Full wwPDB EM Validation Report

Mar 8, 2026 – 05:52 AM UTC

PDB ID	:	5JUO / pdb_00005juo
EMDB ID	:	EMD-6643
Title	:	Saccharomyces cerevisiae 80S ribosome bound with elongation factor eEF2-GDP-sordarin and Taura Syndrome Virus IRES, Structure I (fully rotated 40S subunit)
Authors	:	Abeyrathne, P.; Koh, C.S.; Grant, T.; Grigorieff, N.; Korostelev, A.A.
Deposited on	:	2016-05-10
Resolution	:	4.00 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:

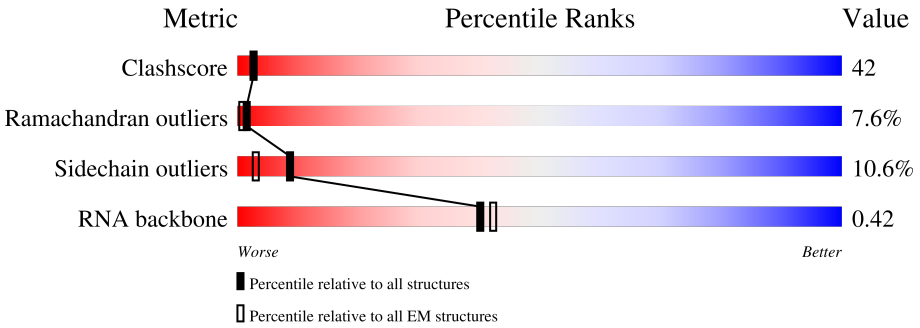
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data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

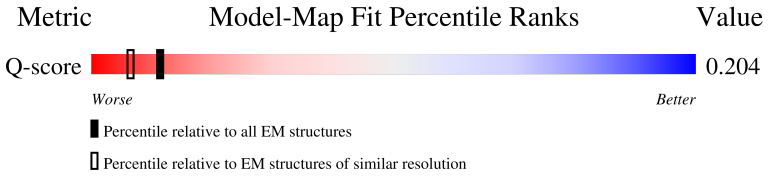
1 Overall quality at a glance

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

The reported resolution of this entry is 4.00 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	7587 (3.50 - 4.50)

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	38% 25% 59% 15% ••
2	B	3396	19% 20% 59% 17% • •
3	C	158	20% 19% 61% 18% •

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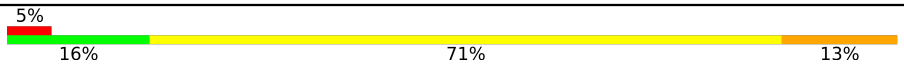
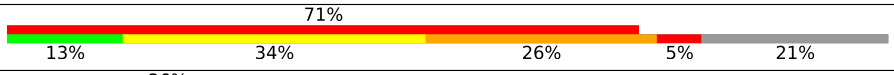
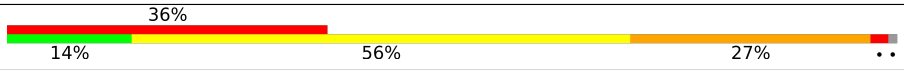
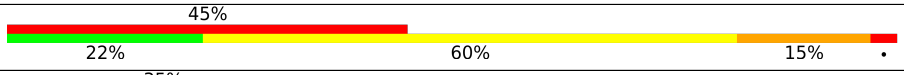
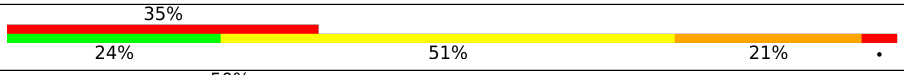
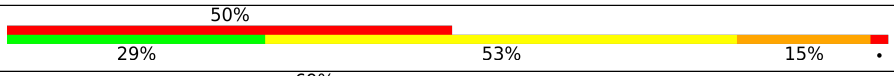
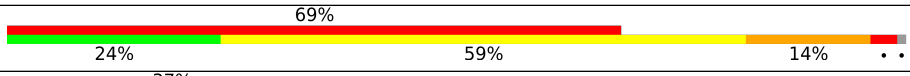
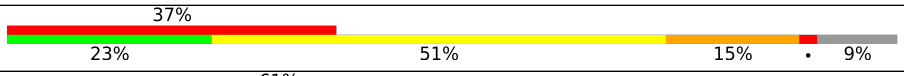
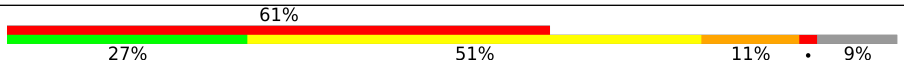
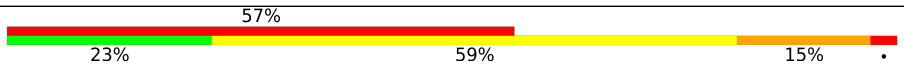
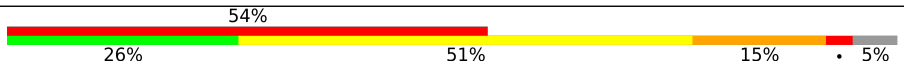
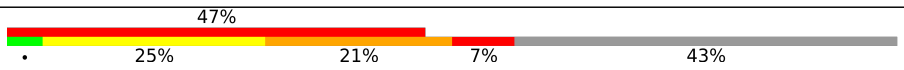
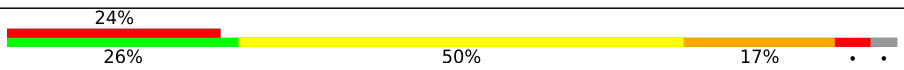
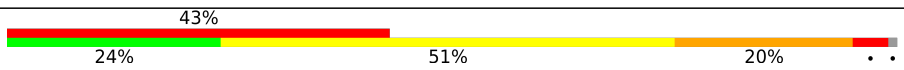
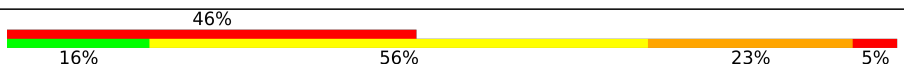
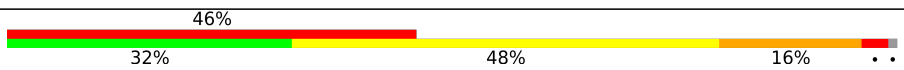
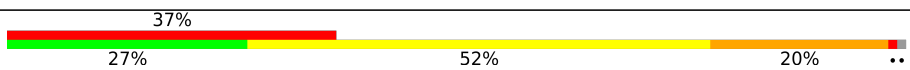
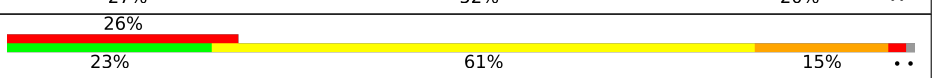
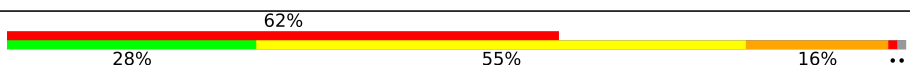
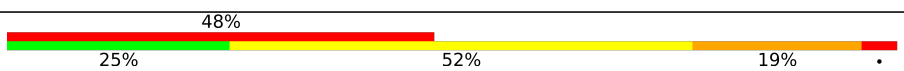
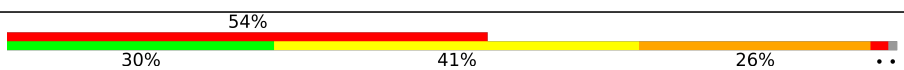
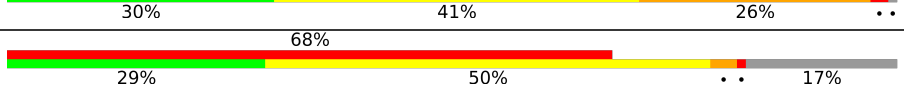
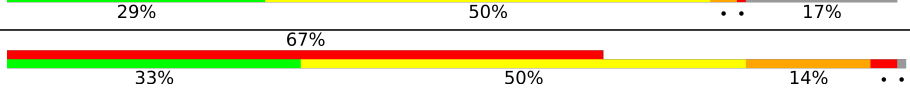
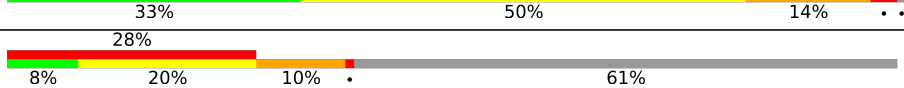
Mol	Chain	Length	Quality of chain
4	D	121	
5	E	217	
6	F	254	
7	G	387	
8	H	362	
9	I	297	
10	J	176	
11	K	244	
12	L	256	
13	M	191	
14	N	221	
15	O	174	
16	P	165	
17	Q	199	
18	R	138	
19	S	204	
20	T	199	
21	U	184	
22	V	186	
23	W	189	
24	X	172	
25	Y	160	
26	Z	121	
27	AA	137	
28	BA	155	

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Mol	Chain	Length	Quality of chain
29	CA	142	64% 26% 40% 17% 15%
30	DA	127	42% 22% 52% 20% 6%
31	EA	136	72% 29% 53% 16%
32	FA	149	31% 20% 52% 26%
33	GA	59	34% 47% 36% 14%
34	HA	105	41% 21% 58% 13% 8%
35	IA	113	35% 27% 45% 23%
36	JA	130	29% 18% 61% 17%
37	KA	107	60% 23% 60% 16%
38	LA	121	47% 23% 49% 18% 7%
39	MA	120	76% 24% 58% 13%
40	NA	100	42% 21% 62% 14%
41	OA	88	39% 18% 55% 20% 6%
42	PA	78	99% 44% 47% 8%
43	QA	51	35% 12% 61% 18% 8%
44	RA	128	18% 12% 23% 5% 59%
45	SA	25	72% 44% 36% 20%
46	TA	106	32% 25% 49% 20% 5%
47	UA	92	41% 26% 49% 21%
48	VA	312	46% 10% 27% 21% 39%
49	WA	319	99% 39% 55% 6%
50	XA	252	73% 25% 44% 12% 18%
51	YA	255	64% 23% 47% 13% 16%
52	ZA	254	63% 28% 50% 8% 15%
53	AB	240	88% 37% 44% 11% 7%

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Mol	Chain	Length	Quality of chain
54	BB	261	36% 24% 64% 11%
55	CB	225	69% 26% 53% 12% 8%
56	DB	236	68% 32% 55% 8%
57	EB	190	91% 29% 53% 12%
58	FB	200	62% 32% 48% 14% 6%
59	GB	197	43% 25% 60% 9% 6%
60	HB	105	73% 30% 53% 8% 9%
61	IB	156	71% 34% 50% 13%
62	JB	143	87% 69% 17% 13%
63	KB	151	81% 29% 56% 14%
64	LB	137	45% 27% 58% 7% 7%
65	MB	142	79% 24% 51% 10% 14%
66	NB	143	87% 24% 67% 8%
67	OB	136	81% 45% 34% 7% 14%
68	PB	146	93% 32% 58% 10%
69	QB	144	90% 35% 53% 11%
70	RB	121	82% 28% 50% 10% 12%
71	SB	87	79% 36% 48% 16%
72	TB	130	66% 29% 49% 19%
73	UB	145	80% 36% 54% 10%
74	VB	135	61% 39% 49% 12%
75	WB	108	63% 15% 38% 11% 35%
76	XB	119	44% 13% 47% 18% 18%
77	YB	82	72% 39% 46% 11%
78	ZB	67	54% 34% 54% 6% 6%

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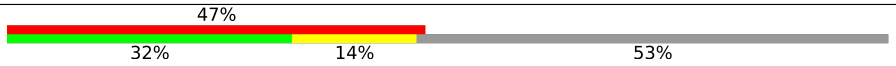
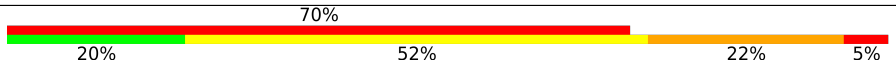
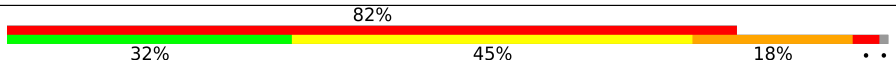
Mol	Chain	Length	Quality of chain
79	AC	56	
80	BC	63	
81	CC	152	
82	DC	842	
83	EC	201	

2 Entry composition (i)

There are 86 unique types of molecules in this entry. The entry contains 215363 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	37658	16811	6630	12436	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 613	C 391	N 115	O 107	0	0

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

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

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

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

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

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

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

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

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

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

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

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

- 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
			1611	1033	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	S	0	0
			1709	1084	310	311	4		

- 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	S	0	0
			942	578	186	175	3		

- 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	S	0	0
			769	475	160	129	5		

- 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		

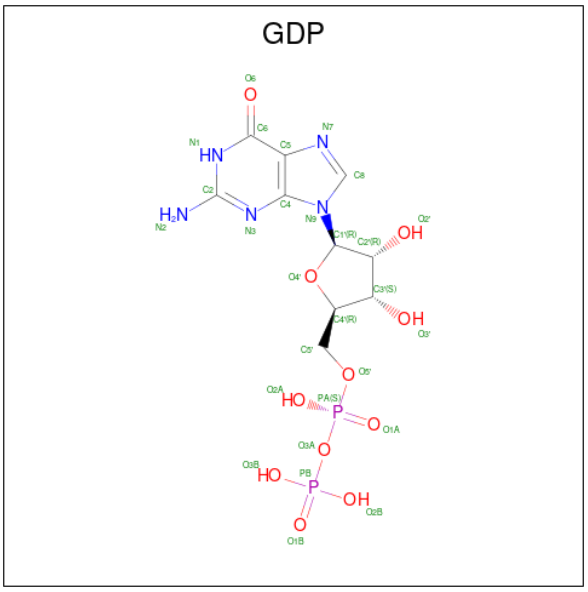
- Molecule 82 is a protein called yeast eEF2.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	DC	841	Total	C	N	O	S	0	0
			6561	4168	1125	1238	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
			4105	1826	718	1363	198		

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

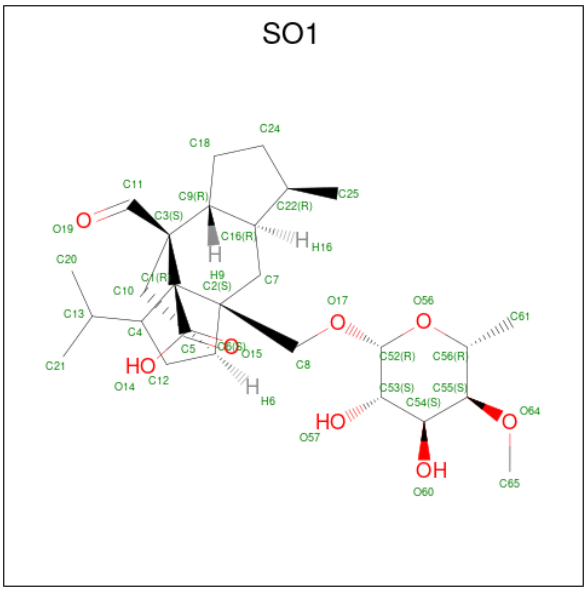


Mol	Chain	Residues	Atoms					AltConf
84	DC	1	Total	C	N	O	P	0
			28	10	5	11	2	

- 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: $C_{27}H_{42}O_8$).



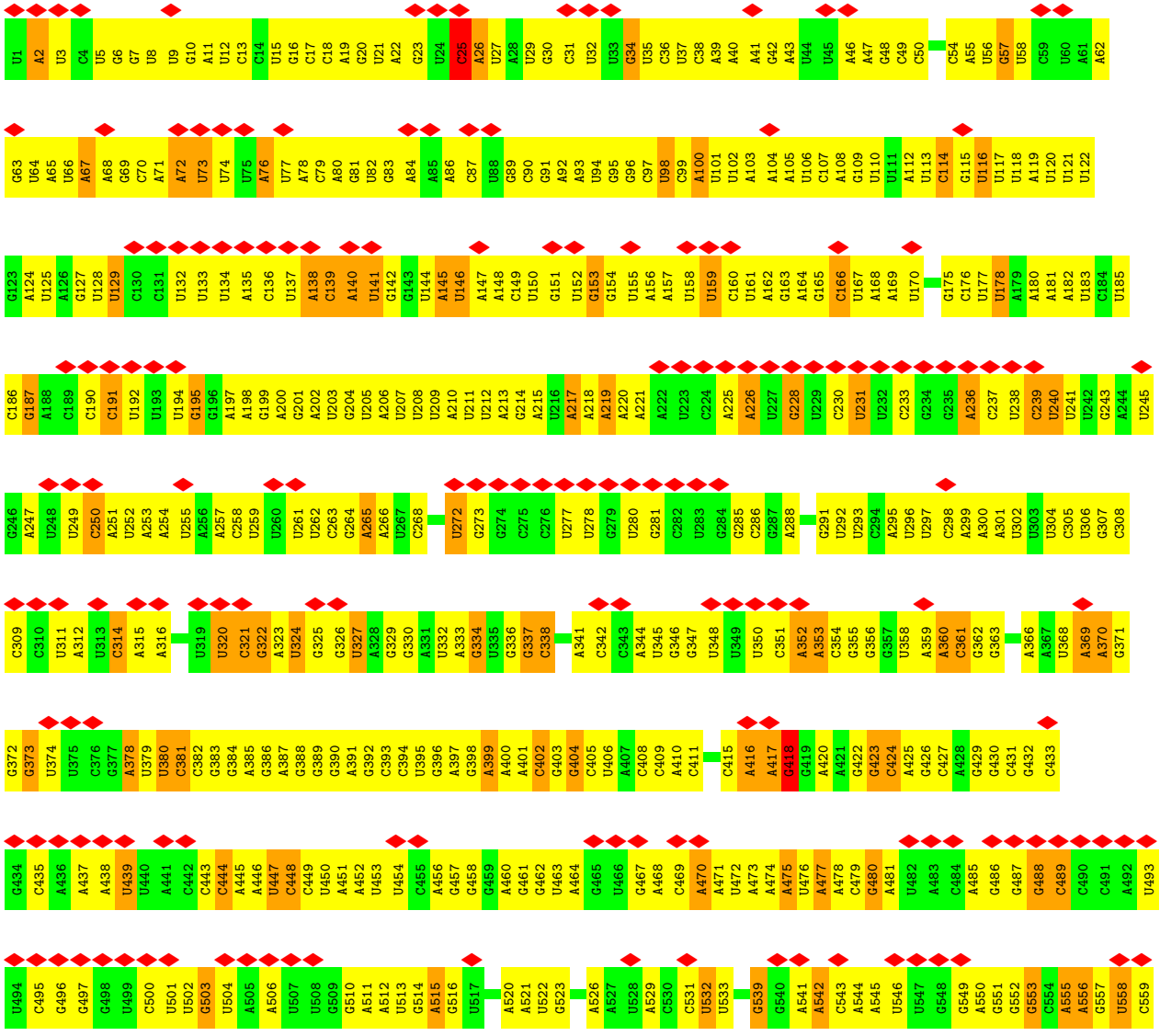
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
86	DC	1	35	27	8	0

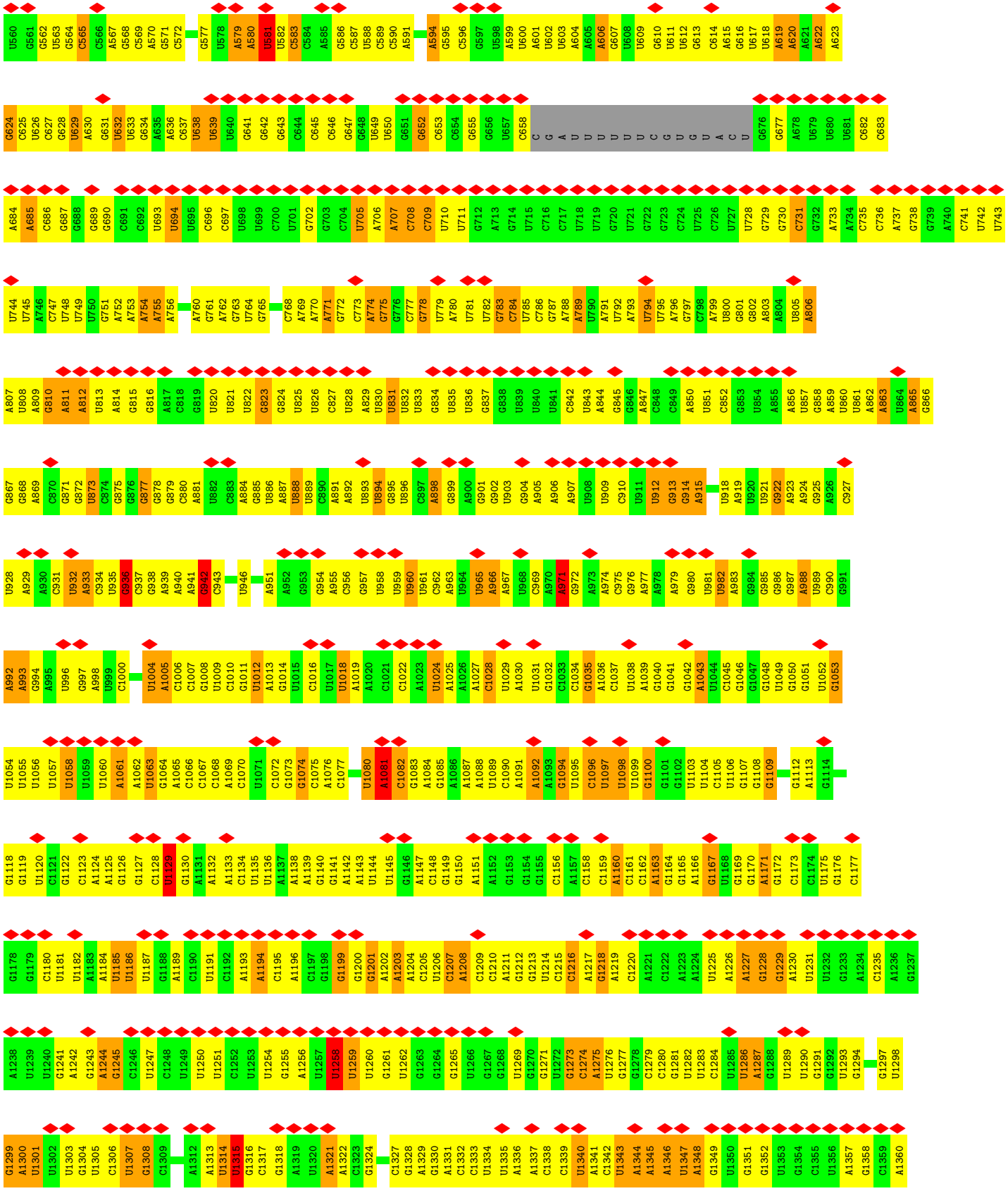
3 Residue-property plots (i)

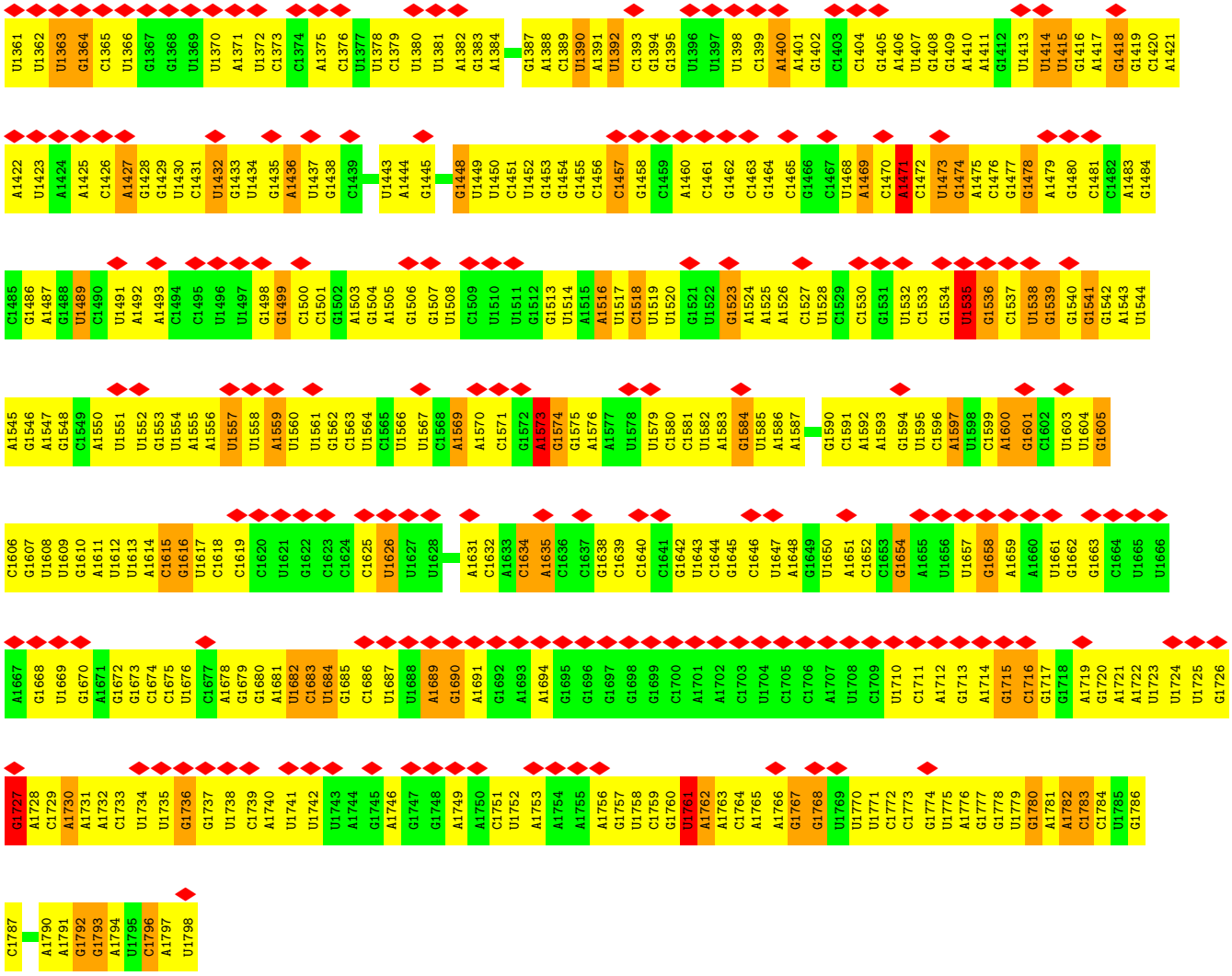
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

Chain A:

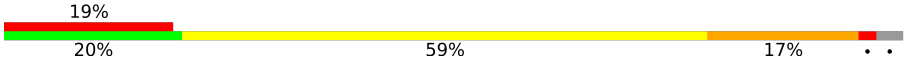


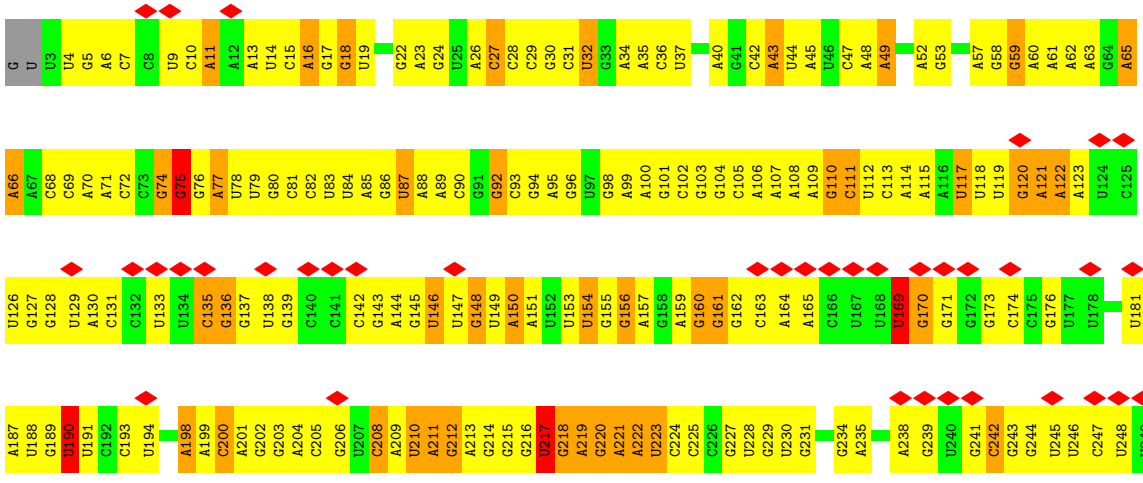


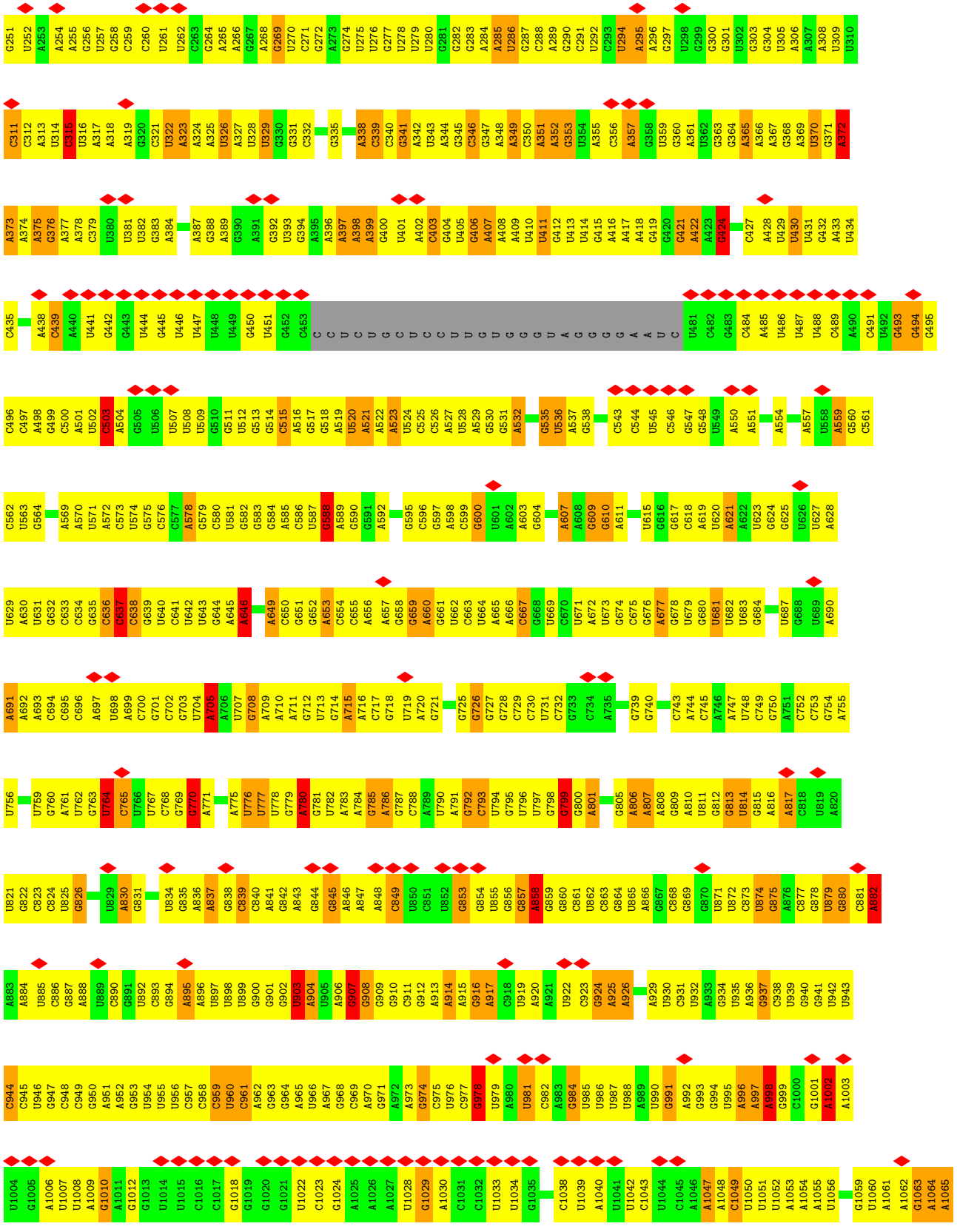


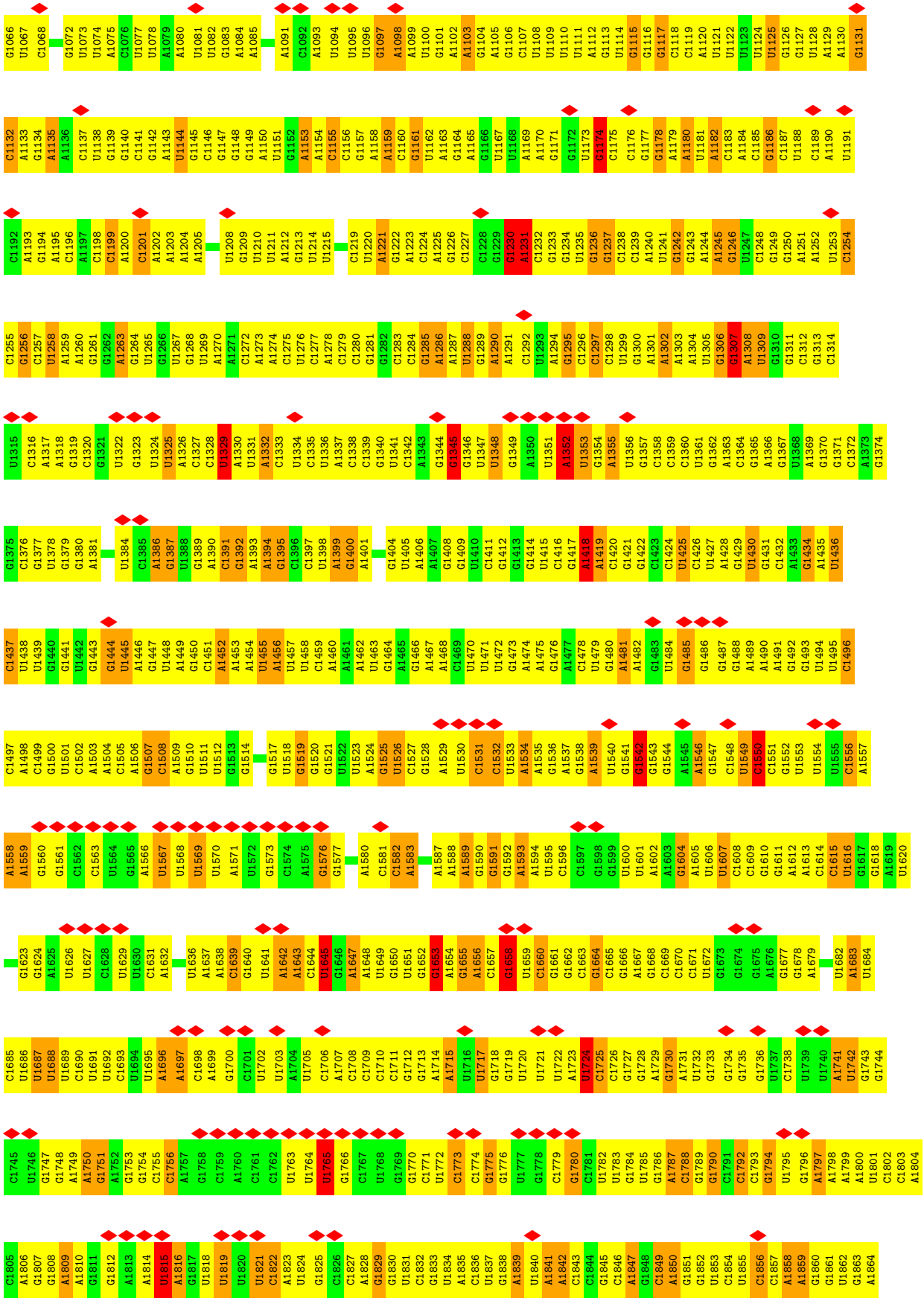
• Molecule 2: 25S ribosomal RNA

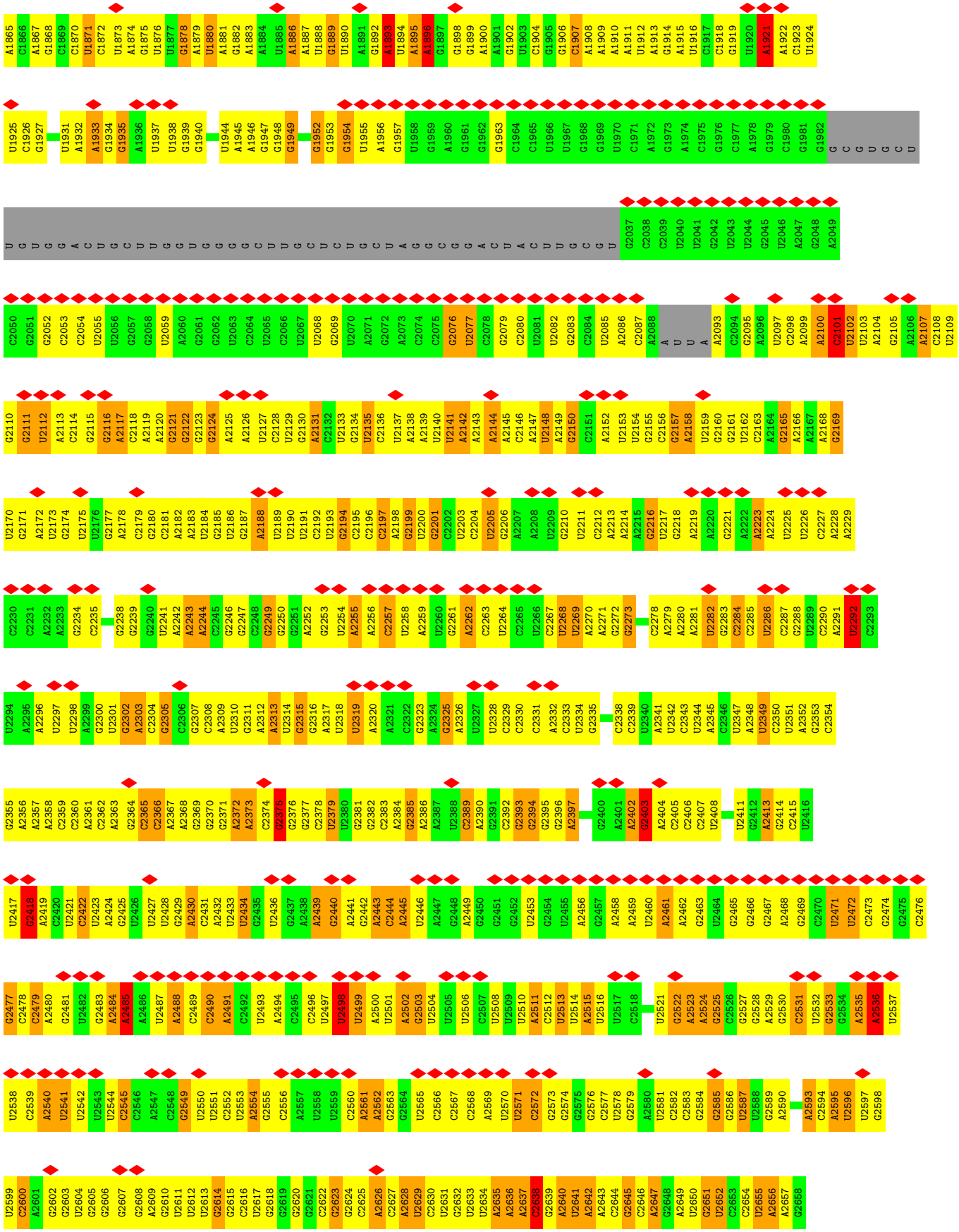
Chain B:

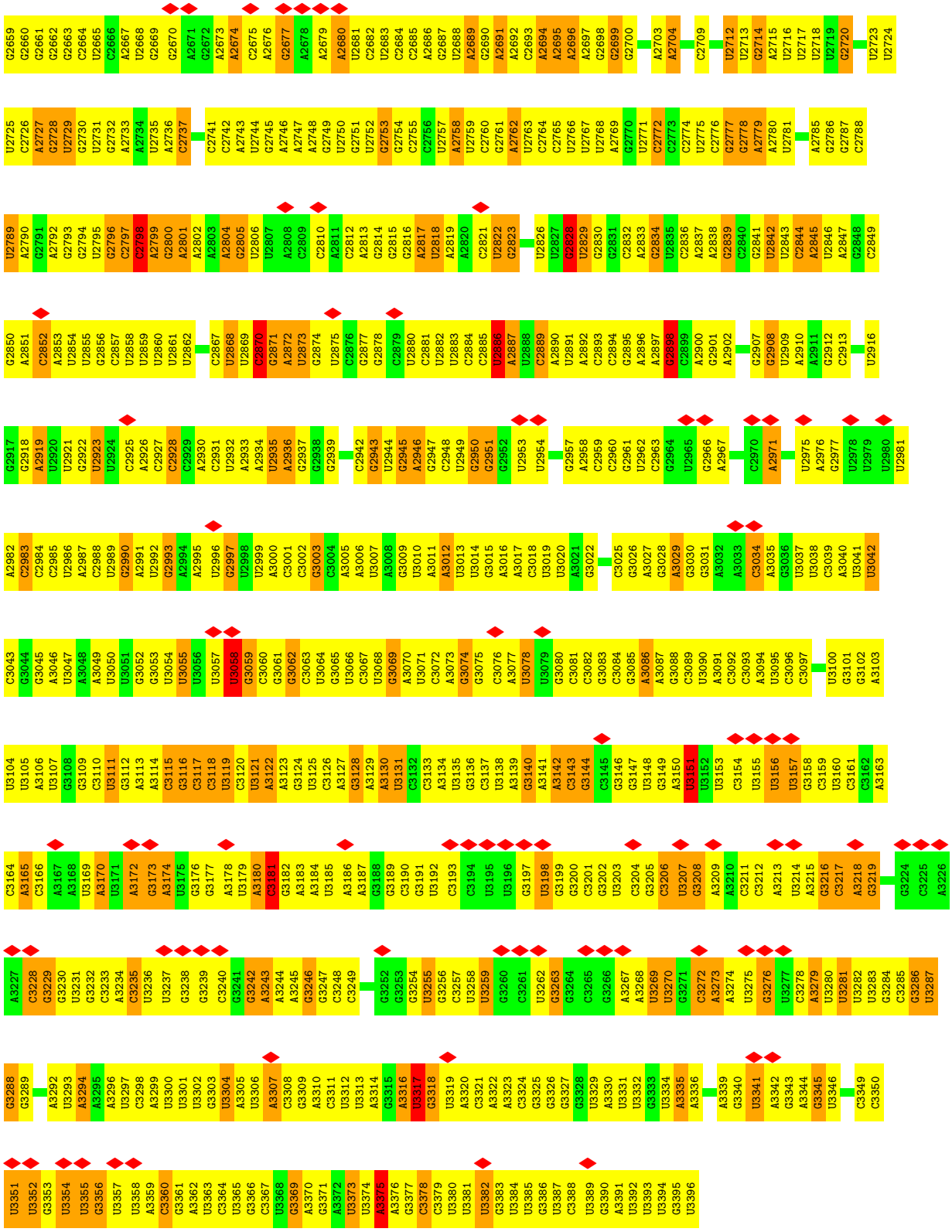






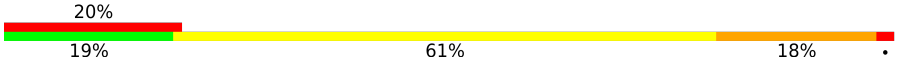


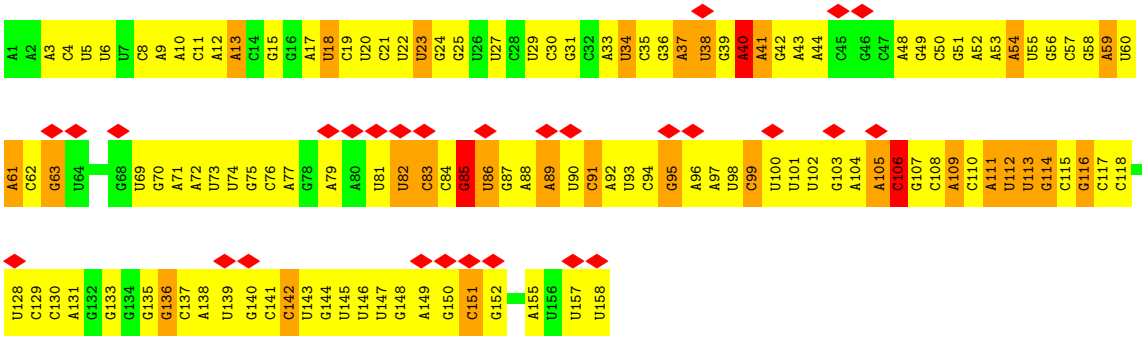




• Molecule 3: 5.8S ribosomal RNA

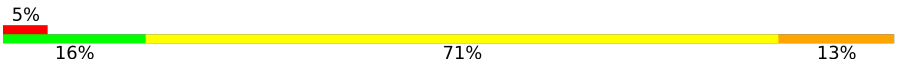
Chain C:

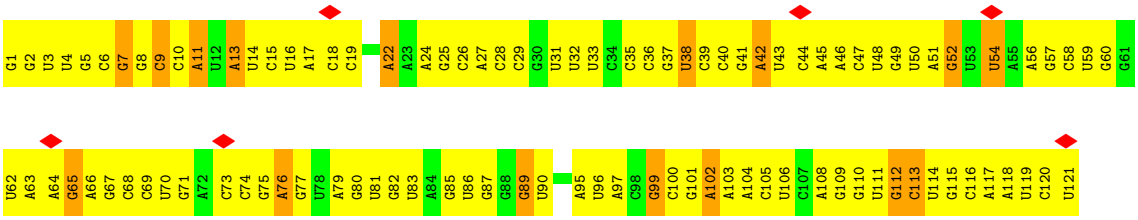




• Molecule 4: 5S ribosomal RNA

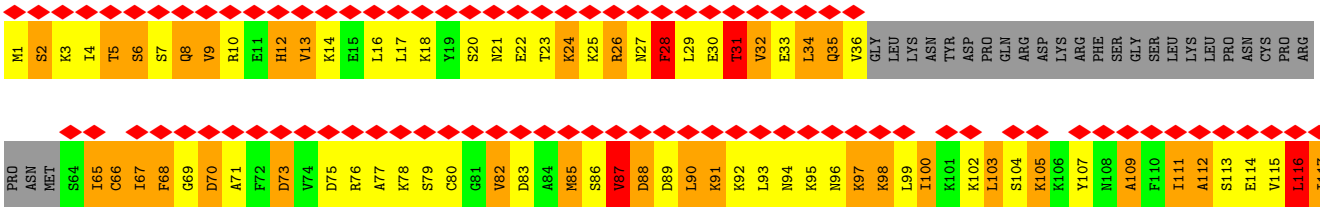
Chain D:

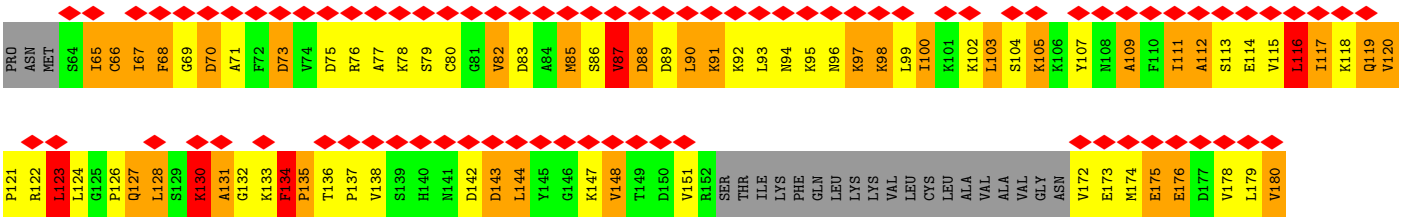


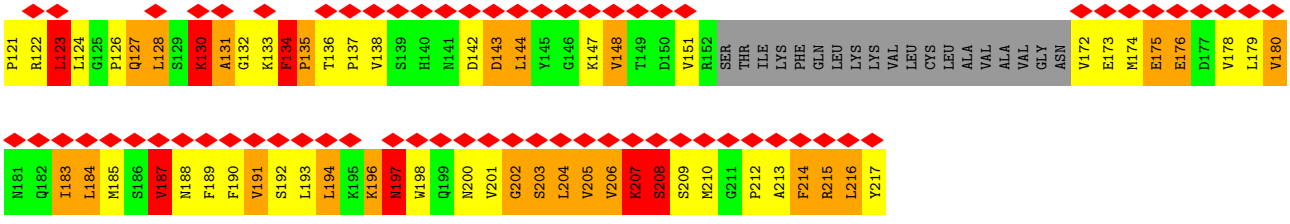


• Molecule 5: uL1 (yeast L1)

Chain E:

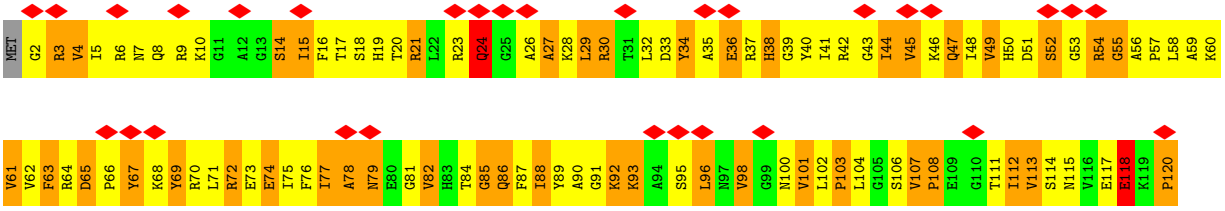


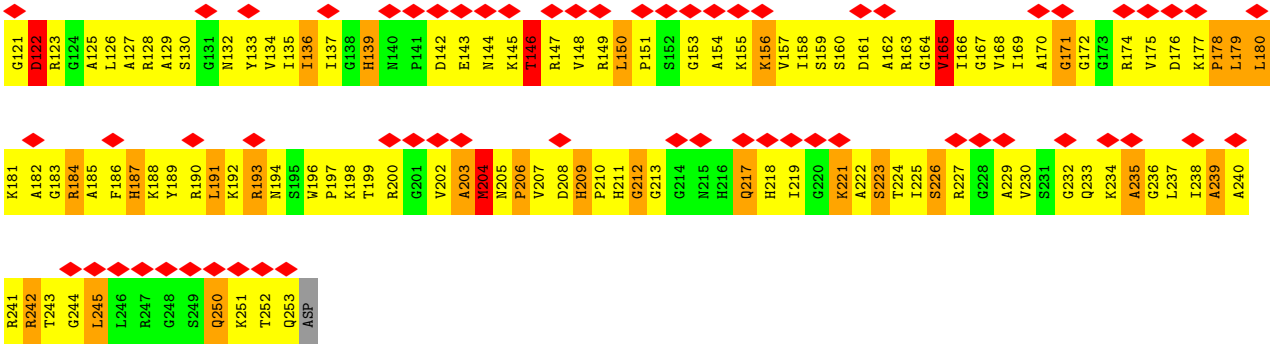




• Molecule 6: uL2 (yeast L2)

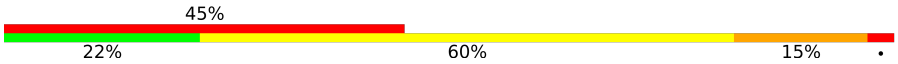
Chain F:

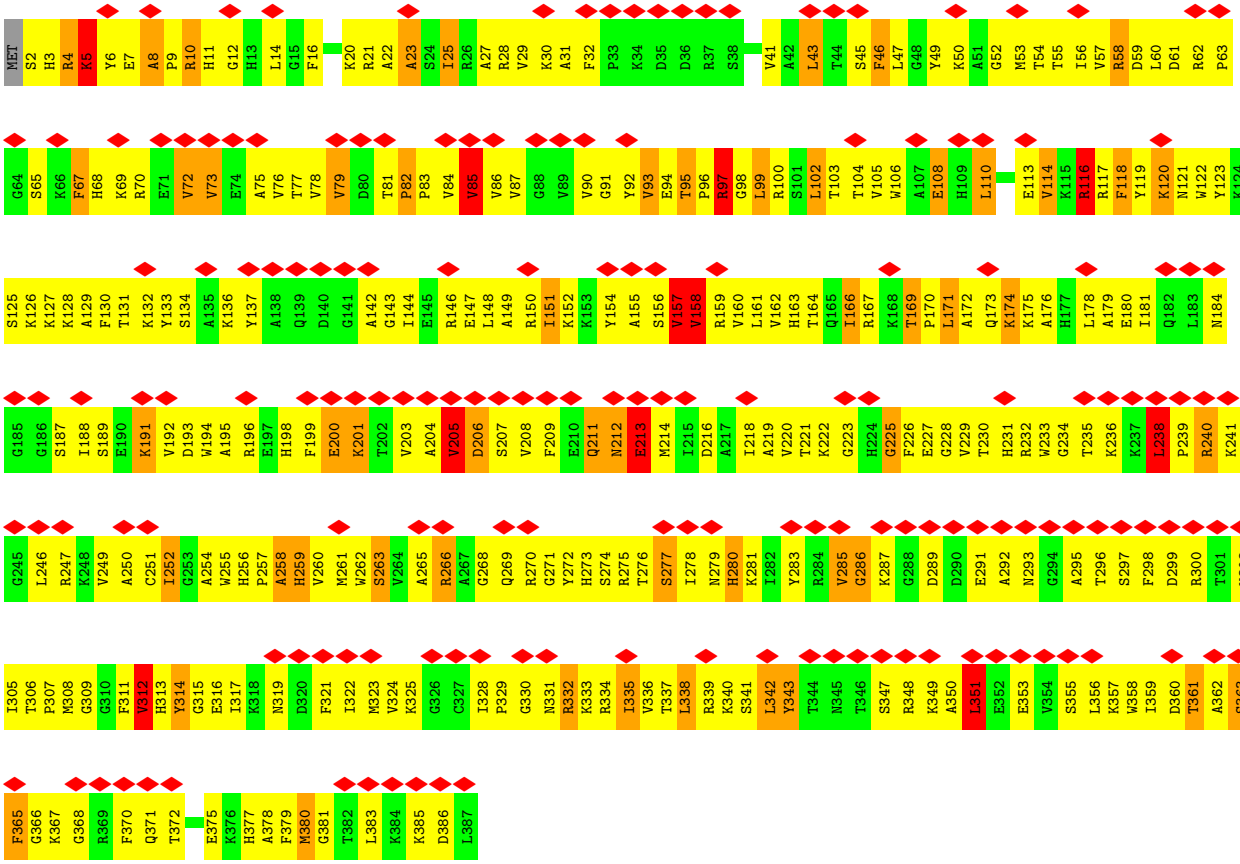




• Molecule 7: uL3 (yeast L3)

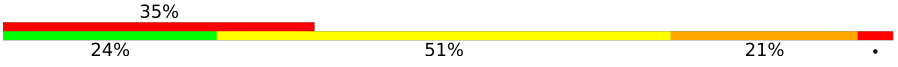
Chain G:

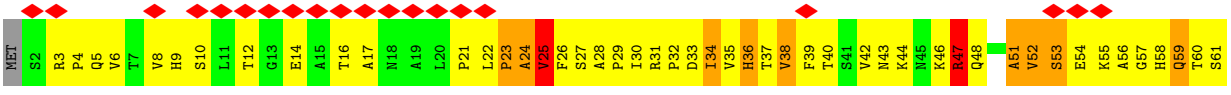


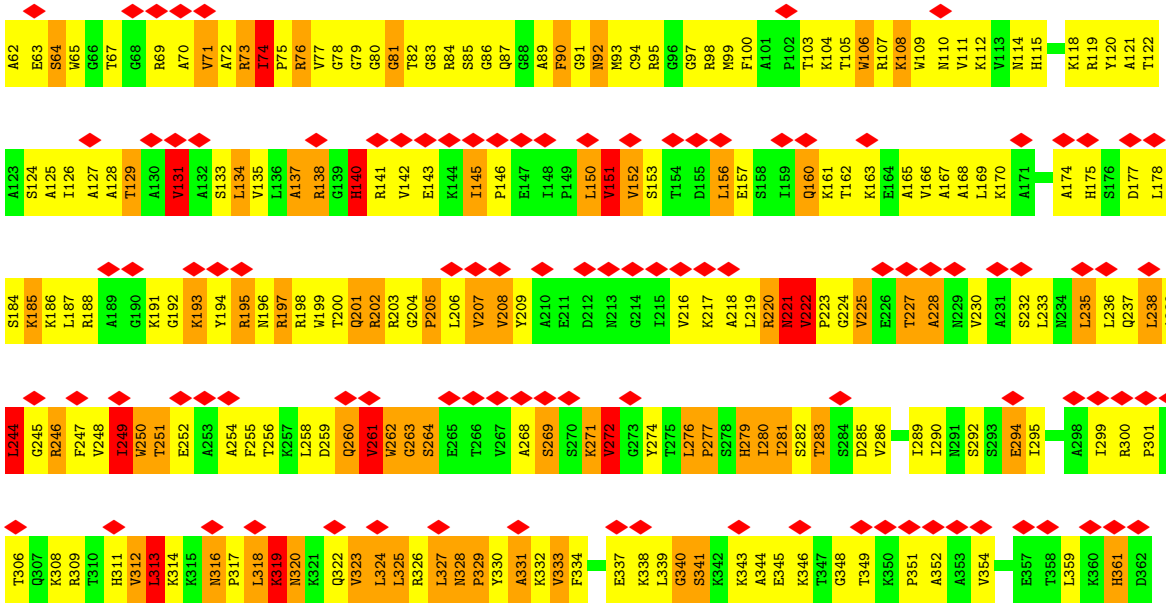


• Molecule 8: uL4 (yeast L4)

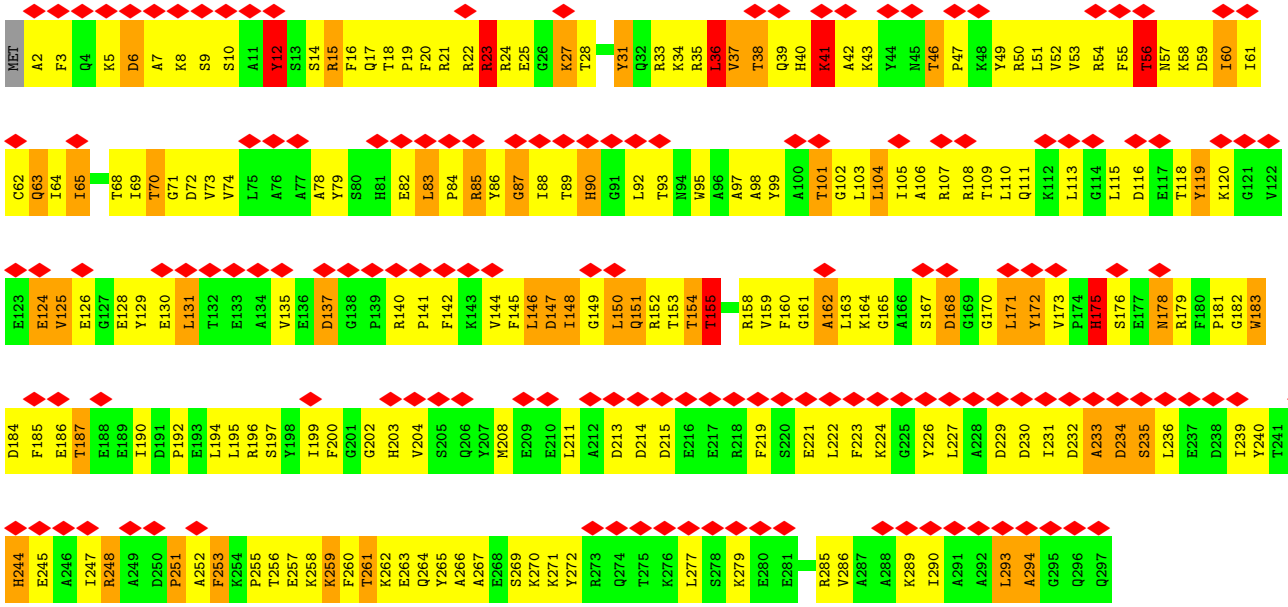
Chain H:



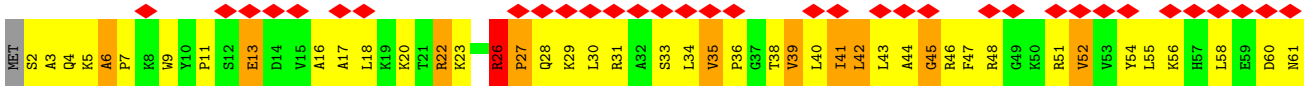


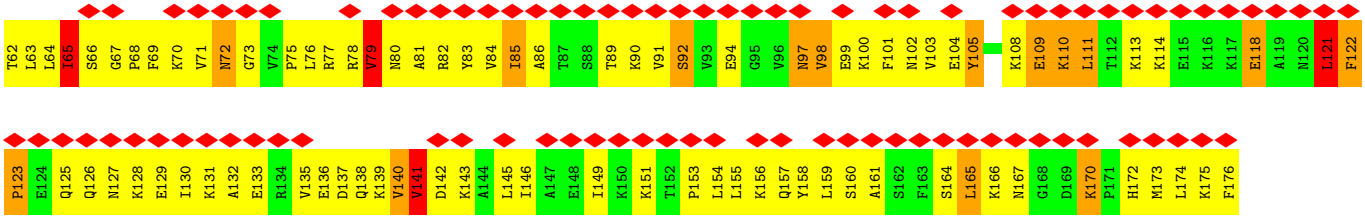


• Molecule 9: uL18 (yeast L5)



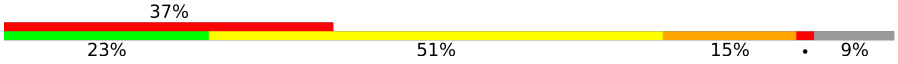
• Molecule 10: eL6 (yeast L6)

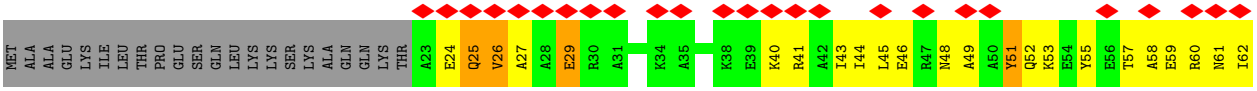


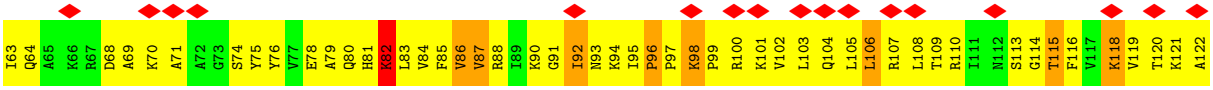


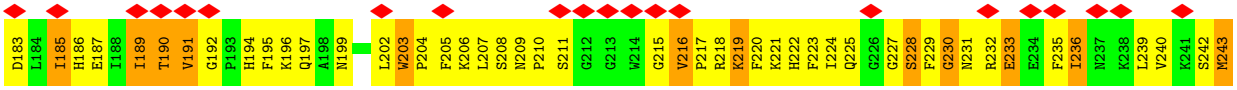
• Molecule 11: uL30 (yeast L7)

Chain K:



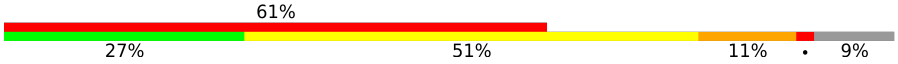


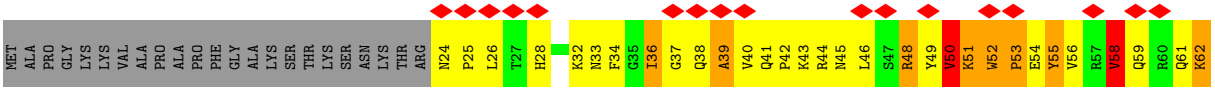


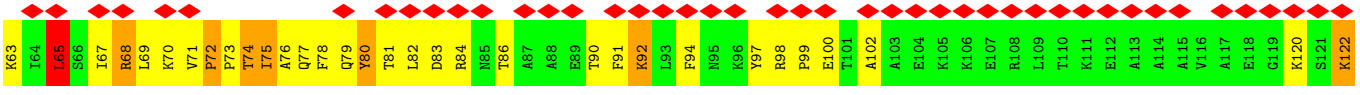


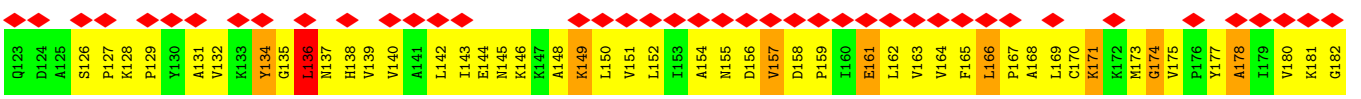
• Molecule 12: eL8 (yeast L8)

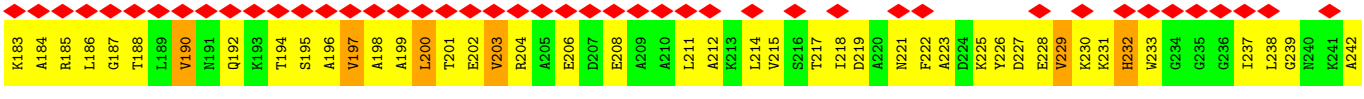
Chain L:

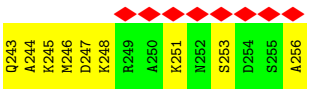










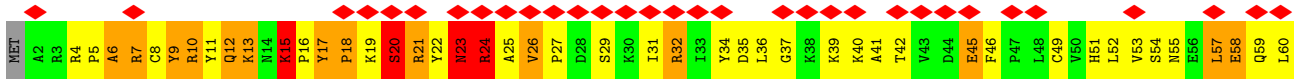


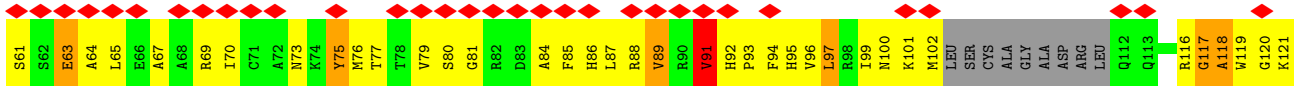
• Molecule 13: uL6 (yeast L9)

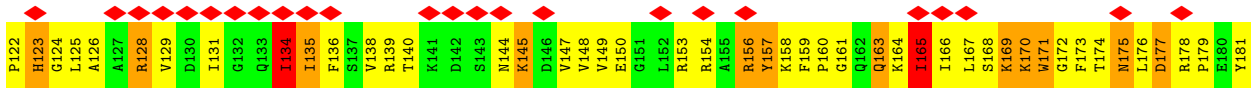
Chain M:

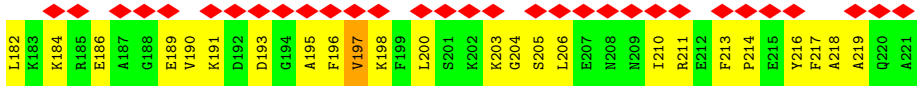
• Molecule 14: uL16 (yeast L10)

Chain N:



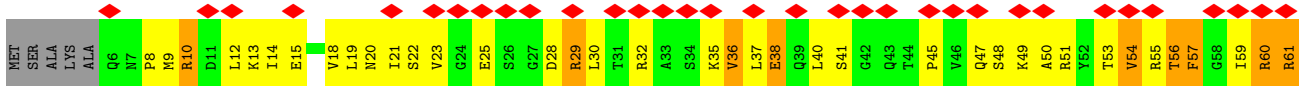


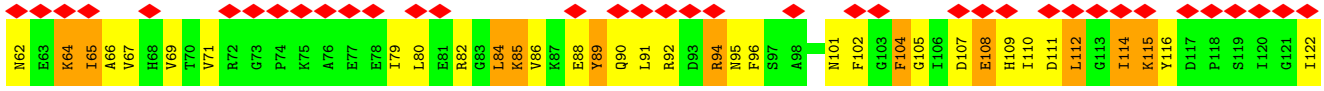


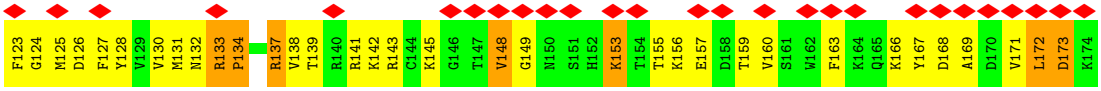


• Molecule 15: uL5 (yeast L11)

Chain O:

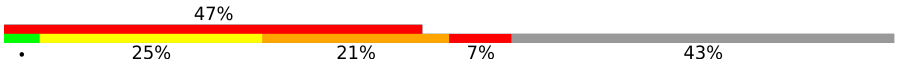


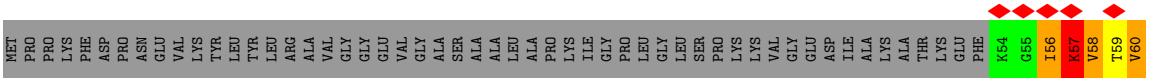


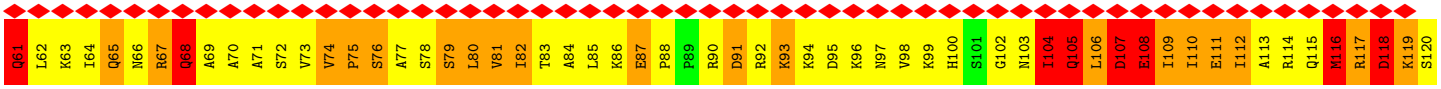


• Molecule 16: uL11 (yeast L12)

Chain P:

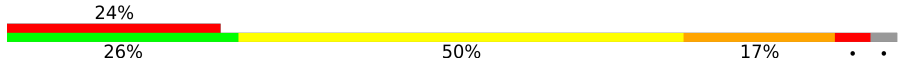


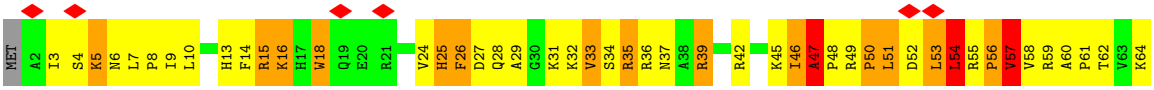


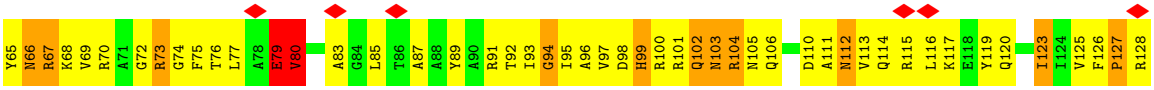


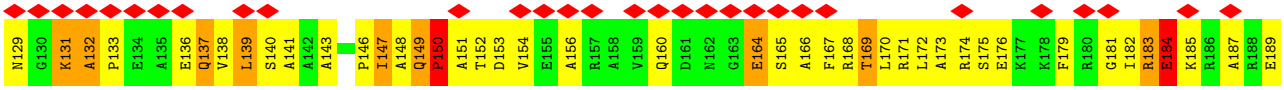
• Molecule 17: eL13 (yeast L13)

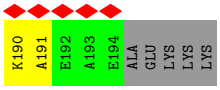
Chain Q:





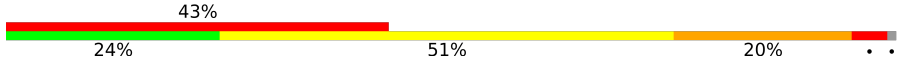


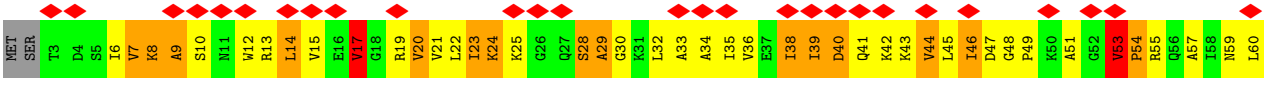


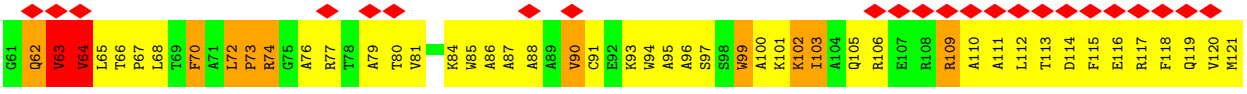


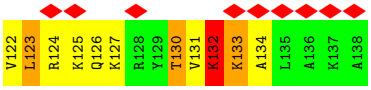
• Molecule 18: eL14 (yeast L14)

Chain R:



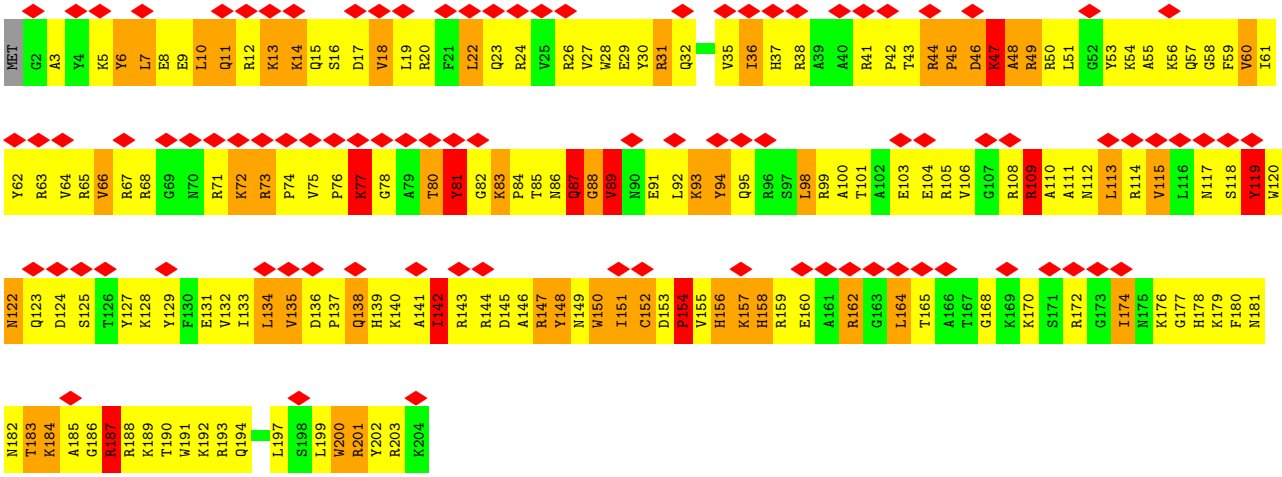






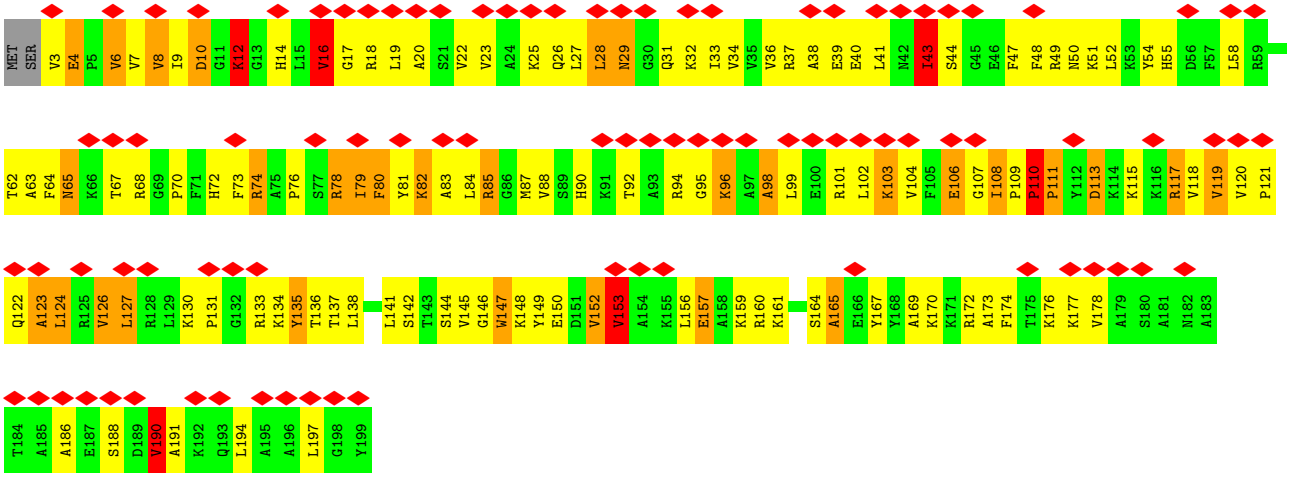
• Molecule 19: eL15 (yeast L15)

Chain S:



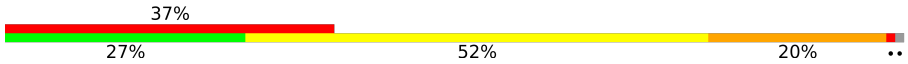
• Molecule 20: uL13 (yeast L16)

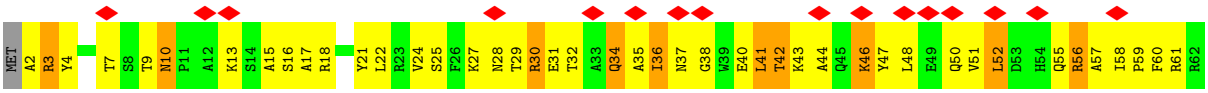
Chain T:

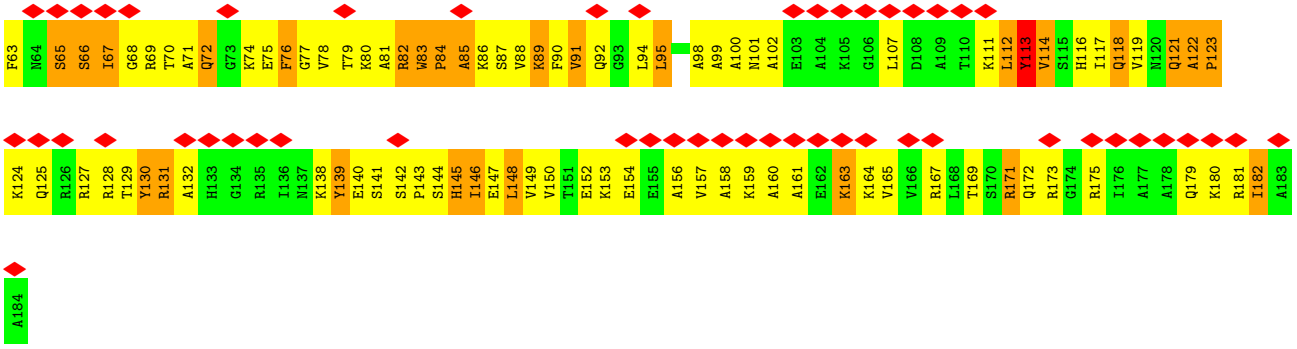


• Molecule 21: uL22 (yeast L17)

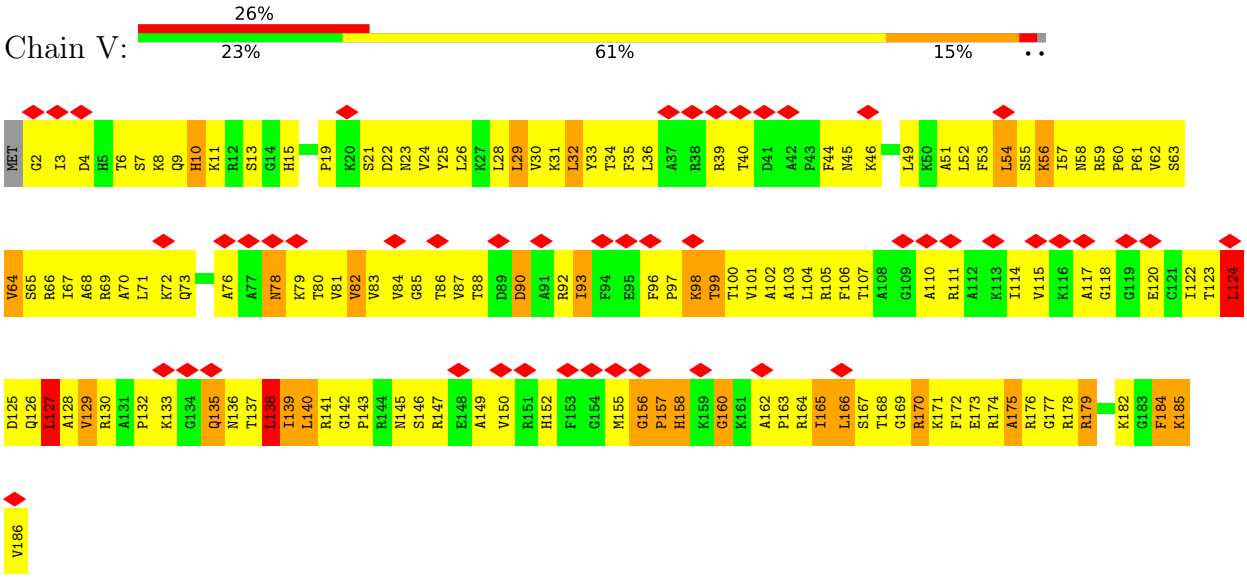
Chain U:



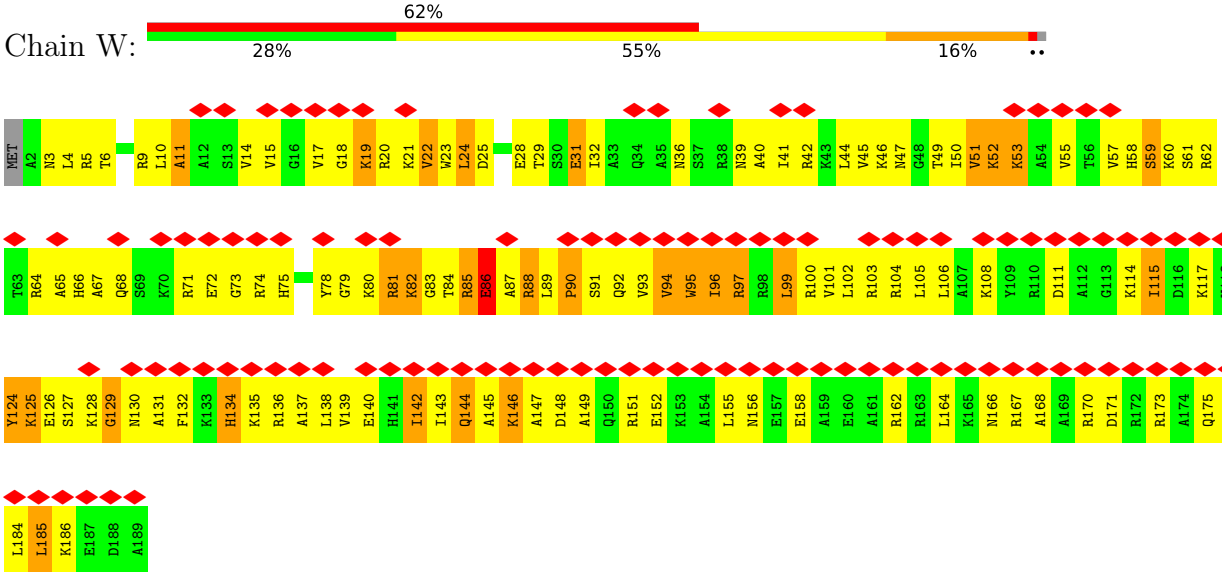




• Molecule 22: eL18 (yeast L18)

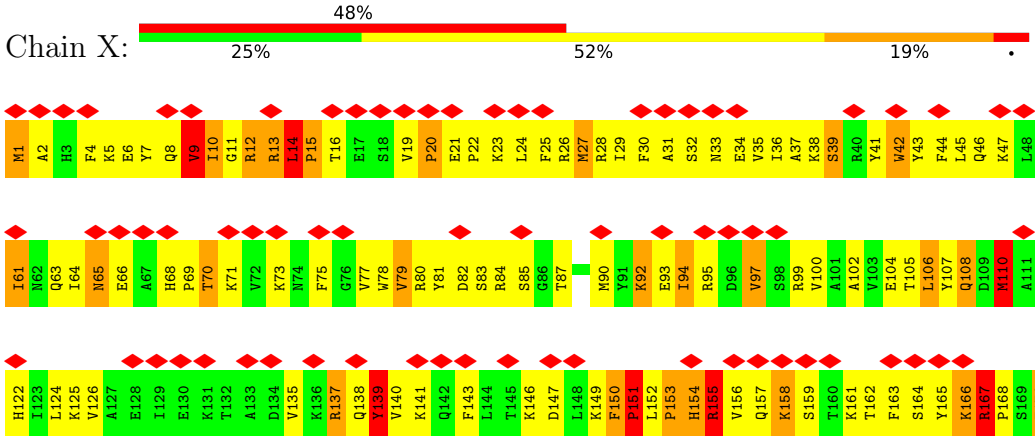


• Molecule 23: eL19 (yeast L19)



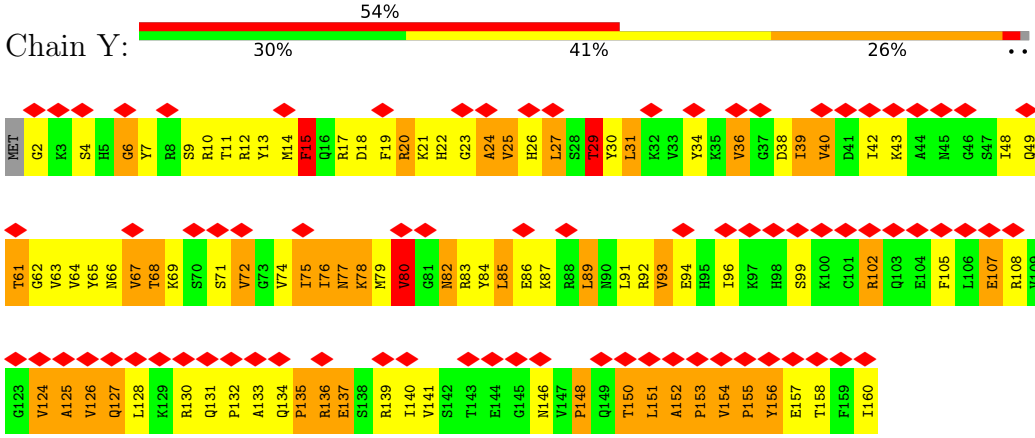
• Molecule 24: eL20 (yeast L20)

Chain X:



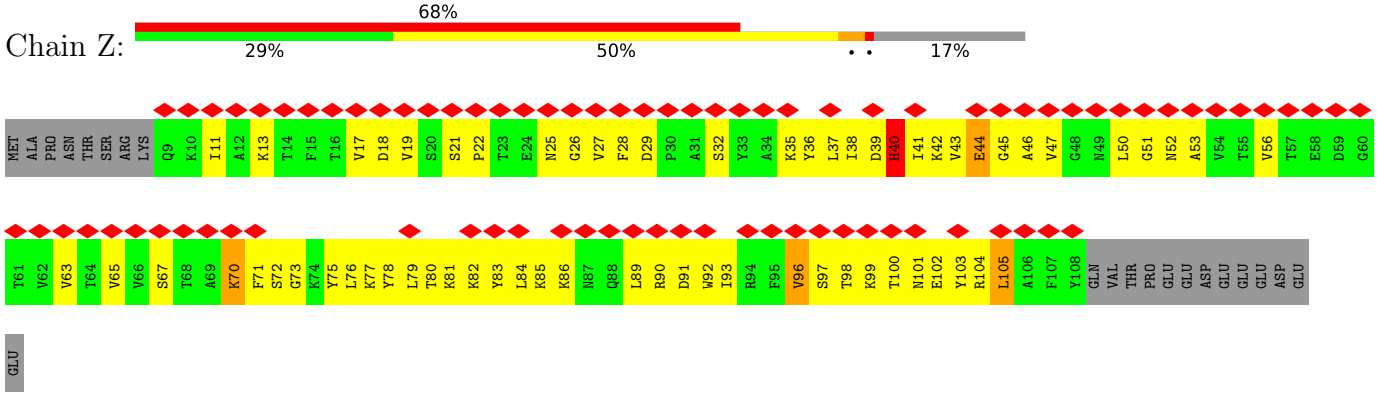
• Molecule 25: eL21 (yeast L21)

Chain Y:



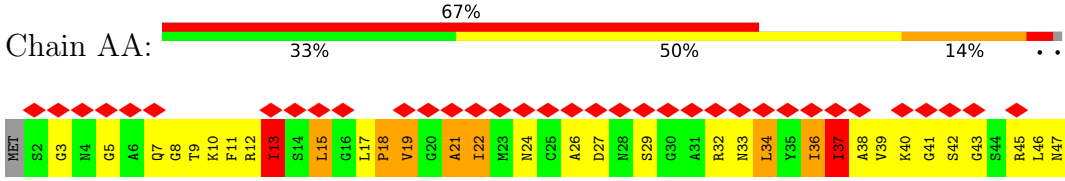
• Molecule 26: eL22 (yeast L22)

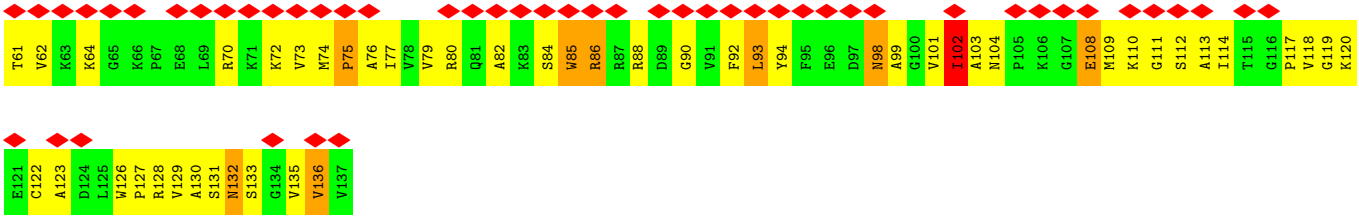
Chain Z:



• Molecule 27: uL14 (yeast L23)

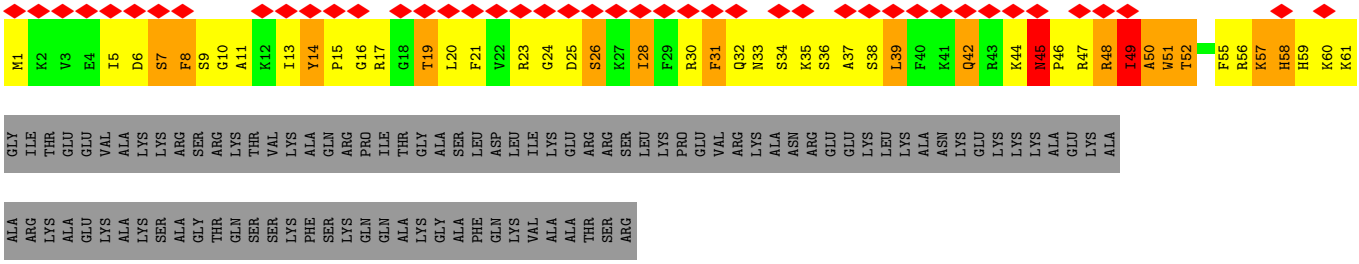
Chain AA:





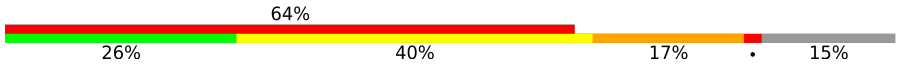
• Molecule 28: eL24 (yeast L24)

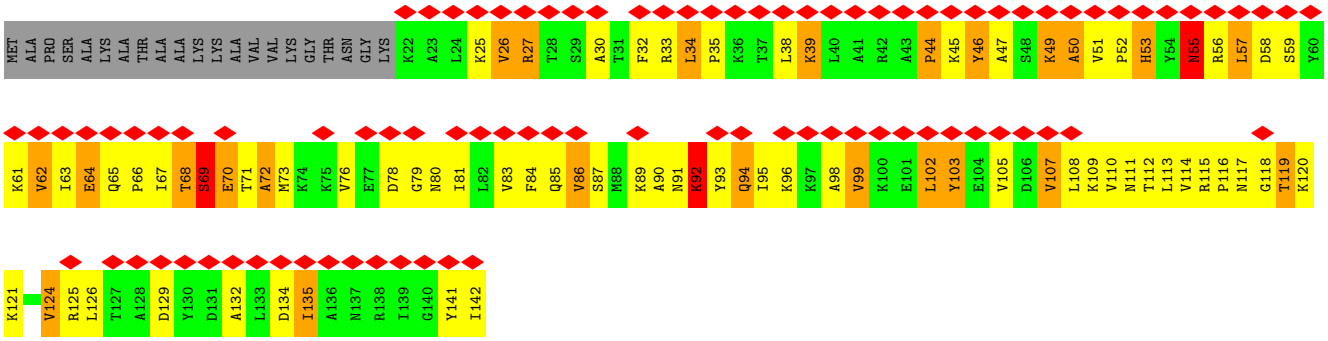
Chain BA:



• Molecule 29: uL23 (yeast L25)

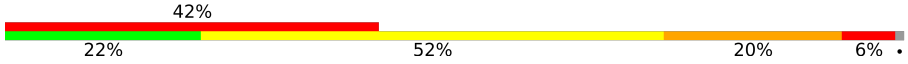
Chain CA:

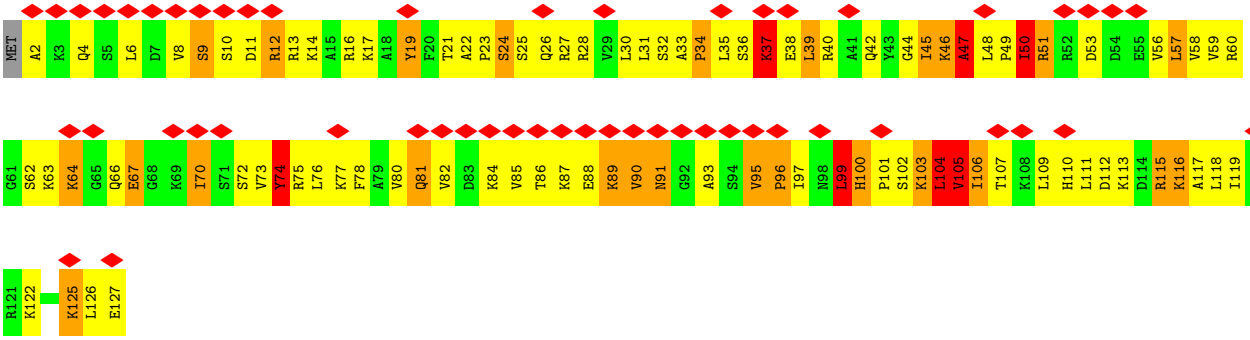




• Molecule 30: uL24 (yeast L26)

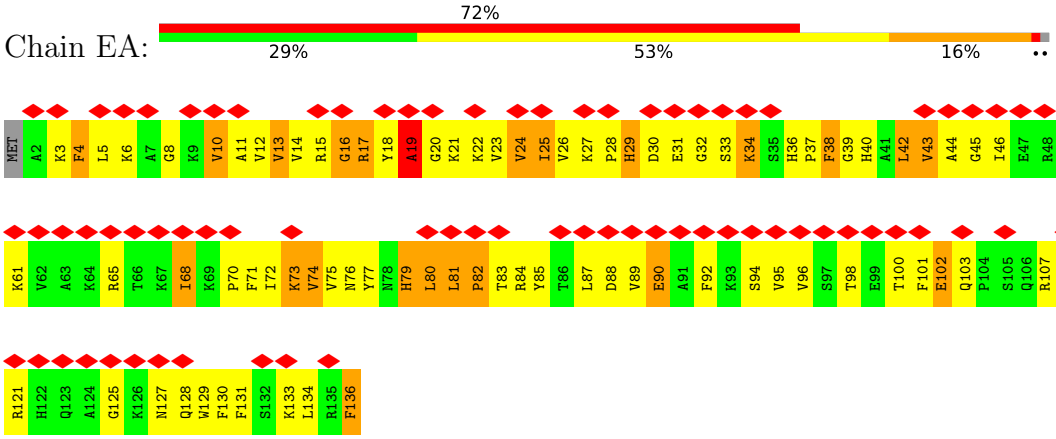
Chain DA:





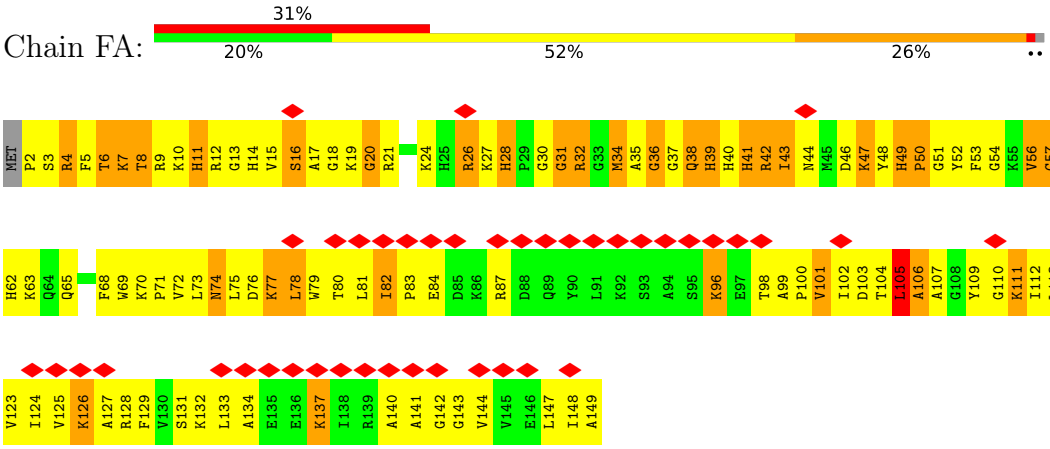
• Molecule 31: eL27 (yeast L27)

Chain EA:



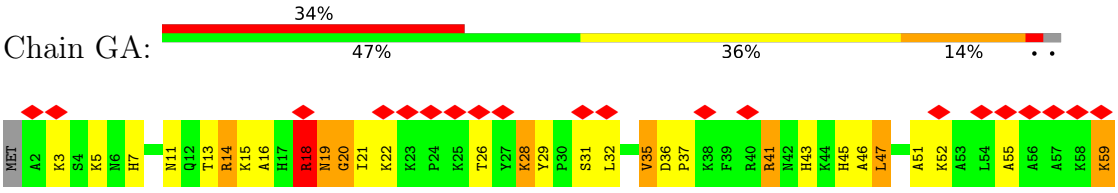
• Molecule 32: uL15 (yeast L28)

Chain FA:



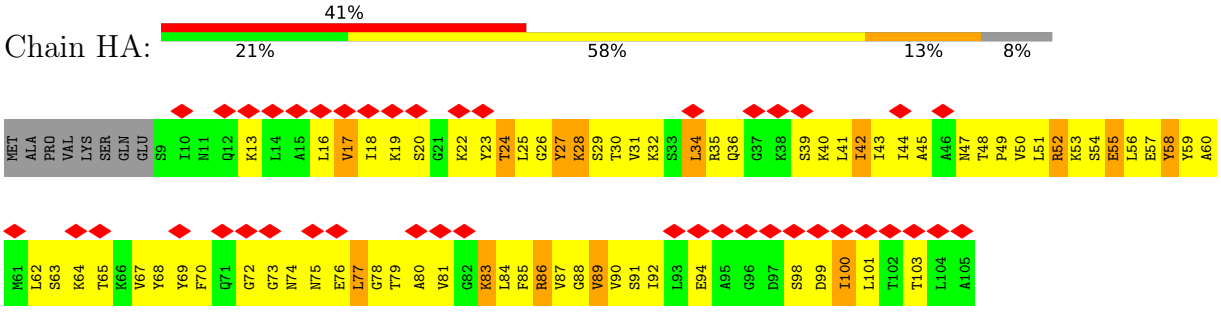
• Molecule 33: eL29 (yeast L29)

Chain GA:



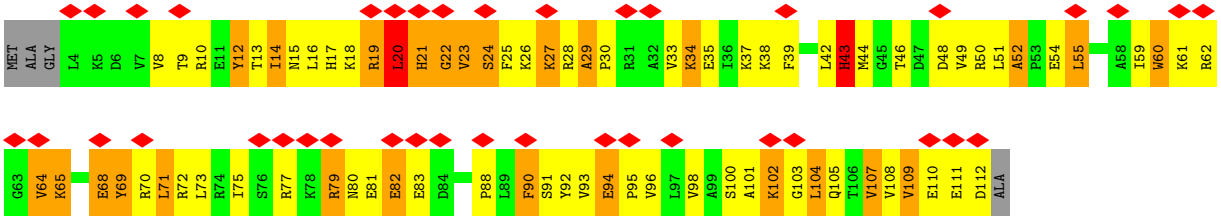
• Molecule 34: eL30 (yeast L30)

Chain HA:



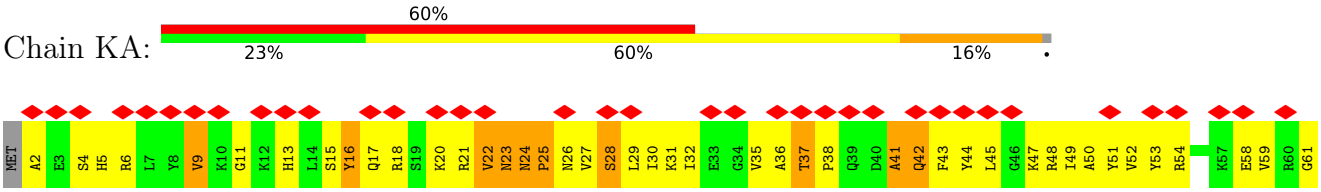
• Molecule 35: eL31 (yeast L31)

Chain IA:

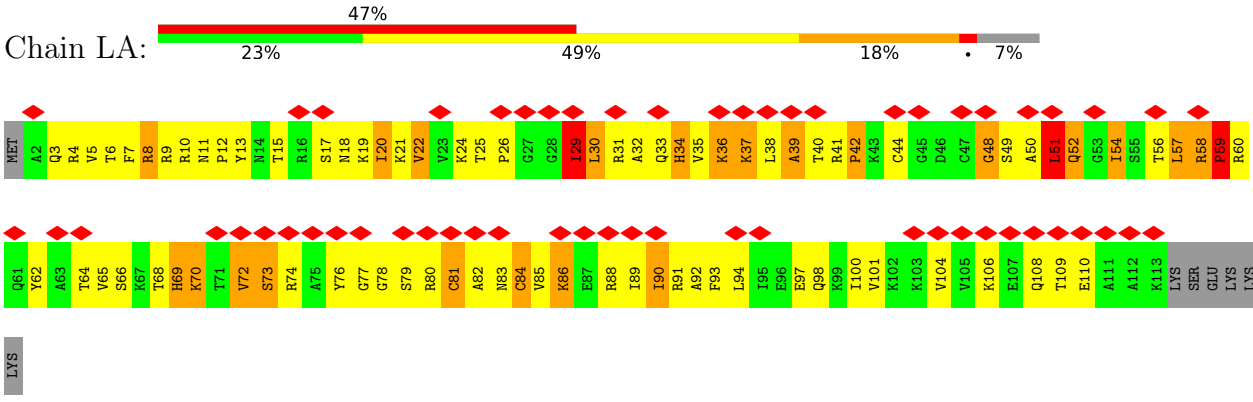


• Molecule 36: eL32 (yeast L32)

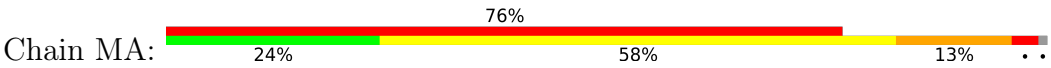
• Molecule 37: eL33 (yeast L33)

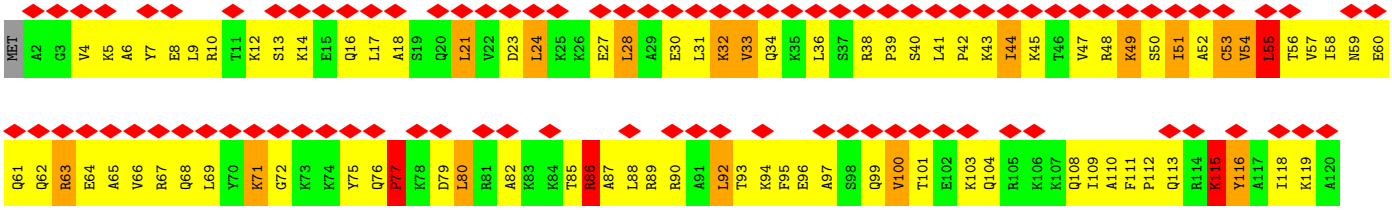


• Molecule 38: eL34 (yeast L34)



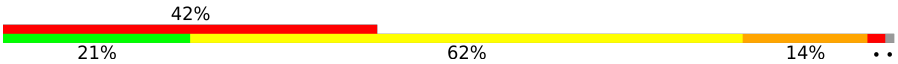
• Molecule 39: uL29 (yeast L35)

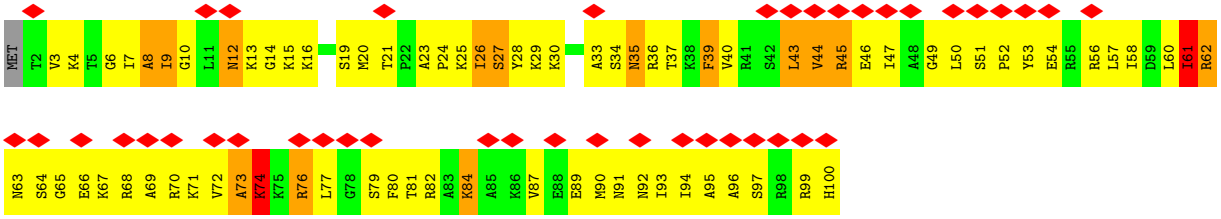




• Molecule 40: eL36 (yeast L36)

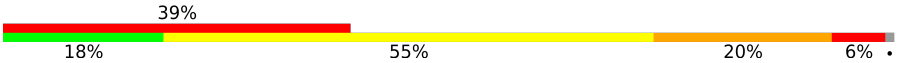
Chain NA:

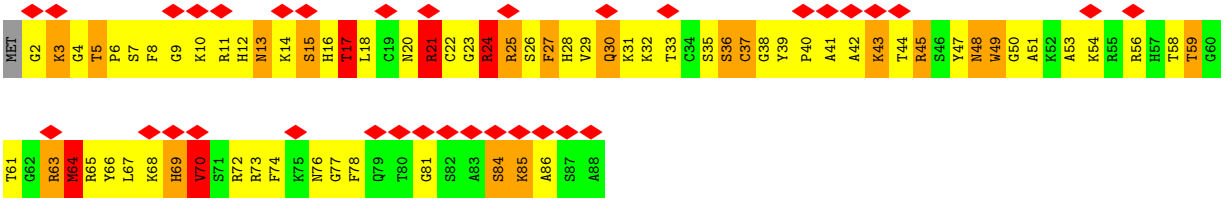




• Molecule 41: eL37 (yeast L37)

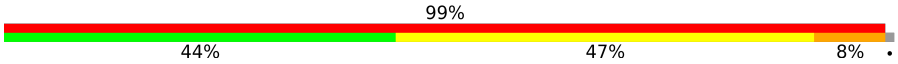
Chain OA:

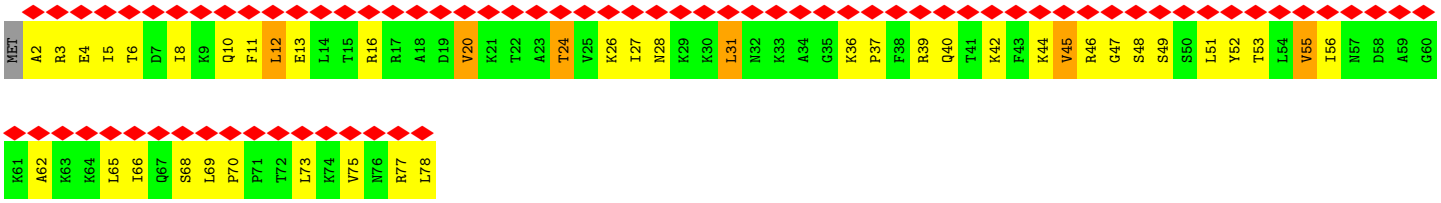




• Molecule 42: eL38 (yeast L38)

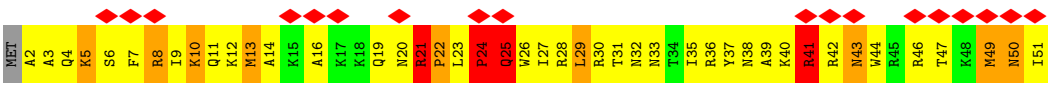
Chain PA:





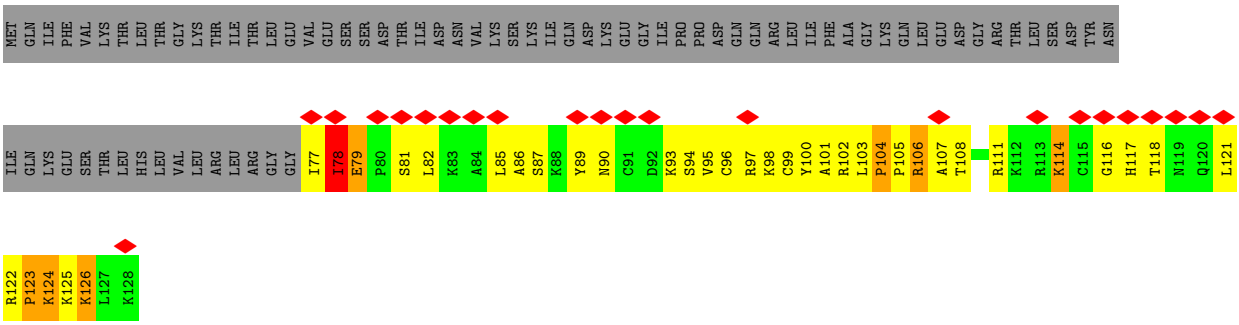
• Molecule 43: eL39 (yeast L39)

Chain QA:



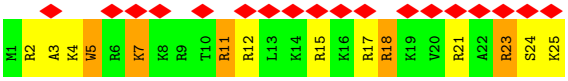
• Molecule 44: eL40 (yeast L40)

Chain RA:



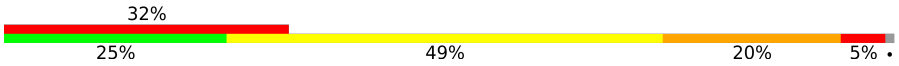
• Molecule 45: eL41 (yeast L41)

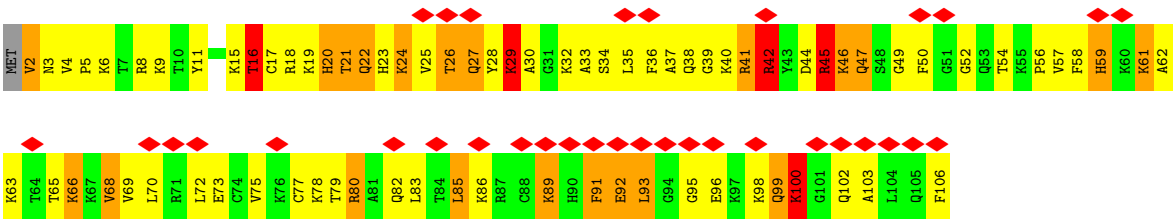
Chain SA:



• Molecule 46: eL42 (yeast L42)

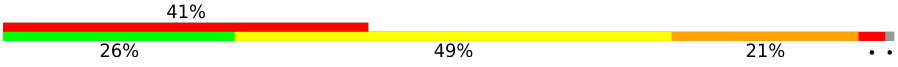
Chain TA:

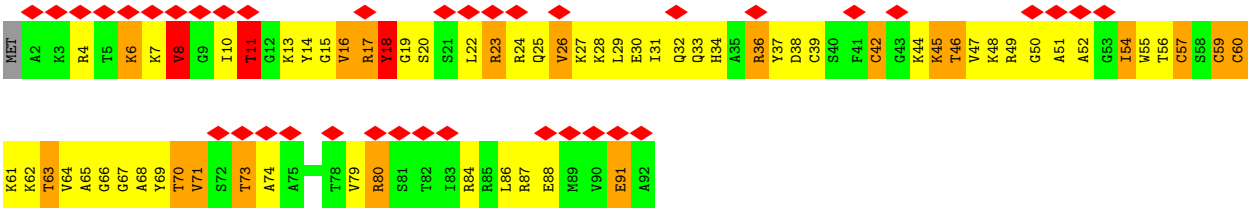




• Molecule 47: eL43 (yeast L43)

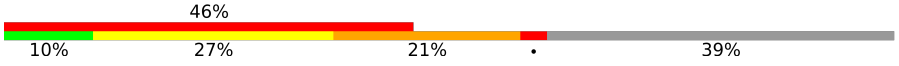
Chain UA:

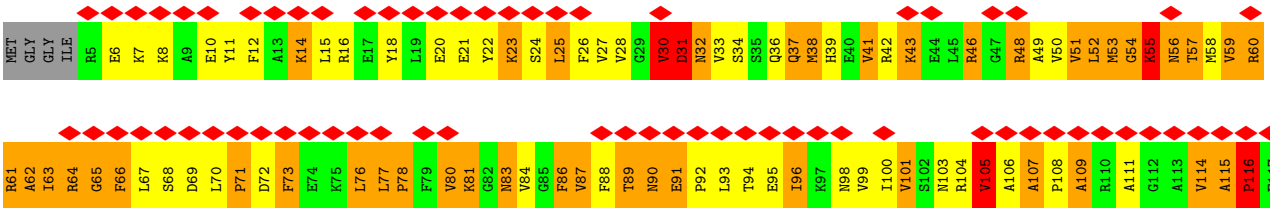


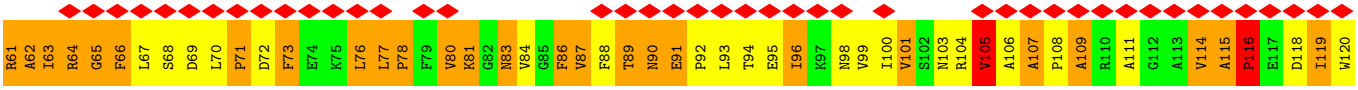


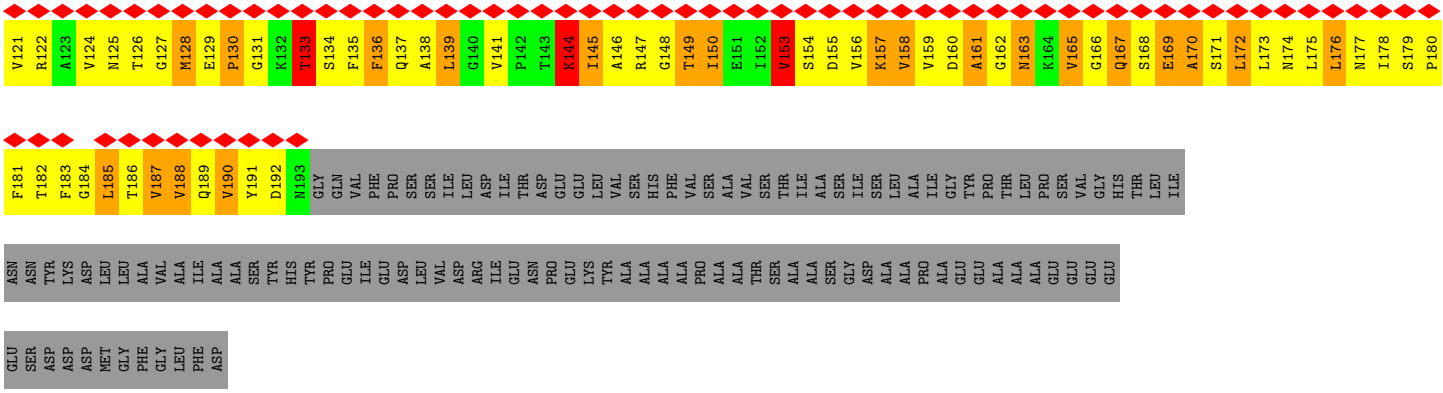
• Molecule 48: uL10 (yeast P0)

Chain VA:



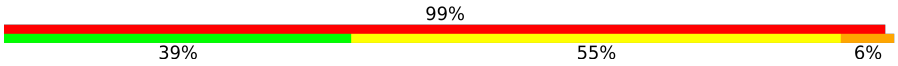


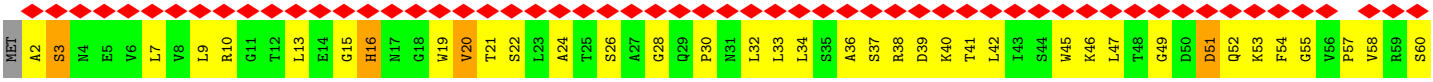


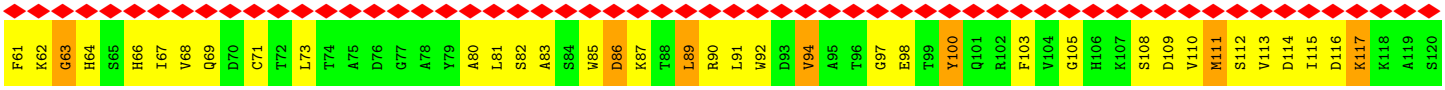


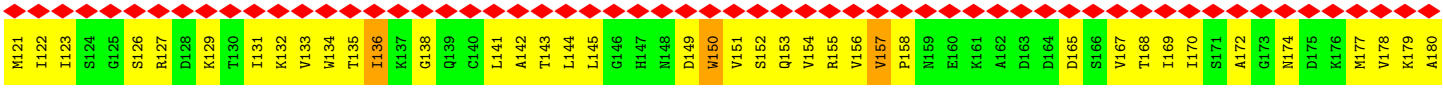
• Molecule 49: RACK1 (yeast Asc1)

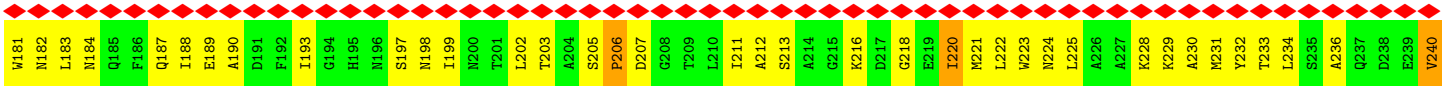
Chain WA:

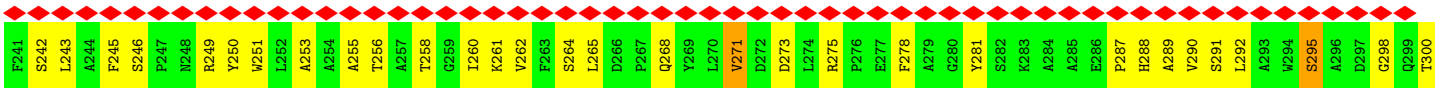


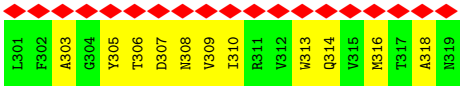






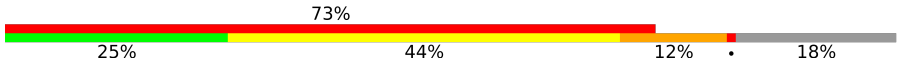


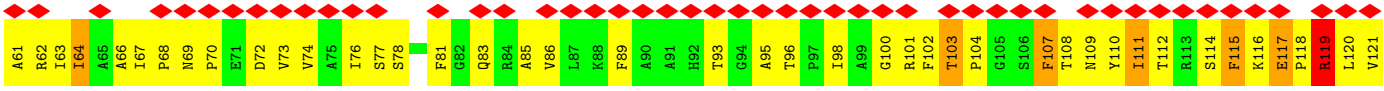


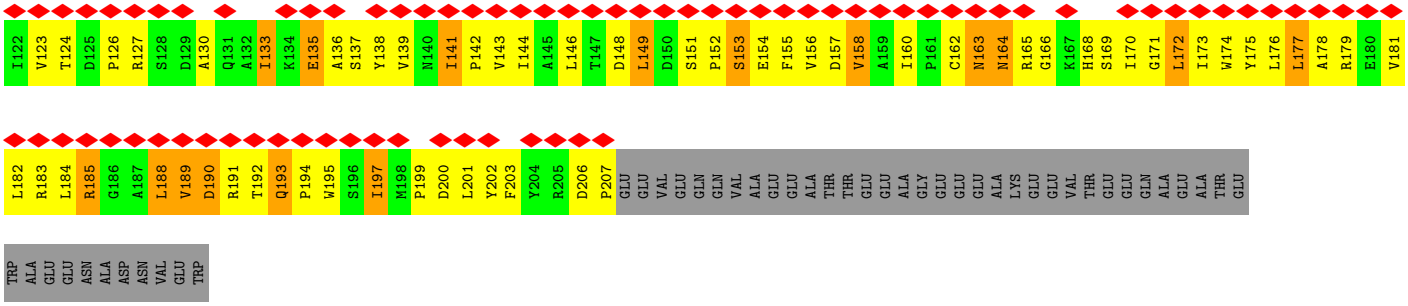


• Molecule 50: uS2 (yeast S0)

Chain XA:

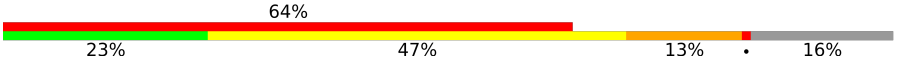


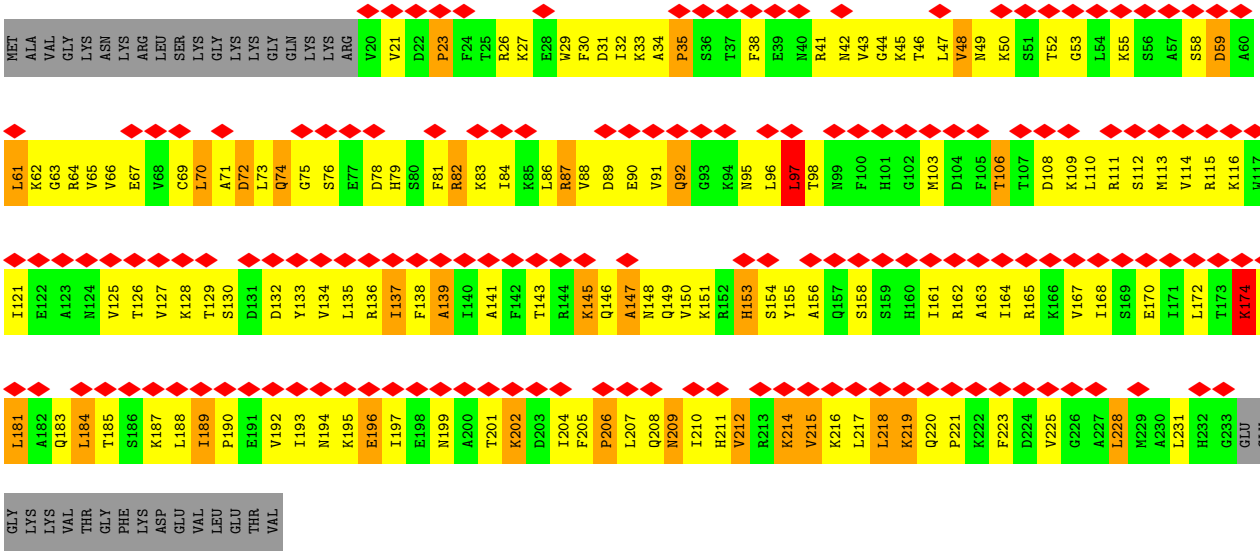




• Molecule 51: eS1 (yeast S1)

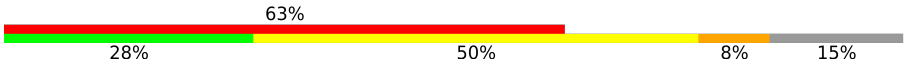
Chain YA:

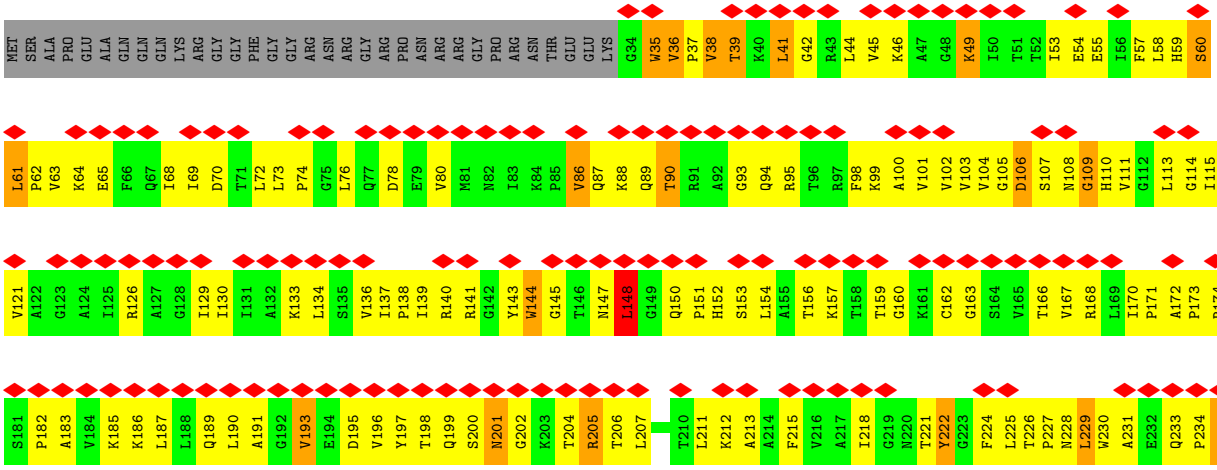


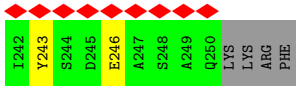


• Molecule 52: uS5 (yeast S2)

Chain ZA:

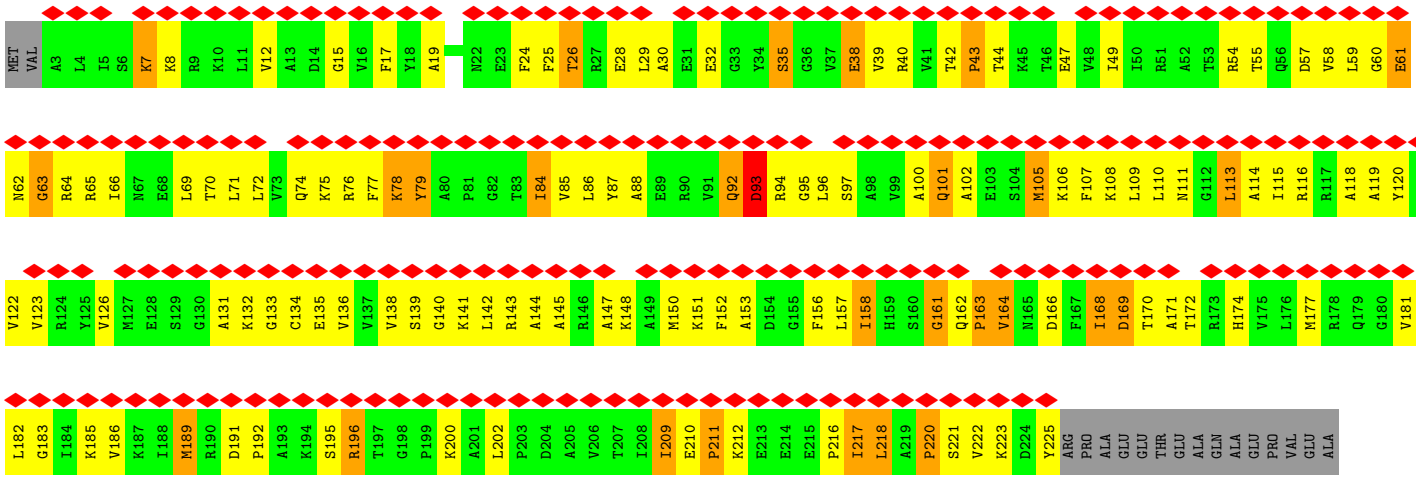






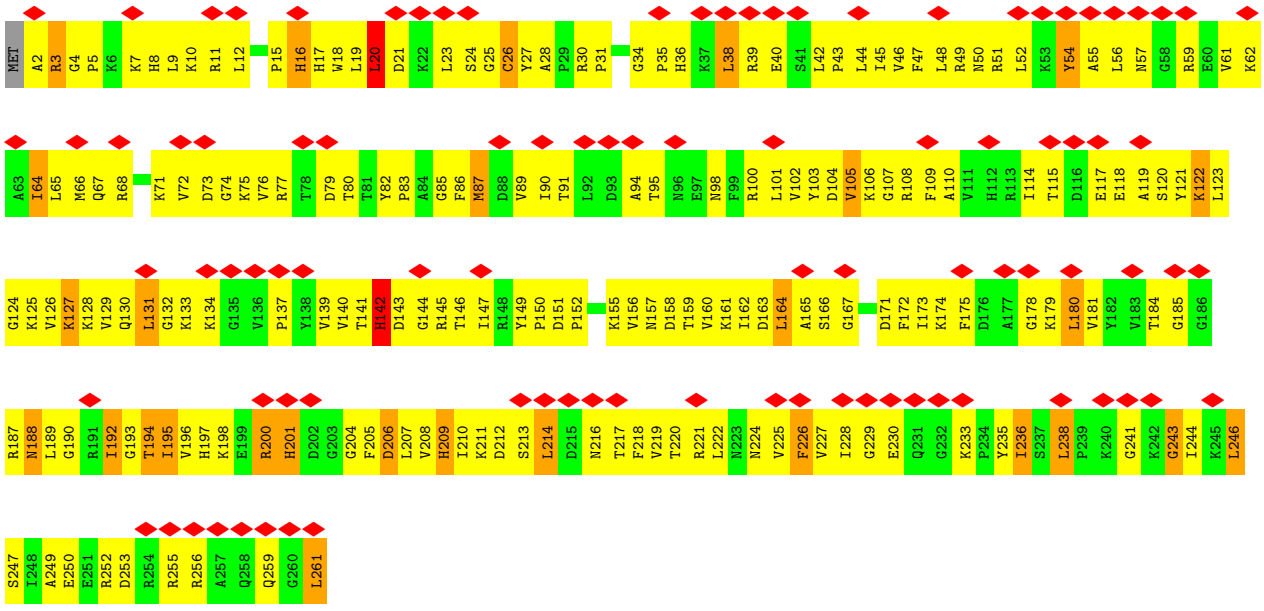
• Molecule 53: uS3 (yeast S3)

Chain AB:



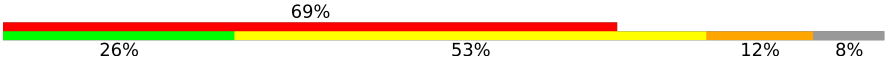
• Molecule 54: eS4 (yeast S4)

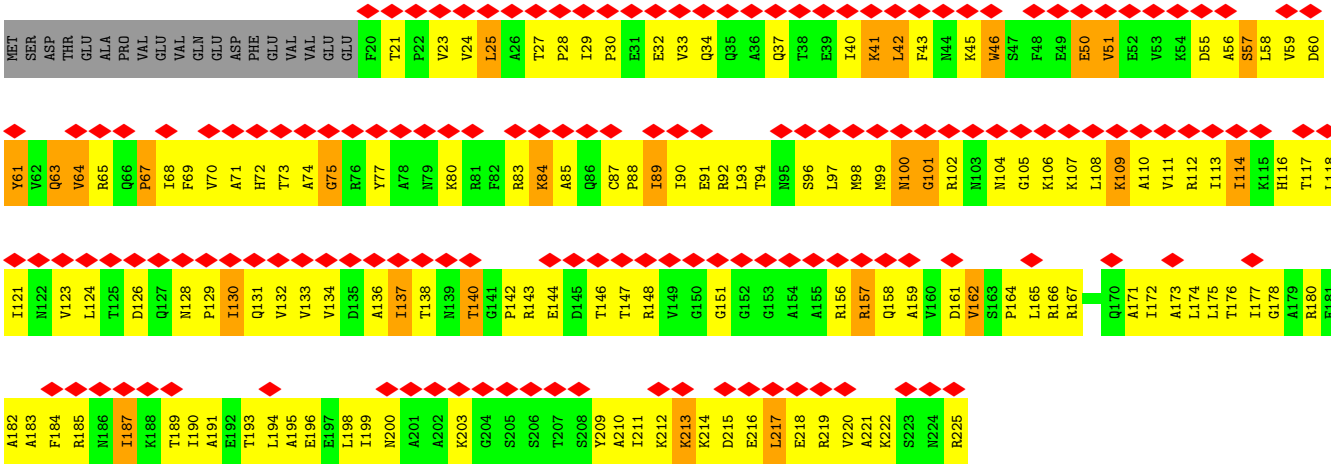
Chain BB:



• Molecule 55: uS7 (yeast S5)

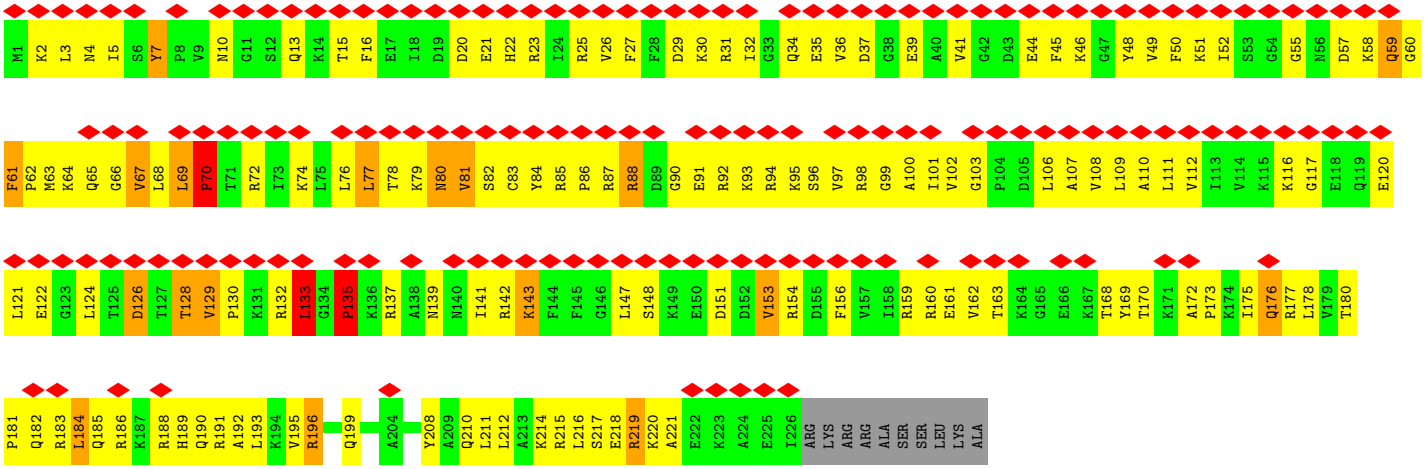
Chain CB:





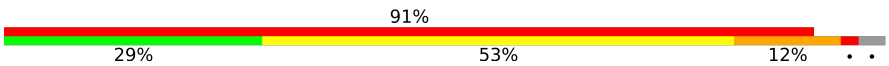
• Molecule 56: eS6 (yeast S6)

Chain DB:



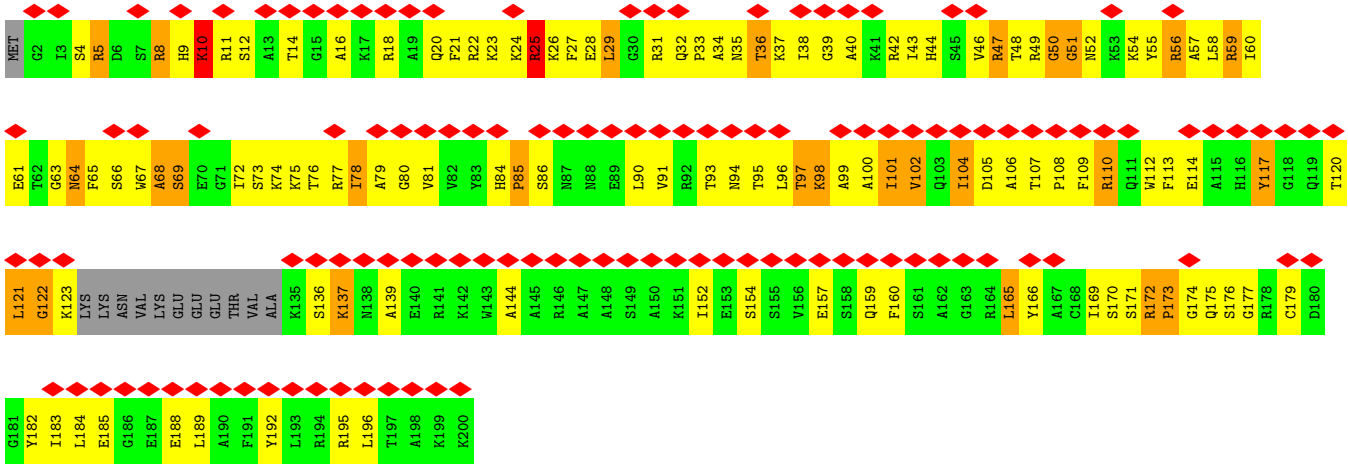
• Molecule 57: eS7 (yeast S7)

Chain EB:



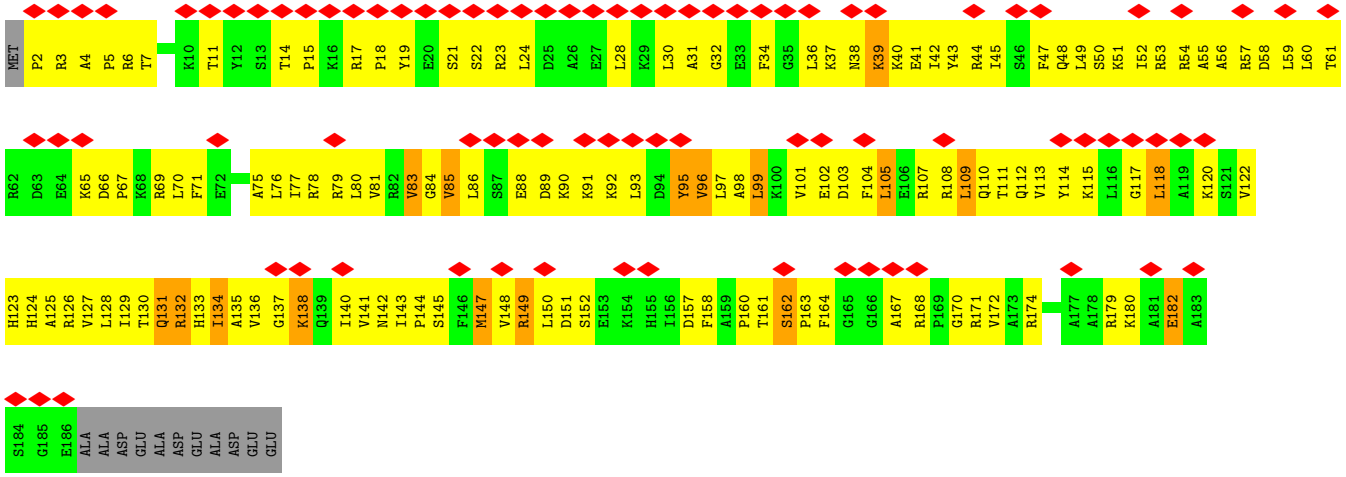
- Molecule 58: eS8 (yeast S8)

Chain FB:



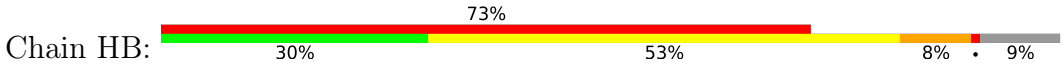
- Molecule 59: uS4 (yeast S9)

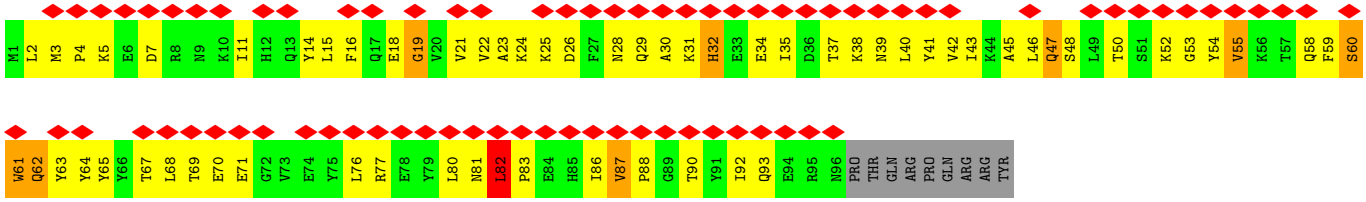
Chain GB:



- Molecule 60: eS10 (yeast S10)

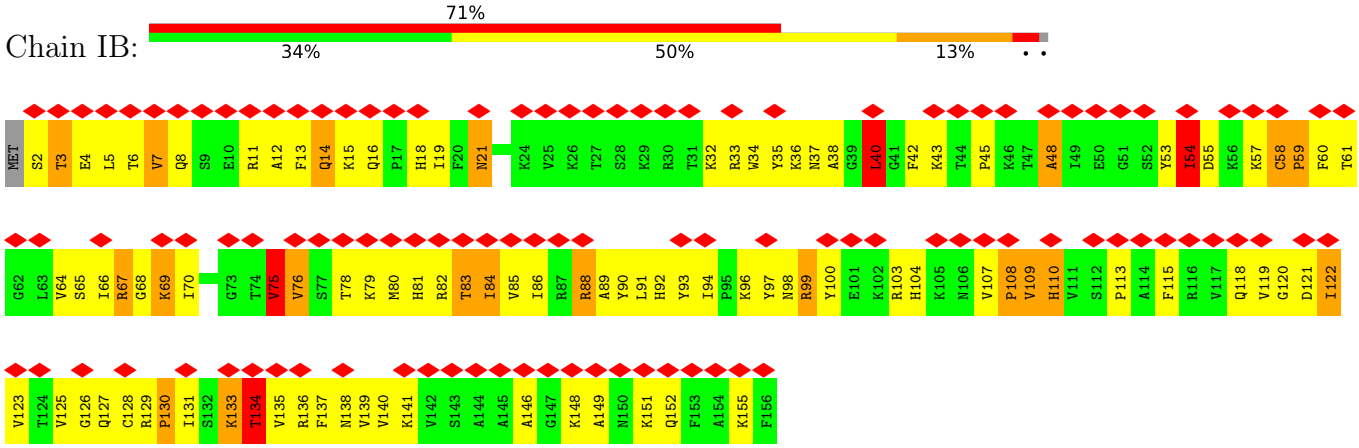
Chain HB:





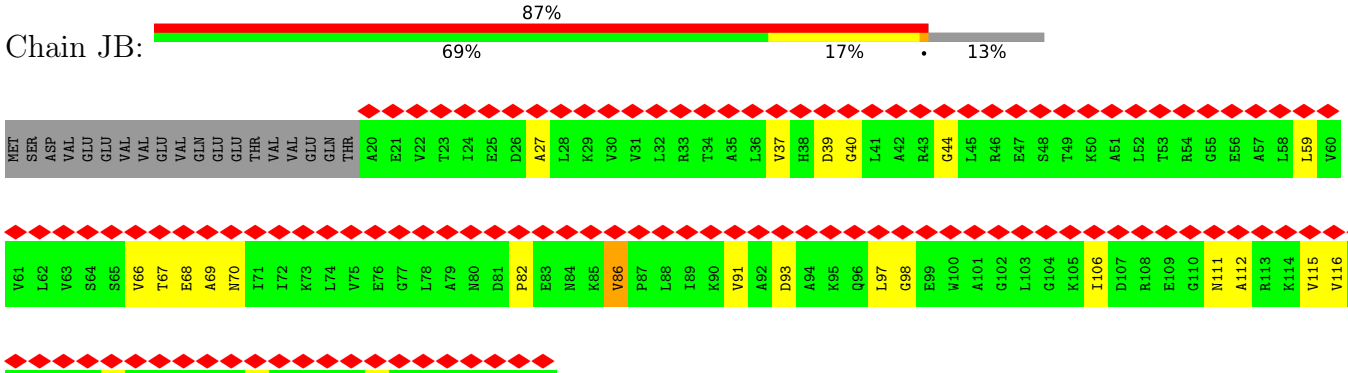
- Molecule 61: uS17 (yeast S11)

Chain IB:



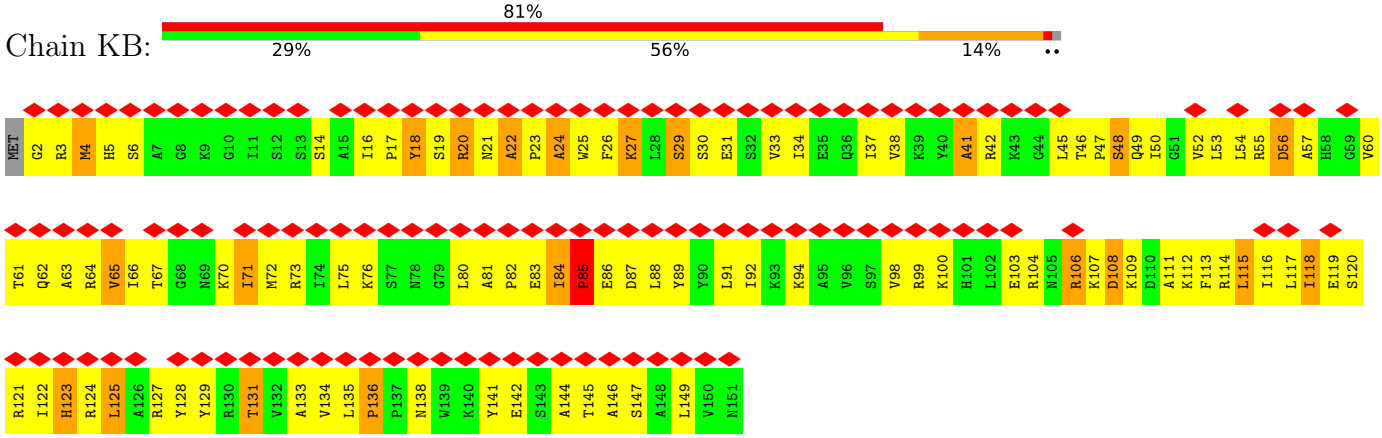
• Molecule 62: eS12 (yeast S12)

Chain JB:



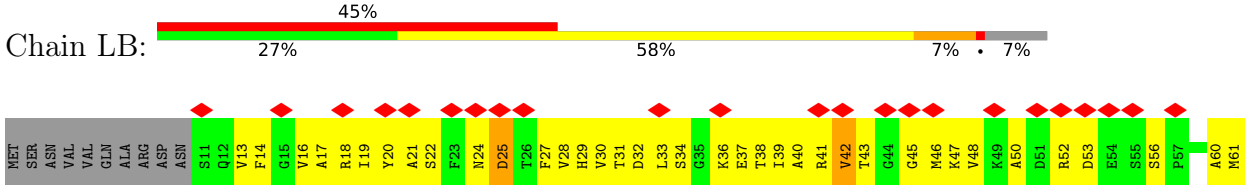
• Molecule 63: uS15 (yeast S13)

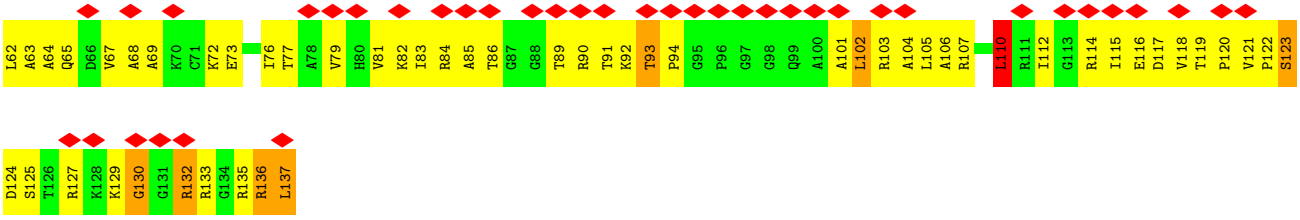
Chain KB:



• Molecule 64: uS11 (yeast S14)

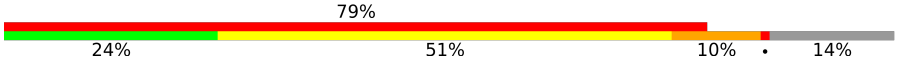
Chain LB:





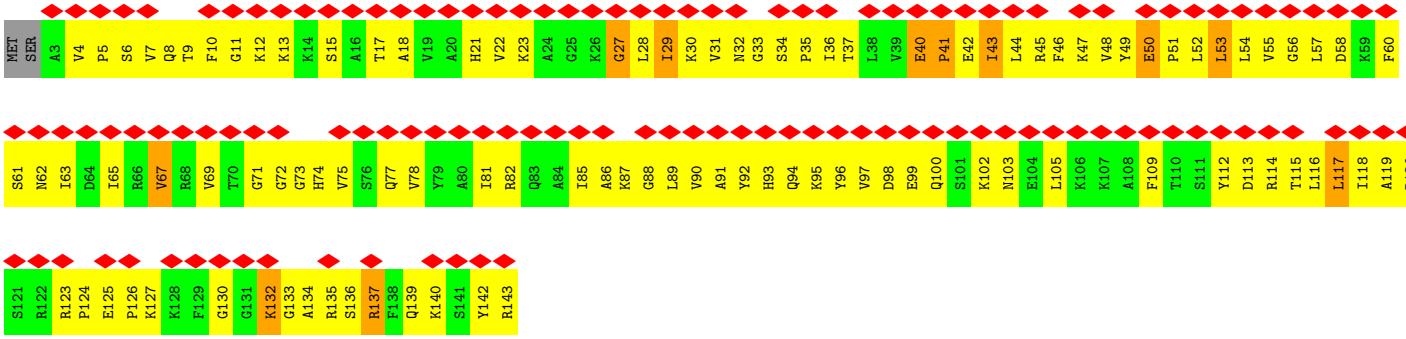
• Molecule 65: uS19 (yeast S15)

Chain MB:



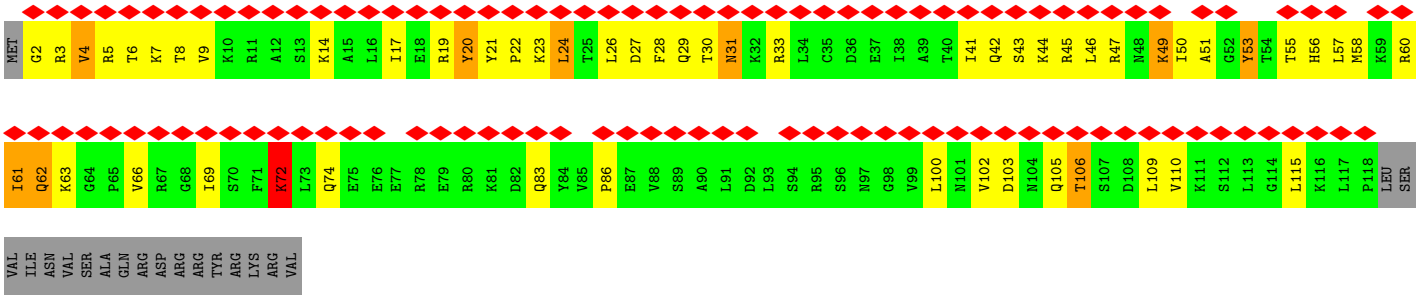
• Molecule 66: uS9 (yeast S16)

Chain NB:



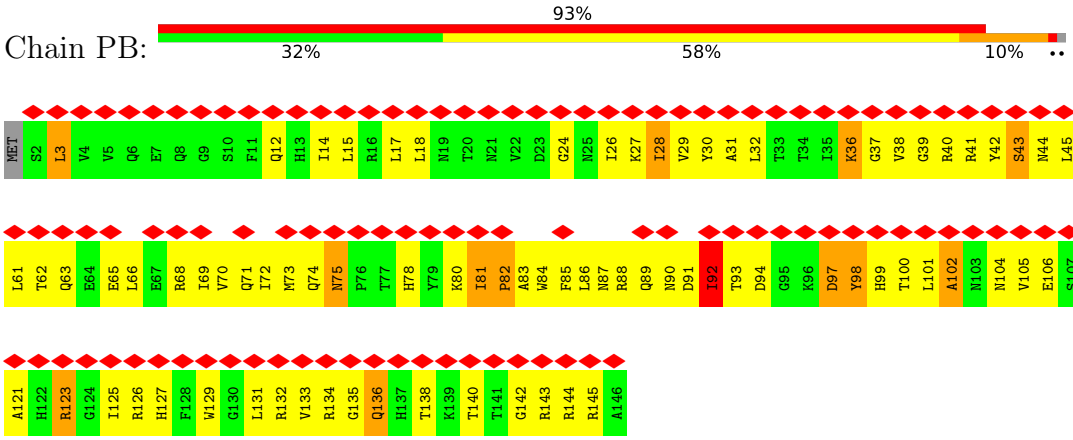
• Molecule 67: eS17 (yeast S17)

Chain OB:



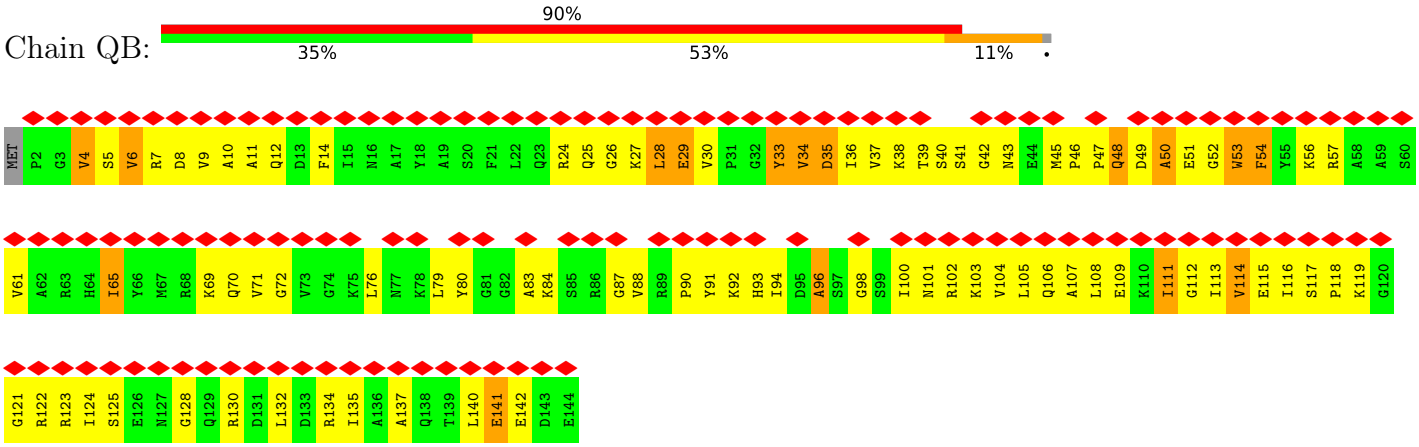
• Molecule 68: uS13 (yeast S18)

Chain PB:



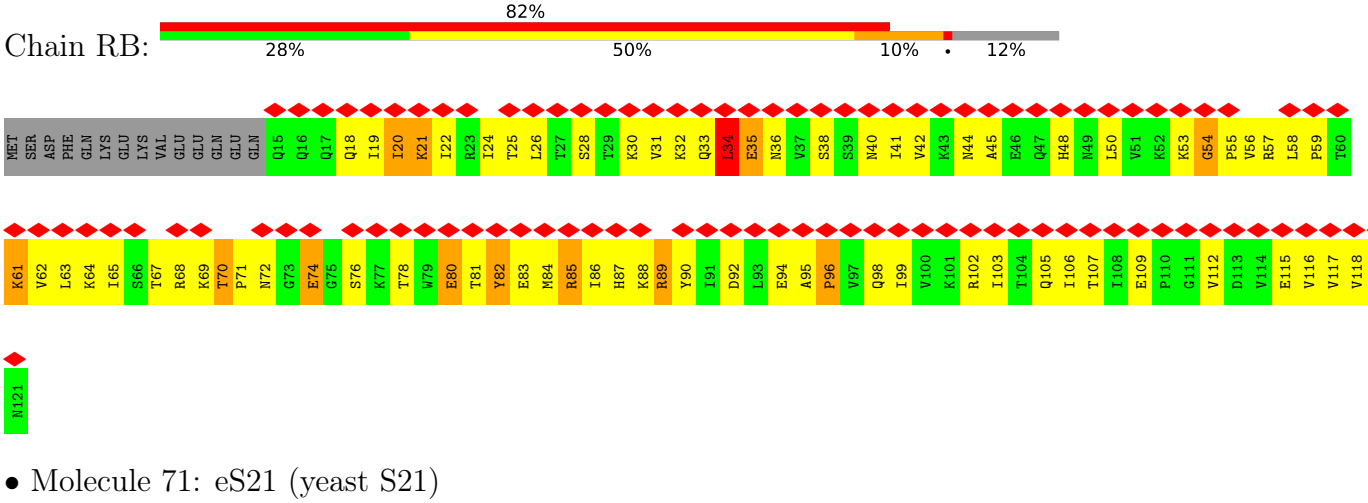
• Molecule 69: eS19 (yeast S19)

Chain QB:



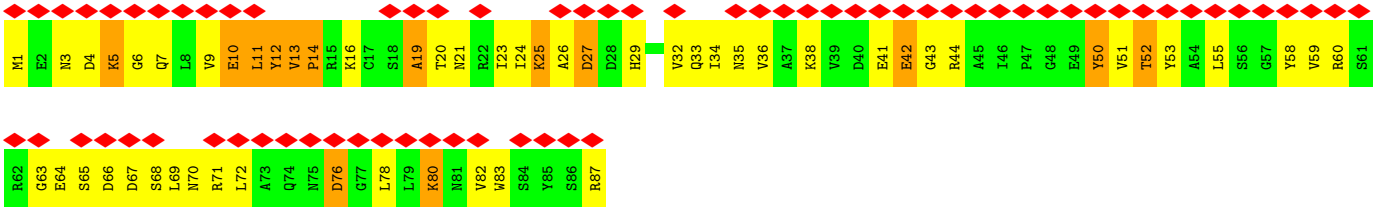
• Molecule 70: uS10 (yeast S20)

Chain RB:



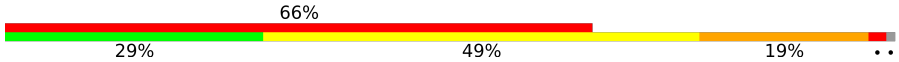
• Molecule 71: eS21 (yeast S21)

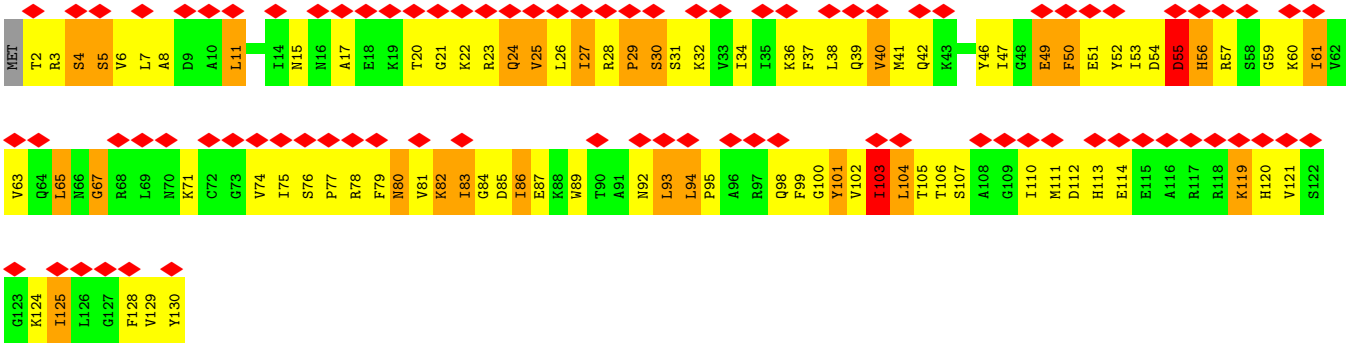
Chain SB:



• Molecule 72: uS8 (yeast S22)

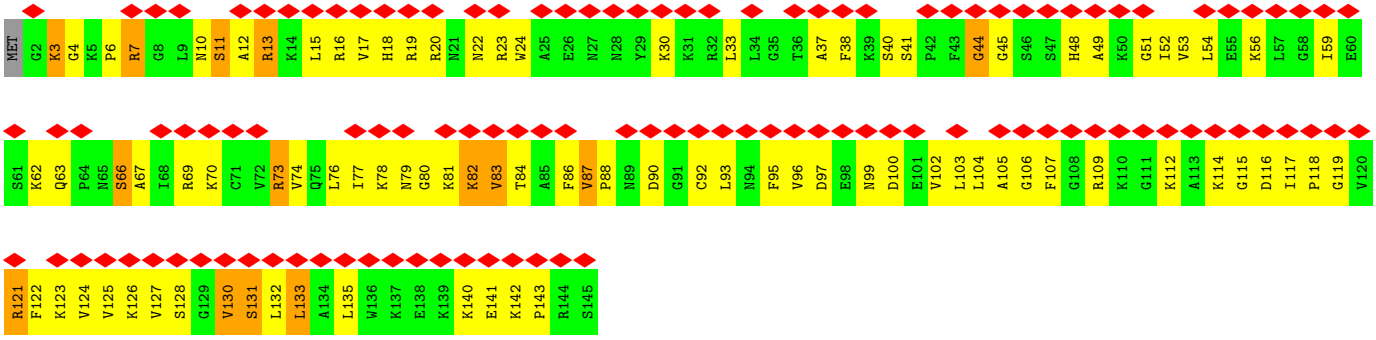
Chain TB:





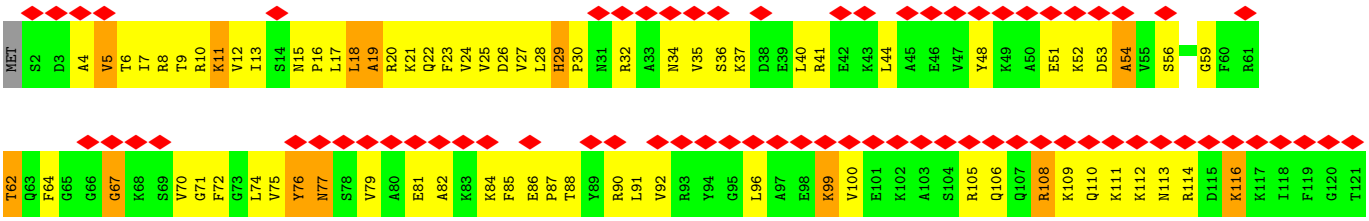
• Molecule 73: uS12 (yeast S23)

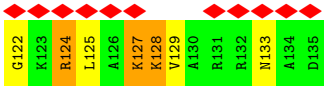
Chain UB:



• Molecule 74: eS24 (yeast S24)

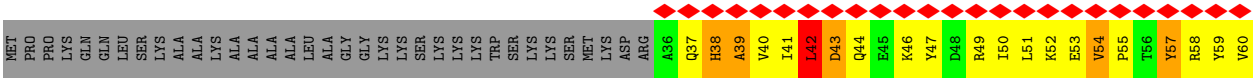
Chain VB:

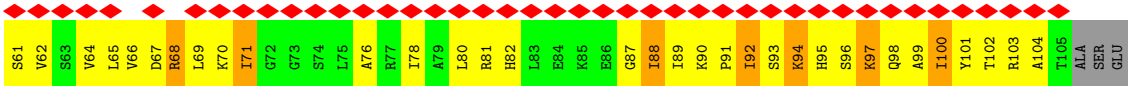




• Molecule 75: eS25 (yeast S25)

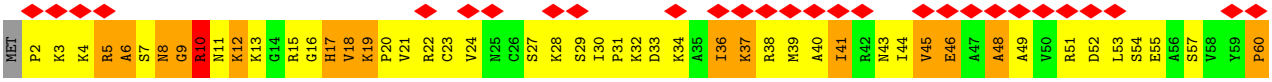
Chain WB:





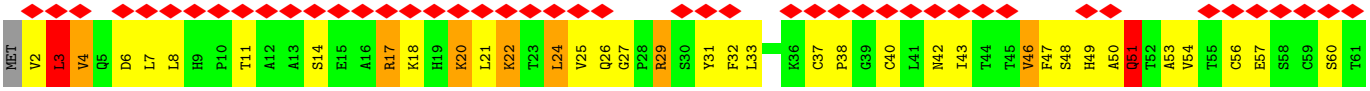
• Molecule 76: eS26 (yeast S26)

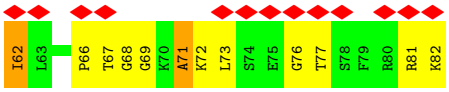
Chain XB:



• Molecule 77: eS27 (yeast S27)

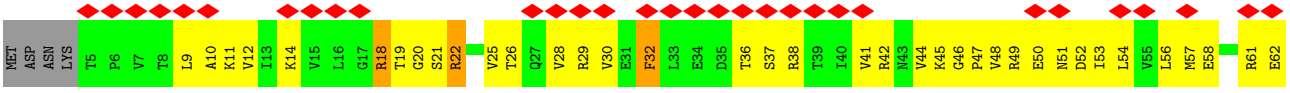
Chain YB:

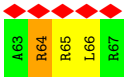




• Molecule 78: eS28 (yeast S28)

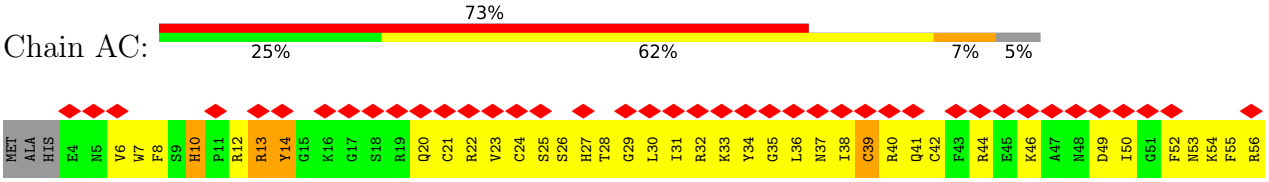
Chain ZB:





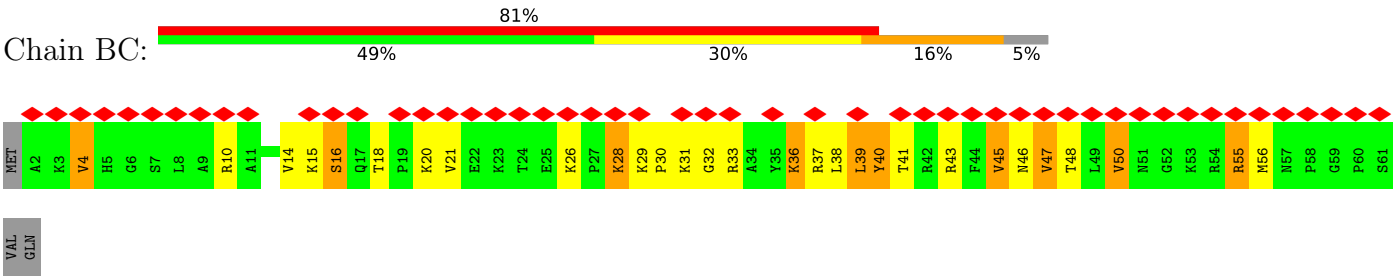
• Molecule 79: uS14 (yeast S29)

Chain AC:



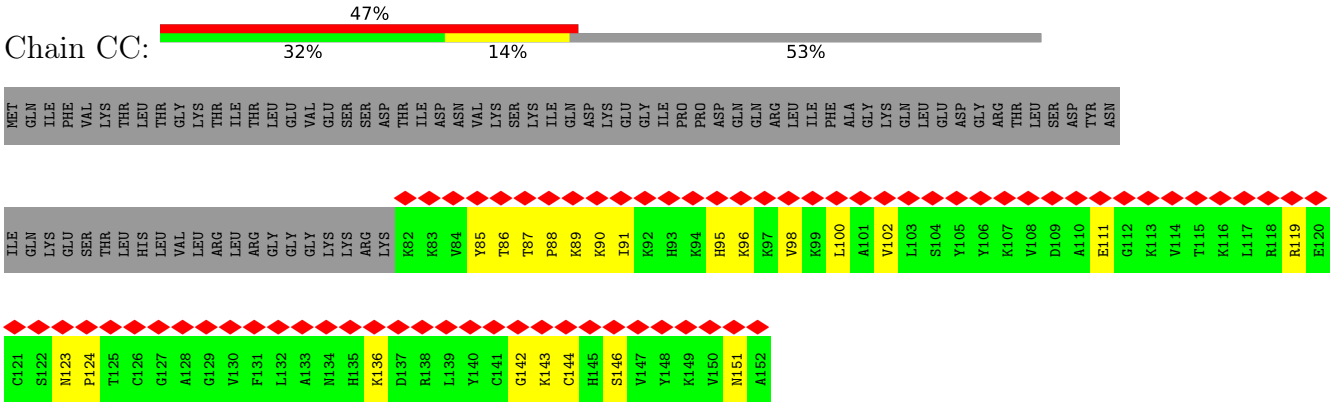
• Molecule 80: eS30 (yeast S30)

Chain BC:



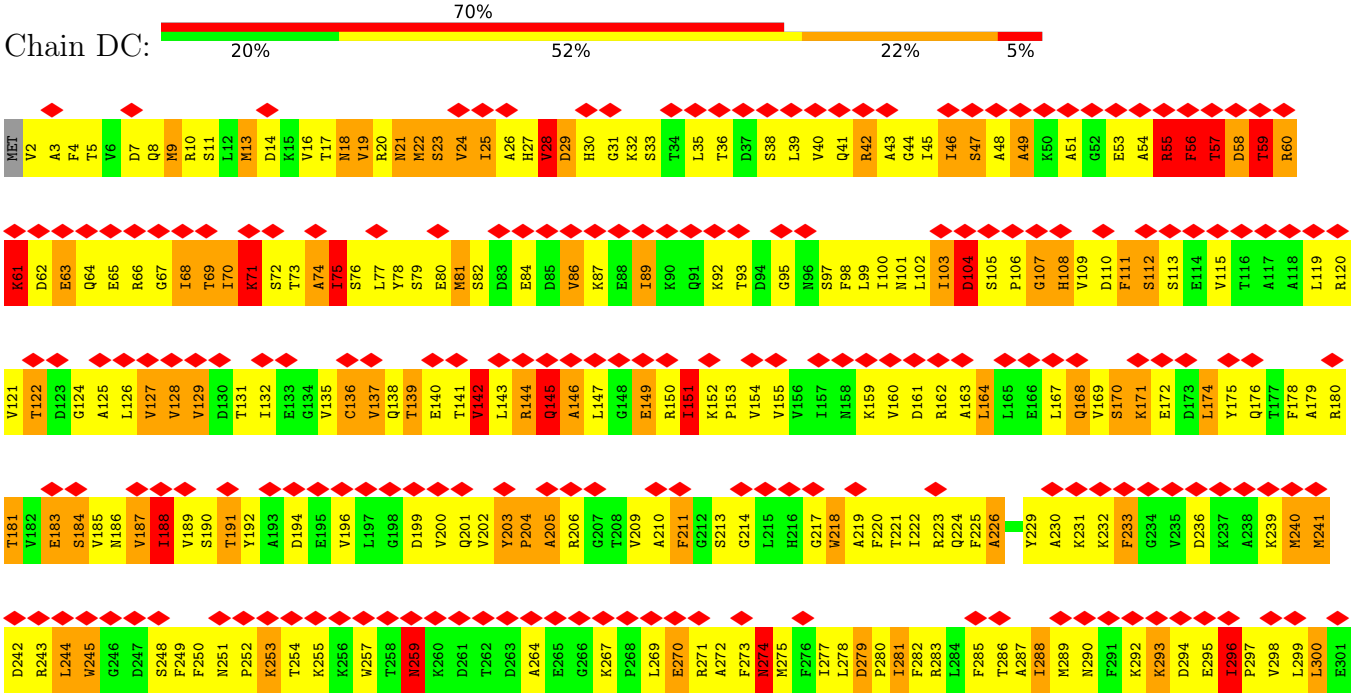
• Molecule 81: eS31 (yeast S31)

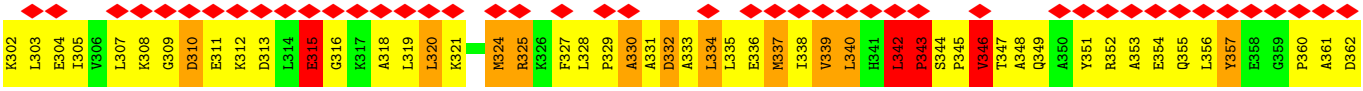
Chain CC:

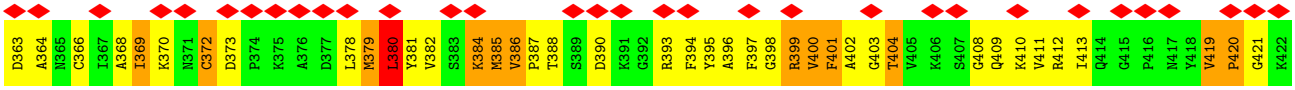


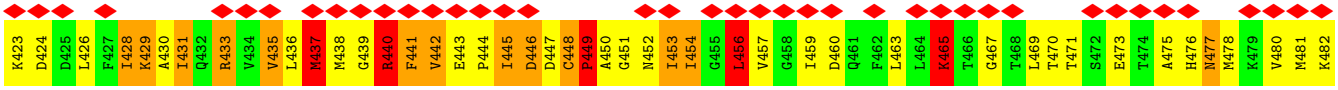
• Molecule 82: yeast eEF2

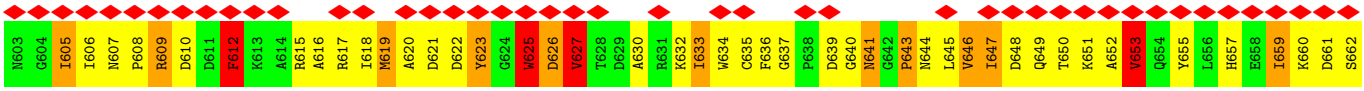
Chain DC:

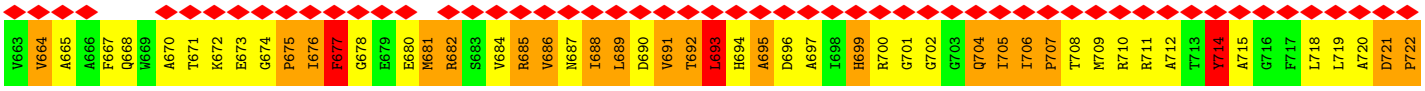


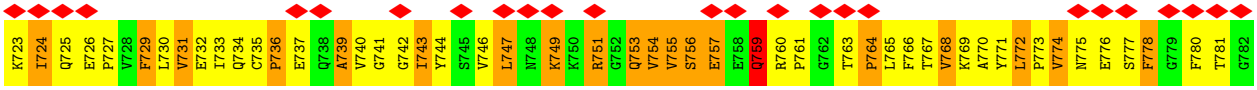


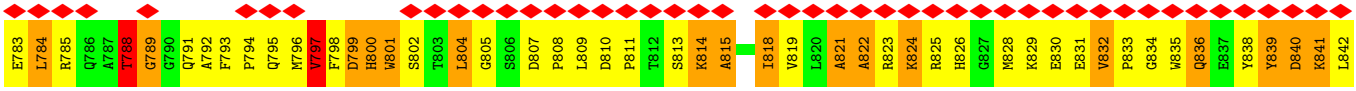






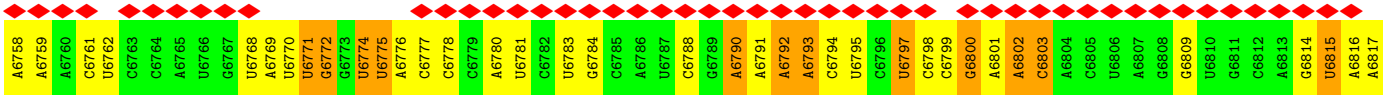


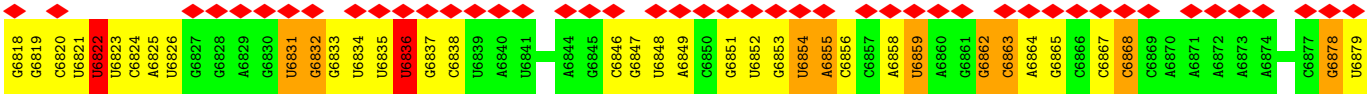


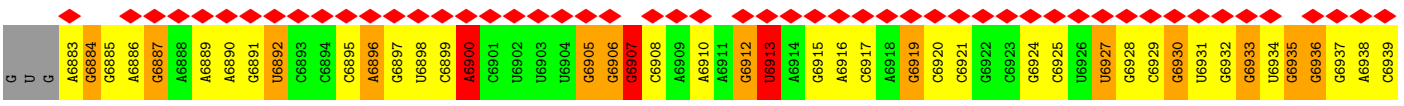


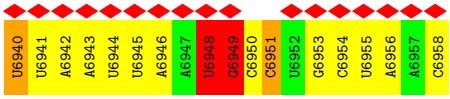
• Molecule 83: IRES

Chain EC:








U6940
U6941
A6942
A6943
U6944
U6945
A6946
A6947
U6948
G6949
C6950
C6951
U6952
G6953
C6954
U6955
A6956
A6957
C6958

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	38047	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	0.130	Depositor
Minimum map value	-0.063	Depositor
Average map value	-0.003	Depositor
Map value standard deviation	0.009	Depositor
Recommended contour level	0.032	Depositor
Map size (Å)	419.84, 419.84, 419.84	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.64, 1.64, 1.64	Depositor

5 Model quality

5.1 Standard geometry

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

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	0.76	0/42096	0.67	29/65570 (0.0%)
2	B	0.96	1/78631 (0.0%)	0.74	107/122552 (0.1%)
3	C	1.01	0/3747	0.74	4/5832 (0.1%)
4	D	0.88	0/2884	0.69	1/4491 (0.0%)
5	E	2.60	124/1377 (9.0%)	1.11	2/1844 (0.1%)
6	F	1.77	30/1952 (1.5%)	1.06	7/2622 (0.3%)
7	G	1.61	27/3153 (0.9%)	1.00	14/4239 (0.3%)
8	H	1.80	46/2802 (1.6%)	1.10	14/3792 (0.4%)
9	I	1.51	16/2426 (0.7%)	1.03	8/3271 (0.2%)
10	J	1.58	10/1425 (0.7%)	1.07	5/1912 (0.3%)
11	K	1.79	18/1822 (1.0%)	1.13	12/2451 (0.5%)
12	L	1.58	11/1850 (0.6%)	1.03	8/2495 (0.3%)
13	M	1.70	19/1540 (1.2%)	0.98	6/2073 (0.3%)
14	N	1.68	15/1754 (0.9%)	1.01	9/2350 (0.4%)
15	O	1.37	4/1375 (0.3%)	0.93	6/1842 (0.3%)
16	P	2.65	73/728 (10.0%)	1.19	5/975 (0.5%)
17	Q	1.61	10/1568 (0.6%)	1.12	9/2106 (0.4%)
18	R	1.82	21/1069 (2.0%)	1.09	6/1438 (0.4%)
19	S	1.79	32/1758 (1.8%)	1.17	10/2354 (0.4%)
20	T	1.69	21/1586 (1.3%)	1.08	8/2128 (0.4%)
21	U	1.85	29/1466 (2.0%)	1.13	14/1968 (0.7%)
22	V	1.76	12/1466 (0.8%)	1.09	6/1965 (0.3%)
23	W	1.49	5/1539 (0.3%)	1.13	13/2050 (0.6%)
24	X	1.77	19/1482 (1.3%)	0.96	7/1990 (0.4%)
25	Y	1.90	29/1301 (2.2%)	1.05	10/1743 (0.6%)
26	Z	1.32	0/812	0.89	1/1099 (0.1%)
27	AA	1.78	20/1019 (2.0%)	1.01	4/1369 (0.3%)
28	BA	1.88	10/521 (1.9%)	1.03	3/691 (0.4%)
29	CA	1.84	14/984 (1.4%)	1.00	5/1325 (0.4%)
30	DA	1.86	25/1005 (2.5%)	1.07	3/1341 (0.2%)
31	EA	1.53	11/1119 (1.0%)	0.90	1/1497 (0.1%)
32	FA	1.74	21/1205 (1.7%)	1.05	10/1612 (0.6%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	GA	1.54	1/474 (0.2%)	1.15	3/629 (0.5%)
34	HA	1.38	1/751 (0.1%)	1.16	8/1008 (0.8%)
35	IA	1.68	9/904 (1.0%)	1.09	7/1213 (0.6%)
36	JA	1.86	19/1041 (1.8%)	1.01	5/1394 (0.4%)
37	KA	1.72	11/869 (1.3%)	0.93	2/1168 (0.2%)
38	LA	1.70	15/891 (1.7%)	1.06	7/1191 (0.6%)
39	MA	1.67	6/979 (0.6%)	1.10	8/1301 (0.6%)
40	NA	1.54	7/779 (0.9%)	1.14	9/1034 (0.9%)
41	OA	1.98	19/697 (2.7%)	1.04	4/923 (0.4%)
42	PA	1.62	6/619 (1.0%)	0.90	2/826 (0.2%)
43	QA	1.83	7/444 (1.6%)	1.13	3/588 (0.5%)
44	RA	1.72	1/424 (0.2%)	1.15	4/562 (0.7%)
45	SA	1.53	1/235 (0.4%)	1.08	1/300 (0.3%)
46	TA	1.65	12/861 (1.4%)	0.91	1/1136 (0.1%)
47	UA	1.64	8/702 (1.1%)	0.98	2/934 (0.2%)
48	VA	2.32	87/1498 (5.8%)	1.26	20/2025 (1.0%)
49	WA	1.38	5/2498 (0.2%)	0.76	3/3398 (0.1%)
50	XA	1.15	1/1651 (0.1%)	1.00	8/2257 (0.4%)
51	YA	1.33	6/1735 (0.3%)	0.91	3/2335 (0.1%)
52	ZA	1.31	1/1665 (0.1%)	0.96	3/2263 (0.1%)
53	AB	1.42	2/1759 (0.1%)	0.93	5/2368 (0.2%)
54	BB	1.23	1/2110 (0.0%)	0.90	6/2839 (0.2%)
55	CB	1.27	1/1630 (0.1%)	0.97	5/2202 (0.2%)
56	DB	1.22	2/1844 (0.1%)	0.94	7/2464 (0.3%)
57	EB	1.37	4/1506 (0.3%)	0.94	3/2028 (0.1%)
58	FB	1.41	4/1515 (0.3%)	0.96	5/2021 (0.2%)
59	GB	1.13	2/1519 (0.1%)	0.96	4/2035 (0.2%)
60	HB	1.46	1/837 (0.1%)	0.92	4/1131 (0.4%)
61	IB	1.62	10/1273 (0.8%)	0.89	1/1712 (0.1%)
62	JB	1.94	4/495 (0.8%)	1.20	1/617 (0.2%)
63	KB	1.47	2/1216 (0.2%)	1.09	10/1638 (0.6%)
64	LB	1.18	1/953 (0.1%)	0.96	2/1279 (0.2%)
65	MB	1.59	6/996 (0.6%)	0.99	2/1335 (0.1%)
66	NB	1.37	3/1126 (0.3%)	0.94	2/1510 (0.1%)
67	OB	1.33	2/844 (0.2%)	1.02	2/1120 (0.2%)
68	PB	1.45	4/1212 (0.3%)	0.95	5/1628 (0.3%)
69	QB	1.40	2/1131 (0.2%)	1.06	5/1517 (0.3%)
70	RB	1.53	3/866 (0.3%)	0.92	2/1169 (0.2%)
71	SB	1.26	0/694	0.90	2/935 (0.2%)
72	TB	1.40	3/1039 (0.3%)	0.95	4/1395 (0.3%)
73	UB	1.42	5/1140 (0.4%)	0.91	0/1518
74	VB	1.16	0/1088	0.94	3/1449 (0.2%)
75	WB	1.41	3/571 (0.5%)	0.98	2/768 (0.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
76	XB	1.34	3/782 (0.4%)	0.90	2/1047 (0.2%)
77	YB	1.39	1/621 (0.2%)	0.89	1/838 (0.1%)
78	ZB	1.26	1/500 (0.2%)	0.78	1/670 (0.1%)
79	AC	1.50	2/454 (0.4%)	0.91	1/602 (0.2%)
80	BC	1.33	0/483	0.90	1/643 (0.2%)
81	CC	1.93	2/283 (0.7%)	1.00	2/352 (0.6%)
82	DC	2.15	268/6665 (4.0%)	1.13	43/9022 (0.5%)
83	EC	1.38	0/4579	0.91	18/7119 (0.3%)
All	All	1.28	1238/230910 (0.5%)	0.85	601/338443 (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	21
2	B	0	92
3	C	0	4
4	D	0	3
6	F	0	1
83	EC	0	8
All	All	0	129

All (1238) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	61	LYS	CA-C	16.90	1.61	1.52
11	K	96	PRO	CA-C	15.57	1.60	1.51
82	DC	799	ASP	CA-C	12.16	1.60	1.53
63	KB	136	PRO	CA-C	12.06	1.58	1.51
29	CA	64	GLU	CA-C	11.10	1.59	1.53
25	Y	154	VAL	CA-C	10.70	1.60	1.52
6	F	54	ARG	CA-C	10.60	1.57	1.52
28	BA	48	ARG	CA-C	10.29	1.61	1.52
14	N	123	HIS	CA-C	10.09	1.57	1.52
9	I	176	SER	CA-C	10.08	1.58	1.53
20	T	109	PRO	CA-C	9.63	1.58	1.52
5	E	5	THR	CA-C	9.24	1.62	1.52
82	DC	788	THR	CA-CB	9.02	1.60	1.53
5	E	95	LYS	CA-C	8.91	1.60	1.52
51	YA	74	GLN	CA-C	8.80	1.56	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	E	123	LEU	CA-C	8.74	1.60	1.52
82	DC	253	LYS	CA-C	8.72	1.60	1.52
16	P	64	ILE	CA-CB	8.70	1.63	1.53
82	DC	552	VAL	CA-C	8.70	1.62	1.52
82	DC	706	ILE	CA-C	8.52	1.61	1.52
36	JA	28	VAL	CA-C	8.52	1.60	1.52
25	Y	137	GLU	CA-C	8.35	1.58	1.53
11	K	228	SER	CA-C	8.27	1.59	1.52
2	B	503	C	O3'-P	8.12	1.73	1.61
21	U	36	ILE	CA-C	8.09	1.63	1.52
46	TA	103	ALA	CA-C	8.09	1.57	1.52
82	DC	799	ASP	N-CA	8.09	1.51	1.46
82	DC	807	ASP	CA-C	8.08	1.61	1.52
41	OA	36	SER	CA-C	7.96	1.56	1.52
11	K	185	ILE	CA-CB	7.91	1.63	1.54
82	DC	245	TRP	CA-C	7.91	1.61	1.52
5	E	197	ASN	CA-C	7.90	1.63	1.52
82	DC	9	MET	SD-CE	7.79	1.99	1.79
16	P	106	LEU	CA-C	7.73	1.61	1.52
5	E	136	THR	CA-C	7.69	1.61	1.52
48	VA	77	LEU	CA-C	7.63	1.61	1.52
19	S	81	TYR	CA-C	7.61	1.61	1.53
16	P	69	ALA	CA-C	7.60	1.60	1.53
35	IA	52	ALA	CA-C	7.60	1.59	1.52
82	DC	622	ASP	CA-C	7.57	1.60	1.52
48	VA	130	PRO	CA-C	7.56	1.60	1.52
82	DC	437	MET	SD-CE	7.56	1.98	1.79
6	F	165	VAL	CA-C	7.55	1.61	1.53
38	LA	22	VAL	CA-CB	7.53	1.61	1.53
5	E	209	SER	CA-C	7.51	1.62	1.52
16	P	60	VAL	CA-C	7.50	1.60	1.52
82	DC	444	PRO	CA-C	7.50	1.60	1.52
16	P	71	ALA	CA-C	7.49	1.61	1.52
5	E	13	VAL	CA-CB	7.49	1.63	1.54
19	S	75	VAL	CA-C	7.48	1.60	1.52
16	P	65	GLN	CA-C	7.47	1.61	1.52
32	FA	118	ILE	CA-C	7.46	1.60	1.52
82	DC	749	LYS	CA-C	7.45	1.58	1.52
6	F	204	MET	SD-CE	7.42	1.98	1.79
6	F	165	VAL	CA-CB	7.41	1.62	1.53
19	S	174	ILE	CA-CB	7.40	1.62	1.53
48	VA	141	VAL	CA-C	7.38	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	E	214	PHE	CA-C	7.38	1.62	1.53
5	E	194	LEU	CA-C	7.38	1.61	1.52
82	DC	203	TYR	CA-C	7.34	1.58	1.52
48	VA	90	ASN	CA-C	7.29	1.61	1.52
69	QB	69	LYS	CA-C	7.26	1.56	1.52
82	DC	296	ILE	CA-C	7.24	1.60	1.52
6	F	88	ILE	CA-CB	7.20	1.61	1.54
8	H	222	VAL	CA-C	7.19	1.60	1.52
82	DC	315	GLU	CA-C	7.19	1.61	1.52
30	DA	96	PRO	CA-C	7.17	1.61	1.52
5	E	116	LEU	CA-C	7.17	1.61	1.52
82	DC	840	ASP	CA-C	7.14	1.61	1.52
35	IA	52	ALA	N-CA	7.14	1.50	1.46
43	QA	40	LYS	CA-C	7.14	1.61	1.53
21	U	161	ALA	CA-C	7.13	1.57	1.53
17	Q	55	ARG	CA-C	7.11	1.60	1.52
82	DC	607	ASN	CA-C	7.09	1.59	1.52
5	E	2	SER	CA-C	7.09	1.61	1.52
5	E	212	PRO	CA-C	7.07	1.60	1.52
82	DC	558	PRO	CA-C	7.07	1.58	1.52
5	E	4	ILE	CA-CB	7.06	1.62	1.54
28	BA	8	PHE	CA-C	7.05	1.57	1.52
28	BA	14	TYR	CA-C	7.05	1.59	1.52
61	IB	84	ILE	CA-C	7.00	1.60	1.52
24	X	110	MET	SD-CE	6.99	1.97	1.79
5	E	4	ILE	CA-C	6.99	1.60	1.52
16	P	73	VAL	CA-C	6.99	1.61	1.52
16	P	116	MET	CA-C	6.97	1.62	1.52
53	AB	209	ILE	CA-C	6.97	1.58	1.52
19	S	36	ILE	CA-CB	6.97	1.61	1.53
16	P	57	LYS	CA-C	6.96	1.60	1.52
11	K	216	VAL	CA-C	6.96	1.60	1.52
48	VA	188	VAL	CA-C	6.96	1.61	1.52
82	DC	51	ALA	CA-C	6.93	1.60	1.53
82	DC	548	ASP	CA-C	6.92	1.57	1.52
43	QA	41	ARG	CA-C	6.92	1.60	1.52
10	J	27	PRO	CA-C	6.91	1.59	1.52
16	P	66	ASN	CA-C	6.90	1.59	1.53
82	DC	419	VAL	CA-CB	6.89	1.59	1.54
11	K	243	MET	SD-CE	6.88	1.96	1.79
30	DA	8	VAL	CA-C	6.88	1.60	1.52
16	P	61	GLN	CA-C	6.87	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	688	ILE	CA-C	6.87	1.60	1.52
82	DC	832	VAL	CA-C	6.86	1.60	1.52
41	OA	69	HIS	CA-C	6.84	1.58	1.52
42	PA	55	VAL	CA-C	6.83	1.59	1.53
5	E	112	ALA	CA-C	6.83	1.60	1.52
27	AA	22	ILE	CA-CB	6.82	1.62	1.54
82	DC	589	LYS	CA-C	6.81	1.60	1.52
82	DC	691	VAL	CA-C	6.81	1.61	1.52
5	E	114	GLU	CA-C	6.81	1.62	1.52
52	ZA	61	LEU	CA-C	6.80	1.58	1.52
79	AC	27	HIS	CA-C	6.80	1.58	1.52
82	DC	673	GLU	CA-C	6.79	1.60	1.53
16	P	104	ILE	CA-C	6.78	1.61	1.52
82	DC	627	VAL	CA-C	6.78	1.61	1.52
16	P	116	MET	SD-CE	6.78	1.96	1.79
82	DC	705	ILE	CA-CB	6.77	1.62	1.54
32	FA	121	VAL	CA-C	6.76	1.59	1.52
5	E	138	VAL	CA-C	6.75	1.61	1.52
5	E	174	MET	SD-CE	6.74	1.96	1.79
21	U	76	PHE	CA-C	6.72	1.61	1.52
20	T	110	PRO	CA-C	6.71	1.58	1.52
5	E	9	VAL	CA-C	6.69	1.61	1.52
48	VA	150	ILE	CA-CB	6.69	1.61	1.53
82	DC	56	PHE	CA-C	6.68	1.61	1.52
5	E	26	ARG	CA-C	6.68	1.61	1.53
82	DC	24	VAL	CA-C	6.68	1.61	1.52
82	DC	60	ARG	CA-C	6.68	1.60	1.52
25	Y	154	VAL	CA-CB	6.67	1.59	1.54
82	DC	448	CYS	CA-C	6.67	1.60	1.52
16	P	73	VAL	CA-CB	6.66	1.63	1.54
82	DC	324	MET	SD-CE	6.65	1.96	1.79
82	DC	339	VAL	CA-C	6.62	1.59	1.52
51	YA	220	GLN	CA-C	6.62	1.58	1.52
7	G	73	VAL	CA-CB	6.62	1.61	1.54
48	VA	91	GLU	CA-C	6.60	1.61	1.53
8	H	261	VAL	CA-C	6.60	1.61	1.52
82	DC	188	ILE	CA-CB	6.60	1.62	1.54
10	J	26	ARG	CA-C	6.59	1.58	1.52
8	H	249	ILE	CA-C	6.58	1.59	1.52
7	G	242	THR	CA-C	6.58	1.60	1.52
41	OA	27	PHE	CA-C	6.58	1.60	1.52
5	E	215	ARG	CA-C	6.57	1.61	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	OA	70	VAL	CA-C	6.56	1.61	1.52
9	I	173	VAL	CA-C	6.56	1.59	1.52
82	DC	89	ILE	CA-C	6.55	1.60	1.52
5	E	18	LYS	CA-C	6.53	1.61	1.52
5	E	98	LYS	CA-C	6.53	1.60	1.52
29	CA	51	VAL	CA-C	6.53	1.59	1.52
5	E	27	ASN	CA-C	6.53	1.61	1.52
19	S	135	VAL	CA-CB	6.52	1.61	1.54
16	P	107	ASP	CA-C	6.52	1.61	1.52
36	JA	39	ASP	CA-C	6.52	1.60	1.52
32	FA	39	HIS	CA-C	6.51	1.61	1.52
22	V	157	PRO	CA-C	6.51	1.59	1.52
29	CA	86	VAL	CA-C	6.51	1.60	1.52
82	DC	768	VAL	CA-C	6.51	1.58	1.53
82	DC	74	ALA	CA-C	6.51	1.60	1.53
16	P	124	THR	CA-C	6.51	1.60	1.53
82	DC	13	MET	SD-CE	6.50	1.95	1.79
82	DC	557	SER	CA-C	6.49	1.59	1.52
82	DC	127	VAL	CA-C	6.49	1.60	1.52
25	Y	72	VAL	CA-CB	6.49	1.61	1.53
16	P	108	GLU	CA-C	6.49	1.61	1.52
24	X	70	THR	CA-C	6.48	1.59	1.53
66	NB	4	VAL	CA-C	6.48	1.58	1.53
5	E	134	PHE	CA-C	6.47	1.60	1.52
16	P	64	ILE	CA-C	6.47	1.60	1.52
35	IA	60	TRP	CA-C	6.47	1.58	1.52
48	VA	30	VAL	CA-CB	6.47	1.63	1.54
82	DC	128	VAL	CA-C	6.47	1.60	1.52
17	Q	47	ALA	CA-C	6.46	1.60	1.52
30	DA	81	GLN	CA-C	6.46	1.60	1.52
18	R	53	VAL	CA-C	6.46	1.59	1.52
27	AA	75	PRO	CA-C	6.45	1.59	1.52
40	NA	87	VAL	CA-CB	6.45	1.61	1.54
6	F	61	VAL	CA-C	6.45	1.59	1.53
48	VA	165	VAL	CA-C	6.45	1.59	1.53
82	DC	187	VAL	CA-C	6.45	1.61	1.52
82	DC	841	LYS	CA-C	6.44	1.60	1.52
14	N	27	PRO	CA-C	6.44	1.60	1.52
16	P	87	GLU	CA-C	6.43	1.61	1.53
21	U	83	TRP	CA-C	6.43	1.60	1.52
14	N	159	PHE	CA-C	6.43	1.59	1.52
13	M	99	ILE	CA-C	6.41	1.58	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	E	90	LEU	CA-C	6.40	1.61	1.52
82	DC	442	VAL	CA-C	6.40	1.60	1.52
5	E	13	VAL	CA-C	6.40	1.60	1.52
48	VA	78	PRO	CA-C	6.39	1.61	1.52
19	S	151	ILE	CA-C	6.39	1.60	1.52
13	M	144	ILE	CA-CB	6.38	1.60	1.53
19	S	162	ARG	CA-C	6.37	1.58	1.52
82	DC	705	ILE	CA-C	6.37	1.61	1.52
16	P	125	LEU	CA-C	6.37	1.61	1.52
30	DA	106	ILE	CA-CB	6.36	1.60	1.54
82	DC	643	PRO	CA-C	6.35	1.61	1.52
5	E	117	ILE	CA-C	6.35	1.60	1.52
20	T	119	VAL	CA-C	6.35	1.61	1.52
76	XB	82	ARG	CA-C	6.34	1.57	1.53
76	XB	97	PRO	CA-C	6.34	1.58	1.52
82	DC	149	GLU	CA-C	6.34	1.61	1.52
16	P	88	PRO	CA-C	6.33	1.58	1.52
41	OA	33	THR	CA-C	6.33	1.60	1.52
82	DC	688	ILE	CA-CB	6.33	1.61	1.53
82	DC	57	THR	CA-C	6.32	1.61	1.52
32	FA	118	ILE	CA-CB	6.32	1.62	1.54
82	DC	801	TRP	CA-C	6.32	1.59	1.52
19	S	13	LYS	CA-C	6.30	1.61	1.53
51	YA	61	LEU	CA-C	6.30	1.57	1.52
82	DC	619	MET	SD-CE	6.30	1.95	1.79
38	LA	22	VAL	CA-C	6.29	1.59	1.53
82	DC	547	HIS	CA-C	6.29	1.60	1.53
82	DC	588	LEU	CA-C	6.26	1.60	1.53
41	OA	5	THR	CA-C	6.26	1.60	1.52
41	OA	63	ARG	CA-C	6.26	1.61	1.53
11	K	139	PRO	CA-C	6.26	1.60	1.52
5	E	120	VAL	CA-C	6.25	1.59	1.52
29	CA	55	ASN	CA-C	6.25	1.61	1.52
61	IB	134	THR	CA-C	6.25	1.60	1.52
48	VA	139	LEU	CA-C	6.25	1.60	1.53
12	L	195	SER	CA-C	6.24	1.58	1.52
48	VA	92	PRO	CA-C	6.24	1.59	1.52
48	VA	23	LYS	CA-C	6.23	1.61	1.52
5	E	88	ASP	CA-C	6.23	1.61	1.52
5	E	213	ALA	CA-C	6.22	1.60	1.52
19	S	157	LYS	CA-C	6.22	1.60	1.52
33	GA	35	VAL	CA-C	6.22	1.58	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	VA	134	SER	CA-C	6.22	1.61	1.52
16	P	146	LYS	CA-C	6.21	1.60	1.52
48	VA	141	VAL	CA-CB	6.21	1.62	1.54
8	H	74	ILE	CA-C	6.21	1.59	1.52
82	DC	25	ILE	CA-CB	6.21	1.61	1.54
38	LA	51	LEU	CA-C	6.20	1.59	1.52
6	F	86	GLN	CA-C	6.20	1.60	1.52
5	E	127	GLN	CA-C	6.19	1.61	1.52
48	VA	41	VAL	CA-C	6.19	1.61	1.52
28	BA	45	ASN	CA-C	6.19	1.60	1.52
30	DA	57	LEU	CA-C	6.19	1.59	1.52
77	YB	17	ARG	CA-C	6.18	1.58	1.52
46	TA	89	LYS	CA-C	6.18	1.58	1.53
19	S	36	ILE	CA-C	6.17	1.59	1.52
70	RB	70	THR	CA-C	6.17	1.59	1.52
36	JA	119	VAL	CA-C	6.17	1.60	1.52
13	M	65	VAL	CA-C	6.17	1.59	1.52
82	DC	621	ASP	CA-C	6.16	1.60	1.52
5	E	70	ASP	CA-C	6.16	1.61	1.52
47	UA	11	THR	CA-C	6.16	1.60	1.52
22	V	129	VAL	CA-CB	6.16	1.60	1.54
82	DC	706	ILE	CA-CB	6.16	1.62	1.54
48	VA	25	LEU	CA-C	6.15	1.60	1.52
9	I	65	ILE	CA-C	6.15	1.60	1.52
12	L	237	ILE	CA-CB	6.15	1.61	1.53
48	VA	192	ASP	CA-C	6.14	1.59	1.52
16	P	109	ILE	CA-C	6.14	1.61	1.52
5	E	136	THR	CA-CB	6.14	1.63	1.52
29	CA	52	PRO	CA-C	6.13	1.59	1.52
82	DC	810	ASP	CA-C	6.13	1.60	1.52
82	DC	794	PRO	CA-C	6.12	1.61	1.52
82	DC	594	ASP	CA-C	6.12	1.60	1.52
82	DC	822	ALA	CA-C	6.12	1.60	1.52
5	E	28	PHE	CA-C	6.12	1.60	1.52
5	E	87	VAL	CA-CB	6.12	1.62	1.54
82	DC	601	ILE	CA-CB	6.12	1.61	1.54
8	H	131	VAL	CA-C	6.11	1.60	1.52
5	E	87	VAL	CA-C	6.11	1.60	1.52
7	G	263	SER	CA-C	6.11	1.59	1.53
5	E	122	ARG	CA-C	6.11	1.60	1.52
16	P	93	LYS	CA-C	6.10	1.59	1.52
16	P	141	CYS	CA-C	6.10	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	S	83	LYS	CA-C	6.10	1.60	1.53
21	U	35	ALA	CA-C	6.09	1.59	1.52
82	DC	342	LEU	CA-C	6.09	1.59	1.52
48	VA	55	LYS	CA-C	6.09	1.60	1.52
82	DC	485	VAL	CA-C	6.09	1.61	1.52
12	L	58	VAL	CA-C	6.08	1.60	1.52
48	VA	167	GLN	CA-C	6.08	1.60	1.52
5	E	128	LEU	CA-C	6.08	1.60	1.52
35	IA	9	THR	CA-CB	6.08	1.59	1.53
18	R	99	TRP	CA-C	6.08	1.60	1.52
5	E	35	GLN	CA-C	6.07	1.60	1.52
7	G	174	LYS	CA-C	6.07	1.60	1.52
11	K	151	ARG	CA-C	6.07	1.59	1.52
82	DC	670	ALA	CA-C	6.07	1.60	1.52
48	VA	121	VAL	CA-C	6.07	1.59	1.52
6	F	235	ALA	CA-C	6.07	1.59	1.53
19	S	174	ILE	CA-C	6.06	1.59	1.52
25	Y	26	HIS	CA-C	6.06	1.60	1.52
25	Y	52	MET	SD-CE	6.06	1.94	1.79
5	E	24	LYS	CA-C	6.06	1.60	1.52
21	U	57	ALA	CA-C	6.06	1.59	1.52
82	DC	443	GLU	CA-C	6.05	1.60	1.52
7	G	82	PRO	CA-C	6.05	1.57	1.52
48	VA	72	ASP	CA-C	6.05	1.61	1.52
5	E	111	ILE	CA-C	6.05	1.59	1.53
6	F	221	LYS	CA-C	6.05	1.58	1.53
82	DC	385	MET	SD-CE	6.04	1.94	1.79
48	VA	119	ILE	CA-C	6.04	1.58	1.53
82	DC	329	PRO	CA-C	6.04	1.59	1.52
82	DC	386	VAL	CA-C	6.04	1.59	1.52
16	P	67	ARG	CA-C	6.04	1.60	1.53
82	DC	838	TYR	CA-C	6.04	1.60	1.52
82	DC	211	PHE	CA-C	6.03	1.59	1.52
25	Y	82	ASN	CA-C	6.03	1.60	1.52
27	AA	73	VAL	CA-CB	6.02	1.60	1.53
82	DC	46	ILE	CA-C	6.02	1.60	1.52
82	DC	686	VAL	CA-C	6.02	1.59	1.52
14	N	134	ILE	CA-C	6.02	1.60	1.52
48	VA	24	SER	CA-C	6.02	1.59	1.52
28	BA	52	THR	CA-C	6.02	1.59	1.52
36	JA	121	ASN	CA-C	6.02	1.60	1.52
48	VA	71	PRO	CA-C	6.01	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	VA	158	VAL	CA-CB	6.01	1.62	1.54
65	MB	96	ILE	CA-C	6.01	1.59	1.52
21	U	142	SER	CA-C	6.01	1.60	1.52
16	P	92	ARG	CA-C	6.00	1.60	1.52
24	X	94	ILE	CA-CB	6.00	1.60	1.53
41	OA	48	ASN	CA-C	6.00	1.60	1.52
20	T	4	GLU	CA-C	6.00	1.59	1.52
57	EB	62	VAL	CA-C	6.00	1.59	1.52
82	DC	572	SER	CA-C	6.00	1.60	1.52
32	FA	119	PRO	CA-C	6.00	1.59	1.53
82	DC	550	ALA	CA-C	6.00	1.57	1.52
12	L	166	LEU	CA-C	5.99	1.59	1.52
82	DC	66	ARG	CA-C	5.99	1.58	1.53
5	E	216	LEU	CA-C	5.99	1.60	1.52
16	P	142	ARG	CA-C	5.99	1.60	1.52
82	DC	481	MET	CA-C	5.99	1.58	1.53
67	OB	115	LEU	CA-C	5.98	1.58	1.52
5	E	206	VAL	CA-C	5.98	1.59	1.52
48	VA	172	LEU	CA-C	5.98	1.60	1.52
5	E	13	VAL	N-CA	5.98	1.53	1.46
48	VA	94	THR	CA-C	5.98	1.60	1.52
82	DC	25	ILE	CA-C	5.97	1.59	1.52
12	L	237	ILE	CA-C	5.96	1.59	1.52
69	QB	46	PRO	CA-C	5.96	1.57	1.52
5	E	126	PRO	CA-C	5.96	1.60	1.52
16	P	60	VAL	CA-CB	5.96	1.60	1.54
16	P	62	LEU	CA-C	5.96	1.60	1.52
5	E	207	LYS	CA-C	5.95	1.60	1.52
46	TA	45	ARG	CA-C	5.95	1.60	1.52
16	P	83	THR	CA-C	5.95	1.60	1.52
82	DC	40	VAL	CA-CB	5.95	1.62	1.54
82	DC	522	MET	SD-CE	5.95	1.94	1.79
5	E	10	ARG	CA-C	5.94	1.60	1.52
25	Y	4	SER	CA-C	5.94	1.59	1.52
61	IB	76	VAL	CA-C	5.94	1.58	1.52
48	VA	48	ARG	CA-C	5.94	1.59	1.53
63	KB	84	ILE	CA-C	5.94	1.58	1.52
5	E	201	VAL	CA-CB	5.93	1.61	1.54
6	F	177	LYS	CA-C	5.93	1.60	1.52
28	BA	49	ILE	CA-C	5.93	1.60	1.52
62	JB	86	VAL	CA-C	5.93	1.59	1.52
14	N	89	VAL	CA-CB	5.93	1.62	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	P	123	ARG	CA-C	5.93	1.60	1.52
37	KA	22	VAL	CA-C	5.93	1.59	1.52
82	DC	65	GLU	CA-C	5.92	1.60	1.52
53	AB	216	PRO	CA-C	5.92	1.58	1.53
17	Q	50	PRO	CA-C	5.91	1.59	1.52
14	N	135	ILE	CA-C	5.91	1.60	1.52
16	P	105	GLN	CA-C	5.91	1.60	1.52
82	DC	267	LYS	CA-C	5.91	1.60	1.53
25	Y	154	VAL	N-CA	5.91	1.51	1.46
82	DC	346	VAL	CA-C	5.91	1.60	1.52
5	E	85	MET	CA-C	5.90	1.59	1.52
24	X	9	VAL	CA-CB	5.90	1.60	1.53
7	G	243	HIS	CA-C	5.90	1.60	1.52
16	P	68	GLN	CA-C	5.90	1.60	1.52
82	DC	517	CYS	CA-C	5.89	1.59	1.52
19	S	187	ARG	CA-C	5.89	1.60	1.52
32	FA	58	MET	SD-CE	5.89	1.94	1.79
19	S	154	PRO	CA-C	5.89	1.60	1.52
24	X	61	ILE	CA-CB	5.89	1.62	1.54
5	E	99	LEU	CA-C	5.88	1.60	1.52
41	OA	21	ARG	CA-C	5.88	1.60	1.52
48	VA	121	VAL	CA-CB	5.88	1.61	1.55
21	U	123	PRO	CA-C	5.88	1.60	1.52
48	VA	46	ARG	CA-C	5.88	1.59	1.53
5	E	68	PHE	CA-C	5.88	1.59	1.53
9	I	9	SER	CA-C	5.88	1.58	1.53
82	DC	676	ILE	CA-CB	5.87	1.61	1.54
5	E	205	VAL	CA-C	5.87	1.60	1.52
82	DC	778	PHE	CA-C	5.87	1.60	1.53
38	LA	39	ALA	CA-C	5.87	1.59	1.52
25	Y	80	VAL	CA-C	5.87	1.60	1.52
82	DC	57	THR	N-CA	5.87	1.53	1.46
14	N	165	ILE	CA-C	5.86	1.60	1.52
25	Y	155	PRO	CA-C	5.86	1.60	1.52
19	S	121	VAL	CA-CB	5.86	1.62	1.54
82	DC	70	ILE	CA-C	5.86	1.61	1.52
18	R	39	ILE	CA-C	5.86	1.58	1.52
82	DC	627	VAL	CA-CB	5.86	1.61	1.54
64	LB	93	THR	CA-C	5.85	1.57	1.52
20	T	10	ASP	CA-C	5.85	1.60	1.52
14	N	17	TYR	CA-C	5.85	1.60	1.52
27	AA	102	ILE	CA-CB	5.85	1.62	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	E	185	MET	CA-C	5.85	1.60	1.52
31	EA	81	LEU	CA-C	5.84	1.60	1.52
82	DC	449	PRO	CA-C	5.84	1.60	1.52
82	DC	380	LEU	CA-C	5.84	1.59	1.52
5	E	115	VAL	CA-C	5.84	1.61	1.52
16	P	143	VAL	CA-CB	5.83	1.60	1.53
11	K	189	ILE	CA-CB	5.83	1.61	1.54
43	QA	8	ARG	CA-C	5.83	1.60	1.52
16	P	70	ALA	CA-C	5.83	1.60	1.52
5	E	193	LEU	CA-C	5.83	1.60	1.52
42	PA	45	VAL	CA-C	5.83	1.58	1.53
82	DC	164	LEU	CA-C	5.83	1.59	1.52
22	V	166	LEU	CA-C	5.82	1.57	1.52
48	VA	95	GLU	CA-C	5.82	1.60	1.52
73	UB	87	VAL	CA-C	5.82	1.58	1.53
16	P	74	VAL	CA-C	5.82	1.59	1.52
20	T	16	VAL	CA-CB	5.82	1.62	1.54
48	VA	38	MET	SD-CE	5.81	1.94	1.79
9	I	175	HIS	CA-C	5.81	1.60	1.52
28	BA	23	ARG	CA-C	5.81	1.60	1.52
82	DC	89	ILE	CA-CB	5.80	1.60	1.53
48	VA	52	LEU	CA-C	5.80	1.59	1.52
7	G	78	VAL	CA-C	5.80	1.60	1.52
7	G	285	VAL	CA-C	5.80	1.60	1.52
37	KA	37	THR	CA-C	5.79	1.60	1.53
58	FB	101	ILE	CA-CB	5.79	1.60	1.53
14	N	26	VAL	CA-C	5.79	1.58	1.52
82	DC	560	VAL	CA-C	5.79	1.59	1.52
11	K	98	LYS	CA-C	5.79	1.58	1.52
16	P	58	VAL	CA-CB	5.79	1.62	1.54
19	S	119	TYR	CA-C	5.79	1.59	1.52
5	E	66	CYS	CA-C	5.79	1.59	1.52
16	P	56	ILE	CA-CB	5.79	1.61	1.54
37	KA	37	THR	CA-CB	5.79	1.62	1.53
30	DA	51	ARG	CA-C	5.79	1.60	1.52
46	TA	26	THR	CA-C	5.79	1.60	1.52
48	VA	128	MET	SD-CE	5.79	1.94	1.79
82	DC	590	ALA	CA-C	5.78	1.59	1.52
31	EA	24	VAL	CA-C	5.78	1.59	1.52
82	DC	651	LYS	CA-C	5.78	1.60	1.52
5	E	190	PHE	CA-C	5.77	1.60	1.52
7	G	203	VAL	CA-C	5.77	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	VA	30	VAL	CA-C	5.77	1.60	1.52
82	DC	646	VAL	CA-C	5.77	1.60	1.52
18	R	64	VAL	CA-C	5.77	1.60	1.52
82	DC	772	LEU	CA-C	5.76	1.59	1.53
38	LA	10	ARG	CA-C	5.76	1.60	1.53
13	M	62	ARG	CA-C	5.76	1.60	1.52
24	X	97	VAL	CA-CB	5.76	1.62	1.54
82	DC	160	VAL	CA-C	5.76	1.58	1.52
19	S	77	LYS	CA-C	5.76	1.58	1.53
48	VA	115	ALA	CA-C	5.76	1.58	1.52
6	F	78	ALA	CA-C	5.75	1.60	1.52
21	U	124	LYS	N-CA	5.75	1.53	1.46
18	R	134	ALA	CA-C	5.75	1.59	1.52
21	U	36	ILE	CA-CB	5.75	1.62	1.54
82	DC	561	VAL	CA-C	5.75	1.60	1.52
5	E	1	MET	SD-CE	5.75	1.94	1.79
5	E	31	THR	CA-C	5.75	1.59	1.52
6	F	35	ALA	CA-C	5.75	1.60	1.52
21	U	84	PRO	CA-C	5.75	1.60	1.52
48	VA	149	THR	CA-CB	5.75	1.62	1.53
5	E	118	LYS	CA-C	5.74	1.60	1.52
16	P	63	LYS	CA-C	5.74	1.60	1.53
29	CA	99	VAL	CA-C	5.74	1.59	1.52
32	FA	83	PRO	CA-C	5.74	1.59	1.52
68	PB	81	ILE	CA-C	5.74	1.58	1.52
78	ZB	45	LYS	CA-C	5.74	1.57	1.52
14	N	21	ARG	CA-C	5.73	1.59	1.52
21	U	131	ARG	CA-C	5.73	1.59	1.52
38	LA	25	THR	CA-C	5.73	1.58	1.52
48	VA	89	THR	CA-C	5.73	1.60	1.52
5	E	30	GLU	CA-C	5.73	1.60	1.52
5	E	94	ASN	CA-C	5.73	1.60	1.52
41	OA	65	ARG	CA-C	5.73	1.60	1.52
56	DB	102	VAL	CA-C	5.73	1.58	1.53
82	DC	592	PRO	CA-C	5.72	1.59	1.52
8	H	271	LYS	CA-C	5.72	1.59	1.52
7	G	280	HIS	CA-C	5.72	1.60	1.52
38	LA	17	SER	CA-C	5.72	1.59	1.52
48	VA	63	ILE	CA-C	5.72	1.60	1.52
48	VA	153	VAL	CA-C	5.72	1.60	1.52
13	M	53	ILE	CA-C	5.72	1.59	1.52
27	AA	34	LEU	CA-C	5.72	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	E	173	GLU	CA-C	5.71	1.60	1.52
5	E	3	LYS	CA-C	5.71	1.59	1.52
16	P	119	LYS	CA-C	5.71	1.60	1.52
5	E	6	SER	CA-C	5.71	1.60	1.52
36	JA	69	SER	CA-C	5.71	1.59	1.53
82	DC	21	ASN	CA-C	5.71	1.60	1.52
37	KA	9	VAL	CA-C	5.70	1.59	1.52
82	DC	828	MET	SD-CE	5.70	1.93	1.79
23	W	19	LYS	CA-C	5.69	1.60	1.52
23	W	115	ILE	CA-C	5.69	1.59	1.52
41	OA	45	ARG	CA-C	5.69	1.60	1.52
30	DA	47	ALA	CA-C	5.69	1.60	1.52
82	DC	689	LEU	CA-C	5.69	1.59	1.52
82	DC	832	VAL	CA-CB	5.69	1.61	1.54
13	M	182	SER	CA-C	5.69	1.58	1.52
82	DC	28	VAL	CA-C	5.69	1.59	1.52
82	DC	137	VAL	CA-CB	5.68	1.60	1.54
82	DC	40	VAL	CA-C	5.68	1.60	1.52
5	E	200	ASN	CA-C	5.67	1.60	1.52
24	X	94	ILE	CA-C	5.67	1.59	1.52
25	Y	49	GLN	CA-C	5.67	1.59	1.52
66	NB	62	ASN	CA-C	5.67	1.57	1.52
82	DC	128	VAL	CA-CB	5.67	1.60	1.53
82	DC	320	LEU	CA-C	5.67	1.60	1.52
82	DC	61	LYS	N-CA	5.67	1.52	1.45
82	DC	591	GLU	CA-C	5.67	1.61	1.53
5	E	21	ASN	CA-C	5.67	1.59	1.52
48	VA	135	PHE	CA-C	5.67	1.60	1.52
11	K	81	HIS	CA-C	5.67	1.60	1.52
7	G	277	SER	CA-C	5.66	1.59	1.52
29	CA	53	HIS	CA-C	5.66	1.60	1.52
82	DC	200	VAL	CA-C	5.66	1.59	1.52
5	E	142	ASP	CA-C	5.66	1.60	1.53
9	I	37	VAL	CA-C	5.66	1.59	1.52
8	H	349	THR	CA-CB	5.66	1.60	1.52
48	VA	86	PHE	CA-C	5.66	1.61	1.53
82	DC	170	SER	CA-C	5.66	1.59	1.52
5	E	119	GLN	CA-C	5.66	1.60	1.52
48	VA	116	PRO	CA-C	5.65	1.60	1.52
5	E	103	LEU	CA-C	5.65	1.59	1.52
22	V	143	PRO	CA-C	5.65	1.59	1.52
25	Y	72	VAL	CA-C	5.65	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	G	158	VAL	CA-C	5.65	1.58	1.52
27	AA	102	ILE	CA-C	5.65	1.59	1.52
48	VA	158	VAL	CA-C	5.65	1.59	1.52
18	R	64	VAL	CA-CB	5.65	1.62	1.54
35	IA	27	LYS	CA-C	5.64	1.60	1.52
82	DC	692	THR	CA-C	5.63	1.58	1.52
36	JA	77	ALA	CA-C	5.63	1.58	1.52
39	MA	55	LEU	CA-C	5.63	1.60	1.52
82	DC	357	TYR	CA-C	5.63	1.59	1.52
19	S	158	HIS	CA-C	5.63	1.60	1.52
15	O	60	ARG	CA-C	5.63	1.59	1.52
10	J	153	PRO	CA-C	5.62	1.59	1.52
36	JA	7	PRO	CA-C	5.62	1.59	1.52
58	FB	101	ILE	CA-C	5.62	1.58	1.53
5	E	32	VAL	CA-C	5.62	1.59	1.52
82	DC	70	ILE	CA-CB	5.62	1.60	1.54
82	DC	184	SER	CA-C	5.62	1.60	1.52
46	TA	29	LYS	CA-C	5.62	1.58	1.52
16	P	98	VAL	CA-C	5.62	1.59	1.52
82	DC	726	GLU	CA-C	5.62	1.59	1.53
82	DC	153	PRO	CA-C	5.62	1.58	1.52
82	DC	296	ILE	CA-CB	5.62	1.61	1.54
7	G	151	ILE	CA-C	5.61	1.59	1.52
25	Y	29	THR	CA-C	5.61	1.60	1.52
16	P	95	ASP	CA-C	5.61	1.60	1.52
5	E	113	SER	CA-C	5.61	1.60	1.52
7	G	8	ALA	CA-C	5.61	1.59	1.52
8	H	131	VAL	CA-CB	5.61	1.62	1.54
82	DC	685	ARG	CA-C	5.61	1.59	1.52
16	P	104	ILE	CA-CB	5.60	1.62	1.54
41	OA	30	GLN	CA-C	5.60	1.60	1.52
46	TA	59	HIS	CA-C	5.60	1.58	1.52
48	VA	69	ASP	CA-C	5.60	1.59	1.52
16	P	112	ILE	CA-C	5.60	1.61	1.52
25	Y	55	LYS	CA-C	5.60	1.60	1.52
82	DC	818	ILE	CA-C	5.60	1.59	1.52
61	IB	59	PRO	CA-C	5.60	1.57	1.52
82	DC	332	ASP	CA-C	5.60	1.60	1.52
5	E	184	LEU	CA-C	5.59	1.60	1.52
20	T	120	VAL	CA-C	5.59	1.58	1.52
48	VA	145	ILE	CA-C	5.59	1.59	1.52
14	N	171	TRP	CA-C	5.59	1.58	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	S	86	ASN	CA-C	5.59	1.58	1.53
25	Y	40	VAL	CA-C	5.59	1.60	1.52
21	U	46	LYS	CA-C	5.58	1.59	1.52
32	FA	82	ILE	CA-C	5.58	1.57	1.52
48	VA	43	LYS	CA-C	5.58	1.60	1.52
25	Y	78	LYS	CA-C	5.58	1.59	1.52
30	DA	70	ILE	CA-C	5.57	1.59	1.52
42	PA	36	LYS	CA-C	5.57	1.58	1.52
43	QA	24	PRO	CA-C	5.57	1.60	1.52
82	DC	676	ILE	CA-C	5.57	1.59	1.52
48	VA	188	VAL	CA-CB	5.57	1.62	1.54
41	OA	44	THR	CA-CB	5.57	1.59	1.53
12	L	72	PRO	CA-C	5.57	1.57	1.52
48	VA	66	PHE	CA-C	5.57	1.60	1.52
82	DC	279	ASP	CA-C	5.57	1.58	1.52
6	F	4	VAL	CA-C	5.56	1.59	1.52
22	V	124	LEU	CA-C	5.56	1.60	1.52
32	FA	74	ASN	CA-C	5.56	1.60	1.52
20	T	117	ARG	CA-C	5.56	1.59	1.52
25	Y	135	PRO	CA-C	5.56	1.60	1.52
25	Y	152	ALA	CA-C	5.56	1.59	1.52
30	DA	95	VAL	CA-C	5.56	1.58	1.52
49	WA	157	VAL	CA-C	5.55	1.58	1.52
6	F	24	GLN	CA-C	5.55	1.59	1.53
18	R	46	ILE	CA-CB	5.55	1.60	1.53
82	DC	3	ALA	CA-C	5.55	1.59	1.52
5	E	29	LEU	CA-C	5.55	1.60	1.52
82	DC	567	VAL	CA-C	5.54	1.59	1.52
82	DC	623	TYR	CA-C	5.54	1.59	1.52
8	H	244	LEU	CA-C	5.54	1.60	1.52
27	AA	53	SER	CA-C	5.54	1.59	1.52
82	DC	241	MET	SD-CE	5.54	1.93	1.79
8	H	207	VAL	CA-C	5.54	1.59	1.52
20	T	6	VAL	CA-CB	5.54	1.61	1.53
48	VA	136	PHE	CA-C	5.54	1.60	1.52
72	TB	94	LEU	CA-C	5.54	1.59	1.53
5	E	25	LYS	CA-C	5.54	1.59	1.52
11	K	190	THR	CA-C	5.53	1.59	1.52
31	EA	80	LEU	CA-C	5.53	1.59	1.53
65	MB	84	ILE	CA-C	5.53	1.57	1.52
75	WB	54	VAL	CA-C	5.53	1.58	1.52
8	H	329	PRO	CA-C	5.53	1.57	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	P	97	ASN	CA-C	5.53	1.59	1.52
82	DC	605	ILE	CA-C	5.53	1.59	1.52
82	DC	71	LYS	CA-C	5.52	1.59	1.53
18	R	20	VAL	CA-C	5.52	1.59	1.52
31	EA	13	VAL	CA-C	5.52	1.58	1.52
5	E	111	ILE	CA-CB	5.52	1.60	1.53
27	AA	37	ILE	CA-C	5.52	1.58	1.52
48	VA	168	SER	CA-C	5.52	1.59	1.52
82	DC	202	VAL	CA-CB	5.51	1.60	1.54
27	AA	58	VAL	CA-CB	5.51	1.60	1.54
6	F	63	PHE	CA-C	5.51	1.58	1.52
39	MA	44	ILE	CA-C	5.51	1.59	1.52
82	DC	171	LYS	CA-C	5.51	1.60	1.52
13	M	144	ILE	CA-C	5.51	1.58	1.52
18	R	73	PRO	CA-C	5.51	1.60	1.52
82	DC	339	VAL	CA-CB	5.51	1.60	1.54
5	E	147	LYS	CA-C	5.50	1.60	1.52
44	RA	118	THR	CA-C	5.50	1.59	1.52
27	AA	21	ALA	CA-C	5.50	1.59	1.52
58	FB	10	LYS	CA-C	5.50	1.60	1.52
82	DC	664	VAL	CA-C	5.50	1.59	1.52
16	P	91	ASP	CA-C	5.50	1.60	1.52
8	H	37	THR	CA-CB	5.50	1.62	1.53
8	H	52	VAL	CA-CB	5.50	1.61	1.54
82	DC	441	PHE	CA-C	5.50	1.59	1.52
8	H	108	LYS	CA-C	5.50	1.59	1.53
82	DC	53	GLU	CA-C	5.50	1.59	1.52
82	DC	500	ASP	CA-C	5.50	1.59	1.53
82	DC	18	ASN	CA-C	5.49	1.61	1.52
16	P	128	VAL	CA-CB	5.49	1.61	1.54
46	TA	27	GLN	CA-C	5.49	1.59	1.52
82	DC	19	VAL	CA-C	5.49	1.59	1.52
82	DC	55	ARG	CA-C	5.49	1.60	1.52
7	G	335	ILE	CA-C	5.49	1.58	1.53
13	M	4	ILE	CA-C	5.49	1.59	1.52
16	P	56	ILE	CA-C	5.49	1.60	1.52
48	VA	147	ARG	CA-C	5.49	1.60	1.53
41	OA	24	ARG	CA-C	5.49	1.59	1.52
66	NB	53	LEU	CA-C	5.49	1.57	1.52
82	DC	68	ILE	CA-C	5.49	1.58	1.52
19	S	122	ASN	CA-C	5.48	1.58	1.52
18	R	63	VAL	CA-C	5.48	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	V	11	LYS	CA-C	5.48	1.59	1.52
30	DA	86	THR	CA-C	5.48	1.59	1.52
16	P	79	SER	CA-C	5.48	1.59	1.52
7	G	285	VAL	CA-CB	5.47	1.61	1.54
46	TA	46	LYS	CA-C	5.47	1.60	1.52
82	DC	657	HIS	CA-C	5.47	1.60	1.52
27	AA	84	SER	CA-C	5.47	1.60	1.52
5	E	92	LYS	CA-C	5.47	1.60	1.52
8	H	318	LEU	CA-C	5.47	1.60	1.52
82	DC	152	LYS	CA-C	5.47	1.58	1.52
7	G	312	VAL	CA-C	5.47	1.59	1.52
35	IA	23	VAL	CA-C	5.46	1.59	1.52
82	DC	774	VAL	CA-CB	5.46	1.60	1.54
5	E	17	LEU	CA-C	5.46	1.59	1.52
9	I	172	TYR	CA-C	5.46	1.59	1.52
82	DC	783	GLU	CA-C	5.46	1.59	1.52
13	M	6	THR	CA-CB	5.46	1.59	1.53
13	M	64	HIS	CA-C	5.46	1.60	1.52
16	P	75	PRO	CA-C	5.46	1.60	1.52
29	CA	89	LYS	CA-C	5.46	1.59	1.53
61	IB	83	THR	CA-C	5.46	1.59	1.52
18	R	44	VAL	CA-C	5.46	1.59	1.52
82	DC	290	ASN	CA-C	5.46	1.59	1.52
82	DC	369	ILE	CA-C	5.46	1.59	1.52
21	U	82	ARG	CA-C	5.46	1.59	1.52
30	DA	9	SER	CA-C	5.46	1.59	1.52
5	E	201	VAL	CA-C	5.45	1.58	1.52
8	H	338	LYS	CA-C	5.45	1.58	1.52
42	PA	45	VAL	CA-CB	5.45	1.59	1.53
48	VA	21	GLU	CA-C	5.45	1.60	1.52
8	H	228	ALA	CA-C	5.45	1.60	1.52
13	M	87	LYS	CA-C	5.45	1.59	1.52
20	T	153	VAL	CA-C	5.45	1.59	1.52
27	AA	94	TYR	CA-C	5.45	1.58	1.52
6	F	146	THR	CA-CB	5.45	1.59	1.52
82	DC	485	VAL	CA-CB	5.45	1.60	1.55
82	DC	804	LEU	CA-C	5.45	1.59	1.52
5	E	102	LYS	CA-C	5.45	1.60	1.52
5	E	7	SER	CA-C	5.45	1.59	1.52
16	P	139	VAL	CA-C	5.45	1.59	1.52
48	VA	176	LEU	CA-C	5.45	1.59	1.52
8	H	53	SER	CA-C	5.44	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	684	VAL	CA-CB	5.44	1.60	1.53
41	OA	32	LYS	CA-C	5.44	1.60	1.53
20	T	43	ILE	CA-C	5.44	1.59	1.52
21	U	42	THR	CA-C	5.44	1.60	1.52
82	DC	106	PRO	CA-C	5.44	1.60	1.52
21	U	163	LYS	CA-C	5.44	1.57	1.52
82	DC	337	MET	SD-CE	5.44	1.93	1.79
82	DC	562	ALA	CA-C	5.44	1.60	1.52
6	F	156	LYS	CA-C	5.43	1.59	1.52
19	S	165	THR	CA-CB	5.43	1.62	1.53
31	EA	43	VAL	CA-CB	5.43	1.61	1.54
18	R	63	VAL	CA-CB	5.43	1.61	1.54
20	T	124	LEU	CA-C	5.43	1.59	1.52
82	DC	41	GLN	CA-C	5.43	1.60	1.52
6	F	229	ALA	CA-C	5.43	1.59	1.52
36	JA	38	ILE	CA-C	5.43	1.59	1.52
82	DC	206	ARG	CA-C	5.43	1.59	1.52
16	P	142	ARG	N-CA	5.43	1.53	1.46
82	DC	653	VAL	CA-C	5.43	1.59	1.52
19	S	44	ARG	CA-C	5.43	1.58	1.52
32	FA	101	VAL	CA-C	5.43	1.59	1.52
5	E	188	ASN	CA-C	5.42	1.60	1.52
27	AA	76	ALA	CA-C	5.42	1.59	1.52
57	EB	64	VAL	CA-C	5.42	1.58	1.52
82	DC	270	GLU	CA-C	5.42	1.60	1.52
82	DC	574	THR	CA-CB	5.42	1.59	1.53
82	DC	129	VAL	CA-C	5.42	1.57	1.52
21	U	65	SER	CA-C	5.42	1.58	1.53
30	DA	104	LEU	CA-C	5.42	1.60	1.53
39	MA	54	VAL	CA-CB	5.42	1.60	1.54
67	OB	4	VAL	CA-C	5.42	1.59	1.52
82	DC	23	SER	CA-C	5.42	1.60	1.52
82	DC	24	VAL	CA-CB	5.42	1.61	1.54
10	J	35	VAL	CA-C	5.42	1.58	1.52
48	VA	68	SER	CA-C	5.42	1.60	1.52
31	EA	82	PRO	CA-C	5.42	1.57	1.52
42	PA	70	PRO	CA-C	5.42	1.57	1.52
18	R	54	PRO	CA-C	5.41	1.60	1.52
29	CA	92	LYS	CA-C	5.41	1.60	1.52
5	E	198	TRP	N-CA	5.41	1.53	1.46
13	M	46	THR	CA-C	5.41	1.58	1.52
6	F	150	LEU	CA-C	5.41	1.58	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	CA	94	GLN	CA-C	5.41	1.60	1.52
31	EA	19	ALA	CA-C	5.41	1.60	1.52
17	Q	53	LEU	CA-C	5.41	1.60	1.52
25	Y	140	ILE	CA-C	5.41	1.58	1.52
82	DC	289	MET	SD-CE	5.41	1.93	1.79
13	M	24	ILE	CA-C	5.40	1.58	1.52
11	K	92	ILE	CA-C	5.40	1.59	1.52
14	N	15	LYS	CA-C	5.40	1.59	1.52
20	T	81	TYR	CA-C	5.40	1.60	1.52
82	DC	369	ILE	CA-CB	5.40	1.61	1.54
13	M	12	VAL	CA-C	5.40	1.58	1.52
18	R	62	GLN	CA-C	5.40	1.60	1.52
5	E	85	MET	SD-CE	5.40	1.93	1.79
45	SA	23	ARG	CA-C	5.40	1.60	1.52
48	VA	98	ASN	CA-C	5.40	1.59	1.52
82	DC	142	VAL	CA-C	5.40	1.60	1.52
21	U	59	PRO	CA-C	5.40	1.58	1.52
32	FA	6	THR	CA-C	5.40	1.59	1.52
9	I	148	ILE	CA-C	5.39	1.59	1.52
82	DC	38	SER	CA-C	5.39	1.60	1.52
82	DC	606	ILE	CA-C	5.39	1.58	1.52
5	E	91	LYS	CA-C	5.39	1.60	1.52
17	Q	52	ASP	CA-C	5.39	1.59	1.52
82	DC	781	THR	CA-C	5.39	1.59	1.52
18	R	24	LYS	CA-C	5.39	1.57	1.52
48	VA	99	VAL	CA-C	5.39	1.59	1.52
5	E	151	VAL	CA-C	5.39	1.59	1.52
35	IA	29	ALA	CA-C	5.39	1.59	1.52
82	DC	69	THR	CA-C	5.39	1.59	1.52
8	H	249	ILE	CA-CB	5.38	1.59	1.53
9	I	88	ILE	CA-C	5.38	1.57	1.53
36	JA	79	VAL	CA-C	5.38	1.59	1.52
37	KA	24	ASN	CA-C	5.38	1.59	1.52
46	TA	68	VAL	CA-C	5.38	1.58	1.52
82	DC	81	MET	SD-CE	5.38	1.93	1.79
5	E	191	VAL	CA-C	5.38	1.59	1.52
39	MA	51	ILE	CA-C	5.38	1.59	1.52
48	VA	53	MET	SD-CE	5.38	1.93	1.79
82	DC	833	PRO	CA-C	5.38	1.59	1.52
17	Q	80	VAL	CA-CB	5.38	1.60	1.54
82	DC	244	LEU	CA-C	5.38	1.59	1.52
16	P	138	SER	CA-C	5.38	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	P	131	GLU	CA-C	5.38	1.59	1.52
20	T	103	LYS	CA-C	5.38	1.58	1.53
38	LA	20	ILE	CA-C	5.38	1.58	1.52
5	E	89	ASP	CA-C	5.37	1.60	1.52
16	P	121	PHE	CA-C	5.37	1.60	1.52
5	E	75	ASP	CA-C	5.37	1.59	1.52
6	F	239	ALA	CA-C	5.37	1.59	1.52
13	M	24	ILE	CA-CB	5.37	1.60	1.54
82	DC	204	PRO	CA-C	5.37	1.60	1.52
46	TA	44	ASP	CA-C	5.37	1.60	1.52
6	F	206	PRO	CA-C	5.37	1.60	1.52
17	Q	33	VAL	CA-C	5.37	1.60	1.52
37	KA	25	PRO	CA-C	5.37	1.59	1.53
49	WA	240	VAL	CA-C	5.37	1.59	1.52
50	XA	141	ILE	CA-C	5.37	1.56	1.52
65	MB	40	ARG	CA-C	5.37	1.59	1.52
24	X	14	LEU	CA-C	5.37	1.59	1.52
8	H	47	ARG	CA-C	5.36	1.59	1.52
39	MA	44	ILE	CA-CB	5.36	1.60	1.54
82	DC	675	PRO	CA-C	5.36	1.60	1.52
21	U	122	ALA	CA-C	5.36	1.57	1.52
24	X	43	TYR	CA-C	5.36	1.59	1.52
38	LA	40	THR	CA-CB	5.36	1.59	1.53
82	DC	431	ILE	CA-C	5.36	1.58	1.52
28	BA	28	ILE	CA-C	5.36	1.59	1.52
8	H	195	ARG	CA-C	5.36	1.59	1.52
49	WA	100	TYR	CA-C	5.36	1.57	1.52
38	LA	29	ILE	CA-CB	5.36	1.61	1.54
65	MB	86	VAL	CA-C	5.36	1.58	1.52
82	DC	533	THR	CA-C	5.36	1.58	1.53
37	KA	28	SER	CA-C	5.35	1.58	1.53
48	VA	76	LEU	CA-C	5.35	1.59	1.52
48	VA	129	GLU	CA-C	5.35	1.59	1.53
8	H	6	VAL	CA-C	5.35	1.59	1.52
10	J	141	VAL	CA-C	5.35	1.59	1.52
43	QA	9	ILE	CA-C	5.35	1.60	1.53
27	AA	33	ASN	CA-C	5.35	1.59	1.52
5	E	116	LEU	N-CA	5.35	1.52	1.46
11	K	118	LYS	CA-C	5.35	1.59	1.52
57	EB	152	VAL	CA-CB	5.35	1.59	1.53
82	DC	724	ILE	CA-C	5.35	1.59	1.52
5	E	100	ILE	CA-CB	5.35	1.62	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	R	40	ASP	CA-C	5.34	1.58	1.53
30	DA	19	TYR	CA-C	5.34	1.59	1.53
61	IB	69	LYS	CA-C	5.34	1.58	1.52
82	DC	445	ILE	CA-C	5.34	1.59	1.52
5	E	71	ALA	CA-C	5.34	1.60	1.52
30	DA	117	ALA	CA-C	5.34	1.59	1.52
82	DC	686	VAL	CA-CB	5.34	1.60	1.54
5	E	185	MET	SD-CE	5.34	1.92	1.79
12	L	53	PRO	CA-C	5.34	1.58	1.52
32	FA	34	MET	SD-CE	5.34	1.92	1.79
41	OA	64	MET	SD-CE	5.34	1.92	1.79
82	DC	104	ASP	CA-C	5.34	1.59	1.52
14	N	18	PRO	CA-C	5.33	1.58	1.52
5	E	180	VAL	CA-C	5.33	1.60	1.52
5	E	143	ASP	CA-C	5.33	1.59	1.52
12	L	178	ALA	CA-C	5.33	1.58	1.52
16	P	139	VAL	CA-CB	5.33	1.61	1.54
24	X	112	ALA	CA-C	5.33	1.59	1.52
48	VA	163	ASN	CA-C	5.33	1.60	1.53
82	DC	785	ARG	CA-C	5.33	1.59	1.52
5	E	135	PRO	CA-C	5.33	1.57	1.52
22	V	82	VAL	CA-CB	5.33	1.59	1.53
36	JA	67	SER	CA-C	5.33	1.59	1.52
8	H	312	VAL	CA-C	5.32	1.59	1.52
8	H	52	VAL	CA-C	5.32	1.59	1.52
29	CA	69	SER	CA-C	5.32	1.59	1.52
61	IB	58	CYS	CA-C	5.32	1.58	1.53
82	DC	145	GLN	CA-C	5.32	1.59	1.52
28	BA	13	ILE	CA-C	5.31	1.59	1.52
72	TB	103	ILE	CA-CB	5.31	1.59	1.54
82	DC	488	VAL	CA-C	5.31	1.59	1.52
20	T	6	VAL	CA-C	5.31	1.59	1.52
48	VA	170	ALA	CA-C	5.31	1.59	1.52
60	HB	87	VAL	CA-C	5.31	1.58	1.52
82	DC	188	ILE	CA-C	5.31	1.59	1.52
5	E	148	VAL	CA-C	5.31	1.60	1.52
5	E	187	VAL	CA-CB	5.31	1.62	1.54
18	R	17	VAL	CA-C	5.31	1.57	1.52
82	DC	373	ASP	CA-C	5.31	1.59	1.52
11	K	136	TYR	CA-C	5.30	1.59	1.52
47	UA	6	LYS	CA-C	5.30	1.58	1.52
21	U	113	TYR	CA-C	5.30	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	LA	58	ARG	CA-C	5.30	1.58	1.52
43	QA	49	MET	SD-CE	5.30	1.92	1.79
68	PB	121	ALA	CA-C	5.30	1.58	1.52
82	DC	839	TYR	CA-C	5.30	1.59	1.52
32	FA	47	LYS	CA-C	5.30	1.59	1.52
20	T	79	ILE	CA-CB	5.29	1.61	1.54
40	NA	77	LEU	CA-C	5.29	1.58	1.52
21	U	67	ILE	CA-C	5.29	1.58	1.52
82	DC	797	VAL	CA-C	5.29	1.59	1.52
8	H	272	VAL	CA-CB	5.29	1.61	1.54
62	JB	136	ILE	CA-C	5.29	1.58	1.52
8	H	90	PHE	CA-C	5.29	1.59	1.52
25	Y	24	ALA	CA-C	5.29	1.59	1.52
6	F	103	PRO	CA-C	5.29	1.59	1.52
12	L	197	VAL	CA-CB	5.29	1.61	1.54
17	Q	123	ILE	CA-CB	5.29	1.60	1.53
48	VA	174	ASN	CA-C	5.29	1.60	1.52
61	IB	75	VAL	CA-C	5.29	1.59	1.52
65	MB	98	ASN	CA-C	5.29	1.59	1.53
6	F	79	ASN	CA-C	5.28	1.58	1.52
42	PA	24	THR	CA-C	5.28	1.58	1.52
82	DC	830	GLU	CA-C	5.28	1.59	1.53
5	E	151	VAL	CA-CB	5.28	1.61	1.54
82	DC	546	GLU	CA-C	5.28	1.59	1.52
19	S	183	THR	CA-CB	5.28	1.57	1.53
48	VA	144	LYS	CA-C	5.28	1.59	1.52
82	DC	233	PHE	CA-C	5.28	1.60	1.52
10	J	170	LYS	CA-C	5.28	1.58	1.52
16	P	144	ASP	CA-C	5.28	1.59	1.52
34	HA	24	THR	CA-C	5.28	1.58	1.52
37	KA	35	VAL	CA-C	5.28	1.59	1.52
48	VA	133	THR	CA-C	5.28	1.60	1.52
9	I	83	LEU	CA-C	5.28	1.59	1.52
36	JA	89	THR	CA-C	5.28	1.60	1.52
82	DC	146	ALA	CA-C	5.28	1.60	1.52
5	E	73	ASP	CA-C	5.27	1.59	1.53
20	T	96	LYS	CA-C	5.27	1.59	1.52
82	DC	127	VAL	CA-CB	5.27	1.61	1.54
82	DC	240	MET	CA-C	5.27	1.59	1.52
82	DC	252	PRO	CA-C	5.27	1.59	1.52
6	F	113	VAL	CA-C	5.27	1.59	1.52
16	P	72	SER	CA-C	5.27	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	KA	94	PHE	CA-C	5.27	1.59	1.52
24	X	155	ARG	CA-C	5.27	1.59	1.52
51	YA	66	VAL	CA-C	5.27	1.57	1.53
82	DC	625	TRP	CA-C	5.27	1.59	1.53
82	DC	709	MET	SD-CE	5.27	1.92	1.79
8	H	320	ASN	CA-C	5.26	1.59	1.52
82	DC	241	MET	CA-C	5.26	1.59	1.52
82	DC	433	ARG	CA-C	5.26	1.59	1.52
16	P	83	THR	CA-CB	5.26	1.61	1.53
6	F	136	ILE	CA-C	5.26	1.59	1.52
27	AA	13	ILE	CA-C	5.26	1.59	1.52
36	JA	120	THR	CA-C	5.26	1.59	1.52
48	VA	96	ILE	CA-CB	5.26	1.62	1.54
38	LA	64	THR	CA-C	5.26	1.59	1.53
48	VA	150	ILE	CA-C	5.26	1.59	1.53
16	P	96	LYS	CA-C	5.25	1.59	1.52
30	DA	116	LYS	CA-C	5.25	1.59	1.52
10	J	65	ILE	CA-C	5.25	1.58	1.52
18	R	14	LEU	CA-C	5.25	1.59	1.52
82	DC	347	THR	CA-C	5.25	1.59	1.52
6	F	193	ARG	CA-C	5.25	1.59	1.52
82	DC	239	LYS	CA-C	5.25	1.59	1.52
82	DC	652	ALA	CA-C	5.25	1.59	1.52
8	H	64	SER	CA-C	5.25	1.59	1.52
8	H	134	LEU	CA-C	5.25	1.59	1.52
5	E	12	HIS	CA-C	5.25	1.59	1.52
21	U	9	THR	CA-C	5.25	1.59	1.52
82	DC	641	ASN	CA-C	5.24	1.59	1.52
82	DC	681	MET	CA-C	5.24	1.60	1.53
8	H	323	VAL	CA-CB	5.24	1.61	1.54
82	DC	259	ASN	CA-C	5.24	1.59	1.52
48	VA	191	TYR	CA-C	5.24	1.58	1.52
82	DC	160	VAL	CA-CB	5.24	1.60	1.54
82	DC	400	VAL	CA-C	5.24	1.59	1.52
48	VA	100	ILE	CA-CB	5.24	1.61	1.54
5	E	97	LYS	CA-C	5.24	1.59	1.52
48	VA	154	SER	CA-C	5.24	1.59	1.52
82	DC	446	ASP	CA-C	5.24	1.59	1.52
8	H	331	ALA	CA-C	5.23	1.59	1.52
18	R	109	ARG	CA-C	5.23	1.59	1.52
46	TA	66	LYS	CA-C	5.23	1.59	1.52
5	E	176	GLU	CA-C	5.23	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	736	PRO	CA-C	5.23	1.58	1.52
82	DC	677	PHE	CA-C	5.23	1.59	1.52
8	H	221	ASN	CA-C	5.23	1.59	1.52
21	U	99	ALA	CA-C	5.23	1.59	1.52
48	VA	146	ALA	CA-C	5.23	1.58	1.53
27	AA	57	MET	CA-C	5.22	1.58	1.53
82	DC	151	ILE	CA-C	5.22	1.58	1.52
21	U	56	ARG	CA-C	5.22	1.58	1.52
48	VA	80	VAL	CA-CB	5.22	1.60	1.54
7	G	97	ARG	CA-C	5.22	1.59	1.52
8	H	47	ARG	N-CA	5.22	1.52	1.46
19	S	31	ARG	CA-C	5.22	1.59	1.52
24	X	170	THR	CA-C	5.22	1.60	1.53
14	N	165	ILE	CA-CB	5.21	1.61	1.54
5	E	131	ALA	CA-C	5.21	1.59	1.52
40	NA	44	VAL	CA-CB	5.21	1.60	1.54
82	DC	68	ILE	CA-CB	5.21	1.59	1.55
43	QA	21	ARG	CA-C	5.21	1.58	1.52
82	DC	811	PRO	CA-C	5.21	1.59	1.52
47	UA	73	THR	CA-CB	5.21	1.61	1.53
48	VA	50	VAL	CA-CB	5.21	1.60	1.54
5	E	120	VAL	CA-CB	5.21	1.60	1.54
6	F	209	HIS	CA-C	5.21	1.58	1.52
13	M	133	THR	CA-C	5.21	1.58	1.52
30	DA	6	LEU	CA-C	5.21	1.58	1.53
82	DC	691	VAL	CA-CB	5.21	1.61	1.55
9	I	61	ILE	CA-C	5.20	1.59	1.52
15	O	133	ARG	CA-C	5.20	1.57	1.52
27	AA	22	ILE	CA-C	5.20	1.59	1.52
36	JA	76	VAL	CA-C	5.20	1.59	1.52
24	X	121	ILE	CA-C	5.20	1.58	1.52
37	KA	67	MET	SD-CE	5.20	1.92	1.79
5	E	144	LEU	CA-C	5.20	1.59	1.52
7	G	169	THR	CA-C	5.20	1.58	1.53
22	V	123	THR	CA-CB	5.20	1.60	1.53
51	YA	189	ILE	CA-C	5.20	1.57	1.52
82	DC	75	ILE	CA-C	5.20	1.58	1.52
82	DC	286	THR	CA-C	5.20	1.60	1.52
32	FA	11	HIS	CA-C	5.20	1.60	1.52
22	V	152	HIS	CA-C	5.20	1.59	1.53
24	X	9	VAL	CA-C	5.20	1.59	1.52
62	JB	37	VAL	CA-C	5.20	1.58	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
47	UA	22	LEU	CA-C	5.19	1.59	1.52
19	S	89	VAL	CA-C	5.19	1.59	1.52
54	BB	238	LEU	CA-C	5.19	1.57	1.52
59	GB	14	THR	CA-C	5.19	1.58	1.52
82	DC	440	ARG	CA-C	5.19	1.59	1.52
31	EA	68	ILE	CA-C	5.19	1.58	1.52
59	GB	168	ARG	CA-C	5.19	1.57	1.52
8	H	225	VAL	CA-C	5.19	1.58	1.52
16	P	80	LEU	CA-C	5.19	1.59	1.52
16	P	82	ILE	CA-CB	5.19	1.62	1.54
61	IB	99	ARG	CA-C	5.19	1.59	1.52
68	PB	98	TYR	CA-C	5.19	1.59	1.52
81	CC	123	ASN	CA-C	5.19	1.57	1.52
8	H	151	VAL	CA-C	5.18	1.58	1.52
38	LA	59	PRO	CA-C	5.18	1.59	1.52
49	WA	318	ALA	CA-C	5.18	1.57	1.52
70	RB	18	GLN	CA-C	5.18	1.58	1.53
22	V	165	ILE	CA-C	5.18	1.58	1.52
24	X	10	ILE	CA-C	5.18	1.58	1.52
31	EA	43	VAL	CA-C	5.18	1.59	1.52
40	NA	8	ALA	CA-C	5.18	1.59	1.52
25	Y	36	VAL	CA-CB	5.18	1.59	1.54
24	X	82	ASP	CA-C	5.18	1.59	1.53
25	Y	61	THR	CA-C	5.18	1.59	1.52
48	VA	156	VAL	CA-CB	5.18	1.61	1.54
5	E	189	PHE	CA-C	5.17	1.59	1.52
7	G	151	ILE	CA-CB	5.17	1.60	1.54
16	P	59	THR	CA-C	5.17	1.59	1.52
82	DC	264	ALA	CA-C	5.17	1.59	1.52
30	DA	67	GLU	CA-C	5.17	1.59	1.52
9	I	36	LEU	CA-C	5.17	1.59	1.52
48	VA	59	VAL	CA-C	5.17	1.60	1.52
68	PB	75	ASN	CA-C	5.17	1.57	1.52
8	H	145	ILE	CA-C	5.17	1.58	1.52
11	K	203	TRP	CA-C	5.17	1.58	1.53
16	P	143	VAL	CA-C	5.17	1.58	1.52
20	T	135	TYR	CA-C	5.17	1.58	1.52
32	FA	62	HIS	CA-C	5.17	1.59	1.53
82	DC	379	MET	SD-CE	5.17	1.92	1.79
35	IA	43	HIS	CA-C	5.16	1.59	1.52
72	TB	125	ILE	CA-C	5.16	1.58	1.52
5	E	115	VAL	CA-CB	5.16	1.62	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	TA	41	ARG	CA-C	5.16	1.59	1.52
23	W	90	PRO	CA-C	5.16	1.59	1.52
31	EA	25	ILE	CA-C	5.16	1.58	1.52
5	E	67	ILE	CA-C	5.15	1.59	1.52
8	H	55	LYS	CA-C	5.15	1.59	1.53
5	E	198	TRP	CA-C	5.15	1.59	1.52
7	G	10	ARG	CA-C	5.15	1.59	1.53
48	VA	190	VAL	CA-C	5.15	1.58	1.52
5	E	33	GLU	CA-C	5.15	1.58	1.53
8	H	183	LYS	CA-C	5.15	1.59	1.53
21	U	112	LEU	CA-C	5.15	1.59	1.52
36	JA	4	LEU	CA-C	5.15	1.59	1.52
37	KA	43	PHE	CA-C	5.15	1.59	1.52
82	DC	612	PHE	CA-C	5.15	1.60	1.52
82	DC	86	VAL	CA-C	5.15	1.58	1.52
82	DC	438	MET	SD-CE	5.15	1.92	1.79
62	JB	111	ASN	CA-C	5.14	1.57	1.52
21	U	66	SER	CA-C	5.14	1.59	1.52
23	W	96	ILE	CA-C	5.14	1.59	1.52
36	JA	8	LYS	CA-C	5.14	1.59	1.52
82	DC	620	ALA	CA-C	5.14	1.59	1.52
48	VA	126	THR	CA-CB	5.14	1.61	1.53
30	DA	99	LEU	CA-C	5.14	1.59	1.52
81	CC	151	ASN	CA-C	5.14	1.58	1.52
82	DC	597	VAL	CA-C	5.14	1.59	1.52
5	E	180	VAL	CA-CB	5.14	1.61	1.54
25	Y	15	PHE	CA-C	5.14	1.58	1.53
29	CA	107	VAL	CA-C	5.14	1.58	1.52
36	JA	49	ASN	CA-C	5.14	1.58	1.52
36	JA	97	ALA	CA-C	5.14	1.59	1.52
82	DC	570	GLU	CA-C	5.14	1.60	1.53
82	DC	610	ASP	CA-C	5.14	1.59	1.52
82	DC	59	THR	CA-C	5.13	1.59	1.52
82	DC	722	PRO	CA-C	5.13	1.59	1.52
82	DC	80	GLU	CA-C	5.13	1.60	1.53
82	DC	254	THR	CA-C	5.13	1.59	1.52
22	V	184	PHE	CA-C	5.13	1.58	1.53
24	X	65	ASN	CA-C	5.13	1.58	1.52
30	DA	105	VAL	CA-CB	5.13	1.61	1.54
32	FA	111	LYS	CA-C	5.13	1.58	1.52
56	DB	129	VAL	CA-C	5.13	1.58	1.52
10	J	52	VAL	CA-C	5.13	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	587	TYR	CA-C	5.12	1.58	1.52
19	S	156	HIS	CA-C	5.12	1.59	1.52
82	DC	230	ALA	CA-C	5.12	1.59	1.52
82	DC	633	ILE	CA-CB	5.12	1.59	1.53
5	E	138	VAL	CA-CB	5.12	1.61	1.54
16	P	58	VAL	CA-C	5.12	1.59	1.52
82	DC	368	ALA	CA-C	5.12	1.59	1.52
5	E	192	SER	CA-C	5.12	1.59	1.53
19	S	74	PRO	CA-C	5.12	1.59	1.52
21	U	7	THR	CA-C	5.12	1.58	1.52
73	UB	87	VAL	CA-CB	5.12	1.59	1.53
82	DC	174	LEU	CA-C	5.12	1.59	1.52
16	P	81	VAL	CA-C	5.12	1.59	1.52
21	U	85	ALA	CA-C	5.11	1.59	1.52
41	OA	15	SER	CA-C	5.11	1.59	1.52
82	DC	456	LEU	CA-C	5.11	1.58	1.52
82	DC	667	PHE	CA-C	5.11	1.59	1.52
9	I	6	ASP	CA-C	5.11	1.57	1.52
82	DC	202	VAL	CA-C	5.11	1.58	1.52
12	L	62	LYS	CA-C	5.11	1.59	1.52
48	VA	96	ILE	CA-C	5.11	1.60	1.52
48	VA	14	LYS	CA-C	5.11	1.59	1.52
58	FB	100	ALA	CA-C	5.11	1.59	1.52
16	P	82	ILE	CA-C	5.11	1.59	1.52
25	Y	63	VAL	CA-C	5.11	1.58	1.52
65	MB	107	ILE	CA-CB	5.11	1.58	1.53
24	X	165	TYR	CA-C	5.10	1.59	1.52
27	AA	18	PRO	CA-C	5.10	1.58	1.52
5	E	191	VAL	CA-CB	5.10	1.60	1.54
7	G	5	LYS	CA-C	5.10	1.59	1.52
16	P	110	ILE	CA-C	5.10	1.59	1.52
82	DC	682	ARG	CA-C	5.10	1.59	1.52
82	DC	723	LYS	CA-C	5.10	1.59	1.52
14	N	24	ARG	CA-C	5.10	1.59	1.52
28	BA	21	PHE	CA-C	5.10	1.59	1.52
82	DC	236	ASP	CA-C	5.10	1.59	1.52
8	H	51	ALA	CA-C	5.09	1.58	1.52
15	O	104	PHE	CA-C	5.09	1.58	1.52
73	UB	59	ILE	CA-CB	5.09	1.59	1.54
7	G	85	VAL	CA-CB	5.09	1.60	1.54
19	S	165	THR	CA-C	5.09	1.60	1.53
75	WB	42	LEU	CA-C	5.09	1.57	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	H	251	THR	CA-C	5.09	1.60	1.53
10	J	79	VAL	CA-C	5.09	1.59	1.52
13	M	55	VAL	CA-C	5.09	1.59	1.52
18	R	44	VAL	CA-CB	5.09	1.61	1.55
5	E	109	ALA	CA-C	5.09	1.59	1.52
48	VA	70	LEU	CA-C	5.09	1.58	1.52
16	P	118	ASP	CA-C	5.09	1.59	1.52
30	DA	10	SER	CA-C	5.09	1.59	1.52
82	DC	58	ASP	CA-C	5.09	1.59	1.53
13	M	59	ASN	CA-C	5.08	1.59	1.52
82	DC	419	VAL	CA-C	5.08	1.57	1.52
11	K	168	ILE	CA-C	5.08	1.58	1.52
76	XB	86	VAL	CA-C	5.08	1.59	1.52
6	F	38	HIS	CA-C	5.08	1.59	1.52
30	DA	50	ILE	CA-C	5.08	1.59	1.52
32	FA	137	LYS	CA-C	5.08	1.59	1.52
82	DC	693	LEU	CA-C	5.08	1.59	1.52
29	CA	99	VAL	CA-CB	5.08	1.60	1.54
82	DC	601	ILE	CA-C	5.08	1.59	1.52
40	NA	21	THR	CA-C	5.07	1.59	1.52
48	VA	161	ALA	CA-C	5.07	1.58	1.53
82	DC	662	SER	CA-C	5.07	1.59	1.52
27	AA	136	VAL	CA-C	5.07	1.59	1.52
19	S	72	LYS	CA-C	5.07	1.59	1.52
7	G	72	VAL	CA-CB	5.07	1.61	1.54
8	H	73	ARG	CA-C	5.07	1.59	1.52
10	J	72	ASN	CA-C	5.07	1.59	1.53
20	T	177	LYS	CA-C	5.07	1.59	1.52
11	K	169	ILE	CA-CB	5.07	1.61	1.54
25	Y	25	VAL	CA-C	5.07	1.59	1.53
61	IB	108	PRO	CA-C	5.07	1.58	1.52
70	RB	78	THR	CA-C	5.07	1.58	1.52
82	DC	122	THR	CA-C	5.07	1.58	1.52
5	E	213	ALA	N-CA	5.06	1.52	1.46
12	L	232	HIS	CA-C	5.06	1.58	1.52
47	UA	16	VAL	CA-CB	5.06	1.60	1.54
47	UA	23	ARG	CA-C	5.06	1.59	1.52
82	DC	530	VAL	CA-C	5.06	1.58	1.52
82	DC	552	VAL	CA-CB	5.06	1.60	1.54
29	CA	62	VAL	CA-CB	5.06	1.61	1.54
75	WB	91	PRO	CA-C	5.06	1.57	1.52
7	G	116	ARG	CA-C	5.06	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	LA	36	LYS	CA-C	5.06	1.58	1.53
8	H	205	PRO	CA-C	5.06	1.59	1.52
31	EA	79	HIS	CA-C	5.06	1.59	1.52
32	FA	102	ILE	CA-C	5.06	1.58	1.52
82	DC	103	ILE	CA-C	5.06	1.59	1.52
5	E	104	SER	CA-C	5.05	1.59	1.52
19	S	46	ASP	CA-C	5.05	1.59	1.52
48	VA	73	PHE	CA-C	5.05	1.59	1.52
16	P	112	ILE	CA-CB	5.05	1.61	1.54
19	S	152	CYS	CA-C	5.05	1.59	1.52
23	W	24	LEU	CA-C	5.05	1.58	1.52
41	OA	64	MET	CA-C	5.05	1.59	1.52
13	M	57	VAL	CA-C	5.05	1.58	1.52
82	DC	325	ARG	CA-C	5.05	1.59	1.52
6	F	226	SER	CA-C	5.05	1.59	1.52
19	S	18	VAL	CA-C	5.05	1.59	1.52
32	FA	38	GLN	CA-C	5.05	1.59	1.52
40	NA	12	ASN	CA-C	5.05	1.58	1.53
15	O	148	VAL	CA-C	5.05	1.59	1.52
36	JA	73	THR	CA-CB	5.05	1.60	1.53
39	MA	100	VAL	CA-C	5.05	1.59	1.52
48	VA	157	LYS	CA-C	5.05	1.58	1.53
47	UA	71	VAL	CA-C	5.05	1.58	1.52
73	UB	83	VAL	CA-C	5.05	1.58	1.52
82	DC	566	THR	CA-CB	5.05	1.60	1.53
5	E	14	LYS	CA-C	5.04	1.59	1.52
41	OA	43	LYS	CA-C	5.04	1.59	1.52
17	Q	54	LEU	CA-C	5.04	1.59	1.52
30	DA	103	LYS	CA-C	5.04	1.59	1.52
32	FA	82	ILE	CA-CB	5.04	1.58	1.54
57	EB	12	ALA	CA-C	5.04	1.59	1.52
82	DC	362	ASP	CA-C	5.04	1.58	1.53
7	G	23	ALA	CA-C	5.04	1.59	1.52
48	VA	51	VAL	CA-C	5.04	1.58	1.52
8	H	208	VAL	CA-CB	5.04	1.59	1.54
82	DC	370	LYS	CA-C	5.04	1.59	1.52
6	F	61	VAL	CA-CB	5.03	1.58	1.53
25	Y	53	PRO	CA-C	5.03	1.58	1.52
55	CB	130	ILE	CA-C	5.03	1.58	1.52
73	UB	66	SER	CA-C	5.03	1.58	1.52
9	I	171	LEU	CA-C	5.03	1.59	1.52
35	IA	20	LEU	CA-C	5.03	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	72	SER	CA-C	5.03	1.58	1.53
5	E	208	SER	CA-C	5.03	1.59	1.52
16	P	74	VAL	CA-CB	5.03	1.60	1.54
8	H	319	LYS	CA-C	5.03	1.58	1.52
9	I	41	LYS	CA-C	5.03	1.59	1.52
21	U	50	GLN	CA-C	5.03	1.59	1.52
30	DA	34	PRO	CA-C	5.02	1.58	1.52
82	DC	659	ILE	CA-CB	5.02	1.61	1.54
25	Y	151	LEU	CA-C	5.02	1.58	1.52
48	VA	187	VAL	CA-C	5.02	1.59	1.52
82	DC	571	SER	CA-C	5.02	1.59	1.52
18	R	38	ILE	CA-C	5.02	1.58	1.53
82	DC	707	PRO	CA-C	5.02	1.59	1.52
16	P	117	ARG	CA-C	5.02	1.59	1.52
22	V	90	ASP	CA-C	5.02	1.59	1.52
38	LA	108	GLN	CA-C	5.02	1.57	1.52
47	UA	74	ALA	CA-C	5.02	1.59	1.52
82	DC	399	ARG	CA-C	5.02	1.59	1.52
82	DC	802	SER	CA-C	5.02	1.60	1.53
30	DA	105	VAL	CA-C	5.02	1.59	1.52
51	YA	189	ILE	CA-CB	5.02	1.57	1.54
25	Y	42	ILE	CA-C	5.02	1.59	1.52
30	DA	9	SER	N-CA	5.02	1.51	1.45
5	E	130	LYS	CA-C	5.01	1.59	1.52
7	G	79	VAL	CA-C	5.01	1.58	1.52
40	NA	81	THR	CA-CB	5.01	1.61	1.53
82	DC	47	SER	CA-C	5.01	1.59	1.52
20	T	12	LYS	CA-C	5.01	1.59	1.52
32	FA	8	THR	CA-CB	5.01	1.61	1.53
49	WA	224	ASN	CA-C	5.01	1.58	1.53
48	VA	31	ASP	CA-C	5.01	1.59	1.52
17	Q	57	VAL	CA-CB	5.01	1.59	1.53
36	JA	10	VAL	CA-CB	5.01	1.62	1.54
82	DC	199	ASP	CA-C	5.01	1.59	1.52
82	DC	815	ALA	CA-C	5.01	1.59	1.52
82	DC	821	ALA	CA-C	5.01	1.59	1.52
9	I	47	PRO	CA-C	5.00	1.57	1.53
79	AC	10	HIS	CA-C	5.00	1.58	1.52
5	E	105	LYS	CA-C	5.00	1.59	1.52
8	H	46	LYS	CA-C	5.00	1.59	1.52
8	H	323	VAL	CA-C	5.00	1.60	1.52
27	AA	50	PRO	CA-C	5.00	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	364	ALA	CA-C	5.00	1.59	1.52
82	DC	715	ALA	CA-C	5.00	1.59	1.52
11	K	92	ILE	CA-CB	5.00	1.60	1.54
20	T	190	VAL	CA-CB	5.00	1.60	1.54
24	X	61	ILE	CA-C	5.00	1.59	1.52

All (601) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	J	126	GLN	N-CA-C	-14.71	95.95	112.57
19	S	109	ARG	N-CA-C	-11.87	101.09	114.62
14	N	117	GLY	N-CA-C	-10.91	99.25	115.72
48	VA	103	ASN	N-CA-C	-10.66	100.57	112.72
12	L	80	TYR	N-CA-C	-9.61	102.79	112.97
10	J	129	GLU	N-CA-C	-9.21	96.83	110.46
36	JA	22	SER	N-CA-C	-8.82	101.77	112.54
67	OB	100	LEU	N-CA-C	8.78	123.20	109.07
20	T	29	ASN	N-CA-C	-8.72	102.77	113.50
50	XA	119	ARG	N-CA-C	-8.52	104.90	114.62
34	HA	76	GLU	N-CA-C	-8.51	103.03	113.50
33	GA	19	ASN	N-CA-C	-8.50	103.09	113.97
44	RA	104	PRO	CA-C-N	8.44	128.08	119.56
44	RA	104	PRO	C-N-CA	8.44	128.08	119.56
5	E	137	PRO	N-CA-C	8.42	123.96	110.40
2	B	1307	G	C2'-C3'-O3'	8.31	121.96	109.50
17	Q	26	PHE	N-CA-C	-8.30	103.15	113.28
2	B	503	C	P-O3'-C3'	8.26	132.58	120.20
11	K	161	VAL	CA-C-N	8.23	130.12	119.84
11	K	161	VAL	C-N-CA	8.23	130.12	119.84
20	T	110	PRO	N-CA-C	8.21	120.71	110.70
2	B	3317	U	C2'-C3'-O3'	8.06	121.59	109.50
8	H	137	ALA	N-CA-C	-8.04	103.47	113.20
13	M	164	ILE	N-CA-C	-8.01	104.70	113.43
48	VA	109	ALA	N-CA-C	8.00	121.06	109.14
2	B	3269	U	C2'-C3'-O3'	7.93	121.39	109.50
28	BA	42	GLN	N-CA-C	-7.90	103.64	113.28
48	VA	61	ARG	N-CA-C	-7.87	103.56	113.01
34	HA	52	ARG	N-CA-C	-7.80	102.74	111.71
83	EC	6900	A	N9-C1'-C2'	7.77	123.65	112.00
35	IA	52	ALA	CA-C-N	7.73	127.01	118.97
35	IA	52	ALA	C-N-CA	7.73	127.01	118.97
48	VA	58	MET	N-CA-C	-7.68	104.06	113.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	HA	77	LEU	N-CA-C	-7.67	103.65	113.16
48	VA	57	THR	N-CA-C	-7.64	103.93	113.18
82	DC	805	GLY	N-CA-C	7.56	121.78	112.64
83	EC	6948	U	N1-C1'-C2'	7.55	123.32	112.00
59	GB	39	LYS	N-CA-C	-7.54	103.34	112.54
7	G	349	LYS	N-CA-C	-7.52	103.36	112.54
28	BA	14	TYR	CA-C-N	7.48	129.19	119.84
28	BA	14	TYR	C-N-CA	7.48	129.19	119.84
82	DC	160	VAL	N-CA-C	-7.47	103.64	112.98
69	QB	65	ILE	N-CA-C	-7.44	105.74	111.62
8	H	263	GLY	N-CA-C	7.38	121.98	112.68
33	GA	18	ARG	N-CA-C	-7.38	103.89	113.12
1	A	1573	A	C2'-C3'-O3'	7.33	120.50	109.50
23	W	86	GLU	N-CA-C	-7.33	102.26	112.45
58	FB	144	ALA	N-CA-C	-7.31	104.62	113.97
72	TB	94	LEU	CA-C-N	7.29	128.95	119.84
72	TB	94	LEU	C-N-CA	7.29	128.95	119.84
48	VA	126	THR	N-CA-C	-7.28	104.53	113.41
40	NA	28	TYR	N-CA-C	-7.28	102.81	114.09
83	EC	6949	G	N9-C1'-C2'	7.27	124.91	114.00
6	F	223	SER	N-CA-C	-7.26	104.50	113.15
82	DC	214	GLY	N-CA-C	7.26	120.92	112.50
16	P	88	PRO	N-CA-C	7.25	119.55	110.70
82	DC	674	GLY	CA-C-N	7.24	128.88	119.84
82	DC	674	GLY	C-N-CA	7.24	128.88	119.84
83	EC	6788	C	N1-C1'-C2'	7.21	122.81	112.00
82	DC	342	LEU	CA-C-N	7.16	128.78	119.84
82	DC	342	LEU	C-N-CA	7.16	128.78	119.84
8	H	179	LEU	N-CA-C	-7.14	102.90	111.69
39	MA	89	ARG	N-CA-C	-7.13	105.11	114.31
34	HA	75	ASN	N-CA-C	-7.12	104.86	113.97
2	B	3058	U	N1-C1'-C2'	7.11	122.67	112.00
83	EC	6855	A	N9-C1'-C2'	7.11	122.66	112.00
39	MA	109	ILE	N-CA-C	-7.10	105.86	112.96
44	RA	114	LYS	N-CA-C	-7.04	104.68	113.20
40	NA	39	PHE	N-CA-C	-7.03	103.55	111.07
1	A	139	C	C2'-C3'-O3'	7.02	120.03	109.50
23	W	166	ASN	N-CA-C	-7.02	103.70	112.90
54	BB	17	HIS	N-CA-C	-7.00	104.61	113.01
2	B	799	G	N9-C1'-C2'	6.98	122.47	112.00
1	A	1727	G	N9-C1'-C2'	6.97	122.45	112.00
48	VA	54	GLY	N-CA-C	6.96	120.28	110.74

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	922	U	N1-C1'-C2'	6.96	122.43	112.00
19	S	147	ARG	N-CA-C	-6.96	104.05	112.54
8	H	197	ARG	N-CA-C	-6.95	103.75	113.20
27	AA	8	GLY	N-CA-C	6.94	119.92	110.69
48	VA	64	ARG	N-CA-C	-6.93	103.82	112.90
22	V	133	LYS	N-CA-C	-6.91	104.16	112.59
83	EC	6919	G	N9-C1'-C2'	6.91	122.36	112.00
82	DC	484	SER	N-CA-C	-6.91	105.19	112.93
2	B	3151	U	N1-C1'-C2'	6.91	122.36	112.00
2	B	961	C	C5'-C4'-C3'	6.88	125.53	115.20
1	A	1761	U	C2'-C3'-O3'	6.86	119.78	109.50
11	K	230	GLY	N-CA-C	6.86	119.12	111.85
8	H	276	LEU	CA-C-N	6.85	128.40	119.84
8	H	276	LEU	C-N-CA	6.85	128.40	119.84
3	C	85	G	C2'-C3'-O3'	6.84	119.76	109.50
47	UA	6	LYS	N-CA-C	-6.81	104.84	113.43
27	AA	104	ASN	CA-C-N	6.81	128.35	119.84
27	AA	104	ASN	C-N-CA	6.81	128.35	119.84
1	A	418	G	N9-C1'-C2'	6.79	122.19	112.00
34	HA	60	ALA	N-CA-C	-6.79	103.81	111.14
17	Q	56	PRO	N-CA-C	6.79	121.33	110.40
19	S	142	ILE	N-CA-C	-6.78	106.88	113.53
2	B	1103	A	C2'-C3'-O3'	6.76	119.65	109.50
37	KA	86	ARG	N-CA-C	-6.75	104.92	113.01
82	DC	496	LYS	N-CA-C	-6.74	105.21	113.50
2	B	882	A	N9-C1'-C2'	6.73	122.09	112.00
60	HB	19	GLY	N-CA-C	-6.70	106.21	114.92
17	Q	146	PRO	N-CA-C	6.69	120.89	111.33
8	H	27	SER	N-CA-C	-6.66	104.18	113.37
41	OA	17	THR	CA-C-N	6.66	130.33	120.87
41	OA	17	THR	C-N-CA	6.66	130.33	120.87
2	B	3228	C	C2'-C3'-O3'	6.65	119.47	109.50
24	X	14	LEU	CA-C-N	6.63	128.13	119.84
24	X	14	LEU	C-N-CA	6.63	128.13	119.84
21	U	157	VAL	N-CA-C	-6.63	106.53	112.90
71	SB	13	VAL	CA-C-N	6.62	128.12	119.84
71	SB	13	VAL	C-N-CA	6.62	128.12	119.84
42	PA	12	LEU	N-CA-C	-6.61	105.19	113.18
10	J	110	LYS	N-CA-C	6.59	120.99	111.56
57	EB	62	VAL	CA-C-N	6.58	128.07	119.84
57	EB	62	VAL	C-N-CA	6.58	128.07	119.84
2	B	705	A	N9-C1'-C2'	6.57	123.86	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	25	C	C2'-C3'-O3'	6.57	119.35	109.50
48	VA	62	ALA	N-CA-C	-6.57	105.09	113.23
2	B	169	U	C2'-C3'-O3'	6.55	119.32	109.50
30	DA	100	HIS	CA-C-N	6.55	126.13	119.19
30	DA	100	HIS	C-N-CA	6.55	126.13	119.19
11	K	215	GLY	N-CA-C	-6.54	106.02	114.85
2	B	1115	G	N9-C1'-C2'	6.53	121.80	112.00
16	P	136	ALA	N-CA-C	-6.53	105.45	113.41
2	B	2114	C	N1-C1'-C2'	6.52	121.78	112.00
29	CA	51	VAL	CA-C-N	6.51	126.54	119.90
29	CA	51	VAL	C-N-CA	6.51	126.54	119.90
11	K	192	GLY	N-CA-C	6.50	119.80	112.00
18	R	7	VAL	N-CA-C	-6.50	106.35	113.43
32	FA	28	HIS	CA-C-N	6.49	127.95	119.84
32	FA	28	HIS	C-N-CA	6.49	127.95	119.84
83	EC	6905	G	N9-C1'-C2'	6.47	121.70	112.00
34	HA	79	THR	N-CA-C	-6.46	104.31	111.36
21	U	89	LYS	N-CA-C	-6.46	104.09	112.23
18	R	28	SER	N-CA-C	-6.46	105.70	113.97
82	DC	63	GLU	N-CA-C	-6.46	105.37	113.18
21	U	10	ASN	CA-C-N	6.44	126.14	119.64
21	U	10	ASN	C-N-CA	6.44	126.14	119.64
82	DC	512	SER	N-CA-C	-6.42	104.28	111.28
76	XB	97	PRO	N-CA-C	6.41	118.53	110.70
6	F	118	GLU	N-CA-C	-6.41	104.95	112.89
19	S	6	TYR	N-CA-C	-6.39	104.31	111.28
2	B	1604	G	N9-C1'-C2'	6.38	121.57	112.00
2	B	2292	U	N1-C1'-C2'	6.37	121.56	112.00
82	DC	149	GLU	N-CA-C	-6.37	106.72	114.75
49	WA	206	PRO	N-CA-C	-6.37	106.56	114.20
7	G	286	GLY	N-CA-C	6.36	128.25	113.18
8	H	120	TYR	N-CA-C	-6.34	103.63	111.75
34	HA	58	TYR	N-CA-C	-6.34	105.03	112.89
12	L	68	ARG	N-CA-C	-6.33	104.46	111.36
2	B	998	A	N9-C1'-C2'	6.32	121.48	112.00
25	Y	152	ALA	CA-C-N	6.32	127.74	119.84
25	Y	152	ALA	C-N-CA	6.32	127.74	119.84
63	KB	65	VAL	N-CA-C	-6.31	106.84	112.90
82	DC	674	GLY	N-CA-C	6.31	125.21	112.34
8	H	138	ARG	N-CA-C	-6.30	105.49	113.43
27	AA	43	GLY	N-CA-C	6.30	123.98	112.27
2	B	2375	G	N9-C1'-C2'	6.29	123.44	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	I	37	VAL	N-CA-C	-6.28	107.13	113.47
14	N	175	ASN	N-CA-C	-6.28	104.78	112.88
2	B	895	A	N9-C1'-C2'	6.27	121.40	112.00
44	RA	104	PRO	N-CA-C	6.27	118.34	110.70
21	U	77	GLY	N-CA-C	-6.26	106.61	115.43
2	B	807	A	N9-C1'-C2'	6.25	121.38	112.00
19	S	82	GLY	N-CA-C	6.25	119.00	110.69
8	H	143	GLU	N-CA-C	-6.25	104.93	113.30
11	K	157	ASN	N-CA-C	-6.23	105.26	112.86
11	K	216	VAL	CA-C-N	6.23	125.80	119.19
11	K	216	VAL	C-N-CA	6.23	125.80	119.19
63	KB	124	ARG	N-CA-C	-6.22	104.39	112.23
48	VA	60	ARG	N-CA-C	-6.21	104.40	112.23
50	XA	107	PHE	N-CA-C	-6.20	105.74	113.55
2	B	2280	A	N9-C1'-C2'	6.20	121.29	112.00
12	L	190	VAL	N-CA-C	-6.19	107.09	113.10
19	S	201	ARG	N-CA-C	-6.19	103.25	111.24
1	A	1471	A	N9-C1'-C2'	6.18	121.27	112.00
51	YA	150	VAL	N-CA-C	-6.16	107.50	113.53
6	F	177	LYS	CA-C-N	6.15	127.53	119.84
6	F	177	LYS	C-N-CA	6.15	127.53	119.84
26	Z	40	HIS	N-CA-C	-6.15	104.94	112.88
1	A	581	U	N1-C1'-C2'	6.14	121.22	112.00
2	B	365	A	N9-C1'-C2'	6.14	121.21	112.00
83	EC	6878	G	N9-C1'-C2'	6.14	123.21	114.00
43	QA	13	MET	N-CA-C	-6.13	104.70	111.82
7	G	134	SER	N-CA-C	-6.12	105.66	113.01
82	DC	181	THR	N-CA-C	-6.12	104.72	111.82
63	KB	118	ILE	N-CA-C	-6.12	104.78	110.53
23	W	142	ILE	N-CA-C	-6.12	103.48	112.04
1	A	942	G	N9-C1'-C2'	6.11	121.17	112.00
54	BB	64	ILE	N-CA-C	-6.11	107.90	113.71
74	VB	128	LYS	N-CA-C	-6.11	106.49	112.97
14	N	15	LYS	CA-C-N	6.11	127.47	119.84
14	N	15	LYS	C-N-CA	6.11	127.47	119.84
32	FA	37	GLY	N-CA-C	-6.11	105.40	112.73
2	B	961	C	C5'-C4'-O4'	6.11	118.26	109.10
82	DC	107	GLY	N-CA-C	6.11	127.65	113.18
74	VB	116	LYS	N-CA-C	-6.10	105.88	113.38
48	VA	56	ASN	N-CA-C	-6.09	105.83	113.20
20	T	98	ALA	N-CA-C	-6.09	105.70	113.01
23	W	73	GLY	N-CA-C	6.09	127.61	113.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	DB	61	PHE	CA-C-N	6.09	126.03	119.76
56	DB	61	PHE	C-N-CA	6.09	126.03	119.76
35	IA	103	GLY	N-CA-C	6.09	120.09	113.58
38	LA	58	ARG	CA-C-N	6.09	127.45	119.84
38	LA	58	ARG	C-N-CA	6.09	127.45	119.84
34	HA	55	GLU	N-CA-C	-6.05	104.80	111.82
18	R	130	THR	N-CA-C	-6.05	105.16	112.54
29	CA	129	ASP	N-CA-C	-6.03	106.46	113.88
10	J	128	LYS	N-CA-C	6.02	123.63	110.80
58	FB	93	THR	N-CA-C	-6.02	106.91	114.56
4	D	90	U	N1-C1'-C2'	6.01	121.01	112.00
2	B	839	C	N1-C1'-C2'	6.00	121.00	112.00
16	P	111	GLU	N-CA-C	-6.00	104.82	111.36
14	N	13	LYS	N-CA-C	-6.00	105.92	113.18
22	V	156	GLY	CA-C-N	6.00	126.94	119.98
22	V	156	GLY	C-N-CA	6.00	126.94	119.98
2	B	646	A	N9-C1'-C2'	5.99	120.99	112.00
7	G	289	ASP	N-CA-C	-5.99	107.79	114.62
21	U	91	VAL	N-CA-C	-5.98	104.19	112.50
17	Q	184	GLU	N-CA-C	-5.98	106.15	113.50
82	DC	62	ASP	N-CA-C	-5.97	106.09	113.19
82	DC	444	PRO	N-CA-C	5.97	119.87	110.50
68	PB	127	HIS	N-CA-C	-5.96	105.27	112.54
53	AB	26	THR	N-CA-C	-5.95	105.97	113.18
2	B	2148	U	N1-C1'-C2'	5.95	120.93	112.00
2	B	3181	C	N1-C1'-C2'	5.95	120.92	112.00
58	FB	110	ARG	N-CA-C	-5.95	106.19	113.50
2	B	1534	A	N9-C1'-C2'	5.91	120.86	112.00
22	V	127	LEU	N-CA-C	-5.91	104.84	111.28
2	B	1352	A	C2'-C3'-O3'	5.90	118.35	109.50
23	W	11	ALA	N-CA-C	-5.90	104.85	111.28
12	L	65	LEU	N-CA-C	-5.89	105.59	112.89
82	DC	373	ASP	CA-C-N	5.88	127.19	119.84
82	DC	373	ASP	C-N-CA	5.88	127.19	119.84
2	B	1878	G	N9-C1'-C2'	5.88	120.82	112.00
69	QB	48	GLN	N-CA-C	-5.88	105.42	112.59
7	G	169	THR	CA-C-N	5.88	126.39	120.04
7	G	169	THR	C-N-CA	5.88	126.39	120.04
2	B	637	C	C2'-C3'-O3'	5.86	122.50	113.70
48	VA	65	GLY	N-CA-C	-5.86	106.51	115.66
35	IA	94	GLU	CA-C-N	5.86	126.35	120.14
35	IA	94	GLU	C-N-CA	5.86	126.35	120.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	1002	A	N9-C1'-C2'	5.86	120.79	112.00
1	A	1535	U	N1-C1'-C2'	5.86	120.78	112.00
7	G	255	TRP	N-CA-C	-5.86	105.24	112.38
25	Y	154	VAL	N-CA-C	5.85	114.58	107.61
82	DC	621	ASP	N-CA-C	5.85	118.13	111.11
11	K	129	LEU	N-CA-C	-5.84	106.69	113.88
69	QB	54	PHE	N-CA-C	-5.84	105.82	113.12
15	O	57	PHE	N-CA-C	-5.84	105.92	114.39
48	VA	115	ALA	CA-C-N	5.84	127.14	119.84
48	VA	115	ALA	C-N-CA	5.84	127.14	119.84
75	WB	92	ILE	N-CA-C	-5.84	107.07	113.43
2	B	190	U	N1-C1'-C2'	5.83	120.74	112.00
21	U	123	PRO	CA-C-N	5.83	128.98	120.71
21	U	123	PRO	C-N-CA	5.83	128.98	120.71
82	DC	398	GLY	N-CA-C	5.82	119.63	110.96
32	FA	57	GLY	N-CA-C	5.81	119.64	112.14
75	WB	40	VAL	N-CA-C	-5.80	108.20	113.71
2	B	978	G	N9-C1'-C2'	5.80	120.70	112.00
30	DA	46	LYS	N-CA-C	-5.80	107.20	114.56
40	NA	61	ILE	N-CA-C	-5.80	105.20	110.82
46	TA	42	ARG	N-CA-C	-5.79	104.96	111.28
40	NA	73	ALA	N-CA-C	-5.79	106.17	113.18
2	B	3307	A	N9-C1'-C2'	5.79	120.68	112.00
1	A	240	U	C2'-C3'-O3'	5.78	118.18	109.50
2	B	1893	A	N9-C1'-C2'	5.78	120.67	112.00
39	MA	86	ARG	N-CA-C	-5.78	105.11	111.82
15	O	56	THR	N-CA-C	-5.78	106.19	113.18
18	R	132	LYS	N-CA-C	-5.78	105.81	112.92
13	M	78	MET	N-CA-C	-5.77	106.78	113.88
63	KB	18	TYR	N-CA-C	-5.77	104.89	111.07
10	J	118	GLU	N-CA-C	-5.77	104.36	111.40
83	EC	6892	U	N1-C1'-C2'	5.77	120.66	112.00
56	DB	80	ASN	CB-CA-C	-5.77	109.38	117.23
59	GB	180	LYS	N-CA-C	-5.77	106.08	113.23
64	LB	124	ASP	N-CA-C	-5.76	105.83	112.86
17	Q	50	PRO	N-CA-C	5.76	120.27	111.34
2	B	2101	C	C2'-C3'-O3'	5.75	118.12	109.50
7	G	234	GLY	N-CA-C	-5.75	106.81	115.32
2	B	372	A	N9-C1'-C2'	5.74	120.61	112.00
38	LA	25	THR	CA-C-N	5.74	125.42	119.56
38	LA	25	THR	C-N-CA	5.74	125.42	119.56
63	KB	63	ALA	N-CA-C	-5.74	105.77	112.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	VA	69	ASP	N-CA-C	-5.74	104.71	110.97
2	B	2197	C	N1-C1'-C2'	5.74	122.61	114.00
2	B	1329	U	C2'-C3'-O3'	5.73	118.09	109.50
21	U	52	LEU	N-CA-C	-5.73	106.37	113.19
2	B	2641	U	N1-C1'-C2'	5.71	120.57	112.00
19	S	184	LYS	N-CA-C	-5.71	106.27	113.18
50	XA	19	ALA	N-CA-C	-5.69	105.83	112.89
23	W	36	ASN	N-CA-C	-5.69	106.14	114.39
2	B	217	U	N1-C1'-C2'	5.69	120.53	112.00
8	H	25	VAL	N-CA-C	-5.69	105.34	113.07
20	T	164	SER	N-CA-C	-5.68	106.18	113.23
53	AB	144	ALA	N-CA-C	-5.68	106.22	114.12
2	B	1815	U	C2'-C3'-O3'	5.68	118.03	109.50
20	T	127	LEU	N-CA-C	5.68	117.28	111.14
7	G	167	ARG	N-CA-C	-5.68	105.61	112.54
13	M	80	THR	N-CA-C	-5.68	105.61	112.54
83	EC	6822	U	N1-C1'-C2'	5.68	120.52	112.00
48	VA	63	ILE	N-CA-C	-5.68	104.70	113.16
2	B	1144	U	N1-C1'-C2'	5.67	120.51	112.00
52	ZA	222	TYR	N-CA-C	-5.67	105.86	112.89
1	A	936	G	N9-C1'-C2'	5.66	120.49	112.00
2	B	1907	C	N1-C1'-C2'	5.66	120.49	112.00
2	B	2536	A	N9-C1'-C2'	5.66	120.49	112.00
21	U	30	ARG	N-CA-C	-5.66	105.03	111.14
51	YA	72	ASP	N-CA-C	-5.66	106.33	113.18
1	A	1209	C	N1-C1'-C2'	5.65	120.47	112.00
68	PB	104	ASN	N-CA-C	-5.65	108.18	114.62
2	B	3255	U	N1-C1'-C2'	5.64	120.46	112.00
32	FA	126	LYS	N-CA-C	-5.63	103.69	111.81
35	IA	22	GLY	N-CA-C	5.63	126.53	113.18
23	W	85	ARG	N-CA-C	-5.63	106.41	113.28
37	KA	41	ALA	N-CA-C	-5.63	106.45	113.38
8	H	338	LYS	CB-CA-C	-5.62	109.58	117.23
29	CA	116	PRO	N-CA-C	-5.62	108.83	114.68
36	JA	99	ASN	N-CA-C	-5.62	105.63	112.88
11	K	243	MET	N-CA-C	-5.62	106.13	112.87
7	G	120	LYS	N-CA-C	-5.62	105.92	112.89
45	SA	18	ARG	N-CA-C	-5.62	106.27	113.23
82	DC	274	ASN	N-CA-C	-5.61	105.74	112.59
11	K	233	GLU	CB-CA-C	-5.61	110.09	116.54
23	W	82	LYS	N-CA-C	-5.61	106.10	113.17
2	B	1550	C	N1-C1'-C2'	5.60	120.41	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	XA	193	GLN	CA-C-N	5.60	126.84	119.84
50	XA	193	GLN	C-N-CA	5.60	126.84	119.84
24	X	167	ARG	CA-C-N	5.59	125.59	119.89
24	X	167	ARG	C-N-CA	5.59	125.59	119.89
2	B	2870	C	N1-C1'-C2'	5.59	120.38	112.00
6	F	187	HIS	N-CA-C	-5.59	106.30	113.01
60	HB	82	LEU	CA-C-N	5.59	125.90	119.92
60	HB	82	LEU	C-N-CA	5.59	125.90	119.92
1	A	503	G	C2'-C3'-O3'	5.58	122.08	113.70
1	A	873	U	N1-C1'-C2'	5.58	120.37	112.00
2	B	1525	G	N9-C1'-C2'	5.58	120.37	112.00
2	B	1542	G	N9-C1'-C2'	5.58	120.36	112.00
40	NA	74	LYS	N-CA-C	-5.58	105.20	112.23
68	PB	90	ASN	N-CA-C	-5.57	105.82	113.56
70	RB	34	LEU	N-CA-C	-5.56	105.23	112.23
36	JA	4	LEU	CA-C-N	5.55	125.87	119.93
36	JA	4	LEU	C-N-CA	5.55	125.87	119.93
80	BC	4	VAL	N-CA-C	-5.55	107.58	112.90
48	VA	73	PHE	N-CA-C	-5.54	105.62	112.38
2	B	2868	U	N1-C1'-C2'	5.54	120.30	112.00
5	E	78	LYS	N-CA-C	-5.54	106.03	112.89
67	OB	83	GLN	N-CA-C	-5.53	107.18	114.04
11	K	236	ILE	N-CA-C	-5.53	105.26	113.39
1	A	965	U	N1-C1'-C2'	5.53	120.29	112.00
2	B	858	A	N9-C1'-C2'	5.52	120.29	112.00
38	LA	70	LYS	N-CA-C	-5.51	106.43	112.72
12	L	102	ALA	CB-CA-C	-5.51	110.20	116.54
74	VB	18	LEU	N-CA-C	-5.51	106.44	112.72
9	I	124	GLU	N-CA-C	-5.51	106.61	113.38
82	DC	205	ALA	N-CA-C	-5.50	106.56	113.28
72	TB	23	ARG	N-CA-C	-5.50	106.57	113.28
18	R	133	LYS	N-CA-C	-5.50	106.48	114.12
2	B	589	A	N9-C1'-C2'	5.48	120.23	112.00
19	S	172	ARG	N-CA-C	-5.48	107.60	114.56
16	P	87	GLU	CA-C-N	5.48	126.03	120.38
16	P	87	GLU	C-N-CA	5.48	126.03	120.38
82	DC	95	GLY	N-CA-C	5.48	118.72	111.70
40	NA	91	ASN	N-CA-C	-5.48	105.86	112.54
32	FA	121	VAL	CA-C-N	5.47	125.65	119.90
32	FA	121	VAL	C-N-CA	5.47	125.65	119.90
49	WA	51	ASP	CB-CA-C	-5.47	110.28	116.63
39	MA	49	LYS	N-CA-C	-5.47	105.22	111.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BB	54	TYR	N-CA-C	-5.47	106.45	113.23
2	B	2852	C	N1-C1'-C2'	5.46	120.20	112.00
55	CB	120	ILE	N-CA-C	-5.46	105.05	111.00
15	O	85	LYS	N-CA-C	-5.46	104.97	111.69
82	DC	807	ASP	CA-C-N	5.46	124.92	119.24
82	DC	807	ASP	C-N-CA	5.46	124.92	119.24
24	X	110	MET	N-CA-C	-5.46	105.41	111.36
83	EC	6944	U	N1-C1'-C2'	5.46	120.19	112.00
23	W	29	THR	N-CA-C	-5.45	105.44	111.71
41	OA	3	LYS	N-CA-C	-5.45	106.51	112.72
59	GB	114	TYR	N-CA-C	-5.45	106.48	113.23
21	U	124	LYS	N-CA-C	5.44	118.12	110.23
83	EC	6862	G	N9-C1'-C2'	5.44	120.16	112.00
1	A	1259	U	N1-C1'-C2'	5.44	120.16	112.00
2	B	1180	A	N9-C1'-C2'	5.44	120.16	112.00
53	AB	183	GLY	N-CA-C	5.43	120.66	111.04
2	B	1696	A	N9-C1'-C2'	5.43	120.14	112.00
32	FA	105	LEU	N-CA-C	-5.43	104.90	112.45
82	DC	481	MET	CB-CA-C	-5.43	110.33	116.63
2	B	903	U	N1-C1'-C2'	5.42	120.14	112.00
17	Q	18	TRP	N-CA-C	-5.42	105.47	111.71
7	G	238	LEU	CA-C-N	5.42	126.62	119.84
7	G	238	LEU	C-N-CA	5.42	126.62	119.84
21	U	102	ALA	N-CA-C	-5.42	105.80	112.90
82	DC	799	ASP	N-CA-C	5.42	113.22	108.78
2	B	322	U	N1-C1'-C2'	5.41	120.12	112.00
39	MA	32	LYS	N-CA-C	-5.41	106.64	113.18
2	B	1531	C	N1-C1'-C2'	5.40	120.11	112.00
20	T	28	LEU	N-CA-C	-5.40	106.76	113.19
2	B	75	G	N9-C1'-C2'	5.40	120.10	112.00
53	AB	57	ASP	N-CA-C	-5.40	106.65	113.18
23	W	146	LYS	N-CA-C	-5.39	106.89	112.93
17	Q	169	THR	N-CA-C	-5.39	106.67	113.20
57	EB	126	LEU	N-CA-C	-5.39	105.96	112.54
82	DC	810	ASP	CA-C-N	5.39	126.58	119.84
82	DC	810	ASP	C-N-CA	5.39	126.58	119.84
3	C	112	U	N1-C1'-C2'	5.39	122.08	114.00
51	YA	196	GLU	N-CA-C	-5.39	106.38	113.12
15	O	133	ARG	CA-C-N	5.39	126.58	119.84
15	O	133	ARG	C-N-CA	5.39	126.58	119.84
38	LA	84	CYS	N-CA-C	-5.39	106.78	113.19
48	VA	107	ALA	N-CA-C	5.39	121.72	109.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	I	60	ILE	N-CA-C	5.38	116.03	108.17
69	QB	142	GLU	N-CA-C	-5.38	106.72	113.72
82	DC	704	GLN	N-CA-C	-5.38	105.50	111.36
20	T	165	ALA	N-CA-C	-5.38	106.23	112.89
58	FB	8	ARG	N-CA-C	-5.37	106.66	113.43
2	B	974	G	N9-C1'-C2'	5.36	120.04	112.00
2	B	2189	U	N1-C1'-C2'	5.36	120.04	112.00
32	FA	38	GLN	N-CA-C	-5.36	105.34	111.07
1	A	236	A	N9-C1'-C2'	5.35	120.03	112.00
1	A	810	G	C2'-C3'-O3'	5.35	117.53	109.50
2	B	384	A	N9-C1'-C2'	5.35	120.03	112.00
2	B	1921	A	N9-C1'-C2'	5.35	120.03	112.00
49	WA	184	ASN	N-CA-C	-5.35	104.33	111.24
82	DC	824	LYS	N-CA-C	-5.35	106.75	113.28
2	B	2413	A	N9-C1'-C2'	5.35	120.03	112.00
83	EC	6815	U	N1-C1'-C2'	5.35	120.03	112.00
24	X	39	SER	N-CA-C	-5.35	105.36	111.14
25	Y	137	GLU	CB-CA-C	-5.34	108.67	116.53
56	DB	177	ARG	N-CA-C	-5.34	106.34	112.86
56	DB	219	ARG	N-CA-C	-5.34	105.62	111.82
13	M	165	CYS	N-CA-C	-5.34	104.23	111.55
82	DC	174	LEU	N-CA-C	-5.34	106.60	113.01
2	B	1717	U	N1-C1'-C2'	5.34	120.00	112.00
25	Y	111	ALA	N-CA-C	-5.33	105.13	111.69
20	T	85	ARG	N-CA-C	-5.33	105.56	111.36
2	B	2525	G	N9-C1'-C2'	5.32	119.98	112.00
66	NB	112	TYR	N-CA-C	-5.32	106.11	113.18
2	B	780	A	C2'-C3'-O3'	5.32	117.47	109.50
63	KB	48	SER	N-CA-C	-5.32	105.57	111.36
68	PB	91	ASP	CB-CA-C	-5.31	110.43	116.54
23	W	167	ARG	N-CA-C	-5.31	106.75	113.18
32	FA	106	ALA	N-CA-C	-5.31	106.75	113.18
2	B	1896	A	N9-C1'-C2'	5.31	119.96	112.00
25	Y	131	GLN	CA-C-N	5.30	126.47	119.84
25	Y	131	GLN	C-N-CA	5.30	126.47	119.84
1	A	1081	A	C4'-C3'-O3'	5.30	117.35	109.40
81	CC	142	GLY	N-CA-C	5.30	120.18	112.60
1	A	62	A	N9-C1'-C2'	5.30	119.94	112.00
7	G	200	GLU	N-CA-C	-5.30	106.12	112.58
12	L	206	GLU	N-CA-C	-5.30	107.48	114.31
2	B	2199	G	N9-C1'-C2'	5.29	119.94	112.00
62	JB	97	LEU	N-CA-C	-5.29	106.78	113.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
82	DC	316	GLY	N-CA-C	5.29	120.71	111.50
8	H	34	ILE	N-CA-C	-5.29	105.24	111.00
9	I	168	ASP	N-CA-C	-5.29	106.86	113.15
83	EC	6790	A	N9-C1'-C2'	5.29	119.93	112.00
63	KB	84	ILE	CA-C-N	5.28	126.44	119.84
63	KB	84	ILE	C-N-CA	5.28	126.44	119.84
2	B	1345	G	N9-C1'-C2'	5.27	119.91	112.00
52	ZA	205	ARG	N-CA-C	-5.27	105.95	112.38
2	B	424	G	N9-C1'-C2'	5.27	119.90	112.00
81	CC	144	CYS	N-CA-C	-5.27	103.53	110.43
2	B	2286	U	N1-C1'-C2'	5.26	121.89	114.00
25	Y	134	GLN	CA-C-N	5.26	126.41	119.84
25	Y	134	GLN	C-N-CA	5.26	126.41	119.84
2	B	1792	C	N1-C1'-C2'	5.26	119.89	112.00
1	A	103	A	C2'-C3'-O3'	5.25	121.58	113.70
9	I	162	ALA	N-CA-C	-5.25	105.72	111.82
77	YB	68	GLY	N-CA-C	-5.25	106.33	113.37
22	V	160	GLY	N-CA-C	5.25	125.63	113.18
68	PB	43	SER	N-CA-C	-5.25	105.62	112.23
82	DC	580	PRO	N-CA-C	-5.24	107.91	114.20
2	B	1658	G	N9-C1'-C2'	5.24	119.86	112.00
2	B	2640	A	N9-C1'-C2'	5.23	119.85	112.00
21	U	95	LEU	N-CA-C	-5.23	106.00	112.38
82	DC	343	PRO	N-CA-C	5.23	123.24	112.47
52	ZA	49	LYS	N-CA-C	-5.23	107.57	114.31
17	Q	66	ASN	N-CA-C	-5.22	106.88	113.20
2	B	1230	G	C2'-C3'-O3'	5.22	121.53	113.70
2	B	315	C	N1-C1'-C2'	5.22	119.82	112.00
53	AB	35	SER	N-CA-C	-5.22	106.98	113.55
2	B	3059	G	N9-C1'-C2'	5.21	119.82	112.00
14	N	18	PRO	N-CA-C	5.21	119.50	111.57
48	VA	66	PHE	N-CA-C	-5.21	105.28	111.69
39	MA	62	GLN	N-CA-C	-5.21	107.22	113.21
50	XA	141	ILE	CA-C-N	5.21	125.19	120.03
50	XA	141	ILE	C-N-CA	5.21	125.19	120.03
38	LA	59	PRO	N-CA-C	5.20	123.19	112.47
54	BB	142	HIS	N-CA-C	-5.20	106.94	113.28
63	KB	41	ALA	N-CA-C	-5.20	106.91	113.20
12	L	52	TRP	CA-C-N	5.20	125.93	120.11
12	L	52	TRP	C-N-CA	5.20	125.93	120.11
82	DC	471	THR	N-CA-C	-5.20	106.96	113.72
2	B	182	U	N1-C1'-C2'	5.20	119.79	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	Y	107	GLU	N-CA-C	-5.20	106.78	113.01
2	B	1153	A	N9-C1'-C2'	5.19	119.78	112.00
2	B	2077	U	N1-C1'-C2'	5.19	119.78	112.00
36	JA	44	ARG	N-CA-C	-5.19	106.05	112.38
40	NA	27	SER	N-CA-C	-5.19	106.71	112.57
48	VA	78	PRO	N-CA-C	5.19	120.74	113.53
21	U	72	GLN	N-CA-C	-5.18	106.79	113.01
55	CB	57	SER	CB-CA-C	-5.18	110.58	116.54
83	EC	6803	C	N1-C1'-C2'	5.18	119.77	112.00
69	QB	141	GLU	N-CA-C	-5.18	106.91	113.18
83	EC	6865	G	N9-C1'-C2'	5.18	119.77	112.00
9	I	97	ALA	N-CA-C	-5.18	106.80	113.01
17	Q	79	GLU	N-CA-C	-5.18	106.81	113.23
2	B	2898	G	N9-C1'-C2'	5.17	119.76	112.00
59	GB	182	GLU	N-CA-C	-5.17	107.35	113.97
78	ZB	22	ARG	N-CA-C	-5.17	107.00	113.72
2	B	1631	C	N1-C1'-C2'	5.17	119.75	112.00
1	A	1129	U	N1-C1'-C2'	5.16	119.74	112.00
2	B	764	U	N1-C1'-C2'	5.16	119.74	112.00
33	GA	51	ALA	N-CA-C	-5.16	105.34	111.69
72	TB	40	VAL	N-CA-C	-5.16	105.82	110.82
9	I	248	ARG	N-CA-C	-5.15	107.06	113.19
82	DC	511	LEU	N-CA-C	-5.15	105.35	111.69
6	F	179	LEU	N-CA-C	-5.15	105.10	111.33
8	H	129	THR	N-CA-C	-5.15	106.51	112.89
1	A	1654	G	N9-C1'-C2'	5.14	119.72	112.00
2	B	2141	U	N1-C1'-C2'	5.14	119.71	112.00
63	KB	107	LYS	N-CA-C	-5.14	106.76	112.57
65	MB	108	ARG	CA-C-N	5.14	124.75	119.56
65	MB	108	ARG	C-N-CA	5.14	124.75	119.56
13	M	185	GLY	N-CA-C	5.14	118.95	112.79
2	B	988	U	N1-C1'-C2'	5.13	119.70	112.00
15	O	84	LEU	N-CA-C	-5.13	106.99	113.20
2	B	2699	G	N9-C1'-C2'	5.13	119.70	112.00
43	QA	10	LYS	N-CA-C	-5.13	106.28	112.54
64	LB	123	SER	N-CA-C	-5.13	107.18	112.93
2	B	2418	G	N9-C1'-C2'	5.12	121.69	114.00
55	CB	140	THR	N-CA-C	-5.12	108.05	114.56
1	A	447	U	N1-C1'-C2'	5.12	119.68	112.00
2	B	1174	G	N9-C1'-C2'	5.12	119.68	112.00
2	B	1765	U	N1-C1'-C2'	5.12	119.68	112.00
1	A	334	G	N9-C1'-C2'	5.12	119.68	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	2860	U	N1-C1'-C2'	5.12	119.68	112.00
2	B	3034	C	N1-C1'-C2'	5.12	119.68	112.00
6	F	184	ARG	N-CA-C	-5.12	106.87	113.01
23	W	66	HIS	N-CA-C	-5.12	106.87	113.01
23	W	67	ALA	N-CA-C	-5.12	105.78	112.23
83	EC	6930	G	C5'-C4'-C3'	5.12	123.67	116.00
1	A	1258	U	N1-C1'-C2'	5.12	119.67	112.00
14	N	20	SER	CA-C-N	5.12	127.40	120.65
14	N	20	SER	C-N-CA	5.12	127.40	120.65
18	R	86	ALA	N-CA-C	-5.11	106.30	112.54
1	A	1024	U	N1-C1'-C2'	5.11	119.67	112.00
2	B	1839	A	N9-C1'-C2'	5.11	119.66	112.00
24	X	154	HIS	N-CA-C	-5.11	107.00	113.23
39	MA	104	GLN	N-CA-C	-5.11	106.88	113.01
66	NB	132	LYS	N-CA-C	-5.11	108.31	114.75
2	B	1645	U	N1-C1'-C2'	5.10	119.65	112.00
7	G	365	PHE	N-CA-C	-5.10	107.01	113.18
40	NA	35	ASN	N-CA-C	-5.10	106.32	112.54
76	XB	91	ASP	N-CA-C	-5.10	107.03	113.20
9	I	23	ARG	N-CA-C	-5.09	105.81	112.23
82	DC	226	ALA	N-CA-C	-5.09	105.81	111.36
3	C	116	G	N9-C1'-C2'	5.09	119.63	112.00
55	CB	61	TYR	N-CA-C	-5.08	106.77	112.87
2	B	588	G	C2'-C3'-O3'	5.08	117.12	109.50
82	DC	755	VAL	N-CA-C	-5.08	105.44	110.62
2	B	2205	U	N1-C1'-C2'	5.07	119.60	112.00
55	CB	217	LEU	N-CA-C	-5.07	106.61	112.89
70	RB	35	GLU	N-CA-C	-5.06	106.88	113.16
54	BB	127	LYS	N-CA-C	-5.06	107.50	113.97
60	HB	47	GLN	N-CA-C	-5.06	105.95	111.82
2	B	1128	U	N1-C1'-C2'	5.06	119.58	112.00
2	B	2826	U	N1-C1'-C2'	5.05	119.58	112.00
82	DC	714	TYR	N-CA-C	-5.05	105.47	110.97
41	OA	8	PHE	N-CA-C	-5.04	106.23	112.38
54	BB	94	ALA	N-CA-C	-5.04	103.49	110.35
58	FB	188	GLU	N-CA-C	-5.04	105.06	111.11
3	C	54	A	N9-C1'-C2'	5.04	119.56	112.00
35	IA	65	LYS	N-CA-C	-5.04	107.17	113.72
50	XA	153	SER	N-CA-C	-5.04	107.20	113.19
40	NA	62	ARG	N-CA-C	-5.03	106.36	113.20
14	N	211	ARG	N-CA-C	-5.03	106.41	112.54
1	A	728	U	N1-C1'-C2'	5.02	119.53	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
79	AC	32	ARG	N-CA-C	-5.02	106.46	112.59
19	S	73	ARG	CA-C-N	5.02	126.12	119.84
19	S	73	ARG	C-N-CA	5.02	126.12	119.84
39	MA	63	ARG	N-CA-C	-5.02	107.10	113.43
47	UA	70	THR	N-CA-C	-5.02	103.77	110.55
13	M	70	THR	N-CA-C	-5.02	106.26	112.38
61	IB	48	ALA	N-CA-C	-5.02	107.29	113.41
43	QA	20	ASN	N-CA-C	-5.02	108.90	114.62
2	B	2498	U	N1-C1'-C2'	5.01	119.52	112.00
42	PA	6	THR	N-CA-C	-5.01	107.84	114.31
2	B	1418	A	N9-C1'-C2'	5.01	121.52	114.00
22	V	139	ILE	N-CA-C	5.01	115.50	108.89
56	DB	7	TYR	CA-C-N	5.01	126.10	119.84
56	DB	7	TYR	C-N-CA	5.01	126.10	119.84
2	B	2257	C	N1-C1'-C2'	5.01	119.51	112.00
31	EA	60	LYS	N-CA-C	-5.01	107.17	113.28
83	EC	6836	U	N1-C1'-C2'	5.01	119.51	112.00
2	B	1302	A	N9-C1'-C2'	5.00	119.51	112.00
29	CA	44	PRO	N-CA-C	5.00	118.91	111.41
82	DC	515	ASP	CA-C-N	5.00	124.31	118.85
82	DC	515	ASP	C-N-CA	5.00	124.31	118.85
2	B	2485	A	N9-C1'-C2'	5.00	119.50	112.00

There are no chirality outliers.

All (129) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1058	U	Sidechain
1	A	1094	G	Sidechain
1	A	1122	G	Sidechain
1	A	1129	U	Sidechain
1	A	1315	U	Sidechain
1	A	1569	A	Sidechain
1	A	1687	U	Sidechain
1	A	1727	G	Sidechain
1	A	203	U	Sidechain
1	A	309	C	Sidechain
1	A	322	G	Sidechain
1	A	324	U	Sidechain
1	A	418	G	Sidechain
1	A	447	U	Sidechain
1	A	549	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	553	G	Sidechain
1	A	873	U	Sidechain
1	A	888	U	Sidechain
1	A	936	G	Sidechain
1	A	971	A	Sidechain
1	A	98	U	Sidechain
2	B	1091	A	Sidechain
2	B	112	U	Sidechain
2	B	1231	A	Sidechain
2	B	1258	U	Sidechain
2	B	1288	U	Sidechain
2	B	1297	C	Sidechain
2	B	1345	G	Sidechain
2	B	1394	A	Sidechain
2	B	1404	G	Sidechain
2	B	1418	A	Sidechain
2	B	1432	C	Sidechain
2	B	1542	G	Sidechain
2	B	1546	A	Sidechain
2	B	1550	C	Sidechain
2	B	1559	A	Sidechain
2	B	1615	C	Sidechain
2	B	1616	U	Sidechain
2	B	1645	U	Sidechain
2	B	1653	G	Sidechain
2	B	1696	A	Sidechain
2	B	1724	U	Sidechain
2	B	1787	A	Sidechain
2	B	1790	G	Sidechain
2	B	1809	A	Sidechain
2	B	1829	G	Sidechain
2	B	190	U	Sidechain
2	B	1921	A	Sidechain
2	B	198	A	Sidechain
2	B	2124	G	Sidechain
2	B	2142	A	Sidechain
2	B	2150	G	Sidechain
2	B	2165	G	Sidechain
2	B	217	U	Sidechain
2	B	221	A	Sidechain
2	B	223	U	Sidechain
2	B	2286	U	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2292	U	Sidechain
2	B	2297	U	Sidechain
2	B	2302	G	Sidechain
2	B	2379	U	Sidechain
2	B	2403	G	Sidechain
2	B	2508	U	Sidechain
2	B	2623	G	Sidechain
2	B	2636	A	Sidechain
2	B	2638	C	Sidechain
2	B	2642	A	Sidechain
2	B	2695	A	Sidechain
2	B	2798	C	Sidechain
2	B	2822	U	Sidechain
2	B	2823	G	Sidechain
2	B	2828	G	Sidechain
2	B	2829	U	Sidechain
2	B	2886	U	Sidechain
2	B	2898	G	Sidechain
2	B	2908	G	Sidechain
2	B	2936	A	Sidechain
2	B	294	U	Sidechain
2	B	2945	G	Sidechain
2	B	2993	G	Sidechain
2	B	3029	A	Sidechain
2	B	3042	U	Sidechain
2	B	3055	U	Sidechain
2	B	3111	U	Sidechain
2	B	3140	G	Sidechain
2	B	3151	U	Sidechain
2	B	319	A	Sidechain
2	B	32	U	Sidechain
2	B	322	U	Sidechain
2	B	3288	G	Sidechain
2	B	3375	A	Sidechain
2	B	349	A	Sidechain
2	B	351	A	Sidechain
2	B	357	A	Sidechain
2	B	383	G	Sidechain
2	B	399	A	Sidechain
2	B	411	U	Sidechain
2	B	424	G	Sidechain
2	B	430	U	Sidechain

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Mol	Chain	Res	Type	Group
2	B	532	A	Sidechain
2	B	653	A	Sidechain
2	B	770	G	Sidechain
2	B	814	U	Sidechain
2	B	853	G	Sidechain
2	B	858	A	Sidechain
2	B	87	U	Sidechain
2	B	882	A	Sidechain
2	B	903	U	Sidechain
2	B	904	A	Sidechain
2	B	907	G	Sidechain
2	B	978	G	Sidechain
2	B	997	A	Sidechain
2	B	998	A	Sidechain
3	C	106	C	Sidechain
3	C	18	U	Sidechain
3	C	40	A	Sidechain
3	C	71	A	Sidechain
4	D	111	U	Sidechain
4	D	89	G	Sidechain
4	D	9	C	Sidechain
83	EC	6836	U	Sidechain
83	EC	6854	U	Sidechain
83	EC	6887	G	Sidechain
83	EC	6900	A	Sidechain
83	EC	6907	G	Sidechain
83	EC	6910	A	Sidechain
83	EC	6913	U	Sidechain
83	EC	6951	C	Sidechain
6	F	69	TYR	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	37658	0	18908	1686	0
2	B	70288	0	35262	4090	0
3	C	3354	0	1695	203	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	D	2580	0	1304	168	0
5	E	1359	0	1425	95	0
6	F	1918	0	1987	417	0
7	G	3082	0	3165	424	0
8	H	2750	0	2863	441	0
9	I	2376	0	2325	310	0
10	J	1401	0	1500	275	0
11	K	1785	0	1862	253	0
12	L	1818	0	1908	238	0
13	M	1519	0	1587	191	0
14	N	1718	0	1754	201	0
15	O	1354	0	1383	141	0
16	P	723	0	774	104	0
17	Q	1543	0	1608	199	0
18	R	1054	0	1149	192	0
19	S	1721	0	1779	306	0
20	T	1556	0	1659	188	0
21	U	1443	0	1485	182	0
22	V	1442	0	1543	239	0
23	W	1522	0	1617	215	0
24	X	1446	0	1487	219	0
25	Y	1277	0	1323	152	0
26	Z	796	0	812	63	0
27	AA	1004	0	1048	111	0
28	BA	509	0	537	74	0
29	CA	969	0	1036	103	0
30	DA	994	0	1081	152	0
31	EA	1093	0	1155	133	0
32	FA	1174	0	1215	165	0
33	GA	463	0	491	40	0
34	HA	743	0	797	136	0
35	IA	890	0	938	116	0
36	JA	1020	0	1090	168	0
37	KA	851	0	880	172	0
38	LA	881	0	949	135	0
39	MA	970	0	1078	96	0
40	NA	772	0	849	104	0
41	OA	682	0	687	88	0
42	PA	613	0	682	40	0
43	QA	437	0	475	78	0
44	RA	418	0	459	60	0
45	SA	234	0	284	28	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
46	TA	848	0	918	96	0
47	UA	695	0	738	114	0
48	VA	1473	0	1514	151	0
49	WA	2445	0	2401	201	0
50	XA	1611	0	1618	169	0
51	YA	1709	0	1784	217	0
52	ZA	1635	0	1723	202	0
53	AB	1734	0	1817	139	0
54	BB	2069	0	2154	273	0
55	CB	1610	0	1675	195	0
56	DB	1820	0	1918	174	0
57	EB	1481	0	1572	153	0
58	FB	1490	0	1525	184	0
59	GB	1494	0	1573	168	0
60	HB	817	0	804	70	0
61	IB	1245	0	1314	158	0
62	JB	496	0	141	4	0
63	KB	1193	0	1255	155	0
64	LB	942	0	979	116	0
65	MB	975	0	1017	89	0
66	NB	1106	0	1166	135	0
67	OB	836	0	827	56	0
68	PB	1193	0	1222	99	0
69	QB	1113	0	1124	104	0
70	RB	856	0	917	108	0
71	SB	685	0	672	85	0
72	TB	1022	0	1060	152	0
73	UB	1122	0	1196	116	0
74	VB	1074	0	1132	89	0
75	WB	563	0	603	72	0
76	XB	769	0	818	124	0
77	YB	611	0	633	58	0
78	ZB	498	0	535	54	0
79	AC	444	0	436	55	0
80	BC	475	0	525	33	0
81	CC	284	0	76	0	0
82	DC	6561	0	6629	677	0
83	EC	4105	0	2063	82	0
84	DC	28	0	12	3	0
85	DC	1	0	0	0	0
86	DC	35	0	40	6	0
All	All	215363	0	160021	15614	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 42.

All (15614) 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)
10:J:31:ARG:CD	37:KA:107:ILE:HA	1.38	1.53
10:J:158:TYR:CE1	18:R:115:PHE:HA	1.45	1.50
10:J:165:LEU:HG	37:KA:6:ARG:O	1.26	1.33
10:J:31:ARG:HD3	37:KA:107:ILE:CA	1.57	1.33
10:J:165:LEU:O	37:KA:6:ARG:CB	1.80	1.28
10:J:165:LEU:O	37:KA:6:ARG:HB2	1.17	1.26
10:J:31:ARG:CD	37:KA:107:ILE:CA	2.09	1.25
10:J:31:ARG:HH11	37:KA:107:ILE:C	1.45	1.25
10:J:164:SER:HB2	37:KA:6:ARG:N	1.54	1.20
8:H:32:PRO:HD2	22:V:24:VAL:HG21	1.22	1.19
1:A:177:U:H3'	1:A:178:U:H5"	1.17	1.17
27:AA:135:VAL:HG11	28:BA:26:SER:HB3	1.24	1.17
2:B:1281:G:H5'	48:VA:55:LYS:HB3	1.22	1.17
10:J:4:GLN:HB3	36:JA:74:PHE:CE1	1.80	1.16
2:B:3379:C:H4'	7:G:315:GLY:HA2	1.17	1.16
10:J:165:LEU:CG	37:KA:6:ARG:O	1.92	1.16
2:B:2203:U:H4'	6:F:241:ARG:HA	1.26	1.15
14:N:174:THR:HG22	14:N:176:LEU:H	1.10	1.15
6:F:72:ARG:HB2	6:F:72:ARG:HH11	1.04	1.15
9:I:41:LYS:HB3	25:Y:67:VAL:HG12	1.23	1.15
22:V:78:ASN:HA	22:V:99:THR:HG22	1.29	1.14
2:B:1541:G:H3'	2:B:1542:G:H5"	1.29	1.14
2:B:1230:G:H2'	2:B:1231:A:H4'	1.23	1.13
2:B:2656:A:H4'	46:TA:98:LYS:HE2	1.14	1.12
10:J:4:GLN:CG	36:JA:74:PHE:HE1	1.62	1.11
2:B:3206:C:H5"	2:B:3207:U:H5"	1.30	1.11
2:B:1719:G:H4'	2:B:1732:U:H4'	1.30	1.11
35:IA:72:ARG:HB3	35:IA:96:VAL:HG21	1.31	1.11
10:J:31:ARG:CB	37:KA:107:ILE:HG22	1.80	1.11
10:J:158:TYR:CE1	18:R:115:PHE:CA	2.34	1.11
10:J:165:LEU:N	37:KA:6:ARG:HB3	1.33	1.11
13:M:90:MET:HG2	13:M:181:VAL:HG22	1.33	1.10
6:F:202:VAL:HG12	6:F:217:GLN:HG2	1.32	1.10
72:TB:30:SER:HA	72:TB:34:ILE:HD12	1.34	1.10
2:B:824:C:H5"	6:F:21:ARG:HE	1.03	1.09
2:B:3273:A:H4'	10:J:44:ALA:HB1	1.16	1.09
13:M:23:ARG:HB2	13:M:39:LYS:HG2	1.35	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:134:VAL:HB	51:YA:219:LYS:HB2	1.26	1.09
59:GB:83:VAL:HA	59:GB:149:ARG:HA	1.29	1.09
10:J:13:GLU:OE2	36:JA:90:LYS:HB2	1.52	1.09
82:DC:79:SER:HB3	82:DC:98:PHE:HB2	1.34	1.08
2:B:995:U:H1'	2:B:2637:A:H5'	1.30	1.08
10:J:31:ARG:HD3	37:KA:107:ILE:CB	1.84	1.08
16:P:133:LEU:HA	16:P:137:GLN:HG3	1.09	1.08
51:YA:176:VAL:HG12	51:YA:177:GLN:H	1.16	1.08
52:ZA:88:LYS:HB3	52:ZA:95:ARG:HB3	1.32	1.08
82:DC:635:CYS:HB3	82:DC:664:VAL:HG13	1.35	1.08
12:L:162:LEU:HD11	19:S:45:PRO:HG2	1.25	1.08
1:A:632:U:H5"	73:UB:11:SER:HB3	1.32	1.07
2:B:339:C:H5'	8:H:195:ARG:HH12	1.14	1.07
29:CA:115:ARG:HG3	29:CA:119:THR:HB	1.36	1.07
72:TB:102:VAL:H	72:TB:113:HIS:HB3	1.10	1.07
8:H:325:LEU:HD21	8:H:332:LYS:HB2	1.37	1.06
1:A:323:A:H4'	58:FB:11:ARG:HD2	1.31	1.06
82:DC:739:ALA:HB1	82:DC:788:THR:HB	1.37	1.06
2:B:666:A:H2'	2:B:667:C:H5"	1.33	1.05
47:UA:55:TRP:HE1	47:UA:66:GLY:HA3	1.16	1.05
1:A:1062:A:H3'	1:A:1063:U:H5"	1.38	1.05
1:A:773:C:H4'	1:A:774:A:H5'	1.39	1.05
2:B:388:G:H4'	21:U:18:ARG:H	1.21	1.05
2:B:2476:C:H2'	2:B:2477:G:H4'	1.38	1.04
18:R:24:LYS:HE3	18:R:25:LYS:HE2	1.38	1.04
24:X:24:LEU:HD12	25:Y:146:ASN:HB3	1.37	1.04
51:YA:71:ALA:HB3	64:LB:114:ARG:HH12	1.22	1.04
1:A:1087:A:H5'	1:A:1298:U:H5	1.21	1.04
2:B:1447:G:N7	21:U:27:LYS:HB2	1.72	1.04
2:B:3286:G:H2'	2:B:3287:U:H5"	1.37	1.04
11:K:224:ILE:HD11	24:X:35:VAL:HG12	1.38	1.03
2:B:2102:U:H5'	23:W:88:ARG:NH2	1.73	1.03
10:J:4:GLN:HG2	36:JA:74:PHE:CE1	1.92	1.03
53:AB:38:GLU:HG3	53:AB:49:ILE:HB	1.39	1.03
64:LB:17:ALA:HA	64:LB:30:VAL:HG23	1.37	1.03
2:B:82:C:H5'	19:S:200:TRP:HZ2	1.20	1.03
2:B:2804:A:H2'	2:B:2805:G:H5"	1.40	1.03
10:J:31:ARG:HD2	37:KA:107:ILE:OXT	1.57	1.03
11:K:119:VAL:HG12	25:Y:135:PRO:HG3	1.39	1.03
55:CB:29:ILE:HD13	66:NB:57:LEU:HD13	1.40	1.03
10:J:4:GLN:CB	36:JA:74:PHE:CE1	2.42	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:12:VAL:HG12	31:EA:13:VAL:H	1.23	1.03
2:B:1302:A:H61	2:B:2833:A:H1'	1.20	1.02
50:XA:98:ILE:HG12	50:XA:116:LYS:HE3	1.40	1.02
83:EC:6934:U:H2'	83:EC:6935:G:H4'	1.41	1.02
1:A:247:A:H1'	61:IB:38:ALA:HA	1.41	1.02
7:G:54:THR:HG23	7:G:76:VAL:HG23	1.37	1.02
2:B:2960:C:H2'	2:B:2961:G:C8	1.95	1.02
18:R:24:LYS:HE2	18:R:62:GLN:HA	1.37	1.02
10:J:165:LEU:N	37:KA:6:ARG:CB	2.23	1.02
54:BB:65:LEU:HD13	54:BB:80:THR:HA	1.41	1.01
55:CB:37:GLN:HB3	66:NB:53:LEU:HD22	1.40	1.01
2:B:1131:G:H1'	2:B:2373:A:N1	1.74	1.01
2:B:1336:U:H2'	2:B:1337:A:C8	1.95	1.01
6:F:27:ALA:HB2	6:F:58:LEU:HD13	1.40	1.01
11:K:236:ILE:HD12	11:K:239:LEU:HD23	1.39	1.01
69:QB:98:GLY:HA2	69:QB:101:ASN:HD22	1.25	1.01
3:C:91:C:H4'	30:DA:23:PRO:HB2	1.42	1.01
20:T:9:ILE:HA	20:T:118:VAL:HG22	1.40	1.01
28:BA:9:SER:HA	28:BA:52:THR:HB	1.41	1.01
10:J:4:GLN:CG	36:JA:74:PHE:CE1	2.43	1.01
36:JA:89:THR:HG22	36:JA:117:ILE:HG23	1.42	1.01
3:C:142:C:H5"	19:S:60:VAL:HG21	1.41	1.00
2:B:1099:A:H5'	25:Y:132:PRO:HG2	1.41	1.00
6:F:92:LYS:HB2	6:F:103:PRO:HD2	1.39	1.00
34:HA:17:VAL:HG22	34:HA:98:SER:HB3	1.42	1.00
35:IA:17:HIS:HB2	35:IA:69:TYR:HB3	1.40	1.00
76:XB:10:ARG:HH11	76:XB:11:ASN:HB2	1.25	1.00
2:B:34:A:H3'	2:B:48:A:H61	1.25	1.00
18:R:84:LYS:HA	18:R:87:ALA:HB3	1.41	1.00
11:K:224:ILE:HG12	24:X:36:ILE:HG12	1.44	1.00
53:AB:171:ALA:HB3	53:AB:186:VAL:HB	1.43	0.99
13:M:10:ILE:HD11	13:M:72:LYS:HA	1.40	0.99
19:S:146:ALA:HA	19:S:149:ASN:HB3	1.43	0.99
82:DC:633:ILE:HG22	82:DC:647:ILE:HG13	1.43	0.99
3:C:83:C:H4'	3:C:84:C:H5'	1.38	0.99
12:L:149:LYS:HB2	12:L:201:THR:HA	1.40	0.99
6:F:101:VAL:HB	6:F:165:VAL:HA	1.44	0.99
54:BB:31:PRO:HG2	54:BB:38:LEU:HD11	1.40	0.99
11:K:82:LYS:HA	11:K:119:VAL:HB	1.44	0.99
3:C:81:U:H4'	3:C:82:U:H5'	1.41	0.99
6:F:5:ILE:HG22	6:F:209:HIS:HA	1.43	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:4:GLN:HB3	36:JA:74:PHE:CZ	1.98	0.99
2:B:160:G:H2'	2:B:161:G:H5"	1.42	0.99
37:KA:89:LEU:HB3	37:KA:93:THR:HG21	1.43	0.99
66:NB:115:THR:HA	66:NB:118:ILE:HG22	1.44	0.99
82:DC:241:MET:HA	82:DC:244:LEU:HD12	1.44	0.99
1:A:1227:A:H4'	1:A:1228:G:H5"	1.41	0.99
1:A:1737:G:H2'	1:A:1738:U:H5'	1.42	0.99
51:YA:135:LEU:HB3	51:YA:217:LEU:HG	1.45	0.99
2:B:830:A:N6	2:B:864:G:H21	1.61	0.98
8:H:126:ILE:HD11	8:H:233:LEU:HD22	1.45	0.98
10:J:31:ARG:HD3	37:KA:107:ILE:CG2	1.92	0.98
12:L:242:ALA:O	12:L:246:MET:HB2	1.63	0.98
10:J:31:ARG:HD3	37:KA:107:ILE:HA	1.00	0.98
61:IB:80:MET:HB3	61:IB:83:THR:HG23	1.45	0.98
51:YA:52:THR:HG22	51:YA:53:GLY:H	1.27	0.98
10:J:165:LEU:C	37:KA:6:ARG:CB	2.23	0.98
41:OA:36:SER:HA	41:OA:45:ARG:HH21	1.29	0.98
1:A:148:A:H61	56:DB:133:LEU:HD21	1.28	0.98
54:BB:246:LEU:HD12	54:BB:246:LEU:H	1.28	0.98
82:DC:272:ALA:HA	82:DC:275:MET:HB3	1.46	0.98
1:A:86:A:H2'	1:A:87:C:C6	1.97	0.98
10:J:176:PHE:CE1	18:R:117:ARG:NH2	2.31	0.98
18:R:25:LYS:HE3	18:R:62:GLN:HG2	1.45	0.98
38:LA:19:LYS:HB2	38:LA:35:VAL:HB	1.45	0.98
2:B:2129:U:H2'	2:B:2130:G:C8	1.99	0.98
2:B:2948:C:H4'	7:G:243:HIS:H	1.25	0.98
10:J:31:ARG:HH11	37:KA:107:ILE:CA	1.76	0.98
13:M:43:VAL:HG12	13:M:44:THR:H	1.26	0.98
34:HA:74:ASN:HA	34:HA:77:LEU:HB3	1.45	0.98
2:B:431:U:H2'	2:B:432:G:C8	1.98	0.98
8:H:203:ARG:HH21	8:H:240:PRO:HB3	1.26	0.98
37:KA:67:MET:HE1	37:KA:90:PRO:HD3	1.46	0.98
1:A:1229:G:H21	1:A:1256:A:H62	0.98	0.97
17:Q:77:LEU:HA	17:Q:80:VAL:HB	1.44	0.97
35:IA:72:ARG:HG2	35:IA:96:VAL:HG11	1.43	0.97
50:XA:183:ARG:HA	50:XA:188:LEU:HG	1.46	0.97
7:G:54:THR:HA	7:G:364:LYS:HE2	1.45	0.97
10:J:31:ARG:HB3	37:KA:107:ILE:HG22	1.43	0.97
37:KA:89:LEU:HD12	37:KA:89:LEU:H	1.28	0.97
1:A:105:A:H62	1:A:308:C:H42	1.05	0.97
56:DB:133:LEU:HD12	56:DB:133:LEU:H	1.27	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:980:G:H4’	1:A:1776:A:H4’	1.45	0.97
1:A:1094:G:H2’	1:A:1095:U:H5’	1.45	0.97
11:K:102:VAL:HG21	11:K:129:LEU:HD22	1.43	0.97
2:B:105:C:H2’	2:B:106:A:C8	2.00	0.97
82:DC:299:LEU:HD12	82:DC:302:LYS:HD2	1.46	0.97
10:J:164:SER:HB2	37:KA:6:ARG:H	1.18	0.97
36:JA:100:ILE:HB	36:JA:105:ARG:HH11	1.30	0.97
2:B:669:U:H3	2:B:793:C:H41	1.09	0.96
10:J:4:GLN:HG2	36:JA:74:PHE:HE1	1.22	0.96
37:KA:18:ARG:HB3	37:KA:23:ASN:HA	1.44	0.96
1:A:214:G:H21	1:A:251:A:H62	0.98	0.96
2:B:229:G:H4’	8:H:220:ARG:HH12	1.25	0.96
2:B:1323:G:H4’	24:X:4:PHE:HZ	1.26	0.96
83:EC:6939:C:H5”	83:EC:6940:U:H5’	1.46	0.96
1:A:992:A:H2’	1:A:993:A:H5’	1.46	0.96
10:J:3:ALA:HB1	36:JA:75:LEU:HD12	1.44	0.96
13:M:24:ILE:HG13	13:M:39:LYS:HE3	1.47	0.96
10:J:158:TYR:CZ	18:R:115:PHE:HA	2.00	0.96
11:K:224:ILE:HG23	24:X:36:ILE:HG23	1.46	0.96
31:EA:46:ILE:HA	31:EA:70:PRO:HA	1.47	0.96
1:A:487:G:H2’	1:A:488:G:H5”	1.48	0.96
10:J:31:ARG:HD2	37:KA:107:ILE:CA	1.94	0.96
59:GB:129:ILE:HD13	59:GB:144:PRO:HA	1.47	0.96
1:A:921:U:H2’	1:A:922:G:H5”	1.46	0.96
2:B:1741:A:H1’	2:B:1785:U:H4’	1.44	0.96
6:F:77:ILE:HG22	6:F:78:ALA:H	1.28	0.96
12:L:186:LEU:HD13	12:L:196:ALA:HA	1.48	0.96
80:BC:47:VAL:HG22	80:BC:48:THR:H	1.31	0.96
82:DC:27:HIS:HB2	82:DC:139:THR:HG23	1.45	0.96
13:M:148:GLY:H	13:M:187:ILE:HD11	1.31	0.96
56:DB:78:THR:HG22	56:DB:79:LYS:H	1.31	0.96
2:B:149:U:H5”	19:S:54:LYS:HG3	1.48	0.95
2:B:1225:A:N1	2:B:3116:G:H2’	1.81	0.95
31:EA:44:ALA:HB1	31:EA:71:PHE:O	1.66	0.95
2:B:522:A:H3’	2:B:523:A:H5”	1.48	0.95
3:C:41:A:H2’	3:C:42:G:H5’	1.47	0.95
10:J:158:TYR:CZ	18:R:115:PHE:CA	2.49	0.95
2:B:973:A:H2’	2:B:974:G:H4’	1.46	0.95
6:F:61:VAL:HG21	6:F:76:PHE:HB2	1.45	0.95
2:B:82:C:H5’	19:S:200:TRP:CZ2	2.02	0.95
6:F:68:LYS:HD2	6:F:70:ARG:HG2	1.45	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:144:ASN:HB3	6:F:160:SER:H	1.32	0.95
12:L:82:LEU:HD11	12:L:86:THR:HG21	1.46	0.95
1:A:251:A:H2'	1:A:252:U:H5'	1.48	0.95
2:B:1720:U:H2'	23:W:124:TYR:OH	1.66	0.95
2:B:3214:U:H2'	18:R:121:MET:HE3	1.47	0.95
8:H:346:LYS:H	8:H:346:LYS:HD2	1.29	0.95
12:L:162:LEU:HD23	19:S:7:LEU:HD12	1.48	0.95
2:B:514:G:H2'	2:B:515:C:H5"	1.49	0.95
82:DC:736:PRO:HD2	82:DC:791:GLN:HB3	1.46	0.95
2:B:388:G:O2'	21:U:17:ALA:HA	1.67	0.95
6:F:113:VAL:HG12	6:F:166:ILE:HA	1.49	0.95
48:VA:30:VAL:HG13	48:VA:31:ASP:H	1.28	0.95
2:B:1523:U:H5'	29:CA:113:LEU:HB3	1.46	0.94
2:B:2154:U:H4'	6:F:240:ALA:HB2	1.49	0.94
22:V:170:ARG:HH11	22:V:170:ARG:HB2	1.29	0.94
82:DC:220:PHE:HB2	82:DC:328:LEU:HD13	1.49	0.94
1:A:157:A:H2'	1:A:158:U:H5"	1.47	0.94
55:CB:113:ILE:HG21	55:CB:190:ILE:HB	1.49	0.94
57:EB:41:LEU:HD21	57:EB:70:PHE:HB2	1.48	0.94
1:A:56:U:H4'	1:A:57:G:H5'	1.50	0.94
1:A:628:G:H21	1:A:971:A:H62	1.02	0.94
2:B:807:A:H61	2:B:934:G:H22	1.15	0.94
2:B:830:A:H62	2:B:864:G:N2	1.65	0.94
5:E:180:VAL:HA	5:E:183:ILE:HD12	1.48	0.94
6:F:114:SER:HA	6:F:127:ALA:HB1	1.46	0.94
2:B:629:U:H2'	2:B:630:A:C8	2.02	0.94
52:ZA:176:SER:HB2	52:ZA:195:ASP:HB3	1.47	0.94
2:B:797:U:H2'	2:B:798:G:C8	2.02	0.94
6:F:133:TYR:HB3	6:F:168:VAL:HG12	1.49	0.94
49:WA:170:ILE:HG21	49:WA:211:ILE:HD13	1.48	0.94
54:BB:89:VAL:HG11	54:BB:119:ALA:HA	1.50	0.94
2:B:438:A:H2'	2:B:439:C:H4'	1.49	0.94
15:O:20:ASN:HD21	15:O:66:ALA:HB1	1.28	0.94
16:P:133:LEU:HA	16:P:137:GLN:CG	1.98	0.94
18:R:132:LYS:HA	18:R:132:LYS:HE3	1.49	0.94
30:DA:115:ARG:HH11	30:DA:115:ARG:HB3	1.33	0.94
31:EA:25:ILE:HA	31:EA:43:VAL:HG12	1.47	0.94
2:B:1421:G:H2'	2:B:1422:G:H8	1.33	0.94
65:MB:76:VAL:HG12	65:MB:77:ARG:H	1.32	0.94
2:B:2679:A:H2'	2:B:2680:A:H5'	1.49	0.94
13:M:22:SER:H	18:R:8:LYS:HD3	1.32	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:91:LEU:HB2	25:Y:96:ILE:HD11	1.47	0.93
2:B:199:A:H3'	30:DA:60:ARG:HH22	1.33	0.93
2:B:2765:C:H4'	46:TA:39:GLY:HA3	1.50	0.93
2:B:3163:A:H2'	2:B:3164:C:H5"	1.46	0.93
2:B:3191:G:H5"	20:T:176:LYS:HG3	1.46	0.93
10:J:79:VAL:HG22	10:J:80:ASN:H	1.33	0.93
17:Q:57:VAL:HG12	17:Q:69:VAL:HG21	1.49	0.93
38:LA:21:LYS:HG2	38:LA:35:VAL:HG22	1.48	0.93
73:UB:121:ARG:HH11	73:UB:121:ARG:HB2	1.31	0.93
1:A:628:G:H21	1:A:971:A:N6	1.66	0.93
10:J:158:TYR:CG	18:R:115:PHE:CD2	2.54	0.93
2:B:824:C:H5"	6:F:21:ARG:NE	1.82	0.93
2:B:1500:G:H2'	2:B:1501:U:O4'	1.68	0.93
78:ZB:10:ALA:HA	78:ZB:32:PHE:HA	1.51	0.93
1:A:397:A:H5"	58:FB:47:ARG:HH11	1.33	0.93
2:B:17:G:H2'	2:B:18:G:H8	1.33	0.93
2:B:374:A:H4'	2:B:375:A:H5'	1.49	0.93
2:B:1581:C:H2'	2:B:1582:C:H5'	1.50	0.93
2:B:364:G:H4'	8:H:84:ARG:HG2	1.47	0.93
14:N:85:PHE:HA	14:N:140:THR:HG22	1.48	0.93
58:FB:9:HIS:HB3	58:FB:20:GLN:HE21	1.31	0.93
9:I:52:VAL:HB	9:I:63:GLN:H	1.31	0.93
12:L:61:GLN:O	12:L:65:LEU:HB3	1.68	0.93
57:EB:98:ILE:HG12	57:EB:121:VAL:HG21	1.48	0.93
2:B:1932:A:C2	2:B:2124:G:H5"	2.04	0.92
2:B:3191:G:H2'	2:B:3192:U:O4'	1.69	0.92
8:H:71:VAL:HG22	8:H:72:ALA:H	1.33	0.92
64:LB:84:ARG:HH21	64:LB:120:PRO:HD2	1.33	0.92
63:KB:146:ALA:HA	63:KB:149:LEU:HD12	1.52	0.92
82:DC:19:VAL:HG13	82:DC:99:LEU:HD22	1.48	0.92
31:EA:23:VAL:HG12	31:EA:45:GLY:HA3	1.48	0.92
69:QB:105:LEU:HD23	69:QB:108:LEU:HD12	1.51	0.92
73:UB:124:VAL:HG12	73:UB:132:LEU:HD11	1.49	0.92
2:B:296:A:H61	2:B:317:A:H61	1.18	0.92
2:B:1234:G:H21	16:P:132:ILE:HG12	1.35	0.92
83:EC:6948:U:O2'	83:EC:6949:G:H1'	1.66	0.92
2:B:990:U:H2'	2:B:991:G:H5"	1.51	0.92
10:J:164:SER:CB	37:KA:5:HIS:HA	2.00	0.92
2:B:2960:C:H2'	2:B:2961:G:H8	1.30	0.92
45:SA:11:ARG:HB2	45:SA:11:ARG:HH11	1.34	0.92
2:B:1064:A:H4'	2:B:1065:A:H2'	1.51	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:867:G:H5'	63:KB:4:MET:HE3	1.52	0.92
17:Q:102:GLN:HE21	17:Q:103:ASN:H	0.94	0.92
20:T:110:PRO:HA	20:T:113:ASP:HB3	1.51	0.92
73:UB:103:LEU:HB3	73:UB:126:LYS:HB2	1.50	0.92
2:B:669:U:H3	2:B:793:C:N4	1.66	0.92
2:B:1788:C:H2'	2:B:1789:G:H8	1.35	0.92
23:W:3:ASN:HD21	23:W:5:ARG:HH12	0.95	0.92
54:BB:105:VAL:HG13	54:BB:243:GLY:HA2	1.51	0.92
63:KB:106:ARG:HB3	63:KB:106:ARG:HH21	1.35	0.92
2:B:669:U:H1'	2:B:1110:U:H4'	1.52	0.92
6:F:72:ARG:HB2	6:F:72:ARG:NH1	1.85	0.92
8:H:152:VAL:HG12	8:H:153:SER:H	1.35	0.92
9:I:245:GLU:HA	9:I:248:ARG:HB3	1.50	0.92
10:J:158:TYR:CD1	18:R:115:PHE:HA	2.05	0.92
6:F:129:ALA:HB3	6:F:132:ASN:HB2	1.51	0.91
8:H:65:TRP:HB3	8:H:69:ARG:HG3	1.52	0.91
10:J:166:LYS:HE2	37:KA:4:SER:OG	1.69	0.91
58:FB:84:HIS:CE1	58:FB:86:SER:HB2	2.04	0.91
82:DC:220:PHE:HA	82:DC:328:LEU:HD22	1.51	0.91
2:B:1887:A:H2'	2:B:1888:U:H5'	1.52	0.91
55:CB:56:ALA:HB2	78:ZB:9:LEU:HD13	1.50	0.91
59:GB:59:LEU:HD13	59:GB:69:ARG:HA	1.52	0.91
69:QB:28:LEU:HD23	69:QB:30:VAL:HG13	1.50	0.91
76:XB:22:ARG:HD2	76:XB:22:ARG:H	1.32	0.91
1:A:397:A:H5"	58:FB:47:ARG:NH1	1.84	0.91
4:D:76:A:H61	4:D:102:A:H3'	1.31	0.91
31:EA:22:LYS:HE2	31:EA:130:PHE:HA	1.50	0.91
1:A:1673:G:H22	1:A:1728:A:H2	1.17	0.91
4:D:80:G:H2'	4:D:81:U:C6	2.06	0.91
11:K:98:LYS:HB2	11:K:99:PRO:HD3	1.53	0.91
54:BB:213:SER:HB2	54:BB:244:ILE:HD12	1.52	0.91
1:A:329:G:H5'	58:FB:99:ALA:HB3	1.53	0.91
1:A:628:G:N2	1:A:971:A:H62	1.68	0.91
2:B:825:U:H2'	2:B:826:G:H5"	1.53	0.91
54:BB:235:TYR:O	54:BB:236:ILE:HG23	1.70	0.91
76:XB:84:VAL:HG13	76:XB:85:ARG:H	1.30	0.91
1:A:138:A:N6	1:A:266:A:H61	1.66	0.91
1:A:1558:U:H3'	1:A:1559:A:H5"	1.49	0.91
2:B:2108:C:O4'	2:B:3344:A:H1'	1.71	0.91
11:K:80:GLN:HE21	25:Y:135:PRO:HB2	1.36	0.91
21:U:112:LEU:HG	21:U:150:VAL:HB	1.50	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:NB:52:LEU:HD13	66:NB:57:LEU:HD21	1.51	0.91
2:B:1078:U:H2'	2:B:1080:A:OP2	1.70	0.91
21:U:21:TYR:HE1	21:U:123:PRO:HD2	1.35	0.91
51:YA:70:LEU:HA	51:YA:73:LEU:HB2	1.52	0.91
1:A:243:G:H1'	54:BB:131:LEU:HD21	1.53	0.91
10:J:31:ARG:NE	37:KA:107:ILE:HA	1.86	0.91
54:BB:79:ASP:HB3	54:BB:82:TYR:HD1	1.36	0.91
56:DB:159:ARG:HG2	56:DB:172:ALA:HB2	1.52	0.91
2:B:726:G:N2	2:B:744:A:H62	1.67	0.91
72:TB:6:VAL:HG13	72:TB:29:PRO:HD2	1.53	0.91
2:B:3058:U:H5"	35:IA:25:PHE:CZ	2.06	0.91
3:C:98:U:H2'	3:C:99:C:H5'	1.53	0.91
8:H:206:LEU:HD11	8:H:237:GLN:HB3	1.53	0.91
29:CA:64:GLU:HB3	29:CA:85:GLN:O	1.70	0.91
29:CA:114:VAL:HB	43:QA:10:LYS:HE2	1.51	0.91
61:IB:8:GLN:HE22	61:IB:14:GLN:H	1.18	0.91
82:DC:296:ILE:HB	82:DC:297:PRO:HD3	1.53	0.91
6:F:136:ILE:HG13	6:F:148:VAL:HG12	1.51	0.90
13:M:90:MET:HA	13:M:181:VAL:HA	1.53	0.90
53:AB:102:ALA:HB2	53:AB:171:ALA:HB1	1.53	0.90
58:FB:55:TYR:HB2	58:FB:176:SER:HA	1.52	0.90
1:A:871:G:H2'	1:A:872:G:C8	2.06	0.90
1:A:1230:A:H62	1:A:1255:G:H21	1.13	0.90
2:B:726:G:H21	2:B:744:A:N6	1.70	0.90
36:JA:76:VAL:HG13	36:JA:81:ASP:HB3	1.53	0.90
48:VA:15:LEU:HD13	48:VA:61:ARG:HG2	1.53	0.90
2:B:155:G:H21	40:NA:26:ILE:HG21	1.36	0.90
2:B:3067:C:H5"	23:W:58:HIS:CD2	2.07	0.90
2:B:3334:U:H4'	2:B:3335:A:H5"	1.52	0.90
10:J:176:PHE:HE1	18:R:117:ARG:HH21	0.95	0.90
10:J:31:ARG:NH1	37:KA:107:ILE:C	2.30	0.90
1:A:1171:A:H2'	1:A:1172:G:C8	2.05	0.90
2:B:3268:A:C5'	10:J:46:ARG:HH21	1.83	0.90
14:N:29:SER:HA	14:N:125:LEU:HD12	1.51	0.90
63:KB:17:PRO:HB2	63:KB:20:ARG:HA	1.53	0.90
68:PB:37:GLY:HA3	68:PB:102:ALA:H	1.37	0.90
2:B:242:C:H5"	17:Q:47:ALA:HB2	1.53	0.90
11:K:84:VAL:HA	11:K:139:PRO:HD2	1.54	0.90
54:BB:214:LEU:HD23	54:BB:216:ASN:HD21	1.36	0.90
82:DC:734:GLN:HG2	82:DC:765:LEU:HB3	1.54	0.90
10:J:158:TYR:CE2	18:R:115:PHE:HB2	2.06	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:81:VAL:HG21	34:HA:87:VAL:HG11	1.54	0.90
57:EB:114:ARG:HH11	57:EB:114:ARG:H	1.04	0.90
71:SB:36:VAL:HG11	71:SB:78:LEU:HD13	1.53	0.90
82:DC:74:ALA:HB2	82:DC:103:ILE:HG12	1.52	0.90
82:DC:75:ILE:HG12	82:DC:439:GLY:HA2	1.50	0.90
2:B:1827:C:H2'	2:B:1828:A:C8	2.06	0.90
2:B:2365:C:H2'	2:B:2366:C:H5"	1.52	0.90
11:K:59:GLU:HA	11:K:62:ILE:HD12	1.54	0.90
1:A:239:C:H1'	56:DB:220:LYS:HB2	1.51	0.90
1:A:1436:A:H2'	1:A:1437:U:H5'	1.52	0.90
4:D:27:A:H2'	4:D:28:C:C6	2.07	0.90
21:U:4:TYR:CE1	21:U:147:GLU:HB2	2.07	0.90
29:CA:141:TYR:HB3	39:MA:33:VAL:HG13	1.53	0.90
53:AB:49:ILE:HG12	53:AB:87:TYR:HB2	1.52	0.90
1:A:1169:G:H21	1:A:1576:A:H62	0.90	0.89
17:Q:102:GLN:HE21	17:Q:103:ASN:N	1.70	0.89
23:W:17:VAL:HG12	23:W:18:GLY:H	1.37	0.89
38:LA:72:VAL:HG23	38:LA:73:SER:H	1.34	0.89
1:A:113:U:H5"	1:A:114:C:H5'	1.52	0.89
1:A:632:U:H5"	73:UB:11:SER:CB	2.02	0.89
2:B:3313:U:H5'	7:G:175:LYS:HD3	1.52	0.89
7:G:283:TYR:HB2	7:G:323:MET:HB3	1.53	0.89
11:K:104:GLN:HE21	22:V:6:THR:HG22	1.36	0.89
17:Q:102:GLN:NE2	17:Q:103:ASN:H	1.70	0.89
52:ZA:111:VAL:HG22	52:ZA:139:ILE:HD11	1.54	0.89
82:DC:737:GLU:HA	82:DC:740:VAL:HG23	1.52	0.89
2:B:931:C:H3'	2:B:932:U:H2'	1.52	0.89
1:A:969:C:H1'	1:A:1104:U:H4'	1.54	0.89
7:G:57:VAL:O	7:G:357:LYS:HB2	1.72	0.89
8:H:8:VAL:HG12	8:H:9:HIS:H	1.36	0.89
49:WA:90:ARG:HB2	49:WA:92:TRP:HE1	1.35	0.89
77:YB:53:ALA:HB1	77:YB:62:ILE:HD11	1.52	0.89
3:C:49:G:H5'	39:MA:42:PRO:HA	1.55	0.89
10:J:31:ARG:HD3	37:KA:107:ILE:HG22	1.54	0.89
72:TB:6:VAL:HG12	72:TB:34:ILE:HD11	1.54	0.89
2:B:1129:A:H5"	14:N:13:LYS:HE3	1.51	0.89
6:F:133:TYR:HB3	6:F:168:VAL:CG1	2.03	0.89
10:J:31:ARG:HD2	37:KA:107:ILE:C	1.97	0.89
54:BB:59:ARG:NH1	74:VB:87:PRO:HG3	1.88	0.89
1:A:1087:A:H5'	1:A:1298:U:C5	2.07	0.89
2:B:199:A:H3'	30:DA:60:ARG:NH2	1.87	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1691:U:H4'	23:W:55:VAL:HG11	1.51	0.89
2:B:3300:U:H2'	2:B:3301:U:H5'	1.53	0.89
64:LB:132:ARG:NH1	64:LB:132:ARG:HB2	1.87	0.89
82:DC:42:ARG:HG3	82:DC:330:ALA:HB3	1.52	0.89
2:B:904:A:H5'	2:B:1536:G:O2'	1.73	0.89
49:WA:314:GLN:HB3	49:WA:316:MET:HE3	1.54	0.89
10:J:146:ILE:HA	10:J:149:ILE:HD12	1.55	0.89
23:W:96:ILE:HG22	23:W:100:ARG:HH22	1.38	0.89
70:RB:30:LYS:O	70:RB:34:LEU:HB3	1.73	0.89
82:DC:39:LEU:HD21	82:DC:334:LEU:HD13	1.53	0.89
2:B:17:G:H2'	2:B:18:G:C8	2.07	0.88
6:F:172:GLY:N	47:UA:68:ALA:H	1.71	0.88
83:EC:6927:U:H3'	83:EC:6928:G:H5'	1.54	0.88
2:B:583:G:H5"	10:J:82:ARG:HH12	1.37	0.88
2:B:1718:G:H21	2:B:1731:A:H4'	1.36	0.88
2:B:2697:A:H2'	2:B:2698:G:C8	2.08	0.88
49:WA:112:SER:HB3	49:WA:153:GLN:HA	1.53	0.88
10:J:82:ARG:HB3	37:KA:104:PRO:HB3	1.52	0.88
12:L:97:TYR:HB3	12:L:132:VAL:N	1.88	0.88
31:EA:4:PHE:HE1	34:HA:35:ARG:HG2	1.38	0.88
38:LA:57:LEU:HD11	38:LA:65:VAL:HG21	1.53	0.88
73:UB:102:VAL:HG12	73:UB:127:VAL:HG12	1.55	0.88
82:DC:20:ARG:HE	82:DC:339:VAL:HA	1.38	0.88
1:A:638:U:H1'	57:EB:101:LYS:HE2	1.54	0.88
44:RA:104:PRO:HB2	44:RA:107:ALA:HB2	1.55	0.88
2:B:561:C:H5"	18:R:76:ALA:HA	1.54	0.88
55:CB:41:LYS:HZ2	55:CB:69:PHE:HB2	1.36	0.88
57:EB:73:VAL:HG11	57:EB:77:LEU:HG	1.55	0.88
60:HB:3:MET:HB2	60:HB:4:PRO:HD2	1.53	0.88
2:B:1235:U:H4'	2:B:1236:G:H5'	1.54	0.88
4:D:89:G:H5'	24:X:84:ARG:HD2	1.53	0.88
10:J:158:TYR:CG	18:R:115:PHE:HD2	1.88	0.88
15:O:49:LYS:HA	15:O:64:LYS:HG2	1.52	0.88
44:RA:93:LYS:HE2	44:RA:102:ARG:HG2	1.56	0.88
64:LB:64:ALA:HA	64:LB:67:VAL:HG12	1.54	0.88
73:UB:104:LEU:HD22	73:UB:124:VAL:HA	1.53	0.88
1:A:96:G:H1	1:A:387:A:H61	1.21	0.88
17:Q:75:PHE:H	17:Q:98:ASP:H	1.22	0.88
52:ZA:178:ILE:HG21	52:ZA:185:LYS:HG3	1.52	0.88
66:NB:93:HIS:HA	66:NB:97:VAL:HB	1.53	0.88
1:A:884:A:H2'	1:A:885:G:C8	2.08	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:518:G:H2'	2:B:520:U:H5"	1.56	0.88
23:W:115:ILE:HG13	23:W:119:LEU:HD23	1.55	0.88
30:DA:70:ILE:HG23	30:DA:81:GLN:O	1.73	0.88
51:YA:180:THR:HG22	51:YA:181:LEU:HD13	1.56	0.88
53:AB:211:PRO:HG2	67:OB:19:ARG:HB2	1.56	0.88
1:A:177:U:H3'	1:A:178:U:C5'	2.03	0.88
2:B:1529:A:H2'	2:B:1530:U:H5'	1.55	0.88
2:B:1538:G:H21	2:B:1583:A:H62	1.13	0.88
6:F:143:GLU:HB3	6:F:145:LYS:HE2	1.56	0.88
7:G:166:ILE:HD13	7:G:171:LEU:HD12	1.56	0.88
21:U:32:THR:HG21	21:U:91:VAL:HG21	1.52	0.88
52:ZA:78:ASP:HA	52:ZA:104:VAL:HG12	1.54	0.88
55:CB:174:LEU:HB3	55:CB:210:ALA:HA	1.55	0.88
55:CB:187:ILE:H	55:CB:187:ILE:HD12	1.35	0.88
71:SB:64:GLU:HB3	77:YB:3:LEU:HD23	1.54	0.88
38:LA:41:ARG:HB2	38:LA:51:LEU:HD23	1.55	0.88
38:LA:90:ILE:HG23	38:LA:94:LEU:HG	1.54	0.88
54:BB:209:HIS:HA	54:BB:219:VAL:HG22	1.56	0.88
2:B:1386:A:H1'	8:H:184:SER:HB3	1.55	0.87
21:U:94:LEU:HD23	21:U:148:LEU:HD23	1.56	0.87
36:JA:100:ILE:HB	36:JA:105:ARG:NH1	1.88	0.87
49:WA:13:LEU:HB2	49:WA:310:ILE:HB	1.55	0.87
2:B:666:A:C2'	2:B:667:C:H5"	2.04	0.87
5:E:91:LYS:HG2	5:E:123:LEU:HG	1.56	0.87
6:F:65:ASP:HA	6:F:72:ARG:HH21	1.38	0.87
10:J:2:SER:HA	36:JA:81:ASP:OD2	1.73	0.87
11:K:86:VAL:HG23	11:K:136:TYR:HB3	1.53	0.87
12:L:203:VAL:HG22	12:L:204:ARG:H	1.38	0.87
65:MB:71:GLU:HG2	65:MB:72:LYS:H	1.40	0.87
1:A:1063:U:H2'	1:A:1064:G:C8	2.09	0.87
2:B:212:G:H2'	8:H:221:ASN:HB3	1.56	0.87
2:B:2085:U:H2'	2:B:2086:A:H5'	1.55	0.87
32:FA:75:LEU:HD13	32:FA:117:ARG:H	1.39	0.87
1:A:1634:C:H3'	1:A:1635:A:H5'	1.55	0.87
2:B:1421:G:H2'	2:B:1422:G:C8	2.08	0.87
2:B:2715:A:C2	46:TA:85:LEU:HG	2.08	0.87
21:U:119:VAL:HB	21:U:146:ILE:HG23	1.57	0.87
1:A:1476:C:H4'	69:QB:45:MET:HG3	1.54	0.87
24:X:12:ARG:HH11	24:X:22:PRO:HD3	1.39	0.87
57:EB:117:THR:HG23	57:EB:120:ALA:H	1.39	0.87
1:A:147:A:H2'	1:A:148:A:C8	2.10	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1750:A:H4'	2:B:1751:G:H5'	1.54	0.87
2:B:3034:C:H41	13:M:120:ASP:HA	1.40	0.87
9:I:41:LYS:HB3	25:Y:67:VAL:CG1	2.04	0.87
21:U:28:ASN:HA	21:U:60:PHE:HE1	1.40	0.87
23:W:31:GLU:HG3	23:W:32:ILE:HD12	1.57	0.87
52:ZA:101:VAL:HG13	52:ZA:113:LEU:HD21	1.56	0.87
1:A:17:C:H2'	1:A:18:C:C6	2.10	0.87
1:A:1760:G:H1'	1:A:1781:A:H2	1.37	0.87
2:B:896:A:H1'	2:B:913:A:C2	2.09	0.87
2:B:2744:U:H2'	2:B:2745:G:C8	2.08	0.87
6:F:79:ASN:HA	6:F:168:VAL:O	1.73	0.87
54:BB:47:PHE:HA	54:BB:51:ARG:HG3	1.56	0.87
82:DC:564:ARG:HG3	82:DC:682:ARG:HD2	1.57	0.87
21:U:4:TYR:HE1	21:U:147:GLU:HB2	1.39	0.87
36:JA:96:ILE:HG22	36:JA:100:ILE:HG13	1.56	0.87
57:EB:27:LEU:HD11	57:EB:80:GLU:HG2	1.57	0.87
65:MB:90:ILE:HD11	65:MB:112:LEU:HD21	1.55	0.87
73:UB:69:ARG:HG3	73:UB:117:ILE:HG12	1.55	0.87
2:B:339:C:H3'	8:H:195:ARG:HH22	1.39	0.87
19:S:44:ARG:HD3	19:S:121:VAL:HG23	1.56	0.87
59:GB:110:GLN:HE22	59:GB:125:ALA:HB3	1.40	0.87
70:RB:34:LEU:HD11	70:RB:89:ARG:HH21	1.38	0.87
2:B:1715:A:N1	34:HA:85:PHE:HB3	1.89	0.86
10:J:167:ASN:ND2	37:KA:6:ARG:HH21	1.72	0.86
12:L:158:ASP:HB2	12:L:159:PRO:HD3	1.56	0.86
53:AB:63:GLY:HA3	60:HB:92:ILE:HD13	1.53	0.86
58:FB:104:ILE:HG13	58:FB:105:ASP:H	1.40	0.86
82:DC:274:ASN:HA	82:DC:278:LEU:HB2	1.56	0.86
1:A:312:A:C2	1:A:314:C:H2'	2.10	0.86
1:A:1169:G:N2	1:A:1576:A:H62	1.73	0.86
2:B:3058:U:H5"	35:IA:25:PHE:HZ	1.35	0.86
20:T:113:ASP:HA	20:T:117:ARG:HH12	1.37	0.86
60:HB:69:THR:HG22	60:HB:70:GLU:H	1.39	0.86
63:KB:47:PRO:HA	63:KB:50:ILE:HB	1.57	0.86
7:G:188:ILE:HA	7:G:191:LYS:HD2	1.57	0.86
57:EB:49:ILE:HD11	57:EB:172:VAL:HG13	1.57	0.86
71:SB:51:VAL:HG12	71:SB:52:THR:H	1.40	0.86
1:A:1106:U:H2'	1:A:1107:G:H8	1.40	0.86
8:H:44:LYS:O	8:H:47:ARG:HB2	1.75	0.86
9:I:40:HIS:CE1	25:Y:69:LYS:HA	2.11	0.86
9:I:184:ASP:HB2	9:I:187:THR:HG22	1.57	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:UA:38:ASP:HA	47:UA:45:LYS:HA	1.56	0.86
82:DC:204:PRO:HB3	82:DC:209:VAL:HB	1.57	0.86
6:F:79:ASN:HD22	6:F:82:VAL:HG13	1.40	0.86
15:O:54:VAL:HG12	15:O:56:THR:H	1.38	0.86
58:FB:97:THR:HA	58:FB:173:PRO:HG3	1.58	0.86
2:B:903:U:H4'	2:B:1535:A:N1	1.90	0.86
2:B:1507:G:H5'	2:B:1507:G:N3	1.89	0.86
38:LA:8:ARG:HG2	38:LA:32:ALA:HB3	1.55	0.86
49:WA:123:ILE:HG22	49:WA:133:VAL:HG22	1.57	0.86
1:A:147:A:H2'	1:A:148:A:H8	1.39	0.86
1:A:979:A:C2	1:A:1775:U:H4'	2.09	0.86
9:I:65:ILE:HG12	9:I:74:VAL:HA	1.55	0.86
10:J:158:TYR:HB2	18:R:115:PHE:CE2	2.09	0.86
31:EA:81:LEU:HD11	38:LA:90:ILE:HD11	1.56	0.86
39:MA:60:GLU:HA	39:MA:63:ARG:HD3	1.57	0.86
2:B:1878:G:H3'	2:B:1879:A:H5"	1.55	0.86
7:G:166:ILE:HD12	7:G:169:THR:HB	1.56	0.86
42:PA:5:ILE:HD11	42:PA:10:GLN:HB3	1.58	0.86
61:IB:108:PRO:HB2	61:IB:135:VAL:HG22	1.56	0.86
2:B:595:G:H1	2:B:609:G:H5"	1.41	0.86
2:B:902:G:H2'	2:B:903:U:H5'	1.55	0.86
5:E:82:VAL:HG22	5:E:148:VAL:HG11	1.54	0.86
13:M:41:ILE:HD12	13:M:67:ALA:HB1	1.57	0.86
40:NA:26:ILE:H	40:NA:26:ILE:HD12	1.39	0.86
55:CB:164:PRO:HA	55:CB:167:ARG:HE	1.41	0.86
64:LB:132:ARG:HB2	64:LB:132:ARG:HH11	1.38	0.86
2:B:1364:C:H5"	22:V:3:ILE:HG21	1.58	0.86
38:LA:51:LEU:HD21	38:LA:54:ILE:HB	1.57	0.86
38:LA:62:TYR:HD1	38:LA:70:LYS:HD2	1.41	0.86
76:XB:19:LYS:HA	76:XB:19:LYS:HE3	1.57	0.86
1:A:1169:G:H21	1:A:1576:A:N6	1.73	0.85
2:B:1831:U:H2'	2:B:1832:C:O4'	1.76	0.85
2:B:2076:G:H2'	2:B:2077:U:H5"	1.57	0.85
14:N:36:LEU:HD13	14:N:87:LEU:HD22	1.57	0.85
73:UB:24:TRP:HZ3	73:UB:30:LYS:HA	1.41	0.85
75:WB:78:ILE:HG13	75:WB:81:ARG:HH21	1.40	0.85
1:A:64:U:H2'	1:A:65:A:H5"	1.58	0.85
2:B:768:C:H1'	17:Q:183:ARG:HH22	1.41	0.85
2:B:1347:U:H2'	2:B:1355:A:H61	1.40	0.85
2:B:1455:U:C5	2:B:1478:C:H5"	2.11	0.85
2:B:2268:U:H3'	2:B:2269:U:H4'	1.56	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:43:ILE:HG22	20:T:44:SER:H	1.40	0.85
37:KA:42:GLN:HA	37:KA:45:LEU:HD12	1.56	0.85
50:XA:197:ILE:HD13	50:XA:197:ILE:H	1.41	0.85
58:FB:106:ALA:HB2	58:FB:165:LEU:HB2	1.55	0.85
82:DC:79:SER:HB2	82:DC:100:ILE:HD11	1.56	0.85
2:B:1064:A:H62	2:B:1096:U:H3	1.21	0.85
2:B:1719:G:C4'	2:B:1732:U:H4'	2.05	0.85
2:B:1851:G:O2'	41:OA:6:PRO:HB3	1.76	0.85
2:B:3376:A:H2	35:IA:21:HIS:HD1	1.23	0.85
3:C:11:C:H2'	3:C:12:A:C8	2.10	0.85
54:BB:128:LYS:HG2	54:BB:140:VAL:HB	1.58	0.85
1:A:551:G:H2'	1:A:552:G:H8	1.41	0.85
2:B:181:U:H2'	2:B:182:U:H4'	1.58	0.85
59:GB:67:PRO:HA	59:GB:70:LEU:HB2	1.56	0.85
1:A:1357:A:H2'	1:A:1358:G:H8	1.40	0.85
2:B:296:A:H3'	2:B:297:G:H21	1.41	0.85
2:B:726:G:H21	2:B:744:A:H62	0.87	0.85
2:B:1055:A:H4'	4:D:100:C:O2	1.77	0.85
2:B:1898:G:H2'	2:B:1899:G:H5'	1.57	0.85
55:CB:116:HIS:ND1	75:WB:98:GLN:HB3	1.92	0.85
1:A:397:A:H4'	58:FB:51:GLY:N	1.90	0.85
2:B:2528:G:H2'	2:B:2529:A:O4'	1.76	0.85
7:G:218:ILE:HD11	7:G:339:ARG:HH11	1.40	0.85
82:DC:288:ILE:HD13	82:DC:320:LEU:HD23	1.58	0.85
1:A:6:G:H5'	1:A:553:G:H4'	1.58	0.85
1:A:1654:G:H21	1:A:1746:A:H62	1.22	0.85
2:B:1887:A:H4'	7:G:228:GLY:N	1.92	0.85
7:G:339:ARG:HG2	7:G:340:LYS:H	1.42	0.85
8:H:60:THR:HG22	8:H:61:SER:H	1.40	0.85
82:DC:100:ILE:HG12	82:DC:335:LEU:HD22	1.58	0.85
2:B:1430:U:O4	32:FA:4:ARG:HA	1.77	0.85
2:B:3066:U:H2'	2:B:3067:C:H6	1.41	0.85
15:O:54:VAL:HG11	15:O:57:PHE:CD2	2.10	0.85
52:ZA:65:GLU:HB2	52:ZA:68:ILE:HG13	1.59	0.85
2:B:287:G:H5'	19:S:179:LYS:HG2	1.57	0.85
2:B:2909:U:H2'	2:B:2910:A:O4'	1.77	0.85
17:Q:91:ARG:HH21	17:Q:97:VAL:HG11	1.41	0.85
18:R:36:VAL:HG23	18:R:47:ASP:HB2	1.57	0.85
20:T:148:LYS:HD2	20:T:148:LYS:H	1.40	0.85
31:EA:71:PHE:CE1	31:EA:73:LYS:HB2	2.12	0.85
80:BC:36:LYS:HA	80:BC:36:LYS:HZ2	1.37	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:164:LEU:HA	82:DC:168:GLN:HA	1.55	0.85
1:A:1290:U:H2'	1:A:1291:G:C8	2.11	0.85
2:B:1541:G:H3'	2:B:1542:G:C5'	2.05	0.85
2:B:2190:U:H2'	2:B:2191:U:O4'	1.75	0.85
19:S:103:GLU:HB3	19:S:160:GLU:HB2	1.58	0.85
19:S:185:ALA:HB3	19:S:190:THR:HB	1.59	0.85
54:BB:198:LYS:HG3	54:BB:208:VAL:HG22	1.57	0.85
60:HB:86:ILE:HG23	60:HB:87:VAL:H	1.42	0.85
1:A:1791:A:H3'	76:XB:8:ASN:HD22	1.42	0.84
2:B:120:G:H4'	2:B:121:A:C8	2.12	0.84
2:B:830:A:H62	2:B:864:G:H21	0.88	0.84
2:B:3268:A:H5"	10:J:46:ARG:HH21	1.41	0.84
4:D:85:G:H1	4:D:95:A:H61	1.22	0.84
12:L:162:LEU:HD11	19:S:45:PRO:CG	2.07	0.84
36:JA:83:GLU:HA	36:JA:86:THR:OG1	1.76	0.84
52:ZA:157:LYS:H	72:TB:95:PRO:HB3	1.41	0.84
72:TB:3:ARG:HH22	72:TB:28:ARG:HH11	1.25	0.84
1:A:1126:G:H5'	45:SA:11:ARG:HE	1.42	0.84
44:RA:99:CYS:HA	44:RA:114:LYS:HE2	1.58	0.84
51:YA:59:ASP:HA	51:YA:62:LYS:HE3	1.57	0.84
51:YA:134:VAL:HB	51:YA:219:LYS:CB	2.07	0.84
1:A:1199:G:H1	79:AC:31:ILE:HG12	1.43	0.84
6:F:158:ILE:HG22	6:F:159:SER:H	1.41	0.84
54:BB:137:PRO:HG2	54:BB:150:PRO:HD2	1.59	0.84
59:GB:148:VAL:HG12	59:GB:150:LEU:H	1.41	0.84
2:B:1308:A:N6	2:B:2367:A:H2	1.75	0.84
2:B:1488:G:H5"	2:B:1838:G:O6	1.77	0.84
2:B:1900:A:H61	2:B:1908:A:H61	1.26	0.84
76:XB:82:ARG:HG3	76:XB:83:ILE:H	1.41	0.84
2:B:1566:A:H3'	2:B:1567:U:H5"	1.59	0.84
10:J:158:TYR:CD1	18:R:115:PHE:HD2	1.94	0.84
14:N:174:THR:HG22	14:N:176:LEU:N	1.90	0.84
42:PA:28:ASN:HB2	42:PA:40:GLN:HB3	1.57	0.84
66:NB:60:PHE:HE1	66:NB:89:LEU:HD22	1.40	0.84
72:TB:41:MET:HB3	72:TB:46:TYR:HB2	1.60	0.84
2:B:2131:A:H61	47:UA:18:TYR:HA	1.42	0.84
2:B:2967:A:H4'	6:F:206:PRO:HG2	1.60	0.84
27:AA:22:ILE:HA	27:AA:34:LEU:O	1.78	0.84
49:WA:289:ALA:HA	49:WA:305:TYR:HA	1.60	0.84
56:DB:154:ARG:HH22	56:DB:180:THR:HG22	1.42	0.84
71:SB:34:ILE:O	71:SB:52:THR:HA	1.77	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:607:A:N1	10:J:26:ARG:HD3	1.92	0.84
2:B:896:A:H1'	2:B:913:A:H2	1.42	0.84
2:B:1231:A:H2'	2:B:1278:A:H61	1.40	0.84
2:B:1888:U:H2'	2:B:1889:G:O4'	1.76	0.84
10:J:176:PHE:HE1	18:R:117:ARG:NH2	1.70	0.84
30:DA:50:ILE:HD13	30:DA:51:ARG:N	1.93	0.84
43:QA:25:GLN:HE21	43:QA:28:ARG:HH22	1.22	0.84
47:UA:29:LEU:HD13	47:UA:69:TYR:HB2	1.59	0.84
68:PB:86:LEU:HG	68:PB:99:HIS:HB2	1.58	0.84
1:A:812:A:N6	1:A:858:G:H2'	1.93	0.84
2:B:798:G:H4'	17:Q:15:ARG:NH2	1.92	0.84
2:B:1338:C:H4'	36:JA:60:ASN:ND2	1.93	0.84
7:G:292:ALA:HA	7:G:303:LYS:O	1.77	0.84
17:Q:67:ARG:HB2	32:FA:105:LEU:O	1.77	0.84
48:VA:30:VAL:HG23	48:VA:183:PHE:HE1	1.43	0.84
82:DC:619:MET:HE1	82:DC:633:ILE:HD11	1.59	0.84
1:A:397:A:H4'	58:FB:51:GLY:H	1.43	0.84
7:G:104:THR:HG22	7:G:106:TRP:HE1	1.41	0.84
22:V:88:THR:HG22	22:V:107:THR:HG21	1.58	0.84
59:GB:77:ILE:HA	59:GB:80:LEU:HD12	1.57	0.84
75:WB:88:ILE:HA	75:WB:104:ALA:HB2	1.58	0.84
82:DC:124:GLY:HA2	82:DC:151:ILE:HG23	1.59	0.84
41:OA:28:HIS:CE1	41:OA:30:GLN:HB2	2.13	0.84
41:OA:51:ALA:HA	41:OA:54:LYS:HE2	1.58	0.84
1:A:258:C:H2'	1:A:259:U:C6	2.13	0.83
1:A:628:G:H1'	2:B:846:A:C2	2.13	0.83
1:A:770:A:H3'	1:A:771:A:H5"	1.58	0.83
2:B:1240:A:H3'	2:B:1241:U:H5"	1.58	0.83
2:B:2881:C:H2'	2:B:2882:U:C5	2.13	0.83
2:B:3049:A:C6	7:G:75:ALA:HB2	2.13	0.83
49:WA:13:LEU:HD12	49:WA:310:ILE:HG21	1.60	0.83
54:BB:126:VAL:HA	54:BB:141:THR:HA	1.58	0.83
54:BB:211:LYS:HB3	54:BB:217:THR:HG22	1.60	0.83
1:A:707:A:H3'	1:A:708:C:H5"	1.60	0.83
7:G:43:LEU:HB3	7:G:181:ILE:HG21	1.58	0.83
8:H:250:TRP:H	8:H:250:TRP:CD1	1.91	0.83
12:L:86:THR:HG23	12:L:214:LEU:HD21	1.60	0.83
24:X:9:VAL:HB	24:X:41:TYR:CD2	2.12	0.83
30:DA:40:ARG:HE	30:DA:46:LYS:HD2	1.40	0.83
34:HA:27:TYR:HB2	34:HA:52:ARG:HH22	1.43	0.83
47:UA:47:VAL:HG22	47:UA:57:CYS:HA	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:112:ARG:HE	75:WB:95:HIS:HD2	1.25	0.83
82:DC:44:GLY:HA2	82:DC:77:LEU:HG	1.59	0.83
2:B:2155:G:H4'	6:F:239:ALA:HB3	1.60	0.83
14:N:86:HIS:HB3	14:N:139:ARG:HG2	1.61	0.83
15:O:104:PHE:O	15:O:127:PHE:HB2	1.78	0.83
3:C:74:U:OP2	30:DA:76:LEU:HB2	1.78	0.83
6:F:65:ASP:HB3	6:F:68:LYS:O	1.79	0.83
30:DA:126:LEU:HG	30:DA:127:GLU:H	1.42	0.83
50:XA:93:THR:HG22	50:XA:181:VAL:HG21	1.59	0.83
56:DB:57:ASP:HA	56:DB:106:LEU:HA	1.60	0.83
79:AC:31:ILE:HB	79:AC:36:LEU:HD11	1.58	0.83
2:B:1661:G:H2'	2:B:1662:G:C8	2.13	0.83
9:I:153:THR:HB	9:I:179:ARG:HH21	1.44	0.83
22:V:68:ALA:HA	22:V:71:LEU:HD12	1.60	0.83
22:V:103:ALA:O	22:V:124:LEU:HG	1.78	0.83
26:Z:93:ILE:HB	26:Z:105:LEU:HD21	1.59	0.83
30:DA:82:VAL:HB	30:DA:85:VAL:HB	1.59	0.83
30:DA:82:VAL:HG12	30:DA:84:LYS:H	1.43	0.83
37:KA:52:VAL:HA	37:KA:66:VAL:HG22	1.59	0.83
63:KB:70:LYS:HB2	63:KB:73:ARG:HD2	1.57	0.83
83:EC:6948:U:O2'	83:EC:6949:G:C1'	2.26	0.83
1:A:628:G:H1'	2:B:846:A:H2	1.44	0.83
1:A:898:A:N3	1:A:899:G:H1'	1.93	0.83
18:R:36:VAL:HG11	18:R:55:ARG:NH2	1.92	0.83
32:FA:128:ARG:HG2	32:FA:129:PHE:H	1.41	0.83
56:DB:159:ARG:HE	56:DB:170:THR:HG23	1.42	0.83
61:IB:75:VAL:HA	61:IB:86:ILE:HG22	1.61	0.83
1:A:71:A:H2'	1:A:72:A:H4'	1.60	0.83
1:A:1210:C:H2'	1:A:1211:A:C8	2.13	0.83
6:F:48:ILE:HD11	47:UA:63:THR:HB	1.61	0.83
2:B:2785:A:H4'	46:TA:41:ARG:HH12	1.43	0.83
18:R:45:LEU:HA	18:R:57:ALA:HA	1.58	0.83
51:YA:61:LEU:HG	51:YA:64:ARG:HE	1.42	0.83
1:A:778:G:H2'	1:A:779:U:H5'	1.59	0.83
39:MA:92:LEU:HD13	39:MA:97:ALA:HB2	1.61	0.83
54:BB:95:THR:HG22	74:VB:16:PRO:HD2	1.60	0.83
72:TB:102:VAL:N	72:TB:113:HIS:HB3	1.93	0.83
73:UB:128:SER:HB3	73:UB:143:PRO:HD2	1.60	0.83
75:WB:41:ILE:HG13	75:WB:42:LEU:H	1.44	0.83
2:B:1719:G:H4'	2:B:1732:U:C4'	2.08	0.83
13:M:9:GLN:HG2	13:M:52:LEU:HD21	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:5:LEU:HD11	34:HA:35:ARG:HB3	1.61	0.83
40:NA:50:LEU:H	40:NA:50:LEU:HD12	1.44	0.83
72:TB:105:THR:HG23	72:TB:110:ILE:HG12	1.59	0.83
75:WB:71:ILE:HD13	75:WB:76:ALA:HB2	1.59	0.83
2:B:1268:G:H21	2:B:1273:A:H62	1.23	0.82
2:B:1683:A:H2'	2:B:1684:U:H6	1.42	0.82
2:B:2817:A:H3'	2:B:2818:U:H5'	1.61	0.82
2:B:3312:U:H5"	7:G:25:ILE:HD12	1.61	0.82
6:F:62:VAL:HA	6:F:73:GLU:HA	1.60	0.82
71:SB:9:VAL:HG22	71:SB:10:GLU:H	1.44	0.82
82:DC:575:ALA:HA	82:DC:839:TYR:HE1	1.40	0.82
2:B:1785:U:H2'	2:B:1786:G:C8	2.13	0.82
34:HA:51:LEU:HD11	38:LA:91:ARG:HG2	1.58	0.82
37:KA:18:ARG:HB3	37:KA:23:ASN:CA	2.07	0.82
55:CB:216:GLU:HG3	55:CB:219:ARG:HD2	1.62	0.82
1:A:299:A:H1'	54:BB:5:PRO:HG3	1.60	0.82
16:P:146:LYS:O	16:P:147:ASN:HB2	1.79	0.82
2:B:388:G:H4'	21:U:18:ARG:N	1.93	0.82
2:B:811:U:H2'	2:B:812:G:C8	2.13	0.82
2:B:1833:G:H1'	43:QA:4:GLN:OE1	1.78	0.82
19:S:73:ARG:HB2	19:S:92:LEU:HD22	1.61	0.82
37:KA:30:ILE:O	37:KA:80:VAL:HG13	1.78	0.82
1:A:1316:G:H5'	67:OB:7:LYS:HB3	1.58	0.82
1:A:1640:C:H42	83:EC:6951:C:P	2.03	0.82
2:B:1908:A:H2'	2:B:1909:A:O4'	1.77	0.82
2:B:1910:A:H2'	2:B:1911:A:C8	2.15	0.82
14:N:59:GLN:HG2	14:N:128:ARG:HH21	1.43	0.82
50:XA:41:ARG:HB2	50:XA:42:PRO:HD3	1.62	0.82
2:B:501:A:H4'	10:J:28:GLN:HB2	1.61	0.82
2:B:1788:C:H2'	2:B:1789:G:C8	2.13	0.82
19:S:46:ASP:O	19:S:50:ARG:HG2	1.78	0.82
50:XA:83:GLN:CA	50:XA:83:GLN:CG	2.57	0.82
54:BB:59:ARG:HH12	74:VB:87:PRO:HG3	1.45	0.82
56:DB:70:PRO:HA	56:DB:98:ARG:NH2	1.94	0.82
59:GB:57:ARG:HA	59:GB:60:LEU:HB2	1.61	0.82
1:A:1414:U:H2'	1:A:1416:G:OP2	1.79	0.82
2:B:962:A:O2'	2:B:963:G:H5'	1.80	0.82
2:B:1203:A:H2'	2:B:1204:A:C8	2.15	0.82
2:B:1231:A:OP1	48:VA:34:SER:HA	1.79	0.82
2:B:1828:A:H2'	2:B:1829:G:C8	2.15	0.82
2:B:2714:G:OP2	46:TA:8:ARG:HD2	1.80	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:113:U:H5”	43:QA:7:PHE:HB2	1.61	0.82
25:Y:20:ARG:NH1	25:Y:20:ARG:HB2	1.95	0.82
25:Y:91:LEU:CB	25:Y:96:ILE:HD11	2.09	0.82
34:HA:52:ARG:O	34:HA:55:GLU:HG2	1.79	0.82
37:KA:13:HIS:CE1	37:KA:89:LEU:HD22	2.15	0.82
53:AB:94:ARG:HA	53:AB:97:SER:HB3	1.60	0.82
53:AB:134:CYS:C	53:AB:157:LEU:HD11	2.05	0.82
2:B:135:C:H2’	39:MA:94:LYS:HD3	1.60	0.82
2:B:727:G:N2	22:V:139:ILE:HB	1.95	0.82
2:B:985:U:H2’	2:B:986:U:C6	2.14	0.82
22:V:100:THR:HG23	22:V:122:ILE:HD12	1.62	0.82
58:FB:34:ALA:HB2	58:FB:56:ARG:HD3	1.62	0.82
2:B:1518:U:H2’	2:B:1519:G:C8	2.15	0.82
6:F:121:GLY:HA2	6:F:163:ARG:HH12	1.43	0.82
10:J:31:ARG:NH1	37:KA:107:ILE:CA	2.43	0.82
24:X:80:ARG:HE	25:Y:156:TYR:HB2	1.44	0.82
66:NB:36:ILE:HD11	66:NB:48:VAL:HG22	1.60	0.82
82:DC:437:MET:HA	82:DC:442:VAL:HG12	1.59	0.82
2:B:681:U:OP2	8:H:115:HIS:HB3	1.79	0.82
2:B:2249:G:H2’	2:B:2250:G:O4’	1.79	0.82
2:B:3379:C:C4’	7:G:315:GLY:HA2	2.07	0.82
6:F:190:ARG:NH2	6:F:191:LEU:HD12	1.94	0.82
8:H:271:LYS:HD2	8:H:274:TYR:CD1	2.15	0.82
23:W:81:ARG:HD2	23:W:88:ARG:HD2	1.62	0.82
61:IB:85:VAL:HG22	61:IB:108:PRO:HB3	1.60	0.82
1:A:523:G:H21	1:A:529:A:H62	1.27	0.81
2:B:947:G:H5”	36:JA:55:ILE:HB	1.60	0.81
2:B:1464:G:H1’	2:B:1511:U:H3	1.44	0.81
2:B:2775:U:H2’	2:B:2776:C:C6	2.15	0.81
6:F:78:ALA:O	6:F:169:ILE:HA	1.79	0.81
9:I:65:ILE:CD1	9:I:74:VAL:HG22	2.10	0.81
18:R:17:VAL:O	18:R:72:LEU:HB3	1.79	0.81
22:V:102:ALA:HB1	22:V:127:LEU:HG	1.61	0.81
23:W:3:ASN:ND2	23:W:5:ARG:HH12	1.77	0.81
34:HA:74:ASN:HB2	34:HA:87:VAL:O	1.80	0.81
43:QA:23:LEU:HB2	43:QA:38:ASN:HB2	1.60	0.81
63:KB:20:ARG:NH1	63:KB:64:ARG:HD2	1.94	0.81
69:QB:137:ALA:O	69:QB:141:GLU:HG2	1.79	0.81
72:TB:7:LEU:HB2	72:TB:34:ILE:HG12	1.62	0.81
1:A:627:C:O3’	63:KB:120:SER:HB3	1.80	0.81
2:B:725:G:H3’	2:B:726:G:H5”	1.59	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1230:G:H2'	2:B:1231:A:C4'	2.09	0.81
2:B:2102:U:H5'	23:W:88:ARG:HH21	1.45	0.81
2:B:2674:A:H5"	15:O:105:GLY:HA3	1.60	0.81
7:G:262:TRP:HB3	20:T:65:ASN:HA	1.62	0.81
10:J:165:LEU:H	37:KA:6:ARG:HB3	1.45	0.81
63:KB:19:SER:O	63:KB:21:ASN:N	2.11	0.81
69:QB:83:ALA:HB1	69:QB:91:TYR:HB3	1.60	0.81
2:B:1369:A:H5"	32:FA:21:ARG:NH1	1.95	0.81
2:B:1706:C:H42	2:B:1738:C:H42	1.28	0.81
2:B:2479:C:H3'	2:B:2480:A:H5'	1.61	0.81
4:D:16:U:H5'	9:I:8:LYS:HB2	1.61	0.81
5:E:120:VAL:HB	5:E:121:PRO:HD3	1.60	0.81
9:I:99:TYR:CD1	9:I:165:GLY:HA2	2.15	0.81
14:N:57:LEU:HD23	14:N:58:GLU:N	1.94	0.81
19:S:199:LEU:HB3	19:S:203:ARG:NE	1.95	0.81
24:X:24:LEU:HD21	24:X:59:VAL:HG21	1.62	0.81
30:DA:59:VAL:HG13	30:DA:60:ARG:HG2	1.62	0.81
31:EA:19:ALA:HB1	38:LA:89:ILE:HD13	1.62	0.81
54:BB:65:LEU:CD1	54:BB:80:THR:HA	2.10	0.81
1:A:1076:A:H4'	76:XB:13:LYS:HD3	1.60	0.81
2:B:339:C:H5'	8:H:195:ARG:NH1	1.94	0.81
2:B:377:A:H1'	2:B:392:G:H21	1.46	0.81
2:B:727:G:H22	22:V:139:ILE:HB	1.45	0.81
2:B:739:G:H2'	2:B:740:G:H8	1.45	0.81
11:K:48:ASN:HA	11:K:51:TYR:HB2	1.62	0.81
11:K:110:ARG:HG3	11:K:113:SER:HB3	1.60	0.81
61:IB:130:PRO:HB3	61:IB:136:ARG:HG2	1.63	0.81
76:XB:13:LYS:H	76:XB:15:ARG:HH12	1.25	0.81
2:B:26:A:H61	2:B:59:G:H1	1.29	0.81
2:B:3006:A:H2'	2:B:3007:U:O4'	1.80	0.81
9:I:192:PRO:HA	9:I:195:LEU:HB3	1.63	0.81
35:IA:16:LEU:HB2	35:IA:69:TYR:HA	1.60	0.81
77:YB:3:LEU:HD12	77:YB:4:VAL:HG12	1.63	0.81
2:B:357:A:H1'	8:H:80:GLY:C	2.06	0.81
2:B:1718:G:H2'	2:B:1719:G:O4'	1.80	0.81
19:S:80:THR:HG21	19:S:87:GLN:HA	1.61	0.81
35:IA:96:VAL:HG23	35:IA:98:VAL:HG12	1.62	0.81
76:XB:78:ALA:O	76:XB:82:ARG:HB3	1.81	0.81
1:A:1203:A:H5'	1:A:1457:C:H41	1.45	0.81
2:B:370:U:H4'	2:B:404:G:C5'	2.09	0.81
2:B:607:A:N1	10:J:26:ARG:CD	2.43	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:60:LEU:HD12	14:N:129:VAL:HG21	1.62	0.81
60:HB:55:VAL:HB	60:HB:68:LEU:HA	1.61	0.81
82:DC:521:TYR:H	82:DC:521:TYR:HD2	1.23	0.81
1:A:32:U:H3	1:A:468:A:H62	1.27	0.81
1:A:373:G:H4'	61:IB:96:LYS:HG3	1.61	0.81
16:P:108:GLU:O	16:P:111:GLU:HB3	1.79	0.81
18:R:48:GLY:HA3	18:R:53:VAL:HG13	1.62	0.81
19:S:115:VAL:HG11	19:S:160:GLU:HB3	1.62	0.81
46:TA:23:HIS:HB3	46:TA:72:LEU:HD22	1.62	0.81
1:A:219:A:H61	1:A:842:C:H42	1.28	0.81
1:A:965:U:H3'	1:A:966:A:H5'	1.62	0.81
1:A:1105:C:H2'	1:A:1106:U:C6	2.15	0.81
3:C:72:A:H1'	3:C:88:A:H2	1.45	0.81
20:T:44:SER:HA	20:T:135:TYR:HA	1.61	0.81
32:FA:47:LYS:HE2	32:FA:48:TYR:CE2	2.16	0.81
36:JA:97:ALA:HB3	36:JA:100:ILE:HG12	1.61	0.81
39:MA:33:VAL:HG12	39:MA:34:GLN:HG3	1.61	0.81
49:WA:260:ILE:HD12	49:WA:313:TRP:HZ3	1.45	0.81
57:EB:39:ARG:H	57:EB:40:PRO:HD2	1.45	0.81
82:DC:445:ILE:HG12	82:DC:446:ASP:H	1.45	0.81
1:A:760:A:H2'	1:A:761:G:O4'	1.81	0.81
1:A:1530:C:OP2	75:WB:95:HIS:HB3	1.81	0.81
2:B:321:C:H4'	19:S:150:TRP:CG	2.16	0.81
31:EA:11:ALA:HA	31:EA:82:PRO:HA	1.62	0.81
57:EB:143:LEU:HD23	57:EB:149:ILE:HD12	1.63	0.81
82:DC:218:TRP:HB3	82:DC:324:MET:HB3	1.63	0.81
1:A:54:C:H2'	1:A:55:A:H8	1.46	0.80
2:B:366:A:H2'	2:B:367:A:C8	2.16	0.80
2:B:1672:U:H5"	23:W:64:ARG:HG2	1.63	0.80
2:B:2200:U:H2'	2:B:2201:G:C8	2.15	0.80
8:H:290:ILE:HA	8:H:295:ILE:HD13	1.63	0.80
9:I:53:VAL:HG11	9:I:159:VAL:HG13	1.63	0.80
48:VA:41:VAL:HG21	48:VA:185:LEU:HD21	1.62	0.80
63:KB:88:LEU:O	63:KB:92:ILE:HG13	1.81	0.80
2:B:939:U:H2'	2:B:940:G:H8	1.45	0.80
2:B:1473:G:H5"	23:W:23:TRP:NE1	1.97	0.80
2:B:2185:G:H5'	6:F:219:ILE:HD11	1.63	0.80
7:G:367:LYS:HG2	28:BA:17:ARG:HH22	1.44	0.80
43:QA:23:LEU:HD21	43:QA:35:ILE:HG22	1.64	0.80
2:B:2325:G:H2'	2:B:2326:A:H8	1.47	0.80
3:C:12:A:H2'	3:C:13:A:H5"	1.62	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:82:VAL:HG21	5:E:148:VAL:HG21	1.60	0.80
50:XA:189:VAL:HG13	50:XA:190:ASP:H	1.45	0.80
1:A:55:A:H3'	1:A:403:G:H22	1.46	0.80
10:J:71:VAL:HG13	10:J:156:LYS:HG3	1.64	0.80
15:O:108:GLU:HA	15:O:122:ILE:HD11	1.63	0.80
22:V:19:PRO:HD3	22:V:53:PHE:HD1	1.45	0.80
34:HA:42:ILE:HG13	34:HA:67:VAL:HG13	1.64	0.80
40:NA:92:ASN:O	40:NA:96:ALA:HB3	1.82	0.80
47:UA:50:GLY:HA3	47:UA:56:THR:HG23	1.62	0.80
63:KB:104:ARG:NH2	63:KB:104:ARG:HB2	1.96	0.80
2:B:1498:A:H2'	2:B:1499:C:C6	2.15	0.80
2:B:1932:A:H2	2:B:2124:G:H5"	1.42	0.80
2:B:2581:U:H2'	2:B:2582:C:C6	2.15	0.80
2:B:3060:C:H2'	2:B:3061:G:H8	1.47	0.80
2:B:3330:A:H4'	7:G:366:GLY:HA3	1.63	0.80
16:P:123:ARG:HH21	48:VA:39:HIS:HB2	1.46	0.80
18:R:113:THR:HB	18:R:116:GLU:HB2	1.62	0.80
39:MA:18:ALA:HA	39:MA:58:ILE:HD13	1.62	0.80
53:AB:196:ARG:HA	53:AB:200:LYS:NZ	1.96	0.80
2:B:88:A:H62	2:B:98:G:H21	1.27	0.80
2:B:388:G:H21	21:U:101:ASN:ND2	1.79	0.80
2:B:855:U:OP1	23:W:95:TRP:HB2	1.80	0.80
6:F:32:LEU:HG	6:F:163:ARG:HH11	1.46	0.80
6:F:63:PHE:HB2	6:F:72:ARG:HH12	1.44	0.80
7:G:65:SER:HB3	7:G:68:HIS:HB2	1.63	0.80
27:AA:17:LEU:HB2	27:AA:52:ALA:HB3	1.63	0.80
49:WA:255:ALA:HB2	49:WA:292:LEU:HD22	1.63	0.80
2:B:1308:A:H62	2:B:2367:A:H2	1.29	0.80
13:M:101:VAL:HG11	13:M:144:ILE:HD12	1.62	0.80
25:Y:39:ILE:HB	25:Y:99:SER:CB	2.12	0.80
36:JA:67:SER:HB2	36:JA:68:PRO:HD2	1.64	0.80
70:RB:30:LYS:HB2	70:RB:33:GLN:HB3	1.64	0.80
70:RB:84:MET:HB2	79:AC:52:PHE:HA	1.61	0.80
1:A:16:G:H21	1:A:1138:A:H62	1.29	0.80
1:A:209:U:H2'	1:A:210:A:C8	2.17	0.80
2:B:356:C:H5"	43:QA:47:THR:HG21	1.64	0.80
2:B:656:A:P	36:JA:27:ARG:HA	2.22	0.80
2:B:1230:G:C2'	2:B:1231:A:H4'	2.09	0.80
2:B:3156:U:H3'	2:B:3157:U:C5'	2.11	0.80
3:C:70:G:H5"	30:DA:28:ARG:NE	1.96	0.80
7:G:230:THR:HG21	7:G:247:ARG:HE	1.45	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:139:VAL:HA	12:L:142:LEU:HD12	1.62	0.80
19:S:138:GLN:HA	19:S:143:ARG:HH11	1.44	0.80
39:MA:48:ARG:HA	39:MA:51:ILE:HB	1.61	0.80
49:WA:30:PRO:HB3	49:WA:295:SER:HB3	1.63	0.80
51:YA:149:GLN:OE1	51:YA:151:LYS:HE3	1.82	0.80
57:EB:141:ARG:HH11	57:EB:151:LYS:HD2	1.45	0.80
2:B:674:G:H2'	2:B:675:C:O4'	1.82	0.80
2:B:2735:U:H4'	25:Y:51:GLY:HA2	1.63	0.80
2:B:2852:C:H2'	14:N:67:ALA:HB2	1.64	0.80
17:Q:24:VAL:HG22	19:S:199:LEU:HB2	1.63	0.80
48:VA:27:VAL:HB	48:VA:189:GLN:HB3	1.62	0.80
49:WA:136:ILE:HD13	49:WA:136:ILE:H	1.47	0.80
61:IB:88:ARG:O	61:IB:104:HIS:HB2	1.82	0.80
2:B:2356:A:H61	2:B:2983:C:H41	1.30	0.80
2:B:2529:A:H2'	2:B:2530:G:H8	1.47	0.80
2:B:3156:U:H3'	2:B:3157:U:H5"	1.64	0.80
2:B:3329:U:H2'	2:B:3330:A:C8	2.17	0.80
10:J:164:SER:HB3	37:KA:5:HIS:HA	1.64	0.80
82:DC:380:LEU:HB3	82:DC:469:LEU:HB3	1.61	0.80
2:B:351:A:H5'	3:C:54:A:H4'	1.64	0.79
2:B:2478:C:H5"	2:B:2488:A:H61	1.47	0.79
6:F:63:PHE:HB3	6:F:72:ARG:HH22	1.45	0.79
6:F:89:TYR:HB2	6:F:100:ASN:ND2	1.97	0.79
27:AA:103:ALA:CB	27:AA:109:MET:HA	2.11	0.79
2:B:824:C:C5'	6:F:21:ARG:HE	1.93	0.79
2:B:939:U:H2'	2:B:940:G:C8	2.17	0.79
2:B:1364:C:H2'	2:B:1365:G:C8	2.16	0.79
6:F:120:PRO:HG3	6:F:162:ALA:HB2	1.62	0.79
8:H:204:GLY:HA3	8:H:224:GLY:CA	2.13	0.79
69:QB:108:LEU:HD22	69:QB:113:ILE:HD12	1.64	0.79
2:B:707:U:H2'	2:B:708:G:H5"	1.64	0.79
2:B:1256:G:O2'	16:P:123:ARG:HB3	1.82	0.79
2:B:2325:G:H2'	2:B:2326:A:C8	2.17	0.79
2:B:3011:A:N3	2:B:3012:A:H1'	1.97	0.79
6:F:68:LYS:HE2	6:F:70:ARG:HB3	1.64	0.79
7:G:218:ILE:HD11	7:G:339:ARG:HD3	1.64	0.79
10:J:165:LEU:CD2	37:KA:6:ARG:O	2.29	0.79
12:L:156:ASP:HB3	12:L:183:LYS:HD3	1.63	0.79
14:N:121:LYS:HG2	14:N:122:PRO:HD2	1.65	0.79
16:P:103:ASN:HA	16:P:141:CYS:HB2	1.65	0.79
72:TB:81:VAL:HG11	72:TB:86:ILE:HG23	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:960:U:H2'	1:A:961:U:C6	2.18	0.79
1:A:1135:U:OP1	73:UB:119:GLY:HA2	1.82	0.79
2:B:99:A:OP1	19:S:194:GLN:HB2	1.81	0.79
2:B:1108:U:H2'	2:B:1109:U:H6	1.47	0.79
2:B:1138:U:O3'	11:K:97:PRO:HD3	1.83	0.79
2:B:1242:G:H1'	82:DC:756:SER:HA	1.63	0.79
2:B:2635:A:H5"	2:B:2636:A:O4'	1.81	0.79
6:F:47:GLN:HE21	6:F:49:VAL:HB	1.48	0.79
7:G:283:TYR:HB3	7:G:356:LEU:HD11	1.63	0.79
18:R:19:ARG:HD2	18:R:65:LEU:HD21	1.65	0.79
19:S:58:GLY:HA3	19:S:142:ILE:HD11	1.64	0.79
28:BA:42:GLN:HB3	28:BA:44:LYS:HE2	1.64	0.79
54:BB:125:LYS:HB2	54:BB:159:THR:HG22	1.65	0.79
77:YB:14:SER:HA	77:YB:17:ARG:HG2	1.65	0.79
1:A:332:U:H2'	1:A:334:G:OP2	1.82	0.79
1:A:1171:A:H2'	1:A:1172:G:H8	1.44	0.79
2:B:903:U:H2'	2:B:904:A:N7	1.97	0.79
2:B:2925:C:H2'	2:B:2926:A:H5'	1.65	0.79
8:H:59:GLN:H	8:H:59:GLN:NE2	1.81	0.79
16:P:123:ARG:NH2	48:VA:39:HIS:HB2	1.98	0.79
23:W:102:LEU:O	23:W:106:LEU:HD13	1.83	0.79
26:Z:38:ILE:HA	26:Z:41:ILE:HB	1.63	0.79
51:YA:65:VAL:O	64:LB:34:SER:HA	1.83	0.79
76:XB:52:ASP:O	76:XB:55:GLU:HG2	1.83	0.79
1:A:946:U:H5"	51:YA:165:ARG:NE	1.97	0.79
1:A:1163:A:H2'	1:A:1164:G:O4'	1.83	0.79
2:B:2880:U:O4'	7:G:238:LEU:HD11	1.81	0.79
2:B:3375:A:H5"	2:B:3378:C:H5	1.46	0.79
22:V:140:LEU:HD23	22:V:141:ARG:H	1.47	0.79
23:W:23:TRP:HB3	23:W:51:VAL:HG23	1.65	0.79
29:CA:86:VAL:HG11	29:CA:95:ILE:HD11	1.65	0.79
35:IA:17:HIS:CB	35:IA:69:TYR:HB3	2.12	0.79
54:BB:42:LEU:HD12	54:BB:109:PHE:HB3	1.63	0.79
1:A:1773:C:OP1	45:SA:3:ALA:HB3	1.82	0.79
2:B:34:A:H2'	2:B:35:A:C8	2.18	0.79
2:B:514:G:C2'	2:B:515:C:H5"	2.12	0.79
2:B:1116:G:H3'	2:B:1117:G:H5"	1.65	0.79
2:B:1842:A:H1'	43:QA:44:TRP:HZ3	1.47	0.79
2:B:3143:C:H4'	2:B:3144:G:H5"	1.64	0.79
6:F:39:GLY:HA3	12:L:36:ILE:HG21	1.64	0.79
7:G:73:VAL:HG11	28:BA:16:GLY:HA3	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:250:TRP:H	8:H:250:TRP:HD1	1.30	0.79
41:OA:69:HIS:O	41:OA:72:ARG:HG2	1.82	0.79
54:BB:151:ASP:HB3	56:DB:215:ARG:HH12	1.46	0.79
61:IB:89:ALA:HA	61:IB:104:HIS:HB3	1.63	0.79
82:DC:635:CYS:HB2	82:DC:668:GLN:NE2	1.98	0.79
3:C:51:G:H1'	3:C:52:A:C8	2.18	0.79
10:J:31:ARG:CD	37:KA:107:ILE:CB	2.56	0.79
49:WA:38:ARG:HA	49:WA:67:ILE:HG23	1.64	0.79
49:WA:189:GLU:HA	53:AB:225:TYR:HB2	1.65	0.79
63:KB:22:ALA:HB1	63:KB:23:PRO:HA	1.64	0.79
1:A:941:A:H2'	1:A:942:G:H4'	1.65	0.79
1:A:1573:A:H1'	1:A:1574:G:OP2	1.83	0.79
12:L:72:PRO:HB2	12:L:74:THR:HG23	1.64	0.79
54:BB:18:TRP:HE3	54:BB:20:LEU:HD12	1.48	0.79
82:DC:223:ARG:HD2	82:DC:340:LEU:HD11	1.64	0.79
82:DC:566:THR:HG21	82:DC:725:GLN:HG3	1.64	0.79
2:B:34:A:H2'	2:B:35:A:H8	1.48	0.79
2:B:284:A:C2	2:B:306:A:H1'	2.18	0.79
4:D:51:A:H3'	4:D:52:G:H5"	1.65	0.79
12:L:91:PHE:HZ	12:L:185:ARG:HB3	1.47	0.79
17:Q:59:ARG:HA	17:Q:69:VAL:HA	1.63	0.79
51:YA:185:THR:HA	51:YA:188:LEU:HD12	1.63	0.79
56:DB:4:ASN:HB3	56:DB:110:ALA:HA	1.63	0.79
58:FB:4:SER:HB2	58:FB:24:LYS:HD3	1.65	0.79
72:TB:65:LEU:H	72:TB:65:LEU:HD13	1.48	0.79
1:A:562:G:H2'	1:A:563:U:C6	2.17	0.78
2:B:868:C:H2'	2:B:869:G:O4'	1.83	0.78
2:B:2107:A:H2'	2:B:3344:A:O2'	1.82	0.78
2:B:2241:U:H4'	6:F:242:ARG:HE	1.47	0.78
2:B:2778:G:H2'	2:B:2779:A:H5"	1.64	0.78
6:F:5:ILE:HG21	6:F:210:PRO:HD3	1.65	0.78
10:J:164:SER:HB2	37:KA:5:HIS:C	2.08	0.78
20:T:16:VAL:HG13	20:T:80:PHE:CE1	2.18	0.78
21:U:36:ILE:HG22	21:U:114:VAL:HG11	1.65	0.78
59:GB:133:HIS:O	59:GB:134:ILE:HG13	1.83	0.78
1:A:921:U:C2'	1:A:922:G:H5"	2.13	0.78
1:A:971:A:H2'	1:A:972:G:O4'	1.82	0.78
1:A:1160:A:H2'	1:A:1161:C:C6	2.18	0.78
2:B:2640:A:H2'	2:B:2641:U:C6	2.18	0.78
2:B:3184:A:H2'	2:B:3185:U:H5'	1.65	0.78
7:G:306:THR:HG21	7:G:316:GLU:HA	1.63	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:175:ALA:O	22:V:178:ARG:HB2	1.82	0.78
82:DC:677:PHE:HB3	82:DC:819:VAL:HG13	1.64	0.78
1:A:1216:C:O2'	1:A:1218:G:H5"	1.83	0.78
2:B:649:A:H2'	2:B:650:C:C6	2.19	0.78
2:B:1458:U:H5"	35:IA:34:LYS:NZ	1.97	0.78
2:B:2622:C:H2'	2:B:2623:G:H8	1.48	0.78
8:H:105:THR:HG22	17:Q:26:PHE:HE2	1.48	0.78
15:O:54:VAL:HB	15:O:59:ILE:HG13	1.65	0.78
18:R:124:ARG:HA	20:T:194:LEU:HD11	1.65	0.78
19:S:47:LYS:HE3	19:S:51:LEU:HD11	1.65	0.78
40:NA:34:SER:HB3	40:NA:37:THR:HG23	1.65	0.78
55:CB:213:LYS:HA	55:CB:213:LYS:HE3	1.64	0.78
9:I:150:LEU:HD22	15:O:142:LYS:HD2	1.65	0.78
13:M:1:MET:HB2	24:X:139:TYR:HB3	1.65	0.78
22:V:67:ILE:O	22:V:71:LEU:HG	1.83	0.78
59:GB:38:ASN:HB2	59:GB:41:GLU:HG3	1.65	0.78
68:PB:46:VAL:HG11	68:PB:69:ILE:HG23	1.62	0.78
1:A:117:U:H2'	1:A:118:U:O4'	1.83	0.78
1:A:1118:G:H2'	1:A:1119:G:C8	2.18	0.78
2:B:501:A:H2'	2:B:502:U:C6	2.17	0.78
2:B:610:G:H21	8:H:313:LEU:HG	1.47	0.78
2:B:1786:G:H2'	2:B:1787:A:C8	2.19	0.78
11:K:41:ARG:HA	11:K:44:ILE:HD12	1.65	0.78
25:Y:124:VAL:HG12	25:Y:125:ALA:H	1.49	0.78
39:MA:85:THR:HB	39:MA:88:LEU:HB2	1.65	0.78
44:RA:97:ARG:HH21	44:RA:122:ARG:HB3	1.48	0.78
49:WA:260:ILE:HD12	49:WA:313:TRP:CZ3	2.18	0.78
58:FB:184:LEU:HD21	58:FB:192:TYR:HB2	1.65	0.78
61:IB:125:VAL:HG12	61:IB:139:VAL:HA	1.65	0.78
76:XB:97:PRO:HB2	76:XB:98:PRO:HD3	1.64	0.78
83:EC:6912:G:H3'	83:EC:6913:U:H5"	1.65	0.78
1:A:295:A:H2'	1:A:296:U:C6	2.19	0.78
1:A:780:A:C8	74:VB:8:ARG:HB3	2.19	0.78
1:A:1524:A:H2'	1:A:1525:A:C8	2.18	0.78
2:B:1311:G:O2'	2:B:2381:G:H4'	1.84	0.78
2:B:1650:G:H4'	6:F:69:TYR:O	1.84	0.78
6:F:20:THR:HB	6:F:23:ARG:HE	1.46	0.78
34:HA:30:THR:HG22	34:HA:91:SER:HB2	1.66	0.78
52:ZA:42:GLY:HA3	52:ZA:65:GLU:OE2	1.82	0.78
54:BB:208:VAL:O	54:BB:219:VAL:HG13	1.82	0.78
82:DC:718:LEU:CB	82:DC:835:TRP:HB3	2.14	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1229:G:N2	1:A:1256:A:H62	1.78	0.78
2:B:1718:G:H21	2:B:1731:A:C4'	1.97	0.78
2:B:2673:A:H5"	15:O:95:ASN:HA	1.64	0.78
9:I:65:ILE:HG21	9:I:72:ASP:HB3	1.64	0.78
13:M:8:GLN:HG3	13:M:68:LEU:HD11	1.64	0.78
16:P:57:LYS:HE2	16:P:79:SER:HB3	1.65	0.78
56:DB:132:ARG:HB3	56:DB:133:LEU:HD12	1.65	0.78
72:TB:103:ILE:HG12	72:TB:111:MET:O	1.83	0.78
6:F:114:SER:HA	6:F:127:ALA:CB	2.13	0.78
8:H:197:ARG:HB2	8:H:197:ARG:HH11	1.47	0.78
14:N:190:VAL:HG12	14:N:197:VAL:HG21	1.62	0.78
27:AA:114:ILE:HD12	27:AA:133:SER:HA	1.66	0.78
49:WA:221:MET:HG2	49:WA:233:THR:HG23	1.66	0.78
61:IB:109:VAL:HG21	61:IB:125:VAL:HG11	1.66	0.78
1:A:563:U:H3	1:A:580:A:H62	1.29	0.78
1:A:943:C:H41	76:XB:18:VAL:HA	1.49	0.78
1:A:1229:G:H21	1:A:1256:A:N6	1.79	0.78
2:B:837:A:N6	2:B:856:G:H1'	1.99	0.78
2:B:897:U:H2'	2:B:898:U:H5'	1.65	0.78
2:B:1281:G:C5'	48:VA:55:LYS:HB3	2.10	0.78
2:B:2750:U:H2'	2:B:2751:G:H8	1.49	0.78
2:B:2757:U:C3'	2:B:2758:A:H5"	2.14	0.78
10:J:154:LEU:HD23	10:J:157:GLN:HG2	1.65	0.78
20:T:74:ARG:HH11	20:T:74:ARG:HG2	1.49	0.78
29:CA:141:TYR:HA	39:MA:34:GLN:HG2	1.65	0.78
32:FA:31:GLY:O	32:FA:32:ARG:HB2	1.83	0.78
49:WA:202:LEU:HA	49:WA:213:SER:HA	1.66	0.78
50:XA:76:ILE:HB	50:XA:123:VAL:HG13	1.66	0.78
1:A:1118:G:H2'	1:A:1119:G:H8	1.48	0.78
2:B:944:C:H4'	36:JA:33:ARG:HH11	1.48	0.78
12:L:61:GLN:HB2	19:S:28:TRP:CH2	2.19	0.78
20:T:148:LYS:HD2	20:T:148:LYS:N	1.99	0.78
41:OA:64:MET:HE3	41:OA:68:LYS:HE3	1.66	0.78
1:A:291:G:H2'	1:A:292:U:C6	2.18	0.77
1:A:395:U:H2'	1:A:396:G:O4'	1.84	0.77
1:A:1225:U:H2'	1:A:1226:A:H5'	1.64	0.77
2:B:720:A:H2'	22:V:69:ARG:HH22	1.48	0.77
2:B:856:G:H22	47:UA:4:ARG:HH22	1.31	0.77
2:B:1270:A:H5'	82:DC:741:GLY:HA3	1.66	0.77
2:B:1305:U:C2	7:G:257:PRO:HG3	2.19	0.77
19:S:154:PRO:HB3	19:S:157:LYS:NZ	1.99	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:30:PHE:HD1	51:YA:31:ASP:H	1.30	0.77
51:YA:87:ARG:HB3	51:YA:87:ARG:HH21	1.49	0.77
53:AB:49:ILE:HG23	53:AB:87:TYR:HB3	1.66	0.77
54:BB:9:LEU:O	54:BB:27:TYR:HB3	1.84	0.77
55:CB:99:MET:HA	55:CB:104:ASN:HA	1.64	0.77
82:DC:32:LYS:HE2	82:DC:107:GLY:H	1.47	0.77
1:A:400:A:C5	58:FB:25:ARG:HA	2.20	0.77
2:B:845:G:H1'	2:B:848:A:N6	1.98	0.77
2:B:1556:C:H2'	2:B:2169:G:C6	2.19	0.77
2:B:3153:U:H3	2:B:3293:U:H3	1.32	0.77
31:EA:10:VAL:HG13	31:EA:24:VAL:HG12	1.66	0.77
72:TB:98:GLN:HG3	72:TB:99:PHE:HD1	1.50	0.77
82:DC:718:LEU:HG	82:DC:835:TRP:HB3	1.66	0.77
1:A:1280:C:H2'	1:A:1281:G:C8	2.19	0.77
4:D:1:G:H21	9:I:269:SER:HB2	1.49	0.77
9:I:83:LEU:HD11	9:I:101:THR:HG23	1.67	0.77
31:EA:57:HIS:ND1	31:EA:65:ARG:HG3	1.99	0.77
31:EA:73:LYS:HE2	31:EA:74:VAL:H	1.49	0.77
51:YA:176:VAL:HG12	51:YA:177:GLN:N	1.97	0.77
53:AB:164:VAL:O	53:AB:168:ILE:HG13	1.84	0.77
82:DC:519:LEU:HB2	82:DC:531:ALA:HB3	1.66	0.77
82:DC:538:LEU:HG	82:DC:542:LEU:HD11	1.66	0.77
1:A:941:A:H5"	1:A:1027:A:O2'	1.85	0.77
2:B:63:A:H4'	19:S:174:ILE:HD13	1.66	0.77
2:B:2875:U:H5"	2:B:2945:G:H1	1.49	0.77
7:G:84:VAL:HG22	7:G:164:THR:HA	1.66	0.77
10:J:167:ASN:ND2	37:KA:6:ARG:NH2	2.32	0.77
11:K:96:PRO:HB2	11:K:99:PRO:HD2	1.65	0.77
15:O:155:THR:HG22	15:O:157:GLU:H	1.49	0.77
56:DB:211:LEU:HA	56:DB:214:LYS:HD2	1.67	0.77
2:B:665:A:H5"	19:S:199:LEU:HD21	1.66	0.77
2:B:2949:U:C2'	2:B:2950:G:H5'	2.15	0.77
37:KA:89:LEU:HD12	37:KA:89:LEU:N	1.99	0.77
54:BB:198:LYS:HZ1	54:BB:222:LEU:HB2	1.47	0.77
1:A:799:A:H2'	1:A:800:U:C6	2.20	0.77
1:A:1205:C:H2'	1:A:1206:U:H5'	1.67	0.77
2:B:150:A:H3'	2:B:151:A:H8	1.50	0.77
10:J:47:PHE:CZ	10:J:75:PRO:HD2	2.19	0.77
24:X:12:ARG:CZ	24:X:15:PRO:HG2	2.15	0.77
39:MA:86:ARG:HH11	39:MA:86:ARG:HB3	1.50	0.77
54:BB:62:LYS:HA	54:BB:65:LEU:HD12	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:IB:109:VAL:HG23	61:IB:137:PHE:C	2.08	0.77
2:B:1108:U:H2'	2:B:1109:U:C6	2.19	0.77
2:B:1323:G:H4'	24:X:4:PHE:CZ	2.16	0.77
2:B:1652:G:H2'	2:B:1653:G:O4'	1.83	0.77
2:B:2185:G:H5"	6:F:202:VAL:HG23	1.66	0.77
2:B:2731:U:H2'	2:B:2732:G:C8	2.19	0.77
2:B:3393:U:H2'	2:B:3394:U:C6	2.20	0.77
3:C:40:A:H2'	3:C:41:A:C8	2.19	0.77
3:C:141:C:H4'	19:S:110:ALA:HB2	1.66	0.77
5:E:175:GLU:O	5:E:179:LEU:HG	1.85	0.77
9:I:111:GLN:HE22	9:I:252:ALA:HB2	1.49	0.77
38:LA:62:TYR:CD1	38:LA:70:LYS:HD2	2.18	0.77
75:WB:78:ILE:HG13	75:WB:81:ARG:NH2	1.98	0.77
1:A:1126:G:H5'	45:SA:11:ARG:NE	2.00	0.77
2:B:229:G:H4'	8:H:220:ARG:NH1	2.00	0.77
2:B:1129:A:OP1	14:N:13:LYS:HG3	1.84	0.77
2:B:2149:A:H5"	6:F:179:LEU:HG	1.67	0.77
2:B:2402:A:H2'	8:H:67:THR:OG1	1.84	0.77
6:F:224:THR:HG22	6:F:237:LEU:HB2	1.67	0.77
24:X:66:GLU:HB3	24:X:69:PRO:HG3	1.66	0.77
30:DA:56:VAL:HG21	30:DA:104:LEU:HD13	1.65	0.77
58:FB:26:LYS:HD2	58:FB:29:LEU:HD13	1.66	0.77
61:IB:45:PRO:HG2	61:IB:48:ALA:HB2	1.67	0.77
61:IB:53:TYR:HB2	61:IB:113:PRO:HG2	1.67	0.77
82:DC:538:LEU:O	82:DC:542:LEU:HG	1.85	0.77
2:B:842:G:H2'	2:B:843:A:C8	2.20	0.77
2:B:1236:G:H2'	16:P:60:VAL:HG22	1.67	0.77
3:C:106:C:H5'	3:C:108:C:OP2	1.85	0.77
6:F:179:LEU:HD11	6:F:188:LYS:HD2	1.67	0.77
12:L:214:LEU:HD12	12:L:217:THR:HB	1.67	0.77
34:HA:55:GLU:O	34:HA:59:TYR:HB2	1.84	0.77
36:JA:105:ARG:HE	36:JA:124:GLY:HA3	1.50	0.77
68:PB:83:ALA:O	68:PB:89:GLN:HB3	1.85	0.77
74:VB:105:ARG:HB3	74:VB:109:LYS:HE2	1.66	0.77
82:DC:739:ALA:HB1	82:DC:788:THR:CB	2.14	0.77
2:B:26:A:C2	2:B:328:U:H1'	2.20	0.77
6:F:54:ARG:HE	6:F:58:LEU:HD11	1.48	0.77
7:G:228:GLY:O	7:G:232:ARG:HB2	1.85	0.77
1:A:1344:A:H2'	1:A:1345:A:H8	1.48	0.76
2:B:2479:C:H3'	2:B:2480:A:C5'	2.15	0.76
3:C:48:A:N6	3:C:54:A:H61	1.82	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:95:ILE:HD12	11:K:133:TYR:HE1	1.51	0.76
24:X:9:VAL:HG23	24:X:27:MET:O	1.85	0.76
27:AA:135:VAL:HG11	28:BA:26:SER:CB	2.10	0.76
36:JA:112:ALA:HA	36:JA:117:ILE:HD11	1.67	0.76
64:LB:61:MET:SD	64:LB:104:ALA:HB2	2.24	0.76
82:DC:135:VAL:HB	82:DC:184:SER:CB	2.15	0.76
2:B:290:G:OP1	19:S:98:LEU:HD22	1.84	0.76
2:B:704:U:H3'	2:B:705:A:H5"	1.68	0.76
2:B:1211:U:H2'	2:B:1212:A:C8	2.19	0.76
2:B:2511:A:H2'	2:B:2512:C:C6	2.20	0.76
2:B:2743:A:H2'	2:B:2744:U:O4'	1.85	0.76
2:B:2774:C:H2'	2:B:2775:U:C6	2.20	0.76
2:B:2874:G:H2'	2:B:2945:G:O6	1.84	0.76
12:L:140:VAL:HG11	19:S:3:ALA:HB2	1.67	0.76
1:A:1125:A:H5"	45:SA:15:ARG:HD2	1.65	0.76
2:B:406:G:H1'	3:C:17:A:N6	2.00	0.76
2:B:728:G:H21	22:V:138:LEU:HD23	1.51	0.76
3:C:73:U:P	30:DA:75:ARG:HB2	2.25	0.76
17:Q:184:GLU:HA	17:Q:187:ALA:HB3	1.67	0.76
20:T:124:LEU:HD21	24:X:168:PRO:HG3	1.65	0.76
34:HA:86:ARG:HD3	47:UA:44:LYS:HD3	1.67	0.76
52:ZA:152:HIS:CD2	52:ZA:153:SER:H	2.03	0.76
53:AB:15:GLY:HA3	79:AC:50:ILE:HG23	1.67	0.76
56:DB:153:VAL:HG13	56:DB:156:PHE:HB2	1.68	0.76
83:EC:6758:A:H2'	83:EC:6759:A:H5'	1.65	0.76
2:B:1376:C:H2'	2:B:1377:G:H8	1.49	0.76
9:I:21:ARG:HG3	9:I:24:ARG:NH2	1.99	0.76
12:L:173:MET:O	12:L:175:VAL:HG23	1.85	0.76
40:NA:67:LYS:HG3	40:NA:70:ARG:HH21	1.49	0.76
50:XA:74:VAL:HG22	50:XA:96:THR:HG23	1.66	0.76
54:BB:178:GLY:HA2	54:BB:195:ILE:HG22	1.66	0.76
57:EB:12:ALA:H	57:EB:13:PRO:CD	1.99	0.76
2:B:114:A:H4'	19:S:49:ARG:NE	2.00	0.76
2:B:269:G:H5"	19:S:14:LYS:HE2	1.68	0.76
2:B:1340:G:H2'	2:B:1341:U:C6	2.20	0.76
2:B:1915:A:H5'	23:W:82:LYS:O	1.85	0.76
2:B:2611:U:H2'	2:B:2612:U:C6	2.21	0.76
6:F:5:ILE:CG2	6:F:210:PRO:HD3	2.16	0.76
6:F:200:ARG:O	6:F:203:ALA:HB3	1.86	0.76
11:K:222:HIS:HB3	11:K:225:GLN:HB3	1.68	0.76
17:Q:32:LYS:HG3	17:Q:35:ARG:HH21	1.49	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:65:ARG:HD2	19:S:127:TYR:CZ	2.21	0.76
52:ZA:137:ILE:HG23	52:ZA:138:PRO:HD2	1.67	0.76
54:BB:45:ILE:HG12	54:BB:49:ARG:HH22	1.50	0.76
1:A:17:C:H2'	1:A:18:C:H6	1.47	0.76
2:B:1508:C:H2'	2:B:1509:A:O4'	1.85	0.76
2:B:1550:C:H2'	2:B:1551:C:C6	2.21	0.76
3:C:41:A:H5"	41:OA:64:MET:HG2	1.66	0.76
3:C:150:G:H5'	12:L:55:TYR:OH	1.86	0.76
4:D:27:A:H2'	4:D:28:C:H6	1.49	0.76
8:H:58:HIS:H	8:H:59:GLN:HE21	1.33	0.76
19:S:37:HIS:CE1	19:S:63:ARG:HB3	2.21	0.76
19:S:199:LEU:HB3	19:S:203:ARG:CD	2.16	0.76
49:WA:91:LEU:O	49:WA:100:TYR:HB2	1.86	0.76
57:EB:64:VAL:HA	57:EB:67:LEU:HG	1.68	0.76
58:FB:98:LYS:HD2	58:FB:172:ARG:HG2	1.68	0.76
1:A:72:A:H3'	1:A:73:U:H5"	1.68	0.76
1:A:476:U:H2'	80:BC:31:LYS:HG3	1.68	0.76
1:A:1327:C:H5"	53:AB:158:ILE:HG22	1.68	0.76
1:A:1682:U:O2'	1:A:1683:C:H5'	1.84	0.76
2:B:637:C:H2'	2:B:638:C:C6	2.20	0.76
2:B:3386:G:H5"	35:IA:10:ARG:CZ	2.15	0.76
8:H:351:PRO:HB3	11:K:70:LYS:HB3	1.67	0.76
26:Z:19:VAL:HG12	26:Z:105:LEU:HB2	1.68	0.76
41:OA:56:ARG:HA	41:OA:61:THR:HG21	1.66	0.76
49:WA:178:VAL:HG21	49:WA:223:TRP:HE1	1.49	0.76
54:BB:103:TYR:HE2	54:BB:184:THR:HG22	1.51	0.76
60:HB:14:TYR:HE2	60:HB:21:VAL:HG13	1.50	0.76
76:XB:22:ARG:HA	76:XB:29:SER:HA	1.65	0.76
82:DC:10:ARG:HA	82:DC:13:MET:HB2	1.68	0.76
82:DC:231:LYS:HD2	82:DC:232:LYS:N	2.01	0.76
1:A:800:U:H2'	1:A:801:G:H8	1.51	0.76
1:A:1524:A:C2	1:A:1590:G:H1'	2.19	0.76
1:A:1567:U:H5"	68:PB:36:LYS:HA	1.66	0.76
2:B:2443:A:H2'	2:B:2444:C:H4'	1.67	0.76
3:C:142:C:H5'	19:S:113:LEU:HD11	1.67	0.76
11:K:121:LYS:HB3	25:Y:133:ALA:HB3	1.67	0.76
20:T:9:ILE:HA	20:T:118:VAL:CG2	2.16	0.76
38:LA:22:VAL:HB	38:LA:30:LEU:HD11	1.68	0.76
54:BB:155:LYS:HE2	54:BB:155:LYS:HA	1.67	0.76
1:A:942:G:H2'	1:A:943:C:C6	2.21	0.76
2:B:3090:U:H2'	2:B:3091:A:C8	2.21	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:166:LEU:HB2	12:L:167:PRO:HD3	1.66	0.76
23:W:134:HIS:CE1	23:W:136:ARG:HD3	2.21	0.76
31:EA:27:LYS:HD2	31:EA:28:PRO:HD2	1.65	0.76
1:A:148:A:H61	56:DB:133:LEU:CD2	1.97	0.76
2:B:224:C:H2'	2:B:225:C:H6	1.50	0.76
2:B:277:G:H1'	19:S:93:LYS:HE3	1.68	0.76
2:B:1054:A:H5"	2:B:2637:A:H61	1.49	0.76
2:B:1347:U:H2'	2:B:1355:A:N6	1.99	0.76
2:B:2223:A:H4'	40:NA:80:PHE:CE2	2.21	0.76
7:G:377:HIS:ND1	7:G:381:GLY:HA2	2.01	0.76
11:K:58:ALA:O	11:K:62:ILE:HG13	1.85	0.76
49:WA:66:HIS:HB2	49:WA:86:ASP:HB3	1.67	0.76
56:DB:161:GLU:HA	56:DB:170:THR:HA	1.66	0.76
1:A:94:U:H2'	1:A:95:G:O4'	1.85	0.75
1:A:866:G:H5"	63:KB:3:ARG:H	1.48	0.75
2:B:856:G:H4'	2:B:1723:A:H1'	1.66	0.75
2:B:2378:C:H2'	2:B:2379:U:C6	2.21	0.75
31:EA:96:VAL:HG22	31:EA:100:THR:HG21	1.66	0.75
34:HA:67:VAL:HG12	34:HA:68:TYR:H	1.50	0.75
48:VA:34:SER:HB3	48:VA:37:GLN:HB3	1.66	0.75
82:DC:113:SER:HB2	82:DC:516:PRO:HG2	1.69	0.75
2:B:592:A:H5'	10:J:17:ALA:O	1.85	0.75
2:B:1317:A:O2'	2:B:1318:A:H3'	1.85	0.75
2:B:1731:A:H2'	2:B:1732:U:O4'	1.86	0.75
6:F:129:ALA:O	6:F:169:ILE:HB	1.86	0.75
14:N:89:VAL:HG13	14:N:136:PHE:CE1	2.21	0.75
19:S:159:ARG:HH21	19:S:164:LEU:HB3	1.50	0.75
20:T:169:ALA:HA	20:T:172:ARG:HH12	1.50	0.75
24:X:11:GLY:HA2	24:X:59:VAL:HG23	1.67	0.75
31:EA:13:VAL:HG11	31:EA:18:TYR:HB2	1.66	0.75
31:EA:61:LYS:O	31:EA:65:ARG:HG2	1.87	0.75
52:ZA:103:VAL:HG11	52:ZA:187:LEU:HG	1.69	0.75
54:BB:201:HIS:NE2	54:BB:207:LEU:HB2	2.00	0.75
1:A:15:U:H3	1:A:1139:A:H61	1.32	0.75
1:A:1147:A:H2'	1:A:1148:C:C6	2.21	0.75
1:A:1767:G:H4'	1:A:1768:G:H5"	1.66	0.75
24:X:137:ARG:HG3	24:X:139:TYR:HE1	1.49	0.75
34:HA:27:TYR:O	34:HA:31:VAL:HG23	1.86	0.75
52:ZA:101:VAL:CG1	52:ZA:113:LEU:HD21	2.16	0.75
53:AB:196:ARG:HA	53:AB:200:LYS:HZ3	1.50	0.75
54:BB:123:LEU:HA	54:BB:161:LYS:HA	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1062:A:H3'	1:A:1063:U:C5'	2.14	0.75
1:A:1142:A:H5"	76:XB:2:PRO:HD3	1.69	0.75
1:A:1606:C:H2'	1:A:1607:G:C8	2.22	0.75
2:B:356:C:H2'	2:B:357:A:H8	1.51	0.75
2:B:865:U:H2'	2:B:866:A:H5'	1.66	0.75
2:B:1077:U:H2'	2:B:1078:U:C6	2.21	0.75
2:B:2268:U:H3'	2:B:2269:U:C4'	2.17	0.75
8:H:59:GLN:H	8:H:59:GLN:HE21	1.33	0.75
25:Y:75:ILE:HD11	25:Y:86:GLU:HG3	1.68	0.75
58:FB:39:GLY:O	58:FB:59:ARG:HB3	1.86	0.75
58:FB:170:SER:HB3	58:FB:182:TYR:HE1	1.50	0.75
60:HB:43:ILE:O	60:HB:47:GLN:HB2	1.85	0.75
74:VB:7:ILE:HG22	74:VB:9:THR:HG23	1.68	0.75
78:ZB:44:VAL:HG21	78:ZB:48:VAL:HG21	1.67	0.75
82:DC:429:LYS:HA	82:DC:429:LYS:HE3	1.68	0.75
2:B:1542:G:H2'	2:B:1543:G:C8	2.22	0.75
3:C:142:C:H5"	19:S:60:VAL:CG2	2.16	0.75
23:W:139:VAL:HA	23:W:142:ILE:HD12	1.68	0.75
66:NB:27:GLY:HA2	66:NB:63:ILE:O	1.86	0.75
70:RB:25:THR:HA	70:RB:90:TYR:HA	1.68	0.75
72:TB:54:ASP:CG	72:TB:55:ASP:H	1.94	0.75
73:UB:13:ARG:HH11	73:UB:13:ARG:HB3	1.50	0.75
82:DC:386:VAL:HG13	82:DC:395:TYR:HB2	1.67	0.75
1:A:341:A:H2'	1:A:342:C:C5	2.21	0.75
1:A:400:A:C5'	58:FB:25:ARG:HE	2.00	0.75
4:D:89:G:H5'	24:X:84:ARG:CD	2.16	0.75
53:AB:168:ILE:HG22	53:AB:189:MET:HB2	1.69	0.75
55:CB:191:ALA:HB3	75:WB:98:GLN:NE2	2.02	0.75
63:KB:127:ARG:O	63:KB:131:THR:HB	1.86	0.75
1:A:1043:A:H8	1:A:1043:A:H5'	1.52	0.75
2:B:812:G:H2'	2:B:813:G:C8	2.22	0.75
2:B:3064:U:H2'	2:B:3065:G:H8	1.52	0.75
8:H:208:VAL:HB	8:H:250:TRP:HA	1.67	0.75
9:I:34:LYS:HD2	9:I:35:ARG:HE	1.51	0.75
21:U:169:THR:O	21:U:173:ARG:HG3	1.87	0.75
31:EA:13:VAL:HG13	31:EA:80:LEU:HD23	1.69	0.75
38:LA:86:LYS:HA	38:LA:89:ILE:HD12	1.67	0.75
48:VA:43:LYS:HA	48:VA:46:ARG:HG2	1.68	0.75
54:BB:212:ASP:HB2	54:BB:244:ILE:HA	1.68	0.75
57:EB:185:ILE:H	57:EB:185:ILE:HD13	1.52	0.75
65:MB:60:LEU:HD12	65:MB:89:MET:HB2	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:TB:3:ARG:CZ	72:TB:28:ARG:HD2	2.17	0.75
1:A:1043:A:H61	1:A:1075:C:H42	1.31	0.75
2:B:34:A:H3'	2:B:48:A:N6	2.01	0.75
2:B:342:A:N6	3:C:22:U:H3	1.84	0.75
2:B:952:A:C2	2:B:1114:U:H4'	2.22	0.75
2:B:2748:A:H1'	9:I:36:LEU:HG	1.67	0.75
2:B:3190:C:H2'	2:B:3191:G:O4'	1.86	0.75
13:M:47:LYS:HB2	18:R:7:VAL:HG21	1.68	0.75
17:Q:29:ALA:O	17:Q:33:VAL:HG23	1.87	0.75
18:R:32:LEU:HB2	18:R:51:ALA:HB2	1.69	0.75
19:S:114:ARG:HD2	19:S:156:HIS:O	1.87	0.75
23:W:96:ILE:HG22	23:W:100:ARG:NH2	2.00	0.75
30:DA:72:SER:OG	30:DA:81:GLN:HB2	1.87	0.75
56:DB:98:ARG:HD3	56:DB:99:GLY:H	1.52	0.75
1:A:10:G:H4'	52:ZA:94:GLN:HE21	1.51	0.75
1:A:1280:C:H4'	70:RB:69:LYS:HG3	1.69	0.75
2:B:1534:A:H2'	2:B:1535:A:C8	2.21	0.75
2:B:1698:C:H2'	2:B:1699:A:C8	2.22	0.75
11:K:87:VAL:HG23	11:K:135:ALA:HB3	1.69	0.75
13:M:112:ILE:HD12	13:M:112:ILE:H	1.51	0.75
23:W:170:ARG:HA	23:W:173:ARG:HB3	1.69	0.75
32:FA:118:ILE:HB	32:FA:119:PRO:HD2	1.68	0.75
49:WA:150:TRP:CD1	49:WA:150:TRP:H	2.03	0.75
55:CB:27:THR:HG23	66:NB:28:LEU:HB2	1.68	0.75
60:HB:59:PHE:CZ	60:HB:62:GLN:HA	2.22	0.75
65:MB:63:ALA:HB1	65:MB:73:PRO:HB3	1.68	0.75
82:DC:369:ILE:HA	82:DC:402:ALA:HB2	1.67	0.75
82:DC:390:ASP:HB2	82:DC:393:ARG:HB2	1.67	0.75
83:EC:6915:G:H2'	83:EC:6916:A:H8	1.51	0.75
1:A:1463:C:H2'	1:A:1464:G:O4'	1.87	0.74
1:A:1483:A:H4'	66:NB:72:GLY:H	1.51	0.74
2:B:277:G:N3	19:S:93:LYS:HD2	2.02	0.74
2:B:311:C:H42	2:B:2779:A:N6	1.84	0.74
2:B:2203:U:H2'	2:B:2204:C:C6	2.22	0.74
2:B:2393:G:H4'	7:G:252:ILE:HD11	1.69	0.74
17:Q:92:THR:HG21	39:MA:111:PHE:HB3	1.68	0.74
23:W:68:GLN:HA	23:W:71:ARG:HD2	1.68	0.74
28:BA:31:PHE:CZ	28:BA:37:ALA:HA	2.22	0.74
59:GB:77:ILE:O	59:GB:81:VAL:HG23	1.87	0.74
59:GB:179:ARG:HD2	59:GB:182:GLU:HG2	1.68	0.74
66:NB:40:GLU:HA	66:NB:42:GLU:H	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:WB:90:LYS:HB2	75:WB:102:THR:HB	1.69	0.74
76:XB:5:ARG:HD2	76:XB:8:ASN:O	1.87	0.74
1:A:1504:G:H4'	69:QB:41:SER:HB3	1.69	0.74
3:C:60:U:H3'	3:C:61:A:H8	1.52	0.74
6:F:190:ARG:HH22	6:F:191:LEU:HD12	1.51	0.74
8:H:34:ILE:O	8:H:38:VAL:HG23	1.88	0.74
19:S:98:LEU:HD11	19:S:128:LYS:HD3	1.68	0.74
26:Z:98:THR:HG22	26:Z:99:LYS:HG3	1.68	0.74
37:KA:31:LYS:HA	37:KA:80:VAL:HG22	1.69	0.74
39:MA:21:LEU:HD22	39:MA:55:LEU:HG	1.68	0.74
61:IB:93:TYR:OH	61:IB:98:ASN:HA	1.87	0.74
77:YB:29:ARG:HH11	77:YB:29:ARG:HB3	1.50	0.74
1:A:41:A:H2'	1:A:438:A:N7	2.02	0.74
1:A:67:A:H61	1:A:83:G:H1'	1.51	0.74
1:A:645:C:H2'	1:A:646:C:C6	2.21	0.74
1:A:1543:A:H4'	1:A:1569:A:C2	2.22	0.74
1:A:1797:A:C6	76:XB:87:ARG:HD2	2.22	0.74
2:B:30:G:H5"	19:S:188:ARG:HH12	1.53	0.74
2:B:2578:U:H2'	2:B:2579:G:O4'	1.87	0.74
2:B:3331:U:H2'	2:B:3332:U:C6	2.21	0.74
6:F:32:LEU:HG	6:F:163:ARG:NH1	2.01	0.74
7:G:227:GLU:HG2	7:G:270:ARG:HH21	1.52	0.74
19:S:61:ILE:HA	19:S:134:LEU:HD13	1.70	0.74
19:S:137:PRO:HB3	19:S:152:CYS:HA	1.69	0.74
23:W:145:ALA:O	23:W:149:ALA:HB3	1.87	0.74
82:DC:399:ARG:HA	82:DC:453:ILE:HD12	1.69	0.74
1:A:607:G:H5'	1:A:613:G:N2	2.01	0.74
2:B:277:G:H21	19:S:93:LYS:HG3	1.52	0.74
2:B:1533:U:H1'	2:B:1798:A:H2	1.51	0.74
2:B:2750:U:H2'	2:B:2751:G:C8	2.23	0.74
2:B:3375:A:H5"	2:B:3378:C:C5	2.22	0.74
6:F:199:THR:HG22	6:F:200:ARG:H	1.52	0.74
37:KA:85:PHE:CE1	37:KA:89:LEU:HD21	2.22	0.74
43:QA:43:ASN:HB3	43:QA:46:ARG:HB3	1.69	0.74
50:XA:98:ILE:HD11	50:XA:116:LYS:HG3	1.68	0.74
82:DC:390:ASP:HB2	82:DC:393:ARG:CB	2.17	0.74
1:A:1542:G:H4'	1:A:1543:A:H5'	1.68	0.74
2:B:720:A:H4'	2:B:721:G:H5'	1.68	0.74
2:B:2765:C:C4'	46:TA:39:GLY:HA3	2.17	0.74
10:J:158:TYR:CZ	18:R:115:PHE:N	2.56	0.74
16:P:106:LEU:H	16:P:142:ARG:CG	2.00	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:110:ALA:O	22:V:114:ILE:HG13	1.87	0.74
24:X:15:PRO:HB3	24:X:19:VAL:O	1.87	0.74
39:MA:65:ALA:O	39:MA:69:LEU:HB3	1.87	0.74
65:MB:30:THR:HG22	65:MB:86:VAL:HG21	1.70	0.74
66:NB:31:VAL:HG22	66:NB:67:VAL:HB	1.69	0.74
2:B:338:A:H2	2:B:1426:C:O2	1.69	0.74
2:B:681:U:P	8:H:115:HIS:HB3	2.27	0.74
2:B:691:A:H2	3:C:29:U:H4'	1.53	0.74
2:B:1286:A:H4'	2:B:1287:A:O4'	1.87	0.74
2:B:1326:A:H2'	2:B:1327:C:C6	2.22	0.74
2:B:2510:U:O2'	2:B:2511:A:H5'	1.88	0.74
2:B:2662:G:H2'	2:B:2663:G:C8	2.23	0.74
2:B:2853:A:H4'	14:N:64:ALA:HA	1.68	0.74
2:B:3062:G:H2'	2:B:3063:C:C6	2.23	0.74
8:H:222:VAL:HG13	8:H:225:VAL:HB	1.69	0.74
21:U:88:VAL:HA	21:U:91:VAL:HG23	1.68	0.74
22:V:178:ARG:C	22:V:185:LYS:HG2	2.13	0.74
57:EB:130:VAL:HB	57:EB:133:THR:OG1	1.87	0.74
82:DC:93:THR:HG21	82:DC:98:PHE:HE1	1.52	0.74
1:A:1089:U:H2'	1:A:1090:C:C6	2.23	0.74
1:A:1387:G:H1'	1:A:1410:A:H61	1.53	0.74
2:B:592:A:OP2	10:J:16:ALA:HB1	1.86	0.74
10:J:158:TYR:HB2	18:R:115:PHE:CD2	2.22	0.74
23:W:88:ARG:O	23:W:90:PRO:HD3	1.88	0.74
25:Y:56:PHE:HE1	25:Y:60:LYS:HE2	1.52	0.74
36:JA:38:ILE:H	36:JA:38:ILE:HD12	1.52	0.74
1:A:1068:C:H2'	1:A:1069:A:C8	2.23	0.74
1:A:1344:A:H2'	1:A:1345:A:C8	2.21	0.74
2:B:2656:A:H4'	46:TA:98:LYS:CE	2.07	0.74
3:C:49:G:N2	3:C:77:A:H1'	2.03	0.74
8:H:32:PRO:CD	22:V:24:VAL:HG21	2.12	0.74
11:K:207:LEU:HD22	11:K:244:ASN:HA	1.69	0.74
20:T:76:PRO:O	20:T:79:ILE:HG22	1.88	0.74
38:LA:72:VAL:HG23	38:LA:73:SER:N	2.03	0.74
42:PA:56:ILE:HG21	42:PA:62:ALA:HA	1.68	0.74
54:BB:126:VAL:HG22	54:BB:158:ASP:H	1.52	0.74
56:DB:178:LEU:HG	56:DB:180:THR:HG23	1.70	0.74
67:OB:45:ARG:HG3	67:OB:49:LYS:HE2	1.70	0.74
73:UB:13:ARG:O	73:UB:17:VAL:HG23	1.88	0.74
74:VB:111:LYS:HA	74:VB:114:ARG:HD2	1.70	0.74
75:WB:60:VAL:O	75:WB:101:TYR:HB2	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:XB:40:ALA:HB3	76:XB:69:ASN:HB3	1.69	0.74
82:DC:619:MET:HB3	82:DC:625:TRP:HB3	1.68	0.74
83:EC:6799:C:H2'	83:EC:6800:G:H4'	1.68	0.74
1:A:880:C:H2'	1:A:881:A:O4'	1.88	0.74
1:A:1128:C:H2'	1:A:1129:U:H5'	1.70	0.74
2:B:406:G:H1'	3:C:17:A:H62	1.51	0.74
2:B:2757:U:H3'	2:B:2758:A:H5"	1.69	0.74
4:D:105:C:H2'	4:D:106:U:C6	2.22	0.74
16:P:82:ILE:HD12	16:P:139:VAL:HG21	1.68	0.74
20:T:62:THR:H	20:T:70:PRO:HD2	1.52	0.74
21:U:114:VAL:HA	21:U:150:VAL:HA	1.69	0.74
24:X:5:LYS:HG3	24:X:32:SER:HB3	1.69	0.74
32:FA:35:ALA:HB3	32:FA:41:HIS:ND1	2.03	0.74
59:GB:77:ILE:HG21	59:GB:91:LYS:HG3	1.68	0.74
67:OB:41:ILE:HG22	67:OB:42:GLN:H	1.52	0.74
67:OB:46:LEU:O	67:OB:50:ILE:HG13	1.88	0.74
73:UB:87:VAL:HB	73:UB:92:CYS:SG	2.27	0.74
82:DC:655:TYR:HB2	82:DC:693:LEU:HG	1.70	0.74
1:A:325:G:H2'	1:A:326:G:H8	1.53	0.74
1:A:624:G:H2'	1:A:625:C:C6	2.22	0.74
2:B:364:G:H5'	8:H:77:VAL:HG11	1.69	0.74
2:B:824:C:H2'	2:B:825:U:C6	2.23	0.74
2:B:1100:U:H2'	2:B:1101:G:C8	2.22	0.74
2:B:3268:A:C5'	10:J:46:ARG:NH2	2.51	0.74
4:D:7:G:OP1	9:I:33:ARG:HD2	1.88	0.74
5:E:23:THR:HG22	5:E:24:LYS:H	1.53	0.74
9:I:113:LEU:HD23	9:I:115:LEU:HB2	1.70	0.74
10:J:167:ASN:HD22	37:KA:6:ARG:NH2	1.86	0.74
19:S:7:LEU:HD22	19:S:10:LEU:HD12	1.68	0.74
20:T:3:VAL:HG13	20:T:4:GLU:HG3	1.70	0.74
36:JA:97:ALA:H	36:JA:100:ILE:HG13	1.53	0.74
36:JA:101:SER:O	36:JA:105:ARG:HG3	1.88	0.74
77:YB:20:LYS:HG3	77:YB:27:GLY:H	1.52	0.74
1:A:306:U:H2'	1:A:307:G:C8	2.22	0.73
1:A:1280:C:H1'	70:RB:70:THR:HB	1.70	0.73
2:B:36:C:H4'	2:B:808:A:C2	2.22	0.73
2:B:856:G:N2	47:UA:4:ARG:HH22	1.84	0.73
2:B:1234:G:N2	16:P:132:ILE:HG12	2.03	0.73
2:B:2246:G:H2'	2:B:2247:G:H8	1.52	0.73
4:D:3:U:H2'	4:D:4:U:C6	2.23	0.73
6:F:204:MET:HB2	6:F:208:ASP:HB2	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:148:ALA:HA	12:L:201:THR:HG22	1.69	0.73
82:DC:109:VAL:HG23	82:DC:138:GLN:HG2	1.70	0.73
82:DC:834:GLY:HA3	82:DC:836:GLN:HE22	1.52	0.73
1:A:551:G:H2'	1:A:552:G:C8	2.23	0.73
1:A:1498:G:H4'	69:QB:121:GLY:H	1.52	0.73
2:B:739:G:H2'	2:B:740:G:C8	2.23	0.73
7:G:212:ASN:HD21	7:G:353:GLU:HG2	1.53	0.73
9:I:148:ILE:HG12	9:I:151:GLN:HB3	1.70	0.73
9:I:231:ILE:HG23	9:I:235:SER:OG	1.88	0.73
10:J:26:ARG:HB2	10:J:26:ARG:HH11	1.53	0.73
11:K:179:LEU:HD13	11:K:179:LEU:H	1.51	0.73
13:M:97:PHE:HD1	13:M:119:GLY:H	1.35	0.73
17:Q:92:THR:HG21	39:MA:111:PHE:CB	2.17	0.73
19:S:190:THR:O	19:S:194:GLN:HG2	1.89	0.73
37:KA:89:LEU:HB3	37:KA:93:THR:CG2	2.17	0.73
55:CB:191:ALA:HB3	75:WB:98:GLN:HE21	1.53	0.73
63:KB:5:HIS:CE1	63:KB:121:ARG:HB2	2.23	0.73
82:DC:172:GLU:O	82:DC:175:TYR:HB3	1.88	0.73
1:A:907:A:H1'	1:A:997:G:O2'	1.89	0.73
1:A:1316:G:H2'	1:A:1317:C:H6	1.54	0.73
1:A:1513:G:H2'	1:A:1514:U:H5"	1.69	0.73
2:B:279:U:H2'	2:B:280:U:O4'	1.87	0.73
2:B:584:G:H2'	2:B:585:A:C8	2.23	0.73
2:B:1721:U:H5	23:W:103:ARG:HH21	1.36	0.73
6:F:184:ARG:N	6:F:184:ARG:HD2	2.03	0.73
20:T:73:PHE:CG	20:T:78:ARG:HG2	2.23	0.73
34:HA:52:ARG:O	34:HA:56:LEU:HG	1.88	0.73
37:KA:89:LEU:H	37:KA:89:LEU:CD1	2.00	0.73
82:DC:384:LYS:O	82:DC:397:PHE:HB3	1.88	0.73
1:A:1203:A:H5'	1:A:1457:C:N4	2.03	0.73
2:B:430:U:H2'	2:B:431:U:O4'	1.87	0.73
2:B:1212:A:H4'	24:X:113:ARG:NH1	2.03	0.73
2:B:1424:C:H2'	2:B:1425:U:O4'	1.88	0.73
2:B:2343:C:H2'	2:B:2344:U:C6	2.23	0.73
39:MA:54:VAL:O	39:MA:58:ILE:HG13	1.89	0.73
54:BB:105:VAL:HG21	54:BB:241:GLY:HA3	1.69	0.73
56:DB:192:ALA:HA	56:DB:195:VAL:HB	1.67	0.73
60:HB:58:GLN:HB2	60:HB:65:TYR:O	1.88	0.73
70:RB:30:LYS:CB	70:RB:33:GLN:HB3	2.17	0.73
1:A:977:A:H62	1:A:1024:U:H3	1.36	0.73
1:A:1166:A:H2'	1:A:1167:G:H5"	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:29:PRO:HD3	8:H:279:HIS:HA	1.70	0.73
9:I:8:LYS:HG3	9:I:12:TYR:CZ	2.24	0.73
9:I:52:VAL:HG21	9:I:63:GLN:HG3	1.71	0.73
9:I:65:ILE:HD11	9:I:74:VAL:HG22	1.71	0.73
9:I:110:LEU:HB3	9:I:116:ASP:HA	1.70	0.73
10:J:165:LEU:H	37:KA:6:ARG:C	1.97	0.73
13:M:112:ILE:HG12	13:M:134:ILE:HG12	1.70	0.73
20:T:43:ILE:HB	20:T:136:THR:HB	1.70	0.73
22:V:62:VAL:CG1	22:V:140:LEU:HD22	2.18	0.73
54:BB:45:ILE:HG13	54:BB:61:VAL:HG11	1.70	0.73
63:KB:87:ASP:O	63:KB:91:LEU:HG	1.88	0.73
82:DC:564:ARG:HG2	82:DC:801:TRP:CZ3	2.24	0.73
83:EC:6936:G:H2'	83:EC:6937:G:H8	1.52	0.73
1:A:623:A:H3'	1:A:624:G:H5"	1.70	0.73
2:B:122:A:H5"	2:B:123:A:C8	2.23	0.73
2:B:382:U:H4'	21:U:100:ALA:HB1	1.71	0.73
2:B:768:C:C1'	17:Q:183:ARG:HH22	2.01	0.73
2:B:929:A:H5"	8:H:61:SER:HB2	1.71	0.73
2:B:3268:A:H5'	10:J:46:ARG:NH2	2.04	0.73
3:C:109:A:H2'	3:C:110:C:O4'	1.88	0.73
8:H:30:ILE:HG21	8:H:128:ALA:HB2	1.70	0.73
8:H:187:LEU:HD13	8:H:193:LYS:HD3	1.71	0.73
13:M:162:GLN:NE2	13:M:163:GLN:HG3	2.04	0.73
29:CA:115:ARG:CG	29:CA:119:THR:HB	2.18	0.73
31:EA:12:VAL:HG12	31:EA:13:VAL:N	2.00	0.73
34:HA:99:ASP:HB2	34:HA:101:LEU:HD23	1.71	0.73
55:CB:213:LYS:O	55:CB:217:LEU:HG	1.89	0.73
61:IB:123:VAL:HG21	61:IB:139:VAL:HG13	1.68	0.73
74:VB:12:VAL:HG13	74:VB:23:PHE:HB3	1.71	0.73
82:DC:300:LEU:HD13	82:DC:307:LEU:HG	1.68	0.73
82:DC:572:SER:OG	82:DC:719:LEU:HD22	1.89	0.73
1:A:394:C:H42	1:A:401:A:H62	1.36	0.73
1:A:1230:A:H62	1:A:1255:G:N2	1.87	0.73
2:B:352:A:H61	2:B:365:A:H5"	1.54	0.73
2:B:985:U:H2'	2:B:986:U:H6	1.51	0.73
2:B:1868:G:H1'	2:B:2119:A:H5'	1.70	0.73
2:B:2281:A:O2'	2:B:2282:U:H5"	1.88	0.73
2:B:3311:C:C2'	2:B:3312:U:H5'	2.18	0.73
5:E:90:LEU:HG	5:E:124:LEU:HD11	1.69	0.73
11:K:235:PHE:HE2	24:X:34:GLU:HB3	1.52	0.73
14:N:170:LYS:HA	14:N:177:ASP:HA	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:19:LEU:HB2	15:O:69:VAL:HG12	1.70	0.73
19:S:117:ASN:O	19:S:133:ILE:HG22	1.88	0.73
22:V:65:SER:HB3	22:V:93:ILE:HD11	1.70	0.73
38:LA:80:ARG:HD3	38:LA:85:VAL:HG22	1.69	0.73
48:VA:115:ALA:HB3	48:VA:163:ASN:H	1.53	0.73
51:YA:214:LYS:HG2	51:YA:215:VAL:H	1.53	0.73
53:AB:105:MET:HG2	53:AB:122:VAL:HG21	1.71	0.73
57:EB:151:LYS:HE2	57:EB:153:LEU:HD21	1.69	0.73
82:DC:45:ILE:HG13	82:DC:78:TYR:N	2.04	0.73
82:DC:615:ARG:HG2	82:DC:619:MET:HE2	1.71	0.73
82:DC:742:GLY:HA3	82:DC:788:THR:HG23	1.70	0.73
2:B:160:G:C2'	2:B:161:G:H5"	2.17	0.73
2:B:430:U:C4'	37:KA:90:PRO:HG3	2.18	0.73
2:B:2885:C:H2'	2:B:2886:U:C6	2.24	0.73
19:S:56:LYS:O	19:S:59:PHE:HB2	1.88	0.73
20:T:113:ASP:HA	20:T:117:ARG:NH1	2.03	0.73
38:LA:44:CYS:HB3	38:LA:48:GLY:H	1.53	0.73
40:NA:60:LEU:HG	40:NA:72:VAL:HG21	1.70	0.73
52:ZA:88:LYS:HG2	52:ZA:89:GLN:H	1.53	0.73
53:AB:158:ILE:H	53:AB:158:ILE:HD13	1.51	0.73
54:BB:160:VAL:HA	54:BB:171:ASP:O	1.89	0.73
54:BB:192:ILE:HG13	54:BB:243:GLY:HA3	1.69	0.73
70:RB:53:LYS:HG3	70:RB:92:ASP:HB2	1.69	0.73
1:A:1737:G:C2'	1:A:1738:U:H5'	2.18	0.73
2:B:2145:A:H4'	2:B:2958:A:O3'	1.89	0.73
2:B:2804:A:C2'	2:B:2805:G:H5"	2.16	0.73
2:B:3055:U:H1'	2:B:3057:U:OP1	1.87	0.73
3:C:60:U:H3'	3:C:61:A:C8	2.24	0.73
3:C:74:U:H2'	30:DA:74:TYR:OH	1.89	0.73
6:F:44:ILE:O	6:F:62:VAL:HG12	1.88	0.73
8:H:359:LEU:HD21	24:X:64:ILE:HG12	1.69	0.73
12:L:59:GLN:O	12:L:62:LYS:HE3	1.87	0.73
32:FA:75:LEU:HG	32:FA:114:GLY:HA2	1.70	0.73
58:FB:60:ILE:HG13	58:FB:96:LEU:HD12	1.71	0.73
59:GB:112:GLN:NE2	59:GB:115:LYS:HG2	2.04	0.73
72:TB:79:PHE:HB2	72:TB:125:ILE:HG22	1.70	0.73
82:DC:632:LYS:HD3	82:DC:648:ASP:O	1.88	0.73
1:A:1634:C:H3'	1:A:1635:A:C5'	2.19	0.73
7:G:81:THR:HG21	7:G:205:VAL:HG13	1.71	0.73
19:S:27:VAL:HG23	19:S:124:ASP:OD2	1.89	0.73
27:AA:13:ILE:HG22	27:AA:85:TRP:CD1	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AA:103:ALA:HB1	27:AA:109:MET:HA	1.71	0.73
32:FA:43:ILE:H	32:FA:43:ILE:HD12	1.54	0.73
32:FA:63:LYS:NZ	32:FA:68:PHE:HB2	2.04	0.73
34:HA:17:VAL:CG2	34:HA:98:SER:HB3	2.16	0.73
52:ZA:113:LEU:HD22	52:ZA:114:GLY:H	1.53	0.73
53:AB:132:LYS:HB3	53:AB:189:MET:SD	2.28	0.73
61:IB:155:LYS:HD2	63:KB:83:GLU:HB2	1.70	0.73
65:MB:19:GLY:HA2	68:PB:94:ASP:HA	1.71	0.73
72:TB:36:LYS:O	72:TB:40:VAL:HG23	1.88	0.73
72:TB:98:GLN:HG3	72:TB:99:PHE:CD1	2.22	0.73
77:YB:31:TYR:O	77:YB:48:SER:HB3	1.88	0.73
1:A:1334:U:H4'	79:AC:55:PHE:HB3	1.71	0.72
2:B:342:A:H62	3:C:22:U:H3	1.36	0.72
2:B:502:U:H2'	2:B:503:C:H5"	1.72	0.72
2:B:821:U:H2'	2:B:822:G:C8	2.23	0.72
2:B:957:C:H2'	2:B:958:C:C6	2.24	0.72
2:B:1463:U:H2'	2:B:1464:G:H5'	1.70	0.72
2:B:1718:G:N2	2:B:1731:A:H4'	2.04	0.72
2:B:1775:G:H2'	2:B:1776:G:O4'	1.88	0.72
2:B:1853:U:H2'	2:B:1854:C:C5	2.24	0.72
2:B:2394:G:N3	7:G:259:HIS:HA	2.03	0.72
2:B:2742:C:H4'	46:TA:20:HIS:CG	2.23	0.72
2:B:3034:C:N4	13:M:120:ASP:HA	2.02	0.72
2:B:3087:A:H1'	2:B:3375:A:N6	2.04	0.72
4:D:16:U:H5'	9:I:8:LYS:CB	2.19	0.72
8:H:23:PRO:HA	8:H:259:ASP:HB2	1.71	0.72
9:I:231:ILE:HD13	9:I:239:ILE:HD11	1.71	0.72
16:P:90:ARG:NH1	16:P:99:LYS:HD3	2.04	0.72
21:U:21:TYR:CE1	21:U:123:PRO:HD2	2.22	0.72
35:IA:107:VAL:HG12	35:IA:108:VAL:H	1.53	0.72
41:OA:38:GLY:HA3	41:OA:45:ARG:HB2	1.69	0.72
49:WA:116:ASP:HB3	49:WA:156:VAL:HG21	1.70	0.72
49:WA:122:ILE:HD11	49:WA:136:ILE:HG23	1.71	0.72
53:AB:65:ARG:O	53:AB:69:LEU:HG	1.89	0.72
55:CB:112:ARG:HE	75:WB:95:HIS:CD2	2.05	0.72
57:EB:73:VAL:CG1	57:EB:77:LEU:HG	2.17	0.72
70:RB:20:ILE:HD13	70:RB:118:VAL:HG23	1.71	0.72
1:A:923:A:H2'	1:A:924:A:C8	2.25	0.72
1:A:989:U:H2'	1:A:990:C:O4'	1.89	0.72
2:B:2357:A:H2'	2:B:2358:A:H8	1.53	0.72
2:B:3362:A:H2'	2:B:3363:U:O4'	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:271:LYS:HD2	8:H:274:TYR:HD1	1.52	0.72
14:N:11:TYR:CD2	14:N:13:LYS:HE2	2.24	0.72
20:T:142:SER:HA	20:T:145:VAL:HG22	1.69	0.72
21:U:15:ALA:HB3	21:U:150:VAL:HG23	1.71	0.72
37:KA:15:SER:HA	37:KA:94:PHE:CD1	2.24	0.72
39:MA:110:ALA:C	39:MA:112:PRO:HD3	2.14	0.72
47:UA:39:CYS:HB2	47:UA:47:VAL:HG21	1.71	0.72
48:VA:51:VAL:HG13	48:VA:87:VAL:HG22	1.70	0.72
51:YA:201:THR:HG22	51:YA:205:PHE:O	1.89	0.72
55:CB:41:LYS:HG3	66:NB:54:LEU:HD22	1.71	0.72
65:MB:60:LEU:HD21	65:MB:94:VAL:HG22	1.69	0.72
76:XB:41:ILE:H	76:XB:41:ILE:HD13	1.53	0.72
2:B:811:U:H2'	2:B:812:G:H8	1.52	0.72
2:B:1169:A:H4'	11:K:219:LYS:HD3	1.69	0.72
2:B:1650:G:H2'	2:B:1651:U:C6	2.24	0.72
2:B:2882:U:H2'	2:B:2883:U:C6	2.24	0.72
2:B:3274:A:OP1	10:J:45:GLY:HA3	1.88	0.72
9:I:101:THR:HG22	9:I:104:LEU:HD23	1.71	0.72
49:WA:233:THR:C	49:WA:234:LEU:HD12	2.14	0.72
56:DB:10:ASN:ND2	56:DB:128:THR:HB	2.04	0.72
56:DB:74:LYS:HA	56:DB:96:SER:HA	1.70	0.72
71:SB:21:ASN:HB2	72:TB:67:GLY:HA3	1.71	0.72
82:DC:571:SER:HA	82:DC:720:ALA:HA	1.71	0.72
1:A:898:A:H62	1:A:914:G:H21	1.33	0.72
1:A:1230:A:N6	1:A:1255:G:H21	1.87	0.72
1:A:1775:U:O4	45:SA:4:LYS:HD2	1.89	0.72
2:B:2948:C:H5"	7:G:243:HIS:HB3	1.69	0.72
2:B:3376:A:C1'	35:IA:18:LYS:HA	2.18	0.72
14:N:166:ILE:HG22	14:N:167:LEU:H	1.53	0.72
17:Q:173:ALA:HA	17:Q:176:GLU:CD	2.14	0.72
23:W:32:ILE:HD11	23:W:49:THR:HG21	1.68	0.72
37:KA:16:TYR:HB2	37:KA:23:ASN:HB2	1.71	0.72
74:VB:56:SER:HB3	74:VB:74:LEU:HB2	1.69	0.72
1:A:113:U:C5'	1:A:114:C:H5'	2.19	0.72
1:A:325:G:H2'	1:A:326:G:C8	2.25	0.72
1:A:461:G:H4'	54:BB:26:CYS:SG	2.30	0.72
1:A:611:U:H2'	1:A:612:U:H5'	1.71	0.72
1:A:1280:C:H2'	1:A:1281:G:H8	1.54	0.72
1:A:1316:G:H2'	1:A:1317:C:C6	2.23	0.72
2:B:2356:A:N6	2:B:2983:C:H5	1.87	0.72
2:B:3273:A:H4'	10:J:44:ALA:CB	2.09	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:61:SER:HB2	14:N:63:GLU:OE2	1.89	0.72
15:O:50:ALA:HB3	15:O:62:ASN:H	1.52	0.72
30:DA:37:LYS:HG2	30:DA:38:GLU:H	1.53	0.72
31:EA:71:PHE:HE1	31:EA:73:LYS:HB2	1.53	0.72
38:LA:44:CYS:HB3	38:LA:48:GLY:N	2.04	0.72
49:WA:197:SER:OG	49:WA:216:LYS:HB3	1.89	0.72
50:XA:148:ASP:HB2	50:XA:164:ASN:ND2	2.03	0.72
52:ZA:126:ARG:O	52:ZA:130:ILE:HD13	1.89	0.72
55:CB:41:LYS:O	55:CB:67:PRO:HB2	1.90	0.72
59:GB:37:LYS:HA	80:BC:36:LYS:HG2	1.72	0.72
60:HB:16:PHE:HB2	60:HB:80:LEU:HD12	1.70	0.72
61:IB:75:VAL:O	61:IB:120:GLY:HA2	1.89	0.72
71:SB:87:ARG:HA	77:YB:11:THR:HG23	1.71	0.72
1:A:479:C:H3’	1:A:480:G:H5”	1.72	0.72
2:B:1605:A:O2’	2:B:1607:U:H5’	1.88	0.72
2:B:1916:U:H4’	23:W:85:ARG:HD3	1.72	0.72
2:B:2186:U:H2’	2:B:2187:G:H5’	1.71	0.72
2:B:3232:G:H2’	2:B:3233:C:C6	2.22	0.72
6:F:92:LYS:CB	6:F:103:PRO:HD2	2.17	0.72
51:YA:201:THR:HG21	51:YA:207:LEU:HD22	1.71	0.72
54:BB:12:LEU:HD21	59:GB:4:ALA:HB2	1.70	0.72
61:IB:75:VAL:CA	61:IB:86:ILE:HG22	2.19	0.72
63:KB:56:ASP:HB3	77:YB:47:PHE:HB2	1.71	0.72
83:EC:6931:U:H2’	83:EC:6932:G:H8	1.55	0.72
1:A:617:U:H2’	1:A:618:U:C6	2.24	0.72
1:A:1094:G:C2’	1:A:1095:U:H5’	2.19	0.72
1:A:1420:C:H2’	1:A:1421:A:H5’	1.70	0.72
2:B:1668:G:H4’	38:LA:30:LEU:HD13	1.70	0.72
2:B:2185:G:H5”	6:F:202:VAL:CG2	2.18	0.72
2:B:3073:A:H3’	2:B:3074:G:H5”	1.71	0.72
4:D:117:A:O4’	9:I:74:VAL:HB	1.90	0.72
12:L:155:ASN:HB3	12:L:180:VAL:O	1.89	0.72
18:R:60:LEU:HA	18:R:63:VAL:HG12	1.71	0.72
41:OA:64:MET:SD	41:OA:68:LYS:HG3	2.29	0.72
48:VA:59:VAL:O	48:VA:62:ALA:HB3	1.88	0.72
52:ZA:139:ILE:HG12	52:ZA:191:ALA:HB1	1.72	0.72
69:QB:37:VAL:HG11	69:QB:100:ILE:HD11	1.72	0.72
69:QB:128:GLY:O	69:QB:132:LEU:HD13	1.89	0.72
82:DC:353:ALA:HA	82:DC:356:LEU:HD12	1.70	0.72
1:A:263:C:H2’	1:A:264:G:H5’	1.70	0.72
1:A:1220:C:H4’	60:HB:52:LYS:HB3	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1532:U:H1'	69:QB:48:GLN:HG2	1.72	0.72
2:B:499:G:H2'	2:B:500:C:C6	2.25	0.72
2:B:671:U:H2'	2:B:672:A:C8	2.25	0.72
2:B:1523:U:H1'	29:CA:111:ASN:CB	2.20	0.72
3:C:72:A:H1'	3:C:88:A:C2	2.24	0.72
6:F:129:ALA:N	6:F:169:ILE:HG13	2.04	0.72
8:H:188:ARG:HD3	8:H:200:THR:HB	1.71	0.72
11:K:195:PHE:O	11:K:199:ASN:HB2	1.90	0.72
17:Q:6:ASN:OD1	22:V:164:ARG:HD3	1.89	0.72
28:BA:9:SER:CA	28:BA:52:THR:HB	2.17	0.72
35:IA:16:LEU:O	35:IA:20:LEU:HB2	1.90	0.72
36:JA:3:SER:HA	36:JA:71:HIS:HD2	1.54	0.72
38:LA:41:ARG:HB2	38:LA:51:LEU:CD2	2.19	0.72
52:ZA:70:ASP:O	52:ZA:74:PRO:HG3	1.90	0.72
59:GB:112:GLN:HA	59:GB:115:LYS:HB3	1.72	0.72
70:RB:40:ASN:HD21	70:RB:107:THR:HB	1.55	0.72
73:UB:87:VAL:HG12	73:UB:124:VAL:HG21	1.70	0.72
1:A:478:A:H4'	59:GB:124:HIS:HA	1.70	0.72
2:B:666:A:H2'	2:B:667:C:C5'	2.16	0.72
2:B:1332:A:H2'	2:B:1333:C:C6	2.24	0.72
2:B:2136:C:H3'	2:B:2142:A:N6	2.04	0.72
2:B:2150:G:OP2	6:F:179:LEU:HD23	1.90	0.72
2:B:2679:A:C2'	2:B:2680:A:H5'	2.20	0.72
2:B:2771:U:H4'	46:TA:15:LYS:HE3	1.70	0.72
9:I:18:THR:HB	9:I:24:ARG:HD3	1.70	0.72
10:J:158:TYR:OH	18:R:115:PHE:N	2.22	0.72
11:K:107:ARG:CZ	11:K:115:THR:HB	2.20	0.72
23:W:119:LEU:O	23:W:123:LEU:HD23	1.88	0.72
49:WA:121:MET:HE1	49:WA:183:LEU:HD13	1.72	0.72
72:TB:7:LEU:HG	72:TB:34:ILE:HG23	1.71	0.72
82:DC:523:SER:HB3	82:DC:527:GLU:H	1.54	0.72
1:A:1674:C:H2'	1:A:1675:C:C6	2.25	0.72
2:B:916:G:O2'	2:B:917:A:H5"	1.89	0.72
2:B:1185:C:H5"	18:R:43:LYS:HE2	1.70	0.72
2:B:1201:C:H42	2:B:2857:C:H5"	1.54	0.72
2:B:1662:G:H2'	2:B:1663:C:O4'	1.89	0.72
9:I:51:LEU:HB2	9:I:144:VAL:HG13	1.71	0.72
9:I:69:ILE:HG23	25:Y:31:LEU:HD22	1.72	0.72
9:I:107:ARG:HB3	9:I:251:PRO:HG3	1.72	0.72
9:I:226:TYR:HE2	9:I:236:LEU:HD22	1.53	0.72
12:L:65:LEU:O	12:L:69:LEU:HD13	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:94:ARG:HH11	20:T:94:ARG:HG2	1.55	0.72
24:X:75:PHE:HB2	24:X:94:ILE:O	1.90	0.72
55:CB:41:LYS:HD3	66:NB:53:LEU:HD12	1.72	0.72
55:CB:128:ASN:HB2	55:CB:131:GLN:HB2	1.72	0.72
57:EB:99:LEU:HD12	57:EB:116:ARG:HD3	1.72	0.72
58:FB:78:ILE:HG22	58:FB:102:VAL:HB	1.70	0.72
63:KB:5:HIS:HE1	63:KB:121:ARG:HB2	1.54	0.72
1:A:385:A:H2'	1:A:386:G:C8	2.25	0.71
1:A:828:U:H3'	1:A:829:A:H5"	1.72	0.71
1:A:912:U:H4'	1:A:913:G:H5"	1.72	0.71
1:A:918:U:H2'	1:A:919:A:C8	2.25	0.71
1:A:1087:A:H1'	1:A:1142:A:O2'	1.89	0.71
1:A:1431:C:H5"	1:A:1432:U:H3'	1.72	0.71
2:B:715:A:N6	2:B:782:U:H5'	2.05	0.71
3:C:95:G:H1'	41:OA:81:GLY:O	1.90	0.71
7:G:211:GLN:HE21	7:G:285:VAL:HG13	1.55	0.71
17:Q:75:PHE:HB2	17:Q:96:ALA:O	1.88	0.71
37:KA:38:PRO:HA	37:KA:41:ALA:HB3	1.72	0.71
57:EB:137:GLY:HA3	57:EB:153:LEU:HB2	1.71	0.71
61:IB:108:PRO:HG3	61:IB:134:THR:HB	1.71	0.71
64:LB:32:ASP:OD2	64:LB:37:GLU:HB3	1.89	0.71
73:UB:88:PRO:O	73:UB:92:CYS:HB2	1.90	0.71
82:DC:109:VAL:CG2	82:DC:138:GLN:HE21	2.03	0.71
83:EC:6769:A:O2'	83:EC:6770:U:H5'	1.90	0.71
1:A:444:C:H42	1:A:460:A:H62	1.36	0.71
1:A:1591:C:H2'	1:A:1592:A:C8	2.25	0.71
2:B:57:A:H4'	19:S:157:LYS:CB	2.21	0.71
2:B:3268:A:H5'	10:J:46:ARG:HH21	1.55	0.71
9:I:15:ARG:NH1	9:I:15:ARG:HB3	2.06	0.71
12:L:170:CYS:SG	12:L:177:TYR:HD2	2.14	0.71
18:R:33:ALA:HB1	18:R:46:ILE:HB	1.72	0.71
20:T:12:LYS:HG2	20:T:40:GLU:HB3	1.72	0.71
31:EA:27:LYS:HB3	31:EA:42:LEU:HD22	1.72	0.71
35:IA:10:ARG:HG2	35:IA:108:VAL:HG13	1.73	0.71
35:IA:72:ARG:CB	35:IA:96:VAL:HG21	2.15	0.71
46:TA:28:TYR:HB3	46:TA:69:VAL:HB	1.72	0.71
50:XA:148:ASP:HB2	50:XA:164:ASN:HD21	1.53	0.71
58:FB:25:ARG:HD3	58:FB:27:PHE:HD2	1.55	0.71
65:MB:48:GLY:HA3	65:MB:52:LYS:NZ	2.05	0.71
73:UB:83:VAL:HG11	73:UB:122:PHE:CE2	2.25	0.71
1:A:218:A:H3'	1:A:219:A:H5"	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:388:G:H5”	21:U:18:ARG:HB2	1.70	0.71
2:B:1689:U:H5”	23:W:61:SER:HB3	1.73	0.71
2:B:1842:A:H1’	43:QA:44:TRP:CZ3	2.25	0.71
11:K:166:ASN:HB3	11:K:180:SER:HA	1.72	0.71
19:S:73:ARG:HE	19:S:92:LEU:HD21	1.54	0.71
20:T:38:ALA:HB3	20:T:106:GLU:HG2	1.71	0.71
40:NA:58:ILE:O	40:NA:61:ILE:HG13	1.90	0.71
44:RA:126:LYS:HD3	44:RA:126:LYS:H	1.55	0.71
61:IB:57:LYS:HB3	61:IB:131:ILE:HD12	1.72	0.71
1:A:1566:U:H5”	68:PB:39:GLY:HA3	1.70	0.71
1:A:1592:A:H2’	1:A:1593:A:O4’	1.90	0.71
2:B:43:A:H5”	19:S:83:LYS:HG2	1.72	0.71
2:B:351:A:H1’	3:C:53:A:O2’	1.90	0.71
2:B:1305:U:C4	7:G:257:PRO:HA	2.24	0.71
2:B:1888:U:C2	2:B:1889:G:H1’	2.25	0.71
2:B:2661:G:H2’	2:B:2662:G:H8	1.55	0.71
7:G:103:THR:HG21	7:G:147:GLU:HB3	1.72	0.71
7:G:218:ILE:HD11	7:G:339:ARG:NH1	2.04	0.71
17:Q:179:PHE:O	17:Q:183:ARG:HB2	1.91	0.71
22:V:26:LEU:O	22:V:30:VAL:HG23	1.90	0.71
49:WA:38:ARG:HG2	49:WA:67:ILE:HG21	1.71	0.71
51:YA:176:VAL:CG1	51:YA:177:GLN:H	1.99	0.71
55:CB:166:ARG:HD2	78:ZB:46:GLY:HA3	1.71	0.71
66:NB:37:THR:HA	66:NB:49:TYR:OH	1.89	0.71
72:TB:3:ARG:HD3	72:TB:29:PRO:HD3	1.72	0.71
79:AC:14:TYR:H	79:AC:14:TYR:HD1	1.38	0.71
82:DC:26:ALA:HB2	82:DC:32:LYS:HD3	1.72	0.71
1:A:138:A:H61	1:A:266:A:H61	1.36	0.71
1:A:986:G:H2’	1:A:987:G:H21	1.54	0.71
2:B:188:U:C2	2:B:223:U:H4’	2.26	0.71
2:B:1661:G:H2’	2:B:1662:G:H8	1.55	0.71
2:B:1900:A:N6	2:B:1908:A:H61	1.88	0.71
2:B:2144:A:O2’	2:B:2145:A:H5’	1.91	0.71
5:E:34:LEU:HD13	5:E:183:ILE:HD11	1.72	0.71
6:F:43:GLY:O	6:F:88:ILE:HB	1.90	0.71
8:H:325:LEU:CD2	8:H:332:LYS:HB2	2.19	0.71
9:I:68:THR:HB	9:I:71:GLY:O	1.90	0.71
10:J:165:LEU:HG	37:KA:6:ARG:C	2.15	0.71
12:L:135:GLY:HA3	12:L:138:HIS:HB3	1.73	0.71
21:U:79:THR:O	21:U:80:LYS:HG3	1.91	0.71
23:W:91:SER:O	23:W:94:VAL:HB	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:72:VAL:HG13	25:Y:93:VAL:HG12	1.73	0.71
30:DA:53:ASP:HB3	30:DA:110:HIS:HB3	1.72	0.71
34:HA:43:ILE:HG12	34:HA:68:TYR:HB3	1.72	0.71
49:WA:90:ARG:HB2	49:WA:92:TRP:NE1	2.05	0.71
67:OB:14:LYS:HE2	67:OB:69:ILE:HD13	1.71	0.71
1:A:1792:G:H3'	1:A:1793:G:H5"	1.70	0.71
2:B:211:A:H5'	8:H:221:ASN:HD21	1.56	0.71
2:B:312:C:H2'	2:B:313:A:H8	1.54	0.71
2:B:807:A:H2	2:B:808:A:C8	2.08	0.71
2:B:807:A:H2	2:B:808:A:N9	1.89	0.71
2:B:1491:A:H62	43:QA:2:ALA:N	1.87	0.71
16:P:60:VAL:O	16:P:75:PRO:HD2	1.91	0.71
30:DA:115:ARG:HB3	30:DA:115:ARG:NH1	2.05	0.71
34:HA:83:LYS:HB2	34:HA:85:PHE:CD2	2.25	0.71
50:XA:42:PRO:HG2	50:XA:45:VAL:HB	1.72	0.71
1:A:600:U:H2'	1:A:601:A:H8	1.56	0.71
2:B:87:U:H5"	22:V:172:PHE:CE2	2.24	0.71
2:B:343:U:O2'	2:B:344:A:H5'	1.91	0.71
2:B:429:U:H2'	2:B:430:U:H6	1.55	0.71
2:B:430:U:H4'	37:KA:90:PRO:HG3	1.72	0.71
2:B:973:A:H2'	2:B:974:G:C4'	2.20	0.71
2:B:1256:G:O4'	16:P:128:VAL:HG22	1.89	0.71
2:B:1296:C:H2'	2:B:1297:C:C6	2.24	0.71
2:B:2182:A:H2'	2:B:2183:A:C8	2.26	0.71
14:N:87:LEU:HD23	14:N:88:ARG:N	2.05	0.71
15:O:19:LEU:HB2	15:O:69:VAL:CG1	2.20	0.71
17:Q:129:ASN:HB3	17:Q:131:LYS:HE2	1.71	0.71
18:R:32:LEU:HB2	18:R:51:ALA:CB	2.20	0.71
22:V:70:ALA:HA	22:V:73:GLN:NE2	2.05	0.71
29:CA:47:ALA:O	39:MA:77:PRO:HG3	1.91	0.71
32:FA:125:VAL:HG12	32:FA:127:ALA:HB2	1.73	0.71
39:MA:38:ARG:NH1	39:MA:38:ARG:HB2	2.05	0.71
63:KB:86:GLU:O	63:KB:89:TYR:HB3	1.90	0.71
67:OB:21:TYR:HA	67:OB:24:LEU:HD12	1.72	0.71
76:XB:74:CYS:SG	76:XB:77:CYS:HB2	2.31	0.71
82:DC:581:ASN:HD21	82:DC:704:GLN:NE2	1.89	0.71
83:EC:6815:U:H3'	83:EC:6816:A:H8	1.54	0.71
1:A:449:C:H2'	1:A:450:U:C6	2.26	0.71
2:B:109:A:H4'	2:B:110:G:H5'	1.71	0.71
2:B:1591:G:H2'	2:B:1592:G:H8	1.55	0.71
2:B:1821:U:H3'	2:B:1822:C:C5'	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:214:MET:O	7:G:341:SER:HB3	1.91	0.71
7:G:229:VAL:HA	7:G:232:ARG:HB3	1.72	0.71
7:G:249:VAL:HG21	7:G:265:ALA:HB3	1.71	0.71
11:K:224:ILE:HD13	24:X:39:SER:HB2	1.71	0.71
14:N:128:ARG:CZ	14:N:128:ARG:HA	2.21	0.71
15:O:48:SER:HB2	15:O:66:ALA:O	1.91	0.71
52:ZA:69:ILE:HA	52:ZA:72:LEU:HB3	1.72	0.71
52:ZA:229:LEU:HD11	71:SB:1:MET:HE2	1.72	0.71
1:A:826:U:H2'	1:A:827:C:C6	2.26	0.71
1:A:1650:U:H2'	1:A:1651:A:C8	2.25	0.71
2:B:372:A:H2'	2:B:373:A:C8	2.25	0.71
2:B:651:G:O3'	2:B:1436:U:H4'	1.91	0.71
2:B:1211:U:H2'	2:B:1212:A:H8	1.54	0.71
2:B:2554:A:N7	6:F:84:THR:HG22	2.06	0.71
15:O:53:THR:HG23	15:O:60:ARG:HA	1.73	0.71
17:Q:187:ALA:O	17:Q:191:ALA:HB2	1.90	0.71
20:T:126:VAL:HG23	24:X:154:HIS:HE1	1.56	0.71
50:XA:139:VAL:HG23	52:ZA:62:PRO:HG3	1.73	0.71
66:NB:43:ILE:HD13	66:NB:43:ILE:H	1.55	0.71
82:DC:135:VAL:HB	82:DC:184:SER:HB3	1.73	0.71
1:A:565:C:OP2	1:A:577:G:H4'	1.91	0.71
1:A:1477:G:H2'	1:A:1478:G:C8	2.26	0.71
1:A:1583:A:N6	1:A:1612:U:H5	1.88	0.71
2:B:1609:C:H2'	2:B:1610:G:H8	1.55	0.71
2:B:3376:A:H1'	35:IA:19:ARG:H	1.56	0.71
16:P:133:LEU:CA	16:P:137:GLN:HG3	2.04	0.71
17:Q:103:ASN:HB3	40:NA:20:MET:HE1	1.71	0.71
18:R:22:LEU:HD23	18:R:64:VAL:CG1	2.21	0.71
20:T:76:PRO:HB3	20:T:138:LEU:HG	1.71	0.71
24:X:26:ARG:HB2	25:Y:148:PRO:CB	2.21	0.71
50:XA:146:LEU:HD11	50:XA:174:TRP:HE1	1.55	0.71
52:ZA:179:VAL:HB	52:ZA:196:VAL:O	1.91	0.71
54:BB:10:LYS:HA	54:BB:27:TYR:HA	1.72	0.71
57:EB:91:ILE:HB	57:EB:169:PHE:HE1	1.55	0.71
68:PB:18:LEU:HD12	68:PB:101:LEU:HD11	1.73	0.71
82:DC:119:LEU:HD11	82:DC:145:GLN:CD	2.16	0.71
2:B:1121:U:H3	2:B:1137:C:H42	1.37	0.70
2:B:2442:G:H2'	2:B:2443:A:H5"	1.71	0.70
3:C:74:U:O5'	30:DA:76:LEU:HG	1.91	0.70
5:E:13:VAL:HG12	5:E:172:VAL:HG21	1.73	0.70
12:L:50:VAL:HG23	12:L:52:TRP:HE1	1.54	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:145:LYS:H	51:YA:145:LYS:HD2	1.56	0.70
58:FB:38:ILE:HD12	58:FB:94:ASN:HB3	1.70	0.70
73:UB:83:VAL:HG11	73:UB:122:PHE:CD2	2.26	0.70
75:WB:46:LYS:HA	75:WB:70:LYS:HE3	1.73	0.70
1:A:306:U:H2'	1:A:307:G:H8	1.56	0.70
1:A:812:A:H62	1:A:858:G:H2'	1.54	0.70
1:A:1595:U:H1'	1:A:1600:A:H2	1.56	0.70
2:B:143:G:H2'	2:B:144:A:C8	2.26	0.70
2:B:364:G:C4'	8:H:84:ARG:HG2	2.19	0.70
2:B:1219:C:H2'	2:B:1220:U:H5"	1.72	0.70
2:B:2530:G:H2'	2:B:2531:C:H5"	1.72	0.70
3:C:136:G:H2'	3:C:137:C:O4'	1.91	0.70
19:S:60:VAL:HB	19:S:134:LEU:HD22	1.72	0.70
32:FA:24:LYS:HD3	32:FA:26:ARG:HH22	1.56	0.70
71:SB:9:VAL:O	71:SB:10:GLU:HB3	1.91	0.70
1:A:619:A:H1'	1:A:1140:G:H21	1.55	0.70
1:A:803:A:C5	57:EB:104:ARG:HB2	2.26	0.70
1:A:868:G:H2'	1:A:869:A:H8	1.55	0.70
1:A:981:U:O2'	1:A:982:U:H5'	1.91	0.70
1:A:1069:A:H2'	1:A:1070:C:O4'	1.91	0.70
1:A:1516:A:O4'	70:RB:59:PRO:HG2	1.91	0.70
2:B:429:U:H5'	37:KA:88:ASN:HB2	1.73	0.70
2:B:1490:A:H2'	2:B:1491:A:O4'	1.91	0.70
2:B:2996:U:H3'	2:B:2997:G:H5'	1.73	0.70
2:B:3206:C:H4'	24:X:157:GLN:OE1	1.90	0.70
15:O:23:VAL:N	15:O:65:ILE:HG13	2.06	0.70
18:R:15:VAL:O	24:X:149:LYS:HA	1.92	0.70
18:R:20:VAL:HG12	18:R:68:LEU:O	1.91	0.70
18:R:109:ARG:HA	18:R:112:LEU:HD12	1.73	0.70
22:V:90:ASP:OD2	22:V:93:ILE:HD11	1.90	0.70
22:V:170:ARG:HA	22:V:174:ARG:HD2	1.74	0.70
24:X:156:VAL:HG12	24:X:170:THR:HG21	1.73	0.70
31:EA:14:VAL:O	38:LA:89:ILE:HD13	1.91	0.70
32:FA:35:ALA:HB3	32:FA:41:HIS:HD1	1.54	0.70
32:FA:126:LYS:HG2	32:FA:148:ILE:HG12	1.73	0.70
34:HA:53:LYS:HA	34:HA:56:LEU:CG	2.21	0.70
35:IA:75:ILE:HG12	35:IA:93:VAL:HG22	1.73	0.70
46:TA:37:ALA:HB3	46:TA:40:LYS:HB3	1.73	0.70
49:WA:52:GLN:HG3	49:WA:53:LYS:H	1.57	0.70
49:WA:250:TYR:O	49:WA:265:LEU:HD23	1.91	0.70
50:XA:188:LEU:HD13	50:XA:189:VAL:N	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:7:LYS:HA	53:AB:7:LYS:HE3	1.74	0.70
59:GB:113:VAL:HG11	59:GB:125:ALA:HA	1.73	0.70
72:TB:103:ILE:HA	72:TB:112:ASP:HA	1.73	0.70
82:DC:293:LYS:HD3	82:DC:293:LYS:H	1.56	0.70
82:DC:718:LEU:HB3	82:DC:835:TRP:CD1	2.26	0.70
1:A:1472:C:H4'	1:A:1473:U:H5'	1.73	0.70
2:B:76:G:C6	17:Q:101:ARG:HA	2.25	0.70
2:B:370:U:H4'	2:B:404:G:H5'	1.71	0.70
2:B:699:A:H2'	2:B:700:C:O4'	1.92	0.70
2:B:899:U:H2'	2:B:900:G:H8	1.56	0.70
2:B:1132:C:H2'	2:B:1133:A:H8	1.55	0.70
2:B:1141:C:H2'	2:B:1142:G:O4'	1.92	0.70
2:B:2645:G:H2'	2:B:2646:C:O4'	1.90	0.70
2:B:2724:U:H5"	25:Y:54:HIS:ND1	2.07	0.70
2:B:3146:G:H2'	2:B:3147:G:C8	2.25	0.70
21:U:60:PHE:CE2	21:U:82:ARG:HB2	2.26	0.70
22:V:19:PRO:HB3	22:V:53:PHE:HA	1.74	0.70
25:Y:76:ILE:HB	25:Y:89:LEU:HD11	1.73	0.70
35:IA:15:ASN:HB3	35:IA:18:LYS:HE2	1.73	0.70
37:KA:67:MET:HE1	37:KA:90:PRO:CD	2.20	0.70
43:QA:2:ALA:HB1	43:QA:5:LYS:HE2	1.74	0.70
50:XA:157:ASP:OD1	71:SB:60:ARG:HD3	1.92	0.70
54:BB:198:LYS:HA	54:BB:208:VAL:HA	1.74	0.70
65:MB:111:MET:HG2	68:PB:119:ILE:HG23	1.73	0.70
1:A:1035:G:H5'	72:TB:2:THR:HG22	1.73	0.70
2:B:198:A:H5'	30:DA:62:SER:OG	1.92	0.70
2:B:1185:C:H3'	2:B:1186:G:H5"	1.73	0.70
2:B:1386:A:H5'	2:B:1386:A:N3	2.06	0.70
2:B:2778:G:C2'	2:B:2779:A:H5"	2.21	0.70
2:B:3280:U:O2'	2:B:3281:U:H5'	1.91	0.70
8:H:141:ARG:HG2	8:H:180:LYS:HD3	1.73	0.70
12:L:78:PHE:O	12:L:79:GLN:HB3	1.88	0.70
20:T:110:PRO:CA	20:T:113:ASP:HB3	2.20	0.70
20:T:130:LYS:HD3	20:T:133:ARG:HH21	1.55	0.70
25:Y:39:ILE:HB	25:Y:99:SER:HB3	1.73	0.70
27:AA:10:LYS:HG2	27:AA:11:PHE:H	1.55	0.70
27:AA:27:ASP:OD1	27:AA:111:GLY:HA3	1.90	0.70
31:EA:26:VAL:HG22	31:EA:42:LEU:O	1.91	0.70
82:DC:109:VAL:HG12	82:DC:110:ASP:H	1.55	0.70
82:DC:231:LYS:HD2	82:DC:232:LYS:H	1.56	0.70
1:A:333:A:H5'	58:FB:48:THR:HB	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:809:A:H2'	57:EB:108:GLN:HE22	1.54	0.70
1:A:833:U:H5'	1:A:834:G:H5"	1.72	0.70
1:A:1662:G:H2'	1:A:1663:G:H8	1.56	0.70
2:B:727:G:H2'	2:B:728:G:O4'	1.92	0.70
2:B:1337:A:H2'	2:B:1338:C:H6	1.55	0.70
54:BB:121:TYR:CD2	54:BB:161:LYS:HD2	2.27	0.70
69:QB:114:VAL:HG22	69:QB:123:ARG:O	1.91	0.70
77:YB:56:CYS:HB3	77:YB:60:SER:HA	1.72	0.70
1:A:72:A:C3'	1:A:73:U:H5"	2.20	0.70
1:A:116:U:H2'	1:A:117:U:C6	2.27	0.70
1:A:204:G:H2'	1:A:205:U:C6	2.27	0.70
1:A:247:A:C1'	61:IB:38:ALA:HA	2.19	0.70
1:A:939:A:H2'	1:A:940:A:C8	2.27	0.70
1:A:1077:C:OP1	76:XB:6:ALA:HB1	1.91	0.70
2:B:269:G:N2	2:B:294:U:H2'	2.07	0.70
2:B:521:A:H2'	2:B:522:A:H8	1.56	0.70
2:B:2665:U:O4	2:B:2703:A:H4'	1.92	0.70
3:C:63:G:H22	3:C:97:A:H2	1.39	0.70
4:D:8:G:OP1	25:Y:27:LEU:HG	1.91	0.70
6:F:158:ILE:HG22	6:F:159:SER:N	2.06	0.70
6:F:172:GLY:H	47:UA:68:ALA:H	1.39	0.70
6:F:250:GLN:HE21	6:F:250:GLN:H	1.36	0.70
8:H:35:VAL:HA	8:H:38:VAL:HB	1.73	0.70
11:K:219:LYS:O	11:K:228:SER:HB2	1.90	0.70
20:T:95:GLY:O	20:T:99:LEU:HG	1.91	0.70
21:U:129:THR:HG22	21:U:131:ARG:HG2	1.73	0.70
50:XA:119:ARG:NH2	52:ZA:240:LEU:HD23	2.05	0.70
54:BB:35:PRO:HB2	54:BB:143:ASP:O	1.90	0.70
60:HB:86:ILE:HG23	60:HB:87:VAL:N	2.06	0.70
68:PB:37:GLY:HA3	68:PB:102:ALA:N	2.07	0.70
82:DC:644:ASN:ND2	82:DC:681:MET:HB2	2.06	0.70
1:A:400:A:H5"	58:FB:25:ARG:HE	1.56	0.70
1:A:1762:A:H1'	1:A:1783:C:H5'	1.74	0.70
2:B:210:U:C2	2:B:230:U:H4'	2.27	0.70
2:B:1161:G:H2'	36:JA:56:GLY:HA3	1.73	0.70
2:B:2988:C:OP1	20:T:65:ASN:HB2	1.92	0.70
2:B:3270:U:O4'	21:U:171:ARG:HA	1.92	0.70
11:K:80:GLN:NE2	25:Y:135:PRO:HB2	2.05	0.70
12:L:132:VAL:HA	12:L:200:LEU:HD12	1.74	0.70
13:M:8:GLN:HG3	13:M:68:LEU:HD21	1.74	0.70
29:CA:65:GLN:O	29:CA:85:GLN:HB3	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:38:VAL:HG22	52:ZA:39:THR:H	1.56	0.70
61:IB:75:VAL:HG23	61:IB:121:ASP:O	1.92	0.70
69:QB:70:GLN:HG2	69:QB:121:GLY:HA3	1.74	0.70
74:VB:8:ARG:O	74:VB:26:ASP:HB3	1.91	0.70
82:DC:76:SER:HA	82:DC:100:ILE:O	1.92	0.70
82:DC:488:VAL:HG12	82:DC:796:MET:HB2	1.73	0.70
1:A:1453:G:H2'	1:A:1454:G:C8	2.27	0.70
1:A:1469:A:H4'	1:A:1541:G:H5'	1.72	0.70
2:B:277:G:H1'	19:S:93:LYS:CE	2.21	0.70
2:B:1742:U:H2'	2:B:1743:G:C8	2.27	0.70
2:B:3067:C:H2'	2:B:3068:U:H5'	1.73	0.70
8:H:92:ASN:HA	8:H:98:ARG:O	1.91	0.70
12:L:149:LYS:HB2	12:L:201:THR:CA	2.18	0.70
38:LA:65:VAL:HB	38:LA:70:LYS:HD3	1.74	0.70
49:WA:300:THR:HG23	49:WA:314:GLN:HG2	1.73	0.70
50:XA:56:LYS:HD3	71:SB:82:VAL:HG11	1.74	0.70
50:XA:74:VAL:HG23	50:XA:118:PRO:HB3	1.73	0.70
54:BB:125:LYS:HA	54:BB:159:THR:HA	1.74	0.70
57:EB:15:GLU:O	57:EB:19:GLN:HG2	1.92	0.70
57:EB:162:ILE:HG22	57:EB:165:LYS:HD2	1.74	0.70
82:DC:224:GLN:HG2	82:DC:328:LEU:HD21	1.74	0.70
1:A:206:A:H1'	1:A:262:U:H3	1.56	0.70
1:A:1558:U:H3'	1:A:1559:A:C5'	2.19	0.70
2:B:2661:G:H2'	2:B:2662:G:C8	2.27	0.70
12:L:28:HIS:HE1	31:EA:125:GLY:HA3	1.56	0.70
19:S:148:TYR:O	19:S:151:ILE:HD13	1.92	0.70
47:UA:14:TYR:CB	47:UA:23:ARG:HD3	2.22	0.70
51:YA:48:VAL:HG13	51:YA:61:LEU:HD23	1.73	0.70
51:YA:129:THR:HB	51:YA:180:THR:HA	1.72	0.70
55:CB:162:VAL:HG22	55:CB:166:ARG:HB3	1.74	0.70
1:A:1008:G:H2'	1:A:1009:U:C6	2.26	0.69
1:A:1199:G:N7	70:RB:67:THR:HA	2.07	0.69
2:B:595:G:H2'	2:B:596:C:C6	2.27	0.69
2:B:725:G:C3'	2:B:726:G:H5"	2.21	0.69
2:B:1285:G:H5"	2:B:3116:G:N7	2.07	0.69
2:B:1647:A:N6	2:B:1808:G:H1'	2.07	0.69
2:B:1774:C:H3'	2:B:1775:G:H5"	1.73	0.69
10:J:31:ARG:CZ	37:KA:107:ILE:HA	2.22	0.69
12:L:218:ILE:O	12:L:222:PHE:HB2	1.92	0.69
20:T:130:LYS:HB3	20:T:133:ARG:HE	1.55	0.69
21:U:51:VAL:HG22	21:U:56:ARG:O	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:145:ASN:HA	22:V:150:VAL:HG21	1.74	0.69
23:W:140:GLU:HA	23:W:143:ILE:HD12	1.73	0.69
26:Z:56:VAL:HG13	26:Z:65:VAL:HG22	1.73	0.69
49:WA:131:ILE:HG12	49:WA:151:VAL:HG11	1.74	0.69
57:EB:142:TYR:CE1	57:EB:148:LYS:HD2	2.26	0.69
82:DC:363:ASP:HB3	82:DC:366:CYS:HB2	1.73	0.69
1:A:54:C:H2'	1:A:55:A:C8	2.27	0.69
1:A:875:G:H4'	1:A:936:G:O2'	1.91	0.69
2:B:1948:G:H5"	23:W:135:LYS:NZ	2.07	0.69
6:F:6:ARG:HH12	6:F:198:LYS:HG2	1.56	0.69
8:H:8:VAL:HG12	8:H:9:HIS:N	2.08	0.69
8:H:170:LYS:HE2	8:H:175:HIS:HB2	1.74	0.69
10:J:31:ARG:CB	37:KA:107:ILE:CG2	2.68	0.69
11:K:52:GLN:HA	11:K:55:TYR:CD2	2.27	0.69
20:T:90:HIS:HA	20:T:95:GLY:HA3	1.73	0.69
58:FB:90:LEU:HB3	58:FB:95:THR:HB	1.73	0.69
61:IB:90:TYR:CE2	61:IB:104:HIS:HA	2.27	0.69
82:DC:81:MET:HG3	82:DC:339:VAL:HG11	1.72	0.69
83:EC:6758:A:C2'	83:EC:6759:A:H5'	2.22	0.69
1:A:98:U:H2'	1:A:99:C:C6	2.26	0.69
1:A:1580:C:H4'	66:NB:137:ARG:HB3	1.73	0.69
2:B:1328:C:H5'	37:KA:75:HIS:O	1.92	0.69
2:B:2186:U:C2'	2:B:2187:G:H5'	2.22	0.69
2:B:2397:A:H3'	2:B:2397:A:N3	2.07	0.69
2:B:2854:U:H5"	14:N:160:PRO:HG3	1.73	0.69
3:C:93:U:O2'	3:C:94:C:H5'	1.93	0.69
11:K:186:HIS:HA	11:K:189:ILE:HG22	1.75	0.69
17:Q:67:ARG:HB3	32:FA:105:LEU:HG	1.72	0.69
25:Y:89:LEU:H	25:Y:89:LEU:HD12	1.57	0.69
29:CA:55:ASN:HD22	29:CA:55:ASN:N	1.91	0.69
48:VA:49:ALA:HA	48:VA:88:PHE:O	1.90	0.69
50:XA:62:ARG:O	50:XA:66:ALA:HB2	1.91	0.69
65:MB:73:PRO:HG2	65:MB:92:SER:HA	1.74	0.69
68:PB:83:ALA:HB1	68:PB:89:GLN:HB2	1.74	0.69
74:VB:109:LYS:HA	74:VB:112:LYS:HE2	1.73	0.69
76:XB:84:VAL:HG13	76:XB:85:ARG:N	2.07	0.69
1:A:55:A:H3'	1:A:403:G:N2	2.07	0.69
1:A:965:U:H3'	1:A:966:A:C5'	2.21	0.69
2:B:990:U:C2'	2:B:991:G:H5"	2.22	0.69
2:B:2352:A:H5"	21:U:83:TRP:O	1.93	0.69
8:H:325:LEU:HD21	8:H:332:LYS:CB	2.21	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:224:ILE:CG1	24:X:36:ILE:HG12	2.22	0.69
12:L:71:VAL:HG23	12:L:76:ALA:HB2	1.75	0.69
17:Q:56:PRO:HB3	17:Q:75:PHE:CE1	2.27	0.69
38:LA:54:ILE:HG12	38:LA:70:LYS:O	1.92	0.69
72:TB:30:SER:HB2	72:TB:61:ILE:HD13	1.74	0.69
82:DC:124:GLY:HA3	82:DC:342:LEU:HD21	1.74	0.69
82:DC:176:GLN:HA	82:DC:179:ALA:HB3	1.72	0.69
82:DC:315:GLU:HA	82:DC:319:LEU:HD22	1.75	0.69
1:A:292:U:H2'	1:A:293:U:C6	2.27	0.69
1:A:558:U:H1'	1:A:581:U:O4'	1.93	0.69
1:A:689:G:H2'	1:A:690:G:C8	2.27	0.69
2:B:185:C:H5"	30:DA:122:LYS:HG2	1.75	0.69
2:B:950:G:H21	2:B:1369:A:H62	1.39	0.69
2:B:1219:C:C2'	2:B:1220:U:H5"	2.23	0.69
2:B:1779:C:N3	23:W:89:LEU:HA	2.07	0.69
6:F:79:ASN:ND2	6:F:82:VAL:HG13	2.07	0.69
11:K:95:ILE:HD12	11:K:133:TYR:CE1	2.26	0.69
34:HA:27:TYR:CB	34:HA:52:ARG:HH22	2.05	0.69
49:WA:180:ALA:HB3	49:WA:190:ALA:HB3	1.75	0.69
82:DC:113:SER:HB2	82:DC:516:PRO:CG	2.23	0.69
82:DC:382:VAL:HG21	82:DC:396:ALA:HB1	1.75	0.69
2:B:422:A:C2	2:B:2363:A:H4'	2.27	0.69
2:B:634:C:C2'	2:B:635:G:H5'	2.22	0.69
2:B:720:A:H3'	22:V:69:ARG:HH12	1.56	0.69
2:B:777:U:H2'	2:B:778:U:C6	2.27	0.69
2:B:1338:C:H4'	36:JA:60:ASN:CG	2.18	0.69
2:B:1389:G:H5"	36:JA:101:SER:HB3	1.73	0.69
2:B:3113:A:N3	13:M:66:ALA:HB1	2.08	0.69
2:B:3244:A:H5"	7:G:100:ARG:HH21	1.57	0.69
7:G:240:ARG:O	7:G:240:ARG:HG2	1.93	0.69
7:G:296:THR:HG22	7:G:297:SER:H	1.58	0.69
8:H:246:ARG:HD3	8:H:247:PHE:H	1.57	0.69
10:J:72:ASN:HB3	10:J:160:SER:HA	1.75	0.69
10:J:164:SER:CB	37:KA:5:HIS:CA	2.70	0.69
34:HA:27:TYR:HB2	34:HA:52:ARG:NH2	2.07	0.69
35:IA:72:ARG:HB3	35:IA:96:VAL:CG2	2.17	0.69
61:IB:108:PRO:HB2	61:IB:135:VAL:CG2	2.22	0.69
68:PB:126:ARG:HG2	68:PB:131:LEU:HB2	1.73	0.69
82:DC:19:VAL:HG13	82:DC:99:LEU:CD2	2.21	0.69
82:DC:588:LEU:HD21	82:DC:712:ALA:HB1	1.74	0.69
82:DC:701:GLY:HA2	82:DC:705:ILE:HD12	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:734:GLN:HA	82:DC:766:PHE:O	1.92	0.69
1:A:201:G:O2'	1:A:202:A:H5'	1.92	0.69
1:A:1166:A:H5'	55:CB:104:ASN:CG	2.18	0.69
1:A:1483:A:H4'	66:NB:72:GLY:N	2.07	0.69
5:E:120:VAL:HG21	5:E:135:PRO:HG2	1.75	0.69
15:O:94:ARG:HD3	15:O:94:ARG:H	1.56	0.69
17:Q:9:ILE:HG13	32:FA:49:HIS:CE1	2.28	0.69
17:Q:169:THR:O	17:Q:173:ALA:HB2	1.92	0.69
20:T:7:VAL:HG11	24:X:163:PHE:HE1	1.58	0.69
36:JA:86:THR:HG23	36:JA:115:LEU:CD2	2.23	0.69
51:YA:126:THR:HG22	51:YA:136:ARG:NE	2.08	0.69
52:ZA:202:GLY:O	52:ZA:204:THR:HG23	1.93	0.69
54:BB:31:PRO:CG	54:BB:38:LEU:HD11	2.20	0.69
58:FB:104:ILE:HG13	58:FB:105:ASP:N	2.08	0.69
72:TB:7:LEU:HD12	72:TB:34:ILE:HA	1.75	0.69
82:DC:61:LYS:O	82:DC:64:GLN:HB3	1.92	0.69
82:DC:169:VAL:HG12	82:DC:170:SER:H	1.56	0.69
1:A:401:A:H4'	54:BB:3:ARG:NH1	2.08	0.69
1:A:1415:U:H2'	1:A:1416:G:H8	1.56	0.69
2:B:146:U:O5'	2:B:148:G:H5'	1.93	0.69
2:B:771:A:H5"	32:FA:132:LYS:HE3	1.75	0.69
2:B:1455:U:HO2'	2:B:1456:A:H8	1.41	0.69
2:B:1832:C:H5"	43:QA:7:PHE:CE1	2.28	0.69
2:B:1915:A:H4'	23:W:83:GLY:O	1.92	0.69
2:B:2154:U:H4'	6:F:240:ALA:CB	2.23	0.69
2:B:2158:A:H4'	2:B:2159:U:H5"	1.74	0.69
2:B:2173:U:H2'	2:B:2174:G:C8	2.27	0.69
2:B:2700:G:H5"	25:Y:17:ARG:HD3	1.74	0.69
3:C:69:U:H2'	3:C:70:G:H5'	1.74	0.69
5:E:65:ILE:HG21	5:E:148:VAL:HG13	1.75	0.69
6:F:91:GLY:O	6:F:102:LEU:HG	1.92	0.69
6:F:206:PRO:HD3	6:F:213:GLY:HA3	1.73	0.69
7:G:22:ALA:HB1	7:G:28:ARG:NH2	2.08	0.69
7:G:303:LYS:HB3	7:G:372:THR:HG22	1.75	0.69
8:H:250:TRP:CD1	8:H:250:TRP:N	2.60	0.69
10:J:31:ARG:CD	37:KA:107:ILE:HG22	2.21	0.69
16:P:134:GLY:H	16:P:137:GLN:HB2	1.58	0.69
17:Q:35:ARG:O	17:Q:39:ARG:HD3	1.93	0.69
21:U:30:ARG:HD3	21:U:30:ARG:C	2.18	0.69
21:U:31:GLU:CD	21:U:61:ARG:H	1.99	0.69
30:DA:85:VAL:HG12	30:DA:97:ILE:HD12	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:NA:66:GLU:O	40:NA:70:ARG:HG3	1.93	0.69
47:UA:14:TYR:HB2	47:UA:23:ARG:HD3	1.75	0.69
51:YA:52:THR:HG22	51:YA:53:GLY:N	2.06	0.69
54:BB:118:GLU:HA	54:BB:121:TYR:HE1	1.58	0.69
57:EB:69:GLY:O	57:EB:73:VAL:HG23	1.92	0.69
57:EB:114:ARG:H	57:EB:114:ARG:NH1	1.87	0.69
63:KB:104:ARG:HB2	63:KB:104:ARG:HH21	1.55	0.69
64:LB:91:THR:HG23	64:LB:93:THR:H	1.58	0.69
68:PB:29:VAL:HA	68:PB:47:CYS:SG	2.33	0.69
73:UB:70:LYS:O	73:UB:87:VAL:HG22	1.92	0.69
82:DC:17:THR:HG21	82:DC:92:LYS:HB2	1.75	0.69
82:DC:22:MET:HG2	82:DC:342:LEU:HD13	1.72	0.69
82:DC:137:VAL:HG23	82:DC:791:GLN:HG3	1.74	0.69
1:A:46:A:C6	1:A:433:C:H4'	2.27	0.69
1:A:588:U:H2'	1:A:589:C:C6	2.28	0.69
1:A:610:G:H5"	1:A:611:U:H5	1.57	0.69
1:A:687:G:H5'	72:TB:119:LYS:HE2	1.73	0.69
2:B:163:C:H2'	2:B:164:A:O4'	1.92	0.69
2:B:1662:G:H22	2:B:1787:A:H2	1.41	0.69
2:B:2995:A:H2'	2:B:2996:U:H5"	1.75	0.69
6:F:92:LYS:HA	6:F:102:LEU:HB3	1.73	0.69
13:M:91:ARG:HH12	44:RA:82:LEU:HD11	1.58	0.69
16:P:86:LYS:HB3	16:P:90:ARG:CB	2.22	0.69
23:W:52:LYS:HE2	23:W:52:LYS:H	1.58	0.69
35:IA:104:LEU:H	35:IA:104:LEU:HD12	1.57	0.69
37:KA:18:ARG:CB	37:KA:23:ASN:HA	2.19	0.69
49:WA:287:PRO:HG2	49:WA:307:ASP:HB3	1.75	0.69
52:ZA:140:ARG:HD3	52:ZA:222:TYR:CE1	2.28	0.69
63:KB:56:ASP:HB3	77:YB:47:PHE:CB	2.22	0.69
72:TB:94:LEU:HD13	72:TB:100:GLY:C	2.17	0.69
79:AC:21:CYS:HB2	79:AC:26:SER:HB3	1.75	0.69
79:AC:36:LEU:HD12	79:AC:38:ILE:H	1.58	0.69
1:A:600:U:H2'	1:A:601:A:C8	2.27	0.69
2:B:1753:G:H2'	2:B:1754:G:H8	1.58	0.69
6:F:179:LEU:O	6:F:180:LEU:HB2	1.93	0.69
7:G:104:THR:CG2	7:G:106:TRP:HE1	2.05	0.69
9:I:34:LYS:HD2	9:I:35:ARG:NE	2.08	0.69
10:J:132:ALA:O	10:J:136:GLU:HG2	1.93	0.69
14:N:60:LEU:HD11	14:N:135:ILE:CD1	2.22	0.69
15:O:110:ILE:HG22	15:O:114:ILE:HG22	1.73	0.69
31:EA:12:VAL:CG1	31:EA:13:VAL:H	2.03	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:IA:15:ASN:OD1	35:IA:18:LYS:HG2	1.93	0.69
41:OA:24:ARG:HA	41:OA:24:ARG:NE	2.07	0.69
49:WA:168:THR:HG22	49:WA:225:LEU:HD21	1.75	0.69
60:HB:42:VAL:HG13	60:HB:46:LEU:HD23	1.74	0.69
82:DC:278:LEU:HA	82:DC:281:ILE:HB	1.75	0.69
82:DC:299:LEU:O	82:DC:303:LEU:HG	1.93	0.69
1:A:450:U:OP1	54:BB:7:LYS:HE3	1.93	0.68
1:A:1169:G:H2'	1:A:1575:G:O6	1.92	0.68
2:B:147:U:H5'	12:L:136:LEU:HD12	1.75	0.68
2:B:268:A:N1	2:B:295:A:H5'	2.08	0.68
2:B:627:U:H2'	2:B:628:A:C8	2.28	0.68
2:B:2837:A:H5"	14:N:154:ARG:CZ	2.22	0.68
2:B:3062:G:H2'	2:B:3063:C:H6	1.58	0.68
3:C:12:A:C2'	3:C:13:A:H5"	2.22	0.68
8:H:126:ILE:CG1	8:H:238:LEU:HD21	2.23	0.68
10:J:31:ARG:HG2	10:J:34:LEU:HG	1.74	0.68
11:K:151:ARG:HH11	11:K:151:ARG:HG3	1.58	0.68
12:L:72:PRO:HD2	12:L:75:ILE:HD13	1.73	0.68
16:P:128:VAL:O	16:P:131:GLU:HG2	1.93	0.68
24:X:12:ARG:HB3	24:X:24:LEU:HG	1.74	0.68
25:Y:20:ARG:HB2	25:Y:20:ARG:HH11	1.55	0.68
28:BA:55:PHE:O	28:BA:58:HIS:HB3	1.93	0.68
36:JA:100:ILE:HG22	36:JA:105:ARG:HG2	1.74	0.68
40:NA:60:LEU:O	40:NA:63:ASN:HB3	1.93	0.68
41:OA:39:TYR:CE1	41:OA:40:PRO:HB3	2.28	0.68
54:BB:118:GLU:HA	54:BB:121:TYR:CE1	2.29	0.68
58:FB:4:SER:OG	58:FB:28:GLU:HG3	1.93	0.68
1:A:1094:G:H2'	1:A:1095:U:C5'	2.21	0.68
1:A:1436:A:C2'	1:A:1437:U:H5'	2.23	0.68
2:B:17:G:H22	3:C:142:C:H42	1.40	0.68
2:B:904:A:H5"	2:B:1537:A:H5'	1.75	0.68
2:B:942:U:C6	32:FA:15:VAL:HG12	2.29	0.68
2:B:995:U:H2'	2:B:996:A:C8	2.27	0.68
2:B:1182:A:H2'	2:B:1183:C:C6	2.27	0.68
2:B:1743:G:H2'	2:B:1744:G:O4'	1.92	0.68
2:B:3113:A:H5"	2:B:3118:C:N4	2.07	0.68
6:F:89:TYR:HB2	6:F:100:ASN:HD22	1.56	0.68
13:M:8:GLN:CG	13:M:68:LEU:HD11	2.22	0.68
63:KB:23:PRO:HB2	63:KB:25:TRP:CD1	2.27	0.68
68:PB:113:LEU:O	68:PB:117:LYS:HG3	1.92	0.68
72:TB:34:ILE:O	72:TB:38:LEU:HG	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:XB:12:LYS:HD3	76:XB:12:LYS:O	1.93	0.68
82:DC:718:LEU:CG	82:DC:835:TRP:HB3	2.23	0.68
2:B:211:A:H3'	8:H:221:ASN:OD1	1.94	0.68
2:B:1856:C:H1'	38:LA:7:PHE:HZ	1.58	0.68
2:B:3039:C:H2'	2:B:3040:A:H8	1.59	0.68
5:E:196:LYS:HA	5:E:196:LYS:NZ	2.08	0.68
6:F:63:PHE:CB	6:F:72:ARG:HH22	2.06	0.68
12:L:143:ILE:HG23	12:L:175:VAL:HG21	1.75	0.68
13:M:92:TYR:CG	13:M:142:ASP:HB3	2.28	0.68
16:P:85:LEU:HD11	16:P:106:LEU:HD13	1.75	0.68
38:LA:51:LEU:HD11	38:LA:54:ILE:HD12	1.75	0.68
57:EB:61:PHE:HE1	57:EB:93:LEU:HD12	1.55	0.68
74:VB:124:ARG:O	74:VB:127:LYS:HG2	1.94	0.68
77:YB:17:ARG:HG3	77:YB:18:LYS:H	1.59	0.68
77:YB:51:GLN:O	77:YB:66:PRO:HB3	1.94	0.68
1:A:1049:U:H2'	1:A:1050:G:C8	2.28	0.68
1:A:1340:U:O4'	1:A:1378:U:H5'	1.92	0.68
1:A:1351:G:H2'	1:A:1352:G:C8	2.29	0.68
1:A:1444:A:H4'	1:A:1445:G:H3'	1.75	0.68
2:B:24:G:H5"	41:OA:58:THR:HG22	1.76	0.68
2:B:715:A:C6	2:B:782:U:H5'	2.29	0.68
2:B:841:A:H5"	23:W:126:GLU:CD	2.18	0.68
2:B:1060:U:H2'	2:B:1061:A:C8	2.28	0.68
2:B:1084:A:H2'	2:B:1085:A:C8	2.28	0.68
2:B:1419:A:N7	8:H:187:LEU:HD12	2.08	0.68
2:B:1670:C:O3'	2:B:1860:G:H5"	1.93	0.68
2:B:1923:C:H2'	2:B:1924:U:C6	2.28	0.68
2:B:2761:G:H1'	2:B:2800:G:N2	2.08	0.68
2:B:3147:G:H4'	7:G:102:LEU:O	1.93	0.68
2:B:3276:G:H3'	10:J:48:ARG:HH22	1.58	0.68
5:E:82:VAL:CG2	5:E:148:VAL:HG11	2.22	0.68
5:E:100:ILE:HG12	5:E:127:GLN:HG3	1.76	0.68
6:F:219:ILE:HG22	6:F:221:LYS:H	1.58	0.68
10:J:82:ARG:CB	37:KA:104:PRO:HB3	2.24	0.68
32:FA:59:ARG:NH2	32:FA:61:PHE:HZ	1.91	0.68
47:UA:57:CYS:HB3	47:UA:62:LYS:O	1.93	0.68
48:VA:111:ALA:HB1	48:VA:170:ALA:HB2	1.75	0.68
48:VA:173:LEU:HD22	48:VA:178:ILE:HD12	1.75	0.68
55:CB:80:LYS:HB2	55:CB:83:ARG:HB3	1.74	0.68
57:EB:174:ASN:HB2	57:EB:180:GLN:HG2	1.74	0.68
64:LB:114:ARG:HA	76:XB:62:TYR:OH	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:585:ARG:HB3	82:DC:587:TYR:HE2	1.58	0.68
1:A:802:G:OP2	57:EB:105:THR:HG21	1.92	0.68
1:A:809:A:H2'	1:A:810:G:H5'	1.76	0.68
2:B:2085:U:C2'	2:B:2086:A:H5'	2.23	0.68
2:B:3061:G:H2'	2:B:3062:G:O4'	1.94	0.68
3:C:60:U:C5	39:MA:55:LEU:HD13	2.29	0.68
4:D:76:A:N6	4:D:102:A:H3'	2.07	0.68
10:J:26:ARG:HB2	10:J:26:ARG:NH1	2.09	0.68
12:L:33:ASN:HB3	12:L:38:GLN:OE1	1.92	0.68
13:M:122:LYS:HG2	13:M:123:ILE:H	1.57	0.68
27:AA:19:VAL:HG13	27:AA:50:PRO:O	1.94	0.68
48:VA:80:VAL:O	48:VA:81:LYS:HB2	1.93	0.68
54:BB:51:ARG:HE	54:BB:110:ALA:HA	1.58	0.68
56:DB:58:LYS:O	56:DB:59:GLN:HB2	1.92	0.68
57:EB:163:ASP:HA	57:EB:166:LEU:HD13	1.75	0.68
60:HB:32:HIS:H	60:HB:32:HIS:CD2	2.12	0.68
72:TB:63:VAL:HG12	72:TB:65:LEU:HD12	1.76	0.68
78:ZB:19:THR:HG22	78:ZB:20:GLY:H	1.58	0.68
82:DC:588:LEU:HD13	82:DC:686:VAL:HG13	1.73	0.68
82:DC:693:LEU:HD12	82:DC:700:ARG:HD2	1.73	0.68
83:EC:6915:G:H2'	83:EC:6916:A:C8	2.28	0.68
1:A:617:U:H5'	1:A:1031:U:O4'	1.93	0.68
2:B:28:C:O2'	2:B:29:C:H5'	1.94	0.68
2:B:145:G:H4'	19:S:55:ALA:O	1.94	0.68
2:B:377:A:H1'	2:B:392:G:N2	2.07	0.68
2:B:639:G:OP1	36:JA:40:SER:HB2	1.93	0.68
2:B:2976:A:C2	2:B:2977:G:H1'	2.28	0.68
11:K:232:ARG:HD3	11:K:239:LEU:HD22	1.75	0.68
19:S:7:LEU:HA	19:S:10:LEU:HB3	1.76	0.68
19:S:200:TRP:HA	19:S:200:TRP:HE3	1.59	0.68
24:X:81:TYR:O	24:X:87:THR:HA	1.93	0.68
48:VA:30:VAL:HG11	48:VA:33:VAL:HB	1.74	0.68
54:BB:180:LEU:HD22	54:BB:192:ILE:HG22	1.75	0.68
54:BB:181:VAL:HG11	54:BB:225:VAL:HG13	1.76	0.68
82:DC:22:MET:SD	82:DC:102:LEU:HD13	2.32	0.68
83:EC:6936:G:H2'	83:EC:6937:G:C8	2.28	0.68
1:A:144:U:O2'	1:A:145:A:H5'	1.94	0.68
1:A:446:A:H5"	54:BB:57:ASN:HB3	1.76	0.68
2:B:82:C:H2'	2:B:83:U:H5'	1.75	0.68
2:B:714:G:N1	32:FA:72:VAL:HG11	2.09	0.68
2:B:2355:G:H4'	21:U:139:TYR:CE2	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2356:A:H61	2:B:2983:C:N4	1.91	0.68
7:G:81:THR:CG2	7:G:205:VAL:HG13	2.24	0.68
19:S:156:HIS:HA	19:S:162:ARG:HH22	1.59	0.68
19:S:200:TRP:HA	19:S:200:TRP:CE3	2.29	0.68
20:T:12:LYS:HG2	20:T:40:GLU:CB	2.24	0.68
27:AA:77:ILE:HB	27:AA:101:VAL:HG23	1.74	0.68
75:WB:78:ILE:HD12	75:WB:78:ILE:H	1.57	0.68
1:A:611:U:C2'	1:A:612:U:H5'	2.24	0.68
1:A:954:G:H2'	1:A:955:A:C8	2.29	0.68
2:B:839:C:H1'	2:B:1724:U:OP2	1.94	0.68
2:B:1002:A:N1	2:B:1050:U:H1'	2.08	0.68
2:B:1447:G:C8	21:U:27:LYS:HB2	2.29	0.68
2:B:1498:A:H2'	2:B:1499:C:H6	1.58	0.68
2:B:1887:A:H4'	7:G:227:GLU:C	2.18	0.68
3:C:23:U:H4'	30:DA:17:LYS:HB2	1.75	0.68
9:I:50:ARG:HG2	9:I:65:ILE:O	1.94	0.68
10:J:28:GLN:OE1	10:J:61:ASN:HA	1.93	0.68
11:K:219:LYS:HA	11:K:228:SER:OG	1.94	0.68
12:L:203:VAL:HG22	12:L:204:ARG:N	2.08	0.68
20:T:54:TYR:HE2	20:T:58:LEU:HD13	1.58	0.68
37:KA:18:ARG:HD2	37:KA:23:ASN:HB3	1.73	0.68
47:UA:55:TRP:CZ2	47:UA:71:VAL:HA	2.29	0.68
52:ZA:187:LEU:HD11	52:ZA:215:PHE:HE1	1.59	0.68
70:RB:95:ALA:HB1	70:RB:96:PRO:HD2	1.74	0.68
71:SB:69:LEU:HD12	71:SB:72:LEU:HD12	1.76	0.68
74:VB:20:ARG:C	74:VB:21:LYS:HD2	2.18	0.68
1:A:247:A:H1'	61:IB:38:ALA:CA	2.22	0.68
1:A:942:G:H5"	76:XB:17:HIS:HB3	1.74	0.68
2:B:560:G:O2'	18:R:73:PRO:HB2	1.94	0.68
2:B:848:A:H2'	2:B:849:C:O4'	1.93	0.68
2:B:2525:G:N7	6:F:34:TYR:HB2	2.08	0.68
2:B:2712:U:O2'	2:B:2743:A:H4'	1.94	0.68
2:B:3151:U:H2'	2:B:3395:G:N2	2.08	0.68
2:B:3339:A:H2'	2:B:3340:G:C8	2.29	0.68
4:D:9:C:H2'	4:D:10:C:H5'	1.75	0.68
8:H:274:TYR:OH	8:H:276:LEU:HD23	1.94	0.68
9:I:236:LEU:HA	9:I:239:ILE:HB	1.76	0.68
9:I:267:ALA:O	9:I:271:LYS:HG3	1.94	0.68
19:S:42:PRO:HG2	19:S:53:TYR:CE2	2.29	0.68
40:NA:64:SER:HB3	40:NA:68:ARG:HG3	1.76	0.68
47:UA:55:TRP:HE1	47:UA:66:GLY:CA	2.01	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:26:LYS:NZ	58:FB:49:ARG:HB2	2.08	0.68
58:FB:97:THR:C	58:FB:99:ALA:H	2.02	0.68
59:GB:158:PHE:CD2	59:GB:164:PHE:HB3	2.29	0.68
66:NB:40:GLU:HB3	66:NB:41:PRO:HA	1.75	0.68
82:DC:552:VAL:HG22	82:DC:553:PRO:HD2	1.76	0.68
1:A:420:A:OP1	56:DB:96:SER:HB2	1.94	0.68
2:B:515:C:C2'	2:B:516:A:H5'	2.24	0.68
2:B:862:U:O2'	2:B:863:C:H5'	1.94	0.68
2:B:1456:A:C8	35:IA:26:LYS:HB3	2.29	0.68
2:B:1856:C:H1'	38:LA:7:PHE:CZ	2.29	0.68
2:B:2181:C:H5"	6:F:193:ARG:NH2	2.09	0.68
9:I:40:HIS:O	9:I:43:LYS:HG2	1.94	0.68
15:O:50:ALA:HB3	15:O:62:ASN:N	2.09	0.68
18:R:21:VAL:HG21	18:R:46:ILE:HG21	1.75	0.68
20:T:37:ARG:HA	20:T:107:GLY:H	1.58	0.68
22:V:26:LEU:O	22:V:29:LEU:HG	1.93	0.68
27:AA:37:ILE:HG23	27:AA:59:MET:C	2.19	0.68
30:DA:60:ARG:HG3	30:DA:103:LYS:HG2	1.76	0.68
48:VA:109:ALA:CB	48:VA:180:PRO:HD2	2.24	0.68
50:XA:119:ARG:NH1	52:ZA:240:LEU:HB3	2.09	0.68
60:HB:30:ALA:HA	60:HB:38:LYS:HG2	1.75	0.68
71:SB:1:MET:HE1	71:SB:13:VAL:HG13	1.75	0.68
73:UB:112:LYS:HE2	73:UB:112:LYS:N	2.09	0.68
2:B:783:A:H5"	2:B:784:A:H5"	1.76	0.67
2:B:1236:G:H2'	16:P:60:VAL:CG2	2.24	0.67
2:B:1415:U:H2'	2:B:1416:C:O4'	1.93	0.67
2:B:1446:A:N1	2:B:2356:A:H5"	2.09	0.67
2:B:1494:U:H1'	2:B:1496:C:N4	2.08	0.67
2:B:3234:A:H2'	2:B:3235:C:H5"	1.76	0.67
6:F:113:VAL:O	6:F:134:VAL:HG22	1.94	0.67
6:F:123:ARG:HA	6:F:163:ARG:HH21	1.58	0.67
11:K:83:LEU:HD13	11:K:84:VAL:N	2.09	0.67
14:N:170:LYS:O	14:N:178:ARG:HG2	1.93	0.67
20:T:33:ILE:O	20:T:102:LEU:HD12	1.94	0.67
37:KA:58:GLU:HG3	37:KA:62:SER:HA	1.75	0.67
55:CB:117:THR:OG1	55:CB:194:LEU:HB2	1.95	0.67
55:CB:144:GLU:OE1	55:CB:221:ALA:HB1	1.94	0.67
58:FB:10:LYS:HG3	58:FB:11:ARG:H	1.60	0.67
82:DC:561:VAL:HG13	82:DC:774:VAL:HG11	1.76	0.67
1:A:65:A:H2	1:A:84:A:H62	1.41	0.67
1:A:617:U:H5'	1:A:1031:U:C4'	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1887:A:O2'	7:G:228:GLY:HA2	1.94	0.67
2:B:2535:A:H3'	2:B:2536:A:C5'	2.24	0.67
2:B:2775:U:H2'	2:B:2776:C:H6	1.58	0.67
2:B:2883:U:H2'	2:B:2884:C:C6	2.29	0.67
2:B:2930:A:O2'	27:AA:37:ILE:HD11	1.93	0.67
2:B:3377:G:N2	7:G:332:ARG:HH22	1.91	0.67
5:E:204:LEU:HD13	5:E:205:VAL:H	1.59	0.67
6:F:58:LEU:HD22	6:F:77:ILE:HG23	1.76	0.67
8:H:351:PRO:HG3	11:K:70:LYS:HD2	1.75	0.67
15:O:91:LEU:HD12	15:O:163:PHE:CE2	2.30	0.67
17:Q:49:ARG:HD2	39:MA:116:TYR:HD2	1.59	0.67
23:W:24:LEU:HD11	23:W:50:ILE:HG23	1.76	0.67
23:W:125:LYS:O	23:W:128:LYS:HB3	1.94	0.67
31:EA:13:VAL:HG22	31:EA:80:LEU:HD22	1.76	0.67
34:HA:30:THR:HG22	34:HA:91:SER:CB	2.24	0.67
35:IA:29:ALA:HB1	35:IA:60:TRP:CE2	2.28	0.67
36:JA:97:ALA:HB1	36:JA:99:ASN:OD1	1.94	0.67
38:LA:72:VAL:HG22	38:LA:77:GLY:HA3	1.76	0.67
38:LA:90:ILE:HG23	38:LA:94:LEU:CG	2.24	0.67
48:VA:76:LEU:HA	48:VA:189:GLN:NE2	2.10	0.67
63:KB:37:ILE:HG23	63:KB:50:ILE:HG21	1.77	0.67
63:KB:88:LEU:HD21	63:KB:125:LEU:HD12	1.76	0.67
68:PB:45:LEU:HD21	68:PB:81:ILE:HG12	1.77	0.67
1:A:958:U:C6	63:KB:14:SER:HB3	2.30	0.67
2:B:286:U:H2'	2:B:287:G:C8	2.29	0.67
2:B:1204:A:H62	2:B:1300:G:H21	1.42	0.67
2:B:2861:U:H2'	2:B:2862:U:O4'	1.95	0.67
2:B:3206:C:C5'	2:B:3207:U:H5"	2.16	0.67
7:G:104:THR:HG22	7:G:106:TRP:NE1	2.08	0.67
14:N:32:ARG:HH11	14:N:32:ARG:HA	1.58	0.67
14:N:60:LEU:HD11	14:N:135:ILE:HD11	1.73	0.67
17:Q:47:ALA:HB1	17:Q:48:PRO:CD	2.25	0.67
20:T:8:VAL:O	20:T:118:VAL:HG13	1.94	0.67
27:AA:37:ILE:HG23	27:AA:59:MET:O	1.94	0.67
51:YA:32:ILE:HG12	51:YA:96:LEU:HB2	1.76	0.67
58:FB:25:ARG:HD3	58:FB:27:PHE:CD2	2.29	0.67
61:IB:34:TRP:HH2	61:IB:36:LYS:HD3	1.59	0.67
69:QB:83:ALA:HA	69:QB:92:LYS:O	1.94	0.67
1:A:1105:C:H2'	1:A:1106:U:H6	1.56	0.67
2:B:363:G:O2'	8:H:77:VAL:HG12	1.94	0.67
2:B:907:G:H21	2:B:925:A:H1'	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2693:C:H5”	2:B:2694:A:H5”	1.75	0.67
7:G:212:ASN:ND2	7:G:353:GLU:HG2	2.09	0.67
8:H:325:LEU:HD21	8:H:332:LYS:H	1.59	0.67
9:I:178:ASN:H	9:I:178:ASN:HD22	1.43	0.67
9:I:178:ASN:HD22	9:I:178:ASN:N	1.91	0.67
11:K:221:LYS:HB2	11:K:227:GLY:HA3	1.76	0.67
12:L:82:LEU:HA	12:L:222:PHE:HZ	1.59	0.67
22:V:71:LEU:HD22	22:V:99:THR:HG21	1.76	0.67
30:DA:31:LEU:HB3	30:DA:101:PRO:HG3	1.77	0.67
52:ZA:69:ILE:HA	52:ZA:72:LEU:CB	2.24	0.67
54:BB:87:MET:HE3	54:BB:236:ILE:HD13	1.76	0.67
67:OB:106:THR:O	67:OB:110:VAL:HG23	1.94	0.67
70:RB:71:PRO:HB3	79:AC:41:GLN:HA	1.77	0.67
72:TB:76:SER:HB3	72:TB:77:PRO:HA	1.75	0.67
76:XB:82:ARG:HG3	76:XB:83:ILE:N	2.09	0.67
82:DC:369:ILE:HG23	82:DC:401:PHE:HB3	1.76	0.67
82:DC:619:MET:HB3	82:DC:625:TRP:CB	2.25	0.67
1:A:1487:A:C5’	1:A:1593:A:H4’	2.25	0.67
1:A:1715:G:H3’	1:A:1716:C:C5’	2.25	0.67
1:A:1760:G:H1’	1:A:1781:A:C2	2.25	0.67
2:B:1448:U:H5	2:B:2355:G:H21	1.43	0.67
2:B:1711:C:H5”	31:EA:38:PHE:HA	1.75	0.67
2:B:2338:C:O3’	27:AA:48:ARG:HA	1.94	0.67
2:B:2392:C:H4’	7:G:266:ARG:NH2	2.09	0.67
2:B:3341:U:O2’	2:B:3342:A:H5’	1.94	0.67
7:G:94:GLU:O	20:T:152:VAL:HG11	1.94	0.67
8:H:206:LEU:HB2	8:H:248:VAL:HG22	1.76	0.67
12:L:162:LEU:HA	19:S:7:LEU:HD11	1.77	0.67
14:N:100:ASN:HD21	14:N:102:MET:HE3	1.58	0.67
14:N:121:LYS:HG2	14:N:122:PRO:CD	2.23	0.67
14:N:191:LYS:O	14:N:197:VAL:HG23	1.95	0.67
37:KA:98:VAL:HG22	37:KA:99:ARG:H	1.59	0.67
39:MA:59:ASN:O	39:MA:63:ARG:HG3	1.93	0.67
50:XA:20:ALA:HA	50:XA:168:HIS:HB3	1.75	0.67
52:ZA:121:VAL:HG11	83:EC:6958:C:H1’	1.76	0.67
70:RB:82:TYR:CD1	79:AC:53:ASN:HA	2.29	0.67
1:A:1661:U:H2’	1:A:1662:G:C8	2.30	0.67
5:E:116:LEU:O	5:E:120:VAL:HG23	1.95	0.67
7:G:94:GLU:HA	7:G:99:LEU:HD13	1.76	0.67
7:G:156:SER:O	7:G:157:VAL:HG13	1.95	0.67
16:P:129:THR:C	16:P:131:GLU:H	2.03	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:38:ILE:HG13	18:R:44:VAL:HG12	1.75	0.67
20:T:7:VAL:HG11	24:X:163:PHE:CE1	2.29	0.67
35:IA:17:HIS:HB2	35:IA:69:TYR:CB	2.19	0.67
47:UA:55:TRP:NE1	47:UA:66:GLY:HA3	2.01	0.67
58:FB:26:LYS:HZ1	58:FB:49:ARG:HB2	1.59	0.67
63:KB:41:ALA:HB2	63:KB:50:ILE:HD11	1.76	0.67
82:DC:275:MET:CA	82:DC:279:ASP:HB2	2.25	0.67
1:A:1128:C:C2'	1:A:1129:U:H5'	2.25	0.67
2:B:211:A:H5'	8:H:220:ARG:HG2	1.77	0.67
2:B:274:G:H2'	2:B:275:U:C6	2.30	0.67
2:B:300:G:H2'	2:B:301:G:H8	1.58	0.67
2:B:1051:U:H4'	25:Y:19:PHE:CD1	2.29	0.67
2:B:1394:A:H2'	2:B:1395:G:O4'	1.95	0.67
2:B:1462:A:H2'	2:B:1463:U:C6	2.30	0.67
2:B:1898:G:C2'	2:B:1899:G:H5'	2.25	0.67
2:B:2358:A:H3'	2:B:2359:C:C6	2.29	0.67
2:B:2369:G:H2'	2:B:2370:G:C8	2.30	0.67
2:B:3082:C:H2'	2:B:3083:G:H8	1.59	0.67
3:C:41:A:P	41:OA:64:MET:HA	2.34	0.67
5:E:175:GLU:HG2	5:E:178:VAL:HG22	1.77	0.67
6:F:34:TYR:HA	6:F:38:HIS:CE1	2.30	0.67
8:H:3:ARG:HB2	8:H:21:PRO:HB3	1.76	0.67
8:H:203:ARG:NH2	8:H:240:PRO:HB3	2.06	0.67
10:J:63:LEU:HB2	10:J:79:VAL:HG12	1.77	0.67
11:K:80:GLN:HE21	25:Y:135:PRO:CB	2.07	0.67
14:N:213:PHE:N	14:N:214:PRO:HD3	2.09	0.67
19:S:154:PRO:HB3	19:S:157:LYS:HZ3	1.57	0.67
24:X:80:ARG:NE	25:Y:156:TYR:HB2	2.10	0.67
26:Z:25:ASN:HD22	26:Z:27:VAL:HG22	1.59	0.67
48:VA:26:PHE:O	48:VA:87:VAL:HB	1.94	0.67
50:XA:121:VAL:HG23	50:XA:141:ILE:HG21	1.76	0.67
55:CB:164:PRO:HB3	55:CB:167:ARG:HH21	1.60	0.67
55:CB:176:THR:O	55:CB:180:ARG:HG3	1.95	0.67
56:DB:175:ILE:HG22	56:DB:178:LEU:HB2	1.76	0.67
63:KB:108:ASP:CG	63:KB:111:ALA:HB3	2.20	0.67
73:UB:24:TRP:CZ3	73:UB:30:LYS:HA	2.27	0.67
82:DC:46:ILE:HG22	82:DC:47:SER:H	1.59	0.67
83:EC:6906:G:H2'	83:EC:6907:G:H5"	1.75	0.67
2:B:370:U:H4'	2:B:404:G:C4'	2.25	0.67
2:B:1210:U:H2'	2:B:1211:U:C6	2.29	0.67
2:B:1286:A:H4'	2:B:1287:A:C4'	2.25	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1435:A:C2	8:H:93:MET:HE1	2.29	0.67
4:D:27:A:H2	4:D:56:A:N1	1.93	0.67
15:O:82:ARG:HG2	15:O:112:LEU:HB2	1.76	0.67
22:V:60:PRO:HG2	22:V:142:GLY:HA3	1.77	0.67
25:Y:56:PHE:CE1	25:Y:60:LYS:HE2	2.29	0.67
37:KA:23:ASN:O	37:KA:25:PRO:HD3	1.95	0.67
48:VA:30:VAL:HG13	48:VA:31:ASP:N	2.07	0.67
48:VA:30:VAL:HG23	48:VA:183:PHE:CE1	2.27	0.67
55:CB:118:LEU:HD23	55:CB:121:ILE:HD12	1.77	0.67
56:DB:210:GLN:O	56:DB:214:LYS:HG3	1.95	0.67
59:GB:49:LEU:HD23	59:GB:99:LEU:HD23	1.77	0.67
66:NB:41:PRO:HD2	66:NB:44:LEU:HB2	1.75	0.67
82:DC:814:LYS:O	82:DC:818:ILE:HG13	1.95	0.67
83:EC:6939:C:C5'	83:EC:6940:U:H5'	2.23	0.67
1:A:127:G:OP1	1:A:128:U:H5	1.77	0.67
1:A:913:G:O6	2:B:2206:G:H4'	1.95	0.67
1:A:1435:G:H4'	1:A:1436:A:H5'	1.77	0.67
1:A:1487:A:H4'	1:A:1593:A:C5'	2.25	0.67
1:A:1614:A:H5'	78:ZB:47:PRO:HD3	1.76	0.67
2:B:321:C:H4'	19:S:150:TRP:CD2	2.29	0.67
2:B:879:U:OP1	2:B:2981:U:H4'	1.95	0.67
2:B:2622:C:H2'	2:B:2623:G:C8	2.30	0.67
2:B:2742:C:OP1	46:TA:19:LYS:HG3	1.95	0.67
2:B:2766:U:H2'	2:B:2767:U:C6	2.30	0.67
2:B:3049:A:N6	7:G:75:ALA:HB2	2.09	0.67
6:F:225:ILE:O	6:F:238:ILE:HA	1.95	0.67
8:H:60:THR:HG22	8:H:61:SER:N	2.10	0.67
12:L:54:GLU:O	12:L:58:VAL:HG23	1.95	0.67
19:S:68:ARG:HG3	19:S:127:TYR:C	2.20	0.67
35:IA:25:PHE:CD1	35:IA:65:LYS:HB2	2.29	0.67
36:JA:95:GLU:HG2	36:JA:96:ILE:N	2.10	0.67
49:WA:158:PRO:HB2	49:WA:206:PRO:HA	1.75	0.67
50:XA:70:PRO:HA	50:XA:73:VAL:HG23	1.75	0.67
54:BB:181:VAL:HG13	54:BB:226:PHE:H	1.60	0.67
59:GB:83:VAL:HA	59:GB:149:ARG:CA	2.17	0.67
82:DC:630:ALA:O	82:DC:633:ILE:HG12	1.95	0.67
1:A:370:A:H2'	1:A:371:G:O4'	1.95	0.67
1:A:443:C:H2'	1:A:444:C:O4'	1.95	0.67
1:A:1758:U:H2'	1:A:1759:C:C6	2.29	0.67
2:B:19:U:H1'	19:S:138:GLN:HE22	1.60	0.67
2:B:36:C:H2'	2:B:37:U:H5'	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3322:A:H2'	2:B:3323:A:C8	2.29	0.67
6:F:227:ARG:CG	6:F:239:ALA:HB2	2.25	0.67
10:J:56:LYS:HB2	10:J:98:VAL:CG1	2.24	0.67
17:Q:69:VAL:HG22	17:Q:70:ARG:H	1.60	0.67
17:Q:166:ALA:O	32:FA:147:LEU:HD11	1.95	0.67
22:V:62:VAL:O	22:V:87:VAL:HA	1.93	0.67
28:BA:14:TYR:CD1	28:BA:15:PRO:HD2	2.29	0.67
32:FA:128:ARG:CG	32:FA:129:PHE:H	2.07	0.67
48:VA:186:THR:HG22	48:VA:187:VAL:H	1.60	0.67
51:YA:149:GLN:CD	51:YA:151:LYS:HE3	2.19	0.67
54:BB:192:ILE:HD13	54:BB:238:LEU:HD22	1.77	0.67
70:RB:45:ALA:HA	70:RB:99:ILE:HD11	1.75	0.67
73:UB:24:TRP:CH2	73:UB:33:LEU:HD12	2.29	0.67
74:VB:17:LEU:HD12	74:VB:18:LEU:HG	1.77	0.67
76:XB:36:ILE:HD11	76:XB:38:ARG:NH1	2.09	0.67
1:A:975:C:O3'	63:KB:109:LYS:HB3	1.95	0.66
2:B:26:A:H2	2:B:328:U:H1'	1.60	0.66
2:B:360:G:H2'	2:B:361:A:C8	2.29	0.66
2:B:632:G:H5"	20:T:94:ARG:HD2	1.75	0.66
2:B:671:U:H2'	2:B:672:A:H8	1.60	0.66
2:B:856:G:H22	47:UA:4:ARG:NH2	1.92	0.66
2:B:1471:U:H4'	23:W:4:LEU:H	1.60	0.66
2:B:1523:U:H5'	29:CA:113:LEU:CB	2.24	0.66
2:B:3060:C:H2'	2:B:3061:G:C8	2.29	0.66
6:F:154:ALA:C	6:F:155:LYS:HD2	2.19	0.66
10:J:158:TYR:CB	18:R:115:PHE:CD2	2.78	0.66
19:S:15:GLN:O	19:S:20:ARG:HD3	1.95	0.66
24:X:42:TRP:CD1	24:X:53:LYS:HD2	2.30	0.66
49:WA:20:VAL:HA	49:WA:37:SER:HB2	1.76	0.66
55:CB:41:LYS:NZ	55:CB:69:PHE:HB2	2.09	0.66
61:IB:8:GLN:NE2	61:IB:14:GLN:H	1.90	0.66
1:A:43:A:H5"	1:A:437:A:N1	2.11	0.66
1:A:1585:U:N3	1:A:1611:A:H2	1.93	0.66
2:B:909:G:N7	2:B:925:A:H2	1.92	0.66
2:B:2851:A:H2'	2:B:2852:C:H5'	1.77	0.66
2:B:2878:G:H5"	7:G:5:LYS:HE2	1.77	0.66
2:B:3300:U:C2'	2:B:3301:U:H5'	2.25	0.66
4:D:9:C:C2'	4:D:10:C:H5'	2.25	0.66
7:G:4:ARG:HH21	7:G:8:ALA:HB3	1.60	0.66
8:H:62:ALA:HB3	8:H:90:PHE:HD2	1.59	0.66
8:H:346:LYS:H	8:H:346:LYS:CD	2.06	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:82:LYS:HA	11:K:119:VAL:CB	2.22	0.66
12:L:170:CYS:HG	12:L:177:TYR:HD2	1.42	0.66
13:M:31:ARG:HB3	13:M:82:VAL:O	1.95	0.66
23:W:106:LEU:HD23	23:W:123:LEU:HB3	1.77	0.66
26:Z:93:ILE:HB	26:Z:105:LEU:CD2	2.26	0.66
29:CA:64:GLU:HG2	29:CA:65:GLN:H	1.60	0.66
38:LA:19:LYS:HE3	38:LA:35:VAL:HB	1.78	0.66
47:UA:19:GLY:O	47:UA:23:ARG:HG3	1.95	0.66
61:IB:55:ASP:HB2	61:IB:113:PRO:HD3	1.78	0.66
66:NB:69:VAL:HG11	66:NB:81:ILE:HG23	1.75	0.66
68:PB:86:LEU:HD23	68:PB:98:TYR:C	2.21	0.66
1:A:166:C:O2	56:DB:133:LEU:HD13	1.95	0.66
1:A:606:A:H1’	1:A:609:U:OP1	1.94	0.66
1:A:1060:U:H3’	1:A:1061:A:H5”	1.78	0.66
1:A:1735:U:H2’	1:A:1736:G:H8	1.59	0.66
1:A:1771:U:H2’	1:A:1772:C:O4’	1.95	0.66
2:B:707:U:H2’	2:B:708:G:C5’	2.24	0.66
2:B:1363:A:OP1	11:K:160:ARG:HD3	1.96	0.66
2:B:1525:G:H21	2:B:1594:A:H1’	1.60	0.66
2:B:1551:C:H2’	2:B:1552:G:O4’	1.95	0.66
2:B:1666:G:H2’	2:B:1667:A:C8	2.30	0.66
2:B:2796:G:O6	46:TA:63:LYS:HD3	1.95	0.66
2:B:2818:U:H5’	2:B:2818:U:H6	1.59	0.66
2:B:3127:A:H3’	2:B:3128:G:H8	1.59	0.66
2:B:3376:A:H1’	35:IA:18:LYS:HA	1.78	0.66
4:D:28:C:H5”	15:O:137:ARG:HB3	1.77	0.66
6:F:29:LEU:CD1	6:F:163:ARG:HE	2.08	0.66
7:G:311:PHE:HB3	7:G:314:TYR:HB3	1.77	0.66
8:H:167:ALA:HA	8:H:170:LYS:HB2	1.76	0.66
13:M:88:TYR:CZ	13:M:155:SER:HB3	2.30	0.66
14:N:9:TYR:HB3	14:N:97:LEU:CD2	2.25	0.66
22:V:62:VAL:HG11	22:V:140:LEU:HD22	1.77	0.66
46:TA:47:GLN:C	46:TA:49:GLY:H	2.02	0.66
54:BB:246:LEU:H	54:BB:246:LEU:CD1	2.06	0.66
58:FB:55:TYR:HB2	58:FB:176:SER:CA	2.25	0.66
69:QB:92:LYS:HE3	69:QB:94:ILE:HB	1.77	0.66
74:VB:12:VAL:HG22	74:VB:23:PHE:HB3	1.78	0.66
82:DC:219:ALA:O	82:DC:328:LEU:HB3	1.95	0.66
1:A:148:A:N6	56:DB:133:LEU:HD21	2.05	0.66
1:A:992:A:C2’	1:A:993:A:H5’	2.22	0.66
1:A:1096:C:H4’	1:A:1099:U:H4’	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:268:A:H61	2:B:295:A:H3'	1.60	0.66
2:B:2356:A:N6	2:B:2983:C:C5	2.63	0.66
2:B:2449:A:N6	2:B:2497:U:H3	1.93	0.66
2:B:3040:A:H5"	27:AA:12:ARG:HD3	1.77	0.66
6:F:70:ARG:O	6:F:70:ARG:HG3	1.94	0.66
10:J:65:ILE:HD11	10:J:77:ARG:HB3	1.77	0.66
21:U:98:ALA:CB	21:U:148:LEU:HD11	2.25	0.66
22:V:78:ASN:HA	22:V:99:THR:CG2	2.17	0.66
22:V:132:PRO:HD2	22:V:135:GLN:HG3	1.76	0.66
31:EA:111:LYS:O	31:EA:115:LYS:HB2	1.96	0.66
33:GA:16:ALA:O	33:GA:20:GLY:HA2	1.96	0.66
36:JA:32:TRP:CH2	36:JA:52:GLN:HG2	2.30	0.66
43:QA:49:MET:HE2	43:QA:51:ILE:O	1.95	0.66
54:BB:228:ILE:O	54:BB:235:TYR:HB2	1.95	0.66
56:DB:159:ARG:HB3	56:DB:170:THR:OG1	1.95	0.66
65:MB:16:SER:HB2	65:MB:20:VAL:O	1.95	0.66
2:B:217:U:H4'	30:DA:100:HIS:ND1	2.11	0.66
2:B:415:G:H2'	2:B:416:A:C8	2.30	0.66
2:B:1337:A:H2'	2:B:1338:C:C6	2.30	0.66
2:B:1653:G:H2'	2:B:1654:A:O4'	1.95	0.66
2:B:2291:A:H2'	2:B:2292:U:O4'	1.96	0.66
2:B:2912:G:H2'	2:B:2913:C:C6	2.30	0.66
2:B:2942:C:OP1	2:B:2943:G:H5"	1.96	0.66
2:B:3042:U:H2'	2:B:3043:C:O4'	1.96	0.66
2:B:3122:A:H2	13:M:67:ALA:HA	1.61	0.66
2:B:3334:U:H4'	2:B:3335:A:C5'	2.25	0.66
8:H:65:TRP:HE3	8:H:71:VAL:HG11	1.59	0.66
11:K:189:ILE:HG23	11:K:190:THR:HG23	1.76	0.66
15:O:141:ARG:O	15:O:145:LYS:HE3	1.95	0.66
23:W:23:TRP:C	23:W:24:LEU:HD12	2.19	0.66
24:X:10:ILE:HG22	24:X:24:LEU:HD22	1.78	0.66
24:X:13:ARG:O	24:X:15:PRO:HD3	1.95	0.66
35:IA:46:THR:HG21	35:IA:91:SER:OG	1.95	0.66
37:KA:49:ILE:HG22	37:KA:100:ILE:HA	1.76	0.66
41:OA:64:MET:HE3	41:OA:68:LYS:CE	2.25	0.66
52:ZA:80:VAL:HA	52:ZA:102:VAL:HG22	1.77	0.66
54:BB:243:GLY:O	54:BB:244:ILE:HD13	1.95	0.66
56:DB:161:GLU:HG2	56:DB:170:THR:HB	1.77	0.66
61:IB:14:GLN:HE21	61:IB:14:GLN:HA	1.60	0.66
68:PB:120:ARG:HA	68:PB:125:ILE:HD11	1.76	0.66
82:DC:493:VAL:HG22	82:DC:556:ILE:HG23	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:635:CYS:CB	82:DC:664:VAL:HG13	2.20	0.66
1:A:843:U:H2'	1:A:844:A:C8	2.31	0.66
1:A:1357:A:H2'	1:A:1358:G:C8	2.29	0.66
2:B:364:G:C5'	8:H:77:VAL:HG11	2.25	0.66
2:B:897:U:H2'	2:B:898:U:C5'	2.26	0.66
2:B:1303:A:H2	2:B:2937:G:H21	1.43	0.66
2:B:1764:U:H3'	2:B:1765:U:C5'	2.26	0.66
2:B:2430:A:H8	2:B:2430:A:H5'	1.60	0.66
2:B:2724:U:H5"	25:Y:54:HIS:CG	2.31	0.66
2:B:3206:C:H5"	2:B:3207:U:C5'	2.17	0.66
2:B:3218:A:H2'	2:B:3278:C:C5	2.30	0.66
2:B:3254:G:H2'	2:B:3255:U:O4'	1.95	0.66
4:D:17:A:H2'	4:D:18:C:C6	2.30	0.66
12:L:99:PRO:HD3	12:L:132:VAL:HG12	1.76	0.66
15:O:28:ASP:O	15:O:32:ARG:HG2	1.96	0.66
36:JA:4:LEU:HD22	36:JA:91:THR:OG1	1.94	0.66
49:WA:218:GLY:O	49:WA:236:ALA:HB3	1.95	0.66
50:XA:4:PRO:HA	71:SB:41:GLU:HA	1.78	0.66
57:EB:12:ALA:H	57:EB:13:PRO:HD2	1.60	0.66
61:IB:89:ALA:HA	61:IB:104:HIS:CB	2.25	0.66
73:UB:102:VAL:CG1	73:UB:127:VAL:HG12	2.26	0.66
73:UB:130:VAL:HG21	73:UB:135:LEU:HD21	1.76	0.66
83:EC:6770:U:H3	83:EC:6821:U:H2'	1.61	0.66
1:A:1729:C:H2'	1:A:1730:A:H5'	1.76	0.66
2:B:36:C:H4'	2:B:808:A:N1	2.10	0.66
2:B:597:G:H1'	8:H:326:ARG:HG3	1.78	0.66
2:B:1259:A:O2'	2:B:1280:C:H4'	1.96	0.66
2:B:1487:G:H1'	38:LA:6:THR:HG21	1.77	0.66
2:B:1609:C:H2'	2:B:1610:G:C8	2.30	0.66
2:B:2585:G:H22	3:C:151:C:H5	1.42	0.66
2:B:2618:G:H5"	14:N:116:ARG:HG2	1.76	0.66
3:C:51:G:H1'	3:C:52:A:N7	2.09	0.66
9:I:184:ASP:HB2	9:I:187:THR:CG2	2.26	0.66
11:K:210:PRO:HA	11:K:242:SER:O	1.94	0.66
15:O:18:VAL:HB	15:O:128:TYR:HB3	1.77	0.66
16:P:128:VAL:HG12	16:P:132:ILE:HD11	1.77	0.66
20:T:92:THR:O	20:T:96:LYS:HG3	1.96	0.66
24:X:108:GLN:HE21	24:X:108:GLN:HA	1.60	0.66
41:OA:17:THR:HG23	43:QA:51:ILE:HD13	1.77	0.66
46:TA:26:THR:HG22	46:TA:27:GLN:H	1.61	0.66
49:WA:49:GLY:HA2	49:WA:54:PHE:CD1	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:73:VAL:O	50:XA:95:ALA:HB1	1.95	0.66
50:XA:171:GLY:HA3	50:XA:203:PHE:HD2	1.61	0.66
54:BB:31:PRO:HB2	54:BB:38:LEU:HD21	1.78	0.66
56:DB:61:PHE:CE1	56:DB:96:SER:HB3	2.31	0.66
57:EB:102:PRO:HB3	57:EB:109:VAL:HG12	1.78	0.66
57:EB:126:LEU:HD12	57:EB:129:LEU:HD12	1.78	0.66
70:RB:38:SER:O	70:RB:42:VAL:HG23	1.95	0.66
76:XB:10:ARG:NH1	76:XB:11:ASN:HB2	2.05	0.66
1:A:264:G:H3'	1:A:265:A:H5"	1.78	0.66
1:A:348:U:O3'	58:FB:14:THR:HG22	1.96	0.66
1:A:435:C:H5'	73:UB:49:ALA:HA	1.78	0.66
1:A:939:A:H2'	1:A:940:A:H8	1.60	0.66
2:B:296:A:OP2	19:S:13:LYS:HE2	1.95	0.66
2:B:499:G:H2'	2:B:500:C:H6	1.60	0.66
2:B:663:C:O2'	8:H:104:LYS:HG3	1.95	0.66
2:B:959:C:H41	2:B:2801:A:H5"	1.59	0.66
2:B:2562:A:H2'	2:B:2563:G:C8	2.30	0.66
6:F:64:ARG:HA	6:F:71:LEU:HA	1.76	0.66
8:H:178:LEU:HD11	8:H:222:VAL:CG2	2.26	0.66
9:I:51:LEU:CA	9:I:144:VAL:HG22	2.26	0.66
10:J:142:ASP:O	10:J:146:ILE:HG12	1.95	0.66
12:L:212:ALA:HA	12:L:215:VAL:HB	1.78	0.66
22:V:178:ARG:HA	22:V:185:LYS:HZ3	1.61	0.66
25:Y:14:MET:HE3	25:Y:58:GLN:HG2	1.77	0.66
34:HA:53:LYS:HA	34:HA:56:LEU:HD12	1.77	0.66
35:IA:14:ILE:O	35:IA:70:ARG:HA	1.96	0.66
37:KA:18:ARG:HB3	37:KA:23:ASN:HB3	1.78	0.66
41:OA:66:TYR:O	41:OA:70:VAL:HG23	1.96	0.66
44:RA:95:VAL:HB	44:RA:122:ARG:NH1	2.10	0.66
57:EB:9:LEU:O	57:EB:10:SER:HB2	1.96	0.66
57:EB:142:TYR:HE1	57:EB:148:LYS:HD2	1.59	0.66
58:FB:172:ARG:HB3	58:FB:175:GLN:HB2	1.77	0.66
63:KB:60:VAL:HG12	63:KB:61:THR:H	1.61	0.66
66:NB:35:PRO:HD3	69:QB:8:ASP:OD2	1.95	0.66
82:DC:109:VAL:HG12	82:DC:110:ASP:N	2.11	0.66
82:DC:224:GLN:HE21	82:DC:328:LEU:HD23	1.61	0.66
82:DC:345:PRO:HG2	82:DC:451:GLY:O	1.96	0.66
1:A:1315:U:H5"	1:A:1329:A:C2	2.30	0.66
1:A:1727:G:H21	58:FB:32:GLN:HE22	1.44	0.66
2:B:1463:U:C2'	2:B:1464:G:H5'	2.25	0.66
2:B:2330:C:H2'	2:B:2331:C:C6	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2948:C:H4'	7:G:243:HIS:N	2.06	0.66
2:B:3017:A:H1'	27:AA:9:THR:CG2	2.25	0.66
3:C:91:C:OP1	3:C:91:C:H3'	1.96	0.66
6:F:227:ARG:HG3	6:F:239:ALA:HB2	1.77	0.66
9:I:178:ASN:H	9:I:178:ASN:ND2	1.93	0.66
11:K:104:GLN:NE2	22:V:6:THR:HG22	2.08	0.66
31:EA:23:VAL:HG12	31:EA:45:GLY:CA	2.23	0.66
43:QA:27:ILE:HA	43:QA:30:ARG:CD	2.25	0.66
48:VA:128:MET:SD	48:VA:150:ILE:HD12	2.36	0.66
49:WA:289:ALA:HB2	49:WA:305:TYR:CD2	2.30	0.66
50:XA:107:PHE:CD1	50:XA:135:GLU:HB3	2.31	0.66
56:DB:57:ASP:OD1	56:DB:61:PHE:HB2	1.95	0.66
58:FB:63:GLY:O	58:FB:75:LYS:HG2	1.96	0.66
82:DC:163:ALA:O	82:DC:169:VAL:HG23	1.96	0.66
1:A:341:A:H2'	1:A:342:C:C6	2.31	0.66
2:B:664:U:H5'	8:H:107:ARG:HA	1.78	0.66
2:B:675:C:C2'	2:B:676:G:H5'	2.25	0.66
2:B:709:A:H1'	2:B:2787:G:O2'	1.96	0.66
2:B:1121:U:H3	2:B:1137:C:N4	1.94	0.66
2:B:1870:C:OP1	2:B:3077:A:H5'	1.94	0.66
2:B:1948:G:H5'	23:W:101:VAL:HG11	1.78	0.66
2:B:3019:U:H2'	2:B:3020:U:O4'	1.96	0.66
2:B:3182:G:H4'	20:T:161:LYS:HG3	1.78	0.66
7:G:240:ARG:HH11	7:G:240:ARG:HG3	1.60	0.66
7:G:305:ILE:HD11	7:G:317:ILE:HG21	1.77	0.66
9:I:183:TRP:NE1	9:I:185:PHE:HA	2.11	0.66
9:I:258:LYS:HB2	9:I:261:THR:HG22	1.77	0.66
13:M:43:VAL:HG12	13:M:44:THR:N	2.07	0.66
16:P:86:LYS:HB3	16:P:90:ARG:HB3	1.77	0.66
19:S:93:LYS:N	19:S:93:LYS:HE2	2.11	0.66
19:S:106:VAL:O	19:S:109:ARG:HG3	1.96	0.66
19:S:159:ARG:HA	19:S:162:ARG:HH21	1.60	0.66
20:T:96:LYS:O	20:T:99:LEU:HB2	1.96	0.66
54:BB:142:HIS:CE1	54:BB:226:PHE:HE2	2.14	0.66
55:CB:68:ILE:HD11	55:CB:90:ILE:HB	1.76	0.66
68:PB:81:ILE:HG22	68:PB:86:LEU:HD11	1.78	0.66
82:DC:297:PRO:O	82:DC:300:LEU:HB3	1.96	0.66
82:DC:635:CYS:SG	82:DC:664:VAL:HA	2.36	0.66
1:A:400:A:N7	58:FB:25:ARG:HA	2.11	0.65
1:A:478:A:C4'	59:GB:127:VAL:HG21	2.26	0.65
1:A:867:G:OP1	63:KB:3:ARG:HD3	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:374:A:N3	2:B:376:G:H5”	2.11	0.65
2:B:585:A:H2’	2:B:586:C:C6	2.30	0.65
2:B:675:C:H2’	2:B:676:G:H5’	1.78	0.65
2:B:790:U:H5”	8:H:112:LYS:HB3	1.78	0.65
2:B:1227:C:H5’	2:B:3117:C:H5’	1.76	0.65
2:B:1234:G:H2’	2:B:1235:U:C5	2.31	0.65
2:B:1482:A:H5’	2:B:1858:A:C6	2.30	0.65
2:B:2108:C:H1’	2:B:3344:A:H8	1.60	0.65
2:B:3070:A:H2’	2:B:3071:U:H5’	1.77	0.65
11:K:90:LYS:HG2	11:K:133:TYR:HD1	1.60	0.65
11:K:102:VAL:HG12	11:K:130:ILE:HD13	1.78	0.65
11:K:236:ILE:HG13	11:K:240:VAL:HG23	1.78	0.65
17:Q:49:ARG:HG2	39:MA:116:TYR:O	1.95	0.65
44:RA:81:SER:O	44:RA:85:LEU:HD23	1.96	0.65
48:VA:7:LYS:HA	48:VA:10:GLU:HG2	1.77	0.65
48:VA:32:ASN:ND2	48:VA:32:ASN:H	1.92	0.65
54:BB:11:ARG:HH11	54:BB:21:ASP:HB2	1.61	0.65
59:GB:130:THR:C	59:GB:132:ARG:H	2.04	0.65
66:NB:8:GLN:HG2	66:NB:21:HIS:CD2	2.31	0.65
74:VB:105:ARG:HA	74:VB:108:ARG:HB3	1.78	0.65
82:DC:31:GLY:O	82:DC:35:LEU:HB2	1.96	0.65
82:DC:249:PHE:HB3	82:DC:269:LEU:HB3	1.78	0.65
82:DC:287:ALA:HB3	82:DC:288:ILE:HD12	1.78	0.65
82:DC:296:ILE:CB	82:DC:297:PRO:HD3	2.26	0.65
1:A:809:A:C2’	57:EB:108:GLN:HE22	2.08	0.65
1:A:1193:A:H5’	70:RB:76:SER:HB3	1.79	0.65
1:A:1639:C:H2’	1:A:1640:C:O4’	1.96	0.65
1:A:1764:C:OP1	1:A:1771:U:H4’	1.97	0.65
2:B:43:A:O3’	19:S:84:PRO:HG2	1.97	0.65
2:B:100:A:H4’	19:S:181:ASN:OD1	1.96	0.65
2:B:145:G:H5”	19:S:55:ALA:HB1	1.77	0.65
2:B:429:U:H2’	2:B:430:U:C6	2.31	0.65
2:B:516:A:H61	2:B:574:U:H3	1.43	0.65
2:B:965:A:H2’	2:B:966:U:C6	2.32	0.65
2:B:1510:G:H2’	2:B:1512:U:C4	2.31	0.65
2:B:2583:C:H2’	2:B:2584:G:H8	1.61	0.65
2:B:2890:A:H61	2:B:2913:C:H42	1.44	0.65
2:B:3233:C:H2’	2:B:3234:A:C8	2.31	0.65
8:H:250:TRP:HZ3	8:H:258:LEU:HD22	1.59	0.65
11:K:95:ILE:HG22	11:K:99:PRO:HB2	1.77	0.65
18:R:23:ILE:O	18:R:30:GLY:HA2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:FA:73:LEU:O	32:FA:113:LEU:HB2	1.94	0.65
58:FB:84:HIS:HE1	58:FB:86:SER:HB2	1.58	0.65
82:DC:135:VAL:HB	82:DC:184:SER:HB2	1.78	0.65
1:A:348:U:H4'	58:FB:14:THR:HA	1.77	0.65
2:B:600:G:H21	2:B:603:A:H62	1.44	0.65
2:B:1255:C:H1'	16:P:131:GLU:HG3	1.78	0.65
2:B:1394:A:H2'	2:B:1395:G:C1'	2.27	0.65
2:B:1923:C:H2'	2:B:1924:U:H6	1.61	0.65
2:B:3119:U:H5'	2:B:3120:C:OP2	1.97	0.65
3:C:91:C:H2'	3:C:92:A:C8	2.30	0.65
4:D:85:G:H1	4:D:95:A:N6	1.94	0.65
12:L:82:LEU:HD11	12:L:86:THR:CG2	2.25	0.65
21:U:119:VAL:CB	21:U:146:ILE:HG23	2.24	0.65
24:X:10:ILE:CG2	24:X:24:LEU:HD22	2.25	0.65
34:HA:73:GLY:O	34:HA:77:LEU:HB2	1.97	0.65
58:FB:61:GLU:O	58:FB:77:ARG:HA	1.97	0.65
59:GB:163:PRO:O	59:GB:164:PHE:HB2	1.95	0.65
72:TB:78:ARG:HB2	72:TB:124:LYS:HD3	1.79	0.65
82:DC:271:ARG:HB3	82:DC:274:ASN:ND2	2.11	0.65
82:DC:588:LEU:HB3	82:DC:688:ILE:HA	1.78	0.65
82:DC:653:VAL:HG21	82:DC:691:VAL:HB	1.77	0.65
82:DC:697:ALA:HA	82:DC:700:ARG:HB2	1.78	0.65
1:A:43:A:H5"	1:A:437:A:C2	2.31	0.65
1:A:562:G:H2'	1:A:563:U:H6	1.61	0.65
1:A:891:A:H2'	1:A:892:A:C8	2.31	0.65
1:A:1365:C:H4'	66:NB:30:LYS:HD2	1.78	0.65
2:B:405:U:H4'	2:B:1416:C:H4'	1.78	0.65
2:B:450:G:H2'	2:B:451:U:H5'	1.79	0.65
2:B:578:A:H2'	8:H:334:PHE:CD2	2.32	0.65
2:B:1098:A:O2'	25:Y:132:PRO:HG3	1.95	0.65
2:B:1184:A:H4'	18:R:59:ASN:ND2	2.12	0.65
2:B:2128:C:H2'	2:B:2129:U:O4'	1.97	0.65
2:B:3184:A:C2'	2:B:3185:U:H5'	2.25	0.65
4:D:11:A:H4'	4:D:13:A:H2'	1.78	0.65
4:D:31:U:H2'	4:D:32:U:C6	2.32	0.65
8:H:209:TYR:HA	8:H:251:THR:OG1	1.97	0.65
10:J:67:GLY:N	10:J:68:PRO:HA	2.12	0.65
11:K:132:PRO:HG2	11:K:133:TYR:CE2	2.31	0.65
15:O:12:LEU:HB2	15:O:133:ARG:CZ	2.26	0.65
24:X:11:GLY:O	24:X:24:LEU:HD23	1.96	0.65
40:NA:62:ARG:NE	40:NA:62:ARG:HA	2.09	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:30:VAL:CG2	48:VA:183:PHE:HE1	2.08	0.65
48:VA:30:VAL:HG22	48:VA:32:ASN:HD22	1.61	0.65
50:XA:59:LEU:HD12	50:XA:62:ARG:HD2	1.78	0.65
53:AB:64:ARG:HE	60:HB:90:THR:HG22	1.61	0.65
54:BB:71:LYS:HG2	54:BB:91:THR:O	1.97	0.65
54:BB:137:PRO:CG	54:BB:150:PRO:HD2	2.25	0.65
55:CB:70:VAL:HG21	66:NB:47:LYS:HB2	1.78	0.65
73:UB:19:ARG:HD3	73:UB:23:ARG:HG2	1.79	0.65
1:A:312:A:N3	1:A:314:C:H2'	2.10	0.65
1:A:868:G:H2'	1:A:869:A:C8	2.31	0.65
1:A:893:U:H2'	1:A:894:U:H5'	1.79	0.65
1:A:962:C:OP1	63:KB:70:LYS:HB3	1.97	0.65
1:A:982:U:H2'	1:A:983:A:O4'	1.95	0.65
1:A:1045:C:H2'	1:A:1046:G:C8	2.32	0.65
1:A:1605:G:H5"	66:NB:127:LYS:HB3	1.76	0.65
2:B:316:U:O2	40:NA:30:LYS:HG2	1.95	0.65
2:B:398:A:H5'	21:U:3:ARG:HD2	1.77	0.65
2:B:634:C:O2'	2:B:635:G:H5'	1.96	0.65
2:B:800:G:H21	2:B:801:A:H61	1.44	0.65
2:B:1523:U:H1'	29:CA:111:ASN:HB3	1.79	0.65
2:B:1656:A:N6	2:B:1799:A:OP2	2.29	0.65
2:B:1886:A:H2'	2:B:1887:A:H8	1.62	0.65
2:B:2181:C:H5"	6:F:193:ARG:CZ	2.27	0.65
2:B:2757:U:H3'	2:B:2758:A:C5'	2.26	0.65
2:B:2932:U:H2'	2:B:2934:A:OP2	1.96	0.65
2:B:3133:C:H2'	2:B:3134:A:O4'	1.96	0.65
2:B:3181:C:H2'	2:B:3182:G:O4'	1.97	0.65
4:D:76:A:N1	4:D:102:A:H5'	2.11	0.65
9:I:21:ARG:HG3	9:I:24:ARG:HH21	1.58	0.65
29:CA:92:LYS:HG3	29:CA:110:VAL:HB	1.79	0.65
38:LA:54:ILE:HD11	38:LA:78:GLY:HA2	1.78	0.65
38:LA:80:ARG:CZ	38:LA:80:ARG:HA	2.26	0.65
47:UA:25:GLN:HA	47:UA:25:GLN:NE2	2.12	0.65
52:ZA:237:VAL:HG21	71:SB:50:TYR:HD2	1.61	0.65
54:BB:49:ARG:HD2	54:BB:56:LEU:O	1.96	0.65
54:BB:139:VAL:HB	54:BB:147:ILE:H	1.60	0.65
56:DB:139:ASN:HA	56:DB:142:ARG:HB2	1.78	0.65
63:KB:16:ILE:HG12	63:KB:17:PRO:HD2	1.78	0.65
63:KB:135:LEU:HB3	63:KB:136:PRO:HD2	1.78	0.65
82:DC:224:GLN:HG2	82:DC:328:LEU:CD2	2.26	0.65
82:DC:489:VAL:O	82:DC:531:ALA:HA	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:479:C:C3’	1:A:480:G:H5”	2.27	0.65
1:A:1673:G:H2’	1:A:1674:C:C6	2.31	0.65
2:B:413:U:H1’	21:U:116:HIS:CE1	2.31	0.65
2:B:570:A:H2’	2:B:571:U:C6	2.32	0.65
2:B:1007:U:H2’	2:B:1008:U:C6	2.30	0.65
2:B:2356:A:N6	2:B:2983:C:H41	1.95	0.65
2:B:3066:U:H2’	2:B:3067:C:C6	2.28	0.65
6:F:6:ARG:NH1	6:F:198:LYS:HG2	2.12	0.65
7:G:169:THR:CG2	7:G:171:LEU:HG	2.26	0.65
9:I:20:PHE:HZ	25:Y:24:ALA:HB3	1.61	0.65
15:O:109:HIS:HA	15:O:125:MET:HE2	1.76	0.65
16:P:134:GLY:N	16:P:137:GLN:HB2	2.11	0.65
17:Q:168:ARG:HA	17:Q:171:ARG:HB2	1.79	0.65
21:U:118:GLN:HE22	21:U:147:GLU:HG2	1.62	0.65
22:V:155:MET:HE3	22:V:163:PRO:HB3	1.78	0.65
31:EA:21:LYS:HG2	31:EA:49:TYR:HE2	1.61	0.65
38:LA:8:ARG:HA	38:LA:8:ARG:HE	1.61	0.65
48:VA:38:MET:HE1	48:VA:185:LEU:HD13	1.79	0.65
49:WA:222:LEU:HD23	49:WA:234:LEU:CD1	2.27	0.65
59:GB:109:LEU:O	59:GB:113:VAL:HG23	1.97	0.65
73:UB:24:TRP:HH2	73:UB:33:LEU:HD12	1.62	0.65
74:VB:12:VAL:HA	74:VB:22:GLN:O	1.96	0.65
82:DC:308:LYS:O	82:DC:311:GLU:HB2	1.97	0.65
1:A:12:U:H2’	1:A:13:C:C6	2.31	0.65
1:A:142:G:P	56:DB:139:ASN:HD21	2.20	0.65
2:B:713:U:O2’	2:B:754:G:H5”	1.97	0.65
2:B:790:U:H4’	8:H:112:LYS:O	1.97	0.65
2:B:1107:C:H2’	2:B:1108:U:C6	2.31	0.65
2:B:1110:U:H2’	2:B:1111:U:C6	2.31	0.65
2:B:1381:A:H5”	8:H:197:ARG:CZ	2.26	0.65
2:B:2641:U:H4’	33:GA:7:HIS:CD2	2.32	0.65
4:D:65:G:H2’	4:D:66:A:C8	2.32	0.65
12:L:208:GLU:HG3	12:L:211:LEU:HD23	1.78	0.65
14:N:73:ASN:HA	14:N:76:MET:HB2	1.78	0.65
15:O:139:THR:HG21	15:O:148:VAL:HG13	1.79	0.65
20:T:110:PRO:HA	20:T:113:ASP:CB	2.26	0.65
21:U:30:ARG:HA	21:U:119:VAL:HG11	1.77	0.65
24:X:11:GLY:C	24:X:24:LEU:HD23	2.22	0.65
34:HA:41:LEU:HG	34:HA:100:ILE:HD11	1.79	0.65
36:JA:3:SER:HA	36:JA:71:HIS:CD2	2.31	0.65
59:GB:34:PHE:CD2	59:GB:105:LEU:HD23	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:IB:66:ILE:HD11	61:IB:138:ASN:HB3	1.79	0.65
65:MB:108:ARG:HB2	65:MB:111:MET:SD	2.36	0.65
69:QB:105:LEU:CD2	69:QB:108:LEU:HD12	2.25	0.65
2:B:30:G:OP2	19:S:187:ARG:HB2	1.96	0.65
2:B:963:G:H8	2:B:963:G:O5'	1.79	0.65
2:B:1387:G:H4'	36:JA:78:ASN:ND2	2.12	0.65
2:B:1448:U:H5"	21:U:66:SER:O	1.97	0.65
2:B:1651:U:H5"	6:F:71:LEU:HD13	1.77	0.65
2:B:1691:U:C4'	23:W:55:VAL:HG11	2.24	0.65
2:B:2182:A:H2'	2:B:2183:A:H8	1.59	0.65
2:B:2349:U:H5"	2:B:2390:A:H5"	1.79	0.65
2:B:3001:C:H2'	2:B:3002:C:O4'	1.97	0.65
2:B:3262:U:H2'	2:B:3263:G:H5"	1.78	0.65
5:E:12:HIS:CE1	5:E:206:VAL:HG11	2.32	0.65
8:H:300:ARG:HB2	8:H:301:PRO:HD2	1.78	0.65
13:M:93:VAL:HG22	44:RA:82:LEU:CD2	2.26	0.65
21:U:95:LEU:HD23	21:U:148:LEU:HD22	1.78	0.65
31:EA:13:VAL:HA	31:EA:80:LEU:HA	1.79	0.65
50:XA:123:VAL:HG12	50:XA:124:THR:H	1.60	0.65
72:TB:78:ARG:HB3	72:TB:124:LYS:HB3	1.78	0.65
1:A:1315:U:H5"	1:A:1329:A:N3	2.11	0.65
2:B:902:G:C2'	2:B:903:U:H5'	2.27	0.65
2:B:975:C:H2'	2:B:976:U:H6	1.61	0.65
2:B:1231:A:H2'	2:B:1278:A:N6	2.12	0.65
2:B:1686:U:H5"	26:Z:42:LYS:NZ	2.11	0.65
2:B:2799:A:H5"	2:B:2800:G:O5'	1.97	0.65
2:B:2858:U:H2'	2:B:2859:U:C6	2.32	0.65
2:B:3129:A:C2	2:B:3131:U:H1'	2.32	0.65
6:F:196:TRP:CD1	6:F:197:PRO:HA	2.32	0.65
10:J:175:LYS:HG3	18:R:111:ALA:HA	1.79	0.65
12:L:168:ALA:O	12:L:171:LYS:HB3	1.97	0.65
15:O:89:TYR:HB3	15:O:169:ALA:HA	1.79	0.65
26:Z:17:VAL:HG12	26:Z:19:VAL:HG13	1.79	0.65
36:JA:97:ALA:HB3	36:JA:100:ILE:CG1	2.27	0.65
45:SA:2:ARG:HD3	45:SA:4:LYS:HB3	1.79	0.65
50:XA:188:LEU:HD13	50:XA:189:VAL:H	1.60	0.65
51:YA:31:ASP:HA	51:YA:45:LYS:HA	1.78	0.65
57:EB:114:ARG:O	57:EB:117:THR:HG22	1.97	0.65
68:PB:26:ILE:HD12	68:PB:31:ALA:HA	1.77	0.65
71:SB:19:ALA:HB2	71:SB:71:ARG:HH12	1.60	0.65
74:VB:35:VAL:HG22	74:VB:36:SER:H	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:XB:9:GLY:O	76:XB:10:ARG:HB2	1.95	0.65
82:DC:81:MET:HB2	82:DC:98:PHE:CE2	2.31	0.65
1:A:969:C:C1'	1:A:1104:U:H4'	2.27	0.65
1:A:1011:G:H2'	1:A:1012:U:H5	1.61	0.65
1:A:1132:A:H2'	1:A:1133:A:C8	2.31	0.65
1:A:1689:A:H2'	1:A:1690:G:H8	1.61	0.65
2:B:10:C:H2'	2:B:11:A:O4'	1.96	0.65
2:B:800:G:N2	2:B:801:A:H61	1.95	0.65
2:B:1231:A:N1	2:B:1277:C:H5	1.96	0.65
2:B:2350:C:O3'	21:U:68:GLY:HA3	1.97	0.65
3:C:23:U:H5"	30:DA:13:ARG:HG2	1.78	0.65
5:E:68:PHE:CZ	5:E:87:VAL:HA	2.32	0.65
6:F:53:GLY:HA2	6:F:191:LEU:HB3	1.79	0.65
7:G:236:LYS:HZ3	27:AA:45:ARG:HH22	1.45	0.65
10:J:149:ILE:HG23	10:J:155:LEU:HB3	1.79	0.65
11:K:82:LYS:CA	11:K:119:VAL:HB	2.24	0.65
12:L:139:VAL:HG13	12:L:199:ALA:HB2	1.79	0.65
16:P:106:LEU:H	16:P:142:ARG:HG3	1.61	0.65
19:S:62:TYR:HB2	19:S:132:VAL:HB	1.79	0.65
37:KA:48:ARG:HB3	37:KA:68:TRP:HZ3	1.62	0.65
47:UA:47:VAL:HG13	47:UA:56:THR:C	2.22	0.65
61:IB:78:THR:OG1	61:IB:119:VAL:HG22	1.97	0.65
69:QB:65:ILE:HG12	69:QB:71:VAL:HG22	1.79	0.65
73:UB:121:ARG:HH11	73:UB:121:ARG:CB	2.07	0.65
1:A:82:U:H2'	1:A:83:G:O4'	1.97	0.64
1:A:1258:U:H4'	60:HB:2:LEU:HD22	1.79	0.64
1:A:1735:U:H2'	1:A:1736:G:C8	2.31	0.64
2:B:104:G:H5'	2:B:699:A:H4'	1.79	0.64
2:B:680:G:H2'	2:B:681:U:H5'	1.77	0.64
2:B:1438:U:H2'	2:B:1439:U:C6	2.32	0.64
2:B:1636:U:H5"	31:EA:74:VAL:HB	1.79	0.64
2:B:2675:C:H42	15:O:22:SER:HB2	1.61	0.64
2:B:3064:U:H2'	2:B:3065:G:C8	2.31	0.64
2:B:3121:U:C1'	2:B:3122:A:H5"	2.27	0.64
4:D:105:C:H2'	4:D:106:U:H6	1.62	0.64
7:G:11:HIS:CD2	7:G:235:THR:HA	2.32	0.64
7:G:367:LYS:HG2	28:BA:17:ARG:NH2	2.09	0.64
10:J:31:ARG:HB2	37:KA:107:ILE:HG22	1.73	0.64
15:O:32:ARG:O	15:O:36:VAL:HG23	1.97	0.64
16:P:105:GLN:HA	16:P:142:ARG:HG2	1.79	0.64
19:S:66:VAL:HG13	19:S:128:LYS:O	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:IA:15:ASN:CB	35:IA:18:LYS:HE2	2.28	0.64
39:MA:38:ARG:HG3	39:MA:39:PRO:HD2	1.78	0.64
49:WA:246:SER:OG	49:WA:249:ARG:HB2	1.97	0.64
52:ZA:162:CYS:SG	52:ZA:212:LYS:HB3	2.36	0.64
57:EB:148:LYS:HE2	57:EB:179:LYS:HD3	1.79	0.64
73:UB:13:ARG:HB3	73:UB:13:ARG:NH1	2.11	0.64
82:DC:292:LYS:C	82:DC:294:ASP:H	2.02	0.64
82:DC:510:ARG:HA	82:DC:513:LYS:HD2	1.78	0.64
2:B:1140:G:H4'	11:K:94:LYS:NZ	2.12	0.64
2:B:1448:U:H5	2:B:2355:G:N2	1.95	0.64
2:B:2127:U:H1'	2:B:2301:U:OP1	1.97	0.64
2:B:2214:A:H2	2:B:2429:G:H21	1.42	0.64
2:B:2278:C:H2'	2:B:2279:A:H5"	1.80	0.64
4:D:33:U:O2	9:I:203:HIS:HB2	1.97	0.64
6:F:191:LEU:O	6:F:192:LYS:HG3	1.98	0.64
7:G:4:ARG:NH2	7:G:8:ALA:HB3	2.12	0.64
7:G:323:MET:HE3	7:G:359:ILE:HG12	1.78	0.64
20:T:85:ARG:HG2	20:T:90:HIS:CE1	2.32	0.64
22:V:19:PRO:C	22:V:21:SER:H	2.04	0.64
24:X:80:ARG:CZ	24:X:87:THR:HG21	2.27	0.64
58:FB:172:ARG:NE	58:FB:175:GLN:HG3	2.11	0.64
70:RB:24:ILE:HG22	70:RB:25:THR:H	1.62	0.64
70:RB:106:ILE:HG13	70:RB:107:THR:H	1.61	0.64
80:BC:45:VAL:HG12	80:BC:46:ASN:N	2.12	0.64
2:B:29:C:OP2	19:S:188:ARG:HB2	1.97	0.64
2:B:649:A:H2'	2:B:650:C:H6	1.62	0.64
2:B:981:U:H2'	2:B:982:C:O4'	1.98	0.64
2:B:1378:U:H2'	2:B:1379:G:H8	1.62	0.64
2:B:1836:C:N4	43:QA:3:ALA:HB2	2.12	0.64
7:G:105:VAL:HG21	7:G:148:LEU:HD12	1.79	0.64
8:H:280:ILE:HG13	8:H:281:ILE:HG22	1.78	0.64
14:N:97:LEU:H	14:N:97:LEU:HD12	1.61	0.64
19:S:61:ILE:HG23	19:S:132:VAL:O	1.96	0.64
40:NA:93:ILE:O	40:NA:97:SER:HB2	1.97	0.64
52:ZA:154:LEU:CD1	52:ZA:193:VAL:HG11	2.27	0.64
53:AB:135:GLU:HA	53:AB:153:ALA:HB2	1.79	0.64
55:CB:211:ILE:HG22	55:CB:215:ASP:OD2	1.98	0.64
67:OB:105:GLN:O	67:OB:109:LEU:HG	1.96	0.64
82:DC:815:ALA:O	82:DC:819:VAL:HG23	1.96	0.64
1:A:863:A:H2'	1:A:865:A:N7	2.12	0.64
1:A:875:G:H1'	1:A:937:C:H4'	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:720:A:H2'	22:V:69:ARG:NH2	2.11	0.64
2:B:965:A:O2'	32:FA:43:ILE:HB	1.97	0.64
2:B:1202:A:C2	2:B:2857:C:H5'	2.32	0.64
2:B:1225:A:C2	2:B:3116:G:H2'	2.32	0.64
2:B:1234:G:OP2	2:B:1235:U:H3'	1.96	0.64
2:B:2762:A:O2'	2:B:2763:U:H5'	1.96	0.64
7:G:76:VAL:HG12	7:G:325:LYS:HA	1.80	0.64
7:G:79:VAL:CG1	7:G:322:ILE:HB	2.26	0.64
7:G:94:GLU:HA	7:G:99:LEU:HD22	1.79	0.64
8:H:236:LEU:O	8:H:240:PRO:HG3	1.97	0.64
10:J:63:LEU:HB2	10:J:79:VAL:CG1	2.27	0.64
12:L:187:GLY:HA2	12:L:190:VAL:HG12	1.78	0.64
22:V:96:PHE:O	22:V:117:ALA:HB1	1.98	0.64
34:HA:41:LEU:HB3	34:HA:92:ILE:HB	1.79	0.64
39:MA:85:THR:HG22	39:MA:87:ALA:H	1.63	0.64
52:ZA:224:PHE:CE2	72:TB:95:PRO:HG2	2.32	0.64
61:IB:59:PRO:HG3	61:IB:66:ILE:HG13	1.79	0.64
63:KB:18:TYR:CE2	77:YB:25:VAL:HG11	2.31	0.64
70:RB:67:THR:HG23	79:AC:40:ARG:HD2	1.80	0.64
1:A:1487:A:H5'	1:A:1593:A:H4'	1.79	0.64
2:B:149:U:H3'	2:B:150:A:H5"	1.80	0.64
2:B:374:A:C4'	2:B:375:A:H5'	2.25	0.64
2:B:661:G:C6	32:FA:17:ALA:HB3	2.32	0.64
2:B:1725:C:H2'	2:B:1726:C:C6	2.32	0.64
2:B:2510:U:HO2'	2:B:2511:A:H8	1.45	0.64
2:B:3034:C:O2'	2:B:3035:A:H5'	1.98	0.64
2:B:3139:A:H4'	7:G:20:LYS:HD3	1.79	0.64
2:B:3366:G:H2'	2:B:3367:C:C6	2.32	0.64
3:C:91:C:C4'	30:DA:23:PRO:HB2	2.25	0.64
8:H:52:VAL:HG22	8:H:53:SER:H	1.62	0.64
8:H:126:ILE:HG12	8:H:238:LEU:HD21	1.79	0.64
9:I:148:ILE:HG12	9:I:151:GLN:CB	2.26	0.64
9:I:231:ILE:HG21	9:I:239:ILE:HD11	1.78	0.64
10:J:165:LEU:CD1	37:KA:9:VAL:HG22	2.28	0.64
19:S:73:ARG:NE	19:S:92:LEU:HD21	2.13	0.64
23:W:182:ASP:O	23:W:186:LYS:HB2	1.97	0.64
36:JA:45:ARG:HB2	36:JA:45:ARG:NH1	2.12	0.64
38:LA:41:ARG:HD2	38:LA:51:LEU:O	1.97	0.64
39:MA:45:LYS:O	39:MA:49:LYS:HB2	1.97	0.64
50:XA:4:PRO:HB3	71:SB:42:GLU:H	1.62	0.64
52:ZA:99:LYS:CB	52:ZA:117:THR:HB	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:156:THR:HG22	72:TB:99:PHE:CE2	2.32	0.64
54:BB:164:LEU:HD23	54:BB:165:ALA:N	2.13	0.64
59:GB:158:PHE:HD2	59:GB:164:PHE:HB3	1.62	0.64
75:WB:39:ALA:HB1	75:WB:71:ILE:C	2.22	0.64
82:DC:135:VAL:HG21	82:DC:185:VAL:HG23	1.79	0.64
82:DC:431:ILE:HG23	82:DC:459:ILE:HD11	1.80	0.64
82:DC:759:GLN:HB3	82:DC:766:PHE:HA	1.79	0.64
1:A:46:A:N6	1:A:433:C:H4'	2.12	0.64
1:A:385:A:H5"	58:FB:22:ARG:HB3	1.80	0.64
1:A:946:U:H5"	51:YA:165:ARG:CZ	2.27	0.64
1:A:1594:G:H2'	1:A:1595:U:H5'	1.79	0.64
2:B:1435:A:H2'	2:B:1437:C:O4'	1.98	0.64
2:B:1498:A:H5"	23:W:6:THR:HG21	1.80	0.64
2:B:2310:U:H2'	2:B:2311:G:C8	2.33	0.64
2:B:2347:U:H2'	2:B:2348:A:C8	2.33	0.64
2:B:2478:C:C5'	2:B:2488:A:H61	2.10	0.64
2:B:2984:C:H2'	2:B:2985:C:C6	2.32	0.64
6:F:60:LYS:HB3	6:F:73:GLU:HB3	1.79	0.64
7:G:93:VAL:HG12	7:G:102:LEU:HD22	1.78	0.64
8:H:151:VAL:HG21	8:H:255:PHE:CD1	2.32	0.64
10:J:54:TYR:CE2	10:J:63:LEU:HD22	2.33	0.64
17:Q:131:LYS:NZ	17:Q:131:LYS:HB3	2.11	0.64
19:S:68:ARG:NH1	19:S:123:GLN:HB2	2.13	0.64
23:W:158:GLU:O	23:W:162:ARG:HB3	1.97	0.64
24:X:5:LYS:HD3	24:X:63:GLN:OE1	1.97	0.64
28:BA:49:ILE:HB	28:BA:51:TRP:NE1	2.13	0.64
31:EA:23:VAL:HA	31:EA:45:GLY:HA2	1.79	0.64
32:FA:79:TRP:HZ2	32:FA:118:ILE:HD12	1.63	0.64
37:KA:18:ARG:HB3	37:KA:23:ASN:CB	2.28	0.64
38:LA:11:ASN:HB3	38:LA:18:ASN:ND2	2.13	0.64
48:VA:48:ARG:HD2	48:VA:91:GLU:OE1	1.96	0.64
49:WA:46:LYS:HB2	49:WA:58:VAL:HG13	1.79	0.64
53:AB:69:LEU:HB3	53:AB:86:LEU:HD22	1.79	0.64
71:SB:55:LEU:HD11	71:SB:72:LEU:HD11	1.80	0.64
72:TB:24:GLN:HA	72:TB:65:LEU:HD13	1.79	0.64
76:XB:19:LYS:HB3	76:XB:32:LYS:HE3	1.79	0.64
82:DC:809:LEU:HG	82:DC:832:VAL:HB	1.79	0.64
1:A:96:G:H4'	1:A:460:A:O3'	1.97	0.64
1:A:139:C:H42	1:A:175:G:H21	1.46	0.64
2:B:136:G:H4'	39:MA:95:PHE:CE1	2.32	0.64
2:B:1245:A:H3'	2:B:1246:G:H5"	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1533:U:H1'	2:B:1798:A:C2	2.32	0.64
2:B:2594:C:H2'	2:B:2595:A:H5"	1.80	0.64
3:C:12:A:OP1	21:U:3:ARG:HD3	1.98	0.64
3:C:114:G:H2'	3:C:115:C:C6	2.32	0.64
6:F:111:THR:O	6:F:135:ILE:HA	1.98	0.64
9:I:39:GLN:HG3	9:I:43:LYS:HB2	1.79	0.64
20:T:76:PRO:HG3	20:T:142:SER:OG	1.98	0.64
22:V:125:ASP:O	22:V:128:ALA:HB3	1.97	0.64
23:W:45:VAL:C	23:W:47:ASN:H	2.06	0.64
29:CA:55:ASN:HD22	29:CA:55:ASN:H	1.43	0.64
47:UA:38:ASP:HA	47:UA:45:LYS:CA	2.28	0.64
49:WA:52:GLN:HG3	49:WA:53:LYS:N	2.12	0.64
51:YA:137:ILE:HD12	51:YA:172:LEU:HD22	1.80	0.64
74:VB:13:ILE:HD13	74:VB:22:GLN:HG3	1.79	0.64
1:A:16:G:H2'	1:A:17:C:C6	2.33	0.64
1:A:1081:A:H5"	1:A:1082:C:OP1	1.97	0.64
2:B:797:U:H2'	2:B:798:G:H8	1.58	0.64
2:B:843:A:H2'	2:B:844:G:H8	1.63	0.64
2:B:2130:G:H2'	2:B:2131:A:H4'	1.80	0.64
3:C:12:A:C3'	3:C:13:A:H5"	2.27	0.64
7:G:161:LEU:HD23	7:G:178:LEU:HD11	1.79	0.64
17:Q:172:LEU:O	17:Q:176:GLU:HG3	1.98	0.64
22:V:32:LEU:CD2	22:V:36:LEU:HD11	2.28	0.64
22:V:83:VAL:HG11	22:V:87:VAL:HG23	1.78	0.64
54:BB:45:ILE:HA	54:BB:61:VAL:HG11	1.80	0.64
59:GB:174:ARG:HA	59:GB:174:ARG:NE	2.12	0.64
1:A:636:A:H5"	72:TB:31:SER:HB3	1.80	0.64
1:A:918:U:H2'	1:A:919:A:H8	1.61	0.64
1:A:1453:G:H1'	65:MB:97:TYR:HE1	1.63	0.64
1:A:1603:U:O2'	1:A:1604:U:H5'	1.98	0.64
2:B:137:G:H2'	2:B:138:U:C6	2.33	0.64
2:B:204:A:O2'	2:B:205:C:H5'	1.98	0.64
2:B:563:U:O2'	2:B:564:G:H5'	1.98	0.64
2:B:744:A:H2'	2:B:745:C:H5'	1.79	0.64
2:B:2949:U:H2'	2:B:2950:G:H5'	1.78	0.64
2:B:3096:C:H2'	2:B:3097:C:C6	2.31	0.64
2:B:3215:A:C8	18:R:121:MET:HE1	2.33	0.64
5:E:65:ILE:HB	5:E:82:VAL:HG13	1.80	0.64
6:F:28:LYS:HB3	6:F:123:ARG:HB3	1.80	0.64
7:G:169:THR:HG23	7:G:170:PRO:HD2	1.78	0.64
7:G:243:HIS:O	7:G:244:ARG:HG2	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:224:ILE:HG21	24:X:39:SER:CB	2.28	0.64
20:T:12:LYS:HA	20:T:40:GLU:O	1.98	0.64
27:AA:54:LEU:HD11	27:AA:122:CYS:HB2	1.79	0.64
47:UA:29:LEU:CD2	47:UA:70:THR:HB	2.27	0.64
48:VA:10:GLU:O	48:VA:14:LYS:HG3	1.98	0.64
49:WA:13:LEU:HB3	49:WA:45:TRP:CZ3	2.33	0.64
49:WA:190:ALA:HB2	49:WA:228:LYS:HG2	1.80	0.64
57:EB:114:ARG:HH11	57:EB:114:ARG:N	1.87	0.64
61:IB:85:VAL:HG22	61:IB:108:PRO:CB	2.27	0.64
70:RB:40:ASN:HD22	70:RB:41:ILE:HD12	1.62	0.64
74:VB:129:VAL:O	74:VB:133:ASN:HB2	1.98	0.64
80:BC:47:VAL:HG22	80:BC:48:THR:N	2.09	0.64
82:DC:111:PHE:HE1	82:DC:537:HIS:HA	1.62	0.64
82:DC:593:ILE:HG12	82:DC:685:ARG:HD3	1.78	0.64
83:EC:6783:U:H2'	83:EC:6784:G:C8	2.32	0.64
2:B:744:A:C2'	2:B:745:C:H5'	2.27	0.64
2:B:1668:G:H2'	2:B:1669:C:O4'	1.99	0.64
2:B:2153:U:H5"	6:F:244:GLY:O	1.98	0.64
2:B:2173:U:H2'	2:B:2174:G:N7	2.13	0.64
2:B:2611:U:H2'	2:B:2612:U:H6	1.59	0.64
2:B:3212:C:H2'	2:B:3213:A:H5'	1.80	0.64
2:B:3300:U:H2'	2:B:3301:U:C5'	2.28	0.64
7:G:46:PHE:C	7:G:47:LEU:HD22	2.23	0.64
7:G:49:TYR:O	7:G:79:VAL:HG23	1.98	0.64
8:H:196:ASN:C	8:H:198:ARG:H	2.06	0.64
9:I:153:THR:HB	9:I:179:ARG:NH2	2.11	0.64
20:T:142:SER:HA	20:T:145:VAL:CG2	2.28	0.64
22:V:25:TYR:HA	22:V:28:LEU:HD12	1.78	0.64
22:V:26:LEU:HA	22:V:29:LEU:HD21	1.79	0.64
29:CA:91:ASN:HD21	29:CA:94:GLN:HG3	1.63	0.64
31:EA:13:VAL:HB	31:EA:18:TYR:O	1.98	0.64
34:HA:16:LEU:HD13	34:HA:19:LYS:HE2	1.79	0.64
36:JA:103:LYS:O	36:JA:106:VAL:HG12	1.97	0.64
38:LA:7:PHE:CE2	38:LA:12:PRO:HA	2.33	0.64
49:WA:133:VAL:HB	49:WA:142:ALA:HB3	1.80	0.64
53:AB:172:THR:HG22	53:AB:185:LYS:HA	1.79	0.64
66:NB:48:VAL:HG23	66:NB:82:ARG:HB3	1.79	0.64
70:RB:19:ILE:HA	70:RB:96:PRO:HA	1.80	0.64
82:DC:67:GLY:O	82:DC:68:ILE:HG23	1.97	0.64
1:A:155:U:H4'	56:DB:59:GLN:H	1.62	0.63
1:A:1061:A:H2'	1:A:1062:A:H5'	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:587:U:O2'	2:B:588:G:H5'	1.98	0.63
2:B:1302:A:H61	2:B:2833:A:C1'	2.03	0.63
2:B:1391:C:C2	36:JA:103:LYS:HB3	2.33	0.63
2:B:1878:G:C3'	2:B:1879:A:H5"	2.27	0.63
2:B:2556:C:H41	6:F:42:ARG:NH1	1.95	0.63
2:B:2583:C:H2'	2:B:2584:G:C8	2.33	0.63
2:B:2663:G:H5'	9:I:152:ARG:HD3	1.79	0.63
2:B:3050:U:H4'	28:BA:17:ARG:HG2	1.80	0.63
2:B:3116:G:H5"	2:B:3117:C:C5	2.33	0.63
2:B:3130:A:H3'	2:B:3131:U:H5'	1.80	0.63
6:F:26:ALA:C	6:F:28:LYS:H	2.06	0.63
8:H:145:ILE:HG21	8:H:150:LEU:HD21	1.79	0.63
8:H:208:VAL:HA	8:H:228:ALA:O	1.98	0.63
9:I:64:ILE:HG12	9:I:144:VAL:HG21	1.79	0.63
9:I:154:THR:O	9:I:160:PHE:HE2	1.81	0.63
10:J:47:PHE:HZ	10:J:75:PRO:HD2	1.61	0.63
19:S:11:GLN:HE21	19:S:44:ARG:HB3	1.63	0.63
21:U:29:THR:HG23	21:U:87:SER:HB3	1.80	0.63
31:EA:49:TYR:CG	31:EA:133:LYS:HD3	2.33	0.63
47:UA:27:LYS:O	47:UA:31:ILE:HG13	1.98	0.63
49:WA:36:ALA:HB2	49:WA:71:CYS:HB3	1.79	0.63
49:WA:212:ALA:HA	49:WA:221:MET:O	1.99	0.63
52:ZA:144:TRP:HE3	52:ZA:152:HIS:HE1	1.45	0.63
59:GB:110:GLN:NE2	59:GB:125:ALA:HB3	2.10	0.63
60:HB:77:ARG:NH2	60:HB:88:PRO:HB3	2.13	0.63
63:KB:55:ARG:HG2	77:YB:47:PHE:CE2	2.34	0.63
82:DC:68:ILE:HD13	82:DC:70:ILE:HG12	1.79	0.63
82:DC:829:LYS:HE2	82:DC:831:GLU:HB3	1.80	0.63
1:A:299:A:H4'	54:BB:5:PRO:HA	1.80	0.63
2:B:36:C:C2'	2:B:37:U:H5'	2.28	0.63
2:B:149:U:C5'	19:S:54:LYS:HG3	2.26	0.63
2:B:853:G:H2'	2:B:854:G:O4'	1.99	0.63
2:B:944:C:H2'	2:B:945:C:H6	1.62	0.63
2:B:1485:G:H2'	2:B:1486:G:C8	2.33	0.63
2:B:2555:G:N3	38:LA:92:ALA:HA	2.14	0.63
2:B:3177:G:H2'	2:B:3178:A:H5"	1.80	0.63
2:B:3214:U:H2'	18:R:121:MET:CE	2.25	0.63
7:G:110:LEU:H	7:G:110:LEU:HD12	1.62	0.63
8:H:197:ARG:HB2	8:H:197:ARG:NH1	2.12	0.63
9:I:52:VAL:HG11	9:I:63:GLN:HG3	1.80	0.63
12:L:59:GLN:O	12:L:62:LYS:HB3	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:87:LYS:HG3	13:M:187:ILE:HA	1.79	0.63
15:O:105:GLY:HA2	15:O:127:PHE:H	1.60	0.63
18:R:100:ALA:O	18:R:103:ILE:HG13	1.98	0.63
21:U:37:ASN:ND2	21:U:116:HIS:HA	2.12	0.63
30:DA:32:SER:HA	30:DA:49:PRO:HA	1.80	0.63
34:HA:26:GLY:O	34:HA:30:THR:HG23	1.98	0.63
36:JA:47:ARG:HH22	37:KA:21:ARG:HG3	1.62	0.63
51:YA:34:ALA:HB1	51:YA:35:PRO:HD2	1.80	0.63
52:ZA:113:LEU:HD22	52:ZA:114:GLY:N	2.13	0.63
65:MB:98:ASN:HB3	65:MB:120:SER:HB3	1.80	0.63
70:RB:99:ILE:O	70:RB:103:ILE:HG12	1.98	0.63
73:UB:135:LEU:HD23	73:UB:140:LYS:O	1.98	0.63
82:DC:126:LEU:HA	82:DC:154:VAL:CG2	2.28	0.63
82:DC:497:ASN:HD22	82:DC:553:PRO:HB2	1.62	0.63
1:A:1316:G:OP1	67:OB:6:THR:HB	1.99	0.63
1:A:1662:G:H2'	1:A:1663:G:C8	2.33	0.63
2:B:19:U:H5"	39:MA:90:ARG:NE	2.13	0.63
2:B:296:A:O2'	2:B:297:G:H5'	1.98	0.63
2:B:787:G:H2'	2:B:788:C:O4'	1.98	0.63
2:B:879:U:O2'	21:U:132:ALA:HB2	1.99	0.63
2:B:1254:C:O4'	16:P:135:THR:HG21	1.98	0.63
2:B:1508:C:H4'	2:B:2353:G:O2'	1.98	0.63
2:B:2358:A:H2'	2:B:2359:C:O4'	1.97	0.63
2:B:3106:A:H2'	2:B:3107:U:O4'	1.98	0.63
2:B:3110:C:H2'	2:B:3111:U:C6	2.33	0.63
2:B:3298:C:H2'	2:B:3299:A:H8	1.62	0.63
6:F:187:HIS:O	6:F:190:ARG:HB3	1.98	0.63
9:I:69:ILE:HG23	25:Y:31:LEU:HB3	1.81	0.63
10:J:173:MET:O	18:R:110:ALA:O	2.14	0.63
22:V:178:ARG:HA	22:V:185:LYS:NZ	2.14	0.63
52:ZA:99:LYS:HB2	52:ZA:117:THR:HB	1.81	0.63
57:EB:49:ILE:CD1	57:EB:172:VAL:HG13	2.28	0.63
65:MB:86:VAL:HG22	65:MB:87:PRO:HD2	1.79	0.63
71:SB:70:ASN:HB3	71:SB:83:TRP:HB2	1.80	0.63
75:WB:39:ALA:HB2	75:WB:69:LEU:O	1.99	0.63
1:A:402:C:H5	1:A:423:G:H2'	1.62	0.63
1:A:828:U:C3'	1:A:829:A:H5"	2.29	0.63
1:A:1166:A:H5"	55:CB:101:GLY:H	1.63	0.63
1:A:1328:G:OP1	53:AB:158:ILE:HB	1.98	0.63
1:A:1405:G:H2'	1:A:1406:A:C8	2.33	0.63
1:A:1764:C:H2'	1:A:1767:G:N7	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:414:U:H2'	2:B:415:G:C8	2.34	0.63
2:B:681:U:H2'	2:B:696:C:N4	2.13	0.63
2:B:845:G:H1'	2:B:848:A:H62	1.62	0.63
2:B:1225:A:H2'	2:B:1226:G:O4'	1.99	0.63
2:B:1453:A:H3'	2:B:1454:A:C8	2.33	0.63
2:B:1489:A:H2'	2:B:1490:A:C8	2.33	0.63
2:B:1879:A:H3'	2:B:1880:U:H5'	1.79	0.63
2:B:2746:A:H2'	2:B:2747:A:O4'	1.99	0.63
6:F:144:ASN:O	6:F:159:SER:HA	1.97	0.63
7:G:54:THR:CG2	7:G:76:VAL:HG23	2.23	0.63
9:I:90:HIS:CE1	9:I:226:TYR:HA	2.34	0.63
14:N:145:LYS:O	14:N:149:VAL:HG23	1.98	0.63
15:O:49:LYS:CA	15:O:64:LYS:HG2	2.27	0.63
17:Q:64:LYS:HA	32:FA:69:TRP:CE3	2.33	0.63
23:W:6:THR:HA	23:W:9:ARG:HH12	1.64	0.63
23:W:96:ILE:CG2	23:W:100:ARG:HH12	2.11	0.63
27:AA:7:GLN:HB2	27:AA:127:PRO:HG3	1.81	0.63
32:FA:75:LEU:HD13	32:FA:117:ARG:N	2.12	0.63
34:HA:78:GLY:HA2	34:HA:81:VAL:HG22	1.81	0.63
35:IA:80:ASN:HB2	35:IA:88:PRO:O	1.97	0.63
54:BB:23:LEU:HD13	59:GB:4:ALA:HB3	1.81	0.63
59:GB:107:ARG:O	59:GB:147:MET:HA	1.98	0.63
61:IB:34:TRP:CH2	61:IB:36:LYS:HD3	2.32	0.63
64:LB:13:VAL:HG22	64:LB:76:ILE:HG23	1.78	0.63
64:LB:20:TYR:CZ	64:LB:22:SER:HB3	2.34	0.63
74:VB:17:LEU:HD12	74:VB:18:LEU:N	2.13	0.63
1:A:410:A:H2'	1:A:411:C:O4'	1.99	0.63
2:B:1466:G:H1'	21:U:89:LYS:NZ	2.14	0.63
2:B:1480:G:H21	2:B:1872:C:H5	1.45	0.63
2:B:1641:U:H3'	2:B:1642:A:H5"	1.81	0.63
2:B:2571:U:H4'	2:B:2572:C:H5'	1.80	0.63
6:F:142:ASP:O	6:F:143:GLU:HB2	1.98	0.63
8:H:126:ILE:HA	8:H:129:THR:HG23	1.80	0.63
8:H:204:GLY:HA3	8:H:224:GLY:O	1.97	0.63
8:H:294:GLU:CD	8:H:294:GLU:H	2.07	0.63
10:J:176:PHE:CZ	18:R:117:ARG:NH2	2.67	0.63
14:N:17:TYR:H	14:N:95:HIS:CE1	2.16	0.63
21:U:52:LEU:O	21:U:52:LEU:HD23	1.99	0.63
23:W:137:ALA:HA	23:W:140:GLU:HB3	1.79	0.63
31:EA:127:ASN:HB2	31:EA:131:PHE:CE1	2.32	0.63
51:YA:33:LYS:HD2	51:YA:42:ASN:HA	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:171:ALA:HB3	53:AB:186:VAL:CB	2.24	0.63
56:DB:88:ARG:HB3	56:DB:91:GLU:HB2	1.81	0.63
57:EB:51:VAL:HG12	57:EB:171:ALA:HB3	1.81	0.63
61:IB:21:ASN:HD22	61:IB:32:LYS:H	1.46	0.63
70:RB:58:LEU:HB3	70:RB:59:PRO:CD	2.28	0.63
74:VB:82:ALA:O	74:VB:86:GLU:HB3	1.99	0.63
82:DC:275:MET:HA	82:DC:279:ASP:HB2	1.81	0.63
1:A:297:U:H4'	54:BB:34:GLY:O	1.99	0.63
1:A:599:A:H2'	1:A:600:U:C6	2.32	0.63
1:A:741:C:OP1	1:A:847:A:H5'	1.98	0.63
2:B:280:U:H4'	19:S:182:ASN:HD21	1.64	0.63
2:B:1508:C:OP1	2:B:2354:C:H4'	1.99	0.63
2:B:1938:U:O2'	2:B:1939:G:H5'	1.99	0.63
2:B:2566:C:H2'	2:B:2567:C:C6	2.33	0.63
2:B:2603:G:H2'	2:B:2604:U:C6	2.34	0.63
2:B:2984:C:H2'	2:B:2985:C:H6	1.64	0.63
7:G:106:TRP:HB2	7:G:133:TYR:CE2	2.34	0.63
12:L:94:PHE:HA	12:L:97:TYR:CD2	2.34	0.63
24:X:38:LYS:HA	24:X:41:TYR:HB3	1.80	0.63
27:AA:103:ALA:HB1	27:AA:108:GLU:O	1.98	0.63
30:DA:60:ARG:HE	30:DA:103:LYS:NZ	1.96	0.63
31:EA:57:HIS:CG	31:EA:65:ARG:HG3	2.33	0.63
48:VA:145:ILE:HG13	82:DC:190:SER:HB3	1.79	0.63
51:YA:180:THR:HG22	51:YA:181:LEU:H	1.62	0.63
54:BB:125:LYS:HE2	54:BB:157:ASN:HB3	1.81	0.63
54:BB:139:VAL:O	54:BB:146:THR:HA	1.98	0.63
56:DB:133:LEU:H	56:DB:133:LEU:CD1	2.05	0.63
56:DB:142:ARG:HB3	56:DB:143:LYS:NZ	2.12	0.63
56:DB:193:LEU:HA	56:DB:196:ARG:CZ	2.28	0.63
72:TB:81:VAL:HG13	72:TB:85:ASP:HB2	1.81	0.63
82:DC:387:PRO:HB3	82:DC:394:PHE:HD1	1.64	0.63
83:EC:6912:G:H3'	83:EC:6913:U:C5'	2.28	0.63
1:A:368:U:H2'	1:A:369:A:O4'	1.99	0.63
1:A:373:G:H8	1:A:373:G:OP2	1.81	0.63
1:A:401:A:H4'	54:BB:3:ARG:CZ	2.29	0.63
1:A:1453:G:H2'	1:A:1454:G:H8	1.63	0.63
2:B:147:U:H3	12:L:159:PRO:HD2	1.63	0.63
2:B:583:G:C2'	2:B:584:G:H5'	2.29	0.63
2:B:631:U:O2'	37:KA:91:ALA:HB1	1.98	0.63
2:B:651:G:H4'	2:B:1436:U:H5'	1.80	0.63
2:B:1138:U:H5"	11:K:97:PRO:HG3	1.78	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1526:U:H4'	2:B:1594:A:C4	2.34	0.63
2:B:3136:G:H5"	7:G:31:ALA:HB1	1.81	0.63
6:F:211:HIS:CD2	6:F:219:ILE:HG23	2.33	0.63
7:G:76:VAL:HG11	7:G:283:TYR:CE2	2.34	0.63
8:H:26:PHE:C	8:H:28:ALA:H	2.05	0.63
8:H:71:VAL:HG22	8:H:72:ALA:N	2.12	0.63
13:M:112:ILE:HD12	13:M:126:VAL:O	1.98	0.63
17:Q:50:PRO:HA	17:Q:137:GLN:HE22	1.64	0.63
20:T:142:SER:HB2	20:T:147:TRP:CE3	2.34	0.63
22:V:70:ALA:HA	22:V:73:GLN:HE21	1.63	0.63
24:X:12:ARG:NH1	24:X:22:PRO:HD3	2.10	0.63
40:NA:45:ARG:HA	40:NA:49:GLY:HA2	1.81	0.63
43:QA:25:GLN:HE21	43:QA:28:ARG:NH2	1.95	0.63
57:EB:96:ARG:NH2	57:EB:124:LYS:HB3	2.13	0.63
58:FB:57:ALA:HB2	58:FB:177:GLY:HA2	1.81	0.63
58:FB:64:ASN:HA	58:FB:75:LYS:HA	1.80	0.63
58:FB:172:ARG:HB3	58:FB:175:GLN:HG3	1.80	0.63
59:GB:66:ASP:O	59:GB:70:LEU:HG	1.98	0.63
76:XB:88:SER:OG	76:XB:91:ASP:HB2	1.98	0.63
1:A:157:A:C2'	1:A:158:U:H5"	2.27	0.63
1:A:1305:U:H2'	1:A:1305:U:O2	1.97	0.63
2:B:2158:A:H4'	2:B:2159:U:C5'	2.28	0.63
6:F:92:LYS:O	6:F:93:LYS:HB2	1.99	0.63
8:H:39:PHE:CE1	8:H:43:ASN:HB2	2.34	0.63
13:M:1:MET:HB2	24:X:139:TYR:CB	2.28	0.63
20:T:73:PHE:HB3	20:T:78:ARG:HB3	1.81	0.63
24:X:10:ILE:HA	24:X:25:PHE:O	1.99	0.63
24:X:137:ARG:HG3	24:X:139:TYR:CE1	2.31	0.63
27:AA:92:PHE:HB2	28:BA:19:THR:HA	1.81	0.63
38:LA:57:LEU:HD11	38:LA:65:VAL:CG2	2.29	0.63
48:VA:83:ASN:N	48:VA:83:ASN:HD22	1.96	0.63
50:XA:163:ASN:C	50:XA:165:ARG:H	2.07	0.63
51:YA:82:ARG:HH22	51:YA:189:ILE:HA	1.64	0.63
51:YA:111:ARG:O	76:XB:68:TYR:HB2	1.99	0.63
51:YA:128:LYS:HE3	51:YA:132:ASP:HB3	1.79	0.63
54:BB:79:ASP:HB3	54:BB:82:TYR:CD1	2.27	0.63
72:TB:79:PHE:HB2	72:TB:125:ILE:CG2	2.28	0.63
75:WB:93:SER:HB2	75:WB:99:ALA:HA	1.81	0.63
77:YB:29:ARG:HB3	77:YB:29:ARG:NH1	2.14	0.63
1:A:1011:G:H2'	1:A:1012:U:C5	2.33	0.63
1:A:1184:A:H2'	1:A:1185:U:H4'	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1759:C:H1'	1:A:1780:G:H1	1.63	0.63
2:B:30:G:H5"	19:S:188:ARG:NH1	2.13	0.63
2:B:208:C:H2'	2:B:209:A:O4'	1.99	0.63
2:B:266:A:N6	40:NA:30:LYS:HA	2.14	0.63
2:B:785:G:N2	2:B:786:A:H62	1.97	0.63
2:B:881:C:H3'	2:B:882:A:H8	1.63	0.63
2:B:2632:G:H2'	2:B:2633:U:C6	2.34	0.63
2:B:2895:G:H5"	44:RA:102:ARG:NH2	2.13	0.63
2:B:3311:C:O2'	2:B:3312:U:H5'	1.97	0.63
7:G:121:ASN:O	7:G:125:SER:HB3	1.98	0.63
9:I:86:TYR:HB3	9:I:247:ILE:HG12	1.80	0.63
12:L:75:ILE:HA	12:L:78:PHE:CE1	2.33	0.63
12:L:97:TYR:HB3	12:L:131:ALA:C	2.23	0.63
13:M:31:ARG:NH2	13:M:187:ILE:HD12	2.14	0.63
16:P:109:ILE:O	16:P:112:ILE:HG12	1.99	0.63
17:Q:74:GLY:HA2	17:Q:96:ALA:CB	2.28	0.63
23:W:121:HIS:O	23:W:125:LYS:HD3	1.99	0.63
31:EA:14:VAL:O	38:LA:89:ILE:HG21	1.99	0.63
36:JA:45:ARG:HH11	36:JA:45:ARG:CB	2.12	0.63
46:TA:9:LYS:HG2	46:TA:22:GLN:CA	2.28	0.63
49:WA:71:CYS:HA	49:WA:81:LEU:O	1.99	0.63
72:TB:103:ILE:HD11	72:TB:110:ILE:HG22	1.81	0.63
75:WB:62:VAL:HG22	75:WB:80:LEU:HD12	1.79	0.63
82:DC:564:ARG:HG3	82:DC:682:ARG:CD	2.29	0.63
1:A:6:G:OP2	52:ZA:205:ARG:HD2	1.98	0.62
1:A:588:U:H2'	1:A:589:C:H6	1.63	0.62
2:B:521:A:H2'	2:B:522:A:C8	2.33	0.62
2:B:712:G:H2'	2:B:713:U:C6	2.33	0.62
2:B:752:C:H2'	2:B:753:C:C6	2.34	0.62
2:B:858:A:H4'	2:B:1790:G:O2'	1.99	0.62
2:B:903:U:H4'	2:B:1535:A:C2	2.34	0.62
2:B:1309:U:H5"	2:B:1311:G:OP1	1.99	0.62
2:B:1322:U:H1'	24:X:108:GLN:HE22	1.63	0.62
2:B:1362:G:H5'	11:K:161:VAL:HG13	1.79	0.62
2:B:1376:C:H2'	2:B:1377:G:C8	2.32	0.62
2:B:2635:A:H5'	2:B:2636:A:C4	2.34	0.62
2:B:2691:A:H3'	2:B:2692:A:H8	1.64	0.62
2:B:2796:G:H2'	46:TA:62:ALA:HB1	1.81	0.62
2:B:2822:U:H2'	2:B:2823:G:O4'	1.98	0.62
2:B:2836:C:H4'	14:N:157:TYR:CD1	2.33	0.62
2:B:3343:G:H1'	2:B:3362:A:H61	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:184:ARG:HD2	6:F:184:ARG:H	1.61	0.62
7:G:205:VAL:HG12	7:G:209:PHE:HE2	1.63	0.62
12:L:221:ASN:C	12:L:225:LYS:HE2	2.24	0.62
13:M:36:LYS:NZ	13:M:78:MET:HG3	2.13	0.62
18:R:126:GLN:CD	20:T:190:VAL:HB	2.24	0.62
21:U:60:PHE:HE2	21:U:82:ARG:HB2	1.64	0.62
21:U:117:ILE:HA	21:U:147:GLU:O	1.99	0.62
23:W:139:VAL:O	23:W:143:ILE:HG13	1.97	0.62
35:IA:44:MET:HE2	35:IA:77:ARG:HD2	1.81	0.62
42:PA:20:VAL:HB	42:PA:73:LEU:HD13	1.81	0.62
44:RA:94:SER:HA	44:RA:124:LYS:H	1.64	0.62
53:AB:115:ILE:HG23	53:AB:116:ARG:H	1.63	0.62
56:DB:27:PHE:O	56:DB:30:LYS:HG2	1.99	0.62
72:TB:3:ARG:NH2	72:TB:28:ARG:HD2	2.14	0.62
73:UB:90:ASP:OD2	80:BC:15:LYS:HB2	1.98	0.62
82:DC:596:GLU:O	82:DC:600:ALA:HB2	1.99	0.62
83:EC:6900:A:H2	83:EC:6913:U:O2	1.81	0.62
1:A:805:U:H2'	1:A:806:A:H5'	1.81	0.62
1:A:1379:C:H5'	66:NB:10:PHE:CD2	2.34	0.62
1:A:1423:U:H5"	53:AB:151:LYS:CE	2.29	0.62
1:A:1722:A:H4'	56:DB:67:VAL:HG12	1.79	0.62
2:B:408:A:H2'	2:B:409:A:O4'	2.00	0.62
2:B:1077:U:H1'	2:B:1083:G:N2	2.14	0.62
2:B:1139:G:O3'	11:K:94:LYS:HA	1.99	0.62
2:B:1390:A:H5'	2:B:1390:A:N3	2.15	0.62
2:B:1504:A:H5"	21:U:125:GLN:OE1	1.99	0.62
2:B:1863:G:H1'	2:B:1867:A:N6	2.13	0.62
2:B:2729:U:H4'	22:V:157:PRO:HB3	1.80	0.62
2:B:2821:C:H42	2:B:2869:U:H3	1.47	0.62
2:B:3301:U:H5"	35:IA:42:LEU:HD22	1.81	0.62
4:D:2:G:H2'	4:D:3:U:H5'	1.80	0.62
10:J:158:TYR:OH	18:R:114:ASP:C	2.42	0.62
12:L:178:ALA:HB2	12:L:218:ILE:HG23	1.79	0.62
14:N:174:THR:CG2	14:N:176:LEU:H	1.98	0.62
19:S:59:PHE:CE1	19:S:133:ILE:HD11	2.34	0.62
34:HA:17:VAL:HG22	34:HA:98:SER:CB	2.25	0.62
36:JA:74:PHE:CD2	36:JA:85:LEU:HD11	2.34	0.62
39:MA:68:GLN:HA	39:MA:71:LYS:HB2	1.81	0.62
42:PA:77:ARG:O	42:PA:78:LEU:HB2	1.99	0.62
44:RA:95:VAL:CG2	44:RA:124:LYS:HG3	2.28	0.62
80:BC:50:VAL:O	80:BC:50:VAL:HG23	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:22:MET:HA	82:DC:122:THR:HB	1.80	0.62
82:DC:84:GLU:O	82:DC:87:LYS:HB2	1.99	0.62
82:DC:143:LEU:HB3	82:DC:188:ILE:HG21	1.80	0.62
1:A:611:U:H4'	61:IB:99:ARG:NH1	2.13	0.62
1:A:1250:U:O2'	1:A:1251:U:H5'	1.99	0.62
1:A:1436:A:N3	53:AB:181:VAL:HG11	2.14	0.62
1:A:1759:C:H2'	1:A:1760:G:O4'	1.99	0.62
2:B:182:U:H2'	2:B:183:G:C8	2.34	0.62
2:B:791:A:H2'	2:B:792:G:C8	2.34	0.62
2:B:856:G:H1	47:UA:4:ARG:HH12	1.47	0.62
2:B:1198:C:H3'	2:B:1199:C:H2'	1.82	0.62
2:B:1225:A:H2	2:B:3116:G:O5'	1.82	0.62
2:B:1302:A:HO2'	2:B:2887:A:H2	1.47	0.62
2:B:1364:C:H2'	2:B:1365:G:H8	1.61	0.62
2:B:3017:A:H1'	27:AA:9:THR:HG22	1.81	0.62
2:B:3286:G:C2'	2:B:3287:U:H5"	2.22	0.62
5:E:124:LEU:O	5:E:128:LEU:HB2	1.99	0.62
14:N:76:MET:HB3	14:N:85:PHE:CE2	2.34	0.62
17:Q:113:VAL:O	17:Q:117:LYS:HD3	1.98	0.62
18:R:70:PHE:CE1	18:R:90:VAL:HG21	2.34	0.62
22:V:62:VAL:HG22	22:V:142:GLY:CA	2.29	0.62
24:X:12:ARG:HD3	24:X:22:PRO:CD	2.29	0.62
24:X:155:ARG:HH22	24:X:157:GLN:HE21	1.46	0.62
32:FA:59:ARG:HH21	32:FA:61:PHE:HZ	1.45	0.62
35:IA:72:ARG:HH11	35:IA:72:ARG:HG3	1.65	0.62
37:KA:51:TYR:O	37:KA:66:VAL:HG13	1.99	0.62
50:XA:81:PHE:HB2	50:XA:170:ILE:HD12	1.81	0.62
52:ZA:227:PRO:HA	52:ZA:230:TRP:CD1	2.33	0.62
54:BB:44:LEU:O	54:BB:48:LEU:HD13	1.98	0.62
55:CB:214:LYS:HA	55:CB:217:LEU:HD12	1.82	0.62
61:IB:55:ASP:CG	61:IB:58:CYS:HB2	2.24	0.62
64:LB:85:ALA:HB2	64:LB:94:PRO:HG3	1.79	0.62
65:MB:40:ARG:HG3	65:MB:115:TYR:OH	1.98	0.62
66:NB:13:LYS:HG3	66:NB:120:ASP:OD2	1.99	0.62
70:RB:56:VAL:HG12	70:RB:57:ARG:N	2.14	0.62
73:UB:24:TRP:CE3	73:UB:30:LYS:HG2	2.34	0.62
82:DC:590:ALA:HB3	82:DC:720:ALA:HB2	1.80	0.62
82:DC:634:TRP:CE2	82:DC:660:LYS:HG3	2.34	0.62
1:A:986:G:H2'	1:A:987:G:N2	2.14	0.62
2:B:17:G:H21	3:C:143:U:H3	1.45	0.62
2:B:1107:C:H2'	2:B:1108:U:H6	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1668:G:H2'	2:B:1669:C:C6	2.35	0.62
2:B:1711:C:H5'	31:EA:38:PHE:HD1	1.63	0.62
2:B:2650:U:H2'	2:B:2651:G:C8	2.34	0.62
2:B:2747:A:C2	9:I:36:LEU:HD11	2.34	0.62
2:B:3245:A:H5"	2:B:3246:G:C8	2.33	0.62
2:B:3380:U:H2'	2:B:3381:U:C6	2.34	0.62
5:E:68:PHE:HA	5:E:85:MET:O	1.98	0.62
7:G:60:LEU:HG	7:G:61:ASP:N	2.13	0.62
7:G:265:ALA:O	7:G:266:ARG:HG2	1.98	0.62
8:H:185:LYS:HG3	8:H:201:GLN:OE1	2.00	0.62
9:I:55:PHE:HD1	9:I:60:ILE:HG12	1.64	0.62
18:R:23:ILE:HA	18:R:63:VAL:HG23	1.82	0.62
20:T:169:ALA:HA	20:T:172:ARG:NH1	2.13	0.62
22:V:19:PRO:HB2	22:V:21:SER:OG	1.99	0.62
25:Y:56:PHE:CZ	25:Y:78:LYS:HG3	2.34	0.62
25:Y:116:ARG:O	25:Y:120:LYS:HB2	2.00	0.62
46:TA:80:ARG:H	46:TA:80:ARG:HE	1.48	0.62
50:XA:126:PRO:HB3	50:XA:133:ILE:HG12	1.81	0.62
55:CB:37:GLN:HG2	55:CB:69:PHE:CE2	2.34	0.62
73:UB:82:LYS:HD3	73:UB:82:LYS:N	2.15	0.62
1:A:937:C:H2'	1:A:938:G:H8	1.65	0.62
1:A:1125:A:H5"	45:SA:15:ARG:CD	2.30	0.62
2:B:65:A:H5'	19:S:176:LYS:NZ	2.15	0.62
2:B:181:U:C2'	2:B:182:U:H4'	2.29	0.62
2:B:516:A:H5"	8:H:344:ALA:CB	2.30	0.62
2:B:537:A:H2'	2:B:538:G:O4'	1.99	0.62
2:B:592:A:H4'	10:J:18:LEU:O	1.99	0.62
2:B:660:A:N1	2:B:942:U:H5'	2.14	0.62
2:B:949:C:H5"	22:V:9:GLN:O	2.00	0.62
2:B:3364:C:H2'	2:B:3365:U:C6	2.34	0.62
6:F:250:GLN:H	6:F:250:GLN:NE2	1.96	0.62
13:M:162:GLN:HE22	13:M:163:GLN:HG3	1.64	0.62
15:O:29:ARG:HE	15:O:29:ARG:HA	1.64	0.62
20:T:19:LEU:O	20:T:23:VAL:HG23	1.99	0.62
21:U:31:GLU:HG3	21:U:60:PHE:HA	1.79	0.62
29:CA:70:GLU:HA	29:CA:73:MET:HB3	1.80	0.62
30:DA:101:PRO:HA	30:DA:104:LEU:HB2	1.81	0.62
34:HA:51:LEU:O	34:HA:54:SER:HB2	2.00	0.62
34:HA:53:LYS:HA	34:HA:56:LEU:CD1	2.30	0.62
40:NA:79:SER:HB2	40:NA:82:ARG:HB3	1.81	0.62
48:VA:55:LYS:HD2	48:VA:57:THR:HG23	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:127:ARG:HH22	50:XA:151:SER:HA	1.64	0.62
50:XA:169:SER:O	50:XA:173:ILE:HG12	1.99	0.62
50:XA:189:VAL:HG13	50:XA:190:ASP:N	2.14	0.62
51:YA:133:TYR:HE1	51:YA:217:LEU:HB3	1.64	0.62
54:BB:193:GLY:HA2	54:BB:212:ASP:HA	1.82	0.62
55:CB:37:GLN:HG2	55:CB:69:PHE:HE2	1.65	0.62
55:CB:133:VAL:HG22	55:CB:198:LEU:HD22	1.81	0.62
56:DB:7:TYR:HB2	56:DB:124:LEU:HD11	1.80	0.62
71:SB:64:GLU:O	71:SB:68:SER:HB2	1.99	0.62
73:UB:126:LYS:HE3	73:UB:130:VAL:O	1.98	0.62
77:YB:17:ARG:HG3	77:YB:18:LYS:N	2.14	0.62
1:A:887:A:H2	1:A:925:G:H1	1.46	0.62
2:B:825:U:C2'	2:B:826:G:H5"	2.28	0.62
2:B:842:G:H2'	2:B:843:A:H8	1.63	0.62
2:B:856:G:H1	47:UA:4:ARG:NH1	1.97	0.62
2:B:1538:G:N2	2:B:1583:A:H62	1.92	0.62
2:B:1593:A:C2	2:B:1616:U:H4'	2.34	0.62
2:B:1814:A:H5"	2:B:1816:A:N3	2.13	0.62
2:B:1845:G:H3'	2:B:1849:C:H42	1.64	0.62
2:B:3146:G:H2'	2:B:3147:G:H8	1.64	0.62
4:D:87:G:H21	24:X:119:ARG:HH22	1.47	0.62
5:E:97:LYS:O	5:E:100:ILE:HG22	1.99	0.62
6:F:65:ASP:HA	6:F:72:ARG:NH2	2.11	0.62
7:G:60:LEU:HD11	7:G:62:ARG:HG3	1.82	0.62
10:J:38:THR:OG1	10:J:90:LYS:HG3	1.99	0.62
10:J:158:TYR:OH	18:R:114:ASP:HB3	1.99	0.62
11:K:145:ARG:O	11:K:149:TYR:HB2	2.00	0.62
14:N:37:GLY:HA2	14:N:85:PHE:CE1	2.34	0.62
14:N:165:ILE:N	14:N:165:ILE:HD13	2.14	0.62
16:P:110:ILE:HB	16:P:142:ARG:NH2	2.13	0.62
17:Q:76:THR:HB	17:Q:79:GLU:HG2	1.82	0.62
19:S:135:VAL:HG13	19:S:142:ILE:HG21	1.81	0.62
22:V:51:ALA:HB3	22:V:84:VAL:HG11	1.81	0.62
23:W:3:ASN:HD21	23:W:5:ARG:NH1	1.80	0.62
48:VA:187:VAL:HG12	48:VA:188:VAL:H	1.64	0.62
49:WA:83:ALA:HB2	49:WA:113:VAL:HG11	1.82	0.62
54:BB:42:LEU:HD11	54:BB:51:ARG:HD2	1.81	0.62
59:GB:60:LEU:HD11	59:GB:93:LEU:HD22	1.81	0.62
82:DC:24:VAL:HG22	82:DC:126:LEU:HB3	1.80	0.62
82:DC:714:TYR:O	82:DC:718:LEU:HD23	1.99	0.62
82:DC:731:VAL:HA	82:DC:795:GLN:O	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:120:U:H2'	1:A:121:U:H5'	1.82	0.62
1:A:607:G:H5'	1:A:613:G:H22	1.62	0.62
1:A:844:A:H2'	1:A:845:G:H8	1.64	0.62
1:A:1043:A:H5'	1:A:1043:A:C8	2.35	0.62
1:A:1625:C:H2'	1:A:1626:U:C6	2.35	0.62
2:B:418:A:H4'	2:B:629:U:O3'	2.00	0.62
2:B:901:G:H2'	2:B:902:G:C8	2.34	0.62
2:B:1314:C:H5'	20:T:17:GLY:HA3	1.80	0.62
2:B:1453:A:C2	2:B:1454:A:H1'	2.35	0.62
2:B:2180:G:H2'	2:B:2181:C:C6	2.35	0.62
2:B:2659:G:H4'	2:B:2751:G:H4'	1.81	0.62
2:B:3052:G:O2'	2:B:3053:G:H5'	2.00	0.62
2:B:3078:U:OP1	2:B:3080:G:H5'	2.00	0.62
3:C:49:G:H2'	3:C:50:C:C6	2.34	0.62
6:F:98:VAL:HG23	6:F:166:ILE:HG22	1.82	0.62
7:G:45:SER:HB2	7:G:339:ARG:HA	1.81	0.62
11:K:85:PHE:CZ	11:K:114:GLY:HA3	2.34	0.62
13:M:4:ILE:O	13:M:58:HIS:HA	2.00	0.62
17:Q:111:ALA:CB	17:Q:150:PRO:HG3	2.30	0.62
25:Y:14:MET:HE1	25:Y:55:LYS:HB2	1.82	0.62
33:GA:43:HIS:HA	33:GA:46:ALA:HB3	1.81	0.62
38:LA:21:LYS:HB2	38:LA:33:GLN:O	2.00	0.62
47:UA:25:GLN:HA	47:UA:25:GLN:HE21	1.63	0.62
53:AB:134:CYS:O	53:AB:153:ALA:HA	1.99	0.62
59:GB:157:ASP:CG	59:GB:158:PHE:H	2.08	0.62
61:IB:133:LYS:HD3	61:IB:134:THR:OG1	1.99	0.62
63:KB:29:SER:HB2	63:KB:66:ILE:HD11	1.81	0.62
78:ZB:12:VAL:HG12	78:ZB:50:GLU:HA	1.81	0.62
78:ZB:32:PHE:HE2	78:ZB:38:ARG:HB3	1.64	0.62
1:A:512:A:H4'	59:GB:164:PHE:CE2	2.33	0.62
1:A:1006:C:O2'	64:LB:137:LEU:HA	1.99	0.62
2:B:86:G:H22	2:B:98:G:H2'	1.64	0.62
2:B:122:A:H8	2:B:122:A:H5'	1.64	0.62
2:B:189:G:H2'	2:B:224:C:OP2	1.99	0.62
2:B:640:U:OP2	36:JA:37:GLY:HA2	2.00	0.62
2:B:1221:A:H2'	48:VA:63:ILE:HD11	1.82	0.62
2:B:1334:U:OP1	11:K:206:LYS:HB3	2.00	0.62
2:B:1356:U:H3'	2:B:1357:G:H5'	1.82	0.62
2:B:1783:U:H2'	2:B:1784:G:C8	2.34	0.62
2:B:1902:G:OP1	2:B:2918:G:H5'	1.99	0.62
2:B:2536:A:H2'	2:B:2537:U:C6	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2574:G:OP2	31:EA:56:LYS:HE2	1.98	0.62
2:B:3279:A:C2'	2:B:3280:U:H5'	2.29	0.62
6:F:29:LEU:HD13	6:F:163:ARG:HE	1.63	0.62
7:G:45:SER:CB	7:G:339:ARG:HA	2.30	0.62
13:M:105:GLU:HG2	13:M:110:LYS:HA	1.81	0.62
14:N:139:ARG:HD2	14:N:173:PHE:CD2	2.34	0.62
19:S:18:VAL:O	19:S:22:LEU:HD13	2.00	0.62
29:CA:67:ILE:HD13	29:CA:115:ARG:NH1	2.14	0.62
29:CA:92:LYS:HE3	29:CA:110:VAL:O	1.99	0.62
30:DA:17:LYS:HE3	30:DA:21:THR:HG21	1.81	0.62
31:EA:33:SER:HB2	31:EA:40:HIS:HE2	1.65	0.62
36:JA:103:LYS:HB2	36:JA:103:LYS:NZ	2.12	0.62
40:NA:8:ALA:O	40:NA:13:LYS:HB2	1.99	0.62
48:VA:61:ARG:HA	48:VA:64:ARG:HB3	1.82	0.62
50:XA:37:VAL:CG2	50:XA:149:LEU:HD21	2.29	0.62
52:ZA:185:LYS:NZ	59:GB:22:SER:HB3	2.15	0.62
53:AB:76:ARG:HD2	53:AB:77:PHE:CE1	2.35	0.62
55:CB:92:ARG:HE	55:CB:172:ILE:HD12	1.65	0.62
61:IB:126:GLY:O	61:IB:137:PHE:HA	2.00	0.62
74:VB:12:VAL:C	74:VB:13:ILE:HD12	2.24	0.62
75:WB:54:VAL:HA	75:WB:60:VAL:HG21	1.81	0.62
1:A:70:C:H2'	1:A:71:A:C8	2.35	0.62
1:A:1170:G:H5'	1:A:1575:G:O6	2.00	0.62
2:B:153:U:H2'	2:B:154:U:C5	2.35	0.62
2:B:1283:C:H2'	2:B:1284:C:H5'	1.82	0.62
2:B:1456:A:H61	35:IA:64:VAL:CG2	2.12	0.62
2:B:2660:G:H2'	2:B:2661:G:C8	2.35	0.62
2:B:2680:A:N3	15:O:59:ILE:HD13	2.15	0.62
2:B:3311:C:H2'	2:B:3312:U:H5'	1.81	0.62
6:F:77:ILE:CD1	6:F:128:ARG:HE	2.13	0.62
8:H:289:ILE:O	8:H:295:ILE:HD12	2.00	0.62
13:M:90:MET:HB3	13:M:179:ILE:HG22	1.81	0.62
15:O:54:VAL:HG12	15:O:56:THR:N	2.13	0.62
36:JA:103:LYS:HG3	36:JA:104:ASN:H	1.64	0.62
50:XA:74:VAL:HG22	50:XA:96:THR:CG2	2.29	0.62
50:XA:183:ARG:HA	50:XA:188:LEU:CG	2.24	0.62
58:FB:85:PRO:O	61:IB:11:ARG:HD3	2.00	0.62
70:RB:61:LYS:HD2	70:RB:86:ILE:HD12	1.81	0.62
71:SB:32:VAL:CG1	71:SB:55:LEU:HB2	2.29	0.62
74:VB:99:LYS:HE3	74:VB:100:VAL:H	1.63	0.62
76:XB:23:CYS:HB3	76:XB:28:LYS:H	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:42:ARG:CG	82:DC:330:ALA:HB3	2.27	0.62
82:DC:167:LEU:O	82:DC:168:GLN:HB3	1.99	0.62
1:A:1080:U:H2'	1:A:1081:A:H5'	1.82	0.62
2:B:224:C:H2'	2:B:225:C:C6	2.32	0.62
2:B:595:G:N1	2:B:609:G:H5"	2.13	0.62
2:B:1523:U:H4'	29:CA:112:THR:O	1.99	0.62
2:B:1916:U:OP1	23:W:84:THR:HA	2.00	0.62
2:B:2117:A:H3'	2:B:2118:C:C6	2.34	0.62
2:B:3084:C:H5'	28:BA:38:SER:HB3	1.81	0.62
9:I:141:PRO:HB2	9:I:172:TYR:HB2	1.81	0.62
14:N:46:PHE:CD2	14:N:139:ARG:HG3	2.35	0.62
15:O:21:ILE:O	15:O:66:ALA:HA	2.00	0.62
15:O:172:LEU:O	15:O:173:ASP:HB2	1.99	0.62
16:P:102:GLY:HA3	16:P:140:GLY:N	2.14	0.62
19:S:37:HIS:HE1	19:S:63:ARG:HB3	1.58	0.62
46:TA:36:PHE:HA	46:TA:41:ARG:HD3	1.82	0.62
47:UA:51:ALA:HB3	47:UA:54:ILE:HD12	1.82	0.62
50:XA:20:ALA:HA	50:XA:168:HIS:CB	2.30	0.62
54:BB:198:LYS:CG	54:BB:208:VAL:HG22	2.28	0.62
56:DB:52:ILE:HG12	56:DB:111:LEU:HD23	1.81	0.62
59:GB:101:VAL:O	59:GB:105:LEU:HD13	1.99	0.62
61:IB:16:GLN:HE22	61:IB:34:TRP:H	1.46	0.62
61:IB:54:ILE:HD12	61:IB:54:ILE:N	2.15	0.62
73:UB:51:GLY:HA2	73:UB:77:ILE:HG12	1.82	0.62
76:XB:41:ILE:HG12	76:XB:41:ILE:O	2.00	0.62
82:DC:125:ALA:O	82:DC:154:VAL:HG22	2.00	0.62
1:A:778:G:H1'	1:A:783:G:C2	2.35	0.61
2:B:57:A:H2'	2:B:58:G:O4'	2.00	0.61
2:B:143:G:H2'	2:B:144:A:H8	1.64	0.61
2:B:714:G:O6	32:FA:70:LYS:HD3	2.00	0.61
2:B:2143:A:C6	2:B:2145:A:H1'	2.35	0.61
2:B:2532:U:H2'	2:B:2533:G:H5"	1.81	0.61
5:E:134:PHE:HB3	83:EC:6771:U:O2'	1.99	0.61
7:G:83:PRO:HA	7:G:204:ALA:HB2	1.80	0.61
17:Q:73:ARG:HG2	17:Q:74:GLY:N	2.15	0.61
17:Q:75:PHE:H	17:Q:98:ASP:N	1.93	0.61
19:S:67:ARG:HG2	19:S:127:TYR:CE1	2.35	0.61
30:DA:89:LYS:HD3	30:DA:95:VAL:HG23	1.81	0.61
33:GA:18:ARG:HA	33:GA:18:ARG:HE	1.65	0.61
34:HA:50:VAL:HA	34:HA:53:LYS:HB3	1.80	0.61
34:HA:53:LYS:HA	34:HA:56:LEU:HG	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:95:GLU:HG3	36:JA:121:ASN:CG	2.25	0.61
41:OA:22:CYS:HB3	41:OA:37:CYS:HB3	1.81	0.61
54:BB:124:GLY:O	54:BB:159:THR:HA	1.99	0.61
56:DB:121:LEU:HD12	56:DB:124:LEU:HD23	1.82	0.61
57:EB:140:VAL:O	72:TB:51:GLU:HA	1.99	0.61
58:FB:110:ARG:HA	58:FB:113:PHE:HB3	1.82	0.61
70:RB:53:LYS:CG	70:RB:92:ASP:HB2	2.29	0.61
72:TB:106:THR:HG22	72:TB:107:SER:N	2.15	0.61
1:A:25:C:H1'	1:A:26:A:OP2	2.00	0.61
1:A:393:C:H2'	1:A:394:C:C6	2.35	0.61
1:A:397:A:O2'	58:FB:50:GLY:HA2	1.99	0.61
1:A:1172:G:N2	69:QB:88:VAL:HG21	2.14	0.61
1:A:1423:U:H5"	53:AB:151:LYS:HE2	1.80	0.61
1:A:1563:C:OP1	69:QB:84:LYS:HD3	2.01	0.61
2:B:361:A:H4'	41:OA:35:SER:O	1.99	0.61
2:B:704:U:H3'	2:B:705:A:C5'	2.30	0.61
2:B:944:C:H4'	36:JA:33:ARG:NH1	2.15	0.61
2:B:1458:U:H5"	35:IA:34:LYS:HZ2	1.65	0.61
2:B:2216:G:H22	2:B:2229:A:H2	1.49	0.61
2:B:3010:U:H5'	7:G:14:LEU:HB3	1.81	0.61
2:B:3112:G:O6	2:B:3119:U:H3'	2.01	0.61
2:B:3198:U:H4'	2:B:3199:G:OP2	2.00	0.61
8:H:280:ILE:HD12	8:H:280:ILE:O	2.00	0.61
11:K:90:LYS:HG2	11:K:133:TYR:CD1	2.35	0.61
12:L:61:GLN:HB2	19:S:28:TRP:CZ2	2.34	0.61
18:R:25:LYS:CE	18:R:62:GLN:HG2	2.28	0.61
18:R:45:LEU:HD11	18:R:55:ARG:HG2	1.82	0.61
30:DA:70:ILE:HG12	30:DA:82:VAL:HA	1.80	0.61
51:YA:199:ASN:O	51:YA:202:LYS:HG2	1.99	0.61
64:LB:19:ILE:HG23	64:LB:27:PHE:O	2.00	0.61
77:YB:17:ARG:HH11	77:YB:18:LYS:HZ2	1.48	0.61
78:ZB:49:ARG:HG3	78:ZB:52:ASP:OD1	2.00	0.61
82:DC:204:PRO:CB	82:DC:209:VAL:HB	2.30	0.61
1:A:542:A:O2'	1:A:543:C:H2'	2.00	0.61
2:B:634:C:H4'	36:JA:47:ARG:HH11	1.65	0.61
2:B:830:A:H2'	2:B:831:G:O4'	1.99	0.61
2:B:1270:A:H5'	82:DC:741:GLY:CA	2.29	0.61
2:B:1470:U:H2'	2:B:1471:U:C6	2.36	0.61
2:B:1614:C:H2'	2:B:1615:C:O4'	1.99	0.61
2:B:2554:A:H8	6:F:85:GLY:HA2	1.65	0.61
2:B:3320:A:H2'	2:B:3321:C:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:67:TYR:HA	12:L:41:GLN:H	1.63	0.61
6:F:182:ALA:HA	6:F:185:ALA:HB3	1.82	0.61
11:K:26:VAL:HG23	11:K:27:ALA:H	1.66	0.61
15:O:47:GLN:HA	15:O:67:VAL:CG1	2.31	0.61
29:CA:80:ASN:C	29:CA:126:LEU:HD12	2.26	0.61
30:DA:60:ARG:HE	30:DA:103:LYS:HZ1	1.47	0.61
31:EA:127:ASN:HB2	31:EA:131:PHE:CD1	2.35	0.61
34:HA:74:ASN:CB	34:HA:88:GLY:HA2	2.30	0.61
38:LA:9:ARG:HD2	38:LA:18:ASN:OD1	2.01	0.61
40:NA:95:ALA:HA	40:NA:99:ARG:CB	2.29	0.61
49:WA:110:VAL:HA	49:WA:126:SER:HA	1.82	0.61
49:WA:240:VAL:HG22	49:WA:256:THR:HG22	1.81	0.61
51:YA:35:PRO:HD3	51:YA:98:THR:HG23	1.81	0.61
56:DB:30:LYS:HB3	56:DB:34:GLN:HG3	1.81	0.61
57:EB:27:LEU:CD1	57:EB:80:GLU:HG2	2.30	0.61
59:GB:28:LEU:O	59:GB:28:LEU:HD23	1.99	0.61
60:HB:50:THR:HG22	60:HB:55:VAL:HG11	1.81	0.61
73:UB:112:LYS:O	73:UB:121:ARG:HG2	2.00	0.61
82:DC:71:LYS:HE2	82:DC:386:VAL:HG23	1.83	0.61
82:DC:334:LEU:O	82:DC:338:ILE:HG13	2.01	0.61
1:A:254:A:H2'	1:A:255:U:C6	2.35	0.61
1:A:685:A:H2'	1:A:686:C:O4'	1.99	0.61
1:A:962:C:H2'	1:A:963:A:O4'	2.01	0.61
1:A:1048:G:O2'	1:A:1049:U:H5'	2.00	0.61
1:A:1199:G:C2	79:AC:40:ARG:HB3	2.35	0.61
2:B:667:C:O2'	17:Q:8:PRO:HG3	2.00	0.61
2:B:707:U:C2'	2:B:708:G:H5"	2.28	0.61
2:B:786:A:P	22:V:146:SER:HB3	2.41	0.61
2:B:1456:A:H61	35:IA:64:VAL:HG23	1.66	0.61
2:B:2110:G:H2'	28:BA:48:ARG:NH2	2.15	0.61
2:B:2594:C:H2'	2:B:2595:A:C5'	2.30	0.61
5:E:5:THR:HG23	5:E:8:GLN:HB2	1.82	0.61
6:F:54:ARG:HH11	6:F:54:ARG:HG3	1.65	0.61
6:F:63:PHE:HB2	6:F:72:ARG:NH1	2.15	0.61
6:F:113:VAL:CG1	6:F:166:ILE:HA	2.26	0.61
6:F:206:PRO:HD3	6:F:213:GLY:CA	2.30	0.61
13:M:19:SER:HA	18:R:6:ILE:HB	1.82	0.61
18:R:23:ILE:HD11	18:R:33:ALA:HB2	1.83	0.61
18:R:24:LYS:HG3	18:R:25:LYS:HG2	1.82	0.61
18:R:95:ALA:HA	18:R:100:ALA:HB1	1.83	0.61
20:T:148:LYS:H	20:T:148:LYS:CD	2.12	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:96:ILE:HG21	36:JA:100:ILE:HG21	1.82	0.61
39:MA:10:ARG:HA	39:MA:61:GLN:NE2	2.16	0.61
40:NA:53:TYR:CD1	40:NA:76:ARG:HD2	2.35	0.61
50:XA:110:TYR:HD1	50:XA:111:ILE:HG13	1.65	0.61
51:YA:47:LEU:O	64:LB:37:GLU:HG2	2.00	0.61
51:YA:111:ARG:HG2	76:XB:68:TYR:O	2.00	0.61
55:CB:23:VAL:HG11	55:CB:34:GLN:OE1	2.01	0.61
58:FB:170:SER:HB3	58:FB:182:TYR:CE1	2.35	0.61
60:HB:24:LYS:HB3	60:HB:29:GLN:NE2	2.15	0.61
67:OB:41:ILE:HG22	67:OB:42:GLN:N	2.14	0.61
67:OB:72:LYS:C	67:OB:74:GLN:H	2.09	0.61
82:DC:203:TYR:C	82:DC:205:ALA:H	2.09	0.61
82:DC:511:LEU:HD23	82:DC:520:THR:CG2	2.30	0.61
1:A:95:G:H3'	1:A:96:G:H8	1.65	0.61
1:A:198:A:H2'	1:A:199:G:H5'	1.83	0.61
1:A:988:A:H2'	1:A:989:U:C6	2.35	0.61
1:A:1082:C:H4'	71:SB:58:TYR:HE2	1.64	0.61
1:A:1163:A:H1'	1:A:1613:U:O2'	2.00	0.61
1:A:1452:U:H1'	65:MB:79:HIS:ND1	2.16	0.61
2:B:641:C:H2'	2:B:642:U:O4'	2.01	0.61
2:B:805:G:H4'	8:H:73:ARG:HB3	1.82	0.61
2:B:897:U:C2'	2:B:898:U:H5'	2.31	0.61
2:B:998:A:H4'	4:D:103:A:C2	2.35	0.61
2:B:1134:G:H2'	2:B:1135:A:H5"	1.82	0.61
2:B:1507:G:H1'	21:U:139:TYR:CE1	2.36	0.61
2:B:1523:U:H1'	29:CA:111:ASN:HB2	1.82	0.61
2:B:2148:U:H5"	6:F:196:TRP:HE1	1.65	0.61
2:B:3076:C:P	35:IA:65:LYS:HE3	2.41	0.61
11:K:96:PRO:HB2	11:K:99:PRO:CD	2.30	0.61
16:P:76:SER:HA	16:P:80:LEU:HG	1.81	0.61
21:U:76:PHE:HB2	21:U:78:VAL:HG23	1.82	0.61
21:U:94:LEU:CD2	21:U:148:LEU:HD23	2.28	0.61
24:X:75:PHE:HD2	24:X:102:ALA:CB	2.14	0.61
24:X:154:HIS:HA	24:X:170:THR:O	2.00	0.61
26:Z:42:LYS:HA	26:Z:46:ALA:O	2.01	0.61
30:DA:60:ARG:HB2	30:DA:103:LYS:HB3	1.82	0.61
32:FA:79:TRP:CZ2	32:FA:118:ILE:HD12	2.35	0.61
39:MA:50:SER:O	39:MA:54:VAL:HG23	2.00	0.61
51:YA:32:ILE:HD12	64:LB:33:LEU:HD11	1.81	0.61
54:BB:178:GLY:HA2	54:BB:195:ILE:CG2	2.30	0.61
54:BB:212:ASP:OD2	54:BB:216:ASN:HB2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:EB:98:ILE:HG23	57:EB:118:LEU:HD23	1.82	0.61
63:KB:98:VAL:HB	63:KB:115:LEU:HD23	1.82	0.61
64:LB:20:TYR:OH	64:LB:22:SER:HB3	2.01	0.61
65:MB:85:ILE:HG22	65:MB:112:LEU:HD23	1.81	0.61
72:TB:22:LYS:HB3	72:TB:25:VAL:HG12	1.82	0.61
72:TB:26:LEU:HD12	72:TB:61:ILE:O	2.00	0.61
1:A:415:C:O2'	1:A:416:A:H2'	2.01	0.61
1:A:637:C:OP2	72:TB:32:LYS:HE2	2.01	0.61
1:A:862:A:H4'	72:TB:57:ARG:HG3	1.83	0.61
2:B:95:A:H5"	32:FA:34:MET:HB2	1.82	0.61
2:B:636:C:P	2:B:636:C:H6	2.24	0.61
2:B:1698:C:H2'	2:B:1699:A:H8	1.62	0.61
2:B:1774:C:H2'	2:B:1775:G:C4'	2.29	0.61
2:B:2319:U:O2'	2:B:2320:A:H5'	2.00	0.61
2:B:2572:C:OP1	31:EA:58:GLY:HA3	2.00	0.61
2:B:2894:C:H2'	2:B:2895:G:H8	1.66	0.61
3:C:75:G:C8	43:QA:30:ARG:HD2	2.35	0.61
6:F:114:SER:HB2	6:F:127:ALA:O	2.00	0.61
7:G:347:SER:O	7:G:348:ARG:HB2	2.00	0.61
8:H:246:ARG:HD3	8:H:247:PHE:N	2.14	0.61
9:I:258:LYS:O	9:I:259:LYS:HB3	2.00	0.61
11:K:75:TYR:HB2	25:Y:141:VAL:HG23	1.83	0.61
12:L:98:ARG:N	12:L:131:ALA:HB1	2.16	0.61
19:S:36:ILE:CD1	19:S:105:ARG:HD3	2.31	0.61
19:S:145:ASP:C	19:S:147:ARG:H	2.08	0.61
20:T:43:ILE:HG22	20:T:44:SER:N	2.12	0.61
28:BA:9:SER:HA	28:BA:52:THR:CB	2.24	0.61
38:LA:3:GLN:HG2	38:LA:30:LEU:HB3	1.83	0.61
52:ZA:109:GLY:HA2	52:ZA:139:ILE:HB	1.83	0.61
52:ZA:152:HIS:HD2	52:ZA:153:SER:H	1.47	0.61
56:DB:34:GLN:O	56:DB:51:LYS:HA	2.01	0.61
74:VB:12:VAL:HG22	74:VB:23:PHE:CB	2.30	0.61
83:EC:6761:C:H2'	83:EC:6762:U:C6	2.35	0.61
1:A:138:A:N6	1:A:266:A:N6	2.43	0.61
1:A:956:C:H2'	1:A:957:G:H8	1.64	0.61
1:A:1043:A:H61	1:A:1075:C:N4	1.99	0.61
1:A:1348:A:H2'	1:A:1349:G:O4'	2.01	0.61
1:A:1556:A:H2'	65:MB:40:ARG:CZ	2.31	0.61
1:A:1609:U:H2'	1:A:1610:G:O4'	2.01	0.61
2:B:398:A:H1'	2:B:1416:C:OP1	2.00	0.61
2:B:877:C:O2'	2:B:880:G:H1'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3181:C:H2'	2:B:3182:G:C8	2.36	0.61
2:B:3355:U:H3'	2:B:3356:G:H5"	1.82	0.61
3:C:42:G:H21	41:OA:21:ARG:HA	1.64	0.61
7:G:169:THR:HG22	7:G:171:LEU:HG	1.82	0.61
7:G:227:GLU:CG	7:G:270:ARG:HH21	2.13	0.61
7:G:232:ARG:HE	7:G:268:GLY:CA	2.14	0.61
7:G:338:LEU:HD22	7:G:338:LEU:H	1.66	0.61
8:H:44:LYS:HD2	8:H:111:VAL:HG21	1.83	0.61
10:J:82:ARG:HB3	37:KA:104:PRO:CB	2.28	0.61
11:K:118:LYS:HG3	11:K:191:VAL:HG11	1.81	0.61
12:L:92:LYS:NZ	12:L:92:LYS:HB3	2.15	0.61
20:T:96:LYS:HA	20:T:99:LEU:HD12	1.83	0.61
20:T:156:LEU:HD23	20:T:159:LYS:HD2	1.83	0.61
22:V:80:THR:OG1	22:V:137:THR:HG22	2.01	0.61
23:W:11:ALA:HB1	23:W:22:VAL:HG11	1.81	0.61
31:EA:4:PHE:HE2	34:HA:63:SER:HA	1.63	0.61
38:LA:44:CYS:CB	38:LA:49:SER:H	2.14	0.61
39:MA:24:LEU:HD22	39:MA:51:ILE:HG13	1.83	0.61
50:XA:124:THR:O	50:XA:146:LEU:HB2	2.00	0.61
50:XA:153:SER:O	50:XA:156:VAL:HG22	2.01	0.61
52:ZA:157:LYS:HE2	52:ZA:170:ILE:HG23	1.81	0.61
53:AB:177:MET:SD	53:AB:182:LEU:HD22	2.40	0.61
54:BB:95:THR:HA	74:VB:16:PRO:HG2	1.82	0.61
55:CB:60:ASP:HA	55:CB:65:ARG:HH22	1.65	0.61
56:DB:135:PRO:HB2	56:DB:141:ILE:HG12	1.83	0.61
66:NB:92:TYR:CE1	66:NB:96:TYR:HB2	2.36	0.61
1:A:329:G:H2'	1:A:330:G:C8	2.35	0.61
1:A:1408:G:H2'	1:A:1409:G:O4'	2.00	0.61
2:B:130:A:H2'	2:B:131:C:O4'	2.00	0.61
2:B:268:A:H5'	2:B:318:A:N3	2.16	0.61
2:B:300:G:H2'	2:B:301:G:C8	2.36	0.61
2:B:356:C:H2'	2:B:357:A:C8	2.34	0.61
2:B:1039:U:H2'	2:B:1040:A:C8	2.35	0.61
2:B:2370:G:H2'	2:B:2371:G:O4'	2.01	0.61
2:B:2643:A:H2'	2:B:2645:G:H5"	1.82	0.61
2:B:3281:U:H2'	2:B:3282:U:C6	2.36	0.61
3:C:59:A:O2'	29:CA:61:LYS:HD3	2.00	0.61
6:F:82:VAL:HG12	6:F:86:GLN:OE1	2.01	0.61
6:F:202:VAL:HG12	6:F:217:GLN:CG	2.19	0.61
6:F:250:GLN:HG2	6:F:250:GLN:O	2.01	0.61
7:G:59:ASP:HA	7:G:70:ARG:O	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:313:HIS:ND1	7:G:332:ARG:HG3	2.16	0.61
13:M:48:VAL:HG13	13:M:49:ASN:ND2	2.15	0.61
15:O:65:ILE:HG23	15:O:66:ALA:H	1.65	0.61
15:O:89:TYR:CD1	15:O:167:TYR:HB3	2.36	0.61
21:U:27:LYS:HB3	21:U:63:PHE:CD2	2.35	0.61
21:U:127:ARG:HB3	21:U:139:TYR:O	2.01	0.61
26:Z:76:LEU:O	26:Z:80:THR:HG23	2.01	0.61
31:EA:81:LEU:HD13	38:LA:93:PHE:CE2	2.36	0.61
31:EA:110:ALA:O	31:EA:114:VAL:HG23	2.00	0.61
37:KA:85:PHE:HB2	37:KA:87:ASN:O	1.99	0.61
38:LA:3:GLN:HG3	38:LA:30:LEU:CD2	2.31	0.61
43:QA:38:ASN:HD22	43:QA:41:ARG:HE	1.47	0.61
50:XA:74:VAL:HG13	50:XA:96:THR:O	2.00	0.61
51:YA:113:MET:HE2	51:YA:209:ASN:HD22	1.65	0.61
55:CB:64:VAL:O	55:CB:64:VAL:HG12	2.01	0.61
59:GB:37:LYS:HD2	80:BC:33:ARG:HB2	1.83	0.61
63:KB:99:ARG:HG3	63:KB:115:LEU:HD21	1.83	0.61
82:DC:380:LEU:HD21	82:DC:456:LEU:HD21	1.82	0.61
82:DC:585:ARG:O	82:DC:691:VAL:HA	2.01	0.61
1:A:128:U:C2	1:A:204:G:H5'	2.35	0.61
1:A:160:C:O3'	56:DB:95:LYS:HE2	2.00	0.61
1:A:390:G:O2'	1:A:1731:A:H5"	2.00	0.61
1:A:556:A:H4'	80:BC:56:MET:HG2	1.82	0.61
1:A:753:A:H2'	1:A:754:A:O4'	2.01	0.61
1:A:1556:A:H4'	1:A:1557:U:H5	1.65	0.61
2:B:87:U:H5"	22:V:172:PHE:HE2	1.64	0.61
2:B:215:G:H5"	30:DA:12:ARG:HD2	1.82	0.61
2:B:881:C:H2'	2:B:882:A:O4'	2.01	0.61
2:B:973:A:C4	2:B:974:G:H1'	2.36	0.61
2:B:1121:U:H2'	2:B:1122:U:C6	2.36	0.61
2:B:1235:U:H4'	2:B:1236:G:H3'	1.80	0.61
2:B:1529:A:C2'	2:B:1530:U:H5'	2.30	0.61
2:B:1643:A:H5'	38:LA:66:SER:OG	2.00	0.61
2:B:2643:A:H4'	33:GA:3:LYS:NZ	2.16	0.61
2:B:2728:G:C6	25:Y:80:VAL:HG21	2.36	0.61
2:B:3163:A:C2'	2:B:3164:C:H5"	2.25	0.61
2:B:3237:U:H2'	2:B:3238:G:O4'	2.01	0.61
2:B:3375:A:H8	2:B:3378:C:H6	1.49	0.61
6:F:48:ILE:HG12	6:F:84:THR:OG1	2.01	0.61
6:F:57:PRO:HD2	6:F:170:ALA:HB3	1.81	0.61
7:G:53:MET:HA	7:G:77:THR:HG22	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:204:GLY:HA3	8:H:224:GLY:C	2.25	0.61
10:J:33:SER:HB2	10:J:86:ALA:CB	2.31	0.61
13:M:91:ARG:NH1	44:RA:82:LEU:HD11	2.16	0.61
14:N:76:MET:HE2	14:N:76:MET:HA	1.83	0.61
19:S:109:ARG:HD3	19:S:110:ALA:HB2	1.82	0.61
26:Z:19:VAL:HG12	26:Z:105:LEU:CB	2.30	0.61
30:DA:56:VAL:HG22	30:DA:57:LEU:H	1.65	0.61
41:OA:18:LEU:HD11	43:QA:8:ARG:HD2	1.81	0.61
43:QA:27:ILE:HA	43:QA:30:ARG:HD3	1.82	0.61
49:WA:47:LEU:HA	49:WA:54:PHE:O	2.00	0.61
54:BB:220:THR:HG22	54:BB:221:ARG:H	1.65	0.61
59:GB:150:LEU:C	59:GB:152:SER:H	2.07	0.61
82:DC:288:ILE:HD12	82:DC:288:ILE:N	2.16	0.61
1:A:385:A:H5'	58:FB:21:PHE:CE2	2.36	0.61
1:A:901:G:H2'	1:A:902:G:H5'	1.83	0.61
1:A:1410:A:H2'	1:A:1411:A:C8	2.36	0.61
2:B:424:G:N2	36:JA:24:ARG:HH21	1.98	0.61
2:B:908:G:H22	2:B:2415:C:P	2.24	0.61
2:B:1281:G:O2'	48:VA:83:ASN:HA	2.01	0.61
2:B:1832:C:H4'	3:C:113:U:H5'	1.81	0.61
2:B:1841:A:O2'	2:B:1842:A:H5"	2.01	0.61
2:B:3040:A:OP1	27:AA:12:ARG:HB2	2.01	0.61
9:I:204:VAL:O	9:I:208:MET:HG3	2.01	0.61
13:M:172:ILE:HG13	44:RA:90:ASN:HD22	1.66	0.61
16:P:105:GLN:HA	16:P:142:ARG:HA	1.81	0.61
20:T:94:ARG:O	20:T:98:ALA:HB2	2.00	0.61
21:U:138:LYS:HD2	21:U:140:GLU:CD	2.26	0.61
48:VA:52:LEU:HB2	48:VA:86:PHE:HB2	1.83	0.61
51:YA:113:MET:HE1	51:YA:211:HIS:HE2	1.66	0.61
52:ZA:183:ALA:C	52:ZA:185:LYS:H	2.08	0.61
54:BB:213:SER:HB2	54:BB:244:ILE:CD1	2.28	0.61
57:EB:47:ARG:HB3	57:EB:59:ALA:HB3	1.82	0.61
60:HB:55:VAL:HG23	60:HB:67:THR:O	2.01	0.61
66:NB:77:GLN:O	66:NB:81:ILE:HG12	2.00	0.61
82:DC:39:LEU:HD21	82:DC:334:LEU:CD1	2.29	0.61
1:A:1782:A:H5"	1:A:1783:C:C6	2.36	0.60
2:B:254:A:H2'	2:B:255:A:C8	2.36	0.60
10:J:56:LYS:H	10:J:64:LEU:HB3	1.65	0.60
13:M:23:ARG:HB2	13:M:39:LYS:CG	2.21	0.60
13:M:93:VAL:HG22	44:RA:82:LEU:HD23	1.83	0.60
17:Q:39:ARG:HA	17:Q:51:LEU:HD11	1.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:119:TYR:CE1	19:S:131:GLU:HB3	2.35	0.60
21:U:117:ILE:HD12	21:U:148:LEU:HB3	1.81	0.60
24:X:117:ARG:H	24:X:117:ARG:CD	2.13	0.60
27:AA:74:MET:HB2	27:AA:102:ILE:HD13	1.83	0.60
35:IA:29:ALA:HB3	35:IA:30:PRO:HD3	1.82	0.60
47:UA:56:THR:HG22	47:UA:63:THR:HG23	1.83	0.60
52:ZA:65:GLU:OE1	52:ZA:68:ILE:HD11	2.01	0.60
54:BB:87:MET:HA	54:BB:87:MET:HE2	1.82	0.60
63:KB:30:SER:HA	63:KB:33:VAL:HG22	1.83	0.60
63:KB:33:VAL:HG23	63:KB:34:ILE:N	2.16	0.60
67:OB:7:LYS:HG3	67:OB:8:THR:N	2.15	0.60
72:TB:8:ALA:HA	72:TB:74:VAL:HG21	1.82	0.60
82:DC:79:SER:HB3	82:DC:98:PHE:CB	2.22	0.60
1:A:943:C:N4	76:XB:18:VAL:HA	2.13	0.60
1:A:1419:G:H4'	79:AC:54:LYS:HE3	1.82	0.60
2:B:185:C:H4'	30:DA:122:LYS:HA	1.84	0.60
2:B:843:A:H2'	2:B:844:G:C8	2.36	0.60
2:B:1362:G:O3'	11:K:160:ARG:HB3	2.01	0.60
2:B:1424:C:H3'	2:B:1425:U:H5"	1.82	0.60
2:B:1699:A:H2'	2:B:1700:G:H8	1.65	0.60
2:B:1794:G:H5'	6:F:188:LYS:HA	1.83	0.60
2:B:2761:G:H22	2:B:2795:U:H3'	1.66	0.60
2:B:3067:C:C2'	2:B:3068:U:H5'	2.31	0.60
2:B:3335:A:H5"	2:B:3370:A:C2	2.35	0.60
2:B:3376:A:C8	35:IA:18:LYS:HA	2.36	0.60
3:C:12:A:H2'	3:C:13:A:C5'	2.29	0.60
4:D:54:U:H1'	4:D:56:A:N6	2.16	0.60
6:F:40:TYR:HD1	6:F:93:LYS:HB3	1.67	0.60
6:F:113:VAL:HG11	6:F:166:ILE:HD13	1.83	0.60
8:H:107:ARG:HG2	8:H:108:LYS:H	1.65	0.60
10:J:31:ARG:CG	37:KA:107:ILE:HG22	2.31	0.60
14:N:176:LEU:HD13	14:N:184:LYS:HD3	1.83	0.60
18:R:24:LYS:NZ	24:X:158:LYS:HE2	2.16	0.60
26:Z:98:THR:HB	26:Z:102:GLU:HB3	1.82	0.60
27:AA:77:ILE:O	27:AA:101:VAL:HG22	2.00	0.60
31:EA:84:ARG:HH21	31:EA:84:ARG:HG3	1.66	0.60
48:VA:11:TYR:CD2	48:VA:57:THR:HB	2.36	0.60
48:VA:30:VAL:CG1	48:VA:31:ASP:H	2.07	0.60
52:ZA:154:LEU:HD12	52:ZA:193:VAL:HG11	1.82	0.60
53:AB:39:VAL:O	53:AB:39:VAL:HG13	2.00	0.60
55:CB:165:LEU:HD23	78:ZB:47:PRO:HB2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:LB:45:GLY:HA2	64:LB:48:VAL:HG12	1.83	0.60
72:TB:30:SER:HA	72:TB:34:ILE:CD1	2.20	0.60
79:AC:33:LYS:HE2	79:AC:34:TYR:CZ	2.35	0.60
1:A:520:A:H2'	1:A:521:A:C8	2.36	0.60
1:A:799:A:H2'	1:A:800:U:H6	1.64	0.60
2:B:148:G:C2'	19:S:49:ARG:HH22	2.13	0.60
2:B:707:U:H1'	2:B:754:G:O2'	2.02	0.60
2:B:1518:U:H2'	2:B:1519:G:H8	1.63	0.60
2:B:1798:A:H2'	2:B:1799:A:C8	2.36	0.60
2:B:1842:A:C1'	43:QA:44:TRP:HZ3	2.13	0.60
2:B:1857:C:H2'	2:B:1858:A:H5'	1.84	0.60
2:B:2599:U:H2'	2:B:2600:C:C6	2.36	0.60
2:B:3321:C:H2'	2:B:3322:A:O4'	2.01	0.60
2:B:3365:U:H5"	28:BA:59:HIS:CE1	2.37	0.60
3:C:95:G:OP1	41:OA:76:ASN:HB3	2.00	0.60
8:H:82:THR:C	8:H:84:ARG:H	2.09	0.60
8:H:197:ARG:HH11	8:H:197:ARG:CB	2.15	0.60
9:I:223:PHE:O	9:I:227:LEU:HD13	2.01	0.60
11:K:51:TYR:CE2	11:K:186:HIS:HB2	2.37	0.60
18:R:105:GLN:HG2	18:R:109:ARG:NH2	2.15	0.60
19:S:199:LEU:HB3	19:S:203:ARG:HD2	1.83	0.60
22:V:64:VAL:HA	22:V:67:ILE:HD12	1.84	0.60
36:JA:66:LEU:HD13	36:JA:70:GLY:HA2	1.83	0.60
37:KA:100:ILE:HD12	37:KA:100:ILE:N	2.16	0.60
45:SA:21:ARG:HH22	45:SA:25:LYS:HD3	1.66	0.60
47:UA:47:VAL:HG13	47:UA:56:THR:O	2.02	0.60
52:ZA:148:LEU:HB3	52:ZA:174:ARG:NH2	2.16	0.60
58:FB:47:ARG:HD3	58:FB:47:ARG:C	2.26	0.60
75:WB:67:ASP:C	75:WB:69:LEU:H	2.09	0.60
82:DC:575:ALA:HA	82:DC:839:TYR:CE1	2.31	0.60
82:DC:633:ILE:CG2	82:DC:647:ILE:HG13	2.26	0.60
1:A:55:A:C6	1:A:403:G:H1'	2.36	0.60
1:A:355:G:H2'	1:A:356:G:C8	2.35	0.60
1:A:417:A:H5'	1:A:418:G:C8	2.36	0.60
1:A:1519:U:H2'	1:A:1520:U:C5	2.36	0.60
2:B:1596:C:H5'	2:B:1606:U:N3	2.16	0.60
2:B:3358:U:H2'	2:B:3359:A:H4'	1.83	0.60
3:C:22:U:H5"	30:DA:16:ARG:NH1	2.15	0.60
5:E:90:LEU:HG	5:E:124:LEU:CD1	2.30	0.60
6:F:45:VAL:HG23	6:F:59:ALA:HB1	1.83	0.60
7:G:108:GLU:HA	7:G:137:TYR:CE2	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:126:LYS:HB2	7:G:128:LYS:HG2	1.82	0.60
7:G:306:THR:CG2	7:G:316:GLU:HA	2.29	0.60
8:H:23:PRO:HB3	8:H:259:ASP:N	2.16	0.60
12:L:140:VAL:HG11	19:S:3:ALA:CB	2.31	0.60
14:N:36:LEU:HD13	14:N:87:LEU:CD2	2.31	0.60
15:O:101:ASN:HD21	15:O:130:VAL:HG23	1.65	0.60
20:T:65:ASN:OD1	20:T:67:THR:HB	2.02	0.60
25:Y:124:VAL:HG12	25:Y:125:ALA:N	2.17	0.60
25:Y:126:VAL:HG23	25:Y:127:GLN:H	1.65	0.60
29:CA:92:LYS:HE3	29:CA:110:VAL:HB	1.84	0.60
40:NA:57:LEU:HD13	40:NA:72:VAL:HB	1.83	0.60
53:AB:135:GLU:HB2	53:AB:157:LEU:HD13	1.83	0.60
56:DB:215:ARG:O	56:DB:219:ARG:HB2	2.00	0.60
63:KB:53:LEU:O	63:KB:57:ALA:HB3	2.01	0.60
68:PB:18:LEU:HD22	68:PB:70:VAL:HG22	1.84	0.60
83:EC:6931:U:H2'	83:EC:6932:G:C8	2.34	0.60
1:A:79:C:C2'	1:A:80:A:H5'	2.31	0.60
1:A:431:C:H2'	1:A:432:G:C8	2.36	0.60
1:A:625:C:H1'	1:A:940:A:C4'	2.31	0.60
1:A:1039:A:HO2'	1:A:1040:G:H8	1.49	0.60
2:B:271:C:O2	40:NA:82:ARG:NH1	2.33	0.60
2:B:388:G:O2'	2:B:389:A:H5'	2.01	0.60
2:B:672:A:H2'	2:B:673:U:O4'	2.02	0.60
2:B:675:C:H2'	2:B:676:G:C5'	2.31	0.60
2:B:865:U:C2'	2:B:866:A:H5'	2.31	0.60
2:B:1074:U:O4'	33:GA:46:ALA:HA	2.01	0.60
2:B:1380:G:H5'	8:H:191:LYS:HD2	1.82	0.60
2:B:3324:C:H4'	35:IA:13:THR:HB	1.83	0.60
2:B:3329:U:H3	2:B:3374:U:H3	1.49	0.60
6:F:54:ARG:NE	6:F:58:LEU:HD11	2.16	0.60
6:F:64:ARG:HG2	6:F:71:LEU:HG	1.84	0.60
8:H:52:VAL:HG12	8:H:103:THR:HB	1.82	0.60
10:J:39:VAL:HG12	10:J:159:LEU:HD21	1.82	0.60
10:J:84:VAL:O	10:J:85:ILE:HG13	2.01	0.60
11:K:179:LEU:H	11:K:179:LEU:CD1	2.14	0.60
11:K:207:LEU:HB3	11:K:243:MET:O	2.01	0.60
12:L:211:LEU:O	12:L:215:VAL:HG23	2.01	0.60
14:N:189:GLU:HB3	14:N:200:LEU:HB3	1.83	0.60
15:O:47:GLN:HA	15:O:67:VAL:HG12	1.83	0.60
19:S:26:ARG:HA	19:S:29:GLU:HB3	1.83	0.60
24:X:166:LYS:O	24:X:167:ARG:HB2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:92:ARG:HB3	25:Y:94:GLU:OE1	2.01	0.60
30:DA:87:LYS:HD3	30:DA:88:GLU:N	2.16	0.60
36:JA:89:THR:HA	36:JA:117:ILE:HG22	1.83	0.60
50:XA:103:THR:HG21	50:XA:114:SER:OG	2.01	0.60
50:XA:126:PRO:O	50:XA:130:ALA:HB2	2.01	0.60
51:YA:214:LYS:HG2	51:YA:215:VAL:N	2.15	0.60
52:ZA:207:LEU:HD21	52:ZA:211:LEU:HD11	1.83	0.60
55:CB:220:VAL:C	55:CB:222:LYS:H	2.08	0.60
56:DB:98:ARG:HD3	56:DB:99:GLY:N	2.16	0.60
61:IB:55:ASP:HB2	61:IB:113:PRO:CD	2.31	0.60
61:IB:55:ASP:OD2	61:IB:58:CYS:HB2	2.02	0.60
61:IB:85:VAL:HG13	61:IB:107:VAL:C	2.27	0.60
71:SB:19:ALA:HB2	71:SB:71:ARG:NH1	2.16	0.60
76:XB:10:ARG:HB3	76:XB:34:LYS:HA	1.84	0.60
82:DC:789:GLY:HA3	82:DC:791:GLN:NE2	2.16	0.60
1:A:10:G:H4'	52:ZA:94:GLN:NE2	2.17	0.60
1:A:642:G:H2'	1:A:643:G:H8	1.66	0.60
2:B:728:G:N2	22:V:138:LEU:HD23	2.16	0.60
2:B:780:A:N1	22:V:168:THR:HG22	2.16	0.60
2:B:885:U:OP1	41:OA:6:PRO:HG3	2.01	0.60
2:B:1052:U:H2'	2:B:1053:A:H5'	1.84	0.60
2:B:1213:G:H2'	2:B:1214:U:C6	2.36	0.60
2:B:2727:A:H3'	2:B:2728:G:H4'	1.84	0.60
2:B:3114:A:H2'	2:B:3115:C:H5	1.67	0.60
6:F:47:GLN:O	6:F:59:ALA:HB1	2.01	0.60
7:G:60:LEU:HG	7:G:61:ASP:H	1.67	0.60
8:H:312:VAL:O	8:H:313:LEU:HB2	2.00	0.60
9:I:125:VAL:HG12	9:I:200:PHE:CZ	2.36	0.60
9:I:208:MET:HE3	9:I:223:PHE:HD2	1.65	0.60
10:J:158:TYR:CD1	18:R:115:PHE:CD2	2.84	0.60
15:O:89:TYR:O	15:O:169:ALA:HB1	2.02	0.60
29:CA:95:ILE:O	29:CA:99:VAL:HG23	2.02	0.60
35:IA:70:ARG:NE	35:IA:102:LYS:HD3	2.17	0.60
52:ZA:152:HIS:HB3	52:ZA:174:ARG:HG2	1.83	0.60
54:BB:49:ARG:HB3	54:BB:49:ARG:NH2	2.17	0.60
54:BB:52:LEU:HD13	54:BB:54:TYR:HE2	1.67	0.60
56:DB:5:ILE:O	56:DB:13:GLN:HA	2.01	0.60
58:FB:169:ILE:HD12	58:FB:179:CYS:SG	2.42	0.60
67:OB:14:LYS:HG3	67:OB:69:ILE:HD12	1.83	0.60
78:ZB:56:LEU:HD23	78:ZB:56:LEU:H	1.67	0.60
82:DC:437:MET:CA	82:DC:442:VAL:HG12	2.29	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:100:A:O2'	1:A:101:U:H5'	2.01	0.60
1:A:800:U:H2'	1:A:801:G:C8	2.36	0.60
1:A:1670:G:H22	1:A:1730:A:H2'	1.66	0.60
2:B:561:C:C5'	18:R:76:ALA:HA	2.27	0.60
2:B:873:C:H5"	2:B:874:U:OP2	2.01	0.60
2:B:1200:A:C6	2:B:2370:G:H5"	2.37	0.60
2:B:1590:G:H3'	2:B:1591:G:H8	1.66	0.60
2:B:1836:C:H42	43:QA:3:ALA:HB2	1.65	0.60
2:B:2119:A:H2'	2:B:2120:A:H5'	1.81	0.60
2:B:2372:A:H5"	2:B:2373:A:H5"	1.83	0.60
2:B:2873:U:O2'	2:B:2874:G:H5'	2.01	0.60
2:B:3028:G:H5'	82:DC:28:VAL:HG21	1.83	0.60
7:G:106:TRP:HB2	7:G:133:TYR:HE2	1.65	0.60
7:G:311:PHE:HD2	7:G:317:ILE:HD11	1.67	0.60
9:I:184:ASP:CB	9:I:187:THR:HG22	2.31	0.60
10:J:64:LEU:HD12	10:J:77:ARG:O	2.01	0.60
10:J:165:LEU:H	37:KA:6:ARG:CB	2.07	0.60
11:K:134:VAL:O	11:K:229:PHE:HA	2.01	0.60
12:L:28:HIS:CE1	31:EA:125:GLY:HA3	2.36	0.60
24:X:26:ARG:HB2	25:Y:148:PRO:HB3	1.83	0.60
29:CA:86:VAL:HG22	29:CA:90:ALA:CB	2.31	0.60
31:EA:58:GLY:O	31:EA:61:LYS:HB2	2.01	0.60
36:JA:103:LYS:HG3	36:JA:104:ASN:N	2.16	0.60
50:XA:123:VAL:HG12	50:XA:124:THR:N	2.17	0.60
50:XA:189:VAL:HG22	50:XA:190:ASP:N	2.17	0.60
52:ZA:76:LEU:HG	52:ZA:105:GLY:C	2.27	0.60
52:ZA:106:ASP:OD2	52:ZA:110:HIS:HB2	2.02	0.60
55:CB:56:ALA:HB1	78:ZB:53:ILE:HG21	1.83	0.60
57:EB:7:LYS:O	57:EB:8:ILE:HG22	2.02	0.60
64:LB:127:ARG:HA	76:XB:22:ARG:HH22	1.66	0.60
76:XB:36:ILE:HD13	76:XB:37:LYS:N	2.17	0.60
82:DC:73:THR:O	82:DC:103:ILE:HA	2.02	0.60
82:DC:109:VAL:HG23	82:DC:138:GLN:HE21	1.65	0.60
82:DC:545:LEU:HA	82:DC:549:HIS:HB2	1.84	0.60
1:A:72:A:H3'	1:A:73:U:C5'	2.32	0.60
1:A:251:A:C2'	1:A:252:U:H5'	2.27	0.60
1:A:327:U:H5"	61:IB:14:GLN:OE1	2.01	0.60
1:A:959:U:H5"	63:KB:14:SER:HB2	1.82	0.60
1:A:1304:G:H3'	1:A:1305:U:O2	2.02	0.60
2:B:841:A:H4'	23:W:126:GLU:HA	1.84	0.60
2:B:965:A:H2'	2:B:966:U:H6	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1118:C:H2'	2:B:1119:C:C6	2.36	0.60
2:B:1157:G:H5"	11:K:220:PHE:CE2	2.36	0.60
2:B:1213:G:H2'	2:B:1214:U:H6	1.66	0.60
2:B:1666:G:H4'	2:B:1742:U:H4'	1.83	0.60
2:B:1713:G:O6	34:HA:28:LYS:HD3	2.02	0.60
2:B:2186:U:H2'	2:B:2187:G:C5'	2.30	0.60
2:B:2357:A:H2'	2:B:2358:A:C8	2.37	0.60
2:B:2393:G:O6	2:B:2982:A:H2'	2.02	0.60
2:B:2613:U:H5"	2:B:2614:G:H5'	1.84	0.60
2:B:2618:G:C5'	14:N:116:ARG:HG2	2.31	0.60
2:B:3376:A:H8	35:IA:18:LYS:HB3	1.66	0.60
4:D:65:G:H2'	4:D:66:A:H8	1.66	0.60
7:G:79:VAL:HG13	7:G:322:ILE:HB	1.83	0.60
7:G:93:VAL:HA	7:G:156:SER:HB2	1.84	0.60
8:H:31:ARG:HD3	22:V:25:TYR:HD2	1.66	0.60
11:K:61:ASN:HA	11:K:64:GLN:HB3	1.84	0.60
14:N:25:ALA:O	14:N:122:PRO:HG2	2.02	0.60
14:N:26:VAL:HG12	14:N:122:PRO:HB3	1.84	0.60
14:N:67:ALA:HB1	14:N:158:LYS:HD2	1.83	0.60
23:W:17:VAL:HG12	23:W:18:GLY:N	2.15	0.60
23:W:96:ILE:HG23	23:W:100:ARG:HH12	1.67	0.60
31:EA:136:PHE:OXT	38:LA:92:ALA:HB1	2.02	0.60
45:SA:11:ARG:HH11	45:SA:11:ARG:CB	2.12	0.60
58:FB:72:ILE:HB	58:FB:74:LYS:HZ2	1.67	0.60
63:KB:88:LEU:HD11	63:KB:129:TYR:CD2	2.36	0.60
71:SB:80:LYS:HB3	71:SB:80:LYS:NZ	2.17	0.60
74:VB:88:THR:O	74:VB:92:VAL:HG23	2.01	0.60
80:BC:32:GLY:O	80:BC:36:LYS:HD2	2.01	0.60
1:A:1205:C:H1'	79:AC:12:ARG:NH1	2.16	0.60
1:A:1282:U:H2'	1:A:1283:U:C6	2.36	0.60
1:A:1317:C:H2'	1:A:1318:G:O4'	2.01	0.60
1:A:1762:A:C1'	1:A:1783:C:H5'	2.31	0.60
2:B:213:A:OP1	30:DA:2:ALA:HB2	2.01	0.60
2:B:371:G:H4'	2:B:396:A:N1	2.17	0.60
2:B:500:C:C4'	10:J:80:ASN:HD21	2.15	0.60
2:B:776:U:H5"	33:GA:41:ARG:NH2	2.17	0.60
2:B:1668:G:H4'	38:LA:30:LEU:CD1	2.32	0.60
2:B:1795:U:OP1	6:F:52:SER:HB3	2.01	0.60
2:B:2154:U:O3'	6:F:240:ALA:HA	2.02	0.60
2:B:3242:G:N7	7:G:150:ARG:HD2	2.17	0.60
3:C:143:U:H2'	3:C:144:G:H8	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:102:LEU:HD23	7:G:102:LEU:H	1.65	0.60
8:H:309:ARG:NH2	8:H:312:VAL:HB	2.16	0.60
9:I:49:TYR:O	9:I:144:VAL:HA	2.02	0.60
9:I:111:GLN:HE22	9:I:252:ALA:CB	2.15	0.60
10:J:170:LYS:HB3	10:J:172:HIS:CE1	2.37	0.60
13:M:132:VAL:CG2	13:M:154:VAL:HG22	2.32	0.60
13:M:155:SER:HA	13:M:158:ALA:HB3	1.84	0.60
14:N:169:LYS:HE2	14:N:169:LYS:HA	1.83	0.60
16:P:78:SER:HB2	16:P:137:GLN:NE2	2.17	0.60
17:Q:74:GLY:HA2	17:Q:96:ALA:HB1	1.83	0.60
19:S:36:ILE:HD11	19:S:105:ARG:HD3	1.84	0.60
22:V:169:GLY:C	22:V:174:ARG:HE	2.09	0.60
24:X:42:TRP:O	24:X:46:GLN:HG3	2.02	0.60
40:NA:50:LEU:HB3	40:NA:54:GLU:HB2	1.83	0.60
44:RA:95:VAL:HG23	44:RA:124:LYS:HG3	1.82	0.60
48:VA:124:VAL:HG12	48:VA:125:ASN:H	1.66	0.60
51:YA:52:THR:CG2	51:YA:53:GLY:H	2.10	0.60
54:BB:123:LEU:HD12	54:BB:161:LYS:N	2.16	0.60
66:NB:127:LYS:HE3	66:NB:132:LYS:HA	1.84	0.60
69:QB:100:ILE:O	69:QB:104:VAL:HG23	2.00	0.60
72:TB:41:MET:HG2	72:TB:129:VAL:HG11	1.83	0.60
82:DC:29:ASP:HA	84:DC:901:GDP:O3B	2.02	0.60
82:DC:147:LEU:HB3	82:DC:192:TYR:O	2.01	0.60
1:A:338:C:H5"	58:FB:10:LYS:HD3	1.84	0.60
1:A:1277:G:H5"	53:AB:139:SER:HB3	1.83	0.60
1:A:1777:G:H2'	1:A:1778:G:H8	1.66	0.60
2:B:118:U:H2'	2:B:119:U:O4'	2.02	0.60
2:B:1049:C:H2'	2:B:1050:U:C6	2.36	0.60
2:B:1250:G:H2'	2:B:1251:A:C8	2.37	0.60
2:B:1498:A:H1'	2:B:1602:A:H2	1.65	0.60
2:B:1868:G:H1'	2:B:2119:A:C5'	2.31	0.60
2:B:3294:A:H5'	7:G:128:LYS:HG3	1.82	0.60
8:H:193:LYS:HA	8:H:198:ARG:HA	1.83	0.60
9:I:261:THR:HA	9:I:265:TYR:CE2	2.37	0.60
13:M:10:ILE:HD13	13:M:75:VAL:HB	1.83	0.60
22:V:93:ILE:HD12	22:V:93:ILE:N	2.15	0.60
23:W:23:TRP:HB2	23:W:53:LYS:HG2	1.83	0.60
23:W:152:GLU:O	23:W:156:ASN:HB2	2.01	0.60
26:Z:37:LEU:HA	26:Z:79:LEU:HD13	1.83	0.60
27:AA:62:VAL:HG23	27:AA:74:MET:HE1	1.84	0.60
28:BA:47:ARG:O	28:BA:48:ARG:HG3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:118:PHE:HA	31:EA:131:PHE:HE2	1.67	0.60
35:IA:46:THR:HG23	35:IA:49:VAL:HG22	1.82	0.60
43:QA:37:TYR:HE1	43:QA:39:ALA:HA	1.67	0.60
44:RA:104:PRO:HB2	44:RA:107:ALA:CB	2.29	0.60
49:WA:10:ARG:NE	49:WA:10:ARG:HA	2.16	0.60
52:ZA:176:SER:H	52:ZA:195:ASP:CG	2.10	0.60
72:TB:79:PHE:O	72:TB:124:LYS:HA	2.02	0.60
73:UB:103:LEU:O	73:UB:125:VAL:HB	2.02	0.60
82:DC:240:MET:O	82:DC:244:LEU:HG	2.02	0.60
1:A:351:C:H5”	1:A:352:A:C8	2.37	0.59
1:A:514:G:O2’	1:A:515:A:H5’	2.02	0.59
1:A:1291:G:H1	1:A:1324:G:H22	1.49	0.59
1:A:1332:C:H2’	1:A:1333:C:C6	2.36	0.59
1:A:1536:G:H2’	1:A:1538:U:C6	2.36	0.59
1:A:1586:A:OP1	66:NB:133:GLY:HA3	2.02	0.59
1:A:1796:C:O2	76:XB:92:ARG:HG2	2.02	0.59
2:B:29:C:OP1	19:S:189:LYS:HB2	2.01	0.59
2:B:142:C:H2’	2:B:143:G:C8	2.37	0.59
2:B:1324:U:H3’	2:B:1325:U:H5”	1.83	0.59
2:B:1427:U:C4	32:FA:4:ARG:HD3	2.37	0.59
2:B:1650:G:H2’	2:B:1651:U:H6	1.63	0.59
2:B:1838:G:H4’	2:B:1839:A:C4	2.37	0.59
2:B:1849:C:H5’	2:B:1849:C:H6	1.66	0.59
2:B:2318:U:H2’	2:B:2319:U:C6	2.37	0.59
2:B:2880:U:C4’	7:G:238:LEU:HD11	2.32	0.59
4:D:57:G:OP2	4:D:58:C:H5	1.85	0.59
7:G:166:ILE:CD1	7:G:171:LEU:HD12	2.32	0.59
9:I:52:VAL:HB	9:I:63:GLN:N	2.12	0.59
9:I:95:TRP:CH2	9:I:161:GLY:HA2	2.37	0.59
10:J:51:ARG:HH22	18:R:114:ASP:CG	2.08	0.59
10:J:98:VAL:HA	10:J:101:PHE:CD2	2.37	0.59
16:P:114:ARG:O	16:P:114:ARG:HD3	2.02	0.59
18:R:95:ALA:HA	18:R:100:ALA:CB	2.31	0.59
22:V:44:PHE:CZ	22:V:82:VAL:HG21	2.36	0.59
22:V:76:ALA:HB2	22:V:79:LYS:HD2	1.83	0.59
30:DA:56:VAL:HG13	30:DA:57:LEU:N	2.17	0.59
32:FA:63:LYS:HZ2	32:FA:68:PHE:HB2	1.66	0.59
35:IA:94:GLU:HB2	35:IA:95:PRO:HD2	1.84	0.59
44:RA:103:LEU:HA	44:RA:111:ARG:HH22	1.66	0.59
49:WA:156:VAL:O	49:WA:158:PRO:HD3	2.02	0.59
52:ZA:108:ASN:O	52:ZA:141:ARG:HD3	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:214:LYS:HA	55:CB:217:LEU:CD1	2.32	0.59
61:IB:122:ILE:H	61:IB:122:ILE:HD12	1.67	0.59
73:UB:79:ASN:HB3	73:UB:81:LYS:HG3	1.83	0.59
1:A:236:A:H2'	1:A:237:C:C6	2.37	0.59
1:A:448:C:H2'	1:A:449:C:C6	2.37	0.59
1:A:1132:A:H2'	1:A:1133:A:H8	1.66	0.59
1:A:1144:U:H2'	1:A:1145:U:C6	2.37	0.59
1:A:1429:G:H2'	1:A:1430:U:C6	2.37	0.59
2:B:32:U:H1'	2:B:53:G:C2	2.36	0.59
2:B:959:C:N4	2:B:2801:A:H2'	2.17	0.59
2:B:1240:A:C3'	2:B:1241:U:H5"	2.30	0.59
2:B:1523:U:O2'	2:B:1608:C:H5'	2.02	0.59
2:B:1706:C:H2'	2:B:1707:A:H8	1.67	0.59
2:B:2147:A:H2'	2:B:2148:U:C2	2.37	0.59
2:B:3312:U:H4'	7:G:25:ILE:HG21	1.84	0.59
6:F:123:ARG:HA	6:F:163:ARG:NH2	2.16	0.59
8:H:323:VAL:HG23	8:H:326:ARG:NH1	2.17	0.59
10:J:69:PHE:HB3	10:J:138:GLN:HG2	1.85	0.59
13:M:122:LYS:HD3	13:M:124:ARG:HH21	1.66	0.59
14:N:34:TYR:O	14:N:89:VAL:HG23	2.02	0.59
14:N:86:HIS:CB	14:N:139:ARG:HG2	2.31	0.59
15:O:94:ARG:C	15:O:96:PHE:H	2.10	0.59
17:Q:3:ILE:HD11	32:FA:34:MET:HA	1.83	0.59
19:S:53:TYR:HD1	19:S:133:ILE:HD13	1.66	0.59
22:V:51:ALA:CB	22:V:84:VAL:HG11	2.31	0.59
25:Y:25:VAL:HG21	25:Y:30:TYR:OH	2.03	0.59
25:Y:72:VAL:HG22	25:Y:93:VAL:HG12	1.85	0.59
31:EA:13:VAL:HG23	31:EA:21:LYS:O	2.01	0.59
34:HA:83:LYS:HB2	34:HA:85:PHE:HD2	1.67	0.59
35:IA:104:LEU:HD12	35:IA:104:LEU:N	2.16	0.59
43:QA:23:LEU:HD23	43:QA:28:ARG:HD3	1.83	0.59
50:XA:42:PRO:CG	50:XA:45:VAL:HB	2.32	0.59
51:YA:174:LYS:O	51:YA:174:LYS:HD2	2.02	0.59
52:ZA:175:GLY:O	59:GB:53:ARG:HD2	2.03	0.59
61:IB:59:PRO:HA	61:IB:64:VAL:O	2.02	0.59
66:NB:43:ILE:HG12	66:NB:44:LEU:HD22	1.83	0.59
71:SB:64:GLU:HG3	77:YB:2:VAL:HG22	1.83	0.59
76:XB:4:LYS:O	76:XB:5:ARG:HB2	2.00	0.59
76:XB:41:ILE:H	76:XB:41:ILE:CD1	2.16	0.59
1:A:64:U:C2'	1:A:65:A:H5"	2.30	0.59
1:A:228:G:H8	1:A:228:G:H5'	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:611:U:H2'	1:A:612:U:C5'	2.31	0.59
1:A:754:A:C5	1:A:793:A:H2'	2.36	0.59
2:B:122:A:H5"	2:B:123:A:C5	2.38	0.59
2:B:303:G:C5'	2:B:304:G:H21	2.14	0.59
2:B:681:U:O2	2:B:696:C:H5	1.84	0.59
2:B:1364:C:H5"	22:V:3:ILE:HG12	1.84	0.59
2:B:1505:C:H2'	2:B:1506:A:C8	2.38	0.59
2:B:1689:U:H5"	23:W:61:SER:CB	2.32	0.59
2:B:2429:G:H2'	2:B:2430:A:H5'	1.85	0.59
2:B:3114:A:H2'	2:B:3115:C:C5	2.37	0.59
8:H:60:THR:HG23	8:H:77:VAL:HG22	1.83	0.59
8:H:169:LEU:HD22	8:H:249:ILE:HD12	1.84	0.59
8:H:327:LEU:HD12	11:K:165:ASP:HA	1.84	0.59
9:I:20:PHE:CZ	25:Y:24:ALA:HB3	2.35	0.59
10:J:158:TYR:HE1	18:R:114:ASP:O	1.84	0.59
11:K:157:ASN:O	11:K:158:LYS:HB3	2.02	0.59
12:L:143:ILE:HG22	12:L:169:LEU:HD22	1.84	0.59
25:Y:39:ILE:HD11	25:Y:102:ARG:HD3	1.83	0.59
27:AA:45:ARG:HG2	27:AA:48:ARG:NE	2.17	0.59
31:EA:3:LYS:HE3	34:HA:36:GLN:O	2.02	0.59
34:HA:83:LYS:HD3	34:HA:85:PHE:HE2	1.67	0.59
34:HA:99:ASP:C	34:HA:101:LEU:H	2.10	0.59
36:JA:38:ILE:H	36:JA:38:ILE:CD1	2.11	0.59
39:MA:6:ALA:HA	39:MA:9:LEU:HD12	1.83	0.59
42:PA:62:ALA:O	42:PA:66:ILE:HG13	2.02	0.59
58:FB:97:THR:O	58:FB:99:ALA:N	2.35	0.59
61:IB:57:LYS:HB3	61:IB:131:ILE:HG23	1.84	0.59
65:MB:60:LEU:HD21	65:MB:94:VAL:CG2	2.31	0.59
71:SB:4:ASP:HB3	71:SB:5:LYS:HD3	1.83	0.59
73:UB:53:VAL:HB	73:UB:100:ASP:H	1.67	0.59
82:DC:506:GLU:O	82:DC:510:ARG:HG3	2.02	0.59
82:DC:634:TRP:CD1	82:DC:660:LYS:HE3	2.36	0.59
83:EC:6832:G:H2'	83:EC:6833:G:O4'	2.02	0.59
1:A:1579:U:H1'	66:NB:139:GLN:HG3	1.83	0.59
1:A:1670:G:N2	1:A:1730:A:H2'	2.17	0.59
2:B:101:G:C2'	2:B:102:C:H5'	2.32	0.59
2:B:528:U:H2'	2:B:529:A:H8	1.65	0.59
2:B:624:G:H2'	2:B:625:G:C8	2.36	0.59
2:B:930:U:H2'	2:B:931:C:O4'	2.03	0.59
2:B:1167:U:O3'	11:K:211:SER:HA	2.01	0.59
2:B:1653:G:N2	2:B:1654:A:H1'	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2154:U:H2'	2:B:2155:G:O4'	2.02	0.59
2:B:2244:A:H4'	6:F:223:SER:OG	2.02	0.59
2:B:2566:C:H2'	2:B:2567:C:H6	1.66	0.59
2:B:2723:U:O2'	25:Y:54:HIS:HB2	2.02	0.59
2:B:3082:C:H2'	2:B:3083:G:C8	2.37	0.59
2:B:3121:U:H1'	2:B:3122:A:H5"	1.83	0.59
2:B:3279:A:O2'	2:B:3280:U:H5'	2.01	0.59
8:H:38:VAL:O	8:H:42:VAL:HG23	2.01	0.59
8:H:64:SER:HA	8:H:75:PRO:HA	1.85	0.59
8:H:142:VAL:HG11	8:H:247:PHE:CD1	2.37	0.59
8:H:299:ILE:HG12	22:V:35:PHE:CZ	2.38	0.59
17:Q:47:ALA:HB1	17:Q:48:PRO:HD2	1.84	0.59
19:S:11:GLN:HG3	19:S:44:ARG:CZ	2.33	0.59
19:S:59:PHE:HE1	19:S:133:ILE:HD11	1.66	0.59
37:KA:27:VAL:HG11	37:KA:82:ARG:HD3	1.85	0.59
44:RA:102:ARG:C	44:RA:103:LEU:HD12	2.28	0.59
49:WA:203:THR:OG1	49:WA:245:PHE:HB2	2.03	0.59
55:CB:196:GLU:HG2	55:CB:200:ASN:ND2	2.18	0.59
58:FB:58:LEU:O	58:FB:59:ARG:HB2	2.02	0.59
59:GB:60:LEU:HD21	59:GB:93:LEU:HD13	1.83	0.59
71:SB:51:VAL:HG12	71:SB:52:THR:N	2.16	0.59
75:WB:46:LYS:HG2	75:WB:70:LYS:HE3	1.84	0.59
1:A:684:A:H2'	1:A:685:A:H5"	1.85	0.59
1:A:922:G:H2'	1:A:923:A:C8	2.37	0.59
1:A:1076:A:C4'	76:XB:13:LYS:HD3	2.32	0.59
2:B:83:U:H2'	2:B:84:U:O4'	2.01	0.59
2:B:694:C:H2'	2:B:695:C:O4'	2.02	0.59
2:B:840:C:H1'	23:W:128:LYS:HD2	1.85	0.59
2:B:1185:C:C3'	2:B:1186:G:H5"	2.32	0.59
2:B:1947:G:H1	2:B:2101:C:H42	1.49	0.59
2:B:2466:G:H1'	5:E:31:THR:HB	1.83	0.59
2:B:2610:G:H2'	2:B:2611:U:C6	2.38	0.59
2:B:2741:C:H4'	46:TA:19:LYS:HA	1.85	0.59
2:B:2805:G:H2'	2:B:2806:U:C6	2.38	0.59
2:B:3190:C:H2'	2:B:3191:G:C8	2.38	0.59
2:B:3306:U:H2'	2:B:3307:A:H5"	1.84	0.59
3:C:84:C:C4	30:DA:112:ASP:HA	2.37	0.59
3:C:141:C:H4'	19:S:110:ALA:CB	2.33	0.59
6:F:108:PRO:HG2	47:UA:86:LEU:HD22	1.84	0.59
7:G:292:ALA:HA	7:G:303:LYS:C	2.28	0.59
8:H:23:PRO:HB2	8:H:258:LEU:HD23	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:113:LEU:CD2	9:I:115:LEU:HB2	2.32	0.59
11:K:131:GLU:OE2	11:K:230:GLY:HA2	2.02	0.59
11:K:178:ILE:HG23	11:K:183:ASP:HB2	1.84	0.59
12:L:91:PHE:CZ	12:L:185:ARG:HB3	2.34	0.59
18:R:21:VAL:HG22	18:R:33:ALA:O	2.03	0.59
23:W:24:LEU:HA	23:W:49:THR:O	2.03	0.59
24:X:68:HIS:C	24:X:70:THR:H	2.08	0.59
39:MA:93:THR:HG23	39:MA:96:GLU:OE2	2.02	0.59
51:YA:61:LEU:HD12	64:LB:36:LYS:HD3	1.85	0.59
51:YA:79:HIS:C	51:YA:81:PHE:H	2.09	0.59
61:IB:80:MET:HE2	61:IB:83:THR:CG2	2.33	0.59
63:KB:128:TYR:O	63:KB:131:THR:HG22	2.02	0.59
64:LB:135:ARG:HG2	64:LB:135:ARG:O	2.02	0.59
68:PB:36:LYS:HD3	68:PB:36:LYS:H	1.67	0.59
69:QB:117:SER:HB2	69:QB:123:ARG:HB2	1.85	0.59
76:XB:75:VAL:O	76:XB:79:ILE:HG13	2.03	0.59
78:ZB:11:LYS:HA	78:ZB:53:ILE:HA	1.82	0.59
82:DC:5:THR:O	82:DC:9:MET:HG2	2.01	0.59
82:DC:225:PHE:O	82:DC:229:TYR:HB2	2.01	0.59
82:DC:647:ILE:HD12	82:DC:647:ILE:N	2.18	0.59
83:EC:6862:G:O2'	83:EC:6863:C:H5'	2.02	0.59
1:A:959:U:H1'	63:KB:61:THR:HB	1.84	0.59
1:A:986:G:C4	1:A:987:G:N2	2.70	0.59
1:A:1043:A:N6	1:A:1075:C:H42	1.99	0.59
1:A:1645:G:H4'	2:B:2255:A:N6	2.18	0.59
2:B:363:G:H4'	8:H:61:SER:OG	2.03	0.59
2:B:642:U:H2'	2:B:644:G:OP2	2.03	0.59
2:B:786:A:O3'	2:B:787:G:H8	1.85	0.59
2:B:1080:A:OP1	9:I:140:ARG:HB2	2.03	0.59
2:B:1249:G:H2'	2:B:1250:G:C8	2.38	0.59
2:B:1452:A:C2	2:B:2347:U:H1'	2.37	0.59
2:B:1636:U:C5'	31:EA:74:VAL:HB	2.33	0.59
2:B:2369:G:H2'	2:B:2370:G:H8	1.66	0.59
2:B:2683:U:H2'	2:B:2684:C:C6	2.36	0.59
2:B:2785:A:H2'	2:B:2786:G:O4'	2.01	0.59
2:B:3039:C:H2'	2:B:3040:A:C8	2.38	0.59
2:B:3040:A:H5"	27:AA:12:ARG:HB2	1.84	0.59
3:C:116:G:H2'	3:C:117:C:C5	2.37	0.59
5:E:36:VAL:HG23	5:E:183:ILE:HG21	1.85	0.59
6:F:27:ALA:CB	6:F:77:ILE:HG12	2.32	0.59
6:F:39:GLY:HA3	12:L:36:ILE:CG2	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:23:PRO:HD2	8:H:26:PHE:HE2	1.67	0.59
8:H:119:ARG:NH1	8:H:271:LYS:HB3	2.18	0.59
8:H:325:LEU:HG	8:H:331:ALA:HB3	1.85	0.59
10:J:30:LEU:HB3	10:J:34:LEU:HD12	1.83	0.59
10:J:63:LEU:O	10:J:78:ARG:HA	2.02	0.59
11:K:239:LEU:O	11:K:243:MET:HG2	2.03	0.59
14:N:9:TYR:HB3	14:N:97:LEU:HD22	1.85	0.59
15:O:96:PHE:CD1	15:O:102:PHE:HB3	2.37	0.59
16:P:85:LEU:HD11	16:P:106:LEU:HD22	1.85	0.59
16:P:86:LYS:HD2	16:P:90:ARG:HG3	1.84	0.59
16:P:107:ASP:H	16:P:142:ARG:HD3	1.68	0.59
17:Q:46:ILE:CG2	17:Q:49:ARG:HB2	2.32	0.59
18:R:77:ARG:O	18:R:81:VAL:HG23	2.03	0.59
23:W:41:ILE:O	23:W:45:VAL:HG23	2.02	0.59
40:NA:40:VAL:O	40:NA:44:VAL:HG23	2.03	0.59
48:VA:115:ALA:HB2	48:VA:165:VAL:HG23	1.83	0.59
49:WA:42:LEU:CD1	49:WA:82:SER:HB3	2.32	0.59
49:WA:172:ALA:HB1	49:WA:199:ILE:HG22	1.85	0.59
52:ZA:228:ASN:HB2	52:ZA:229:LEU:HD12	1.83	0.59
53:AB:105:MET:HE1	53:AB:109:LEU:HG	1.85	0.59
54:BB:188:ASN:N	54:BB:188:ASN:HD22	2.01	0.59
55:CB:73:THR:HB	55:CB:91:GLU:OE2	2.01	0.59
55:CB:120:ILE:HD12	55:CB:195:ALA:HB2	1.84	0.59
64:LB:60:ALA:HB1	64:LB:101:ALA:HB2	1.85	0.59
82:DC:378:LEU:HA	82:DC:403:GLY:HA3	1.84	0.59
1:A:148:A:OP2	1:A:149:C:H5	1.85	0.59
1:A:384:G:H2'	1:A:385:A:C8	2.37	0.59
1:A:810:G:N3	57:EB:111:LYS:HE2	2.17	0.59
1:A:844:A:H2'	1:A:845:G:C8	2.38	0.59
1:A:877:G:H5"	1:A:937:C:O2	2.02	0.59
1:A:1107:G:H3'	1:A:1108:G:N2	2.17	0.59
1:A:1415:U:H2'	1:A:1416:G:C8	2.38	0.59
1:A:1444:A:C4'	1:A:1445:G:H3'	2.32	0.59
1:A:1448:G:H8	1:A:1448:G:H5'	1.66	0.59
1:A:1513:G:C2'	1:A:1514:U:H5"	2.33	0.59
1:A:1711:C:H2'	1:A:1712:A:O4'	2.03	0.59
1:A:1791:A:H3'	76:XB:8:ASN:ND2	2.15	0.59
2:B:1155:C:H2'	2:B:1156:C:C6	2.37	0.59
2:B:1194:G:H8	2:B:1194:G:O5'	1.85	0.59
2:B:1466:G:H1'	21:U:89:LYS:HZ2	1.67	0.59
2:B:1803:C:H4'	38:LA:62:TYR:HB3	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2121:G:H2'	2:B:2122:G:H4'	1.83	0.59
2:B:2723:U:H2'	2:B:2724:U:H5'	1.83	0.59
2:B:2918:G:H2'	2:B:2919:A:C8	2.38	0.59
2:B:3037:U:H2'	2:B:3038:U:C6	2.37	0.59
2:B:3357:U:H2'	2:B:3358:U:C5	2.38	0.59
3:C:141:C:H2'	3:C:142:C:C5	2.38	0.59
4:D:62:U:H4'	9:I:285:ARG:NH2	2.17	0.59
5:E:112:ALA:HB1	5:E:116:LEU:HD21	1.83	0.59
6:F:174:ARG:C	6:F:176:ASP:H	2.11	0.59
8:H:115:HIS:HA	8:H:118:LYS:HB2	1.84	0.59
11:K:25:GLN:HG2	11:K:29:GLU:HB2	1.82	0.59
15:O:91:LEU:HD13	15:O:96:PHE:CE2	2.37	0.59
18:R:72:LEU:HD22	18:R:73:PRO:HD2	1.84	0.59
22:V:44:PHE:CE1	22:V:82:VAL:HG21	2.38	0.59
24:X:9:VAL:HG13	24:X:61:ILE:CD1	2.32	0.59
24:X:156:VAL:HG12	24:X:170:THR:CG2	2.32	0.59
27:AA:17:LEU:CB	27:AA:52:ALA:HB3	2.31	0.59
32:FA:24:LYS:HD3	32:FA:26:ARG:NH2	2.17	0.59
38:LA:80:ARG:HB3	38:LA:85:VAL:CG2	2.33	0.59
39:MA:28:LEU:HD23	39:MA:47:VAL:HG11	1.84	0.59
40:NA:61:ILE:C	40:NA:63:ASN:H	2.11	0.59
50:XA:110:TYR:CD1	50:XA:111:ILE:HG13	2.38	0.59
51:YA:130:SER:HB3	51:YA:178:GLY:HA2	1.84	0.59
70:RB:63:LEU:HD22	79:AC:34:TYR:CZ	2.37	0.59
76:XB:79:ILE:HA	76:XB:84:VAL:HG11	1.83	0.59
82:DC:310:ASP:HA	82:DC:313:ASP:HB2	1.84	0.59
82:DC:507:GLY:HA2	82:DC:510:ARG:HB2	1.85	0.59
1:A:619:A:H4'	1:A:1140:G:O2'	2.02	0.59
2:B:217:U:H3'	2:B:218:G:C5'	2.33	0.59
2:B:269:G:H2'	19:S:120:TRP:CE2	2.38	0.59
2:B:278:U:H2'	2:B:279:U:O4'	2.02	0.59
2:B:296:A:N6	2:B:317:A:H61	1.96	0.59
2:B:311:C:H42	2:B:2779:A:H61	1.49	0.59
2:B:518:G:H2'	2:B:520:U:C5'	2.31	0.59
2:B:598:A:H2'	2:B:599:C:C6	2.38	0.59
2:B:1106:G:H2'	2:B:1107:C:C6	2.38	0.59
2:B:1427:U:C5	32:FA:4:ARG:HD3	2.37	0.59
2:B:2303:A:H2'	2:B:2304:C:O4'	2.01	0.59
2:B:2468:A:N7	2:B:2479:C:H5'	2.18	0.59
2:B:2673:A:C5'	15:O:95:ASN:HA	2.32	0.59
2:B:3127:A:H3'	2:B:3128:G:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:135:ILE:HG22	6:F:136:ILE:H	1.68	0.59
8:H:31:ARG:NH2	22:V:23:ASN:HA	2.17	0.59
12:L:162:LEU:CD2	19:S:7:LEU:HD12	2.29	0.59
17:Q:156:ALA:HA	32:FA:99:ALA:O	2.01	0.59
18:R:15:VAL:HA	18:R:19:ARG:HG2	1.85	0.59
18:R:90:VAL:HG13	18:R:91:CYS:H	1.68	0.59
21:U:30:ARG:CZ	21:U:34:GLN:HG3	2.33	0.59
23:W:79:GLY:O	23:W:80:LYS:HE2	2.03	0.59
23:W:90:PRO:HD2	23:W:93:VAL:HG21	1.85	0.59
34:HA:50:VAL:HG13	34:HA:53:LYS:HE3	1.85	0.59
51:YA:48:VAL:HG12	51:YA:49:ASN:N	2.18	0.59
51:YA:70:LEU:HD21	51:YA:79:HIS:ND1	2.17	0.59
52:ZA:140:ARG:HB3	52:ZA:221:THR:HB	1.83	0.59
52:ZA:224:PHE:CZ	72:TB:95:PRO:HG2	2.37	0.59
54:BB:149:TYR:HB3	56:DB:208:TYR:HB2	1.84	0.59
57:EB:111:LYS:HG2	57:EB:112:ARG:H	1.67	0.59
64:LB:64:ALA:O	64:LB:68:ALA:HB2	2.02	0.59
79:AC:20:GLN:HA	79:AC:30:LEU:HD11	1.84	0.59
82:DC:25:ILE:HB	82:DC:127:VAL:HG22	1.85	0.59
82:DC:150:ARG:NH2	82:DC:196:VAL:HG11	2.17	0.59
82:DC:541:CYS:O	82:DC:545:LEU:HD13	2.03	0.59
1:A:190:C:O2'	1:A:191:C:H5'	2.03	0.59
1:A:743:U:H5"	57:EB:108:GLN:H	1.67	0.59
1:A:752:A:H2	1:A:797:G:H1	1.49	0.59
1:A:1172:G:H22	69:QB:88:VAL:HG21	1.67	0.59
2:B:763:G:N3	2:B:764:U:H1'	2.18	0.59
2:B:1317:A:H4'	20:T:18:ARG:HH22	1.67	0.59
2:B:1672:U:H5"	23:W:64:ARG:CG	2.33	0.59
2:B:1887:A:H1'	7:G:226:PHE:CE2	2.38	0.59
2:B:1900:A:H61	2:B:1908:A:N6	1.99	0.59
2:B:2217:U:H2'	2:B:2218:G:C8	2.37	0.59
2:B:2403:G:H2'	2:B:2870:C:O2'	2.03	0.59
2:B:2720:G:H1	2:B:2736:A:H61	1.50	0.59
2:B:3073:A:C3'	2:B:3074:G:H5"	2.32	0.59
5:E:205:VAL:HG12	5:E:215:ARG:HA	1.85	0.59
17:Q:4:SER:HA	32:FA:44:ASN:ND2	2.16	0.59
18:R:45:LEU:HD21	18:R:55:ARG:CG	2.31	0.59
30:DA:38:GLU:O	30:DA:42:GLN:HG2	2.01	0.59
36:JA:9:ILE:CD1	36:JA:69:SER:HA	2.33	0.59
50:XA:178:ALA:O	50:XA:181:VAL:HG22	2.03	0.59
51:YA:163:ALA:O	51:YA:167:VAL:HG23	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:141:ARG:HA	52:ZA:154:LEU:HA	1.84	0.59
69:QB:37:VAL:HG22	69:QB:38:LYS:H	1.68	0.59
1:A:182:A:H2'	1:A:183:U:C6	2.38	0.59
1:A:1556:A:H4'	1:A:1557:U:C5	2.38	0.59
2:B:43:A:H5"	19:S:83:LYS:HE2	1.85	0.59
2:B:413:U:C1'	21:U:116:HIS:HE1	2.16	0.59
2:B:1302:A:N6	2:B:2833:A:H1'	2.04	0.59
2:B:1774:C:C3'	2:B:1775:G:H5"	2.33	0.59
2:B:2817:A:H3'	2:B:2818:U:C5'	2.32	0.59
2:B:2891:U:O2'	2:B:3014:U:H5"	2.03	0.59
2:B:3138:U:H5"	7:G:274:SER:O	2.03	0.59
2:B:3330:A:H4'	7:G:367:LYS:H	1.68	0.59
6:F:126:LEU:HD22	6:F:150:LEU:HD11	1.84	0.59
7:G:116:ARG:HD2	7:G:122:TRP:CD2	2.37	0.59
20:T:124:LEU:HD21	24:X:168:PRO:CG	2.31	0.59
22:V:185:LYS:HD3	22:V:186:VAL:N	2.18	0.59
24:X:154:HIS:HA	24:X:170:THR:HB	1.85	0.59
25:Y:76:ILE:HD13	25:Y:77:ASN:H	1.68	0.59
35:IA:8:VAL:HG22	35:IA:77:ARG:HB3	1.83	0.59
35:IA:23:VAL:O	35:IA:28:ARG:HG3	2.03	0.59
54:BB:87:MET:HG3	54:BB:226:PHE:CZ	2.37	0.59
54:BB:198:LYS:NZ	54:BB:222:LEU:HB2	2.18	0.59
76:XB:36:ILE:HD13	76:XB:36:ILE:C	2.27	0.59
82:DC:115:VAL:HG12	82:DC:145:GLN:OE1	2.02	0.59
82:DC:300:LEU:CD1	82:DC:307:LEU:HG	2.33	0.59
83:EC:6949:G:H2'	83:EC:6950:C:C6	2.38	0.59
1:A:556:A:C5'	80:BC:56:MET:HG2	2.33	0.58
1:A:795:U:H2'	1:A:796:A:H8	1.68	0.58
1:A:1159:C:H1'	66:NB:140:LYS:HZ3	1.68	0.58
2:B:1270:A:OP1	82:DC:741:GLY:HA3	2.03	0.58
2:B:1927:G:OP1	47:UA:6:LYS:HB3	2.03	0.58
2:B:3351:U:H3'	2:B:3352:U:C5'	2.33	0.58
6:F:144:ASN:CB	6:F:160:SER:H	2.11	0.58
7:G:58:ARG:CD	7:G:59:ASP:H	2.16	0.58
10:J:58:LEU:HB2	10:J:62:THR:OG1	2.03	0.58
11:K:48:ASN:CA	11:K:51:TYR:HB2	2.33	0.58
11:K:102:VAL:HG13	11:K:126:LEU:HD21	1.85	0.58
14:N:12:GLN:H	14:N:12:GLN:NE2	2.01	0.58
17:Q:66:ASN:HD21	32:FA:128:ARG:HH22	1.49	0.58
20:T:31:GLN:OE1	20:T:33:ILE:HD11	2.03	0.58
26:Z:41:ILE:O	26:Z:47:VAL:HA	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:MA:53:CYS:HA	39:MA:56:THR:HB	1.84	0.58
49:WA:149:ASP:HB3	49:WA:174:ASN:HB2	1.85	0.58
54:BB:127:LYS:HB2	54:BB:140:VAL:HG12	1.85	0.58
59:GB:47:PHE:O	59:GB:50:SER:HB2	2.03	0.58
71:SB:20:THR:HG22	72:TB:21:GLY:HA2	1.84	0.58
79:AC:21:CYS:HB2	79:AC:26:SER:CB	2.32	0.58
82:DC:737:GLU:HA	82:DC:740:VAL:CG2	2.29	0.58
1:A:400:A:H5"	58:FB:25:ARG:NE	2.18	0.58
1:A:686:C:H2'	1:A:687:G:O4'	2.03	0.58
1:A:1194:A:H62	66:NB:143:ARG:CA	2.15	0.58
1:A:1579:U:O2'	66:NB:139:GLN:HA	2.03	0.58
2:B:88:A:H2'	2:B:89:A:O4'	2.02	0.58
2:B:269:G:H5'	19:S:120:TRP:CE3	2.38	0.58
2:B:1662:G:H4'	23:W:92:GLN:OE1	2.02	0.58
2:B:1823:A:H2'	2:B:1824:U:O4'	2.03	0.58
2:B:1859:A:O2'	2:B:1860:G:H5'	2.02	0.58
2:B:2436:U:O3'	12:L:70:LYS:HE3	2.04	0.58
2:B:2442:G:C3'	2:B:2443:A:H5"	2.33	0.58
6:F:5:ILE:HA	6:F:208:ASP:O	2.02	0.58
6:F:103:PRO:HA	6:F:162:ALA:O	2.03	0.58
7:G:113:GLU:HB3	7:G:176:ALA:CB	2.33	0.58
8:H:188:ARG:H	8:H:199:TRP:HA	1.68	0.58
8:H:351:PRO:HA	11:K:70:LYS:O	2.04	0.58
9:I:125:VAL:HG12	9:I:200:PHE:HZ	1.68	0.58
12:L:186:LEU:HD22	12:L:196:ALA:H	1.69	0.58
14:N:26:VAL:HG12	14:N:122:PRO:CB	2.34	0.58
24:X:6:GLU:OE1	24:X:28:ARG:HD3	2.03	0.58
38:LA:29:ILE:HD13	38:LA:29:ILE:H	1.68	0.58
48:VA:130:PRO:HA	48:VA:150:ILE:HD11	1.85	0.58
50:XA:133:ILE:HD12	50:XA:133:ILE:N	2.18	0.58
58:FB:136:SER:HB3	58:FB:139:ALA:HB3	1.84	0.58
61:IB:16:GLN:O	61:IB:19:ILE:HB	2.03	0.58
63:KB:91:LEU:HD22	63:KB:121:ARG:HH22	1.68	0.58
72:TB:80:ASN:HB3	72:TB:82:LYS:NZ	2.17	0.58
74:VB:29:HIS:HB2	74:VB:32:ARG:O	2.02	0.58
82:DC:26:ALA:CB	82:DC:32:LYS:HD3	2.32	0.58
1:A:67:A:N6	1:A:83:G:H1'	2.18	0.58
1:A:480:G:H2'	1:A:481:A:O4'	2.03	0.58
2:B:57:A:H4'	19:S:157:LYS:HB2	1.84	0.58
2:B:1065:A:H3'	2:B:1066:G:H8	1.69	0.58
2:B:1146:C:H2'	2:B:1147:G:H8	1.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1254:C:O2	16:P:131:GLU:HB2	2.03	0.58
2:B:1670:C:H4'	2:B:1860:G:OP1	2.03	0.58
2:B:1695:U:H5'	38:LA:24:LYS:C	2.29	0.58
2:B:2163:C:H4'	6:F:8:GLN:HA	1.85	0.58
2:B:3007:U:OP1	20:T:74:ARG:N	2.31	0.58
3:C:60:U:H5"	3:C:61:A:N7	2.18	0.58
6:F:113:VAL:HA	6:F:167:GLY:H	1.67	0.58
6:F:204:MET:O	6:F:212:GLY:HA3	2.03	0.58
8:H:290:ILE:HA	8:H:295:ILE:CD1	2.30	0.58
9:I:8:LYS:HG3	9:I:12:TYR:CE1	2.38	0.58
10:J:40:LEU:HB3	10:J:86:ALA:HA	1.85	0.58
17:Q:174:ARG:HB2	40:NA:9:ILE:HD12	1.86	0.58
35:IA:16:LEU:HB3	35:IA:20:LEU:HD12	1.86	0.58
35:IA:25:PHE:O	35:IA:65:LYS:HB3	2.04	0.58
37:KA:73:ARG:O	37:KA:81:VAL:HG13	2.03	0.58
39:MA:10:ARG:HA	39:MA:61:GLN:HE22	1.67	0.58
48:VA:76:LEU:HA	48:VA:189:GLN:HE22	1.68	0.58
54:BB:35:PRO:HB2	54:BB:143:ASP:C	2.28	0.58
59:GB:96:VAL:CG2	59:GB:97:LEU:N	2.66	0.58
63:KB:64:ARG:HA	63:KB:67:THR:O	2.02	0.58
65:MB:76:VAL:HG12	65:MB:77:ARG:N	2.11	0.58
1:A:5:U:O2'	1:A:553:G:O3'	2.21	0.58
1:A:34:G:H2'	1:A:35:U:C6	2.39	0.58
1:A:148:A:H62	1:A:166:C:H42	1.50	0.58
1:A:469:C:H3'	1:A:470:A:H5"	1.85	0.58
1:A:869:A:O2'	63:KB:49:GLN:HB2	2.02	0.58
1:A:981:U:C2'	1:A:982:U:H5'	2.33	0.58
1:A:1366:U:H5"	66:NB:32:ASN:C	2.27	0.58
1:A:1472:C:H2'	1:A:1535:U:O4	2.02	0.58
1:A:1487:A:H4'	1:A:1593:A:H5'	1.84	0.58
2:B:65:A:H4'	2:B:66:A:O5'	2.04	0.58
2:B:658:G:N2	8:H:93:MET:HB2	2.18	0.58
2:B:691:A:O2'	2:B:692:A:H5'	2.04	0.58
2:B:1389:G:H5'	36:JA:99:ASN:O	2.04	0.58
2:B:1949:G:H5"	23:W:104:ARG:CZ	2.34	0.58
2:B:2615:G:H2'	2:B:2616:C:H6	1.68	0.58
2:B:2643:A:H2'	2:B:2645:G:C5'	2.34	0.58
2:B:3050:U:H4'	28:BA:17:ARG:CG	2.33	0.58
2:B:3357:U:H2'	2:B:3358:U:C6	2.39	0.58
3:C:60:U:OP2	29:CA:61:LYS:HE2	2.03	0.58
8:H:58:HIS:N	8:H:59:GLN:HE21	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:138:ARG:HH12	8:H:240:PRO:HD2	1.68	0.58
9:I:231:ILE:HG21	9:I:239:ILE:CD1	2.33	0.58
10:J:31:ARG:NH1	37:KA:107:ILE:HA	2.14	0.58
12:L:78:PHE:C	12:L:80:TYR:H	2.09	0.58
12:L:82:LEU:HG	12:L:86:THR:HB	1.84	0.58
12:L:139:VAL:CG1	12:L:199:ALA:HB2	2.34	0.58
17:Q:126:PHE:CD2	17:Q:132:ALA:HB1	2.38	0.58
19:S:47:LYS:HG3	19:S:51:LEU:CD1	2.33	0.58
21:U:24:VAL:HB	21:U:87:SER:HA	1.86	0.58
22:V:157:PRO:HD3	32:FA:47:LYS:HB3	1.85	0.58
31:EA:50:PRO:HD3	31:EA:68:ILE:HG23	1.84	0.58
37:KA:13:HIS:HA	37:KA:30:ILE:HD13	1.86	0.58
39:MA:21:LEU:HB2	39:MA:54:VAL:CG1	2.34	0.58
47:UA:39:CYS:HB2	47:UA:47:VAL:CG2	2.34	0.58
49:WA:42:LEU:HD11	49:WA:82:SER:HB3	1.85	0.58
50:XA:41:ARG:CZ	50:XA:42:PRO:HD3	2.33	0.58
52:ZA:140:ARG:HD3	52:ZA:222:TYR:HE1	1.68	0.58
56:DB:175:ILE:HB	56:DB:178:LEU:HD22	1.84	0.58
57:EB:120:ALA:O	57:EB:124:LYS:HB2	2.03	0.58
69:QB:116:ILE:HD12	69:QB:116:ILE:N	2.19	0.58
72:TB:15:ASN:OD1	72:TB:71:LYS:HD2	2.04	0.58
78:ZB:12:VAL:HA	78:ZB:30:VAL:HG12	1.85	0.58
82:DC:113:SER:HB2	82:DC:516:PRO:HB2	1.85	0.58
82:DC:718:LEU:HB2	82:DC:835:TRP:HB3	1.84	0.58
1:A:511:A:H5”	59:GB:172:VAL:HG13	1.85	0.58
1:A:1387:G:H1’	1:A:1410:A:N6	2.17	0.58
1:A:1429:G:H1’	70:RB:74:GLU:HG2	1.86	0.58
1:A:1567:U:C5’	68:PB:36:LYS:HA	2.33	0.58
1:A:1595:U:H1’	1:A:1600:A:C2	2.38	0.58
2:B:666:A:C3’	2:B:667:C:H5”	2.33	0.58
2:B:861:C:H2’	2:B:862:U:C6	2.39	0.58
2:B:2174:G:H4’	2:B:2175:U:H2’	1.85	0.58
2:B:2748:A:H2’	2:B:2749:G:O4’	2.03	0.58
2:B:2841:G:H22	2:B:2846:U:H5”	1.69	0.58
2:B:3058:U:C5’	35:IA:25:PHE:HZ	2.14	0.58
2:B:3214:U:C6	18:R:121:MET:HG3	2.38	0.58
8:H:126:ILE:HG13	8:H:238:LEU:HD11	1.86	0.58
12:L:183:LYS:O	12:L:194:THR:HA	2.03	0.58
13:M:93:VAL:HG11	44:RA:86:ALA:HB2	1.86	0.58
20:T:74:ARG:HG3	20:T:146:GLY:HA3	1.86	0.58
23:W:123:LEU:HA	23:W:127:SER:OG	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:82:LYS:O	26:Z:86:LYS:HB2	2.03	0.58
34:HA:13:LYS:O	34:HA:17:VAL:HG23	2.02	0.58
35:IA:20:LEU:O	35:IA:21:HIS:C	2.46	0.58
40:NA:53:TYR:CE1	40:NA:76:ARG:HD2	2.39	0.58
40:NA:70:ARG:O	40:NA:74:LYS:HB2	2.04	0.58
50:XA:168:HIS:O	50:XA:172:LEU:HB2	2.04	0.58
51:YA:64:ARG:NH2	64:LB:37:GLU:HB2	2.17	0.58
55:CB:46:TRP:CG	55:CB:129:PRO:HG3	2.38	0.58
55:CB:209:TYR:CD1	55:CB:212:LYS:HD2	2.39	0.58
66:NB:93:HIS:HB3	66:NB:102:LYS:HB2	1.85	0.58
74:VB:17:LEU:CD1	74:VB:18:LEU:HG	2.33	0.58
82:DC:10:ARG:CZ	82:DC:449:PRO:HD3	2.34	0.58
82:DC:111:PHE:C	82:DC:113:SER:H	2.12	0.58
82:DC:734:GLN:HG2	82:DC:765:LEU:CB	2.32	0.58
1:A:400:A:C8	58:FB:25:ARG:HA	2.37	0.58
1:A:1194:A:H62	66:NB:143:ARG:HA	1.68	0.58
2:B:955:U:OP1	33:GA:7:HIS:HA	2.03	0.58
2:B:1671:C:OP1	2:B:1860:G:H4'	2.04	0.58
2:B:2433:U:H1'	19:S:125:SER:HB3	1.84	0.58
2:B:2501:U:H2'	2:B:2502:A:H8	1.67	0.58
2:B:2681:U:H1'	15:O:66:ALA:CB	2.34	0.58
2:B:2805:G:H2'	2:B:2806:U:H6	1.69	0.58
5:E:2:SER:OG	5:E:203:SER:HA	2.04	0.58
10:J:58:LEU:HD21	10:J:64:LEU:HB2	1.84	0.58
18:R:17:VAL:HG11	18:R:74:ARG:HA	1.85	0.58
29:CA:55:ASN:H	29:CA:55:ASN:ND2	2.01	0.58
34:HA:49:PRO:O	34:HA:52:ARG:HG2	2.04	0.58
35:IA:16:LEU:HD13	35:IA:70:ARG:N	2.19	0.58
36:JA:86:THR:HG23	36:JA:115:LEU:HD21	1.85	0.58
36:JA:100:ILE:CG2	36:JA:105:ARG:HG2	2.31	0.58
37:KA:73:ARG:C	37:KA:81:VAL:HG13	2.28	0.58
41:OA:41:ALA:C	41:OA:43:LYS:H	2.10	0.58
48:VA:25:LEU:HD12	48:VA:88:PHE:CE1	2.38	0.58
48:VA:122:ARG:HA	48:VA:155:ASP:OD2	2.04	0.58
51:YA:67:GLU:HG2	51:YA:83:LYS:HE3	1.84	0.58
54:BB:57:ASN:O	54:BB:61:VAL:HG23	2.02	0.58
59:GB:57:ARG:O	59:GB:61:THR:HG23	2.03	0.58
59:GB:77:ILE:HD12	59:GB:77:ILE:N	2.19	0.58
70:RB:36:ASN:O	70:RB:40:ASN:HB2	2.03	0.58
70:RB:53:LYS:HG3	70:RB:92:ASP:CB	2.34	0.58
71:SB:64:GLU:CB	77:YB:3:LEU:HD23	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:TB:94:LEU:HB3	72:TB:100:GLY:HA3	1.85	0.58
73:UB:112:LYS:HE2	73:UB:112:LYS:H	1.66	0.58
82:DC:573:GLN:HG2	82:DC:719:LEU:HD13	1.86	0.58
82:DC:735:CYS:HB2	82:DC:792:ALA:HA	1.86	0.58
1:A:503:G:OP1	80:BC:45:VAL:HG11	2.04	0.58
1:A:1299:G:H2'	1:A:1300:A:C8	2.39	0.58
2:B:122:A:H2'	2:B:146:U:O4	2.04	0.58
2:B:230:U:H2'	2:B:231:G:C8	2.39	0.58
2:B:280:U:H2'	2:B:282:G:OP2	2.03	0.58
2:B:308:A:OP1	40:NA:80:PHE:HB3	2.03	0.58
2:B:367:A:H2'	2:B:368:G:H5'	1.86	0.58
2:B:400:G:H4'	2:B:403:C:O2	2.03	0.58
2:B:947:G:H2'	2:B:948:C:C6	2.38	0.58
2:B:969:C:OP1	33:GA:19:ASN:HB3	2.04	0.58
2:B:1449:A:H1'	2:B:2983:C:C5	2.38	0.58
2:B:2527:G:H2'	2:B:2528:G:O4'	2.04	0.58
2:B:3009:G:H2'	2:B:3010:U:O4'	2.03	0.58
5:E:6:SER:O	5:E:9:VAL:HB	2.04	0.58
7:G:113:GLU:HB3	7:G:176:ALA:HB2	1.86	0.58
10:J:68:PRO:HB3	10:J:138:GLN:NE2	2.18	0.58
10:J:79:VAL:HG22	10:J:80:ASN:N	2.13	0.58
12:L:72:PRO:HB3	19:S:17:ASP:OD1	2.03	0.58
18:R:19:ARG:HD2	18:R:65:LEU:CD2	2.32	0.58
20:T:65:ASN:HB3	20:T:68:ARG:HG3	1.85	0.58
27:AA:93:LEU:HA	28:BA:20:LEU:HB3	1.86	0.58
30:DA:101:PRO:HA	30:DA:104:LEU:CB	2.33	0.58
43:QA:37:TYR:CE1	43:QA:39:ALA:HA	2.39	0.58
48:VA:11:TYR:CE2	48:VA:57:THR:HB	2.38	0.58
51:YA:97:LEU:HD11	51:YA:231:LEU:HB3	1.85	0.58
51:YA:113:MET:HE1	51:YA:211:HIS:NE2	2.19	0.58
53:AB:29:LEU:HD22	53:AB:32:GLU:HG2	1.86	0.58
58:FB:47:ARG:HD3	58:FB:47:ARG:O	2.03	0.58
59:GB:126:ARG:HG2	59:GB:144:PRO:HB3	1.85	0.58
59:GB:132:ARG:HD2	59:GB:142:ASN:HD22	1.69	0.58
59:GB:161:THR:HA	59:GB:167:ALA:HB2	1.86	0.58
68:PB:68:ARG:O	68:PB:72:ILE:HG13	2.03	0.58
78:ZB:18:ARG:HG2	78:ZB:26:THR:OG1	2.03	0.58
78:ZB:44:VAL:CG2	78:ZB:48:VAL:HG21	2.34	0.58
82:DC:27:HIS:C	82:DC:28:VAL:HG23	2.28	0.58
82:DC:113:SER:HB2	82:DC:516:PRO:CB	2.34	0.58
82:DC:121:VAL:HG21	82:DC:397:PHE:CZ	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:532:U:H2'	1:A:533:U:H6	1.67	0.58
1:A:921:U:C3'	1:A:922:G:H5"	2.33	0.58
1:A:1067:C:H5'	51:YA:149:GLN:HA	1.86	0.58
1:A:1464:G:O2'	1:A:1465:C:H5'	2.04	0.58
2:B:13:A:O2'	29:CA:39:LYS:HG3	2.04	0.58
2:B:277:G:N2	19:S:93:LYS:HG3	2.19	0.58
2:B:1687:U:C2	26:Z:70:LYS:HD2	2.38	0.58
2:B:1706:C:H4'	2:B:1787:A:H5'	1.86	0.58
2:B:2141:U:O2'	2:B:2976:A:H1'	2.04	0.58
2:B:2157:G:H22	2:B:2177:G:H1'	1.69	0.58
2:B:2441:A:H2	2:B:2506:U:H3	1.51	0.58
2:B:2778:G:H2'	2:B:2779:A:C5'	2.33	0.58
4:D:36:C:H2'	4:D:37:G:C8	2.38	0.58
6:F:128:ARG:C	6:F:169:ILE:HG13	2.29	0.58
7:G:342:LEU:H	7:G:342:LEU:HD23	1.68	0.58
8:H:25:VAL:HG13	8:H:276:LEU:HD13	1.86	0.58
8:H:312:VAL:O	8:H:312:VAL:HG23	2.04	0.58
8:H:319:LYS:NZ	8:H:320:ASN:HB2	2.18	0.58
10:J:33:SER:HB2	10:J:86:ALA:HB3	1.85	0.58
19:S:15:GLN:HG3	40:NA:52:PRO:HD2	1.85	0.58
21:U:28:ASN:HD22	21:U:84:PRO:HB3	1.68	0.58
21:U:31:GLU:CG	21:U:60:PHE:HA	2.34	0.58
22:V:28:LEU:O	22:V:31:LYS:HB3	2.03	0.58
22:V:165:ILE:HG12	22:V:168:THR:HG23	1.85	0.58
23:W:72:GLU:HB2	23:W:74:ARG:NH1	2.19	0.58
24:X:9:VAL:HG13	24:X:61:ILE:HD12	1.85	0.58
26:Z:25:ASN:HD22	26:Z:27:VAL:CG2	2.16	0.58
34:HA:49:PRO:HG2	34:HA:52:ARG:HD2	1.86	0.58
37:KA:45:LEU:HD11	37:KA:74:THR:HG23	1.86	0.58
40:NA:79:SER:HB2	40:NA:82:ARG:CB	2.34	0.58
53:AB:49:ILE:HG23	53:AB:87:TYR:CB	2.34	0.58
53:AB:107:PHE:O	53:AB:111:ASN:HB2	2.03	0.58
54:BB:133:LYS:O	54:BB:134:LYS:HB2	2.04	0.58
54:BB:211:LYS:HA	54:BB:217:THR:HA	1.86	0.58
56:DB:139:ASN:O	56:DB:143:LYS:HD2	2.04	0.58
82:DC:533:THR:H	82:DC:537:HIS:CD2	2.21	0.58
1:A:652:G:H2'	1:A:653:C:H5'	1.85	0.58
1:A:1345:A:C2'	1:A:1346:A:H5"	2.34	0.58
2:B:148:G:H2'	19:S:49:ARG:HH22	1.69	0.58
2:B:156:G:H5'	40:NA:25:LYS:HD2	1.85	0.58
2:B:388:G:C5'	21:U:18:ARG:HB2	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:879:U:H3'	2:B:879:U:O2	2.03	0.58
2:B:1173:U:H1'	2:B:1179:A:H2'	1.85	0.58
2:B:1538:G:H21	2:B:1583:A:N6	1.95	0.58
2:B:2246:G:H2'	2:B:2247:G:C8	2.36	0.58
2:B:2512:C:H2'	2:B:2513:U:C6	2.39	0.58
2:B:2513:U:H5"	2:B:2586:G:H1	1.69	0.58
2:B:2560:C:O2'	12:L:43:LYS:HG3	2.03	0.58
2:B:2834:G:H2'	2:B:2834:G:N3	2.19	0.58
2:B:2896:A:H5"	44:RA:124:LYS:NZ	2.19	0.58
2:B:3160:U:H2'	2:B:3161:C:C6	2.39	0.58
2:B:3202:G:H2'	2:B:3203:U:O4'	2.04	0.58
6:F:50:HIS:HB2	47:UA:54:ILE:HD11	1.85	0.58
7:G:8:ALA:HB1	7:G:9:PRO:CD	2.34	0.58
7:G:332:ARG:O	7:G:333:LYS:HB2	2.02	0.58
12:L:62:LYS:NZ	12:L:63:LYS:HB2	2.19	0.58
14:N:67:ALA:CB	14:N:158:LYS:HD2	2.33	0.58
38:LA:51:LEU:HD23	38:LA:51:LEU:O	2.04	0.58
42:PA:69:LEU:HG	42:PA:75:VAL:HG21	1.85	0.58
50:XA:11:PRO:O	50:XA:15:GLN:HB2	2.03	0.58
50:XA:191:ARG:HG3	50:XA:192:THR:HG23	1.86	0.58
51:YA:113:MET:HE2	51:YA:209:ASN:ND2	2.18	0.58
57:EB:112:ARG:O	57:EB:112:ARG:HD3	2.04	0.58
61:IB:33:ARG:HH12	61:IB:61:THR:HG21	1.68	0.58
70:RB:82:TYR:HD1	79:AC:53:ASN:HA	1.67	0.58
82:DC:496:LYS:HG3	82:DC:555:LYS:HB2	1.85	0.58
1:A:314:C:O2	1:A:354:C:N3	2.35	0.58
1:A:344:A:O2'	1:A:345:U:H5'	2.04	0.58
1:A:381:C:H2'	1:A:382:C:C6	2.39	0.58
1:A:748:U:C2'	1:A:749:U:H5'	2.34	0.58
1:A:1028:C:O2'	1:A:1790:A:H4'	2.04	0.58
1:A:1219:A:O2'	60:HB:48:SER:HA	2.03	0.58
1:A:1417:A:O2'	66:NB:126:PRO:HG2	2.04	0.58
1:A:1716:C:O2'	1:A:1717:G:H5"	2.03	0.58
2:B:31:C:H5	19:S:188:ARG:HH22	1.52	0.58
2:B:95:A:H5"	32:FA:34:MET:CB	2.34	0.58
2:B:216:G:C2'	2:B:217:U:H5'	2.34	0.58
2:B:1009:A:H2'	2:B:1010:G:C8	2.39	0.58
2:B:1665:C:H2'	2:B:1666:G:H8	1.69	0.58
2:B:2109:U:H2'	2:B:2110:G:C8	2.39	0.58
2:B:2442:G:C2'	2:B:2443:A:H5"	2.32	0.58
2:B:2842:U:H3'	2:B:2844:C:H41	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3365:U:H5”	28:BA:59:HIS:NE2	2.19	0.58
8:H:33:ASP:HB2	22:V:22:ASP:CB	2.34	0.58
13:M:92:TYR:CD1	13:M:142:ASP:HB3	2.39	0.58
13:M:97:PHE:HD1	13:M:119:GLY:N	2.02	0.58
13:M:114:VAL:HG23	13:M:124:ARG:HB2	1.86	0.58
14:N:51:HIS:HB3	14:N:134:ILE:HG23	1.84	0.58
21:U:171:ARG:HD3	21:U:171:ARG:H	1.68	0.58
28:BA:49:ILE:HB	28:BA:51:TRP:HE1	1.69	0.58
32:FA:111:LYS:HE2	32:FA:113:LEU:HD23	1.85	0.58
34:HA:13:LYS:HE3	34:HA:103:THR:HB	1.85	0.58
36:JA:104:ASN:O	36:JA:108:ILE:HG13	2.04	0.58
48:VA:145:ILE:HG22	48:VA:148:GLY:H	1.69	0.58
50:XA:157:ASP:O	50:XA:158:VAL:HB	2.03	0.58
51:YA:83:LYS:HG3	51:YA:106:THR:HG23	1.86	0.58
54:BB:214:LEU:HD23	54:BB:216:ASN:ND2	2.15	0.58
56:DB:175:ILE:CG2	56:DB:178:LEU:HB2	2.33	0.58
58:FB:97:THR:O	58:FB:169:ILE:HB	2.04	0.58
73:UB:76:LEU:HD12	73:UB:81:LYS:HB2	1.86	0.58
82:DC:19:VAL:O	82:DC:344:SER:HA	2.03	0.58
82:DC:333:ALA:O	82:DC:336:GLU:HB3	2.04	0.58
1:A:140:A:H4’	1:A:141:U:H5’	1.85	0.57
1:A:370:A:H2’	1:A:371:G:C8	2.39	0.57
1:A:398:G:H2’	1:A:399:A:H5”	1.85	0.57
1:A:941:A:H2’	1:A:942:G:C4’	2.33	0.57
1:A:1601:G:H22	69:QB:88:VAL:HG13	1.69	0.57
2:B:650:C:H2’	2:B:651:G:C8	2.39	0.57
2:B:1747:G:H2’	2:B:1748:G:H5’	1.87	0.57
2:B:1861:G:H2’	2:B:1862:U:C6	2.39	0.57
2:B:1938:U:C1’	23:W:78:TYR:HB2	2.34	0.57
2:B:2338:C:H3’	2:B:2339:C:H2’	1.85	0.57
2:B:2991:A:H2	21:U:69:ARG:HH22	1.50	0.57
2:B:2995:A:C2’	2:B:2996:U:H5”	2.34	0.57
2:B:3217:C:C4	21:U:182:ILE:HA	2.40	0.57
3:C:27:U:H4’	8:H:51:ALA:HB3	1.86	0.57
7:G:232:ARG:HE	7:G:268:GLY:C	2.11	0.57
9:I:43:LYS:HB3	9:I:46:THR:CB	2.34	0.57
10:J:166:LYS:CE	37:KA:4:SER:OG	2.48	0.57
12:L:132:VAL:HA	12:L:200:LEU:CD1	2.34	0.57
13:M:18:VAL:HG22	13:M:27:VAL:HG13	1.85	0.57
14:N:97:LEU:HD11	14:N:126:ALA:HB2	1.86	0.57
23:W:168:ALA:HA	23:W:171:ASP:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:171:PHE:N	24:X:171:PHE:CD1	2.72	0.57
50:XA:185:ARG:HA	50:XA:185:ARG:HH11	1.69	0.57
54:BB:181:VAL:CG1	54:BB:225:VAL:HG13	2.33	0.57
56:DB:176:GLN:HA	56:DB:176:GLN:OE1	2.04	0.57
82:DC:137:VAL:CG2	82:DC:791:GLN:HG3	2.33	0.57
82:DC:363:ASP:HB3	82:DC:366:CYS:CB	2.34	0.57
82:DC:409:GLN:HG2	82:DC:411:VAL:CG2	2.34	0.57
1:A:93:A:H8	1:A:399:A:H5"	1.69	0.57
1:A:176:C:H2'	1:A:177:U:H5'	1.86	0.57
1:A:221:A:H5"	1:A:833:U:H1'	1.86	0.57
1:A:755:A:H2'	1:A:756:A:C8	2.38	0.57
1:A:1280:C:H5"	70:RB:69:LYS:HE3	1.85	0.57
1:A:1756:A:O2'	1:A:1757:G:H5'	2.04	0.57
1:A:1790:A:OP1	76:XB:12:LYS:HE2	2.03	0.57
2:B:215:G:C5'	30:DA:12:ARG:HD2	2.34	0.57
2:B:700:C:H2'	2:B:701:G:C8	2.39	0.57
2:B:884:A:OP1	41:OA:5:THR:HG23	2.04	0.57
2:B:1287:A:H2'	2:B:1288:U:C6	2.39	0.57
2:B:1699:A:H2'	2:B:1700:G:C8	2.39	0.57
2:B:1731:A:O2'	2:B:1732:U:H5'	2.04	0.57
2:B:2365:C:H2'	2:B:2366:C:C5'	2.29	0.57
2:B:2545:C:H5'	51:YA:225:VAL:HG23	1.86	0.57
2:B:3096:C:H2'	2:B:3097:C:H6	1.69	0.57
2:B:3136:G:H5"	7:G:31:ALA:CB	2.34	0.57
2:B:3384:U:O2'	2:B:3385:U:H5'	2.04	0.57
3:C:91:C:O2	30:DA:25:SER:HB2	2.04	0.57
7:G:95:THR:HG21	7:G:100:ARG:HB2	1.86	0.57
8:H:36:HIS:O	8:H:40:THR:HG23	2.04	0.57
8:H:65:TRP:CZ3	8:H:76:ARG:HG3	2.39	0.57
10:J:55:LEU:HD12	10:J:64:LEU:HG	1.85	0.57
10:J:158:TYR:CZ	18:R:115:PHE:HB2	2.38	0.57
11:K:153:PHE:O	11:K:202:LEU:HD23	2.04	0.57
11:K:224:ILE:HA	24:X:36:ILE:HG12	1.86	0.57
13:M:48:VAL:HG13	13:M:49:ASN:H	1.69	0.57
17:Q:99:HIS:HE1	17:Q:100:ARG:HH21	1.52	0.57
19:S:100:ALA:O	19:S:104:GLU:HG3	2.04	0.57
27:AA:10:LYS:HG2	27:AA:11:PHE:N	2.17	0.57
30:DA:104:LEU:O	30:DA:105:VAL:HG13	2.05	0.57
35:IA:12:TYR:H	35:IA:12:TYR:HD2	1.52	0.57
35:IA:12:TYR:O	35:IA:73:LEU:HB2	2.04	0.57
38:LA:21:LYS:CG	38:LA:35:VAL:HG22	2.30	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:NA:36:ARG:O	40:NA:40:VAL:HG23	2.05	0.57
41:OA:26:SER:HB3	41:OA:35:SER:OG	2.04	0.57
41:OA:84:SER:O	41:OA:85:LYS:HB2	2.03	0.57
43:QA:19:GLN:HB3	43:QA:42:ARG:HD3	1.86	0.57
46:TA:25:VAL:HG22	46:TA:72:LEU:HD23	1.86	0.57
48:VA:15:LEU:HD21	48:VA:60:ARG:HH21	1.67	0.57
53:AB:64:ARG:HD3	60:HB:90:THR:HA	1.85	0.57
58:FB:73:SER:C	58:FB:74:LYS:HD2	2.29	0.57
69:QB:52:GLY:C	69:QB:54:PHE:H	2.12	0.57
72:TB:82:LYS:N	72:TB:82:LYS:HD2	2.19	0.57
73:UB:24:TRP:HE3	73:UB:30:LYS:HG2	1.69	0.57
75:WB:46:LYS:O	75:WB:50:ILE:HG13	2.04	0.57
1:A:625:C:H1'	1:A:940:A:H4'	1.86	0.57
1:A:1722:A:H2'	1:A:1723:U:O4'	2.04	0.57
2:B:515:C:O2'	2:B:516:A:H5'	2.05	0.57
2:B:524:U:H2'	2:B:525:C:H5'	1.84	0.57
2:B:790:U:H5'	8:H:112:LYS:HD2	1.84	0.57
2:B:848:A:H2'	2:B:849:C:C4'	2.33	0.57
2:B:1150:A:H61	2:B:2369:G:H1'	1.68	0.57
2:B:1391:C:O2'	36:JA:103:LYS:HG2	2.04	0.57
2:B:2650:U:H5'	2:B:2758:A:C6	2.39	0.57
2:B:2681:U:H2'	2:B:2682:C:C6	2.39	0.57
2:B:2828:G:H2'	2:B:2829:U:H6	1.69	0.57
2:B:3041:U:H2'	2:B:3042:U:C6	2.39	0.57
2:B:3084:C:H2'	2:B:3085:G:H5'	1.86	0.57
3:C:107:G:OP2	3:C:137:C:H3'	2.05	0.57
4:D:44:C:O2'	4:D:45:A:H5'	2.02	0.57
6:F:149:ARG:HA	6:F:155:LYS:HG3	1.85	0.57
7:G:252:ILE:N	7:G:252:ILE:HD12	2.19	0.57
8:H:115:HIS:HA	8:H:118:LYS:CB	2.33	0.57
11:K:232:ARG:HD3	11:K:239:LEU:CD2	2.34	0.57
14:N:100:ASN:ND2	14:N:102:MET:HE3	2.19	0.57
14:N:190:VAL:CG1	14:N:197:VAL:HG21	2.33	0.57
15:O:49:LYS:HG3	15:O:64:LYS:HE3	1.85	0.57
17:Q:4:SER:HA	32:FA:44:ASN:HD21	1.69	0.57
17:Q:36:ARG:O	17:Q:39:ARG:HB2	2.04	0.57
19:S:137:PRO:CB	19:S:152:CYS:HA	2.35	0.57
20:T:173:ALA:HA	20:T:176:LYS:HE3	1.85	0.57
21:U:22:LEU:HD22	21:U:90:PHE:HD2	1.69	0.57
24:X:29:ILE:HG13	24:X:41:TYR:HB2	1.86	0.57
32:FA:104:THR:HA	32:FA:107:ALA:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:MA:61:GLN:C	39:MA:63:ARG:H	2.11	0.57
40:NA:57:LEU:HD12	40:NA:60:LEU:HB2	1.86	0.57
48:VA:60:ARG:HG2	48:VA:63:ILE:HD12	1.86	0.57
50:XA:176:LEU:HD23	50:XA:176:LEU:O	2.05	0.57
50:XA:177:LEU:O	50:XA:181:VAL:HG13	2.04	0.57
54:BB:247:SER:C	54:BB:249:ALA:H	2.13	0.57
59:GB:51:LYS:HA	59:GB:54:ARG:HB3	1.86	0.57
59:GB:75:ALA:O	59:GB:78:ARG:HB3	2.04	0.57
64:LB:89:THR:HG22	64:LB:122:PRO:HG3	1.86	0.57
65:MB:16:SER:HB3	65:MB:21:ASP:HA	1.85	0.57
65:MB:29:SER:OG	65:MB:31:GLU:HG2	2.04	0.57
72:TB:24:GLN:HA	72:TB:65:LEU:CD1	2.34	0.57
82:DC:18:ASN:OD1	82:DC:98:PHE:HA	2.03	0.57
82:DC:292:LYS:O	82:DC:296:ILE:HG13	2.04	0.57
82:DC:501:LEU:N	82:DC:502:PRO:CD	2.68	0.57
82:DC:742:GLY:HA3	82:DC:788:THR:CG2	2.33	0.57
82:DC:753:GLN:HB2	82:DC:771:TYR:HB2	1.84	0.57
82:DC:753:GLN:CB	82:DC:771:TYR:HB2	2.33	0.57
1:A:86:A:H2'	1:A:87:C:C5	2.39	0.57
1:A:381:C:H5'	54:BB:12:LEU:HD12	1.86	0.57
1:A:390:G:H2'	1:A:391:A:C8	2.38	0.57
1:A:642:G:H2'	1:A:643:G:C8	2.40	0.57
1:A:791:A:O2'	1:A:792:U:H5'	2.03	0.57
1:A:1585:U:H5'	66:NB:125:GLU:OE2	2.05	0.57
2:B:217:U:H2'	30:DA:103:LYS:HD3	1.86	0.57
2:B:296:A:H61	2:B:317:A:N6	1.94	0.57
2:B:1065:A:N3	33:GA:28:LYS:HG2	2.18	0.57
2:B:1458:U:H2'	2:B:1459:C:C6	2.39	0.57
2:B:1723:A:H8	2:B:1723:A:O5'	1.87	0.57
2:B:1741:A:H4'	38:LA:38:LEU:HD11	1.85	0.57
2:B:2511:A:H2'	2:B:2512:C:H6	1.66	0.57
2:B:2550:U:C5	12:L:37:GLY:HA3	2.39	0.57
2:B:2814:G:H2'	2:B:2815:G:C8	2.39	0.57
2:B:2843:U:H5"	2:B:2844:C:C5	2.40	0.57
2:B:2843:U:H5"	2:B:2844:C:H5	1.70	0.57
2:B:3215:A:H62	18:R:122:VAL:HG22	1.70	0.57
3:C:135:G:H2'	3:C:136:G:H4'	1.86	0.57
9:I:27:LYS:HE3	15:O:143:ARG:HG2	1.87	0.57
9:I:37:VAL:HG23	9:I:50:ARG:NH2	2.19	0.57
9:I:52:VAL:CB	9:I:63:GLN:HG3	2.34	0.57
15:O:109:HIS:CD2	15:O:122:ILE:HD12	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:47:ALA:CB	17:Q:48:PRO:CD	2.83	0.57
25:Y:66:ASN:HB2	33:GA:35:VAL:HG13	1.85	0.57
36:JA:9:ILE:HG23	36:JA:63:THR:CG2	2.35	0.57
36:JA:67:SER:HB2	36:JA:68:PRO:CD	2.35	0.57
37:KA:98:VAL:HG22	37:KA:99:ARG:N	2.18	0.57
43:QA:19:GLN:O	43:QA:42:ARG:HD3	2.04	0.57
49:WA:82:SER:O	49:WA:89:LEU:HA	2.03	0.57
51:YA:33:LYS:HB3	51:YA:41:ARG:O	2.03	0.57
51:YA:87:ARG:HB3	51:YA:87:ARG:NH2	2.19	0.57
52:ZA:39:THR:HG21	52:ZA:64:LYS:HD3	1.84	0.57
52:ZA:69:ILE:HG22	52:ZA:72:LEU:HD23	1.86	0.57
52:ZA:159:THR:HG22	52:ZA:160:GLY:N	2.19	0.57
54:BB:160:VAL:HG22	54:BB:172:PHE:HA	1.86	0.57
56:DB:58:LYS:HG3	56:DB:107:ALA:HB2	1.86	0.57
56:DB:212:LEU:O	56:DB:216:LEU:HB2	2.05	0.57
64:LB:68:ALA:O	64:LB:72:LYS:HG2	2.04	0.57
68:PB:32:LEU:HB2	68:PB:43:SER:OG	2.04	0.57
69:QB:28:LEU:HD22	69:QB:29:GLU:N	2.19	0.57
69:QB:34:VAL:O	69:QB:35:ASP:HB2	2.03	0.57
69:QB:118:PRO:O	69:QB:119:LYS:HB2	2.04	0.57
82:DC:24:VAL:HB	82:DC:104:ASP:O	2.04	0.57
82:DC:273:PHE:HD1	82:DC:277:ILE:HD12	1.69	0.57
82:DC:724:ILE:O	82:DC:804:LEU:HB3	2.03	0.57
1:A:31:C:H5'	73:UB:133:LEU:HD12	1.86	0.57
1:A:956:C:H2'	1:A:957:G:C8	2.38	0.57
2:B:583:G:O2'	2:B:584:G:H5'	2.04	0.57
2:B:683:U:O2	2:B:683:U:H2'	2.05	0.57
2:B:711:A:H2'	2:B:712:G:O4'	2.04	0.57
2:B:1178:G:O2'	2:B:1179:A:H5'	2.03	0.57
2:B:1308:A:N6	2:B:2367:A:C2	2.66	0.57
2:B:1428:A:OP2	32:FA:2:PRO:HG2	2.04	0.57
2:B:1437:C:H2'	2:B:1438:U:C6	2.40	0.57
2:B:1497:C:O2'	2:B:1602:A:H2'	2.03	0.57
2:B:1782:U:H2'	2:B:1783:U:O4'	2.04	0.57
2:B:2102:U:C5'	23:W:88:ARG:NH2	2.61	0.57
2:B:2774:C:H2'	2:B:2775:U:H6	1.68	0.57
2:B:2907:G:O2'	2:B:2908:G:H5'	2.05	0.57
2:B:3113:A:H5"	2:B:3118:C:H41	1.68	0.57
6:F:77:ILE:HD11	6:F:128:ARG:HE	1.70	0.57
7:G:58:ARG:HD2	7:G:59:ASP:H	1.69	0.57
8:H:9:HIS:HB2	8:H:151:VAL:O	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:32:LYS:HE2	12:L:34:PHE:CZ	2.39	0.57
18:R:63:VAL:O	18:R:63:VAL:HG13	2.04	0.57
19:S:112:ASN:CG	19:S:113:LEU:HD22	2.29	0.57
19:S:115:VAL:O	19:S:159:ARG:HD3	2.03	0.57
19:S:142:ILE:HD12	19:S:142:ILE:N	2.20	0.57
22:V:23:ASN:CG	22:V:26:LEU:HB2	2.30	0.57
24:X:92:LYS:HE3	24:X:110:MET:HE1	1.86	0.57
24:X:151:PRO:C	24:X:153:PRO:HD3	2.30	0.57
26:Z:100:THR:O	26:Z:101:ASN:HB2	2.05	0.57
28:BA:20:LEU:HD12	28:BA:30:ARG:HA	1.86	0.57
52:ZA:98:PHE:HZ	53:AB:116:ARG:HH12	1.53	0.57
57:EB:143:LEU:CD2	57:EB:149:ILE:HD12	2.33	0.57
65:MB:124:THR:HB	65:MB:125:PRO:HD2	1.86	0.57
79:AC:39:CYS:SG	79:AC:42:CYS:HB2	2.44	0.57
82:DC:159:LYS:HB3	82:DC:162:ARG:HG2	1.87	0.57
82:DC:619:MET:HE3	82:DC:630:ALA:HB1	1.84	0.57
1:A:617:U:H3	1:A:1088:A:H2	1.52	0.57
1:A:1126:G:OP1	45:SA:11:ARG:HG3	2.04	0.57
1:A:1199:G:C8	70:RB:67:THR:HA	2.40	0.57
2:B:68:C:O3'	19:S:177:GLY:HA2	2.04	0.57
2:B:92:G:OP2	2:B:93:C:H5"	2.04	0.57
2:B:411:U:H1'	21:U:121:GLN:HE22	1.69	0.57
2:B:1566:A:H3'	2:B:1567:U:C5'	2.33	0.57
2:B:2162:U:O3'	6:F:234:LYS:HD2	2.03	0.57
2:B:2262:A:H2'	2:B:2263:C:H5'	1.85	0.57
2:B:2341:A:H2'	2:B:2342:U:C6	2.39	0.57
2:B:3106:A:C2'	2:B:3107:U:H5'	2.34	0.57
2:B:3130:A:H3'	2:B:3131:U:C5'	2.34	0.57
5:E:6:SER:HA	5:E:36:VAL:HG22	1.87	0.57
6:F:78:ALA:HB3	6:F:169:ILE:HG23	1.87	0.57
7:G:216:ASP:OD1	7:G:278:ILE:HB	2.05	0.57
8:H:110:ASN:HB2	19:S:201:ARG:O	2.04	0.57
10:J:22:ARG:HB2	10:J:22:ARG:HH11	1.68	0.57
10:J:38:THR:OG1	10:J:90:LYS:HE2	2.05	0.57
17:Q:42:ARG:O	17:Q:46:ILE:HG12	2.04	0.57
22:V:26:LEU:HA	22:V:29:LEU:CD2	2.34	0.57
23:W:128:LYS:HD3	23:W:129:GLY:N	2.19	0.57
29:CA:103:TYR:HB2	29:CA:105:VAL:HG23	1.86	0.57
35:IA:35:GLU:HA	35:IA:38:LYS:HB3	1.86	0.57
40:NA:39:PHE:O	40:NA:43:LEU:HB2	2.04	0.57
50:XA:67:ILE:HG22	50:XA:69:ASN:H	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:197:ILE:HD13	50:XA:197:ILE:N	2.15	0.57
51:YA:206:PRO:O	51:YA:207:LEU:HB2	2.03	0.57
69:QB:101:ASN:O	69:QB:104:VAL:HB	2.04	0.57
73:UB:124:VAL:CG1	73:UB:132:LEU:HD11	2.28	0.57
76:XB:89:ARG:O	76:XB:92:ARG:HB2	2.04	0.57
82:DC:169:VAL:HG12	82:DC:170:SER:N	2.19	0.57
1:A:338:C:H1'	58:FB:5:ARG:HA	1.87	0.57
1:A:512:A:H4'	59:GB:164:PHE:HE2	1.68	0.57
1:A:645:C:H2'	1:A:646:C:H6	1.69	0.57
1:A:1569:A:H2'	1:A:1570:A:C8	2.40	0.57
1:A:1684:U:H2'	1:A:1685:G:H8	1.70	0.57
2:B:114:A:H2'	2:B:115:A:O4'	2.05	0.57
2:B:419:G:H1	3:C:4:C:H42	1.52	0.57
2:B:639:G:H4'	2:B:1434:G:O6	2.04	0.57
2:B:1127:G:O6	14:N:13:LYS:HB3	2.04	0.57
2:B:2079:G:H2'	2:B:2080:C:O4'	2.05	0.57
2:B:2527:G:H2'	2:B:2528:G:C8	2.40	0.57
2:B:2715:A:N1	46:TA:85:LEU:HG	2.20	0.57
2:B:2836:C:H4'	14:N:157:TYR:HD1	1.69	0.57
2:B:3146:G:H4'	7:G:100:ARG:CD	2.35	0.57
2:B:3234:A:C2'	2:B:3235:C:H5"	2.34	0.57
2:B:3284:G:H2'	2:B:3285:C:C6	2.40	0.57
5:E:5:THR:HG21	5:E:8:GLN:HE21	1.70	0.57
6:F:245:LEU:H	6:F:245:LEU:HD12	1.70	0.57
7:G:73:VAL:HG22	27:AA:90:GLY:HA3	1.87	0.57
8:H:125:ALA:HB3	8:H:238:LEU:HD13	1.85	0.57
13:M:47:LYS:CB	18:R:7:VAL:HG21	2.34	0.57
16:P:121:PHE:CD1	16:P:128:VAL:HG21	2.40	0.57
17:Q:173:ALA:O	40:NA:10:GLY:HA2	2.04	0.57
21:U:2:ALA:O	21:U:3:ARG:HB2	2.03	0.57
25:Y:11:THR:HB	25:Y:15:PHE:CE2	2.40	0.57
26:Z:83:TYR:CE2	26:Z:89:LEU:HD11	2.39	0.57
34:HA:24:THR:OG1	34:HA:29:SER:HB2	2.05	0.57
41:OA:16:HIS:HA	41:OA:27:PHE:C	2.29	0.57
49:WA:33:LEU:HB2	49:WA:47:LEU:CD1	2.34	0.57
51:YA:139:ALA:HA	51:YA:212:VAL:HA	1.87	0.57
52:ZA:159:THR:HG22	52:ZA:160:GLY:H	1.70	0.57
53:AB:38:GLU:CG	53:AB:49:ILE:HB	2.26	0.57
54:BB:50:ASN:O	54:BB:51:ARG:HG2	2.05	0.57
54:BB:128:LYS:HB2	54:BB:130:GLN:HE22	1.70	0.57
55:CB:73:THR:HG22	55:CB:74:ALA:N	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:EB:63:PRO:O	57:EB:64:VAL:HB	2.04	0.57
59:GB:30:LEU:HD21	59:GB:102:GLU:OE1	2.03	0.57
61:IB:80:MET:HB2	61:IB:83:THR:O	2.05	0.57
69:QB:98:GLY:HA2	69:QB:101:ASN:ND2	2.09	0.57
76:XB:20:PRO:HA	76:XB:31:PRO:HA	1.87	0.57
82:DC:112:SER:HA	82:DC:115:VAL:CG2	2.34	0.57
82:DC:655:TYR:HB2	82:DC:693:LEU:CG	2.34	0.57
1:A:18:C:H2'	1:A:19:A:C8	2.39	0.57
1:A:18:C:H2'	1:A:19:A:H8	1.70	0.57
1:A:1672:G:H2'	1:A:1673:G:O4'	2.04	0.57
2:B:405:U:C2'	2:B:406:G:H5'	2.33	0.57
2:B:631:U:H1'	37:KA:91:ALA:CB	2.35	0.57
2:B:653:A:O4'	2:B:2360:C:H2'	2.05	0.57
2:B:744:A:H2'	2:B:745:C:C5'	2.35	0.57
2:B:764:U:H2'	2:B:764:U:O2	2.03	0.57
2:B:1042:U:H2'	2:B:1043:C:C6	2.40	0.57
2:B:1245:A:C4	2:B:1272:C:H4'	2.40	0.57
2:B:1463:U:H3	2:B:1467:A:H62	1.52	0.57
2:B:1833:G:C8	2:B:1834:U:C5	2.93	0.57
2:B:2157:G:N2	2:B:2177:G:H1'	2.20	0.57
2:B:2828:G:O3'	14:N:4:ARG:HG2	2.03	0.57
2:B:2884:C:H2'	2:B:2885:C:H6	1.69	0.57
5:E:26:ARG:HB3	5:E:28:PHE:HE1	1.68	0.57
6:F:112:ILE:HG13	6:F:135:ILE:HG12	1.86	0.57
7:G:73:VAL:HG11	28:BA:16:GLY:CA	2.32	0.57
7:G:218:ILE:CD1	7:G:339:ARG:HD3	2.34	0.57
7:G:229:VAL:CG2	7:G:265:ALA:HB1	2.34	0.57
11:K:136:TYR:O	11:K:231:ASN:HA	2.04	0.57
12:L:170:CYS:SG	12:L:177:TYR:CD2	2.95	0.57
13:M:47:LYS:HB2	18:R:7:VAL:CG2	2.35	0.57
13:M:48:VAL:HG13	13:M:49:ASN:N	2.19	0.57
14:N:99:ILE:HB	14:N:123:HIS:ND1	2.20	0.57
16:P:110:ILE:HA	16:P:113:ALA:HB3	1.86	0.57
21:U:60:PHE:HE2	21:U:82:ARG:H	1.50	0.57
27:AA:93:LEU:H	27:AA:93:LEU:HD23	1.69	0.57
31:EA:16:GLY:HA2	38:LA:74:ARG:HD3	1.87	0.57
32:FA:105:LEU:HD11	32:FA:128:ARG:NH1	2.20	0.57
39:MA:5:LYS:HD2	39:MA:7:TYR:CE2	2.40	0.57
52:ZA:44:LEU:HD22	52:ZA:49:LYS:HG3	1.85	0.57
56:DB:210:GLN:HG2	56:DB:214:LYS:HE3	1.85	0.57
57:EB:42:GLN:HG2	57:EB:43:PHE:H	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:PB:132:ARG:HB3	68:PB:136:GLN:HE21	1.69	0.57
77:YB:21:LEU:O	77:YB:22:LYS:HB2	2.04	0.57
1:A:113:U:H5"	1:A:114:C:H3'	1.87	0.57
1:A:513:U:H2'	1:A:514:G:C8	2.39	0.57
1:A:1162:C:H1'	78:ZB:22:ARG:HB2	1.86	0.57
1:A:1595:U:H2'	1:A:1596:C:H5'	1.86	0.57
1:A:1605:G:C5'	66:NB:127:LYS:HB3	2.34	0.57
2:B:11:A:H2	3:C:148:G:H1	1.53	0.57
2:B:77:A:H5'	17:Q:100:ARG:HH11	1.69	0.57
2:B:149:U:C3'	2:B:150:A:H5"	2.35	0.57
2:B:1278:A:H3'	2:B:1279:C:C6	2.39	0.57
2:B:2146:C:H2'	2:B:2147:A:O4'	2.05	0.57
2:B:2226:U:OP1	46:TA:35:LEU:HD12	2.05	0.57
2:B:2512:C:H4'	12:L:246:MET:HE2	1.86	0.57
2:B:2553:U:H6	34:HA:51:LEU:HD12	1.69	0.57
2:B:2838:A:H61	2:B:2850:G:C2'	2.17	0.57
2:B:3148:U:H2'	2:B:3149:G:C8	2.40	0.57
2:B:3369:G:OP2	28:BA:61:LYS:HE2	2.04	0.57
3:C:79:A:H5"	39:MA:43:LYS:HE3	1.86	0.57
6:F:32:LEU:HA	6:F:36:GLU:HB2	1.87	0.57
6:F:66:PRO:HD3	6:F:72:ARG:HH21	1.70	0.57
7:G:128:LYS:O	7:G:131:THR:HG23	2.05	0.57
8:H:318:LEU:HD11	11:K:150:LYS:HB2	1.87	0.57
16:P:105:GLN:HG3	16:P:143:VAL:HG22	1.87	0.57
17:Q:75:PHE:N	17:Q:98:ASP:H	1.98	0.57
20:T:130:LYS:HD3	20:T:133:ARG:NH2	2.18	0.57
22:V:33:TYR:CD1	22:V:36:LEU:HD12	2.40	0.57
24:X:155:ARG:HH12	24:X:157:GLN:CD	2.13	0.57
34:HA:87:VAL:O	34:HA:87:VAL:HG13	2.05	0.57
42:PA:8:ILE:HD12	42:PA:8:ILE:H	1.70	0.57
47:UA:57:CYS:O	47:UA:61:LYS:HA	2.05	0.57
48:VA:130:PRO:HG2	82:DC:191:THR:HG23	1.85	0.57
51:YA:121:ILE:HG21	51:YA:164:ILE:CD1	2.34	0.57
54:BB:107:GLY:CA	54:BB:189:LEU:HG	2.35	0.57
70:RB:62:VAL:HG22	70:RB:85:ARG:HB3	1.86	0.57
80:BC:14:VAL:O	80:BC:18:THR:HG23	2.04	0.57
1:A:127:G:C6	56:DB:195:VAL:HG13	2.40	0.57
1:A:474:A:OP1	59:GB:145:SER:HB3	2.05	0.57
1:A:1242:A:O2'	1:A:1243:G:H3'	2.04	0.57
1:A:1245:G:H1'	1:A:1247:U:C5	2.39	0.57
2:B:504:A:H5'	2:B:607:A:H4'	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:633:C:O2'	37:KA:22:VAL:HA	2.04	0.57
2:B:783:A:H5"	2:B:784:A:C5'	2.34	0.57
2:B:916:G:OP1	2:B:2957:G:H5"	2.04	0.57
2:B:1447:G:C5'	21:U:63:PHE:HB3	2.35	0.57
2:B:2185:G:C5'	6:F:219:ILE:HD11	2.33	0.57
2:B:2407:C:H4'	2:B:2620:G:H4'	1.86	0.57
2:B:2598:G:H2'	2:B:2599:U:C6	2.39	0.57
2:B:2638:C:H2'	2:B:2639:G:O4'	2.04	0.57
2:B:2676:A:H5'	2:B:2677:G:C8	2.40	0.57
2:B:3116:G:H5"	2:B:3117:C:H5	1.69	0.57
3:C:135:G:H2'	3:C:136:G:C4'	2.34	0.57
9:I:22:ARG:HB3	9:I:28:THR:HB	1.87	0.57
13:M:112:ILE:CG1	13:M:134:ILE:HG12	2.34	0.57
14:N:91:VAL:HG12	14:N:92:HIS:H	1.70	0.57
15:O:38:GLU:HA	15:O:45:PRO:HD3	1.87	0.57
16:P:61:GLN:HG3	16:P:74:VAL:HG12	1.87	0.57
20:T:110:PRO:C	20:T:113:ASP:HB3	2.30	0.57
23:W:20:ARG:HD3	23:W:21:LYS:HZ1	1.70	0.57
24:X:41:TYR:O	24:X:45:LEU:HD23	2.05	0.57
26:Z:43:VAL:O	26:Z:45:GLY:N	2.38	0.57
26:Z:96:VAL:HG23	26:Z:104:ARG:HG3	1.87	0.57
29:CA:113:LEU:HG	29:CA:121:LYS:HB3	1.87	0.57
35:IA:16:LEU:HB2	35:IA:69:TYR:CA	2.33	0.57
36:JA:47:ARG:HH12	37:KA:21:ARG:HH11	1.53	0.57
41:OA:64:MET:SD	41:OA:67:LEU:HB3	2.45	0.57
46:TA:23:HIS:CB	46:TA:72:LEU:HD22	2.34	0.57
50:XA:89:PHE:CD2	50:XA:178:ALA:HB2	2.40	0.57
55:CB:134:VAL:O	55:CB:138:THR:HG23	2.05	0.57
57:EB:30:SER:O	57:EB:31:SER:HB2	2.04	0.57
61:IB:109:VAL:HA	61:IB:135:VAL:HG13	1.87	0.57
63:KB:104:ARG:HH21	63:KB:104:ARG:CB	2.17	0.57
64:LB:13:VAL:HG13	64:LB:77:THR:H	1.70	0.57
71:SB:68:SER:O	71:SB:72:LEU:HG	2.05	0.57
83:EC:6837:G:H2'	83:EC:6838:C:C6	2.40	0.57
83:EC:6846:C:C3'	83:EC:6847:G:H5"	2.35	0.57
1:A:138:A:H62	1:A:266:A:H61	1.52	0.56
1:A:477:A:H2'	1:A:478:A:C8	2.40	0.56
1:A:975:C:H4'	63:KB:109:LYS:O	2.05	0.56
1:A:1080:U:C2'	1:A:1081:A:H5'	2.35	0.56
1:A:1106:U:H2'	1:A:1107:G:C8	2.31	0.56
2:B:19:U:H5"	39:MA:90:ARG:CD	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:47:C:H2'	2:B:48:A:C8	2.40	0.56
2:B:70:A:OP1	2:B:101:G:H1'	2.05	0.56
2:B:129:U:OP1	29:CA:45:LYS:HD3	2.05	0.56
2:B:341:G:H21	2:B:349:A:H61	1.53	0.56
2:B:1235:U:OP2	16:P:77:ALA:HA	2.05	0.56
2:B:1245:A:H2'	2:B:1272:C:H5'	1.87	0.56
2:B:1255:C:O2'	2:B:1256:G:H8	1.88	0.56
2:B:1393:A:H5"	36:JA:99:ASN:HA	1.87	0.56
2:B:2577:C:H2'	2:B:2578:U:C6	2.40	0.56
2:B:3192:U:H2'	2:B:3193:C:C5	2.39	0.56
2:B:3215:A:N7	18:R:121:MET:HE1	2.20	0.56
3:C:53:A:H3'	3:C:54:A:C8	2.40	0.56
7:G:205:VAL:HG12	7:G:209:PHE:CE2	2.40	0.56
8:H:62:ALA:C	8:H:75:PRO:HB2	2.30	0.56
8:H:283:THR:HG21	8:H:289:ILE:HG13	1.86	0.56
12:L:162:LEU:HD21	19:S:45:PRO:HB2	1.87	0.56
13:M:70:THR:O	13:M:74:LEU:HG	2.04	0.56
15:O:109:HIS:HA	15:O:125:MET:CE	2.35	0.56
29:CA:65:GLN:NE2	39:MA:32:LYS:HE2	2.20	0.56
34:HA:57:GLU:HG2	34:HA:69:TYR:OH	2.05	0.56
34:HA:63:SER:C	34:HA:65:THR:H	2.13	0.56
38:LA:93:PHE:O	38:LA:97:GLU:HG2	2.05	0.56
41:OA:9:GLY:C	41:OA:11:ARG:H	2.13	0.56
49:WA:152:SER:HB2	49:WA:172:ALA:O	2.04	0.56
52:ZA:235:LEU:N	52:ZA:236:PRO:HD3	2.20	0.56
54:BB:128:LYS:HB2	54:BB:130:GLN:NE2	2.20	0.56
59:GB:90:LYS:HB2	59:GB:95:TYR:HB2	1.87	0.56
59:GB:96:VAL:HG23	59:GB:97:LEU:N	2.19	0.56
63:KB:18:TYR:CD2	77:YB:25:VAL:HG11	2.40	0.56
70:RB:102:ARG:HA	70:RB:105:GLN:HG2	1.86	0.56
82:DC:23:SER:HB3	82:DC:103:ILE:HD12	1.86	0.56
82:DC:585:ARG:HB3	82:DC:587:TYR:CE2	2.40	0.56
82:DC:635:CYS:HB3	82:DC:664:VAL:CG1	2.23	0.56
1:A:769:A:H2'	1:A:770:A:C8	2.40	0.56
1:A:1605:G:H2'	1:A:1606:C:C6	2.40	0.56
1:A:1673:G:N2	1:A:1728:A:H2	1.94	0.56
2:B:126:U:H1'	19:S:57:GLN:HE22	1.71	0.56
2:B:138:U:H2'	2:B:139:G:H8	1.69	0.56
2:B:915:A:H8	2:B:2136:C:O2'	1.87	0.56
2:B:956:U:H4'	2:B:2726:C:H5"	1.85	0.56
2:B:1234:G:N3	16:P:132:ILE:HG12	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1427:U:O4	32:FA:4:ARG:HD3	2.05	0.56
2:B:1544:G:H4'	2:B:2168:A:H4'	1.86	0.56
2:B:1658:G:H2'	2:B:1659:U:C6	2.40	0.56
2:B:2614:G:H2'	2:B:2615:G:C8	2.39	0.56
2:B:2667:A:H2'	2:B:2668:U:H5'	1.87	0.56
2:B:2794:G:H4'	46:TA:58:PHE:CE2	2.40	0.56
2:B:3046:A:H5'	7:G:221:THR:HG21	1.87	0.56
2:B:3138:U:H5"	7:G:275:ARG:HD3	1.87	0.56
2:B:3169:U:H2'	2:B:3170:A:C8	2.40	0.56
2:B:3230:G:H4'	18:R:132:LYS:HD2	1.86	0.56
7:G:276:THR:HG22	7:G:278:ILE:HG23	1.86	0.56
8:H:29:PRO:HB2	22:V:25:TYR:CE2	2.40	0.56
8:H:160:GLN:O	8:H:161:LYS:HD2	2.05	0.56
11:K:80:GLN:HG2	25:Y:135:PRO:HB2	1.87	0.56
11:K:153:PHE:HA	11:K:162:PRO:HA	1.86	0.56
11:K:233:GLU:HB2	24:X:35:VAL:HG22	1.86	0.56
12:L:229:VAL:HG13	12:L:232:HIS:HB3	1.85	0.56
13:M:106:LYS:C	13:M:108:GLY:H	2.14	0.56
14:N:58:GLU:OE2	14:N:161:GLY:HA3	2.05	0.56
21:U:118:GLN:HE22	21:U:147:GLU:CG	2.18	0.56
21:U:141:SER:O	21:U:143:PRO:HD3	2.05	0.56
22:V:130:ARG:C	22:V:132:PRO:HD3	2.30	0.56
22:V:173:GLU:HA	32:FA:51:GLY:O	2.05	0.56
25:Y:15:PHE:N	25:Y:15:PHE:CD2	2.73	0.56
26:Z:79:LEU:O	26:Z:79:LEU:HD23	2.04	0.56
28:BA:14:TYR:HD1	28:BA:15:PRO:HD2	1.70	0.56
32:FA:73:LEU:HG	32:FA:74:ASN:H	1.70	0.56
40:NA:9:ILE:HA	40:NA:13:LYS:HB3	1.86	0.56
52:ZA:137:ILE:CG2	52:ZA:138:PRO:HD2	2.34	0.56
54:BB:103:TYR:CE2	54:BB:184:THR:HG22	2.36	0.56
54:BB:128:LYS:HA	54:BB:156:VAL:HG13	1.86	0.56
56:DB:23:ARG:O	56:DB:41:VAL:HG13	2.05	0.56
56:DB:193:LEU:HA	56:DB:196:ARG:NH2	2.19	0.56
57:EB:148:LYS:HE2	57:EB:179:LYS:HB3	1.85	0.56
58:FB:38:ILE:HG13	58:FB:94:ASN:O	2.04	0.56
60:HB:32:HIS:H	60:HB:32:HIS:HD2	1.52	0.56
71:SB:20:THR:HG22	72:TB:21:GLY:CA	2.35	0.56
74:VB:125:LEU:HD12	74:VB:128:LYS:HB2	1.88	0.56
82:DC:483:PHE:CE2	82:DC:517:CYS:HB3	2.39	0.56
1:A:91:G:H2'	1:A:92:A:O4'	2.06	0.56
1:A:291:G:H2'	1:A:292:U:C5	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:780:A:H8	74:VB:8:ARG:HB3	1.65	0.56
1:A:929:A:H1'	64:LB:123:SER:HA	1.87	0.56
1:A:1126:G:H5'	45:SA:11:ARG:CD	2.34	0.56
1:A:1160:A:H2'	1:A:1161:C:H6	1.65	0.56
1:A:1519:U:H2'	1:A:1520:U:C6	2.41	0.56
1:A:1714:A:H2'	1:A:1715:G:C8	2.41	0.56
2:B:19:U:C1'	19:S:138:GLN:HE22	2.18	0.56
2:B:264:G:N2	40:NA:26:ILE:HG12	2.20	0.56
2:B:270:U:O4	2:B:295:A:C8	2.59	0.56
2:B:582:G:H2'	2:B:583:G:H8	1.70	0.56
2:B:583:G:H5"	10:J:82:ARG:NH1	2.15	0.56
2:B:633:C:H2'	2:B:634:C:C6	2.40	0.56
2:B:680:G:H5"	8:H:114:ASN:ND2	2.21	0.56
2:B:714:G:H2'	32:FA:113:LEU:HD22	1.88	0.56
2:B:1112:A:H4'	32:FA:19:LYS:HE3	1.87	0.56
2:B:1398:U:H5"	3:C:9:A:H5"	1.87	0.56
2:B:1429:G:C4	8:H:99:MET:HE3	2.41	0.56
2:B:1498:A:H1'	2:B:1602:A:C2	2.41	0.56
2:B:1573:G:O3'	29:CA:38:LEU:HD13	2.06	0.56
2:B:1581:C:OP1	2:B:2522:G:H5'	2.05	0.56
2:B:1605:A:HO2'	2:B:1607:U:H5'	1.71	0.56
2:B:1649:U:C2'	2:B:1650:G:H5'	2.36	0.56
2:B:2109:U:H4'	2:B:3363:U:O2'	2.05	0.56
2:B:2243:A:H5'	2:B:2313:A:H5'	1.88	0.56
2:B:2499:U:H2'	2:B:2500:A:H8	1.70	0.56
2:B:2874:G:H2'	2:B:2945:G:C6	2.40	0.56
2:B:3359:A:H3'	2:B:3360:C:C5	2.40	0.56
4:D:16:U:H5'	9:I:8:LYS:CG	2.35	0.56
5:E:132:GLY:O	83:EC:6818:G:H1'	2.05	0.56
6:F:46:LYS:O	6:F:47:GLN:HB2	2.04	0.56
6:F:72:ARG:HH11	6:F:72:ARG:CB	1.96	0.56
6:F:182:ALA:HB1	6:F:196:TRP:HH2	1.69	0.56
6:F:223:SER:O	6:F:237:LEU:HG	2.06	0.56
7:G:122:TRP:HA	7:G:125:SER:OG	2.05	0.56
7:G:205:VAL:O	7:G:207:SER:N	2.39	0.56
7:G:257:PRO:HG2	7:G:261:MET:HE3	1.87	0.56
7:G:306:THR:OG1	7:G:317:ILE:HG12	2.05	0.56
8:H:31:ARG:NE	22:V:23:ASN:HA	2.20	0.56
8:H:57:GLY:HA3	8:H:97:GLY:C	2.30	0.56
9:I:34:LYS:O	9:I:38:THR:HG23	2.05	0.56
10:J:31:ARG:HG3	10:J:33:SER:OG	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:164:SER:HB2	37:KA:5:HIS:CA	2.33	0.56
12:L:50:VAL:HA	29:CA:30:ALA:HA	1.88	0.56
13:M:22:SER:H	18:R:8:LYS:CD	2.13	0.56
13:M:188:THR:OG1	13:M:191:LEU:HD12	2.05	0.56
17:Q:99:HIS:CE1	17:Q:100:ARG:HH21	2.23	0.56
17:Q:182:ILE:HG23	17:Q:185:LYS:HE3	1.88	0.56
19:S:113:LEU:HA	19:S:137:PRO:HD2	1.87	0.56
19:S:199:LEU:HD22	19:S:203:ARG:HD2	1.88	0.56
20:T:83:ALA:C	20:T:84:LEU:HD12	2.29	0.56
21:U:67:ILE:HD11	21:U:82:ARG:HG3	1.88	0.56
21:U:98:ALA:HB2	21:U:148:LEU:HD11	1.86	0.56
23:W:105:LEU:HD22	23:W:106:LEU:HD12	1.87	0.56
27:AA:39:VAL:HB	27:AA:42:SER:HB3	1.88	0.56
30:DA:57:LEU:HD22	30:DA:66:GLN:O	2.05	0.56
31:EA:22:LYS:HE3	31:EA:129:TRP:CZ3	2.39	0.56
32:FA:75:LEU:HD12	32:FA:116:GLY:N	2.20	0.56
36:JA:32:TRP:HH2	36:JA:52:GLN:HG2	1.68	0.56
39:MA:21:LEU:CD2	39:MA:55:LEU:HG	2.35	0.56
41:OA:16:HIS:HB3	41:OA:26:SER:HA	1.86	0.56
48:VA:32:ASN:O	48:VA:183:PHE:CZ	2.59	0.56
48:VA:101:VAL:HA	48:VA:104:ARG:HG2	1.87	0.56
50:XA:61:ALA:C	50:XA:63:ILE:H	2.13	0.56
52:ZA:180:ALA:HB2	52:ZA:198:THR:HG21	1.88	0.56
54:BB:95:THR:CG2	74:VB:16:PRO:HD2	2.32	0.56
54:BB:107:GLY:HA2	54:BB:189:LEU:HG	1.88	0.56
55:CB:41:LYS:HZ1	55:CB:69:PHE:H	1.54	0.56
58:FB:67:TRP:HA	58:FB:183:ILE:HD12	1.88	0.56
59:GB:40:LYS:HA	59:GB:43:TYR:HD2	1.70	0.56
65:MB:38:PRO:O	65:MB:42:ARG:HG3	2.05	0.56
67:OB:2:GLY:O	67:OB:3:ARG:HD3	2.05	0.56
71:SB:69:LEU:HA	71:SB:72:LEU:HD12	1.87	0.56
72:TB:89:TRP:O	72:TB:93:LEU:HD23	2.06	0.56
76:XB:21:VAL:HG23	76:XB:32:LYS:HB3	1.86	0.56
82:DC:42:ARG:HE	82:DC:331:ALA:HB3	1.70	0.56
82:DC:251:ASN:C	82:DC:253:LYS:H	2.14	0.56
82:DC:369:ILE:HD11	82:DC:379:MET:HB3	1.88	0.56
83:EC:6825:A:H2'	83:EC:6826:U:C6	2.40	0.56
1:A:372:G:H2'	1:A:373:G:O4'	2.06	0.56
1:A:791:A:C2'	1:A:792:U:H5'	2.36	0.56
1:A:1417:A:H2'	1:A:1418:G:C8	2.41	0.56
1:A:1595:U:C2'	1:A:1596:C:H5'	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:17:G:H22	3:C:142:C:N4	2.03	0.56
2:B:633:C:H5"	37:KA:18:ARG:NH2	2.21	0.56
2:B:861:C:OP2	2:B:894:G:H5"	2.06	0.56
2:B:994:G:H22	2:B:1053:A:H2'	1.68	0.56
2:B:1219:C:OP1	48:VA:8:LYS:HE2	2.06	0.56
2:B:1238:C:H6	2:B:1238:C:O5'	1.89	0.56
2:B:1523:U:H4'	29:CA:112:THR:C	2.31	0.56
2:B:1887:A:H2'	2:B:1888:U:C5'	2.32	0.56
2:B:1910:A:H2'	2:B:1911:A:H8	1.64	0.56
2:B:2104:A:H2'	2:B:2105:G:C8	2.41	0.56
2:B:2730:G:H4'	22:V:184:PHE:CD2	2.40	0.56
2:B:3234:A:C3'	2:B:3235:C:H5"	2.36	0.56
5:E:5:THR:N	5:E:36:VAL:HG13	2.21	0.56
7:G:212:ASN:O	7:G:281:LYS:HG3	2.04	0.56
9:I:2:ALA:N	9:I:8:LYS:HZ2	2.03	0.56
9:I:101:THR:HA	9:I:104:LEU:HB3	1.87	0.56
11:K:114:GLY:O	11:K:205:PHE:HD2	1.88	0.56
11:K:222:HIS:CE1	11:K:224:ILE:HB	2.40	0.56
17:Q:147:ILE:HG22	17:Q:149:GLN:HG3	1.88	0.56
18:R:102:LYS:O	18:R:105:GLN:HB3	2.04	0.56
19:S:14:LYS:HA	19:S:19:LEU:HD22	1.88	0.56
20:T:43:ILE:HG21	20:T:50:ASN:ND2	2.20	0.56
20:T:142:SER:CA	20:T:145:VAL:HG22	2.36	0.56
24:X:135:VAL:HG11	24:X:141:LYS:HB2	1.85	0.56
32:FA:47:LYS:HE2	32:FA:48:TYR:HE2	1.68	0.56
35:IA:55:LEU:O	35:IA:59:ILE:HG13	2.04	0.56
36:JA:20:HIS:O	36:JA:21:HIS:HB2	2.04	0.56
49:WA:150:TRP:CD1	49:WA:150:TRP:N	2.73	0.56
51:YA:121:ILE:HD12	51:YA:121:ILE:N	2.20	0.56
54:BB:121:TYR:OH	54:BB:236:ILE:HG22	2.05	0.56
58:FB:36:THR:HG23	58:FB:95:THR:HG23	1.87	0.56
59:GB:79:ARG:O	59:GB:83:VAL:HG22	2.05	0.56
61:IB:94:ILE:HD12	61:IB:94:ILE:N	2.21	0.56
64:LB:32:ASP:OD1	64:LB:34:SER:HB3	2.05	0.56
65:MB:90:ILE:CG2	65:MB:109:PRO:HG3	2.34	0.56
69:QB:40:SER:HB3	69:QB:43:ASN:HD22	1.70	0.56
75:WB:89:ILE:HB	75:WB:101:TYR:HB3	1.87	0.56
79:AC:21:CYS:C	79:AC:23:VAL:H	2.13	0.56
82:DC:109:VAL:HG22	82:DC:138:GLN:HE21	1.70	0.56
82:DC:380:LEU:HD12	82:DC:400:VAL:HG22	1.88	0.56
82:DC:395:TYR:HD2	82:DC:435:VAL:HG21	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:634:TRP:HB3	82:DC:664:VAL:CG2	2.35	0.56
82:DC:650:THR:HG22	82:DC:689:LEU:O	2.05	0.56
1:A:96:G:H1	1:A:387:A:N6	1.96	0.56
1:A:373:G:C5'	61:IB:96:LYS:HA	2.36	0.56
1:A:415:C:C2'	1:A:416:A:H5"	2.35	0.56
1:A:850:A:H2'	1:A:851:U:C6	2.40	0.56
1:A:1231:U:H3	1:A:1254:U:H3	1.52	0.56
1:A:1392:U:H2'	1:A:1393:C:C6	2.41	0.56
2:B:86:G:N2	2:B:98:G:H2'	2.20	0.56
2:B:211:A:H5'	8:H:221:ASN:ND2	2.20	0.56
2:B:311:C:H2'	2:B:312:C:O4'	2.05	0.56
2:B:1162:U:OP1	36:JA:54:LYS:HD2	2.05	0.56
2:B:1164:G:H2'	2:B:1165:A:C8	2.41	0.56
2:B:3324:C:H4'	35:IA:13:THR:O	2.06	0.56
6:F:61:VAL:HG21	6:F:76:PHE:CB	2.27	0.56
7:G:28:ARG:HH21	7:G:274:SER:HB2	1.71	0.56
7:G:159:ARG:HD3	7:G:180:GLU:HB3	1.87	0.56
8:H:286:VAL:HG21	22:V:28:LEU:HB3	1.87	0.56
8:H:351:PRO:HB3	11:K:70:LYS:CB	2.35	0.56
12:L:76:ALA:C	12:L:78:PHE:H	2.13	0.56
17:Q:103:ASN:O	40:NA:20:MET:HE2	2.05	0.56
20:T:18:ARG:HB2	20:T:123:ALA:HA	1.87	0.56
20:T:76:PRO:HB3	20:T:138:LEU:CG	2.36	0.56
24:X:10:ILE:HD13	25:Y:148:PRO:HG2	1.88	0.56
25:Y:78:LYS:HD3	25:Y:87:LYS:HE3	1.87	0.56
27:AA:15:LEU:HA	27:AA:53:SER:HB3	1.87	0.56
29:CA:70:GLU:C	29:CA:72:ALA:H	2.14	0.56
32:FA:82:ILE:HB	32:FA:87:ARG:HG3	1.86	0.56
41:OA:14:LYS:HD3	41:OA:17:THR:OG1	2.04	0.56
43:QA:23:LEU:CD2	43:QA:28:ARG:HD3	2.35	0.56
47:UA:49:ARG:HH21	47:UA:52:ALA:HA	1.69	0.56
47:UA:84:ARG:NH1	47:UA:84:ARG:HB3	2.21	0.56
48:VA:15:LEU:HD12	48:VA:16:ARG:N	2.21	0.56
48:VA:32:ASN:H	48:VA:32:ASN:HD22	1.51	0.56
61:IB:13:PHE:HD2	61:IB:15:LYS:HB3	1.71	0.56
61:IB:93:TYR:HD1	61:IB:100:TYR:CE1	2.23	0.56
63:KB:98:VAL:HG11	63:KB:115:LEU:HB2	1.86	0.56
63:KB:99:ARG:O	63:KB:103:GLU:HG2	2.06	0.56
66:NB:87:LYS:HA	66:NB:117:LEU:HD12	1.87	0.56
74:VB:25:VAL:HG12	74:VB:27:VAL:HG23	1.87	0.56
83:EC:6801:A:C6	83:EC:6884:G:H1'	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:404:G:H2'	1:A:405:C:C6	2.40	0.56
1:A:522:U:OP1	74:VB:37:LYS:HG3	2.05	0.56
1:A:1035:G:O4'	72:TB:2:THR:HA	2.05	0.56
1:A:1680:G:N2	1:A:1720:G:H2'	2.20	0.56
1:A:1793:G:O2'	1:A:1794:A:H3'	2.05	0.56
2:B:16:A:H2'	2:B:17:G:H5'	1.88	0.56
2:B:637:C:H2'	2:B:638:C:H6	1.65	0.56
2:B:665:A:H5'	19:S:199:LEU:HD11	1.85	0.56
2:B:1222:G:H2'	48:VA:56:ASN:CG	2.31	0.56
2:B:1344:G:C2	2:B:1345:G:H1'	2.40	0.56
2:B:1525:G:N2	2:B:1594:A:H1'	2.21	0.56
2:B:1729:A:H3'	2:B:1730:G:H5'	1.88	0.56
2:B:2430:A:H2'	2:B:2431:C:C6	2.40	0.56
2:B:2724:U:H5"	25:Y:54:HIS:CE1	2.41	0.56
2:B:2746:A:C2	9:I:146:LEU:HD22	2.41	0.56
2:B:2775:U:H4'	2:B:2777:G:N2	2.20	0.56
2:B:3148:U:H5'	7:G:104:THR:HB	1.86	0.56
2:B:3151:U:H2'	2:B:3395:G:H22	1.70	0.56
2:B:3262:U:C3'	2:B:3263:G:H5"	2.35	0.56
2:B:3267:A:C2	10:J:73:GLY:HA3	2.39	0.56
6:F:30:ARG:HD3	6:F:63:PHE:CE1	2.40	0.56
6:F:70:ARG:HH21	6:F:72:ARG:HD3	1.69	0.56
9:I:107:ARG:NH2	9:I:120:LYS:HG2	2.19	0.56
9:I:211:LEU:HD23	9:I:215:ASP:HB3	1.88	0.56
11:K:145:ARG:CZ	11:K:149:TYR:HE1	2.18	0.56
12:L:159:PRO:C	12:L:161:GLU:H	2.12	0.56
21:U:28:ASN:HA	21:U:60:PHE:CE1	2.31	0.56
23:W:40:ALA:O	23:W:44:LEU:HD23	2.06	0.56
24:X:79:VAL:HA	24:X:124:LEU:HG	1.88	0.56
35:IA:10:ARG:HB2	35:IA:12:TYR:CE2	2.41	0.56
48:VA:34:SER:HB3	48:VA:37:GLN:HE21	1.70	0.56
49:WA:168:THR:CG2	49:WA:225:LEU:HD21	2.36	0.56
52:ZA:185:LYS:O	52:ZA:189:GLN:HG3	2.05	0.56
54:BB:18:TRP:CE3	54:BB:20:LEU:HD12	2.36	0.56
54:BB:43:PRO:HA	54:BB:82:TYR:O	2.04	0.56
55:CB:69:PHE:CE1	66:NB:46:PHE:HB3	2.41	0.56
58:FB:24:LYS:C	58:FB:25:ARG:HD2	2.30	0.56
58:FB:172:ARG:HB3	58:FB:175:GLN:CG	2.36	0.56
66:NB:73:GLY:O	66:NB:77:GLN:HG3	2.06	0.56
77:YB:20:LYS:NZ	77:YB:21:LEU:HG	2.21	0.56
82:DC:28:VAL:HG22	82:DC:108:HIS:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:619:MET:HE1	82:DC:633:ILE:CD1	2.34	0.56
82:DC:729:PHE:HB2	82:DC:772:LEU:O	2.05	0.56
1:A:19:A:H2'	1:A:20:G:H5'	1.87	0.56
1:A:877:G:H2'	1:A:878:G:O4'	2.04	0.56
1:A:1474:G:H2'	1:A:1475:A:C8	2.41	0.56
1:A:1735:U:OP1	27:AA:64:LYS:HD3	2.05	0.56
2:B:246:U:H2'	2:B:247:C:C6	2.40	0.56
2:B:1162:U:H5"	36:JA:57:TYR:CE1	2.41	0.56
2:B:1556:C:H2'	2:B:2169:G:N1	2.20	0.56
2:B:1898:G:N3	27:AA:18:PRO:HG3	2.20	0.56
2:B:2402:A:H1'	2:B:2871:G:O4'	2.05	0.56
2:B:3146:G:H4'	7:G:100:ARG:HD2	1.88	0.56
6:F:79:ASN:OD1	6:F:167:GLY:HA3	2.05	0.56
8:H:31:ARG:O	8:H:35:VAL:HG23	2.05	0.56
9:I:95:TRP:O	9:I:98:ALA:HB3	2.06	0.56
10:J:31:ARG:HB2	37:KA:107:ILE:CG2	2.34	0.56
11:K:88:ARG:NE	11:K:103:LEU:HD13	2.20	0.56
14:N:87:LEU:HD23	14:N:87:LEU:C	2.31	0.56
17:Q:27:ASP:HB2	17:Q:31:LYS:HG2	1.88	0.56
17:Q:120:GLN:O	17:Q:123:ILE:HG12	2.05	0.56
18:R:132:LYS:HA	18:R:132:LYS:CE	2.29	0.56
20:T:150:GLU:O	20:T:153:VAL:HB	2.06	0.56
21:U:169:THR:OG1	21:U:172:GLN:HB2	2.06	0.56
22:V:126:GLN:O	22:V:129:VAL:HB	2.06	0.56
22:V:175:ALA:CB	32:FA:54:GLY:HA3	2.35	0.56
24:X:14:LEU:HD21	25:Y:139:ARG:HH12	1.71	0.56
24:X:77:VAL:CG2	24:X:106:LEU:HD11	2.36	0.56
26:Z:13:LYS:HB2	26:Z:67:SER:O	2.06	0.56
30:DA:53:ASP:HB3	30:DA:110:HIS:CB	2.36	0.56
30:DA:89:LYS:HE3	30:DA:91:ASN:HD21	1.71	0.56
35:IA:79:ARG:O	35:IA:79:ARG:HD2	2.05	0.56
50:XA:55:GLU:O	50:XA:58:VAL:HB	2.05	0.56
53:AB:60:GLY:HA3	53:AB:65:ARG:H	1.71	0.56
55:CB:166:ARG:HD2	78:ZB:46:GLY:CA	2.36	0.56
56:DB:31:ARG:H	56:DB:34:GLN:HG3	1.70	0.56
56:DB:93:LYS:HG2	56:DB:95:LYS:NZ	2.21	0.56
57:EB:39:ARG:N	57:EB:40:PRO:HD2	2.19	0.56
57:EB:150:GLN:HB2	57:EB:181:ILE:HG12	1.88	0.56
57:EB:185:ILE:HB	57:EB:186:PRO:HD2	1.87	0.56
67:OB:9:VAL:CG1	67:OB:46:LEU:HG	2.36	0.56
73:UB:130:VAL:HB	73:UB:135:LEU:HD11	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:YB:37:CYS:SG	77:YB:40:CYS:HB2	2.46	0.56
1:A:398:G:H5"	58:FB:49:ARG:HG3	1.86	0.56
1:A:478:A:H5'	59:GB:127:VAL:HG21	1.87	0.56
1:A:770:A:H3'	1:A:771:A:C5'	2.33	0.56
1:A:959:U:C5'	63:KB:14:SER:HB2	2.35	0.56
1:A:1473:U:C5	55:CB:97:LEU:HD23	2.40	0.56
2:B:9:U:O2'	2:B:10:C:H5'	2.04	0.56
2:B:287:G:H2'	2:B:288:C:C6	2.41	0.56
2:B:1204:A:H62	2:B:1300:G:N2	2.04	0.56
2:B:1697:A:H2'	2:B:1698:C:O4'	2.05	0.56
2:B:1751:G:C8	42:PA:26:LYS:HG2	2.40	0.56
2:B:1755:C:H2'	2:B:1756:C:H5"	1.88	0.56
2:B:1889:G:OP1	7:G:246:LEU:HG	2.06	0.56
2:B:2203:U:C4'	6:F:241:ARG:HA	2.18	0.56
2:B:2540:A:O2'	2:B:2541:U:H5"	2.06	0.56
2:B:3375:A:C8	2:B:3378:C:H5"	2.41	0.56
6:F:103:PRO:HB3	6:F:161:ASP:HA	1.88	0.56
6:F:202:VAL:HG13	6:F:218:HIS:O	2.06	0.56
7:G:45:SER:HB2	7:G:338:LEU:O	2.05	0.56
7:G:205:VAL:C	7:G:207:SER:H	2.14	0.56
8:H:44:LYS:HD3	8:H:47:ARG:NH1	2.20	0.56
9:I:52:VAL:CG2	9:I:63:GLN:HG3	2.34	0.56
9:I:107:ARG:HG3	9:I:248:ARG:HA	1.88	0.56
10:J:52:VAL:HG23	10:J:66:SER:C	2.31	0.56
10:J:54:TYR:CZ	10:J:63:LEU:HD22	2.40	0.56
10:J:158:TYR:CZ	18:R:115:PHE:CB	2.89	0.56
14:N:29:SER:CA	14:N:125:LEU:HD12	2.31	0.56
14:N:77:THR:C	14:N:79:VAL:H	2.14	0.56
17:Q:24:VAL:CG1	19:S:203:ARG:HH21	2.19	0.56
19:S:114:ARG:HG2	19:S:137:PRO:HG3	1.87	0.56
28:BA:45:ASN:HB3	28:BA:48:ARG:HB2	1.88	0.56
31:EA:76:ASN:HB2	31:EA:79:HIS:CG	2.40	0.56
32:FA:111:LYS:HG2	32:FA:129:PHE:O	2.06	0.56
44:RA:99:CYS:HA	44:RA:114:LYS:CE	2.34	0.56
46:TA:45:ARG:O	46:TA:45:ARG:HD3	2.04	0.56
49:WA:41:THR:HG22	49:WA:61:PHE:O	2.06	0.56
49:WA:288:HIS:O	49:WA:306:THR:HG23	2.05	0.56
50:XA:107:PHE:HB2	50:XA:135:GLU:CD	2.31	0.56
50:XA:148:ASP:O	50:XA:149:LEU:HG	2.06	0.56
51:YA:126:THR:HA	51:YA:136:ARG:HG3	1.88	0.56
52:ZA:140:ARG:HB2	52:ZA:222:TYR:CE1	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:182:GLN:O	56:DB:185:GLN:HB3	2.06	0.56
59:GB:107:ARG:HB2	59:GB:147:MET:HE2	1.87	0.56
63:KB:26:PHE:HE1	63:KB:60:VAL:HG22	1.71	0.56
78:ZB:18:ARG:HA	78:ZB:26:THR:HA	1.88	0.56
82:DC:44:GLY:CA	82:DC:77:LEU:HG	2.33	0.56
82:DC:561:VAL:HG12	82:DC:562:ALA:H	1.70	0.56
83:EC:6780:A:O2'	83:EC:6816:A:H1'	2.06	0.56
1:A:40:A:H2'	1:A:41:A:O4'	2.06	0.56
1:A:64:U:H2'	1:A:65:A:C5'	2.33	0.56
1:A:763:G:H2'	1:A:764:U:O4'	2.06	0.56
1:A:836:U:H2'	1:A:837:G:O4'	2.05	0.56
1:A:862:A:H4'	72:TB:57:ARG:CG	2.36	0.56
1:A:1429:G:N2	70:RB:72:ASN:HD22	2.04	0.56
2:B:106:A:H2'	2:B:107:A:O4'	2.06	0.56
2:B:275:U:O2'	2:B:276:U:H5'	2.06	0.56
2:B:1260:A:H4'	2:B:1279:C:O2'	2.06	0.56
2:B:1268:G:N2	2:B:1273:A:H62	1.99	0.56
2:B:1362:G:H4'	11:K:160:ARG:N	2.21	0.56
2:B:1668:G:H2'	2:B:1669:C:H6	1.69	0.56
2:B:2535:A:H3'	2:B:2536:A:H4'	1.87	0.56
2:B:3059:G:N2	2:B:3332:U:H4'	2.21	0.56
2:B:3215:A:O4'	10:J:161:ALA:CB	2.54	0.56
2:B:3321:C:H2'	2:B:3322:A:C8	2.41	0.56
2:B:3323:A:H5"	35:IA:19:ARG:NH2	2.21	0.56
6:F:108:PRO:CG	47:UA:86:LEU:HD22	2.36	0.56
9:I:183:TRP:HE1	9:I:185:PHE:HA	1.70	0.56
10:J:125:GLN:C	10:J:127:ASN:H	2.13	0.56
10:J:165:LEU:HD23	37:KA:6:ARG:O	2.04	0.56
14:N:19:LYS:HA	14:N:23:ASN:OD1	2.05	0.56
14:N:153:ARG:HH21	14:N:154:ARG:HG3	1.69	0.56
14:N:177:ASP:CG	14:N:179:PRO:HD2	2.31	0.56
17:Q:32:LYS:HG3	17:Q:35:ARG:NH2	2.20	0.56
24:X:69:PRO:HA	24:X:97:VAL:HG22	1.88	0.56
31:EA:15:ARG:HD2	38:LA:86:LYS:HE2	1.88	0.56
39:MA:41:LEU:O	39:MA:44:ILE:HG22	2.06	0.56
52:ZA:73:LEU:HD23	52:ZA:76:LEU:HD11	1.87	0.56
55:CB:108:LEU:H	55:CB:108:LEU:HD12	1.71	0.56
59:GB:108:ARG:HB2	59:GB:111:THR:HG22	1.87	0.56
59:GB:141:VAL:HG12	59:GB:143:ILE:H	1.71	0.56
60:HB:4:PRO:HG2	60:HB:7:ASP:HB3	1.88	0.56
66:NB:9:THR:HG21	66:NB:88:GLY:HA2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SB:60:ARG:HA	71:SB:65:SER:HB2	1.86	0.56
76:XB:2:PRO:HG2	76:XB:3:LYS:H	1.71	0.56
76:XB:23:CYS:HB3	76:XB:28:LYS:N	2.21	0.56
1:A:72:A:C2'	1:A:73:U:H5"	2.36	0.56
1:A:101:U:O2	58:FB:21:PHE:HB2	2.05	0.56
1:A:176:C:C2'	1:A:177:U:H5'	2.36	0.56
1:A:1065:A:H2'	1:A:1066:C:C6	2.41	0.56
2:B:514:G:C3'	2:B:515:C:H5"	2.36	0.56
2:B:580:C:H2'	2:B:581:U:O4'	2.04	0.56
2:B:821:U:H2'	2:B:822:G:H8	1.67	0.56
2:B:877:C:H1'	2:B:882:A:H61	1.71	0.56
2:B:1311:G:H8	2:B:1311:G:O5'	1.88	0.56
2:B:1493:G:N3	43:QA:13:MET:HG3	2.21	0.56
2:B:1845:G:H3'	2:B:1846:C:H5"	1.87	0.56
2:B:2102:U:C5'	23:W:88:ARG:HH21	2.16	0.56
2:B:2150:G:P	6:F:179:LEU:HD23	2.46	0.56
2:B:2613:U:H5"	2:B:2614:G:C5'	2.36	0.56
2:B:2771:U:O2'	2:B:2772:C:H4'	2.06	0.56
3:C:10:A:C5	3:C:11:C:N4	2.74	0.56
3:C:10:A:H2'	3:C:11:C:C6	2.41	0.56
3:C:43:A:H2'	3:C:44:A:O4'	2.05	0.56
3:C:111:A:O2'	3:C:112:U:H5'	2.05	0.56
4:D:77:G:H22	4:D:101:G:H3'	1.71	0.56
4:D:119:U:H2'	4:D:120:C:C6	2.41	0.56
6:F:27:ALA:HB1	6:F:77:ILE:HG12	1.87	0.56
6:F:184:ARG:O	6:F:188:LYS:HB2	2.06	0.56
6:F:204:MET:HB2	6:F:208:ASP:CB	2.35	0.56
13:M:128:VAL:HG13	13:M:134:ILE:HD13	1.88	0.56
14:N:75:TYR:CD2	14:N:154:ARG:HD2	2.41	0.56
14:N:206:LEU:O	14:N:210:ILE:HG13	2.06	0.56
17:Q:18:TRP:CD1	17:Q:18:TRP:H	2.24	0.56
20:T:20:ALA:HB1	20:T:84:LEU:HD11	1.88	0.56
20:T:52:LEU:O	20:T:55:HIS:HB2	2.05	0.56
24:X:104:GLU:O	24:X:108:GLN:HG2	2.06	0.56
26:Z:80:THR:O	26:Z:84:LEU:HG	2.06	0.56
29:CA:114:VAL:HG13	29:CA:119:THR:O	2.06	0.56
36:JA:45:ARG:HB2	36:JA:45:ARG:HH11	1.71	0.56
36:JA:103:LYS:HE3	36:JA:104:ASN:ND2	2.20	0.56
38:LA:44:CYS:H	38:LA:49:SER:N	2.03	0.56
49:WA:178:VAL:CG2	49:WA:223:TRP:HE1	2.19	0.56
50:XA:59:LEU:CD1	50:XA:62:ARG:HH11	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:103:VAL:HG22	52:ZA:113:LEU:HD23	1.88	0.56
53:AB:105:MET:HA	53:AB:108:LYS:HB2	1.86	0.56
53:AB:140:GLY:O	53:AB:147:ALA:HA	2.04	0.56
55:CB:209:TYR:HD1	55:CB:212:LYS:HD2	1.71	0.56
57:EB:111:LYS:HG2	57:EB:112:ARG:N	2.21	0.56
68:PB:36:LYS:O	68:PB:102:ALA:HA	2.05	0.56
73:UB:37:ALA:O	73:UB:41:SER:HB2	2.05	0.56
1:A:245:U:H2'	1:A:247:A:OP2	2.05	0.55
1:A:272:U:O2'	1:A:273:G:H5'	2.06	0.55
1:A:795:U:H2'	1:A:796:A:C8	2.41	0.55
1:A:830:U:H2'	1:A:831:U:C6	2.40	0.55
1:A:1066:C:H1'	51:YA:146:GLN:OE1	2.06	0.55
1:A:1210:C:H2'	1:A:1211:A:H8	1.69	0.55
2:B:415:G:H2'	2:B:416:A:H8	1.70	0.55
2:B:1231:A:N1	2:B:1277:C:C5	2.74	0.55
2:B:1427:U:O2'	2:B:1428:A:H5'	2.06	0.55
2:B:1560:G:H2'	2:B:1561:G:H5'	1.88	0.55
2:B:1593:A:O5'	38:LA:60:ARG:HD3	2.06	0.55
2:B:1779:C:O2	23:W:93:VAL:HG11	2.05	0.55
2:B:2497:U:H4'	2:B:2498:U:C5	2.40	0.55
2:B:2515:A:H2'	2:B:2516:U:O4'	2.05	0.55
3:C:149:A:H4'	29:CA:35:PRO:HG2	1.87	0.55
6:F:103:PRO:HB3	6:F:161:ASP:C	2.31	0.55
8:H:56:ALA:O	8:H:98:ARG:HA	2.06	0.55
8:H:263:GLY:CA	8:H:269:SER:HA	2.36	0.55
9:I:126:GLU:HG2	9:I:196:ARG:HG3	1.86	0.55
9:I:164:LYS:HD3	9:I:168:ASP:OD1	2.05	0.55
18:R:21:VAL:CG2	18:R:46:ILE:HG21	2.36	0.55
19:S:6:TYR:CE2	40:NA:40:VAL:HG22	2.40	0.55
21:U:17:ALA:HB1	21:U:94:LEU:CD1	2.37	0.55
25:Y:17:ARG:HB3	25:Y:22:HIS:ND1	2.21	0.55
29:CA:73:MET:SD	29:CA:76:VAL:HG21	2.47	0.55
37:KA:44:TYR:O	37:KA:47:LYS:HG2	2.07	0.55
40:NA:34:SER:HB3	40:NA:37:THR:CG2	2.36	0.55
47:UA:55:TRP:HB2	47:UA:64:VAL:HB	1.87	0.55
49:WA:112:SER:CB	49:WA:153:GLN:HA	2.33	0.55
51:YA:70:LEU:HB3	51:YA:84:ILE:HG12	1.87	0.55
51:YA:154:SER:OG	51:YA:205:PHE:HZ	1.88	0.55
53:AB:116:ARG:O	53:AB:120:TYR:HB2	2.05	0.55
54:BB:158:ASP:OD2	54:BB:174:LYS:HA	2.05	0.55
55:CB:43:PHE:HB3	55:CB:46:TRP:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:24:LYS:HE3	60:HB:26:ASP:HB2	1.87	0.55
68:PB:28:ILE:HD12	68:PB:52:VAL:HG11	1.88	0.55
80:BC:16:SER:HB2	82:DC:609:ARG:HD2	1.89	0.55
82:DC:22:MET:HE1	82:DC:102:LEU:HD22	1.87	0.55
82:DC:612:PHE:H	82:DC:612:PHE:HD2	1.52	0.55
82:DC:789:GLY:C	82:DC:791:GLN:H	2.14	0.55
1:A:73:U:H4'	1:A:74:U:H5'	1.88	0.55
1:A:567:A:H2'	73:UB:90:ASP:OD1	2.06	0.55
1:A:1159:C:H1'	66:NB:140:LYS:NZ	2.21	0.55
1:A:1260:U:H2'	1:A:1261:G:C8	2.40	0.55
2:B:27:C:H5'	2:B:328:U:H4'	1.88	0.55
2:B:101:G:O2'	2:B:102:C:H5'	2.06	0.55
2:B:807:A:N6	2:B:934:G:H22	1.97	0.55
2:B:880:G:H2'	2:B:882:A:N7	2.21	0.55
2:B:1101:G:H2'	2:B:1102:A:C8	2.42	0.55
2:B:1163:A:O2'	2:B:1164:G:H5'	2.06	0.55
2:B:3072:C:H4'	2:B:3336:A:H5"	1.87	0.55
2:B:3206:C:H2'	18:R:99:TRP:HE1	1.71	0.55
6:F:14:SER:O	6:F:17:THR:HG23	2.07	0.55
8:H:26:PHE:HE1	8:H:126:ILE:HG22	1.72	0.55
8:H:38:VAL:HG12	8:H:39:PHE:N	2.21	0.55
9:I:235:SER:O	9:I:239:ILE:HG13	2.06	0.55
15:O:57:PHE:HD2	15:O:59:ILE:HD11	1.71	0.55
17:Q:42:ARG:HD3	17:Q:51:LEU:HD13	1.89	0.55
18:R:38:ILE:HG13	18:R:44:VAL:CG1	2.36	0.55
20:T:16:VAL:HG13	20:T:80:PHE:HE1	1.68	0.55
21:U:40:GLU:HB3	21:U:42:THR:HG22	1.89	0.55
26:Z:29:ASP:HB3	26:Z:32:SER:HB3	1.87	0.55
29:CA:107:VAL:HG11	29:CA:124:VAL:HG22	1.86	0.55
34:HA:83:LYS:HD3	34:HA:85:PHE:CE2	2.41	0.55
36:JA:86:THR:HG23	36:JA:115:LEU:HD22	1.87	0.55
37:KA:16:TYR:HA	37:KA:28:SER:HA	1.88	0.55
37:KA:47:LYS:H	37:KA:71:VAL:HB	1.71	0.55
49:WA:170:ILE:HG21	49:WA:211:ILE:CD1	2.30	0.55
52:ZA:133:LYS:O	52:ZA:136:VAL:HG23	2.07	0.55
55:CB:110:ALA:O	55:CB:114:ILE:HB	2.06	0.55
59:GB:107:ARG:HB2	59:GB:147:MET:CE	2.36	0.55
71:SB:1:MET:SD	71:SB:10:GLU:HB3	2.46	0.55
71:SB:12:TYR:CZ	71:SB:14:PRO:HA	2.41	0.55
78:ZB:25:VAL:HG12	78:ZB:26:THR:N	2.20	0.55
82:DC:20:ARG:NE	82:DC:339:VAL:HA	2.14	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:360:PRO:HG2	82:DC:363:ASP:HB2	1.87	0.55
82:DC:519:LEU:HD23	86:DC:903:SO1:H56	1.87	0.55
1:A:118:U:H4'	1:A:397:A:H1'	1.88	0.55
1:A:168:A:O2'	1:A:169:A:H5'	2.07	0.55
1:A:398:G:H2'	1:A:399:A:C5'	2.36	0.55
1:A:424:C:H1'	1:A:427:C:H41	1.70	0.55
1:A:1113:A:OP2	1:A:1751:C:H5'	2.06	0.55
1:A:1715:G:H3'	1:A:1716:C:H5'	1.88	0.55
2:B:126:U:OP1	19:S:144:ARG:HD2	2.07	0.55
2:B:718:G:O2'	2:B:719:U:H5'	2.07	0.55
2:B:1059:G:H2'	2:B:1060:U:C6	2.41	0.55
2:B:1263:A:N6	16:P:136:ALA:HB2	2.21	0.55
2:B:1301:A:H5'	2:B:1302:A:C8	2.40	0.55
2:B:1705:U:C2	2:B:1786:G:H4'	2.41	0.55
2:B:1910:A:O2'	2:B:1911:A:H5'	2.06	0.55
2:B:2186:U:O2'	2:B:2187:G:H5'	2.07	0.55
2:B:2356:A:H4'	21:U:138:LYS:O	2.06	0.55
2:B:2528:G:OP1	12:L:245:LYS:HG3	2.05	0.55
2:B:2901:G:H2'	2:B:2902:A:H8	1.71	0.55
2:B:3065:G:H2'	2:B:3066:U:C6	2.41	0.55
2:B:3313:U:O2'	2:B:3314:A:H5'	2.06	0.55
3:C:27:U:O2'	8:H:51:ALA:HB3	2.05	0.55
6:F:41:ILE:HG22	6:F:90:ALA:O	2.05	0.55
7:G:350:ALA:O	7:G:351:LEU:HB3	2.06	0.55
8:H:151:VAL:HG21	8:H:255:PHE:CE1	2.42	0.55
14:N:9:TYR:N	14:N:9:TYR:CD2	2.75	0.55
14:N:17:TYR:HE2	14:N:23:ASN:ND2	2.03	0.55
24:X:77:VAL:HG21	24:X:106:LEU:HD11	1.87	0.55
26:Z:17:VAL:HG21	26:Z:76:LEU:HD21	1.88	0.55
27:AA:54:LEU:CD1	27:AA:122:CYS:HB2	2.36	0.55
32:FA:35:ALA:HB1	32:FA:40:HIS:HE1	1.71	0.55
36:JA:67:SER:CB	36:JA:68:PRO:HD2	2.36	0.55
40:NA:35:ASN:O	40:NA:39:PHE:HB2	2.07	0.55
52:ZA:60:SER:OG	71:SB:26:ALA:HA	2.06	0.55
52:ZA:143:TYR:CE1	52:ZA:151:PRO:HG3	2.41	0.55
54:BB:51:ARG:NE	54:BB:110:ALA:HA	2.22	0.55
58:FB:67:TRP:HE3	58:FB:72:ILE:HD11	1.70	0.55
61:IB:84:ILE:HG13	61:IB:109:VAL:HG13	1.89	0.55
64:LB:127:ARG:HG2	64:LB:127:ARG:HH11	1.71	0.55
68:PB:18:LEU:HD21	68:PB:69:ILE:HG22	1.88	0.55
74:VB:13:ILE:HD12	74:VB:13:ILE:N	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:VB:106:GLN:O	74:VB:110:GLN:HB2	2.07	0.55
1:A:485:A:H2'	1:A:486:G:H8	1.71	0.55
2:B:413:U:H1'	21:U:116:HIS:HE1	1.71	0.55
2:B:528:U:H2'	2:B:529:A:C8	2.41	0.55
2:B:792:G:H2'	2:B:793:C:H5"	1.88	0.55
2:B:825:U:H2'	2:B:826:G:C5'	2.33	0.55
2:B:1248:C:H2'	2:B:1249:G:H5'	1.87	0.55
2:B:1654:A:H3'	2:B:1655:G:C5'	2.37	0.55
2:B:2535:A:N7	2:B:2536:A:H1'	2.20	0.55
2:B:2837:A:H5"	14:N:154:ARG:NE	2.21	0.55
2:B:2854:U:H5"	14:N:160:PRO:CG	2.37	0.55
2:B:2949:U:O2'	2:B:2950:G:H5'	2.04	0.55
2:B:3262:U:C2'	2:B:3263:G:H5"	2.36	0.55
5:E:180:VAL:O	5:E:183:ILE:HB	2.06	0.55
6:F:3:ARG:HB3	6:F:207:VAL:O	2.06	0.55
8:H:31:ARG:CZ	22:V:23:ASN:HA	2.36	0.55
8:H:131:VAL:O	8:H:135:VAL:HG23	2.05	0.55
8:H:206:LEU:HD11	8:H:237:GLN:CB	2.34	0.55
9:I:27:LYS:HA	9:I:150:LEU:CD1	2.37	0.55
9:I:95:TRP:CD1	9:I:158:ARG:HA	2.41	0.55
10:J:42:LEU:HD13	10:J:47:PHE:CB	2.36	0.55
13:M:12:VAL:HG22	13:M:79:ILE:HD13	1.87	0.55
18:R:45:LEU:HD21	18:R:55:ARG:HG2	1.89	0.55
20:T:74:ARG:HG2	20:T:74:ARG:NH1	2.20	0.55
27:AA:117:PRO:HD3	28:BA:25:ASP:O	2.07	0.55
33:GA:59:LYS:HD3	33:GA:59:LYS:N	2.22	0.55
34:HA:50:VAL:HG13	34:HA:53:LYS:CE	2.37	0.55
34:HA:67:VAL:HG12	34:HA:68:TYR:N	2.20	0.55
35:IA:72:ARG:HG3	35:IA:72:ARG:NH1	2.20	0.55
39:MA:7:TYR:CE1	39:MA:8:GLU:HG3	2.42	0.55
39:MA:60:GLU:HA	39:MA:63:ARG:CD	2.34	0.55
50:XA:98:ILE:CD1	50:XA:116:LYS:HG3	2.37	0.55
51:YA:70:LEU:CD1	51:YA:79:HIS:HB3	2.35	0.55
52:ZA:160:GLY:O	52:ZA:166:THR:HA	2.06	0.55
59:GB:36:LEU:HD21	59:GB:108:ARG:HH12	1.72	0.55
60:HB:16:PHE:CB	60:HB:80:LEU:HD12	2.35	0.55
64:LB:13:VAL:CG2	64:LB:76:ILE:HA	2.36	0.55
67:OB:5:ARG:CD	67:OB:5:ARG:H	2.19	0.55
71:SB:35:ASN:HA	71:SB:51:VAL:O	2.07	0.55
82:DC:711:ARG:HA	82:DC:714:TYR:HB2	1.87	0.55
1:A:206:A:H1'	1:A:262:U:N3	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1089:U:H2'	1:A:1090:C:H6	1.68	0.55
1:A:1129:U:H3'	1:A:1130:G:C8	2.42	0.55
1:A:1609:U:H2'	1:A:1610:G:C8	2.42	0.55
2:B:45:A:OP2	19:S:85:THR:HB	2.06	0.55
2:B:217:U:H3'	2:B:218:G:H5'	1.88	0.55
2:B:840:C:O3'	23:W:125:LYS:HB3	2.06	0.55
2:B:871:U:N3	2:B:890:C:H1'	2.22	0.55
2:B:1481:A:N3	2:B:1481:A:H2'	2.22	0.55
2:B:2136:C:H3'	2:B:2142:A:H62	1.70	0.55
2:B:2421:U:H2'	2:B:2422:C:O4'	2.07	0.55
2:B:2695:A:H3'	2:B:2696:A:H5"	1.89	0.55
2:B:3011:A:H4'	2:B:3012:A:OP1	2.06	0.55
2:B:3106:A:H2'	2:B:3107:U:H5'	1.88	0.55
2:B:3163:A:H2'	2:B:3164:C:C5'	2.27	0.55
2:B:3367:C:OP1	28:BA:61:LYS:HE3	2.05	0.55
3:C:29:U:OP1	17:Q:26:PHE:HB2	2.07	0.55
4:D:67:G:H5'	9:I:10:SER:HA	1.88	0.55
5:E:67:ILE:O	5:E:85:MET:HB3	2.06	0.55
6:F:139:HIS:CE1	6:F:146:THR:HB	2.42	0.55
10:J:26:ARG:CG	10:J:27:PRO:HD2	2.37	0.55
21:U:48:LEU:HD11	21:U:92:GLN:HG3	1.88	0.55
23:W:21:LYS:O	23:W:53:LYS:HG3	2.05	0.55
24:X:42:TRP:HE1	24:X:58:ILE:HD11	1.72	0.55
31:EA:70:PRO:HD2	31:EA:115:LYS:HD2	1.88	0.55
32:FA:131:SER:OG	32:FA:134:ALA:HB2	2.07	0.55
34:HA:13:LYS:HD3	34:HA:103:THR:HG21	1.89	0.55
39:MA:61:GLN:O	39:MA:64:GLU:HG2	2.07	0.55
44:RA:103:LEU:HB3	44:RA:104:PRO:CD	2.36	0.55
46:TA:77:CYS:O	46:TA:78:LYS:HG2	2.06	0.55
47:UA:11:THR:HG23	47:UA:23:ARG:HB3	1.88	0.55
47:UA:29:LEU:HD22	47:UA:70:THR:HB	1.88	0.55
49:WA:181:TRP:HA	49:WA:188:ILE:HD12	1.87	0.55
53:AB:168:ILE:HG22	53:AB:189:MET:CB	2.36	0.55
55:CB:130:ILE:O	55:CB:134:VAL:HG23	2.06	0.55
55:CB:190:ILE:O	55:CB:194:LEU:HG	2.06	0.55
59:GB:112:GLN:HE22	59:GB:115:LYS:HG2	1.70	0.55
61:IB:109:VAL:HG22	61:IB:110:HIS:N	2.20	0.55
68:PB:36:LYS:HD3	68:PB:36:LYS:N	2.22	0.55
72:TB:78:ARG:HD3	72:TB:78:ARG:N	2.22	0.55
76:XB:28:LYS:HD2	76:XB:74:CYS:HB2	1.87	0.55
82:DC:78:TYR:HE1	82:DC:97:SER:HA	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:445:ILE:HG12	82:DC:446:ASP:N	2.19	0.55
83:EC:6792:A:H3'	83:EC:6793:A:C5'	2.37	0.55
1:A:1773:C:H2'	1:A:1774:G:C8	2.42	0.55
1:A:1780:G:H2'	1:A:1781:A:O4'	2.05	0.55
2:B:361:A:C5'	41:OA:36:SER:HB2	2.36	0.55
2:B:708:G:H2'	2:B:710:A:N7	2.21	0.55
2:B:791:A:OP1	8:H:111:VAL:HG13	2.06	0.55
2:B:1451:C:H2'	2:B:1880:U:H5	1.71	0.55
2:B:1626:U:H4'	2:B:1632:A:H4'	1.88	0.55
2:B:1654:A:H3'	2:B:1655:G:H5'	1.89	0.55
2:B:1711:C:H5'	31:EA:38:PHE:CD1	2.40	0.55
2:B:1938:U:H6	2:B:1938:U:O5'	1.89	0.55
2:B:2688:U:H4'	2:B:2689:A:C5'	2.37	0.55
3:C:41:A:OP1	41:OA:64:MET:HA	2.06	0.55
4:D:47:C:H5'	9:I:203:HIS:NE2	2.22	0.55
8:H:290:ILE:HD11	22:V:35:PHE:CD2	2.41	0.55
8:H:359:LEU:HA	24:X:8:GLN:HE22	1.72	0.55
9:I:49:TYR:HB3	9:I:64:ILE:CG2	2.37	0.55
14:N:172:GLY:C	14:N:174:THR:H	2.15	0.55
17:Q:91:ARG:NH2	17:Q:97:VAL:HG11	2.18	0.55
19:S:179:LYS:HB3	19:S:180:PHE:CE2	2.42	0.55
20:T:27:LEU:CD1	20:T:102:LEU:HB2	2.36	0.55
22:V:68:ALA:HA	22:V:71:LEU:CD1	2.34	0.55
23:W:148:ASP:O	23:W:151:ARG:HB2	2.07	0.55
30:DA:34:PRO:HA	30:DA:47:ALA:HB2	1.88	0.55
36:JA:100:ILE:HG22	36:JA:105:ARG:CG	2.36	0.55
36:JA:111:ARG:NH2	36:JA:115:LEU:HD21	2.21	0.55
41:OA:2:GLY:O	41:OA:7:SER:HB3	2.07	0.55
44:RA:96:CYS:HB3	44:RA:100:TYR:H	1.72	0.55
49:WA:222:LEU:HD23	49:WA:234:LEU:HD13	1.88	0.55
50:XA:37:VAL:HG21	50:XA:149:LEU:HD21	1.89	0.55
50:XA:191:ARG:HE	50:XA:192:THR:H	1.54	0.55
54:BB:100:ARG:CB	54:BB:114:ILE:HG21	2.36	0.55
54:BB:210:ILE:HG22	54:BB:211:LYS:H	1.71	0.55
54:BB:214:LEU:HD22	54:BB:246:LEU:HB3	1.89	0.55
55:CB:172:ILE:HA	55:CB:175:LEU:HD12	1.89	0.55
59:GB:115:LYS:C	59:GB:117:GLY:H	2.15	0.55
65:MB:105:VAL:HG12	65:MB:106:GLU:H	1.71	0.55
68:PB:3:LEU:HD22	68:PB:3:LEU:O	2.06	0.55
72:TB:128:PHE:HD2	72:TB:130:TYR:HE1	1.54	0.55
82:DC:476:HIS:O	82:DC:477:ASN:HB2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:617:ARG:HH22	82:DC:627:VAL:HB	1.72	0.55
82:DC:702:GLY:O	82:DC:706:ILE:HG13	2.06	0.55
82:DC:744:TYR:HA	82:DC:747:LEU:CD2	2.37	0.55
1:A:35:U:H4'	1:A:516:G:OP1	2.05	0.55
1:A:989:U:H2'	1:A:990:C:C6	2.41	0.55
1:A:1301:U:H5'	52:ZA:88:LYS:HG3	1.89	0.55
2:B:61:A:H5"	19:S:155:VAL:HB	1.89	0.55
2:B:218:G:H1'	2:B:372:A:H1'	1.89	0.55
2:B:485:A:H2'	2:B:486:U:C6	2.42	0.55
2:B:584:G:H2'	2:B:585:A:H8	1.70	0.55
2:B:929:A:H5"	8:H:61:SER:CB	2.37	0.55
2:B:1098:A:H4'	25:Y:130:ARG:O	2.07	0.55
2:B:1156:C:H4'	4:D:86:U:OP1	2.06	0.55
2:B:1232:C:O2'	2:B:1233:G:H5'	2.06	0.55
2:B:1553:U:H4'	2:B:1554:U:H5'	1.89	0.55
2:B:1691:U:C5'	23:W:55:VAL:HG11	2.36	0.55
2:B:2101:C:O2'	2:B:2102:U:H5"	2.07	0.55
2:B:2524:A:H1'	2:B:2525:G:C8	2.40	0.55
2:B:2616:C:H2'	2:B:2617:U:H5'	1.89	0.55
2:B:2892:A:H2'	2:B:2893:C:C6	2.41	0.55
2:B:3275:U:H3'	2:B:3276:G:C5'	2.36	0.55
5:E:73:ASP:HA	5:E:144:LEU:HD11	1.88	0.55
6:F:68:LYS:HD3	6:F:69:TYR:N	2.21	0.55
9:I:148:ILE:HD11	9:I:152:ARG:O	2.06	0.55
10:J:22:ARG:HH11	10:J:22:ARG:CB	2.19	0.55
10:J:36:PRO:HB3	10:J:55:LEU:O	2.07	0.55
11:K:224:ILE:HD13	24:X:39:SER:CB	2.36	0.55
13:M:10:ILE:HD12	13:M:55:VAL:HG11	1.89	0.55
13:M:172:ILE:HG12	44:RA:90:ASN:HB3	1.87	0.55
18:R:66:THR:HB	18:R:67:PRO:HD2	1.89	0.55
19:S:30:TYR:C	19:S:32:GLN:H	2.15	0.55
19:S:61:ILE:CD1	19:S:133:ILE:HA	2.37	0.55
21:U:88:VAL:HA	21:U:91:VAL:CG2	2.34	0.55
22:V:83:VAL:HG11	22:V:87:VAL:CG2	2.37	0.55
31:EA:16:GLY:CA	38:LA:74:ARG:HD3	2.36	0.55
32:FA:100:PRO:O	32:FA:124:ILE:HB	2.07	0.55
34:HA:85:PHE:HD1	34:HA:86:ARG:N	2.04	0.55
39:MA:40:SER:O	39:MA:42:PRO:HD3	2.06	0.55
44:RA:122:ARG:HH11	44:RA:122:ARG:HG3	1.72	0.55
46:TA:6:LYS:HB3	46:TA:25:VAL:H	1.70	0.55
50:XA:200:ASP:HB2	67:OB:86:PRO:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:38:VAL:HG22	52:ZA:39:THR:N	2.22	0.55
52:ZA:103:VAL:CG2	52:ZA:113:LEU:HD23	2.37	0.55
53:AB:25:PHE:HA	53:AB:28:GLU:HB3	1.87	0.55
61:IB:94:ILE:HG12	73:UB:12:ALA:HB1	1.88	0.55
68:PB:86:LEU:HD22	68:PB:97:ASP:HB2	1.88	0.55
69:QB:42:GLY:HA2	69:QB:84:LYS:HD2	1.89	0.55
83:EC:6775:U:H3'	83:EC:6775:U:O2	2.07	0.55
1:A:373:G:O5'	61:IB:96:LYS:HA	2.07	0.55
1:A:752:A:H2	1:A:797:G:H22	1.55	0.55
1:A:808:U:H2'	1:A:809:A:O4'	2.06	0.55
1:A:1452:U:H2'	1:A:1453:G:C8	2.42	0.55
1:A:1516:A:O2'	1:A:1517:U:H5'	2.06	0.55
2:B:9:U:C2'	2:B:10:C:H5'	2.37	0.55
2:B:261:U:H2'	2:B:262:U:C6	2.41	0.55
2:B:911:C:H5"	6:F:15:ILE:HD13	1.89	0.55
2:B:1328:C:H2'	2:B:1329:U:C5	2.42	0.55
2:B:1725:C:H2'	2:B:1726:C:C5	2.42	0.55
2:B:1954:G:H2'	2:B:1954:G:N3	2.21	0.55
2:B:3183:A:H2'	2:B:3184:A:H8	1.70	0.55
2:B:3217:C:O2	2:B:3217:C:H2'	2.06	0.55
2:B:3309:G:H3'	2:B:3310:A:H8	1.70	0.55
4:D:77:G:N2	4:D:101:G:C8	2.75	0.55
6:F:14:SER:C	6:F:16:PHE:H	2.14	0.55
6:F:149:ARG:HG3	6:F:155:LYS:HE2	1.89	0.55
7:G:21:ARG:N	7:G:269:GLN:HG2	2.21	0.55
8:H:62:ALA:HB3	8:H:90:PHE:CD2	2.42	0.55
9:I:124:GLU:O	9:I:126:GLU:HG3	2.07	0.55
19:S:77:LYS:HG2	19:S:78:GLY:H	1.72	0.55
22:V:100:THR:HG23	22:V:122:ILE:CD1	2.36	0.55
24:X:27:MET:SD	24:X:44:PHE:HB3	2.47	0.55
25:Y:53:PRO:HB3	25:Y:91:LEU:HD22	1.89	0.55
26:Z:41:ILE:HA	26:Z:75:TYR:OH	2.06	0.55
27:AA:135:VAL:HG21	28:BA:26:SER:OG	2.06	0.55
34:HA:39:SER:HA	34:HA:92:ILE:O	2.07	0.55
39:MA:28:LEU:HD22	39:MA:28:LEU:O	2.07	0.55
42:PA:10:GLN:O	42:PA:13:GLU:HB3	2.06	0.55
46:TA:15:LYS:HA	46:TA:18:ARG:NH1	2.22	0.55
49:WA:143:THR:HG22	49:WA:145:LEU:HD11	1.87	0.55
55:CB:97:LEU:HD22	55:CB:110:ALA:CB	2.37	0.55
55:CB:171:ALA:O	55:CB:175:LEU:HG	2.07	0.55
56:DB:80:ASN:O	56:DB:81:VAL:O	2.25	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:TB:8:ALA:HA	72:TB:74:VAL:HG11	1.89	0.55
72:TB:8:ALA:CA	72:TB:74:VAL:HG11	2.36	0.55
82:DC:297:PRO:HG3	82:DC:312:LYS:HE3	1.87	0.55
1:A:312:A:H62	1:A:352:A:H1'	1.72	0.55
1:A:1084:A:H2'	1:A:1085:G:O4'	2.07	0.55
1:A:1479:A:O2'	69:QB:12:GLN:HG2	2.07	0.55
2:B:122:A:H5'	2:B:122:A:C8	2.42	0.55
2:B:503:C:O2'	2:B:607:A:H5'	2.07	0.55
2:B:660:A:H5'	8:H:100:PHE:CD1	2.42	0.55
2:B:673:U:H5"	8:H:31:ARG:HH22	1.71	0.55
2:B:892:U:H2'	2:B:893:C:C6	2.42	0.55
2:B:1007:U:H2'	2:B:1008:U:H6	1.72	0.55
2:B:1232:C:H5	2:B:1261:G:H2'	1.71	0.55
2:B:1305:U:O4	7:G:257:PRO:HA	2.07	0.55
2:B:1326:A:H2'	2:B:1327:C:H6	1.67	0.55
2:B:1898:G:H1'	27:AA:18:PRO:HD2	1.89	0.55
2:B:1948:G:H5"	23:W:135:LYS:HZ2	1.72	0.55
2:B:2140:U:C2'	2:B:2141:U:H5'	2.36	0.55
2:B:3159:C:H2'	2:B:3160:U:H6	1.71	0.55
3:C:92:A:H5'	30:DA:23:PRO:HD2	1.88	0.55
6:F:41:ILE:HD13	6:F:63:PHE:CD2	2.42	0.55
6:F:98:VAL:HA	6:F:166:ILE:CG2	2.37	0.55
7:G:55:THR:HB	7:G:360:ASP:HB3	1.89	0.55
8:H:71:VAL:CG2	8:H:72:ALA:H	2.15	0.55
10:J:7:PRO:HG3	36:JA:92:TYR:OH	2.07	0.55
11:K:224:ILE:HG21	24:X:39:SER:HB3	1.89	0.55
12:L:79:GLN:H	12:L:81:THR:HG23	1.71	0.55
12:L:122:LYS:N	12:L:122:LYS:HD3	2.21	0.55
13:M:97:PHE:CD1	13:M:119:GLY:N	2.75	0.55
15:O:109:HIS:ND1	15:O:110:ILE:HG23	2.22	0.55
22:V:65:SER:HB3	22:V:90:ASP:OD2	2.07	0.55
22:V:83:VAL:O	22:V:103:ALA:HA	2.06	0.55
23:W:142:ILE:O	23:W:146:LYS:HD3	2.07	0.55
24:X:30:PHE:HZ	24:X:99:ARG:HB3	1.72	0.55
24:X:107:TYR:HE1	24:X:118:PHE:HD1	1.54	0.55
27:AA:62:VAL:HG12	27:AA:64:LYS:H	1.70	0.55
30:DA:35:LEU:HD13	30:DA:40:ARG:HA	1.89	0.55
32:FA:63:LYS:HZ1	32:FA:68:PHE:HB2	1.72	0.55
38:LA:15:THR:O	38:LA:19:LYS:HG3	2.07	0.55
50:XA:31:VAL:HG23	50:XA:149:LEU:O	2.06	0.55
51:YA:38:PHE:HE1	51:YA:74:GLN:HB2	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:79:HIS:HA	51:YA:81:PHE:CE1	2.42	0.55
52:ZA:35:TRP:CZ3	52:ZA:37:PRO:HB3	2.41	0.55
53:AB:101:GLN:O	53:AB:105:MET:HB2	2.07	0.55
54:BB:47:PHE:CE1	54:BB:101:LEU:HD21	2.41	0.55
54:BB:172:PHE:C	54:BB:173:ILE:HD12	2.32	0.55
55:CB:73:THR:HG23	66:NB:114:ARG:NE	2.22	0.55
55:CB:96:SER:CB	55:CB:176:THR:HG21	2.36	0.55
57:EB:152:VAL:O	57:EB:183:PHE:HA	2.06	0.55
58:FB:192:TYR:O	58:FB:196:LEU:HD13	2.07	0.55
60:HB:82:LEU:HB3	60:HB:86:ILE:HG21	1.88	0.55
66:NB:29:ILE:O	66:NB:35:PRO:HA	2.07	0.55
66:NB:93:HIS:HA	66:NB:97:VAL:CB	2.33	0.55
67:OB:27:ASP:O	67:OB:31:ASN:HB2	2.06	0.55
68:PB:53:ASP:HB2	68:PB:56:LYS:HG3	1.89	0.55
73:UB:56:LYS:HB3	73:UB:93:LEU:HD21	1.87	0.55
73:UB:76:LEU:O	73:UB:80:GLY:HA2	2.07	0.55
1:A:254:A:H2'	1:A:255:U:H6	1.70	0.55
1:A:263:C:C2'	1:A:264:G:H5'	2.36	0.55
1:A:329:G:H5'	58:FB:99:ALA:CB	2.32	0.55
1:A:888:U:H2'	1:A:889:U:O4'	2.07	0.55
1:A:1751:C:O2'	1:A:1752:U:H5'	2.07	0.55
2:B:765:C:OP1	2:B:765:C:H3'	2.07	0.55
2:B:946:U:H2'	2:B:947:G:H8	1.72	0.55
2:B:1129:A:P	14:N:13:LYS:HG3	2.47	0.55
2:B:1213:G:H4'	24:X:90:MET:HE2	1.88	0.55
2:B:1706:C:H2'	2:B:1707:A:C8	2.42	0.55
2:B:1733:G:H2'	2:B:1734:G:O4'	2.07	0.55
2:B:1815:U:H1'	2:B:1816:A:OP2	2.06	0.55
2:B:1946:A:H2'	2:B:1947:G:O4'	2.07	0.55
2:B:2148:U:H2'	2:B:2149:A:C8	2.42	0.55
2:B:2661:G:H5"	2:B:2748:A:H61	1.72	0.55
2:B:3066:U:H6	2:B:3066:U:O5'	1.90	0.55
3:C:23:U:C5'	30:DA:13:ARG:HG2	2.36	0.55
3:C:92:A:OP1	30:DA:23:PRO:HG2	2.07	0.55
6:F:32:LEU:HD12	6:F:120:PRO:O	2.07	0.55
6:F:77:ILE:CG2	6:F:169:ILE:HD12	2.37	0.55
7:G:41:VAL:HG11	7:G:194:TRP:CG	2.42	0.55
8:H:126:ILE:HG13	8:H:238:LEU:HD21	1.87	0.55
9:I:51:LEU:HB2	9:I:144:VAL:HG22	1.89	0.55
17:Q:47:ALA:CB	17:Q:48:PRO:HD2	2.37	0.55
22:V:178:ARG:HD3	22:V:185:LYS:HZ3	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:117:ARG:O	24:X:121:ILE:HG13	2.06	0.55
28:BA:35:LYS:HE2	28:BA:51:TRP:CE3	2.42	0.55
34:HA:17:VAL:HG13	34:HA:98:SER:H	1.71	0.55
34:HA:25:LEU:HD13	34:HA:85:PHE:HZ	1.72	0.55
41:OA:25:ARG:HD3	41:OA:25:ARG:O	2.07	0.55
42:PA:4:GLU:HA	42:PA:53:THR:HG23	1.89	0.55
48:VA:49:ALA:HB2	48:VA:89:THR:HB	1.88	0.55
52:ZA:129:ILE:O	52:ZA:133:LYS:HG2	2.06	0.55
52:ZA:233:GLN:HB3	52:ZA:234:PRO:HD2	1.90	0.55
54:BB:36:HIS:CD2	54:BB:85:GLY:HA3	2.42	0.55
58:FB:121:LEU:N	58:FB:121:LEU:HD22	2.22	0.55
72:TB:37:PHE:O	72:TB:40:VAL:HB	2.07	0.55
75:WB:53:GLU:OE1	75:WB:68:ARG:HG3	2.07	0.55
75:WB:100:ILE:HD13	75:WB:101:TYR:N	2.22	0.55
78:ZB:25:VAL:HG11	78:ZB:66:LEU:HD12	1.88	0.55
82:DC:48:ALA:O	82:DC:49:ALA:HB2	2.07	0.55
82:DC:169:VAL:HB	82:DC:174:LEU:HD13	1.88	0.55
82:DC:587:TYR:CD1	82:DC:690:ASP:HB2	2.42	0.55
1:A:487:G:C2'	1:A:488:G:H5"	2.30	0.54
1:A:1163:A:H4'	55:CB:166:ARG:HH22	1.72	0.54
1:A:1476:C:O3'	69:QB:45:MET:HB2	2.06	0.54
1:A:1672:G:H2'	1:A:1673:G:C8	2.41	0.54
2:B:89:A:H5'	32:FA:60:TYR:O	2.08	0.54
2:B:314:U:H2'	2:B:315:C:C6	2.42	0.54
2:B:522:A:H3'	2:B:523:A:C5'	2.29	0.54
2:B:790:U:H2'	2:B:791:A:H8	1.72	0.54
2:B:885:U:O2'	2:B:886:C:H5'	2.08	0.54
2:B:977:C:H2'	2:B:978:G:C8	2.41	0.54
2:B:994:G:N2	2:B:1053:A:H2'	2.21	0.54
2:B:1259:A:C5	48:VA:53:MET:HG3	2.42	0.54
2:B:1438:U:O5'	2:B:1438:U:H6	1.90	0.54
2:B:1455:U:O2'	35:IA:26:LYS:HD3	2.07	0.54
2:B:1481:A:N1	38:LA:4:ARG:HB3	2.21	0.54
2:B:2225:U:H2'	2:B:2226:U:C6	2.42	0.54
2:B:2479:C:OP2	2:B:2480:A:H8	1.90	0.54
2:B:2880:U:H2'	2:B:2881:C:O4'	2.08	0.54
2:B:3010:U:C5'	7:G:14:LEU:HB3	2.36	0.54
2:B:3040:A:H5"	27:AA:12:ARG:CB	2.37	0.54
2:B:3320:A:H4'	7:G:174:LYS:NZ	2.22	0.54
2:B:3330:A:H5'	7:G:363:SER:HB3	1.89	0.54
4:D:113:C:H2'	4:D:114:U:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:133:TYR:HB3	6:F:168:VAL:HG11	1.86	0.54
8:H:178:LEU:HD11	8:H:222:VAL:HG21	1.88	0.54
9:I:37:VAL:CG2	9:I:50:ARG:NH2	2.69	0.54
13:M:99:ILE:HD11	13:M:177:ASP:CG	2.32	0.54
19:S:68:ARG:CZ	19:S:128:LYS:HD2	2.37	0.54
19:S:68:ARG:HG2	19:S:128:LYS:HB2	1.89	0.54
21:U:31:GLU:HG3	21:U:60:PHE:CD1	2.42	0.54
21:U:44:ALA:HA	21:U:47:TYR:CE1	2.41	0.54
25:Y:18:ASP:HB2	25:Y:21:LYS:HB2	1.90	0.54
28:BA:33:ASN:ND2	28:BA:35:LYS:H	2.05	0.54
34:HA:18:ILE:HG12	34:HA:80:ALA:O	2.07	0.54
49:WA:16:HIS:HD2	49:WA:310:ILE:HD11	1.71	0.54
49:WA:109:ASP:HB2	49:WA:127:ARG:HD2	1.90	0.54
49:WA:127:ARG:C	49:WA:129:LYS:H	2.14	0.54
56:DB:35:GLU:HB3	56:DB:49:VAL:CG1	2.36	0.54
58:FB:110:ARG:HG3	58:FB:121:LEU:HD21	1.89	0.54
66:NB:82:ARG:HH22	66:NB:116:LEU:HD22	1.72	0.54
67:OB:106:THR:HA	67:OB:109:LEU:HD12	1.89	0.54
69:QB:40:SER:HA	69:QB:96:ALA:HB1	1.89	0.54
76:XB:44:ILE:HD11	76:XB:65:PRO:O	2.07	0.54
82:DC:30:HIS:O	82:DC:128:VAL:HG11	2.08	0.54
82:DC:115:VAL:O	82:DC:119:LEU:HG	2.06	0.54
82:DC:356:LEU:HD22	82:DC:401:PHE:HE1	1.71	0.54
1:A:320:U:H3’	1:A:321:C:H5”	1.89	0.54
2:B:115:A:O2’	19:S:5:LYS:HD2	2.07	0.54
2:B:255:A:H2’	2:B:256:G:C8	2.42	0.54
2:B:643:U:H5’	2:B:1117:G:H1’	1.89	0.54
2:B:960:U:H4’	2:B:963:G:C2	2.42	0.54
2:B:1489:A:H2’	2:B:1490:A:H8	1.71	0.54
2:B:1591:G:O2’	2:B:1592:G:H5’	2.08	0.54
2:B:2140:U:O2’	2:B:2141:U:H5’	2.07	0.54
2:B:2333:C:H2’	2:B:2334:U:C6	2.42	0.54
2:B:2395:G:O2’	7:G:258:ALA:HB1	2.07	0.54
2:B:2608:G:OP1	6:F:2:GLY:HA3	2.07	0.54
2:B:2752:U:H5’	2:B:2752:U:H6	1.71	0.54
2:B:2882:U:H2’	2:B:2883:U:H6	1.66	0.54
2:B:3059:G:H22	2:B:3332:U:H4’	1.72	0.54
6:F:30:ARG:HD3	6:F:63:PHE:CD1	2.42	0.54
7:G:43:LEU:HD13	7:G:208:VAL:HG22	1.88	0.54
7:G:166:ILE:HG21	7:G:176:ALA:HA	1.87	0.54
8:H:8:VAL:HG11	8:H:252:GLU:OE1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:178:ASN:N	9:I:178:ASN:ND2	2.54	0.54
10:J:2:SER:HB2	36:JA:81:ASP:OD1	2.07	0.54
11:K:154:GLY:HA2	11:K:203:TRP:H	1.72	0.54
13:M:12:VAL:HG12	13:M:16:VAL:HG13	1.89	0.54
17:Q:127:PRO:HB2	17:Q:129:ASN:OD1	2.08	0.54
19:S:20:ARG:HG2	19:S:20:ARG:HH21	1.73	0.54
20:T:25:LYS:O	20:T:29:ASN:HB2	2.07	0.54
21:U:128:ARG:C	21:U:139:TYR:HB2	2.33	0.54
27:AA:36:ILE:H	27:AA:36:ILE:HD12	1.73	0.54
27:AA:132:ASN:N	27:AA:132:ASN:HD22	2.04	0.54
40:NA:45:ARG:NH2	40:NA:90:MET:HE1	2.21	0.54
47:UA:23:ARG:HA	47:UA:26:VAL:CG2	2.38	0.54
48:VA:15:LEU:CD1	48:VA:61:ARG:HG2	2.32	0.54
57:EB:86:GLN:C	57:EB:88:ARG:H	2.15	0.54
57:EB:135:ILE:HD12	57:EB:135:ILE:N	2.21	0.54
58:FB:50:GLY:C	58:FB:52:ASN:H	2.15	0.54
61:IB:123:VAL:CG2	61:IB:139:VAL:HG13	2.36	0.54
63:KB:94:LYS:HG2	63:KB:118:ILE:HG23	1.88	0.54
67:OB:21:TYR:CE2	67:OB:58:MET:HE1	2.41	0.54
73:UB:6:PRO:O	73:UB:15:LEU:HD21	2.07	0.54
75:WB:39:ALA:HB1	75:WB:71:ILE:O	2.07	0.54
76:XB:92:ARG:HH11	76:XB:92:ARG:HG3	1.72	0.54
82:DC:751:ARG:HD2	82:DC:773:PRO:HG2	1.90	0.54
1:A:472:U:O2'	1:A:769:A:H1'	2.07	0.54
1:A:1454:G:H4'	65:MB:122:THR:HG21	1.89	0.54
1:A:1557:U:O2'	1:A:1558:U:H2'	2.07	0.54
1:A:1684:U:H2'	1:A:1685:G:C8	2.42	0.54
2:B:837:A:H3'	2:B:838:G:C8	2.42	0.54
2:B:947:G:C5'	36:JA:55:ILE:HB	2.34	0.54
2:B:1146:C:H2'	2:B:1147:G:C8	2.42	0.54
2:B:1692:U:H2'	2:B:1693:C:C6	2.42	0.54
2:B:1709:C:H5"	31:EA:15:ARG:HH12	1.73	0.54
2:B:2389:C:H2'	2:B:2390:A:H8	1.72	0.54
2:B:3186:A:N6	20:T:131:PRO:HB2	2.23	0.54
4:D:67:G:H2'	4:D:68:C:O4'	2.07	0.54
5:E:85:MET:HE3	5:E:107:TYR:HE1	1.71	0.54
6:F:67:TYR:C	12:L:40:VAL:HG13	2.33	0.54
6:F:77:ILE:HD11	6:F:128:ARG:NE	2.23	0.54
7:G:114:VAL:O	7:G:117:ARG:HB3	2.08	0.54
7:G:151:ILE:O	7:G:155:ALA:HB2	2.08	0.54
7:G:261:MET:HE2	20:T:63:ALA:O	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:311:HIS:CE1	11:K:162:PRO:HG3	2.42	0.54
9:I:170:GLY:O	9:I:171:LEU:HD23	2.07	0.54
11:K:43:ILE:HA	11:K:46:GLU:HG2	1.89	0.54
11:K:98:LYS:O	11:K:102:VAL:HG23	2.07	0.54
11:K:224:ILE:HA	24:X:36:ILE:CD1	2.37	0.54
14:N:191:LYS:C	14:N:197:VAL:HG23	2.32	0.54
17:Q:24:VAL:HG11	19:S:203:ARG:HH21	1.72	0.54
19:S:30:TYR:CE1	19:S:129:TYR:HB3	2.42	0.54
19:S:98:LEU:HD11	19:S:128:LYS:CD	2.35	0.54
22:V:76:ALA:HA	22:V:79:LYS:HB2	1.90	0.54
22:V:176:ARG:HH12	32:FA:42:ARG:NH1	2.05	0.54
31:EA:81:LEU:HD11	38:LA:90:ILE:CD1	2.34	0.54
46:TA:99:GLN:HB3	46:TA:102:GLN:HG3	1.89	0.54
54:BB:100:ARG:HB3	54:BB:114:ILE:HG21	1.88	0.54
55:CB:93:LEU:HD23	55:CB:93:LEU:C	2.33	0.54
57:EB:86:GLN:HG2	57:EB:87:ASP:H	1.73	0.54
60:HB:86:ILE:CG2	60:HB:87:VAL:H	2.16	0.54
63:KB:23:PRO:O	63:KB:24:ALA:HB3	2.07	0.54
72:TB:26:LEU:O	72:TB:27:ILE:HG23	2.07	0.54
77:YB:32:PHE:C	77:YB:33:LEU:HD12	2.32	0.54
82:DC:496:LYS:HD3	82:DC:553:PRO:HB3	1.89	0.54
82:DC:615:ARG:HA	82:DC:618:ILE:HD12	1.90	0.54
1:A:144:U:HO2’	1:A:145:A:H8	1.54	0.54
1:A:602:U:H2’	1:A:603:U:C6	2.42	0.54
1:A:1593:A:H2’	1:A:1594:G:C8	2.42	0.54
1:A:1600:A:H3’	1:A:1600:A:OP2	2.07	0.54
2:B:102:C:O2’	2:B:103:G:H5’	2.08	0.54
2:B:122:A:H5”	2:B:123:A:C4	2.43	0.54
2:B:199:A:H5”	30:DA:60:ARG:HH21	1.72	0.54
2:B:884:A:OP2	41:OA:4:GLY:HA3	2.07	0.54
2:B:1299:U:H2’	2:B:1300:G:O4’	2.06	0.54
2:B:1875:G:OP2	23:W:18:GLY:HA3	2.07	0.54
2:B:2316:G:H2’	2:B:2317:A:H8	1.72	0.54
2:B:3007:U:OP1	20:T:73:PHE:HA	2.07	0.54
2:B:3113:A:O2’	13:M:69:ARG:HB2	2.08	0.54
4:D:65:G:H4’	14:N:204:GLY:C	2.32	0.54
4:D:99:G:P	24:X:53:LYS:HG2	2.47	0.54
6:F:7:ASN:O	6:F:10:LYS:HG3	2.08	0.54
7:G:169:THR:CG2	7:G:170:PRO:HD2	2.37	0.54
9:I:31:TYR:C	9:I:31:TYR:CD1	2.85	0.54
12:L:150:LEU:HD11	12:L:152:LEU:HG	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:36:LYS:CE	13:M:78:MET:HG3	2.37	0.54
14:N:116:ARG:HB3	14:N:116:ARG:NH1	2.22	0.54
18:R:118:PHE:HA	18:R:121:MET:HB3	1.88	0.54
19:S:136:ASP:OD2	19:S:138:GLN:HG3	2.06	0.54
24:X:12:ARG:HD3	24:X:22:PRO:HG2	1.89	0.54
27:AA:45:ARG:HG2	27:AA:48:ARG:HB2	1.89	0.54
29:CA:99:VAL:HA	29:CA:103:TYR:CE2	2.43	0.54
39:MA:100:VAL:HG22	39:MA:101:THR:N	2.23	0.54
39:MA:108:GLN:O	39:MA:112:PRO:HG3	2.06	0.54
44:RA:103:LEU:HB3	44:RA:104:PRO:HD2	1.89	0.54
46:TA:52:GLY:O	46:TA:54:THR:HG23	2.07	0.54
49:WA:42:LEU:O	49:WA:60:SER:HA	2.07	0.54
49:WA:121:MET:CE	49:WA:183:LEU:HD13	2.36	0.54
51:YA:156:ALA:HB3	51:YA:161:ILE:HG13	1.89	0.54
51:YA:170:GLU:O	51:YA:174:LYS:HB2	2.06	0.54
51:YA:181:LEU:HD13	51:YA:181:LEU:H	1.71	0.54
52:ZA:130:ILE:O	52:ZA:134:LEU:HD23	2.07	0.54
55:CB:191:ALA:CB	75:WB:98:GLN:HE21	2.19	0.54
57:EB:68:ALA:O	57:EB:72:LYS:HG3	2.07	0.54
61:IB:80:MET:HB3	61:IB:83:THR:CG2	2.28	0.54
64:LB:13:VAL:HG21	64:LB:76:ILE:HA	1.88	0.54
66:NB:97:VAL:HG12	66:NB:98:ASP:N	2.23	0.54
70:RB:28:SER:HB3	70:RB:34:LEU:HD23	1.90	0.54
82:DC:204:PRO:HD3	82:DC:209:VAL:CG2	2.37	0.54
82:DC:307:LEU:HD23	82:DC:311:GLU:OE1	2.07	0.54
82:DC:385:MET:HA	82:DC:396:ALA:HA	1.88	0.54
82:DC:650:THR:HG22	82:DC:689:LEU:C	2.32	0.54
82:DC:724:ILE:HG23	82:DC:808:PRO:HG3	1.88	0.54
1:A:444:C:N4	1:A:460:A:H62	2.05	0.54
1:A:586:G:H2'	1:A:587:C:C6	2.42	0.54
1:A:937:C:H2'	1:A:938:G:C8	2.42	0.54
1:A:1000:C:H3'	1:A:1000:C:O2	2.08	0.54
1:A:1170:G:H2'	1:A:1170:G:N3	2.22	0.54
1:A:1203:A:C5'	1:A:1457:C:H41	2.18	0.54
1:A:1775:U:H2'	1:A:1776:A:C8	2.43	0.54
2:B:44:U:OP1	19:S:85:THR:N	2.40	0.54
2:B:366:A:H2'	2:B:367:A:N9	2.20	0.54
2:B:615:U:O2'	2:B:3272:C:C5	2.56	0.54
2:B:630:A:O5'	2:B:630:A:H8	1.91	0.54
2:B:812:G:H2'	2:B:813:G:H8	1.68	0.54
2:B:1263:A:C6	16:P:136:ALA:HB2	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1372:C:OP2	32:FA:7:LYS:HG2	2.08	0.54
2:B:1412:G:OP2	36:JA:98:HIS:HB2	2.07	0.54
2:B:1439:U:H5"	8:H:87:GLN:HG3	1.89	0.54
2:B:1581:C:C2'	2:B:1582:C:H5'	2.31	0.54
2:B:2116:G:O2'	2:B:2117:A:H5'	2.06	0.54
2:B:2341:A:H2'	2:B:2342:U:H6	1.72	0.54
2:B:2356:A:H2'	2:B:2357:A:H5'	1.90	0.54
2:B:2931:C:H2'	2:B:2932:U:O4'	2.08	0.54
2:B:2992:U:H1'	21:U:69:ARG:NH1	2.23	0.54
2:B:3325:G:H2'	2:B:3326:G:O4'	2.07	0.54
10:J:3:ALA:CB	36:JA:75:LEU:HD12	2.28	0.54
11:K:86:VAL:O	11:K:114:GLY:HA2	2.08	0.54
11:K:101:LYS:HD2	11:K:104:GLN:OE1	2.07	0.54
12:L:228:GLU:C	12:L:230:LYS:H	2.15	0.54
12:L:229:VAL:HG12	12:L:229:VAL:O	2.07	0.54
14:N:140:THR:HG21	14:N:148:VAL:HG21	1.89	0.54
17:Q:6:ASN:O	17:Q:7:LEU:HD23	2.07	0.54
17:Q:16:LYS:HD2	17:Q:16:LYS:H	1.73	0.54
22:V:32:LEU:HD23	22:V:32:LEU:C	2.32	0.54
23:W:23:TRP:HB3	23:W:51:VAL:CG2	2.37	0.54
24:X:12:ARG:HH11	24:X:22:PRO:CD	2.18	0.54
27:AA:45:ARG:CG	27:AA:48:ARG:HB2	2.37	0.54
29:CA:107:VAL:CG1	29:CA:124:VAL:HG13	2.37	0.54
34:HA:74:ASN:HB3	34:HA:88:GLY:HA2	1.89	0.54
39:MA:85:THR:HB	39:MA:88:LEU:CB	2.34	0.54
42:PA:46:ARG:HA	42:PA:51:LEU:HD13	1.89	0.54
50:XA:152:PRO:C	50:XA:154:GLU:H	2.14	0.54
51:YA:194:ASN:ND2	51:YA:211:HIS:ND1	2.52	0.54
53:AB:113:LEU:HB3	53:AB:118:ALA:HB2	1.88	0.54
53:AB:135:GLU:HA	53:AB:153:ALA:CB	2.36	0.54
56:DB:93:LYS:HG2	56:DB:95:LYS:HZ2	1.71	0.54
58:FB:81:VAL:HG21	58:FB:95:THR:H	1.72	0.54
61:IB:122:ILE:HD12	61:IB:122:ILE:N	2.23	0.54
68:PB:88:ARG:HB3	68:PB:98:TYR:O	2.07	0.54
72:TB:36:LYS:HB2	72:TB:110:ILE:HD12	1.89	0.54
73:UB:69:ARG:HD2	73:UB:116:ASP:OD2	2.07	0.54
73:UB:69:ARG:CG	73:UB:117:ILE:HG12	2.33	0.54
73:UB:125:VAL:C	73:UB:132:LEU:HD13	2.33	0.54
76:XB:23:CYS:SG	76:XB:74:CYS:HB3	2.47	0.54
76:XB:82:ARG:HG3	76:XB:83:ILE:HG12	1.90	0.54
82:DC:271:ARG:CG	82:DC:273:PHE:HB3	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:433:ARG:O	82:DC:457:VAL:HG12	2.07	0.54
82:DC:746:VAL:HG11	82:DC:784:LEU:HD12	1.89	0.54
83:EC:6758:A:H2'	83:EC:6759:A:C5'	2.37	0.54
83:EC:6949:G:H2'	83:EC:6950:C:H6	1.71	0.54
1:A:627:C:O5'	1:A:627:C:H6	1.91	0.54
1:A:1449:U:H2'	1:A:1450:U:C6	2.42	0.54
1:A:1527:C:H2'	1:A:1528:U:C6	2.43	0.54
2:B:31:C:H2'	2:B:32:U:O4'	2.07	0.54
2:B:57:A:H2	2:B:61:A:H1'	1.72	0.54
2:B:316:U:C2	40:NA:30:LYS:HG2	2.43	0.54
2:B:347:G:C2	2:B:353:G:C5	2.95	0.54
2:B:817:A:O4'	41:OA:13:ASN:HB3	2.07	0.54
2:B:954:U:O4	2:B:1115:G:H1'	2.07	0.54
2:B:965:A:H5"	17:Q:4:SER:HB3	1.89	0.54
2:B:991:G:H2'	2:B:992:A:O4'	2.08	0.54
2:B:1449:A:H1'	2:B:2983:C:C4	2.43	0.54
2:B:1491:A:H2'	2:B:1492:G:H5'	1.90	0.54
2:B:1797:A:C2	2:B:1798:A:H1'	2.42	0.54
2:B:1907:C:H2'	2:B:1907:C:O2	2.08	0.54
2:B:2628:A:H3'	2:B:2629:U:H5"	1.90	0.54
2:B:2728:G:C5	25:Y:80:VAL:HG21	2.43	0.54
2:B:3330:A:H4'	7:G:367:LYS:N	2.23	0.54
2:B:3330:A:H8	2:B:3330:A:O5'	1.90	0.54
5:E:26:ARG:HB3	5:E:28:PHE:CE1	2.43	0.54
15:O:82:ARG:O	15:O:85:LYS:HB3	2.08	0.54
16:P:94:LYS:HB2	16:P:99:LYS:HE3	1.90	0.54
16:P:102:GLY:HA3	16:P:140:GLY:H	1.71	0.54
16:P:137:GLN:C	16:P:139:VAL:H	2.15	0.54
18:R:124:ARG:HA	20:T:194:LEU:CD1	2.36	0.54
20:T:124:LEU:HD23	20:T:127:LEU:HD12	1.89	0.54
24:X:1:MET:HG3	24:X:33:ASN:OD1	2.08	0.54
25:Y:85:LEU:HD23	25:Y:86:GLU:H	1.71	0.54
25:Y:130:ARG:O	25:Y:132:PRO:HD3	2.07	0.54
28:BA:45:ASN:OD1	28:BA:48:ARG:HD3	2.07	0.54
30:DA:109:LEU:HG	30:DA:111:LEU:HD11	1.88	0.54
40:NA:57:LEU:HD11	40:NA:69:ALA:HB1	1.90	0.54
44:RA:95:VAL:HB	44:RA:122:ARG:HH12	1.71	0.54
46:TA:9:LYS:HG2	46:TA:22:GLN:HA	1.88	0.54
47:UA:14:TYR:HB3	47:UA:23:ARG:HD3	1.89	0.54
51:YA:90:GLU:HG2	51:YA:228:LEU:HD11	1.90	0.54
52:ZA:156:THR:HG22	72:TB:99:PHE:HE2	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:42:LEU:HB2	55:CB:46:TRP:O	2.06	0.54
55:CB:215:ASP:HA	55:CB:218:GLU:OE1	2.07	0.54
57:EB:126:LEU:CD1	57:EB:129:LEU:HD12	2.36	0.54
57:EB:142:TYR:O	72:TB:49:GLU:HB2	2.07	0.54
61:IB:75:VAL:HA	61:IB:86:ILE:HA	1.88	0.54
64:LB:47:LYS:HG3	64:LB:62:LEU:HB3	1.89	0.54
65:MB:97:TYR:HB2	65:MB:102:PHE:CE1	2.43	0.54
66:NB:117:LEU:N	66:NB:117:LEU:HD22	2.23	0.54
72:TB:63:VAL:CG1	72:TB:65:LEU:HD12	2.38	0.54
73:UB:62:LYS:HG2	73:UB:63:GLN:H	1.73	0.54
78:ZB:50:GLU:O	78:ZB:51:ASN:HB2	2.06	0.54
82:DC:273:PHE:O	82:DC:277:ILE:HB	2.08	0.54
82:DC:280:PRO:HA	82:DC:283:ARG:HD2	1.87	0.54
82:DC:699:DDE:HAD2	82:DC:699:DDE:HAC2	1.73	0.54
82:DC:733:ILE:HD13	82:DC:784:LEU:HG	1.88	0.54
1:A:355:G:H2'	1:A:356:G:H8	1.72	0.54
1:A:478:A:O3'	59:GB:124:HIS:HB2	2.08	0.54
1:A:803:A:C4	57:EB:104:ARG:HB2	2.42	0.54
1:A:1525:A:H2'	1:A:1526:A:O4'	2.07	0.54
1:A:1586:A:H2'	1:A:1587:A:O4'	2.07	0.54
2:B:62:A:H5"	19:S:164:LEU:HD23	1.88	0.54
2:B:615:U:C4'	2:B:3272:C:H41	2.20	0.54
2:B:691:A:C2	3:C:29:U:H4'	2.38	0.54
2:B:796:U:H2'	2:B:797:U:O4'	2.08	0.54
2:B:1238:C:H2'	2:B:1239:C:O4'	2.08	0.54
2:B:2468:A:H62	2:B:2479:C:H5'	1.71	0.54
2:B:2535:A:H3'	2:B:2536:A:C4'	2.37	0.54
2:B:2765:C:C5'	46:TA:42:ARG:HH22	2.19	0.54
2:B:2796:G:H2'	46:TA:62:ALA:CB	2.37	0.54
2:B:2880:U:H4'	7:G:238:LEU:HD21	1.90	0.54
2:B:3123:A:H2'	2:B:3124:G:C8	2.42	0.54
2:B:3202:G:C2'	2:B:3203:U:H5'	2.38	0.54
3:C:73:U:OP1	30:DA:75:ARG:HB2	2.07	0.54
3:C:104:A:H5"	41:OA:42:ALA:HA	1.90	0.54
4:D:19:C:O5'	4:D:19:C:H6	1.91	0.54
5:E:65:ILE:CG2	5:E:148:VAL:HG13	2.37	0.54
6:F:185:ALA:O	6:F:188:LYS:HB3	2.07	0.54
10:J:40:LEU:HD22	10:J:84:VAL:HB	1.90	0.54
12:L:178:ALA:HB2	12:L:218:ILE:CG2	2.37	0.54
15:O:15:GLU:HB2	15:O:132:ASN:CG	2.32	0.54
24:X:5:LYS:O	24:X:30:PHE:HA	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:10:ILE:HG22	24:X:24:LEU:CD2	2.38	0.54
25:Y:64:VAL:CG1	25:Y:67:VAL:HG22	2.38	0.54
32:FA:73:LEU:HB2	32:FA:109:TYR:HE2	1.72	0.54
38:LA:3:GLN:CG	38:LA:30:LEU:HB3	2.38	0.54
47:UA:32:GLN:C	47:UA:37:TYR:HE2	2.14	0.54
48:VA:77:LEU:N	48:VA:78:PRO:HD2	2.22	0.54
49:WA:10:ARG:HA	49:WA:10:ARG:HE	1.72	0.54
49:WA:24:ALA:HB2	49:WA:71:CYS:O	2.07	0.54
49:WA:89:LEU:HD23	49:WA:89:LEU:H	1.73	0.54
50:XA:57:LEU:HD23	50:XA:176:LEU:HD22	1.90	0.54
51:YA:172:LEU:O	51:YA:176:VAL:HG23	2.07	0.54
53:AB:217:ILE:O	53:AB:218:LEU:HB2	2.07	0.54
54:BB:9:LEU:HD22	54:BB:31:PRO:HD3	1.90	0.54
54:BB:12:LEU:HD21	59:GB:4:ALA:CB	2.37	0.54
54:BB:19:LEU:HD21	54:BB:108:ARG:CZ	2.37	0.54
54:BB:34:GLY:HA3	54:BB:83:PRO:HG2	1.89	0.54
54:BB:100:ARG:HE	54:BB:118:GLU:HG2	1.72	0.54
54:BB:196:VAL:HB	54:BB:209:HIS:HB3	1.90	0.54
55:CB:92:ARG:NE	55:CB:172:ILE:HD12	2.22	0.54
61:IB:4:GLU:HG2	61:IB:5:LEU:HG	1.90	0.54
63:KB:75:LEU:HG	63:KB:81:ALA:HA	1.90	0.54
82:DC:13:MET:HE2	82:DC:452:ASN:HD22	1.73	0.54
82:DC:732:GLU:HA	82:DC:768:VAL:O	2.08	0.54
1:A:3:U:H4'	52:ZA:198:THR:OG1	2.08	0.54
1:A:638:U:H5'	57:EB:112:ARG:HD2	1.90	0.54
1:A:843:U:H2'	1:A:844:A:H8	1.69	0.54
1:A:1498:G:H4'	69:QB:121:GLY:N	2.22	0.54
2:B:32:U:H5"	19:S:71:ARG:HH21	1.72	0.54
2:B:676:G:N7	22:V:86:THR:HG21	2.21	0.54
2:B:809:G:H2'	2:B:810:A:C8	2.43	0.54
2:B:1488:G:H21	38:LA:12:PRO:HB2	1.73	0.54
2:B:1878:G:H3'	2:B:1879:A:C5'	2.32	0.54
2:B:2162:U:OP1	6:F:238:ILE:HG21	2.07	0.54
2:B:2394:G:C2	7:G:259:HIS:HA	2.42	0.54
2:B:2462:A:H5"	2:B:2485:A:H2	1.72	0.54
2:B:2610:G:H2'	2:B:2611:U:H6	1.73	0.54
2:B:2674:A:H5"	15:O:105:GLY:CA	2.35	0.54
2:B:2933:A:C2'	2:B:2934:A:H5'	2.38	0.54
2:B:2948:C:C4'	7:G:243:HIS:H	2.10	0.54
8:H:187:LEU:HD23	8:H:199:TRP:CD2	2.42	0.54
9:I:65:ILE:HG23	9:I:73:VAL:C	2.33	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:157:TYR:CD2	14:N:157:TYR:N	2.75	0.54
21:U:89:LYS:O	21:U:92:GLN:HB3	2.08	0.54
23:W:11:ALA:CB	23:W:22:VAL:HG11	2.37	0.54
25:Y:53:PRO:HB3	25:Y:91:LEU:CD2	2.37	0.54
26:Z:73:GLY:HA3	26:Z:103:TYR:CE2	2.43	0.54
27:AA:45:ARG:HB3	27:AA:48:ARG:HB3	1.90	0.54
35:IA:54:GLU:HB3	35:IA:95:PRO:HG3	1.90	0.54
38:LA:68:THR:O	38:LA:69:HIS:ND1	2.39	0.54
48:VA:111:ALA:HB1	48:VA:170:ALA:CB	2.38	0.54
49:WA:222:LEU:HD23	49:WA:234:LEU:HD11	1.90	0.54
50:XA:41:ARG:HB2	50:XA:41:ARG:CZ	2.38	0.54
55:CB:214:LYS:O	55:CB:218:GLU:HG3	2.08	0.54
57:EB:119:THR:HA	57:EB:122:HIS:HD2	1.73	0.54
58:FB:195:ARG:C	58:FB:196:LEU:HD12	2.33	0.54
59:GB:174:ARG:HA	59:GB:174:ARG:HE	1.73	0.54
63:KB:135:LEU:HD22	63:KB:136:PRO:HD2	1.89	0.54
64:LB:29:HIS:HB2	64:LB:40:ALA:O	2.06	0.54
64:LB:50:ALA:C	64:LB:52:ARG:H	2.16	0.54
75:WB:60:VAL:HG23	75:WB:65:LEU:HD21	1.90	0.54
82:DC:211:PHE:HB2	82:DC:220:PHE:HD2	1.71	0.54
1:A:57:G:H2'	1:A:58:U:C6	2.43	0.54
1:A:393:C:H41	1:A:400:A:H1'	1.73	0.54
1:A:555:A:H2'	1:A:556:A:C8	2.43	0.54
1:A:749:U:OP1	72:TB:82:LYS:HB3	2.08	0.54
1:A:762:A:H4'	59:GB:71:PHE:HE1	1.73	0.54
1:A:809:A:N3	57:EB:108:GLN:NE2	2.56	0.54
1:A:1166:A:O2'	1:A:1587:A:H4'	2.08	0.54
2:B:520:U:OP1	11:K:70:LYS:HE3	2.08	0.54
2:B:707:U:C3'	2:B:708:G:H5"	2.37	0.54
2:B:945:C:H2'	2:B:946:U:H6	1.73	0.54
2:B:1178:G:N3	2:B:1329:U:H5'	2.22	0.54
2:B:1303:A:H2	2:B:2937:G:N2	2.06	0.54
2:B:2253:G:H2'	2:B:2254:U:O4'	2.07	0.54
2:B:2561:A:C6	12:L:32:LYS:HB3	2.43	0.54
3:C:33:A:H4'	41:OA:74:PHE:CE1	2.43	0.54
4:D:15:C:O3'	9:I:8:LYS:HG2	2.08	0.54
4:D:16:U:H2'	4:D:17:A:O4'	2.08	0.54
6:F:32:LEU:H	6:F:163:ARG:NH1	2.05	0.54
9:I:12:TYR:O	9:I:16:PHE:HB2	2.07	0.54
10:J:77:ARG:HG2	10:J:78:ARG:H	1.72	0.54
11:K:86:VAL:HG22	11:K:134:VAL:HB	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:117:PHE:HB3	13:M:120:ASP:HB2	1.90	0.54
15:O:23:VAL:C	15:O:65:ILE:HG13	2.32	0.54
19:S:62:TYR:CD1	19:S:106:VAL:HB	2.43	0.54
19:S:73:ARG:HB3	19:S:89:VAL:HG13	1.89	0.54
19:S:122:ASN:HB3	19:S:129:TYR:HD2	1.73	0.54
19:S:151:ILE:HA	19:S:156:HIS:CD2	2.43	0.54
20:T:161:LYS:O	20:T:165:ALA:HB2	2.07	0.54
22:V:175:ALA:HB3	32:FA:54:GLY:HA3	1.89	0.54
24:X:93:GLU:C	24:X:94:ILE:HD12	2.32	0.54
29:CA:62:VAL:O	29:CA:86:VAL:HG23	2.08	0.54
30:DA:21:THR:O	30:DA:23:PRO:HG3	2.07	0.54
31:EA:29:HIS:HB3	31:EA:40:HIS:NE2	2.22	0.54
34:HA:86:ARG:CD	47:UA:44:LYS:HD3	2.36	0.54
53:AB:162:GLN:HE21	53:AB:166:ASP:HB2	1.73	0.54
60:HB:4:PRO:HG2	60:HB:7:ASP:CB	2.38	0.54
63:KB:26:PHE:CE1	63:KB:60:VAL:HG22	2.42	0.54
64:LB:137:LEU:HD22	64:LB:137:LEU:OXT	2.08	0.54
66:NB:123:ARG:HG3	66:NB:124:PRO:HD2	1.90	0.54
71:SB:87:ARG:HH11	71:SB:87:ARG:HB3	1.73	0.54
72:TB:78:ARG:CB	72:TB:124:LYS:HD3	2.38	0.54
79:AC:31:ILE:HB	79:AC:36:LEU:CD1	2.33	0.54
82:DC:27:HIS:HD2	82:DC:139:THR:H	1.56	0.54
82:DC:545:LEU:O	82:DC:550:ALA:HB3	2.08	0.54
1:A:89:G:H2'	1:A:90:C:C6	2.43	0.54
1:A:398:G:H4'	58:FB:49:ARG:CZ	2.37	0.54
1:A:639:U:H2'	1:A:639:U:O2	2.06	0.54
1:A:755:A:H2'	1:A:756:A:H8	1.70	0.54
2:B:188:U:N3	2:B:223:U:H4'	2.23	0.54
2:B:359:U:C5	2:B:360:G:N7	2.76	0.54
2:B:369:A:H61	3:C:20:U:H3	1.56	0.54
2:B:429:U:C5'	37:KA:88:ASN:HB2	2.38	0.54
2:B:872:U:H2'	2:B:873:C:C6	2.43	0.54
2:B:1455:U:O2'	2:B:1456:A:H8	1.90	0.54
2:B:1480:G:N2	2:B:1871:U:H5"	2.23	0.54
2:B:1608:C:H5"	29:CA:111:ASN:ND2	2.24	0.54
2:B:2173:U:OP1	6:F:18:SER:HB2	2.08	0.54
2:B:2795:U:OP1	46:TA:63:LYS:HB2	2.07	0.54
2:B:2953:U:H2'	2:B:2954:U:H2'	1.89	0.54
2:B:2985:C:H2'	2:B:2986:U:C6	2.43	0.54
2:B:3047:U:H5"	7:G:330:GLY:O	2.08	0.54
2:B:3071:U:H2'	2:B:3072:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3279:A:H2'	2:B:3280:U:H5'	1.90	0.54
2:B:3386:G:H5"	35:IA:10:ARG:NH1	2.22	0.54
6:F:63:PHE:C	6:F:65:ASP:H	2.16	0.54
8:H:60:THR:CG2	8:H:77:VAL:HG22	2.37	0.54
13:M:12:VAL:HG22	13:M:79:ILE:CD1	2.37	0.54
15:O:54:VAL:O	15:O:55:ARG:HB3	2.08	0.54
17:Q:83:ALA:HB2	17:Q:116:LEU:HD13	1.90	0.54
17:Q:98:ASP:OD2	17:Q:101:ARG:HD3	2.07	0.54
19:S:72:LYS:HG2	19:S:89:VAL:HG12	1.89	0.54
19:S:148:TYR:HA	19:S:150:TRP:CZ3	2.43	0.54
24:X:2:ALA:HB3	24:X:32:SER:OG	2.07	0.54
29:CA:110:VAL:HG22	29:CA:124:VAL:CG2	2.37	0.54
34:HA:27:TYR:HD2	34:HA:28:LYS:N	2.05	0.54
42:PA:4:GLU:HG3	42:PA:55:VAL:HG21	1.89	0.54
49:WA:174:ASN:HB3	49:WA:198:ASN:ND2	2.23	0.54
51:YA:32:ILE:HD12	51:YA:46:THR:HG21	1.89	0.54
51:YA:33:LYS:HG2	51:YA:95:ASN:OD1	2.08	0.54
51:YA:46:THR:C	51:YA:47:LEU:HD12	2.33	0.54
51:YA:205:PHE:CD1	51:YA:206:PRO:HD2	2.43	0.54
52:ZA:109:GLY:CA	52:ZA:139:ILE:HB	2.38	0.54
54:BB:181:VAL:CG2	54:BB:227:VAL:HG22	2.38	0.54
56:DB:192:ALA:CA	56:DB:195:VAL:HB	2.36	0.54
64:LB:20:TYR:HB3	64:LB:27:PHE:HB2	1.89	0.54
70:RB:22:ILE:HG13	70:RB:117:VAL:O	2.08	0.54
74:VB:40:LEU:O	74:VB:44:LEU:HG	2.08	0.54
75:WB:50:ILE:C	75:WB:52:LYS:H	2.16	0.54
76:XB:13:LYS:H	76:XB:15:ARG:NH1	2.00	0.54
76:XB:45:VAL:HG23	76:XB:46:GLU:H	1.72	0.54
76:XB:60:PRO:C	76:XB:62:TYR:H	2.15	0.54
82:DC:271:ARG:HG2	82:DC:273:PHE:HB3	1.89	0.54
82:DC:780:PHE:CZ	82:DC:784:LEU:HD11	2.43	0.54
83:EC:6858:A:H4'	83:EC:6859:U:C6	2.43	0.54
1:A:813:U:O2'	1:A:814:A:H5'	2.08	0.53
1:A:886:U:OP1	51:YA:214:LYS:HE2	2.07	0.53
1:A:931:C:H1'	51:YA:118:GLN:HE21	1.72	0.53
1:A:1124:A:H2'	1:A:1125:A:C8	2.43	0.53
2:B:227:G:H2'	2:B:228:U:O4'	2.08	0.53
2:B:428:A:O4'	37:KA:25:PRO:HB2	2.08	0.53
2:B:502:U:C2'	2:B:503:C:H5"	2.37	0.53
2:B:627:U:H2'	2:B:628:A:H8	1.69	0.53
2:B:799:G:H1'	17:Q:18:TRP:HZ2	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:938:C:C5	32:FA:26:ARG:HD2	2.43	0.53
2:B:964:G:O2'	32:FA:30:GLY:HA2	2.08	0.53
2:B:1064:A:H1'	2:B:1065:A:OP2	2.08	0.53
2:B:1122:U:O5'	2:B:1122:U:H6	1.91	0.53
2:B:1281:G:H4'	48:VA:54:GLY:O	2.08	0.53
2:B:1495:U:H2'	2:B:1842:A:C2	2.43	0.53
2:B:1649:U:H2'	2:B:1650:G:O4'	2.08	0.53
2:B:2117:A:H3'	2:B:2118:C:C5	2.43	0.53
2:B:2626:A:H4'	25:Y:2:GLY:HA2	1.91	0.53
2:B:2682:C:H2'	2:B:2683:U:H6	1.73	0.53
2:B:3072:C:H2'	2:B:3073:A:O4'	2.07	0.53
7:G:94:GLU:OE1	20:T:152:VAL:HG13	2.08	0.53
8:H:220:ARG:HG3	8:H:221:ASN:ND2	2.22	0.53
12:L:239:GLY:O	12:L:243:GLN:HB2	2.08	0.53
14:N:164:LYS:O	14:N:165:ILE:HG23	2.08	0.53
18:R:123:LEU:HD23	18:R:126:GLN:OE1	2.07	0.53
22:V:59:ARG:HH11	22:V:59:ARG:HB3	1.71	0.53
23:W:171:ASP:O	23:W:175:GLN:HB2	2.08	0.53
24:X:118:PHE:HA	24:X:121:ILE:HD12	1.90	0.53
24:X:139:TYR:H	24:X:139:TYR:HD1	1.54	0.53
30:DA:40:ARG:HE	30:DA:46:LYS:CD	2.15	0.53
40:NA:51:SER:HB2	40:NA:52:PRO:HD2	1.90	0.53
47:UA:55:TRP:HH2	47:UA:69:TYR:O	1.91	0.53
59:GB:122:VAL:O	59:GB:125:ALA:HB3	2.07	0.53
59:GB:162:SER:HB2	59:GB:163:PRO:HD2	1.90	0.53
61:IB:148:LYS:HD2	61:IB:151:LYS:HD3	1.89	0.53
65:MB:48:GLY:HA3	65:MB:52:LYS:HZ2	1.73	0.53
68:PB:26:ILE:O	68:PB:58:ALA:HB3	2.08	0.53
68:PB:114:GLU:HA	68:PB:117:LYS:HD2	1.90	0.53
70:RB:48:HIS:CD2	70:RB:50:LEU:HD23	2.42	0.53
75:WB:42:LEU:HD12	75:WB:43:ASP:H	1.73	0.53
75:WB:54:VAL:HG13	75:WB:89:ILE:HG23	1.90	0.53
78:ZB:30:VAL:HG11	78:ZB:54:LEU:HD22	1.90	0.53
82:DC:71:LYS:HA	82:DC:71:LYS:NZ	2.23	0.53
82:DC:132:ILE:HD13	82:DC:162:ARG:HD3	1.89	0.53
82:DC:655:TYR:HD2	82:DC:693:LEU:HB3	1.72	0.53
82:DC:759:GLN:HG2	82:DC:766:PHE:CG	2.43	0.53
1:A:26:A:HO2'	1:A:27:U:H6	1.55	0.53
1:A:86:A:H2'	1:A:87:C:H6	1.63	0.53
1:A:358:U:O2'	1:A:360:A:H5"	2.07	0.53
1:A:960:U:H2'	1:A:961:U:H6	1.70	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1013:A:H2'	1:A:1014:G:O4'	2.09	0.53
1:A:1462:G:O6	68:PB:140:THR:HA	2.09	0.53
2:B:126:U:C1'	19:S:57:GLN:HE22	2.21	0.53
2:B:204:A:C2'	2:B:205:C:H5'	2.38	0.53
2:B:720:A:H3'	22:V:69:ARG:NH1	2.23	0.53
2:B:904:A:C5'	2:B:1537:A:H5'	2.37	0.53
2:B:915:A:O3'	2:B:2957:G:H4'	2.08	0.53
2:B:1140:G:H4'	11:K:94:LYS:HZ2	1.72	0.53
2:B:2076:G:H2'	2:B:2077:U:C5'	2.35	0.53
2:B:2381:G:C2'	2:B:2382:G:H5'	2.38	0.53
2:B:2789:U:H2'	2:B:2790:A:C8	2.43	0.53
2:B:2877:G:H2'	2:B:2878:G:O4'	2.08	0.53
2:B:2901:G:H2'	2:B:2902:A:C8	2.43	0.53
2:B:3068:U:OP2	23:W:59:SER:HB3	2.08	0.53
2:B:3083:G:H4'	28:BA:42:GLN:NE2	2.23	0.53
2:B:3322:A:H2'	2:B:3323:A:H8	1.72	0.53
4:D:4:U:H2'	4:D:5:G:C8	2.42	0.53
8:H:33:ASP:HB2	22:V:22:ASP:HB2	1.90	0.53
8:H:124:SER:HA	8:H:127:ALA:HB3	1.91	0.53
8:H:200:THR:HG23	8:H:202:ARG:HH22	1.72	0.53
8:H:204:GLY:HA3	8:H:224:GLY:HA2	1.88	0.53
11:K:114:GLY:O	11:K:115:THR:HG23	2.08	0.53
12:L:97:TYR:CE1	12:L:203:VAL:HG23	2.42	0.53
20:T:119:VAL:HG23	24:X:164:SER:HB3	1.90	0.53
20:T:121:PRO:HA	20:T:127:LEU:HD12	1.88	0.53
22:V:102:ALA:CB	22:V:127:LEU:HG	2.36	0.53
24:X:26:ARG:NH1	24:X:28:ARG:HG3	2.24	0.53
25:Y:29:THR:HG22	25:Y:93:VAL:O	2.08	0.53
27:AA:61:THR:HA	27:AA:74:MET:HE3	1.90	0.53
52:ZA:148:LEU:O	71:SB:4:ASP:HB2	2.08	0.53
54:BB:214:LEU:CD2	54:BB:216:ASN:HD21	2.16	0.53
55:CB:41:LYS:HG3	66:NB:54:LEU:CD2	2.37	0.53
56:DB:216:LEU:O	56:DB:220:LYS:HB3	2.08	0.53
56:DB:220:LYS:C	56:DB:220:LYS:HD2	2.32	0.53
57:EB:31:SER:HB2	57:EB:32:PRO:HD3	1.90	0.53
63:KB:129:TYR:CD1	63:KB:134:VAL:HG21	2.42	0.53
65:MB:16:SER:OG	68:PB:93:THR:HA	2.08	0.53
71:SB:80:LYS:HB3	71:SB:80:LYS:HZ3	1.72	0.53
82:DC:17:THR:HA	82:DC:344:SER:OG	2.08	0.53
82:DC:86:VAL:HA	82:DC:89:ILE:HD12	1.89	0.53
82:DC:775:ASN:C	82:DC:777:SER:H	2.16	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:101:U:H2'	1:A:102:U:O4'	2.08	0.53
1:A:372:G:H1'	1:A:612:U:H3	1.73	0.53
1:A:531:C:H2'	1:A:532:U:H5"	1.90	0.53
1:A:1346:A:H5'	1:A:1348:A:N7	2.24	0.53
1:A:1437:U:O2'	1:A:1438:G:H8	1.90	0.53
2:B:916:G:P	2:B:2957:G:H5"	2.48	0.53
2:B:1369:A:H5"	32:FA:21:ARG:HH11	1.69	0.53
2:B:1372:C:P	32:FA:7:LYS:HG2	2.48	0.53
2:B:2769:A:H1'	46:TA:82:GLN:CD	2.34	0.53
6:F:20:THR:OG1	6:F:23:ARG:HB2	2.07	0.53
6:F:28:LYS:HB3	6:F:123:ARG:CB	2.38	0.53
6:F:30:ARG:HA	6:F:74:GLU:HG2	1.90	0.53
6:F:32:LEU:HA	6:F:36:GLU:CB	2.39	0.53
6:F:144:ASN:HB3	6:F:160:SER:N	2.14	0.53
8:H:67:THR:O	8:H:67:THR:HG23	2.07	0.53
8:H:162:THR:O	8:H:166:VAL:HG23	2.09	0.53
10:J:139:LYS:C	10:J:141:VAL:H	2.16	0.53
14:N:80:SER:HB2	14:N:144:ASN:HD21	1.73	0.53
15:O:137:ARG:O	15:O:141:ARG:HG2	2.08	0.53
17:Q:28:GLN:O	17:Q:32:LYS:HB2	2.08	0.53
17:Q:64:LYS:HG3	32:FA:69:TRP:CE2	2.42	0.53
21:U:15:ALA:HB2	21:U:107:LEU:HD22	1.90	0.53
21:U:130:TYR:N	21:U:130:TYR:CD1	2.75	0.53
22:V:19:PRO:C	22:V:21:SER:N	2.67	0.53
34:HA:24:THR:CG2	34:HA:91:SER:HB3	2.38	0.53
37:KA:106:ASN:N	37:KA:106:ASN:HD22	2.04	0.53
47:UA:39:CYS:HB3	47:UA:42:CYS:SG	2.49	0.53
52:ZA:61:LEU:HB3	52:ZA:62:PRO:HD2	1.89	0.53
52:ZA:65:GLU:H	52:ZA:68:ILE:CD1	2.21	0.53
54:BB:126:VAL:O	54:BB:157:ASN:HA	2.08	0.53
56:DB:10:ASN:HD22	56:DB:128:THR:HB	1.72	0.53
58:FB:76:THR:HG21	58:FB:108:PRO:HG2	1.90	0.53
59:GB:99:LEU:HD12	59:GB:103:ASP:OD1	2.09	0.53
63:KB:16:ILE:CG1	63:KB:17:PRO:HD2	2.38	0.53
63:KB:20:ARG:HH11	63:KB:64:ARG:HD2	1.71	0.53
70:RB:21:LYS:HG2	70:RB:94:GLU:HG3	1.90	0.53
82:DC:159:LYS:HE2	84:DC:901:GDP:N7	2.23	0.53
82:DC:192:TYR:CE2	82:DC:764:PRO:HG2	2.43	0.53
82:DC:551:GLY:O	82:DC:552:VAL:HB	2.07	0.53
82:DC:565:GLU:HG2	82:DC:677:PHE:HE2	1.72	0.53
1:A:422:G:H2'	1:A:423:G:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1450:U:O2'	79:AC:8:PHE:HA	2.07	0.53
1:A:1749:A:H8	1:A:1749:A:O5'	1.91	0.53
2:B:277:G:H2'	2:B:278:U:C6	2.43	0.53
2:B:516:A:H5"	8:H:344:ALA:HB2	1.90	0.53
2:B:547:G:H2'	2:B:548:G:O4'	2.08	0.53
2:B:572:A:H2'	2:B:573:C:C6	2.43	0.53
2:B:1141:C:H2'	2:B:1142:G:C8	2.43	0.53
2:B:1283:C:C2'	2:B:1284:C:H5'	2.39	0.53
2:B:1538:G:H2'	2:B:1539:A:C8	2.43	0.53
2:B:1764:U:H3'	2:B:1765:U:H5"	1.89	0.53
2:B:2614:G:H2'	2:B:2615:G:H8	1.74	0.53
4:D:11:A:O2'	4:D:13:A:H5"	2.08	0.53
6:F:77:ILE:HD11	6:F:115:ASN:OD1	2.08	0.53
6:F:127:ALA:HB2	6:F:134:VAL:CG1	2.39	0.53
7:G:254:ALA:HB3	7:G:256:HIS:O	2.09	0.53
7:G:311:PHE:HD1	7:G:312:VAL:H	1.54	0.53
8:H:60:THR:HG21	8:H:89:ALA:HB3	1.90	0.53
8:H:84:ARG:HD2	8:H:87:GLN:HE21	1.73	0.53
9:I:43:LYS:HB3	9:I:46:THR:HB	1.90	0.53
11:K:145:ARG:NH1	11:K:149:TYR:HE1	2.06	0.53
12:L:161:GLU:HA	12:L:164:VAL:HG13	1.89	0.53
13:M:47:LYS:HD3	13:M:50:ASN:HA	1.91	0.53
18:R:10:SER:HB3	18:R:12:TRP:CH2	2.43	0.53
18:R:97:SER:O	18:R:101:LYS:HG3	2.08	0.53
19:S:148:TYR:HD1	19:S:150:TRP:CZ3	2.27	0.53
21:U:18:ARG:N	21:U:94:LEU:HD11	2.23	0.53
25:Y:18:ASP:CB	25:Y:21:LYS:HB2	2.39	0.53
38:LA:7:PHE:HB3	38:LA:34:HIS:HE1	1.73	0.53
52:ZA:157:LYS:HD3	52:ZA:170:ILE:HG12	1.90	0.53
52:ZA:227:PRO:HA	52:ZA:230:TRP:CG	2.43	0.53
54:BB:72:VAL:HG22	54:BB:90:ILE:HG23	1.89	0.53
57:EB:64:VAL:HA	57:EB:67:LEU:CG	2.37	0.53
58:FB:4:SER:HB2	58:FB:24:LYS:CD	2.38	0.53
64:LB:112:ILE:O	76:XB:57:SER:HA	2.07	0.53
65:MB:28:MET:HE1	65:MB:36:LEU:HD21	1.90	0.53
69:QB:47:PRO:HG2	69:QB:53:TRP:NE1	2.23	0.53
71:SB:69:LEU:HD12	71:SB:72:LEU:CD1	2.39	0.53
72:TB:54:ASP:CG	72:TB:55:ASP:N	2.66	0.53
78:ZB:29:ARG:HG3	78:ZB:41:VAL:HG22	1.90	0.53
82:DC:440:ARG:HD2	82:DC:441:PHE:N	2.23	0.53
83:EC:6815:U:H3'	83:EC:6816:A:C8	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:7:G:H2'	1:A:8:U:H5"	1.90	0.53
1:A:128:U:OP2	1:A:129:U:H5	1.91	0.53
1:A:385:A:H2'	1:A:386:G:H8	1.71	0.53
1:A:748:U:O2'	1:A:749:U:H5'	2.08	0.53
1:A:1041:G:H2'	1:A:1042:G:O4'	2.08	0.53
1:A:1404:C:H2'	1:A:1405:G:C8	2.43	0.53
1:A:1434:U:H2'	1:A:1436:A:C8	2.44	0.53
2:B:321:C:H5'	19:S:150:TRP:CE3	2.43	0.53
2:B:417:A:H8	2:B:417:A:P	2.32	0.53
2:B:500:C:H4'	10:J:80:ASN:HD21	1.74	0.53
2:B:511:G:H2'	2:B:512:U:O4'	2.09	0.53
2:B:562:C:H2'	2:B:563:U:C6	2.43	0.53
2:B:1002:A:H2	2:B:1003:A:H62	1.56	0.53
2:B:1159:A:O2'	2:B:1160:C:H5"	2.09	0.53
2:B:1833:G:O2'	43:QA:4:GLN:HA	2.09	0.53
2:B:1836:C:C6	2:B:1836:C:H3'	2.44	0.53
2:B:2524:A:N1	12:L:44:ARG:HB2	2.23	0.53
2:B:3215:A:O4'	10:J:161:ALA:HB1	2.08	0.53
2:B:3268:A:C6	10:J:69:PHE:CZ	2.96	0.53
2:B:3314:A:P	7:G:175:LYS:HB2	2.48	0.53
6:F:222:ALA:C	6:F:224:THR:H	2.14	0.53
7:G:256:HIS:HA	7:G:257:PRO:C	2.34	0.53
8:H:76:ARG:HH11	8:H:76:ARG:CG	2.20	0.53
8:H:345:GLU:HB2	11:K:60:ARG:HH12	1.74	0.53
11:K:160:ARG:HD2	11:K:203:TRP:CE2	2.43	0.53
14:N:53:VAL:HG21	14:N:166:ILE:CD1	2.37	0.53
17:Q:165:SER:C	17:Q:167:PHE:H	2.16	0.53
18:R:23:ILE:HG21	18:R:28:SER:HB2	1.90	0.53
18:R:36:VAL:HG11	18:R:55:ARG:HH21	1.71	0.53
19:S:20:ARG:NH2	40:NA:52:PRO:HG2	2.24	0.53
19:S:57:GLN:HB2	19:S:141:ALA:HB2	1.90	0.53
22:V:64:VAL:HA	22:V:67:ILE:CD1	2.37	0.53
23:W:185:LEU:HD13	23:W:185:LEU:O	2.08	0.53
33:GA:11:ASN:O	33:GA:15:LYS:HG3	2.08	0.53
41:OA:67:LEU:C	41:OA:69:HIS:H	2.14	0.53
48:VA:12:PHE:O	48:VA:15:LEU:HG	2.08	0.53
49:WA:278:PHE:HB3	49:WA:281:TYR:CD1	2.44	0.53
50:XA:56:LYS:HZ2	50:XA:56:LYS:HB3	1.73	0.53
51:YA:195:LYS:O	51:YA:199:ASN:HB2	2.09	0.53
55:CB:42:LEU:HD12	55:CB:46:TRP:C	2.33	0.53
55:CB:185:ARG:HH11	55:CB:185:ARG:HG2	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:74:LYS:HD2	58:FB:74:LYS:N	2.24	0.53
66:NB:7:VAL:CG2	66:NB:22:VAL:HB	2.39	0.53
66:NB:60:PHE:CE1	66:NB:89:LEU:HD22	2.32	0.53
68:PB:132:ARG:HD3	68:PB:136:GLN:CD	2.33	0.53
69:QB:33:TYR:O	69:QB:36:ILE:HG12	2.09	0.53
69:QB:76:LEU:HA	69:QB:79:LEU:HB3	1.91	0.53
76:XB:74:CYS:O	76:XB:75:VAL:HB	2.09	0.53
82:DC:399:ARG:HA	82:DC:453:ILE:CD1	2.38	0.53
1:A:127:G:OP1	1:A:128:U:C5	2.61	0.53
1:A:162:A:H3'	1:A:163:G:H21	1.73	0.53
1:A:251:A:H2	54:BB:131:LEU:HD23	1.72	0.53
1:A:965:U:C3'	1:A:966:A:H5'	2.36	0.53
1:A:1227:A:O5'	1:A:1228:G:H2'	2.08	0.53
2:B:809:G:H2'	2:B:810:A:H8	1.73	0.53
2:B:841:A:H5'	23:W:126:GLU:HA	1.91	0.53
2:B:997:A:H3'	2:B:998:A:H8	1.72	0.53
2:B:1393:A:C4	2:B:1418:A:C2	2.97	0.53
2:B:1685:C:H2'	2:B:1686:U:C6	2.43	0.53
2:B:1916:U:C5'	23:W:85:ARG:HD3	2.39	0.53
2:B:2896:A:H4'	44:RA:95:VAL:CG1	2.38	0.53
2:B:2930:A:H2'	2:B:2931:C:C6	2.44	0.53
6:F:53:GLY:HA3	6:F:191:LEU:HD22	1.90	0.53
6:F:77:ILE:HG21	6:F:169:ILE:HD12	1.90	0.53
7:G:11:HIS:HB3	7:G:233:TRP:O	2.08	0.53
9:I:208:MET:HG2	9:I:223:PHE:CD2	2.43	0.53
9:I:289:LYS:HD2	9:I:293:LEU:HD12	1.91	0.53
15:O:148:VAL:HG23	15:O:153:LYS:HG3	1.89	0.53
18:R:72:LEU:HD21	18:R:76:ALA:HB3	1.91	0.53
24:X:58:ILE:H	24:X:58:ILE:HD12	1.73	0.53
28:BA:46:PRO:HA	28:BA:49:ILE:HD11	1.90	0.53
30:DA:40:ARG:NH1	30:DA:40:ARG:HB2	2.24	0.53
30:DA:56:VAL:HG23	30:DA:106:ILE:HA	1.90	0.53
39:MA:9:LEU:O	39:MA:17:LEU:HD11	2.09	0.53
47:UA:24:ARG:O	47:UA:27:LYS:HG2	2.08	0.53
48:VA:109:ALA:CB	48:VA:179:SER:HA	2.38	0.53
58:FB:38:ILE:HD12	58:FB:80:GLY:HA2	1.90	0.53
61:IB:67:ARG:NH2	61:IB:129:ARG:HA	2.23	0.53
61:IB:155:LYS:CD	63:KB:83:GLU:HB2	2.36	0.53
65:MB:60:LEU:HD22	65:MB:92:SER:HB2	1.89	0.53
68:PB:66:LEU:HA	68:PB:69:ILE:HD12	1.91	0.53
71:SB:69:LEU:HA	71:SB:72:LEU:HB2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:TB:3:ARG:NH1	72:TB:28:ARG:HD2	2.24	0.53
82:DC:131:THR:HG23	82:DC:178:PHE:CE1	2.44	0.53
82:DC:243:ARG:O	82:DC:248:SER:HB3	2.09	0.53
82:DC:578:LYS:HE3	82:DC:585:ARG:NH2	2.24	0.53
1:A:40:A:H5"	1:A:380:U:O4	2.08	0.53
1:A:112:A:H5'	61:IB:68:GLY:HA2	1.90	0.53
1:A:638:U:C4'	57:EB:112:ARG:HE	2.21	0.53
1:A:774:A:H2'	1:A:775:G:C4'	2.39	0.53
1:A:1175:U:H2'	1:A:1176:G:C8	2.43	0.53
1:A:1282:U:H2'	1:A:1283:U:C5	2.43	0.53
1:A:1527:C:O2'	55:CB:108:LEU:HD22	2.09	0.53
1:A:1761:U:H1'	1:A:1762:A:OP2	2.07	0.53
2:B:144:A:H2'	2:B:145:G:O4'	2.08	0.53
2:B:634:C:H2'	2:B:635:G:H5'	1.91	0.53
2:B:692:A:H2'	2:B:693:A:H5'	1.91	0.53
2:B:707:U:H2'	2:B:708:G:C4'	2.39	0.53
2:B:1119:C:H2'	2:B:1120:A:H8	1.73	0.53
2:B:1255:C:O2'	2:B:1256:G:C8	2.62	0.53
2:B:1269:U:H1'	2:B:1272:C:H5	1.74	0.53
2:B:1333:C:H5"	22:V:2:GLY:N	2.24	0.53
2:B:1695:U:H1'	2:B:1749:A:N6	2.24	0.53
2:B:1915:A:H5'	23:W:82:LYS:C	2.34	0.53
2:B:1932:A:H2'	2:B:1933:A:H5'	1.90	0.53
2:B:2161:G:H5"	6:F:227:ARG:HH11	1.74	0.53
2:B:2681:U:O2'	15:O:66:ALA:HB3	2.09	0.53
2:B:3190:C:C2'	2:B:3191:G:O4'	2.56	0.53
6:F:92:LYS:HB2	6:F:103:PRO:CD	2.27	0.53
8:H:193:LYS:HA	8:H:198:ARG:HG3	1.90	0.53
9:I:98:ALA:HB1	9:I:162:ALA:HB2	1.90	0.53
9:I:108:ARG:NH2	9:I:253:PHE:HA	2.23	0.53
12:L:74:THR:HG23	12:L:75:ILE:HD12	1.91	0.53
13:M:109:ALA:O	13:M:110:LYS:HB3	2.08	0.53
15:O:48:SER:H	15:O:67:VAL:HG12	1.72	0.53
16:P:78:SER:HB2	16:P:137:GLN:CD	2.33	0.53
16:P:82:ILE:HD12	16:P:139:VAL:CG2	2.39	0.53
18:R:25:LYS:HE3	18:R:62:GLN:HE21	1.74	0.53
19:S:145:ASP:OD1	19:S:147:ARG:HB2	2.08	0.53
20:T:72:HIS:O	20:T:74:ARG:NH1	2.42	0.53
22:V:51:ALA:HA	22:V:54:LEU:HG	1.91	0.53
22:V:165:ILE:HG12	22:V:168:THR:CG2	2.38	0.53
22:V:178:ARG:O	22:V:185:LYS:HG2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:58:ILE:HD12	24:X:58:ILE:N	2.23	0.53
30:DA:28:ARG:HG2	30:DA:75:ARG:NH2	2.24	0.53
30:DA:39:LEU:HD13	30:DA:39:LEU:O	2.09	0.53
33:GA:35:VAL:HG12	33:GA:36:ASP:N	2.24	0.53
47:UA:17:ARG:HB2	47:UA:18:TYR:CZ	2.43	0.53
47:UA:49:ARG:NH2	47:UA:52:ALA:HA	2.23	0.53
49:WA:287:PRO:CG	49:WA:307:ASP:HB3	2.39	0.53
50:XA:102:PHE:CZ	50:XA:104:PRO:HA	2.43	0.53
51:YA:193:ILE:HG21	51:YA:212:VAL:CG1	2.39	0.53
69:QB:117:SER:HB2	69:QB:123:ARG:N	2.24	0.53
70:RB:64:LYS:HG2	70:RB:83:GLU:HB3	1.90	0.53
72:TB:27:ILE:HD12	72:TB:61:ILE:HD12	1.91	0.53
76:XB:84:VAL:CG1	76:XB:85:ARG:H	2.13	0.53
1:A:295:A:H2'	1:A:296:U:H6	1.69	0.53
1:A:329:G:H2'	1:A:330:G:H8	1.74	0.53
1:A:809:A:C2'	1:A:810:G:H5'	2.38	0.53
1:A:1087:A:C5'	1:A:1298:U:H5	2.08	0.53
1:A:1277:G:H21	53:AB:174:HIS:CE1	2.27	0.53
1:A:1553:G:N2	1:A:1555:A:H3'	2.24	0.53
2:B:841:A:H2'	2:B:842:G:O4'	2.09	0.53
2:B:857:G:OP2	2:B:857:G:C8	2.62	0.53
2:B:911:C:O2'	2:B:912:G:H5'	2.08	0.53
2:B:960:U:H4'	2:B:963:G:N2	2.24	0.53
2:B:1055:A:H2'	2:B:1056:U:O4'	2.09	0.53
2:B:1146:C:H4'	2:B:1331:U:C5	2.44	0.53
2:B:1257:C:H1'	16:P:123:ARG:NE	2.24	0.53
2:B:1755:C:C3'	2:B:1756:C:H5"	2.38	0.53
2:B:3146:G:H4'	7:G:100:ARG:NE	2.23	0.53
2:B:3309:G:H1'	21:U:69:ARG:HD2	1.90	0.53
4:D:7:G:OP2	9:I:28:THR:HG23	2.09	0.53
4:D:64:A:OP1	14:N:206:LEU:HB3	2.08	0.53
6:F:113:VAL:CG1	6:F:166:ILE:HD13	2.39	0.53
7:G:16:PHE:HD2	7:G:275:ARG:CZ	2.22	0.53
9:I:64:ILE:HG21	9:I:142:PHE:HE1	1.74	0.53
11:K:239:LEU:HD21	11:K:243:MET:HE2	1.91	0.53
12:L:146:LYS:HG3	12:L:173:MET:HE1	1.91	0.53
13:M:8:GLN:CD	13:M:68:LEU:HD11	2.33	0.53
13:M:58:HIS:O	13:M:59:ASN:HB3	2.09	0.53
20:T:147:TRP:CZ2	20:T:153:VAL:HG21	2.43	0.53
29:CA:99:VAL:HG13	29:CA:103:TYR:CD2	2.44	0.53
35:IA:10:ARG:HA	35:IA:108:VAL:HA	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:KA:11:GLY:HA2	37:KA:31:LYS:O	2.09	0.53
41:OA:64:MET:HB3	41:OA:68:LYS:H	1.74	0.53
41:OA:74:PHE:HA	41:OA:78:PHE:CE1	2.44	0.53
43:QA:38:ASN:ND2	43:QA:41:ARG:HH21	2.07	0.53
48:VA:56:ASN:OD1	48:VA:59:VAL:HG21	2.08	0.53
51:YA:130:SER:C	51:YA:132:ASP:H	2.17	0.53
56:DB:181:PRO:HA	56:DB:184:LEU:CD1	2.38	0.53
68:PB:30:TYR:HD2	68:PB:40:ARG:HH22	1.57	0.53
70:RB:64:LYS:HG2	70:RB:83:GLU:CB	2.39	0.53
72:TB:2:THR:C	72:TB:4:SER:H	2.16	0.53
75:WB:62:VAL:O	75:WB:66:VAL:HG23	2.08	0.53
77:YB:14:SER:HA	77:YB:17:ARG:CG	2.39	0.53
82:DC:109:VAL:HG22	82:DC:141:THR:HG21	1.91	0.53
82:DC:221:THR:HG23	82:DC:333:ALA:HB1	1.91	0.53
1:A:250:C:H2'	1:A:251:A:C8	2.43	0.53
1:A:606:A:H4'	1:A:607:G:C5'	2.39	0.53
1:A:628:G:O6	1:A:969:C:H3'	2.09	0.53
1:A:1454:G:H4'	65:MB:122:THR:CB	2.39	0.53
2:B:79:U:H2'	2:B:80:G:C8	2.44	0.53
2:B:150:A:H3'	2:B:151:A:C8	2.36	0.53
2:B:507:U:H2'	2:B:508:U:C6	2.43	0.53
2:B:550:A:O2'	2:B:551:A:H5'	2.08	0.53
2:B:841:A:C5'	23:W:126:GLU:HA	2.38	0.53
2:B:871:U:H2'	2:B:872:U:C6	2.43	0.53
2:B:1190:A:H2'	2:B:1190:A:N3	2.24	0.53
2:B:1323:G:H1'	24:X:104:GLU:OE1	2.08	0.53
2:B:1539:A:H2'	2:B:1540:U:H5'	1.91	0.53
2:B:1772:U:H5"	2:B:1773:C:C5	2.44	0.53
2:B:2178:A:H5'	6:F:129:ALA:HB2	1.91	0.53
2:B:3095:U:H5"	27:AA:86:ARG:NH1	2.24	0.53
2:B:3302:U:O2'	2:B:3303:G:H5'	2.09	0.53
3:C:3:A:H2'	3:C:4:C:O4'	2.09	0.53
4:D:57:G:H4'	15:O:138:VAL:HG11	1.90	0.53
6:F:230:VAL:HG22	6:F:233:GLN:HB2	1.91	0.53
7:G:56:ILE:HG21	7:G:283:TYR:CE2	2.44	0.53
8:H:82:THR:HG22	8:H:85:SER:HB2	1.91	0.53
10:J:70:LYS:HG3	10:J:71:VAL:N	2.24	0.53
10:J:137:ASP:O	10:J:141:VAL:HG23	2.09	0.53
13:M:90:MET:HE2	13:M:179:ILE:O	2.09	0.53
13:M:110:LYS:NZ	13:M:133:THR:HG22	2.23	0.53
16:P:128:VAL:O	16:P:132:ILE:HG13	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:164:GLU:O	17:Q:165:SER:HB3	2.08	0.53
25:Y:75:ILE:CD1	25:Y:86:GLU:HG3	2.38	0.53
27:AA:82:ALA:HB2	27:AA:98:ASN:ND2	2.24	0.53
28:BA:17:ARG:HD3	28:BA:17:ARG:C	2.34	0.53
31:EA:39:GLY:HA3	31:EA:77:TYR:CD2	2.44	0.53
35:IA:25:PHE:CG	35:IA:65:LYS:HB2	2.43	0.53
36:JA:109:LEU:O	36:JA:113:LYS:HB2	2.09	0.53
37:KA:15:SER:HA	37:KA:94:PHE:HD1	1.73	0.53
46:TA:3:ASN:HA	46:TA:92:GLU:HG3	1.91	0.53
49:WA:21:THR:HB	49:WA:69:GLN:NE2	2.24	0.53
50:XA:70:PRO:HA	50:XA:73:VAL:CG2	2.39	0.53
51:YA:121:ILE:HG21	51:YA:164:ILE:HD12	1.90	0.53
51:YA:133:TYR:CE1	51:YA:217:LEU:HD23	2.44	0.53
54:BB:15:PRO:HB3	54:BB:39:ARG:HH11	1.74	0.53
55:CB:61:TYR:HA	55:CB:85:ALA:HB1	1.90	0.53
56:DB:64:LYS:O	56:DB:67:VAL:HG22	2.09	0.53
57:EB:14:THR:HG22	57:EB:17:GLU:OE2	2.09	0.53
58:FB:184:LEU:HD21	58:FB:192:TYR:CB	2.36	0.53
59:GB:57:ARG:CA	59:GB:60:LEU:HB2	2.37	0.53
59:GB:84:GLY:O	59:GB:107:ARG:HD3	2.09	0.53
63:KB:54:LEU:HD11	63:KB:71:ILE:HD11	1.91	0.53
65:MB:17:TYR:C	65:MB:18:ARG:HH11	2.17	0.53
65:MB:22:LEU:HD21	65:MB:109:PRO:HB2	1.89	0.53
70:RB:31:VAL:HG23	70:RB:32:LYS:H	1.74	0.53
73:UB:87:VAL:HB	73:UB:92:CYS:HB3	1.89	0.53
83:EC:6912:G:H2'	83:EC:6913:U:H4'	1.91	0.53
1:A:583:C:H3'	1:A:583:C:OP2	2.09	0.53
1:A:627:C:H5'	63:KB:117:LEU:CD2	2.39	0.53
1:A:1752:U:H2'	1:A:1753:A:C8	2.44	0.53
2:B:48:A:OP1	2:B:48:A:H8	1.91	0.53
2:B:430:U:O4'	37:KA:90:PRO:HG3	2.08	0.53
2:B:527:A:H2'	2:B:528:U:C6	2.44	0.53
2:B:631:U:H2'	2:B:632:G:H8	1.74	0.53
2:B:958:C:H5"	2:B:2800:G:OP1	2.09	0.53
2:B:1392:G:OP1	36:JA:101:SER:HA	2.09	0.53
2:B:1394:A:H2'	2:B:1395:G:H1'	1.90	0.53
2:B:1463:U:H2'	2:B:1464:G:C5'	2.37	0.53
2:B:1534:A:H2'	2:B:1535:A:N7	2.24	0.53
2:B:1691:U:H4'	23:W:55:VAL:HG21	1.90	0.53
2:B:2196:C:C5'	2:B:2271:A:H4'	2.39	0.53
2:B:2697:A:H2'	2:B:2698:G:H8	1.67	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3089:C:H2'	2:B:3090:U:C6	2.44	0.53
2:B:3268:A:H5"	10:J:46:ARG:NH2	2.15	0.53
4:D:7:G:H21	9:I:71:GLY:CA	2.22	0.53
6:F:78:ALA:HB3	6:F:169:ILE:CG2	2.39	0.53
12:L:79:GLN:C	12:L:81:THR:H	2.15	0.53
18:R:113:THR:HG22	18:R:115:PHE:H	1.74	0.53
19:S:155:VAL:HG23	19:S:156:HIS:ND1	2.24	0.53
19:S:188:ARG:H	19:S:188:ARG:HD2	1.72	0.53
32:FA:101:VAL:HG12	32:FA:126:LYS:HE3	1.90	0.53
34:HA:85:PHE:CD1	34:HA:86:ARG:N	2.77	0.53
40:NA:51:SER:HB2	40:NA:52:PRO:CD	2.38	0.53
49:WA:182:ASN:HB2	49:WA:189:GLU:HB2	1.90	0.53
51:YA:125:VAL:O	51:YA:136:ARG:HG3	2.09	0.53
52:ZA:65:GLU:H	52:ZA:68:ILE:HD12	1.73	0.53
53:AB:42:THR:HB	53:AB:43:PRO:HD2	1.91	0.53
53:AB:76:ARG:HD3	53:AB:76:ARG:C	2.34	0.53
54:BB:194:THR:O	54:BB:195:ILE:HB	2.09	0.53
55:CB:146:THR:HG22	55:CB:159:ALA:HB2	1.91	0.53
56:DB:95:LYS:O	56:DB:97:VAL:HG23	2.09	0.53
57:EB:30:SER:C	57:EB:32:PRO:HD2	2.34	0.53
57:EB:169:PHE:HA	57:EB:172:VAL:HB	1.90	0.53
66:NB:93:HIS:ND1	66:NB:97:VAL:HG21	2.24	0.53
68:PB:38:VAL:HG22	68:PB:101:LEU:HD21	1.91	0.53
72:TB:106:THR:CG2	72:TB:107:SER:N	2.72	0.53
73:UB:52:ILE:N	73:UB:74:VAL:HG13	2.24	0.53
82:DC:63:GLU:HB3	82:DC:68:ILE:HD12	1.90	0.53
1:A:531:C:H3'	1:A:532:U:H5'	1.91	0.52
1:A:778:G:C8	1:A:779:U:H2'	2.44	0.52
1:A:1341:A:N6	1:A:1384:A:H61	2.07	0.52
1:A:1476:C:H4'	69:QB:45:MET:CG	2.32	0.52
1:A:1686:C:O2	1:A:1686:C:H2'	2.10	0.52
1:A:1752:U:H2'	1:A:1753:A:O4'	2.09	0.52
2:B:156:G:C1'	17:Q:99:HIS:HB2	2.39	0.52
2:B:743:C:O2'	22:V:140:LEU:HD23	2.09	0.52
2:B:872:U:H2'	2:B:873:C:H6	1.74	0.52
2:B:944:C:H2'	2:B:945:C:C6	2.43	0.52
2:B:1084:A:H2'	2:B:1085:A:H8	1.71	0.52
2:B:1278:A:H3'	2:B:1279:C:C5	2.43	0.52
2:B:1473:G:H5"	23:W:23:TRP:CE2	2.44	0.52
2:B:2300:G:O2'	2:B:2328:U:H1'	2.09	0.52
2:B:2681:U:H1'	15:O:66:ALA:HB3	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2730:G:H4'	22:V:184:PHE:CE2	2.44	0.52
2:B:2971:A:H3'	2:B:2971:A:N3	2.23	0.52
2:B:3148:U:C4'	7:G:104:THR:HB	2.39	0.52
2:B:3379:C:H2'	2:B:3380:U:C6	2.44	0.52
4:D:68:C:H5'	9:I:14:SER:HA	1.90	0.52
4:D:108:A:H2'	4:D:109:G:O4'	2.09	0.52
8:H:23:PRO:HD2	8:H:26:PHE:CE2	2.44	0.52
8:H:337:GLU:O	8:H:339:LEU:HG	2.09	0.52
11:K:59:GLU:HA	11:K:62:ILE:CD1	2.33	0.52
12:L:50:VAL:HG23	12:L:52:TRP:NE1	2.22	0.52
17:Q:91:ARG:HE	17:Q:97:VAL:HG21	1.74	0.52
21:U:72:GLN:CD	21:U:83:TRP:HZ2	2.17	0.52
24:X:107:TYR:CD1	24:X:121:ILE:HD12	2.44	0.52
24:X:138:GLN:C	24:X:140:VAL:H	2.17	0.52
24:X:155:ARG:HH22	24:X:157:GLN:NE2	2.07	0.52
30:DA:115:ARG:O	30:DA:119:ILE:HG13	2.09	0.52
38:LA:97:GLU:O	38:LA:101:VAL:HG23	2.08	0.52
42:PA:53:THR:HG23	42:PA:53:THR:O	2.09	0.52
56:DB:196:ARG:HA	56:DB:199:GLN:OE1	2.08	0.52
57:EB:174:ASN:HD22	57:EB:180:GLN:HG3	1.73	0.52
58:FB:172:ARG:HB3	58:FB:175:GLN:CB	2.39	0.52
61:IB:85:VAL:HG22	61:IB:108:PRO:CA	2.38	0.52
66:NB:40:GLU:CB	66:NB:41:PRO:HA	2.38	0.52
82:DC:100:ILE:CG1	82:DC:335:LEU:HD22	2.34	0.52
82:DC:593:ILE:HB	82:DC:598:SER:HB2	1.91	0.52
1:A:158:U:O2'	1:A:159:U:H3'	2.09	0.52
1:A:974:A:O4'	63:KB:116:ILE:HD12	2.09	0.52
1:A:1727:G:N2	58:FB:32:GLN:HE22	2.06	0.52
2:B:44:U:P	19:S:84:PRO:HG2	2.50	0.52
2:B:486:U:C2'	2:B:487:U:H5'	2.38	0.52
2:B:627:U:H4'	2:B:1399:A:O2'	2.10	0.52
2:B:1248:C:H4'	2:B:2843:U:O2'	2.09	0.52
2:B:1576:G:H2'	2:B:1577:G:O4'	2.09	0.52
2:B:2503:G:C2	2:B:2504:U:H1'	2.44	0.52
2:B:2693:C:H5"	2:B:2694:A:C5'	2.40	0.52
2:B:2761:G:H1'	2:B:2800:G:H22	1.72	0.52
2:B:2785:A:H5"	46:TA:36:PHE:O	2.09	0.52
2:B:2912:G:H2'	2:B:2913:C:H6	1.75	0.52
3:C:57:C:O2'	3:C:61:A:H4'	2.08	0.52
6:F:77:ILE:HG22	6:F:78:ALA:N	2.10	0.52
6:F:118:GLU:HG3	6:F:125:ALA:HB3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:180:LEU:HD13	47:UA:14:TYR:CE1	2.44	0.52
8:H:205:PRO:HB3	8:H:247:PHE:HD2	1.72	0.52
8:H:207:VAL:HG21	8:H:219:LEU:CD1	2.40	0.52
9:I:108:ARG:CZ	9:I:253:PHE:HA	2.39	0.52
9:I:153:THR:CB	9:I:179:ARG:HH21	2.17	0.52
10:J:122:PHE:HB3	10:J:123:PRO:HA	1.90	0.52
12:L:186:LEU:HD11	12:L:198:ALA:HB2	1.91	0.52
18:R:25:LYS:HE3	18:R:62:GLN:CG	2.29	0.52
19:S:30:TYR:C	19:S:65:ARG:HH12	2.17	0.52
25:Y:135:PRO:O	25:Y:136:ARG:HG2	2.08	0.52
27:AA:40:LYS:HG3	27:AA:57:MET:HG2	1.91	0.52
29:CA:26:VAL:C	29:CA:27:ARG:HD2	2.35	0.52
31:EA:22:LYS:HE2	31:EA:130:PHE:CA	2.31	0.52
34:HA:25:LEU:HD22	34:HA:87:VAL:HG21	1.91	0.52
38:LA:82:ALA:O	38:LA:85:VAL:HB	2.08	0.52
44:RA:77:ILE:HG13	44:RA:78:ILE:HG13	1.90	0.52
48:VA:109:ALA:HB2	48:VA:179:SER:HA	1.91	0.52
54:BB:87:MET:CE	54:BB:236:ILE:HD13	2.39	0.52
55:CB:42:LEU:CD2	55:CB:42:LEU:H	2.21	0.52
56:DB:22:HIS:C	56:DB:25:ARG:HG2	2.35	0.52
74:VB:81:GLU:HA	74:VB:84:LYS:HB3	1.90	0.52
75:WB:94:LYS:HG2	75:WB:94:LYS:O	2.10	0.52
82:DC:349:GLN:HA	82:DC:352:ARG:HB3	1.91	0.52
1:A:394:C:H1'	56:DB:90:GLY:O	2.09	0.52
1:A:624:G:H2'	1:A:625:C:H6	1.69	0.52
1:A:811:A:N7	57:EB:111:LYS:HD2	2.25	0.52
1:A:831:U:H2'	1:A:832:U:O4'	2.10	0.52
1:A:992:A:C2	1:A:1012:U:N3	2.71	0.52
1:A:1205:C:C2'	1:A:1206:U:H5'	2.39	0.52
1:A:1678:A:H2'	1:A:1679:G:O4'	2.09	0.52
2:B:18:G:H2'	2:B:18:G:N3	2.23	0.52
2:B:543:C:H2'	2:B:544:C:O4'	2.09	0.52
2:B:545:U:H2'	2:B:547:G:H1'	1.91	0.52
2:B:846:A:N7	2:B:847:A:C6	2.77	0.52
2:B:981:U:O2	2:B:1105:A:H4'	2.09	0.52
2:B:993:G:N3	2:B:2637:A:H2'	2.24	0.52
2:B:1234:G:C2	16:P:132:ILE:HG12	2.44	0.52
2:B:1447:G:HO2'	2:B:2355:G:H1	1.58	0.52
2:B:1683:A:H2'	2:B:1684:U:C6	2.32	0.52
2:B:1732:U:H3'	2:B:1733:G:H8	1.75	0.52
2:B:1755:C:H3'	2:B:1756:C:H5"	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1845:G:C3'	2:B:1849:C:H42	2.22	0.52
2:B:2675:C:N4	15:O:22:SER:HB2	2.25	0.52
2:B:2681:U:C1'	15:O:66:ALA:HB3	2.40	0.52
2:B:3041:U:P	27:AA:12:ARG:HE	2.32	0.52
2:B:3231:U:H2'	2:B:3232:G:C8	2.43	0.52
2:B:3311:C:H2'	2:B:3312:U:C5'	2.39	0.52
2:B:3393:U:H2'	2:B:3394:U:H6	1.71	0.52
3:C:4:C:C5'	21:U:61:ARG:HB3	2.39	0.52
3:C:101:U:H2'	3:C:102:U:O4'	2.10	0.52
3:C:104:A:H4'	41:OA:42:ALA:HB1	1.90	0.52
4:D:87:G:H21	24:X:119:ARG:NH2	2.06	0.52
9:I:99:TYR:CE2	9:I:164:LYS:HB3	2.45	0.52
10:J:165:LEU:N	10:J:165:LEU:HD23	2.25	0.52
12:L:45:ASN:OD1	29:CA:26:VAL:HG23	2.09	0.52
13:M:109:ALA:HB3	13:M:111:PHE:CE1	2.44	0.52
14:N:134:ILE:HD12	14:N:134:ILE:N	2.25	0.52
15:O:82:ARG:HE	15:O:112:LEU:HD12	1.74	0.52
17:Q:77:LEU:CA	17:Q:80:VAL:HB	2.30	0.52
20:T:121:PRO:HB3	20:T:127:LEU:CD1	2.40	0.52
20:T:149:TYR:O	20:T:153:VAL:HG23	2.10	0.52
23:W:24:LEU:HD23	23:W:32:ILE:HG12	1.92	0.52
30:DA:35:LEU:HG	30:DA:47:ALA:HA	1.92	0.52
34:HA:74:ASN:HB2	34:HA:87:VAL:C	2.34	0.52
35:IA:98:VAL:HG22	35:IA:100:SER:H	1.73	0.52
40:NA:95:ALA:O	40:NA:99:ARG:HB3	2.09	0.52
41:OA:70:VAL:HA	41:OA:73:ARG:HB2	1.91	0.52
43:QA:11:GLN:O	43:QA:14:ALA:HB3	2.09	0.52
49:WA:169:ILE:O	49:WA:180:ALA:HA	2.08	0.52
50:XA:10:THR:HB	50:XA:11:PRO:HD2	1.90	0.52
50:XA:61:ALA:C	50:XA:63:ILE:N	2.66	0.52
52:ZA:41:LEU:O	52:ZA:45:VAL:HG23	2.09	0.52
55:CB:30:PRO:O	55:CB:33:VAL:HG22	2.09	0.52
57:EB:63:PRO:O	57:EB:95:GLU:HB3	2.10	0.52
57:EB:118:LEU:O	57:EB:121:VAL:HB	2.09	0.52
58:FB:26:LYS:HA	58:FB:29:LEU:HB3	1.91	0.52
59:GB:126:ARG:HA	59:GB:129:ILE:HD12	1.90	0.52
60:HB:15:LEU:HD22	60:HB:46:LEU:CD1	2.39	0.52
67:OB:58:MET:HA	67:OB:61:ILE:HB	1.90	0.52
69:QB:4:VAL:HG21	69:QB:140:LEU:CD1	2.40	0.52
71:SB:32:VAL:CG2	71:SB:34:ILE:HG12	2.39	0.52
72:TB:81:VAL:CG1	72:TB:86:ILE:HG23	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:292:LYS:C	82:DC:294:ASP:N	2.67	0.52
82:DC:671:THR:HG22	82:DC:681:MET:SD	2.49	0.52
1:A:201:G:C2'	1:A:202:A:H5'	2.40	0.52
1:A:374:U:O2'	1:A:603:U:H5"	2.09	0.52
1:A:1216:C:OP2	1:A:1216:C:H6	1.93	0.52
2:B:276:U:H2'	2:B:277:G:C8	2.44	0.52
2:B:1296:C:H2'	2:B:1297:C:H6	1.74	0.52
2:B:1420:C:H2'	2:B:1421:G:H8	1.74	0.52
2:B:1494:U:H1'	2:B:1496:C:H41	1.73	0.52
2:B:1520:G:H5"	29:CA:69:SER:OG	2.09	0.52
2:B:1735:G:C2	2:B:1736:G:H1'	2.44	0.52
2:B:2695:A:H3'	2:B:2696:A:C5'	2.40	0.52
2:B:2927:C:H2'	2:B:2928:C:C6	2.45	0.52
2:B:3285:C:H2'	2:B:3286:G:H5"	1.92	0.52
8:H:134:LEU:HA	8:H:137:ALA:CB	2.40	0.52
13:M:89:LYS:HD2	13:M:183:HIS:HB3	1.90	0.52
14:N:166:ILE:HG22	14:N:167:LEU:N	2.21	0.52
19:S:20:ARG:O	19:S:23:GLN:HB3	2.10	0.52
20:T:76:PRO:HB3	20:T:138:LEU:CD2	2.39	0.52
22:V:170:ARG:HH11	22:V:170:ARG:CB	2.11	0.52
23:W:176:ARG:HH11	23:W:176:ARG:HG3	1.75	0.52
24:X:92:LYS:CE	24:X:110:MET:HE1	2.39	0.52
35:IA:20:LEU:HD22	35:IA:28:ARG:CZ	2.39	0.52
37:KA:50:ALA:HB1	37:KA:66:VAL:CG1	2.40	0.52
49:WA:38:ARG:NH1	67:OB:29:GLN:HB3	2.24	0.52
50:XA:96:THR:HG23	50:XA:96:THR:O	2.10	0.52
51:YA:133:TYR:CE1	51:YA:217:LEU:HB3	2.42	0.52
52:ZA:156:THR:HB	72:TB:95:PRO:HB3	1.91	0.52
52:ZA:229:LEU:HD12	52:ZA:229:LEU:N	2.25	0.52
53:AB:168:ILE:C	53:AB:168:ILE:HD12	2.34	0.52
54:BB:105:VAL:HG21	54:BB:241:GLY:CA	2.38	0.52
54:BB:123:LEU:HD11	54:BB:173:ILE:HD11	1.92	0.52
59:GB:179:ARG:O	59:GB:182:GLU:HG3	2.08	0.52
69:QB:104:VAL:HG12	69:QB:105:LEU:N	2.23	0.52
70:RB:87:HIS:HB3	70:RB:89:ARG:NH2	2.24	0.52
76:XB:46:GLU:OE1	76:XB:48:ALA:HB3	2.09	0.52
77:YB:67:THR:HG21	77:YB:72:LYS:HE2	1.91	0.52
82:DC:42:ARG:HG3	82:DC:331:ALA:H	1.75	0.52
82:DC:343:PRO:CG	82:DC:348:ALA:HB2	2.40	0.52
1:A:105:A:H62	1:A:308:C:N4	1.88	0.52
1:A:151:G:H21	56:DB:13:GLN:CD	2.18	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:220:A:N7	1:A:831:U:O4	2.43	0.52
1:A:567:A:OP2	73:UB:67:ALA:HB1	2.10	0.52
1:A:772:G:OP1	59:GB:7:THR:HG22	2.08	0.52
1:A:1544:U:H2'	1:A:1545:A:O4'	2.10	0.52
1:A:1546:G:H2'	1:A:1547:A:C8	2.44	0.52
1:A:1654:G:H5"	45:SA:24:SER:HB3	1.91	0.52
2:B:44:U:H2'	2:B:45:A:O4'	2.08	0.52
2:B:634:C:H2'	2:B:635:G:C5'	2.39	0.52
2:B:941:G:H2'	2:B:942:U:H5'	1.90	0.52
2:B:1486:G:N2	2:B:1857:C:H42	2.07	0.52
2:B:1648:A:H62	2:B:1807:G:H21	1.57	0.52
2:B:1655:G:C4'	38:LA:59:PRO:HG2	2.39	0.52
2:B:2227:C:H2'	2:B:2228:A:H8	1.75	0.52
2:B:2628:A:C3'	2:B:2629:U:H5"	2.39	0.52
2:B:2688:U:O2'	9:I:16:PHE:HA	2.09	0.52
2:B:2933:A:H2'	2:B:2934:A:H5'	1.90	0.52
2:B:3385:U:H2'	2:B:3386:G:O4'	2.09	0.52
3:C:52:A:N6	43:QA:24:PRO:HD2	2.25	0.52
4:D:25:G:H2'	4:D:26:C:O4'	2.10	0.52
6:F:65:ASP:OD1	6:F:68:LYS:HB3	2.09	0.52
7:G:347:SER:HB3	7:G:350:ALA:HB3	1.91	0.52
8:H:51:ALA:HA	8:H:103:THR:CG2	2.39	0.52
8:H:84:ARG:O	8:H:87:GLN:HB3	2.08	0.52
9:I:150:LEU:HD13	15:O:142:LYS:O	2.09	0.52
9:I:164:LYS:HA	9:I:167:SER:HB3	1.92	0.52
11:K:80:GLN:CG	11:K:119:VAL:HG11	2.39	0.52
11:K:90:LYS:HE3	11:K:95:ILE:HD11	1.90	0.52
14:N:55:ASN:H	14:N:163:GLN:HA	1.73	0.52
14:N:59:GLN:HG2	14:N:128:ARG:NH2	2.19	0.52
14:N:135:ILE:HG22	14:N:136:PHE:CD1	2.44	0.52
14:N:189:GLU:HG2	14:N:200:LEU:HD23	1.92	0.52
15:O:82:ARG:NE	15:O:112:LEU:HB2	2.24	0.52
18:R:120:VAL:CG2	20:T:197:LEU:HD22	2.39	0.52
20:T:94:ARG:HG2	20:T:94:ARG:NH1	2.23	0.52
23:W:25:ASP:OD1	23:W:49:THR:HG23	2.09	0.52
30:DA:57:LEU:HA	30:DA:66:GLN:O	2.10	0.52
30:DA:118:LEU:HD11	30:DA:122:LYS:HD2	1.91	0.52
37:KA:89:LEU:HB3	37:KA:93:THR:CB	2.39	0.52
46:TA:65:THR:O	46:TA:66:LYS:HG3	2.10	0.52
51:YA:149:GLN:OE1	51:YA:151:LYS:HB2	2.09	0.52
53:AB:101:GLN:OE1	53:AB:122:VAL:HG13	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:202:LEU:HD22	53:AB:202:LEU:H	1.74	0.52
54:BB:120:SER:O	54:BB:164:LEU:HB3	2.09	0.52
54:BB:131:LEU:N	54:BB:131:LEU:HD22	2.25	0.52
56:DB:159:ARG:NE	56:DB:170:THR:HG23	2.21	0.52
58:FB:72:ILE:HB	58:FB:74:LYS:NZ	2.24	0.52
59:GB:67:PRO:HA	59:GB:70:LEU:CB	2.34	0.52
63:KB:41:ALA:HB2	63:KB:50:ILE:CD1	2.38	0.52
70:RB:65:ILE:HA	79:AC:33:LYS:NZ	2.25	0.52
72:TB:7:LEU:HA	72:TB:34:ILE:HD13	1.91	0.52
82:DC:271:ARG:HD3	82:DC:273:PHE:HB3	1.90	0.52
82:DC:409:GLN:HG2	82:DC:411:VAL:HG22	1.91	0.52
82:DC:529:ILE:HG13	86:DC:903:SO1:H213	1.91	0.52
1:A:79:C:H2'	1:A:80:A:H5'	1.91	0.52
1:A:138:A:H62	1:A:266:A:N6	2.06	0.52
1:A:325:G:H1'	61:IB:83:THR:HG21	1.91	0.52
1:A:990:C:H4'	64:LB:129:LYS:HA	1.91	0.52
1:A:1103:U:H3'	73:UB:6:PRO:HB3	1.92	0.52
1:A:1291:G:H8	1:A:1291:G:O5'	1.92	0.52
2:B:62:A:H5"	19:S:164:LEU:CD2	2.38	0.52
2:B:639:G:O5'	36:JA:37:GLY:HA3	2.09	0.52
2:B:696:C:OP1	8:H:272:VAL:HG23	2.09	0.52
2:B:858:A:H2'	2:B:859:G:O4'	2.09	0.52
2:B:1203:A:N3	2:B:2855:U:O2'	2.39	0.52
2:B:1353:U:O2'	2:B:1354:G:H5'	2.10	0.52
2:B:1495:U:H4'	2:B:1514:G:H4'	1.90	0.52
2:B:1649:U:H2'	2:B:1650:G:C4'	2.39	0.52
2:B:1945:A:H2'	2:B:1946:A:C8	2.44	0.52
2:B:2855:U:OP1	14:N:160:PRO:HB3	2.09	0.52
7:G:338:LEU:HD22	7:G:338:LEU:N	2.25	0.52
11:K:63:ILE:N	11:K:63:ILE:HD12	2.24	0.52
11:K:173:LEU:HD21	11:K:178:ILE:HB	1.91	0.52
13:M:22:SER:N	18:R:8:LYS:HD3	2.14	0.52
13:M:138:THR:O	13:M:139:ASN:HB3	2.10	0.52
18:R:22:LEU:HB3	18:R:64:VAL:O	2.09	0.52
21:U:78:VAL:HG12	21:U:80:LYS:H	1.75	0.52
26:Z:22:PRO:HB3	26:Z:93:ILE:HG21	1.91	0.52
28:BA:1:MET:HB2	28:BA:15:PRO:CG	2.40	0.52
30:DA:56:VAL:HG22	30:DA:104:LEU:HD22	1.91	0.52
34:HA:22:LYS:HD3	34:HA:94:GLU:HB2	1.91	0.52
34:HA:41:LEU:HD12	34:HA:92:ILE:HG12	1.92	0.52
36:JA:95:GLU:HA	36:JA:121:ASN:OD1	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:MA:57:VAL:HA	39:MA:60:GLU:HB3	1.92	0.52
49:WA:40:LYS:HG2	49:WA:66:HIS:C	2.35	0.52
50:XA:163:ASN:O	50:XA:165:ARG:N	2.42	0.52
51:YA:137:ILE:HD11	51:YA:176:VAL:HG21	1.91	0.52
54:BB:95:THR:HA	74:VB:16:PRO:CG	2.40	0.52
54:BB:164:LEU:HD23	54:BB:165:ALA:H	1.75	0.52
57:EB:102:PRO:HB3	57:EB:109:VAL:H	1.72	0.52
57:EB:130:VAL:HG11	57:EB:154:LEU:HD21	1.91	0.52
58:FB:110:ARG:O	58:FB:114:GLU:HG3	2.10	0.52
59:GB:24:LEU:O	59:GB:24:LEU:HD23	2.09	0.52
61:IB:93:TYR:C	61:IB:94:ILE:HD12	2.34	0.52
65:MB:76:VAL:CG1	65:MB:77:ARG:H	2.15	0.52
73:UB:54:LEU:HD12	73:UB:73:ARG:HD2	1.92	0.52
82:DC:33:SER:HB3	84:DC:901:GDP:O1A	2.09	0.52
82:DC:754:VAL:HA	82:DC:770:ALA:HA	1.91	0.52
1:A:639:U:C5	57:EB:118:LEU:HD12	2.44	0.52
1:A:1133:A:H2'	1:A:1134:C:O4'	2.09	0.52
1:A:1171:A:O3'	68:PB:144:ARG:HD2	2.09	0.52
1:A:1402:G:C5'	67:OB:4:VAL:HG22	2.39	0.52
2:B:26:A:N3	2:B:328:U:O2'	2.35	0.52
2:B:208:C:OP2	8:H:163:LYS:HE2	2.10	0.52
2:B:388:G:N2	21:U:101:ASN:ND2	2.54	0.52
2:B:664:U:O5'	2:B:664:U:H6	1.93	0.52
2:B:793:C:O2'	32:FA:7:LYS:HD2	2.10	0.52
2:B:1341:U:H2'	2:B:1342:C:H6	1.74	0.52
2:B:1472:U:H2'	2:B:1473:G:H8	1.75	0.52
2:B:1501:U:H2'	2:B:1502:C:C5	2.45	0.52
2:B:1593:A:N3	2:B:1616:U:H4'	2.24	0.52
2:B:1831:U:H2'	2:B:1832:C:C6	2.45	0.52
2:B:2133:U:H2'	2:B:2134:G:H5'	1.91	0.52
2:B:2323:G:C2	2:B:2325:G:C5	2.97	0.52
2:B:2358:A:H3'	2:B:2359:C:C5	2.44	0.52
2:B:2628:A:H1'	2:B:2798:C:H2'	1.92	0.52
2:B:3065:G:H2'	2:B:3066:U:C5	2.45	0.52
2:B:3072:C:H4'	2:B:3336:A:C5'	2.39	0.52
2:B:3197:G:O2'	2:B:3198:U:H5"	2.10	0.52
2:B:3335:A:C4	2:B:3371:G:H4'	2.44	0.52
6:F:96:LEU:HD11	6:F:108:PRO:HD3	1.92	0.52
7:G:350:ALA:O	7:G:351:LEU:CB	2.57	0.52
8:H:206:LEU:CD1	8:H:237:GLN:HB3	2.33	0.52
9:I:51:LEU:HB3	9:I:145:PHE:C	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:165:LEU:H	37:KA:6:ARG:CA	2.22	0.52
11:K:224:ILE:HG12	24:X:36:ILE:CG1	2.28	0.52
12:L:230:LYS:HB3	12:L:231:LYS:HD2	1.92	0.52
23:W:121:HIS:CE1	23:W:125:LYS:HD2	2.44	0.52
30:DA:27:ARG:HG2	30:DA:78:PHE:CE1	2.45	0.52
30:DA:58:VAL:HA	30:DA:104:LEU:HD23	1.92	0.52
49:WA:177:MET:HG3	49:WA:193:ILE:CG2	2.39	0.52
49:WA:203:THR:HG22	49:WA:212:ALA:H	1.75	0.52
53:AB:95:GLY:O	53:AB:126:VAL:HG13	2.10	0.52
55:CB:209:TYR:O	55:CB:212:LYS:HB2	2.09	0.52
57:EB:126:LEU:HD21	57:EB:152:VAL:HG21	1.90	0.52
58:FB:95:THR:CG2	58:FB:97:THR:HG23	2.40	0.52
60:HB:15:LEU:CD2	60:HB:76:LEU:HD11	2.39	0.52
60:HB:87:VAL:O	60:HB:87:VAL:HG13	2.10	0.52
61:IB:21:ASN:HB3	61:IB:32:LYS:HB2	1.91	0.52
61:IB:36:LYS:NZ	61:IB:38:ALA:HB2	2.25	0.52
64:LB:64:ALA:HA	64:LB:67:VAL:CG1	2.32	0.52
65:MB:31:GLU:HG3	65:MB:32:ASP:H	1.75	0.52
65:MB:31:GLU:O	65:MB:34:VAL:HG22	2.09	0.52
65:MB:60:LEU:HD22	65:MB:92:SER:CB	2.40	0.52
66:NB:46:PHE:HA	66:NB:49:TYR:CD2	2.44	0.52
70:RB:80:GLU:HG2	70:RB:81:THR:N	2.24	0.52
73:UB:106:GLY:O	73:UB:123:LYS:HG2	2.09	0.52
74:VB:87:PRO:HD2	74:VB:90:ARG:HD2	1.90	0.52
82:DC:75:ILE:HG12	82:DC:439:GLY:CA	2.31	0.52
82:DC:121:VAL:HG21	82:DC:397:PHE:CE2	2.44	0.52
1:A:320:U:H3’	1:A:321:C:C5’	2.40	0.52
1:A:336:G:O2’	1:A:337:G:H5’	2.10	0.52
1:A:478:A:H2’	1:A:479:C:C6	2.45	0.52
2:B:78:U:H3	2:B:325:A:H61	1.58	0.52
2:B:138:U:H2’	2:B:139:G:C8	2.43	0.52
2:B:433:A:H2’	2:B:434:U:H5’	1.90	0.52
2:B:1238:C:H5’	16:P:137:GLN:HA	1.92	0.52
2:B:1498:A:OP1	23:W:6:THR:HG23	2.09	0.52
2:B:1640:G:H5’	2:B:1738:C:OP1	2.10	0.52
2:B:2330:C:H2’	2:B:2331:C:H6	1.72	0.52
2:B:2650:U:H5’	2:B:2758:A:N1	2.24	0.52
2:B:2664:C:OP2	15:O:142:LYS:HE3	2.10	0.52
2:B:2760:C:HO2’	2:B:2761:G:H8	1.55	0.52
2:B:2766:U:H2’	2:B:2767:U:H6	1.73	0.52
2:B:3121:U:O4’	2:B:3122:A:H5”	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3279:A:H2'	2:B:3280:U:C5'	2.40	0.52
3:C:83:C:C4'	3:C:84:C:H5'	2.26	0.52
3:C:157:U:O2'	3:C:158:U:H5'	2.10	0.52
7:G:136:LYS:HB3	7:G:144:ILE:HG13	1.90	0.52
8:H:33:ASP:HA	8:H:36:HIS:HD2	1.74	0.52
9:I:98:ALA:O	9:I:162:ALA:HA	2.10	0.52
10:J:82:ARG:O	37:KA:104:PRO:HA	2.09	0.52
12:L:162:LEU:CA	19:S:7:LEU:HD11	2.40	0.52
13:M:132:VAL:HG23	13:M:147:SER:O	2.10	0.52
18:R:34:ALA:HB2	18:R:70:PHE:CZ	2.45	0.52
21:U:58:ILE:HD12	21:U:84:PRO:HD2	1.90	0.52
23:W:93:VAL:O	23:W:97:ARG:HB2	2.10	0.52
25:Y:75:ILE:C	25:Y:75:ILE:HD13	2.35	0.52
37:KA:13:HIS:HA	37:KA:30:ILE:CD1	2.39	0.52
41:OA:16:HIS:HB3	41:OA:26:SER:CA	2.40	0.52
46:TA:9:LYS:HA	46:TA:22:GLN:HA	1.92	0.52
47:UA:17:ARG:HB2	47:UA:18:TYR:CE1	2.45	0.52
47:UA:47:VAL:HG22	47:UA:57:CYS:CA	2.38	0.52
49:WA:36:ALA:HB2	49:WA:71:CYS:CB	2.39	0.52
49:WA:179:LYS:HD3	49:WA:181:TRP:NE1	2.25	0.52
51:YA:176:VAL:C	51:YA:177:GLN:HG2	2.35	0.52
52:ZA:226:THR:CB	52:ZA:228:ASN:HD22	2.23	0.52
54:BB:252:ARG:HD3	54:BB:256:ARG:HD2	1.91	0.52
57:EB:141:ARG:NH1	57:EB:151:LYS:HD2	2.20	0.52
61:IB:80:MET:HE2	61:IB:83:THR:HG23	1.92	0.52
70:RB:102:ARG:O	70:RB:106:ILE:HG22	2.10	0.52
71:SB:59:VAL:HG13	77:YB:3:LEU:HD21	1.92	0.52
76:XB:73:TYR:HB3	76:XB:78:ALA:HB2	1.92	0.52
79:AC:31:ILE:HD11	79:AC:40:ARG:HA	1.92	0.52
79:AC:40:ARG:HG3	79:AC:41:GLN:N	2.24	0.52
82:DC:619:MET:CE	82:DC:630:ALA:HB1	2.39	0.52
83:EC:6935:G:H2'	83:EC:6935:G:N3	2.25	0.52
1:A:79:C:H2'	1:A:80:A:C5'	2.39	0.52
1:A:324:U:H2'	1:A:325:G:C8	2.45	0.52
1:A:532:U:H2'	1:A:533:U:C6	2.44	0.52
1:A:563:U:H2'	1:A:564:G:O4'	2.09	0.52
1:A:924:A:H2'	1:A:925:G:C8	2.44	0.52
1:A:1499:G:OP1	69:QB:122:ARG:HG3	2.09	0.52
1:A:1690:G:H2'	1:A:1691:A:O4'	2.10	0.52
2:B:100:A:H2'	2:B:101:G:N3	2.25	0.52
2:B:159:A:H61	2:B:262:U:H3	1.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:335:G:P	30:DA:9:SER:HB2	2.50	0.52
2:B:1502:C:O5'	2:B:1502:C:H6	1.93	0.52
2:B:1912:U:H2'	2:B:1913:A:O4'	2.10	0.52
2:B:2127:U:O4'	2:B:2301:U:H5"	2.10	0.52
2:B:2417:U:H5'	2:B:2966:G:H1'	1.91	0.52
2:B:2549:G:P	12:L:36:ILE:HB	2.49	0.52
2:B:2615:G:H2'	2:B:2616:C:C6	2.45	0.52
2:B:2985:C:H2'	2:B:2986:U:H6	1.75	0.52
2:B:2996:U:O2	2:B:2996:U:H2'	2.09	0.52
2:B:3060:C:H1'	2:B:3332:U:O2'	2.09	0.52
2:B:3231:U:H2'	2:B:3232:G:N7	2.24	0.52
2:B:3335:A:N3	2:B:3371:G:H4'	2.25	0.52
4:D:8:G:H2'	4:D:9:C:C6	2.45	0.52
6:F:44:ILE:HD12	6:F:44:ILE:N	2.25	0.52
7:G:196:ARG:HA	7:G:199:PHE:CE2	2.45	0.52
8:H:23:PRO:HB3	8:H:259:ASP:H	1.75	0.52
9:I:55:PHE:CE2	9:I:159:VAL:HA	2.45	0.52
11:K:179:LEU:HD22	11:K:180:SER:N	2.25	0.52
14:N:154:ARG:HA	14:N:157:TYR:CE1	2.45	0.52
14:N:166:ILE:HB	25:Y:160:ILE:HG21	1.92	0.52
15:O:82:ARG:HG2	15:O:112:LEU:CB	2.40	0.52
17:Q:89:TYR:O	17:Q:93:ILE:HG12	2.10	0.52
18:R:32:LEU:HB3	18:R:85:TRP:HZ2	1.74	0.52
19:S:98:LEU:O	19:S:101:THR:HB	2.09	0.52
20:T:28:LEU:HD22	20:T:94:ARG:HH12	1.75	0.52
22:V:4:ASP:HB3	22:V:6:THR:HG23	1.92	0.52
38:LA:8:ARG:HG3	38:LA:32:ALA:O	2.10	0.52
39:MA:77:PRO:HB2	39:MA:80:LEU:HB2	1.92	0.52
43:QA:28:ARG:HG2	43:QA:35:ILE:O	2.10	0.52
51:YA:88:VAL:HG11	51:YA:96:LEU:HD22	1.92	0.52
52:ZA:69:ILE:HD12	52:ZA:70:ASP:N	2.25	0.52
52:ZA:215:PHE:HA	52:ZA:218:ILE:HG12	1.92	0.52
54:BB:47:PHE:HA	54:BB:51:ARG:CG	2.35	0.52
54:BB:105:VAL:HA	54:BB:190:GLY:O	2.10	0.52
55:CB:33:VAL:O	55:CB:37:GLN:HB2	2.09	0.52
55:CB:57:SER:HB3	78:ZB:53:ILE:HB	1.92	0.52
56:DB:76:LEU:HD13	56:DB:94:ARG:NH2	2.25	0.52
64:LB:29:HIS:HB3	64:LB:41:ARG:HA	1.92	0.52
68:PB:71:GLN:O	68:PB:75:ASN:HB2	2.09	0.52
76:XB:7:SER:O	76:XB:8:ASN:C	2.52	0.52
78:ZB:19:THR:HG21	78:ZB:66:LEU:H	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:ZB:32:PHE:N	78:ZB:32:PHE:CD2	2.78	0.52
82:DC:93:THR:CG2	82:DC:98:PHE:HE1	2.20	0.52
82:DC:410:LYS:HA	82:DC:430:ALA:HA	1.92	0.52
82:DC:759:GLN:HG2	82:DC:766:PHE:CD1	2.44	0.52
1:A:65:A:H2	1:A:84:A:N6	2.06	0.52
1:A:622:A:H4'	1:A:623:A:H5'	1.91	0.52
1:A:735:C:H5"	54:BB:197:HIS:CG	2.45	0.52
1:A:907:A:H1'	1:A:997:G:HO2'	1.73	0.52
1:A:1383:G:O2'	70:RB:35:GLU:HG2	2.09	0.52
2:B:68:C:H2'	2:B:69:C:O4'	2.09	0.52
2:B:109:A:C4'	2:B:110:G:H5'	2.40	0.52
2:B:347:G:H4'	2:B:365:A:OP1	2.10	0.52
2:B:388:G:H5'	21:U:18:ARG:O	2.10	0.52
2:B:855:U:O2'	2:B:1723:A:H4'	2.10	0.52
2:B:975:C:H2'	2:B:976:U:C6	2.43	0.52
2:B:1380:G:O2'	2:B:1381:A:H5'	2.10	0.52
2:B:1898:G:H2'	2:B:1899:G:C5'	2.35	0.52
2:B:2234:G:H2'	2:B:2235:C:C6	2.45	0.52
2:B:2392:C:C3'	7:G:266:ARG:HH22	2.23	0.52
2:B:2414:G:H2'	2:B:2415:C:O4'	2.10	0.52
5:E:86:SER:C	5:E:88:ASP:H	2.18	0.52
6:F:29:LEU:O	6:F:74:GLU:HG3	2.09	0.52
7:G:105:VAL:HG11	7:G:148:LEU:HD11	1.92	0.52
7:G:372:THR:OG1	7:G:375:GLU:HB2	2.09	0.52
8:H:239:ALA:N	8:H:240:PRO:HD3	2.25	0.52
8:H:250:TRP:HD1	8:H:250:TRP:N	2.00	0.52
9:I:264:GLN:HA	9:I:264:GLN:NE2	2.25	0.52
11:K:48:ASN:HA	11:K:51:TYR:CB	2.38	0.52
11:K:101:LYS:HG3	11:K:105:LEU:HG	1.92	0.52
11:K:189:ILE:HG23	11:K:190:THR:N	2.25	0.52
19:S:146:ALA:HA	19:S:149:ASN:CB	2.28	0.52
23:W:95:TRP:O	23:W:99:LEU:HB2	2.10	0.52
24:X:7:TYR:CD2	24:X:37:ALA:HB2	2.45	0.52
36:JA:34:LYS:HG3	36:JA:52:GLN:HE22	1.75	0.52
38:LA:31:ARG:HG3	38:LA:32:ALA:H	1.75	0.52
49:WA:68:VAL:HG13	49:WA:83:ALA:O	2.10	0.52
49:WA:121:MET:HE2	49:WA:133:VAL:HG11	1.92	0.52
50:XA:185:ARG:HD3	50:XA:185:ARG:C	2.35	0.52
51:YA:65:VAL:HA	51:YA:87:ARG:HA	1.92	0.52
52:ZA:152:HIS:CD2	52:ZA:153:SER:N	2.76	0.52
52:ZA:233:GLN:HB3	52:ZA:234:PRO:CD	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:85:ALA:HB2	55:CB:165:LEU:HD13	1.92	0.52
63:KB:94:LYS:HG2	63:KB:118:ILE:CG2	2.40	0.52
82:DC:124:GLY:CA	82:DC:151:ILE:HG23	2.36	0.52
82:DC:127:VAL:CG1	82:DC:143:LEU:HD11	2.40	0.52
82:DC:345:PRO:O	82:DC:349:GLN:HB2	2.10	0.52
83:EC:6867:C:H2'	83:EC:6868:C:C6	2.45	0.52
1:A:1076:A:C5'	76:XB:13:LYS:HD3	2.41	0.51
1:A:1500:C:H5'	69:QB:106:GLN:OE1	2.09	0.51
1:A:1543:A:H4'	1:A:1569:A:N1	2.25	0.51
1:A:1546:G:H21	68:PB:87:ASN:HB2	1.75	0.51
1:A:1741:U:H2'	1:A:1742:U:C6	2.45	0.51
2:B:212:G:C8	8:H:223:PRO:HD3	2.44	0.51
2:B:341:G:H21	2:B:349:A:N6	2.08	0.51
2:B:731:U:H2'	2:B:732:C:C6	2.44	0.51
2:B:759:U:C2'	2:B:760:G:H5'	2.41	0.51
2:B:946:U:H2'	2:B:947:G:C8	2.45	0.51
2:B:995:U:O2'	2:B:2636:A:H5"	2.10	0.51
2:B:1074:U:H1'	33:GA:46:ALA:HB2	1.92	0.51
2:B:1113:G:H5"	32:FA:20:GLY:N	2.25	0.51
2:B:1131:G:H1	2:B:1200:A:H2	1.58	0.51
2:B:1363:A:H2'	2:B:1364:C:O4'	2.10	0.51
2:B:1926:C:O2'	47:UA:6:LYS:HD3	2.10	0.51
2:B:2196:C:H4'	2:B:2271:A:O4'	2.09	0.51
2:B:2290:C:H2'	2:B:2291:A:O4'	2.10	0.51
2:B:2331:C:O2'	2:B:2332:A:H5'	2.10	0.51
2:B:2530:G:C2'	2:B:2531:C:H5"	2.38	0.51
3:C:37:A:H4'	3:C:38:U:H3'	1.93	0.51
3:C:84:C:N3	30:DA:112:ASP:HA	2.25	0.51
6:F:114:SER:O	6:F:165:VAL:HG13	2.11	0.51
8:H:30:ILE:CG2	8:H:128:ALA:HB2	2.37	0.51
8:H:58:HIS:HA	8:H:90:PHE:CD1	2.45	0.51
8:H:60:THR:CG2	8:H:61:SER:H	2.15	0.51
8:H:118:LYS:O	8:H:121:ALA:HB3	2.11	0.51
9:I:85:ARG:C	9:I:85:ARG:HE	2.17	0.51
9:I:248:ARG:HG2	9:I:248:ARG:O	2.10	0.51
10:J:76:LEU:O	10:J:77:ARG:HB2	2.10	0.51
12:L:63:LYS:O	12:L:67:ILE:HG13	2.10	0.51
12:L:77:GLN:O	12:L:80:TYR:HB3	2.10	0.51
12:L:162:LEU:HD23	19:S:7:LEU:CD1	2.30	0.51
13:M:68:LEU:HD13	13:M:69:ARG:N	2.25	0.51
13:M:98:PRO:O	13:M:116:ASN:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:112:ILE:HD11	13:M:128:VAL:HG22	1.91	0.51
14:N:10:ARG:HG2	14:N:58:GLU:HB2	1.92	0.51
16:P:86:LYS:HB3	16:P:90:ARG:HB2	1.91	0.51
19:S:84:PRO:HA	19:S:87:GLN:HB2	1.91	0.51
22:V:88:THR:HG22	22:V:107:THR:CG2	2.34	0.51
22:V:101:VAL:HB	22:V:120:GLU:O	2.10	0.51
22:V:140:LEU:CD2	22:V:141:ARG:H	2.20	0.51
25:Y:64:VAL:HG11	25:Y:67:VAL:HG22	1.92	0.51
31:EA:10:VAL:HG12	31:EA:23:VAL:O	2.10	0.51
32:FA:149:ALA:HB3	40:NA:14:GLY:C	2.34	0.51
42:PA:20:VAL:HB	42:PA:73:LEU:CD1	2.41	0.51
49:WA:216:LYS:HD2	67:OB:22:PRO:O	2.09	0.51
50:XA:54:TRP:O	50:XA:58:VAL:HG23	2.10	0.51
50:XA:144:ILE:HA	50:XA:158:VAL:O	2.10	0.51
50:XA:181:VAL:HG23	50:XA:182:LEU:HG	1.92	0.51
54:BB:200:ARG:O	54:BB:201:HIS:HB2	2.10	0.51
57:EB:98:ILE:HG22	57:EB:98:ILE:O	2.09	0.51
57:EB:116:ARG:HG2	57:EB:116:ARG:O	2.10	0.51
60:HB:69:THR:HG22	60:HB:70:GLU:N	2.16	0.51
63:KB:98:VAL:CG1	63:KB:115:LEU:HB2	2.40	0.51
65:MB:36:LEU:C	65:MB:36:LEU:HD12	2.35	0.51
66:NB:11:GLY:O	66:NB:18:ALA:HB3	2.10	0.51
67:OB:50:ILE:O	67:OB:53:TYR:HB2	2.10	0.51
80:BC:30:PRO:HG3	80:BC:38:LEU:HD12	1.92	0.51
1:A:570:A:C2	73:UB:115:GLY:HA3	2.44	0.51
1:A:603:U:H2'	1:A:604:A:O4'	2.10	0.51
1:A:1513:G:C3'	1:A:1514:U:H5"	2.40	0.51
1:A:1524:A:H5"	69:QB:93:HIS:CE1	2.45	0.51
1:A:1590:G:H2'	1:A:1591:C:C6	2.45	0.51
1:A:1797:A:N6	76:XB:87:ARG:HD2	2.24	0.51
2:B:109:A:OP1	2:B:109:A:H8	1.93	0.51
2:B:303:G:H5"	2:B:304:G:C5'	2.41	0.51
2:B:515:C:H2'	2:B:516:A:H5'	1.91	0.51
2:B:582:G:H2'	2:B:583:G:C8	2.44	0.51
2:B:817:A:N7	41:OA:15:SER:HB2	2.26	0.51
2:B:837:A:H62	2:B:856:G:H1'	1.74	0.51
2:B:1139:G:H5"	11:K:95:ILE:O	2.09	0.51
2:B:1255:C:HO2'	2:B:1256:G:H8	1.57	0.51
2:B:1818:U:H2'	2:B:1819:U:H5"	1.92	0.51
2:B:2173:U:H3'	2:B:2174:G:C8	2.45	0.51
2:B:2444:C:H2'	2:B:2445:A:C8	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3330:A:H5'	7:G:363:SER:CB	2.40	0.51
3:C:69:U:C2'	3:C:70:G:H5'	2.40	0.51
3:C:130:C:O2'	3:C:131:A:H5'	2.09	0.51
8:H:57:GLY:HA3	8:H:98:ARG:N	2.25	0.51
8:H:134:LEU:HA	8:H:137:ALA:HB2	1.91	0.51
8:H:271:LYS:HB2	8:H:274:TYR:HB3	1.92	0.51
8:H:325:LEU:HD21	8:H:332:LYS:N	2.24	0.51
9:I:53:VAL:HB	9:I:147:ASP:O	2.10	0.51
9:I:186:GLU:O	9:I:187:THR:HB	2.10	0.51
10:J:42:LEU:HD13	10:J:47:PHE:HB3	1.92	0.51
10:J:42:LEU:C	10:J:43:LEU:HD12	2.36	0.51
11:K:119:VAL:HG12	25:Y:135:PRO:CG	2.27	0.51
11:K:236:ILE:O	11:K:240:VAL:HG23	2.09	0.51
13:M:86:TYR:CE2	13:M:151:VAL:HG13	2.45	0.51
14:N:36:LEU:HG	14:N:69:ARG:CZ	2.41	0.51
17:Q:154:VAL:HG23	32:FA:101:VAL:HG21	1.92	0.51
20:T:49:ARG:O	20:T:52:LEU:HB2	2.09	0.51
23:W:45:VAL:HA	23:W:50:ILE:HB	1.91	0.51
24:X:47:LYS:N	24:X:47:LYS:HD2	2.25	0.51
25:Y:76:ILE:HD13	25:Y:77:ASN:N	2.25	0.51
28:BA:31:PHE:CE1	28:BA:37:ALA:HA	2.45	0.51
30:DA:125:LYS:C	30:DA:126:LEU:HD23	2.35	0.51
32:FA:69:TRP:C	32:FA:71:PRO:HD3	2.35	0.51
50:XA:112:THR:HG23	50:XA:115:PHE:HB2	1.93	0.51
51:YA:62:LYS:O	51:YA:88:VAL:O	2.28	0.51
52:ZA:191:ALA:HB3	52:ZA:193:VAL:HG23	1.92	0.51
52:ZA:226:THR:HB	52:ZA:228:ASN:HD22	1.74	0.51
53:AB:59:LEU:HD12	53:AB:66:ILE:HG13	1.91	0.51
56:DB:122:GLU:O	56:DB:126:ASP:HB3	2.11	0.51
63:KB:81:ALA:HB1	63:KB:82:PRO:HD2	1.92	0.51
63:KB:98:VAL:HG21	63:KB:118:ILE:HD11	1.91	0.51
78:ZB:19:THR:HG22	78:ZB:20:GLY:N	2.25	0.51
80:BC:28:LYS:HG2	80:BC:29:LYS:O	2.10	0.51
82:DC:412:ARG:HB2	82:DC:470:THR:O	2.10	0.51
82:DC:493:VAL:HG13	82:DC:556:ILE:CD1	2.41	0.51
1:A:96:G:OP1	54:BB:10:LYS:HE2	2.10	0.51
1:A:385:A:C5'	58:FB:22:ARG:HB3	2.40	0.51
1:A:449:C:H2'	1:A:450:U:H6	1.74	0.51
1:A:1065:A:H2'	1:A:1066:C:H6	1.75	0.51
1:A:1351:G:H2'	1:A:1352:G:H8	1.72	0.51
1:A:1382:A:O4'	70:RB:57:ARG:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1547:A:H2'	1:A:1548:G:H5'	1.91	0.51
1:A:1786:G:OP2	64:LB:133:ARG:HD3	2.10	0.51
2:B:42:C:H4'	2:B:2611:U:H4'	1.92	0.51
2:B:126:U:H2'	2:B:127:G:C8	2.44	0.51
2:B:127:G:H2'	2:B:128:G:C8	2.46	0.51
2:B:660:A:C2	2:B:942:U:H4'	2.44	0.51
2:B:701:G:H2'	2:B:702:C:C6	2.45	0.51
2:B:1131:G:H1'	2:B:2373:A:C6	2.45	0.51
2:B:1307:G:H1'	2:B:1308:A:OP2	2.10	0.51
2:B:1722:U:H6	2:B:1722:U:O5'	1.93	0.51
2:B:1870:C:H2'	2:B:1871:U:O4'	2.10	0.51
2:B:2646:C:H4'	14:N:119:TRP:CE3	2.44	0.51
2:B:2731:U:H2'	2:B:2732:G:O4'	2.09	0.51
2:B:3018:C:H2'	2:B:3019:U:O4'	2.10	0.51
2:B:3212:C:H2'	2:B:3213:A:C5'	2.40	0.51
3:C:30:C:OP1	17:Q:31:LYS:HG2	2.10	0.51
4:D:22:A:H2'	4:D:22:A:N3	2.25	0.51
4:D:36:C:O2	4:D:45:A:H1'	2.10	0.51
7:G:56:ILE:HG21	7:G:283:TYR:HE2	1.74	0.51
7:G:67:PHE:CE2	27:AA:88:ARG:HB2	2.46	0.51
7:G:118:PHE:N	7:G:118:PHE:CD1	2.79	0.51
7:G:144:ILE:O	7:G:148:LEU:HD13	2.09	0.51
8:H:299:ILE:HG23	22:V:39:ARG:CB	2.41	0.51
9:I:55:PHE:HE2	9:I:159:VAL:HA	1.76	0.51
11:K:79:ALA:HA	25:Y:137:GLU:O	2.09	0.51
18:R:96:ALA:HA	18:R:101:LYS:NZ	2.26	0.51
18:R:123:LEU:O	20:T:194:LEU:HD11	2.11	0.51
19:S:154:PRO:HB3	19:S:157:LYS:HZ2	1.73	0.51
21:U:31:GLU:CD	21:U:60:PHE:HA	2.35	0.51
24:X:75:PHE:CE2	24:X:99:ARG:HA	2.44	0.51
30:DA:40:ARG:NE	30:DA:46:LYS:HD2	2.19	0.51
36:JA:36:LYS:HA	36:JA:43:ARG:HD3	1.93	0.51
40:NA:50:LEU:H	40:NA:50:LEU:CD1	2.20	0.51
40:NA:50:LEU:HD21	40:NA:93:ILE:HG21	1.91	0.51
48:VA:127:GLY:HA2	48:VA:149:THR:HB	1.91	0.51
49:WA:61:PHE:HE1	49:WA:97:GLY:HA2	1.74	0.51
49:WA:190:ALA:CB	49:WA:228:LYS:HG2	2.40	0.51
49:WA:229:LYS:HA	53:AB:222:VAL:HG11	1.92	0.51
51:YA:185:THR:O	51:YA:189:ILE:HD13	2.11	0.51
54:BB:10:LYS:HG2	54:BB:27:TYR:HD1	1.75	0.51
55:CB:27:THR:HG21	66:NB:29:ILE:H	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:50:PHE:HB3	56:DB:111:LEU:HD22	1.92	0.51
65:MB:57:MET:HE1	65:MB:86:VAL:HG11	1.93	0.51
82:DC:126:LEU:HA	82:DC:154:VAL:HG23	1.91	0.51
82:DC:411:VAL:HB	82:DC:469:LEU:HD11	1.93	0.51
1:A:139:C:H1'	1:A:140:A:OP2	2.09	0.51
1:A:257:A:H1'	58:FB:73:SER:OG	2.11	0.51
1:A:478:A:O4'	59:GB:127:VAL:HG21	2.10	0.51
1:A:1474:G:H5'	55:CB:102:ARG:NH1	2.25	0.51
1:A:1674:C:H2'	1:A:1675:C:H6	1.69	0.51
2:B:65:A:H5'	19:S:176:LYS:HZ1	1.73	0.51
2:B:628:A:H5'	2:B:1399:A:C4	2.45	0.51
2:B:807:A:H61	2:B:934:G:N2	1.97	0.51
2:B:814:U:O3'	41:OA:35:SER:HB3	2.11	0.51
2:B:1479:U:C2'	2:B:1480:G:H5'	2.41	0.51
2:B:2662:G:H2'	2:B:2663:G:H8	1.73	0.51
2:B:3282:U:H2'	2:B:3283:U:C6	2.46	0.51
2:B:3354:U:H5'	2:B:3355:U:OP1	2.10	0.51
2:B:3362:A:H2'	2:B:3363:U:C5'	2.40	0.51
4:D:74:C:H2'	4:D:75:G:O4'	2.10	0.51
6:F:113:VAL:HB	6:F:165:VAL:O	2.11	0.51
6:F:245:LEU:H	6:F:245:LEU:CD1	2.23	0.51
8:H:263:GLY:HA2	8:H:269:SER:HA	1.93	0.51
12:L:149:LYS:CB	12:L:201:THR:HA	2.27	0.51
12:L:221:ASN:O	12:L:225:LYS:HE2	2.10	0.51
13:M:36:LYS:HE2	13:M:78:MET:HE3	1.93	0.51
14:N:46:PHE:CB	14:N:139:ARG:HG3	2.39	0.51
17:Q:34:SER:HA	17:Q:37:ASN:HD22	1.76	0.51
17:Q:57:VAL:HG22	17:Q:115:ARG:NH1	2.25	0.51
19:S:24:ARG:HG2	19:S:24:ARG:O	2.10	0.51
23:W:80:LYS:HE2	23:W:80:LYS:HA	1.92	0.51
23:W:99:LEU:HD13	23:W:103:ARG:NH1	2.25	0.51
24:X:4:PHE:CE2	24:X:104:GLU:HG2	2.45	0.51
24:X:46:GLN:C	24:X:47:LYS:HD2	2.36	0.51
25:Y:118:GLU:O	25:Y:122:GLN:HB2	2.10	0.51
26:Z:89:LEU:HD13	26:Z:93:ILE:HD11	1.93	0.51
31:EA:49:TYR:CB	31:EA:133:LYS:HD3	2.41	0.51
34:HA:29:SER:HA	34:HA:32:LYS:HD3	1.92	0.51
37:KA:103:TYR:HA	37:KA:105:SER:N	2.25	0.51
43:QA:5:LYS:HD3	43:QA:13:MET:HE1	1.92	0.51
46:TA:98:LYS:C	46:TA:100:LYS:H	2.19	0.51
47:UA:29:LEU:HB3	47:UA:69:TYR:HB3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:28:VAL:HG22	48:VA:87:VAL:HG23	1.91	0.51
48:VA:34:SER:H	48:VA:37:GLN:NE2	2.09	0.51
59:GB:171:ARG:NH1	59:GB:174:ARG:HB2	2.24	0.51
61:IB:78:THR:CG2	61:IB:119:VAL:HA	2.40	0.51
67:OB:21:TYR:N	67:OB:22:PRO:HD2	2.25	0.51
67:OB:26:LEU:O	67:OB:55:THR:HG23	2.09	0.51
68:PB:38:VAL:HG22	68:PB:101:LEU:CD2	2.39	0.51
82:DC:243:ARG:HB3	82:DC:257:TRP:HE3	1.75	0.51
1:A:304:U:O3'	61:IB:137:PHE:HZ	1.93	0.51
1:A:396:G:H22	1:A:399:A:H5'	1.76	0.51
1:A:774:A:C5	1:A:775:G:H1'	2.45	0.51
1:A:868:G:H5"	63:KB:91:LEU:HD21	1.92	0.51
1:A:1470:C:OP1	1:A:1471:A:H1'	2.10	0.51
2:B:101:G:H2'	2:B:102:C:H5'	1.92	0.51
2:B:929:A:O2'	2:B:930:U:H5'	2.10	0.51
2:B:1145:G:H5'	36:JA:46:PHE:CE1	2.45	0.51
2:B:1729:A:H3'	2:B:1730:G:C5'	2.41	0.51
2:B:1806:A:H3'	2:B:1807:G:C8	2.46	0.51
2:B:1926:C:H4'	2:B:1927:G:N3	2.25	0.51
2:B:2357:A:OP2	21:U:138:LYS:HE3	2.11	0.51
2:B:2765:C:H4'	46:TA:39:GLY:CA	2.32	0.51
2:B:2946:A:H1'	2:B:2981:U:C4	2.46	0.51
2:B:3273:A:O4'	10:J:83:TYR:HE2	1.94	0.51
2:B:3285:C:H2'	2:B:3286:G:O4'	2.10	0.51
3:C:116:G:H2'	3:C:117:C:C6	2.46	0.51
4:D:116:C:O2	9:I:74:VAL:HG23	2.10	0.51
5:E:131:ALA:HB1	5:E:133:LYS:HE3	1.93	0.51
7:G:110:LEU:H	7:G:110:LEU:CD1	2.23	0.51
7:G:362:ALA:HB1	7:G:368:GLY:HA3	1.93	0.51
10:J:146:ILE:HA	10:J:149:ILE:CD1	2.33	0.51
12:L:126:SER:HB3	12:L:127:PRO:HD2	1.93	0.51
13:M:65:VAL:O	13:M:68:LEU:HB3	2.11	0.51
13:M:99:ILE:HG22	13:M:99:ILE:O	2.11	0.51
14:N:85:PHE:CA	14:N:140:THR:HG22	2.32	0.51
19:S:67:ARG:HG2	19:S:127:TYR:HE1	1.76	0.51
32:FA:73:LEU:HB2	32:FA:109:TYR:CE2	2.46	0.51
32:FA:84:GLU:HA	32:FA:87:ARG:HB3	1.93	0.51
38:LA:30:LEU:HG	38:LA:31:ARG:N	2.25	0.51
46:TA:15:LYS:HA	46:TA:18:ARG:CZ	2.41	0.51
48:VA:18:TYR:O	48:VA:22:TYR:HD2	1.94	0.51
48:VA:145:ILE:HB	82:DC:201:GLN:NE2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:77:SER:HB2	50:XA:86:VAL:HG21	1.92	0.51
53:AB:61:GLU:H	53:AB:64:ARG:HB3	1.74	0.51
53:AB:115:ILE:HG21	53:AB:142:LEU:CD1	2.40	0.51
59:GB:110:GLN:NE2	59:GB:122:VAL:O	2.40	0.51
63:KB:38:VAL:O	63:KB:42:ARG:HB2	2.11	0.51
66:NB:7:VAL:HG23	66:NB:22:VAL:HB	1.91	0.51
70:RB:40:ASN:HD22	70:RB:41:ILE:CD1	2.24	0.51
72:TB:113:HIS:CG	72:TB:114:GLU:N	2.79	0.51
73:UB:116:ASP:O	73:UB:118:PRO:HD3	2.11	0.51
74:VB:124:ARG:HD3	74:VB:124:ARG:C	2.35	0.51
78:ZB:18:ARG:HA	78:ZB:26:THR:HG23	1.93	0.51
82:DC:155:VAL:HB	82:DC:209:VAL:HG22	1.93	0.51
82:DC:192:TYR:HE2	82:DC:764:PRO:HG2	1.76	0.51
82:DC:579:SER:C	82:DC:581:ASN:H	2.19	0.51
82:DC:841:LYS:HD3	82:DC:842:LEU:N	2.25	0.51
1:A:6:G:H5'	1:A:553:G:C4'	2.35	0.51
1:A:92:A:C8	1:A:93:A:H2	2.29	0.51
1:A:251:A:C2	54:BB:131:LEU:HB2	2.46	0.51
1:A:268:C:N4	56:DB:186:ARG:HD3	2.25	0.51
1:A:416:A:H5'	1:A:417:A:N7	2.25	0.51
1:A:1431:C:H4'	1:A:1432:U:H5"	1.92	0.51
2:B:432:G:H2'	2:B:433:A:C8	2.46	0.51
2:B:680:G:H2'	2:B:681:U:C5'	2.39	0.51
2:B:855:U:H5'	23:W:95:TRP:CD1	2.46	0.51
2:B:1601:U:H1'	2:B:1604:G:C6	2.45	0.51
2:B:1913:A:N3	2:B:2120:A:H2'	2.25	0.51
2:B:2119:A:H8	2:B:2119:A:O5'	1.93	0.51
2:B:2198:A:H1'	2:B:2270:A:OP1	2.11	0.51
2:B:2361:A:H2'	2:B:2362:C:C6	2.45	0.51
2:B:2402:A:C4	2:B:2871:G:H1'	2.46	0.51
2:B:2554:A:C4	6:F:46:LYS:HG3	2.46	0.51
2:B:3126:C:H2'	2:B:3127:A:C8	2.46	0.51
2:B:3257:C:H2'	2:B:3258:U:C6	2.46	0.51
4:D:51:A:C3'	4:D:52:G:H5"	2.38	0.51
4:D:82:G:H2'	4:D:83:U:O4'	2.11	0.51
4:D:101:G:C2'	4:D:102:A:H5"	2.41	0.51
7:G:262:TRP:CG	7:G:263:SER:N	2.78	0.51
8:H:339:LEU:C	8:H:341:SER:H	2.18	0.51
9:I:83:LEU:N	9:I:84:PRO:CD	2.73	0.51
13:M:22:SER:OG	13:M:39:LYS:HE2	2.11	0.51
13:M:25:VAL:HB	13:M:36:LYS:HB3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:106:LYS:O	13:M:107:ASP:HB2	2.10	0.51
17:Q:68:LYS:NZ	17:Q:152:THR:HG22	2.25	0.51
19:S:115:VAL:CG1	19:S:160:GLU:HB3	2.36	0.51
34:HA:41:LEU:O	34:HA:91:SER:HA	2.11	0.51
36:JA:106:VAL:HG13	36:JA:107:VAL:N	2.26	0.51
52:ZA:218:ILE:HA	52:ZA:221:THR:HG23	1.91	0.51
55:CB:71:ALA:HB1	55:CB:94:THR:HG21	1.92	0.51
55:CB:109:LYS:NZ	55:CB:109:LYS:HB3	2.25	0.51
58:FB:78:ILE:HD12	58:FB:78:ILE:N	2.26	0.51
60:HB:15:LEU:HD23	60:HB:76:LEU:HD11	1.92	0.51
70:RB:54:GLY:O	70:RB:56:VAL:HG23	2.10	0.51
70:RB:71:PRO:HB3	79:AC:41:GLN:CA	2.40	0.51
71:SB:72:LEU:O	71:SB:76:ASP:HB2	2.11	0.51
74:VB:113:ASN:HA	74:VB:116:LYS:HB2	1.93	0.51
82:DC:60:ARG:HB2	82:DC:63:GLU:HB2	1.92	0.51
82:DC:204:PRO:O	82:DC:222:ILE:HG13	2.10	0.51
82:DC:495:VAL:HG11	82:DC:501:LEU:HA	1.93	0.51
82:DC:593:ILE:HD11	82:DC:685:ARG:HB3	1.93	0.51
82:DC:798:PHE:CD1	86:DC:903:SO1:H6	2.46	0.51
1:A:1307:U:H2'	1:A:1308:G:H5'	1.93	0.51
2:B:684:G:H5"	17:Q:35:ARG:CZ	2.41	0.51
2:B:709:A:H4'	32:FA:57:GLY:HA2	1.93	0.51
2:B:1235:U:C4'	2:B:1236:G:H5'	2.34	0.51
2:B:1394:A:O2'	3:C:19:C:H4'	2.10	0.51
2:B:1474:A:H2'	2:B:1475:A:O4'	2.10	0.51
2:B:1678:G:H2'	2:B:1679:A:C8	2.45	0.51
2:B:1728:G:OP2	34:HA:86:ARG:HG3	2.10	0.51
2:B:1910:A:O2'	2:B:2334:U:H4'	2.11	0.51
2:B:2273:G:H1'	2:B:2311:G:O6	2.10	0.51
2:B:2484:A:H4'	5:E:130:LYS:HE2	1.92	0.51
2:B:2748:A:H5"	9:I:145:PHE:CE1	2.46	0.51
2:B:3005:A:C5'	7:G:98:GLY:HA2	2.41	0.51
2:B:3203:U:H2'	2:B:3204:C:C6	2.46	0.51
2:B:3343:G:O2'	2:B:3362:A:N6	2.44	0.51
2:B:3359:A:H3'	2:B:3360:C:H5	1.74	0.51
5:E:34:LEU:H	5:E:34:LEU:HD12	1.75	0.51
5:E:90:LEU:HD21	5:E:119:GLN:HB3	1.92	0.51
6:F:199:THR:HG22	6:F:200:ARG:N	2.21	0.51
7:G:25:ILE:HD13	7:G:25:ILE:H	1.75	0.51
7:G:136:LYS:NZ	7:G:143:GLY:HA3	2.26	0.51
7:G:299:ASP:O	7:G:300:ARG:HB2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:308:MET:HG2	7:G:363:SER:H	1.76	0.51
7:G:375:GLU:O	7:G:378:ALA:HB3	2.11	0.51
8:H:92:ASN:HD22	8:H:100:PHE:HB2	1.75	0.51
8:H:207:VAL:O	8:H:207:VAL:HG12	2.10	0.51
9:I:119:TYR:CE1	9:I:135:VAL:HG23	2.46	0.51
10:J:70:LYS:CE	10:J:146:ILE:HG13	2.39	0.51
13:M:115:ARG:NH2	13:M:123:ILE:HG12	2.26	0.51
13:M:188:THR:CB	13:M:191:LEU:HD12	2.41	0.51
14:N:37:GLY:HA2	14:N:85:PHE:HE1	1.76	0.51
17:Q:106:GLN:OE1	40:NA:20:MET:HG3	2.11	0.51
20:T:174:PHE:O	20:T:178:VAL:HG23	2.10	0.51
23:W:100:ARG:HH11	23:W:100:ARG:HG3	1.76	0.51
29:CA:66:PRO:HD3	29:CA:84:PHE:CD1	2.46	0.51
29:CA:99:VAL:HG13	29:CA:103:TYR:CE2	2.46	0.51
30:DA:53:ASP:O	30:DA:110:HIS:HB3	2.10	0.51
36:JA:9:ILE:HG23	36:JA:63:THR:HG23	1.93	0.51
38:LA:80:ARG:HH21	38:LA:84:CYS:HB3	1.76	0.51
49:WA:203:THR:HG22	49:WA:212:ALA:N	2.25	0.51
51:YA:81:PHE:O	51:YA:82:ARG:HB2	2.11	0.51
51:YA:125:VAL:C	51:YA:136:ARG:HG3	2.36	0.51
54:BB:124:GLY:C	54:BB:159:THR:HA	2.36	0.51
61:IB:123:VAL:HG23	61:IB:141:LYS:O	2.11	0.51
63:KB:118:ILE:O	63:KB:122:ILE:HG13	2.10	0.51
70:RB:24:ILE:HG22	70:RB:25:THR:N	2.25	0.51
73:UB:69:ARG:O	73:UB:70:LYS:HB2	2.10	0.51
78:ZB:46:GLY:O	78:ZB:48:VAL:HG23	2.10	0.51
82:DC:676:ILE:HG13	82:DC:677:PHE:CD2	2.44	0.51
82:DC:836:GLN:H	82:DC:836:GLN:NE2	2.08	0.51
1:A:152:U:H2'	1:A:153:G:H5"	1.93	0.51
1:A:177:U:C3'	1:A:178:U:H5"	2.12	0.51
1:A:408:C:H2'	1:A:409:C:C6	2.46	0.51
1:A:512:A:OP2	59:GB:170:GLY:HA3	2.10	0.51
1:A:1041:G:H2'	1:A:1042:G:C1'	2.41	0.51
1:A:1100:G:C5	72:TB:75:ILE:HG23	2.46	0.51
1:A:1149:G:H1'	1:A:1765:A:N3	2.25	0.51
1:A:1186:U:H2'	1:A:1187:U:O4'	2.11	0.51
1:A:1321:A:H4'	1:A:1322:A:O5'	2.11	0.51
2:B:515:C:H6	2:B:515:C:C5'	2.23	0.51
2:B:560:G:H5'	18:R:80:THR:HG21	1.92	0.51
2:B:768:C:H1'	17:Q:183:ARG:NH2	2.16	0.51
2:B:915:A:H5"	2:B:2957:G:O3'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1066:G:H2'	2:B:1067:U:C6	2.45	0.51
2:B:1178:G:H5'	2:B:1178:G:H8	1.73	0.51
2:B:1245:A:H3'	2:B:1246:G:C5'	2.40	0.51
2:B:1267:U:H2'	2:B:1268:G:O4'	2.10	0.51
2:B:1339:C:H5'	36:JA:60:ASN:HA	1.93	0.51
2:B:1480:G:H22	2:B:1871:U:H5"	1.76	0.51
2:B:1666:G:C4'	2:B:1742:U:H4'	2.40	0.51
2:B:2417:U:O2'	2:B:2418:G:H5'	2.10	0.51
2:B:2896:A:O3'	44:RA:95:VAL:HG21	2.11	0.51
2:B:2995:A:H2	2:B:3143:C:C5	2.28	0.51
2:B:3331:U:OP1	7:G:367:LYS:HB2	2.10	0.51
3:C:91:C:H2'	3:C:92:A:H8	1.73	0.51
6:F:40:TYR:HA	6:F:91:GLY:HA3	1.93	0.51
8:H:35:VAL:CA	8:H:38:VAL:HB	2.39	0.51
8:H:60:THR:HB	8:H:90:PHE:CE2	2.46	0.51
8:H:107:ARG:HG2	8:H:108:LYS:N	2.26	0.51
8:H:162:THR:HA	8:H:218:ALA:O	2.11	0.51
8:H:207:VAL:HG21	8:H:219:LEU:HD13	1.92	0.51
9:I:131:LEU:H	9:I:131:LEU:HD22	1.75	0.51
9:I:160:PHE:CZ	9:I:179:ARG:HB3	2.46	0.51
10:J:92:SER:OG	10:J:94:GLU:HG2	2.11	0.51
10:J:158:TYR:CE1	18:R:114:ASP:O	2.64	0.51
12:L:139:VAL:HG22	12:L:199:ALA:HB2	1.93	0.51
13:M:83:THR:C	13:M:84:LYS:HD2	2.36	0.51
14:N:92:HIS:CD2	14:N:93:PRO:HD2	2.46	0.51
15:O:21:ILE:HD12	15:O:37:LEU:HG	1.92	0.51
15:O:86:VAL:HG22	15:O:111:ASP:OD1	2.10	0.51
15:O:110:ILE:HG21	15:O:115:LYS:O	2.11	0.51
17:Q:54:LEU:HG	17:Q:119:TYR:CD2	2.46	0.51
17:Q:110:ASP:O	17:Q:113:VAL:HG12	2.10	0.51
20:T:41:LEU:HB3	20:T:138:LEU:HD23	1.93	0.51
20:T:43:ILE:O	20:T:135:TYR:HB2	2.11	0.51
20:T:108:ILE:HG21	20:T:117:ARG:NH1	2.26	0.51
21:U:41:LEU:C	21:U:41:LEU:HD13	2.35	0.51
35:IA:37:LYS:CE	35:IA:51:LEU:HG	2.41	0.51
37:KA:51:TYR:CE1	37:KA:96:ALA:HB1	2.45	0.51
42:PA:12:LEU:O	42:PA:12:LEU:HD23	2.11	0.51
49:WA:83:ALA:HA	49:WA:89:LEU:HB3	1.93	0.51
50:XA:41:ARG:HB2	50:XA:41:ARG:NH2	2.26	0.51
58:FB:75:LYS:HD3	58:FB:75:LYS:C	2.36	0.51
58:FB:104:ILE:CG1	58:FB:105:ASP:H	2.12	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:49:LEU:HB2	59:GB:104:PHE:HE2	1.75	0.51
59:GB:107:ARG:O	59:GB:147:MET:HE2	2.10	0.51
63:KB:128:TYR:HA	63:KB:131:THR:HG22	1.92	0.51
64:LB:85:ALA:H	64:LB:119:THR:HG21	1.76	0.51
67:OB:43:SER:OG	67:OB:46:LEU:HB3	2.10	0.51
68:PB:38:VAL:HG12	68:PB:43:SER:HB2	1.93	0.51
82:DC:332:ASP:O	82:DC:336:GLU:HB2	2.11	0.51
82:DC:387:PRO:HA	82:DC:394:PHE:HA	1.93	0.51
82:DC:508:LEU:HB3	82:DC:520:THR:HB	1.92	0.51
82:DC:564:ARG:HB3	82:DC:682:ARG:HB3	1.92	0.51
1:A:397:A:C4'	58:FB:51:GLY:H	2.20	0.51
1:A:523:G:N2	1:A:529:A:H62	2.03	0.51
1:A:610:G:H3'	73:UB:19:ARG:HH22	1.75	0.51
1:A:875:G:H2'	1:A:877:G:OP2	2.11	0.51
1:A:1273:G:O6	1:A:1431:C:H5'	2.11	0.51
1:A:1461:C:OP2	68:PB:143:ARG:HA	2.11	0.51
1:A:1501:C:H5"	69:QB:103:LYS:HZ1	1.75	0.51
2:B:70:A:H2'	2:B:71:A:C8	2.46	0.51
2:B:118:U:O2'	2:B:119:U:H5'	2.10	0.51
2:B:122:A:H4'	2:B:123:A:O4'	2.10	0.51
2:B:303:G:H5"	2:B:304:G:H5"	1.92	0.51
2:B:312:C:H2'	2:B:313:A:C8	2.42	0.51
2:B:331:G:H2'	2:B:332:C:H5'	1.93	0.51
2:B:340:C:H42	3:C:24:G:H1	1.59	0.51
2:B:450:G:C2'	2:B:451:U:H5'	2.41	0.51
2:B:856:G:H5'	2:B:1723:A:O4'	2.11	0.51
2:B:1523:U:O2	2:B:1608:C:H4'	2.10	0.51
2:B:1665:C:H2'	2:B:1666:G:C8	2.46	0.51
2:B:1795:U:H4'	2:B:1796:G:C4	2.45	0.51
2:B:1938:U:O4'	23:W:78:TYR:HB2	2.10	0.51
2:B:2339:C:OP2	27:AA:48:ARG:HB2	2.10	0.51
2:B:2745:G:N2	2:B:2748:A:OP2	2.43	0.51
2:B:2844:C:C2'	2:B:2845:A:H5'	2.41	0.51
2:B:3015:G:H2'	2:B:3016:A:C8	2.46	0.51
2:B:3139:A:O3'	7:G:20:LYS:HD3	2.11	0.51
2:B:3234:A:H3'	2:B:3235:C:H5"	1.93	0.51
2:B:3259:U:H5'	2:B:3259:U:H6	1.76	0.51
4:D:120:C:H2'	9:I:265:TYR:CD1	2.46	0.51
5:E:76:ARG:O	5:E:79:SER:HB2	2.11	0.51
7:G:4:ARG:O	7:G:5:LYS:CB	2.59	0.51
7:G:343:TYR:N	7:G:343:TYR:CD1	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:181:VAL:HG12	8:H:182:LEU:N	2.26	0.51
9:I:33:ARG:NH1	9:I:50:ARG:NH1	2.59	0.51
9:I:52:VAL:CG1	9:I:63:GLN:HG3	2.41	0.51
10:J:165:LEU:O	37:KA:6:ARG:CG	2.54	0.51
11:K:222:HIS:HB3	11:K:225:GLN:CB	2.38	0.51
11:K:236:ILE:HG13	11:K:240:VAL:CG2	2.39	0.51
12:L:82:LEU:HD22	12:L:180:VAL:HG23	1.91	0.51
13:M:170:LYS:HD3	13:M:175:PHE:CZ	2.46	0.51
14:N:54:SER:O	14:N:131:ILE:HA	2.10	0.51
16:P:106:LEU:H	16:P:142:ARG:HG2	1.74	0.51
18:R:36:VAL:HG13	18:R:76:ALA:O	2.11	0.51
22:V:104:LEU:HD23	22:V:105:ARG:N	2.25	0.51
24:X:151:PRO:HG2	24:X:153:PRO:HD3	1.92	0.51
37:KA:26:ASN:HA	37:KA:88:ASN:OD1	2.10	0.51
38:LA:80:ARG:HD2	38:LA:88:ARG:HD2	1.93	0.51
52:ZA:183:ALA:HB1	52:ZA:211:LEU:HD21	1.93	0.51
53:AB:136:VAL:O	53:AB:152:PHE:HB2	2.11	0.51
55:CB:142:PRO:O	55:CB:162:VAL:HG11	2.10	0.51
56:DB:29:ASP:HA	56:DB:101:ILE:HG23	1.93	0.51
57:EB:56:LYS:HB2	57:EB:88:ARG:CZ	2.40	0.51
57:EB:64:VAL:N	57:EB:65:PRO:HD2	2.25	0.51
59:GB:53:ARG:O	59:GB:57:ARG:HG3	2.10	0.51
65:MB:111:MET:HG2	68:PB:119:ILE:CG2	2.40	0.51
66:NB:36:ILE:HD11	66:NB:48:VAL:CG2	2.37	0.51
66:NB:49:TYR:C	66:NB:51:PRO:HD2	2.36	0.51
66:NB:67:VAL:HG21	66:NB:85:ILE:HD11	1.93	0.51
68:PB:84:TRP:CZ2	69:QB:36:ILE:HB	2.46	0.51
82:DC:250:PHE:O	82:DC:275:MET:HE1	2.11	0.51
82:DC:563:TYR:HA	82:DC:801:TRP:HZ3	1.76	0.51
82:DC:564:ARG:HG2	82:DC:801:TRP:CH2	2.46	0.51
83:EC:6885:G:H2'	83:EC:6886:A:C8	2.45	0.51
1:A:30:G:H2'	1:A:31:C:C6	2.46	0.51
1:A:36:C:H2'	1:A:37:U:O4'	2.11	0.51
1:A:399:A:H4'	54:BB:3:ARG:HA	1.93	0.51
1:A:1147:A:H2'	1:A:1148:C:H6	1.72	0.51
2:B:213:A:H2'	2:B:214:G:O4'	2.10	0.51
2:B:655:C:OP1	36:JA:27:ARG:HG2	2.11	0.51
2:B:787:G:H8	2:B:787:G:P	2.34	0.51
2:B:815:G:C2	2:B:926:A:C2	2.99	0.51
2:B:957:C:H2'	2:B:958:C:H6	1.73	0.51
2:B:1195:A:H4'	2:B:1320:C:OP1	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1340:G:H2'	2:B:1341:U:H6	1.73	0.51
2:B:1491:A:C2'	2:B:1492:G:H5'	2.41	0.51
2:B:1747:G:C2'	2:B:1748:G:H5'	2.41	0.51
2:B:1821:U:H3'	2:B:1822:C:H5"	1.91	0.51
2:B:1892:G:H2'	2:B:1893:A:H5"	1.93	0.51
2:B:2736:A:H4'	25:Y:71:SER:CB	2.40	0.51
2:B:3159:C:H2'	2:B:3160:U:C6	2.46	0.51
2:B:3330:A:H4'	7:G:366:GLY:CA	2.39	0.51
3:C:12:A:H3'	3:C:13:A:H5"	1.91	0.51
5:E:205:VAL:HB	5:E:214:PHE:O	2.11	0.51
6:F:26:ALA:O	6:F:28:LYS:N	2.43	0.51
6:F:68:LYS:CE	6:F:70:ARG:HB3	2.39	0.51
6:F:134:VAL:O	6:F:134:VAL:HG23	2.11	0.51
7:G:52:GLY:HA3	7:G:311:PHE:CE1	2.46	0.51
7:G:196:ARG:HD2	7:G:199:PHE:CE2	2.46	0.51
8:H:26:PHE:C	8:H:28:ALA:N	2.69	0.51
12:L:75:ILE:HG22	12:L:76:ALA:H	1.75	0.51
21:U:27:LYS:HB3	21:U:63:PHE:CE2	2.45	0.51
40:NA:9:ILE:HA	40:NA:13:LYS:CB	2.41	0.51
44:RA:108:THR:HA	44:RA:121:LEU:HD12	1.93	0.51
46:TA:95:GLY:O	46:TA:96:GLU:HB2	2.11	0.51
47:UA:23:ARG:O	47:UA:26:VAL:HB	2.10	0.51
48:VA:12:PHE:HB3	48:VA:60:ARG:NH2	2.26	0.51
48:VA:38:MET:CE	48:VA:185:LEU:HD13	2.41	0.51
49:WA:9:LEU:HD13	49:WA:313:TRP:CD1	2.46	0.51
49:WA:33:LEU:HB2	49:WA:47:LEU:HD11	1.93	0.51
49:WA:57:PRO:O	66:NB:99:GLU:HB3	2.10	0.51
54:BB:126:VAL:HG23	54:BB:157:ASN:H	1.76	0.51
57:EB:33:GLU:C	57:EB:34:LEU:HD12	2.37	0.51
63:KB:52:VAL:HG13	63:KB:55:ARG:CZ	2.41	0.51
65:MB:63:ALA:HB1	65:MB:73:PRO:CB	2.38	0.51
70:RB:64:LYS:NZ	79:AC:56:ARG:HH22	2.08	0.51
74:VB:35:VAL:HG22	74:VB:36:SER:N	2.25	0.51
76:XB:51:ARG:HG2	76:XB:51:ARG:HH21	1.76	0.51
82:DC:251:ASN:O	82:DC:255:LYS:HA	2.11	0.51
83:EC:6770:U:N3	83:EC:6821:U:H2'	2.26	0.51
1:A:326:G:OP1	61:IB:131:ILE:HG22	2.11	0.50
1:A:620:A:C2	1:A:1108:G:H4'	2.46	0.50
1:A:788:A:H5"	1:A:789:A:O4'	2.12	0.50
1:A:1330:G:H3'	1:A:1331:A:C8	2.46	0.50
1:A:1532:U:C1'	69:QB:48:GLN:HG2	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1583:A:H62	1:A:1612:U:H5	1.56	0.50
1:A:1792:G:H3'	1:A:1793:G:C5'	2.37	0.50
2:B:87:U:C5'	22:V:172:PHE:HE2	2.24	0.50
2:B:219:A:C8	2:B:1390:A:C8	2.99	0.50
2:B:260:C:O2'	2:B:261:U:H5'	2.11	0.50
2:B:796:U:H2'	2:B:797:U:C6	2.47	0.50
2:B:995:U:C1'	2:B:2637:A:H5'	2.22	0.50
2:B:1334:U:H2'	2:B:1335:C:C6	2.45	0.50
2:B:1443:G:H2'	2:B:1444:G:H5"	1.93	0.50
2:B:1653:G:C2	2:B:1654:A:H1'	2.46	0.50
2:B:1686:U:H5"	26:Z:42:LYS:HZ2	1.76	0.50
2:B:1691:U:H4'	23:W:55:VAL:CG1	2.34	0.50
2:B:1732:U:H3'	2:B:1733:G:C8	2.46	0.50
2:B:2768:U:H2'	2:B:2769:A:C8	2.46	0.50
2:B:2781:U:OP1	17:Q:182:ILE:HG13	2.11	0.50
4:D:68:C:O2'	4:D:69:C:H5'	2.11	0.50
8:H:152:VAL:HG12	8:H:153:SER:N	2.14	0.50
8:H:299:ILE:HG13	22:V:39:ARG:O	2.11	0.50
17:Q:64:LYS:HA	32:FA:69:TRP:CZ3	2.45	0.50
24:X:158:LYS:HD3	24:X:158:LYS:H	1.75	0.50
30:DA:82:VAL:HG11	30:DA:85:VAL:HG23	1.92	0.50
36:JA:97:ALA:CB	36:JA:100:ILE:HG12	2.36	0.50
49:WA:52:GLN:C	49:WA:54:PHE:H	2.19	0.50
50:XA:119:ARG:CZ	52:ZA:240:LEU:HD23	2.41	0.50
51:YA:26:ARG:HA	51:YA:50:LYS:HB2	1.93	0.50
52:ZA:45:VAL:HG21	52:ZA:68:ILE:HG23	1.93	0.50
55:CB:113:ILE:HG21	55:CB:190:ILE:CB	2.31	0.50
57:EB:64:VAL:CA	57:EB:67:LEU:HG	2.40	0.50
59:GB:44:ARG:O	59:GB:48:GLN:HG3	2.11	0.50
65:MB:114:HIS:NE2	68:PB:116:LEU:HD11	2.26	0.50
66:NB:100:GLN:O	66:NB:103:ASN:HB3	2.11	0.50
68:PB:27:LYS:HE2	68:PB:56:LYS:O	2.11	0.50
73:UB:53:VAL:HA	73:UB:74:VAL:HG22	1.93	0.50
74:VB:5:VAL:O	74:VB:6:THR:HB	2.12	0.50
82:DC:119:LEU:HB3	82:DC:149:GLU:OE1	2.11	0.50
82:DC:150:ARG:HG3	82:DC:355:GLN:OE1	2.11	0.50
1:A:95:G:H3'	1:A:96:G:C8	2.45	0.50
1:A:385:A:O3'	58:FB:22:ARG:HA	2.11	0.50
1:A:409:C:H4'	1:A:1733:C:OP1	2.11	0.50
1:A:886:U:H2'	1:A:887:A:O4'	2.11	0.50
1:A:1051:G:H2'	1:A:1053:G:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:211:A:C5'	8:H:220:ARG:HG2	2.39	0.50
2:B:326:U:O2'	2:B:327:A:H5'	2.10	0.50
2:B:628:A:H2'	2:B:629:U:O4'	2.11	0.50
2:B:763:G:C2	2:B:764:U:H1'	2.47	0.50
2:B:1135:A:OP2	33:GA:5:LYS:HD2	2.10	0.50
2:B:1408:G:O2'	2:B:1409:G:H5'	2.11	0.50
2:B:1503:A:H2'	2:B:1504:A:O4'	2.11	0.50
2:B:1596:C:H5'	2:B:1606:U:C2	2.46	0.50
2:B:1807:G:H2'	2:B:1808:G:O4'	2.11	0.50
2:B:1915:A:H2'	2:B:1916:U:C6	2.46	0.50
2:B:2093:A:N1	23:W:114:LYS:HE3	2.25	0.50
2:B:2211:U:H2'	2:B:2212:C:O4'	2.11	0.50
2:B:2367:A:H2'	2:B:2368:A:C8	2.46	0.50
2:B:2967:A:H4'	6:F:206:PRO:CG	2.37	0.50
2:B:2992:U:H1'	21:U:69:ARG:HH12	1.76	0.50
2:B:3087:A:H5'	7:G:365:PHE:O	2.12	0.50
2:B:3230:G:H2'	2:B:3231:U:O4'	2.10	0.50
4:D:36:C:H4'	9:I:155:THR:HG23	1.93	0.50
6:F:112:ILE:CG1	6:F:135:ILE:HG12	2.41	0.50
6:F:158:ILE:CG2	6:F:159:SER:H	2.17	0.50
8:H:80:GLY:O	8:H:81:GLY:C	2.53	0.50
8:H:359:LEU:HA	24:X:8:GLN:OE1	2.11	0.50
11:K:83:LEU:HD13	11:K:83:LEU:C	2.36	0.50
15:O:84:LEU:O	15:O:88:GLU:N	2.44	0.50
16:P:81:VAL:HB	16:P:117:ARG:HH21	1.77	0.50
16:P:133:LEU:O	16:P:146:LYS:HD3	2.11	0.50
17:Q:170:LEU:HD23	40:NA:7:ILE:CG2	2.41	0.50
22:V:138:LEU:HD22	22:V:138:LEU:C	2.36	0.50
27:AA:29:SER:HB3	27:AA:111:GLY:HA2	1.93	0.50
31:EA:33:SER:HB2	31:EA:40:HIS:NE2	2.25	0.50
34:HA:16:LEU:HA	34:HA:19:LYS:HE2	1.93	0.50
36:JA:21:HIS:CD2	36:JA:24:ARG:HD2	2.46	0.50
36:JA:96:ILE:H	36:JA:121:ASN:HD21	1.59	0.50
36:JA:97:ALA:H	36:JA:100:ILE:CG1	2.23	0.50
39:MA:44:ILE:O	39:MA:48:ARG:HG2	2.11	0.50
48:VA:119:ILE:HG13	48:VA:159:VAL:HG12	1.93	0.50
50:XA:175:TYR:CD2	50:XA:199:PRO:HG3	2.46	0.50
54:BB:95:THR:HG22	74:VB:16:PRO:CD	2.36	0.50
58:FB:172:ARG:CB	58:FB:175:GLN:HB2	2.40	0.50
59:GB:142:ASN:HD21	74:VB:64:PHE:HE2	1.58	0.50
60:HB:39:ASN:O	60:HB:43:ILE:HG13	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:IB:109:VAL:CA	61:IB:135:VAL:HG13	2.41	0.50
63:KB:2:GLY:O	63:KB:3:ARG:HB3	2.10	0.50
66:NB:6:SER:HB3	66:NB:23:LYS:HD3	1.93	0.50
66:NB:93:HIS:ND1	66:NB:97:VAL:HG11	2.25	0.50
70:RB:106:ILE:HG13	70:RB:107:THR:N	2.27	0.50
71:SB:55:LEU:HD11	71:SB:72:LEU:CD1	2.41	0.50
82:DC:635:CYS:HB2	82:DC:668:GLN:HE21	1.75	0.50
82:DC:741:GLY:HA2	82:DC:744:TYR:HB2	1.92	0.50
1:A:63:G:H2'	1:A:64:U:H5'	1.93	0.50
1:A:311:U:OP1	73:UB:24:TRP:NE1	2.41	0.50
1:A:382:C:H2'	1:A:383:G:C8	2.46	0.50
1:A:906:A:C2	1:A:998:A:H1'	2.46	0.50
1:A:1214:U:H2'	1:A:1215:C:C6	2.46	0.50
1:A:1260:U:H2'	1:A:1261:G:H8	1.75	0.50
1:A:1690:G:H1	1:A:1711:C:H42	1.59	0.50
2:B:28:C:H1'	2:B:61:A:H2	1.75	0.50
2:B:306:A:H2	2:B:2224:A:C2	2.29	0.50
2:B:730:C:H5'	22:V:136:ASN:HA	1.92	0.50
2:B:856:G:C4'	2:B:1723:A:H1'	2.40	0.50
2:B:1256:G:C1'	16:P:128:VAL:HG22	2.42	0.50
2:B:1258:U:H1'	48:VA:42:ARG:NH1	2.25	0.50
2:B:1397:C:H2'	2:B:1398:U:O4'	2.10	0.50
2:B:1939:G:H5'	23:W:79:GLY:HA3	1.94	0.50
2:B:2186:U:O3'	2:B:2315:G:H5"	2.10	0.50
2:B:2729:U:H1'	32:FA:46:ASP:OD2	2.10	0.50
2:B:2786:G:H21	32:FA:58:MET:HG3	1.76	0.50
2:B:2828:G:H2'	2:B:2829:U:O4'	2.11	0.50
2:B:3049:A:H4'	7:G:364:LYS:HB3	1.93	0.50
2:B:3302:U:H2'	2:B:3303:G:O4'	2.12	0.50
4:D:11:A:C4'	4:D:13:A:H2'	2.42	0.50
5:E:68:PHE:O	5:E:112:ALA:HA	2.11	0.50
5:E:103:LEU:C	5:E:105:LYS:H	2.19	0.50
6:F:5:ILE:CG2	6:F:209:HIS:HA	2.30	0.50
6:F:202:VAL:O	6:F:212:GLY:HA2	2.11	0.50
6:F:250:GLN:HE21	6:F:250:GLN:N	2.08	0.50
8:H:157:GLU:OE2	8:H:209:TYR:HB2	2.11	0.50
11:K:137:GLY:O	11:K:139:PRO:HD3	2.10	0.50
11:K:153:PHE:CE1	11:K:162:PRO:HB3	2.47	0.50
15:O:12:LEU:CD1	15:O:131:MET:HE3	2.40	0.50
16:P:106:LEU:N	16:P:142:ARG:HG3	2.26	0.50
16:P:119:LYS:HG2	16:P:119:LYS:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:92:THR:HG21	39:MA:111:PHE:HB2	1.89	0.50
18:R:12:TRP:CD1	24:X:153:PRO:HG3	2.47	0.50
19:S:45:PRO:O	19:S:49:ARG:HB3	2.11	0.50
25:Y:9:SER:O	25:Y:10:ARG:HB2	2.10	0.50
26:Z:35:LYS:HA	26:Z:38:ILE:HG22	1.93	0.50
47:UA:29:LEU:HD21	47:UA:70:THR:HB	1.93	0.50
49:WA:30:PRO:CB	49:WA:295:SER:HB3	2.37	0.50
52:ZA:55:GLU:HA	52:ZA:58:LEU:HB2	1.93	0.50
55:CB:63:GLN:HG3	55:CB:88:PRO:HA	1.93	0.50
58:FB:173:PRO:HG2	58:FB:174:GLY:H	1.76	0.50
58:FB:192:TYR:HA	58:FB:195:ARG:HB2	1.92	0.50
64:LB:64:ALA:CA	64:LB:67:VAL:HG12	2.36	0.50
69:QB:117:SER:CB	69:QB:123:ARG:HB2	2.41	0.50
77:YB:73:LEU:HB2	77:YB:77:THR:OG1	2.10	0.50
79:AC:36:LEU:HD12	79:AC:38:ILE:N	2.25	0.50
82:DC:24:VAL:HG23	82:DC:102:LEU:HD11	1.92	0.50
82:DC:279:ASP:HB3	82:DC:280:PRO:HD3	1.93	0.50
82:DC:644:ASN:HD21	82:DC:681:MET:HB2	1.74	0.50
82:DC:777:SER:HA	82:DC:780:PHE:HB2	1.93	0.50
1:A:431:C:H2'	1:A:432:G:O4'	2.12	0.50
1:A:863:A:H2'	1:A:865:A:C8	2.46	0.50
1:A:963:A:H62	63:KB:70:LYS:HZ3	1.59	0.50
1:A:1054:U:O5'	1:A:1054:U:H6	1.95	0.50
1:A:1177:C:H4'	1:A:1189:A:N6	2.27	0.50
1:A:1499:G:OP2	69:QB:72:GLY:HA3	2.10	0.50
1:A:1617:U:O2'	1:A:1618:C:H5'	2.11	0.50
1:A:1760:G:O2'	1:A:1761:U:H5'	2.10	0.50
2:B:341:G:N2	2:B:349:A:H61	2.09	0.50
2:B:405:U:H2'	2:B:406:G:H5'	1.93	0.50
2:B:665:A:O2'	2:B:666:A:H5'	2.12	0.50
2:B:896:A:N3	2:B:913:A:N3	2.59	0.50
2:B:1159:A:H5'	11:K:92:ILE:CG2	2.41	0.50
2:B:1405:U:H2'	2:B:1406:A:O4'	2.12	0.50
2:B:1653:G:H2'	2:B:1654:A:H8	1.77	0.50
2:B:1655:G:H4'	38:LA:59:PRO:HG2	1.94	0.50
2:B:2138:A:H2'	41:OA:3:LYS:HD3	1.92	0.50
2:B:2154:U:O2	2:B:2182:A:H2	1.95	0.50
2:B:2218:G:H2'	2:B:2219:A:C8	2.47	0.50
2:B:2424:A:N1	6:F:230:VAL:HG11	2.27	0.50
2:B:2462:A:H5"	2:B:2485:A:C2	2.46	0.50
2:B:2746:A:N6	9:I:148:ILE:HB	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2754:G:C3'	2:B:2755:C:H5"	2.41	0.50
3:C:36:G:N2	3:C:37:A:H61	2.09	0.50
5:E:187:VAL:O	5:E:191:VAL:HG23	2.12	0.50
5:E:207:LYS:O	5:E:208:SER:HB2	2.10	0.50
6:F:224:THR:HA	6:F:237:LEU:H	1.77	0.50
7:G:43:LEU:H	7:G:43:LEU:HD12	1.77	0.50
9:I:264:GLN:HA	9:I:264:GLN:HE21	1.76	0.50
10:J:9:TRP:CH2	10:J:11:PRO:HA	2.47	0.50
10:J:18:LEU:N	10:J:18:LEU:HD22	2.27	0.50
11:K:75:TYR:HB2	25:Y:141:VAL:CG2	2.40	0.50
11:K:223:PHE:HE2	24:X:35:VAL:HB	1.77	0.50
13:M:31:ARG:CD	13:M:149:ASN:HB3	2.40	0.50
14:N:49:CYS:HA	14:N:139:ARG:HA	1.92	0.50
17:Q:8:PRO:HG2	17:Q:10:LEU:HD21	1.93	0.50
17:Q:46:ILE:HG22	17:Q:49:ARG:HB2	1.92	0.50
18:R:45:LEU:HD21	18:R:55:ARG:HG3	1.94	0.50
23:W:130:ASN:O	23:W:131:ALA:HB3	2.12	0.50
27:AA:103:ALA:HB2	27:AA:109:MET:HA	1.90	0.50
32:FA:49:HIS:H	32:FA:50:PRO:CD	2.25	0.50
35:IA:24:SER:HB3	35:IA:27:LYS:HB2	1.94	0.50
36:JA:32:TRP:CE2	36:JA:53:PRO:HD2	2.47	0.50
41:OA:24:ARG:HA	41:OA:24:ARG:HE	1.73	0.50
47:UA:55:TRP:NE1	47:UA:71:VAL:HG13	2.27	0.50
51:YA:82:ARG:NH2	51:YA:189:ILE:HA	2.25	0.50
51:YA:109:LYS:HE3	51:YA:113:MET:HE3	1.93	0.50
54:BB:214:LEU:HB3	54:BB:216:ASN:ND2	2.27	0.50
56:DB:50:PHE:HA	56:DB:112:VAL:O	2.12	0.50
56:DB:85:ARG:HH12	56:DB:87:ARG:HD3	1.76	0.50
59:GB:93:LEU:HA	59:GB:96:VAL:CG2	2.41	0.50
65:MB:44:ARG:C	65:MB:44:ARG:HD3	2.36	0.50
66:NB:55:VAL:HG13	66:NB:56:GLY:N	2.27	0.50
68:PB:46:VAL:CG1	68:PB:69:ILE:HG23	2.37	0.50
71:SB:71:ARG:HB2	71:SB:83:TRP:CE2	2.46	0.50
75:WB:60:VAL:O	75:WB:60:VAL:HG13	2.10	0.50
76:XB:44:ILE:HD13	76:XB:64:LEU:HD21	1.93	0.50
76:XB:82:ARG:HA	76:XB:82:ARG:HE	1.75	0.50
82:DC:164:LEU:HD23	82:DC:169:VAL:H	1.77	0.50
82:DC:295:GLU:HB3	82:DC:299:LEU:HD22	1.91	0.50
82:DC:653:VAL:HG11	82:DC:693:LEU:HD23	1.92	0.50
1:A:351:C:H5"	1:A:352:A:N7	2.26	0.50
1:A:778:G:C2'	1:A:779:U:H5'	2.38	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:808:U:O2'	1:A:809:A:H5'	2.12	0.50
1:A:1160:A:H2	1:A:1619:C:H41	1.59	0.50
1:A:1330:G:H3'	1:A:1331:A:H8	1.77	0.50
1:A:1444:A:H4'	1:A:1445:G:C3'	2.41	0.50
1:A:1483:A:H5'	66:NB:71:GLY:HA2	1.93	0.50
1:A:1498:G:H3'	1:A:1499:G:H5"	1.93	0.50
1:A:1668:G:O2'	1:A:1669:U:H5'	2.10	0.50
2:B:52:A:H5"	41:OA:48:ASN:O	2.10	0.50
2:B:92:G:C8	2:B:94:G:H1'	2.46	0.50
2:B:148:G:H3'	19:S:49:ARG:HH12	1.77	0.50
2:B:148:G:OP1	19:S:53:TYR:HE2	1.94	0.50
2:B:199:A:C6	2:B:201:A:H1'	2.47	0.50
2:B:209:A:H2'	8:H:162:THR:HG21	1.92	0.50
2:B:496:C:H2'	2:B:497:C:C6	2.47	0.50
2:B:561:C:H2'	2:B:562:C:C6	2.46	0.50
2:B:675:C:H2'	2:B:676:G:O4'	2.12	0.50
2:B:904:A:H5"	2:B:1537:A:C5'	2.42	0.50
2:B:1150:A:H3'	2:B:1151:U:C6	2.46	0.50
2:B:1370:G:H5"	32:FA:18:GLY:O	2.10	0.50
2:B:1546:A:H2'	2:B:1547:G:H5'	1.92	0.50
2:B:1549:U:H2'	2:B:1550:C:C5	2.46	0.50
2:B:1627:U:H2'	2:B:1814:A:N7	2.26	0.50
2:B:1886:A:H2'	2:B:1887:A:C8	2.45	0.50
2:B:2191:U:H2'	2:B:2192:C:C6	2.47	0.50
2:B:2298:U:C5	2:B:2921:U:H1'	2.47	0.50
2:B:2413:A:O2'	2:B:2414:G:H5'	2.12	0.50
2:B:2525:G:H22	12:L:44:ARG:NH1	2.10	0.50
2:B:2732:G:H5'	2:B:2761:G:H5"	1.94	0.50
2:B:2882:U:O4	7:G:4:ARG:HG2	2.11	0.50
2:B:3386:G:H2'	2:B:3387:U:C6	2.47	0.50
6:F:122:ASP:OD2	6:F:125:ALA:HB2	2.11	0.50
7:G:60:LEU:HD23	7:G:68:HIS:HA	1.93	0.50
8:H:30:ILE:HD13	8:H:128:ALA:HB2	1.94	0.50
9:I:109:THR:HG23	9:I:110:LEU:N	2.27	0.50
10:J:164:SER:CB	37:KA:5:HIS:C	2.84	0.50
11:K:76:TYR:CE2	11:K:78:GLU:HA	2.47	0.50
11:K:95:ILE:CG2	11:K:99:PRO:HB2	2.39	0.50
11:K:242:SER:C	11:K:244:ASN:H	2.18	0.50
12:L:150:LEU:HD13	12:L:151:VAL:N	2.26	0.50
12:L:155:ASN:CG	12:L:156:ASP:H	2.20	0.50
13:M:103:ILE:HG13	13:M:136:PHE:CE1	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:58:VAL:HG21	17:Q:101:ARG:NH1	2.27	0.50
19:S:14:LYS:HA	19:S:19:LEU:HB3	1.93	0.50
19:S:87:GLN:O	19:S:88:GLY:O	2.28	0.50
29:CA:76:VAL:HG22	29:CA:83:VAL:CG2	2.41	0.50
31:EA:13:VAL:C	31:EA:20:GLY:H	2.19	0.50
34:HA:42:ILE:HD11	34:HA:67:VAL:HG22	1.94	0.50
34:HA:44:ILE:CG1	34:HA:53:LYS:HD3	2.42	0.50
38:LA:80:ARG:HB3	38:LA:85:VAL:HG22	1.93	0.50
38:LA:80:ARG:CD	38:LA:85:VAL:HG22	2.39	0.50
48:VA:38:MET:O	48:VA:41:VAL:HB	2.10	0.50
49:WA:45:TRP:HA	49:WA:57:PRO:HA	1.93	0.50
52:ZA:99:LYS:HG2	52:ZA:100:ALA:N	2.27	0.50
53:AB:76:ARG:HD3	53:AB:76:ARG:O	2.12	0.50
53:AB:138:VAL:O	53:AB:150:MET:HE3	2.12	0.50
54:BB:125:LYS:CB	54:BB:159:THR:HG22	2.38	0.50
56:DB:84:TYR:CE1	56:DB:86:PRO:HG3	2.46	0.50
56:DB:161:GLU:HG2	56:DB:170:THR:CB	2.42	0.50
59:GB:57:ARG:CZ	59:GB:57:ARG:HB2	2.41	0.50
70:RB:56:VAL:HG12	70:RB:57:ARG:H	1.76	0.50
73:UB:87:VAL:HB	73:UB:92:CYS:CB	2.42	0.50
74:VB:75:VAL:O	74:VB:75:VAL:HG13	2.12	0.50
82:DC:324:MET:HE2	82:DC:324:MET:HA	1.92	0.50
82:DC:608:PRO:HG3	82:DC:636:PHE:CD2	2.46	0.50
1:A:15:U:H2'	1:A:16:G:O4'	2.11	0.50
1:A:142:G:H5"	56:DB:139:ASN:OD1	2.11	0.50
1:A:392:G:N2	56:DB:92:ARG:NH1	2.59	0.50
1:A:615:A:H2'	1:A:616:G:O4'	2.11	0.50
1:A:747:C:C2'	1:A:748:U:H5'	2.42	0.50
1:A:811:A:H61	57:EB:113:PRO:HG3	1.76	0.50
1:A:822:U:O2'	1:A:823:G:H5"	2.10	0.50
1:A:906:A:H2	1:A:998:A:H1'	1.76	0.50
1:A:1126:G:H5'	45:SA:11:ARG:HD2	1.93	0.50
1:A:1281:G:H2'	1:A:1282:U:O4'	2.11	0.50
1:A:1470:C:P	1:A:1471:A:H1'	2.52	0.50
2:B:95:A:H2'	2:B:96:G:O4'	2.12	0.50
2:B:96:G:H5'	17:Q:15:ARG:CZ	2.41	0.50
2:B:219:A:O2'	2:B:220:G:H5'	2.11	0.50
2:B:294:U:H5'	40:NA:76:ARG:HD3	1.94	0.50
2:B:338:A:C2	2:B:1426:C:O2	2.59	0.50
2:B:393:U:H3	2:B:397:A:H62	1.59	0.50
2:B:1012:G:H8	2:B:1012:G:O5'	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1405:U:H6	2:B:1405:U:O5'	1.94	0.50
2:B:1554:U:H2'	2:B:1582:C:OP2	2.11	0.50
2:B:1672:U:H5"	23:W:64:ARG:CD	2.42	0.50
2:B:1753:G:H2'	2:B:1754:G:C8	2.43	0.50
2:B:1916:U:C4'	23:W:85:ARG:HD3	2.41	0.50
2:B:2828:G:H2'	2:B:2829:U:C6	2.46	0.50
2:B:2996:U:H3'	2:B:2997:G:C5'	2.39	0.50
2:B:3173:G:N2	37:KA:96:ALA:HB2	2.26	0.50
2:B:3329:U:C5'	7:G:308:MET:HB3	2.42	0.50
4:D:62:U:H5"	9:I:285:ARG:NH1	2.27	0.50
7:G:84:VAL:HG12	7:G:162:VAL:HB	1.94	0.50
7:G:252:ILE:HD12	7:G:252:ILE:H	1.77	0.50
7:G:336:VAL:HG12	7:G:337:THR:N	2.26	0.50
8:H:195:ARG:HD2	8:H:197:ARG:HH22	1.76	0.50
8:H:222:VAL:HG13	8:H:225:VAL:CB	2.39	0.50
8:H:351:PRO:CG	11:K:70:LYS:HD2	2.40	0.50
10:J:158:TYR:CE2	18:R:115:PHE:CB	2.89	0.50
11:K:25:GLN:O	11:K:26:VAL:C	2.55	0.50
11:K:242:SER:C	11:K:244:ASN:N	2.70	0.50
12:L:197:VAL:O	12:L:197:VAL:HG23	2.10	0.50
13:M:55:VAL:O	13:M:55:VAL:HG23	2.12	0.50
15:O:12:LEU:HB2	15:O:133:ARG:NH2	2.26	0.50
18:R:68:LEU:HB3	18:R:90:VAL:HG23	1.93	0.50
20:T:52:LEU:HA	20:T:55:HIS:HD2	1.76	0.50
22:V:65:SER:HB3	22:V:93:ILE:CD1	2.38	0.50
32:FA:49:HIS:N	32:FA:50:PRO:CD	2.75	0.50
32:FA:148:ILE:HA	40:NA:6:GLY:O	2.12	0.50
34:HA:59:TYR:HA	34:HA:62:LEU:HB2	1.92	0.50
38:LA:3:GLN:HG3	38:LA:30:LEU:HD23	1.92	0.50
42:PA:27:ILE:HG23	42:PA:39:ARG:HG3	1.92	0.50
43:QA:49:MET:HG3	43:QA:51:ILE:N	2.26	0.50
45:SA:2:ARG:NH1	45:SA:4:LYS:HE2	2.26	0.50
46:TA:11:TYR:HA	46:TA:19:LYS:O	2.10	0.50
48:VA:37:GLN:O	48:VA:41:VAL:HG23	2.12	0.50
51:YA:62:LYS:HB2	51:YA:62:LYS:NZ	2.27	0.50
51:YA:103:MET:H	51:YA:215:VAL:HG13	1.75	0.50
51:YA:179:SER:OG	51:YA:183:GLN:HB2	2.11	0.50
52:ZA:243:TYR:HD1	52:ZA:246:GLU:HG3	1.76	0.50
54:BB:139:VAL:HB	54:BB:147:ILE:HB	1.92	0.50
55:CB:113:ILE:CG2	55:CB:190:ILE:HB	2.30	0.50
55:CB:120:ILE:O	55:CB:124:LEU:HD13	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:KB:88:LEU:HA	63:KB:91:LEU:HB2	1.94	0.50
64:LB:137:LEU:HD22	64:LB:137:LEU:C	2.37	0.50
76:XB:8:ASN:O	76:XB:9:GLY:C	2.55	0.50
76:XB:89:ARG:O	76:XB:92:ARG:CB	2.59	0.50
82:DC:127:VAL:HG11	82:DC:143:LEU:HD11	1.94	0.50
1:A:400:A:OP2	58:FB:25:ARG:HG3	2.11	0.50
1:A:523:G:H21	1:A:529:A:N6	2.04	0.50
1:A:531:C:H5	1:A:532:U:C6	2.29	0.50
1:A:902:G:H2'	1:A:903:U:C6	2.47	0.50
1:A:1073:G:H2'	1:A:1074:G:O4'	2.12	0.50
1:A:1175:U:H2'	1:A:1176:G:H8	1.77	0.50
1:A:1473:U:H5	55:CB:97:LEU:HD23	1.75	0.50
1:A:1782:A:H3'	1:A:1783:C:C5'	2.41	0.50
2:B:225:C:H1'	30:DA:102:SER:HB3	1.94	0.50
2:B:655:C:H2'	2:B:656:A:C8	2.47	0.50
2:B:675:C:H2'	2:B:676:G:C4'	2.42	0.50
2:B:1270:A:C5'	82:DC:741:GLY:HA3	2.40	0.50
2:B:1376:C:H2'	2:B:1377:G:O4'	2.12	0.50
2:B:1582:C:H5"	2:B:1583:A:OP1	2.12	0.50
2:B:2384:A:H2	20:T:96:LYS:HE2	1.77	0.50
2:B:3105:U:H2'	2:B:3106:A:O4'	2.12	0.50
2:B:3362:A:H3'	2:B:3363:U:H6	1.76	0.50
6:F:103:PRO:HB3	6:F:161:ASP:CA	2.42	0.50
6:F:225:ILE:HD12	6:F:235:ALA:H	1.77	0.50
7:G:94:GLU:HA	7:G:99:LEU:CD1	2.41	0.50
10:J:4:GLN:HG2	36:JA:74:PHE:CD1	2.44	0.50
10:J:98:VAL:C	10:J:100:LYS:H	2.20	0.50
12:L:219:ASP:O	12:L:223:ALA:HB3	2.12	0.50
13:M:41:ILE:HG13	13:M:70:THR:HG21	1.93	0.50
20:T:147:TRP:HZ2	20:T:153:VAL:HG21	1.77	0.50
24:X:11:GLY:CA	24:X:59:VAL:HG23	2.40	0.50
25:Y:78:LYS:HD3	25:Y:87:LYS:CE	2.40	0.50
34:HA:51:LEU:HD11	38:LA:91:ARG:CG	2.36	0.50
36:JA:64:LYS:O	36:JA:65:PHE:HB2	2.11	0.50
36:JA:109:LEU:HA	36:JA:112:ALA:HB3	1.93	0.50
38:LA:80:ARG:HD3	38:LA:85:VAL:HA	1.93	0.50
44:RA:79:GLU:HB3	44:RA:82:LEU:HB3	1.94	0.50
49:WA:181:TRP:HE3	49:WA:187:GLN:O	1.95	0.50
50:XA:85:ALA:HA	50:XA:202:TYR:HD1	1.77	0.50
51:YA:113:MET:CE	51:YA:209:ASN:HD22	2.25	0.50
52:ZA:157:LYS:HG2	52:ZA:171:PRO:HD3	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:164:VAL:HA	53:AB:168:ILE:HG12	1.94	0.50
56:DB:162:VAL:HG22	56:DB:163:THR:N	2.27	0.50
58:FB:46:VAL:CG2	58:FB:54:LYS:HB3	2.42	0.50
59:GB:77:ILE:HA	59:GB:80:LEU:CD1	2.37	0.50
59:GB:77:ILE:HD12	59:GB:77:ILE:H	1.77	0.50
61:IB:34:TRP:HE3	61:IB:61:THR:HA	1.77	0.50
61:IB:109:VAL:HG23	61:IB:137:PHE:O	2.11	0.50
63:KB:66:ILE:HG23	63:KB:67:THR:N	2.27	0.50
64:LB:130:GLY:HA3	76:XB:27:SER:HB3	1.92	0.50
69:QB:47:PRO:HG2	69:QB:53:TRP:CD1	2.47	0.50
72:TB:57:ARG:HH22	77:YB:26:GLN:HB2	1.76	0.50
76:XB:66:LYS:HD3	76:XB:66:LYS:N	2.26	0.50
82:DC:283:ARG:O	82:DC:287:ALA:HB2	2.12	0.50
82:DC:521:TYR:CD1	86:DC:903:SO1:H612	2.46	0.50
82:DC:590:ALA:HB3	82:DC:720:ALA:CB	2.42	0.50
82:DC:739:ALA:CB	82:DC:788:THR:HB	2.25	0.50
1:A:777:C:H3'	1:A:778:G:H5"	1.93	0.50
1:A:1547:A:C2'	1:A:1548:G:H5'	2.42	0.50
1:A:1643:U:H1'	1:A:1781:A:H4'	1.93	0.50
1:A:1782:A:H5"	1:A:1783:C:H6	1.75	0.50
2:B:838:G:H21	2:B:1724:U:P	2.35	0.50
2:B:1263:A:H4'	2:B:1264:G:H8	1.75	0.50
2:B:1362:G:H5"	11:K:160:ARG:O	2.12	0.50
2:B:1644:C:H5	38:LA:68:THR:HG21	1.77	0.50
2:B:1727:G:O3'	2:B:1730:G:H4'	2.12	0.50
2:B:1799:A:H2'	2:B:1800:A:H8	1.77	0.50
2:B:1937:U:H2'	2:B:1938:U:C6	2.47	0.50
2:B:2128:C:H2'	2:B:2129:U:C5'	2.41	0.50
2:B:2178:A:H5"	6:F:132:ASN:ND2	2.26	0.50
2:B:2353:G:H2'	2:B:2354:C:C6	2.47	0.50
2:B:2691:A:H3'	2:B:2692:A:C8	2.44	0.50
2:B:2712:U:H2'	2:B:2713:U:C6	2.47	0.50
2:B:2743:A:O2'	2:B:2744:U:H5'	2.12	0.50
2:B:2746:A:C6	9:I:148:ILE:HB	2.47	0.50
2:B:3117:C:H1'	2:B:3118:C:O4'	2.12	0.50
5:E:67:ILE:HG21	5:E:77:ALA:HB2	1.93	0.50
9:I:56:THR:OG1	9:I:59:ASP:HB2	2.11	0.50
13:M:31:ARG:HG2	13:M:32:GLY:N	2.25	0.50
16:P:93:LYS:HG2	16:P:93:LYS:O	2.12	0.50
19:S:98:LEU:HD23	19:S:99:ARG:N	2.27	0.50
19:S:151:ILE:HA	19:S:156:HIS:HD2	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:4:PHE:HE2	24:X:104:GLU:HG2	1.77	0.50
29:CA:39:LYS:HB3	29:CA:39:LYS:NZ	2.27	0.50
30:DA:28:ARG:HH11	30:DA:49:PRO:HG2	1.77	0.50
38:LA:44:CYS:HB3	38:LA:49:SER:H	1.75	0.50
38:LA:100:ILE:O	38:LA:104:VAL:HG23	2.12	0.50
41:OA:25:ARG:HG3	43:QA:50:ASN:O	2.12	0.50
46:TA:3:ASN:HA	46:TA:92:GLU:CG	2.42	0.50
48:VA:39:HIS:HA	48:VA:42:ARG:CD	2.42	0.50
51:YA:61:LEU:C	51:YA:63:GLY:H	2.19	0.50
52:ZA:63:VAL:HG12	52:ZA:134:LEU:HD13	1.92	0.50
54:BB:126:VAL:HB	54:BB:140:VAL:O	2.12	0.50
54:BB:208:VAL:C	54:BB:219:VAL:HG13	2.36	0.50
56:DB:57:ASP:OD2	56:DB:72:ARG:HD3	2.11	0.50
59:GB:134:ILE:C	59:GB:134:ILE:HD12	2.37	0.50
64:LB:43:THR:O	64:LB:47:LYS:HE2	2.12	0.50
64:LB:69:ALA:O	64:LB:73:GLU:HG2	2.12	0.50
69:QB:130:ARG:O	69:QB:134:ARG:HB2	2.12	0.50
73:UB:104:LEU:CD2	73:UB:124:VAL:HA	2.32	0.50
76:XB:12:LYS:HD3	76:XB:12:LYS:C	2.37	0.50
82:DC:512:SER:HA	82:DC:518:VAL:CG1	2.42	0.50
82:DC:759:GLN:CB	82:DC:766:PHE:HA	2.41	0.50
1:A:298:C:H5”	54:BB:38:LEU:HD23	1.94	0.50
1:A:641:G:O2’	1:A:642:G:H5’	2.12	0.50
1:A:1076:A:H5’	76:XB:13:LYS:HD3	1.93	0.50
1:A:1400:A:H5’	67:OB:60:ARG:NH2	2.27	0.50
2:B:284:A:N6	2:B:2785:A:O4’	2.45	0.50
2:B:324:A:H2’	2:B:325:A:C8	2.46	0.50
2:B:536:U:O2’	2:B:537:A:H5’	2.12	0.50
2:B:806:A:N3	2:B:2812:C:O2’	2.41	0.50
2:B:873:C:H4’	2:B:1907:C:O2’	2.11	0.50
2:B:948:C:H2’	2:B:949:C:C6	2.47	0.50
2:B:1156:C:H4’	4:D:86:U:P	2.52	0.50
2:B:1296:C:C4	2:B:1297:C:N4	2.80	0.50
2:B:1688:U:C5	26:Z:78:TYR:HB2	2.47	0.50
2:B:1864:A:N7	2:B:1865:A:N6	2.60	0.50
2:B:1926:C:H4’	2:B:1927:G:C4	2.47	0.50
2:B:2156:C:O2’	2:B:2157:G:H5’	2.11	0.50
2:B:2173:U:C2’	2:B:2174:G:C8	2.95	0.50
2:B:2369:G:C6	2:B:2370:G:C6	2.99	0.50
2:B:2484:A:H4’	5:E:130:LYS:CD	2.42	0.50
2:B:2594:C:C2’	2:B:2595:A:H5”	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2654:C:OP2	46:TA:2:VAL:HG22	2.12	0.50
2:B:2755:C:O5'	2:B:2755:C:H6	1.93	0.50
2:B:2757:U:C2'	2:B:2758:A:H5"	2.42	0.50
2:B:2892:A:H2'	2:B:2893:C:H6	1.77	0.50
2:B:3268:A:C5	10:J:69:PHE:CZ	3.00	0.50
2:B:3278:C:H3'	2:B:3279:A:C5'	2.41	0.50
2:B:3308:C:H2'	2:B:3309:G:N3	2.27	0.50
2:B:3335:A:H5"	2:B:3370:A:H2	1.77	0.50
4:D:43:U:H4'	15:O:141:ARG:HA	1.92	0.50
4:D:46:A:OP1	9:I:158:ARG:HG2	2.12	0.50
6:F:143:GLU:HB3	6:F:145:LYS:CE	2.36	0.50
9:I:204:VAL:HG11	9:I:236:LEU:HD22	1.94	0.50
10:J:9:TRP:CZ2	10:J:11:PRO:HA	2.46	0.50
15:O:54:VAL:HG11	15:O:57:PHE:CE2	2.47	0.50
19:S:3:ALA:O	19:S:6:TYR:HB2	2.11	0.50
22:V:86:THR:HG23	22:V:105:ARG:O	2.12	0.50
24:X:167:ARG:HG3	24:X:168:PRO:HD2	1.93	0.50
25:Y:15:PHE:N	25:Y:15:PHE:HD2	2.08	0.50
30:DA:34:PRO:HD2	30:DA:101:PRO:O	2.11	0.50
32:FA:79:TRP:HA	32:FA:82:ILE:CD1	2.42	0.50
44:RA:106:ARG:HG3	44:RA:106:ARG:HH11	1.76	0.50
48:VA:27:VAL:CB	48:VA:189:GLN:HB3	2.39	0.50
52:ZA:157:LYS:HG3	72:TB:95:PRO:HA	1.93	0.50
55:CB:148:ARG:HD2	55:CB:157:ARG:HB3	1.92	0.50
58:FB:5:ARG:CZ	58:FB:28:GLU:HA	2.42	0.50
59:GB:39:LYS:N	59:GB:39:LYS:HD2	2.27	0.50
62:JB:68:GLU:C	62:JB:70:ASN:H	2.20	0.50
72:TB:81:VAL:HA	72:TB:85:ASP:CB	2.42	0.50
74:VB:24:VAL:HG13	74:VB:71:GLY:O	2.12	0.50
78:ZB:32:PHE:HZ	78:ZB:38:ARG:HD2	1.77	0.50
82:DC:119:LEU:HD11	82:DC:145:GLN:OE1	2.10	0.50
82:DC:144:ARG:HG3	82:DC:192:TYR:CZ	2.47	0.50
83:EC:6801:A:H3'	83:EC:6802:A:C5'	2.42	0.50
1:A:194:U:O2'	1:A:195:G:H4'	2.12	0.49
1:A:205:U:H2'	1:A:206:A:H8	1.77	0.49
1:A:327:U:O2'	61:IB:12:ALA:HB3	2.12	0.49
1:A:747:C:H2'	1:A:748:U:H5'	1.93	0.49
1:A:807:A:H2'	1:A:808:U:O4'	2.12	0.49
2:B:17:G:N2	3:C:143:U:H3	2.09	0.49
2:B:629:U:H2'	2:B:630:A:H8	1.70	0.49
2:B:680:G:H5"	8:H:114:ASN:HD21	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1411:C:H2'	2:B:1412:G:H8	1.77	0.49
2:B:1581:C:H2'	2:B:1582:C:C5'	2.32	0.49
2:B:1623:G:H2'	2:B:1624:G:O4'	2.12	0.49
2:B:1940:G:H21	2:B:3362:A:H1'	1.75	0.49
2:B:2052:G:H2'	2:B:2053:C:O4'	2.12	0.49
2:B:2162:U:H2'	2:B:2163:C:H6	1.76	0.49
2:B:2165:G:H1'	2:B:2168:A:N6	2.27	0.49
2:B:2922:G:H1'	2:B:2951:G:H21	1.77	0.49
2:B:2932:U:H5"	27:AA:41:GLY:HA2	1.94	0.49
2:B:3081:C:O2'	2:B:3082:C:H5'	2.12	0.49
2:B:3083:G:H2'	2:B:3084:C:O4'	2.12	0.49
2:B:3112:G:H1	2:B:3119:U:H2'	1.77	0.49
2:B:3243:A:H5'	20:T:156:LEU:HD11	1.94	0.49
3:C:11:C:H2'	3:C:12:A:H8	1.68	0.49
3:C:85:G:O6	30:DA:112:ASP:HB3	2.12	0.49
4:D:16:U:H2'	4:D:17:A:C8	2.47	0.49
7:G:225:GLY:O	7:G:269:GLN:HA	2.12	0.49
8:H:8:VAL:CG1	8:H:9:HIS:H	2.16	0.49
8:H:188:ARG:HD3	8:H:200:THR:CB	2.42	0.49
8:H:281:ILE:HD12	22:V:125:ASP:HB3	1.94	0.49
9:I:286:VAL:O	9:I:290:ILE:HG13	2.12	0.49
12:L:55:TYR:O	12:L:59:GLN:HG2	2.12	0.49
12:L:75:ILE:HD12	12:L:75:ILE:N	2.26	0.49
14:N:92:HIS:HB3	14:N:94:PHE:CE2	2.47	0.49
14:N:116:ARG:HH11	14:N:116:ARG:CB	2.24	0.49
15:O:61:ARG:O	15:O:62:ASN:HB2	2.12	0.49
17:Q:58:VAL:C	17:Q:69:VAL:HG23	2.37	0.49
17:Q:69:VAL:HG22	17:Q:70:ARG:N	2.25	0.49
17:Q:189:GLU:HB2	17:Q:190:LYS:HD3	1.94	0.49
18:R:74:ARG:HB3	18:R:74:ARG:NH1	2.26	0.49
36:JA:25:TYR:HB3	36:JA:27:ARG:HG2	1.93	0.49
36:JA:96:ILE:CG2	36:JA:100:ILE:HG21	2.42	0.49
37:KA:50:ALA:HB2	37:KA:68:TRP:CD2	2.46	0.49
39:MA:23:ASP:O	39:MA:27:GLU:HG3	2.11	0.49
49:WA:177:MET:HG3	49:WA:193:ILE:HG22	1.93	0.49
50:XA:116:LYS:O	50:XA:117:GLU:C	2.53	0.49
54:BB:180:LEU:HB2	54:BB:230:GLU:O	2.12	0.49
55:CB:57:SER:C	55:CB:59:VAL:H	2.20	0.49
55:CB:70:VAL:CG2	66:NB:47:LYS:HD3	2.42	0.49
55:CB:118:LEU:CD2	55:CB:198:LEU:HD13	2.42	0.49
57:EB:39:ARG:H	57:EB:40:PRO:CD	2.21	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:84:HIS:C	58:FB:86:SER:H	2.19	0.49
59:GB:28:LEU:HD13	80:BC:43:ARG:NH1	2.26	0.49
61:IB:6:THR:O	61:IB:7:VAL:HB	2.11	0.49
67:OB:28:PHE:HE1	67:OB:51:ALA:HB3	1.77	0.49
75:WB:50:ILE:C	75:WB:52:LYS:N	2.70	0.49
1:A:23:G:H21	1:A:368:U:C5'	2.24	0.49
1:A:542:A:H2'	1:A:544:A:H5'	1.93	0.49
1:A:754:A:C6	1:A:793:A:H2'	2.46	0.49
1:A:962:C:H3'	1:A:963:A:C8	2.47	0.49
1:A:1007:C:H5"	64:LB:135:ARG:CG	2.42	0.49
1:A:1119:G:H2'	1:A:1120:U:C6	2.47	0.49
1:A:1555:A:O2'	65:MB:82:ASN:HB3	2.12	0.49
1:A:1673:G:H4'	56:DB:92:ARG:HH22	1.77	0.49
2:B:356:C:H5"	43:QA:47:THR:CG2	2.39	0.49
2:B:516:A:N6	2:B:574:U:H3	2.08	0.49
2:B:966:U:H2'	2:B:967:A:C8	2.48	0.49
2:B:1500:G:C2	2:B:1501:U:H1'	2.47	0.49
2:B:1506:A:OP1	21:U:127:ARG:HD2	2.12	0.49
2:B:1567:U:H2'	2:B:1568:U:H5"	1.94	0.49
2:B:1605:A:OP1	2:B:1835:A:H5"	2.11	0.49
2:B:1829:G:O3'	2:B:1830:G:C8	2.64	0.49
2:B:2349:U:H4'	2:B:2390:A:H4'	1.93	0.49
2:B:2378:C:H2'	2:B:2379:U:H6	1.73	0.49
2:B:2884:C:H2'	2:B:2885:C:C6	2.47	0.49
2:B:3112:G:H1'	2:B:3122:A:N6	2.27	0.49
6:F:33:ASP:O	6:F:37:ARG:HG2	2.12	0.49
9:I:33:ARG:NH1	9:I:50:ARG:CZ	2.75	0.49
11:K:173:LEU:C	11:K:175:LYS:H	2.20	0.49
13:M:21:LYS:HA	18:R:8:LYS:HG3	1.92	0.49
13:M:189:GLU:C	13:M:191:LEU:H	2.20	0.49
17:Q:54:LEU:HG	17:Q:119:TYR:CE2	2.47	0.49
17:Q:57:VAL:HG23	17:Q:115:ARG:HD2	1.94	0.49
21:U:117:ILE:HG23	21:U:117:ILE:O	2.11	0.49
22:V:57:ILE:C	22:V:59:ARG:H	2.19	0.49
24:X:21:GLU:HB3	25:Y:146:ASN:HD21	1.76	0.49
26:Z:41:ILE:HG12	26:Z:43:VAL:HG23	1.93	0.49
27:AA:58:VAL:HG23	27:AA:58:VAL:O	2.12	0.49
27:AA:70:ARG:O	27:AA:72:LYS:HE3	2.11	0.49
29:CA:118:GLY:H	43:QA:14:ALA:HB1	1.76	0.49
34:HA:50:VAL:O	34:HA:50:VAL:HG12	2.12	0.49
38:LA:42:PRO:HB2	38:LA:51:LEU:HD13	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:MA:60:GLU:O	39:MA:63:ARG:HB2	2.12	0.49
50:XA:183:ARG:CA	50:XA:188:LEU:HG	2.32	0.49
54:BB:15:PRO:HB3	54:BB:39:ARG:NH1	2.27	0.49
54:BB:18:TRP:O	54:BB:19:LEU:HB2	2.11	0.49
58:FB:171:SER:O	58:FB:173:PRO:HD3	2.12	0.49
59:GB:140:ILE:CG1	59:GB:160:PRO:HD2	2.42	0.49
63:KB:135:LEU:CB	63:KB:136:PRO:HD2	2.42	0.49
64:LB:83:ILE:HG12	64:LB:84:ARG:H	1.76	0.49
73:UB:107:PHE:CD1	73:UB:114:LYS:HE2	2.47	0.49
76:XB:7:SER:HB3	76:XB:13:LYS:HD2	1.94	0.49
77:YB:20:LYS:CG	77:YB:27:GLY:H	2.21	0.49
78:ZB:58:GLU:CD	78:ZB:61:ARG:HB3	2.37	0.49
80:BC:10:ARG:HD3	82:DC:665:ALA:HB2	1.94	0.49
82:DC:164:LEU:HD13	82:DC:285:PHE:CZ	2.47	0.49
82:DC:189:VAL:HG11	82:DC:201:GLN:HA	1.94	0.49
1:A:611:U:H4'	61:IB:99:ARG:CZ	2.43	0.49
1:A:693:U:H3'	1:A:694:U:H5'	1.93	0.49
2:B:545:U:H5	2:B:547:G:H21	1.59	0.49
2:B:676:G:N1	22:V:61:PRO:HD3	2.27	0.49
2:B:1234:G:H1'	16:P:132:ILE:HD13	1.94	0.49
2:B:1363:A:H5'	11:K:160:ARG:HB3	1.94	0.49
2:B:1588:A:H3'	2:B:1589:A:C5'	2.41	0.49
2:B:1688:U:H2'	2:B:1689:U:C5	2.47	0.49
2:B:1802:C:O2'	2:B:1803:C:H5'	2.12	0.49
2:B:1833:G:H2'	2:B:1834:U:C6	2.47	0.49
2:B:3087:A:H1'	2:B:3375:A:H62	1.76	0.49
3:C:5:U:H2'	3:C:6:U:O4'	2.12	0.49
3:C:8:C:H6	3:C:8:C:H3'	1.77	0.49
4:D:81:U:O2'	4:D:82:G:H5'	2.12	0.49
6:F:58:LEU:HD22	6:F:77:ILE:CG2	2.42	0.49
7:G:6:TYR:O	7:G:8:ALA:N	2.45	0.49
7:G:56:ILE:HD11	7:G:356:LEU:HB3	1.93	0.49
7:G:60:LEU:HD11	7:G:62:ARG:HE	1.77	0.49
7:G:307:PRO:HA	7:G:361:THR:O	2.13	0.49
13:M:86:TYR:CE2	13:M:151:VAL:HG22	2.46	0.49
20:T:136:THR:CG2	20:T:137:THR:N	2.75	0.49
22:V:173:GLU:HG2	32:FA:52:TYR:HA	1.94	0.49
32:FA:38:GLN:HG3	32:FA:53:PHE:CE2	2.47	0.49
36:JA:35:GLN:O	36:JA:43:ARG:HB2	2.12	0.49
41:OA:53:ALA:HA	41:OA:56:ARG:NH1	2.26	0.49
58:FB:36:THR:O	58:FB:95:THR:HA	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:172:ARG:CD	58:FB:175:GLN:HG3	2.41	0.49
63:KB:114:ARG:O	63:KB:118:ILE:HG13	2.11	0.49
67:OB:53:TYR:O	67:OB:57:LEU:HG	2.12	0.49
72:TB:17:ALA:HB1	72:TB:25:VAL:HG11	1.93	0.49
82:DC:16:VAL:HG21	82:DC:346:VAL:HG11	1.95	0.49
82:DC:25:ILE:CD1	82:DC:142:VAL:HG12	2.42	0.49
82:DC:519:LEU:HD22	82:DC:531:ALA:CB	2.43	0.49
1:A:247:A:H4'	61:IB:37:ASN:O	2.11	0.49
1:A:488:G:H2'	1:A:489:C:H5'	1.94	0.49
1:A:633:U:H2'	1:A:634:G:O4'	2.12	0.49
1:A:768:C:C2	59:GB:143:ILE:HD13	2.48	0.49
1:A:785:U:O2'	1:A:786:C:H5'	2.12	0.49
1:A:1394:G:H2'	1:A:1395:G:H8	1.77	0.49
1:A:1593:A:H2'	1:A:1594:G:H8	1.75	0.49
2:B:364:G:C5'	8:H:84:ARG:HG2	2.43	0.49
2:B:997:A:H3'	2:B:998:A:C8	2.47	0.49
2:B:1156:C:H1'	4:D:86:U:C5	2.47	0.49
2:B:1517:G:H5"	43:QA:22:PRO:HG2	1.94	0.49
2:B:1721:U:OP2	23:W:124:TYR:HE1	1.96	0.49
2:B:1925:U:H1'	47:UA:20:SER:HB3	1.94	0.49
2:B:2598:G:H2'	2:B:2599:U:H6	1.77	0.49
2:B:2916:U:H5	2:B:2935:U:HO2'	1.61	0.49
2:B:3027:A:H2'	2:B:3028:G:O4'	2.12	0.49
2:B:3276:G:H3'	10:J:48:ARG:NH2	2.26	0.49
6:F:5:ILE:HD12	6:F:7:ASN:HD21	1.78	0.49
6:F:139:HIS:HA	6:F:146:THR:HA	1.94	0.49
7:G:67:PHE:CZ	27:AA:88:ARG:HB2	2.48	0.49
7:G:236:LYS:HZ3	27:AA:45:ARG:NH2	2.10	0.49
9:I:15:ARG:HB3	9:I:15:ARG:CZ	2.42	0.49
9:I:40:HIS:HB3	9:I:43:LYS:CE	2.42	0.49
9:I:125:VAL:HG13	9:I:244:HIS:CD2	2.48	0.49
12:L:62:LYS:HA	19:S:28:TRP:HZ3	1.77	0.49
13:M:92:TYR:OH	13:M:101:VAL:HB	2.12	0.49
14:N:35:ASP:OD2	14:N:39:LYS:HB3	2.11	0.49
20:T:20:ALA:HB1	20:T:84:LEU:CD1	2.43	0.49
20:T:27:LEU:HD12	20:T:102:LEU:HB2	1.94	0.49
24:X:10:ILE:HD13	25:Y:148:PRO:CG	2.41	0.49
25:Y:66:ASN:CG	33:GA:35:VAL:HG13	2.37	0.49
25:Y:83:ARG:N	33:GA:21:ILE:HD13	2.28	0.49
25:Y:92:ARG:C	25:Y:94:GLU:H	2.20	0.49
32:FA:35:ALA:HB3	32:FA:41:HIS:CE1	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:FA:123:VAL:H	32:FA:143:GLY:HA2	1.77	0.49
40:NA:90:MET:HA	40:NA:93:ILE:HG12	1.95	0.49
48:VA:63:ILE:C	48:VA:66:PHE:HB3	2.36	0.49
49:WA:142:ALA:HB1	49:WA:144:LEU:HD21	1.93	0.49
53:AB:55:THR:HA	53:AB:58:VAL:HB	1.93	0.49
54:BB:89:VAL:HG22	54:BB:100:ARG:CZ	2.42	0.49
55:CB:57:SER:O	55:CB:58:LEU:HB2	2.12	0.49
56:DB:78:THR:HG22	56:DB:79:LYS:N	2.12	0.49
59:GB:45:ILE:HG13	59:GB:105:LEU:HD11	1.93	0.49
61:IB:64:VAL:HG12	61:IB:129:ARG:HE	1.78	0.49
65:MB:95:GLY:HA2	65:MB:104:GLN:HA	1.94	0.49
66:NB:40:GLU:H	66:NB:45:ARG:HE	1.60	0.49
67:OB:9:VAL:HG11	67:OB:46:LEU:HG	1.94	0.49
67:OB:61:ILE:C	67:OB:63:LYS:H	2.21	0.49
68:PB:142:GLY:C	68:PB:143:ARG:HD2	2.37	0.49
71:SB:9:VAL:HG22	71:SB:10:GLU:N	2.22	0.49
71:SB:38:LYS:NZ	71:SB:51:VAL:HG22	2.27	0.49
72:TB:36:LYS:HB3	72:TB:110:ILE:HB	1.95	0.49
73:UB:33:LEU:HD13	73:UB:33:LEU:O	2.11	0.49
77:YB:73:LEU:HD23	77:YB:73:LEU:H	1.78	0.49
82:DC:4:PHE:CD1	82:DC:8:GLN:HB3	2.47	0.49
82:DC:564:ARG:HG2	82:DC:801:TRP:CE3	2.46	0.49
1:A:55:A:N6	1:A:403:G:H1'	2.27	0.49
1:A:107:C:H2'	1:A:108:A:H8	1.77	0.49
1:A:652:G:C2'	1:A:653:C:H5'	2.43	0.49
1:A:877:G:H3'	1:A:877:G:OP1	2.12	0.49
1:A:1141:G:H2'	1:A:1142:A:C8	2.47	0.49
1:A:1277:G:H5"	53:AB:139:SER:CB	2.42	0.49
2:B:110:G:C2	2:B:111:C:H1'	2.47	0.49
2:B:147:U:C5'	12:L:136:LEU:HD12	2.42	0.49
2:B:155:G:H21	40:NA:26:ILE:CG2	2.15	0.49
2:B:403:C:H2'	2:B:404:G:C5'	2.42	0.49
2:B:760:G:N2	2:B:770:G:O2'	2.42	0.49
2:B:1007:U:H4'	14:N:92:HIS:HE1	1.77	0.49
2:B:1231:A:N6	2:B:1276:U:H3	2.11	0.49
2:B:1384:U:OP1	8:H:203:ARG:HB3	2.13	0.49
2:B:1454:A:OP1	2:B:1455:U:H4'	2.13	0.49
2:B:3054:U:H2'	2:B:3055:U:C6	2.48	0.49
2:B:3218:A:H2'	2:B:3278:C:H5	1.77	0.49
2:B:3330:A:C2'	2:B:3331:U:H5'	2.42	0.49
3:C:4:C:H5'	21:U:61:ARG:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:195:ARG:C	8:H:197:ARG:H	2.20	0.49
10:J:65:ILE:O	10:J:76:LEU:HA	2.13	0.49
11:K:151:ARG:HG3	11:K:151:ARG:NH1	2.27	0.49
12:L:208:GLU:HG3	12:L:211:LEU:CD2	2.42	0.49
13:M:186:PHE:N	13:M:186:PHE:CD2	2.78	0.49
15:O:84:LEU:HD22	15:O:89:TYR:HA	1.95	0.49
19:S:9:GLU:O	19:S:12:ARG:HB2	2.12	0.49
20:T:136:THR:HG22	20:T:137:THR:N	2.27	0.49
23:W:28:GLU:HB3	23:W:31:GLU:HB3	1.93	0.49
24:X:167:ARG:CG	24:X:168:PRO:HD2	2.42	0.49
31:EA:22:LYS:HG2	31:EA:130:PHE:HA	1.95	0.49
35:IA:72:ARG:NE	35:IA:104:LEU:HD22	2.27	0.49
35:IA:79:ARG:HD2	35:IA:79:ARG:C	2.37	0.49
36:JA:21:HIS:NE2	36:JA:24:ARG:HD2	2.26	0.49
37:KA:64:ILE:C	37:KA:65:ARG:HG3	2.36	0.49
39:MA:38:ARG:HB2	39:MA:38:ARG:CZ	2.43	0.49
48:VA:166:GLY:H	48:VA:169:GLU:HG3	1.77	0.49
49:WA:109:ASP:OD2	67:OB:33:ARG:HG3	2.13	0.49
53:AB:49:ILE:HG12	53:AB:87:TYR:CB	2.32	0.49
54:BB:64:ILE:HD13	74:VB:17:LEU:HD13	1.94	0.49
54:BB:173:ILE:HD12	54:BB:173:ILE:N	2.27	0.49
58:FB:12:SER:CB	58:FB:16:ALA:HB3	2.42	0.49
58:FB:173:PRO:C	58:FB:175:GLN:H	2.20	0.49
61:IB:33:ARG:NH1	61:IB:61:THR:HG21	2.28	0.49
61:IB:97:TYR:OH	73:UB:16:ARG:HA	2.12	0.49
63:KB:22:ALA:HA	63:KB:24:ALA:N	2.27	0.49
66:NB:45:ARG:O	66:NB:48:VAL:HG12	2.13	0.49
72:TB:5:SER:HB3	72:TB:8:ALA:HB3	1.94	0.49
72:TB:22:LYS:CB	72:TB:25:VAL:HG12	2.43	0.49
72:TB:37:PHE:HD1	72:TB:38:LEU:HD23	1.78	0.49
72:TB:82:LYS:HD2	72:TB:82:LYS:H	1.76	0.49
73:UB:3:LYS:C	73:UB:3:LYS:HE3	2.37	0.49
75:WB:54:VAL:CG1	75:WB:89:ILE:HG23	2.42	0.49
82:DC:68:ILE:HD13	82:DC:70:ILE:CG1	2.41	0.49
82:DC:119:LEU:HD13	82:DC:149:GLU:HG3	1.95	0.49
82:DC:744:TYR:HA	82:DC:747:LEU:HD22	1.94	0.49
83:EC:6891:G:H2'	83:EC:6892:U:C6	2.47	0.49
83:EC:6896:A:H2'	83:EC:6897:G:H8	1.77	0.49
1:A:300:A:O2'	1:A:301:A:H5'	2.13	0.49
1:A:649:U:HO2'	1:A:650:U:H6	1.59	0.49
1:A:826:U:H2'	1:A:827:C:C5	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1225:U:C2'	1:A:1226:A:H5'	2.37	0.49
1:A:1337:A:H5'	1:A:1338:C:OP2	2.12	0.49
1:A:1472:C:H4'	1:A:1474:G:C8	2.47	0.49
1:A:1642:G:H2'	1:A:1643:U:C6	2.47	0.49
2:B:9:U:H2'	2:B:10:C:O4'	2.13	0.49
2:B:345:G:N2	2:B:349:A:OP2	2.45	0.49
2:B:517:G:H2'	2:B:518:G:H5'	1.93	0.49
2:B:560:G:C5'	18:R:80:THR:HG21	2.43	0.49
2:B:795:G:O2'	2:B:1111:U:H5"	2.13	0.49
2:B:798:G:H4'	17:Q:15:ARG:HH21	1.72	0.49
2:B:969:C:O3'	33:GA:18:ARG:HB3	2.12	0.49
2:B:1227:C:H5'	2:B:3117:C:C5'	2.42	0.49
2:B:1346:G:H2'	2:B:1347:U:C6	2.47	0.49
2:B:1916:U:H4'	23:W:85:ARG:NH1	2.28	0.49
2:B:1919:G:H1'	2:B:1934:G:N2	2.28	0.49
2:B:2158:A:H8	2:B:2158:A:O5'	1.95	0.49
2:B:2389:C:O2'	2:B:2390:A:H5'	2.13	0.49
2:B:2404:A:H5'	2:B:2405:C:OP2	2.12	0.49
2:B:2737:C:OP1	25:Y:68:THR:HG23	2.12	0.49
2:B:3124:G:H2'	2:B:3125:U:O4'	2.13	0.49
2:B:3126:C:H2'	2:B:3127:A:H8	1.77	0.49
2:B:3127:A:H2'	2:B:3128:G:C8	2.48	0.49
2:B:3211:C:C4	2:B:3212:C:C5	3.00	0.49
2:B:3387:U:H2'	2:B:3388:C:C6	2.47	0.49
3:C:138:A:C2	3:C:139:U:N3	2.80	0.49
5:E:175:GLU:CG	5:E:178:VAL:HG22	2.42	0.49
6:F:40:TYR:CD1	6:F:93:LYS:HB3	2.47	0.49
7:G:148:LEU:O	7:G:152:LYS:HD3	2.12	0.49
9:I:19:PRO:HB2	9:I:23:ARG:HB3	1.94	0.49
10:J:56:LYS:HD2	10:J:98:VAL:HG12	1.93	0.49
11:K:210:PRO:HG3	11:K:243:MET:SD	2.53	0.49
11:K:222:HIS:ND1	11:K:224:ILE:HB	2.27	0.49
13:M:4:ILE:HG23	13:M:5:GLN:H	1.76	0.49
13:M:169:ASN:O	13:M:170:LYS:HB3	2.12	0.49
14:N:26:VAL:HG12	14:N:122:PRO:CG	2.43	0.49
17:Q:5:LYS:O	17:Q:7:LEU:HG	2.12	0.49
19:S:91:GLU:HB3	46:TA:50:PHE:HZ	1.77	0.49
19:S:98:LEU:HD21	19:S:128:LYS:HD3	1.94	0.49
21:U:29:THR:HA	21:U:32:THR:OG1	2.13	0.49
23:W:20:ARG:HD3	23:W:21:LYS:NZ	2.27	0.49
23:W:119:LEU:HG	23:W:123:LEU:CD2	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:34:TYR:HE2	25:Y:93:VAL:HB	1.77	0.49
28:BA:33:ASN:HD21	28:BA:35:LYS:CB	2.24	0.49
32:FA:110:GLY:O	32:FA:128:ARG:HB3	2.12	0.49
37:KA:53:TYR:CE2	37:KA:65:ARG:HB2	2.47	0.49
38:LA:57:LEU:HD13	38:LA:62:TYR:CD1	2.47	0.49
39:MA:108:GLN:C	39:MA:112:PRO:HG3	2.37	0.49
41:OA:38:GLY:CA	41:OA:45:ARG:HB2	2.42	0.49
53:AB:136:VAL:HG13	53:AB:186:VAL:HG22	1.95	0.49
58:FB:38:ILE:HG21	58:FB:79:ALA:O	2.12	0.49
59:GB:49:LEU:HD13	59:GB:49:LEU:O	2.12	0.49
64:LB:17:ALA:HB3	64:LB:81:VAL:HA	1.93	0.49
69:QB:28:LEU:HD23	69:QB:30:VAL:CG1	2.33	0.49
72:TB:113:HIS:NE2	72:TB:114:GLU:HG3	2.27	0.49
73:UB:40:SER:O	73:UB:41:SER:C	2.55	0.49
82:DC:25:ILE:O	82:DC:127:VAL:HA	2.13	0.49
82:DC:385:MET:C	82:DC:387:PRO:HD3	2.37	0.49
82:DC:424:ASP:C	82:DC:426:LEU:H	2.20	0.49
82:DC:554:LEU:HD22	82:DC:556:ILE:HD13	1.94	0.49
82:DC:647:ILE:HD12	82:DC:647:ILE:H	1.78	0.49
82:DC:743:ILE:O	82:DC:747:LEU:HD22	2.13	0.49
82:DC:751:ARG:HB3	82:DC:753:GLN:OE1	2.12	0.49
1:A:156:A:H2'	1:A:157:A:O4'	2.12	0.49
1:A:164:A:H2'	1:A:165:G:C8	2.48	0.49
1:A:931:C:O2'	51:YA:118:GLN:HG3	2.13	0.49
1:A:1049:U:P	77:YB:69:GLY:HA2	2.52	0.49
1:A:1414:U:OP2	1:A:1415:U:H5"	2.13	0.49
2:B:221:A:OP1	2:B:221:A:H3'	2.11	0.49
2:B:361:A:H5'	41:OA:36:SER:HB2	1.94	0.49
2:B:661:G:C5	32:FA:17:ALA:HB3	2.48	0.49
2:B:1234:G:H21	16:P:132:ILE:CG1	2.14	0.49
2:B:1303:A:N3	2:B:1304:A:C2	2.81	0.49
2:B:1450:G:N2	2:B:2354:C:N3	2.61	0.49
2:B:1486:G:H1	2:B:1856:C:H42	1.61	0.49
2:B:1687:U:N3	26:Z:70:LYS:HD2	2.27	0.49
2:B:1709:C:H2'	2:B:1710:C:C6	2.48	0.49
2:B:1867:A:H2	2:B:2119:A:HO2'	1.57	0.49
2:B:2406:C:H1'	2:B:2819:A:C2	2.47	0.49
2:B:2501:U:H2'	2:B:2502:A:C8	2.47	0.49
2:B:2565:U:H2'	2:B:2566:C:C6	2.47	0.49
2:B:2655:U:H3'	46:TA:3:ASN:HB3	1.95	0.49
2:B:2660:G:H2'	2:B:2661:G:H8	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2735:U:H4'	25:Y:51:GLY:CA	2.38	0.49
2:B:3362:A:H2'	2:B:3363:U:H5'	1.93	0.49
4:D:62:U:H5"	9:I:285:ARG:HH12	1.76	0.49
6:F:122:ASP:O	6:F:123:ARG:HB2	2.12	0.49
6:F:189:TYR:CE2	6:F:196:TRP:HB2	2.47	0.49
8:H:299:ILE:HG12	22:V:35:PHE:CE2	2.47	0.49
9:I:64:ILE:HG12	9:I:144:VAL:CG2	2.43	0.49
10:J:26:ARG:HG3	10:J:27:PRO:HD2	1.95	0.49
12:L:32:LYS:HE2	12:L:34:PHE:HZ	1.77	0.49
14:N:21:ARG:NH2	14:N:22:TYR:HE1	2.09	0.49
16:P:124:THR:O	16:P:128:VAL:HG23	2.12	0.49
17:Q:39:ARG:HG3	17:Q:39:ARG:HH11	1.77	0.49
17:Q:42:ARG:HG2	17:Q:46:ILE:HG13	1.95	0.49
18:R:119:GLN:O	18:R:123:LEU:HB2	2.12	0.49
20:T:10:ASP:HA	20:T:36:VAL:HG23	1.94	0.49
20:T:126:VAL:HG23	24:X:154:HIS:CE1	2.41	0.49
21:U:114:VAL:HG23	21:U:149:VAL:O	2.13	0.49
32:FA:73:LEU:CD2	32:FA:81:LEU:HD11	2.43	0.49
37:KA:47:LYS:O	37:KA:70:LYS:HB2	2.12	0.49
42:PA:27:ILE:HA	42:PA:40:GLN:O	2.13	0.49
46:TA:9:LYS:HA	46:TA:21:THR:O	2.12	0.49
47:UA:8:VAL:O	47:UA:11:THR:HB	2.13	0.49
49:WA:261:LYS:HE3	49:WA:273:ASP:OD1	2.12	0.49
52:ZA:183:ALA:C	52:ZA:185:LYS:N	2.67	0.49
53:AB:39:VAL:HA	53:AB:47:GLU:O	2.12	0.49
54:BB:49:ARG:NH2	54:BB:61:VAL:HG21	2.28	0.49
54:BB:67:GLN:NE2	74:VB:85:PHE:HZ	2.11	0.49
54:BB:194:THR:O	54:BB:195:ILE:CB	2.61	0.49
55:CB:143:ARG:HB2	78:ZB:57:MET:HE2	1.95	0.49
64:LB:105:LEU:HD12	64:LB:106:ALA:N	2.27	0.49
67:OB:21:TYR:CD2	67:OB:58:MET:HE1	2.48	0.49
70:RB:53:LYS:HB2	70:RB:92:ASP:HB2	1.93	0.49
70:RB:64:LYS:HZ1	79:AC:56:ARG:HH22	1.60	0.49
74:VB:29:HIS:N	74:VB:30:PRO:HD3	2.27	0.49
79:AC:42:CYS:O	79:AC:46:LYS:HG2	2.12	0.49
82:DC:86:VAL:HA	82:DC:89:ILE:CD1	2.42	0.49
82:DC:494:GLU:HG2	82:DC:495:VAL:H	1.77	0.49
83:EC:6826:U:H6	83:EC:6826:U:O5'	1.95	0.49
1:A:121:U:H2'	1:A:122:U:C6	2.48	0.49
1:A:253:A:H2'	1:A:254:A:O4'	2.13	0.49
1:A:354:C:H2'	1:A:355:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:460:A:C2	54:BB:27:TYR:HE2	2.31	0.49
1:A:965:U:H4'	63:KB:128:TYR:HB2	1.95	0.49
1:A:1081:A:H2'	1:A:1083:G:N7	2.27	0.49
1:A:1293:U:H2'	1:A:1294:G:H8	1.77	0.49
1:A:1524:A:H2	1:A:1590:G:H1'	1.71	0.49
2:B:26:A:H2'	2:B:27:C:H5'	1.94	0.49
2:B:44:U:OP1	19:S:84:PRO:HG2	2.13	0.49
2:B:120:G:H5'	12:L:129:PRO:HG3	1.94	0.49
2:B:225:C:C1'	30:DA:102:SER:HB3	2.42	0.49
2:B:225:C:H5'	30:DA:34:PRO:HD3	1.95	0.49
2:B:429:U:H4'	37:KA:88:ASN:O	2.13	0.49
2:B:712:G:H2'	2:B:713:U:H6	1.74	0.49
2:B:747:A:C2'	2:B:748:U:H5'	2.42	0.49
2:B:836:A:N6	2:B:857:G:H1'	2.27	0.49
2:B:924:G:O5'	2:B:924:G:C8	2.66	0.49
2:B:1055:A:H5"	4:D:100:C:H2'	1.95	0.49
2:B:1096:U:H1'	2:B:1097:G:C2	2.48	0.49
2:B:1381:A:C5'	8:H:197:ARG:CZ	2.91	0.49
2:B:1427:U:H5	32:FA:4:ARG:CZ	2.26	0.49
2:B:1501:U:H2'	2:B:1502:C:H5	1.78	0.49
2:B:2484:A:H4'	5:E:130:LYS:HD2	1.94	0.49
2:B:2668:U:H2'	2:B:2669:G:C8	2.48	0.49
2:B:2713:U:H3'	46:TA:8:ARG:HG3	1.93	0.49
2:B:2724:U:H2'	2:B:2725:U:C6	2.48	0.49
2:B:2742:C:HO2'	46:TA:20:HIS:CE1	2.30	0.49
2:B:2818:U:H5'	2:B:2818:U:C6	2.45	0.49
2:B:3148:U:C5'	7:G:104:THR:HB	2.42	0.49
2:B:3304:U:O2'	2:B:3305:A:H5'	2.13	0.49
2:B:3329:U:H4'	7:G:308:MET:CB	2.43	0.49
4:D:70:U:H2'	4:D:71:G:O4'	2.12	0.49
6:F:113:VAL:HA	6:F:167:GLY:N	2.28	0.49
7:G:212:ASN:OD1	7:G:353:GLU:HA	2.12	0.49
7:G:311:PHE:HD1	7:G:312:VAL:N	2.10	0.49
8:H:76:ARG:HB3	8:H:86:GLY:C	2.37	0.49
15:O:18:VAL:O	15:O:126:ASP:O	2.31	0.49
16:P:112:ILE:O	16:P:115:GLN:HB2	2.12	0.49
18:R:122:VAL:HG22	18:R:125:LYS:NZ	2.28	0.49
19:S:53:TYR:HD1	19:S:133:ILE:CD1	2.26	0.49
19:S:114:ARG:HB2	19:S:151:ILE:HG23	1.95	0.49
26:Z:18:ASP:O	26:Z:104:ARG:HB2	2.12	0.49
27:AA:114:ILE:HD12	27:AA:133:SER:CA	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BA:57:LYS:HB2	28:BA:57:LYS:NZ	2.27	0.49
31:EA:54:THR:HG23	31:EA:56:LYS:HB2	1.95	0.49
34:HA:16:LEU:O	34:HA:19:LYS:HG2	2.13	0.49
45:SA:17:ARG:O	45:SA:21:ARG:HB2	2.13	0.49
47:UA:45:LYS:O	47:UA:46:THR:HG23	2.13	0.49
47:UA:47:VAL:HG21	47:UA:57:CYS:HB2	1.95	0.49
49:WA:37:SER:OG	49:WA:38:ARG:N	2.45	0.49
51:YA:29:TRP:HA	51:YA:47:LEU:HG	1.93	0.49
51:YA:97:LEU:CD1	51:YA:231:LEU:HB3	2.43	0.49
55:CB:107:LYS:O	55:CB:111:VAL:HG23	2.13	0.49
58:FB:49:ARG:HH11	58:FB:49:ARG:HG2	1.78	0.49
60:HB:19:GLY:O	60:HB:68:LEU:HB3	2.13	0.49
61:IB:66:ILE:HA	61:IB:128:CYS:HA	1.93	0.49
61:IB:78:THR:HG21	61:IB:118:GLN:C	2.38	0.49
67:OB:72:LYS:NZ	67:OB:72:LYS:HB2	2.27	0.49
69:QB:47:PRO:HG2	69:QB:53:TRP:CE2	2.48	0.49
79:AC:33:LYS:C	79:AC:35:GLY:H	2.21	0.49
82:DC:27:HIS:CD2	82:DC:139:THR:H	2.29	0.49
82:DC:120:ARG:HG2	82:DC:381:TYR:HE2	1.78	0.49
82:DC:217:GLY:O	82:DC:325:ARG:HA	2.13	0.49
82:DC:402:ALA:HA	82:DC:450:ALA:CB	2.43	0.49
1:A:29:U:H2'	1:A:30:G:C8	2.48	0.49
1:A:57:G:H2'	1:A:58:U:O4'	2.13	0.49
1:A:66:U:H1'	56:DB:160:ARG:NH2	2.28	0.49
1:A:370:A:H2'	1:A:371:G:H8	1.75	0.49
1:A:618:U:H5"	1:A:1030:A:C6	2.48	0.49
1:A:736:C:H2'	1:A:737:A:C8	2.47	0.49
1:A:1283:U:H2'	1:A:1284:C:C5	2.48	0.49
1:A:1405:G:H2'	1:A:1406:A:H8	1.76	0.49
1:A:1798:U:H3'	51:YA:116:LYS:NZ	2.28	0.49
2:B:198:A:H2'	2:B:199:A:H5'	1.95	0.49
2:B:525:C:H2'	2:B:526:C:O4'	2.13	0.49
2:B:651:G:H2'	2:B:652:G:O4'	2.12	0.49
2:B:929:A:H1'	41:OA:49:TRP:CZ3	2.48	0.49
2:B:1048:A:C2	2:B:2632:G:N2	2.80	0.49
2:B:1255:C:C1'	16:P:131:GLU:HG3	2.43	0.49
2:B:1308:A:OP2	2:B:1308:A:C8	2.66	0.49
2:B:1386:A:C1'	8:H:184:SER:HB3	2.36	0.49
2:B:1686:U:H5"	26:Z:42:LYS:HZ3	1.76	0.49
2:B:1695:U:O2	38:LA:26:PRO:HG3	2.13	0.49
2:B:1904:C:H41	7:G:241:LYS:NZ	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2649:A:N3	2:B:2758:A:H2	2.10	0.49
2:B:3314:A:OP1	7:G:175:LYS:HB2	2.13	0.49
4:D:13:A:H5'	4:D:14:U:C5	2.47	0.49
6:F:151:PRO:C	6:F:153:GLY:H	2.21	0.49
7:G:114:VAL:HG13	7:G:163:HIS:HB3	1.94	0.49
8:H:334:PHE:HA	8:H:339:LEU:HD12	1.93	0.49
8:H:352:ALA:HB3	8:H:354:VAL:HG22	1.94	0.49
9:I:195:LEU:O	9:I:199:ILE:HG13	2.13	0.49
10:J:65:ILE:CD1	10:J:77:ARG:HB3	2.42	0.49
13:M:97:PHE:HB2	13:M:118:LEU:HA	1.93	0.49
14:N:168:SER:HA	25:Y:160:ILE:O	2.13	0.49
17:Q:98:ASP:OD2	17:Q:101:ARG:HB3	2.12	0.49
24:X:71:LYS:O	24:X:97:VAL:HG23	2.13	0.49
24:X:94:ILE:HD12	24:X:94:ILE:N	2.28	0.49
28:BA:34:SER:HA	28:BA:37:ALA:HB3	1.95	0.49
29:CA:107:VAL:HG11	29:CA:124:VAL:CG2	2.43	0.49
30:DA:89:LYS:HE2	30:DA:93:ALA:HB3	1.95	0.49
31:EA:37:PRO:HD2	31:EA:38:PHE:CE1	2.48	0.49
31:EA:73:LYS:HE2	31:EA:74:VAL:N	2.24	0.49
31:EA:83:THR:HG23	31:EA:85:TYR:H	1.77	0.49
32:FA:21:ARG:O	32:FA:24:LYS:HG3	2.12	0.49
32:FA:125:VAL:HG12	32:FA:127:ALA:CB	2.43	0.49
33:GA:26:THR:O	33:GA:26:THR:HG23	2.13	0.49
37:KA:29:LEU:HD11	37:KA:75:HIS:NE2	2.28	0.49
46:TA:70:LEU:CD1	46:TA:85:LEU:HD22	2.42	0.49
48:VA:30:VAL:CG2	48:VA:183:PHE:CE1	2.90	0.49
48:VA:185:LEU:O	48:VA:185:LEU:HG	2.13	0.49
49:WA:7:LEU:HA	49:WA:314:GLN:O	2.12	0.49
49:WA:113:VAL:O	49:WA:113:VAL:HG13	2.12	0.49
50:XA:74:VAL:CG2	50:XA:118:PRO:HB3	2.41	0.49
52:ZA:237:VAL:HG11	71:SB:50:TYR:CD2	2.48	0.49
59:GB:85:VAL:HA	59:GB:107:ARG:CG	2.43	0.49
64:LB:81:VAL:HG22	64:LB:115:ILE:HA	1.94	0.49
67:OB:20:TYR:CE1	67:OB:23:LYS:HD2	2.48	0.49
72:TB:55:ASP:OD2	72:TB:59:GLY:HA2	2.13	0.49
72:TB:55:ASP:HB3	77:YB:25:VAL:HG13	1.94	0.49
75:WB:46:LYS:HA	75:WB:70:LYS:CE	2.42	0.49
76:XB:45:VAL:HG23	76:XB:46:GLU:N	2.28	0.49
1:A:955:A:H2'	1:A:956:C:O4'	2.12	0.49
1:A:1104:U:OP2	73:UB:6:PRO:HG3	2.12	0.49
1:A:1308:G:H21	1:A:1400:A:H2	1.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1423:U:H5”	53:AB:151:LYS:NZ	2.27	0.49
1:A:1454:G:H4’	65:MB:122:THR:HB	1.95	0.49
1:A:1468:U:O4’	69:QB:88:VAL:HG23	2.13	0.49
1:A:1581:C:H5”	66:NB:135:ARG:HB2	1.95	0.49
2:B:63:A:N3	2:B:79:U:H5’	2.28	0.49
2:B:265:A:O2’	19:S:5:LYS:HE3	2.13	0.49
2:B:715:A:H5’	32:FA:133:LEU:HD13	1.95	0.49
2:B:1006:A:H2’	2:B:1007:U:H5’	1.94	0.49
2:B:1259:A:N7	48:VA:53:MET:HG3	2.27	0.49
2:B:1520:G:H2’	2:B:1521:G:O4’	2.12	0.49
2:B:1613:A:H2’	2:B:1614:C:O4’	2.13	0.49
2:B:1833:G:OP1	43:QA:10:LYS:HD3	2.12	0.49
2:B:2356:A:H5’	21:U:138:LYS:NZ	2.26	0.49
2:B:2442:G:H3’	2:B:2443:A:H5”	1.95	0.49
2:B:2609:A:H2’	2:B:2610:G:C8	2.48	0.49
2:B:2646:C:H4’	14:N:119:TRP:CZ3	2.48	0.49
2:B:2762:A:C2’	2:B:2763:U:H5’	2.43	0.49
2:B:2832:C:O2’	2:B:2833:A:H5’	2.13	0.49
2:B:3001:C:H2’	2:B:3002:C:C6	2.48	0.49
2:B:3180:A:H3’	20:T:167:TYR:CE1	2.48	0.49
7:G:291:GLU:O	7:G:292:ALA:HB3	2.12	0.49
8:H:33:ASP:CB	22:V:22:ASP:HB3	2.42	0.49
10:J:62:THR:HG21	10:J:78:ARG:NH1	2.27	0.49
10:J:81:ALA:O	10:J:84:VAL:HG22	2.13	0.49
11:K:121:LYS:HD3	11:K:121:LYS:C	2.38	0.49
12:L:75:ILE:C	12:L:77:GLN:H	2.21	0.49
15:O:88:GLU:C	15:O:90:GLN:H	2.21	0.49
18:R:19:ARG:NH2	18:R:66:THR:O	2.45	0.49
20:T:14:HIS:CB	20:T:19:LEU:HD22	2.43	0.49
22:V:57:ILE:HD12	22:V:57:ILE:N	2.27	0.49
22:V:155:MET:HE3	22:V:163:PRO:CB	2.42	0.49
24:X:12:ARG:HD3	24:X:22:PRO:CG	2.42	0.49
24:X:135:VAL:CG1	24:X:141:LYS:HB2	2.43	0.49
36:JA:9:ILE:HD11	36:JA:69:SER:HA	1.93	0.49
36:JA:54:LYS:H	36:JA:57:TYR:HD2	1.59	0.49
38:LA:42:PRO:O	38:LA:51:LEU:HB3	2.13	0.49
46:TA:68:VAL:HG11	46:TA:85:LEU:HB2	1.95	0.49
49:WA:26:SER:C	49:WA:28:GLY:H	2.20	0.49
49:WA:167:VAL:HB	49:WA:183:LEU:HB2	1.95	0.49
50:XA:193:GLN:C	50:XA:195:TRP:H	2.21	0.49
55:CB:120:ILE:HD12	55:CB:195:ALA:CB	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:67:VAL:HG23	56:DB:99:GLY:C	2.37	0.49
59:GB:11:THR:HG22	59:GB:44:ARG:HG3	1.94	0.49
59:GB:56:ALA:O	59:GB:60:LEU:HD23	2.12	0.49
59:GB:85:VAL:N	59:GB:107:ARG:HG3	2.28	0.49
61:IB:80:MET:CB	61:IB:83:THR:HG23	2.32	0.49
64:LB:20:TYR:CE1	64:LB:22:SER:HB3	2.47	0.49
65:MB:22:LEU:O	65:MB:26:LEU:HD13	2.13	0.49
65:MB:25:LEU:O	65:MB:87:PRO:HB3	2.12	0.49
66:NB:11:GLY:C	66:NB:12:LYS:HG3	2.38	0.49
68:PB:42:TYR:O	68:PB:46:VAL:HG23	2.12	0.49
70:RB:85:ARG:HH11	70:RB:85:ARG:HG2	1.78	0.49
71:SB:35:ASN:OD1	71:SB:52:THR:HG23	2.12	0.49
74:VB:105:ARG:HH11	74:VB:105:ARG:HG2	1.77	0.49
76:XB:19:LYS:O	76:XB:32:LYS:HG2	2.12	0.49
82:DC:20:ARG:HD2	82:DC:338:ILE:O	2.13	0.49
82:DC:390:ASP:HB2	82:DC:393:ARG:HB3	1.92	0.49
82:DC:470:THR:HG21	82:DC:475:ALA:HB1	1.95	0.49
82:DC:510:ARG:HA	82:DC:513:LYS:HB2	1.93	0.49
82:DC:661:ASP:HA	82:DC:664:VAL:HB	1.95	0.49
83:EC:6883:A:H1'	83:EC:6885:G:OP2	2.12	0.49
1:A:66:U:OP2	56:DB:173:PRO:HA	2.13	0.48
1:A:333:A:H2'	1:A:334:G:H8	1.76	0.48
1:A:452:A:O2'	1:A:453:U:H5'	2.13	0.48
1:A:835:U:H6	1:A:835:U:O5'	1.96	0.48
1:A:869:A:H1'	63:KB:48:SER:HB3	1.95	0.48
1:A:905:A:H4'	64:LB:52:ARG:HG3	1.95	0.48
1:A:966:A:H2'	1:A:967:A:C8	2.48	0.48
1:A:1067:C:C5'	51:YA:149:GLN:HA	2.42	0.48
1:A:1204:A:H2	79:AC:12:ARG:HD2	1.77	0.48
1:A:1474:G:H5'	55:CB:102:ARG:HH11	1.78	0.48
1:A:1507:G:H2'	1:A:1508:U:O4'	2.12	0.48
1:A:1727:G:H21	58:FB:32:GLN:NE2	2.10	0.48
2:B:156:G:N9	17:Q:99:HIS:HB2	2.28	0.48
2:B:1366:A:N3	2:B:1366:A:H2'	2.26	0.48
2:B:1446:A:OP1	2:B:2984:C:H5"	2.13	0.48
2:B:1845:G:H5"	2:B:1846:C:H5"	1.95	0.48
2:B:2110:G:H2'	28:BA:48:ARG:HH21	1.77	0.48
2:B:2149:A:H4'	6:F:179:LEU:HB2	1.94	0.48
2:B:2155:G:N2	2:B:2181:C:O2	2.44	0.48
2:B:2177:G:C8	6:F:128:ARG:HD3	2.48	0.48
2:B:2443:A:C6	2:B:2444:C:H1'	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2535:A:H61	2:B:2544:U:H3	1.60	0.48
2:B:2723:U:C2'	2:B:2724:U:H5'	2.43	0.48
2:B:2765:C:H5"	46:TA:39:GLY:HA3	1.95	0.48
2:B:3262:U:H3'	2:B:3263:G:H5"	1.94	0.48
3:C:143:U:H2'	3:C:144:G:C8	2.47	0.48
3:C:145:U:H2'	3:C:146:U:O4'	2.13	0.48
4:D:1:G:H21	9:I:269:SER:CB	2.23	0.48
5:E:66:CYS:HB3	5:E:109:ALA:O	2.12	0.48
5:E:91:LYS:NZ	5:E:123:LEU:HD21	2.27	0.48
6:F:37:ARG:O	6:F:38:HIS:HD2	1.96	0.48
7:G:94:GLU:CD	20:T:152:VAL:HG22	2.38	0.48
7:G:146:ARG:HH21	7:G:149:ALA:CB	2.26	0.48
7:G:161:LEU:HB3	7:G:178:LEU:HD11	1.94	0.48
8:H:119:ARG:CZ	8:H:271:LYS:HB3	2.43	0.48
8:H:181:VAL:O	8:H:182:LEU:HB3	2.11	0.48
9:I:263:GLU:O	9:I:266:ALA:HB3	2.13	0.48
11:K:159:GLN:O	11:K:161:VAL:HG22	2.13	0.48
11:K:203:TRP:CD1	11:K:204:PRO:HD2	2.48	0.48
13:M:171:ASP:O	13:M:175:PHE:HB2	2.13	0.48
17:Q:87:ALA:HB1	17:Q:91:ARG:NE	2.28	0.48
21:U:25:SER:OG	21:U:28:ASN:HB2	2.12	0.48
22:V:45:ASN:O	22:V:49:LEU:HB2	2.13	0.48
25:Y:74:VAL:C	25:Y:89:LEU:HD13	2.38	0.48
30:DA:56:VAL:HG21	30:DA:104:LEU:CD1	2.39	0.48
31:EA:44:ALA:CB	31:EA:72:ILE:HA	2.43	0.48
32:FA:73:LEU:HD22	32:FA:81:LEU:HD11	1.95	0.48
34:HA:42:ILE:HA	34:HA:90:VAL:O	2.12	0.48
36:JA:29:ALA:C	36:JA:31:ASN:H	2.21	0.48
40:NA:43:LEU:O	40:NA:47:ILE:HG13	2.13	0.48
50:XA:206:ASP:HA	50:XA:207:PRO:C	2.38	0.48
51:YA:79:HIS:C	51:YA:81:PHE:N	2.71	0.48
51:YA:205:PHE:CD1	51:YA:207:LEU:HD12	2.48	0.48
52:ZA:222:TYR:O	71:SB:23:ILE:HD12	2.12	0.48
53:AB:156:PHE:O	53:AB:189:MET:HE3	2.13	0.48
55:CB:70:VAL:HG11	66:NB:43:ILE:O	2.13	0.48
55:CB:124:LEU:HD11	75:WB:59:TYR:HB2	1.95	0.48
56:DB:70:PRO:HD3	56:DB:101:ILE:HD12	1.95	0.48
57:EB:78:THR:O	57:EB:82:GLU:HB2	2.13	0.48
58:FB:159:GLN:HG2	58:FB:165:LEU:HD12	1.95	0.48
59:GB:28:LEU:HD23	59:GB:28:LEU:C	2.38	0.48
65:MB:37:ALA:HB1	65:MB:41:VAL:HB	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:MB:94:VAL:HG21	65:MB:107:ILE:HD11	1.95	0.48
70:RB:56:VAL:CG1	70:RB:57:ARG:N	2.76	0.48
72:TB:53:ILE:HG13	72:TB:60:LYS:C	2.38	0.48
77:YB:62:ILE:O	77:YB:62:ILE:HG23	2.13	0.48
80:BC:36:LYS:HA	80:BC:36:LYS:NZ	2.18	0.48
1:A:67:A:H8	1:A:67:A:P	2.36	0.48
1:A:329:G:C5'	58:FB:99:ALA:HB3	2.36	0.48
1:A:550:A:H5'	1:A:556:A:N1	2.29	0.48
1:A:638:U:H6	57:EB:101:LYS:HD3	1.77	0.48
1:A:1227:A:C4'	1:A:1228:G:H5"	2.28	0.48
1:A:1420:C:C2'	1:A:1421:A:H5'	2.39	0.48
2:B:634:C:H2'	2:B:635:G:O4'	2.13	0.48
2:B:985:U:C2	2:B:986:U:C5	3.00	0.48
2:B:1204:A:H2'	2:B:1205:A:O4'	2.13	0.48
2:B:1305:U:C5	7:G:256:HIS:HB3	2.48	0.48
2:B:1455:U:OP2	2:B:1478:C:H4'	2.13	0.48
2:B:2130:G:H2'	2:B:2131:A:C5'	2.43	0.48
2:B:2749:G:H2'	2:B:2750:U:O4'	2.13	0.48
2:B:3218:A:H4'	2:B:3219:G:O5'	2.12	0.48
3:C:23:U:C4'	30:DA:17:LYS:HB2	2.41	0.48
3:C:111:A:N3	41:OA:29:VAL:HG21	2.27	0.48
4:D:64:A:O4'	9:I:286:VAL:HG13	2.13	0.48
4:D:118:A:H2'	4:D:119:U:C6	2.47	0.48
8:H:44:LYS:HD2	8:H:111:VAL:CG2	2.43	0.48
8:H:203:ARG:HH21	8:H:240:PRO:CB	2.13	0.48
8:H:316:ASN:N	8:H:316:ASN:HD22	2.10	0.48
10:J:138:GLN:O	10:J:141:VAL:HB	2.14	0.48
10:J:174:LEU:HB3	10:J:176:PHE:CZ	2.48	0.48
12:L:62:LYS:HZ2	12:L:63:LYS:HB2	1.77	0.48
15:O:82:ARG:CG	15:O:112:LEU:HB2	2.42	0.48
22:V:178:ARG:HD3	22:V:185:LYS:NZ	2.29	0.48
23:W:24:LEU:HG	23:W:50:ILE:HG12	1.94	0.48
31:EA:11:ALA:CA	31:EA:82:PRO:HA	2.40	0.48
34:HA:43:ILE:HA	34:HA:68:TYR:O	2.13	0.48
35:IA:111:GLU:O	35:IA:112:ASP:HB3	2.12	0.48
44:RA:87:SER:C	44:RA:89:TYR:H	2.22	0.48
49:WA:169:ILE:HD11	49:WA:181:TRP:HB2	1.94	0.48
50:XA:127:ARG:NH2	50:XA:151:SER:HA	2.27	0.48
51:YA:34:ALA:HB3	51:YA:41:ARG:HA	1.95	0.48
51:YA:205:PHE:HD1	51:YA:207:LEU:HD12	1.76	0.48
52:ZA:226:THR:OG1	52:ZA:228:ASN:HB2	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:26:THR:O	53:AB:30:ALA:HB2	2.13	0.48
54:BB:187:ARG:NE	54:BB:187:ARG:HA	2.28	0.48
55:CB:59:VAL:O	55:CB:60:ASP:HB2	2.13	0.48
55:CB:144:GLU:HG2	55:CB:161:ASP:HA	1.96	0.48
68:PB:60:GLU:O	68:PB:61:LEU:HB2	2.13	0.48
71:SB:59:VAL:HG13	77:YB:3:LEU:CD2	2.44	0.48
73:UB:52:ILE:H	73:UB:74:VAL:HG13	1.78	0.48
82:DC:183:GLU:O	82:DC:187:VAL:HG23	2.13	0.48
1:A:210:A:H2'	1:A:211:U:C6	2.47	0.48
1:A:329:G:H2'	1:A:330:G:O4'	2.13	0.48
1:A:794:U:H2'	1:A:794:U:O2	2.13	0.48
1:A:806:A:H5'	1:A:806:A:H8	1.78	0.48
1:A:959:U:C5	63:KB:17:PRO:HG3	2.49	0.48
1:A:1201:G:H2'	1:A:1599:C:O2	2.13	0.48
1:A:1229:G:O6	62:JB:44:GLY:HA3	2.14	0.48
1:A:1294:G:H1	1:A:1303:U:H3	1.60	0.48
1:A:1542:G:H5"	69:QB:87:GLY:HA2	1.95	0.48
2:B:76:G:C5	17:Q:101:ARG:HB2	2.49	0.48
2:B:170:G:H1	2:B:248:U:H3	1.62	0.48
2:B:201:A:H4'	2:B:220:G:C5	2.48	0.48
2:B:431:U:H2'	2:B:432:G:H8	1.69	0.48
2:B:438:A:H2	2:B:495:G:H21	1.60	0.48
2:B:617:G:O2'	2:B:618:C:H5'	2.13	0.48
2:B:664:U:OP1	8:H:108:LYS:HB2	2.14	0.48
2:B:911:C:C5	6:F:9:ARG:NE	2.81	0.48
2:B:1028:U:H3'	2:B:1029:G:H5'	1.95	0.48
2:B:1653:G:O2'	2:B:1654:A:H5'	2.13	0.48
2:B:1948:G:N3	2:B:1948:G:H2'	2.27	0.48
2:B:2344:U:H2'	2:B:2345:A:C8	2.48	0.48
2:B:2603:G:H2'	2:B:2604:U:H6	1.76	0.48
2:B:2663:G:H5'	9:I:152:ARG:CD	2.42	0.48
2:B:3313:U:C2'	2:B:3314:A:H5'	2.44	0.48
2:B:3335:A:C2	2:B:3371:G:H5"	2.47	0.48
4:D:1:G:N2	9:I:269:SER:HB2	2.24	0.48
5:E:36:VAL:HG23	5:E:183:ILE:CG2	2.42	0.48
5:E:120:VAL:CG2	5:E:135:PRO:HG2	2.43	0.48
6:F:24:GLN:HE21	6:F:51:ASP:HA	1.77	0.48
6:F:135:ILE:C	6:F:136:ILE:HD12	2.38	0.48
8:H:60:THR:HB	8:H:90:PHE:CZ	2.49	0.48
8:H:200:THR:HG23	8:H:200:THR:O	2.13	0.48
9:I:51:LEU:HA	9:I:144:VAL:HG22	1.93	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:12:GLN:H	14:N:12:GLN:HE21	1.60	0.48
15:O:91:LEU:O	15:O:172:LEU:HD12	2.13	0.48
15:O:166:LYS:C	15:O:168:ASP:H	2.19	0.48
16:P:134:GLY:H	16:P:137:GLN:CB	2.25	0.48
17:Q:48:PRO:HD2	39:MA:115:LYS:HG2	1.95	0.48
17:Q:73:ARG:HG3	17:Q:73:ARG:HH21	1.78	0.48
18:R:36:VAL:CG2	18:R:47:ASP:HB2	2.37	0.48
19:S:153:ASP:HB3	19:S:155:VAL:HG22	1.94	0.48
20:T:6:VAL:HA	20:T:32:LYS:O	2.14	0.48
24:X:13:ARG:HG2	24:X:51:VAL:HG11	1.95	0.48
24:X:155:ARG:HD3	24:X:171:PHE:O	2.12	0.48
27:AA:45:ARG:CG	27:AA:48:ARG:CB	2.91	0.48
28:BA:17:ARG:HD3	28:BA:17:ARG:O	2.14	0.48
29:CA:70:GLU:HA	29:CA:73:MET:CB	2.42	0.48
36:JA:89:THR:HG21	36:JA:115:LEU:O	2.13	0.48
38:LA:12:PRO:HG2	38:LA:13:TYR:HD2	1.77	0.48
42:PA:46:ARG:HA	42:PA:51:LEU:CD1	2.44	0.48
48:VA:16:ARG:HG3	48:VA:64:ARG:NH1	2.28	0.48
48:VA:63:ILE:O	48:VA:66:PHE:HB3	2.13	0.48
48:VA:86:PHE:O	48:VA:87:VAL:HG23	2.13	0.48
49:WA:281:TYR:CE2	49:WA:287:PRO:HD3	2.48	0.48
50:XA:139:VAL:HG13	50:XA:141:ILE:HG13	1.95	0.48
51:YA:44:GLY:HA3	64:LB:14:PHE:HB2	1.95	0.48
52:ZA:109:GLY:C	52:ZA:139:ILE:HD13	2.37	0.48
57:EB:59:ALA:HB1	57:EB:93:LEU:HG	1.95	0.48
57:EB:91:ILE:HD13	57:EB:169:PHE:CE1	2.48	0.48
69:QB:65:ILE:CG1	69:QB:71:VAL:HG22	2.43	0.48
74:VB:88:THR:HA	74:VB:91:LEU:HD12	1.95	0.48
82:DC:653:VAL:HG11	82:DC:691:VAL:HG12	1.94	0.48
1:A:39:A:OP1	59:GB:6:ARG:HD3	2.13	0.48
1:A:107:C:H4'	1:A:383:G:N3	2.29	0.48
1:A:461:G:H2'	1:A:462:G:C8	2.48	0.48
1:A:797:G:H4'	61:IB:69:LYS:NZ	2.27	0.48
1:A:961:U:H5"	63:KB:71:ILE:HG21	1.95	0.48
1:A:1170:G:H5"	1:A:1171:A:OP2	2.14	0.48
1:A:1760:G:H2'	1:A:1761:U:O2	2.12	0.48
2:B:146:U:OP1	2:B:147:U:H3'	2.13	0.48
2:B:399:A:H2'	2:B:400:G:H5'	1.95	0.48
2:B:1074:U:H4'	33:GA:45:HIS:O	2.13	0.48
2:B:1448:U:H4'	21:U:66:SER:CB	2.43	0.48
2:B:1540:U:H2'	2:B:1541:G:H8	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1682:U:C5	26:Z:85:LYS:HB2	2.47	0.48
2:B:1827:C:H2'	2:B:1828:A:H8	1.73	0.48
2:B:1938:U:H1'	23:W:78:TYR:HB2	1.95	0.48
2:B:2749:G:O2'	9:I:35:ARG:HB3	2.12	0.48
2:B:2765:C:C5'	46:TA:39:GLY:HA3	2.43	0.48
2:B:2975:U:H2'	2:B:2976:A:C8	2.49	0.48
2:B:3377:G:H21	7:G:332:ARG:HH22	1.61	0.48
3:C:36:G:H21	3:C:37:A:H61	1.61	0.48
3:C:54:A:H8	3:C:54:A:O5'	1.96	0.48
3:C:91:C:O3'	30:DA:23:PRO:HG2	2.12	0.48
5:E:93:LEU:HD22	5:E:100:ILE:HD12	1.95	0.48
6:F:42:ARG:CZ	6:F:44:ILE:HD11	2.43	0.48
7:G:94:GLU:CA	7:G:99:LEU:HD13	2.43	0.48
9:I:63:GLN:HA	9:I:105:ILE:CD1	2.44	0.48
10:J:64:LEU:HA	10:J:77:ARG:O	2.13	0.48
13:M:36:LYS:HE2	13:M:78:MET:CE	2.43	0.48
18:R:66:THR:HA	18:R:99:TRP:HZ3	1.77	0.48
19:S:16:SER:HA	19:S:20:ARG:HB2	1.94	0.48
19:S:30:TYR:CZ	19:S:129:TYR:HB3	2.48	0.48
19:S:58:GLY:CA	19:S:142:ILE:HD11	2.41	0.48
20:T:170:LYS:O	20:T:174:PHE:HB2	2.13	0.48
22:V:81:VAL:HA	22:V:138:LEU:O	2.14	0.48
22:V:85:GLY:O	22:V:104:LEU:HB3	2.13	0.48
23:W:90:PRO:HB2	23:W:93:VAL:HG23	1.94	0.48
23:W:119:LEU:HG	23:W:123:LEU:HD23	1.95	0.48
29:CA:53:HIS:HE1	29:CA:56:ARG:HG3	1.77	0.48
29:CA:81:ILE:HG23	29:CA:124:VAL:H	1.78	0.48
30:DA:85:VAL:CG1	30:DA:97:ILE:HD12	2.41	0.48
38:LA:80:ARG:HH21	38:LA:84:CYS:CB	2.27	0.48
40:NA:26:ILE:HA	40:NA:29:LYS:HB2	1.96	0.48
40:NA:56:ARG:O	40:NA:60:LEU:HD23	2.13	0.48
49:WA:38:ARG:HG2	49:WA:67:ILE:CG2	2.41	0.48
50:XA:85:ALA:HA	50:XA:202:TYR:CD1	2.48	0.48
52:ZA:140:ARG:HH21	52:ZA:229:LEU:HD11	1.77	0.48
67:OB:44:LYS:O	67:OB:47:ARG:HB3	2.13	0.48
70:RB:35:GLU:O	70:RB:38:SER:HB3	2.12	0.48
82:DC:169:VAL:CB	82:DC:174:LEU:HD13	2.43	0.48
82:DC:412:ARG:NH2	82:DC:473:GLU:HG3	2.29	0.48
82:DC:496:LYS:HB2	82:DC:555:LYS:N	2.28	0.48
82:DC:696:ASP:O	82:DC:700:ARG:HG3	2.12	0.48
1:A:748:U:H2'	1:A:749:U:H5'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1390:U:H4'	1:A:1391:A:C8	2.49	0.48
2:B:19:U:H5"	39:MA:90:ARG:CZ	2.43	0.48
2:B:36:C:H4'	2:B:808:A:H2	1.75	0.48
2:B:74:G:P	17:Q:104:ARG:HB2	2.53	0.48
2:B:200:C:N3	2:B:217:U:C4	2.82	0.48
2:B:676:G:OP2	22:V:107:THR:HA	2.13	0.48
2:B:912:G:H2'	2:B:914:A:C5	2.48	0.48
2:B:1486:G:H8	2:B:1486:G:O5'	1.97	0.48
2:B:1672:U:C5'	23:W:64:ARG:HG2	2.38	0.48
2:B:1729:A:N7	34:HA:48:THR:HG23	2.27	0.48
2:B:2655:U:H1'	2:B:2656:A:C2	2.49	0.48
2:B:3329:U:H4'	7:G:308:MET:C	2.39	0.48
6:F:53:GLY:HA2	6:F:191:LEU:CB	2.44	0.48
6:F:70:ARG:HE	6:F:72:ARG:HD3	1.77	0.48
6:F:79:ASN:O	6:F:82:VAL:HG22	2.14	0.48
6:F:117:GLU:HG2	6:F:121:GLY:H	1.78	0.48
6:F:135:ILE:HG22	6:F:136:ILE:N	2.29	0.48
7:G:92:TYR:C	7:G:102:LEU:HD21	2.37	0.48
7:G:94:GLU:HA	7:G:99:LEU:CD2	2.44	0.48
8:H:33:ASP:O	8:H:36:HIS:HB2	2.14	0.48
8:H:271:LYS:HD2	8:H:274:TYR:CE1	2.49	0.48
9:I:182:GLY:HA2	9:I:194:LEU:HD23	1.96	0.48
13:M:8:GLN:OE1	13:M:69:ARG:HD2	2.13	0.48
13:M:162:GLN:HE22	13:M:163:GLN:CG	2.26	0.48
14:N:60:LEU:CD1	14:N:129:VAL:HG21	2.37	0.48
19:S:188:ARG:HD2	19:S:188:ARG:N	2.29	0.48
20:T:172:ARG:NH1	20:T:172:ARG:HB3	2.28	0.48
23:W:115:ILE:CG1	23:W:119:LEU:HD23	2.34	0.48
23:W:123:LEU:O	23:W:127:SER:HB2	2.14	0.48
24:X:27:MET:HE1	24:X:44:PHE:CD2	2.48	0.48
46:TA:47:GLN:C	46:TA:49:GLY:N	2.71	0.48
51:YA:32:ILE:HG22	51:YA:43:VAL:HG21	1.95	0.48
52:ZA:156:THR:HG22	72:TB:99:PHE:CZ	2.48	0.48
55:CB:117:THR:OG1	55:CB:191:ALA:HA	2.13	0.48
56:DB:67:VAL:HG23	56:DB:100:ALA:N	2.27	0.48
58:FB:36:THR:HG23	58:FB:36:THR:O	2.14	0.48
64:LB:103:ARG:O	64:LB:107:ARG:HB2	2.13	0.48
66:NB:56:GLY:C	66:NB:58:ASP:H	2.22	0.48
73:UB:20:ARG:O	73:UB:23:ARG:HB2	2.14	0.48
74:VB:122:GLY:C	74:VB:124:ARG:H	2.22	0.48
80:BC:41:THR:HA	80:BC:45:VAL:CG2	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:BC:45:VAL:HG12	80:BC:46:ASN:H	1.79	0.48
82:DC:57:THR:HG23	82:DC:58:ASP:N	2.28	0.48
82:DC:295:GLU:HB3	82:DC:299:LEU:HB2	1.96	0.48
82:DC:539:GLU:HA	82:DC:542:LEU:HD12	1.96	0.48
1:A:154:G:H21	56:DB:60:GLY:HA3	1.77	0.48
1:A:285:G:O2'	1:A:286:C:H5'	2.13	0.48
1:A:382:C:H2'	1:A:383:G:H8	1.79	0.48
1:A:392:G:H2'	1:A:393:C:C6	2.48	0.48
1:A:454:U:OP1	54:BB:66:MET:HE2	2.14	0.48
1:A:682:C:O2'	1:A:683:C:H5'	2.14	0.48
1:A:1235:C:OP2	1:A:1245:G:H8	1.97	0.48
1:A:1245:G:H1'	1:A:1247:U:H5	1.77	0.48
1:A:1546:G:N2	68:PB:87:ASN:HB2	2.28	0.48
1:A:1616:G:H4'	78:ZB:18:ARG:HD2	1.94	0.48
1:A:1761:U:O4'	1:A:1782:A:H2	1.96	0.48
2:B:135:C:O2'	39:MA:94:LYS:HB3	2.14	0.48
2:B:214:G:H2'	2:B:215:G:C8	2.49	0.48
2:B:382:U:C4'	21:U:100:ALA:HB1	2.41	0.48
2:B:501:A:H4'	10:J:28:GLN:CB	2.39	0.48
2:B:615:U:O4'	2:B:3272:C:N4	2.46	0.48
2:B:768:C:H2'	2:B:769:G:H5'	1.95	0.48
2:B:847:A:H2'	2:B:848:A:O4'	2.14	0.48
2:B:1212:A:O4'	24:X:113:ARG:HD3	2.13	0.48
2:B:1297:C:O2'	2:B:1298:C:H5'	2.14	0.48
2:B:1362:G:C5'	11:K:161:VAL:HG13	2.44	0.48
2:B:1533:U:O2'	2:B:1534:A:H5'	2.13	0.48
2:B:1857:C:H5	2:B:1858:A:C4	2.32	0.48
2:B:1887:A:H5'	7:G:227:GLU:HA	1.95	0.48
2:B:1888:U:H2'	2:B:1889:G:C1'	2.43	0.48
2:B:2217:U:H2'	2:B:2218:G:H8	1.77	0.48
2:B:2365:C:C2'	2:B:2366:C:H5"	2.34	0.48
2:B:2376:G:H2'	2:B:2377:G:C8	2.48	0.48
2:B:2407:C:H2'	2:B:2408:U:C6	2.49	0.48
2:B:2780:A:O3'	17:Q:181:GLY:HA3	2.13	0.48
2:B:2959:C:O2'	2:B:2960:C:H5'	2.14	0.48
2:B:3095:U:H5"	27:AA:86:ARG:CZ	2.43	0.48
2:B:3095:U:H2'	2:B:3096:C:H6	1.79	0.48
2:B:3159:C:O2'	2:B:3160:U:H5'	2.12	0.48
3:C:24:G:H2'	3:C:25:G:C8	2.48	0.48
3:C:34:U:H5'	41:OA:78:PHE:CZ	2.48	0.48
3:C:48:A:H61	3:C:54:A:H61	1.59	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:80:GLY:HA2	8:H:85:SER:OG	2.13	0.48
9:I:27:LYS:HA	9:I:150:LEU:HD11	1.95	0.48
9:I:50:ARG:O	9:I:64:ILE:HA	2.14	0.48
9:I:221:GLU:HA	9:I:224:LYS:HE3	1.96	0.48
11:K:90:LYS:HE3	11:K:95:ILE:CD1	2.43	0.48
11:K:95:ILE:HG23	11:K:133:TYR:CE1	2.49	0.48
13:M:138:THR:HG22	13:M:139:ASN:N	2.29	0.48
15:O:54:VAL:HB	15:O:59:ILE:CG1	2.38	0.48
18:R:102:LYS:NZ	18:R:102:LYS:HB2	2.29	0.48
18:R:124:ARG:N	20:T:194:LEU:HD21	2.28	0.48
21:U:3:ARG:C	21:U:18:ARG:HH22	2.21	0.48
24:X:24:LEU:HD21	24:X:59:VAL:CG2	2.40	0.48
25:Y:61:THR:O	25:Y:76:ILE:HD11	2.13	0.48
27:AA:62:VAL:HB	27:AA:70:ARG:HG2	1.96	0.48
39:MA:18:ALA:HA	39:MA:58:ILE:CD1	2.40	0.48
42:PA:27:ILE:CG2	42:PA:39:ARG:HG3	2.44	0.48
42:PA:28:ASN:HB2	42:PA:40:GLN:CB	2.36	0.48
44:RA:93:LYS:HB2	44:RA:124:LYS:HD2	1.95	0.48
48:VA:114:VAL:C	48:VA:116:PRO:HD3	2.38	0.48
55:CB:63:GLN:HB2	55:CB:88:PRO:HA	1.94	0.48
55:CB:184:PHE:CD2	55:CB:185:ARG:HG3	2.49	0.48
57:EB:98:ILE:CG2	57:EB:118:LEU:HD23	2.44	0.48
61:IB:13:PHE:CD2	61:IB:15:LYS:HD2	2.48	0.48
61:IB:78:THR:O	61:IB:80:MET:N	2.46	0.48
66:NB:97:VAL:HG12	66:NB:98:ASP:H	1.79	0.48
66:NB:109:PHE:CD2	66:NB:117:LEU:HD21	2.49	0.48
70:RB:65:ILE:HA	79:AC:33:LYS:HZ2	1.79	0.48
70:RB:84:MET:HB3	79:AC:52:PHE:CD1	2.49	0.48
72:TB:42:GLN:HB2	72:TB:47:ILE:HD11	1.94	0.48
73:UB:127:VAL:O	73:UB:128:SER:HB2	2.12	0.48
74:VB:125:LEU:O	74:VB:129:VAL:HG23	2.14	0.48
77:YB:47:PHE:HD1	77:YB:50:ALA:H	1.61	0.48
82:DC:563:TYR:HD1	82:DC:727:PRO:HD2	1.78	0.48
82:DC:653:VAL:CG1	82:DC:693:LEU:HD23	2.42	0.48
1:A:308:C:P	61:IB:103:ARG:NH1	2.87	0.48
1:A:385:A:H4'	58:FB:22:ARG:HB3	1.95	0.48
1:A:416:A:H3'	1:A:417:A:H8	1.79	0.48
1:A:449:C:H5"	54:BB:30:ARG:HB3	1.95	0.48
1:A:607:G:N2	1:A:614:C:C5'	2.77	0.48
1:A:623:A:H3'	1:A:624:G:C5'	2.40	0.48
1:A:748:U:OP1	72:TB:82:LYS:HG2	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1036:A:H4'	72:TB:3:ARG:HH12	1.79	0.48
1:A:1340:U:H2'	49:WA:62:LYS:HE2	1.96	0.48
1:A:1770:U:O2'	1:A:1771:U:H5'	2.13	0.48
1:A:1771:U:O2'	1:A:1772:C:H5'	2.14	0.48
1:A:1779:U:H2'	1:A:1781:A:OP2	2.14	0.48
2:B:150:A:OP1	19:S:147:ARG:HD3	2.14	0.48
2:B:493:G:H4'	2:B:494:G:C8	2.48	0.48
2:B:777:U:H2'	2:B:778:U:H6	1.77	0.48
2:B:778:U:O2'	2:B:779:G:H5'	2.13	0.48
2:B:814:U:H5"	41:OA:35:SER:HA	1.96	0.48
2:B:825:U:HO2'	2:B:1587:A:H2	1.60	0.48
2:B:1063:G:N2	2:B:1066:G:H21	2.12	0.48
2:B:1405:U:H5'	36:JA:57:TYR:O	2.14	0.48
2:B:1557:A:O2'	2:B:1558:A:H5"	2.13	0.48
2:B:1875:G:H2'	2:B:1876:U:C6	2.48	0.48
2:B:1947:G:H1	2:B:2101:C:N4	2.11	0.48
2:B:2085:U:C3'	2:B:2086:A:H5'	2.43	0.48
2:B:2163:C:O2'	6:F:8:GLN:O	2.29	0.48
2:B:3005:A:H5"	20:T:149:TYR:OH	2.14	0.48
2:B:3190:C:H2'	2:B:3191:G:H8	1.76	0.48
2:B:3282:U:H2'	2:B:3283:U:H6	1.78	0.48
2:B:3330:A:H2'	2:B:3331:U:H5'	1.96	0.48
3:C:55:U:H2'	3:C:56:G:H8	1.79	0.48
3:C:86:U:H3'	39:MA:7:TYR:CE2	2.48	0.48
6:F:33:ASP:CG	6:F:36:GLU:HG2	2.38	0.48
7:G:222:LYS:O	7:G:271:GLY:HA3	2.14	0.48
8:H:121:ALA:HB1	8:H:235:LEU:HD11	1.95	0.48
9:I:107:ARG:HH11	9:I:248:ARG:HG3	1.79	0.48
21:U:42:THR:HG23	21:U:43:LYS:HG3	1.94	0.48
22:V:35:PHE:HE1	22:V:39:ARG:NE	2.12	0.48
25:Y:126:VAL:HG23	25:Y:127:GLN:N	2.27	0.48
27:AA:11:PHE:HD1	27:AA:12:ARG:N	2.12	0.48
27:AA:93:LEU:HB3	28:BA:20:LEU:HD23	1.95	0.48
27:AA:131:SER:C	27:AA:132:ASN:HD22	2.21	0.48
28:BA:39:LEU:HG	28:BA:51:TRP:HZ2	1.79	0.48
31:EA:13:VAL:HG13	31:EA:80:LEU:CD2	2.41	0.48
31:EA:101:PHE:O	31:EA:102:GLU:HB3	2.12	0.48
34:HA:27:TYR:HB2	34:HA:52:ARG:HH12	1.79	0.48
40:NA:56:ARG:NH1	40:NA:60:LEU:HD21	2.29	0.48
40:NA:57:LEU:HD13	40:NA:72:VAL:CB	2.42	0.48
41:OA:5:THR:N	41:OA:6:PRO:HD2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:176:LEU:O	48:VA:177:ASN:HB2	2.14	0.48
51:YA:35:PRO:O	51:YA:41:ARG:HG2	2.13	0.48
51:YA:61:LEU:HB3	51:YA:64:ARG:HG3	1.95	0.48
55:CB:97:LEU:HD11	55:CB:194:LEU:CD1	2.43	0.48
56:DB:218:GLU:O	56:DB:221:ALA:HB3	2.14	0.48
58:FB:57:ALA:HB2	58:FB:177:GLY:CA	2.42	0.48
59:GB:92:LYS:O	59:GB:93:LEU:HB3	2.13	0.48
60:HB:23:ALA:HB1	60:HB:39:ASN:OD1	2.14	0.48
61:IB:34:TRP:CE3	61:IB:61:THR:HA	2.49	0.48
62:JB:98:GLY:HA3	62:JB:116:VAL:O	2.13	0.48
68:PB:123:ARG:HA	68:PB:133:VAL:HG23	1.95	0.48
73:UB:77:ILE:HG22	73:UB:77:ILE:O	2.14	0.48
80:BC:36:LYS:HZ2	80:BC:36:LYS:CA	2.17	0.48
82:DC:519:LEU:HD22	82:DC:531:ALA:HB3	1.95	0.48
83:EC:6900:A:C2	83:EC:6913:U:O2	2.66	0.48
1:A:92:A:N7	1:A:93:A:H2	2.12	0.48
1:A:180:A:O2'	1:A:181:A:H5'	2.14	0.48
1:A:470:A:C2'	1:A:471:A:H5'	2.43	0.48
1:A:1056:U:O2'	1:A:1057:U:H5'	2.14	0.48
1:A:1276:U:H4'	53:AB:147:ALA:CB	2.43	0.48
1:A:1291:G:H22	1:A:1324:G:N2	2.12	0.48
2:B:22:G:O2'	3:C:40:A:N1	2.45	0.48
2:B:43:A:C5'	19:S:83:LYS:HE2	2.43	0.48
2:B:45:A:N3	2:B:95:A:C2	2.82	0.48
2:B:202:G:O2'	2:B:203:G:H5'	2.14	0.48
2:B:323:A:H2'	2:B:324:A:C8	2.48	0.48
2:B:639:G:P	36:JA:37:GLY:HA3	2.54	0.48
2:B:814:U:H4'	41:OA:35:SER:HB2	1.95	0.48
2:B:839:C:H1'	2:B:1724:U:P	2.53	0.48
2:B:840:C:H4'	23:W:125:LYS:HB3	1.96	0.48
2:B:1213:G:O2'	2:B:1214:U:H5'	2.13	0.48
2:B:1378:U:H2'	2:B:1379:G:C8	2.47	0.48
2:B:3135:U:C5	2:B:3136:G:N7	2.81	0.48
2:B:3172:A:H4'	2:B:3173:G:C4	2.49	0.48
2:B:3173:G:C2	37:KA:96:ALA:HB2	2.48	0.48
2:B:3181:C:H42	2:B:3189:G:H5"	1.77	0.48
2:B:3358:U:H2'	2:B:3359:A:C4'	2.43	0.48
5:E:13:VAL:HG12	5:E:172:VAL:CG2	2.42	0.48
6:F:61:VAL:HG23	6:F:76:PHE:H	1.77	0.48
6:F:68:LYS:HD2	6:F:70:ARG:CG	2.32	0.48
8:H:52:VAL:HG22	8:H:53:SER:N	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:200:PHE:C	9:I:240:TYR:HD2	2.22	0.48
11:K:43:ILE:HG12	11:K:46:GLU:OE1	2.13	0.48
12:L:62:LYS:HG2	12:L:63:LYS:N	2.27	0.48
12:L:157:VAL:O	12:L:158:ASP:C	2.56	0.48
13:M:132:VAL:HB	13:M:154:VAL:HG22	1.95	0.48
14:N:86:HIS:O	14:N:138:VAL:HA	2.14	0.48
19:S:156:HIS:CA	19:S:162:ARG:HH22	2.25	0.48
20:T:73:PHE:CD2	20:T:78:ARG:HG2	2.48	0.48
21:U:15:ALA:O	21:U:150:VAL:HG22	2.14	0.48
23:W:41:ILE:HG23	23:W:50:ILE:CD1	2.43	0.48
24:X:77:VAL:HG12	24:X:78:TRP:N	2.29	0.48
25:Y:34:TYR:CE2	25:Y:93:VAL:HB	2.48	0.48
30:DA:30:LEU:HD13	30:DA:78:PHE:HE1	1.78	0.48
31:EA:70:PRO:HD2	31:EA:115:LYS:HE3	1.96	0.48
35:IA:21:HIS:O	35:IA:23:VAL:HG23	2.14	0.48
41:OA:39:TYR:CD1	41:OA:40:PRO:HB3	2.48	0.48
43:QA:23:LEU:HB2	43:QA:38:ASN:CB	2.39	0.48
47:UA:67:GLY:HA3	47:UA:70:THR:O	2.14	0.48
51:YA:162:ARG:HG2	51:YA:165:ARG:HH22	1.78	0.48
54:BB:100:ARG:HB2	54:BB:114:ILE:HD13	1.95	0.48
56:DB:195:VAL:O	56:DB:199:GLN:HG3	2.13	0.48
57:EB:41:LEU:HD11	57:EB:70:PHE:HA	1.95	0.48
57:EB:63:PRO:C	57:EB:65:PRO:HD2	2.39	0.48
57:EB:130:VAL:HG23	57:EB:135:ILE:HD11	1.95	0.48
58:FB:4:SER:HA	58:FB:28:GLU:O	2.14	0.48
58:FB:97:THR:C	58:FB:99:ALA:N	2.72	0.48
59:GB:40:LYS:HA	59:GB:43:TYR:CD2	2.48	0.48
59:GB:85:VAL:CG2	59:GB:147:MET:HE1	2.44	0.48
61:IB:149:ALA:HA	61:IB:152:GLN:HG2	1.95	0.48
66:NB:7:VAL:HG22	66:NB:22:VAL:O	2.14	0.48
69:QB:114:VAL:HG23	69:QB:124:ILE:HD12	1.95	0.48
72:TB:11:LEU:CD1	72:TB:74:VAL:HB	2.44	0.48
74:VB:4:ALA:O	74:VB:5:VAL:HB	2.13	0.48
74:VB:19:ALA:HB1	74:VB:77:ASN:HB2	1.95	0.48
79:AC:33:LYS:HE2	79:AC:34:TYR:CE2	2.49	0.48
82:DC:727:PRO:HB2	82:DC:774:VAL:CG2	2.43	0.48
82:DC:727:PRO:HB2	82:DC:774:VAL:HG23	1.96	0.48
82:DC:759:GLN:HB3	82:DC:767:THR:H	1.79	0.48
1:A:6:G:H3'	52:ZA:205:ARG:HH12	1.79	0.48
1:A:511:A:OP2	59:GB:172:VAL:HG22	2.14	0.48
1:A:777:C:H2'	1:A:778:G:H4'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1559:A:H2'	1:A:1559:A:N3	2.29	0.48
2:B:677:A:OP2	22:V:88:THR:HB	2.14	0.48
2:B:792:G:C2'	2:B:793:C:H5"	2.43	0.48
2:B:822:G:H2'	2:B:823:C:H6	1.78	0.48
2:B:1077:U:H2'	2:B:1078:U:H6	1.73	0.48
2:B:1290:A:H2'	2:B:1291:A:O4'	2.14	0.48
2:B:1492:G:H4'	2:B:1843:C:H5"	1.96	0.48
2:B:1493:G:H21	43:QA:16:ALA:HB2	1.79	0.48
2:B:2513:U:H4'	2:B:2586:G:O6	2.14	0.48
2:B:2593:A:H4'	2:B:2594:C:C5	2.49	0.48
2:B:2765:C:C2'	2:B:2766:U:H5'	2.44	0.48
2:B:2796:G:H4'	2:B:2798:C:O4'	2.14	0.48
2:B:3245:A:H5"	2:B:3246:G:H8	1.79	0.48
3:C:140:G:H2'	3:C:141:C:O4'	2.13	0.48
6:F:115:ASN:ND2	6:F:123:ARG:O	2.47	0.48
6:F:121:GLY:C	6:F:123:ARG:H	2.22	0.48
6:F:145:LYS:HB3	6:F:157:VAL:HG21	1.96	0.48
7:G:257:PRO:C	7:G:259:HIS:H	2.20	0.48
8:H:33:ASP:HB2	22:V:22:ASP:HB3	1.96	0.48
8:H:69:ARG:O	8:H:70:ALA:HB3	2.13	0.48
8:H:320:ASN:OD1	8:H:323:VAL:HG12	2.13	0.48
9:I:65:ILE:HG12	9:I:74:VAL:CA	2.35	0.48
10:J:165:LEU:N	37:KA:6:ARG:O	2.39	0.48
11:K:87:VAL:O	11:K:134:VAL:HA	2.13	0.48
11:K:98:LYS:HB2	11:K:99:PRO:CD	2.36	0.48
17:Q:14:PHE:HB3	17:Q:18:TRP:NE1	2.29	0.48
17:Q:76:THR:O	17:Q:79:GLU:HG3	2.14	0.48
22:V:21:SER:OG	22:V:26:LEU:HD13	2.14	0.48
22:V:80:THR:O	22:V:137:THR:HA	2.13	0.48
22:V:138:LEU:HD22	22:V:139:ILE:N	2.29	0.48
31:EA:134:LEU:HB3	31:EA:136:PHE:CE2	2.48	0.48
52:ZA:147:ASN:HB3	71:SB:3:ASN:C	2.39	0.48
52:ZA:162:CYS:HB3	52:ZA:213:ALA:HB2	1.96	0.48
53:AB:126:VAL:HG12	53:AB:131:ALA:HB2	1.95	0.48
54:BB:34:GLY:HA3	54:BB:83:PRO:CG	2.44	0.48
54:BB:155:LYS:HE2	54:BB:155:LYS:CA	2.41	0.48
59:GB:48:GLN:O	59:GB:52:ILE:HG13	2.13	0.48
63:KB:113:PHE:CD1	63:KB:113:PHE:C	2.91	0.48
64:LB:137:LEU:HD13	64:LB:137:LEU:H	1.78	0.48
65:MB:36:LEU:HD12	65:MB:36:LEU:O	2.14	0.48
65:MB:48:GLY:HA3	65:MB:52:LYS:HZ1	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:NB:130:GLY:HA3	66:NB:137:ARG:HH12	1.79	0.48
70:RB:80:GLU:HG2	79:AC:54:LYS:HD3	1.94	0.48
72:TB:54:ASP:HA	72:TB:59:GLY:HA3	1.96	0.48
72:TB:85:ASP:O	72:TB:89:TRP:HD1	1.96	0.48
74:VB:20:ARG:CB	74:VB:76:TYR:HA	2.44	0.48
74:VB:34:ASN:ND2	74:VB:62:THR:HG23	2.29	0.48
75:WB:68:ARG:C	75:WB:70:LYS:H	2.21	0.48
76:XB:24:VAL:HG22	76:XB:24:VAL:O	2.14	0.48
77:YB:81:ARG:O	77:YB:82:LYS:HB2	2.14	0.48
82:DC:21:ASN:OD1	82:DC:122:THR:HG22	2.13	0.48
82:DC:137:VAL:O	82:DC:140:GLU:HB3	2.14	0.48
83:EC:6799:C:C2'	83:EC:6800:G:H4'	2.41	0.48
83:EC:6831:U:H2'	83:EC:6832:G:H5"	1.95	0.48
1:A:37:U:H2'	1:A:38:C:C6	2.48	0.48
1:A:1054:U:H1'	51:YA:148:ASN:ND2	2.28	0.48
1:A:1143:A:O2'	1:A:1144:U:H5'	2.14	0.48
1:A:1150:G:H5"	1:A:1151:A:C5'	2.44	0.48
1:A:1394:G:H2'	1:A:1395:G:C8	2.48	0.48
1:A:1437:U:O2'	1:A:1438:G:C8	2.67	0.48
1:A:1456:C:H3'	1:A:1457:C:C5'	2.44	0.48
1:A:1791:A:OP1	76:XB:8:ASN:HB2	2.13	0.48
2:B:27:C:O2'	2:B:28:C:H5'	2.13	0.48
2:B:80:G:H2'	2:B:81:C:H6	1.79	0.48
2:B:271:C:H2'	2:B:272:G:O4'	2.14	0.48
2:B:413:U:O5'	2:B:413:U:H6	1.97	0.48
2:B:713:U:O2	2:B:754:G:H4'	2.14	0.48
2:B:841:A:C4'	23:W:126:GLU:HA	2.43	0.48
2:B:930:U:O5'	2:B:930:U:H6	1.97	0.48
2:B:1100:U:H2'	2:B:1101:G:H8	1.75	0.48
2:B:1278:A:H5'	2:B:1279:C:OP2	2.14	0.48
2:B:1341:U:H2'	2:B:1342:C:C6	2.49	0.48
2:B:1496:C:O5'	2:B:1496:C:H6	1.97	0.48
2:B:1914:G:H2'	2:B:1914:G:N3	2.29	0.48
2:B:2183:A:O2'	6:F:236:GLY:O	2.32	0.48
2:B:2686:A:H2'	2:B:2687:G:C8	2.48	0.48
2:B:2857:C:H5	14:N:7:ARG:HH21	1.61	0.48
2:B:3101:G:H2'	2:B:3102:G:C8	2.49	0.48
2:B:3329:U:H4'	7:G:308:MET:HB2	1.96	0.48
2:B:3373:U:H5'	35:IA:70:ARG:NH1	2.29	0.48
4:D:8:G:H2'	4:D:9:C:O4'	2.13	0.48
4:D:16:U:OP1	9:I:8:LYS:HE2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:115:G:H21	9:I:72:ASP:H	1.62	0.48
6:F:104:LEU:HA	6:F:107:VAL:HG22	1.96	0.48
6:F:224:THR:HG22	6:F:237:LEU:HD12	1.96	0.48
7:G:29:VAL:HG11	7:G:32:PHE:CE1	2.49	0.48
7:G:196:ARG:HA	7:G:199:PHE:CZ	2.48	0.48
8:H:169:LEU:O	8:H:174:ALA:HB3	2.14	0.48
8:H:299:ILE:HG23	22:V:39:ARG:HB3	1.94	0.48
8:H:339:LEU:O	8:H:341:SER:N	2.47	0.48
10:J:39:VAL:CG2	10:J:89:THR:O	2.62	0.48
10:J:39:VAL:HG22	10:J:89:THR:O	2.13	0.48
12:L:97:TYR:HB2	12:L:132:VAL:HB	1.96	0.48
17:Q:85:LEU:N	17:Q:85:LEU:HD23	2.29	0.48
22:V:49:LEU:HA	22:V:52:LEU:HD12	1.96	0.48
23:W:59:SER:OG	23:W:62:ARG:HG3	2.13	0.48
28:BA:49:ILE:O	28:BA:49:ILE:HG12	2.13	0.48
37:KA:17:GLN:O	37:KA:24:ASN:HB2	2.14	0.48
47:UA:50:GLY:O	47:UA:51:ALA:HB3	2.14	0.48
48:VA:105:VAL:O	48:VA:106:ALA:HB3	2.14	0.48
48:VA:145:ILE:HG21	82:DC:190:SER:HB2	1.95	0.48
49:WA:117:LYS:HD3	49:WA:117:LYS:H	1.79	0.48
50:XA:22:THR:HG22	50:XA:169:SER:OG	2.13	0.48
51:YA:70:LEU:HD11	51:YA:79:HIS:HB3	1.96	0.48
52:ZA:140:ARG:HD2	71:SB:10:GLU:CD	2.38	0.48
55:CB:195:ALA:O	55:CB:199:ILE:HG13	2.13	0.48
56:DB:44:GLU:C	56:DB:46:LYS:H	2.21	0.48
64:LB:17:ALA:N	64:LB:79:VAL:HG22	2.29	0.48
66:NB:67:VAL:CG2	66:NB:85:ILE:HD11	2.44	0.48
82:DC:28:VAL:HG12	82:DC:29:ASP:H	1.79	0.48
82:DC:74:ALA:HA	82:DC:102:LEU:O	2.14	0.48
82:DC:271:ARG:CD	82:DC:273:PHE:HB3	2.43	0.48
82:DC:412:ARG:HA	82:DC:428:ILE:HA	1.95	0.48
82:DC:588:LEU:HD22	82:DC:688:ILE:HG12	1.96	0.48
1:A:262:U:H2'	1:A:263:C:O4'	2.14	0.47
1:A:636:A:C2	1:A:637:C:H1'	2.48	0.47
1:A:1201:G:N2	1:A:1600:A:OP2	2.44	0.47
1:A:1204:A:H1'	1:A:1554:U:O4	2.14	0.47
2:B:35:A:H2'	2:B:36:C:H6	1.79	0.47
2:B:62:A:H2'	2:B:63:A:O4'	2.13	0.47
2:B:146:U:P	2:B:148:G:H5'	2.54	0.47
2:B:147:U:O2	12:L:162:LEU:HD12	2.14	0.47
2:B:762:U:H2'	2:B:763:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:860:G:O4'	6:F:181:LYS:HD2	2.14	0.47
2:B:1157:G:H5"	11:K:220:PHE:HE2	1.77	0.47
2:B:1400:G:C6	2:B:1412:G:C6	3.02	0.47
2:B:1508:C:OP1	21:U:127:ARG:NH2	2.47	0.47
2:B:1595:U:H3	2:B:1612:A:H61	1.62	0.47
2:B:1663:C:O2	2:B:1786:G:N2	2.34	0.47
2:B:2395:G:C6	2:B:2396:G:C6	3.02	0.47
2:B:2746:A:N3	9:I:146:LEU:HD13	2.29	0.47
2:B:2849:C:H2'	2:B:2850:G:O4'	2.14	0.47
2:B:2856:G:H2'	2:B:2857:C:C6	2.49	0.47
2:B:2896:A:O4'	44:RA:100:TYR:HB3	2.14	0.47
2:B:3025:C:H2'	2:B:3026:G:O4'	2.14	0.47
2:B:3229:G:O2'	18:R:132:LYS:HB3	2.14	0.47
2:B:3316:A:OP2	7:G:123:TYR:HA	2.14	0.47
4:D:64:A:H4'	9:I:286:VAL:HG22	1.94	0.47
4:D:97:A:H1'	11:K:225:GLN:OE1	2.13	0.47
6:F:181:LYS:C	6:F:183:GLY:H	2.21	0.47
7:G:340:LYS:HG2	7:G:341:SER:N	2.29	0.47
8:H:181:VAL:C	8:H:183:LYS:H	2.22	0.47
8:H:256:THR:C	8:H:258:LEU:H	2.22	0.47
12:L:76:ALA:C	12:L:78:PHE:N	2.70	0.47
13:M:138:THR:HG22	13:M:139:ASN:H	1.78	0.47
14:N:20:SER:H	14:N:23:ASN:HB2	1.79	0.47
15:O:79:ILE:HG22	15:O:79:ILE:O	2.13	0.47
18:R:28:SER:OG	18:R:54:PRO:HD2	2.14	0.47
18:R:38:ILE:HD11	24:X:150:PHE:HE2	1.79	0.47
19:S:183:THR:O	19:S:183:THR:HG23	2.14	0.47
26:Z:36:TYR:HA	26:Z:39:ASP:OD1	2.14	0.47
26:Z:38:ILE:HD11	26:Z:50:LEU:HD22	1.96	0.47
26:Z:43:VAL:HG13	26:Z:70:LYS:O	2.13	0.47
26:Z:84:LEU:HD22	26:Z:90:ARG:HG2	1.95	0.47
29:CA:64:GLU:HG2	29:CA:65:GLN:N	2.28	0.47
32:FA:74:ASN:HB2	32:FA:115:LYS:HB2	1.95	0.47
34:HA:55:GLU:HG3	34:HA:56:LEU:HD23	1.96	0.47
35:IA:12:TYR:N	35:IA:12:TYR:CD2	2.81	0.47
35:IA:33:VAL:HG13	35:IA:51:LEU:HD12	1.96	0.47
35:IA:52:ALA:HB2	35:IA:92:TYR:CE1	2.49	0.47
36:JA:74:PHE:HB2	36:JA:92:TYR:CE1	2.49	0.47
36:JA:123:LYS:HA	36:JA:126:LEU:CD1	2.44	0.47
37:KA:32:ILE:HD13	37:KA:44:TYR:CG	2.49	0.47
38:LA:90:ILE:HG23	38:LA:94:LEU:CD1	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:130:PRO:CG	82:DC:191:THR:HG23	2.44	0.47
51:YA:92:GLN:HG3	51:YA:97:LEU:HD23	1.95	0.47
52:ZA:226:THR:HB	52:ZA:228:ASN:ND2	2.29	0.47
55:CB:97:LEU:HD11	55:CB:194:LEU:HD13	1.95	0.47
55:CB:121:ILE:HG21	55:CB:132:VAL:HG21	1.95	0.47
56:DB:22:HIS:O	56:DB:25:ARG:HG2	2.13	0.47
58:FB:8:ARG:CD	58:FB:20:GLN:HG2	2.44	0.47
59:GB:28:LEU:O	59:GB:31:ALA:HB3	2.13	0.47
64:LB:81:VAL:HG21	64:LB:115:ILE:HG23	1.95	0.47
78:ZB:56:LEU:HD12	78:ZB:58:GLU:OE1	2.13	0.47
82:DC:25:ILE:CG2	82:DC:127:VAL:HG22	2.44	0.47
82:DC:129:VAL:HG12	82:DC:139:THR:HG21	1.95	0.47
82:DC:138:GLN:O	82:DC:142:VAL:HG23	2.14	0.47
82:DC:144:ARG:NH1	82:DC:765:LEU:HD21	2.29	0.47
82:DC:586:ILE:HD12	82:DC:708:THR:HG22	1.96	0.47
1:A:333:A:C5	58:FB:49:ARG:HD3	2.49	0.47
1:A:884:A:H2'	1:A:885:G:H8	1.73	0.47
1:A:1454:G:H4'	65:MB:122:THR:CG2	2.44	0.47
1:A:1713:G:H2'	1:A:1714:A:O4'	2.14	0.47
2:B:7:C:H6	2:B:7:C:O5'	1.98	0.47
2:B:361:A:H5"	41:OA:36:SER:HB2	1.95	0.47
2:B:973:A:C2'	2:B:974:G:H4'	2.32	0.47
2:B:1007:U:H4'	14:N:92:HIS:CE1	2.49	0.47
2:B:1455:U:C6	2:B:1478:C:H5"	2.48	0.47
2:B:1730:G:N7	34:HA:28:LYS:HD2	2.28	0.47
2:B:2130:G:H2'	2:B:2131:A:H5'	1.95	0.47
2:B:2144:A:OP1	2:B:2325:G:H1'	2.14	0.47
2:B:2392:C:O3'	7:G:266:ARG:NH2	2.37	0.47
2:B:2669:G:N2	2:B:2685:C:O2	2.44	0.47
2:B:2872:A:O2'	2:B:2873:U:H5'	2.14	0.47
2:B:2919:A:C8	2:B:2919:A:OP2	2.67	0.47
2:B:2988:C:O3'	7:G:262:TRP:HA	2.14	0.47
2:B:3037:U:OP1	7:G:348:ARG:HD2	2.15	0.47
2:B:3355:U:H3'	2:B:3356:G:C5'	2.44	0.47
6:F:21:ARG:HB3	6:F:21:ARG:CZ	2.44	0.47
6:F:33:ASP:H	6:F:36:GLU:HB2	1.80	0.47
6:F:67:TYR:O	12:L:40:VAL:HG13	2.14	0.47
6:F:101:VAL:HG23	6:F:164:GLY:C	2.38	0.47
7:G:173:GLN:O	7:G:174:LYS:HB2	2.15	0.47
7:G:220:VAL:CG1	7:G:272:TYR:HA	2.44	0.47
8:H:92:ASN:ND2	8:H:100:PHE:HB2	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:64:ILE:HG21	9:I:142:PHE:CE1	2.49	0.47
10:J:157:GLN:CD	10:J:157:GLN:H	2.22	0.47
21:U:4:TYR:CD1	21:U:147:GLU:HB2	2.47	0.47
22:V:23:ASN:HB3	22:V:26:LEU:CB	2.43	0.47
22:V:36:LEU:O	22:V:40:THR:HG23	2.14	0.47
22:V:62:VAL:HG22	22:V:142:GLY:HA2	1.97	0.47
22:V:63:SER:HB3	22:V:90:ASP:HB2	1.96	0.47
27:AA:21:ALA:HB3	27:AA:36:ILE:CD1	2.43	0.47
28:BA:1:MET:SD	28:BA:15:PRO:HG2	2.54	0.47
30:DA:56:VAL:CG2	30:DA:104:LEU:HD22	2.44	0.47
30:DA:77:LYS:O	30:DA:78:PHE:HB2	2.14	0.47
30:DA:89:LYS:HB2	30:DA:91:ASN:HD21	1.78	0.47
37:KA:42:GLN:HA	37:KA:45:LEU:CD1	2.37	0.47
39:MA:63:ARG:O	39:MA:66:VAL:HB	2.14	0.47
46:TA:99:GLN:HB3	46:TA:102:GLN:CG	2.44	0.47
48:VA:26:PHE:HB2	48:VA:87:VAL:HG11	1.96	0.47
52:ZA:234:PRO:HB2	52:ZA:236:PRO:HD3	1.95	0.47
53:AB:168:ILE:HD12	53:AB:169:ASP:N	2.29	0.47
55:CB:144:GLU:O	55:CB:217:LEU:HB3	2.14	0.47
56:DB:32:ILE:HD12	56:DB:64:LYS:C	2.39	0.47
57:EB:8:ILE:HG23	57:EB:8:ILE:O	2.13	0.47
66:NB:50:GLU:HA	66:NB:53:LEU:HD12	1.95	0.47
68:PB:70:VAL:O	68:PB:74:GLN:HG2	2.15	0.47
70:RB:42:VAL:HG22	70:RB:55:PRO:HG3	1.96	0.47
73:UB:73:ARG:HG2	73:UB:84:THR:HG22	1.96	0.47
73:UB:132:LEU:H	73:UB:132:LEU:CD1	2.26	0.47
82:DC:9:MET:O	82:DC:13:MET:HG3	2.13	0.47
82:DC:773:PRO:HB2	82:DC:776:GLU:HB2	1.95	0.47
1:A:165:G:H2'	1:A:166:C:O4'	2.14	0.47
1:A:957:G:H21	77:YB:51:GLN:CG	2.27	0.47
1:A:1022:C:O5'	1:A:1022:C:H6	1.98	0.47
1:A:1054:U:H2'	1:A:1055:U:O4'	2.14	0.47
1:A:1166:A:C2'	1:A:1167:G:H5"	2.41	0.47
2:B:26:A:N6	2:B:59:G:H1	2.06	0.47
2:B:217:U:O2	2:B:221:A:N7	2.47	0.47
2:B:416:A:H2'	2:B:417:A:C8	2.49	0.47
2:B:502:U:C3'	2:B:503:C:H5"	2.43	0.47
2:B:518:G:C2	2:B:520:U:H4'	2.49	0.47
2:B:807:A:C2	2:B:808:A:C8	2.98	0.47
2:B:807:A:C2	2:B:808:A:N9	2.77	0.47
2:B:1059:G:H2'	2:B:1060:U:H6	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1073:U:O2'	2:B:1074:U:H5'	2.15	0.47
2:B:1234:G:H5"	16:P:118:ASP:HB2	1.97	0.47
2:B:1636:U:H4'	31:EA:75:VAL:HA	1.96	0.47
2:B:2561:A:N1	12:L:32:LYS:HB3	2.29	0.47
2:B:2856:G:C6	2:B:2857:C:C4	3.02	0.47
2:B:3040:A:C5'	27:AA:12:ARG:HB2	2.44	0.47
2:B:3324:C:H4'	35:IA:13:THR:C	2.39	0.47
6:F:10:LYS:HG2	6:F:16:PHE:CE1	2.50	0.47
7:G:90:VAL:HG13	7:G:103:THR:O	2.14	0.47
7:G:292:ALA:CA	7:G:303:LYS:O	2.59	0.47
7:G:362:ALA:O	7:G:363:SER:C	2.57	0.47
8:H:10:SER:C	8:H:12:THR:H	2.22	0.47
10:J:5:LYS:O	10:J:6:ALA:HB3	2.14	0.47
11:K:97:PRO:O	11:K:100:ARG:HB3	2.14	0.47
11:K:150:LYS:O	11:K:151:ARG:HG2	2.14	0.47
12:L:90:THR:HG22	12:L:90:THR:O	2.14	0.47
13:M:31:ARG:HD3	13:M:149:ASN:HB3	1.95	0.47
19:S:47:LYS:O	19:S:51:LEU:HG	2.13	0.47
25:Y:74:VAL:HG12	25:Y:75:ILE:N	2.29	0.47
26:Z:44:GLU:H	26:Z:70:LYS:HB3	1.79	0.47
29:CA:102:LEU:HB3	29:CA:103:TYR:CD1	2.50	0.47
30:DA:74:TYR:HD2	30:DA:81:GLN:HE22	1.62	0.47
34:HA:27:TYR:CD2	34:HA:27:TYR:C	2.92	0.47
37:KA:69:GLY:HA3	37:KA:85:PHE:HA	1.95	0.47
43:QA:21:ARG:CZ	43:QA:24:PRO:HG3	2.44	0.47
48:VA:30:VAL:O	48:VA:31:ASP:CB	2.61	0.47
48:VA:91:GLU:HB2	48:VA:96:ILE:HG23	1.96	0.47
49:WA:89:LEU:HG	49:WA:103:PHE:HB2	1.96	0.47
52:ZA:53:ILE:HG12	52:ZA:72:LEU:HD23	1.96	0.47
54:BB:67:GLN:NE2	74:VB:85:PHE:CZ	2.81	0.47
54:BB:225:VAL:HG12	54:BB:226:PHE:N	2.28	0.47
59:GB:113:VAL:HB	59:GB:125:ALA:HB1	1.95	0.47
59:GB:149:ARG:O	59:GB:150:LEU:HB3	2.13	0.47
66:NB:10:PHE:CE1	66:NB:12:LYS:HE2	2.48	0.47
67:OB:58:MET:HA	67:OB:61:ILE:HD12	1.97	0.47
70:RB:25:THR:HB	70:RB:115:GLU:HB2	1.96	0.47
74:VB:70:VAL:HG12	74:VB:71:GLY:N	2.29	0.47
75:WB:54:VAL:HG12	75:WB:88:ILE:HG21	1.96	0.47
82:DC:617:ARG:HA	82:DC:617:ARG:NE	2.29	0.47
82:DC:644:ASN:HD21	82:DC:681:MET:CB	2.26	0.47
1:A:1177:C:H4'	1:A:1189:A:H61	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1308:G:N2	1:A:1400:A:H2	2.13	0.47
1:A:1335:U:H2'	1:A:1336:A:C8	2.48	0.47
1:A:1619:C:C2	78:ZB:22:ARG:HG3	2.49	0.47
2:B:36:C:H2'	2:B:37:U:C5'	2.43	0.47
2:B:169:U:H1'	2:B:170:G:OP1	2.15	0.47
2:B:394:G:H2'	2:B:396:A:OP2	2.14	0.47
2:B:519:A:C5	2:B:522:A:H4'	2.50	0.47
2:B:715:A:OP2	32:FA:113:LEU:HB3	2.13	0.47
2:B:1317:A:H4'	20:T:18:ARG:NH2	2.29	0.47
2:B:1448:U:C5	2:B:2355:G:N2	2.79	0.47
2:B:1453:A:H3'	2:B:1454:A:H8	1.79	0.47
2:B:1472:U:O2'	2:B:1473:G:H5'	2.14	0.47
2:B:1662:G:N2	2:B:1787:A:H2	2.09	0.47
2:B:1916:U:H4'	23:W:85:ARG:CD	2.44	0.47
2:B:1927:G:P	47:UA:6:LYS:HB3	2.54	0.47
2:B:2143:A:N6	2:B:2145:A:H1'	2.29	0.47
2:B:2392:C:H4'	7:G:266:ARG:HH22	1.79	0.47
2:B:2439:A:H2'	2:B:2440:G:C8	2.50	0.47
2:B:3161:C:OP1	2:B:3396:U:H2'	2.14	0.47
4:D:7:G:H4'	9:I:72:ASP:OD2	2.14	0.47
7:G:94:GLU:HG3	7:G:99:LEU:HD21	1.96	0.47
7:G:198:HIS:CD2	7:G:201:LYS:HG2	2.50	0.47
7:G:307:PRO:HD2	7:G:311:PHE:HA	1.97	0.47
9:I:62:CYS:O	9:I:78:ALA:HB3	2.13	0.47
10:J:102:ASN:O	10:J:105:TYR:HB3	2.13	0.47
14:N:196:PHE:HD1	14:N:197:VAL:HG12	1.79	0.47
15:O:112:LEU:N	15:O:112:LEU:HD23	2.29	0.47
16:P:81:VAL:HA	16:P:84:ALA:HB2	1.96	0.47
18:R:40:ASP:OD1	18:R:43:LYS:HB2	2.14	0.47
18:R:121:MET:SD	18:R:122:VAL:HG23	2.54	0.47
22:V:66:ARG:O	22:V:69:ARG:HB3	2.15	0.47
24:X:80:ARG:O	24:X:122:HIS:HB2	2.14	0.47
24:X:167:ARG:HG3	24:X:168:PRO:CD	2.44	0.47
25:Y:14:MET:C	25:Y:15:PHE:HD2	2.21	0.47
34:HA:30:THR:HG21	34:HA:89:VAL:CG2	2.43	0.47
34:HA:51:LEU:C	34:HA:54:SER:H	2.23	0.47
40:NA:54:GLU:O	40:NA:58:ILE:HG23	2.13	0.47
44:RA:122:ARG:NH1	44:RA:122:ARG:HG3	2.29	0.47
46:TA:17:CYS:SG	46:TA:21:THR:CG2	3.02	0.47
47:UA:54:ILE:HG22	47:UA:63:THR:HG22	1.96	0.47
48:VA:32:ASN:ND2	48:VA:183:PHE:CE1	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:33:VAL:HG22	48:VA:34:SER:H	1.80	0.47
50:XA:153:SER:O	71:SB:63:GLY:HA2	2.14	0.47
51:YA:86:LEU:HB3	51:YA:98:THR:OG1	2.15	0.47
51:YA:154:SER:OG	51:YA:205:PHE:CZ	2.66	0.47
52:ZA:235:LEU:N	52:ZA:236:PRO:CD	2.78	0.47
54:BB:47:PHE:O	54:BB:51:ARG:HB2	2.14	0.47
55:CB:96:SER:HA	55:CB:99:MET:HE3	1.96	0.47
57:EB:152:VAL:HG23	57:EB:181:ILE:HG23	1.97	0.47
58:FB:68:ALA:O	58:FB:69:SER:C	2.57	0.47
59:GB:101:VAL:HG12	59:GB:105:LEU:CD2	2.44	0.47
59:GB:136:VAL:HG12	59:GB:136:VAL:O	2.14	0.47
63:KB:85:PRO:HB3	63:KB:87:ASP:OD2	2.14	0.47
63:KB:117:LEU:HA	63:KB:120:SER:OG	2.14	0.47
64:LB:47:LYS:HE3	64:LB:63:ALA:HA	1.95	0.47
65:MB:79:HIS:HE2	65:MB:102:PHE:HZ	1.61	0.47
70:RB:82:TYR:CE1	79:AC:53:ASN:HA	2.50	0.47
71:SB:26:ALA:O	71:SB:27:ASP:HB3	2.14	0.47
72:TB:11:LEU:HD13	72:TB:74:VAL:HB	1.97	0.47
72:TB:52:TYR:CE2	72:TB:54:ASP:HB2	2.50	0.47
82:DC:22:MET:HE3	82:DC:338:ILE:HG23	1.96	0.47
82:DC:78:TYR:CE1	82:DC:97:SER:HA	2.48	0.47
82:DC:597:VAL:O	82:DC:601:ILE:HG13	2.14	0.47
82:DC:637:GLY:O	82:DC:644:ASN:HB2	2.14	0.47
83:EC:6797:U:H2'	83:EC:6798:C:C6	2.49	0.47
1:A:161:U:O2'	1:A:162:A:H5'	2.14	0.47
1:A:333:A:H2'	1:A:334:G:C8	2.49	0.47
1:A:460:A:N3	54:BB:27:TYR:HE2	2.12	0.47
1:A:619:A:H5"	1:A:1141:G:H4'	1.95	0.47
1:A:1243:G:H5"	1:A:1245:G:OP2	2.15	0.47
1:A:1347:U:O2	1:A:1516:A:H2'	2.13	0.47
1:A:1723:U:H2'	1:A:1724:U:O4'	2.14	0.47
2:B:126:U:H1'	19:S:57:GLN:NE2	2.28	0.47
2:B:656:A:H2'	2:B:657:A:C8	2.50	0.47
2:B:963:G:O5'	2:B:963:G:C8	2.65	0.47
2:B:1332:A:H2'	2:B:1333:C:H6	1.79	0.47
2:B:1366:A:H3'	2:B:1367:G:C8	2.50	0.47
2:B:1647:A:H62	2:B:1808:G:H1'	1.78	0.47
2:B:1879:A:H3'	2:B:1880:U:C5'	2.45	0.47
2:B:2836:C:H2'	2:B:2837:A:O4'	2.13	0.47
2:B:2909:U:C4	2:B:2910:A:C5	3.02	0.47
2:B:2930:A:H2'	2:B:2931:C:H6	1.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:7:G:OP1	9:I:33:ARG:NH1	2.45	0.47
7:G:173:GLN:C	7:G:175:LYS:H	2.23	0.47
8:H:30:ILE:HD11	8:H:127:ALA:O	2.15	0.47
9:I:17:GLN:O	9:I:19:PRO:HD3	2.14	0.47
9:I:115:LEU:HD13	9:I:118:THR:HG23	1.96	0.47
9:I:257:GLU:C	9:I:259:LYS:H	2.23	0.47
10:J:68:PRO:HB3	10:J:138:GLN:HE22	1.78	0.47
11:K:25:GLN:HG2	11:K:29:GLU:CB	2.45	0.47
12:L:139:VAL:CG2	12:L:199:ALA:HB2	2.44	0.47
13:M:88:TYR:CE2	13:M:155:SER:HB3	2.49	0.47
14:N:144:ASN:HA	14:N:147:VAL:CG2	2.45	0.47
18:R:74:ARG:HH11	24:X:146:LYS:HE3	1.79	0.47
19:S:94:TYR:HE2	19:S:98:LEU:HA	1.79	0.47
22:V:96:PHE:CE1	22:V:114:ILE:HA	2.49	0.47
27:AA:37:ILE:HG13	27:AA:38:ALA:N	2.30	0.47
32:FA:149:ALA:O	40:NA:15:LYS:HB2	2.14	0.47
34:HA:64:LYS:HG2	34:HA:64:LYS:O	2.14	0.47
34:HA:83:LYS:C	34:HA:85:PHE:H	2.23	0.47
36:JA:9:ILE:HD13	36:JA:68:PRO:O	2.14	0.47
36:JA:28:VAL:HG12	36:JA:29:ALA:N	2.30	0.47
42:PA:2:ALA:N	42:PA:51:LEU:HD23	2.30	0.47
48:VA:8:LYS:H	48:VA:8:LYS:HD2	1.78	0.47
51:YA:70:LEU:HD23	51:YA:189:ILE:HG23	1.97	0.47
51:YA:79:HIS:HA	51:YA:81:PHE:CD1	2.50	0.47
51:YA:119:THR:HG21	51:YA:161:ILE:CD1	2.45	0.47
51:YA:121:ILE:HB	51:YA:141:ALA:HB3	1.96	0.47
51:YA:146:GLN:HG2	51:YA:147:ALA:H	1.79	0.47
52:ZA:183:ALA:HB2	52:ZA:207:LEU:HD11	1.96	0.47
53:AB:115:ILE:HG12	53:AB:142:LEU:HD13	1.96	0.47
53:AB:209:ILE:HG13	53:AB:210:GLU:H	1.78	0.47
54:BB:46:VAL:O	54:BB:50:ASN:HB2	2.15	0.47
54:BB:213:SER:O	54:BB:214:LEU:HB2	2.15	0.47
56:DB:26:VAL:O	56:DB:36:VAL:HG11	2.13	0.47
57:EB:102:PRO:CB	57:EB:109:VAL:HG12	2.44	0.47
57:EB:111:LYS:CG	57:EB:112:ARG:H	2.24	0.47
58:FB:22:ARG:HG3	58:FB:23:LYS:N	2.29	0.47
64:LB:19:ILE:HG23	64:LB:28:VAL:HA	1.97	0.47
68:PB:37:GLY:CA	68:PB:102:ALA:H	2.19	0.47
72:TB:103:ILE:HD13	72:TB:104:LEU:N	2.29	0.47
78:ZB:32:PHE:N	78:ZB:32:PHE:HD2	2.12	0.47
82:DC:81:MET:HG3	82:DC:339:VAL:CG1	2.42	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:382:VAL:CG2	82:DC:396:ALA:HB1	2.43	0.47
82:DC:382:VAL:HA	82:DC:397:PHE:O	2.14	0.47
1:A:11:A:O2'	52:ZA:86:VAL:HG13	2.14	0.47
1:A:430:G:O2'	1:A:431:C:H5'	2.14	0.47
1:A:467:G:H2'	1:A:468:A:H5"	1.97	0.47
1:A:478:A:C5'	59:GB:127:VAL:HG21	2.43	0.47
1:A:1037:C:H2'	1:A:1038:U:C6	2.49	0.47
1:A:1098:U:H1'	72:TB:71:LYS:CG	2.44	0.47
1:A:1241:G:H5'	65:MB:78:THR:HA	1.97	0.47
2:B:208:C:O2'	2:B:209:A:H5'	2.14	0.47
2:B:370:U:H4'	2:B:404:G:O4'	2.14	0.47
2:B:484:C:H2'	2:B:485:A:O4'	2.15	0.47
2:B:744:A:H2'	2:B:745:C:O4'	2.13	0.47
2:B:949:C:H5'	22:V:10:HIS:HB2	1.96	0.47
2:B:1074:U:C1'	33:GA:46:ALA:HA	2.45	0.47
2:B:1169:A:H2'	2:B:1170:A:O4'	2.14	0.47
2:B:1643:A:OP1	38:LA:66:SER:HB3	2.15	0.47
2:B:2188:A:N3	47:UA:18:TYR:O	2.47	0.47
2:B:2287:C:H3'	2:B:2288:G:H5'	1.97	0.47
2:B:2428:U:H2'	2:B:2429:G:O4'	2.15	0.47
2:B:2742:C:O2'	46:TA:20:HIS:NE2	2.47	0.47
2:B:2771:U:H3'	2:B:2772:C:H5"	1.95	0.47
2:B:3209:A:OP2	24:X:161:LYS:HD2	2.14	0.47
3:C:54:A:C8	3:C:54:A:O5'	2.67	0.47
6:F:155:LYS:HD2	6:F:155:LYS:N	2.30	0.47
7:G:119:TYR:CZ	7:G:129:ALA:HB2	2.49	0.47
7:G:379:PHE:HE2	28:BA:11:ALA:HA	1.78	0.47
9:I:232:ASP:CG	9:I:233:ALA:N	2.72	0.47
10:J:39:VAL:CG1	10:J:159:LEU:HD21	2.45	0.47
10:J:108:LYS:O	10:J:109:GLU:HG2	2.15	0.47
10:J:175:LYS:CG	18:R:111:ALA:HA	2.42	0.47
11:K:160:ARG:HB2	11:K:203:TRP:CZ3	2.49	0.47
14:N:10:ARG:HA	14:N:59:GLN:HB2	1.96	0.47
14:N:21:ARG:HH22	14:N:22:TYR:HE1	1.62	0.47
16:P:81:VAL:HG13	16:P:113:ALA:HB1	1.97	0.47
17:Q:15:ARG:HH11	17:Q:15:ARG:HG2	1.80	0.47
17:Q:101:ARG:HG2	17:Q:102:GLN:N	2.30	0.47
18:R:68:LEU:HD11	18:R:93:LYS:HB3	1.95	0.47
19:S:46:ASP:HB2	19:S:50:ARG:HH12	1.78	0.47
19:S:112:ASN:HB2	19:S:138:GLN:NE2	2.29	0.47
19:S:140:LYS:HA	19:S:143:ARG:HB2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:27:LEU:HD12	20:T:102:LEU:HD13	1.95	0.47
20:T:74:ARG:HB2	20:T:147:TRP:H	1.80	0.47
21:U:138:LYS:HD2	21:U:140:GLU:OE1	2.13	0.47
23:W:170:ARG:HA	23:W:173:ARG:CB	2.42	0.47
25:Y:11:THR:HB	25:Y:15:PHE:CZ	2.49	0.47
31:EA:14:VAL:O	31:EA:19:ALA:HB1	2.14	0.47
34:HA:43:ILE:CG2	34:HA:70:PHE:HB2	2.43	0.47
36:JA:41:VAL:HA	36:JA:46:PHE:HD2	1.79	0.47
45:SA:7:LYS:HD3	45:SA:11:ARG:HH12	1.80	0.47
48:VA:30:VAL:O	48:VA:31:ASP:HB2	2.15	0.47
51:YA:23:PRO:O	51:YA:27:LYS:HG2	2.14	0.47
55:CB:142:PRO:HB3	55:CB:217:LEU:CD1	2.43	0.47
55:CB:173:ALA:O	55:CB:177:ILE:HG13	2.14	0.47
56:DB:195:VAL:HG12	56:DB:196:ARG:N	2.30	0.47
56:DB:208:TYR:HA	56:DB:211:LEU:HB3	1.96	0.47
56:DB:216:LEU:HA	56:DB:219:ARG:NH2	2.28	0.47
57:EB:141:ARG:HB2	57:EB:149:ILE:O	2.14	0.47
58:FB:38:ILE:CD1	58:FB:80:GLY:HA2	2.44	0.47
63:KB:112:LYS:O	63:KB:115:LEU:HB3	2.15	0.47
66:NB:93:HIS:CA	66:NB:97:VAL:HB	2.35	0.47
68:PB:86:LEU:HD12	68:PB:86:LEU:N	2.28	0.47
70:RB:71:PRO:HB3	79:AC:41:GLN:CB	2.45	0.47
71:SB:20:THR:O	71:SB:21:ASN:HB2	2.14	0.47
73:UB:141:GLU:HG2	73:UB:142:LYS:N	2.30	0.47
75:WB:69:LEU:HB2	83:EC:6867:C:O3'	2.14	0.47
82:DC:25:ILE:HD11	82:DC:146:ALA:HB2	1.95	0.47
82:DC:138:GLN:O	82:DC:141:THR:HB	2.14	0.47
82:DC:226:ALA:HA	82:DC:240:MET:SD	2.54	0.47
82:DC:436:LEU:HA	82:DC:454:ILE:CG1	2.45	0.47
82:DC:565:GLU:HB3	82:DC:676:ILE:HD11	1.96	0.47
82:DC:584:ASN:HA	82:DC:692:THR:O	2.14	0.47
1:A:168:A:C2'	1:A:169:A:H5'	2.44	0.47
1:A:211:U:H2'	1:A:212:U:C6	2.50	0.47
1:A:332:U:H5"	58:FB:31:ARG:HH21	1.79	0.47
1:A:398:G:OP1	58:FB:49:ARG:HA	2.14	0.47
1:A:579:A:H3'	1:A:580:A:C5'	2.45	0.47
1:A:1066:C:O2'	51:YA:149:GLN:N	2.48	0.47
1:A:1164:G:H2'	1:A:1165:G:C8	2.50	0.47
1:A:1425:A:C2'	1:A:1426:C:H5'	2.44	0.47
1:A:1453:G:H4'	65:MB:81:ARG:HE	1.79	0.47
1:A:1483:A:H2'	1:A:1484:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:90:C:H5”	2:B:283:G:H1’	1.97	0.47
2:B:374:A:H4’	2:B:375:A:C5’	2.33	0.47
2:B:375:A:O3’	30:DA:89:LYS:HD2	2.14	0.47
2:B:409:A:H3’	2:B:410:U:C6	2.50	0.47
2:B:422:A:N1	2:B:2363:A:H4’	2.30	0.47
2:B:535:G:C4	2:B:554:A:N6	2.83	0.47
2:B:623:U:H4’	37:KA:86:ARG:NH2	2.30	0.47
2:B:730:C:H2’	2:B:731:U:O4’	2.14	0.47
2:B:945:C:H2’	2:B:946:U:C6	2.49	0.47
2:B:967:A:H2’	2:B:968:G:C8	2.48	0.47
2:B:1052:U:C2’	2:B:1053:A:H5’	2.44	0.47
2:B:1231:A:C2’	2:B:1278:A:H61	2.21	0.47
2:B:1237:G:N3	2:B:1237:G:H2’	2.29	0.47
2:B:1248:C:C2’	2:B:1249:G:H5’	2.44	0.47
2:B:1295:G:C5	2:B:1296:C:C4	3.02	0.47
2:B:1306:G:H21	2:B:1307:G:H8	1.62	0.47
2:B:1336:U:C2’	2:B:1337:A:C8	2.84	0.47
2:B:1530:U:H3’	2:B:1531:C:C6	2.50	0.47
2:B:1558:A:OP2	12:L:54:GLU:HG2	2.15	0.47
2:B:1602:A:H4’	23:W:10:LEU:HD21	1.96	0.47
2:B:1822:C:H5’	2:B:1822:C:H6	1.79	0.47
2:B:1836:C:H3’	2:B:1836:C:H6	1.80	0.47
2:B:2108:C:C4’	2:B:3344:A:H1’	2.45	0.47
2:B:2203:U:H2’	2:B:2204:C:H6	1.75	0.47
2:B:2316:G:H2’	2:B:2317:A:C8	2.49	0.47
2:B:2383:C:H2’	2:B:2384:A:O4’	2.15	0.47
2:B:2422:C:H2’	2:B:2423:U:C6	2.49	0.47
2:B:2430:A:H5’	2:B:2430:A:C8	2.46	0.47
2:B:2443:A:C2’	2:B:2444:C:H4’	2.43	0.47
2:B:2624:G:H2’	2:B:2625:C:H5’	1.96	0.47
2:B:2667:A:C2’	2:B:2668:U:H5’	2.43	0.47
2:B:2931:C:H4’	27:AA:39:VAL:O	2.14	0.47
2:B:2949:U:H4’	7:G:241:LYS:HB3	1.96	0.47
2:B:2988:C:OP1	20:T:68:ARG:HD3	2.15	0.47
2:B:3035:A:C5	13:M:121:LYS:HB3	2.50	0.47
2:B:3123:A:H2’	2:B:3124:G:H8	1.79	0.47
2:B:3298:C:H2’	2:B:3299:A:C8	2.45	0.47
2:B:3313:U:O2’	7:G:173:GLN:HA	2.15	0.47
3:C:12:A:H2’	3:C:13:A:C4’	2.45	0.47
4:D:31:U:H2’	4:D:32:U:H6	1.80	0.47
4:D:103:A:H2’	4:D:104:A:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:76:PHE:O	6:F:77:ILE:O	2.33	0.47
7:G:86:VAL:HG13	7:G:160:VAL:CG1	2.45	0.47
7:G:303:LYS:HZ2	7:G:371:GLN:HB3	1.80	0.47
8:H:23:PRO:CA	8:H:259:ASP:HB2	2.41	0.47
8:H:80:GLY:C	8:H:85:SER:HB2	2.40	0.47
8:H:181:VAL:HG22	8:H:202:ARG:HB2	1.95	0.47
8:H:196:ASN:OD1	30:DA:11:ASP:HA	2.14	0.47
8:H:320:ASN:CG	8:H:323:VAL:HG12	2.40	0.47
9:I:105:ILE:O	9:I:109:THR:HG22	2.15	0.47
10:J:110:LYS:HB3	10:J:113:LYS:HB2	1.96	0.47
12:L:78:PHE:O	12:L:79:GLN:CB	2.60	0.47
14:N:119:TRP:CD1	14:N:119:TRP:C	2.93	0.47
14:N:169:LYS:HA	14:N:169:LYS:CE	2.44	0.47
16:P:106:LEU:HD13	16:P:110:ILE:HD11	1.95	0.47
17:Q:123:ILE:O	17:Q:125:VAL:HG23	2.14	0.47
17:Q:148:ALA:O	17:Q:149:GLN:C	2.58	0.47
19:S:13:LYS:O	19:S:15:GLN:N	2.44	0.47
19:S:114:ARG:NH2	19:S:157:LYS:HD2	2.29	0.47
21:U:98:ALA:HB1	21:U:148:LEU:HD11	1.96	0.47
22:V:19:PRO:CD	22:V:53:PHE:HD1	2.23	0.47
23:W:9:ARG:HG3	23:W:19:LYS:HE2	1.96	0.47
23:W:58:HIS:O	23:W:60:LYS:N	2.47	0.47
26:Z:25:ASN:ND2	26:Z:27:VAL:HG13	2.30	0.47
26:Z:63:VAL:HG12	26:Z:65:VAL:HG23	1.95	0.47
27:AA:93:LEU:HB3	28:BA:20:LEU:HB3	1.97	0.47
31:EA:74:VAL:HG22	31:EA:101:PHE:CD1	2.49	0.47
36:JA:41:VAL:HG12	36:JA:46:PHE:CD2	2.49	0.47
37:KA:101:PHE:HB3	37:KA:103:TYR:CE1	2.50	0.47
38:LA:106:LYS:HA	38:LA:110:GLU:HG3	1.96	0.47
39:MA:85:THR:HB	39:MA:88:LEU:H	1.80	0.47
42:PA:65:LEU:HD12	42:PA:68:SER:HB2	1.95	0.47
44:RA:103:LEU:HA	44:RA:111:ARG:NH2	2.29	0.47
48:VA:145:ILE:HB	82:DC:201:GLN:CD	2.40	0.47
48:VA:187:VAL:HG12	48:VA:188:VAL:N	2.29	0.47
49:WA:242:SER:HB2	49:WA:290:VAL:O	2.15	0.47
49:WA:305:TYR:HB2	49:WA:309:VAL:O	2.15	0.47
51:YA:64:ARG:HB3	64:LB:34:SER:OG	2.15	0.47
51:YA:138:PHE:HD2	51:YA:214:LYS:HB3	1.80	0.47
52:ZA:229:LEU:HD11	71:SB:1:MET:CE	2.42	0.47
54:BB:114:ILE:HB	54:BB:118:GLU:OE2	2.14	0.47
54:BB:222:LEU:HA	54:BB:225:VAL:CG2	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:42:LEU:O	55:CB:69:PHE:HA	2.14	0.47
55:CB:84:LYS:HZ2	55:CB:84:LYS:HB2	1.79	0.47
55:CB:88:PRO:HG2	55:CB:91:GLU:CB	2.45	0.47
56:DB:69:LEU:O	56:DB:99:GLY:HA3	2.15	0.47
57:EB:162:ILE:O	57:EB:166:LEU:HD13	2.15	0.47
60:HB:92:ILE:HG23	60:HB:92:ILE:O	2.15	0.47
66:NB:130:GLY:HA3	66:NB:137:ARG:HH22	1.78	0.47
68:PB:41:ARG:HA	68:PB:44:ASN:HB3	1.97	0.47
70:RB:41:ILE:HG22	70:RB:41:ILE:O	2.14	0.47
71:SB:64:GLU:CD	77:YB:2:VAL:HG13	2.40	0.47
72:TB:81:VAL:HA	72:TB:85:ASP:HB2	1.96	0.47
73:UB:6:PRO:HG2	73:UB:15:LEU:CD2	2.45	0.47
75:WB:54:VAL:HG12	75:WB:88:ILE:CG2	2.45	0.47
82:DC:137:VAL:HG13	82:DC:138:GLN:H	1.80	0.47
82:DC:271:ARG:HG2	82:DC:273:PHE:H	1.79	0.47
82:DC:275:MET:C	82:DC:279:ASP:HB2	2.39	0.47
82:DC:616:ALA:HA	82:DC:619:MET:HE3	1.97	0.47
82:DC:645:LEU:HB2	82:DC:685:ARG:HB2	1.94	0.47
82:DC:757:GLU:O	82:DC:757:GLU:HG3	2.15	0.47
83:EC:6906:G:C2'	83:EC:6907:G:H5"	2.43	0.47
1:A:148:A:OP2	1:A:149:C:C5	2.67	0.47
1:A:347:G:H5'	61:IB:80:MET:SD	2.54	0.47
1:A:381:C:OP1	59:GB:2:PRO:HD2	2.15	0.47
1:A:445:A:H2'	1:A:446:A:H8	1.79	0.47
1:A:472:U:H2'	1:A:473:A:C8	2.50	0.47
1:A:877:G:H5'	1:A:937:C:H1'	1.97	0.47
1:A:1363:U:H3'	1:A:1364:G:C4'	2.45	0.47
1:A:1388:A:N6	1:A:1409:G:H1'	2.29	0.47
2:B:277:G:H4'	46:TA:50:PHE:CE2	2.49	0.47
2:B:403:C:H2'	2:B:404:G:H5'	1.97	0.47
2:B:419:G:H1	3:C:4:C:N4	2.13	0.47
2:B:519:A:N7	2:B:522:A:H4'	2.29	0.47
2:B:806:A:H2	2:B:2813:A:O4'	1.98	0.47
2:B:830:A:C2'	2:B:831:G:H5'	2.44	0.47
2:B:872:U:O2'	2:B:873:C:H5'	2.15	0.47
2:B:949:C:H2'	2:B:950:G:H8	1.79	0.47
2:B:1364:C:C5'	22:V:3:ILE:HG21	2.38	0.47
2:B:1667:A:OP1	2:B:1743:G:H4'	2.13	0.47
2:B:1725:C:H5"	47:UA:36:ARG:NH1	2.30	0.47
2:B:1882:G:H2'	2:B:1883:A:O4'	2.14	0.47
2:B:1915:A:H2'	2:B:1916:U:C5	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1916:U:H6	2:B:1916:U:O5'	1.98	0.47
2:B:2135:U:H3	2:B:2145:A:H61	1.62	0.47
2:B:2154:U:H1'	6:F:237:LEU:HD22	1.96	0.47
2:B:2919:A:OP2	2:B:2919:A:H8	1.98	0.47
2:B:3113:A:C2	13:M:66:ALA:HB1	2.49	0.47
2:B:3169:U:H2'	2:B:3170:A:N9	2.29	0.47
2:B:3304:U:O2	7:G:334:ARG:HA	2.15	0.47
2:B:3320:A:O3'	7:G:174:LYS:HD2	2.15	0.47
5:E:5:THR:H	5:E:36:VAL:HG13	1.78	0.47
7:G:27:ALA:N	7:G:220:VAL:HG23	2.30	0.47
7:G:86:VAL:HG13	7:G:160:VAL:HG13	1.97	0.47
7:G:311:PHE:CD2	7:G:317:ILE:HD11	2.47	0.47
8:H:204:GLY:O	8:H:246:ARG:NH2	2.45	0.47
9:I:211:LEU:HB3	9:I:219:PHE:CG	2.50	0.47
11:K:110:ARG:HD2	11:K:206:LYS:HG2	1.96	0.47
13:M:57:VAL:HG12	13:M:58:HIS:H	1.79	0.47
14:N:9:TYR:N	14:N:9:TYR:HD2	2.12	0.47
15:O:36:VAL:HG21	15:O:123:PHE:CE2	2.50	0.47
17:Q:87:ALA:HB1	17:Q:91:ARG:NH2	2.30	0.47
18:R:22:LEU:HD23	18:R:64:VAL:HG13	1.95	0.47
18:R:39:ILE:O	24:X:95:ARG:HD3	2.15	0.47
22:V:58:ASN:C	22:V:60:PRO:HD3	2.40	0.47
22:V:96:PHE:HE1	22:V:114:ILE:HA	1.80	0.47
25:Y:14:MET:HE3	25:Y:58:GLN:CG	2.45	0.47
27:AA:117:PRO:HA	27:AA:135:VAL:O	2.14	0.47
38:LA:93:PHE:CD2	38:LA:94:LEU:HD23	2.50	0.47
46:TA:79:THR:HA	46:TA:80:ARG:HH21	1.79	0.47
51:YA:133:TYR:CZ	51:YA:217:LEU:HD23	2.49	0.47
51:YA:202:LYS:HB2	51:YA:202:LYS:NZ	2.30	0.47
52:ZA:73:LEU:O	52:ZA:76:LEU:HD13	2.15	0.47
53:AB:8:LYS:HG2	70:RB:61:LYS:HD3	1.96	0.47
53:AB:35:SER:OG	53:AB:100:ALA:HB2	2.15	0.47
56:DB:116:LYS:HG2	56:DB:117:GLY:N	2.29	0.47
56:DB:129:VAL:CG2	56:DB:130:PRO:HD2	2.44	0.47
56:DB:142:ARG:HB3	56:DB:143:LYS:HZ2	1.80	0.47
56:DB:163:THR:HG22	56:DB:168:THR:HG22	1.96	0.47
57:EB:9:LEU:O	57:EB:10:SER:CB	2.61	0.47
59:GB:45:ILE:HG21	59:GB:101:VAL:HG13	1.96	0.47
68:PB:84:TRP:HZ2	69:QB:36:ILE:HB	1.78	0.47
70:RB:109:GLU:HB3	70:RB:112:VAL:HG21	1.96	0.47
71:SB:11:LEU:HD12	71:SB:11:LEU:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:TB:11:LEU:HD21	72:TB:37:PHE:HZ	1.79	0.47
80:BC:37:ARG:O	80:BC:41:THR:HG23	2.15	0.47
82:DC:16:VAL:CG2	82:DC:346:VAL:HG11	2.45	0.47
82:DC:561:VAL:HG13	82:DC:774:VAL:CG1	2.45	0.47
82:DC:677:PHE:N	82:DC:677:PHE:HD2	2.12	0.47
1:A:94:U:O2'	54:BB:8:HIS:HB2	2.15	0.47
1:A:867:G:H1	1:A:961:U:H3	1.63	0.47
2:B:31:C:H5	19:S:188:ARG:NH2	2.11	0.47
2:B:72:C:O2	17:Q:61:PRO:HB3	2.14	0.47
2:B:89:A:OP2	22:V:171:LYS:HE3	2.15	0.47
2:B:238:A:H2'	2:B:239:G:O4'	2.14	0.47
2:B:1667:A:H5'	2:B:1743:G:H5"	1.97	0.47
2:B:1806:A:H2'	2:B:1807:G:O4'	2.14	0.47
2:B:2218:G:H2'	2:B:2219:A:H8	1.80	0.47
2:B:2358:A:H3'	2:B:2359:C:H6	1.79	0.47
2:B:2594:C:C3'	2:B:2595:A:H5"	2.45	0.47
2:B:2765:C:H5"	46:TA:42:ARG:HH22	1.80	0.47
2:B:3212:C:C4	2:B:3213:A:H1'	2.50	0.47
4:D:63:A:OP1	9:I:285:ARG:HD3	2.15	0.47
5:E:87:VAL:HG21	5:E:116:LEU:HB3	1.96	0.47
6:F:101:VAL:HB	6:F:165:VAL:CA	2.32	0.47
8:H:104:LYS:HD2	8:H:106:TRP:NE1	2.30	0.47
9:I:128:GLU:HG3	9:I:129:TYR:H	1.79	0.47
9:I:153:THR:HB	9:I:179:ARG:HE	1.79	0.47
12:L:201:THR:O	12:L:202:GLU:HG3	2.15	0.47
12:L:214:LEU:HD12	12:L:217:THR:CB	2.41	0.47
14:N:119:TRP:HD1	14:N:120:GLY:N	2.12	0.47
15:O:166:LYS:O	15:O:167:TYR:HB2	2.15	0.47
22:V:19:PRO:HD3	22:V:53:PHE:CD1	2.35	0.47
28:BA:31:PHE:HD1	28:BA:32:GLN:H	1.63	0.47
29:CA:80:ASN:O	29:CA:126:LEU:HB2	2.14	0.47
30:DA:40:ARG:HH11	30:DA:40:ARG:CB	2.28	0.47
32:FA:27:LYS:HD2	32:FA:28:HIS:CE1	2.49	0.47
34:HA:13:LYS:HD3	34:HA:103:THR:CG2	2.45	0.47
34:HA:16:LEU:HD13	34:HA:19:LYS:CE	2.45	0.47
34:HA:24:THR:HG22	34:HA:91:SER:O	2.15	0.47
36:JA:95:GLU:HG2	36:JA:96:ILE:H	1.77	0.47
37:KA:45:LEU:HD21	37:KA:74:THR:N	2.30	0.47
38:LA:44:CYS:SG	38:LA:81:CYS:SG	3.12	0.47
38:LA:72:VAL:CG2	38:LA:73:SER:H	2.06	0.47
43:QA:3:ALA:H	43:QA:5:LYS:HE2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:SA:2:ARG:HD2	45:SA:5:TRP:CE2	2.50	0.47
50:XA:142:PRO:HB3	71:SB:34:ILE:HD11	1.97	0.47
52:ZA:69:ILE:HD12	52:ZA:69:ILE:C	2.40	0.47
53:AB:24:PHE:CE2	53:AB:72:LEU:HD22	2.50	0.47
54:BB:16:HIS:C	54:BB:18:TRP:N	2.73	0.47
54:BB:49:ARG:HD2	54:BB:56:LEU:C	2.39	0.47
54:BB:52:LEU:HD13	54:BB:54:TYR:CE2	2.48	0.47
54:BB:68:ARG:HG2	54:BB:76:VAL:HG13	1.95	0.47
55:CB:70:VAL:HG23	55:CB:72:HIS:H	1.78	0.47
56:DB:162:VAL:HG22	56:DB:163:THR:H	1.80	0.47
58:FB:107:THR:OG1	58:FB:108:PRO:HD3	2.15	0.47
61:IB:59:PRO:HD3	61:IB:138:ASN:ND2	2.30	0.47
65:MB:20:VAL:HG21	65:MB:28:MET:SD	2.55	0.47
66:NB:91:ALA:HA	66:NB:94:GLN:HG2	1.97	0.47
70:RB:48:HIS:HD2	70:RB:50:LEU:HB3	1.80	0.47
70:RB:62:VAL:HG12	70:RB:64:LYS:HG3	1.97	0.47
72:TB:17:ALA:CB	72:TB:25:VAL:HG11	2.45	0.47
72:TB:103:ILE:HD11	72:TB:110:ILE:CG2	2.42	0.47
74:VB:15:ASN:HD21	74:VB:17:LEU:HD11	1.80	0.47
74:VB:99:LYS:HE2	74:VB:100:VAL:HG12	1.96	0.47
75:WB:47:TYR:O	75:WB:51:LEU:HD13	2.14	0.47
80:BC:21:VAL:O	80:BC:21:VAL:HG13	2.15	0.47
83:EC:6809:G:H4’	83:EC:6853:G:H5”	1.97	0.47
83:EC:6938:A:O5’	83:EC:6938:A:H8	1.96	0.47
1:A:230:C:H3’	1:A:231:U:H5”	1.96	0.47
1:A:709:C:N4	1:A:731:C:H5”	2.30	0.47
1:A:797:G:H4’	61:IB:69:LYS:HZ1	1.79	0.47
1:A:1279:C:H2’	1:A:1280:C:O4’	2.15	0.47
1:A:1480:G:H2’	1:A:1481:C:H5’	1.96	0.47
1:A:1596:C:H2’	1:A:1597:A:H5”	1.95	0.47
2:B:74:G:H2’	2:B:75:G:O4’	2.15	0.47
2:B:77:A:OP2	17:Q:73:ARG:HD2	2.15	0.47
2:B:194:U:H6	2:B:194:U:O5’	1.98	0.47
2:B:311:C:N4	2:B:2779:A:H61	2.13	0.47
2:B:345:G:H3’	2:B:346:C:H5”	1.97	0.47
2:B:486:U:H2’	2:B:487:U:H5’	1.97	0.47
2:B:990:U:H2’	2:B:991:G:C5’	2.34	0.47
2:B:1118:C:H2’	2:B:1119:C:H6	1.77	0.47
2:B:1755:C:C2’	2:B:1756:C:H5”	2.45	0.47
2:B:1800:A:OP2	2:B:1801:U:H5	1.97	0.47
2:B:1940:G:OP1	23:W:75:HIS:HA	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2402:A:OP2	8:H:70:ALA:HA	2.15	0.47
2:B:2468:A:N6	2:B:2479:C:H5'	2.30	0.47
2:B:2523:A:H2'	12:L:51:LYS:HB2	1.97	0.47
2:B:2732:G:H4'	2:B:2760:C:H4'	1.97	0.47
2:B:3106:A:H2'	2:B:3107:U:C5'	2.44	0.47
3:C:75:G:H2'	3:C:76:C:C6	2.50	0.47
5:E:202:GLY:O	5:E:203:SER:HB2	2.13	0.47
6:F:144:ASN:HB3	6:F:160:SER:HB2	1.97	0.47
7:G:295:ALA:HB1	7:G:300:ARG:HA	1.96	0.47
7:G:385:LYS:HG3	7:G:386:ASP:N	2.30	0.47
8:H:74:ILE:HD12	8:H:75:PRO:HD2	1.97	0.47
8:H:280:ILE:HD12	8:H:280:ILE:C	2.40	0.47
8:H:286:VAL:CG2	22:V:28:LEU:HB3	2.45	0.47
9:I:18:THR:HB	9:I:24:ARG:CD	2.42	0.47
9:I:43:LYS:HB3	9:I:46:THR:OG1	2.15	0.47
10:J:51:ARG:NH2	18:R:114:ASP:CG	2.59	0.47
11:K:75:TYR:O	25:Y:141:VAL:HG22	2.15	0.47
11:K:132:PRO:HA	11:K:229:PHE:CG	2.50	0.47
11:K:154:GLY:HA2	11:K:203:TRP:N	2.30	0.47
13:M:91:ARG:HH12	44:RA:82:LEU:CD1	2.24	0.47
14:N:77:THR:HA	14:N:81:GLY:O	2.14	0.47
14:N:144:ASN:HA	14:N:147:VAL:HG21	1.97	0.47
15:O:110:ILE:CG2	15:O:114:ILE:HG22	2.44	0.47
17:Q:15:ARG:HH11	17:Q:15:ARG:CG	2.28	0.47
19:S:53:TYR:CD1	19:S:133:ILE:HD13	2.48	0.47
19:S:101:THR:O	19:S:105:ARG:HG3	2.15	0.47
22:V:81:VAL:O	22:V:102:ALA:HB3	2.15	0.47
23:W:144:GLN:HA	23:W:147:ALA:HB3	1.96	0.47
25:Y:66:ASN:CB	33:GA:35:VAL:HG13	2.44	0.47
29:CA:92:LYS:HE3	29:CA:110:VAL:C	2.40	0.47
29:CA:107:VAL:HG13	29:CA:124:VAL:HG13	1.95	0.47
31:EA:12:VAL:HB	31:EA:81:LEU:HB2	1.96	0.47
31:EA:42:LEU:N	31:EA:42:LEU:HD12	2.30	0.47
32:FA:120:ASN:HA	32:FA:141:ALA:HB1	1.96	0.47
35:IA:51:LEU:HD13	35:IA:55:LEU:HD11	1.96	0.47
36:JA:38:ILE:HD12	36:JA:38:ILE:N	2.26	0.47
39:MA:86:ARG:HH11	39:MA:86:ARG:CB	2.25	0.47
40:NA:23:ALA:HB1	40:NA:24:PRO:HD2	1.97	0.47
50:XA:6:THR:HG22	50:XA:6:THR:O	2.14	0.47
51:YA:121:ILE:HG21	51:YA:164:ILE:HG21	1.96	0.47
54:BB:106:LYS:HD2	54:BB:108:ARG:NH1	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:185:GLY:HA3	54:BB:224:ASN:OD1	2.15	0.47
55:CB:121:ILE:CG2	55:CB:132:VAL:HG21	2.45	0.47
56:DB:77:LEU:HD12	56:DB:77:LEU:N	2.29	0.47
56:DB:93:LYS:HG3	56:DB:94:ARG:N	2.30	0.47
56:DB:216:LEU:HA	56:DB:219:ARG:CZ	2.45	0.47
58:FB:42:ARG:HD3	58:FB:44:HIS:NE2	2.30	0.47
63:KB:106:ARG:HH21	63:KB:106:ARG:CB	2.18	0.47
66:NB:87:LYS:HG3	66:NB:117:LEU:HA	1.97	0.47
73:UB:6:PRO:C	73:UB:15:LEU:HD21	2.40	0.47
82:DC:220:PHE:HD1	82:DC:328:LEU:HD21	1.79	0.47
82:DC:336:GLU:O	82:DC:340:LEU:HB2	2.14	0.47
82:DC:387:PRO:HG3	82:DC:394:PHE:HB3	1.97	0.47
82:DC:605:ILE:HG21	82:DC:623:TYR:HE2	1.78	0.47
1:A:63:G:H4'	1:A:170:U:C5	2.49	0.46
1:A:152:U:C3'	1:A:153:G:H5"	2.44	0.46
1:A:630:A:H2'	1:A:631:G:O4'	2.16	0.46
1:A:707:A:H2'	1:A:708:C:H4'	1.97	0.46
1:A:957:G:H21	77:YB:51:GLN:CD	2.23	0.46
1:A:1182:U:H2'	1:A:1184:A:OP2	2.15	0.46
1:A:1648:A:H4'	80:BC:4:VAL:HG21	1.98	0.46
1:A:1778:G:O2'	1:A:1779:U:H5'	2.16	0.46
2:B:32:U:H1'	2:B:53:G:N2	2.30	0.46
2:B:509:U:H4'	37:KA:42:GLN:OE1	2.14	0.46
2:B:581:U:O2'	2:B:582:G:H5'	2.15	0.46
2:B:623:U:H2'	2:B:624:G:O4'	2.15	0.46
2:B:1254:C:C4'	16:P:135:THR:HG21	2.45	0.46
2:B:1818:U:C3'	2:B:1819:U:H5"	2.44	0.46
2:B:1923:C:H5"	45:SA:25:LYS:OXT	2.16	0.46
2:B:2213:A:H1'	2:B:2602:G:H5'	1.97	0.46
2:B:2242:A:H5'	6:F:243:THR:O	2.14	0.46
2:B:2525:G:C8	6:F:34:TYR:HB2	2.50	0.46
2:B:2821:C:H3'	2:B:2821:C:H6	1.80	0.46
2:B:3139:A:H3'	2:B:3140:G:H8	1.79	0.46
2:B:3312:U:H4'	7:G:25:ILE:CG2	2.45	0.46
4:D:44:C:C2'	4:D:45:A:H5'	2.45	0.46
4:D:80:G:H2'	4:D:81:U:H6	1.71	0.46
6:F:56:ALA:HB1	6:F:78:ALA:CB	2.45	0.46
6:F:139:HIS:ND1	6:F:146:THR:HB	2.30	0.46
7:G:219:ALA:HB2	7:G:336:VAL:HG13	1.96	0.46
8:H:83:GLY:O	8:H:87:GLN:HB2	2.15	0.46
9:I:64:ILE:HG23	9:I:144:VAL:HG23	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:151:GLN:CD	9:I:152:ARG:H	2.23	0.46
9:I:160:PHE:CD2	9:I:179:ARG:O	2.68	0.46
10:J:159:LEU:C	10:J:161:ALA:H	2.23	0.46
11:K:107:ARG:C	11:K:108:LEU:HG	2.40	0.46
12:L:143:ILE:HG23	12:L:175:VAL:CG2	2.43	0.46
13:M:4:ILE:HG12	13:M:5:GLN:N	2.31	0.46
15:O:23:VAL:HG11	15:O:29:ARG:CD	2.44	0.46
16:P:129:THR:C	16:P:131:GLU:N	2.70	0.46
18:R:120:VAL:HG13	20:T:194:LEU:HD23	1.97	0.46
19:S:63:ARG:HA	19:S:131:GLU:HG3	1.97	0.46
19:S:68:ARG:CD	19:S:128:LYS:HB2	2.45	0.46
25:Y:156:TYR:C	25:Y:157:GLU:HG3	2.40	0.46
30:DA:35:LEU:HD22	30:DA:39:LEU:HD12	1.97	0.46
30:DA:89:LYS:HB2	30:DA:91:ASN:ND2	2.30	0.46
32:FA:111:LYS:HE2	32:FA:113:LEU:CD2	2.45	0.46
36:JA:45:ARG:NH1	36:JA:45:ARG:CB	2.76	0.46
46:TA:24:LYS:HD2	46:TA:73:GLU:HB3	1.97	0.46
49:WA:80:ALA:C	49:WA:91:LEU:HD12	2.40	0.46
52:ZA:69:ILE:HD11	52:ZA:133:LYS:HD2	1.97	0.46
55:CB:75:GLY:HA2	55:CB:77:TYR:HE1	1.79	0.46
56:DB:147:LEU:O	56:DB:148:SER:HB3	2.16	0.46
57:EB:42:GLN:HG2	57:EB:43:PHE:N	2.31	0.46
57:EB:109:VAL:O	57:EB:109:VAL:HG13	2.15	0.46
61:IB:45:PRO:HG2	61:IB:48:ALA:CB	2.42	0.46
63:KB:144:ALA:O	63:KB:147:SER:HB3	2.15	0.46
65:MB:89:MET:HG3	65:MB:107:ILE:HG21	1.96	0.46
66:NB:114:ARG:HB3	66:NB:116:LEU:CD2	2.45	0.46
68:PB:65:GLU:O	68:PB:69:ILE:HG13	2.15	0.46
70:RB:25:THR:HG23	70:RB:89:ARG:O	2.15	0.46
72:TB:42:GLN:NE2	72:TB:50:PHE:HE1	2.13	0.46
73:UB:10:ASN:O	73:UB:11:SER:HB3	2.15	0.46
75:WB:96:SER:C	75:WB:97:LYS:HD2	2.39	0.46
82:DC:74:ALA:HB3	82:DC:453:ILE:HG21	1.96	0.46
1:A:470:A:H2'	1:A:471:A:O4'	2.15	0.46
1:A:606:A:H4'	1:A:607:G:H5"	1.95	0.46
1:A:625:C:O2	1:A:940:A:H1'	2.15	0.46
1:A:627:C:H5'	63:KB:117:LEU:HD21	1.96	0.46
1:A:1135:U:H2'	1:A:1136:U:C6	2.50	0.46
1:A:1443:U:O2'	1:A:1444:A:N7	2.47	0.46
1:A:1765:A:H8	1:A:1768:G:H22	1.58	0.46
1:A:1790:A:O2'	1:A:1791:A:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:599:C:OP1	8:H:332:LYS:HE2	2.15	0.46
2:B:837:A:H61	2:B:856:G:H1'	1.77	0.46
2:B:996:A:O2'	4:D:80:G:H4'	2.15	0.46
2:B:1098:A:H4'	25:Y:130:ARG:HB2	1.98	0.46
2:B:1223:A:H61	2:B:1286:A:H5"	1.80	0.46
2:B:1256:G:N3	16:P:123:ARG:HG3	2.31	0.46
2:B:1765:U:O4	23:W:47:ASN:HB2	2.16	0.46
2:B:1910:A:O2'	2:B:2334:U:H5'	2.14	0.46
2:B:2158:A:C5'	2:B:2159:U:H3'	2.45	0.46
2:B:2338:C:H4'	27:AA:47:ASN:O	2.14	0.46
2:B:2528:G:H4'	12:L:244:ALA:HB1	1.97	0.46
2:B:2639:G:H3'	2:B:2640:A:H8	1.80	0.46
2:B:2746:A:C2	9:I:146:LEU:HB3	2.50	0.46
2:B:2757:U:H2'	2:B:2758:A:H5"	1.97	0.46
2:B:2766:U:H2'	2:B:2767:U:O4'	2.15	0.46
2:B:3158:G:H22	2:B:3292:A:H2	1.62	0.46
2:B:3272:C:H4'	10:J:79:VAL:HA	1.97	0.46
2:B:3274:A:OP1	10:J:45:GLY:CA	2.61	0.46
3:C:76:C:H2'	3:C:77:A:O4'	2.15	0.46
4:D:5:G:H2'	4:D:6:C:C6	2.50	0.46
5:E:65:ILE:H	5:E:65:ILE:HD12	1.81	0.46
6:F:172:GLY:H	47:UA:68:ALA:N	2.10	0.46
7:G:118:PHE:N	7:G:118:PHE:HD1	2.13	0.46
8:H:115:HIS:NE2	8:H:119:ARG:NE	2.62	0.46
8:H:330:TYR:HD1	11:K:45:LEU:HD12	1.80	0.46
10:J:76:LEU:O	10:J:76:LEU:HD12	2.15	0.46
11:K:163:LEU:O	11:K:168:ILE:HG21	2.16	0.46
12:L:68:ARG:CD	12:L:238:LEU:HD13	2.44	0.46
12:L:92:LYS:HB3	12:L:92:LYS:HZ3	1.80	0.46
12:L:151:VAL:HG23	12:L:175:VAL:HG12	1.97	0.46
13:M:28:VAL:HA	13:M:33:THR:HG22	1.96	0.46
14:N:9:TYR:HB3	14:N:97:LEU:HD23	1.97	0.46
14:N:166:ILE:HD13	25:Y:158:THR:CG2	2.45	0.46
17:Q:95:ILE:HD12	17:Q:95:ILE:N	2.30	0.46
21:U:69:ARG:HA	21:U:80:LYS:HA	1.96	0.46
21:U:111:LYS:HD2	21:U:153:LYS:O	2.15	0.46
22:V:70:ALA:O	22:V:73:GLN:HB2	2.15	0.46
23:W:84:THR:O	23:W:87:ALA:HB3	2.15	0.46
30:DA:126:LEU:CG	30:DA:127:GLU:H	2.15	0.46
35:IA:37:LYS:HE2	35:IA:51:LEU:HG	1.98	0.46
40:NA:43:LEU:HD13	40:NA:46:GLU:OE1	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:UA:80:ARG:CZ	47:UA:80:ARG:HA	2.45	0.46
48:VA:32:ASN:HD22	48:VA:32:ASN:N	2.14	0.46
49:WA:155:ARG:HH11	49:WA:155:ARG:HB3	1.79	0.46
50:XA:109:ASN:HD22	50:XA:109:ASN:C	2.23	0.46
52:ZA:116:LYS:HG3	52:ZA:117:THR:H	1.81	0.46
53:AB:143:ARG:HG2	53:AB:143:ARG:HH21	1.80	0.46
54:BB:204:GLY:O	54:BB:205:PHE:HB2	2.13	0.46
56:DB:154:ARG:NH2	56:DB:180:THR:HG22	2.20	0.46
64:LB:28:VAL:HG21	64:LB:63:ALA:HB1	1.96	0.46
64:LB:45:GLY:HA2	64:LB:48:VAL:CG1	2.45	0.46
69:QB:109:GLU:OE2	69:QB:116:ILE:HD11	2.15	0.46
69:QB:114:VAL:HG23	69:QB:124:ILE:CD1	2.45	0.46
70:RB:31:VAL:HG23	70:RB:32:LYS:N	2.30	0.46
82:DC:39:LEU:HD22	82:DC:331:ALA:HA	1.98	0.46
82:DC:548:ASP:O	82:DC:549:HIS:C	2.59	0.46
1:A:11:A:H5'	52:ZA:87:GLN:HG3	1.98	0.46
1:A:20:G:H5"	1:A:571:G:N7	2.30	0.46
1:A:69:G:H2'	1:A:70:C:O4'	2.15	0.46
1:A:479:C:H2'	1:A:480:G:C4'	2.46	0.46
1:A:569:C:H1'	1:A:583:C:H5'	1.98	0.46
1:A:943:C:N4	76:XB:18:VAL:HG12	2.31	0.46
2:B:32:U:H1'	2:B:53:G:N1	2.29	0.46
2:B:122:A:H5"	2:B:123:A:N7	2.31	0.46
2:B:387:A:H8	2:B:387:A:OP2	1.99	0.46
2:B:707:U:H4'	2:B:779:G:N3	2.30	0.46
2:B:951:A:N6	2:B:1369:A:H1'	2.30	0.46
2:B:1204:A:H8	2:B:1204:A:O5'	1.99	0.46
2:B:1359:C:H2'	2:B:1360:C:H6	1.79	0.46
2:B:1654:A:H2'	2:B:1655:G:H5"	1.96	0.46
2:B:1834:U:OP2	43:QA:10:LYS:HD2	2.15	0.46
2:B:2149:A:H5"	6:F:179:LEU:CG	2.43	0.46
2:B:2461:A:C2	2:B:2485:A:H2'	2.50	0.46
2:B:2881:C:H4'	7:G:249:VAL:CG1	2.46	0.46
2:B:3205:G:P	2:B:3206:C:H41	2.39	0.46
2:B:3216:G:O2'	2:B:3219:G:H1'	2.15	0.46
2:B:3257:C:H2'	2:B:3258:U:H6	1.81	0.46
2:B:3329:U:H5"	7:G:308:MET:HB3	1.98	0.46
2:B:3330:A:C4'	7:G:366:GLY:HA3	2.41	0.46
6:F:27:ALA:HA	6:F:75:ILE:CG2	2.45	0.46
7:G:355:SER:C	7:G:356:LEU:HD23	2.41	0.46
9:I:33:ARG:HH11	9:I:50:ARG:NH1	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:51:LEU:CB	9:I:144:VAL:HG22	2.46	0.46
11:K:84:VAL:CA	11:K:139:PRO:HD2	2.38	0.46
11:K:87:VAL:HA	11:K:113:SER:O	2.15	0.46
12:L:25:PRO:HG2	12:L:26:LEU:HD12	1.97	0.46
13:M:13:PRO:HG2	13:M:16:VAL:CG1	2.46	0.46
13:M:103:ILE:HG13	13:M:136:PHE:CZ	2.51	0.46
18:R:35:ILE:HG23	18:R:45:LEU:O	2.14	0.46
18:R:109:ARG:HA	18:R:112:LEU:CD1	2.45	0.46
21:U:175:ARG:O	21:U:179:GLN:HG3	2.15	0.46
31:EA:33:SER:O	31:EA:34:LYS:HB2	2.15	0.46
34:HA:44:ILE:HD13	34:HA:53:LYS:CD	2.45	0.46
36:JA:31:ASN:N	36:JA:31:ASN:HD22	2.13	0.46
40:NA:50:LEU:HB3	40:NA:54:GLU:CB	2.45	0.46
41:OA:67:LEU:C	41:OA:69:HIS:N	2.74	0.46
43:QA:8:ARG:O	43:QA:12:LYS:HG3	2.16	0.46
47:UA:10:ILE:HG12	47:UA:10:ILE:O	2.15	0.46
48:VA:189:GLN:HG2	48:VA:190:VAL:N	2.29	0.46
49:WA:211:ILE:HB	49:WA:223:TRP:HB2	1.97	0.46
50:XA:59:LEU:O	50:XA:63:ILE:HG13	2.15	0.46
50:XA:189:VAL:CG1	50:XA:190:ASP:H	2.17	0.46
52:ZA:88:LYS:HE2	52:ZA:95:ARG:CB	2.45	0.46
54:BB:11:ARG:HA	54:BB:28:ALA:HB2	1.97	0.46
54:BB:95:THR:HG21	74:VB:17:LEU:HD23	1.98	0.46
54:BB:125:LYS:HE2	54:BB:157:ASN:CB	2.45	0.46
55:CB:119:ASP:OD1	75:WB:92:ILE:HB	2.16	0.46
55:CB:121:ILE:HD11	55:CB:198:LEU:HB2	1.97	0.46
55:CB:136:ALA:HA	55:CB:140:THR:HG21	1.97	0.46
55:CB:167:ARG:O	55:CB:171:ALA:HB2	2.16	0.46
56:DB:3:LEU:O	56:DB:15:THR:HA	2.15	0.46
57:EB:37:GLU:C	57:EB:38:LEU:HD12	2.39	0.46
57:EB:91:ILE:HB	57:EB:169:PHE:CE1	2.43	0.46
57:EB:173:TYR:HA	57:EB:176:LEU:HB2	1.96	0.46
58:FB:50:GLY:O	58:FB:52:ASN:N	2.48	0.46
59:GB:23:ARG:HH11	59:GB:23:ARG:HG2	1.81	0.46
60:HB:11:ILE:HG23	60:HB:46:LEU:HD21	1.97	0.46
63:KB:56:ASP:HB3	77:YB:47:PHE:HB3	1.95	0.46
64:LB:42:VAL:HG21	64:LB:67:VAL:HB	1.97	0.46
65:MB:17:TYR:HD2	65:MB:18:ARG:HG2	1.80	0.46
66:NB:127:LYS:CE	66:NB:132:LYS:HA	2.46	0.46
68:PB:81:ILE:O	68:PB:86:LEU:HD11	2.15	0.46
68:PB:86:LEU:HA	68:PB:99:HIS:ND1	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:41:SER:O	69:QB:84:LYS:HD2	2.16	0.46
82:DC:565:GLU:HG3	82:DC:680:GLU:O	2.15	0.46
1:A:63:G:H4'	1:A:170:U:H5	1.81	0.46
1:A:204:G:H2'	1:A:205:U:H6	1.79	0.46
1:A:320:U:C3'	1:A:321:C:H5"	2.45	0.46
1:A:594:A:H4'	1:A:595:G:H5'	1.97	0.46
1:A:802:G:H21	72:TB:107:SER:HB3	1.79	0.46
1:A:1505:A:H2'	1:A:1506:G:O4'	2.15	0.46
2:B:230:U:H2'	2:B:231:G:O4'	2.16	0.46
2:B:660:A:N1	2:B:942:U:H4'	2.30	0.46
2:B:1190:A:H5'	2:B:1191:U:OP1	2.15	0.46
2:B:1223:A:H61	2:B:1286:A:C5'	2.29	0.46
2:B:1327:C:H2'	2:B:1328:C:O4'	2.15	0.46
2:B:1369:A:C5'	32:FA:21:ARG:HD2	2.45	0.46
2:B:1795:U:N3	47:UA:51:ALA:HA	2.30	0.46
2:B:1802:C:H2'	2:B:1803:C:C6	2.50	0.46
2:B:1845:G:H3'	2:B:1846:C:C5'	2.45	0.46
2:B:1868:G:O2'	2:B:2119:A:H5'	2.15	0.46
2:B:1918:C:H2'	2:B:1919:G:O4'	2.14	0.46
2:B:2154:U:C1'	6:F:237:LEU:HD22	2.44	0.46
2:B:2429:G:C2'	2:B:2430:A:H5'	2.45	0.46
2:B:2787:G:H2'	2:B:2788:C:C6	2.49	0.46
2:B:3003:G:H4'	7:G:159:ARG:NH1	2.31	0.46
2:B:3200:G:H2'	2:B:3201:C:C6	2.50	0.46
3:C:117:C:O2'	3:C:118:C:H5'	2.15	0.46
4:D:46:A:H2'	4:D:47:C:C6	2.50	0.46
6:F:181:LYS:C	6:F:183:GLY:N	2.74	0.46
9:I:51:LEU:O	9:I:147:ASP:HB2	2.14	0.46
10:J:158:TYR:CE1	18:R:114:ASP:C	2.93	0.46
12:L:68:ARG:HH11	12:L:68:ARG:HG3	1.81	0.46
13:M:188:THR:HB	13:M:191:LEU:HD12	1.97	0.46
17:Q:64:LYS:HE2	17:Q:65:TYR:OH	2.15	0.46
19:S:77:LYS:HG2	19:S:78:GLY:N	2.30	0.46
21:U:24:VAL:CG1	21:U:87:SER:HA	2.46	0.46
21:U:65:SER:O	21:U:66:SER:HB2	2.15	0.46
28:BA:46:PRO:O	28:BA:49:ILE:HD13	2.16	0.46
29:CA:102:LEU:HB3	29:CA:103:TYR:CE1	2.51	0.46
30:DA:51:ARG:HA	30:DA:73:VAL:HG21	1.98	0.46
30:DA:80:VAL:O	30:DA:99:LEU:HD12	2.16	0.46
31:EA:50:PRO:HD3	31:EA:68:ILE:HG12	1.96	0.46
32:FA:149:ALA:HB3	40:NA:14:GLY:HA2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:123:LYS:HA	36:JA:126:LEU:HD12	1.98	0.46
39:MA:13:SER:OG	39:MA:16:GLN:HG3	2.15	0.46
42:PA:45:VAL:HG23	42:PA:45:VAL:O	2.15	0.46
50:XA:51:GLY:O	50:XA:55:GLU:HG3	2.16	0.46
52:ZA:144:TRP:CZ3	52:ZA:173:PRO:HB3	2.50	0.46
52:ZA:172:ALA:HB3	52:ZA:195:ASP:C	2.40	0.46
53:AB:66:ILE:O	53:AB:70:THR:HG23	2.15	0.46
54:BB:62:LYS:HD3	54:BB:80:THR:OG1	2.14	0.46
55:CB:123:VAL:HG11	75:WB:58:ARG:O	2.15	0.46
56:DB:48:TYR:OH	56:DB:120:GLU:HA	2.15	0.46
57:EB:63:PRO:O	57:EB:64:VAL:CB	2.62	0.46
59:GB:55:ALA:O	59:GB:58:ASP:HB3	2.16	0.46
61:IB:109:VAL:CG2	61:IB:110:HIS:N	2.78	0.46
63:KB:92:ILE:HA	63:KB:141:TYR:OH	2.16	0.46
63:KB:118:ILE:HG22	63:KB:122:ILE:HD12	1.96	0.46
66:NB:23:LYS:O	66:NB:63:ILE:HG22	2.16	0.46
68:PB:26:ILE:CD1	68:PB:31:ALA:HA	2.45	0.46
68:PB:100:THR:HB	68:PB:105:VAL:CA	2.45	0.46
70:RB:83:GLU:HG3	79:AC:55:PHE:CD2	2.51	0.46
72:TB:25:VAL:O	72:TB:63:VAL:HB	2.16	0.46
74:VB:20:ARG:HD2	74:VB:74:LEU:HD22	1.98	0.46
82:DC:55:ARG:HB3	82:DC:56:PHE:H	1.57	0.46
82:DC:335:LEU:HA	82:DC:338:ILE:HD12	1.96	0.46
82:DC:489:VAL:HB	82:DC:532:GLY:H	1.81	0.46
83:EC:6924:G:N2	83:EC:6929:C:O2	2.45	0.46
1:A:19:A:C2’	1:A:20:G:H5’	2.46	0.46
1:A:354:C:H6	1:A:354:C:O5’	1.99	0.46
1:A:636:A:H5”	72:TB:31:SER:CB	2.45	0.46
1:A:1010:C:H2’	1:A:1011:G:O4’	2.16	0.46
1:A:1037:C:H2’	1:A:1038:U:H6	1.81	0.46
1:A:1301:U:H5’	52:ZA:88:LYS:CD	2.44	0.46
1:A:1474:G:H2’	1:A:1475:A:H8	1.80	0.46
2:B:19:U:H1’	19:S:138:GLN:NE2	2.28	0.46
2:B:270:U:O4	2:B:295:A:H8	1.98	0.46
2:B:427:C:H6	2:B:427:C:O5’	1.97	0.46
2:B:623:U:H4’	37:KA:86:ARG:HH22	1.79	0.46
2:B:913:A:O4’	6:F:197:PRO:HG2	2.16	0.46
2:B:1077:U:O2	2:B:1082:U:O4	2.33	0.46
2:B:1294:A:H2’	2:B:1295:G:C8	2.51	0.46
2:B:1400:G:C2	2:B:1401:A:C8	3.03	0.46
2:B:1439:U:O2’	8:H:95:ARG:HD2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1449:A:C5	2:B:1450:G:H1'	2.51	0.46
2:B:1454:A:C8	2:B:1454:A:O5'	2.68	0.46
2:B:1649:U:H2'	2:B:1650:G:H5'	1.97	0.46
2:B:2123:G:O2'	2:B:2124:G:H5'	2.15	0.46
2:B:2228:A:H2'	2:B:2229:A:C8	2.50	0.46
2:B:2748:A:O2'	9:I:36:LEU:HA	2.15	0.46
2:B:2841:G:H3'	2:B:2842:U:C5'	2.45	0.46
4:D:59:U:H2'	4:D:60:G:O4'	2.16	0.46
5:E:121:PRO:HG2	83:EC:6772:G:H5'	1.96	0.46
6:F:41:ILE:HD13	6:F:63:PHE:HD2	1.79	0.46
7:G:358:TRP:HZ2	7:G:371:GLN:HG3	1.79	0.46
9:I:15:ARG:HB3	9:I:15:ARG:HH11	1.81	0.46
9:I:37:VAL:CG2	9:I:50:ARG:HH21	2.27	0.46
9:I:40:HIS:HB3	9:I:43:LYS:HE2	1.97	0.46
9:I:118:THR:O	9:I:119:TYR:HB2	2.16	0.46
10:J:29:LYS:C	10:J:30:LEU:HD23	2.41	0.46
12:L:83:ASP:OD2	12:L:83:ASP:N	2.48	0.46
18:R:70:PHE:N	18:R:70:PHE:CD1	2.83	0.46
20:T:41:LEU:HD21	20:T:80:PHE:CZ	2.50	0.46
22:V:19:PRO:HG3	22:V:26:LEU:HD22	1.98	0.46
22:V:35:PHE:HE1	22:V:39:ARG:HE	1.64	0.46
25:Y:82:ASN:O	33:GA:21:ILE:HA	2.15	0.46
27:AA:74:MET:HB2	27:AA:102:ILE:CD1	2.45	0.46
29:CA:57:LEU:HA	29:CA:61:LYS:HD2	1.98	0.46
31:EA:30:ASP:CG	31:EA:31:GLU:H	2.22	0.46
31:EA:44:ALA:HB2	31:EA:72:ILE:HA	1.97	0.46
40:NA:67:LYS:HA	40:NA:70:ARG:HE	1.81	0.46
47:UA:33:GLN:OE1	47:UA:69:TYR:HA	2.16	0.46
49:WA:251:TRP:CZ3	49:WA:271:VAL:HG11	2.51	0.46
51:YA:83:LYS:HD2	64:LB:116:GLU:OE1	2.15	0.46
51:YA:121:ILE:O	51:YA:141:ALA:HB3	2.15	0.46
52:ZA:180:ALA:HB2	52:ZA:198:THR:CG2	2.45	0.46
57:EB:141:ARG:HG3	57:EB:151:LYS:HB2	1.98	0.46
64:LB:103:ARG:HD3	76:XB:49:ALA:HB2	1.97	0.46
68:PB:144:ARG:O	68:PB:145:ARG:HB2	2.16	0.46
73:UB:52:ILE:O	73:UB:74:VAL:HG13	2.15	0.46
74:VB:21:LYS:HD2	74:VB:21:LYS:N	2.31	0.46
75:WB:62:VAL:HA	75:WB:80:LEU:CD1	2.46	0.46
78:ZB:21:SER:OG	78:ZB:22:ARG:HD2	2.16	0.46
82:DC:297:PRO:HB3	82:DC:307:LEU:HD11	1.98	0.46
82:DC:380:LEU:CD1	82:DC:400:VAL:HG22	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:419:VAL:O	82:DC:421:GLY:N	2.48	0.46
82:DC:587:TYR:HB2	82:DC:690:ASP:HB2	1.98	0.46
1:A:146:U:O2'	1:A:147:A:H5'	2.15	0.46
1:A:567:A:H4'	80:BC:10:ARG:O	2.16	0.46
1:A:1018:U:H2'	1:A:1019:A:C8	2.51	0.46
1:A:1107:G:H3'	1:A:1108:G:H21	1.79	0.46
1:A:1366:U:H5"	66:NB:32:ASN:O	2.16	0.46
1:A:1503:A:H8	1:A:1564:U:H4'	1.81	0.46
1:A:1635:A:H5"	1:A:1638:G:H4'	1.97	0.46
1:A:1777:G:H2'	1:A:1778:G:C8	2.49	0.46
2:B:234:G:O2'	2:B:235:A:H5'	2.15	0.46
2:B:279:U:H3	2:B:286:U:H3	1.63	0.46
2:B:787:G:OP1	22:V:147:ARG:HG3	2.16	0.46
2:B:999:G:H5"	4:D:104:A:O2'	2.16	0.46
2:B:1083:G:H2'	2:B:1084:A:C8	2.49	0.46
2:B:1101:G:H2'	2:B:1102:A:H8	1.81	0.46
2:B:1377:G:C2	2:B:1378:U:C5	3.04	0.46
2:B:1797:A:H2'	2:B:1798:A:O4'	2.15	0.46
2:B:2836:C:H6	2:B:2852:C:H41	1.61	0.46
2:B:2841:G:H2'	2:B:2898:G:N2	2.30	0.46
2:B:2900:A:H2	2:B:3025:C:O2	1.99	0.46
2:B:3000:A:O2'	2:B:3001:C:H5'	2.14	0.46
2:B:3068:U:H5"	23:W:57:VAL:HG23	1.97	0.46
2:B:3068:U:P	23:W:59:SER:H	2.38	0.46
2:B:3324:C:O3'	35:IA:13:THR:HB	2.16	0.46
3:C:19:C:H2'	3:C:20:U:O4'	2.15	0.46
3:C:48:A:N6	3:C:54:A:N6	2.58	0.46
4:D:24:A:H4'	4:D:120:C:H4'	1.97	0.46
7:G:82:PRO:HB3	7:G:319:ASN:CG	2.40	0.46
7:G:96:PRO:HG3	20:T:152:VAL:CG2	2.46	0.46
8:H:26:PHE:CE1	8:H:126:ILE:HG22	2.49	0.46
9:I:3:PHE:HB2	9:I:6:ASP:OD2	2.16	0.46
9:I:51:LEU:HB3	9:I:145:PHE:O	2.14	0.46
12:L:65:LEU:O	12:L:65:LEU:HD22	2.16	0.46
12:L:75:ILE:HA	12:L:78:PHE:HE1	1.77	0.46
13:M:24:ILE:HG13	13:M:39:LYS:CE	2.32	0.46
13:M:48:VAL:HG13	13:M:49:ASN:HD22	1.80	0.46
15:O:156:LYS:O	15:O:160:VAL:HG23	2.15	0.46
17:Q:25:HIS:ND1	19:S:200:TRP:HZ3	2.14	0.46
17:Q:167:PHE:CE2	32:FA:132:LYS:HB2	2.51	0.46
20:T:121:PRO:HB3	20:T:127:LEU:HD13	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:169:GLY:O	22:V:174:ARG:NE	2.46	0.46
24:X:77:VAL:HG12	24:X:78:TRP:H	1.81	0.46
29:CA:63:ILE:HG12	29:CA:98:ALA:CB	2.46	0.46
31:EA:71:PHE:CD1	31:EA:72:ILE:N	2.83	0.46
32:FA:105:LEU:HD11	32:FA:128:ARG:CZ	2.46	0.46
39:MA:28:LEU:HA	39:MA:31:LEU:HB3	1.97	0.46
47:UA:59:CYS:O	47:UA:60:CYS:CB	2.64	0.46
48:VA:52:LEU:HB2	48:VA:86:PHE:CB	2.45	0.46
50:XA:12:GLU:HG3	50:XA:13:ASP:N	2.31	0.46
52:ZA:62:PRO:HA	71:SB:29:HIS:CE1	2.50	0.46
52:ZA:157:LYS:HG2	52:ZA:171:PRO:CD	2.45	0.46
52:ZA:168:ARG:HB3	52:ZA:199:GLN:HB3	1.97	0.46
52:ZA:225:LEU:CD1	52:ZA:230:TRP:HE1	2.29	0.46
53:AB:75:LYS:HB3	60:HB:22:VAL:HG21	1.96	0.46
54:BB:152:PRO:HD2	56:DB:215:ARG:NH1	2.31	0.46
58:FB:11:ARG:HA	58:FB:16:ALA:O	2.14	0.46
58:FB:37:LYS:O	58:FB:59:ARG:HA	2.15	0.46
59:GB:171:ARG:HA	59:GB:171:ARG:NE	2.30	0.46
60:HB:3:MET:HB2	60:HB:4:PRO:CD	2.37	0.46
66:NB:5:PRO:O	66:NB:23:LYS:HA	2.15	0.46
66:NB:31:VAL:O	66:NB:32:ASN:HB2	2.15	0.46
68:PB:38:VAL:HG13	68:PB:73:MET:SD	2.55	0.46
69:QB:6:VAL:O	69:QB:9:VAL:HG23	2.16	0.46
70:RB:56:VAL:CG1	70:RB:57:ARG:H	2.28	0.46
79:AC:10:HIS:HD2	79:AC:12:ARG:HD2	1.79	0.46
82:DC:186:ASN:ND2	82:DC:201:GLN:OE1	2.49	0.46
1:A:2:A:H2'	52:ZA:197:TYR:CD1	2.50	0.46
1:A:142:G:H2'	1:A:142:G:N3	2.31	0.46
1:A:293:U:O2'	54:BB:133:LYS:HG2	2.15	0.46
1:A:405:C:O2'	1:A:406:U:H5'	2.15	0.46
1:A:457:G:H2'	1:A:458:G:O4'	2.16	0.46
1:A:812:A:N7	1:A:859:A:H5'	2.31	0.46
1:A:979:A:H5'	1:A:1787:C:O2'	2.16	0.46
1:A:1066:C:O2'	51:YA:148:ASN:HB2	2.16	0.46
1:A:1429:G:O2'	70:RB:74:GLU:HG2	2.14	0.46
2:B:392:G:O2'	30:DA:90:VAL:HG21	2.15	0.46
2:B:562:C:O3'	24:X:71:LYS:HD2	2.16	0.46
2:B:641:C:OP1	32:FA:24:LYS:HE2	2.15	0.46
2:B:655:C:H2'	2:B:656:A:H8	1.81	0.46
2:B:717:C:H2'	2:B:718:G:O4'	2.15	0.46
2:B:1369:A:H4'	32:FA:21:ARG:HD2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1734:G:H2'	2:B:1735:G:C8	2.51	0.46
2:B:1754:G:O2'	2:B:1755:C:H5'	2.16	0.46
2:B:1815:U:H4'	2:B:1816:A:O5'	2.16	0.46
2:B:1845:G:C2'	2:B:1849:C:H42	2.29	0.46
2:B:1898:G:H1'	27:AA:18:PRO:CG	2.45	0.46
2:B:2476:C:H2'	2:B:2477:G:C4'	2.27	0.46
2:B:2561:A:O2'	2:B:2562:A:O4'	2.34	0.46
2:B:2655:U:H2'	46:TA:3:ASN:O	2.16	0.46
2:B:2675:C:H42	15:O:22:SER:CB	2.28	0.46
2:B:3066:U:H3	2:B:3075:G:H1	1.63	0.46
2:B:3376:A:H1'	35:IA:19:ARG:N	2.29	0.46
3:C:92:A:C2'	3:C:93:U:H5'	2.45	0.46
4:D:39:C:H2'	4:D:40:C:C6	2.51	0.46
6:F:41:ILE:CD1	6:F:63:PHE:HD2	2.28	0.46
6:F:112:ILE:HA	6:F:134:VAL:O	2.16	0.46
7:G:93:VAL:HA	7:G:156:SER:CB	2.46	0.46
7:G:385:LYS:O	7:G:386:ASP:HB2	2.16	0.46
8:H:126:ILE:HG13	8:H:238:LEU:CD1	2.45	0.46
8:H:156:LEU:HD23	8:H:156:LEU:C	2.41	0.46
8:H:157:GLU:CG	8:H:251:THR:HG21	2.46	0.46
8:H:208:VAL:HG23	8:H:248:VAL:CG1	2.46	0.46
8:H:220:ARG:HG3	8:H:221:ASN:HD22	1.80	0.46
9:I:37:VAL:HG12	9:I:37:VAL:O	2.16	0.46
11:K:79:ALA:O	11:K:80:GLN:C	2.58	0.46
11:K:83:LEU:N	11:K:119:VAL:HG23	2.30	0.46
11:K:107:ARG:HH22	11:K:116:PHE:C	2.23	0.46
11:K:145:ARG:HG2	11:K:149:TYR:CE1	2.51	0.46
12:L:161:GLU:O	19:S:7:LEU:HD21	2.15	0.46
12:L:170:CYS:HB2	12:L:177:TYR:CE2	2.50	0.46
16:P:81:VAL:CG1	16:P:113:ALA:HB1	2.46	0.46
16:P:130:LYS:HE3	16:P:145:PHE:HB3	1.98	0.46
17:Q:54:LEU:HD23	17:Q:54:LEU:HA	1.80	0.46
18:R:53:VAL:HG23	18:R:54:PRO:HD2	1.96	0.46
21:U:18:ARG:HH12	21:U:147:GLU:CD	2.23	0.46
22:V:19:PRO:HB3	22:V:53:PHE:CA	2.45	0.46
22:V:176:ARG:NH2	22:V:184:PHE:HE1	2.13	0.46
30:DA:37:LYS:CG	30:DA:38:GLU:H	2.26	0.46
30:DA:40:ARG:HB2	30:DA:40:ARG:HH11	1.80	0.46
31:EA:136:PHE:HD2	31:EA:136:PHE:H	1.60	0.46
35:IA:15:ASN:CG	35:IA:18:LYS:HG2	2.40	0.46
37:KA:29:LEU:HD21	37:KA:75:HIS:CG	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:OA:9:GLY:C	41:OA:11:ARG:N	2.74	0.46
48:VA:145:ILE:HG21	82:DC:190:SER:CB	2.45	0.46
51:YA:29:TRP:HZ2	64:LB:13:VAL:HG23	1.81	0.46
53:AB:105:MET:CG	53:AB:122:VAL:HG21	2.42	0.46
55:CB:29:ILE:HB	55:CB:34:GLN:NE2	2.30	0.46
55:CB:51:VAL:HA	55:CB:131:GLN:OE1	2.16	0.46
56:DB:159:ARG:HE	56:DB:170:THR:CG2	2.21	0.46
59:GB:113:VAL:HB	59:GB:125:ALA:CB	2.46	0.46
61:IB:3:THR:O	61:IB:4:GLU:HB3	2.15	0.46
61:IB:125:VAL:CG2	61:IB:137:PHE:HB3	2.45	0.46
68:PB:26:ILE:HG13	68:PB:31:ALA:CB	2.45	0.46
68:PB:100:THR:HB	68:PB:105:VAL:HA	1.97	0.46
70:RB:41:ILE:HD12	70:RB:41:ILE:N	2.31	0.46
73:UB:19:ARG:HG2	73:UB:19:ARG:HH21	1.81	0.46
82:DC:277:ILE:O	82:DC:281:ILE:HD12	2.15	0.46
82:DC:297:PRO:HG3	82:DC:312:LYS:CE	2.45	0.46
82:DC:356:LEU:HD13	82:DC:401:PHE:CE1	2.50	0.46
82:DC:489:VAL:HG11	82:DC:538:LEU:HD22	1.96	0.46
82:DC:677:PHE:HD2	82:DC:677:PHE:H	1.64	0.46
1:A:105:A:OP1	58:FB:18:ARG:HD3	2.16	0.46
1:A:176:C:H2'	1:A:177:U:C5'	2.45	0.46
1:A:619:A:H5"	1:A:1141:G:C4'	2.46	0.46
1:A:625:C:H1'	1:A:940:A:O4'	2.16	0.46
1:A:802:G:N3	72:TB:107:SER:HB2	2.31	0.46
1:A:1076:A:O2'	1:A:1077:C:H5'	2.15	0.46
2:B:126:U:H2'	2:B:127:G:H8	1.81	0.46
2:B:345:G:OP1	2:B:1429:G:N1	2.46	0.46
2:B:346:C:P	8:H:52:VAL:HG23	2.56	0.46
2:B:747:A:H2'	2:B:748:U:H5'	1.98	0.46
2:B:1144:U:O2	2:B:1159:A:N7	2.49	0.46
2:B:1175:C:H2'	2:B:1176:C:O4'	2.16	0.46
2:B:1366:A:H3'	2:B:1367:G:H8	1.80	0.46
2:B:1464:G:H1'	2:B:1511:U:N3	2.21	0.46
2:B:1468:A:C5	2:B:1881:A:H4'	2.51	0.46
2:B:1664:G:H2'	2:B:1665:C:C6	2.51	0.46
2:B:1729:A:N1	47:UA:42:CYS:HB2	2.31	0.46
2:B:1938:U:O2'	23:W:79:GLY:HA3	2.16	0.46
2:B:2173:U:H3'	2:B:2174:G:H8	1.80	0.46
2:B:2184:U:H2'	2:B:2185:G:C8	2.51	0.46
2:B:2478:C:OP2	2:B:2480:A:N6	2.48	0.46
2:B:2554:A:C8	6:F:85:GLY:HA2	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2628:A:C1'	2:B:2798:C:H2'	2.46	0.46
2:B:2643:A:H2'	2:B:2645:G:O5'	2.16	0.46
2:B:2742:C:O5'	46:TA:20:HIS:HB2	2.15	0.46
2:B:3213:A:C6	2:B:3214:U:C5	3.04	0.46
2:B:3362:A:C2'	2:B:3363:U:H5'	2.45	0.46
2:B:3369:G:C6	28:BA:56:ARG:HD2	2.51	0.46
7:G:72:VAL:O	7:G:72:VAL:HG23	2.16	0.46
8:H:31:ARG:CD	22:V:25:TYR:HD2	2.28	0.46
12:L:128:LYS:CG	12:L:129:PRO:HD2	2.46	0.46
15:O:25:GLU:HG3	15:O:29:ARG:HB3	1.97	0.46
16:P:81:VAL:HA	16:P:84:ALA:CB	2.46	0.46
17:Q:56:PRO:HD2	17:Q:73:ARG:O	2.16	0.46
17:Q:58:VAL:HG21	17:Q:101:ARG:HH12	1.81	0.46
19:S:9:GLU:HA	19:S:12:ARG:HD2	1.97	0.46
19:S:114:ARG:HH11	19:S:114:ARG:HG3	1.81	0.46
20:T:16:VAL:HA	20:T:80:PHE:HZ	1.80	0.46
21:U:118:GLN:O	21:U:118:GLN:NE2	2.49	0.46
25:Y:107:GLU:O	25:Y:111:ALA:HB2	2.15	0.46
31:EA:96:VAL:HA	31:EA:100:THR:OG1	2.15	0.46
31:EA:111:LYS:HA	31:EA:114:VAL:HB	1.98	0.46
38:LA:5:VAL:O	38:LA:5:VAL:HG13	2.15	0.46
39:MA:76:GLN:HB2	39:MA:77:PRO:HD2	1.98	0.46
41:OA:14:LYS:NZ	41:OA:17:THR:HG21	2.31	0.46
47:UA:38:ASP:HA	47:UA:45:LYS:CB	2.45	0.46
47:UA:47:VAL:CG2	47:UA:57:CYS:HB2	2.46	0.46
49:WA:92:TRP:CD1	49:WA:92:TRP:N	2.84	0.46
49:WA:303:ALA:O	49:WA:310:ILE:HG23	2.16	0.46
50:XA:120:LEU:HD12	50:XA:121:VAL:H	1.80	0.46
51:YA:145:LYS:H	51:YA:145:LYS:CD	2.26	0.46
54:BB:87:MET:CE	54:BB:100:ARG:HD3	2.46	0.46
55:CB:92:ARG:HB3	55:CB:172:ILE:HD13	1.98	0.46
56:DB:215:ARG:HA	56:DB:218:GLU:OE1	2.15	0.46
58:FB:8:ARG:HG2	58:FB:20:GLN:HG2	1.98	0.46
61:IB:13:PHE:CD2	61:IB:15:LYS:HB3	2.50	0.46
61:IB:13:PHE:HB3	61:IB:15:LYS:HD2	1.97	0.46
69:QB:115:GLU:HB3	69:QB:125:SER:HB3	1.97	0.46
73:UB:38:PHE:CE1	73:UB:45:GLY:HA3	2.51	0.46
75:WB:42:LEU:CD1	75:WB:43:ASP:H	2.29	0.46
77:YB:47:PHE:CD1	77:YB:48:SER:N	2.81	0.46
82:DC:25:ILE:HG23	82:DC:142:VAL:HG12	1.97	0.46
82:DC:131:THR:HG21	82:DC:163:ALA:CB	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:408:GLY:HA2	82:DC:431:ILE:O	2.15	0.46
82:DC:494:GLU:O	82:DC:554:LEU:HD23	2.15	0.46
82:DC:577:SER:HA	82:DC:840:ASP:CG	2.41	0.46
82:DC:706:ILE:HB	82:DC:707:PRO:HD3	1.97	0.46
83:EC:6895:C:H2'	83:EC:6896:A:H5"	1.97	0.46
83:EC:6933:G:C2'	83:EC:6934:U:H5'	2.46	0.46
1:A:79:C:O2'	1:A:80:A:H5'	2.16	0.46
1:A:568:G:O2'	1:A:569:C:H5'	2.16	0.46
1:A:777:C:C1'	54:BB:261:LEU:HD13	2.46	0.46
1:A:901:G:C2'	1:A:902:G:H5'	2.46	0.46
1:A:1038:U:H3	1:A:1092:A:H61	1.64	0.46
1:A:1087:A:O2'	1:A:1143:A:H5'	2.15	0.46
1:A:1163:A:N3	1:A:1613:U:H1'	2.31	0.46
1:A:1176:G:H2'	1:A:1177:C:C6	2.51	0.46
2:B:31:C:C2'	2:B:32:U:H5'	2.46	0.46
2:B:118:U:H2'	2:B:119:U:C6	2.51	0.46
2:B:291:C:O2'	2:B:292:U:H5'	2.15	0.46
2:B:644:G:O4'	2:B:1153:A:C6	2.69	0.46
2:B:748:U:OP1	33:GA:31:SER:HB3	2.16	0.46
2:B:981:U:C6	2:B:981:U:OP2	2.69	0.46
2:B:1195:A:H61	2:B:1313:G:H1	1.64	0.46
2:B:1239:C:OP1	16:P:57:LYS:HE3	2.16	0.46
2:B:1875:G:H2'	2:B:1876:U:H6	1.81	0.46
2:B:2456:A:C2	2:B:2483:G:H4'	2.50	0.46
2:B:2484:A:H4'	5:E:130:LYS:CE	2.46	0.46
2:B:2857:C:H41	14:N:7:ARG:HH22	1.64	0.46
2:B:3120:C:O2'	2:B:3121:U:H2'	2.16	0.46
2:B:3183:A:P	20:T:37:ARG:HH12	2.38	0.46
2:B:3198:U:O4'	13:M:21:LYS:HD3	2.16	0.46
2:B:3267:A:N6	10:J:70:LYS:O	2.48	0.46
4:D:77:G:N2	4:D:101:G:H3'	2.30	0.46
8:H:112:LYS:CB	19:S:202:TYR:HB3	2.46	0.46
8:H:165:ALA:O	8:H:168:ALA:HB3	2.15	0.46
12:L:238:LEU:HD12	12:L:242:ALA:HB3	1.98	0.46
14:N:218:ALA:O	14:N:219:ALA:HB3	2.15	0.46
17:Q:53:LEU:HD13	17:Q:94:GLY:HA2	1.97	0.46
18:R:105:GLN:CG	18:R:109:ARG:NH2	2.78	0.46
19:S:8:GLU:HG3	19:S:50:ARG:CZ	2.46	0.46
20:T:186:ALA:C	20:T:188:SER:H	2.24	0.46
22:V:26:LEU:HD23	22:V:30:VAL:HG23	1.97	0.46
25:Y:62:GLY:CA	25:Y:76:ILE:HG12	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:96:ILE:HD12	25:Y:96:ILE:N	2.31	0.46
27:AA:3:GLY:C	27:AA:5:GLY:H	2.24	0.46
29:CA:59:SER:HA	29:CA:98:ALA:HB2	1.98	0.46
32:FA:103:ASP:HB3	32:FA:106:ALA:HB3	1.96	0.46
47:UA:60:CYS:SG	47:UA:62:LYS:HE2	2.56	0.46
50:XA:42:PRO:HD2	50:XA:45:VAL:O	2.16	0.46
50:XA:81:PHE:HB3	50:XA:166:GLY:HA3	1.97	0.46
51:YA:113:MET:HE1	51:YA:211:HIS:CD2	2.51	0.46
51:YA:128:LYS:HE3	51:YA:132:ASP:CB	2.46	0.46
54:BB:230:GLU:HB2	54:BB:233:LYS:HB3	1.98	0.46
55:CB:146:THR:HA	55:CB:159:ALA:HA	1.98	0.46
57:EB:118:LEU:O	57:EB:118:LEU:HD22	2.16	0.46
58:FB:65:PHE:CE2	58:FB:104:ILE:HG21	2.50	0.46
58:FB:121:LEU:HD12	58:FB:160:PHE:CD2	2.50	0.46
58:FB:137:LYS:HD3	58:FB:137:LYS:H	1.81	0.46
59:GB:112:GLN:HG3	59:GB:148:VAL:HG21	1.98	0.46
64:LB:85:ALA:HA	64:LB:94:PRO:HA	1.97	0.46
69:QB:61:VAL:O	69:QB:65:ILE:HG13	2.15	0.46
70:RB:40:ASN:ND2	70:RB:107:THR:HB	2.27	0.46
71:SB:24:ILE:O	71:SB:25:LYS:C	2.59	0.46
73:UB:86:PHE:CE1	73:UB:88:PRO:HG3	2.50	0.46
75:WB:70:LYS:C	75:WB:71:ILE:HG13	2.41	0.46
76:XB:10:ARG:HH11	76:XB:11:ASN:CB	2.12	0.46
76:XB:10:ARG:O	76:XB:34:LYS:HA	2.15	0.46
82:DC:45:ILE:HG13	82:DC:77:LEU:C	2.40	0.46
82:DC:693:LEU:CD1	82:DC:700:ARG:HD2	2.42	0.46
82:DC:823:ARG:HA	82:DC:826:HIS:CD2	2.51	0.46
1:A:20:G:H5"	1:A:571:G:C8	2.51	0.46
1:A:97:C:H4'	1:A:427:C:OP1	2.16	0.46
1:A:354:C:O2'	1:A:355:G:H5'	2.16	0.46
1:A:866:G:H2'	1:A:867:G:H8	1.80	0.46
1:A:963:A:N6	63:KB:70:LYS:NZ	2.64	0.46
1:A:1203:A:H5"	1:A:1456:C:N4	2.30	0.46
1:A:1341:A:H61	1:A:1384:A:H61	1.64	0.46
1:A:1658:G:H2'	1:A:1659:A:O4'	2.15	0.46
1:A:1721:A:N3	56:DB:66:GLY:HA3	2.31	0.46
2:B:856:G:H22	47:UA:4:ARG:HH12	1.64	0.46
2:B:1569:U:H5"	2:B:1570:U:H5	1.81	0.46
2:B:1649:U:O2'	6:F:68:LYS:HE3	2.16	0.46
2:B:1863:G:C2	2:B:1865:A:H8	2.33	0.46
2:B:1911:A:C1'	2:B:2333:C:H4'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2174:G:H4'	2:B:2175:U:C2'	2.45	0.46
2:B:2389:C:H2'	2:B:2390:A:C8	2.51	0.46
2:B:2389:C:H5"	21:U:66:SER:HA	1.97	0.46
2:B:2425:G:H1	2:B:2604:U:H3	1.64	0.46
2:B:2554:A:N3	6:F:46:LYS:HG3	2.30	0.46
2:B:2767:U:H5"	46:TA:32:LYS:O	2.15	0.46
2:B:2875:U:H6	2:B:2945:G:O6	1.99	0.46
2:B:3020:U:H1'	2:B:3035:A:N6	2.31	0.46
3:C:133:G:H4'	29:CA:55:ASN:CG	2.41	0.46
4:D:115:G:N2	9:I:72:ASP:H	2.15	0.46
6:F:29:LEU:HD11	6:F:163:ARG:HE	1.80	0.46
7:G:50:LYS:HD3	7:G:331:ASN:O	2.16	0.46
7:G:67:PHE:HA	7:G:70:ARG:HH21	1.81	0.46
7:G:380:MET:HE3	7:G:383:LEU:HD21	1.96	0.46
8:H:329:PRO:HB3	11:K:41:ARG:NH2	2.30	0.46
9:I:230:ASP:O	9:I:231:ILE:HG13	2.16	0.46
11:K:82:LYS:HD2	11:K:82:LYS:H	1.80	0.46
11:K:123:THR:HG22	11:K:126:LEU:HB3	1.98	0.46
12:L:62:LYS:HZ2	12:L:63:LYS:CB	2.29	0.46
12:L:136:LEU:HD13	12:L:137:ASN:OD1	2.15	0.46
13:M:9:GLN:HG2	13:M:52:LEU:CD2	2.40	0.46
14:N:17:TYR:HE2	14:N:23:ASN:HD21	1.63	0.46
15:O:21:ILE:CD1	15:O:37:LEU:HG	2.46	0.46
18:R:72:LEU:HD22	18:R:73:PRO:CD	2.44	0.46
23:W:96:ILE:CG2	23:W:100:ARG:NH1	2.77	0.46
24:X:87:THR:HB	25:Y:156:TYR:CE2	2.51	0.46
25:Y:78:LYS:NZ	25:Y:87:LYS:HE3	2.31	0.46
31:EA:117:ALA:O	31:EA:121:ARG:HD3	2.16	0.46
37:KA:45:LEU:HD22	37:KA:73:ARG:HA	1.97	0.46
39:MA:76:GLN:O	39:MA:77:PRO:C	2.59	0.46
44:RA:122:ARG:HG3	44:RA:122:ARG:O	2.16	0.46
44:RA:122:ARG:O	44:RA:123:PRO:C	2.59	0.46
48:VA:15:LEU:HB2	48:VA:86:PHE:CZ	2.51	0.46
49:WA:2:ALA:O	49:WA:3:SER:HB3	2.16	0.46
49:WA:21:THR:HB	49:WA:69:GLN:HE22	1.81	0.46
49:WA:32:LEU:HD12	49:WA:45:TRP:O	2.16	0.46
49:WA:53:LYS:C	49:WA:55:GLY:N	2.73	0.46
51:YA:127:VAL:HG13	51:YA:135:LEU:CD1	2.46	0.46
51:YA:151:LYS:HB3	51:YA:153:HIS:NE2	2.30	0.46
54:BB:210:ILE:HB	54:BB:218:PHE:O	2.16	0.46
55:CB:164:PRO:CB	55:CB:167:ARG:HH21	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:77:LEU:HD11	56:DB:95:LYS:HB2	1.98	0.46
59:GB:140:ILE:HG13	59:GB:160:PRO:HD2	1.96	0.46
60:HB:82:LEU:HB3	60:HB:86:ILE:HG12	1.98	0.46
61:IB:40:LEU:HG	61:IB:42:PHE:CZ	2.51	0.46
64:LB:60:ALA:O	64:LB:63:ALA:HB3	2.16	0.46
64:LB:64:ALA:HB1	64:LB:105:LEU:HB3	1.98	0.46
66:NB:51:PRO:O	66:NB:55:VAL:HG12	2.16	0.46
69:QB:40:SER:CB	69:QB:43:ASN:HD22	2.28	0.46
76:XB:82:ARG:CG	76:XB:83:ILE:H	2.13	0.46
82:DC:24:VAL:HG22	82:DC:126:LEU:HD23	1.96	0.46
82:DC:677:PHE:CD2	82:DC:677:PHE:N	2.84	0.46
1:A:21:U:H2'	1:A:22:A:O4'	2.16	0.45
1:A:300:A:H5"	54:BB:2:ALA:HB3	1.98	0.45
1:A:595:G:H2'	1:A:596:C:C6	2.51	0.45
1:A:607:G:N2	1:A:614:C:H5"	2.31	0.45
1:A:857:U:OP2	57:EB:65:PRO:HB3	2.16	0.45
1:A:895:G:H2'	1:A:896:U:O4'	2.16	0.45
1:A:975:C:H4'	63:KB:109:LYS:C	2.41	0.45
1:A:1425:A:O2'	1:A:1426:C:H5'	2.15	0.45
1:A:1473:U:OP1	55:CB:183:ALA:HB1	2.16	0.45
1:A:1638:G:H2'	1:A:1639:C:O4'	2.16	0.45
1:A:1643:U:C1'	1:A:1781:A:H4'	2.47	0.45
1:A:1790:A:H5"	76:XB:12:LYS:HD2	1.98	0.45
2:B:590:G:N1	2:B:610:G:H2'	2.31	0.45
2:B:1140:G:H2'	2:B:1141:C:C6	2.51	0.45
2:B:1301:A:H5'	2:B:1302:A:N7	2.31	0.45
2:B:1702:U:H2'	2:B:1703:U:C6	2.51	0.45
2:B:1711:C:C5'	31:EA:38:PHE:HD1	2.30	0.45
2:B:1793:C:C4	6:F:179:LEU:HD22	2.51	0.45
2:B:2136:C:H2'	2:B:2137:U:O2	2.16	0.45
2:B:2587:U:H1'	12:L:49:TYR:HD2	1.81	0.45
2:B:2594:C:H2'	2:B:2595:A:C4'	2.47	0.45
2:B:2617:U:H1'	14:N:116:ARG:HH21	1.82	0.45
2:B:2627:C:C2	2:B:2797:C:H4'	2.52	0.45
2:B:2650:U:H5'	2:B:2758:A:N6	2.31	0.45
2:B:2677:G:H2'	2:B:2677:G:N3	2.31	0.45
2:B:2684:C:H4'	15:O:101:ASN:HD21	1.81	0.45
2:B:2732:G:H5'	2:B:2761:G:C5'	2.46	0.45
2:B:2990:G:O2'	2:B:2991:A:H5'	2.16	0.45
2:B:3095:U:H2'	2:B:3096:C:C6	2.50	0.45
2:B:3139:A:OP1	7:G:22:ALA:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3297:U:H2'	2:B:3298:C:O4'	2.16	0.45
3:C:104:A:OP2	3:C:105:A:H2'	2.16	0.45
5:E:196:LYS:HA	5:E:196:LYS:HZ2	1.81	0.45
7:G:93:VAL:CG1	7:G:100:ARG:HB3	2.46	0.45
7:G:214:MET:HE3	7:G:279:ASN:OD1	2.16	0.45
7:G:339:ARG:HG2	7:G:340:LYS:N	2.22	0.45
8:H:65:TRP:CE3	8:H:71:VAL:HG11	2.47	0.45
8:H:192:GLY:HA2	8:H:195:ARG:HB2	1.98	0.45
10:J:42:LEU:HD13	10:J:47:PHE:HB2	1.98	0.45
10:J:164:SER:OG	37:KA:4:SER:O	2.30	0.45
11:K:173:LEU:C	11:K:175:LYS:N	2.73	0.45
12:L:143:ILE:CG2	12:L:169:LEU:HD22	2.45	0.45
13:M:1:MET:CB	24:X:139:TYR:HB3	2.42	0.45
14:N:46:PHE:CE2	14:N:86:HIS:HB2	2.50	0.45
15:O:12:LEU:HB2	15:O:133:ARG:NE	2.31	0.45
15:O:54:VAL:O	15:O:55:ARG:CB	2.64	0.45
15:O:65:ILE:HG12	15:O:66:ALA:N	2.30	0.45
18:R:24:LYS:HZ1	24:X:158:LYS:HE2	1.80	0.45
19:S:63:ARG:HG3	19:S:131:GLU:OE1	2.16	0.45
20:T:99:LEU:C	20:T:101:ARG:H	2.24	0.45
20:T:115:LYS:HD2	20:T:115:LYS:N	2.30	0.45
21:U:10:ASN:HB2	21:U:13:LYS:HD2	1.98	0.45
23:W:99:LEU:HD13	23:W:103:ARG:HH12	1.80	0.45
24:X:79:VAL:CA	24:X:124:LEU:HG	2.46	0.45
26:Z:21:SER:N	26:Z:22:PRO:HD2	2.31	0.45
32:FA:27:LYS:HD2	32:FA:28:HIS:HE1	1.81	0.45
34:HA:41:LEU:HB3	34:HA:92:ILE:CG1	2.47	0.45
35:IA:27:LYS:C	35:IA:30:PRO:HD2	2.41	0.45
37:KA:59:VAL:HG23	37:KA:61:GLY:H	1.81	0.45
39:MA:21:LEU:HB2	39:MA:54:VAL:HG11	1.98	0.45
39:MA:92:LEU:HA	39:MA:96:GLU:CD	2.41	0.45
50:XA:52:LYS:O	50:XA:56:LYS:HG2	2.15	0.45
50:XA:175:TYR:CE2	50:XA:199:PRO:HG3	2.51	0.45
51:YA:29:TRP:HZ2	64:LB:13:VAL:CG2	2.29	0.45
52:ZA:58:LEU:HA	71:SB:12:TYR:CE1	2.51	0.45
52:ZA:69:ILE:HA	52:ZA:72:LEU:HB2	1.98	0.45
54:BB:229:GLY:HA2	54:BB:235:TYR:HD2	1.80	0.45
57:EB:97:ARG:HD3	57:EB:116:ARG:HH12	1.79	0.45
60:HB:42:VAL:HG13	60:HB:46:LEU:CD2	2.42	0.45
63:KB:5:HIS:CD2	63:KB:117:LEU:HD22	2.51	0.45
63:KB:18:TYR:CE1	72:TB:55:ASP:HA	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:LB:29:HIS:HB3	64:LB:41:ARG:CA	2.47	0.45
65:MB:54:ALA:O	65:MB:58:LYS:HG3	2.16	0.45
68:PB:75:ASN:HB3	68:PB:78:HIS:HD2	1.82	0.45
72:TB:50:PHE:N	72:TB:50:PHE:CD1	2.84	0.45
73:UB:107:PHE:CE1	73:UB:114:LYS:HE2	2.51	0.45
74:VB:13:ILE:HD13	74:VB:22:GLN:CG	2.47	0.45
82:DC:74:ALA:HA	82:DC:102:LEU:C	2.41	0.45
82:DC:164:LEU:HD13	82:DC:285:PHE:CE2	2.51	0.45
82:DC:259:ASN:N	82:DC:259:ASN:HD22	2.13	0.45
82:DC:646:VAL:O	82:DC:646:VAL:HG12	2.16	0.45
82:DC:823:ARG:HB3	82:DC:829:LYS:O	2.16	0.45
1:A:23:G:H21	1:A:368:U:H4'	1.81	0.45
1:A:144:U:O2'	1:A:145:A:H8	1.99	0.45
1:A:992:A:H2	1:A:1012:U:O4	1.99	0.45
1:A:1280:C:C1'	70:RB:70:THR:HB	2.42	0.45
1:A:1346:A:OP1	1:A:1346:A:H2'	2.15	0.45
1:A:1547:A:C2	68:PB:89:GLN:HG2	2.51	0.45
2:B:660:A:N1	2:B:942:U:C5'	2.79	0.45
2:B:682:U:C5	8:H:112:LYS:HG2	2.51	0.45
2:B:707:U:H3'	2:B:708:G:H5"	1.98	0.45
2:B:729:C:O2'	22:V:79:LYS:HE3	2.16	0.45
2:B:790:U:H2'	2:B:791:A:C8	2.51	0.45
2:B:896:A:H5'	6:F:186:PHE:CG	2.51	0.45
2:B:1022:U:H2'	2:B:1023:C:C6	2.51	0.45
2:B:1047:A:H1'	2:B:2633:U:O2'	2.17	0.45
2:B:1167:U:O2'	11:K:209:ASN:O	2.33	0.45
2:B:1285:G:H5"	2:B:3116:G:C5	2.51	0.45
2:B:1422:G:H1'	10:J:3:ALA:O	2.15	0.45
2:B:1728:G:H5'	2:B:1728:G:N3	2.30	0.45
2:B:1889:G:H2'	2:B:1890:U:C6	2.51	0.45
2:B:2111:G:H22	2:B:3083:G:H1'	1.81	0.45
2:B:2493:U:H4'	5:E:35:GLN:HE22	1.81	0.45
2:B:2628:A:H5'	2:B:2799:A:OP1	2.16	0.45
2:B:2688:U:H4'	2:B:2689:A:O5'	2.17	0.45
2:B:2992:U:H2'	2:B:2993:G:H5'	1.97	0.45
2:B:3011:A:O3'	2:B:3012:A:H4'	2.17	0.45
2:B:3040:A:O2'	2:B:3041:U:H5'	2.16	0.45
4:D:9:C:OP2	25:Y:27:LEU:HB2	2.16	0.45
6:F:210:PRO:HG2	6:F:232:GLY:O	2.16	0.45
8:H:22:LEU:C	8:H:24:ALA:H	2.24	0.45
10:J:31:ARG:CG	10:J:34:LEU:HG	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:41:ILE:O	10:J:84:VAL:HA	2.16	0.45
10:J:51:ARG:NH2	18:R:118:PHE:CE2	2.80	0.45
12:L:134:TYR:HD2	12:L:134:TYR:H	1.64	0.45
12:L:168:ALA:HB1	40:NA:46:GLU:OE1	2.16	0.45
13:M:114:VAL:CG2	13:M:124:ARG:HB2	2.46	0.45
14:N:51:HIS:HB3	14:N:134:ILE:CG2	2.46	0.45
16:P:105:GLN:HA	16:P:142:ARG:CA	2.45	0.45
18:R:32:LEU:HB2	18:R:51:ALA:HB1	1.95	0.45
19:S:186:GLY:O	19:S:187:ARG:C	2.59	0.45
23:W:96:ILE:HG22	23:W:100:ARG:CZ	2.46	0.45
23:W:135:LYS:HA	23:W:138:LEU:HD13	1.98	0.45
29:CA:92:LYS:CG	29:CA:110:VAL:HB	2.43	0.45
30:DA:33:ALA:HA	30:DA:101:PRO:HB2	1.97	0.45
32:FA:125:VAL:CG1	32:FA:127:ALA:HB2	2.45	0.45
32:FA:128:ARG:CG	32:FA:129:PHE:N	2.74	0.45
41:OA:14:LYS:HE2	43:QA:51:ILE:HD11	1.98	0.45
43:QA:3:ALA:N	43:QA:5:LYS:HE2	2.31	0.45
43:QA:27:ILE:HG22	43:QA:35:ILE:HD13	1.97	0.45
48:VA:119:ILE:HD12	48:VA:173:LEU:HD11	1.98	0.45
50:XA:109:ASN:C	50:XA:109:ASN:ND2	2.73	0.45
50:XA:152:PRO:C	50:XA:154:GLU:N	2.74	0.45
53:AB:74:GLN:HG3	53:AB:79:TYR:O	2.16	0.45
55:CB:116:HIS:O	55:CB:120:ILE:HG13	2.16	0.45
58:FB:154:SER:HA	58:FB:157:GLU:HB3	1.98	0.45
60:HB:14:TYR:CE2	60:HB:21:VAL:HG13	2.41	0.45
60:HB:54:TYR:HA	60:HB:71:GLU:CD	2.42	0.45
61:IB:93:TYR:CZ	61:IB:98:ASN:HA	2.52	0.45
66:NB:41:PRO:O	66:NB:43:ILE:HD13	2.17	0.45
70:RB:67:THR:HG23	79:AC:40:ARG:HB2	1.98	0.45
82:DC:25:ILE:HG23	82:DC:142:VAL:CG1	2.46	0.45
82:DC:565:GLU:HG2	82:DC:677:PHE:CE2	2.51	0.45
82:DC:653:VAL:HG22	82:DC:691:VAL:O	2.15	0.45
1:A:16:G:O3'	1:A:1109:G:H5'	2.17	0.45
1:A:94:U:H3'	1:A:94:U:C6	2.52	0.45
1:A:121:U:H2'	1:A:122:U:O4'	2.16	0.45
1:A:415:C:H2'	1:A:416:A:H5"	1.98	0.45
1:A:887:A:H5"	64:LB:120:PRO:HB2	1.99	0.45
1:A:933:A:OP2	76:XB:37:LYS:HE2	2.15	0.45
1:A:980:G:H2'	1:A:981:U:H5'	1.99	0.45
2:B:49:A:OP1	19:S:191:TRP:HZ2	1.99	0.45
2:B:199:A:N1	2:B:201:A:H1'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:346:C:N3	2:B:348:A:N7	2.65	0.45
2:B:1067:U:H2'	2:B:1068:C:C6	2.52	0.45
2:B:1093:A:OP1	25:Y:120:LYS:HE2	2.16	0.45
2:B:1146:C:C4'	2:B:1331:U:H5	2.29	0.45
2:B:1449:A:H2'	2:B:1450:G:O4'	2.17	0.45
2:B:1506:A:H2'	2:B:1509:A:N6	2.31	0.45
2:B:2097:U:H2'	2:B:2098:C:O4'	2.16	0.45
2:B:2196:C:H5'	2:B:2271:A:H4'	1.97	0.45
2:B:2651:G:H5"	2:B:2652:U:O4'	2.16	0.45
2:B:2759:U:H6	2:B:2759:U:O5'	1.99	0.45
2:B:2890:A:H2'	2:B:2891:U:O4'	2.16	0.45
2:B:2948:C:H5"	7:G:243:HIS:CB	2.45	0.45
2:B:3114:A:H3'	2:B:3115:C:H6	1.82	0.45
2:B:3202:G:O2'	2:B:3203:U:H5'	2.15	0.45
4:D:7:G:H5'	9:I:33:ARG:HD2	1.99	0.45
4:D:77:G:C8	24:X:50:LYS:HD2	2.52	0.45
8:H:115:HIS:HA	8:H:118:LYS:HB3	1.99	0.45
8:H:339:LEU:C	8:H:341:SER:N	2.73	0.45
8:H:346:LYS:HD2	8:H:346:LYS:N	2.13	0.45
9:I:86:TYR:CB	9:I:247:ILE:HG12	2.44	0.45
11:K:122:ALA:HB2	25:Y:132:PRO:HB3	1.98	0.45
11:K:224:ILE:HA	24:X:36:ILE:CG1	2.46	0.45
13:M:14:GLU:O	13:M:16:VAL:N	2.49	0.45
13:M:16:VAL:HG23	13:M:28:VAL:O	2.16	0.45
14:N:46:PHE:CD1	14:N:140:THR:HA	2.51	0.45
18:R:17:VAL:HB	18:R:72:LEU:HD12	1.96	0.45
18:R:122:VAL:HG22	18:R:125:LYS:HZ3	1.82	0.45
19:S:38:ARG:HB2	19:S:62:TYR:HE2	1.81	0.45
23:W:58:HIS:CD2	23:W:60:LYS:HD3	2.50	0.45
24:X:11:GLY:HA2	24:X:59:VAL:H	1.81	0.45
25:Y:20:ARG:HB2	25:Y:20:ARG:CZ	2.47	0.45
26:Z:43:VAL:O	26:Z:44:GLU:C	2.58	0.45
27:AA:93:LEU:CA	28:BA:20:LEU:HB3	2.46	0.45
29:CA:66:PRO:HA	29:CA:84:PHE:HA	1.98	0.45
29:CA:96:LYS:NZ	29:CA:108:LEU:O	2.49	0.45
30:DA:59:VAL:HG12	30:DA:103:LYS:C	2.40	0.45
32:FA:35:ALA:O	32:FA:41:HIS:HB2	2.16	0.45
32:FA:71:PRO:HB2	32:FA:109:TYR:HA	1.98	0.45
36:JA:76:VAL:HG13	36:JA:81:ASP:CB	2.35	0.45
37:KA:15:SER:HA	37:KA:94:PHE:CE1	2.51	0.45
38:LA:83:ASN:HA	38:LA:86:LYS:HD3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:NA:57:LEU:HD12	40:NA:57:LEU:O	2.16	0.45
44:RA:96:CYS:HA	44:RA:121:LEU:HD23	1.99	0.45
51:YA:153:HIS:CG	51:YA:154:SER:H	2.35	0.45
53:AB:164:VAL:HA	53:AB:168:ILE:CG1	2.46	0.45
56:DB:2:LYS:HA	56:DB:16:PHE:O	2.16	0.45
56:DB:55:GLY:HA3	56:DB:63:MET:HE2	1.97	0.45
56:DB:77:LEU:HD12	56:DB:77:LEU:H	1.82	0.45
56:DB:217:SER:O	56:DB:220:LYS:HG3	2.16	0.45
57:EB:185:ILE:HB	57:EB:186:PRO:CD	2.46	0.45
59:GB:34:PHE:CD1	59:GB:105:LEU:HB3	2.51	0.45
59:GB:84:GLY:HA2	59:GB:150:LEU:HD22	1.98	0.45
64:LB:136:ARG:H	64:LB:136:ARG:NE	2.15	0.45
66:NB:32:ASN:O	69:QB:7:ARG:HD2	2.16	0.45
67:OB:27:ASP:HB3	67:OB:30:THR:HG22	1.97	0.45
73:UB:74:VAL:O	73:UB:83:VAL:O	2.35	0.45
74:VB:44:LEU:HD22	74:VB:48:TYR:HE2	1.82	0.45
82:DC:154:VAL:HG23	82:DC:154:VAL:O	2.16	0.45
82:DC:331:ALA:O	82:DC:335:LEU:HG	2.16	0.45
82:DC:440:ARG:HH11	82:DC:440:ARG:HG3	1.81	0.45
82:DC:813:SER:O	82:DC:814:LYS:C	2.59	0.45
1:A:81:G:H2'	1:A:82:U:C6	2.51	0.45
1:A:176:C:H2'	1:A:177:U:O4'	2.16	0.45
1:A:198:A:C2'	1:A:199:G:H5'	2.46	0.45
1:A:1144:U:H2'	1:A:1145:U:H6	1.78	0.45
1:A:1552:U:H2'	1:A:1553:G:O4'	2.16	0.45
1:A:1574:G:H5"	1:A:1575:G:OP1	2.16	0.45
2:B:173:G:H3'	2:B:174:C:C6	2.50	0.45
2:B:214:G:H2'	2:B:215:G:H8	1.81	0.45
2:B:258:G:O2'	2:B:259:C:H5'	2.16	0.45
2:B:641:C:C2'	2:B:642:U:H5'	2.46	0.45
2:B:837:A:H3'	2:B:838:G:H8	1.82	0.45
2:B:912:G:C2	2:B:914:A:C2	3.04	0.45
2:B:1348:U:H4'	2:B:1349:G:H5"	1.99	0.45
2:B:1538:G:H2'	2:B:1539:A:H8	1.79	0.45
2:B:1747:G:H4'	42:PA:53:THR:HG21	1.97	0.45
2:B:1887:A:H1'	7:G:226:PHE:CZ	2.51	0.45
2:B:1926:C:OP2	47:UA:7:LYS:HE3	2.17	0.45
2:B:2141:U:HO2'	2:B:2976:A:H1'	1.82	0.45
2:B:2193:U:H4'	2:B:2312:A:C2	2.52	0.45
2:B:2203:U:OP1	6:F:226:SER:HA	2.17	0.45
2:B:2468:A:H62	2:B:2479:C:C5'	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3054:U:H2'	2:B:3055:U:H6	1.81	0.45
2:B:3116:G:H4'	2:B:3117:C:OP2	2.16	0.45
4:D:7:G:OP1	9:I:33:ARG:CD	2.62	0.45
4:D:67:G:H4'	9:I:10:SER:HA	1.99	0.45
5:E:23:THR:HG22	5:E:24:LYS:N	2.26	0.45
5:E:26:ARG:CG	5:E:210:MET:HA	2.46	0.45
8:H:170:LYS:HG3	8:H:175:HIS:HB3	1.98	0.45
8:H:186:LYS:O	8:H:199:TRP:HB3	2.16	0.45
8:H:208:VAL:HG23	8:H:248:VAL:HG11	1.98	0.45
10:J:165:LEU:C	37:KA:6:ARG:HB3	1.81	0.45
11:K:169:ILE:O	11:K:173:LEU:HB3	2.16	0.45
12:L:229:VAL:HA	12:L:232:HIS:HB2	1.99	0.45
15:O:23:VAL:H	15:O:65:ILE:HG13	1.78	0.45
17:Q:39:ARG:HH11	17:Q:39:ARG:CG	2.30	0.45
18:R:24:LYS:O	18:R:29:ALA:HA	2.16	0.45
18:R:94:TRP:C	18:R:96:ALA:N	2.75	0.45
19:S:65:ARG:HD2	19:S:127:TYR:CE1	2.52	0.45
20:T:157:GLU:O	20:T:161:LYS:HB2	2.16	0.45
22:V:81:VAL:HG12	22:V:138:LEU:CD1	2.47	0.45
24:X:26:ARG:HB2	25:Y:148:PRO:HB2	1.96	0.45
28:BA:50:ALA:HA	28:BA:55:PHE:CD1	2.51	0.45
31:EA:4:PHE:CE2	34:HA:63:SER:HA	2.48	0.45
33:GA:37:PRO:CB	33:GA:41:ARG:HH21	2.29	0.45
35:IA:50:ARG:HD2	35:IA:90:PHE:HE2	1.81	0.45
46:TA:29:LYS:NZ	46:TA:29:LYS:HB3	2.31	0.45
52:ZA:99:LYS:HA	52:ZA:117:THR:HB	1.97	0.45
56:DB:193:LEU:HD23	56:DB:193:LEU:C	2.42	0.45
59:GB:108:ARG:O	59:GB:111:THR:HG22	2.17	0.45
63:KB:30:SER:HA	63:KB:33:VAL:CG2	2.46	0.45
66:NB:43:ILE:HD13	66:NB:43:ILE:N	2.28	0.45
68:PB:26:ILE:HG13	68:PB:31:ALA:HB2	1.98	0.45
72:TB:105:THR:CG2	72:TB:110:ILE:HG12	2.41	0.45
80:BC:39:LEU:C	80:BC:39:LEU:HD13	2.42	0.45
82:DC:497:ASN:ND2	82:DC:553:PRO:HB2	2.31	0.45
82:DC:568:GLU:HB3	82:DC:721:ASP:CG	2.41	0.45
83:EC:6885:G:H2'	83:EC:6886:A:H8	1.81	0.45
1:A:891:A:H2'	1:A:892:A:H8	1.80	0.45
1:A:993:A:H2'	1:A:994:G:H5'	1.97	0.45
1:A:1005:A:H2'	1:A:1006:C:C6	2.51	0.45
1:A:1149:G:H1'	1:A:1765:A:C4	2.50	0.45
1:A:1273:G:O6	1:A:1430:U:H2'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1274:C:H4'	1:A:1276:U:OP2	2.17	0.45
1:A:1276:U:H4'	53:AB:147:ALA:HB3	1.97	0.45
1:A:1448:G:H5'	1:A:1448:G:C8	2.51	0.45
1:A:1523:G:H1'	69:QB:79:LEU:HD13	1.99	0.45
1:A:1725:U:H2'	1:A:1726:G:C8	2.51	0.45
2:B:265:A:H4'	40:NA:34:SER:HB2	1.99	0.45
2:B:363:G:H5"	8:H:61:SER:HB3	1.99	0.45
2:B:407:A:H61	3:C:15:G:H2'	1.81	0.45
2:B:421:G:H3'	2:B:421:G:N3	2.32	0.45
2:B:632:G:OP1	20:T:94:ARG:HB2	2.16	0.45
2:B:1359:C:H2'	2:B:1360:C:C6	2.51	0.45
2:B:1493:G:C2	43:QA:13:MET:HG3	2.52	0.45
2:B:1551:C:H2'	2:B:1552:G:C8	2.51	0.45
2:B:1651:U:C5'	6:F:71:LEU:HD13	2.46	0.45
2:B:1799:A:H2'	2:B:1800:A:C8	2.52	0.45
2:B:1835:A:OP2	43:QA:3:ALA:HB1	2.16	0.45
2:B:2535:A:H3'	2:B:2536:A:H5"	1.98	0.45
2:B:2682:C:H2'	2:B:2683:U:C6	2.51	0.45
2:B:3088:G:H5"	7:G:332:ARG:HH21	1.81	0.45
2:B:3255:U:H2'	2:B:3256:G:C8	2.51	0.45
3:C:75:G:OP1	43:QA:30:ARG:HB3	2.16	0.45
4:D:2:G:H2'	4:D:3:U:C5'	2.45	0.45
4:D:101:G:O2'	4:D:102:A:H5"	2.17	0.45
6:F:101:VAL:HG23	6:F:164:GLY:O	2.16	0.45
6:F:128:ARG:HA	6:F:169:ILE:HD11	1.99	0.45
6:F:184:ARG:H	6:F:184:ARG:CD	2.27	0.45
8:H:35:VAL:HA	8:H:38:VAL:CB	2.42	0.45
8:H:178:LEU:HD11	8:H:222:VAL:HG22	1.98	0.45
8:H:181:VAL:HG12	8:H:182:LEU:H	1.81	0.45
8:H:205:PRO:HB3	8:H:247:PHE:CD2	2.50	0.45
12:L:128:LYS:HG3	12:L:129:PRO:HD2	1.98	0.45
13:M:99:ILE:HD13	13:M:165:CYS:SG	2.55	0.45
13:M:122:LYS:HG2	13:M:123:ILE:N	2.29	0.45
15:O:94:ARG:O	15:O:95:ASN:HB2	2.16	0.45
17:Q:56:PRO:HG2	17:Q:72:GLY:HA3	1.99	0.45
19:S:35:VAL:HG13	19:S:65:ARG:HG2	1.97	0.45
19:S:38:ARG:HD3	19:S:38:ARG:C	2.41	0.45
20:T:49:ARG:HA	20:T:52:LEU:HD12	1.99	0.45
22:V:76:ALA:CB	22:V:79:LYS:HD2	2.47	0.45
27:AA:21:ALA:HB3	27:AA:36:ILE:HD11	1.99	0.45
27:AA:79:VAL:HG23	27:AA:80:ARG:HG3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CA:96:LYS:HE3	29:CA:110:VAL:HG23	1.97	0.45
31:EA:6:LYS:O	31:EA:25:ILE:HD12	2.16	0.45
32:FA:35:ALA:HB1	32:FA:40:HIS:CE1	2.50	0.45
35:IA:51:LEU:HD23	35:IA:93:VAL:HB	1.98	0.45
37:KA:17:GLN:HB3	37:KA:24:ASN:ND2	2.32	0.45
38:LA:11:ASN:OD1	38:LA:18:ASN:HB3	2.17	0.45
38:LA:36:LYS:O	38:LA:37:LYS:CB	2.65	0.45
43:QA:44:TRP:H	43:QA:44:TRP:CD1	2.35	0.45
50:XA:118:PRO:HG2	50:XA:141:ILE:CD1	2.47	0.45
51:YA:216:LYS:C	51:YA:217:LEU:HD12	2.42	0.45
54:BB:122:LYS:HZ3	54:BB:145:ARG:CZ	2.29	0.45
58:FB:48:THR:HG21	58:FB:54:LYS:HB2	1.97	0.45
58:FB:74:LYS:HE2	58:FB:112:TRP:HB2	1.98	0.45
59:GB:93:LEU:HD12	59:GB:96:VAL:HG21	1.99	0.45
60:HB:80:LEU:HD23	60:HB:80:LEU:HA	1.83	0.45
61:IB:59:PRO:HB3	61:IB:65:SER:HA	1.99	0.45
61:IB:75:VAL:HB	61:IB:120:GLY:CA	2.47	0.45
63:KB:30:SER:O	63:KB:34:ILE:HG13	2.16	0.45
63:KB:52:VAL:HG22	63:KB:55:ARG:HH21	1.82	0.45
65:MB:56:PHE:CE2	65:MB:78:THR:HB	2.52	0.45
70:RB:98:GLN:HA	70:RB:98:GLN:HE21	1.81	0.45
71:SB:64:GLU:OE1	71:SB:67:ASP:HB2	2.17	0.45
72:TB:41:MET:SD	72:TB:129:VAL:HG11	2.56	0.45
73:UB:130:VAL:O	73:UB:131:SER:HB2	2.17	0.45
75:WB:102:THR:HG22	75:WB:103:ARG:N	2.32	0.45
78:ZB:44:VAL:CB	78:ZB:48:VAL:HG21	2.46	0.45
82:DC:56:PHE:O	82:DC:58:ASP:N	2.50	0.45
82:DC:617:ARG:NH2	82:DC:627:VAL:HB	2.31	0.45
1:A:107:C:H2'	1:A:108:A:C8	2.51	0.45
1:A:107:C:H5"	1:A:383:G:C2'	2.47	0.45
1:A:153:G:H2'	1:A:154:G:C8	2.52	0.45
1:A:429:G:OP1	1:A:439:U:H5"	2.16	0.45
1:A:777:C:C4'	54:BB:261:LEU:HD13	2.47	0.45
1:A:1286:U:H2'	1:A:1287:A:C8	2.51	0.45
1:A:1676:U:OP1	58:FB:58:LEU:HD11	2.16	0.45
2:B:408:A:H61	3:C:15:G:H1'	1.81	0.45
2:B:513:G:H2'	2:B:514:G:C8	2.51	0.45
2:B:1055:A:H5"	4:D:100:C:O2'	2.16	0.45
2:B:1149:G:H3'	2:B:1150:A:C5'	2.47	0.45
2:B:1261:G:H3'	2:B:1261:G:N3	2.31	0.45
2:B:1295:G:H3'	2:B:1296:C:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1324:U:C3'	2:B:1325:U:H5"	2.47	0.45
2:B:1476:G:O2'	35:IA:64:VAL:HG11	2.16	0.45
2:B:1647:A:N6	2:B:1808:G:O2'	2.49	0.45
2:B:1729:A:H5'	34:HA:52:ARG:NH2	2.31	0.45
2:B:2746:A:H5"	9:I:178:ASN:HD21	1.81	0.45
2:B:2856:G:C2	2:B:2857:C:C2	3.05	0.45
2:B:3105:U:C2'	2:B:3106:A:H5'	2.47	0.45
2:B:3362:A:H2'	2:B:3363:U:C4'	2.46	0.45
4:D:65:G:H4'	14:N:205:SER:N	2.32	0.45
4:D:76:A:C6	4:D:102:A:H5'	2.50	0.45
6:F:46:LYS:HD3	6:F:62:VAL:HG11	1.99	0.45
7:G:32:PHE:HE2	7:G:159:ARG:NH2	2.15	0.45
7:G:110:LEU:HD12	7:G:110:LEU:N	2.30	0.45
8:H:31:ARG:HD2	22:V:24:VAL:HB	1.99	0.45
8:H:58:HIS:CD2	8:H:98:ARG:HB2	2.52	0.45
8:H:145:ILE:HD12	8:H:145:ILE:O	2.16	0.45
8:H:274:TYR:CZ	8:H:276:LEU:HD23	2.52	0.45
9:I:55:PHE:HE2	9:I:159:VAL:HG22	1.82	0.45
12:L:134:TYR:CD2	12:L:134:TYR:N	2.85	0.45
13:M:8:GLN:HG3	13:M:68:LEU:CD1	2.41	0.45
14:N:177:ASP:OD2	14:N:179:PRO:HD2	2.16	0.45
17:Q:60:ALA:HB3	17:Q:65:TYR:O	2.16	0.45
21:U:36:ILE:HG22	21:U:114:VAL:CG1	2.43	0.45
22:V:166:LEU:HD23	22:V:167:SER:OG	2.17	0.45
25:Y:39:ILE:HD11	25:Y:102:ARG:HB2	1.98	0.45
25:Y:40:VAL:HB	25:Y:96:ILE:CG2	2.45	0.45
25:Y:55:LYS:O	25:Y:58:GLN:HB3	2.16	0.45
27:AA:11:PHE:HD1	27:AA:12:ARG:H	1.64	0.45
28:BA:51:TRP:CE3	28:BA:52:THR:HG22	2.52	0.45
29:CA:67:ILE:HD13	29:CA:115:ARG:CZ	2.46	0.45
29:CA:99:VAL:HG22	29:CA:103:TYR:HE2	1.81	0.45
31:EA:36:HIS:HB3	31:EA:40:HIS:CE1	2.51	0.45
34:HA:31:VAL:HG12	34:HA:35:ARG:NE	2.30	0.45
35:IA:12:TYR:CE2	35:IA:75:ILE:HB	2.51	0.45
39:MA:30:GLU:HA	39:MA:33:VAL:HB	1.97	0.45
47:UA:34:HIS:O	47:UA:48:LYS:HG2	2.15	0.45
48:VA:138:ALA:HA	82:DC:180:ARG:NH2	2.32	0.45
49:WA:80:ALA:HB2	49:WA:94:VAL:HG13	1.98	0.45
49:WA:136:ILE:HD13	49:WA:136:ILE:N	2.25	0.45
49:WA:220:ILE:O	49:WA:234:LEU:HD13	2.17	0.45
50:XA:41:ARG:HB2	50:XA:42:PRO:CD	2.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:57:PHE:HB3	71:SB:26:ALA:HB1	1.98	0.45
53:AB:59:LEU:HA	53:AB:66:ILE:HG12	1.97	0.45
54:BB:162:ILE:HG23	54:BB:167:GLY:HA2	1.98	0.45
55:CB:85:ALA:CB	55:CB:165:LEU:HD13	2.46	0.45
56:DB:193:LEU:HG	56:DB:196:ARG:HH12	1.82	0.45
58:FB:65:PHE:HZ	58:FB:78:ILE:HG23	1.82	0.45
61:IB:94:ILE:HG22	61:IB:97:TYR:H	1.82	0.45
63:KB:33:VAL:CG2	63:KB:34:ILE:N	2.80	0.45
63:KB:71:ILE:HG22	63:KB:72:MET:N	2.31	0.45
63:KB:135:LEU:HB3	63:KB:136:PRO:CD	2.46	0.45
64:LB:18:ARG:HA	64:LB:82:LYS:O	2.16	0.45
66:NB:90:VAL:HG12	66:NB:105:LEU:CD2	2.45	0.45
68:PB:123:ARG:HA	68:PB:133:VAL:CG2	2.46	0.45
70:RB:58:LEU:HB3	70:RB:59:PRO:HD2	1.97	0.45
72:TB:57:ARG:NH2	77:YB:26:GLN:HB2	2.32	0.45
73:UB:119:GLY:O	73:UB:121:ARG:HG3	2.16	0.45
74:VB:37:LYS:HA	74:VB:40:LEU:CB	2.47	0.45
76:XB:23:CYS:HB2	76:XB:28:LYS:O	2.16	0.45
78:ZB:42:ARG:NE	78:ZB:42:ARG:HA	2.30	0.45
82:DC:272:ALA:HA	82:DC:275:MET:CB	2.33	0.45
82:DC:436:LEU:HG	82:DC:454:ILE:HD11	1.99	0.45
83:EC:6855:A:H2'	83:EC:6856:C:C6	2.51	0.45
1:A:446:A:OP1	54:BB:59:ARG:HB2	2.15	0.45
1:A:869:A:H1'	63:KB:48:SER:CB	2.46	0.45
1:A:921:U:H2'	1:A:922:G:C5'	2.32	0.45
1:A:959:U:C6	63:KB:17:PRO:HG3	2.52	0.45
1:A:1450:U:H2'	1:A:1451:C:C6	2.51	0.45
1:A:1483:A:C5'	66:NB:71:GLY:HA2	2.47	0.45
2:B:35:A:H2'	2:B:36:C:C6	2.51	0.45
2:B:43:A:H4'	19:S:84:PRO:HD2	1.98	0.45
2:B:378:A:H1'	30:DA:91:ASN:HA	1.97	0.45
2:B:411:U:C1'	21:U:121:GLN:HE22	2.29	0.45
2:B:524:U:C2'	2:B:525:C:H5'	2.47	0.45
2:B:531:G:O2'	2:B:532:A:H5'	2.16	0.45
2:B:834:U:C2'	2:B:835:G:H5'	2.47	0.45
2:B:1150:A:N6	2:B:2369:G:H1'	2.32	0.45
2:B:1273:A:H2'	2:B:1274:A:O4'	2.17	0.45
2:B:1435:A:N1	8:H:93:MET:HE1	2.32	0.45
2:B:1610:G:H2'	2:B:1611:G:O4'	2.17	0.45
2:B:1666:G:O3'	2:B:1743:G:H5'	2.17	0.45
2:B:1809:A:H2'	2:B:1810:A:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1818:U:H3'	2:B:1819:U:H5"	1.98	0.45
2:B:1854:C:H2'	2:B:1855:U:H5'	1.98	0.45
2:B:2227:C:H2'	2:B:2228:A:C8	2.51	0.45
2:B:2234:G:H2'	2:B:2235:C:H6	1.81	0.45
2:B:2427:U:H2'	2:B:2428:U:C6	2.52	0.45
2:B:2552:C:OP1	38:LA:98:GLN:NE2	2.48	0.45
2:B:2586:G:C8	12:L:68:ARG:NH2	2.85	0.45
2:B:2642:A:H5'	33:GA:7:HIS:HB3	1.99	0.45
2:B:2841:G:H2'	2:B:2898:G:H21	1.80	0.45
2:B:2841:G:N2	2:B:2846:U:H5"	2.30	0.45
2:B:2993:G:H2'	2:B:3142:A:N6	2.31	0.45
2:B:3070:A:C2'	2:B:3071:U:H5'	2.44	0.45
2:B:3135:U:H3'	2:B:3136:G:H8	1.82	0.45
2:B:3208:G:H22	20:T:3:VAL:HG21	1.81	0.45
2:B:3373:U:H5'	35:IA:70:ARG:CZ	2.46	0.45
2:B:3376:A:H2'	2:B:3376:A:N3	2.31	0.45
3:C:48:A:H61	3:C:54:A:N6	2.14	0.45
4:D:79:A:H2'	4:D:80:G:O4'	2.17	0.45
4:D:87:G:H21	24:X:119:ARG:HH12	1.63	0.45
6:F:179:LEU:HD11	6:F:188:LYS:CD	2.42	0.45
7:G:338:LEU:H	7:G:338:LEU:CD2	2.29	0.45
8:H:216:VAL:HG23	8:H:217:LYS:HG3	1.99	0.45
8:H:304:GLN:HE22	8:H:308:LYS:HB2	1.81	0.45
8:H:319:LYS:H	8:H:319:LYS:HG3	1.71	0.45
9:I:102:GLY:HA3	9:I:165:GLY:C	2.41	0.45
9:I:128:GLU:HG3	9:I:129:TYR:N	2.32	0.45
10:J:13:GLU:OE2	36:JA:90:LYS:CB	2.44	0.45
11:K:76:TYR:CZ	11:K:78:GLU:HA	2.51	0.45
11:K:182:ASP:O	11:K:185:ILE:HB	2.16	0.45
12:L:159:PRO:C	12:L:161:GLU:N	2.75	0.45
14:N:150:GLU:OE2	14:N:153:ARG:HD3	2.17	0.45
15:O:20:ASN:ND2	15:O:66:ALA:HB1	2.12	0.45
18:R:13:ARG:HB3	18:R:65:LEU:HD22	1.99	0.45
19:S:38:ARG:HB2	19:S:62:TYR:CE2	2.52	0.45
19:S:62:TYR:CD1	19:S:134:LEU:HD21	2.52	0.45
20:T:19:LEU:HB2	20:T:123:ALA:HB1	1.99	0.45
20:T:23:VAL:HB	20:T:84:LEU:HD21	1.97	0.45
22:V:86:THR:HG22	22:V:87:VAL:N	2.32	0.45
24:X:107:TYR:CE1	24:X:118:PHE:HD1	2.33	0.45
25:Y:66:ASN:HB2	33:GA:35:VAL:HG22	1.97	0.45
25:Y:79:MET:HG3	33:GA:21:ILE:HG21	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AA:75:PRO:O	27:AA:103:ALA:O	2.34	0.45
31:EA:4:PHE:CE1	34:HA:35:ARG:HG2	2.31	0.45
32:FA:73:LEU:HD22	32:FA:109:TYR:CE2	2.52	0.45
38:LA:3:GLN:HG3	38:LA:30:LEU:HD22	1.98	0.45
38:LA:72:VAL:CG2	38:LA:77:GLY:HA3	2.44	0.45
40:NA:95:ALA:HA	40:NA:99:ARG:HB3	1.99	0.45
43:QA:23:LEU:HD21	43:QA:35:ILE:O	2.16	0.45
47:UA:56:THR:HA	47:UA:63:THR:HG23	1.99	0.45
51:YA:33:LYS:CA	51:YA:43:VAL:HG22	2.46	0.45
51:YA:48:VAL:HG12	51:YA:49:ASN:H	1.82	0.45
53:AB:115:ILE:HG23	53:AB:116:ARG:N	2.30	0.45
58:FB:26:LYS:HD2	58:FB:29:LEU:CD1	2.40	0.45
58:FB:65:PHE:CZ	58:FB:78:ILE:HG23	2.51	0.45
59:GB:41:GLU:O	59:GB:45:ILE:HG12	2.17	0.45
59:GB:134:ILE:HD13	59:GB:136:VAL:HG23	1.99	0.45
61:IB:75:VAL:N	61:IB:86:ILE:HG22	2.31	0.45
64:LB:53:ASP:OD1	64:LB:56:SER:HB3	2.16	0.45
65:MB:16:SER:CB	65:MB:21:ASP:HA	2.47	0.45
66:NB:118:ILE:HG23	66:NB:119:ALA:N	2.31	0.45
68:PB:81:ILE:HG22	68:PB:86:LEU:CD1	2.47	0.45
70:RB:25:THR:HG22	70:RB:26:LEU:H	1.82	0.45
70:RB:32:LYS:O	70:RB:36:ASN:HB2	2.16	0.45
72:TB:51:GLU:CD	77:YB:8:LEU:HD22	2.42	0.45
72:TB:83:ILE:HG23	72:TB:83:ILE:O	2.17	0.45
74:VB:51:GLU:O	74:VB:52:LYS:C	2.59	0.45
74:VB:105:ARG:HG2	74:VB:105:ARG:NH1	2.30	0.45
79:AC:21:CYS:CB	79:AC:26:SER:H	2.30	0.45
82:DC:109:VAL:CG1	82:DC:110:ASP:H	2.25	0.45
82:DC:181:THR:O	82:DC:185:VAL:HG23	2.17	0.45
82:DC:357:TYR:HA	82:DC:478:MET:HA	1.98	0.45
82:DC:718:LEU:HA	82:DC:722:PRO:HG3	1.97	0.45
83:EC:6797:U:H2'	83:EC:6798:C:C5	2.52	0.45
83:EC:6867:C:H2'	83:EC:6868:C:C5	2.52	0.45
1:A:66:U:H6	56:DB:173:PRO:HG3	1.82	0.45
1:A:79:C:H2'	1:A:80:A:O4'	2.15	0.45
1:A:446:A:N6	1:A:461:G:H21	2.15	0.45
1:A:1573:A:C1'	1:A:1574:G:OP2	2.58	0.45
2:B:209:A:H3'	8:H:162:THR:HB	1.99	0.45
2:B:257:U:H2'	2:B:258:G:H5'	1.98	0.45
2:B:516:A:H5"	8:H:344:ALA:HB3	1.98	0.45
2:B:654:C:H2'	2:B:655:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:840:C:H1'	23:W:128:LYS:CD	2.47	0.45
2:B:924:G:P	2:B:924:G:H8	2.40	0.45
2:B:1177:G:H5'	37:KA:18:ARG:NH2	2.32	0.45
2:B:1577:G:H2'	2:B:1577:G:N3	2.32	0.45
2:B:1641:U:H3'	2:B:1642:A:C5'	2.45	0.45
2:B:1780:G:H8	2:B:1780:G:OP2	2.00	0.45
2:B:1836:C:C6	2:B:1836:C:C3'	3.00	0.45
2:B:2198:A:C5	2:B:2199:G:C8	3.05	0.45
2:B:2357:A:P	21:U:138:LYS:HG2	2.56	0.45
2:B:2367:A:H2'	2:B:2368:A:O4'	2.17	0.45
2:B:2381:G:H2'	2:B:2382:G:H5'	1.97	0.45
2:B:2551:U:O4	6:F:95:SER:HB2	2.16	0.45
2:B:2628:A:H4'	2:B:2799:A:OP2	2.17	0.45
2:B:2717:U:O2'	2:B:2718:U:H5'	2.16	0.45
2:B:2874:G:C6	2:B:2945:G:C8	3.04	0.45
2:B:2944:U:H5"	2:B:2945:G:OP2	2.17	0.45
3:C:3:A:C2'	3:C:4:C:H5'	2.47	0.45
4:D:87:G:N2	24:X:119:ARG:HH22	2.12	0.45
6:F:42:ARG:HD2	6:F:87:PHE:CE1	2.51	0.45
6:F:93:LYS:N	6:F:102:LEU:HD23	2.32	0.45
7:G:43:LEU:HD12	7:G:43:LEU:N	2.31	0.45
8:H:112:LYS:HB2	19:S:202:TYR:HB3	1.99	0.45
8:H:318:LEU:HD12	11:K:150:LYS:HD3	1.98	0.45
9:I:39:GLN:CG	9:I:43:LYS:HB2	2.46	0.45
10:J:56:LYS:HB2	10:J:98:VAL:HG11	1.96	0.45
12:L:55:TYR:CD2	12:L:56:VAL:HG23	2.52	0.45
13:M:34:LEU:O	13:M:78:MET:HE1	2.17	0.45
13:M:43:VAL:CG1	13:M:44:THR:H	2.05	0.45
14:N:41:ALA:CB	14:N:46:PHE:HE2	2.30	0.45
18:R:24:LYS:CE	18:R:25:LYS:HE2	2.27	0.45
18:R:99:TRP:O	18:R:103:ILE:HG12	2.17	0.45
19:S:110:ALA:HB1	19:S:113:LEU:CD2	2.46	0.45
22:V:80:THR:HG23	22:V:136:ASN:O	2.17	0.45
23:W:31:GLU:CD	23:W:44:LEU:HD11	2.42	0.45
23:W:31:GLU:OE2	23:W:44:LEU:HD11	2.17	0.45
24:X:77:VAL:HG12	24:X:79:VAL:HG22	1.99	0.45
30:DA:60:ARG:HB3	30:DA:103:LYS:HE3	1.98	0.45
35:IA:14:ILE:HG22	35:IA:71:LEU:O	2.17	0.45
37:KA:17:GLN:H	37:KA:24:ASN:CB	2.30	0.45
37:KA:49:ILE:C	37:KA:49:ILE:HD12	2.42	0.45
39:MA:5:LYS:HD2	39:MA:7:TYR:HE2	1.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:MA:24:LEU:HD22	39:MA:51:ILE:CG1	2.46	0.45
40:NA:61:ILE:HA	40:NA:65:GLY:O	2.17	0.45
49:WA:251:TRP:HA	49:WA:264:SER:HA	1.99	0.45
50:XA:184:LEU:HD22	71:SB:43:GLY:HA2	1.97	0.45
55:CB:89:ILE:HD12	55:CB:90:ILE:H	1.81	0.45
55:CB:111:VAL:O	55:CB:114:ILE:HG22	2.17	0.45
59:GB:130:THR:C	59:GB:132:ARG:N	2.72	0.45
61:IB:14:GLN:NE2	61:IB:54:ILE:HG21	2.32	0.45
61:IB:16:GLN:NE2	61:IB:34:TRP:HB3	2.31	0.45
63:KB:70:LYS:HB2	63:KB:73:ARG:CD	2.39	0.45
64:LB:90:ARG:HH21	64:LB:90:ARG:HG3	1.82	0.45
65:MB:15:HIS:HB2	68:PB:115:ARG:HE	1.82	0.45
67:OB:66:VAL:HG12	67:OB:69:ILE:H	1.82	0.45
75:WB:57:TYR:HB3	75:WB:60:VAL:HB	1.98	0.45
76:XB:24:VAL:HG12	76:XB:72:HIS:HB2	1.98	0.45
1:A:380:U:H3’	1:A:381:C:C5	2.52	0.45
1:A:629:U:H2’	1:A:630:A:O4’	2.16	0.45
1:A:636:A:C5’	72:TB:31:SER:HB3	2.46	0.45
1:A:709:C:H42	1:A:731:C:H5”	1.81	0.45
1:A:1170:G:H21	1:A:1571:C:H4’	1.81	0.45
1:A:1189:A:H2	1:A:1195:C:H4’	1.82	0.45
1:A:1654:G:N2	1:A:1746:A:H62	2.03	0.45
2:B:62:A:O2’	2:B:63:A:H5’	2.17	0.45
2:B:335:G:OP1	30:DA:9:SER:HB2	2.16	0.45
2:B:644:G:H4’	2:B:1153:A:C4	2.51	0.45
2:B:680:G:C2’	2:B:681:U:H5’	2.46	0.45
2:B:699:A:O2’	2:B:700:C:H5’	2.17	0.45
2:B:708:G:O2’	2:B:755:A:H4’	2.16	0.45
2:B:965:A:H1’	32:FA:43:ILE:HD13	1.99	0.45
2:B:981:U:OP2	2:B:981:U:H6	2.00	0.45
2:B:1140:G:H2’	2:B:1141:C:H6	1.82	0.45
2:B:1488:G:H3’	2:B:1838:G:N1	2.32	0.45
2:B:1491:A:N7	43:QA:2:ALA:N	2.64	0.45
2:B:1806:A:H3’	2:B:1807:G:H8	1.82	0.45
2:B:2765:C:O2’	2:B:2766:U:H5’	2.17	0.45
2:B:2834:G:N2	2:B:2855:U:H1’	2.32	0.45
2:B:2880:U:C4’	7:G:238:LEU:HD21	2.46	0.45
2:B:2889:C:H6	2:B:2889:C:H5’	1.81	0.45
2:B:3126:C:H1’	13:M:156:GLN:NE2	2.32	0.45
4:D:4:U:H2’	4:D:5:G:H8	1.80	0.45
4:D:67:G:C5’	9:I:10:SER:HA	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:91:GLY:O	6:F:93:LYS:N	2.49	0.45
7:G:10:ARG:HH11	7:G:10:ARG:HG3	1.82	0.45
7:G:336:VAL:HG12	7:G:337:THR:H	1.81	0.45
8:H:16:THR:HG22	8:H:17:ALA:N	2.32	0.45
8:H:23:PRO:CB	8:H:258:LEU:HD23	2.47	0.45
8:H:30:ILE:N	22:V:25:TYR:OH	2.50	0.45
8:H:85:SER:C	8:H:87:GLN:H	2.24	0.45
9:I:87:GLY:HA3	9:I:243:ALA:CB	2.47	0.45
10:J:131:LYS:HD2	10:J:133:GLU:H	1.82	0.45
11:K:224:ILE:HG12	24:X:36:ILE:HA	1.99	0.45
14:N:41:ALA:HB1	14:N:46:PHE:CE2	2.51	0.45
17:Q:56:PRO:HB2	17:Q:112:ASN:OD1	2.17	0.45
20:T:22:VAL:O	20:T:26:GLN:HG2	2.17	0.45
20:T:48:PHE:CE1	20:T:52:LEU:HD21	2.52	0.45
22:V:79:LYS:HA	22:V:136:ASN:ND2	2.32	0.45
27:AA:132:ASN:N	27:AA:132:ASN:ND2	2.65	0.45
30:DA:111:LEU:HD12	30:DA:111:LEU:N	2.32	0.45
31:EA:83:THR:C	31:EA:85:TYR:H	2.24	0.45
32:FA:104:THR:HB	32:FA:109:TYR:HB2	1.98	0.45
37:KA:37:THR:O	37:KA:41:ALA:HB2	2.17	0.45
42:PA:24:THR:HG22	42:PA:44:LYS:HB2	1.98	0.45
47:UA:50:GLY:HA3	47:UA:56:THR:CG2	2.41	0.45
48:VA:111:ALA:CB	48:VA:170:ALA:CB	2.95	0.45
48:VA:144:LYS:HB2	48:VA:153:VAL:HG21	1.98	0.45
49:WA:278:PHE:CE2	49:WA:287:PRO:HD2	2.52	0.45
51:YA:70:LEU:HB3	51:YA:84:ILE:CG1	2.46	0.45
51:YA:70:LEU:CA	51:YA:73:LEU:HB2	2.35	0.45
51:YA:118:GLN:HB2	51:YA:143:THR:OG1	2.17	0.45
53:AB:92:GLN:O	53:AB:93:ASP:C	2.59	0.45
55:CB:37:GLN:HB3	66:NB:53:LEU:CD2	2.30	0.45
56:DB:21:GLU:N	56:DB:21:GLU:OE1	2.49	0.45
61:IB:127:GLN:HA	61:IB:136:ARG:O	2.17	0.45
63:KB:27:LYS:O	63:KB:27:LYS:HD2	2.16	0.45
64:LB:92:LYS:HZ1	64:LB:121:VAL:HG13	1.81	0.45
65:MB:10:ARG:HG2	65:MB:12:PHE:H	1.80	0.45
65:MB:17:TYR:O	68:PB:92:ILE:HD13	2.17	0.45
70:RB:53:LYS:CB	70:RB:92:ASP:HB2	2.47	0.45
74:VB:12:VAL:CG1	74:VB:23:PHE:HB3	2.46	0.45
77:YB:20:LYS:HZ3	77:YB:21:LEU:HG	1.81	0.45
82:DC:56:PHE:N	82:DC:56:PHE:CD2	2.84	0.45
82:DC:300:LEU:HG	82:DC:305:ILE:HB	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:463:LEU:HD11	82:DC:467:GLY:HA3	1.99	0.45
82:DC:733:ILE:CD1	82:DC:784:LEU:HG	2.47	0.45
83:EC:6770:U:O4	83:EC:6822:U:H5"	2.16	0.45
1:A:152:U:H3'	1:A:153:G:H5"	1.99	0.45
1:A:372:G:H1'	1:A:612:U:O2	2.17	0.45
1:A:1567:U:P	68:PB:39:GLY:HA2	2.57	0.45
1:A:1584:G:N2	1:A:1610:G:H2'	2.32	0.45
1:A:1643:U:H2'	1:A:1644:C:O4'	2.17	0.45
2:B:345:G:H1	2:B:349:A:P	2.40	0.45
2:B:603:A:H8	2:B:603:A:O5'	2.00	0.45
2:B:697:A:H2'	2:B:698:U:O4'	2.17	0.45
2:B:725:G:H2'	2:B:726:G:O4'	2.17	0.45
2:B:768:C:C2'	2:B:769:G:H5'	2.47	0.45
2:B:1233:G:H21	16:P:128:VAL:HG11	1.80	0.45
2:B:1270:A:P	82:DC:741:GLY:HA3	2.58	0.45
2:B:1307:G:C4	2:B:1308:A:C2	3.05	0.45
2:B:1498:A:H5"	23:W:6:THR:CG2	2.46	0.45
2:B:1528:G:H5"	2:B:1592:G:H22	1.82	0.45
2:B:1644:C:C5	38:LA:68:THR:HG21	2.52	0.45
2:B:2111:G:O3'	28:BA:44:LYS:HD2	2.17	0.45
2:B:2119:A:O5'	2:B:2119:A:C8	2.69	0.45
2:B:2372:A:H4'	2:B:2373:A:H5'	1.99	0.45
2:B:2389:C:H5"	21:U:66:SER:CA	2.47	0.45
2:B:2392:C:H5"	2:B:2393:G:OP2	2.16	0.45
2:B:2512:C:H2'	2:B:2513:U:H6	1.81	0.45
2:B:2715:A:H2	46:TA:86:LYS:H	1.65	0.45
2:B:2767:U:H5'	46:TA:33:ALA:HA	1.98	0.45
2:B:3165:A:H2'	2:B:3166:C:C6	2.52	0.45
2:B:3278:C:O2	2:B:3278:C:H2'	2.17	0.45
3:C:155:A:OP2	12:L:181:LYS:HE2	2.17	0.45
8:H:230:VAL:HG22	8:H:254:ALA:HB1	1.99	0.45
8:H:359:LEU:HA	24:X:8:GLN:NE2	2.31	0.45
9:I:27:LYS:HA	9:I:150:LEU:HD12	1.99	0.45
10:J:41:ILE:HD12	10:J:41:ILE:N	2.32	0.45
10:J:42:LEU:HB3	10:J:47:PHE:O	2.17	0.45
10:J:139:LYS:O	10:J:143:LYS:HG3	2.16	0.45
10:J:142:ASP:HA	10:J:145:LEU:HB2	1.99	0.45
11:K:44:ILE:HD11	11:K:179:LEU:HD21	1.99	0.45
11:K:83:LEU:HD11	11:K:116:PHE:CD1	2.52	0.45
11:K:157:ASN:O	11:K:158:LYS:CB	2.64	0.45
11:K:229:PHE:CD1	11:K:229:PHE:C	2.94	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:48:VAL:HG12	13:M:52:LEU:O	2.16	0.45
14:N:16:PRO:O	14:N:18:PRO:HD3	2.17	0.45
14:N:31:ILE:HG23	14:N:34:TYR:CZ	2.52	0.45
15:O:141:ARG:O	15:O:145:LYS:HB2	2.17	0.45
17:Q:140:SER:HB3	17:Q:143:ALA:HB3	1.99	0.45
19:S:7:LEU:HA	19:S:10:LEU:CB	2.44	0.45
20:T:41:LEU:HD21	20:T:80:PHE:CE1	2.51	0.45
24:X:5:LYS:HD3	24:X:63:GLN:CD	2.42	0.45
25:Y:36:VAL:HG13	25:Y:64:VAL:O	2.16	0.45
25:Y:57:TYR:CD1	25:Y:76:ILE:HG21	2.52	0.45
29:CA:49:LYS:O	29:CA:50:ALA:HB3	2.17	0.45
31:EA:8:GLY:HA2	31:EA:88:ASP:O	2.17	0.45
31:EA:76:ASN:HB2	31:EA:79:HIS:ND1	2.31	0.45
32:FA:4:ARG:C	32:FA:6:THR:H	2.23	0.45
36:JA:9:ILE:HG23	36:JA:63:THR:HG21	1.98	0.45
38:LA:51:LEU:HD11	38:LA:54:ILE:CD1	2.45	0.45
40:NA:57:LEU:HD21	40:NA:73:ALA:HB2	1.98	0.45
50:XA:59:LEU:HD13	50:XA:62:ARG:HH11	1.82	0.45
51:YA:189:ILE:HD12	51:YA:189:ILE:N	2.32	0.45
54:BB:19:LEU:HD21	54:BB:108:ARG:NH2	2.32	0.45
54:BB:178:GLY:O	54:BB:179:LYS:HG3	2.17	0.45
55:CB:55:ASP:HB3	55:CB:58:LEU:CD1	2.47	0.45
61:IB:70:ILE:HG22	61:IB:126:GLY:CA	2.46	0.45
63:KB:56:ASP:CB	77:YB:47:PHE:HB2	2.43	0.45
63:KB:76:LYS:O	63:KB:76:LYS:HD2	2.17	0.45
65:MB:72:LYS:HE2	65:MB:93:VAL:HG22	1.98	0.45
66:NB:7:VAL:HG12	66:NB:95:LYS:HE3	1.99	0.45
69:QB:28:LEU:HD13	69:QB:28:LEU:H	1.82	0.45
69:QB:116:ILE:HD12	69:QB:116:ILE:H	1.82	0.45
71:SB:59:VAL:CG1	77:YB:3:LEU:HD21	2.47	0.45
74:VB:37:LYS:O	74:VB:40:LEU:HB3	2.17	0.45
76:XB:22:ARG:HD2	76:XB:22:ARG:N	2.15	0.45
82:DC:755:VAL:HG22	82:DC:771:TYR:CE1	2.52	0.45
83:EC:6770:U:H6	83:EC:6770:U:H3'	1.81	0.45
1:A:304:U:H4'	61:IB:127:GLN:HG3	1.98	0.44
1:A:345:U:H1'	1:A:346:G:C8	2.52	0.44
1:A:861:U:H3'	1:A:862:A:C8	2.52	0.44
1:A:1380:U:H2'	1:A:1381:U:O4'	2.16	0.44
2:B:82:C:C2'	2:B:83:U:H5'	2.46	0.44
2:B:411:U:H1'	21:U:121:GLN:NE2	2.32	0.44
2:B:418:A:H4'	2:B:630:A:H5'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:645:A:N1	2:B:2372:A:C2	2.85	0.44
2:B:655:C:OP2	36:JA:27:ARG:HD3	2.17	0.44
2:B:669:U:N3	2:B:793:C:N4	2.46	0.44
2:B:677:A:H4'	2:B:678:G:H4'	1.98	0.44
2:B:874:U:C5	2:B:2950:G:P	3.10	0.44
2:B:950:G:C2	2:B:1370:G:C6	3.05	0.44
2:B:1054:A:H5"	2:B:2637:A:N6	2.25	0.44
2:B:1380:G:H5'	8:H:191:LYS:CD	2.47	0.44
2:B:1447:G:H5"	21:U:63:PHE:HB3	1.99	0.44
2:B:1458:U:H2'	2:B:1459:C:H6	1.80	0.44
2:B:1690:C:H5"	23:W:60:LYS:HE2	1.99	0.44
2:B:1853:U:H2'	2:B:1854:C:C6	2.51	0.44
2:B:2166:A:OP1	19:S:76:PRO:HA	2.16	0.44
2:B:2394:G:H2'	2:B:2395:G:O4'	2.17	0.44
2:B:2444:C:H5	2:B:2446:U:N3	2.14	0.44
2:B:2682:C:OP2	15:O:51:ARG:HD2	2.17	0.44
2:B:3139:A:H3'	2:B:3140:G:C8	2.53	0.44
2:B:3244:A:C2	7:G:97:ARG:HD3	2.52	0.44
3:C:144:G:H2'	3:C:145:U:C6	2.52	0.44
3:C:148:G:H2'	3:C:149:A:O4'	2.18	0.44
5:E:26:ARG:HG2	5:E:210:MET:HA	1.99	0.44
6:F:34:TYR:O	6:F:38:HIS:CG	2.71	0.44
7:G:25:ILE:HD13	7:G:25:ILE:N	2.32	0.44
7:G:65:SER:HB3	7:G:68:HIS:CB	2.42	0.44
8:H:71:VAL:HG21	8:H:76:ARG:CZ	2.46	0.44
9:I:90:HIS:CE1	9:I:229:ASP:HB2	2.51	0.44
10:J:52:VAL:HG23	10:J:66:SER:O	2.17	0.44
11:K:40:LYS:O	11:K:44:ILE:HG13	2.17	0.44
11:K:80:GLN:HG3	11:K:119:VAL:HG11	1.99	0.44
12:L:24:ASN:N	12:L:25:PRO:HD2	2.32	0.44
12:L:73:PRO:HD3	12:L:233:TRP:CE3	2.52	0.44
13:M:189:GLU:HG3	13:M:190:ASP:H	1.82	0.44
13:M:189:GLU:O	13:M:190:ASP:HB3	2.16	0.44
14:N:8:CYS:C	14:N:9:TYR:HD2	2.25	0.44
15:O:89:TYR:CE1	15:O:167:TYR:HB3	2.52	0.44
16:P:118:ASP:C	16:P:120:SER:H	2.25	0.44
19:S:111:ALA:HB1	19:S:158:HIS:NE2	2.32	0.44
24:X:13:ARG:HA	24:X:57:GLU:H	1.82	0.44
28:BA:32:GLN:HG3	28:BA:33:ASN:N	2.32	0.44
30:DA:89:LYS:CE	30:DA:91:ASN:HD21	2.30	0.44
32:FA:105:LEU:HD21	32:FA:128:ARG:HH22	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:IA:8:VAL:HG22	35:IA:77:ARG:CB	2.46	0.44
37:KA:89:LEU:CB	37:KA:93:THR:HG21	2.32	0.44
38:LA:62:TYR:HE1	38:LA:70:LYS:HB3	1.82	0.44
39:MA:57:VAL:O	39:MA:61:GLN:HG3	2.17	0.44
47:UA:23:ARG:HA	47:UA:26:VAL:HG21	1.98	0.44
47:UA:84:ARG:CA	47:UA:84:ARG:HH11	2.30	0.44
50:XA:163:ASN:C	50:XA:165:ARG:N	2.74	0.44
53:AB:77:PHE:O	53:AB:78:LYS:C	2.60	0.44
58:FB:9:HIS:HB3	58:FB:20:GLN:NE2	2.13	0.44
61:IB:85:VAL:HG22	61:IB:108:PRO:HA	1.99	0.44
61:IB:115:PHE:HE1	61:IB:139:VAL:HG12	1.82	0.44
67:OB:21:TYR:C	67:OB:23:LYS:H	2.24	0.44
69:QB:80:TYR:O	69:QB:96:ALA:HB2	2.17	0.44
82:DC:730:LEU:HB2	82:DC:799:ASP:HB2	1.98	0.44
1:A:187:G:O2'	1:A:198:A:N6	2.49	0.44
1:A:625:C:H42	1:A:974:A:H61	1.66	0.44
1:A:834:G:H2'	1:A:835:U:C5	2.52	0.44
1:A:909:U:H2'	1:A:910:C:C6	2.52	0.44
1:A:927:C:H2'	1:A:928:U:C6	2.51	0.44
1:A:1034:C:H4'	63:KB:2:GLY:N	2.32	0.44
1:A:1534:G:H4'	1:A:1536:G:O6	2.17	0.44
1:A:1797:A:OP1	76:XB:10:ARG:HG2	2.18	0.44
2:B:306:A:H2	2:B:2224:A:H2	1.64	0.44
2:B:376:G:OP2	30:DA:89:LYS:HE3	2.17	0.44
2:B:575:G:O2'	2:B:576:C:H5'	2.17	0.44
2:B:596:C:H6	2:B:596:C:O5'	2.00	0.44
2:B:902:G:H21	2:B:1534:A:H2	1.64	0.44
2:B:929:A:C5'	8:H:61:SER:HB2	2.45	0.44
2:B:942:U:N3	32:FA:16:SER:HA	2.32	0.44
2:B:1029:G:H2'	2:B:1030:A:O4'	2.17	0.44
2:B:1074:U:H1'	33:GA:46:ALA:CB	2.47	0.44
2:B:1145:G:H2'	2:B:1146:C:H5'	1.98	0.44
2:B:1212:A:H4'	24:X:113:ARG:HH11	1.79	0.44
2:B:1556:C:O2'	2:B:1557:A:H5'	2.16	0.44
2:B:2179:C:O2	6:F:130:SER:O	2.35	0.44
2:B:2393:G:H4'	7:G:252:ILE:CD1	2.42	0.44
2:B:2424:A:C6	6:F:230:VAL:HG11	2.52	0.44
2:B:2624:G:C2'	2:B:2625:C:H5'	2.46	0.44
2:B:2667:A:H8	2:B:2667:A:O5'	2.00	0.44
2:B:2984:C:C2	2:B:2985:C:C5	3.06	0.44
2:B:2987:A:H2'	2:B:2988:C:C6	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3025:C:OP1	13:M:96:HIS:HB2	2.17	0.44
2:B:3109:G:O2'	2:B:3110:C:H5'	2.17	0.44
2:B:3370:A:H2'	2:B:3371:G:O4'	2.17	0.44
2:B:3376:A:N9	35:IA:18:LYS:HA	2.31	0.44
4:D:29:C:N4	9:I:57:ASN:HD21	2.15	0.44
6:F:186:PHE:CA	6:F:196:TRP:HZ3	2.30	0.44
6:F:238:ILE:HD12	6:F:238:ILE:N	2.32	0.44
7:G:87:VAL:HG13	7:G:163:HIS:NE2	2.32	0.44
7:G:136:LYS:C	7:G:144:ILE:HD11	2.42	0.44
7:G:271:GLY:C	7:G:273:HIS:H	2.25	0.44
7:G:303:LYS:NZ	7:G:371:GLN:HB3	2.31	0.44
8:H:193:LYS:HB2	8:H:193:LYS:NZ	2.32	0.44
9:I:108:ARG:HG3	9:I:251:PRO:O	2.17	0.44
10:J:35:VAL:C	10:J:54:TYR:HD1	2.25	0.44
11:K:109:THR:HG22	22:V:6:THR:HG21	1.98	0.44
12:L:154:ALA:HB3	12:L:163:VAL:HG11	1.99	0.44
12:L:242:ALA:O	12:L:246:MET:CB	2.52	0.44
13:M:27:VAL:O	13:M:33:THR:HG22	2.18	0.44
14:N:39:LYS:HG2	14:N:40:LYS:H	1.82	0.44
17:Q:119:TYR:CE1	39:MA:118:ILE:HD11	2.52	0.44
18:R:43:LYS:HG2	18:R:59:ASN:OD1	2.17	0.44
18:R:68:LEU:HD21	18:R:93:LYS:HD2	1.99	0.44
20:T:121:PRO:HB2	24:X:159:SER:HB2	2.00	0.44
22:V:98:LYS:HG3	22:V:118:GLY:C	2.43	0.44
22:V:147:ARG:HG2	22:V:149:ALA:H	1.82	0.44
23:W:21:LYS:O	23:W:22:VAL:C	2.61	0.44
23:W:106:LEU:CD2	23:W:123:LEU:HB3	2.45	0.44
31:EA:22:LYS:HE3	31:EA:129:TRP:CE3	2.51	0.44
31:EA:72:ILE:HD11	31:EA:107:ARG:HA	1.98	0.44
37:KA:13:HIS:HB3	37:KA:93:THR:O	2.17	0.44
38:LA:109:THR:HG22	38:LA:109:THR:O	2.17	0.44
39:MA:21:LEU:HD13	39:MA:54:VAL:HG12	1.99	0.44
40:NA:44:VAL:C	40:NA:46:GLU:H	2.25	0.44
48:VA:7:LYS:HA	48:VA:10:GLU:CG	2.45	0.44
52:ZA:76:LEU:HA	52:ZA:105:GLY:O	2.17	0.44
52:ZA:239:PRO:HB3	52:ZA:243:TYR:HD2	1.83	0.44
54:BB:45:ILE:CG1	54:BB:49:ARG:HH22	2.24	0.44
55:CB:96:SER:HB3	55:CB:176:THR:HG21	1.98	0.44
55:CB:98:MET:HE3	55:CB:105:GLY:HA2	1.98	0.44
57:EB:94:ALA:HB3	57:EB:96:ARG:NH1	2.32	0.44
59:GB:128:LEU:HD23	59:GB:131:GLN:NE2	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:MB:116:LEU:HD23	65:MB:119:PHE:HD2	1.81	0.44
66:NB:30:LYS:HD3	66:NB:33:GLY:HA2	1.98	0.44
66:NB:115:THR:CA	66:NB:118:ILE:HG22	2.29	0.44
67:OB:20:TYR:HD2	67:OB:24:LEU:HG	1.82	0.44
73:UB:66:SER:O	73:UB:67:ALA:HB2	2.17	0.44
75:WB:41:ILE:HG13	75:WB:42:LEU:N	2.22	0.44
77:YB:7:LEU:HD22	77:YB:24:LEU:HD13	1.99	0.44
1:A:74:U:H1'	1:A:76:A:OP2	2.17	0.44
1:A:107:C:H1'	1:A:362:G:O2'	2.18	0.44
1:A:393:C:H2'	1:A:394:C:C5	2.53	0.44
1:A:805:U:H2'	1:A:806:A:C5'	2.45	0.44
1:A:1113:A:OP2	1:A:1751:C:C5'	2.65	0.44
1:A:1341:A:OP1	49:WA:63:GLY:HA2	2.18	0.44
1:A:1550:A:C8	65:MB:39:ALA:HB1	2.52	0.44
2:B:126:U:H2'	2:B:127:G:O4'	2.16	0.44
2:B:224:C:C2	2:B:225:C:C5	3.06	0.44
2:B:287:G:H2'	2:B:288:C:H6	1.83	0.44
2:B:413:U:C1'	21:U:116:HIS:CE1	2.95	0.44
2:B:444:U:H2'	2:B:445:G:C8	2.53	0.44
2:B:677:A:H4'	2:B:678:G:C4'	2.47	0.44
2:B:936:A:H5"	2:B:937:G:OP1	2.17	0.44
2:B:1144:U:H5"	2:B:1145:G:OP1	2.16	0.44
2:B:1187:C:O2'	2:B:1188:U:H5'	2.16	0.44
2:B:1453:A:H2'	2:B:1454:A:O4'	2.17	0.44
2:B:1510:G:H2'	2:B:1512:U:C5	2.52	0.44
2:B:1580:A:N3	2:B:1581:C:N4	2.66	0.44
2:B:1596:C:C5'	2:B:1606:U:C2	2.99	0.44
2:B:1643:A:H5'	2:B:1644:C:OP2	2.17	0.44
2:B:1691:U:H5'	23:W:55:VAL:HG11	1.98	0.44
2:B:1864:A:OP1	23:W:81:ARG:HA	2.18	0.44
2:B:2163:C:P	6:F:234:LYS:HD2	2.58	0.44
2:B:2284:C:H2'	2:B:2285:C:O4'	2.18	0.44
2:B:2609:A:H2'	2:B:2610:G:H8	1.82	0.44
2:B:2933:A:H8	2:B:2933:A:O5'	2.00	0.44
2:B:2988:C:H2'	2:B:2989:U:O4'	2.17	0.44
2:B:2999:U:H4'	2:B:3296:A:C4'	2.47	0.44
2:B:3109:G:H1'	13:M:163:GLN:HE22	1.82	0.44
4:D:54:U:H1'	4:D:56:A:H62	1.81	0.44
4:D:65:G:O3'	14:N:204:GLY:HA2	2.17	0.44
6:F:63:PHE:HB3	6:F:72:ARG:NH2	2.24	0.44
6:F:182:ALA:CA	6:F:185:ALA:HB3	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:102:LEU:HD23	7:G:102:LEU:N	2.32	0.44
9:I:54:ARG:CZ	9:I:149:GLY:HA2	2.48	0.44
11:K:132:PRO:HG2	11:K:133:TYR:CD2	2.52	0.44
11:K:194:HIS:HB3	11:K:197:GLN:HB2	1.99	0.44
14:N:5:PRO:C	14:N:7:ARG:H	2.24	0.44
14:N:135:ILE:HG22	14:N:136:PHE:HD1	1.81	0.44
19:S:6:TYR:CD2	40:NA:40:VAL:HG22	2.52	0.44
21:U:128:ARG:HG3	21:U:130:TYR:CZ	2.53	0.44
27:AA:102:ILE:HG13	27:AA:110:LYS:HB3	1.99	0.44
34:HA:27:TYR:CD2	34:HA:28:LYS:N	2.85	0.44
34:HA:27:TYR:CD1	34:HA:52:ARG:NH2	2.85	0.44
45:SA:4:LYS:HG2	45:SA:5:TRP:CZ3	2.52	0.44
49:WA:114:ASP:HB3	49:WA:155:ARG:HA	2.00	0.44
54:BB:105:VAL:CG1	54:BB:243:GLY:HA2	2.36	0.44
54:BB:216:ASN:O	54:BB:218:PHE:HD2	1.99	0.44
59:GB:93:LEU:O	59:GB:96:VAL:HG22	2.17	0.44
60:HB:53:GLY:O	60:HB:54:TYR:HB2	2.17	0.44
61:IB:43:LYS:C	61:IB:43:LYS:HD3	2.42	0.44
63:KB:145:THR:O	63:KB:149:LEU:HG	2.17	0.44
64:LB:130:GLY:HA3	76:XB:27:SER:CB	2.48	0.44
66:NB:90:VAL:HG12	66:NB:105:LEU:HD21	1.99	0.44
71:SB:11:LEU:O	71:SB:12:TYR:HB3	2.17	0.44
76:XB:7:SER:HA	76:XB:13:LYS:HE2	1.98	0.44
77:YB:46:VAL:HG13	77:YB:54:VAL:HG11	1.98	0.44
82:DC:706:ILE:O	82:DC:710:ARG:HB2	2.17	0.44
83:EC:6792:A:H3'	83:EC:6793:A:H5'	1.97	0.44
1:A:416:A:H3'	1:A:417:A:C8	2.52	0.44
1:A:822:U:H2'	1:A:823:G:H21	1.82	0.44
1:A:875:G:H1'	1:A:937:C:C4'	2.47	0.44
1:A:939:A:H5'	63:KB:6:SER:HB3	2.00	0.44
1:A:974:A:O3'	63:KB:112:LYS:HE2	2.17	0.44
1:A:1125:A:O3'	45:SA:15:ARG:HD3	2.17	0.44
1:A:1765:A:H5'	1:A:1767:G:C8	2.52	0.44
2:B:106:A:C2'	2:B:107:A:H5'	2.47	0.44
2:B:428:A:H2'	2:B:429:U:O4'	2.18	0.44
2:B:619:A:H5'	21:U:167:ARG:NH1	2.32	0.44
2:B:785:G:N3	2:B:785:G:H5"	2.32	0.44
2:B:916:G:HO2'	2:B:917:A:H5"	1.79	0.44
2:B:1472:U:H2'	2:B:1473:G:C8	2.52	0.44
2:B:1567:U:C3'	2:B:1568:U:H5"	2.48	0.44
2:B:1677:G:O2'	2:B:1678:G:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1949:G:H5"	23:W:104:ARG:NH2	2.32	0.44
2:B:2760:C:O2'	2:B:2761:G:H8	1.99	0.44
2:B:2847:A:C2	2:B:2898:G:H2'	2.52	0.44
2:B:2885:C:H2'	2:B:2886:U:C5	2.52	0.44
2:B:2890:A:H61	2:B:2913:C:N4	2.13	0.44
2:B:3069:G:H4'	23:W:59:SER:HB2	2.00	0.44
2:B:3183:A:H2'	2:B:3184:A:C8	2.51	0.44
2:B:3321:C:H2'	2:B:3322:A:H8	1.82	0.44
4:D:116:C:O2'	9:I:74:VAL:N	2.50	0.44
6:F:61:VAL:CG2	6:F:76:PHE:H	2.30	0.44
7:G:214:MET:HE2	7:G:350:ALA:HB2	1.99	0.44
8:H:246:ARG:CD	8:H:247:PHE:N	2.80	0.44
8:H:340:GLY:O	8:H:341:SER:OG	2.29	0.44
9:I:40:HIS:HB3	9:I:43:LYS:NZ	2.32	0.44
9:I:211:LEU:CD1	9:I:223:PHE:CZ	3.00	0.44
9:I:260:PHE:CD1	9:I:264:GLN:HG3	2.52	0.44
15:O:18:VAL:CB	15:O:128:TYR:HB3	2.46	0.44
17:Q:49:ARG:HB3	17:Q:49:ARG:HH21	1.82	0.44
19:S:43:THR:HG23	19:S:131:GLU:OE2	2.17	0.44
20:T:27:LEU:HD23	20:T:27:LEU:C	2.42	0.44
22:V:92:ARG:HB2	32:FA:76:ASP:CG	2.41	0.44
24:X:95:ARG:NH1	24:X:143:PHE:HB3	2.32	0.44
26:Z:17:VAL:CG2	26:Z:76:LEU:HD21	2.47	0.44
30:DA:115:ARG:HH11	30:DA:115:ARG:CB	2.16	0.44
32:FA:75:LEU:HG	32:FA:114:GLY:CA	2.44	0.44
35:IA:18:LYS:O	35:IA:19:ARG:HB2	2.18	0.44
36:JA:105:ARG:HA	36:JA:108:ILE:HD12	1.99	0.44
37:KA:51:TYR:HE2	37:KA:53:TYR:HB3	1.83	0.44
39:MA:49:LYS:O	39:MA:52:ALA:HB3	2.17	0.44
46:TA:61:LYS:NZ	46:TA:61:LYS:HB3	2.32	0.44
50:XA:179:ARG:O	50:XA:183:ARG:HB2	2.18	0.44
52:ZA:37:PRO:HG3	52:ZA:46:LYS:HD3	1.98	0.44
53:AB:161:GLY:C	53:AB:163:PRO:HD2	2.42	0.44
54:BB:158:ASP:HB3	54:BB:173:ILE:O	2.17	0.44
54:BB:214:LEU:HD22	54:BB:246:LEU:CB	2.47	0.44
55:CB:63:GLN:CG	55:CB:88:PRO:HA	2.47	0.44
55:CB:71:ALA:HB3	55:CB:111:VAL:HG13	1.99	0.44
55:CB:80:LYS:HB2	55:CB:83:ARG:CB	2.43	0.44
57:EB:119:THR:HA	57:EB:122:HIS:CD2	2.51	0.44
58:FB:12:SER:H	58:FB:16:ALA:HB3	1.83	0.44
61:IB:75:VAL:HB	61:IB:121:ASP:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:LB:47:LYS:HG3	64:LB:62:LEU:CB	2.47	0.44
68:PB:24:GLY:O	68:PB:26:ILE:HG12	2.18	0.44
70:RB:22:ILE:HG13	70:RB:118:VAL:HA	1.99	0.44
70:RB:58:LEU:HB2	70:RB:88:LYS:O	2.17	0.44
70:RB:71:PRO:HB3	79:AC:41:GLN:HB3	1.98	0.44
73:UB:19:ARG:O	73:UB:23:ARG:HG2	2.16	0.44
75:WB:62:VAL:HA	75:WB:80:LEU:HD12	1.98	0.44
77:YB:22:LYS:HD3	77:YB:22:LYS:O	2.18	0.44
82:DC:109:VAL:CG1	82:DC:110:ASP:N	2.80	0.44
82:DC:137:VAL:HG13	82:DC:138:GLN:N	2.32	0.44
82:DC:279:ASP:HB3	82:DC:280:PRO:CD	2.47	0.44
82:DC:300:LEU:HD11	82:DC:305:ILE:HG22	2.00	0.44
1:A:293:U:O2'	54:BB:133:LYS:HE2	2.18	0.44
1:A:520:A:H2'	1:A:521:A:H8	1.81	0.44
1:A:1639:C:O5'	1:A:1639:C:H6	1.99	0.44
2:B:126:U:C1'	19:S:57:GLN:NE2	2.80	0.44
2:B:659:G:H4'	8:H:92:ASN:OD1	2.18	0.44
2:B:881:C:O2	2:B:1850:A:H2'	2.18	0.44
2:B:946:U:OP1	36:JA:53:PRO:HG2	2.18	0.44
2:B:1129:A:O2'	2:B:1130:A:H5'	2.18	0.44
2:B:1713:G:H1'	2:B:1731:A:N6	2.32	0.44
2:B:1787:A:H3'	2:B:1788:C:H5"	2.00	0.44
2:B:2093:A:OP2	2:B:2093:A:H3'	2.18	0.44
2:B:2137:U:H2'	2:B:2141:U:C5	2.53	0.44
2:B:2510:U:O2'	2:B:2511:A:H8	1.99	0.44
2:B:2597:U:H2'	2:B:2598:G:H8	1.82	0.44
2:B:3072:C:H4'	2:B:3336:A:H4'	1.99	0.44
3:C:73:U:OP2	30:DA:75:ARG:HB2	2.17	0.44
3:C:128:U:O2'	3:C:129:C:H6	2.00	0.44
4:D:11:A:N3	4:D:14:U:H1'	2.33	0.44
6:F:15:ILE:HG13	6:F:16:PHE:CE2	2.52	0.44
6:F:120:PRO:HG3	6:F:162:ALA:CB	2.39	0.44
6:F:209:HIS:HD2	6:F:211:HIS:HB2	1.82	0.44
7:G:271:GLY:N	7:G:273:HIS:NE2	2.66	0.44
9:I:52:VAL:HG21	9:I:63:GLN:CG	2.45	0.44
9:I:232:ASP:CG	9:I:233:ALA:H	2.24	0.44
10:J:131:LYS:HD3	10:J:132:ALA:N	2.32	0.44
11:K:88:ARG:HA	11:K:133:TYR:O	2.17	0.44
11:K:236:ILE:HA	11:K:239:LEU:HB3	1.99	0.44
12:L:151:VAL:CG2	12:L:175:VAL:HG12	2.46	0.44
13:M:170:LYS:HD3	13:M:175:PHE:CE1	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:156:ARG:NH1	14:N:165:ILE:HD12	2.33	0.44
19:S:199:LEU:HD13	19:S:203:ARG:NH1	2.32	0.44
20:T:51:LYS:NZ	20:T:55:HIS:CE1	2.86	0.44
23:W:11:ALA:O	23:W:15:VAL:HG23	2.16	0.44
24:X:6:GLU:O	24:X:64:ILE:HB	2.17	0.44
24:X:80:ARG:HB2	24:X:124:LEU:HD21	2.00	0.44
27:AA:24:ASN:O	27:AA:99:ALA:HA	2.18	0.44
28:BA:5:ILE:HG13	28:BA:10:GLY:O	2.17	0.44
30:DA:30:LEU:HD22	30:DA:31:LEU:HG	1.99	0.44
33:GA:55:ALA:O	33:GA:59:LYS:HD2	2.18	0.44
34:HA:44:ILE:CB	34:HA:53:LYS:HD3	2.48	0.44
35:IA:111:GLU:O	35:IA:112:ASP:CB	2.66	0.44
36:JA:107:VAL:O	36:JA:110:ALA:HB3	2.17	0.44
37:KA:42:GLN:O	37:KA:45:LEU:HB2	2.17	0.44
40:NA:26:ILE:H	40:NA:26:ILE:CD1	2.16	0.44
49:WA:87:LYS:HE3	49:WA:108:SER:CA	2.47	0.44
49:WA:143:THR:HG22	49:WA:145:LEU:CD1	2.47	0.44
51:YA:193:ILE:O	51:YA:197:ILE:HG12	2.17	0.44
52:ZA:154:LEU:HD12	52:ZA:154:LEU:N	2.32	0.44
57:EB:128:ASP:O	57:EB:131:PHE:HB2	2.18	0.44
58:FB:74:LYS:HB2	58:FB:109:PHE:CE2	2.52	0.44
59:GB:96:VAL:CG2	59:GB:97:LEU:H	2.29	0.44
72:TB:80:ASN:HB3	72:TB:82:LYS:HZ2	1.80	0.44
75:WB:61:SER:OG	75:WB:64:VAL:HG23	2.16	0.44
76:XB:85:ARG:O	76:XB:86:VAL:HG12	2.16	0.44
82:DC:7:ASP:O	82:DC:11:SER:HB2	2.17	0.44
1:A:607:G:H21	1:A:614:C:C5'	2.31	0.44
1:A:904:G:H2'	1:A:905:A:C8	2.53	0.44
1:A:957:G:H21	77:YB:51:GLN:HG2	1.83	0.44
1:A:1123:C:H2'	1:A:1124:A:C8	2.52	0.44
1:A:1375:A:H2'	1:A:1376:C:C6	2.53	0.44
2:B:30:G:H2'	2:B:31:C:O4'	2.17	0.44
2:B:210:U:O2	2:B:230:U:H4'	2.17	0.44
2:B:296:A:H3'	2:B:297:G:N2	2.21	0.44
2:B:530:G:H2'	2:B:531:G:C8	2.52	0.44
2:B:560:G:O5'	18:R:80:THR:HG21	2.18	0.44
2:B:572:A:H2'	2:B:573:C:H6	1.81	0.44
2:B:856:G:H22	47:UA:4:ARG:CZ	2.31	0.44
2:B:874:U:H5	2:B:2950:G:P	2.41	0.44
2:B:915:A:H2'	2:B:916:G:H4'	2.00	0.44
2:B:1052:U:H2'	2:B:1053:A:C5'	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1366:A:C2	2:B:1367:G:C4	3.05	0.44
2:B:1473:G:O3'	23:W:23:TRP:NE1	2.38	0.44
2:B:1541:G:H1'	2:B:1557:A:C2	2.53	0.44
2:B:2157:G:C5	6:F:150:LEU:HD13	2.53	0.44
2:B:2444:C:H5	2:B:2446:U:C4	2.35	0.44
2:B:2521:U:O2	2:B:2523:A:H4'	2.18	0.44
2:B:2745:G:H2'	2:B:2747:A:OP2	2.18	0.44
2:B:3101:G:H2'	2:B:3102:G:H8	1.82	0.44
6:F:5:ILE:HG21	6:F:210:PRO:CD	2.43	0.44
6:F:121:GLY:C	6:F:123:ARG:N	2.75	0.44
7:G:91:GLY:HA2	7:G:158:VAL:HG13	2.00	0.44
8:H:196:ASN:C	8:H:198:ARG:N	2.75	0.44
8:H:269:SER:OG	8:H:274:TYR:HB3	2.18	0.44
9:I:21:ARG:HH11	9:I:21:ARG:HG2	1.83	0.44
9:I:69:ILE:CG2	25:Y:31:LEU:HB3	2.46	0.44
10:J:130:ILE:C	10:J:130:ILE:HD12	2.42	0.44
11:K:41:ARG:HA	11:K:44:ILE:CD1	2.42	0.44
11:K:235:PHE:CE2	24:X:34:GLU:HB3	2.43	0.44
12:L:170:CYS:HB2	12:L:177:TYR:HE2	1.83	0.44
14:N:9:TYR:CB	14:N:97:LEU:HD22	2.47	0.44
16:P:105:GLN:HG3	16:P:143:VAL:CG2	2.46	0.44
16:P:130:LYS:HE3	16:P:145:PHE:CG	2.53	0.44
20:T:87:MET:O	20:T:88:VAL:HG23	2.18	0.44
22:V:56:LYS:HA	22:V:59:ARG:CZ	2.48	0.44
23:W:81:ARG:CD	23:W:88:ARG:HD2	2.41	0.44
24:X:77:VAL:HG21	24:X:106:LEU:HD21	2.00	0.44
27:AA:88:ARG:HA	27:AA:88:ARG:NE	2.32	0.44
27:AA:93:LEU:CB	28:BA:20:LEU:HB3	2.48	0.44
32:FA:35:ALA:O	32:FA:36:GLY:C	2.60	0.44
34:HA:99:ASP:C	34:HA:101:LEU:N	2.75	0.44
36:JA:106:VAL:HG13	36:JA:107:VAL:H	1.81	0.44
38:LA:20:ILE:HG22	38:LA:22:VAL:HG13	1.98	0.44
40:NA:26:ILE:HD12	40:NA:26:ILE:N	2.20	0.44
49:WA:51:ASP:O	49:WA:54:PHE:HB2	2.17	0.44
51:YA:31:ASP:HB3	51:YA:45:LYS:CD	2.48	0.44
51:YA:69:CYS:HB2	64:LB:114:ARG:NH1	2.33	0.44
51:YA:71:ALA:HB3	64:LB:114:ARG:NH1	2.06	0.44
51:YA:156:ALA:HB3	51:YA:161:ILE:CG1	2.47	0.44
51:YA:225:VAL:HA	51:YA:228:LEU:HB2	1.99	0.44
53:AB:102:ALA:CB	53:AB:171:ALA:HB1	2.38	0.44
53:AB:170:THR:CG2	53:AB:172:THR:HG23	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:23:VAL:HG13	55:CB:23:VAL:O	2.18	0.44
59:GB:150:LEU:C	59:GB:152:SER:N	2.75	0.44
61:IB:57:LYS:CB	61:IB:131:ILE:HG23	2.48	0.44
69:QB:4:VAL:HG22	69:QB:5:SER:H	1.83	0.44
71:SB:5:LYS:HD3	71:SB:5:LYS:H	1.83	0.44
73:UB:53:VAL:HG23	73:UB:100:ASP:O	2.18	0.44
74:VB:37:LYS:HA	74:VB:40:LEU:HB2	2.00	0.44
75:WB:57:TYR:CE2	83:EC:6863:C:H2'	2.53	0.44
76:XB:30:ILE:HG13	76:XB:31:PRO:HD2	1.99	0.44
82:DC:137:VAL:HG21	82:DC:791:GLN:HE21	1.83	0.44
82:DC:189:VAL:HG11	82:DC:201:GLN:CA	2.48	0.44
1:A:186:C:H2'	1:A:187:G:O4'	2.17	0.44
1:A:591:A:H4'	59:GB:19:TYR:CE1	2.53	0.44
1:A:1030:A:OP1	76:XB:3:LYS:HE3	2.18	0.44
1:A:1126:G:C5'	45:SA:11:ARG:HD2	2.48	0.44
1:A:1544:U:H3	1:A:1567:U:H3	1.66	0.44
1:A:1740:A:H2'	1:A:1741:U:C6	2.53	0.44
2:B:351:A:H62	43:QA:35:ILE:HA	1.82	0.44
2:B:424:G:C6	2:B:635:G:N2	2.85	0.44
2:B:503:C:H1'	10:J:23:LYS:HD2	1.99	0.44
2:B:607:A:C2	10:J:26:ARG:CD	3.00	0.44
2:B:865:U:H2'	2:B:866:A:C5'	2.42	0.44
2:B:1255:C:H4'	16:P:131:GLU:OE2	2.17	0.44
2:B:1524:A:C6	2:B:1607:U:C6	3.05	0.44
2:B:1647:A:H2'	2:B:1648:A:H5'	2.00	0.44
2:B:1671:C:H2'	2:B:1672:U:C6	2.52	0.44
2:B:1772:U:H5"	2:B:1773:C:H5	1.81	0.44
2:B:1830:G:H1'	29:CA:93:TYR:HE2	1.83	0.44
2:B:1898:G:H1'	27:AA:18:PRO:CD	2.48	0.44
2:B:2419:A:H1'	2:B:2804:A:C8	2.53	0.44
2:B:2635:A:N6	2:B:2641:U:H2'	2.32	0.44
2:B:2709:C:OP1	46:TA:100:LYS:HD3	2.18	0.44
2:B:2788:C:O2	2:B:2788:C:H2'	2.17	0.44
2:B:2830:G:H1'	2:B:2861:U:C2	2.53	0.44
2:B:2852:C:C2'	14:N:67:ALA:HB2	2.42	0.44
2:B:2961:G:H2'	2:B:2962:U:C6	2.53	0.44
2:B:2999:U:H4'	2:B:3296:A:H4'	1.99	0.44
2:B:3013:U:H2'	2:B:3014:U:C6	2.53	0.44
2:B:3028:G:O2'	2:B:3029:A:H5'	2.18	0.44
2:B:3060:C:O2'	2:B:3061:G:H5'	2.18	0.44
2:B:3296:A:O2'	2:B:3297:U:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3335:A:H2'	2:B:3336:A:O4'	2.18	0.44
2:B:3376:A:C8	35:IA:18:LYS:HB3	2.50	0.44
4:D:29:C:OP2	15:O:137:ARG:HG3	2.17	0.44
6:F:4:VAL:HG23	6:F:9:ARG:HD3	2.00	0.44
6:F:23:ARG:HD3	6:F:53:GLY:HA3	1.99	0.44
6:F:102:LEU:HD22	6:F:106:SER:HB2	1.99	0.44
7:G:60:LEU:HG	7:G:62:ARG:H	1.83	0.44
7:G:93:VAL:CG1	7:G:102:LEU:HD22	2.47	0.44
7:G:334:ARG:HG3	7:G:335:ILE:N	2.33	0.44
8:H:32:PRO:HB3	8:H:244:LEU:HD11	2.00	0.44
8:H:140:HIS:HB3	8:H:142:VAL:HG22	2.00	0.44
10:J:60:ASP:HB3	10:J:103:VAL:HG11	1.99	0.44
12:L:165:PHE:O	12:L:169:LEU:HB2	2.18	0.44
14:N:57:LEU:HD23	14:N:58:GLU:CA	2.47	0.44
15:O:41:SER:HB2	15:O:71:VAL:HG22	1.99	0.44
16:P:76:SER:CB	16:P:116:MET:HB3	2.48	0.44
18:R:21:VAL:CG2	18:R:33:ALA:HB3	2.48	0.44
19:S:68:ARG:NH2	19:S:128:LYS:HD2	2.31	0.44
19:S:146:ALA:HB2	39:MA:99:GLN:O	2.18	0.44
19:S:148:TYR:CD1	19:S:150:TRP:CZ3	3.06	0.44
20:T:47:PHE:HZ	20:T:144:SER:OG	2.01	0.44
21:U:48:LEU:HD23	21:U:48:LEU:C	2.42	0.44
22:V:68:ALA:O	22:V:72:LYS:HG3	2.18	0.44
23:W:51:VAL:C	23:W:53:LYS:H	2.24	0.44
24:X:75:PHE:CD2	24:X:102:ALA:CB	2.96	0.44
25:Y:7:TYR:C	25:Y:7:TYR:CD2	2.96	0.44
25:Y:135:PRO:C	25:Y:136:ARG:HG2	2.42	0.44
29:CA:76:VAL:HG22	29:CA:83:VAL:HG23	1.99	0.44
36:JA:18:LYS:HA	36:JA:30:GLU:O	2.16	0.44
37:KA:58:GLU:HG3	37:KA:62:SER:CA	2.44	0.44
40:NA:51:SER:H	40:NA:54:GLU:CG	2.31	0.44
46:TA:21:THR:O	46:TA:23:HIS:N	2.50	0.44
47:UA:38:ASP:HB2	47:UA:45:LYS:HB3	2.00	0.44
49:WA:19:TRP:HB2	49:WA:38:ARG:HD2	1.98	0.44
50:XA:72:ASP:O	50:XA:118:PRO:HA	2.18	0.44
50:XA:133:ILE:N	50:XA:133:ILE:CD1	2.80	0.44
50:XA:142:PRO:HB3	71:SB:34:ILE:CD1	2.48	0.44
51:YA:81:PHE:H	51:YA:81:PHE:HD1	1.66	0.44
51:YA:139:ALA:HB3	51:YA:168:ILE:HD13	2.00	0.44
53:AB:202:LEU:HD22	53:AB:202:LEU:N	2.33	0.44
59:GB:84:GLY:HA3	59:GB:150:LEU:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:32:HIS:CE1	60:HB:35:ILE:HD12	2.52	0.44
70:RB:33:GLN:O	70:RB:36:ASN:HB3	2.18	0.44
72:TB:106:THR:CG2	72:TB:121:VAL:HB	2.47	0.44
77:YB:49:HIS:O	77:YB:71:ALA:HB2	2.18	0.44
82:DC:99:LEU:HD23	82:DC:100:ILE:N	2.33	0.44
82:DC:174:LEU:HG	82:DC:178:PHE:CE2	2.53	0.44
82:DC:210:ALA:HB2	82:DC:337:MET:SD	2.58	0.44
82:DC:647:ILE:HD11	82:DC:685:ARG:HB2	1.99	0.44
82:DC:735:CYS:HA	82:DC:791:GLN:O	2.18	0.44
1:A:155:U:H4'	56:DB:59:GLN:N	2.30	0.44
1:A:380:U:H3'	1:A:381:C:C6	2.53	0.44
1:A:934:C:N4	76:XB:95:ARG:HD2	2.33	0.44
1:A:962:C:OP2	63:KB:70:LYS:HD2	2.18	0.44
1:A:965:U:H4'	63:KB:128:TYR:CG	2.52	0.44
1:A:1082:C:H4'	71:SB:58:TYR:CE2	2.49	0.44
1:A:1435:G:C4'	1:A:1436:A:H5'	2.47	0.44
1:A:1506:G:H4'	1:A:1550:A:O2'	2.17	0.44
2:B:435:C:H2'	2:B:621:A:N6	2.33	0.44
2:B:628:A:H5"	2:B:1399:A:C2	2.52	0.44
2:B:672:A:H2'	2:B:673:U:C6	2.53	0.44
2:B:822:G:H4'	6:F:194:ASN:HB2	1.99	0.44
2:B:886:C:OP1	2:B:1851:G:H5"	2.18	0.44
2:B:1223:A:O2'	2:B:1224:C:H5'	2.18	0.44
2:B:1311:G:O5'	2:B:1311:G:C8	2.69	0.44
2:B:1448:U:H4'	21:U:66:SER:HB3	2.00	0.44
2:B:1453:A:C3'	2:B:1454:A:H8	2.31	0.44
2:B:1482:A:H5"	2:B:1858:A:N1	2.33	0.44
2:B:1523:U:C5'	29:CA:113:LEU:HB3	2.32	0.44
2:B:1606:U:C2	38:LA:8:ARG:HD3	2.53	0.44
2:B:1695:U:H5'	38:LA:24:LYS:HB3	2.00	0.44
2:B:1747:G:N3	42:PA:2:ALA:HB1	2.33	0.44
2:B:1779:C:H5'	23:W:97:ARG:NH2	2.33	0.44
2:B:2086:A:H5"	2:B:2087:C:H5'	1.98	0.44
2:B:2261:G:H1'	2:B:2262:A:N7	2.33	0.44
2:B:2309:A:H1'	2:B:2962:U:H5'	2.00	0.44
2:B:2356:A:O3'	21:U:138:LYS:HG2	2.17	0.44
2:B:2512:C:H2'	2:B:2513:U:O4'	2.18	0.44
2:B:2897:A:H5"	44:RA:125:LYS:HB2	2.00	0.44
2:B:2948:C:O2'	7:G:242:THR:HA	2.16	0.44
2:B:3351:U:C3'	2:B:3352:U:C5'	2.95	0.44
3:C:30:C:H2'	3:C:31:G:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:85:G:H4'	3:C:86:U:OP1	2.18	0.44
6:F:3:ARG:HG2	6:F:4:VAL:H	1.82	0.44
6:F:41:ILE:HG12	6:F:42:ARG:N	2.33	0.44
6:F:128:ARG:HA	6:F:169:ILE:HG13	1.99	0.44
6:F:158:ILE:CG2	6:F:159:SER:N	2.77	0.44
7:G:58:ARG:CG	7:G:59:ASP:N	2.80	0.44
7:G:315:GLY:C	7:G:316:GLU:HG3	2.42	0.44
8:H:126:ILE:HG13	8:H:238:LEU:CD2	2.48	0.44
8:H:185:LYS:O	8:H:199:TRP:CE3	2.71	0.44
8:H:271:LYS:HB2	8:H:274:TYR:CB	2.48	0.44
8:H:345:GLU:H	11:K:60:ARG:HH12	1.63	0.44
10:J:97:ASN:O	10:J:98:VAL:HB	2.17	0.44
10:J:121:LEU:HB3	10:J:123:PRO:HB3	1.98	0.44
12:L:139:VAL:HG22	12:L:199:ALA:CB	2.48	0.44
12:L:150:LEU:CD1	12:L:152:LEU:HG	2.47	0.44
14:N:17:TYR:CE2	14:N:23:ASN:ND2	2.86	0.44
15:O:57:PHE:HB2	15:O:59:ILE:HG12	1.99	0.44
15:O:101:ASN:OD1	15:O:130:VAL:HA	2.18	0.44
17:Q:64:LYS:O	17:Q:67:ARG:HG2	2.17	0.44
20:T:79:ILE:HG21	20:T:138:LEU:HD21	2.00	0.44
20:T:108:ILE:CG2	20:T:117:ARG:NH1	2.81	0.44
21:U:38:GLY:HA2	21:U:113:TYR:HE1	1.82	0.44
22:V:80:THR:HG22	22:V:100:THR:HB	1.99	0.44
22:V:127:LEU:C	22:V:127:LEU:HD13	2.41	0.44
22:V:157:PRO:HD3	32:FA:47:LYS:CB	2.48	0.44
23:W:32:ILE:HD12	23:W:32:ILE:N	2.33	0.44
24:X:29:ILE:HG21	24:X:37:ALA:O	2.17	0.44
31:EA:14:VAL:CG2	38:LA:90:ILE:HG12	2.48	0.44
32:FA:77:LYS:HD3	32:FA:80:THR:OG1	2.18	0.44
34:HA:40:LYS:HA	34:HA:65:THR:HG23	1.99	0.44
34:HA:41:LEU:HB3	34:HA:92:ILE:CB	2.47	0.44
36:JA:67:SER:CB	36:JA:68:PRO:CD	2.96	0.44
36:JA:103:LYS:HB2	36:JA:103:LYS:HZ3	1.80	0.44
37:KA:47:LYS:HB2	37:KA:71:VAL:HG21	1.99	0.44
40:NA:68:ARG:O	40:NA:72:VAL:HG23	2.18	0.44
41:OA:63:ARG:O	41:OA:64:MET:HB2	2.17	0.44
44:RA:85:LEU:N	44:RA:85:LEU:HD22	2.33	0.44
46:TA:70:LEU:HD11	46:TA:85:LEU:HD22	1.98	0.44
48:VA:133:THR:O	48:VA:137:GLN:HG3	2.18	0.44
48:VA:183:PHE:CD1	48:VA:184:GLY:N	2.86	0.44
49:WA:289:ALA:HB2	49:WA:305:TYR:CE2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:76:ILE:HD12	50:XA:98:ILE:HD12	2.00	0.44
51:YA:193:ILE:HG21	51:YA:212:VAL:HG13	1.99	0.44
51:YA:205:PHE:HB3	51:YA:207:LEU:HD11	1.99	0.44
52:ZA:238:SER:C	52:ZA:240:LEU:H	2.24	0.44
53:AB:43:PRO:O	53:AB:44:THR:HB	2.18	0.44
53:AB:84:ILE:HD12	53:AB:86:LEU:HG	1.99	0.44
53:AB:223:LYS:HD2	53:AB:223:LYS:N	2.33	0.44
55:CB:156:ARG:HB2	55:CB:157:ARG:HH21	1.82	0.44
60:HB:31:LYS:HA	60:HB:37:THR:O	2.18	0.44
64:LB:28:VAL:HG21	64:LB:63:ALA:CB	2.47	0.44
66:NB:45:ARG:HG3	66:NB:49:TYR:CZ	2.53	0.44
66:NB:92:TYR:HD1	66:NB:96:TYR:HD2	1.64	0.44
67:OB:28:PHE:CE1	67:OB:51:ALA:HB3	2.53	0.44
68:PB:126:ARG:HA	68:PB:129:TRP:CE3	2.53	0.44
68:PB:132:ARG:HB3	68:PB:136:GLN:NE2	2.33	0.44
72:TB:27:ILE:CD1	72:TB:61:ILE:HD12	2.47	0.44
76:XB:17:HIS:ND1	76:XB:17:HIS:C	2.75	0.44
82:DC:579:SER:C	82:DC:581:ASN:N	2.75	0.44
82:DC:823:ARG:HA	82:DC:826:HIS:HD2	1.82	0.44
1:A:108:A:C6	1:A:109:G:C6	3.05	0.44
1:A:626:U:O2’	63:KB:113:PHE:HZ	2.01	0.44
1:A:807:A:H62	57:EB:104:ARG:HH11	1.66	0.44
1:A:879:G:H2’	1:A:880:C:H6	1.83	0.44
1:A:1053:G:H2’	1:A:1053:G:N3	2.33	0.44
1:A:1170:G:N2	1:A:1571:C:H4’	2.32	0.44
1:A:1371:A:H1’	1:A:1373:C:OP2	2.18	0.44
1:A:1431:C:H5”	1:A:1432:U:C3’	2.44	0.44
1:A:1561:U:O2’	1:A:1562:G:H5’	2.17	0.44
2:B:69:C:N4	2:B:314:U:H4’	2.33	0.44
2:B:361:A:H5”	41:OA:36:SER:CB	2.48	0.44
2:B:747:A:H2’	2:B:748:U:O4’	2.18	0.44
2:B:1156:C:C1’	4:D:86:U:H5	2.30	0.44
2:B:1312:C:H2’	2:B:1313:G:O4’	2.18	0.44
2:B:1547:G:H21	2:B:1548:C:H1’	1.83	0.44
2:B:1765:U:H6	23:W:46:LYS:HZ2	1.65	0.44
2:B:1956:A:H2’	2:B:1957:G:O4’	2.18	0.44
2:B:2329:C:O2’	2:B:2330:C:H5’	2.18	0.44
2:B:2525:G:C5	6:F:34:TYR:HB2	2.53	0.44
2:B:2712:U:HO2’	2:B:2743:A:H4’	1.82	0.44
2:B:2896:A:H4’	44:RA:95:VAL:HG13	2.00	0.44
2:B:3100:U:O2’	2:B:3101:G:H8	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3182:G:H2'	2:B:3183:A:O4'	2.17	0.44
2:B:3296:A:C2'	2:B:3297:U:H5'	2.48	0.44
2:B:3335:A:H8	2:B:3335:A:H5'	1.82	0.44
3:C:72:A:O2'	3:C:89:A:H1'	2.18	0.44
3:C:111:A:H5"	41:OA:29:VAL:HG22	1.99	0.44
4:D:79:A:H62	4:D:101:G:H1'	1.83	0.44
8:H:219:LEU:O	8:H:222:VAL:HG12	2.17	0.44
9:I:41:LYS:HD2	9:I:41:LYS:N	2.33	0.44
10:J:98:VAL:HA	10:J:101:PHE:CE2	2.53	0.44
10:J:158:TYR:OH	18:R:114:ASP:CB	2.64	0.44
11:K:80:GLN:HG2	11:K:119:VAL:HG11	2.00	0.44
11:K:90:LYS:HG3	11:K:91:GLY:N	2.33	0.44
12:L:75:ILE:HA	12:L:78:PHE:CD1	2.52	0.44
12:L:155:ASN:CG	12:L:156:ASP:N	2.76	0.44
17:Q:16:LYS:HD2	17:Q:16:LYS:N	2.32	0.44
17:Q:170:LEU:HG	32:FA:147:LEU:HD13	1.98	0.44
18:R:32:LEU:O	18:R:53:VAL:HG11	2.17	0.44
19:S:10:LEU:C	19:S:12:ARG:H	2.26	0.44
19:S:68:ARG:CG	19:S:128:LYS:HB2	2.47	0.44
20:T:62:THR:HG23	20:T:64:PHE:CE2	2.53	0.44
21:U:27:LYS:HD3	21:U:63:PHE:CD1	2.52	0.44
21:U:71:ALA:HA	21:U:74:LYS:HB2	2.00	0.44
22:V:46:LYS:O	22:V:49:LEU:HB3	2.17	0.44
23:W:6:THR:HA	23:W:9:ARG:NH1	2.30	0.44
23:W:24:LEU:CG	23:W:50:ILE:HG12	2.47	0.44
23:W:117:LYS:H	23:W:117:LYS:HG2	1.64	0.44
27:AA:36:ILE:CG2	27:AA:58:VAL:HB	2.47	0.44
31:EA:130:PHE:C	31:EA:130:PHE:CD1	2.96	0.44
35:IA:96:VAL:CG2	35:IA:98:VAL:HG12	2.39	0.44
40:NA:45:ARG:HH22	40:NA:90:MET:HE1	1.82	0.44
43:QA:28:ARG:HA	43:QA:33:ASN:OD1	2.17	0.44
46:TA:26:THR:HG22	46:TA:27:GLN:N	2.32	0.44
49:WA:253:ALA:HB2	49:WA:262:VAL:HG22	2.00	0.44
50:XA:57:LEU:HD11	50:XA:177:LEU:HG	1.99	0.44
50:XA:171:GLY:HA3	50:XA:203:PHE:CD2	2.46	0.44
53:AB:84:ILE:HD13	53:AB:85:VAL:N	2.33	0.44
54:BB:184:THR:HA	54:BB:189:LEU:HD12	1.99	0.44
55:CB:99:MET:O	55:CB:100:ASN:CB	2.66	0.44
59:GB:83:VAL:HG23	59:GB:85:VAL:H	1.82	0.44
64:LB:19:ILE:O	64:LB:83:ILE:HA	2.17	0.44
72:TB:106:THR:CG2	72:TB:107:SER:H	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:UB:126:LYS:HA	73:UB:131:SER:HA	2.00	0.44
77:YB:46:VAL:CG1	77:YB:54:VAL:HG21	2.47	0.44
82:DC:121:VAL:HG23	82:DC:122:THR:HG23	1.99	0.44
82:DC:343:PRO:HG2	82:DC:348:ALA:HB2	1.99	0.44
82:DC:521:TYR:CE1	86:DC:903:SO1:H612	2.52	0.44
83:EC:6939:C:H5"	83:EC:6940:U:C5'	2.33	0.44
1:A:35:U:H2'	1:A:36:C:C6	2.53	0.43
1:A:160:C:P	1:A:160:C:H6	2.41	0.43
1:A:443:C:H2'	1:A:444:C:C4'	2.48	0.43
1:A:568:G:H21	1:A:583:C:H5'	1.83	0.43
1:A:803:A:O2'	57:EB:104:ARG:HG2	2.18	0.43
1:A:975:C:O5'	1:A:975:C:H6	2.01	0.43
1:A:1029:U:OP2	76:XB:12:LYS:HE3	2.18	0.43
1:A:1076:A:H4'	76:XB:13:LYS:CD	2.41	0.43
1:A:1112:G:O3'	1:A:1751:C:H4'	2.18	0.43
1:A:1182:U:O5'	1:A:1182:U:H6	2.01	0.43
1:A:1729:C:H2'	1:A:1730:A:C5'	2.46	0.43
1:A:1738:U:H2'	1:A:1739:C:C5	2.53	0.43
2:B:37:U:O3'	2:B:935:U:H4'	2.18	0.43
2:B:115:A:H2	2:B:266:A:O4'	2.01	0.43
2:B:373:A:H2'	2:B:375:A:C8	2.53	0.43
2:B:525:C:O5'	2:B:525:C:H6	2.01	0.43
2:B:561:C:O2'	2:B:562:C:H5'	2.18	0.43
2:B:1334:U:H1'	11:K:208:SER:HB2	1.99	0.43
2:B:1360:C:H2'	2:B:1361:U:C6	2.53	0.43
2:B:1376:C:C2	2:B:1377:G:C8	3.06	0.43
2:B:1462:A:H2'	2:B:1463:U:H6	1.81	0.43
2:B:1524:A:N7	2:B:1834:U:N3	2.65	0.43
2:B:1554:U:H3	2:B:1559:A:H2	1.59	0.43
2:B:1649:U:H2'	2:B:1650:G:C5'	2.48	0.43
2:B:1774:C:H2'	2:B:1775:G:H4'	1.99	0.43
2:B:2144:A:C4	2:B:2281:A:C6	3.05	0.43
2:B:2465:G:H21	5:E:207:LYS:NZ	2.15	0.43
2:B:2732:G:H2'	2:B:2733:A:C8	2.53	0.43
2:B:2908:G:C5	2:B:2909:U:C4	3.06	0.43
2:B:3086:A:O3'	7:G:366:GLY:HA2	2.18	0.43
2:B:3148:U:H2'	2:B:3149:G:H8	1.83	0.43
2:B:3239:G:H2'	2:B:3240:C:O4'	2.18	0.43
2:B:3330:A:H5'	7:G:363:SER:OG	2.18	0.43
2:B:3384:U:H1'	35:IA:105:GLN:OE1	2.18	0.43
4:D:1:G:O4'	9:I:270:LYS:HE2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:184:ARG:N	6:F:184:ARG:CD	2.78	0.43
12:L:151:VAL:CG1	12:L:177:TYR:HB3	2.48	0.43
19:S:20:ARG:HG2	19:S:20:ARG:NH2	2.33	0.43
20:T:127:LEU:HD23	24:X:156:VAL:HB	1.99	0.43
24:X:107:TYR:CE1	24:X:121:ILE:HG21	2.52	0.43
25:Y:40:VAL:HB	25:Y:96:ILE:HG23	2.00	0.43
26:Z:77:LYS:O	26:Z:81:LYS:HG2	2.18	0.43
28:BA:14:TYR:HA	28:BA:15:PRO:HD3	1.79	0.43
28:BA:33:ASN:CG	28:BA:35:LYS:H	2.26	0.43
31:EA:81:LEU:HD22	34:HA:58:TYR:HE2	1.83	0.43
33:GA:28:LYS:O	33:GA:29:TYR:HB2	2.18	0.43
36:JA:19:ARG:HD2	36:JA:28:VAL:CG1	2.48	0.43
38:LA:65:VAL:CB	38:LA:70:LYS:HD3	2.46	0.43
39:MA:7:TYR:CD1	39:MA:8:GLU:HG3	2.52	0.43
42:PA:8:ILE:HD12	42:PA:8:ILE:N	2.31	0.43
43:QA:28:ARG:NH1	43:QA:28:ARG:HB2	2.33	0.43
45:SA:7:LYS:CD	45:SA:11:ARG:HH12	2.31	0.43
48:VA:30:VAL:CG2	48:VA:32:ASN:HD22	2.27	0.43
48:VA:51:VAL:HG13	48:VA:87:VAL:CG2	2.44	0.43
48:VA:65:GLY:HA2	48:VA:73:PHE:HD2	1.82	0.43
49:WA:16:HIS:HE1	49:WA:37:SER:HB3	1.82	0.43
49:WA:85:TRP:CD1	49:WA:109:ASP:HB3	2.53	0.43
49:WA:225:LEU:HD12	49:WA:228:LYS:HG3	2.00	0.43
50:XA:8:ASP:O	50:XA:9:LEU:HB2	2.16	0.43
50:XA:17:LEU:HD23	50:XA:172:LEU:HD22	2.00	0.43
50:XA:68:PRO:HG2	52:ZA:241:ASP:O	2.18	0.43
50:XA:155:PHE:HA	71:SB:60:ARG:HE	1.82	0.43
52:ZA:53:ILE:HA	52:ZA:72:LEU:HD21	1.99	0.43
52:ZA:154:LEU:HD11	52:ZA:193:VAL:HG11	1.96	0.43
52:ZA:243:TYR:CD1	52:ZA:246:GLU:HG3	2.52	0.43
53:AB:40:ARG:HG3	53:AB:49:ILE:CD1	2.47	0.43
53:AB:140:GLY:C	53:AB:147:ALA:HA	2.43	0.43
54:BB:51:ARG:HG2	54:BB:51:ARG:HH11	1.83	0.43
54:BB:252:ARG:HA	54:BB:255:ARG:HD2	2.00	0.43
59:GB:60:LEU:HD21	59:GB:93:LEU:CD1	2.47	0.43
59:GB:113:VAL:HA	59:GB:118:LEU:HD12	1.99	0.43
60:HB:42:VAL:CG1	60:HB:46:LEU:HD23	2.46	0.43
68:PB:41:ARG:HH11	68:PB:41:ARG:HG3	1.83	0.43
69:QB:37:VAL:HG22	69:QB:38:LYS:N	2.33	0.43
72:TB:84:GLY:HA2	72:TB:87:GLU:HG3	1.99	0.43
73:UB:83:VAL:HG11	73:UB:122:PHE:HE2	1.77	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:XB:93:LYS:O	76:XB:95:ARG:HG3	2.18	0.43
82:DC:250:PHE:CE2	82:DC:255:LYS:HD3	2.53	0.43
82:DC:278:LEU:HA	82:DC:281:ILE:CB	2.46	0.43
82:DC:413:ILE:HG12	82:DC:459:ILE:HG23	2.00	0.43
83:EC:6884:G:H2'	83:EC:6885:G:H8	1.83	0.43
83:EC:6948:U:O2'	83:EC:6949:G:O4'	2.36	0.43
1:A:94:U:H3'	1:A:94:U:H6	1.83	0.43
1:A:145:A:HO2'	1:A:146:U:H6	1.60	0.43
1:A:217:A:H1'	1:A:830:U:H6	1.82	0.43
1:A:1165:G:H2'	1:A:1166:A:C8	2.54	0.43
1:A:1166:A:H5'	55:CB:104:ASN:OD1	2.17	0.43
1:A:1180:C:H3'	1:A:1181:U:C6	2.53	0.43
1:A:1456:C:H3'	1:A:1457:C:H5'	2.00	0.43
1:A:1479:A:H1'	69:QB:12:GLN:OE1	2.18	0.43
1:A:1547:A:H2	68:PB:89:GLN:HG2	1.83	0.43
1:A:1710:U:H6	1:A:1710:U:O5'	2.01	0.43
1:A:1771:U:C2'	1:A:1772:C:H5'	2.48	0.43
2:B:261:U:H2'	2:B:262:U:H6	1.83	0.43
2:B:412:G:N3	21:U:118:GLN:HG3	2.32	0.43
2:B:519:A:N1	24:X:65:ASN:HB2	2.33	0.43
2:B:677:A:N1	2:B:703:G:O2'	2.50	0.43
2:B:687:U:H5	17:Q:36:ARG:NH1	2.16	0.43
2:B:1233:G:N2	16:P:128:VAL:CG1	2.82	0.43
2:B:1328:C:H2'	2:B:1329:U:H5	1.82	0.43
2:B:1369:A:OP1	32:FA:14:HIS:HD2	2.01	0.43
2:B:1454:A:H3'	2:B:1455:U:H5'	2.00	0.43
2:B:1794:G:H5'	6:F:187:HIS:O	2.18	0.43
2:B:1947:G:N2	2:B:2102:U:C2	2.86	0.43
2:B:1949:G:OP1	23:W:101:VAL:HG13	2.18	0.43
2:B:2185:G:C6	2:B:2186:U:C4	3.06	0.43
2:B:2631:U:H4'	2:B:2697:A:H2	1.84	0.43
2:B:2930:A:C1'	27:AA:37:ILE:HD11	2.48	0.43
2:B:3087:A:C5'	7:G:365:PHE:O	2.66	0.43
2:B:3137:C:H5"	7:G:276:THR:CB	2.48	0.43
2:B:3274:A:H2'	21:U:171:ARG:HH12	1.83	0.43
3:C:94:C:H42	3:C:96:A:H61	1.66	0.43
3:C:135:G:N3	3:C:136:G:H1'	2.33	0.43
4:D:10:C:C4	9:I:20:PHE:HD2	2.36	0.43
6:F:76:PHE:HE2	6:F:101:VAL:HG11	1.83	0.43
8:H:157:GLU:HG2	8:H:251:THR:HG21	1.99	0.43
11:K:90:LYS:CE	11:K:95:ILE:HD11	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:128:VAL:HG22	13:M:134:ILE:HD13	2.00	0.43
14:N:51:HIS:HE2	14:N:168:SER:HB2	1.83	0.43
14:N:174:THR:HG21	14:N:181:TYR:CD1	2.54	0.43
17:Q:74:GLY:HA2	17:Q:96:ALA:HB3	1.97	0.43
19:S:62:TYR:HB3	19:S:106:VAL:HG11	2.00	0.43
23:W:148:ASP:HA	23:W:151:ARG:HD2	2.00	0.43
24:X:68:HIS:C	24:X:70:THR:N	2.75	0.43
26:Z:71:PHE:HD1	26:Z:72:SER:H	1.65	0.43
27:AA:77:ILE:HG21	27:AA:129:VAL:HG21	2.00	0.43
29:CA:63:ILE:HG12	29:CA:98:ALA:HB1	1.99	0.43
31:EA:44:ALA:CB	31:EA:72:ILE:HG22	2.47	0.43
32:FA:124:ILE:HD13	32:FA:144:VAL:HG22	2.00	0.43
36:JA:20:HIS:CG	36:JA:42:VAL:HG21	2.53	0.43
36:JA:34:LYS:HG3	36:JA:52:GLN:NE2	2.33	0.43
37:KA:17:GLN:C	37:KA:24:ASN:HB2	2.43	0.43
40:NA:67:LYS:HG3	40:NA:70:ARG:NH2	2.24	0.43
48:VA:36:GLN:HA	48:VA:39:HIS:ND1	2.33	0.43
49:WA:39:ASP:O	49:WA:40:LYS:HB2	2.18	0.43
49:WA:230:ALA:CB	53:AB:220:PRO:HB3	2.48	0.43
50:XA:197:ILE:HB	50:XA:201:LEU:HD13	2.00	0.43
51:YA:38:PHE:HZ	51:YA:70:LEU:HB2	1.82	0.43
51:YA:111:ARG:HG2	76:XB:68:TYR:C	2.43	0.43
52:ZA:110:HIS:HE1	71:SB:11:LEU:HD22	1.82	0.43
52:ZA:139:ILE:HG12	52:ZA:191:ALA:CB	2.46	0.43
52:ZA:226:THR:C	52:ZA:228:ASN:N	2.75	0.43
53:AB:12:VAL:HG21	70:RB:63:LEU:HD12	1.99	0.43
53:AB:141:LYS:HD3	53:AB:145:ALA:HA	2.00	0.43
54:BB:180:LEU:CD2	54:BB:192:ILE:HG22	2.46	0.43
55:CB:24:VAL:O	55:CB:24:VAL:HG13	2.18	0.43
56:DB:103:GLY:O	56:DB:106:LEU:HG	2.18	0.43
56:DB:181:PRO:HA	56:DB:184:LEU:HD12	2.00	0.43
57:EB:21:ALA:HB2	57:EB:43:PHE:CZ	2.52	0.43
57:EB:102:PRO:HB3	57:EB:109:VAL:N	2.32	0.43
61:IB:78:THR:HG21	61:IB:119:VAL:HA	1.99	0.43
69:QB:34:VAL:O	69:QB:35:ASP:CB	2.67	0.43
70:RB:25:THR:HG22	70:RB:26:LEU:N	2.33	0.43
70:RB:67:THR:HG22	70:RB:68:ARG:N	2.33	0.43
71:SB:33:GLN:HG2	71:SB:52:THR:HG21	2.00	0.43
74:VB:18:LEU:O	74:VB:19:ALA:C	2.60	0.43
76:XB:83:ILE:O	76:XB:84:VAL:HB	2.19	0.43
82:DC:564:ARG:HB3	82:DC:682:ARG:CB	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:586:ILE:HG22	82:DC:588:LEU:HD23	1.98	0.43
1:A:8:U:O2'	1:A:9:U:H5'	2.17	0.43
1:A:252:U:H5"	54:BB:132:GLY:C	2.44	0.43
1:A:556:A:C4'	80:BC:56:MET:HG2	2.48	0.43
1:A:1173:C:H1'	69:QB:88:VAL:HG11	2.00	0.43
1:A:1614:A:OP1	55:CB:166:ARG:HG3	2.18	0.43
1:A:1681:A:C8	56:DB:65:GLN:HG2	2.54	0.43
1:A:1763:A:H2'	1:A:1764:C:H5'	1.99	0.43
2:B:311:C:O2'	2:B:312:C:H5'	2.18	0.43
2:B:646:A:C2	2:B:2375:G:C2	3.06	0.43
2:B:775:A:H5"	33:GA:41:ARG:HD3	2.00	0.43
2:B:784:A:N1	22:V:93:ILE:HG23	2.33	0.43
2:B:824:C:H5"	6:F:21:ARG:CZ	2.43	0.43
2:B:837:A:O2'	47:UA:10:ILE:HD12	2.19	0.43
2:B:856:G:H22	47:UA:4:ARG:NH1	2.16	0.43
2:B:856:G:C5'	2:B:1723:A:H1'	2.48	0.43
2:B:1042:U:H4'	14:N:196:PHE:CD2	2.54	0.43
2:B:1138:U:H4'	11:K:97:PRO:HD3	2.00	0.43
2:B:1222:G:H2'	48:VA:56:ASN:OD1	2.18	0.43
2:B:1656:A:H5'	2:B:1657:C:C2	2.53	0.43
2:B:1934:G:H2'	2:B:1935:G:H5"	2.00	0.43
2:B:2328:U:H2'	2:B:2329:C:H6	1.83	0.43
2:B:2424:A:H2'	2:B:2425:G:O4'	2.19	0.43
2:B:2633:U:O2'	2:B:2634:U:H5'	2.18	0.43
2:B:2714:G:O6	2:B:2741:C:N3	2.52	0.43
2:B:2766:U:H5"	46:TA:37:ALA:HB1	2.01	0.43
2:B:2887:A:N3	2:B:2887:A:H2'	2.33	0.43
2:B:3254:G:H2'	2:B:3255:U:C4'	2.48	0.43
3:C:11:C:N4	3:C:12:A:N6	2.65	0.43
3:C:92:A:P	30:DA:23:PRO:HG2	2.58	0.43
4:D:22:A:C6	9:I:272:TYR:HB2	2.53	0.43
5:E:116:LEU:HD12	5:E:120:VAL:CG2	2.49	0.43
6:F:26:ALA:C	6:F:28:LYS:N	2.75	0.43
8:H:31:ARG:HH21	22:V:23:ASN:HA	1.82	0.43
8:H:33:ASP:HA	8:H:36:HIS:CD2	2.52	0.43
8:H:256:THR:C	8:H:258:LEU:N	2.76	0.43
8:H:289:ILE:O	8:H:292:SER:HB2	2.19	0.43
8:H:300:ARG:HG2	22:V:39:ARG:HB3	2.00	0.43
11:K:218:ARG:O	11:K:219:LYS:HB2	2.17	0.43
14:N:24:ARG:HB3	14:N:25:ALA:H	1.65	0.43
14:N:182:LEU:O	14:N:186:GLU:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:9:MET:O	15:O:10:ARG:C	2.61	0.43
15:O:94:ARG:HD3	15:O:94:ARG:N	2.30	0.43
18:R:24:LYS:HZ2	24:X:158:LYS:HE2	1.83	0.43
19:S:49:ARG:N	19:S:53:TYR:HB3	2.33	0.43
19:S:142:ILE:HD12	19:S:142:ILE:H	1.81	0.43
20:T:82:LYS:HE3	20:T:85:ARG:HD2	2.00	0.43
21:U:78:VAL:HG12	21:U:79:THR:N	2.32	0.43
22:V:33:TYR:HA	22:V:36:LEU:HG	2.00	0.43
22:V:70:ALA:HA	22:V:73:GLN:HG3	2.00	0.43
22:V:170:ARG:HA	22:V:174:ARG:CD	2.46	0.43
23:W:155:LEU:HA	23:W:158:GLU:HG2	1.99	0.43
24:X:80:ARG:CB	24:X:124:LEU:HD21	2.49	0.43
27:AA:123:ALA:O	27:AA:130:ALA:HB2	2.18	0.43
29:CA:109:LYS:HD3	29:CA:111:ASN:HD21	1.84	0.43
30:DA:9:SER:OG	30:DA:14:LYS:HD2	2.18	0.43
30:DA:63:LYS:HB3	30:DA:66:GLN:HE21	1.82	0.43
31:EA:11:ALA:HB3	31:EA:23:VAL:HG23	2.00	0.43
32:FA:105:LEU:HD21	32:FA:128:ARG:NH2	2.33	0.43
34:HA:50:VAL:O	34:HA:54:SER:N	2.51	0.43
40:NA:50:LEU:HA	40:NA:54:GLU:HG3	2.00	0.43
42:PA:5:ILE:HG22	42:PA:53:THR:O	2.18	0.43
47:UA:7:LYS:HG3	47:UA:7:LYS:O	2.18	0.43
47:UA:38:ASP:CB	47:UA:45:LYS:HB3	2.48	0.43
48:VA:184:GLY:O	48:VA:185:LEU:C	2.60	0.43
51:YA:89:ASP:O	51:YA:223:PHE:HE2	2.01	0.43
51:YA:109:LYS:HD2	51:YA:112:SER:HB3	2.00	0.43
51:YA:205:PHE:HB3	51:YA:207:LEU:CD1	2.48	0.43
51:YA:214:LYS:CG	51:YA:215:VAL:H	2.24	0.43
52:ZA:35:TRP:O	52:ZA:36:VAL:HB	2.18	0.43
53:AB:162:GLN:N	53:AB:163:PRO:CD	2.80	0.43
53:AB:171:ALA:CB	53:AB:186:VAL:HB	2.31	0.43
54:BB:16:HIS:C	54:BB:18:TRP:H	2.24	0.43
54:BB:137:PRO:HG2	54:BB:149:TYR:HA	2.00	0.43
55:CB:55:ASP:HB3	55:CB:58:LEU:HD12	1.99	0.43
57:EB:4:PRO:HB2	57:EB:5:GLN:H	1.68	0.43
57:EB:159:VAL:O	57:EB:163:ASP:HB2	2.18	0.43
58:FB:80:GLY:O	58:FB:102:VAL:HG12	2.18	0.43
59:GB:86:LEU:CD1	59:GB:95:TYR:HB3	2.48	0.43
61:IB:128:CYS:CB	61:IB:138:ASN:HD22	2.30	0.43
62:JB:67:THR:C	62:JB:69:ALA:H	2.27	0.43
67:OB:72:LYS:C	67:OB:74:GLN:N	2.73	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:UB:87:VAL:HG23	73:UB:87:VAL:O	2.18	0.43
79:AC:29:GLY:O	79:AC:39:CYS:HA	2.17	0.43
1:A:963:A:H1'	1:A:965:U:H5	1.82	0.43
1:A:1279:C:H1'	70:RB:71:PRO:HD2	2.00	0.43
1:A:1547:A:H2'	1:A:1548:G:C5'	2.48	0.43
1:A:1615:C:OP2	78:ZB:47:PRO:HG3	2.18	0.43
2:B:202:G:C2'	2:B:203:G:H5'	2.48	0.43
2:B:776:U:H2'	2:B:777:U:H5"	2.01	0.43
2:B:1138:U:O2'	2:B:1139:G:H5'	2.19	0.43
2:B:1145:G:C2'	2:B:1146:C:H5'	2.49	0.43
2:B:1210:U:H2'	2:B:1211:U:H6	1.81	0.43
2:B:1453:A:H2'	2:B:1454:A:C8	2.53	0.43
2:B:1657:C:H5	2:B:1798:A:OP2	2.01	0.43
2:B:1734:G:H2'	2:B:1735:G:H8	1.84	0.43
2:B:1747:G:H2'	2:B:1748:G:C5'	2.47	0.43
2:B:1904:C:H41	7:G:241:LYS:HZ1	1.65	0.43
2:B:2221:G:N2	2:B:2224:A:OP2	2.50	0.43
2:B:2478:C:H5"	2:B:2488:A:N6	2.25	0.43
2:B:2644:C:O5'	2:B:2644:C:H6	2.00	0.43
2:B:3373:U:H5'	35:IA:70:ARG:NH2	2.33	0.43
7:G:96:PRO:HG3	20:T:152:VAL:HG23	2.00	0.43
7:G:128:LYS:C	7:G:131:THR:HG23	2.44	0.43
7:G:240:ARG:HG3	7:G:240:ARG:NH1	2.30	0.43
8:H:279:HIS:C	8:H:281:ILE:N	2.72	0.43
8:H:283:THR:HB	8:H:289:ILE:HD11	2.00	0.43
10:J:79:VAL:CG2	10:J:80:ASN:H	2.13	0.43
14:N:17:TYR:H	14:N:95:HIS:HE1	1.62	0.43
15:O:48:SER:O	15:O:64:LYS:HA	2.19	0.43
16:P:109:ILE:HG23	16:P:110:ILE:HD12	2.01	0.43
17:Q:50:PRO:CG	17:Q:141:ALA:HB2	2.49	0.43
18:R:127:LYS:HD2	20:T:191:ALA:HB2	1.98	0.43
19:S:109:ARG:HD3	19:S:110:ALA:CB	2.48	0.43
19:S:145:ASP:C	19:S:147:ARG:N	2.73	0.43
22:V:170:ARG:NH1	32:FA:57:GLY:HA3	2.34	0.43
24:X:23:LYS:O	24:X:24:LEU:HB2	2.17	0.43
24:X:80:ARG:HD3	25:Y:154:VAL:HG23	2.00	0.43
25:Y:65:TYR:HD2	25:Y:74:VAL:C	2.27	0.43
30:DA:26:GLN:O	30:DA:30:LEU:HB2	2.19	0.43
34:HA:45:ALA:HB1	34:HA:72:GLY:C	2.44	0.43
35:IA:81:GLU:O	35:IA:82:GLU:HB3	2.18	0.43
36:JA:6:HIS:HD1	36:JA:6:HIS:C	2.26	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:95:GLU:CG	36:JA:96:ILE:N	2.79	0.43
38:LA:39:ALA:HB2	38:LA:58:ARG:HD3	2.01	0.43
44:RA:116:GLY:O	44:RA:117:HIS:HB2	2.18	0.43
50:XA:78:SER:HA	50:XA:100:GLY:HA2	2.00	0.43
51:YA:146:GLN:HG2	51:YA:147:ALA:N	2.33	0.43
52:ZA:99:LYS:CA	52:ZA:117:THR:HB	2.49	0.43
54:BB:129:VAL:O	54:BB:129:VAL:HG13	2.18	0.43
54:BB:198:LYS:HZ1	54:BB:206:ASP:HB2	1.81	0.43
54:BB:201:HIS:HD2	54:BB:207:LEU:H	1.66	0.43
56:DB:162:VAL:HG12	56:DB:169:TYR:O	2.18	0.43
56:DB:186:ARG:O	56:DB:189:HIS:HB3	2.18	0.43
57:EB:166:LEU:O	57:EB:170:GLN:HG3	2.17	0.43
60:HB:25:LYS:HB3	60:HB:62:GLN:HB3	2.00	0.43
60:HB:69:THR:CG2	60:HB:70:GLU:H	2.21	0.43
60:HB:82:LEU:HA	60:HB:83:PRO:HD2	1.85	0.43
65:MB:50:THR:O	65:MB:50:THR:HG23	2.18	0.43
73:UB:52:ILE:O	73:UB:74:VAL:HA	2.19	0.43
75:WB:69:LEU:O	75:WB:69:LEU:HD13	2.18	0.43
77:YB:6:ASP:C	77:YB:8:LEU:H	2.26	0.43
77:YB:42:ASN:HB3	77:YB:43:ILE:H	1.69	0.43
82:DC:25:ILE:HG23	82:DC:142:VAL:HB	2.01	0.43
82:DC:388:THR:OG1	82:DC:395:TYR:HE1	2.01	0.43
82:DC:581:ASN:HD21	82:DC:704:GLN:HE22	1.62	0.43
82:DC:587:TYR:CD2	82:DC:587:TYR:N	2.85	0.43
82:DC:647:ILE:CD1	82:DC:685:ARG:HB2	2.48	0.43
82:DC:732:GLU:OE2	82:DC:769:LYS:HA	2.19	0.43
83:EC:6770:U:H2'	83:EC:6821:U:N3	2.32	0.43
1:A:23:G:H21	1:A:368:U:H5'	1.83	0.43
1:A:113:U:H5"	1:A:114:C:C5'	2.36	0.43
1:A:219:A:H61	1:A:842:C:N4	2.06	0.43
1:A:400:A:H5'	58:FB:25:ARG:HH21	1.82	0.43
1:A:460:A:H5'	1:A:461:G:OP2	2.18	0.43
1:A:477:A:H2'	1:A:478:A:H8	1.81	0.43
1:A:590:C:H2'	1:A:591:A:C8	2.53	0.43
1:A:603:U:O2'	1:A:604:A:H5'	2.19	0.43
1:A:963:A:H62	63:KB:70:LYS:NZ	2.16	0.43
1:A:1242:A:O2'	1:A:1244:A:H5'	2.18	0.43
1:A:1433:G:H2'	1:A:1434:U:H5'	2.00	0.43
1:A:1756:A:H3'	1:A:1757:G:H8	1.82	0.43
2:B:77:A:H2'	2:B:78:U:O4'	2.18	0.43
2:B:645:A:C6	2:B:649:A:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:903:U:OP2	41:OA:30:GLN:HG2	2.19	0.43
2:B:906:A:H5'	2:B:910:G:H4'	2.00	0.43
2:B:1116:G:H3'	2:B:1117:G:C5'	2.43	0.43
2:B:1145:G:O6	2:B:1158:A:C2	2.71	0.43
2:B:1147:G:H21	2:B:1170:A:H1'	1.83	0.43
2:B:1705:U:N3	2:B:1786:G:H4'	2.33	0.43
2:B:1708:C:H2'	2:B:1709:C:C6	2.53	0.43
2:B:2234:G:H2'	2:B:2235:C:O4'	2.19	0.43
2:B:2350:C:O2'	2:B:2351:U:H5'	2.18	0.43
2:B:2415:C:H5'	6:F:2:GLY:N	2.33	0.43
2:B:2647:A:H1'	14:N:22:TYR:CE2	2.53	0.43
2:B:2765:C:H5'	46:TA:42:ARG:HH22	1.83	0.43
2:B:3105:U:O2'	2:B:3106:A:H5'	2.17	0.43
2:B:3230:G:H5'	18:R:132:LYS:HD3	2.00	0.43
2:B:3285:C:H2'	2:B:3286:G:C4'	2.47	0.43
3:C:103:G:H5'	41:OA:20:ASN:O	2.18	0.43
4:D:109:G:O2'	4:D:110:G:H5'	2.18	0.43
6:F:33:ASP:OD1	6:F:36:GLU:HG2	2.19	0.43
7:G:249:VAL:HG12	7:G:249:VAL:O	2.18	0.43
8:H:23:PRO:CG	8:H:258:LEU:HB3	2.48	0.43
8:H:309:ARG:CZ	8:H:312:VAL:HG11	2.47	0.43
8:H:327:LEU:O	8:H:328:ASN:CB	2.66	0.43
10:J:122:PHE:HB3	10:J:123:PRO:CA	2.47	0.43
11:K:121:LYS:HD3	11:K:121:LYS:O	2.18	0.43
12:L:69:LEU:HG	19:S:24:ARG:NH1	2.33	0.43
14:N:99:ILE:HG12	14:N:101:LYS:N	2.34	0.43
14:N:153:ARG:HH21	14:N:154:ARG:CG	2.31	0.43
15:O:101:ASN:ND2	15:O:130:VAL:HG23	2.32	0.43
20:T:172:ARG:HB3	20:T:172:ARG:CZ	2.48	0.43
21:U:159:LYS:HG3	21:U:160:ALA:H	1.83	0.43
22:V:140:LEU:HD23	22:V:141:ARG:N	2.25	0.43
22:V:156:GLY:HA2	32:FA:47:LYS:HB2	2.00	0.43
30:DA:81:GLN:HB3	30:DA:96:PRO:HB3	2.00	0.43
31:EA:4:PHE:HD2	34:HA:62:LEU:O	2.02	0.43
48:VA:120:TRP:HB2	48:VA:157:LYS:NZ	2.32	0.43
49:WA:64:HIS:CE1	49:WA:82:SER:HB2	2.53	0.43
49:WA:121:MET:SD	49:WA:183:LEU:HD13	2.58	0.43
49:WA:306:THR:C	49:WA:308:ASN:H	2.25	0.43
51:YA:110:LEU:O	51:YA:114:VAL:HG23	2.18	0.43
53:AB:77:PHE:O	53:AB:79:TYR:N	2.51	0.43
53:AB:202:LEU:H	53:AB:202:LEU:CD2	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:49:ARG:HH21	54:BB:61:VAL:HG21	1.83	0.43
54:BB:95:THR:HA	74:VB:16:PRO:HB2	2.00	0.43
54:BB:246:LEU:HD22	54:BB:250:GLU:OE2	2.19	0.43
55:CB:75:GLY:HA2	55:CB:77:TYR:CE1	2.53	0.43
58:FB:43:ILE:HG21	58:FB:55:TYR:HB3	2.00	0.43
58:FB:66:SER:HA	58:FB:72:ILE:O	2.19	0.43
63:KB:118:ILE:HG22	63:KB:122:ILE:CD1	2.48	0.43
64:LB:127:ARG:HG2	64:LB:127:ARG:NH1	2.33	0.43
65:MB:17:TYR:CD1	65:MB:36:LEU:HD11	2.54	0.43
66:NB:9:THR:CG2	66:NB:88:GLY:HA2	2.48	0.43
70:RB:82:TYR:HD1	79:AC:53:ASN:CA	2.29	0.43
73:UB:48:HIS:CD2	73:UB:105:ALA:HB2	2.53	0.43
76:XB:85:ARG:O	76:XB:86:VAL:O	2.35	0.43
82:DC:76:SER:C	82:DC:77:LEU:HD12	2.43	0.43
82:DC:108:HIS:HA	82:DC:138:GLN:CD	2.44	0.43
82:DC:145:GLN:HE21	82:DC:145:GLN:HB3	1.56	0.43
82:DC:150:ARG:NH1	82:DC:196:VAL:HG21	2.33	0.43
82:DC:372:CYS:SG	82:DC:450:ALA:HB1	2.57	0.43
82:DC:402:ALA:HA	82:DC:450:ALA:HB2	2.00	0.43
82:DC:573:GLN:HG2	82:DC:719:LEU:CD1	2.47	0.43
1:A:485:A:H2'	1:A:486:G:C8	2.53	0.43
1:A:570:A:H61	73:UB:117:ILE:HG13	1.83	0.43
1:A:901:G:H2'	1:A:902:G:C5'	2.48	0.43
1:A:1164:G:H2'	1:A:1165:G:H8	1.83	0.43
1:A:1193:A:C5'	70:RB:76:SER:HB3	2.47	0.43
1:A:1365:C:H4'	66:NB:30:LYS:CD	2.47	0.43
1:A:1609:U:H5"	66:NB:75:VAL:HB	2.00	0.43
1:A:1619:C:O2	78:ZB:22:ARG:HG3	2.19	0.43
2:B:651:G:C6	2:B:652:G:C6	3.07	0.43
2:B:942:U:C2	32:FA:16:SER:HA	2.53	0.43
2:B:1245:A:C5	2:B:1272:C:H4'	2.54	0.43
2:B:1251:A:H2'	2:B:1252:A:C8	2.54	0.43
2:B:1316:C:C2	20:T:130:LYS:HD2	2.54	0.43
2:B:1557:A:C5	2:B:1559:A:N6	2.87	0.43
2:B:1770:G:N2	2:B:1771:C:H1'	2.33	0.43
2:B:1830:G:H5"	29:CA:92:LYS:HG2	2.00	0.43
2:B:1921:A:H2'	2:B:1922:A:C8	2.53	0.43
2:B:2124:G:C2	2:B:2330:C:C2	3.07	0.43
2:B:2174:G:H8	2:B:2174:G:OP1	2.01	0.43
2:B:2356:A:H62	2:B:2983:C:H5	1.62	0.43
2:B:2394:G:H3'	2:B:2394:G:OP2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2802:A:H5'	46:TA:56:PRO:HB2	2.00	0.43
2:B:2987:A:H2'	2:B:2988:C:H6	1.84	0.43
2:B:3018:C:C4	2:B:3019:U:C4	3.06	0.43
2:B:3275:U:H5'	37:KA:68:TRP:HE1	1.84	0.43
3:C:84:C:H42	30:DA:116:LYS:HE3	1.84	0.43
6:F:55:GLY:HA3	6:F:174:ARG:NH1	2.34	0.43
7:G:57:VAL:CG2	7:G:358:TRP:HE3	2.30	0.43
7:G:205:VAL:HG23	7:G:206:ASP:H	1.83	0.43
7:G:265:ALA:C	7:G:266:ARG:HG2	2.42	0.43
8:H:31:ARG:HE	22:V:23:ASN:HA	1.82	0.43
8:H:76:ARG:CG	8:H:76:ARG:NH1	2.82	0.43
8:H:304:GLN:NE2	8:H:308:LYS:HB2	2.34	0.43
8:H:326:ARG:HD2	8:H:327:LEU:HD11	2.00	0.43
10:J:56:LYS:HD3	10:J:101:PHE:O	2.19	0.43
10:J:98:VAL:HA	10:J:101:PHE:HD2	1.83	0.43
12:L:151:VAL:HG11	12:L:177:TYR:HB3	2.00	0.43
13:M:47:LYS:HE3	18:R:7:VAL:CG2	2.48	0.43
13:M:138:THR:C	13:M:140:VAL:H	2.25	0.43
13:M:150:SER:O	13:M:154:VAL:HG23	2.18	0.43
15:O:61:ARG:O	15:O:61:ARG:HG2	2.19	0.43
15:O:110:ILE:HG22	15:O:114:ILE:CG2	2.44	0.43
20:T:34:VAL:HB	20:T:103:LYS:O	2.18	0.43
21:U:4:TYR:HA	21:U:147:GLU:OE2	2.19	0.43
22:V:67:ILE:HD11	22:V:87:VAL:CG1	2.48	0.43
23:W:122:VAL:O	23:W:123:LEU:C	2.62	0.43
23:W:143:ILE:O	23:W:147:ALA:HB2	2.18	0.43
24:X:42:TRP:HD1	24:X:53:LYS:NZ	2.16	0.43
24:X:75:PHE:CD2	24:X:102:ALA:HB3	2.53	0.43
27:AA:11:PHE:CZ	27:AA:88:ARG:HD2	2.54	0.43
27:AA:79:VAL:HG12	27:AA:122:CYS:SG	2.59	0.43
34:HA:27:TYR:HB2	34:HA:52:ARG:NH1	2.33	0.43
34:HA:44:ILE:HA	34:HA:88:GLY:O	2.19	0.43
35:IA:39:PHE:O	35:IA:43:HIS:HB2	2.19	0.43
43:QA:27:ILE:HG23	43:QA:30:ARG:NE	2.33	0.43
48:VA:133:THR:HA	48:VA:136:PHE:HB2	2.00	0.43
49:WA:85:TRP:CG	49:WA:109:ASP:HB3	2.54	0.43
51:YA:35:PRO:HD3	51:YA:98:THR:CG2	2.48	0.43
54:BB:2:ALA:C	54:BB:4:GLY:H	2.26	0.43
69:QB:4:VAL:HG21	69:QB:140:LEU:HD11	2.01	0.43
70:RB:40:ASN:O	70:RB:44:ASN:HB2	2.19	0.43
75:WB:37:GLN:O	75:WB:38:HIS:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:278:LEU:HA	82:DC:281:ILE:CG2	2.49	0.43
82:DC:565:GLU:H	82:DC:681:MET:HA	1.84	0.43
82:DC:775:ASN:HA	82:DC:778:PHE:CE2	2.53	0.43
1:A:352:A:H4'	1:A:353:A:H8	1.84	0.43
1:A:779:U:O2'	1:A:780:A:H5'	2.18	0.43
1:A:959:U:O2	1:A:959:U:H2'	2.18	0.43
1:A:1176:G:H2'	1:A:1177:C:O4'	2.19	0.43
1:A:1242:A:HO2'	1:A:1243:G:H3'	1.82	0.43
1:A:1647:U:H2'	1:A:1648:A:C8	2.53	0.43
2:B:96:G:OP1	32:FA:34:MET:HG2	2.18	0.43
2:B:120:G:C6	12:L:128:LYS:HB2	2.54	0.43
2:B:213:A:O5'	30:DA:2:ALA:HA	2.17	0.43
2:B:260:C:C2'	2:B:261:U:H5'	2.48	0.43
2:B:314:U:H2'	2:B:315:C:C1'	2.49	0.43
2:B:628:A:H5"	2:B:1399:A:C6	2.54	0.43
2:B:641:C:H2'	2:B:642:U:H5'	2.01	0.43
2:B:970:A:P	33:GA:18:ARG:HB3	2.59	0.43
2:B:975:C:H5'	22:V:58:ASN:ND2	2.34	0.43
2:B:1010:G:H1'	14:N:195:ALA:HB2	2.01	0.43
2:B:1304:A:H62	2:B:2859:U:H4'	1.84	0.43
2:B:1431:G:OP2	32:FA:12:ARG:NH1	2.52	0.43
2:B:1653:G:C4	2:B:1654:A:C8	3.07	0.43
2:B:1789:G:O2'	2:B:1790:G:H5'	2.19	0.43
2:B:1803:C:H2'	2:B:1804:A:O4'	2.19	0.43
2:B:1887:A:H4'	7:G:227:GLU:CA	2.49	0.43
2:B:2392:C:O2'	7:G:266:ARG:NH1	2.49	0.43
2:B:2595:A:H3'	2:B:2596:U:H6	1.84	0.43
2:B:2630:C:H5"	25:Y:6:GLY:HA2	2.01	0.43
2:B:2759:U:O3'	2:B:2760:C:H6	2.02	0.43
2:B:2764:C:OP1	22:V:182:LYS:HD2	2.18	0.43
2:B:3124:G:OP1	20:T:134:LYS:HE3	2.18	0.43
2:B:3248:C:H2'	2:B:3249:C:H6	1.84	0.43
3:C:35:C:H2'	3:C:36:G:C8	2.54	0.43
4:D:115:G:H21	9:I:72:ASP:N	2.15	0.43
7:G:85:VAL:HG22	7:G:163:HIS:NE2	2.34	0.43
8:H:36:HIS:HA	8:H:242:ALA:CB	2.49	0.43
8:H:62:ALA:HB1	8:H:75:PRO:C	2.44	0.43
8:H:179:LEU:O	8:H:183:LYS:HB2	2.18	0.43
8:H:279:HIS:CG	8:H:282:SER:HA	2.53	0.43
9:I:51:LEU:HB2	9:I:144:VAL:CG1	2.42	0.43
9:I:65:ILE:HG23	9:I:73:VAL:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:116:PHE:CE1	11:K:139:PRO:HG3	2.54	0.43
11:K:186:HIS:HA	11:K:189:ILE:CG2	2.47	0.43
11:K:224:ILE:HG12	24:X:36:ILE:CA	2.49	0.43
12:L:251:LYS:O	12:L:256:ALA:HB2	2.19	0.43
13:M:89:LYS:O	13:M:181:VAL:HG13	2.18	0.43
13:M:121:LYS:HA	13:M:121:LYS:HD2	1.79	0.43
14:N:9:TYR:CD1	14:N:97:LEU:HD22	2.53	0.43
18:R:130:THR:O	18:R:133:LYS:HB2	2.19	0.43
19:S:27:VAL:HG13	19:S:28:TRP:N	2.34	0.43
19:S:41:ARG:HH11	19:S:41:ARG:HB2	1.84	0.43
21:U:42:THR:HG23	21:U:43:LYS:N	2.34	0.43
21:U:43:LYS:O	21:U:46:LYS:HB3	2.18	0.43
21:U:122:ALA:HB2	21:U:145:HIS:HB2	2.01	0.43
21:U:165:VAL:O	21:U:165:VAL:HG13	2.19	0.43
22:V:83:VAL:HB	22:V:103:ALA:HB2	2.01	0.43
22:V:147:ARG:O	22:V:150:VAL:HG22	2.19	0.43
23:W:62:ARG:O	23:W:65:ALA:HB3	2.18	0.43
23:W:168:ALA:O	23:W:171:ASP:HB3	2.18	0.43
24:X:13:ARG:HA	24:X:56:GLY:HA2	2.00	0.43
24:X:79:VAL:HG12	24:X:80:ARG:H	1.84	0.43
25:Y:126:VAL:CG2	25:Y:127:GLN:H	2.30	0.43
26:Z:78:TYR:O	26:Z:81:LYS:HB2	2.18	0.43
28:BA:25:ASP:CG	28:BA:26:SER:H	2.27	0.43
28:BA:33:ASN:CG	28:BA:34:SER:H	2.26	0.43
31:EA:44:ALA:HB2	31:EA:72:ILE:HG22	2.00	0.43
35:IA:109:VAL:HG12	35:IA:110:GLU:N	2.32	0.43
40:NA:71:LYS:HE2	40:NA:71:LYS:HB3	1.87	0.43
40:NA:89:GLU:O	40:NA:92:ASN:HB3	2.18	0.43
42:PA:4:GLU:HA	42:PA:53:THR:CG2	2.48	0.43
43:QA:7:PHE:O	43:QA:11:GLN:HB2	2.19	0.43
50:XA:136:ALA:C	50:XA:138:TYR:H	2.27	0.43
51:YA:181:LEU:HA	51:YA:184:LEU:HB3	2.00	0.43
55:CB:165:LEU:HD23	78:ZB:47:PRO:CB	2.47	0.43
56:DB:109:LEU:HD23	56:DB:110:ALA:N	2.34	0.43
58:FB:43:ILE:HA	58:FB:56:ARG:O	2.18	0.43
59:GB:24:LEU:HD23	59:GB:24:LEU:C	2.44	0.43
63:KB:84:ILE:CG2	63:KB:135:LEU:HD21	2.49	0.43
65:MB:98:ASN:O	65:MB:122:THR:HA	2.19	0.43
68:PB:126:ARG:HG3	68:PB:129:TRP:HE3	1.83	0.43
69:QB:53:TRP:HA	69:QB:56:LYS:HB2	2.01	0.43
71:SB:36:VAL:CG1	71:SB:78:LEU:HD13	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:TB:39:GLN:HA	72:TB:42:GLN:HB3	2.00	0.43
73:UB:48:HIS:NE2	73:UB:105:ALA:HB2	2.33	0.43
82:DC:56:PHE:HD1	82:DC:60:ARG:HH21	1.66	0.43
1:A:11:A:H4'	52:ZA:87:GLN:H	1.83	0.43
1:A:374:U:O5'	1:A:374:U:H6	2.01	0.43
1:A:475:A:H2'	1:A:476:U:O4'	2.18	0.43
1:A:946:U:H5"	51:YA:165:ARG:CD	2.49	0.43
1:A:959:U:O2'	63:KB:61:THR:HA	2.19	0.43
1:A:975:C:H2'	1:A:976:G:O4'	2.19	0.43
1:A:1061:A:C2'	1:A:1062:A:H5'	2.48	0.43
1:A:1213:G:H22	79:AC:7:TRP:HE1	1.67	0.43
1:A:1390:U:H4'	1:A:1391:A:H8	1.83	0.43
1:A:1647:U:H2'	1:A:1648:A:H8	1.84	0.43
2:B:57:A:C2	2:B:61:A:H1'	2.52	0.43
2:B:122:A:H5"	2:B:123:A:N9	2.33	0.43
2:B:149:U:H2'	2:B:150:A:H5"	1.99	0.43
2:B:388:G:H21	21:U:101:ASN:CG	2.27	0.43
2:B:639:G:P	36:JA:40:SER:HB2	2.58	0.43
2:B:749:C:O2'	33:GA:47:LEU:HG	2.19	0.43
2:B:1587:A:O2'	2:B:1588:A:H5"	2.18	0.43
2:B:1832:C:H5"	43:QA:7:PHE:CD1	2.53	0.43
2:B:1963:G:H21	2:B:2054:C:H42	1.67	0.43
2:B:2254:U:H2'	2:B:2261:G:O6	2.18	0.43
2:B:2278:C:C2'	2:B:2279:A:H5"	2.48	0.43
2:B:2278:C:N4	2:B:2305:G:C4	2.87	0.43
2:B:2939:G:P	7:G:2:SER:HA	2.59	0.43
2:B:3046:A:H5'	7:G:221:THR:CG2	2.48	0.43
2:B:3326:G:H2'	2:B:3327:G:C8	2.53	0.43
3:C:91:C:O4'	30:DA:24:SER:HB3	2.18	0.43
7:G:56:ILE:CD1	7:G:356:LEU:HB3	2.49	0.43
7:G:114:VAL:HG22	7:G:163:HIS:ND1	2.33	0.43
8:H:169:LEU:HD22	8:H:249:ILE:CD1	2.47	0.43
9:I:90:HIS:HE1	9:I:226:TYR:HA	1.81	0.43
9:I:208:MET:HE3	9:I:223:PHE:CD2	2.51	0.43
12:L:38:GLN:O	12:L:39:ALA:HB3	2.17	0.43
12:L:48:ARG:HH11	12:L:48:ARG:HG2	1.83	0.43
12:L:218:ILE:HA	12:L:222:PHE:HD2	1.84	0.43
14:N:15:LYS:HD2	14:N:16:PRO:HD2	1.99	0.43
14:N:216:TYR:CG	14:N:217:PHE:N	2.87	0.43
15:O:12:LEU:HD13	15:O:131:MET:HE3	2.00	0.43
17:Q:74:GLY:H	17:Q:98:ASP:HB2	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:170:LEU:HA	17:Q:173:ALA:HB3	2.01	0.43
17:Q:172:LEU:HA	17:Q:175:SER:HB3	2.00	0.43
19:S:7:LEU:HD22	19:S:10:LEU:CD1	2.43	0.43
21:U:95:LEU:HD23	21:U:148:LEU:CD2	2.47	0.43
22:V:23:ASN:HB3	22:V:26:LEU:HB3	2.00	0.43
22:V:56:LYS:HD3	22:V:56:LYS:C	2.44	0.43
22:V:166:LEU:HD23	22:V:167:SER:N	2.34	0.43
23:W:175:GLN:HA	23:W:175:GLN:NE2	2.34	0.43
26:Z:97:SER:OG	26:Z:103:TYR:HA	2.18	0.43
29:CA:70:GLU:C	29:CA:72:ALA:N	2.77	0.43
32:FA:77:LYS:HB3	32:FA:78:LEU:H	1.42	0.43
36:JA:89:THR:HB	36:JA:116:GLY:O	2.19	0.43
37:KA:42:GLN:CA	37:KA:45:LEU:HD12	2.39	0.43
37:KA:47:LYS:N	37:KA:71:VAL:HB	2.33	0.43
40:NA:60:LEU:C	40:NA:63:ASN:HB3	2.44	0.43
49:WA:233:THR:HG22	49:WA:234:LEU:N	2.32	0.43
51:YA:208:GLN:O	51:YA:209:ASN:HB2	2.18	0.43
52:ZA:35:TRP:CZ2	52:ZA:37:PRO:HA	2.54	0.43
52:ZA:222:TYR:CD1	71:SB:14:PRO:HG2	2.53	0.43
53:AB:61:GLU:C	53:AB:63:GLY:H	2.26	0.43
54:BB:181:VAL:HG22	54:BB:227:VAL:HG22	2.01	0.43
56:DB:70:PRO:HA	56:DB:98:ARG:HH22	1.80	0.43
59:GB:76:LEU:O	59:GB:80:LEU:HG	2.19	0.43
61:IB:58:CYS:SG	61:IB:60:PHE:HB2	2.58	0.43
64:LB:110:LEU:O	64:LB:112:ILE:HG12	2.18	0.43
65:MB:110:GLU:O	68:PB:119:ILE:HG12	2.18	0.43
66:NB:86:ALA:HB2	66:NB:116:LEU:HD12	2.01	0.43
72:TB:17:ALA:HB1	72:TB:25:VAL:CG1	2.49	0.43
77:YB:38:PRO:HD3	77:YB:76:GLY:O	2.19	0.43
80:BC:55:ARG:HD3	80:BC:56:MET:H	1.84	0.43
82:DC:102:LEU:HD12	82:DC:103:ILE:N	2.34	0.43
82:DC:737:GLU:C	82:DC:739:ALA:H	2.25	0.43
1:A:72:A:C3'	1:A:73:U:C5'	2.93	0.43
1:A:175:G:N2	1:A:176:C:C5	2.87	0.43
1:A:208:U:H2'	1:A:209:U:C6	2.54	0.43
1:A:410:A:N1	1:A:423:G:O6	2.52	0.43
1:A:1025:A:C6	1:A:1027:A:H1'	2.54	0.43
1:A:1042:G:H1	1:A:1076:A:H61	1.67	0.43
2:B:47:C:H3'	2:B:48:A:H2'	2.00	0.43
2:B:635:G:H2'	2:B:636:C:C5'	2.49	0.43
2:B:672:A:OP1	22:V:55:SER:HA	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:674:G:H8	2:B:674:G:O5'	2.02	0.43
2:B:971:G:O2'	2:B:1371:G:N3	2.50	0.43
2:B:1002:A:H2	2:B:1003:A:N6	2.17	0.43
2:B:1055:A:H5"	4:D:100:C:C2'	2.49	0.43
2:B:1161:G:H21	36:JA:56:GLY:HA2	1.84	0.43
2:B:1203:A:N6	2:B:1301:A:OP1	2.52	0.43
2:B:1528:G:OP2	2:B:1528:G:C8	2.71	0.43
2:B:1650:G:H5'	6:F:68:LYS:HE2	2.01	0.43
2:B:2130:G:C2'	2:B:2131:A:H5'	2.49	0.43
2:B:2155:G:H4'	6:F:238:ILE:O	2.19	0.43
2:B:2333:C:H2'	2:B:2334:U:O4'	2.19	0.43
2:B:2384:A:H2	20:T:96:LYS:CE	2.32	0.43
2:B:2384:A:C3'	2:B:2385:G:H5"	2.49	0.43
2:B:3034:C:C2'	2:B:3035:A:H5'	2.49	0.43
2:B:3127:A:C3'	2:B:3128:G:H8	2.29	0.43
2:B:3150:A:H5'	7:G:130:PHE:H	1.83	0.43
2:B:3232:G:H2'	2:B:3233:C:H6	1.78	0.43
2:B:3305:A:H2'	2:B:3306:U:O4'	2.18	0.43
3:C:29:U:H2'	3:C:30:C:C6	2.54	0.43
4:D:36:C:C5'	9:I:155:THR:HG23	2.48	0.43
4:D:99:G:OP2	24:X:53:LYS:HG2	2.17	0.43
5:E:91:LYS:HZ3	5:E:123:LEU:HD21	1.82	0.43
6:F:51:ASP:HB2	6:F:58:LEU:HG	2.01	0.43
6:F:127:ALA:HB2	6:F:134:VAL:HG11	2.00	0.43
8:H:200:THR:CG2	8:H:202:ARG:HH22	2.32	0.43
8:H:208:VAL:HB	8:H:250:TRP:CA	2.44	0.43
8:H:276:LEU:HA	8:H:277:PRO:HD2	1.65	0.43
8:H:295:ILE:O	8:H:299:ILE:HD13	2.18	0.43
8:H:326:ARG:HD2	8:H:327:LEU:CD1	2.49	0.43
10:J:58:LEU:CD2	10:J:64:LEU:HB2	2.48	0.43
11:K:53:LYS:O	11:K:57:THR:HG23	2.19	0.43
11:K:102:VAL:HG13	11:K:126:LEU:HD11	2.01	0.43
11:K:137:GLY:O	11:K:139:PRO:CD	2.67	0.43
12:L:136:LEU:O	12:L:140:VAL:HG23	2.18	0.43
12:L:203:VAL:CG2	12:L:204:ARG:H	2.19	0.43
13:M:49:ASN:O	13:M:51:GLN:N	2.51	0.43
13:M:57:VAL:HG12	13:M:58:HIS:N	2.34	0.43
13:M:67:ALA:O	13:M:70:THR:HG22	2.19	0.43
13:M:189:GLU:HG3	13:M:190:ASP:N	2.33	0.43
15:O:172:LEU:O	15:O:173:ASP:CB	2.65	0.43
19:S:77:LYS:CG	19:S:78:GLY:H	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:163:LYS:O	21:U:164:LYS:HB3	2.19	0.43
31:EA:89:VAL:HG13	31:EA:90:GLU:OE1	2.19	0.43
35:IA:101:ALA:O	35:IA:102:LYS:HB2	2.19	0.43
45:SA:15:ARG:HA	45:SA:18:ARG:NH1	2.34	0.43
46:TA:36:PHE:HB3	46:TA:41:ARG:HH11	1.82	0.43
49:WA:90:ARG:CB	49:WA:92:TRP:NE1	2.80	0.43
50:XA:139:VAL:CG2	52:ZA:62:PRO:HG3	2.47	0.43
52:ZA:206:THR:HG23	52:ZA:206:THR:O	2.18	0.43
54:BB:25:GLY:O	54:BB:26:CYS:HB2	2.17	0.43
57:EB:30:SER:O	57:EB:31:SER:CB	2.67	0.43
58:FB:44:HIS:CG	58:FB:58:LEU:HD12	2.53	0.43
61:IB:2:SER:N	61:IB:82:ARG:HG2	2.34	0.43
63:KB:84:ILE:HB	63:KB:85:PRO:HD2	2.00	0.43
68:PB:12:GLN:HG2	68:PB:15:LEU:HB3	2.00	0.43
76:XB:21:VAL:CG2	76:XB:32:LYS:HB3	2.49	0.43
78:ZB:28:VAL:HG21	78:ZB:44:VAL:CG1	2.48	0.43
78:ZB:61:ARG:HG2	78:ZB:62:GLU:N	2.34	0.43
79:AC:20:GLN:CA	79:AC:30:LEU:HD11	2.48	0.43
82:DC:58:ASP:O	82:DC:59:THR:HG23	2.18	0.43
82:DC:161:ASP:HB3	82:DC:213:SER:HB2	2.01	0.43
82:DC:333:ALA:HA	82:DC:336:GLU:OE2	2.19	0.43
82:DC:760:ARG:HB2	82:DC:763:THR:OG1	2.18	0.43
1:A:15:U:H2'	1:A:16:G:C5'	2.48	0.43
1:A:625:C:H2'	1:A:626:U:O4'	2.18	0.43
1:A:927:C:O2'	1:A:928:U:H5'	2.19	0.43
1:A:932:U:H5"	1:A:933:A:O4'	2.19	0.43
1:A:1042:G:H2'	1:A:1043:A:H5'	2.00	0.43
1:A:1043:A:N1	1:A:1075:C:N3	2.66	0.43
1:A:1125:A:OP1	45:SA:18:ARG:HD2	2.19	0.43
2:B:22:G:C4	2:B:23:A:C8	3.07	0.43
2:B:284:A:N1	2:B:306:A:H1'	2.33	0.43
2:B:289:A:O2'	2:B:290:G:H5'	2.19	0.43
2:B:836:A:H2'	2:B:837:A:C8	2.54	0.43
2:B:997:A:H4'	4:D:79:A:O2'	2.19	0.43
2:B:1209:G:H2'	2:B:1210:U:O4'	2.18	0.43
2:B:1542:G:C2'	2:B:1543:G:C8	2.98	0.43
2:B:1670:C:O3'	2:B:1860:G:C5'	2.65	0.43
2:B:1755:C:H2'	2:B:1756:C:C5'	2.48	0.43
2:B:1837:U:H6	2:B:1837:U:O5'	2.02	0.43
2:B:2423:U:H2'	2:B:2424:A:C8	2.54	0.43
2:B:2430:A:H2'	2:B:2431:C:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2649:A:C2	2:B:2758:A:H2	2.36	0.43
2:B:2775:U:H4'	2:B:2777:G:H22	1.84	0.43
2:B:2889:C:O2'	2:B:2890:A:H5'	2.18	0.43
2:B:3083:G:H2'	2:B:3084:C:C6	2.54	0.43
2:B:3312:U:C5'	7:G:25:ILE:HD12	2.41	0.43
2:B:3320:A:H4'	7:G:174:LYS:HZ2	1.84	0.43
4:D:13:A:H2	9:I:21:ARG:HB2	1.83	0.43
4:D:102:A:H2'	4:D:103:A:O4'	2.19	0.43
5:E:69:GLY:HA3	5:E:73:ASP:CG	2.44	0.43
6:F:104:LEU:HG	6:F:107:VAL:HG21	2.01	0.43
7:G:119:TYR:OH	7:G:129:ALA:HB2	2.19	0.43
7:G:119:TYR:CE2	7:G:129:ALA:HB2	2.54	0.43
8:H:182:LEU:HB2	8:H:223:PRO:HB2	1.99	0.43
9:I:222:LEU:O	9:I:223:PHE:HB2	2.18	0.43
11:K:107:ARG:NH1	11:K:115:THR:HB	2.34	0.43
13:M:52:LEU:HD23	13:M:53:ILE:H	1.83	0.43
13:M:74:LEU:O	13:M:78:MET:HB2	2.18	0.43
13:M:84:LYS:HG3	13:M:191:LEU:HB3	2.00	0.43
15:O:92:ARG:HD3	15:O:94:ARG:HE	1.84	0.43
16:P:86:LYS:HE3	16:P:104:ILE:CD1	2.49	0.43
17:Q:54:LEU:HB3	17:Q:95:ILE:HG23	2.01	0.43
17:Q:126:PHE:HA	17:Q:127:PRO:HD3	1.85	0.43
18:R:22:LEU:HD23	18:R:64:VAL:HG11	1.99	0.43
18:R:68:LEU:HD13	18:R:90:VAL:HG23	2.01	0.43
29:CA:44:PRO:HB2	29:CA:46:TYR:CD2	2.54	0.43
30:DA:36:SER:O	30:DA:37:LYS:C	2.62	0.43
32:FA:75:LEU:CD1	32:FA:117:ARG:H	2.19	0.43
34:HA:44:ILE:HB	34:HA:53:LYS:HD3	2.00	0.43
34:HA:69:TYR:N	34:HA:69:TYR:CD1	2.87	0.43
36:JA:71:HIS:ND1	36:JA:93:ALA:HB2	2.34	0.43
38:LA:11:ASN:ND2	38:LA:11:ASN:C	2.77	0.43
38:LA:19:LYS:HB2	38:LA:35:VAL:CB	2.33	0.43
39:MA:38:ARG:HB2	39:MA:38:ARG:HH11	1.80	0.43
41:OA:47:TYR:HB3	41:OA:49:TRP:NE1	2.34	0.43
48:VA:118:ASP:N	48:VA:161:ALA:HB2	2.33	0.43
48:VA:171:SER:O	48:VA:175:LEU:HG	2.19	0.43
49:WA:132:LYS:HB3	49:WA:134:TRP:HE1	1.84	0.43
50:XA:139:VAL:HG22	50:XA:139:VAL:O	2.19	0.43
51:YA:38:PHE:HE1	51:YA:74:GLN:CB	2.32	0.43
51:YA:44:GLY:HA2	64:LB:14:PHE:CD1	2.53	0.43
51:YA:151:LYS:HB3	51:YA:153:HIS:CD2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:137:ILE:HA	55:CB:140:THR:OG1	2.19	0.43
55:CB:142:PRO:HA	55:CB:214:LYS:HG3	2.01	0.43
58:FB:58:LEU:O	58:FB:59:ARG:CB	2.65	0.43
59:GB:123:HIS:O	59:GB:127:VAL:HG23	2.18	0.43
60:HB:50:THR:HA	60:HB:55:VAL:HG13	2.01	0.43
60:HB:61:TRP:O	60:HB:62:GLN:C	2.62	0.43
61:IB:2:SER:HB2	61:IB:82:ARG:H	1.84	0.43
61:IB:118:GLN:HG2	61:IB:119:VAL:H	1.84	0.43
67:OB:5:ARG:H	67:OB:5:ARG:HD3	1.82	0.43
70:RB:22:ILE:HD11	70:RB:116:VAL:HG12	1.99	0.43
73:UB:112:LYS:HE2	73:UB:112:LYS:CA	2.49	0.43
75:WB:41:ILE:HG13	75:WB:42:LEU:HD12	2.00	0.43
76:XB:9:GLY:HA3	76:XB:34:LYS:HD2	2.01	0.43
76:XB:23:CYS:CB	76:XB:28:LYS:O	2.67	0.43
82:DC:27:HIS:HA	82:DC:138:GLN:OE1	2.19	0.43
82:DC:351:TYR:CD1	82:DC:352:ARG:N	2.86	0.43
82:DC:353:ALA:O	82:DC:356:LEU:HB2	2.19	0.43
82:DC:403:GLY:H	82:DC:450:ALA:HB2	1.84	0.43
82:DC:746:VAL:HG11	82:DC:784:LEU:CD1	2.48	0.43
1:A:119:A:H2'	1:A:120:U:O4'	2.19	0.42
1:A:144:U:H5	56:DB:137:ARG:HH22	1.66	0.42
1:A:478:A:H5'	59:GB:127:VAL:CG2	2.49	0.42
1:A:500:C:H2'	1:A:501:U:O4'	2.19	0.42
1:A:787:G:H3'	1:A:788:A:C8	2.54	0.42
1:A:825:U:H2'	1:A:826:U:O4'	2.19	0.42
1:A:1127:G:H2'	1:A:1128:C:C6	2.54	0.42
1:A:1434:U:H5"	79:AC:24:CYS:HB2	2.01	0.42
1:A:1517:U:H2'	1:A:1518:C:H5	1.84	0.42
2:B:153:U:H5"	2:B:154:U:OP1	2.19	0.42
2:B:409:A:H5"	2:B:410:U:OP2	2.19	0.42
2:B:532:A:H2	2:B:560:G:H22	1.67	0.42
2:B:632:G:N2	37:KA:23:ASN:OD1	2.45	0.42
2:B:725:G:H2'	2:B:726:G:C4'	2.49	0.42
2:B:830:A:H2'	2:B:831:G:H5'	2.01	0.42
2:B:1125:U:H2'	2:B:1126:G:O4'	2.19	0.42
2:B:1557:A:H5"	12:L:54:GLU:OE1	2.19	0.42
2:B:1606:U:H5'	38:LA:8:ARG:NH1	2.34	0.42
2:B:1643:A:C5'	38:LA:66:SER:OG	2.66	0.42
2:B:2162:U:H2'	2:B:2163:C:C6	2.52	0.42
2:B:2249:G:N3	2:B:2250:G:H1'	2.34	0.42
2:B:2362:C:O5'	2:B:2362:C:H6	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2582:C:H2'	2:B:2583:C:C6	2.54	0.42
2:B:2593:A:H4'	2:B:2594:C:C6	2.54	0.42
2:B:2762:A:C6	2:B:2800:G:C8	3.07	0.42
2:B:2829:U:H3	2:B:2861:U:H3	1.67	0.42
2:B:2921:U:C6	2:B:2923:U:OP2	2.72	0.42
2:B:3009:G:O2'	2:B:3010:U:H5'	2.18	0.42
2:B:3058:U:C5'	35:IA:25:PHE:CZ	2.91	0.42
3:C:23:U:H5"	30:DA:13:ARG:CG	2.47	0.42
4:D:76:A:N6	4:D:103:A:C8	2.81	0.42
5:E:9:VAL:HG12	5:E:180:VAL:HG22	2.01	0.42
6:F:112:ILE:HG21	47:UA:79:VAL:HG11	2.01	0.42
6:F:186:PHE:HA	6:F:196:TRP:HZ3	1.84	0.42
7:G:236:LYS:NZ	27:AA:45:ARG:HH12	2.16	0.42
8:H:36:HIS:HA	8:H:242:ALA:HB2	2.00	0.42
8:H:156:LEU:HD22	8:H:251:THR:CG2	2.49	0.42
9:I:49:TYR:HB3	9:I:64:ILE:HG22	2.01	0.42
9:I:68:THR:HG22	9:I:70:THR:H	1.83	0.42
9:I:103:LEU:O	9:I:103:LEU:HD23	2.19	0.42
11:K:46:GLU:O	11:K:49:ALA:HB3	2.19	0.42
11:K:69:ALA:HB1	11:K:74:SER:O	2.19	0.42
11:K:92:ILE:HG23	11:K:93:ASN:CG	2.44	0.42
11:K:145:ARG:HG2	11:K:149:TYR:CD1	2.54	0.42
11:K:195:PHE:O	11:K:199:ASN:CB	2.65	0.42
12:L:72:PRO:HB2	12:L:74:THR:CG2	2.44	0.42
12:L:75:ILE:O	12:L:76:ALA:HB3	2.19	0.42
12:L:82:LEU:HA	12:L:222:PHE:CZ	2.46	0.42
12:L:132:VAL:HG23	12:L:200:LEU:HD13	2.01	0.42
13:M:20:ILE:O	18:R:8:LYS:HB2	2.18	0.42
14:N:51:HIS:CD2	25:Y:160:ILE:HG23	2.53	0.42
14:N:193:ASP:OD2	14:N:198:LYS:HE2	2.18	0.42
19:S:118:SER:HA	19:S:131:GLU:O	2.19	0.42
19:S:137:PRO:C	19:S:143:ARG:HD2	2.44	0.42
21:U:29:THR:HA	21:U:32:THR:CB	2.49	0.42
22:V:103:ALA:HB3	22:V:106:PHE:CZ	2.54	0.42
22:V:157:PRO:O	22:V:158:HIS:HB2	2.18	0.42
22:V:174:ARG:HB2	32:FA:56:VAL:HG21	1.99	0.42
23:W:96:ILE:HG23	23:W:100:ARG:NH1	2.34	0.42
28:BA:33:ASN:CG	28:BA:34:SER:N	2.76	0.42
31:EA:127:ASN:CB	31:EA:131:PHE:CE1	3.00	0.42
34:HA:53:LYS:O	34:HA:57:GLU:HG3	2.19	0.42
40:NA:95:ALA:HA	40:NA:99:ARG:HB2	1.99	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:UA:88:GLU:HA	47:UA:91:GLU:HB2	2.00	0.42
48:VA:15:LEU:HB2	48:VA:86:PHE:CE2	2.54	0.42
48:VA:91:GLU:HB2	48:VA:96:ILE:CG2	2.49	0.42
48:VA:180:PRO:C	48:VA:182:THR:H	2.27	0.42
49:WA:167:VAL:O	49:WA:183:LEU:HD12	2.19	0.42
50:XA:57:LEU:O	50:XA:60:ALA:HB3	2.18	0.42
50:XA:108:THR:O	50:XA:109:ASN:HB3	2.19	0.42
51:YA:196:GLU:O	51:YA:199:ASN:HB3	2.19	0.42
51:YA:218:LEU:HD22	51:YA:218:LEU:C	2.44	0.42
52:ZA:110:HIS:N	52:ZA:139:ILE:HD13	2.34	0.42
52:ZA:226:THR:C	52:ZA:228:ASN:H	2.26	0.42
53:AB:75:LYS:HB3	60:HB:22:VAL:CG2	2.49	0.42
54:BB:36:HIS:CG	54:BB:85:GLY:HA3	2.53	0.42
56:DB:52:ILE:HG23	56:DB:109:LEU:HD21	2.00	0.42
57:EB:181:ILE:HG22	57:EB:182:VAL:N	2.34	0.42
58:FB:22:ARG:HG3	58:FB:23:LYS:H	1.82	0.42
58:FB:48:THR:CG2	58:FB:54:LYS:HB2	2.49	0.42
64:LB:81:VAL:CG2	64:LB:115:ILE:HA	2.49	0.42
64:LB:84:ARG:HB3	64:LB:84:ARG:NH1	2.33	0.42
67:OB:58:MET:O	67:OB:61:ILE:HB	2.18	0.42
68:PB:46:VAL:HG21	68:PB:73:MET:SD	2.58	0.42
69:QB:53:TRP:HA	69:QB:56:LYS:HD2	2.01	0.42
72:TB:82:LYS:O	72:TB:83:ILE:C	2.61	0.42
82:DC:296:ILE:CB	82:DC:297:PRO:CD	2.97	0.42
82:DC:382:VAL:HG11	82:DC:396:ALA:HB1	2.01	0.42
82:DC:384:LYS:NZ	82:DC:516:PRO:HG3	2.34	0.42
82:DC:588:LEU:CB	82:DC:688:ILE:HA	2.46	0.42
1:A:218:A:H3'	1:A:219:A:C5'	2.46	0.42
1:A:478:A:O2'	59:GB:124:HIS:ND1	2.47	0.42
1:A:617:U:H5'	1:A:1031:U:H4'	1.98	0.42
1:A:625:C:N4	1:A:974:A:H61	2.17	0.42
1:A:825:U:H3	1:A:847:A:H61	1.68	0.42
1:A:862:A:H5'	72:TB:56:HIS:O	2.19	0.42
1:A:1007:C:H5"	64:LB:135:ARG:HG3	2.02	0.42
1:A:1501:C:H5"	69:QB:103:LYS:NZ	2.34	0.42
1:A:1676:U:H5"	58:FB:58:LEU:CD2	2.49	0.42
2:B:381:U:H2'	2:B:382:U:C6	2.54	0.42
2:B:399:A:C2'	2:B:400:G:H5'	2.49	0.42
2:B:570:A:H2'	2:B:571:U:H6	1.79	0.42
2:B:1028:U:H3'	2:B:1029:G:C5'	2.49	0.42
2:B:1138:U:H4'	11:K:97:PRO:CD	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1213:G:C4'	24:X:90:MET:HE2	2.48	0.42
2:B:1258:U:C1'	48:VA:42:ARG:HH12	2.32	0.42
2:B:1275:C:H2'	2:B:1276:U:O4'	2.19	0.42
2:B:1288:U:HO2'	2:B:1289:G:H8	1.66	0.42
2:B:1311:G:H2'	2:B:1312:C:C6	2.54	0.42
2:B:1792:C:H5"	6:F:184:ARG:CZ	2.49	0.42
2:B:1825:G:OP1	42:PA:48:SER:HB2	2.19	0.42
2:B:2154:U:H2'	2:B:2155:G:C8	2.54	0.42
2:B:2166:A:P	19:S:76:PRO:HA	2.58	0.42
2:B:2284:C:C5	2:B:2285:C:C4	3.07	0.42
2:B:2467:G:H2'	2:B:2468:A:C8	2.54	0.42
2:B:2489:C:H5	2:B:2490:C:H41	1.67	0.42
2:B:2581:U:H2'	2:B:2582:C:C5	2.52	0.42
2:B:2727:A:N1	32:FA:43:ILE:HG23	2.33	0.42
2:B:2771:U:C3'	2:B:2772:C:H5"	2.49	0.42
2:B:2789:U:H2'	2:B:2790:A:H8	1.84	0.42
2:B:3109:G:C2'	2:B:3110:C:H5'	2.49	0.42
2:B:3349:C:H2'	2:B:3350:C:C6	2.54	0.42
6:F:28:LYS:HA	6:F:115:ASN:HD21	1.83	0.42
6:F:129:ALA:C	6:F:169:ILE:HB	2.43	0.42
11:K:155:LYS:O	11:K:156:ILE:HG13	2.19	0.42
12:L:217:THR:O	12:L:221:ASN:HB2	2.20	0.42
15:O:54:VAL:HG21	15:O:59:ILE:HD11	2.01	0.42
15:O:101:ASN:CG	15:O:130:VAL:HA	2.44	0.42
15:O:125:MET:HB2	15:O:127:PHE:HE1	1.83	0.42
18:R:20:VAL:HB	18:R:70:PHE:HE1	1.85	0.42
18:R:100:ALA:HA	18:R:103:ILE:HD11	2.01	0.42
19:S:174:ILE:O	19:S:174:ILE:HG23	2.19	0.42
20:T:122:GLN:O	20:T:123:ALA:HB2	2.18	0.42
21:U:24:VAL:HG23	21:U:144:SER:OG	2.19	0.42
21:U:122:ALA:HB2	21:U:145:HIS:CG	2.54	0.42
22:V:104:LEU:CD2	22:V:105:ARG:N	2.82	0.42
22:V:138:LEU:O	22:V:138:LEU:HD13	2.19	0.42
23:W:6:THR:O	23:W:10:LEU:HD13	2.18	0.42
23:W:134:HIS:C	23:W:136:ARG:H	2.26	0.42
25:Y:11:THR:CG2	25:Y:55:LYS:HB3	2.49	0.42
26:Z:26:GLY:C	26:Z:28:PHE:H	2.26	0.42
27:AA:29:SER:HB3	27:AA:111:GLY:CA	2.49	0.42
31:EA:102:GLU:HA	31:EA:107:ARG:HH21	1.84	0.42
34:HA:48:THR:HG23	34:HA:49:PRO:HD2	2.00	0.42
34:HA:74:ASN:HA	34:HA:77:LEU:CB	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:41:VAL:HA	36:JA:46:PHE:CD2	2.55	0.42
40:NA:89:GLU:C	40:NA:90:MET:HE2	2.44	0.42
47:UA:20:SER:HA	47:UA:23:ARG:NH1	2.34	0.42
50:XA:61:ALA:HA	50:XA:64:ILE:HG13	2.01	0.42
50:XA:143:VAL:C	50:XA:144:ILE:HG13	2.44	0.42
50:XA:193:GLN:O	50:XA:195:TRP:N	2.52	0.42
51:YA:115:ARG:O	76:XB:39:MET:HE2	2.19	0.42
52:ZA:99:LYS:HA	52:ZA:117:THR:CB	2.49	0.42
52:ZA:147:ASN:O	52:ZA:148:LEU:C	2.62	0.42
53:AB:8:LYS:HG2	70:RB:61:LYS:CD	2.49	0.42
53:AB:105:MET:HE2	53:AB:108:LYS:HB3	2.02	0.42
53:AB:135:GLU:N	53:AB:157:LEU:HD11	2.34	0.42
54:BB:49:ARG:HG3	54:BB:55:ALA:O	2.19	0.42
54:BB:125:LYS:HA	54:BB:159:THR:CA	2.47	0.42
55:CB:117:THR:HG23	55:CB:195:ALA:N	2.35	0.42
56:DB:58:LYS:O	56:DB:59:GLN:CB	2.65	0.42
59:GB:150:LEU:O	59:GB:152:SER:N	2.52	0.42
61:IB:118:GLN:HG2	61:IB:119:VAL:N	2.33	0.42
64:LB:118:VAL:O	64:LB:120:PRO:HD3	2.19	0.42
65:MB:42:ARG:O	65:MB:46:ALA:HB2	2.19	0.42
65:MB:56:PHE:HZ	65:MB:94:VAL:HG21	1.84	0.42
76:XB:54:SER:HA	76:XB:57:SER:OG	2.20	0.42
82:DC:20:ARG:HH21	82:DC:339:VAL:HG13	1.84	0.42
82:DC:337:MET:HA	82:DC:340:LEU:HB2	2.01	0.42
82:DC:465:LYS:HZ1	82:DC:512:SER:HA	1.84	0.42
1:A:150:U:H2'	1:A:151:G:O4'	2.19	0.42
1:A:198:A:H2'	1:A:199:G:C5'	2.49	0.42
1:A:372:G:H1'	1:A:612:U:N3	2.34	0.42
1:A:629:U:N3	1:A:971:A:N6	2.67	0.42
1:A:773:C:H4'	1:A:774:A:C5'	2.28	0.42
1:A:1782:A:H3'	1:A:1783:C:O4'	2.19	0.42
2:B:6:A:H3'	2:B:7:C:C5	2.55	0.42
2:B:19:U:H4'	19:S:138:GLN:OE1	2.19	0.42
2:B:200:C:N4	2:B:217:U:C2	2.88	0.42
2:B:357:A:H1'	8:H:80:GLY:O	2.19	0.42
2:B:853:G:N2	23:W:130:ASN:OD1	2.52	0.42
2:B:860:G:H2'	2:B:2133:U:H1'	2.01	0.42
2:B:911:C:H5"	6:F:15:ILE:CD1	2.48	0.42
2:B:990:U:C3'	2:B:991:G:H5"	2.48	0.42
2:B:1119:C:H1'	2:B:1154:A:C4	2.55	0.42
2:B:1186:G:O2'	2:B:1187:C:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1507:G:H1'	21:U:139:TYR:HE1	1.81	0.42
2:B:1647:A:C2	2:B:1809:A:H1'	2.53	0.42
2:B:1751:G:C4	42:PA:26:LYS:HE3	2.54	0.42
2:B:1779:C:C2	23:W:89:LEU:HA	2.54	0.42
2:B:1792:C:H4'	6:F:184:ARG:HG3	2.01	0.42
2:B:1851:G:H2'	2:B:1852:G:O4'	2.20	0.42
2:B:1911:A:H1'	2:B:2333:C:H4'	2.00	0.42
2:B:2137:U:O4	2:B:2142:A:H8	2.02	0.42
2:B:2162:U:H2'	2:B:2163:C:O4'	2.19	0.42
2:B:2491:A:O2'	5:E:205:VAL:HG21	2.18	0.42
2:B:2524:A:H1'	2:B:2525:G:N7	2.34	0.42
2:B:2529:A:H2	2:B:2581:U:O2	2.02	0.42
2:B:3243:A:H4'	7:G:95:THR:HB	2.00	0.42
2:B:3275:U:H3'	2:B:3276:G:H5"	2.00	0.42
2:B:3363:U:O2'	2:B:3364:C:H5'	2.18	0.42
4:D:112:G:H2'	4:D:113:C:C6	2.54	0.42
6:F:186:PHE:HD1	6:F:196:TRP:CZ3	2.37	0.42
6:F:223:SER:O	6:F:237:LEU:N	2.52	0.42
8:H:216:VAL:HG23	8:H:217:LYS:N	2.34	0.42
9:I:84:PRO:HA	9:I:89:THR:HA	2.00	0.42
9:I:160:PHE:CE1	9:I:179:ARG:HB3	2.54	0.42
10:J:13:GLU:OE1	36:JA:90:LYS:HD3	2.19	0.42
10:J:132:ALA:HA	10:J:135:VAL:CG2	2.49	0.42
11:K:85:PHE:HB2	11:K:116:PHE:CE1	2.54	0.42
15:O:94:ARG:C	15:O:96:PHE:N	2.77	0.42
17:Q:49:ARG:HH21	17:Q:49:ARG:CB	2.33	0.42
17:Q:76:THR:HB	17:Q:79:GLU:CG	2.49	0.42
18:R:105:GLN:HG2	18:R:109:ARG:CZ	2.49	0.42
19:S:112:ASN:OD1	19:S:113:LEU:HD22	2.20	0.42
20:T:27:LEU:C	20:T:29:ASN:H	2.25	0.42
22:V:30:VAL:O	22:V:34:THR:HG23	2.18	0.42
24:X:77:VAL:HG11	24:X:106:LEU:HD22	2.01	0.42
24:X:83:SER:C	24:X:85:SER:H	2.28	0.42
24:X:152:LEU:N	24:X:153:PRO:HD3	2.34	0.42
27:AA:130:ALA:HA	27:AA:133:SER:OG	2.19	0.42
37:KA:72:THR:OG1	37:KA:84:THR:HG23	2.20	0.42
38:LA:36:LYS:O	38:LA:37:LYS:HB3	2.20	0.42
42:PA:46:ARG:HG3	42:PA:47:GLY:N	2.33	0.42
43:QA:10:LYS:HA	43:QA:13:MET:HE3	2.01	0.42
49:WA:258:THR:HG22	49:WA:275:ARG:HH12	1.85	0.42
51:YA:70:LEU:HD13	51:YA:79:HIS:HB3	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:143:TYR:CZ	52:ZA:151:PRO:HG3	2.54	0.42
52:ZA:152:HIS:HB3	52:ZA:174:ARG:CG	2.47	0.42
52:ZA:185:LYS:HZ2	59:GB:22:SER:HB3	1.81	0.42
53:AB:143:ARG:HG2	53:AB:143:ARG:NH2	2.35	0.42
54:BB:123:LEU:HD11	54:BB:173:ILE:CD1	2.48	0.42
54:BB:123:LEU:HD23	54:BB:228:ILE:HA	2.01	0.42
55:CB:51:VAL:HG11	55:CB:64:VAL:HG11	2.01	0.42
57:EB:59:ALA:HA	57:EB:91:ILE:HG23	2.02	0.42
63:KB:84:ILE:HG22	63:KB:135:LEU:HD21	2.00	0.42
63:KB:86:GLU:HG3	63:KB:87:ASP:N	2.34	0.42
69:QB:117:SER:HB2	69:QB:123:ARG:H	1.84	0.42
74:VB:105:ARG:HD3	74:VB:109:LYS:NZ	2.34	0.42
82:DC:433:ARG:NH1	82:DC:433:ARG:HB3	2.33	0.42
82:DC:598:SER:HA	82:DC:601:ILE:HD12	2.01	0.42
1:A:29:U:H2'	1:A:30:G:H8	1.84	0.42
1:A:219:A:OP1	1:A:219:A:H4'	2.18	0.42
1:A:417:A:H4'	1:A:418:G:O4'	2.19	0.42
1:A:865:A:H4'	1:A:1035:G:H5'	2.01	0.42
1:A:924:A:H2'	1:A:925:G:H8	1.84	0.42
1:A:1719:A:H2'	1:A:1720:G:O4'	2.20	0.42
2:B:355:A:H1'	2:B:365:A:N6	2.34	0.42
2:B:562:C:H5"	24:X:71:LYS:HG3	2.00	0.42
2:B:664:U:H4'	8:H:106:TRP:O	2.19	0.42
2:B:1193:A:C2	2:B:1317:A:N6	2.85	0.42
2:B:1226:G:O2'	2:B:3117:C:H5'	2.19	0.42
2:B:1239:C:P	16:P:57:LYS:HE3	2.59	0.42
2:B:1445:U:C2	2:B:1446:A:N7	2.87	0.42
2:B:1523:U:O2'	29:CA:111:ASN:HB3	2.19	0.42
2:B:1725:C:H5"	47:UA:36:ARG:HH12	1.84	0.42
2:B:2652:U:O3'	46:TA:89:LYS:HG3	2.18	0.42
2:B:2731:U:H2'	2:B:2732:G:H8	1.78	0.42
2:B:2856:G:H2'	2:B:2857:C:O4'	2.19	0.42
2:B:2868:U:H2'	2:B:2869:U:C6	2.55	0.42
2:B:3111:U:H1'	13:M:152:GLU:OE2	2.20	0.42
2:B:3127:A:H2'	2:B:3128:G:O4'	2.19	0.42
2:B:3169:U:H2'	2:B:3170:A:C1'	2.48	0.42
2:B:3182:G:O2'	20:T:161:LYS:HD3	2.19	0.42
3:C:41:A:C2'	3:C:42:G:H5'	2.32	0.42
6:F:82:VAL:HG23	47:UA:65:ALA:CB	2.50	0.42
7:G:243:HIS:CD2	7:G:244:ARG:HD3	2.54	0.42
8:H:23:PRO:CB	8:H:258:LEU:HB3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:84:ARG:C	8:H:87:GLN:HB3	2.44	0.42
8:H:243:HIS:O	8:H:244:LEU:HB2	2.19	0.42
9:I:37:VAL:HG22	9:I:50:ARG:HH21	1.84	0.42
9:I:87:GLY:HA3	9:I:243:ALA:HB2	2.00	0.42
9:I:211:LEU:HD11	9:I:223:PHE:CZ	2.54	0.42
12:L:42:PRO:HG2	12:L:44:ARG:CG	2.49	0.42
12:L:55:TYR:CE2	12:L:56:VAL:HG23	2.55	0.42
13:M:122:LYS:C	13:M:123:ILE:HG13	2.45	0.42
14:N:6:ALA:C	14:N:8:CYS:H	2.27	0.42
14:N:42:THR:HG23	14:N:45:GLU:HB2	2.01	0.42
18:R:96:ALA:HA	18:R:101:LYS:HZ1	1.82	0.42
21:U:16:SER:HB3	21:U:149:VAL:HG22	2.02	0.42
21:U:154:GLU:CD	21:U:154:GLU:H	2.27	0.42
22:V:7:SER:O	22:V:8:LYS:C	2.63	0.42
22:V:51:ALA:HA	22:V:54:LEU:CD1	2.48	0.42
29:CA:114:VAL:HB	43:QA:10:LYS:CE	2.36	0.42
31:EA:46:ILE:C	31:EA:46:ILE:HD12	2.44	0.42
31:EA:70:PRO:HD2	31:EA:115:LYS:CD	2.48	0.42
38:LA:83:ASN:C	38:LA:85:VAL:H	2.26	0.42
43:QA:2:ALA:C	43:QA:4:GLN:N	2.77	0.42
43:QA:49:MET:HG3	43:QA:51:ILE:H	1.83	0.42
44:RA:95:VAL:HG23	44:RA:124:LYS:CG	2.48	0.42
46:TA:68:VAL:CG1	46:TA:85:LEU:HB2	2.50	0.42
49:WA:115:ILE:HG13	49:WA:121:MET:O	2.19	0.42
49:WA:205:SER:C	49:WA:207:ASP:H	2.25	0.42
52:ZA:144:TRP:HB3	52:ZA:152:HIS:CE1	2.54	0.42
54:BB:46:VAL:O	54:BB:51:ARG:HG3	2.19	0.42
54:BB:100:ARG:NH2	54:BB:118:GLU:O	2.52	0.42
54:BB:102:VAL:HG22	54:BB:103:TYR:N	2.34	0.42
54:BB:118:GLU:C	54:BB:120:SER:H	2.28	0.42
56:DB:82:SER:O	56:DB:83:CYS:HB2	2.19	0.42
58:FB:12:SER:HB2	58:FB:16:ALA:CB	2.49	0.42
59:GB:135:ALA:HB2	59:GB:160:PRO:HD3	2.00	0.42
61:IB:59:PRO:HG3	61:IB:66:ILE:CG1	2.47	0.42
64:LB:17:ALA:O	64:LB:30:VAL:HA	2.19	0.42
66:NB:41:PRO:O	66:NB:42:GLU:HB3	2.19	0.42
68:PB:62:THR:OG1	68:PB:65:GLU:HG3	2.18	0.42
69:QB:4:VAL:HG21	69:QB:140:LEU:HD13	2.01	0.42
74:VB:15:ASN:HB3	74:VB:20:ARG:O	2.19	0.42
75:WB:47:TYR:HA	75:WB:50:ILE:HD12	1.99	0.42
75:WB:87:GLY:O	75:WB:88:ILE:C	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:ZB:18:ARG:HG2	78:ZB:26:THR:HG23	2.01	0.42
1:A:162:A:P	56:DB:83:CYS:H	2.41	0.42
1:A:381:C:H3'	1:A:381:C:OP2	2.19	0.42
1:A:389:G:N2	1:A:1732:A:H5'	2.34	0.42
1:A:451:A:C8	1:A:453:U:H6	2.38	0.42
1:A:628:G:O6	1:A:969:C:H5"	2.20	0.42
1:A:869:A:H1'	63:KB:48:SER:OG	2.19	0.42
1:A:1407:U:H2'	1:A:1408:G:C8	2.54	0.42
1:A:1551:U:H6	65:MB:43:ARG:NH2	2.18	0.42
1:A:1783:C:H2'	1:A:1783:C:O2	2.17	0.42
2:B:10:C:H1'	12:L:55:TYR:HD1	1.84	0.42
2:B:81:C:H2'	2:B:82:C:C6	2.53	0.42
2:B:216:G:O2'	2:B:217:U:H5'	2.19	0.42
2:B:220:G:N1	2:B:1390:A:C2	2.88	0.42
2:B:710:A:N6	2:B:755:A:O3'	2.52	0.42
2:B:996:A:H2'	2:B:997:A:O4'	2.20	0.42
2:B:1033:U:H2'	2:B:1034:U:O4'	2.19	0.42
2:B:1305:U:N1	7:G:257:PRO:HG3	2.34	0.42
2:B:1508:C:O5'	2:B:2354:C:H4'	2.19	0.42
2:B:1591:G:H2'	2:B:1592:G:C8	2.44	0.42
2:B:2112:U:H4'	2:B:2113:A:O4'	2.19	0.42
2:B:2296:A:H2	2:B:2918:G:N3	2.17	0.42
2:B:2370:G:C6	2:B:2371:G:C5	3.07	0.42
2:B:2372:A:C3'	2:B:2373:A:C5'	2.97	0.42
2:B:2479:C:OP2	2:B:2480:A:C8	2.72	0.42
2:B:2857:C:H2'	2:B:2858:U:C6	2.55	0.42
2:B:3042:U:H4'	27:AA:45:ARG:HB2	2.02	0.42
2:B:3045:G:OP1	7:G:12:GLY:HA2	2.20	0.42
2:B:3215:A:O4'	10:J:161:ALA:HB2	2.20	0.42
2:B:3217:C:O2	2:B:3217:C:C2'	2.68	0.42
2:B:3287:U:O4	2:B:3288:G:C6	2.72	0.42
7:G:49:TYR:HA	7:G:335:ILE:HA	2.02	0.42
8:H:187:LEU:HD23	8:H:187:LEU:HA	1.93	0.42
9:I:82:GLU:C	9:I:84:PRO:HD2	2.43	0.42
9:I:252:ALA:O	9:I:253:PHE:HB3	2.19	0.42
10:J:149:ILE:C	10:J:151:LYS:H	2.27	0.42
13:M:47:LYS:H	18:R:7:VAL:HG11	1.85	0.42
14:N:123:HIS:HB3	14:N:124:GLY:H	1.68	0.42
15:O:84:LEU:O	15:O:88:GLU:HA	2.19	0.42
20:T:146:GLY:O	20:T:147:TRP:C	2.61	0.42
21:U:58:ILE:CD1	21:U:88:VAL:HG21	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:107:THR:O	22:V:111:ARG:HB2	2.19	0.42
24:X:71:LYS:O	24:X:73:LYS:HD2	2.19	0.42
26:Z:39:ASP:OD2	26:Z:40:HIS:N	2.52	0.42
29:CA:64:GLU:HG2	29:CA:65:GLN:HG3	2.00	0.42
29:CA:142:ILE:O	29:CA:142:ILE:HG12	2.20	0.42
30:DA:22:ALA:O	30:DA:27:ARG:HG3	2.19	0.42
31:EA:95:VAL:HG11	31:EA:110:ALA:HA	2.02	0.42
35:IA:72:ARG:O	35:IA:96:VAL:HG13	2.19	0.42
39:MA:100:VAL:HG22	39:MA:101:THR:H	1.83	0.42
40:NA:57:LEU:CD2	40:NA:73:ALA:HB2	2.49	0.42
40:NA:61:ILE:C	40:NA:63:ASN:N	2.76	0.42
41:OA:50:GLY:O	41:OA:53:ALA:HB3	2.19	0.42
42:PA:3:ARG:C	42:PA:53:THR:HG22	2.45	0.42
47:UA:55:TRP:HZ2	47:UA:67:GLY:H	1.66	0.42
49:WA:42:LEU:HD23	49:WA:42:LEU:HA	1.86	0.42
50:XA:26:ALA:C	50:XA:27:ARG:HG3	2.45	0.42
50:XA:59:LEU:HD12	50:XA:62:ARG:CD	2.48	0.42
50:XA:126:PRO:C	50:XA:130:ALA:HB2	2.44	0.42
51:YA:92:GLN:HE21	51:YA:92:GLN:HB3	1.60	0.42
51:YA:127:VAL:HG13	51:YA:135:LEU:HD12	2.01	0.42
54:BB:252:ARG:CD	54:BB:256:ARG:HD2	2.49	0.42
57:EB:51:VAL:C	57:EB:53:GLY:H	2.28	0.42
58:FB:81:VAL:HG23	58:FB:94:ASN:HA	2.00	0.42
64:LB:16:VAL:HG22	64:LB:32:ASP:O	2.20	0.42
66:NB:51:PRO:C	66:NB:53:LEU:H	2.27	0.42
69:QB:9:VAL:HG11	69:QB:14:PHE:CG	2.54	0.42
73:UB:7:ARG:H	73:UB:7:ARG:HD2	1.85	0.42
73:UB:18:HIS:O	73:UB:22:ASN:ND2	2.52	0.42
73:UB:76:LEU:CD1	73:UB:81:LYS:HB2	2.48	0.42
75:WB:78:ILE:HD12	75:WB:78:ILE:N	2.31	0.42
75:WB:96:SER:HB2	75:WB:97:LYS:HD2	2.01	0.42
76:XB:87:ARG:HH22	76:XB:94:ASN:HB3	1.85	0.42
79:AC:10:HIS:CD2	79:AC:12:ARG:HD2	2.54	0.42
82:DC:32:LYS:O	82:DC:36:THR:HG23	2.19	0.42
82:DC:797:VAL:HA	86:DC:903:SO1:H54	2.02	0.42
83:EC:6831:U:H2'	83:EC:6832:G:C5'	2.50	0.42
1:A:11:A:H2'	1:A:12:U:H5'	2.00	0.42
1:A:162:A:OP1	56:DB:82:SER:HA	2.18	0.42
1:A:477:A:N6	1:A:539:G:C2	2.86	0.42
1:A:931:C:P	76:XB:70:LYS:HD2	2.59	0.42
1:A:961:U:H4'	63:KB:48:SER:HA	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1646:C:H4'	2:B:2259:A:N6	2.35	0.42
2:B:44:U:O2	2:B:92:G:H5"	2.20	0.42
2:B:117:U:H5	12:L:145:ASN:ND2	2.18	0.42
2:B:155:G:H4'	2:B:156:G:H2'	2.01	0.42
2:B:580:C:H2'	2:B:581:U:C6	2.54	0.42
2:B:679:U:H1'	2:B:788:C:O2'	2.20	0.42
2:B:893:C:H5"	2:B:894:G:H5'	2.01	0.42
2:B:1352:A:H5"	2:B:1352:A:N3	2.35	0.42
2:B:1508:C:P	2:B:2354:C:H4'	2.59	0.42
2:B:1894:U:H2'	2:B:1895:A:O4'	2.20	0.42
2:B:1896:A:N1	2:B:3093:C:C5	2.87	0.42
2:B:1915:A:H4'	23:W:83:GLY:C	2.44	0.42
2:B:2348:A:C8	2:B:2349:U:C5	3.08	0.42
2:B:2481:G:OP1	5:E:98:LYS:HB2	2.19	0.42
2:B:2670:G:C5'	9:I:5:LYS:HZ3	2.32	0.42
2:B:2700:G:OP1	25:Y:17:ARG:HB2	2.18	0.42
2:B:3047:U:OP1	7:G:222:LYS:HB3	2.20	0.42
3:C:49:G:O4'	39:MA:42:PRO:HG3	2.20	0.42
3:C:141:C:H2'	3:C:142:C:C6	2.54	0.42
6:F:53:GLY:CA	6:F:191:LEU:HB3	2.49	0.42
6:F:70:ARG:NE	6:F:72:ARG:HG2	2.35	0.42
6:F:82:VAL:HG23	47:UA:65:ALA:HB3	2.01	0.42
6:F:136:ILE:HA	6:F:148:VAL:HA	2.01	0.42
6:F:209:HIS:HA	6:F:210:PRO:HD3	1.91	0.42
7:G:61:ASP:HA	7:G:69:LYS:HD3	2.01	0.42
8:H:60:THR:HG22	8:H:62:ALA:H	1.84	0.42
8:H:71:VAL:HG11	8:H:76:ARG:NH1	2.35	0.42
8:H:85:SER:C	8:H:87:GLN:N	2.78	0.42
8:H:182:LEU:HD13	8:H:223:PRO:HD2	2.01	0.42
9:I:21:ARG:O	9:I:25:GLU:HG2	2.20	0.42
9:I:107:ARG:NH1	9:I:248:ARG:HG3	2.34	0.42
9:I:294:ALA:HB1	14:N:217:PHE:HB3	2.01	0.42
11:K:102:VAL:O	11:K:106:LEU:HB2	2.19	0.42
11:K:240:VAL:C	11:K:242:SER:N	2.76	0.42
12:L:58:VAL:CG1	19:S:32:GLN:HB3	2.50	0.42
12:L:154:ALA:HA	12:L:196:ALA:CB	2.50	0.42
19:S:98:LEU:HD23	19:S:99:ARG:H	1.84	0.42
20:T:127:LEU:CD2	24:X:156:VAL:HB	2.49	0.42
20:T:130:LYS:O	20:T:133:ARG:HG2	2.20	0.42
21:U:30:ARG:NH1	21:U:31:GLU:OE2	2.52	0.42
23:W:181:ARG:HA	23:W:185:LEU:HB3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:44:GLU:HG2	26:Z:44:GLU:O	2.20	0.42
28:BA:9:SER:HB3	28:BA:36:SER:OG	2.20	0.42
32:FA:70:LYS:O	32:FA:72:VAL:HG13	2.19	0.42
32:FA:111:LYS:HG2	32:FA:129:PHE:C	2.44	0.42
34:HA:22:LYS:CE	34:HA:94:GLU:HB2	2.49	0.42
38:LA:74:ARG:HH11	38:LA:74:ARG:HG2	1.84	0.42
47:UA:55:TRP:HZ2	47:UA:70:THR:O	2.02	0.42
48:VA:159:VAL:HG22	48:VA:160:ASP:H	1.83	0.42
51:YA:33:LYS:HA	51:YA:43:VAL:HG22	2.00	0.42
52:ZA:126:ARG:HH11	52:ZA:126:ARG:HG3	1.84	0.42
52:ZA:140:ARG:NH2	71:SB:1:MET:HE2	2.34	0.42
52:ZA:182:PRO:C	52:ZA:185:LYS:HB3	2.45	0.42
56:DB:188:ARG:HH11	56:DB:188:ARG:HG2	1.84	0.42
60:HB:3:MET:CB	60:HB:4:PRO:HD2	2.36	0.42
64:LB:31:THR:HG22	64:LB:38:THR:HA	2.02	0.42
66:NB:44:LEU:HD22	66:NB:44:LEU:N	2.35	0.42
66:NB:50:GLU:HA	66:NB:53:LEU:CD1	2.50	0.42
66:NB:65:ILE:HG21	66:NB:85:ILE:HD13	2.01	0.42
67:OB:53:TYR:O	67:OB:56:HIS:HB3	2.19	0.42
67:OB:58:MET:SD	67:OB:61:ILE:HD12	2.60	0.42
68:PB:45:LEU:HD22	68:PB:85:PHE:CE2	2.55	0.42
72:TB:41:MET:CG	72:TB:129:VAL:HG11	2.49	0.42
76:XB:32:LYS:HG3	76:XB:33:ASP:OD2	2.19	0.42
78:ZB:36:THR:O	78:ZB:37:SER:OG	2.37	0.42
82:DC:121:VAL:HB	82:DC:453:ILE:HD11	2.02	0.42
82:DC:224:GLN:HG2	82:DC:328:LEU:HD23	2.02	0.42
82:DC:356:LEU:HD13	82:DC:401:PHE:CD1	2.54	0.42
82:DC:382:VAL:HG13	82:DC:397:PHE:N	2.34	0.42
82:DC:385:MET:HB3	82:DC:395:TYR:O	2.20	0.42
82:DC:436:LEU:HA	82:DC:454:ILE:HD11	2.00	0.42
82:DC:822:ALA:O	82:DC:825:ARG:HB3	2.20	0.42
82:DC:831:GLU:HG3	82:DC:832:VAL:N	2.34	0.42
1:A:110:U:H4'	1:A:796:A:C2	2.54	0.42
1:A:264:G:OP1	1:A:265:A:H5'	2.20	0.42
1:A:751:G:H2'	1:A:752:A:C8	2.54	0.42
1:A:774:A:H2'	1:A:775:G:H4'	2.02	0.42
1:A:783:G:HO2'	1:A:784:C:H5	1.67	0.42
1:A:1100:G:C2	72:TB:75:ILE:HD12	2.54	0.42
1:A:1382:A:C4'	70:RB:57:ARG:HB3	2.50	0.42
1:A:1796:C:H2'	76:XB:92:ARG:O	2.20	0.42
2:B:127:G:H2'	2:B:128:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:277:G:N3	19:S:93:LYS:HG3	2.35	0.42
2:B:531:G:H2'	2:B:532:A:O4'	2.20	0.42
2:B:1006:A:C2'	2:B:1007:U:H5'	2.50	0.42
2:B:1155:C:O2'	2:B:1156:C:H5'	2.20	0.42
2:B:1454:A:H8	2:B:1454:A:O5'	2.02	0.42
2:B:1473:G:C5'	23:W:23:TRP:NE1	2.77	0.42
2:B:1605:A:O2'	2:B:1607:U:H2'	2.20	0.42
2:B:1647:A:H61	2:B:1808:G:H1'	1.83	0.42
2:B:1779:C:O2	23:W:90:PRO:HD2	2.19	0.42
2:B:1887:A:C5'	7:G:227:GLU:HA	2.50	0.42
2:B:2432:A:H2'	2:B:2433:U:C6	2.55	0.42
2:B:2521:U:N3	2:B:2523:A:H5"	2.35	0.42
2:B:2527:G:C6	2:B:2528:G:C6	3.08	0.42
2:B:2529:A:C2	2:B:2581:U:N3	2.83	0.42
2:B:2703:A:H5"	2:B:2704:A:H5"	2.00	0.42
2:B:3030:G:H2'	2:B:3031:G:O4'	2.20	0.42
5:E:196:LYS:HA	5:E:196:LYS:HZ3	1.85	0.42
8:H:58:HIS:CD2	8:H:98:ARG:HG3	2.55	0.42
8:H:247:PHE:CZ	8:H:249:ILE:HG23	2.54	0.42
9:I:110:LEU:O	9:I:116:ASP:HB2	2.19	0.42
9:I:213:ASP:OD2	9:I:214:ASP:N	2.51	0.42
12:L:135:GLY:HA3	12:L:138:HIS:CB	2.46	0.42
14:N:49:CYS:HA	14:N:138:VAL:O	2.20	0.42
14:N:116:ARG:HB3	14:N:116:ARG:HH11	1.82	0.42
14:N:117:GLY:O	14:N:118:ALA:C	2.62	0.42
15:O:36:VAL:HG21	15:O:123:PHE:HE2	1.84	0.42
17:Q:131:LYS:HB3	17:Q:131:LYS:HZ3	1.83	0.42
21:U:2:ALA:O	21:U:3:ARG:CB	2.65	0.42
24:X:110:MET:O	24:X:114:HIS:HB2	2.20	0.42
25:Y:62:GLY:HA3	25:Y:76:ILE:HG12	2.00	0.42
28:BA:55:PHE:O	28:BA:58:HIS:CB	2.64	0.42
29:CA:114:VAL:CB	43:QA:10:LYS:HE2	2.35	0.42
30:DA:17:LYS:O	30:DA:21:THR:HG23	2.19	0.42
40:NA:45:ARG:CA	40:NA:49:GLY:HA2	2.48	0.42
41:OA:39:TYR:CZ	41:OA:40:PRO:HB3	2.55	0.42
43:QA:31:THR:O	43:QA:32:ASN:C	2.62	0.42
44:RA:95:VAL:HG23	44:RA:124:LYS:CB	2.50	0.42
46:TA:93:LEU:H	46:TA:93:LEU:HG	1.66	0.42
48:VA:181:PHE:O	48:VA:183:PHE:HD2	2.03	0.42
49:WA:21:THR:HB	49:WA:69:GLN:CD	2.45	0.42
49:WA:69:GLN:HG2	49:WA:111:MET:SD	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:39:ASN:O	50:XA:47:VAL:HG23	2.20	0.42
50:XA:59:LEU:HA	50:XA:62:ARG:HD2	2.01	0.42
51:YA:43:VAL:HG23	51:YA:44:GLY:N	2.33	0.42
51:YA:76:SER:HB3	51:YA:78:ASP:OD1	2.20	0.42
52:ZA:59:HIS:CE1	52:ZA:236:PRO:HG2	2.54	0.42
52:ZA:69:ILE:CD1	52:ZA:133:LYS:HD2	2.50	0.42
53:AB:158:ILE:H	53:AB:158:ILE:CD1	2.25	0.42
54:BB:86:PHE:O	54:BB:87:MET:HB2	2.19	0.42
55:CB:42:LEU:HG	55:CB:46:TRP:H	1.84	0.42
55:CB:60:ASP:CA	55:CB:65:ARG:HH22	2.30	0.42
58:FB:74:LYS:HE2	58:FB:112:TRP:CB	2.50	0.42
59:GB:3:ARG:O	59:GB:4:ALA:C	2.63	0.42
59:GB:36:LEU:HD22	59:GB:41:GLU:HB2	2.02	0.42
61:IB:130:PRO:HB3	61:IB:136:ARG:NE	2.34	0.42
64:LB:117:ASP:OD2	64:LB:119:THR:HG23	2.19	0.42
65:MB:108:ARG:HA	65:MB:109:PRO:HD3	1.86	0.42
68:PB:17:LEU:O	68:PB:18:LEU:HB2	2.19	0.42
68:PB:27:LYS:HG3	68:PB:56:LYS:O	2.19	0.42
68:PB:100:THR:HG22	68:PB:108:LYS:HD2	2.00	0.42
69:QB:52:GLY:O	69:QB:54:PHE:N	2.52	0.42
71:SB:6:GLY:O	71:SB:7:GLN:C	2.61	0.42
74:VB:99:LYS:HE3	74:VB:99:LYS:HA	2.02	0.42
78:ZB:64:ARG:HB3	78:ZB:65:ARG:H	1.67	0.42
82:DC:144:ARG:HG3	82:DC:192:TYR:CE2	2.55	0.42
82:DC:280:PRO:HA	82:DC:283:ARG:CD	2.48	0.42
82:DC:356:LEU:HD22	82:DC:401:PHE:CE1	2.54	0.42
1:A:78:A:N3	56:DB:178:LEU:HD23	2.35	0.42
1:A:79:C:H2'	1:A:80:A:C4'	2.50	0.42
1:A:164:A:H2'	1:A:165:G:H8	1.83	0.42
1:A:213:A:N6	1:A:253:A:N6	2.68	0.42
1:A:225:A:H2'	1:A:226:A:C8	2.55	0.42
1:A:392:G:O2'	1:A:393:C:H5'	2.20	0.42
1:A:1037:C:O2'	1:A:1038:U:H5'	2.20	0.42
1:A:1041:G:H2'	1:A:1042:G:H1'	2.00	0.42
1:A:1097:U:O4	52:ZA:201:ASN:HB2	2.20	0.42
1:A:1128:C:H2'	1:A:1129:U:C5'	2.45	0.42
1:A:1258:U:H5'	60:HB:2:LEU:HB2	2.02	0.42
1:A:1280:C:H1'	70:RB:70:THR:CB	2.45	0.42
1:A:1426:C:H3'	1:A:1427:A:H4'	2.02	0.42
1:A:1579:U:H2'	1:A:1580:C:C6	2.55	0.42
1:A:1776:A:H2'	1:A:1777:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:146:U:H3'	2:B:146:U:OP2	2.20	0.42
2:B:222:A:N3	2:B:222:A:H2'	2.34	0.42
2:B:343:U:O2	2:B:658:G:H1'	2.20	0.42
2:B:433:A:C2'	2:B:434:U:H5'	2.50	0.42
2:B:681:U:OP1	8:H:115:HIS:HB3	2.20	0.42
2:B:693:A:H2'	2:B:694:C:C6	2.55	0.42
2:B:731:U:H2'	2:B:732:C:H6	1.83	0.42
2:B:793:C:H2'	2:B:794:U:H5'	2.02	0.42
2:B:806:A:C2	2:B:2813:A:O4'	2.72	0.42
2:B:815:G:H2'	2:B:906:A:N6	2.35	0.42
2:B:899:U:H2'	2:B:900:G:C8	2.46	0.42
2:B:996:A:H2	4:D:79:A:C2	2.38	0.42
2:B:1110:U:H2'	2:B:1111:U:H6	1.79	0.42
2:B:1148:G:O2'	2:B:1171:G:H4'	2.20	0.42
2:B:1202:A:C2	2:B:2856:G:O2'	2.72	0.42
2:B:1494:U:H4'	2:B:1495:U:O4'	2.20	0.42
2:B:1528:G:H5"	2:B:1592:G:N2	2.34	0.42
2:B:1560:G:C2'	2:B:1561:G:H5'	2.49	0.42
2:B:1637:A:H2'	2:B:1638:A:C8	2.55	0.42
2:B:1690:C:H2'	2:B:1691:U:O4'	2.19	0.42
2:B:1714:A:H61	2:B:1730:G:H1'	1.85	0.42
2:B:1718:G:N2	2:B:1731:A:C4'	2.72	0.42
2:B:1718:G:H3'	2:B:1719:G:H8	1.85	0.42
2:B:1845:G:O2'	41:OA:5:THR:HG22	2.19	0.42
2:B:2128:C:C2'	2:B:2129:U:H5'	2.50	0.42
2:B:2149:A:H8	2:B:2149:A:O5'	2.03	0.42
2:B:2432:A:H2'	2:B:2433:U:O4'	2.20	0.42
2:B:2527:G:H2'	2:B:2528:G:C1'	2.50	0.42
2:B:2544:U:O2'	2:B:2545:C:C6	2.73	0.42
2:B:2821:C:H3'	2:B:2821:C:C6	2.55	0.42
2:B:2896:A:H4'	44:RA:95:VAL:HG11	2.00	0.42
2:B:3015:G:H2'	2:B:3016:A:H8	1.82	0.42
2:B:3103:A:H2'	2:B:3104:U:O4'	2.19	0.42
2:B:3174:A:C5	2:B:3279:A:H1'	2.55	0.42
4:D:112:G:H2'	4:D:113:C:C5	2.55	0.42
4:D:118:A:H2'	4:D:119:U:H6	1.84	0.42
6:F:30:ARG:HB3	6:F:30:ARG:NH1	2.35	0.42
6:F:137:ILE:O	6:F:147:ARG:HB2	2.19	0.42
7:G:243:HIS:C	7:G:244:ARG:HG2	2.44	0.42
8:H:22:LEU:HD22	8:H:26:PHE:CE2	2.55	0.42
8:H:330:TYR:O	8:H:333:VAL:HG12	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:113:LEU:HG	9:I:115:LEU:HD23	2.01	0.42
9:I:146:LEU:HD21	9:I:163:LEU:HD22	2.01	0.42
9:I:211:LEU:HB3	9:I:219:PHE:HB2	2.01	0.42
10:J:47:PHE:CE2	10:J:75:PRO:HD2	2.53	0.42
13:M:8:GLN:HG3	13:M:68:LEU:CD2	2.47	0.42
13:M:186:PHE:N	13:M:186:PHE:HD2	2.18	0.42
19:S:36:ILE:HD13	19:S:105:ARG:HD3	2.00	0.42
19:S:103:GLU:HB3	19:S:160:GLU:CB	2.40	0.42
20:T:47:PHE:CD1	20:T:47:PHE:C	2.97	0.42
20:T:124:LEU:HD23	20:T:127:LEU:CD1	2.49	0.42
24:X:1:MET:HB3	24:X:4:PHE:CE1	2.55	0.42
24:X:154:HIS:CA	24:X:170:THR:HB	2.50	0.42
27:AA:12:ARG:NH1	27:AA:13:ILE:O	2.53	0.42
30:DA:116:LYS:HA	30:DA:119:ILE:HD12	2.02	0.42
35:IA:49:VAL:HG13	35:IA:91:SER:HB2	2.02	0.42
36:JA:66:LEU:HD23	36:JA:72:LYS:HG3	2.00	0.42
38:LA:12:PRO:HG2	38:LA:13:TYR:CD2	2.53	0.42
42:PA:11:PHE:CE2	42:PA:52:TYR:HB3	2.55	0.42
48:VA:105:VAL:HB	48:VA:106:ALA:H	1.60	0.42
49:WA:222:LEU:HD11	49:WA:265:LEU:CD1	2.49	0.42
49:WA:261:LYS:HG2	49:WA:273:ASP:CG	2.45	0.42
54:BB:44:LEU:HG	54:BB:82:TYR:HB3	2.01	0.42
55:CB:189:THR:O	55:CB:193:THR:HG23	2.19	0.42
56:DB:159:ARG:CB	56:DB:170:THR:OG1	2.64	0.42
56:DB:211:LEU:C	56:DB:211:LEU:HD13	2.45	0.42
57:EB:153:LEU:CD2	57:EB:184:GLU:HB3	2.50	0.42
58:FB:122:GLY:O	58:FB:123:LYS:HB3	2.20	0.42
61:IB:115:PHE:CE1	61:IB:139:VAL:HG12	2.55	0.42
63:KB:115:LEU:HA	63:KB:118:ILE:CD1	2.50	0.42
63:KB:119:GLU:HG2	63:KB:123:HIS:ND1	2.35	0.42
63:KB:142:GLU:HG2	63:KB:145:THR:HG23	2.01	0.42
64:LB:39:ILE:O	64:LB:40:ALA:HB3	2.19	0.42
66:NB:18:ALA:HB2	66:NB:69:VAL:HG12	2.01	0.42
68:PB:18:LEU:HD11	68:PB:73:MET:HE3	2.02	0.42
73:UB:87:VAL:CG1	73:UB:124:VAL:HG21	2.46	0.42
74:VB:8:ARG:HH11	74:VB:28:LEU:HD11	1.85	0.42
74:VB:82:ALA:C	74:VB:84:LYS:H	2.27	0.42
82:DC:537:HIS:CD2	82:DC:538:LEU:N	2.88	0.42
1:A:472:U:O5'	1:A:472:U:H6	2.03	0.42
1:A:607:G:H21	1:A:614:C:H5"	1.85	0.42
1:A:647:G:N1	1:A:687:G:N2	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:899:G:H4'	64:LB:46:MET:HG2	2.01	0.42
1:A:1206:U:OP2	1:A:1207:C:H3'	2.20	0.42
1:A:1219:A:HO2'	60:HB:48:SER:HA	1.82	0.42
1:A:1297:G:H2'	1:A:1298:U:H2'	2.01	0.42
1:A:1305:U:O2	1:A:1305:U:C2'	2.67	0.42
1:A:1314:U:H4'	1:A:1315:U:H5	1.85	0.42
1:A:1338:C:H1'	1:A:1410:A:C4	2.54	0.42
2:B:4:U:O2'	2:B:5:G:H5'	2.20	0.42
2:B:23:A:H2'	2:B:24:G:C8	2.54	0.42
2:B:148:G:H2'	19:S:49:ARG:NH2	2.34	0.42
2:B:306:A:C2	2:B:2224:A:H2	2.37	0.42
2:B:363:G:H1'	8:H:79:GLY:CA	2.50	0.42
2:B:378:A:H2'	2:B:379:C:O4'	2.20	0.42
2:B:388:G:N2	21:U:101:ASN:HD21	2.17	0.42
2:B:631:U:H2'	2:B:632:G:C8	2.54	0.42
2:B:678:G:C2'	2:B:679:U:H5'	2.49	0.42
2:B:894:G:C2	2:B:1660:C:H5'	2.55	0.42
2:B:1493:G:N3	2:B:1493:G:H2'	2.35	0.42
2:B:1558:A:C2	29:CA:34:LEU:HD22	2.55	0.42
2:B:1639:C:H5"	38:LA:52:GLN:OE1	2.20	0.42
2:B:1654:A:C3'	2:B:1655:G:C5'	2.98	0.42
2:B:1832:C:O3'	43:QA:7:PHE:HD1	2.03	0.42
2:B:2160:G:H2'	2:B:2161:G:C8	2.55	0.42
2:B:2196:C:O3'	2:B:2270:A:O2'	2.38	0.42
2:B:2228:A:H2'	2:B:2229:A:O4'	2.20	0.42
2:B:2263:C:H2'	2:B:2264:U:O4'	2.19	0.42
2:B:2345:A:H5"	35:IA:24:SER:HA	2.02	0.42
2:B:2628:A:H2'	2:B:2629:U:H5"	2.01	0.42
2:B:2742:C:H4'	46:TA:20:HIS:CB	2.50	0.42
2:B:2838:A:H2'	2:B:2839:G:O4'	2.19	0.42
2:B:3235:C:H2'	2:B:3236:U:H5'	2.01	0.42
2:B:3285:C:H2'	2:B:3286:G:C5'	2.49	0.42
3:C:24:G:C8	30:DA:13:ARG:NE	2.88	0.42
4:D:47:C:H5'	9:I:203:HIS:CD2	2.55	0.42
4:D:48:U:O2'	4:D:49:G:H5'	2.20	0.42
6:F:37:ARG:C	6:F:38:HIS:CD2	2.98	0.42
6:F:88:ILE:HG22	6:F:89:TYR:N	2.34	0.42
7:G:25:ILE:H	7:G:25:ILE:CD1	2.32	0.42
7:G:192:VAL:O	7:G:195:ALA:HB3	2.19	0.42
7:G:281:LYS:H	7:G:325:LYS:HB3	1.85	0.42
9:I:51:LEU:N	9:I:144:VAL:HG22	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:64:ILE:HD13	9:I:142:PHE:CE1	2.55	0.42
11:K:114:GLY:O	11:K:205:PHE:CD2	2.71	0.42
11:K:120:THR:O	11:K:124:LEU:HB2	2.19	0.42
11:K:178:ILE:CD1	11:K:187:GLU:HB2	2.50	0.42
11:K:216:VAL:HG13	11:K:217:PRO:HD2	2.00	0.42
11:K:221:LYS:HB2	11:K:227:GLY:CA	2.47	0.42
11:K:240:VAL:HA	11:K:243:MET:HG2	2.02	0.42
12:L:161:GLU:HA	12:L:164:VAL:CG1	2.50	0.42
13:M:47:LYS:HD3	13:M:50:ASN:H	1.84	0.42
15:O:114:ILE:HD12	15:O:114:ILE:N	2.35	0.42
19:S:36:ILE:HD11	19:S:105:ARG:HH11	1.85	0.42
19:S:66:VAL:HG22	19:S:128:LYS:O	2.20	0.42
20:T:141:LEU:O	20:T:145:VAL:HG13	2.20	0.42
22:V:26:LEU:HD23	22:V:30:VAL:CG2	2.50	0.42
23:W:17:VAL:CG1	23:W:18:GLY:H	2.19	0.42
23:W:105:LEU:O	23:W:108:LYS:HG2	2.20	0.42
24:X:94:ILE:HG21	24:X:105:THR:OG1	2.20	0.42
30:DA:32:SER:HA	30:DA:49:PRO:CA	2.47	0.42
34:HA:30:THR:O	34:HA:34:LEU:HD13	2.20	0.42
34:HA:43:ILE:HG12	34:HA:68:TYR:HD2	1.85	0.42
44:RA:104:PRO:HB3	44:RA:105:PRO:HD2	2.02	0.42
46:TA:9:LYS:CG	46:TA:22:GLN:HA	2.50	0.42
49:WA:85:TRP:HB3	49:WA:109:ASP:OD1	2.20	0.42
49:WA:246:SER:HB2	49:WA:251:TRP:O	2.20	0.42
49:WA:255:ALA:CB	49:WA:292:LEU:HD22	2.43	0.42
51:YA:133:TYR:CD2	51:YA:181:LEU:HD11	2.54	0.42
53:AB:12:VAL:HG21	70:RB:63:LEU:CD1	2.50	0.42
54:BB:125:LYS:CA	54:BB:159:THR:HA	2.48	0.42
56:DB:121:LEU:HB2	56:DB:124:LEU:HB3	2.01	0.42
57:EB:97:ARG:O	57:EB:98:ILE:HB	2.20	0.42
58:FB:50:GLY:C	58:FB:52:ASN:N	2.77	0.42
59:GB:137:GLY:O	59:GB:138:LYS:HB3	2.20	0.42
60:HB:59:PHE:CZ	60:HB:62:GLN:HG2	2.54	0.42
63:KB:75:LEU:CD2	63:KB:81:ALA:HA	2.49	0.42
64:LB:62:LEU:HD23	64:LB:65:GLN:CD	2.45	0.42
67:OB:17:ILE:HG21	67:OB:69:ILE:HG21	2.02	0.42
69:QB:39:THR:HB	69:QB:57:ARG:CZ	2.50	0.42
72:TB:3:ARG:NH2	72:TB:28:ARG:HH11	2.03	0.42
72:TB:7:LEU:CB	72:TB:34:ILE:HG12	2.42	0.42
80:BC:29:LYS:HB3	80:BC:30:PRO:HD2	2.01	0.42
82:DC:720:ALA:O	82:DC:721:ASP:CB	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:48:G:O2'	1:A:49:C:H5'	2.20	0.42
1:A:50:C:H41	1:A:424:C:H2'	1.85	0.42
1:A:247:A:C2	61:IB:67:ARG:HB3	2.55	0.42
1:A:324:U:C1'	1:A:346:G:H21	2.33	0.42
1:A:424:C:C1'	1:A:427:C:H41	2.32	0.42
1:A:705:U:H2'	1:A:706:A:H8	1.85	0.42
1:A:1172:G:H1'	1:A:1570:A:C2	2.55	0.42
1:A:1341:A:O2'	1:A:1342:C:H5'	2.20	0.42
1:A:1400:A:H2'	1:A:1401:A:C8	2.55	0.42
1:A:1483:A:C2	1:A:1607:G:H1'	2.55	0.42
1:A:1616:G:N2	78:ZB:22:ARG:O	2.52	0.42
2:B:24:G:H5"	41:OA:58:THR:CG2	2.48	0.42
2:B:388:G:H2'	2:B:389:A:C8	2.55	0.42
2:B:418:A:H5'	2:B:629:U:O2'	2.19	0.42
2:B:517:G:C2'	2:B:518:G:H5'	2.50	0.42
2:B:607:A:O2'	8:H:322:GLN:HG3	2.20	0.42
2:B:628:A:C5'	2:B:1399:A:C5	3.03	0.42
2:B:682:U:H5	8:H:112:LYS:HG2	1.85	0.42
2:B:863:C:H2'	2:B:864:G:O4'	2.20	0.42
2:B:956:U:O2'	2:B:957:C:H5'	2.20	0.42
2:B:1073:U:H3	2:B:1085:A:H61	1.66	0.42
2:B:1174:G:C6	2:B:1175:C:C4	3.08	0.42
2:B:1221:A:H3'	2:B:1221:A:N3	2.35	0.42
2:B:1276:U:O2'	2:B:1277:C:H5'	2.20	0.42
2:B:1305:U:H5	7:G:256:HIS:HB3	1.85	0.42
2:B:1478:C:H2'	2:B:1479:U:C6	2.55	0.42
2:B:1506:A:H2'	2:B:1509:A:H61	1.85	0.42
2:B:1524:A:H5'	2:B:1608:C:OP1	2.20	0.42
2:B:1525:G:HO2'	2:B:1594:A:H2	1.63	0.42
2:B:1566:A:H2'	2:B:1567:U:C4'	2.50	0.42
2:B:1647:A:C2'	2:B:1648:A:H5'	2.49	0.42
2:B:1859:A:H8	2:B:1859:A:O5'	2.02	0.42
2:B:1889:G:C4	2:B:1890:U:C5	3.08	0.42
2:B:2594:C:H3'	2:B:2595:A:H5"	2.01	0.42
2:B:2814:G:H2'	2:B:2815:G:H8	1.81	0.42
2:B:3049:A:H2'	2:B:3050:U:H5'	2.02	0.42
2:B:3158:G:H1	2:B:3292:A:H2	1.59	0.42
2:B:3329:U:H2'	2:B:3330:A:H8	1.81	0.42
2:B:3367:C:P	28:BA:61:LYS:HE3	2.60	0.42
2:B:3379:C:H5"	7:G:314:TYR:O	2.20	0.42
2:B:3386:G:O2'	2:B:3387:U:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:27:U:H4'	8:H:51:ALA:CB	2.50	0.42
3:C:92:A:H2'	3:C:93:U:H5'	2.02	0.42
3:C:108:C:O5'	3:C:108:C:H6	2.02	0.42
3:C:147:U:H2'	3:C:148:G:O4'	2.20	0.42
4:D:87:G:H21	24:X:119:ARG:NH1	2.18	0.42
7:G:238:LEU:HD13	7:G:238:LEU:HA	1.83	0.42
8:H:126:ILE:HA	8:H:129:THR:CG2	2.48	0.42
9:I:33:ARG:O	9:I:37:VAL:HG23	2.20	0.42
9:I:109:THR:O	9:I:113:LEU:HB2	2.19	0.42
10:J:6:ALA:HA	10:J:7:PRO:HD2	1.89	0.42
10:J:165:LEU:CB	37:KA:6:ARG:O	2.63	0.42
11:K:127:LEU:C	11:K:129:LEU:H	2.27	0.42
13:M:41:ILE:HD13	13:M:41:ILE:HA	1.90	0.42
18:R:8:LYS:HB3	18:R:9:ALA:H	1.70	0.42
19:S:61:ILE:CA	19:S:134:LEU:HD13	2.43	0.42
19:S:68:ARG:HH12	19:S:123:GLN:HB2	1.83	0.42
20:T:82:LYS:HE3	20:T:85:ARG:CD	2.49	0.42
21:U:30:ARG:HH11	21:U:31:GLU:CD	2.28	0.42
21:U:88:VAL:HG12	21:U:88:VAL:O	2.20	0.42
22:V:177:GLY:O	22:V:185:LYS:HA	2.19	0.42
23:W:94:VAL:HG12	23:W:95:TRP:N	2.35	0.42
24:X:1:MET:HA	24:X:33:ASN:OD1	2.20	0.42
24:X:155:ARG:HH12	24:X:157:GLN:NE2	2.17	0.42
25:Y:43:LYS:O	25:Y:43:LYS:HG2	2.20	0.42
25:Y:48:ILE:HG13	25:Y:94:GLU:HB3	2.01	0.42
25:Y:124:VAL:O	25:Y:125:ALA:HB3	2.19	0.42
29:CA:68:THR:O	29:CA:69:SER:C	2.63	0.42
30:DA:21:THR:O	30:DA:23:PRO:CD	2.68	0.42
34:HA:50:VAL:HG22	34:HA:53:LYS:HE2	2.01	0.42
36:JA:20:HIS:CB	36:JA:42:VAL:HG21	2.50	0.42
36:JA:62:LYS:H	36:JA:62:LYS:HD2	1.84	0.42
36:JA:96:ILE:HG13	36:JA:121:ASN:HD21	1.85	0.42
41:OA:28:HIS:CD2	41:OA:31:LYS:H	2.38	0.42
46:TA:8:ARG:NH2	46:TA:83:LEU:HD13	2.35	0.42
48:VA:189:GLN:HG2	48:VA:190:VAL:H	1.83	0.42
49:WA:54:PHE:CZ	49:WA:300:THR:HG21	2.55	0.42
49:WA:142:ALA:HB1	49:WA:144:LEU:CD2	2.50	0.42
49:WA:222:LEU:HD11	49:WA:265:LEU:HD12	2.01	0.42
49:WA:222:LEU:HB3	49:WA:231:MET:SD	2.59	0.42
51:YA:69:CYS:HB2	64:LB:114:ARG:HD3	2.01	0.42
51:YA:193:ILE:HD13	51:YA:196:GLU:CD	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:57:PHE:CD2	52:ZA:138:PRO:HD3	2.54	0.42
55:CB:73:THR:CG2	55:CB:74:ALA:N	2.82	0.42
55:CB:220:VAL:C	55:CB:222:LYS:N	2.76	0.42
56:DB:61:PHE:HA	56:DB:62:PRO:HD2	1.84	0.42
57:EB:148:LYS:HE2	57:EB:179:LYS:CG	2.50	0.42
58:FB:85:PRO:HA	61:IB:11:ARG:HB3	2.02	0.42
59:GB:37:LYS:HB3	80:BC:33:ARG:CB	2.50	0.42
61:IB:16:GLN:NE2	61:IB:33:ARG:NH2	2.67	0.42
61:IB:93:TYR:CD1	61:IB:100:TYR:CE1	3.06	0.42
63:KB:37:ILE:HG23	63:KB:50:ILE:HD13	2.02	0.42
63:KB:65:VAL:O	63:KB:65:VAL:HG12	2.20	0.42
71:SB:16:LYS:C	71:SB:24:ILE:HG13	2.44	0.42
71:SB:34:ILE:HG21	71:SB:69:LEU:HD21	2.02	0.42
72:TB:65:LEU:HD13	72:TB:65:LEU:N	2.27	0.42
74:VB:41:ARG:HA	74:VB:44:LEU:HD12	2.02	0.42
75:WB:67:ASP:C	75:WB:69:LEU:N	2.77	0.42
82:DC:2:VAL:HG11	82:DC:78:TYR:CB	2.50	0.42
82:DC:48:ALA:O	82:DC:49:ALA:CB	2.68	0.42
82:DC:305:ILE:HD11	82:DC:327:PHE:HD1	1.85	0.42
82:DC:318:ALA:HA	82:DC:321:LYS:HD2	2.02	0.42
82:DC:360:PRO:CG	82:DC:363:ASP:HB2	2.49	0.42
82:DC:585:ARG:NH2	82:DC:840:ASP:HB3	2.34	0.42
1:A:108:A:H4'	1:A:363:G:O2'	2.20	0.41
1:A:249:U:O2	61:IB:18:HIS:HD2	2.03	0.41
1:A:391:A:O4'	1:A:1731:A:H5'	2.20	0.41
1:A:415:C:O2'	1:A:416:A:H5"	2.19	0.41
1:A:744:U:H2'	1:A:745:U:C6	2.55	0.41
1:A:985:G:H2'	1:A:986:G:H5'	2.01	0.41
1:A:1004:U:H3'	1:A:1005:A:C5'	2.49	0.41
1:A:1169:G:H2'	1:A:1170:G:H5'	2.02	0.41
1:A:1388:A:H4'	1:A:1389:C:O5'	2.20	0.41
1:A:1471:A:N3	1:A:1474:G:O2'	2.38	0.41
1:A:1489:U:O2	1:A:1489:U:O4'	2.38	0.41
1:A:1542:G:H5"	69:QB:87:GLY:CA	2.49	0.41
1:A:1763:A:C2'	1:A:1764:C:H5'	2.50	0.41
2:B:156:G:C8	17:Q:99:HIS:HB2	2.55	0.41
2:B:428:A:C1'	37:KA:25:PRO:HB2	2.50	0.41
2:B:562:C:H5"	24:X:71:LYS:CG	2.50	0.41
2:B:693:A:H2'	2:B:694:C:H6	1.84	0.41
2:B:768:C:C1'	17:Q:183:ARG:NH2	2.77	0.41
2:B:834:U:O2'	2:B:835:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:841:A:H5”	23:W:126:GLU:OE1	2.19	0.41
2:B:986:U:O2’	2:B:987:U:H5’	2.20	0.41
2:B:995:U:H2’	2:B:996:A:N7	2.34	0.41
2:B:1393:A:H8	2:B:1393:A:O5’	2.03	0.41
2:B:1509:A:O5’	2:B:1509:A:H8	2.03	0.41
2:B:1576:G:O2’	2:B:1577:G:H5’	2.20	0.41
2:B:1828:A:C2’	2:B:1829:G:C8	2.96	0.41
2:B:2155:G:H2’	2:B:2156:C:C6	2.55	0.41
2:B:2528:G:C2	2:B:2529:A:H1’	2.54	0.41
2:B:2853:A:O3’	14:N:64:ALA:HB2	2.20	0.41
2:B:2881:C:H4’	7:G:249:VAL:HG12	2.02	0.41
2:B:3189:G:O2’	2:B:3190:C:H5’	2.20	0.41
2:B:3281:U:H2’	2:B:3282:U:H6	1.84	0.41
2:B:3301:U:O2’	2:B:3302:U:H5’	2.19	0.41
3:C:36:G:H2’	3:C:37:A:C2	2.55	0.41
3:C:41:A:OP2	41:OA:64:MET:HA	2.19	0.41
4:D:37:G:H2’	4:D:38:U:C6	2.55	0.41
6:F:3:ARG:CB	6:F:207:VAL:O	2.67	0.41
7:G:127:LYS:C	7:G:129:ALA:H	2.28	0.41
7:G:273:HIS:HB2	7:G:275:ARG:HG2	2.01	0.41
7:G:280:HIS:HB3	7:G:324:VAL:CG2	2.50	0.41
7:G:343:TYR:N	7:G:343:TYR:HD1	2.18	0.41
8:H:207:VAL:HB	8:H:227:THR:HA	2.01	0.41
8:H:286:VAL:HG11	22:V:32:LEU:HB2	2.01	0.41
9:I:34:LYS:HD2	9:I:35:ARG:CD	2.50	0.41
9:I:125:VAL:HG13	9:I:244:HIS:NE2	2.34	0.41
10:J:111:LEU:O	10:J:114:LYS:HG2	2.19	0.41
10:J:165:LEU:N	37:KA:6:ARG:CA	2.79	0.41
11:K:152:GLY:O	11:K:163:LEU:HG	2.19	0.41
12:L:99:PRO:HG3	12:L:132:VAL:O	2.20	0.41
13:M:86:TYR:CZ	13:M:151:VAL:HG13	2.54	0.41
13:M:97:PHE:CB	13:M:118:LEU:HA	2.50	0.41
14:N:57:LEU:HG	14:N:129:VAL:O	2.19	0.41
14:N:75:TYR:HD2	14:N:154:ARG:NH1	2.17	0.41
14:N:174:THR:CG2	14:N:176:LEU:HB2	2.50	0.41
15:O:14:ILE:HD12	15:O:14:ILE:N	2.34	0.41
15:O:88:GLU:O	15:O:90:GLN:N	2.52	0.41
17:Q:67:ARG:HA	32:FA:105:LEU:HB3	2.02	0.41
19:S:47:LYS:NZ	19:S:47:LYS:HA	2.34	0.41
20:T:79:ILE:HD12	20:T:138:LEU:HD11	2.02	0.41
21:U:44:ALA:HA	21:U:47:TYR:CD1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:31:GLU:CG	23:W:32:ILE:HD12	2.39	0.41
23:W:176:ARG:HG3	23:W:176:ARG:NH1	2.35	0.41
25:Y:39:ILE:CD1	25:Y:102:ARG:HB2	2.49	0.41
26:Z:73:GLY:HA3	26:Z:103:TYR:CZ	2.55	0.41
27:AA:40:LYS:HB2	27:AA:57:MET:HB3	2.02	0.41
31:EA:50:PRO:CG	31:EA:68:ILE:HG12	2.50	0.41
34:HA:86:ARG:HE	47:UA:44:LYS:CG	2.32	0.41
39:MA:76:GLN:OE1	39:MA:80:LEU:HD13	2.20	0.41
46:TA:4:VAL:HG21	46:TA:91:PHE:CE2	2.55	0.41
47:UA:47:VAL:CG2	47:UA:57:CYS:HA	2.41	0.41
49:WA:135:THR:OG1	49:WA:141:LEU:HD23	2.20	0.41
49:WA:144:LEU:N	49:WA:144:LEU:HD22	2.35	0.41
49:WA:179:LYS:HD3	49:WA:181:TRP:CE2	2.54	0.41
51:YA:72:ASP:OD1	64:LB:114:ARG:HD2	2.20	0.41
53:AB:96:LEU:CD2	53:AB:131:ALA:HB2	2.50	0.41
54:BB:141:THR:HB	54:BB:143:ASP:OD1	2.20	0.41
55:CB:40:ILE:O	55:CB:42:LEU:HD22	2.19	0.41
56:DB:87:ARG:O	56:DB:88:ARG:HB2	2.20	0.41
58:FB:32:GLN:HA	58:FB:33:PRO:HD3	1.86	0.41
59:GB:42:ILE:HG23	59:GB:101:VAL:HG11	2.02	0.41
61:IB:109:VAL:HG21	61:IB:125:VAL:CG1	2.43	0.41
63:KB:20:ARG:HH12	63:KB:64:ARG:HD2	1.81	0.41
63:KB:23:PRO:O	63:KB:24:ALA:CB	2.67	0.41
63:KB:125:LEU:HD13	63:KB:128:TYR:HD2	1.85	0.41
64:LB:127:ARG:HD2	76:XB:22:ARG:NH2	2.35	0.41
67:OB:19:ARG:O	67:OB:20:TYR:HB2	2.20	0.41
68:PB:81:ILE:HG22	68:PB:81:ILE:O	2.20	0.41
72:TB:8:ALA:CA	72:TB:74:VAL:HG21	2.47	0.41
72:TB:20:THR:OG1	72:TB:22:LYS:HD3	2.20	0.41
75:WB:42:LEU:O	75:WB:43:ASP:C	2.63	0.41
82:DC:139:THR:O	82:DC:143:LEU:HB2	2.20	0.41
82:DC:244:LEU:HD22	82:DC:277:ILE:HD12	2.01	0.41
82:DC:342:LEU:HA	82:DC:343:PRO:HD2	1.86	0.41
82:DC:747:LEU:C	82:DC:749:LYS:H	2.28	0.41
82:DC:753:GLN:O	82:DC:754:VAL:C	2.63	0.41
1:A:346:G:H3'	1:A:347:G:H8	1.85	0.41
1:A:1162:C:H1'	78:ZB:22:ARG:HD3	2.01	0.41
1:A:1651:A:H2'	1:A:1652:C:H6	1.85	0.41
1:A:1678:A:O2'	1:A:1679:G:H5'	2.20	0.41
1:A:1760:G:H21	1:A:1782:A:H1'	1.84	0.41
2:B:126:U:H5"	19:S:140:LYS:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:244:G:OP1	17:Q:131:LYS:HA	2.19	0.41
2:B:351:A:C8	3:C:53:A:H2	2.38	0.41
2:B:730:C:C5'	22:V:136:ASN:HA	2.50	0.41
2:B:755:A:O2'	2:B:756:U:H5'	2.20	0.41
2:B:786:A:O3'	2:B:787:G:C8	2.70	0.41
2:B:1231:A:N6	2:B:1276:U:N3	2.68	0.41
2:B:1319:G:H2'	2:B:1320:C:C6	2.55	0.41
2:B:1393:A:H2'	2:B:1394:A:H5'	2.02	0.41
2:B:1446:A:N1	2:B:2356:A:C5'	2.82	0.41
2:B:1707:A:H2'	2:B:1708:C:C6	2.55	0.41
2:B:1829:G:O3'	2:B:1830:G:H8	2.04	0.41
2:B:2128:C:H2'	2:B:2129:U:H5'	2.02	0.41
2:B:2659:G:H2'	2:B:2660:G:O4'	2.19	0.41
2:B:2851:A:C2'	2:B:2852:C:H5'	2.47	0.41
2:B:2874:G:C5	2:B:2945:G:C8	3.08	0.41
2:B:3150:A:OP1	7:G:132:LYS:HB2	2.19	0.41
2:B:3360:C:H2'	2:B:3361:G:C8	2.55	0.41
3:C:41:A:O3'	41:OA:59:THR:HA	2.20	0.41
5:E:130:LYS:HA	83:EC:6774:U:O2	2.20	0.41
6:F:34:TYR:CD1	6:F:38:HIS:ND1	2.87	0.41
6:F:205:ASN:HB3	6:F:206:PRO:HD2	2.02	0.41
7:G:295:ALA:HB1	7:G:300:ARG:CA	2.50	0.41
7:G:312:VAL:C	7:G:314:TYR:H	2.28	0.41
10:J:22:ARG:HH11	10:J:22:ARG:CG	2.33	0.41
10:J:54:TYR:CD2	10:J:55:LEU:N	2.88	0.41
10:J:157:GLN:CD	10:J:157:GLN:N	2.79	0.41
11:K:88:ARG:CD	11:K:103:LEU:HD13	2.50	0.41
12:L:244:ALA:O	12:L:247:ASP:HB2	2.20	0.41
14:N:52:LEU:HA	14:N:165:ILE:HG22	2.02	0.41
14:N:196:PHE:O	14:N:197:VAL:HB	2.19	0.41
15:O:149:GLY:O	15:O:153:LYS:HB2	2.20	0.41
16:P:67:ARG:O	16:P:68:GLN:CB	2.68	0.41
16:P:125:LEU:H	16:P:125:LEU:HD12	1.85	0.41
20:T:39:GLU:N	20:T:106:GLU:OE1	2.54	0.41
20:T:41:LEU:HD23	20:T:138:LEU:HD23	2.02	0.41
23:W:132:PHE:CE1	23:W:138:LEU:HA	2.55	0.41
23:W:135:LYS:HA	23:W:138:LEU:CB	2.50	0.41
23:W:180:LYS:O	23:W:184:LEU:HB2	2.19	0.41
25:Y:152:ALA:HB1	25:Y:153:PRO:HD2	2.02	0.41
29:CA:55:ASN:HB2	29:CA:58:ASP:HB3	2.02	0.41
29:CA:98:ALA:O	29:CA:102:LEU:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CA:109:LYS:HB3	29:CA:125:ARG:CB	2.49	0.41
31:EA:42:LEU:HD21	31:EA:98:THR:OG1	2.20	0.41
31:EA:70:PRO:CD	31:EA:115:LYS:HD2	2.51	0.41
37:KA:17:GLN:H	37:KA:24:ASN:HB3	1.84	0.41
44:RA:96:CYS:HB3	44:RA:100:TYR:N	2.33	0.41
45:SA:2:ARG:HG2	45:SA:4:LYS:H	1.85	0.41
46:TA:15:LYS:O	46:TA:16:THR:HG23	2.20	0.41
47:UA:84:ARG:HB3	47:UA:84:ARG:CZ	2.50	0.41
48:VA:63:ILE:HA	48:VA:66:PHE:HB3	2.02	0.41
48:VA:128:MET:HE1	48:VA:175:LEU:HD13	2.02	0.41
49:WA:34:LEU:HD22	49:WA:73:LEU:CD2	2.49	0.41
49:WA:61:PHE:HZ	49:WA:94:VAL:HA	1.85	0.41
49:WA:81:LEU:HD21	49:WA:89:LEU:HD12	2.02	0.41
49:WA:179:LYS:HD3	49:WA:181:TRP:HE1	1.85	0.41
50:XA:123:VAL:CG1	50:XA:124:THR:H	2.30	0.41
50:XA:154:GLU:O	50:XA:155:PHE:HB2	2.20	0.41
52:ZA:167:VAL:HA	52:ZA:200:SER:HA	2.02	0.41
53:AB:107:PHE:HA	53:AB:110:LEU:HB2	2.02	0.41
53:AB:119:ALA:O	53:AB:123:VAL:HG23	2.20	0.41
54:BB:114:ILE:HB	54:BB:118:GLU:CD	2.45	0.41
55:CB:32:GLU:HG3	55:CB:33:VAL:N	2.35	0.41
55:CB:92:ARG:HB3	55:CB:172:ILE:CD1	2.51	0.41
58:FB:35:ASN:O	58:FB:36:THR:C	2.62	0.41
59:GB:36:LEU:HD13	59:GB:42:ILE:CG1	2.50	0.41
61:IB:109:VAL:HB	61:IB:137:PHE:HB2	2.02	0.41
63:KB:64:ARG:HG3	63:KB:64:ARG:HH11	1.85	0.41
66:NB:6:SER:HB3	66:NB:23:LYS:HB3	2.02	0.41
66:NB:69:VAL:CG1	66:NB:81:ILE:HG23	2.49	0.41
69:QB:57:ARG:O	69:QB:61:VAL:HG23	2.20	0.41
74:VB:79:VAL:O	74:VB:82:ALA:HB3	2.19	0.41
76:XB:38:ARG:O	76:XB:71:LEU:HB2	2.20	0.41
78:ZB:11:LYS:HB2	78:ZB:53:ILE:HG12	2.01	0.41
1:A:314:C:O2'	1:A:315:A:H5'	2.19	0.41
1:A:463:U:H2'	1:A:464:A:C8	2.56	0.41
1:A:479:C:H2'	1:A:480:G:O4'	2.20	0.41
1:A:572:C:O5'	1:A:572:C:H6	2.03	0.41
1:A:624:G:C6	1:A:625:C:N4	2.89	0.41
1:A:1087:A:H2'	1:A:1088:A:O4'	2.20	0.41
1:A:1191:U:H4'	66:NB:143:ARG:HB3	2.02	0.41
1:A:1566:U:H5"	68:PB:39:GLY:CA	2.44	0.41
1:A:1585:U:H3	1:A:1611:A:H2	1.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1613:U:O5'	1:A:1613:U:H6	2.03	0.41
1:A:1714:A:H2'	1:A:1715:G:H8	1.85	0.41
2:B:32:U:H4'	2:B:1546:A:N1	2.35	0.41
2:B:484:C:C2'	2:B:485:A:H5'	2.50	0.41
2:B:761:A:N6	2:B:770:G:H1'	2.34	0.41
2:B:1232:C:C5	2:B:1261:G:H2'	2.53	0.41
2:B:1339:C:OP1	36:JA:61:LYS:HE2	2.21	0.41
2:B:1566:A:H2'	2:B:1567:U:H4'	2.01	0.41
2:B:1833:G:O2'	43:QA:4:GLN:NE2	2.53	0.41
2:B:1863:G:H4'	23:W:82:LYS:HE3	2.03	0.41
2:B:2152:A:C2	2:B:2185:G:C6	3.08	0.41
2:B:2194:G:H2'	2:B:2195:C:C6	2.55	0.41
2:B:2434:U:O4	2:B:2595:A:H2	2.03	0.41
2:B:2479:C:C3'	2:B:2480:A:C5'	2.91	0.41
2:B:2753:G:H2'	2:B:2754:G:C8	2.55	0.41
2:B:2805:G:H2'	2:B:2806:U:O4'	2.20	0.41
2:B:3160:U:H2'	2:B:3161:C:C5	2.55	0.41
2:B:3345:G:O2'	2:B:3346:U:H5'	2.20	0.41
6:F:70:ARG:NH2	6:F:72:ARG:HD3	2.35	0.41
9:I:59:ASP:HA	9:I:93:THR:CG2	2.49	0.41
9:I:258:LYS:O	9:I:259:LYS:CB	2.67	0.41
10:J:114:LYS:O	10:J:118:GLU:HB2	2.20	0.41
11:K:106:LEU:HD12	11:K:130:ILE:HD11	2.02	0.41
12:L:190:VAL:HG13	12:L:192:GLN:HB2	2.02	0.41
13:M:21:LYS:HA	18:R:8:LYS:CG	2.49	0.41
16:P:105:GLN:HA	16:P:142:ARG:CG	2.50	0.41
17:Q:67:ARG:HD3	17:Q:68:LYS:HB2	2.03	0.41
17:Q:87:ALA:HB1	17:Q:91:ARG:CZ	2.50	0.41
21:U:17:ALA:C	21:U:94:LEU:HD11	2.45	0.41
22:V:165:ILE:HD12	22:V:166:LEU:H	1.84	0.41
23:W:96:ILE:HG22	23:W:100:ARG:NH1	2.36	0.41
25:Y:39:ILE:HB	25:Y:99:SER:OG	2.19	0.41
27:AA:120:LYS:HA	27:AA:136:VAL:CG1	2.50	0.41
30:DA:62:SER:C	30:DA:64:LYS:H	2.29	0.41
30:DA:89:LYS:HB2	30:DA:91:ASN:OD1	2.20	0.41
34:HA:30:THR:O	34:HA:34:LEU:HB2	2.20	0.41
35:IA:15:ASN:HB3	35:IA:18:LYS:HG2	2.02	0.41
36:JA:20:HIS:HB2	36:JA:50:ILE:HD11	2.01	0.41
41:OA:16:HIS:HA	41:OA:27:PHE:O	2.20	0.41
42:PA:5:ILE:CD1	42:PA:10:GLN:HB3	2.40	0.41
44:RA:93:LYS:CE	44:RA:102:ARG:HG2	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:SA:12:ARG:HA	45:SA:15:ARG:HH12	1.85	0.41
47:UA:25:GLN:NE2	47:UA:25:GLN:CA	2.78	0.41
47:UA:32:GLN:C	47:UA:37:TYR:CE2	2.96	0.41
48:VA:16:ARG:HG3	48:VA:64:ARG:CZ	2.50	0.41
49:WA:49:GLY:HA2	49:WA:54:PHE:CE1	2.55	0.41
50:XA:59:LEU:HD12	50:XA:59:LEU:HA	1.90	0.41
51:YA:58:SER:HA	51:YA:91:VAL:CG1	2.51	0.41
51:YA:62:LYS:HB2	51:YA:62:LYS:HZ2	1.85	0.41
53:AB:102:ALA:O	53:AB:106:LYS:HB2	2.20	0.41
54:BB:201:HIS:CE1	54:BB:207:LEU:HD12	2.55	0.41
54:BB:250:GLU:HA	54:BB:253:ASP:OD2	2.20	0.41
55:CB:63:GLN:CB	55:CB:88:PRO:HA	2.51	0.41
55:CB:87:CYS:SG	55:CB:88:PRO:HD2	2.60	0.41
55:CB:118:LEU:HD21	55:CB:198:LEU:HD13	2.02	0.41
55:CB:142:PRO:HA	55:CB:214:LYS:HE3	2.02	0.41
55:CB:221:ALA:O	55:CB:225:ARG:HD3	2.21	0.41
58:FB:36:THR:CG2	58:FB:95:THR:HG23	2.49	0.41
58:FB:105:ASP:C	58:FB:107:THR:H	2.28	0.41
60:HB:3:MET:HE1	60:HB:45:ALA:HB2	2.02	0.41
61:IB:14:GLN:HB3	61:IB:54:ILE:HG12	2.02	0.41
69:QB:102:ARG:O	69:QB:106:GLN:HB2	2.20	0.41
72:TB:7:LEU:HD12	72:TB:34:ILE:CA	2.47	0.41
72:TB:101:TYR:N	72:TB:101:TYR:CD1	2.88	0.41
79:AC:24:CYS:O	79:AC:26:SER:N	2.53	0.41
82:DC:22:MET:HA	82:DC:122:THR:CB	2.49	0.41
82:DC:25:ILE:CB	82:DC:127:VAL:HG22	2.49	0.41
82:DC:25:ILE:HD12	82:DC:142:VAL:O	2.20	0.41
82:DC:61:LYS:HE3	82:DC:440:ARG:HB2	2.01	0.41
82:DC:82:SER:O	82:DC:86:VAL:HG23	2.21	0.41
82:DC:272:ALA:CA	82:DC:275:MET:HB3	2.33	0.41
82:DC:800:HIS:CG	82:DC:801:TRP:N	2.88	0.41
1:A:154:G:N2	56:DB:60:GLY:HA3	2.36	0.41
1:A:967:A:OP1	63:KB:4:MET:HB3	2.20	0.41
1:A:1139:A:H2'	1:A:1140:G:H8	1.85	0.41
1:A:1435:G:O6	60:HB:25:LYS:HE3	2.21	0.41
1:A:1585:U:N3	1:A:1611:A:C2	2.81	0.41
2:B:96:G:P	32:FA:34:MET:HG2	2.61	0.41
2:B:268:A:H8	2:B:318:A:H2	1.68	0.41
2:B:409:A:H2	2:B:1441:G:N3	2.19	0.41
2:B:496:C:H2'	2:B:497:C:H6	1.84	0.41
2:B:537:A:H3'	2:B:538:G:H8	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:810:A:H5”	19:S:81:TYR:HB3	2.01	0.41
2:B:815:G:N2	2:B:926:A:C2	2.88	0.41
2:B:816:A:H5”	2:B:920:A:H62	1.85	0.41
2:B:953:G:H4’	2:B:954:U:C6	2.56	0.41
2:B:1048:A:H2	2:B:2632:G:N2	2.19	0.41
2:B:1114:U:O2’	2:B:1115:G:H5’	2.20	0.41
2:B:1178:G:O6	37:KA:20:LYS:HG3	2.20	0.41
2:B:1245:A:H5”	2:B:1272:C:OP1	2.21	0.41
2:B:1379:G:C6	2:B:1428:A:C2	3.08	0.41
2:B:1391:C:C5	36:JA:103:LYS:HD2	2.55	0.41
2:B:1845:G:H2’	2:B:1849:C:H42	1.84	0.41
2:B:1873:U:H2’	2:B:1874:A:H5’	2.01	0.41
2:B:2099:A:H2’	2:B:2100:A:C2	2.56	0.41
2:B:2124:G:O2’	2:B:2125:A:H5’	2.20	0.41
2:B:2171:G:O2’	2:B:2172:A:H5’	2.21	0.41
2:B:2291:A:N1	2:B:2302:G:C6	2.89	0.41
2:B:2317:A:C2’	2:B:2318:U:H5’	2.51	0.41
2:B:2434:U:N3	2:B:2515:A:H2	2.17	0.41
2:B:2604:U:H2’	2:B:2605:G:O4’	2.20	0.41
2:B:3083:G:H4’	28:BA:42:GLN:HE22	1.82	0.41
2:B:3202:G:H2’	2:B:3203:U:C5’	2.50	0.41
5:E:120:VAL:HB	5:E:121:PRO:CD	2.41	0.41
6:F:128:ARG:CA	6:F:169:ILE:HG13	2.51	0.41
7:G:227:GLU:HG2	7:G:270:ARG:NH2	2.26	0.41
7:G:296:THR:O	7:G:300:ARG:HG3	2.20	0.41
7:G:303:LYS:HD2	7:G:361:THR:HG21	2.02	0.41
8:H:156:LEU:HD22	8:H:251:THR:HG22	2.03	0.41
8:H:219:LEU:O	8:H:220:ARG:C	2.64	0.41
9:I:56:THR:HB	9:I:57:ASN:H	1.73	0.41
9:I:65:ILE:HD13	9:I:74:VAL:HG22	1.97	0.41
9:I:106:ALA:O	9:I:110:LEU:HD13	2.19	0.41
11:K:116:PHE:HE1	11:K:139:PRO:HG3	1.84	0.41
12:L:97:TYR:C	12:L:131:ALA:HB1	2.45	0.41
12:L:149:LYS:HG3	12:L:201:THR:O	2.19	0.41
12:L:162:LEU:HA	19:S:7:LEU:CD1	2.49	0.41
16:P:76:SER:O	16:P:117:ARG:HG2	2.20	0.41
16:P:122:GLY:O	16:P:123:ARG:HD3	2.20	0.41
17:Q:61:PRO:O	17:Q:62:THR:OG1	2.32	0.41
17:Q:92:THR:CG2	39:MA:111:PHE:HB3	2.45	0.41
18:R:106:ARG:HA	18:R:109:ARG:HD2	2.01	0.41
19:S:8:GLU:O	19:S:12:ARG:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:132:VAL:HG12	19:S:134:LEU:HD12	2.02	0.41
24:X:1:MET:HB3	24:X:4:PHE:HE1	1.86	0.41
25:Y:53:PRO:O	25:Y:54:HIS:C	2.64	0.41
25:Y:89:LEU:H	25:Y:89:LEU:CD1	2.28	0.41
31:EA:71:PHE:CD1	31:EA:73:LYS:HB2	2.55	0.41
33:GA:35:VAL:CG1	33:GA:36:ASP:N	2.84	0.41
36:JA:6:HIS:CE1	36:JA:9:ILE:HG13	2.55	0.41
36:JA:9:ILE:HD13	36:JA:69:SER:HA	2.01	0.41
36:JA:63:THR:HA	36:JA:66:LEU:HD12	2.03	0.41
37:KA:59:VAL:C	37:KA:61:GLY:N	2.74	0.41
38:LA:4:ARG:HH11	38:LA:4:ARG:HG3	1.85	0.41
38:LA:80:ARG:HA	38:LA:80:ARG:NE	2.35	0.41
43:QA:27:ILE:HA	43:QA:30:ARG:HG3	2.02	0.41
48:VA:109:ALA:HB1	48:VA:180:PRO:HD2	1.99	0.41
49:WA:10:ARG:HD2	49:WA:314:GLN:OE1	2.20	0.41
49:WA:189:GLU:HG3	53:AB:225:TYR:O	2.20	0.41
50:XA:163:ASN:HD22	50:XA:163:ASN:HA	1.59	0.41
51:YA:71:ALA:HB2	51:YA:79:HIS:C	2.45	0.41
52:ZA:182:PRO:HD3	59:GB:17:ARG:NH1	2.35	0.41
54:BB:175:PHE:HE2	54:BB:198:LYS:HD2	1.85	0.41
55:CB:63:GLN:O	55:CB:64:VAL:HB	2.19	0.41
58:FB:12:SER:OG	58:FB:16:ALA:HB3	2.21	0.41
58:FB:109:PHE:CD1	58:FB:109:PHE:N	2.88	0.41
60:HB:54:TYR:HA	60:HB:71:GLU:HG3	2.03	0.41
65:MB:86:VAL:CG2	65:MB:87:PRO:HD2	2.50	0.41
65:MB:96:ILE:H	65:MB:96:ILE:HG13	1.71	0.41
65:MB:126:VAL:HG22	65:MB:128:HIS:CD2	2.55	0.41
69:QB:38:LYS:HE3	69:QB:38:LYS:HB2	1.94	0.41
72:TB:5:SER:CB	72:TB:8:ALA:HB3	2.50	0.41
75:WB:55:PRO:C	75:WB:57:TYR:H	2.29	0.41
75:WB:78:ILE:HA	75:WB:81:ARG:HE	1.84	0.41
76:XB:79:ILE:O	76:XB:79:ILE:HG22	2.20	0.41
78:ZB:32:PHE:CE2	78:ZB:38:ARG:HB3	2.51	0.41
82:DC:112:SER:HA	82:DC:115:VAL:HB	2.03	0.41
82:DC:250:PHE:H	82:DC:272:ALA:HB2	1.85	0.41
82:DC:821:ALA:HA	82:DC:824:LYS:HE3	2.02	0.41
1:A:128:U:OP2	1:A:129:U:C5	2.73	0.41
1:A:150:U:H2'	1:A:151:G:C8	2.55	0.41
1:A:206:A:H2'	1:A:206:A:N3	2.35	0.41
1:A:451:A:C2	1:A:456:A:C2	3.08	0.41
1:A:627:C:O2'	1:A:628:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1208:A:H8	1:A:1269:U:HO2'	1.66	0.41
1:A:1258:U:H2'	1:A:1259:U:H6	1.85	0.41
1:A:1258:U:H2'	1:A:1259:U:C6	2.56	0.41
1:A:1304:G:OP1	1:A:1306:C:H6	2.03	0.41
1:A:1585:U:C4	1:A:1611:A:H2	2.39	0.41
1:A:1777:G:N2	1:A:1784:C:O2	2.49	0.41
2:B:126:U:O4'	19:S:57:GLN:OE1	2.39	0.41
2:B:277:G:H2'	2:B:278:U:H6	1.84	0.41
2:B:521:A:O2'	2:B:522:A:H5'	2.21	0.41
2:B:653:A:C5'	2:B:2361:A:H5"	2.51	0.41
2:B:661:G:H3'	32:FA:8:THR:HG21	2.02	0.41
2:B:794:U:H2'	2:B:795:G:O4'	2.20	0.41
2:B:830:A:H2'	2:B:831:G:C5'	2.51	0.41
2:B:874:U:H4'	2:B:875:G:H5'	2.01	0.41
2:B:1074:U:H6	2:B:1074:U:O5'	2.03	0.41
2:B:1150:A:H2'	2:B:1151:U:O4'	2.20	0.41
2:B:1155:C:H2'	2:B:1156:C:H6	1.84	0.41
2:B:1199:C:H4'	2:B:1200:A:O4'	2.19	0.41
2:B:1364:C:H5"	22:V:3:ILE:CG2	2.39	0.41
2:B:1398:U:O2	2:B:1412:G:O6	2.39	0.41
2:B:1399:A:C5	3:C:8:C:O4'	2.73	0.41
2:B:1648:A:C4	2:B:1649:U:C5	3.08	0.41
2:B:1706:C:C5'	2:B:1787:A:H5'	2.50	0.41
2:B:1865:A:N7	2:B:1867:A:C5	2.88	0.41
2:B:1889:G:OP1	7:G:247:ARG:HG3	2.19	0.41
2:B:2068:U:H5"	2:B:2069:G:OP2	2.20	0.41
2:B:2130:G:H2'	2:B:2131:A:C4'	2.47	0.41
2:B:2362:C:C6	2:B:2362:C:O5'	2.73	0.41
2:B:2769:A:H1'	46:TA:82:GLN:OE1	2.19	0.41
2:B:3035:A:H1'	13:M:122:LYS:HB2	2.02	0.41
2:B:3058:U:H5"	35:IA:25:PHE:CE2	2.55	0.41
2:B:3208:G:N2	20:T:3:VAL:HG21	2.35	0.41
3:C:106:C:H1'	3:C:138:A:C5	2.55	0.41
3:C:115:C:H2'	3:C:116:G:O4'	2.20	0.41
4:D:13:A:C2	9:I:21:ARG:HB2	2.56	0.41
5:E:16:LEU:C	5:E:16:LEU:HD13	2.45	0.41
6:F:53:GLY:CA	6:F:191:LEU:HD13	2.51	0.41
6:F:202:VAL:HG11	6:F:217:GLN:O	2.20	0.41
6:F:227:ARG:HG2	6:F:238:ILE:HG22	2.02	0.41
7:G:43:LEU:HD13	7:G:208:VAL:CG2	2.50	0.41
7:G:53:MET:HA	7:G:77:THR:HA	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:315:GLY:O	7:G:316:GLU:HG3	2.21	0.41
10:J:136:GLU:O	10:J:140:VAL:HG23	2.20	0.41
11:K:85:PHE:HB2	11:K:139:PRO:HG3	2.01	0.41
11:K:240:VAL:HA	11:K:243:MET:CG	2.51	0.41
12:L:61:GLN:HB2	19:S:28:TRP:HH2	1.79	0.41
12:L:97:TYR:HE1	12:L:203:VAL:HG23	1.83	0.41
13:M:109:ALA:HB3	13:M:111:PHE:HE1	1.84	0.41
14:N:61:SER:HB2	14:N:63:GLU:HG2	2.03	0.41
15:O:107:ASP:HA	15:O:124:GLY:HA2	2.02	0.41
17:Q:131:LYS:HB3	17:Q:131:LYS:HZ2	1.85	0.41
19:S:49:ARG:NH1	19:S:49:ARG:HG3	2.35	0.41
23:W:132:PHE:HE1	23:W:138:LEU:HG	1.86	0.41
24:X:75:PHE:O	24:X:93:GLU:HA	2.20	0.41
25:Y:29:THR:HG22	25:Y:29:THR:O	2.21	0.41
25:Y:82:ASN:C	33:GA:21:ILE:HD13	2.45	0.41
26:Z:100:THR:O	26:Z:101:ASN:CB	2.68	0.41
27:AA:26:ALA:CB	27:AA:101:VAL:HG13	2.51	0.41
29:CA:76:VAL:O	29:CA:132:ALA:CB	2.68	0.41
30:DA:89:LYS:O	30:DA:91:ASN:N	2.54	0.41
38:LA:42:PRO:HD2	38:LA:51:LEU:CD2	2.50	0.41
50:XA:137:SER:HB2	50:XA:155:PHE:CE1	2.55	0.41
52:ZA:152:HIS:CD2	52:ZA:152:HIS:H	2.38	0.41
54:BB:162:ILE:HG22	54:BB:163:ASP:N	2.35	0.41
55:CB:164:PRO:HB3	55:CB:167:ARG:NH2	2.32	0.41
57:EB:33:GLU:O	57:EB:34:LEU:HD12	2.20	0.41
59:GB:49:LEU:HD13	59:GB:49:LEU:C	2.45	0.41
59:GB:162:SER:N	59:GB:167:ALA:CB	2.83	0.41
61:IB:109:VAL:HG23	61:IB:138:ASN:N	2.33	0.41
66:NB:75:VAL:HA	66:NB:78:VAL:HG23	2.03	0.41
66:NB:130:GLY:CA	66:NB:137:ARG:HH22	2.34	0.41
69:QB:25:GLN:HG2	69:QB:27:LYS:HD2	2.02	0.41
74:VB:53:ASP:O	74:VB:54:ALA:HB2	2.21	0.41
82:DC:394:PHE:HB2	82:DC:460:ASP:HB3	2.01	0.41
82:DC:411:VAL:HG12	82:DC:412:ARG:N	2.36	0.41
82:DC:571:SER:HB2	82:DC:590:ALA:H	1.86	0.41
83:EC:6836:U:H2'	83:EC:6837:G:C8	2.55	0.41
1:A:380:U:O2'	59:GB:5:PRO:HD3	2.21	0.41
1:A:1241:G:O4'	65:MB:79:HIS:HB2	2.21	0.41
1:A:1261:G:H2'	1:A:1262:U:C6	2.56	0.41
1:A:1301:U:H5'	52:ZA:88:LYS:CG	2.51	0.41
1:A:1533:C:H4'	1:A:1539:G:N1	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:44:U:O2'	46:TA:46:LYS:HD3	2.20	0.41
2:B:216:G:H2'	2:B:217:U:H5'	2.01	0.41
2:B:285:A:H5"	2:B:286:U:OP1	2.20	0.41
2:B:780:A:H4'	22:V:162:ALA:HB2	2.01	0.41
2:B:835:G:N3	2:B:857:G:C2	2.88	0.41
2:B:913:A:C2	2:B:2135:U:H5'	2.56	0.41
2:B:1162:U:O3'	36:JA:57:TYR:CE1	2.73	0.41
2:B:1369:A:H4'	32:FA:21:ARG:HB2	2.02	0.41
2:B:1473:G:C3'	23:W:23:TRP:HE1	2.31	0.41
2:B:1479:U:O2'	2:B:1480:G:H5'	2.20	0.41
2:B:1493:G:C4	43:QA:13:MET:HG3	2.55	0.41
2:B:1952:G:H4'	2:B:2080:C:OP2	2.21	0.41
2:B:2238:G:H2'	2:B:2239:G:C8	2.56	0.41
2:B:2364:G:O2'	2:B:2986:U:H4'	2.20	0.41
2:B:2561:A:C5	12:L:32:LYS:HD3	2.55	0.41
2:B:2760:C:N4	46:TA:63:LYS:HE3	2.35	0.41
2:B:2788:C:C2	2:B:2789:U:C5	3.08	0.41
3:C:38:U:C2	39:MA:79:ASP:HA	2.55	0.41
3:C:104:A:H4'	41:OA:42:ALA:CB	2.49	0.41
3:C:111:A:C2	41:OA:14:LYS:HD2	2.56	0.41
5:E:5:THR:HG21	5:E:8:GLN:NE2	2.35	0.41
5:E:5:THR:C	5:E:36:VAL:HG13	2.44	0.41
6:F:65:ASP:HA	6:F:66:PRO:HD3	1.90	0.41
7:G:218:ILE:O	7:G:337:THR:HB	2.20	0.41
8:H:345:GLU:H	11:K:60:ARG:NH1	2.19	0.41
9:I:31:TYR:C	9:I:31:TYR:HD1	2.28	0.41
9:I:101:THR:HA	9:I:104:LEU:HD23	2.03	0.41
9:I:128:GLU:CG	9:I:129:TYR:H	2.32	0.41
9:I:183:TRP:HB2	9:I:190:ILE:CD1	2.50	0.41
12:L:169:LEU:C	12:L:171:LYS:N	2.77	0.41
12:L:226:TYR:C	12:L:228:GLU:H	2.27	0.41
12:L:229:VAL:HG13	12:L:232:HIS:CB	2.50	0.41
13:M:128:VAL:HG12	13:M:129:ARG:N	2.36	0.41
13:M:172:ILE:HD13	13:M:173:ARG:N	2.35	0.41
14:N:46:PHE:CG	14:N:139:ARG:HG3	2.54	0.41
14:N:171:TRP:H	14:N:174:THR:HB	1.85	0.41
17:Q:45:LYS:O	17:Q:47:ALA:N	2.53	0.41
17:Q:173:ALA:O	17:Q:176:GLU:HB2	2.20	0.41
20:T:87:MET:O	20:T:88:VAL:CG2	2.67	0.41
21:U:75:GLU:HB3	21:U:76:PHE:CE1	2.55	0.41
22:V:82:VAL:HA	22:V:102:ALA:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CA:86:VAL:HG13	29:CA:120:LYS:HD3	2.01	0.41
29:CA:113:LEU:C	29:CA:113:LEU:HD12	2.46	0.41
30:DA:30:LEU:O	30:DA:30:LEU:HD23	2.20	0.41
36:JA:21:HIS:HD2	36:JA:25:TYR:HE2	1.67	0.41
36:JA:95:GLU:HG3	36:JA:121:ASN:OD1	2.20	0.41
36:JA:100:ILE:O	36:JA:105:ARG:HD2	2.20	0.41
41:OA:53:ALA:HA	41:OA:56:ARG:HH12	1.86	0.41
49:WA:13:LEU:HD22	49:WA:55:GLY:HA3	2.03	0.41
49:WA:199:ILE:CG2	49:WA:213:SER:HB2	2.51	0.41
51:YA:61:LEU:HG	51:YA:64:ARG:NE	2.24	0.41
52:ZA:89:GLN:O	52:ZA:90:THR:HB	2.20	0.41
52:ZA:183:ALA:HB2	52:ZA:207:LEU:CD1	2.50	0.41
57:EB:113:PRO:HG2	57:EB:116:ARG:HB3	2.02	0.41
57:EB:125:ILE:HB	57:EB:173:TYR:OH	2.20	0.41
58:FB:81:VAL:CG1	58:FB:91:VAL:HA	2.51	0.41
58:FB:101:ILE:HG22	58:FB:101:ILE:O	2.20	0.41
61:IB:90:TYR:C	61:IB:91:LEU:HD12	2.46	0.41
63:KB:33:VAL:HG23	63:KB:34:ILE:H	1.83	0.41
64:LB:85:ALA:H	64:LB:119:THR:CG2	2.33	0.41
66:NB:87:LYS:CG	66:NB:117:LEU:HA	2.51	0.41
71:SB:53:TYR:HB3	71:SB:72:LEU:HD13	2.03	0.41
76:XB:12:LYS:NZ	76:XB:16:GLY:H	2.19	0.41
76:XB:74:CYS:O	76:XB:75:VAL:CB	2.68	0.41
82:DC:581:ASN:O	82:DC:582:LYS:HB2	2.21	0.41
82:DC:744:TYR:HA	82:DC:747:LEU:HD23	2.01	0.41
1:A:11:A:C2’	1:A:12:U:H5’	2.50	0.41
1:A:211:U:H2’	1:A:212:U:C5	2.56	0.41
1:A:748:U:OP1	72:TB:82:LYS:HE2	2.21	0.41
1:A:927:C:H2’	1:A:928:U:O4’	2.21	0.41
1:A:959:U:H5”	63:KB:14:SER:CB	2.50	0.41
1:A:960:U:H5’	63:KB:55:ARG:HE	1.86	0.41
1:A:993:A:C2’	1:A:994:G:H5’	2.51	0.41
1:A:1035:G:H4’	72:TB:2:THR:HB	2.03	0.41
1:A:1344:A:H4’	1:A:1345:A:OP1	2.20	0.41
1:A:1346:A:H4’	1:A:1348:A:OP2	2.20	0.41
1:A:1580:C:O2’	66:NB:136:SER:HA	2.20	0.41
1:A:1584:G:H22	1:A:1611:A:P	2.44	0.41
1:A:1683:C:O2’	1:A:1684:U:H5”	2.20	0.41
2:B:26:A:O2’	2:B:329:U:H5”	2.19	0.41
2:B:181:U:C3’	2:B:182:U:H4’	2.51	0.41
2:B:1253:U:OP1	16:P:135:THR:HG22	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1468:A:C6	2:B:1881:A:H4'	2.56	0.41
2:B:1650:G:O2'	2:B:1651:U:H5'	2.21	0.41
2:B:1653:G:H2'	2:B:1654:A:C8	2.54	0.41
2:B:1711:C:H5"	31:EA:38:PHE:CA	2.46	0.41
2:B:1715:A:C2	34:HA:85:PHE:HB3	2.55	0.41
2:B:1887:A:H4'	7:G:227:GLU:HA	2.02	0.41
2:B:1944:U:H2'	2:B:1945:A:C8	2.55	0.41
2:B:2155:G:C4'	6:F:239:ALA:HB3	2.40	0.41
2:B:2177:G:C8	6:F:125:ALA:O	2.74	0.41
2:B:2449:A:N6	2:B:2497:U:N3	2.66	0.41
2:B:2716:U:H2'	2:B:2717:U:C6	2.55	0.41
2:B:2727:A:N1	32:FA:43:ILE:HA	2.36	0.41
2:B:3029:A:H8	2:B:3029:A:O5'	2.03	0.41
2:B:3134:A:C5	2:B:3135:U:C5	3.08	0.41
2:B:3139:A:H4'	7:G:20:LYS:CG	2.51	0.41
2:B:3201:C:H2'	2:B:3202:G:C8	2.56	0.41
2:B:3317:U:H5"	2:B:3318:G:H5'	2.03	0.41
3:C:33:A:H4'	41:OA:74:PHE:CZ	2.54	0.41
3:C:55:U:H2'	3:C:56:G:C8	2.56	0.41
4:D:114:U:H2'	4:D:115:G:H8	1.86	0.41
6:F:39:GLY:CA	12:L:36:ILE:HG21	2.42	0.41
7:G:161:LEU:HA	7:G:179:ALA:O	2.20	0.41
7:G:216:ASP:O	7:G:218:ILE:HG13	2.21	0.41
7:G:223:GLY:HA2	7:G:271:GLY:HA3	2.02	0.41
9:I:95:TRP:CZ2	9:I:181:PRO:HG3	2.56	0.41
10:J:40:LEU:CB	10:J:85:ILE:O	2.69	0.41
13:M:74:LEU:HD23	13:M:74:LEU:HA	1.88	0.41
17:Q:167:PHE:CZ	32:FA:132:LYS:HB2	2.56	0.41
19:S:62:TYR:CE1	19:S:134:LEU:HD21	2.56	0.41
20:T:85:ARG:HG2	20:T:90:HIS:NE2	2.36	0.41
22:V:36:LEU:O	22:V:40:THR:CG2	2.69	0.41
22:V:179:ARG:HB3	22:V:179:ARG:NH1	2.35	0.41
23:W:23:TRP:O	23:W:24:LEU:HD12	2.21	0.41
25:Y:105:PHE:O	25:Y:108:ARG:HB3	2.21	0.41
28:BA:8:PHE:HE1	28:BA:46:PRO:HA	1.85	0.41
32:FA:40:HIS:O	32:FA:43:ILE:CD1	2.68	0.41
38:LA:8:ARG:HG2	38:LA:32:ALA:CB	2.38	0.41
40:NA:53:TYR:CE2	40:NA:76:ARG:HG2	2.56	0.41
46:TA:106:PHE:HB2	83:EC:6887:G:O2'	2.20	0.41
48:VA:83:ASN:N	48:VA:83:ASN:ND2	2.67	0.41
50:XA:61:ALA:O	50:XA:63:ILE:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:38:PHE:CE1	51:YA:74:GLN:HB2	2.53	0.41
51:YA:64:ARG:HD3	64:LB:34:SER:OG	2.21	0.41
51:YA:153:HIS:HB2	51:YA:155:TYR:CZ	2.56	0.41
52:ZA:61:LEU:CD1	52:ZA:240:LEU:HD22	2.50	0.41
53:AB:24:PHE:HE2	53:AB:72:LEU:HD22	1.85	0.41
54:BB:188:ASN:N	54:BB:188:ASN:ND2	2.68	0.41
55:CB:124:LEU:HD12	55:CB:124:LEU:N	2.35	0.41
56:DB:23:ARG:HG2	56:DB:23:ARG:HH21	1.85	0.41
59:GB:85:VAL:CA	59:GB:107:ARG:HG3	2.51	0.41
65:MB:17:TYR:O	65:MB:18:ARG:HD3	2.20	0.41
65:MB:37:ALA:O	65:MB:42:ARG:HD2	2.20	0.41
65:MB:111:MET:HE2	65:MB:119:PHE:CE1	2.56	0.41
73:UB:103:LEU:C	73:UB:103:LEU:HD13	2.46	0.41
73:UB:132:LEU:H	73:UB:132:LEU:HD12	1.86	0.41
82:DC:81:MET:HB2	82:DC:98:PHE:CD2	2.55	0.41
82:DC:144:ARG:HG3	82:DC:192:TYR:CE1	2.56	0.41
82:DC:834:GLY:HA3	82:DC:836:GLN:NE2	2.29	0.41
1:A:107:C:OP1	1:A:384:G:H5'	2.21	0.41
1:A:187:G:H2'	1:A:198:A:N6	2.36	0.41
1:A:777:C:O4'	54:BB:261:LEU:HD13	2.21	0.41
1:A:980:G:H4'	1:A:1776:A:C4'	2.33	0.41
1:A:1289:U:O4'	1:A:1422:A:H2	2.04	0.41
1:A:1458:G:H2'	1:A:1458:G:N3	2.35	0.41
1:A:1595:U:H2'	1:A:1596:C:C5'	2.50	0.41
1:A:1796:C:H5'	1:A:1797:A:C8	2.55	0.41
2:B:52:A:C4	2:B:53:G:C8	3.08	0.41
2:B:149:U:C2'	2:B:150:A:H5"	2.50	0.41
2:B:211:A:H5'	8:H:220:ARG:CG	2.48	0.41
2:B:265:A:C3'	2:B:266:A:H5'	2.51	0.41
2:B:309:U:OP1	40:NA:84:LYS:HE3	2.20	0.41
2:B:375:A:C2	2:B:394:G:H4'	2.56	0.41
2:B:666:A:H2'	2:B:667:C:O4'	2.21	0.41
2:B:784:A:H4'	22:V:92:ARG:NH2	2.36	0.41
2:B:1038:C:H2'	2:B:1039:U:C6	2.55	0.41
2:B:1147:G:N2	2:B:1170:A:H1'	2.35	0.41
2:B:1234:G:H5"	16:P:118:ASP:CB	2.50	0.41
2:B:1639:C:O3'	2:B:1738:C:H5"	2.21	0.41
2:B:1729:A:OP2	34:HA:26:GLY:HA2	2.20	0.41
2:B:1846:C:O2'	2:B:1847:A:H5"	2.21	0.41
2:B:1863:G:C2	2:B:1865:A:H3'	2.56	0.41
2:B:2141:U:H1'	2:B:2976:A:C2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2221:G:N2	2:B:2223:A:H3'	2.35	0.41
2:B:2225:U:H2'	2:B:2226:U:H6	1.83	0.41
2:B:2442:G:H2'	2:B:2443:A:C5'	2.44	0.41
2:B:2699:G:H2'	2:B:2700:G:C8	2.56	0.41
2:B:2747:A:H5'	9:I:175:HIS:HB3	2.01	0.41
2:B:2882:U:H4'	7:G:263:SER:O	2.20	0.41
2:B:3164:C:O2'	2:B:3165:A:H8	2.04	0.41
2:B:3359:A:N3	2:B:3359:A:H2'	2.35	0.41
2:B:3391:A:H2'	2:B:3392:U:C6	2.55	0.41
4:D:15:C:H2'	4:D:16:U:C5	2.55	0.41
5:E:20:SER:HB3	5:E:210:MET:SD	2.61	0.41
5:E:179:LEU:O	5:E:183:ILE:HG13	2.20	0.41
7:G:122:TRP:HA	7:G:125:SER:HG	1.86	0.41
7:G:169:THR:HG21	7:G:171:LEU:HG	2.00	0.41
7:G:188:ILE:O	7:G:191:LYS:HB2	2.20	0.41
7:G:198:HIS:HA	7:G:201:LYS:HB2	2.03	0.41
7:G:212:ASN:O	7:G:213:GLU:C	2.63	0.41
7:G:229:VAL:CA	7:G:232:ARG:HB3	2.47	0.41
7:G:292:ALA:HB2	7:G:302:LYS:HA	2.03	0.41
7:G:308:MET:HE2	7:G:370:PHE:HB2	2.03	0.41
8:H:51:ALA:HA	8:H:103:THR:HG21	2.02	0.41
8:H:259:ASP:OD1	8:H:264:SER:HB3	2.21	0.41
8:H:299:ILE:HG21	22:V:35:PHE:HZ	1.85	0.41
9:I:197:SER:O	9:I:202:GLY:N	2.53	0.41
9:I:255:PRO:O	9:I:256:THR:C	2.64	0.41
11:K:90:LYS:NZ	11:K:91:GLY:H	2.19	0.41
11:K:107:ARG:O	11:K:108:LEU:HG	2.21	0.41
12:L:144:GLU:O	12:L:173:MET:HE2	2.21	0.41
12:L:215:VAL:O	12:L:219:ASP:HB2	2.21	0.41
15:O:22:SER:OG	15:O:66:ALA:HB2	2.20	0.41
18:R:41:GLN:OE1	18:R:42:LYS:HG3	2.21	0.41
18:R:85:TRP:HE1	18:R:91:CYS:HB3	1.85	0.41
19:S:168:GLY:C	19:S:170:LYS:N	2.79	0.41
19:S:191:TRP:O	19:S:192:LYS:C	2.64	0.41
21:U:60:PHE:HE2	21:U:82:ARG:N	2.18	0.41
21:U:146:ILE:HD12	21:U:146:ILE:H	1.85	0.41
23:W:106:LEU:HD21	23:W:123:LEU:HD12	2.03	0.41
24:X:5:LYS:HD2	24:X:32:SER:HA	2.02	0.41
28:BA:20:LEU:HD11	28:BA:28:ILE:CG2	2.50	0.41
28:BA:47:ARG:HH22	28:BA:57:LYS:HG2	1.85	0.41
31:EA:15:ARG:C	31:EA:19:ALA:HB2	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:GA:32:LEU:HD23	33:GA:35:VAL:HG21	2.03	0.41
34:HA:27:TYR:HB2	34:HA:52:ARG:CZ	2.50	0.41
36:JA:29:ALA:C	36:JA:31:ASN:N	2.77	0.41
36:JA:121:ASN:N	36:JA:122:PRO:CD	2.84	0.41
37:KA:65:ARG:O	37:KA:66:VAL:HG23	2.20	0.41
40:NA:25:LYS:C	40:NA:27:SER:H	2.29	0.41
41:OA:21:ARG:HD2	41:OA:39:TYR:HB2	2.01	0.41
41:OA:47:TYR:HB3	41:OA:49:TRP:HE1	1.85	0.41
44:RA:104:PRO:CB	44:RA:107:ALA:HB2	2.39	0.41
46:TA:8:ARG:HE	46:TA:72:LEU:HD21	1.86	0.41
48:VA:28:VAL:O	48:VA:84:VAL:HA	2.21	0.41
50:XA:89:PHE:CE1	50:XA:93:THR:HG21	2.55	0.41
50:XA:162:CYS:SG	50:XA:163:ASN:N	2.94	0.41
51:YA:190:PRO:HG2	51:YA:192:VAL:HG23	2.01	0.41
52:ZA:54:GLU:O	52:ZA:58:LEU:HB2	2.21	0.41
52:ZA:115:ILE:O	52:ZA:116:LYS:HB2	2.20	0.41
53:AB:54:ARG:O	53:AB:58:VAL:HG23	2.21	0.41
53:AB:211:PRO:HG2	67:OB:19:ARG:CB	2.38	0.41
55:CB:96:SER:C	55:CB:176:THR:HG21	2.45	0.41
55:CB:178:GLY:O	55:CB:182:ALA:HB2	2.21	0.41
56:DB:36:VAL:O	56:DB:50:PHE:HB2	2.21	0.41
56:DB:186:ARG:O	56:DB:190:GLN:HG2	2.21	0.41
57:EB:59:ALA:HB1	57:EB:93:LEU:CD1	2.51	0.41
58:FB:185:GLU:HA	58:FB:189:LEU:HB2	2.03	0.41
59:GB:129:ILE:CD1	59:GB:144:PRO:HA	2.34	0.41
59:GB:130:THR:HG23	59:GB:131:GLN:N	2.36	0.41
60:HB:32:HIS:CD2	60:HB:32:HIS:N	2.83	0.41
61:IB:66:ILE:HD11	61:IB:138:ASN:CB	2.48	0.41
63:KB:20:ARG:HH11	63:KB:64:ARG:HB3	1.86	0.41
64:LB:21:ALA:O	64:LB:85:ALA:O	2.37	0.41
65:MB:74:ALA:HA	65:MB:75:PRO:HD3	1.89	0.41
66:NB:30:LYS:HA	66:NB:34:SER:O	2.20	0.41
69:QB:34:VAL:HG21	69:QB:54:PHE:HB2	2.02	0.41
70:RB:85:ARG:HG2	70:RB:85:ARG:NH1	2.35	0.41
73:UB:37:ALA:O	73:UB:44:GLY:HA2	2.21	0.41
74:VB:53:ASP:CG	74:VB:96:LEU:HD21	2.45	0.41
75:WB:54:VAL:HG13	75:WB:89:ILE:CG2	2.50	0.41
76:XB:92:ARG:HG3	76:XB:92:ARG:NH1	2.34	0.41
78:ZB:56:LEU:H	78:ZB:56:LEU:CD2	2.32	0.41
82:DC:99:LEU:HD23	82:DC:99:LEU:C	2.46	0.41
82:DC:578:LYS:HD3	82:DC:582:LYS:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:634:TRP:HB3	82:DC:664:VAL:HG22	2.01	0.41
82:DC:774:VAL:CG2	82:DC:798:PHE:HE1	2.34	0.41
82:DC:823:ARG:HH11	82:DC:823:ARG:HG2	1.86	0.41
1:A:43:A:H1'	1:A:378:A:N3	2.36	0.41
1:A:67:A:OP1	1:A:67:A:H3'	2.21	0.41
1:A:71:A:N1	1:A:81:G:C2	2.88	0.41
1:A:90:C:O2'	1:A:91:G:H5'	2.21	0.41
1:A:379:U:O5'	1:A:379:U:H6	2.03	0.41
1:A:385:A:C4'	58:FB:22:ARG:HB3	2.51	0.41
1:A:617:U:H6	1:A:617:U:O5'	2.04	0.41
1:A:768:C:H2'	1:A:769:A:O4'	2.21	0.41
1:A:879:G:H2'	1:A:880:C:C6	2.55	0.41
1:A:1007:C:H5"	64:LB:135:ARG:HG2	2.03	0.41
1:A:1299:G:H2'	1:A:1300:A:N9	2.35	0.41
1:A:1794:A:C2	76:XB:79:ILE:HB	2.56	0.41
2:B:277:G:H5'	19:S:91:GLU:OE2	2.20	0.41
2:B:323:A:O2'	2:B:324:A:H5'	2.21	0.41
2:B:429:U:H5'	37:KA:88:ASN:HD22	1.85	0.41
2:B:512:U:O2'	2:B:513:G:H5'	2.21	0.41
2:B:514:G:N3	8:H:341:SER:HB3	2.35	0.41
2:B:570:A:H2'	2:B:571:U:O4'	2.20	0.41
2:B:661:G:N7	32:FA:19:LYS:HB2	2.36	0.41
2:B:676:G:C2	22:V:61:PRO:HD3	2.55	0.41
2:B:678:G:O2'	2:B:679:U:H5'	2.20	0.41
2:B:810:A:OP1	19:S:81:TYR:HD2	2.03	0.41
2:B:836:A:H61	2:B:857:G:C1'	2.34	0.41
2:B:839:C:H4'	2:B:1724:U:C2'	2.50	0.41
2:B:878:G:N3	2:B:880:G:N2	2.69	0.41
2:B:929:A:H2'	2:B:930:U:C6	2.56	0.41
2:B:1188:U:O4	2:B:1317:A:C2	2.74	0.41
2:B:1532:C:O2'	2:B:1533:U:H5'	2.21	0.41
2:B:1546:A:C2'	2:B:1547:G:H5'	2.51	0.41
2:B:1556:C:C4	2:B:2169:G:C8	3.09	0.41
2:B:1558:A:C8	12:L:53:PRO:HB3	2.56	0.41
2:B:1600:U:C2'	2:B:1601:U:H5'	2.50	0.41
2:B:1730:G:C6	34:HA:26:GLY:HA3	2.56	0.41
2:B:1934:G:C3'	2:B:1935:G:H5"	2.51	0.41
2:B:2103:U:O2'	2:B:2104:A:H5'	2.20	0.41
2:B:2115:G:N2	2:B:2120:A:H1'	2.35	0.41
2:B:2166:A:H5"	19:S:72:LYS:NZ	2.36	0.41
2:B:2181:C:H2'	2:B:2182:A:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2184:U:OP1	6:F:7:ASN:ND2	2.50	0.41
2:B:2407:C:H1'	2:B:2818:U:H3	1.86	0.41
2:B:2639:G:H3'	2:B:2640:A:C8	2.56	0.41
2:B:2741:C:O2'	46:TA:20:HIS:N	2.54	0.41
2:B:2746:A:C5'	9:I:178:ASN:HD21	2.33	0.41
2:B:2792:A:H2'	2:B:2793:G:H8	1.84	0.41
2:B:2838:A:H2'	2:B:2839:G:C1'	2.50	0.41
2:B:2880:U:H4'	7:G:238:LEU:CD2	2.51	0.41
2:B:3001:C:H5"	7:G:117:ARG:CD	2.51	0.41
2:B:3068:U:H3	2:B:3073:A:H61	1.69	0.41
2:B:3087:A:H1'	2:B:3375:A:H61	1.80	0.41
2:B:3129:A:H2'	2:B:3131:U:C6	2.56	0.41
2:B:3212:C:C2'	2:B:3213:A:H5'	2.47	0.41
2:B:3381:U:H3'	2:B:3382:U:H5'	2.01	0.41
3:C:11:C:O2'	21:U:4:TYR:O	2.38	0.41
3:C:72:A:C1'	3:C:88:A:H2	2.23	0.41
3:C:84:C:O2	30:DA:113:LYS:HG3	2.21	0.41
3:C:112:U:H5"	43:QA:6:SER:OG	2.20	0.41
4:D:1:G:C1'	9:I:270:LYS:HE2	2.51	0.41
4:D:6:C:H5	9:I:22:ARG:NH1	2.19	0.41
4:D:40:C:C2	4:D:42:A:N6	2.89	0.41
4:D:49:G:H4'	4:D:50:U:O4'	2.20	0.41
4:D:76:A:OP2	4:D:76:A:H3'	2.21	0.41
5:E:184:LEU:HA	5:E:187:VAL:HB	2.03	0.41
5:E:216:LEU:O	5:E:217:TYR:C	2.64	0.41
6:F:53:GLY:HA2	6:F:191:LEU:HD13	2.03	0.41
6:F:77:ILE:CD1	6:F:115:ASN:HB2	2.51	0.41
6:F:183:GLY:C	6:F:185:ALA:H	2.28	0.41
7:G:216:ASP:HB2	7:G:339:ARG:HB3	2.03	0.41
7:G:252:ILE:HG22	7:G:260:VAL:HG13	2.03	0.41
8:H:145:ILE:HA	8:H:146:PRO:HD3	1.83	0.41
9:I:19:PRO:O	9:I:24:ARG:HG3	2.21	0.41
9:I:41:LYS:HE2	9:I:41:LYS:HA	2.03	0.41
10:J:158:TYR:CE1	18:R:115:PHE:N	2.81	0.41
11:K:85:PHE:CG	11:K:86:VAL:N	2.88	0.41
11:K:103:LEU:HD23	11:K:130:ILE:HD12	2.01	0.41
11:K:110:ARG:HB3	22:V:2:GLY:O	2.20	0.41
11:K:143:THR:O	11:K:147:LEU:HB2	2.21	0.41
12:L:238:LEU:HB3	12:L:243:GLN:HG2	2.03	0.41
14:N:206:LEU:HG	14:N:210:ILE:HD11	2.03	0.41
15:O:14:ILE:HG13	15:O:131:MET:SD	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:23:VAL:HG11	15:O:29:ARG:HD3	2.03	0.41
15:O:67:VAL:O	15:O:67:VAL:HG23	2.21	0.41
16:P:67:ARG:O	16:P:67:ARG:HG3	2.20	0.41
19:S:47:LYS:O	19:S:48:ALA:C	2.63	0.41
19:S:87:GLN:O	19:S:88:GLY:C	2.62	0.41
19:S:187:ARG:HB3	19:S:188:ARG:HD2	2.02	0.41
20:T:76:PRO:CB	20:T:138:LEU:HG	2.48	0.41
20:T:84:LEU:HA	20:T:87:MET:HB2	2.02	0.41
21:U:17:ALA:HB1	21:U:94:LEU:HD11	2.03	0.41
22:V:103:ALA:HB3	22:V:106:PHE:CE1	2.55	0.41
24:X:1:MET:HE3	24:X:31:ALA:HA	2.03	0.41
24:X:156:VAL:HA	24:X:170:THR:HG22	2.03	0.41
27:AA:88:ARG:HH11	27:AA:88:ARG:HG2	1.85	0.41
27:AA:118:VAL:HG12	27:AA:119:GLY:N	2.36	0.41
29:CA:53:HIS:CE1	29:CA:56:ARG:HG3	2.56	0.41
30:DA:23:PRO:O	30:DA:24:SER:C	2.64	0.41
30:DA:48:LEU:HG	30:DA:49:PRO:HD2	2.03	0.41
31:EA:127:ASN:CB	31:EA:131:PHE:HE1	2.34	0.41
32:FA:4:ARG:O	32:FA:9:ARG:HG3	2.21	0.41
34:HA:51:LEU:HA	34:HA:54:SER:OG	2.21	0.41
34:HA:63:SER:C	34:HA:65:THR:N	2.76	0.41
35:IA:17:HIS:H	35:IA:69:TYR:HA	1.86	0.41
35:IA:71:LEU:HD22	35:IA:72:ARG:H	1.86	0.41
38:LA:15:THR:OG1	38:LA:18:ASN:HB3	2.20	0.41
38:LA:80:ARG:HD3	38:LA:85:VAL:CG2	2.45	0.41
40:NA:4:LYS:HA	40:NA:12:ASN:CB	2.51	0.41
42:PA:12:LEU:O	42:PA:16:ARG:HG3	2.21	0.41
43:QA:28:ARG:HH11	43:QA:28:ARG:CB	2.34	0.41
44:RA:79:GLU:HG3	44:RA:82:LEU:H	1.85	0.41
44:RA:96:CYS:HB3	44:RA:99:CYS:HB2	2.03	0.41
46:TA:27:GLN:HE21	46:TA:27:GLN:HB2	1.71	0.41
47:UA:87:ARG:O	47:UA:91:GLU:HG3	2.20	0.41
48:VA:25:LEU:HD23	48:VA:25:LEU:C	2.46	0.41
48:VA:104:ARG:O	48:VA:184:GLY:HA3	2.21	0.41
49:WA:170:ILE:HB	49:WA:202:LEU:HD11	2.03	0.41
50:XA:4:PRO:O	50:XA:5:ALA:HB2	2.21	0.41
50:XA:39:ASN:HB3	50:XA:47:VAL:CG2	2.51	0.41
50:XA:93:THR:HG22	50:XA:181:VAL:CG2	2.41	0.41
50:XA:133:ILE:HD12	50:XA:133:ILE:H	1.86	0.41
51:YA:156:ALA:C	51:YA:158:SER:H	2.28	0.41
52:ZA:225:LEU:HD11	52:ZA:230:TRP:CD1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:227:PRO:HG3	52:ZA:230:TRP:CZ2	2.56	0.41
53:AB:105:MET:HE2	53:AB:108:LYS:CB	2.51	0.41
53:AB:192:PRO:HA	53:AB:195:SER:HB2	2.02	0.41
54:BB:106:LYS:HD2	54:BB:108:ARG:CZ	2.50	0.41
55:CB:147:THR:HG22	55:CB:158:GLN:O	2.20	0.41
55:CB:218:GLU:HA	55:CB:221:ALA:HB3	2.03	0.41
56:DB:37:ASP:OD2	56:DB:39:GLU:HB2	2.21	0.41
56:DB:52:ILE:CG2	56:DB:109:LEU:HD21	2.50	0.41
57:EB:8:ILE:HG13	57:EB:42:GLN:HA	2.02	0.41
57:EB:66:SER:C	57:EB:68:ALA:H	2.29	0.41
57:EB:148:LYS:HG3	57:EB:179:LYS:HG2	2.03	0.41
58:FB:21:PHE:CD1	58:FB:22:ARG:HG2	2.56	0.41
58:FB:26:LYS:HD2	58:FB:29:LEU:HD22	2.03	0.41
58:FB:184:LEU:HG	58:FB:189:LEU:HA	2.03	0.41
59:GB:66:ASP:CG	59:GB:67:PRO:HD2	2.46	0.41
60:HB:15:LEU:HD22	60:HB:46:LEU:HD12	2.03	0.41
60:HB:24:LYS:HA	60:HB:63:TYR:HA	2.02	0.41
61:IB:75:VAL:HA	61:IB:86:ILE:CG2	2.40	0.41
61:IB:92:HIS:CG	61:IB:103:ARG:NH1	2.89	0.41
61:IB:94:ILE:HD13	61:IB:99:ARG:O	2.21	0.41
63:KB:20:ARG:HD3	63:KB:64:ARG:HB3	2.03	0.41
63:KB:64:ARG:NH1	63:KB:70:LYS:HE3	2.36	0.41
63:KB:75:LEU:HG	63:KB:81:ALA:CA	2.51	0.41
64:LB:29:HIS:HB3	64:LB:41:ARG:O	2.21	0.41
69:QB:9:VAL:HG12	69:QB:10:ALA:N	2.36	0.41
69:QB:39:THR:HG22	69:QB:100:ILE:HG13	2.03	0.41
69:QB:61:VAL:CG1	69:QB:105:LEU:HD11	2.51	0.41
72:TB:11:LEU:HD11	72:TB:37:PHE:CZ	2.56	0.41
72:TB:65:LEU:HD22	72:TB:65:LEU:C	2.46	0.41
75:WB:38:HIS:O	75:WB:39:ALA:HB3	2.20	0.41
77:YB:56:CYS:SG	77:YB:57:GLU:N	2.87	0.41
79:AC:39:CYS:SG	79:AC:42:CYS:CB	3.09	0.41
82:DC:140:GLU:O	82:DC:144:ARG:HB3	2.21	0.41
82:DC:672:LYS:HA	82:DC:680:GLU:HG2	2.02	0.41
82:DC:759:GLN:HB3	82:DC:766:PHE:CA	2.47	0.41
1:A:15:U:C2'	1:A:16:G:H5'	2.50	0.41
1:A:37:U:H2'	1:A:38:C:H6	1.86	0.41
1:A:128:U:H5'	1:A:178:U:O2'	2.21	0.41
1:A:354:C:H2'	1:A:355:G:H8	1.86	0.41
1:A:361:C:H2'	1:A:362:G:C8	2.56	0.41
1:A:1087:A:C2	1:A:1142:A:H4'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1316:G:C5'	67:OB:7:LYS:HB3	2.40	0.41
1:A:1345:A:O2'	1:A:1346:A:H5"	2.20	0.41
1:A:1360:A:H1'	1:A:1364:G:C2	2.56	0.41
1:A:1642:G:H2'	1:A:1643:U:H6	1.86	0.41
2:B:31:C:OP2	19:S:187:ARG:NH1	2.53	0.41
2:B:148:G:C3'	19:S:49:ARG:HH12	2.34	0.41
2:B:185:C:O3'	30:DA:122:LYS:HA	2.21	0.41
2:B:408:A:N6	3:C:15:G:H1'	2.36	0.41
2:B:518:G:C2'	2:B:520:U:H5"	2.39	0.41
2:B:559:A:N3	18:R:73:PRO:HG3	2.36	0.41
2:B:805:G:C4'	8:H:73:ARG:HB3	2.50	0.41
2:B:887:G:H2'	2:B:888:A:C8	2.56	0.41
2:B:958:C:H5"	2:B:2800:G:P	2.61	0.41
2:B:970:A:H2'	2:B:971:G:C8	2.56	0.41
2:B:1052:U:H2'	2:B:1053:A:O4'	2.21	0.41
2:B:1159:A:H5'	11:K:92:ILE:HG21	2.01	0.41
2:B:1183:C:H2'	2:B:1184:A:C8	2.56	0.41
2:B:1202:A:H2	2:B:2856:G:O2'	2.04	0.41
2:B:1255:C:O2'	2:B:1256:G:H5'	2.21	0.41
2:B:1459:C:H2'	2:B:1460:A:O4'	2.20	0.41
2:B:1712:G:O2'	2:B:1713:G:H5'	2.20	0.41
2:B:2468:A:N6	2:B:2479:C:C5'	2.84	0.41
2:B:2746:A:N3	9:I:146:LEU:HD22	2.36	0.41
2:B:2841:G:H1'	2:B:2847:A:N6	2.37	0.41
2:B:2844:C:O2'	2:B:2845:A:H5'	2.21	0.41
2:B:3234:A:H2'	2:B:3235:C:C5'	2.45	0.41
2:B:3268:A:C4	10:J:69:PHE:CE1	3.09	0.41
2:B:3376:A:H8	35:IA:18:LYS:CB	2.32	0.41
2:B:3379:C:H1'	7:G:309:GLY:O	2.21	0.41
3:C:58:G:H5"	3:C:98:U:O2	2.21	0.41
4:D:99:G:H5'	24:X:53:LYS:HB3	2.02	0.41
6:F:104:LEU:HD23	6:F:146:THR:HG21	2.03	0.41
6:F:172:GLY:H	47:UA:67:GLY:HA2	1.86	0.41
7:G:231:HIS:HD2	7:G:270:ARG:CZ	2.33	0.41
9:I:111:GLN:NE2	9:I:252:ALA:HB2	2.26	0.41
10:J:72:ASN:ND2	10:J:159:LEU:HB3	2.36	0.41
13:M:86:TYR:CD2	13:M:151:VAL:HG13	2.56	0.41
13:M:122:LYS:HD3	13:M:124:ARG:HE	1.86	0.41
14:N:12:GLN:NE2	14:N:12:GLN:N	2.67	0.41
14:N:77:THR:C	14:N:79:VAL:N	2.78	0.41
17:Q:67:ARG:HB2	32:FA:105:LEU:C	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:87:ALA:HB1	17:Q:91:ARG:HE	1.86	0.41
17:Q:110:ASP:O	17:Q:114:GLN:HG2	2.20	0.41
19:S:17:ASP:HB3	19:S:18:VAL:H	1.66	0.41
20:T:111:PRO:C	20:T:113:ASP:H	2.28	0.41
24:X:69:PRO:C	24:X:97:VAL:HG21	2.46	0.41
26:Z:101:ASN:O	26:Z:102:GLU:HG3	2.20	0.41
31:EA:17:ARG:H	38:LA:74:ARG:HB2	1.86	0.41
31:EA:77:TYR:C	31:EA:79:HIS:H	2.28	0.41
36:JA:11:LYS:HD2	36:JA:14:THR:CG2	2.51	0.41
39:MA:67:ARG:HH11	39:MA:67:ARG:HG2	1.85	0.41
42:PA:31:LEU:HB3	42:PA:37:PRO:HA	2.02	0.41
48:VA:67:LEU:C	48:VA:67:LEU:HD23	2.45	0.41
48:VA:172:LEU:O	48:VA:176:LEU:HG	2.21	0.41
49:WA:157:VAL:HG21	49:WA:225:LEU:HD23	2.03	0.41
50:XA:189:VAL:HG22	50:XA:190:ASP:H	1.84	0.41
51:YA:21:VAL:HB	51:YA:26:ARG:HH22	1.86	0.41
51:YA:32:ILE:HG22	51:YA:43:VAL:CG2	2.51	0.41
53:AB:58:VAL:O	53:AB:65:ARG:HB2	2.21	0.41
54:BB:193:GLY:O	54:BB:195:ILE:N	2.54	0.41
55:CB:69:PHE:CD1	66:NB:46:PHE:HB3	2.55	0.41
56:DB:107:ALA:O	56:DB:108:VAL:HG23	2.21	0.41
57:EB:8:ILE:O	57:EB:42:GLN:HG3	2.20	0.41
57:EB:31:SER:O	57:EB:32:PRO:O	2.39	0.41
57:EB:168:SER:O	57:EB:172:VAL:HG23	2.21	0.41
59:GB:120:LYS:HB3	59:GB:120:LYS:NZ	2.36	0.41
60:HB:38:LYS:HD2	60:HB:41:TYR:CE1	2.55	0.41
61:IB:70:ILE:HA	61:IB:126:GLY:HA2	2.02	0.41
63:KB:16:ILE:HD11	63:KB:62:GLN:OE1	2.21	0.41
68:PB:105:VAL:HG13	68:PB:106:GLU:N	2.36	0.41
69:QB:107:ALA:O	69:QB:111:ILE:HG22	2.20	0.41
71:SB:3:ASN:HD21	71:SB:5:LYS:HE3	1.86	0.41
74:VB:12:VAL:HG22	74:VB:23:PHE:HB2	2.02	0.41
78:ZB:14:LYS:HD3	78:ZB:29:ARG:CZ	2.51	0.41
82:DC:380:LEU:HD22	82:DC:469:LEU:CD2	2.50	0.41
82:DC:578:LYS:HA	82:DC:584:ASN:O	2.21	0.41
82:DC:637:GLY:HA2	82:DC:668:GLN:OE1	2.21	0.41
1:A:98:U:C4	1:A:99:C:N4	2.90	0.40
1:A:299:A:H2'	1:A:300:A:C8	2.55	0.40
1:A:990:C:H5"	64:LB:129:LYS:HE2	2.04	0.40
1:A:1273:G:H4'	1:A:1275:A:OP1	2.20	0.40
1:A:1313:A:H2	1:A:1330:G:O4'	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1372:U:H2'	1:A:1373:C:O4'	2.21	0.40
1:A:1721:A:N3	56:DB:66:GLY:CA	2.84	0.40
2:B:107:A:H2'	2:B:108:A:O4'	2.20	0.40
2:B:162:G:O2'	2:B:163:C:H5'	2.21	0.40
2:B:265:A:H5"	40:NA:33:ALA:O	2.20	0.40
2:B:268:A:N6	2:B:295:A:H3'	2.32	0.40
2:B:628:A:H4'	2:B:1399:A:C6	2.55	0.40
2:B:785:G:OP2	22:V:66:ARG:NH2	2.54	0.40
2:B:1156:C:H2'	2:B:1157:G:O4'	2.21	0.40
2:B:1391:C:O2'	36:JA:101:SER:HB2	2.22	0.40
2:B:1660:C:O5'	2:B:1660:C:H6	2.04	0.40
2:B:1794:G:O4'	6:F:187:HIS:O	2.40	0.40
2:B:1795:U:H3'	6:F:52:SER:OG	2.21	0.40
2:B:1818:U:C2'	2:B:1819:U:H5"	2.51	0.40
2:B:2468:A:C5	2:B:2479:C:H5'	2.57	0.40
2:B:2567:C:H3'	2:B:2568:C:C5'	2.51	0.40
2:B:2725:U:H2'	2:B:2726:C:H5'	2.03	0.40
2:B:2992:U:H4'	2:B:3310:A:O4'	2.21	0.40
2:B:3035:A:H1'	13:M:121:LYS:O	2.22	0.40
2:B:3109:G:C1'	13:M:163:GLN:HE22	2.34	0.40
2:B:3212:C:N3	2:B:3213:A:H1'	2.37	0.40
3:C:4:C:H5"	21:U:61:ARG:HB3	2.02	0.40
5:E:123:LEU:N	5:E:123:LEU:HD22	2.36	0.40
6:F:245:LEU:HD12	6:F:245:LEU:N	2.32	0.40
7:G:170:PRO:O	7:G:171:LEU:O	2.38	0.40
8:H:304:GLN:C	8:H:306:THR:H	2.29	0.40
10:J:141:VAL:HG12	10:J:145:LEU:HD12	2.04	0.40
10:J:158:TYR:CD2	18:R:115:PHE:HB2	2.53	0.40
12:L:161:GLU:C	19:S:7:LEU:HD11	2.47	0.40
12:L:184:ALA:O	12:L:188:THR:HG23	2.21	0.40
12:L:208:GLU:O	12:L:211:LEU:HB3	2.21	0.40
13:M:117:PHE:HB3	13:M:120:ASP:CB	2.51	0.40
17:Q:5:LYS:HD3	17:Q:5:LYS:HA	1.96	0.40
17:Q:15:ARG:CG	17:Q:15:ARG:NH1	2.85	0.40
17:Q:103:ASN:HB3	40:NA:20:MET:CE	2.46	0.40
19:S:110:ALA:HB1	19:S:112:ASN:OD1	2.21	0.40
19:S:200:TRP:CE3	19:S:200:TRP:CA	3.02	0.40
22:V:155:MET:HE3	22:V:163:PRO:CA	2.52	0.40
23:W:95:TRP:O	23:W:99:LEU:HD23	2.21	0.40
23:W:123:LEU:HD13	23:W:127:SER:OG	2.22	0.40
26:Z:41:ILE:CG1	26:Z:43:VAL:HG23	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DA:22:ALA:HB1	30:DA:26:GLN:HB3	2.02	0.40
30:DA:60:ARG:CB	30:DA:103:LYS:HE3	2.51	0.40
30:DA:109:LEU:HG	30:DA:111:LEU:CD1	2.50	0.40
32:FA:9:ARG:C	32:FA:11:HIS:H	2.29	0.40
32:FA:120:ASN:HA	32:FA:141:ALA:CB	2.50	0.40
36:JA:66:LEU:HD22	36:JA:70:GLY:HA2	2.02	0.40
37:KA:49:ILE:HG13	37:KA:70:LYS:HA	2.03	0.40
38:LA:7:PHE:HB3	38:LA:34:HIS:CE1	2.55	0.40
38:LA:106:LYS:HB3	38:LA:110:GLU:OE1	2.21	0.40
42:PA:42:LYS:HE3	42:PA:42:LYS:HB2	1.81	0.40
49:WA:253:ALA:CB	49:WA:262:VAL:HG22	2.51	0.40
51:YA:146:GLN:C	51:YA:148:ASN:H	2.29	0.40
54:BB:74:GLY:HA3	54:BB:164:LEU:HD21	2.03	0.40
55:CB:180:ARG:O	55:CB:184:PHE:HB2	2.21	0.40
56:DB:129:VAL:HG23	56:DB:130:PRO:HD2	2.01	0.40
57:EB:38:LEU:HD21	57:EB:76:LYS:HB3	2.02	0.40
57:EB:130:VAL:HB	57:EB:133:THR:HG1	1.80	0.40
58:FB:22:ARG:CG	58:FB:23:LYS:H	2.33	0.40
59:GB:32:GLY:HA3	80:BC:40:TYR:CG	2.56	0.40
61:IB:67:ARG:HD3	61:IB:67:ARG:N	2.36	0.40
69:QB:49:ASP:O	69:QB:50:ALA:HB3	2.20	0.40
69:QB:111:ILE:HG23	69:QB:112:GLY:H	1.85	0.40
72:TB:80:ASN:HD22	72:TB:80:ASN:HA	1.56	0.40
72:TB:106:THR:HG21	72:TB:121:VAL:CG2	2.52	0.40
73:UB:83:VAL:HG11	73:UB:122:PHE:HD2	1.78	0.40
76:XB:7:SER:CA	76:XB:13:LYS:HE2	2.52	0.40
82:DC:19:VAL:CG1	82:DC:99:LEU:HD22	2.35	0.40
82:DC:167:LEU:O	82:DC:168:GLN:CB	2.68	0.40
82:DC:282:PHE:HA	82:DC:285:PHE:CD2	2.56	0.40
82:DC:615:ARG:NH2	82:DC:633:ILE:HG13	2.36	0.40
82:DC:772:LEU:HD11	82:DC:776:GLU:O	2.21	0.40
1:A:167:U:H1'	56:DB:133:LEU:HD23	2.03	0.40
1:A:220:A:H2'	1:A:221:A:O4'	2.21	0.40
1:A:304:U:O3'	61:IB:137:PHE:CZ	2.74	0.40
1:A:865:A:H4'	72:TB:2:THR:HG21	2.04	0.40
1:A:959:U:H4'	1:A:960:U:OP2	2.21	0.40
1:A:1387:G:H2'	1:A:1388:A:H2'	2.02	0.40
2:B:79:U:H2'	2:B:80:G:H8	1.86	0.40
2:B:170:G:H2'	2:B:171:G:O4'	2.22	0.40
2:B:199:A:C3'	30:DA:60:ARG:NH2	2.73	0.40
2:B:856:G:N2	47:UA:4:ARG:HH12	2.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:904:A:H4'	2:B:1536:G:O3'	2.21	0.40
2:B:910:G:N2	2:B:919:U:H1'	2.36	0.40
2:B:1133:A:H2'	2:B:1134:G:H5'	2.04	0.40
2:B:1233:G:O2'	2:B:1234:G:H5'	2.21	0.40
2:B:1308:A:C2	2:B:1311:G:H4'	2.55	0.40
2:B:1605:A:N1	2:B:1608:C:H1'	2.36	0.40
2:B:1645:U:O2	2:B:1645:U:H2'	2.20	0.40
2:B:1695:U:H4'	38:LA:24:LYS:O	2.21	0.40
2:B:2119:A:N6	2:B:2120:A:C2	2.89	0.40
2:B:2131:A:N6	47:UA:18:TYR:HA	2.23	0.40
2:B:2157:G:O2'	6:F:156:LYS:HD2	2.20	0.40
2:B:2249:G:N7	2:B:2272:G:C4	2.89	0.40
2:B:2471:U:H2'	2:B:2472:U:H5'	2.04	0.40
2:B:2556:C:H41	6:F:42:ARG:CZ	2.33	0.40
6:F:30:ARG:HB3	6:F:36:GLU:OE2	2.22	0.40
6:F:63:PHE:CB	6:F:72:ARG:NH2	2.80	0.40
6:F:182:ALA:HB1	6:F:196:TRP:CH2	2.54	0.40
7:G:277:SER:HB3	7:G:329:PRO:HG3	2.04	0.40
8:H:59:GLN:HE21	8:H:59:GLN:N	2.10	0.40
8:H:205:PRO:HD2	8:H:224:GLY:C	2.46	0.40
9:I:236:LEU:HD12	9:I:239:ILE:HD12	2.03	0.40
10:J:158:TYR:CZ	18:R:114:ASP:C	2.99	0.40
12:L:68:ARG:HE	12:L:238:LEU:HA	1.86	0.40
13:M:48:VAL:CG1	13:M:49:ASN:H	2.33	0.40
14:N:4:ARG:HH12	14:N:99:ILE:HG13	1.86	0.40
14:N:153:ARG:O	14:N:157:TYR:CE2	2.75	0.40
14:N:176:LEU:CD1	14:N:184:LYS:HD3	2.51	0.40
15:O:28:ASP:O	15:O:32:ARG:CG	2.66	0.40
16:P:121:PHE:HD1	16:P:128:VAL:HG21	1.85	0.40
17:Q:54:LEU:HG	17:Q:119:TYR:CG	2.57	0.40
17:Q:138:VAL:O	17:Q:139:LEU:C	2.65	0.40
18:R:81:VAL:O	18:R:85:TRP:HB2	2.21	0.40
20:T:27:LEU:HG	20:T:101:ARG:HB3	2.02	0.40
23:W:5:ARG:NH1	23:W:5:ARG:HB3	2.36	0.40
23:W:58:HIS:O	23:W:59:SER:C	2.63	0.40
23:W:86:GLU:O	23:W:90:PRO:HA	2.20	0.40
24:X:77:VAL:HG11	24:X:106:LEU:CD2	2.51	0.40
25:Y:17:ARG:HG3	25:Y:22:HIS:HA	2.02	0.40
26:Z:70:LYS:C	26:Z:70:LYS:HD3	2.46	0.40
27:AA:45:ARG:HG2	27:AA:48:ARG:HE	1.85	0.40
28:BA:6:ASP:O	28:BA:7:SER:C	2.65	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CA:63:ILE:CG1	29:CA:98:ALA:HB1	2.51	0.40
30:DA:28:ARG:NH1	30:DA:49:PRO:HG2	2.36	0.40
32:FA:9:ARG:HH22	32:FA:12:ARG:NH1	2.19	0.40
32:FA:128:ARG:HG3	40:NA:8:ALA:HB1	2.03	0.40
36:JA:22:SER:C	36:JA:24:ARG:H	2.29	0.40
36:JA:66:LEU:HD23	36:JA:72:LYS:CG	2.51	0.40
37:KA:27:VAL:HG13	37:KA:83:ALA:O	2.21	0.40
39:MA:12:LYS:HD3	39:MA:16:GLN:HB3	2.04	0.40
48:VA:30:VAL:CG1	48:VA:33:VAL:HB	2.48	0.40
48:VA:77:LEU:O	48:VA:80:VAL:HG23	2.21	0.40
49:WA:46:LYS:HB2	49:WA:58:VAL:CG1	2.49	0.40
50:XA:37:VAL:HG23	50:XA:149:LEU:HD21	2.02	0.40
52:ZA:186:LYS:O	52:ZA:190:LEU:HG	2.22	0.40
53:AB:19:ALA:HA	79:AC:49:ASP:OD1	2.21	0.40
53:AB:71:LEU:HD22	60:HB:18:GLU:OE1	2.21	0.40
54:BB:115:THR:OG1	54:BB:118:GLU:HB2	2.22	0.40
54:BB:225:VAL:CG1	54:BB:226:PHE:N	2.84	0.40
55:CB:25:LEU:HD12	66:NB:61:SER:OG	2.21	0.40
55:CB:41:LYS:HD2	55:CB:69:PHE:HD2	1.86	0.40
55:CB:88:PRO:HG2	55:CB:91:GLU:HB3	2.04	0.40
55:CB:97:LEU:HD22	55:CB:110:ALA:HB1	2.03	0.40
56:DB:80:ASN:O	56:DB:81:VAL:HG12	2.21	0.40
56:DB:178:LEU:C	56:DB:183:ARG:HH11	2.29	0.40
58:FB:5:ARG:HE	58:FB:5:ARG:HB2	1.52	0.40
58:FB:166:TYR:O	58:FB:183:ILE:HG23	2.21	0.40
60:HB:60:SER:HB3	60:HB:65:TYR:HD2	1.85	0.40
61:IB:133:LYS:HG2	61:IB:134:THR:N	2.36	0.40
64:LB:28:VAL:O	64:LB:42:VAL:HG23	2.21	0.40
67:OB:41:ILE:CG2	67:OB:42:GLN:N	2.84	0.40
69:QB:30:VAL:HG12	69:QB:54:PHE:CE2	2.56	0.40
73:UB:86:PHE:O	73:UB:124:VAL:HG23	2.22	0.40
74:VB:28:LEU:HA	74:VB:67:GLY:O	2.21	0.40
82:DC:229:TYR:HB3	82:DC:233:PHE:CE2	2.57	0.40
82:DC:574:THR:O	82:DC:576:LEU:HD12	2.20	0.40
82:DC:754:VAL:HG13	82:DC:769:LYS:O	2.21	0.40
1:A:40:A:H5"	1:A:380:U:C4	2.57	0.40
1:A:74:U:O4	56:DB:169:TYR:HE1	2.05	0.40
1:A:106:U:H2'	1:A:107:C:H5'	2.02	0.40
1:A:470:A:H2'	1:A:471:A:H5'	2.03	0.40
1:A:862:A:N6	63:KB:73:ARG:HH12	2.19	0.40
1:A:899:G:H21	1:A:915:A:N6	2.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1734:U:H2'	1:A:1735:U:O4'	2.21	0.40
2:B:438:A:H2'	2:B:439:C:C4'	2.35	0.40
2:B:562:C:H5"	24:X:71:LYS:HD2	2.04	0.40
2:B:683:U:H2'	2:B:684:G:O4'	2.21	0.40
2:B:705:A:C2	2:B:715:A:C6	3.09	0.40
2:B:984:G:O6	33:GA:14:ARG:HG2	2.21	0.40
2:B:1100:U:OP2	11:K:196:LYS:HD2	2.22	0.40
2:B:1173:U:H1'	2:B:1179:A:C2'	2.51	0.40
2:B:1424:C:C3'	2:B:1425:U:H5"	2.49	0.40
2:B:1457:U:O2'	35:IA:30:PRO:HG3	2.20	0.40
2:B:1475:A:H2'	2:B:1476:G:C8	2.56	0.40
2:B:1479:U:H2'	2:B:1480:G:H5'	2.03	0.40
2:B:1567:U:H3'	2:B:1568:U:H5"	2.03	0.40
2:B:1685:C:C5	26:Z:82:LYS:NZ	2.89	0.40
2:B:1706:C:H5"	2:B:1787:A:H4'	2.03	0.40
2:B:1779:C:N3	23:W:89:LEU:CA	2.79	0.40
2:B:2197:C:N4	2:B:2241:U:H3'	2.37	0.40
2:B:2243:A:C8	6:F:245:LEU:HD23	2.57	0.40
2:B:2527:G:O2'	12:L:244:ALA:HB3	2.20	0.40
2:B:2553:U:H1'	34:HA:51:LEU:HD12	2.02	0.40
2:B:2577:C:H2'	2:B:2578:U:H6	1.84	0.40
2:B:2857:C:H41	14:N:7:ARG:NH2	2.19	0.40
2:B:2861:U:H2'	2:B:2862:U:C6	2.56	0.40
2:B:2988:C:OP1	20:T:65:ASN:CB	2.64	0.40
2:B:3115:C:H1'	2:B:3117:C:N4	2.36	0.40
2:B:3147:G:C2'	2:B:3148:U:H5'	2.52	0.40
2:B:3181:C:C4	2:B:3182:G:C6	3.10	0.40
2:B:3235:C:C2'	2:B:3236:U:H5'	2.51	0.40
2:B:3308:C:H3'	2:B:3309:G:H21	1.85	0.40
3:C:50:C:H6	3:C:50:C:O5'	2.05	0.40
4:D:15:C:H2'	4:D:16:U:C6	2.56	0.40
4:D:95:A:H2'	4:D:96:U:C6	2.56	0.40
6:F:37:ARG:C	6:F:38:HIS:HD2	2.29	0.40
6:F:41:ILE:CG1	6:F:42:ARG:N	2.84	0.40
6:F:240:ALA:HB1	6:F:242:ARG:O	2.21	0.40
7:G:85:VAL:HG13	7:G:163:HIS:CE1	2.56	0.40
7:G:160:VAL:O	7:G:181:ILE:HD12	2.22	0.40
8:H:35:VAL:C	8:H:38:VAL:HB	2.46	0.40
8:H:131:VAL:HG12	8:H:133:SER:OG	2.21	0.40
8:H:195:ARG:HD2	8:H:197:ARG:NH2	2.37	0.40
8:H:221:ASN:HD22	8:H:221:ASN:N	2.18	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:38:THR:HG23	10:J:90:LYS:CB	2.51	0.40
10:J:101:PHE:HA	10:J:105:TYR:CD1	2.56	0.40
11:K:62:ILE:HB	11:K:63:ILE:HD12	2.03	0.40
12:L:212:ALA:HA	12:L:215:VAL:CB	2.50	0.40
13:M:124:ARG:HA	13:M:124:ARG:HD3	1.95	0.40
13:M:162:GLN:HE21	13:M:162:GLN:HB3	1.72	0.40
14:N:17:TYR:CD2	14:N:96:VAL:HB	2.56	0.40
17:Q:14:PHE:CE2	19:S:197:LEU:HD22	2.56	0.40
19:S:119:TYR:CD1	19:S:131:GLU:HB3	2.56	0.40
21:U:17:ALA:HB3	21:U:94:LEU:HG	2.04	0.40
21:U:181:ARG:HB2	21:U:181:ARG:NH2	2.36	0.40
22:V:176:ARG:HA	22:V:182:LYS:O	2.21	0.40
23:W:45:VAL:C	23:W:47:ASN:N	2.75	0.40
23:W:140:GLU:O	23:W:143:ILE:HB	2.21	0.40
24:X:12:ARG:HD2	24:X:13:ARG:O	2.22	0.40
27:AA:128:ARG:HH11	27:AA:128:ARG:HG3	1.85	0.40
28:BA:50:ALA:HB2	28:BA:55:PHE:CE1	2.56	0.40
29:CA:107:VAL:HG11	29:CA:124:VAL:HG13	2.02	0.40
30:DA:118:LEU:O	30:DA:122:LYS:HG3	2.22	0.40
31:EA:19:ALA:CB	38:LA:89:ILE:HD13	2.42	0.40
32:FA:111:LYS:HD3	32:FA:112:ILE:N	2.36	0.40
32:FA:137:LYS:O	32:FA:140:ALA:HB3	2.21	0.40
39:MA:110:ALA:O	39:MA:112:PRO:HD3	2.22	0.40
43:QA:28:ARG:O	43:QA:29:LEU:HB2	2.20	0.40
44:RA:106:ARG:HG3	44:RA:106:ARG:NH1	2.35	0.40
45:SA:4:LYS:HG3	45:SA:7:LYS:NZ	2.36	0.40
46:TA:17:CYS:SG	46:TA:21:THR:HG23	2.61	0.40
49:WA:22:SER:N	49:WA:291:SER:HB3	2.36	0.40
49:WA:233:THR:O	49:WA:234:LEU:HD12	2.20	0.40
50:XA:144:ILE:HG23	50:XA:158:VAL:O	2.22	0.40
51:YA:32:ILE:CD1	51:YA:46:THR:HG21	2.51	0.40
51:YA:153:HIS:CG	51:YA:154:SER:N	2.90	0.40
53:AB:153:ALA:HB1	53:AB:157:LEU:CD1	2.50	0.40
53:AB:191:ASP:OD2	53:AB:192:PRO:HD2	2.22	0.40
54:BB:11:ARG:H	54:BB:27:TYR:HA	1.86	0.40
54:BB:73:ASP:HB3	54:BB:145:ARG:HH22	1.85	0.40
54:BB:214:LEU:HD22	54:BB:246:LEU:CG	2.51	0.40
54:BB:222:LEU:HA	54:BB:225:VAL:HG21	2.03	0.40
55:CB:116:HIS:CE1	75:WB:93:SER:HB3	2.57	0.40
55:CB:118:LEU:HD23	55:CB:198:LEU:HD13	2.03	0.40
56:DB:30:LYS:O	56:DB:101:ILE:HA	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:132:ARG:CB	56:DB:133:LEU:HD12	2.43	0.40
56:DB:215:ARG:HG2	56:DB:215:ARG:HH11	1.86	0.40
56:DB:216:LEU:O	56:DB:216:LEU:HD23	2.21	0.40
57:EB:109:VAL:O	57:EB:110:GLN:C	2.63	0.40
58:FB:38:ILE:CD1	58:FB:94:ASN:HB3	2.45	0.40
61:IB:133:LYS:CG	61:IB:134:THR:N	2.83	0.40
63:KB:119:GLU:HA	63:KB:122:ILE:HB	2.04	0.40
64:LB:17:ALA:N	64:LB:79:VAL:CG2	2.84	0.40
64:LB:24:ASN:O	64:LB:25:ASP:HB2	2.21	0.40
66:NB:28:LEU:HD12	66:NB:28:LEU:C	2.46	0.40
69:QB:24:ARG:C	69:QB:26:GLY:N	2.78	0.40
71:SB:12:TYR:HE2	71:SB:26:ALA:HB2	1.86	0.40
73:UB:73:ARG:HH11	73:UB:73:ARG:HG3	1.86	0.40
74:VB:86:GLU:OE2	74:VB:91:LEU:HG	2.21	0.40
75:WB:49:ARG:O	75:WB:52:LYS:HB2	2.22	0.40
76:XB:82:ARG:CG	76:XB:83:ILE:N	2.79	0.40
79:AC:13:ARG:HH11	79:AC:13:ARG:HG3	1.85	0.40
82:DC:299:LEU:HA	82:DC:302:LYS:HD2	2.03	0.40
82:DC:404:THR:HA	82:DC:448:CYS:O	2.21	0.40
1:A:305:C:H2'	1:A:306:U:C6	2.56	0.40
1:A:372:G:H1'	1:A:612:U:C2	2.56	0.40
1:A:394:C:O5'	1:A:394:C:H6	2.04	0.40
1:A:959:U:C6	63:KB:61:THR:HG21	2.56	0.40
1:A:1039:A:O2'	1:A:1040:G:H8	2.03	0.40
1:A:1136:U:OP1	73:UB:118:PRO:HA	2.22	0.40
1:A:1142:A:H2'	1:A:1143:A:O4'	2.20	0.40
1:A:1167:G:H21	66:NB:139:GLN:CD	2.29	0.40
1:A:1483:A:H61	1:A:1591:C:C1'	2.34	0.40
1:A:1498:G:H2'	1:A:1499:G:C4'	2.51	0.40
1:A:1680:G:C1'	1:A:1721:A:H61	2.34	0.40
2:B:123:A:OP1	12:L:100:GLU:HG2	2.20	0.40
2:B:497:C:H2'	2:B:498:A:O4'	2.21	0.40
2:B:515:C:H2'	2:B:516:A:C5'	2.51	0.40
2:B:984:G:H22	33:GA:13:THR:HB	1.87	0.40
2:B:1061:A:H2'	2:B:1062:A:C8	2.57	0.40
2:B:1339:C:OP1	36:JA:61:LYS:HG3	2.21	0.40
2:B:1358:C:C4	2:B:1359:C:C4	3.10	0.40
2:B:1414:G:H2'	2:B:1415:U:C6	2.56	0.40
2:B:1863:G:N3	2:B:1865:A:H8	2.20	0.40
2:B:1867:A:C2	2:B:2119:A:H4'	2.56	0.40
2:B:1933:A:OP1	2:B:2123:G:H4'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2145:A:O2'	2:B:2958:A:H5"	2.21	0.40
2:B:2175:U:H4'	6:F:26:ALA:HB2	2.03	0.40
2:B:2407:C:H1'	2:B:2818:U:O2	2.20	0.40
2:B:2549:G:OP2	12:L:36:ILE:HB	2.21	0.40
2:B:2614:G:H2'	2:B:2615:G:O4'	2.22	0.40
2:B:2748:A:H1'	9:I:36:LEU:CG	2.44	0.40
2:B:2918:G:H2'	2:B:2919:A:H8	1.83	0.40
2:B:3067:C:O3'	23:W:58:HIS:HA	2.21	0.40
2:B:3150:A:H5'	7:G:130:PHE:N	2.36	0.40
2:B:3215:A:H5"	37:KA:2:ALA:HB2	2.02	0.40
2:B:3330:A:O2'	2:B:3331:U:H5'	2.21	0.40
4:D:48:U:O4	9:I:58:LYS:HB2	2.22	0.40
6:F:27:ALA:HA	6:F:75:ILE:HG21	2.02	0.40
6:F:171:GLY:C	47:UA:68:ALA:HB2	2.46	0.40
7:G:293:ASN:CB	7:G:305:ILE:HG23	2.50	0.40
7:G:321:PHE:O	7:G:322:ILE:HD13	2.22	0.40
8:H:261:VAL:O	8:H:261:VAL:HG12	2.21	0.40
12:L:170:CYS:O	12:L:174:GLY:HA2	2.21	0.40
14:N:213:PHE:N	14:N:214:PRO:CD	2.82	0.40
17:Q:50:PRO:CA	17:Q:137:GLN:HE22	2.34	0.40
17:Q:103:ASN:HD22	17:Q:105:ASN:H	1.70	0.40
17:Q:131:LYS:O	17:Q:132:ALA:C	2.65	0.40
17:Q:173:ALA:HA	17:Q:176:GLU:OE1	2.19	0.40
18:R:23:ILE:HD11	18:R:53:VAL:HG11	2.03	0.40
21:U:30:ARG:HD3	21:U:31:GLU:N	2.36	0.40
21:U:119:VAL:HB	21:U:146:ILE:CG2	2.38	0.40
22:V:57:ILE:N	22:V:57:ILE:CD1	2.84	0.40
22:V:93:ILE:HD12	22:V:93:ILE:H	1.84	0.40
23:W:39:ASN:O	23:W:42:ARG:HB3	2.22	0.40
24:X:125:LYS:HG2	24:X:126:VAL:N	2.36	0.40
25:Y:91:LEU:HB3	25:Y:96:ILE:HD11	1.97	0.40
26:Z:51:GLY:C	26:Z:53:ALA:H	2.30	0.40
27:AA:77:ILE:HG23	27:AA:126:TRP:CD1	2.57	0.40
29:CA:103:TYR:HB3	29:CA:135:ILE:CD1	2.51	0.40
30:DA:126:LEU:HG	30:DA:127:GLU:N	2.22	0.40
31:EA:12:VAL:HB	31:EA:81:LEU:O	2.21	0.40
31:EA:45:GLY:N	31:EA:71:PHE:CE2	2.87	0.40
32:FA:101:VAL:CG1	32:FA:126:LYS:HE3	2.50	0.40
34:HA:74:ASN:HB2	34:HA:88:GLY:HA2	2.01	0.40
37:KA:85:PHE:CD1	37:KA:89:LEU:HD11	2.56	0.40
43:QA:5:LYS:N	43:QA:5:LYS:HD2	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RA:98:LYS:HE2	44:RA:98:LYS:HB3	1.96	0.40
44:RA:99:CYS:O	44:RA:100:TYR:HB2	2.21	0.40
47:UA:10:ILE:O	47:UA:13:LYS:HE2	2.22	0.40
47:UA:55:TRP:CH2	47:UA:69:TYR:O	2.72	0.40
49:WA:42:LEU:CG	49:WA:82:SER:HB3	2.52	0.40
49:WA:53:LYS:C	49:WA:55:GLY:H	2.27	0.40
50:XA:101:ARG:NE	50:XA:104:PRO:HD2	2.37	0.40
50:XA:133:ILE:CD1	50:XA:133:ILE:H	2.34	0.40
50:XA:146:LEU:HD23	50:XA:160:ILE:HD12	2.03	0.40
51:YA:86:LEU:N	51:YA:86:LEU:HD22	2.36	0.40
51:YA:103:MET:SD	51:YA:188:LEU:HD22	2.61	0.40
53:AB:133:GLY:HA3	53:AB:157:LEU:HG	2.04	0.40
54:BB:114:ILE:HD12	54:BB:118:GLU:HB3	2.02	0.40
54:BB:139:VAL:CB	54:BB:147:ILE:HB	2.51	0.40
54:BB:241:GLY:O	54:BB:244:ILE:HG12	2.21	0.40
55:CB:185:ARG:HG2	55:CB:185:ARG:NH1	2.35	0.40
63:KB:100:LYS:HA	63:KB:103:GLU:HG2	2.03	0.40
64:LB:102:LEU:N	64:LB:102:LEU:HD22	2.35	0.40
64:LB:136:ARG:O	64:LB:136:ARG:HG2	2.21	0.40
65:MB:34:VAL:HG23	65:MB:35:LYS:CD	2.52	0.40
66:NB:123:ARG:CG	66:NB:124:PRO:HD2	2.50	0.40
68:PB:60:GLU:HG2	68:PB:61:LEU:HD22	2.03	0.40
69:QB:14:PHE:HE1	69:QB:135:ILE:HG13	1.86	0.40
70:RB:80:GLU:CG	79:AC:54:LYS:HD3	2.50	0.40
73:UB:95:PHE:O	73:UB:142:LYS:HE3	2.22	0.40
82:DC:25:ILE:HD13	82:DC:142:VAL:HG12	2.03	0.40
82:DC:27:HIS:HB3	82:DC:30:HIS:CE1	2.56	0.40
82:DC:61:LYS:C	82:DC:63:GLU:H	2.28	0.40
82:DC:204:PRO:CG	82:DC:209:VAL:HB	2.51	0.40
82:DC:288:ILE:HD12	82:DC:288:ILE:H	1.86	0.40
82:DC:310:ASP:HA	82:DC:313:ASP:CB	2.50	0.40
82:DC:598:SER:O	82:DC:643:PRO:HB3	2.21	0.40
82:DC:695:ALA:HB3	82:DC:699:DDE:HD2	2.03	0.40
82:DC:733:ILE:HG23	82:DC:793:PHE:H	1.87	0.40
83:EC:6854:U:H2'	83:EC:6855:A:H5'	2.03	0.40
1:A:467:G:C2'	1:A:468:A:H5"	2.51	0.40
1:A:1064:G:H2'	1:A:1065:A:C8	2.56	0.40
1:A:1301:U:OP2	52:ZA:88:LYS:HB2	2.22	0.40
1:A:1343:U:O5'	1:A:1343:U:H6	2.04	0.40
1:A:1360:A:H1'	1:A:1364:G:N2	2.36	0.40
1:A:1455:G:H2'	1:A:1456:C:H5'	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1536:G:H2'	1:A:1538:U:C5	2.55	0.40
1:A:1607:G:H2'	1:A:1608:U:C6	2.56	0.40
1:A:1798:U:H3'	51:YA:116:LYS:HZ3	1.85	0.40
2:B:44:U:O4	2:B:94:G:N2	2.54	0.40
2:B:515:C:C5'	2:B:515:C:C6	3.04	0.40
2:B:578:A:C4'	8:H:324:LEU:HD21	2.52	0.40
2:B:637:C:O2'	2:B:638:C:O5'	2.37	0.40
2:B:659:G:H2'	2:B:660:A:N7	2.37	0.40
2:B:796:U:O2'	2:B:797:U:H5'	2.21	0.40
2:B:858:A:C5	2:B:859:G:C5	3.09	0.40
2:B:925:A:H4'	2:B:926:A:H5'	2.04	0.40
2:B:1174:G:N2	20:T:87:MET:SD	2.95	0.40
2:B:1290:A:H5'	2:B:1290:A:H8	1.85	0.40
2:B:1380:G:O5'	2:B:1380:G:H8	2.05	0.40
2:B:2121:G:C2'	2:B:2122:G:O5'	2.70	0.40
2:B:2252:A:H2'	2:B:2253:G:C8	2.56	0.40
2:B:2353:G:H4'	21:U:86:LYS:HD2	2.03	0.40
2:B:2700:G:H5"	25:Y:17:ARG:CD	2.49	0.40
2:B:2801:A:O2'	2:B:2802:A:H2'	2.21	0.40
3:C:74:U:P	30:DA:76:LEU:HG	2.61	0.40
4:D:3:U:H6	4:D:3:U:O5'	2.04	0.40
4:D:35:C:H2'	4:D:36:C:H5'	2.03	0.40
5:E:67:ILE:HD13	5:E:111:ILE:HB	2.04	0.40
6:F:76:PHE:HD2	6:F:165:VAL:HG21	1.86	0.40
6:F:77:ILE:HD13	6:F:128:ARG:HE	1.86	0.40
7:G:32:PHE:HE2	7:G:159:ARG:HH21	1.69	0.40
7:G:214:MET:HE2	7:G:350:ALA:CB	2.51	0.40
8:H:76:ARG:HG3	8:H:76:ARG:HH11	1.85	0.40
8:H:82:THR:HG23	8:H:85:SER:N	2.36	0.40
8:H:361:HIS:N	24:X:28:ARG:HH12	2.20	0.40
9:I:51:LEU:HD12	9:I:52:VAL:N	2.37	0.40
11:K:68:ASP:O	11:K:71:ALA:HB3	2.21	0.40
12:L:171:LYS:HG2	40:NA:46:GLU:OE2	2.22	0.40
12:L:229:VAL:CG1	12:L:232:HIS:HB3	2.51	0.40
13:M:45:PHE:HD1	13:M:55:VAL:HG12	1.85	0.40
13:M:106:LYS:C	13:M:108:GLY:N	2.79	0.40
17:Q:49:ARG:HB3	39:MA:116:TYR:CD2	2.55	0.40
17:Q:54:LEU:HG	17:Q:119:TYR:CZ	2.57	0.40
18:R:68:LEU:HD23	18:R:68:LEU:HA	1.96	0.40
20:T:28:LEU:HD22	20:T:94:ARG:NH1	2.35	0.40
20:T:87:MET:C	20:T:88:VAL:HG23	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:28:ASN:ND2	21:U:84:PRO:HB3	2.34	0.40
23:W:135:LYS:O	23:W:138:LEU:HB3	2.22	0.40
24:X:16:THR:H	24:X:19:VAL:HB	1.86	0.40
32:FA:96:LYS:C	32:FA:98:THR:H	2.30	0.40
34:HA:24:THR:HG23	34:HA:24:THR:O	2.22	0.40
34:HA:48:THR:HG1	34:HA:74:ASN:HD22	1.69	0.40
35:IA:46:THR:HG23	35:IA:46:THR:O	2.22	0.40
39:MA:6:ALA:HA	39:MA:9:LEU:CD1	2.49	0.40
42:PA:69:LEU:CG	42:PA:75:VAL:HG21	2.51	0.40
44:RA:126:LYS:H	44:RA:126:LYS:CD	2.29	0.40
47:UA:37:TYR:N	47:UA:47:VAL:O	2.55	0.40
48:VA:61:ARG:CA	48:VA:64:ARG:HB3	2.51	0.40
48:VA:65:GLY:HA2	48:VA:73:PHE:CD2	2.57	0.40
49:WA:42:LEU:HG	49:WA:82:SER:HB3	2.03	0.40
49:WA:172:ALA:HB1	49:WA:199:ILE:CG2	2.50	0.40
49:WA:230:ALA:HB1	53:AB:220:PRO:HB3	2.03	0.40
51:YA:136:ARG:O	51:YA:215:VAL:HA	2.21	0.40
51:YA:187:LYS:C	51:YA:190:PRO:HD2	2.46	0.40
52:ZA:59:HIS:O	52:ZA:61:LEU:HG	2.21	0.40
54:BB:102:VAL:C	54:BB:109:PHE:HD1	2.30	0.40
54:BB:163:ASP:HB2	54:BB:166:SER:O	2.21	0.40
55:CB:40:ILE:O	55:CB:40:ILE:HG23	2.22	0.40
55:CB:191:ALA:HB3	75:WB:98:GLN:HG3	2.03	0.40
56:DB:70:PRO:CD	56:DB:101:ILE:HD12	2.51	0.40
57:EB:91:ILE:HD11	57:EB:129:LEU:HD23	2.03	0.40
58:FB:47:ARG:HA	58:FB:47:ARG:HH21	1.87	0.40
61:IB:85:VAL:CG2	61:IB:108:PRO:HB3	2.41	0.40
63:KB:21:ASN:HB3	63:KB:22:ALA:H	1.73	0.40
67:OB:21:TYR:C	67:OB:23:LYS:N	2.80	0.40
68:PB:145:ARG:NE	68:PB:145:ARG:HA	2.37	0.40
72:TB:82:LYS:N	72:TB:82:LYS:CD	2.83	0.40
74:VB:10:ARG:HB3	74:VB:11:LYS:H	1.70	0.40
82:DC:27:HIS:CD2	82:DC:136:CYS:SG	3.15	0.40
82:DC:386:VAL:HG13	82:DC:386:VAL:O	2.22	0.40
82:DC:386:VAL:HG11	82:DC:437:MET:HE3	2.04	0.40
82:DC:435:VAL:O	82:DC:454:ILE:HG13	2.21	0.40
82:DC:635:CYS:SG	82:DC:664:VAL:HG22	2.62	0.40
83:EC:6798:C:H6	83:EC:6798:C:O5'	2.04	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%)	125 (76%)	32 (19%)	8 (5%)	2 19
6	F	250/254 (98%)	152 (61%)	66 (26%)	32 (13%)	0 4
7	G	384/387 (99%)	268 (70%)	80 (21%)	36 (9%)	0 10
8	H	359/362 (99%)	239 (67%)	79 (22%)	41 (11%)	0 5
9	I	294/297 (99%)	213 (72%)	57 (19%)	24 (8%)	0 11
10	J	173/176 (98%)	124 (72%)	33 (19%)	16 (9%)	0 10
11	K	220/244 (90%)	165 (75%)	46 (21%)	9 (4%)	2 21
12	L	231/256 (90%)	165 (71%)	52 (22%)	14 (6%)	1 15
13	M	189/191 (99%)	134 (71%)	41 (22%)	14 (7%)	1 13
14	N	207/221 (94%)	150 (72%)	42 (20%)	15 (7%)	1 13
15	O	167/174 (96%)	118 (71%)	32 (19%)	17 (10%)	0 8
16	P	92/165 (56%)	61 (66%)	23 (25%)	8 (9%)	0 10
17	Q	191/199 (96%)	138 (72%)	36 (19%)	17 (9%)	0 10
18	R	134/138 (97%)	102 (76%)	23 (17%)	9 (7%)	1 15
19	S	201/204 (98%)	130 (65%)	58 (29%)	13 (6%)	1 15
20	T	195/199 (98%)	164 (84%)	23 (12%)	8 (4%)	2 21
21	U	181/184 (98%)	137 (76%)	36 (20%)	8 (4%)	2 20
22	V	183/186 (98%)	130 (71%)	42 (23%)	11 (6%)	1 16
23	W	186/189 (98%)	140 (75%)	35 (19%)	11 (6%)	1 16
24	X	170/172 (99%)	116 (68%)	42 (25%)	12 (7%)	1 14
25	Y	157/160 (98%)	107 (68%)	34 (22%)	16 (10%)	0 8
26	Z	98/121 (81%)	70 (71%)	24 (24%)	4 (4%)	2 21
27	AA	134/137 (98%)	103 (77%)	27 (20%)	4 (3%)	3 26
28	BA	59/155 (38%)	38 (64%)	14 (24%)	7 (12%)	0 5
29	CA	119/142 (84%)	83 (70%)	23 (19%)	13 (11%)	0 7

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
30	DA	124/127 (98%)	95 (77%)	19 (15%)	10 (8%)	1 11
31	EA	133/136 (98%)	92 (69%)	32 (24%)	9 (7%)	1 14
32	FA	146/149 (98%)	89 (61%)	40 (27%)	17 (12%)	0 5
33	GA	56/59 (95%)	46 (82%)	9 (16%)	1 (2%)	6 34
34	HA	95/105 (90%)	70 (74%)	21 (22%)	4 (4%)	2 21
35	IA	107/113 (95%)	78 (73%)	19 (18%)	10 (9%)	0 10
36	JA	125/130 (96%)	88 (70%)	34 (27%)	3 (2%)	4 30
37	KA	104/107 (97%)	72 (69%)	27 (26%)	5 (5%)	2 19
38	LA	110/121 (91%)	70 (64%)	28 (26%)	12 (11%)	0 7
39	MA	117/120 (98%)	93 (80%)	16 (14%)	8 (7%)	1 14
40	NA	97/100 (97%)	72 (74%)	21 (22%)	4 (4%)	2 21
41	OA	85/88 (97%)	45 (53%)	27 (32%)	13 (15%)	0 3
42	PA	75/78 (96%)	64 (85%)	11 (15%)	0	100 100
43	QA	48/51 (94%)	29 (60%)	12 (25%)	7 (15%)	0 3
44	RA	50/128 (39%)	30 (60%)	15 (30%)	5 (10%)	0 8
45	SA	23/25 (92%)	22 (96%)	1 (4%)	0	100 100
46	TA	103/106 (97%)	67 (65%)	29 (28%)	7 (7%)	1 14
47	UA	89/92 (97%)	55 (62%)	25 (28%)	9 (10%)	0 8
48	VA	187/312 (60%)	137 (73%)	34 (18%)	16 (9%)	0 10
49	WA	316/319 (99%)	236 (75%)	67 (21%)	13 (4%)	2 21
50	XA	204/252 (81%)	141 (69%)	45 (22%)	18 (9%)	0 10
51	YA	212/255 (83%)	142 (67%)	51 (24%)	19 (9%)	0 10
52	ZA	215/254 (85%)	160 (74%)	41 (19%)	14 (6%)	1 15
53	AB	221/240 (92%)	169 (76%)	35 (16%)	17 (8%)	1 12
54	BB	258/261 (99%)	188 (73%)	53 (20%)	17 (7%)	1 15
55	CB	204/225 (91%)	156 (76%)	32 (16%)	16 (8%)	1 12
56	DB	224/236 (95%)	169 (75%)	42 (19%)	13 (6%)	1 16
57	EB	182/190 (96%)	118 (65%)	44 (24%)	20 (11%)	0 6
58	FB	184/200 (92%)	130 (71%)	36 (20%)	18 (10%)	0 9
59	GB	183/197 (93%)	132 (72%)	35 (19%)	16 (9%)	0 10
60	HB	94/105 (90%)	63 (67%)	22 (23%)	9 (10%)	0 9

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
61	IB	153/156 (98%)	102 (67%)	41 (27%)	10 (6%)	1 15
62	JB	122/143 (85%)	87 (71%)	20 (16%)	15 (12%)	0 4
63	KB	148/151 (98%)	114 (77%)	25 (17%)	9 (6%)	1 15
64	LB	125/137 (91%)	90 (72%)	28 (22%)	7 (6%)	1 17
65	MB	120/142 (84%)	81 (68%)	30 (25%)	9 (8%)	1 13
66	NB	139/143 (97%)	106 (76%)	24 (17%)	9 (6%)	1 15
67	OB	115/136 (85%)	90 (78%)	19 (16%)	6 (5%)	1 18
68	PB	143/146 (98%)	99 (69%)	34 (24%)	10 (7%)	1 14
69	QB	141/144 (98%)	108 (77%)	23 (16%)	10 (7%)	1 14
70	RB	105/121 (87%)	77 (73%)	25 (24%)	3 (3%)	3 26
71	SB	85/87 (98%)	64 (75%)	13 (15%)	8 (9%)	0 10
72	TB	127/130 (98%)	89 (70%)	28 (22%)	10 (8%)	1 12
73	UB	142/145 (98%)	102 (72%)	31 (22%)	9 (6%)	1 15
74	VB	132/135 (98%)	94 (71%)	31 (24%)	7 (5%)	1 18
75	WB	68/108 (63%)	48 (71%)	11 (16%)	9 (13%)	0 3
76	XB	95/119 (80%)	60 (63%)	19 (20%)	16 (17%)	0 2
77	YB	79/82 (96%)	50 (63%)	24 (30%)	5 (6%)	1 15
78	ZB	61/67 (91%)	42 (69%)	19 (31%)	0	100 100
79	AC	51/56 (91%)	41 (80%)	7 (14%)	3 (6%)	1 16
80	BC	58/63 (92%)	41 (71%)	13 (22%)	4 (7%)	1 14
81	CC	69/152 (45%)	37 (54%)	14 (20%)	18 (26%)	0 1
82	DC	838/842 (100%)	629 (75%)	153 (18%)	56 (7%)	1 15
All	All	12226/13416 (91%)	8741 (72%)	2555 (21%)	930 (8%)	1 13

All (930) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
6	F	21	ARG
6	F	77	ILE
6	F	93	LYS
6	F	120	PRO
6	F	203	ALA
7	G	5	LYS
7	G	171	LEU

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Mol	Chain	Res	Type
7	G	172	ALA
7	G	189	SER
7	G	205	VAL
7	G	206	ASP
7	G	211	GLN
7	G	286	GLY
7	G	298	PHE
7	G	363	SER
8	H	38	VAL
8	H	91	GLY
8	H	202	ARG
8	H	220	ARG
8	H	244	LEU
8	H	268	ALA
8	H	272	VAL
8	H	313	LEU
8	H	328	ASN
8	H	341	SER
9	I	42	ALA
9	I	56	THR
9	I	150	LEU
9	I	233	ALA
9	I	261	THR
9	I	294	ALA
10	J	79	VAL
10	J	91	VAL
10	J	97	ASN
10	J	109	GLU
10	J	141	VAL
11	K	26	VAL
11	K	82	LYS
11	K	142	SER
11	K	158	LYS
11	K	219	LYS
12	L	36	ILE
13	M	14	GLU
13	M	50	ASN
13	M	176	LEU
14	N	70	ILE
14	N	118	ALA
15	O	10	ARG
15	O	30	LEU

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Mol	Chain	Res	Type
15	O	173	ASP
16	P	118	ASP
16	P	125	LEU
17	Q	13	HIS
17	Q	47	ALA
17	Q	139	LEU
17	Q	151	ALA
18	R	29	ALA
19	S	87	GLN
19	S	88	GLY
19	S	93	LYS
19	S	94	TYR
19	S	187	ARG
20	T	16	VAL
20	T	123	ALA
21	U	85	ALA
22	V	54	LEU
22	V	97	PRO
22	V	124	LEU
22	V	138	LEU
23	W	94	VAL
24	X	59	VAL
25	Y	12	ARG
25	Y	153	PRO
25	Y	156	TYR
26	Z	44	GLU
27	AA	108	GLU
28	BA	51	TRP
28	BA	60	LYS
30	DA	24	SER
30	DA	37	LYS
30	DA	125	LYS
31	EA	19	ALA
31	EA	34	LYS
32	FA	32	ARG
32	FA	36	GLY
32	FA	39	HIS
32	FA	65	GLN
32	FA	117	ARG
34	HA	47	ASN
35	IA	19	ARG
35	IA	24	SER

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Mol	Chain	Res	Type
35	IA	83	GLU
38	LA	56	THR
38	LA	59	PRO
38	LA	79	SER
41	OA	49	TRP
41	OA	85	LYS
43	QA	22	PRO
43	QA	25	GLN
43	QA	29	LEU
46	TA	30	ALA
46	TA	38	GLN
47	UA	28	LYS
47	UA	91	GLU
48	VA	6	GLU
48	VA	30	VAL
48	VA	81	LYS
48	VA	93	LEU
48	VA	158	VAL
49	WA	271	VAL
49	WA	295	SER
50	XA	38	PHE
50	XA	164	ASN
50	XA	189	VAL
51	YA	48	VAL
51	YA	176	VAL
51	YA	221	PRO
52	ZA	60	SER
52	ZA	107	SER
53	AB	78	LYS
53	AB	93	ASP
53	AB	220	PRO
54	BB	26	CYS
54	BB	40	GLU
54	BB	194	THR
54	BB	195	ILE
54	BB	200	ARG
54	BB	214	LEU
54	BB	236	ILE
55	CB	63	GLN
55	CB	100	ASN
55	CB	101	GLY
55	CB	203	LYS

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Mol	Chain	Res	Type
56	DB	81	VAL
57	EB	10	SER
57	EB	12	ALA
57	EB	14	THR
57	EB	31	SER
57	EB	32	PRO
57	EB	39	ARG
57	EB	63	PRO
57	EB	64	VAL
57	EB	85	PHE
58	FB	36	THR
58	FB	69	SER
58	FB	98	LYS
58	FB	122	GLY
59	GB	15	PRO
59	GB	98	ALA
59	GB	134	ILE
59	GB	138	LYS
60	HB	62	GLN
60	HB	93	GLN
61	IB	79	LYS
61	IB	146	ALA
62	JB	27	ALA
63	KB	4	MET
63	KB	20	ARG
64	LB	42	VAL
64	LB	125	SER
65	MB	73	PRO
65	MB	89	MET
66	NB	134	ALA
67	OB	20	TYR
67	OB	24	LEU
67	OB	103	ASP
68	PB	80	LYS
68	PB	82	PRO
68	PB	92	ILE
69	QB	11	ALA
69	QB	29	GLU
69	QB	53	TRP
69	QB	96	ALA
71	SB	27	ASP
72	TB	4	SER

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Mol	Chain	Res	Type
72	TB	56	HIS
72	TB	83	ILE
73	UB	11	SER
73	UB	96	VAL
73	UB	133	LEU
75	WB	43	ASP
75	WB	71	ILE
76	XB	8	ASN
76	XB	10	ARG
76	XB	43	ASN
76	XB	81	ALA
76	XB	84	VAL
76	XB	89	ARG
77	YB	22	LYS
79	AC	25	SER
81	CC	86	THR
81	CC	88	PRO
81	CC	91	ILE
81	CC	119	ARG
81	CC	124	PRO
81	CC	146	SER
82	DC	28	VAL
82	DC	43	ALA
82	DC	49	ALA
82	DC	54	ALA
82	DC	56	PHE
82	DC	57	THR
82	DC	108	HIS
82	DC	171	LYS
82	DC	296	ILE
82	DC	309	GLY
82	DC	330	ALA
82	DC	343	PRO
82	DC	361	ALA
82	DC	420	PRO
82	DC	486	SER
82	DC	583	HIS
82	DC	641	ASN
82	DC	653	VAL
82	DC	739	ALA
82	DC	759	GLN
5	E	22	GLU

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Mol	Chain	Res	Type
5	E	175	GLU
5	E	197	ASN
5	E	203	SER
6	F	19	HIS
6	F	27	ALA
6	F	29	LEU
6	F	52	SER
6	F	74	GLU
6	F	92	LYS
6	F	212	GLY
7	G	7	GLU
7	G	97	ARG
7	G	110	LEU
7	G	142	ALA
7	G	191	LYS
7	G	212	ASN
7	G	213	GLU
7	G	225	GLY
7	G	244	ARG
7	G	351	LEU
8	H	14	GLU
8	H	47	ARG
8	H	81	GLY
8	H	106	TRP
8	H	221	ASN
8	H	232	SER
8	H	245	GLY
8	H	262	TRP
8	H	269	SER
8	H	317	PRO
8	H	340	GLY
8	H	343	LYS
9	I	12	TYR
9	I	41	LYS
9	I	90	HIS
10	J	122	PHE
10	J	140	VAL
12	L	48	ARG
12	L	51	LYS
12	L	171	LYS
12	L	174	GLY
12	L	182	GLY

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Mol	Chain	Res	Type
12	L	203	VAL
13	M	15	GLY
13	M	59	ASN
13	M	82	VAL
13	M	95	ALA
13	M	141	LYS
14	N	6	ALA
14	N	145	LYS
14	N	197	VAL
15	O	114	ILE
15	O	116	TYR
15	O	134	PRO
16	P	107	ASP
16	P	144	ASP
17	Q	46	ILE
17	Q	136	GLU
18	R	9	ALA
18	R	63	VAL
18	R	74	ARG
19	S	95	GLN
20	T	147	TRP
20	T	153	VAL
21	U	152	GLU
22	V	13	SER
22	V	98	LYS
22	V	99	THR
22	V	160	GLY
23	W	53	LYS
23	W	59	SER
23	W	124	TYR
24	X	55	SER
24	X	112	ALA
25	Y	23	GLY
25	Y	102	ARG
25	Y	126	VAL
25	Y	136	ARG
26	Z	11	ILE
27	AA	15	LEU
27	AA	112	SER
28	BA	50	ALA
28	BA	58	HIS
29	CA	33	ARG

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Mol	Chain	Res	Type
29	CA	49	LYS
29	CA	68	THR
30	DA	44	GLY
30	DA	64	LYS
30	DA	90	VAL
31	EA	16	GLY
31	EA	17	ARG
31	EA	32	GLY
31	EA	87	LEU
31	EA	94	SER
32	FA	4	ARG
32	FA	13	GLY
32	FA	16	SER
32	FA	20	GLY
32	FA	77	LYS
35	IA	21	HIS
35	IA	22	GLY
35	IA	61	LYS
35	IA	68	GLU
37	KA	16	TYR
37	KA	91	ALA
38	LA	73	SER
39	MA	14	LYS
39	MA	72	GLY
39	MA	75	TYR
40	NA	3	VAL
41	OA	21	ARG
41	OA	23	GLY
41	OA	37	CYS
41	OA	77	GLY
41	OA	84	SER
41	OA	86	ALA
43	QA	36	ARG
44	RA	78	ILE
44	RA	101	ALA
44	RA	124	LYS
46	TA	16	THR
46	TA	22	GLN
47	UA	15	GLY
47	UA	36	ARG
47	UA	42	CYS
47	UA	60	CYS

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Mol	Chain	Res	Type
48	VA	31	ASP
48	VA	108	PRO
48	VA	131	GLY
49	WA	94	VAL
49	WA	98	GLU
49	WA	105	GLY
50	XA	5	ALA
50	XA	37	VAL
50	XA	64	ILE
50	XA	111	ILE
50	XA	194	PRO
51	YA	35	PRO
51	YA	97	LEU
52	ZA	39	THR
52	ZA	148	LEU
52	ZA	163	GLY
52	ZA	231	ALA
53	AB	161	GLY
53	AB	164	VAL
53	AB	217	ILE
54	BB	24	SER
54	BB	104	ASP
54	BB	164	LEU
54	BB	201	HIS
55	CB	45	LYS
55	CB	50	GLU
55	CB	51	VAL
55	CB	106	LYS
55	CB	151	GLY
56	DB	20	ASP
56	DB	151	ASP
56	DB	153	VAL
57	EB	110	GLN
57	EB	156	SER
58	FB	10	LYS
58	FB	51	GLY
58	FB	59	ARG
58	FB	64	ASN
58	FB	117	TYR
58	FB	152	ILE
60	HB	61	TRP
60	HB	81	ASN

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Mol	Chain	Res	Type
61	IB	7	VAL
61	IB	81	HIS
62	JB	39	ASP
62	JB	115	VAL
62	JB	131	ASP
64	LB	110	LEU
65	MB	14	THR
65	MB	55	GLY
66	NB	15	SER
66	NB	27	GLY
66	NB	113	ASP
68	PB	51	ASP
68	PB	109	LEU
68	PB	123	ARG
68	PB	135	GLY
69	QB	35	ASP
70	RB	21	LYS
70	RB	54	GLY
70	RB	96	PRO
71	SB	14	PRO
71	SB	19	ALA
71	SB	42	GLU
71	SB	44	ARG
72	TB	5	SER
72	TB	27	ILE
72	TB	49	GLU
73	UB	4	GLY
73	UB	44	GLY
74	VB	11	LYS
74	VB	54	ALA
74	VB	59	GLY
75	WB	44	GLN
75	WB	88	ILE
76	XB	48	ALA
76	XB	86	VAL
77	YB	62	ILE
80	BC	47	VAL
81	CC	98	VAL
81	CC	136	LYS
82	DC	559	PRO
82	DC	639	ASP
82	DC	695	ALA

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Mol	Chain	Res	Type
82	DC	751	ARG
82	DC	764	PRO
82	DC	789	GLY
82	DC	797	VAL
6	F	3	ARG
6	F	14	SER
6	F	30	ARG
6	F	47	GLN
6	F	55	GLY
6	F	81	GLY
6	F	85	GLY
6	F	178	PRO
6	F	252	THR
7	G	3	HIS
7	G	23	ALA
7	G	239	PRO
7	G	314	TYR
7	G	380	MET
8	H	5	GLN
8	H	109	TRP
8	H	140	HIS
8	H	185	LYS
8	H	222	VAL
8	H	314	LYS
9	I	187	THR
9	I	259	LYS
9	I	262	LYS
10	J	98	VAL
12	L	39	ALA
12	L	120	LYS
12	L	253	SER
13	M	2	LYS
14	N	84	ALA
14	N	156	ARG
14	N	203	LYS
15	O	8	PRO
15	O	108	GLU
15	O	115	LYS
15	O	153	LYS
16	P	68	GLN
16	P	108	GLU
17	Q	94	GLY

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Mol	Chain	Res	Type
17	Q	153	ASP
18	R	8	LYS
19	S	14	LYS
19	S	31	ARG
20	T	65	ASN
21	U	3	ARG
21	U	156	ALA
21	U	158	ALA
22	V	135	GLN
23	W	97	ARG
23	W	182	ASP
23	W	185	LEU
24	X	151	PRO
24	X	153	PRO
24	X	155	ARG
24	X	166	LYS
24	X	167	ARG
25	Y	6	GLY
25	Y	29	THR
25	Y	124	VAL
25	Y	127	GLN
26	Z	91	ASP
28	BA	7	SER
29	CA	78	ASP
29	CA	87	SER
30	DA	74	TYR
30	DA	105	VAL
35	IA	102	LYS
38	LA	37	LYS
38	LA	48	GLY
38	LA	50	ALA
39	MA	77	PRO
40	NA	19	SER
43	QA	24	PRO
43	QA	26	TRP
46	TA	34	SER
46	TA	100	LYS
47	UA	18	TYR
48	VA	87	VAL
48	VA	116	PRO
50	XA	41	ARG
50	XA	149	LEU

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Mol	Chain	Res	Type
50	XA	158	VAL
50	XA	190	ASP
51	YA	153	HIS
51	YA	206	PRO
51	YA	209	ASN
51	YA	215	VAL
52	ZA	90	THR
53	AB	61	GLU
53	AB	62	ASN
53	AB	114	ALA
53	AB	196	ARG
54	BB	20	LEU
54	BB	105	VAL
54	BB	144	GLY
54	BB	226	PHE
56	DB	70	PRO
56	DB	126	ASP
56	DB	133	LEU
56	DB	191	ARG
57	EB	13	PRO
57	EB	74	GLN
57	EB	178	GLY
58	FB	25	ARG
58	FB	68	ALA
58	FB	120	THR
59	GB	18	PRO
59	GB	21	SER
59	GB	99	LEU
59	GB	118	LEU
59	GB	151	ASP
61	IB	54	ILE
62	JB	91	VAL
62	JB	112	ALA
63	KB	85	PRO
63	KB	133	ALA
64	LB	25	ASP
65	MB	100	LYS
65	MB	125	PRO
65	MB	127	ARG
67	OB	72	LYS
68	PB	50	ALA
68	PB	102	ALA

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Mol	Chain	Res	Type
69	QB	33	TYR
69	QB	50	ALA
71	SB	25	LYS
72	TB	55	ASP
72	TB	119	LYS
73	UB	99	ASN
73	UB	131	SER
74	VB	19	ALA
75	WB	68	ARG
75	WB	94	LYS
76	XB	5	ARG
76	XB	6	ALA
76	XB	45	VAL
76	XB	60	PRO
77	YB	71	ALA
81	CC	89	LYS
81	CC	96	LYS
82	DC	29	ASP
82	DC	59	THR
82	DC	168	GLN
82	DC	477	ASN
82	DC	480	VAL
82	DC	482	LYS
82	DC	721	ASP
82	DC	754	VAL
82	DC	756	SER
82	DC	814	LYS
5	E	208	SER
6	F	15	ILE
6	F	65	ASP
6	F	122	ASP
6	F	171	GLY
6	F	180	LEU
6	F	217	GLN
6	F	242	ARG
6	F	251	LYS
7	G	108	GLU
7	G	258	ALA
8	H	4	PRO
8	H	260	GLN
8	H	264	SER
8	H	277	PRO

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Mol	Chain	Res	Type
8	H	281	ILE
8	H	348	GLY
9	I	7	ALA
9	I	38	THR
9	I	137	ASP
9	I	155	THR
9	I	234	ASP
9	I	235	SER
10	J	45	GLY
10	J	85	ILE
10	J	92	SER
10	J	99	GLU
10	J	105	TYR
10	J	111	LEU
11	K	24	GLU
11	K	159	GLN
13	M	117	PHE
13	M	170	LYS
14	N	10	ARG
14	N	20	SER
14	N	45	GLU
14	N	170	LYS
14	N	177	ASP
15	O	64	LYS
15	O	89	TYR
15	O	172	LEU
16	P	123	ARG
17	Q	127	PRO
17	Q	149	GLN
17	Q	150	PRO
18	R	79	ALA
19	S	47	LYS
19	S	121	VAL
21	U	81	ALA
22	V	175	ALA
23	W	88	ARG
23	W	129	GLY
24	X	15	PRO
24	X	139	TYR
25	Y	125	ALA
25	Y	150	THR
27	AA	113	ALA

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Mol	Chain	Res	Type
29	CA	50	ALA
29	CA	69	SER
29	CA	72	ALA
29	CA	92	LYS
30	DA	45	ILE
31	EA	128	GLN
32	FA	5	PHE
32	FA	49	HIS
32	FA	142	GLY
34	HA	20	SER
36	JA	38	ILE
36	JA	68	PRO
38	LA	69	HIS
39	MA	103	LYS
39	MA	113	GLN
40	NA	94	ILE
41	OA	17	THR
41	OA	59	THR
43	QA	43	ASN
44	RA	79	GLU
46	TA	5	PRO
48	VA	55	LYS
48	VA	107	ALA
48	VA	162	GLY
49	WA	63	GLY
50	XA	9	LEU
50	XA	42	PRO
51	YA	75	GLY
51	YA	82	ARG
51	YA	145	LYS
52	ZA	145	GLY
53	AB	113	LEU
53	AB	211	PRO
53	AB	221	SER
54	BB	122	LYS
54	BB	243	GLY
55	CB	21	THR
55	CB	64	VAL
55	CB	126	ASP
56	DB	88	ARG
56	DB	135	PRO
57	EB	8	ILE

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Mol	Chain	Res	Type
57	EB	112	ARG
59	GB	65	LYS
59	GB	132	ARG
60	HB	28	ASN
60	HB	64	TYR
62	JB	93	ASP
62	JB	119	SER
62	JB	125	ASN
63	KB	24	ALA
63	KB	31	GLU
63	KB	138	ASN
64	LB	86	THR
64	LB	132	ARG
65	MB	19	GLY
65	MB	101	ALA
66	NB	40	GLU
66	NB	142	TYR
71	SB	12	TYR
72	TB	30	SER
74	VB	5	VAL
74	VB	67	GLY
74	VB	76	TYR
75	WB	39	ALA
76	XB	61	GLU
77	YB	51	GLN
79	AC	13	ARG
79	AC	22	ARG
80	BC	45	VAL
81	CC	95	HIS
81	CC	100	LEU
81	CC	143	LYS
82	DC	105	SER
82	DC	112	SER
82	DC	384	LYS
82	DC	465	LYS
82	DC	626	ASP
82	DC	761	PRO
6	F	34	TYR
6	F	175	VAL
7	G	43	LEU
7	G	187	SER
7	G	303	LYS

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Mol	Chain	Res	Type
7	G	361	THR
9	I	119	TYR
9	I	253	PHE
10	J	6	ALA
11	K	178	ILE
11	K	191	VAL
12	L	136	LEU
12	L	229	VAL
13	M	175	PHE
14	N	23	ASN
15	O	29	ARG
15	O	38	GLU
15	O	54	VAL
16	P	138	SER
17	Q	5	LYS
17	Q	25	HIS
17	Q	73	ARG
17	Q	132	ALA
18	R	49	PRO
18	R	88	ALA
19	S	48	ALA
21	U	70	THR
22	V	10	HIS
23	W	122	VAL
24	X	13	ARG
25	Y	27	LEU
28	BA	24	GLY
29	CA	25	LYS
29	CA	79	GLY
30	DA	47	ALA
35	IA	82	GLU
36	JA	50	ILE
37	KA	36	ALA
38	LA	72	VAL
39	MA	115	LYS
41	OA	70	VAL
44	RA	123	PRO
49	WA	138	GLY
49	WA	165	ASP
49	WA	220	ILE
50	XA	4	PRO
50	XA	117	GLU

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Mol	Chain	Res	Type
51	YA	23	PRO
51	YA	55	LYS
51	YA	139	ALA
51	YA	174	LYS
51	YA	210	ILE
52	ZA	93	GLY
52	ZA	150	GLN
53	AB	88	ALA
53	AB	218	LEU
56	DB	68	LEU
57	EB	73	VAL
59	GB	85	VAL
59	GB	89	ASP
59	GB	131	GLN
60	HB	34	GLU
60	HB	60	SER
60	HB	82	LEU
61	IB	130	PRO
61	IB	133	LYS
62	JB	59	LEU
62	JB	82	PRO
63	KB	22	ALA
63	KB	29	SER
67	OB	62	GLN
71	SB	10	GLU
75	WB	38	HIS
77	YB	3	LEU
80	BC	16	SER
81	CC	87	THR
81	CC	90	LYS
81	CC	102	VAL
82	DC	354	GLU
82	DC	372	CYS
82	DC	401	PHE
82	DC	423	LYS
82	DC	454	ILE
82	DC	552	VAL
7	G	63	PRO
7	G	250	ALA
7	G	312	VAL
8	H	24	ALA
9	I	27	LYS

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Mol	Chain	Res	Type
9	I	244	HIS
10	J	121	LEU
12	L	157	VAL
13	M	42	ASP
13	M	43	VAL
17	Q	147	ILE
19	S	148	TYR
19	S	154	PRO
20	T	111	PRO
28	BA	26	SER
29	CA	71	THR
32	FA	3	SER
32	FA	96	LYS
33	GA	20	GLY
34	HA	100	ILE
37	KA	90	PRO
38	LA	34	HIS
39	MA	82	ALA
41	OA	10	LYS
41	OA	64	MET
47	UA	8	VAL
48	VA	71	PRO
48	VA	105	VAL
49	WA	3	SER
49	WA	15	GLY
50	XA	28	ASN
50	XA	103	THR
51	YA	147	ALA
56	DB	45	PHE
58	FB	40	ALA
58	FB	104	ILE
61	IB	3	THR
61	IB	40	LEU
62	JB	66	VAL
62	JB	86	VAL
64	LB	130	GLY
69	QB	90	PRO
73	UB	97	ASP
75	WB	97	LYS
76	XB	64	LEU
81	CC	85	TYR
81	CC	111	GLU

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Mol	Chain	Res	Type
82	DC	304	GLU
82	DC	310	ASP
82	DC	428	ILE
5	E	202	GLY
8	H	131	VAL
9	I	87	GLY
12	L	50	VAL
20	T	43	ILE
21	U	182	ILE
26	Z	96	VAL
32	FA	50	PRO
35	IA	109	VAL
38	LA	54	ILE
40	NA	9	ILE
49	WA	298	GLY
52	ZA	38	VAL
55	CB	137	ILE
56	DB	69	LEU
57	EB	54	GLY
58	FB	50	GLY
58	FB	85	PRO
67	OB	102	VAL
80	BC	50	VAL
82	DC	449	PRO
82	DC	678	GLY
5	E	87	VAL
8	H	23	PRO
8	H	71	VAL
8	H	78	GLY
25	Y	148	PRO
31	EA	103	GLN
32	FA	31	GLY
34	HA	42	ILE
37	KA	80	VAL
51	YA	204	ILE
52	ZA	36	VAL
52	ZA	109	GLY
57	EB	98	ILE
66	NB	50	GLU
68	PB	14	ILE
69	QB	4	VAL
7	G	157	VAL

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Mol	Chain	Res	Type
17	Q	133	PRO
24	X	20	PRO
25	Y	155	PRO
49	WA	154	VAL
53	AB	63	GLY
55	CB	67	PRO
55	CB	75	GLY
59	GB	83	VAL
59	GB	162	SER
62	JB	106	ILE
66	NB	29	ILE
76	XB	75	VAL
82	DC	640	GLY
82	DC	675	PRO
6	F	108	PRO
7	G	93	VAL
8	H	261	VAL
15	O	36	VAL
18	R	64	VAL
20	T	110	PRO
23	W	177	VAL
29	CA	26	VAL
53	AB	43	PRO
57	EB	149	ILE
61	IB	75	VAL
69	QB	6	VAL
72	TB	67	GLY
73	UB	130	VAL
76	XB	9	GLY
5	E	183	ILE
8	H	152	VAL
9	I	125	VAL
14	N	91	VAL
38	LA	42	PRO
47	UA	26	VAL
48	VA	101	VAL
52	ZA	236	PRO
55	CB	28	PRO
58	FB	173	PRO
62	JB	40	GLY
66	NB	41	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%)	133 (85%)	24 (15%)	3 15
6	F	194/196 (99%)	170 (88%)	24 (12%)	4 20
7	G	322/323 (100%)	284 (88%)	38 (12%)	5 21
8	H	288/289 (100%)	247 (86%)	41 (14%)	3 17
9	I	244/245 (100%)	213 (87%)	31 (13%)	4 20
10	J	152/153 (99%)	140 (92%)	12 (8%)	11 35
11	K	186/205 (91%)	168 (90%)	18 (10%)	8 27
12	L	191/208 (92%)	174 (91%)	17 (9%)	9 31
13	M	171/171 (100%)	151 (88%)	20 (12%)	5 21
14	N	180/187 (96%)	159 (88%)	21 (12%)	5 21
15	O	147/150 (98%)	135 (92%)	12 (8%)	10 34
16	P	81/136 (60%)	63 (78%)	18 (22%)	1 6
17	Q	154/159 (97%)	131 (85%)	23 (15%)	3 16
18	R	107/109 (98%)	95 (89%)	12 (11%)	6 22
19	S	175/176 (99%)	143 (82%)	32 (18%)	2 12
20	T	160/162 (99%)	144 (90%)	16 (10%)	7 26
21	U	145/146 (99%)	131 (90%)	14 (10%)	8 27
22	V	150/151 (99%)	135 (90%)	15 (10%)	7 26
23	W	153/154 (99%)	138 (90%)	15 (10%)	7 27
24	X	156/156 (100%)	130 (83%)	26 (17%)	2 13
25	Y	136/137 (99%)	116 (85%)	20 (15%)	3 16
26	Z	87/107 (81%)	82 (94%)	5 (6%)	18 43
27	AA	104/105 (99%)	90 (86%)	14 (14%)	4 18
28	BA	54/129 (42%)	48 (89%)	6 (11%)	6 23
29	CA	105/118 (89%)	89 (85%)	16 (15%)	3 15
30	DA	109/110 (99%)	93 (85%)	16 (15%)	3 16

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
31	EA	115/116 (99%)	104 (90%)	11 (10%)	8 28
32	FA	118/119 (99%)	107 (91%)	11 (9%)	8 29
33	GA	46/47 (98%)	38 (83%)	8 (17%)	2 13
34	HA	81/88 (92%)	72 (89%)	9 (11%)	6 23
35	IA	96/97 (99%)	80 (83%)	16 (17%)	2 13
36	JA	109/111 (98%)	92 (84%)	17 (16%)	2 15
37	KA	90/91 (99%)	86 (96%)	4 (4%)	25 48
38	LA	95/103 (92%)	84 (88%)	11 (12%)	5 21
39	MA	104/105 (99%)	88 (85%)	16 (15%)	2 15
40	NA	81/82 (99%)	72 (89%)	9 (11%)	6 23
41	OA	70/71 (99%)	65 (93%)	5 (7%)	13 38
42	PA	68/69 (99%)	65 (96%)	3 (4%)	25 48
43	QA	45/46 (98%)	40 (89%)	5 (11%)	6 23
44	RA	47/116 (40%)	44 (94%)	3 (6%)	16 40
45	SA	23/23 (100%)	19 (83%)	4 (17%)	2 13
46	TA	90/91 (99%)	70 (78%)	20 (22%)	1 6
47	UA	71/72 (99%)	57 (80%)	14 (20%)	1 9
48	VA	160/254 (63%)	144 (90%)	16 (10%)	7 26
49	WA	261/262 (100%)	250 (96%)	11 (4%)	26 49
50	XA	172/210 (82%)	156 (91%)	16 (9%)	8 29
51	YA	191/224 (85%)	172 (90%)	19 (10%)	7 27
52	ZA	176/205 (86%)	166 (94%)	10 (6%)	18 43
53	AB	182/195 (93%)	166 (91%)	16 (9%)	9 32
54	BB	221/222 (100%)	202 (91%)	19 (9%)	10 33
55	CB	173/191 (91%)	160 (92%)	13 (8%)	12 36
56	DB	193/201 (96%)	182 (94%)	11 (6%)	18 43
57	EB	165/170 (97%)	150 (91%)	15 (9%)	9 30
58	FB	150/161 (93%)	137 (91%)	13 (9%)	9 32
59	GB	158/166 (95%)	151 (96%)	7 (4%)	25 48
60	HB	89/98 (91%)	85 (96%)	4 (4%)	24 47
61	IB	136/137 (99%)	123 (90%)	13 (10%)	8 28

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
63	KB	127/128 (99%)	114 (90%)	13 (10%)	7 25
64	LB	96/105 (91%)	92 (96%)	4 (4%)	26 49
65	MB	103/118 (87%)	96 (93%)	7 (7%)	14 39
66	NB	117/119 (98%)	111 (95%)	6 (5%)	21 45
67	OB	82/124 (66%)	75 (92%)	7 (8%)	10 33
68	PB	128/129 (99%)	115 (90%)	13 (10%)	7 25
69	QB	115/116 (99%)	110 (96%)	5 (4%)	26 48
70	RB	100/114 (88%)	92 (92%)	8 (8%)	11 35
71	SB	74/74 (100%)	67 (90%)	7 (10%)	8 28
72	TB	110/111 (99%)	93 (84%)	17 (16%)	2 15
73	UB	119/120 (99%)	111 (93%)	8 (7%)	15 39
74	VB	112/113 (99%)	104 (93%)	8 (7%)	13 38
75	WB	61/89 (68%)	57 (93%)	4 (7%)	15 40
76	XB	83/101 (82%)	71 (86%)	12 (14%)	3 16
77	YB	70/71 (99%)	63 (90%)	7 (10%)	7 26
78	ZB	56/60 (93%)	53 (95%)	3 (5%)	20 44
79	AC	47/49 (96%)	41 (87%)	6 (13%)	4 20
80	BC	51/54 (94%)	44 (86%)	7 (14%)	3 17
82	DC	713/714 (100%)	626 (88%)	87 (12%)	5 21
All	All	10248/11032 (93%)	9164 (89%)	1084 (11%)	9 24

All (1084) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	E	8	GLN
5	E	28	PHE
5	E	31	THR
5	E	32	VAL
5	E	34	LEU
5	E	65	ILE
5	E	70	ASP
5	E	80	CYS
5	E	82	VAL
5	E	83	ASP
5	E	96	ASN

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Mol	Chain	Res	Type
5	E	116	LEU
5	E	117	ILE
5	E	123	LEU
5	E	130	LYS
5	E	134	PHE
5	E	143	ASP
5	E	176	GLU
5	E	187	VAL
5	E	194	LEU
5	E	196	LYS
5	E	197	ASN
5	E	204	LEU
5	E	207	LYS
6	F	24	GLN
6	F	36	GLU
6	F	44	ILE
6	F	45	VAL
6	F	49	VAL
6	F	67	TYR
6	F	72	ARG
6	F	82	VAL
6	F	96	LEU
6	F	98	VAL
6	F	101	VAL
6	F	107	VAL
6	F	112	ILE
6	F	118	GLU
6	F	122	ASP
6	F	139	HIS
6	F	146	THR
6	F	165	VAL
6	F	178	PRO
6	F	191	LEU
6	F	204	MET
6	F	245	LEU
6	F	250	GLN
6	F	253	GLN
7	G	4	ARG
7	G	25	ILE
7	G	30	LYS
7	G	46	PHE
7	G	58	ARG

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Mol	Chain	Res	Type
7	G	67	PHE
7	G	85	VAL
7	G	95	THR
7	G	99	LEU
7	G	102	LEU
7	G	114	VAL
7	G	116	ARG
7	G	118	PHE
7	G	120	LYS
7	G	154	TYR
7	G	157	VAL
7	G	158	VAL
7	G	166	ILE
7	G	184	ASN
7	G	193	ASP
7	G	200	GLU
7	G	201	LYS
7	G	205	VAL
7	G	213	GLU
7	G	238	LEU
7	G	240	ARG
7	G	244	ARG
7	G	251	CYS
7	G	252	ILE
7	G	259	HIS
7	G	266	ARG
7	G	287	LYS
7	G	328	ILE
7	G	332	ARG
7	G	338	LEU
7	G	342	LEU
7	G	343	TYR
7	G	351	LEU
8	H	25	VAL
8	H	36	HIS
8	H	48	GLN
8	H	54	GLU
8	H	59	GLN
8	H	63	GLU
8	H	74	ILE
8	H	76	ARG
8	H	92	ASN

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Mol	Chain	Res	Type
8	H	94	CYS
8	H	122	THR
8	H	140	HIS
8	H	150	LEU
8	H	151	VAL
8	H	156	LEU
8	H	160	GLN
8	H	177	ASP
8	H	193	LYS
8	H	194	TYR
8	H	201	GLN
8	H	227	THR
8	H	235	LEU
8	H	238	LEU
8	H	246	ARG
8	H	249	ILE
8	H	250	TRP
8	H	260	GLN
8	H	262	TRP
8	H	279	HIS
8	H	280	ILE
8	H	283	THR
8	H	285	ASP
8	H	294	GLU
8	H	313	LEU
8	H	316	ASN
8	H	319	LYS
8	H	324	LEU
8	H	325	LEU
8	H	327	LEU
8	H	333	VAL
8	H	361	HIS
9	I	12	TYR
9	I	15	ARG
9	I	23	ARG
9	I	31	TYR
9	I	36	LEU
9	I	41	LYS
9	I	46	THR
9	I	56	THR
9	I	63	GLN
9	I	70	THR

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Mol	Chain	Res	Type
9	I	79	TYR
9	I	85	ARG
9	I	92	LEU
9	I	101	THR
9	I	104	LEU
9	I	130	GLU
9	I	131	LEU
9	I	137	ASP
9	I	146	LEU
9	I	147	ASP
9	I	151	GLN
9	I	154	THR
9	I	155	THR
9	I	175	HIS
9	I	178	ASN
9	I	183	TRP
9	I	234	ASP
9	I	251	PRO
9	I	277	LEU
9	I	279	LYS
9	I	293	LEU
10	J	13	GLU
10	J	20	LYS
10	J	22	ARG
10	J	26	ARG
10	J	39	VAL
10	J	41	ILE
10	J	42	LEU
10	J	65	ILE
10	J	104	GLU
10	J	121	LEU
10	J	123	PRO
10	J	165	LEU
11	K	25	GLN
11	K	29	GLU
11	K	51	TYR
11	K	82	LYS
11	K	86	VAL
11	K	87	VAL
11	K	106	LEU
11	K	115	THR
11	K	123	THR

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Mol	Chain	Res	Type
11	K	124	LEU
11	K	138	TYR
11	K	143	THR
11	K	155	LYS
11	K	159	GLN
11	K	161	VAL
11	K	168	ILE
11	K	169	ILE
11	K	179	LEU
12	L	46	LEU
12	L	50	VAL
12	L	55	TYR
12	L	58	VAL
12	L	65	LEU
12	L	74	THR
12	L	75	ILE
12	L	84	ARG
12	L	92	LYS
12	L	122	LYS
12	L	134	TYR
12	L	136	LEU
12	L	149	LYS
12	L	161	GLU
12	L	200	LEU
12	L	227	ASP
12	L	248	LYS
13	M	4	ILE
13	M	30	PRO
13	M	38	LEU
13	M	41	ILE
13	M	49	ASN
13	M	50	ASN
13	M	52	LEU
13	M	58	HIS
13	M	68	LEU
13	M	70	THR
13	M	78	MET
13	M	111	PHE
13	M	112	ILE
13	M	123	ILE
13	M	136	PHE
13	M	151	VAL

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Mol	Chain	Res	Type
13	M	161	LEU
13	M	162	GLN
13	M	167	VAL
13	M	172	ILE
14	N	7	ARG
14	N	9	TYR
14	N	12	GLN
14	N	15	LYS
14	N	23	ASN
14	N	24	ARG
14	N	32	ARG
14	N	57	LEU
14	N	58	GLU
14	N	63	GLU
14	N	65	LEU
14	N	75	TYR
14	N	91	VAL
14	N	97	LEU
14	N	128	ARG
14	N	134	ILE
14	N	157	TYR
14	N	163	GLN
14	N	165	ILE
14	N	169	LYS
14	N	175	ASN
15	O	13	LYS
15	O	35	LYS
15	O	40	LEU
15	O	61	ARG
15	O	65	ILE
15	O	80	LEU
15	O	94	ARG
15	O	112	LEU
15	O	134	PRO
15	O	137	ARG
15	O	159	THR
15	O	171	VAL
16	P	56	ILE
16	P	57	LYS
16	P	58	VAL
16	P	61	GLN
16	P	65	GLN

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Mol	Chain	Res	Type
16	P	76	SER
16	P	87	GLU
16	P	91	ASP
16	P	100	HIS
16	P	104	ILE
16	P	105	GLN
16	P	107	ASP
16	P	116	MET
16	P	118	ASP
16	P	125	LEU
16	P	129	THR
16	P	130	LYS
16	P	131	GLU
17	Q	15	ARG
17	Q	16	LYS
17	Q	35	ARG
17	Q	39	ARG
17	Q	51	LEU
17	Q	54	LEU
17	Q	57	VAL
17	Q	67	ARG
17	Q	79	GLU
17	Q	80	VAL
17	Q	99	HIS
17	Q	102	GLN
17	Q	103	ASN
17	Q	104	ARG
17	Q	112	ASN
17	Q	128	ARG
17	Q	131	LYS
17	Q	137	GLN
17	Q	150	PRO
17	Q	160	GLN
17	Q	164	GLU
17	Q	183	ARG
17	Q	184	GLU
18	R	14	LEU
18	R	17	VAL
18	R	23	ILE
18	R	53	VAL
18	R	70	PHE
18	R	72	LEU

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Mol	Chain	Res	Type
18	R	90	VAL
18	R	102	LYS
18	R	103	ILE
18	R	123	LEU
18	R	131	VAL
18	R	132	LYS
19	S	7	LEU
19	S	10	LEU
19	S	11	GLN
19	S	22	LEU
19	S	45	PRO
19	S	47	LYS
19	S	49	ARG
19	S	60	VAL
19	S	64	VAL
19	S	66	VAL
19	S	77	LYS
19	S	80	THR
19	S	81	TYR
19	S	87	GLN
19	S	89	VAL
19	S	98	LEU
19	S	108	ARG
19	S	109	ARG
19	S	113	LEU
19	S	115	VAL
19	S	119	TYR
19	S	121	VAL
19	S	134	LEU
19	S	138	GLN
19	S	139	HIS
19	S	142	ILE
19	S	150	TRP
19	S	164	LEU
19	S	178	HIS
19	S	184	LYS
19	S	193	ARG
19	S	200	TRP
20	T	8	VAL
20	T	12	LYS
20	T	74	ARG
20	T	78	ARG

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Mol	Chain	Res	Type
20	T	80	PHE
20	T	82	LYS
20	T	104	VAL
20	T	106	GLU
20	T	108	ILE
20	T	110	PRO
20	T	113	ASP
20	T	126	VAL
20	T	152	VAL
20	T	157	GLU
20	T	160	ARG
20	T	190	VAL
21	U	34	GLN
21	U	41	LEU
21	U	55	GLN
21	U	113	TYR
21	U	114	VAL
21	U	118	GLN
21	U	121	GLN
21	U	130	TYR
21	U	139	TYR
21	U	145	HIS
21	U	146	ILE
21	U	148	LEU
21	U	171	ARG
21	U	180	LYS
22	V	15	HIS
22	V	29	LEU
22	V	32	LEU
22	V	56	LYS
22	V	64	VAL
22	V	78	ASN
22	V	93	ILE
22	V	115	VAL
22	V	127	LEU
22	V	138	LEU
22	V	140	LEU
22	V	158	HIS
22	V	170	ARG
22	V	179	ARG
22	V	185	LYS
23	W	14	VAL

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Mol	Chain	Res	Type
23	W	22	VAL
23	W	31	GLU
23	W	51	VAL
23	W	52	LYS
23	W	81	ARG
23	W	86	GLU
23	W	95	TRP
23	W	99	LEU
23	W	111	ASP
23	W	125	LYS
23	W	134	HIS
23	W	144	GLN
23	W	164	LEU
23	W	181	ARG
24	X	1	MET
24	X	9	VAL
24	X	12	ARG
24	X	14	LEU
24	X	20	PRO
24	X	27	MET
24	X	42	TRP
24	X	50	LYS
24	X	51	VAL
24	X	58	ILE
24	X	79	VAL
24	X	92	LYS
24	X	100	VAL
24	X	106	LEU
24	X	108	GLN
24	X	110	MET
24	X	117	ARG
24	X	137	ARG
24	X	139	TYR
24	X	147	ASP
24	X	150	PHE
24	X	151	PRO
24	X	155	ARG
24	X	158	LYS
24	X	162	THR
24	X	172	TYR
25	Y	13	TYR
25	Y	15	PHE

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Mol	Chain	Res	Type
25	Y	20	ARG
25	Y	31	LEU
25	Y	38	ASP
25	Y	39	ILE
25	Y	67	VAL
25	Y	68	THR
25	Y	75	ILE
25	Y	76	ILE
25	Y	77	ASN
25	Y	80	VAL
25	Y	84	TYR
25	Y	85	LEU
25	Y	89	LEU
25	Y	93	VAL
25	Y	122	GLN
25	Y	128	LEU
25	Y	150	THR
25	Y	151	LEU
26	Z	40	HIS
26	Z	52	ASN
26	Z	70	LYS
26	Z	92	TRP
26	Z	105	LEU
27	AA	13	ILE
27	AA	19	VAL
27	AA	32	ARG
27	AA	36	ILE
27	AA	37	ILE
27	AA	46	LEU
27	AA	54	LEU
27	AA	57	MET
27	AA	85	TRP
27	AA	86	ARG
27	AA	93	LEU
27	AA	98	ASN
27	AA	102	ILE
27	AA	132	ASN
28	BA	19	THR
28	BA	31	PHE
28	BA	39	LEU
28	BA	45	ASN
28	BA	49	ILE

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Mol	Chain	Res	Type
28	BA	57	LYS
29	CA	27	ARG
29	CA	32	PHE
29	CA	34	LEU
29	CA	39	LYS
29	CA	46	TYR
29	CA	55	ASN
29	CA	57	LEU
29	CA	69	SER
29	CA	70	GLU
29	CA	102	LEU
29	CA	103	TYR
29	CA	117	ASN
29	CA	119	THR
29	CA	124	VAL
29	CA	134	ASP
29	CA	135	ILE
30	DA	4	GLN
30	DA	12	ARG
30	DA	19	TYR
30	DA	37	LYS
30	DA	39	LEU
30	DA	45	ILE
30	DA	50	ILE
30	DA	67	GLU
30	DA	74	TYR
30	DA	89	LYS
30	DA	91	ASN
30	DA	99	LEU
30	DA	104	LEU
30	DA	105	VAL
30	DA	107	THR
30	DA	115	ARG
31	EA	4	PHE
31	EA	10	VAL
31	EA	29	HIS
31	EA	38	PHE
31	EA	42	LEU
31	EA	73	LYS
31	EA	74	VAL
31	EA	90	GLU
31	EA	92	PHE

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Mol	Chain	Res	Type
31	EA	102	GLU
31	EA	136	PHE
32	FA	7	LYS
32	FA	10	LYS
32	FA	26	ARG
32	FA	41	HIS
32	FA	42	ARG
32	FA	43	ILE
32	FA	56	VAL
32	FA	78	LEU
32	FA	105	LEU
32	FA	115	LYS
32	FA	121	VAL
33	GA	14	ARG
33	GA	18	ARG
33	GA	22	LYS
33	GA	28	LYS
33	GA	41	ARG
33	GA	47	LEU
33	GA	52	LYS
33	GA	59	LYS
34	HA	17	VAL
34	HA	23	TYR
34	HA	27	TYR
34	HA	28	LYS
34	HA	34	LEU
34	HA	83	LYS
34	HA	84	LEU
34	HA	86	ARG
34	HA	89	VAL
35	IA	12	TYR
35	IA	14	ILE
35	IA	20	LEU
35	IA	34	LYS
35	IA	43	HIS
35	IA	48	ASP
35	IA	55	LEU
35	IA	62	ARG
35	IA	64	VAL
35	IA	68	GLU
35	IA	69	TYR
35	IA	71	LEU

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Mol	Chain	Res	Type
35	IA	79	ARG
35	IA	90	PHE
35	IA	104	LEU
35	IA	107	VAL
36	JA	4	LEU
36	JA	21	HIS
36	JA	36	LYS
36	JA	38	ILE
36	JA	68	PRO
36	JA	71	HIS
36	JA	75	LEU
36	JA	78	ASN
36	JA	79	VAL
36	JA	81	ASP
36	JA	82	LEU
36	JA	85	LEU
36	JA	86	THR
36	JA	87	MET
36	JA	92	TYR
36	JA	103	LYS
36	JA	117	ILE
37	KA	23	ASN
37	KA	42	GLN
37	KA	54	ARG
37	KA	100	ILE
38	LA	8	ARG
38	LA	29	ILE
38	LA	30	LEU
38	LA	51	LEU
38	LA	52	GLN
38	LA	57	LEU
38	LA	59	PRO
38	LA	76	TYR
38	LA	81	CYS
38	LA	86	LYS
38	LA	90	ILE
39	MA	4	VAL
39	MA	21	LEU
39	MA	24	LEU
39	MA	28	LEU
39	MA	33	VAL
39	MA	36	LEU

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Mol	Chain	Res	Type
39	MA	53	CYS
39	MA	55	LEU
39	MA	71	LYS
39	MA	77	PRO
39	MA	80	LEU
39	MA	86	ARG
39	MA	92	LEU
39	MA	115	LYS
39	MA	116	TYR
39	MA	119	LYS
40	NA	16	LYS
40	NA	26	ILE
40	NA	43	LEU
40	NA	45	ARG
40	NA	61	ILE
40	NA	74	LYS
40	NA	76	ARG
40	NA	84	LYS
40	NA	100	HIS
41	OA	12	HIS
41	OA	13	ASN
41	OA	17	THR
41	OA	24	ARG
41	OA	25	ARG
42	PA	20	VAL
42	PA	31	LEU
42	PA	49	SER
43	QA	5	LYS
43	QA	21	ARG
43	QA	25	GLN
43	QA	41	ARG
43	QA	50	ASN
44	RA	78	ILE
44	RA	106	ARG
44	RA	126	LYS
45	SA	5	TRP
45	SA	7	LYS
45	SA	11	ARG
45	SA	23	ARG
46	TA	2	VAL
46	TA	16	THR
46	TA	20	HIS

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Mol	Chain	Res	Type
46	TA	21	THR
46	TA	24	LYS
46	TA	29	LYS
46	TA	42	ARG
46	TA	45	ARG
46	TA	47	GLN
46	TA	57	VAL
46	TA	59	HIS
46	TA	61	LYS
46	TA	75	VAL
46	TA	80	ARG
46	TA	85	LEU
46	TA	91	PHE
46	TA	92	GLU
46	TA	93	LEU
46	TA	99	GLN
46	TA	100	LYS
47	UA	8	VAL
47	UA	11	THR
47	UA	16	VAL
47	UA	17	ARG
47	UA	18	TYR
47	UA	30	GLU
47	UA	45	LYS
47	UA	46	THR
47	UA	54	ILE
47	UA	57	CYS
47	UA	59	CYS
47	UA	63	THR
47	UA	73	THR
47	UA	80	ARG
48	VA	20	GLU
48	VA	23	LYS
48	VA	32	ASN
48	VA	37	GLN
48	VA	55	LYS
48	VA	83	ASN
48	VA	90	ASN
48	VA	105	VAL
48	VA	114	VAL
48	VA	133	THR
48	VA	139	LEU

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Mol	Chain	Res	Type
48	VA	144	LYS
48	VA	153	VAL
48	VA	167	GLN
48	VA	169	GLU
48	VA	185	LEU
49	WA	16	HIS
49	WA	20	VAL
49	WA	86	ASP
49	WA	89	LEU
49	WA	111	MET
49	WA	117	LYS
49	WA	136	ILE
49	WA	150	TRP
49	WA	232	TYR
49	WA	243	LEU
49	WA	268	GLN
50	XA	9	LEU
50	XA	12	GLU
50	XA	32	HIS
50	XA	36	TYR
50	XA	54	TRP
50	XA	56	LYS
50	XA	115	PHE
50	XA	119	ARG
50	XA	133	ILE
50	XA	135	GLU
50	XA	163	ASN
50	XA	172	LEU
50	XA	177	LEU
50	XA	185	ARG
50	XA	188	LEU
50	XA	197	ILE
51	YA	59	ASP
51	YA	70	LEU
51	YA	87	ARG
51	YA	92	GLN
51	YA	97	LEU
51	YA	106	THR
51	YA	108	ASP
51	YA	118	GLN
51	YA	137	ILE
51	YA	174	LYS

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Mol	Chain	Res	Type
51	YA	175	GLU
51	YA	181	LEU
51	YA	184	LEU
51	YA	202	LYS
51	YA	212	VAL
51	YA	214	LYS
51	YA	218	LEU
51	YA	219	LYS
51	YA	228	LEU
52	ZA	35	TRP
52	ZA	41	LEU
52	ZA	86	VAL
52	ZA	106	ASP
52	ZA	144	TRP
52	ZA	148	LEU
52	ZA	193	VAL
52	ZA	201	ASN
52	ZA	229	LEU
52	ZA	235	LEU
53	AB	7	LYS
53	AB	17	PHE
53	AB	38	GLU
53	AB	79	TYR
53	AB	84	ILE
53	AB	92	GLN
53	AB	93	ASP
53	AB	101	GLN
53	AB	105	MET
53	AB	148	LYS
53	AB	158	ILE
53	AB	163	PRO
53	AB	168	ILE
53	AB	169	ASP
53	AB	189	MET
53	AB	212	LYS
54	BB	3	ARG
54	BB	16	HIS
54	BB	20	LEU
54	BB	38	LEU
54	BB	75	LYS
54	BB	77	ARG
54	BB	87	MET

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Mol	Chain	Res	Type
54	BB	98	ASN
54	BB	117	GLU
54	BB	131	LEU
54	BB	142	HIS
54	BB	180	LEU
54	BB	188	ASN
54	BB	192	ILE
54	BB	206	ASP
54	BB	209	HIS
54	BB	246	LEU
54	BB	259	GLN
54	BB	261	LEU
55	CB	25	LEU
55	CB	41	LYS
55	CB	42	LEU
55	CB	46	TRP
55	CB	50	GLU
55	CB	84	LYS
55	CB	89	ILE
55	CB	109	LYS
55	CB	114	ILE
55	CB	157	ARG
55	CB	162	VAL
55	CB	187	ILE
55	CB	213	LYS
56	DB	59	GLN
56	DB	67	VAL
56	DB	70	PRO
56	DB	77	LEU
56	DB	128	THR
56	DB	133	LEU
56	DB	135	PRO
56	DB	143	LYS
56	DB	176	GLN
56	DB	184	LEU
56	DB	196	ARG
57	EB	24	PHE
57	EB	28	GLU
57	EB	32	PRO
57	EB	47	ARG
57	EB	62	VAL
57	EB	63	PRO

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Mol	Chain	Res	Type
57	EB	82	GLU
57	EB	97	ARG
57	EB	114	ARG
57	EB	118	LEU
57	EB	119	THR
57	EB	166	LEU
57	EB	173	TYR
57	EB	177	THR
57	EB	185	ILE
58	FB	5	ARG
58	FB	25	ARG
58	FB	29	LEU
58	FB	47	ARG
58	FB	56	ARG
58	FB	78	ILE
58	FB	97	THR
58	FB	102	VAL
58	FB	117	TYR
58	FB	121	LEU
58	FB	137	LYS
58	FB	165	LEU
58	FB	172	ARG
59	GB	88	GLU
59	GB	95	TYR
59	GB	96	VAL
59	GB	105	LEU
59	GB	109	LEU
59	GB	147	MET
59	GB	149	ARG
60	HB	5	LYS
60	HB	32	HIS
60	HB	40	LEU
60	HB	55	VAL
61	IB	14	GLN
61	IB	21	ASN
61	IB	35	TYR
61	IB	40	LEU
61	IB	54	ILE
61	IB	67	ARG
61	IB	76	VAL
61	IB	88	ARG
61	IB	109	VAL

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Mol	Chain	Res	Type
61	IB	110	HIS
61	IB	122	ILE
61	IB	134	THR
61	IB	140	VAL
63	KB	27	LYS
63	KB	45	LEU
63	KB	46	THR
63	KB	56	ASP
63	KB	71	ILE
63	KB	80	LEU
63	KB	85	PRO
63	KB	106	ARG
63	KB	108	ASP
63	KB	115	LEU
63	KB	123	HIS
63	KB	125	LEU
63	KB	131	THR
64	LB	102	LEU
64	LB	110	LEU
64	LB	136	ARG
64	LB	137	LEU
65	MB	15	HIS
65	MB	21	ASP
65	MB	84	ILE
65	MB	87	PRO
65	MB	105	VAL
65	MB	123	TYR
65	MB	125	PRO
66	NB	17	THR
66	NB	43	ILE
66	NB	67	VAL
66	NB	74	HIS
66	NB	117	LEU
66	NB	137	ARG
67	OB	31	ASN
67	OB	49	LYS
67	OB	53	TYR
67	OB	61	ILE
67	OB	62	GLN
67	OB	72	LYS
67	OB	106	THR
68	PB	3	LEU

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Mol	Chain	Res	Type
68	PB	28	ILE
68	PB	36	LYS
68	PB	55	HIS
68	PB	60	GLU
68	PB	63	GLN
68	PB	82	PRO
68	PB	92	ILE
68	PB	97	ASP
68	PB	114	GLU
68	PB	134	ARG
68	PB	136	GLN
68	PB	138	THR
69	QB	28	LEU
69	QB	34	VAL
69	QB	51	GLU
69	QB	111	ILE
69	QB	114	VAL
70	RB	20	ILE
70	RB	34	LEU
70	RB	61	LYS
70	RB	74	GLU
70	RB	80	GLU
70	RB	82	TYR
70	RB	85	ARG
70	RB	89	ARG
71	SB	5	LYS
71	SB	11	LEU
71	SB	50	TYR
71	SB	52	THR
71	SB	66	ASP
71	SB	76	ASP
71	SB	80	LYS
72	TB	11	LEU
72	TB	24	GLN
72	TB	25	VAL
72	TB	29	PRO
72	TB	50	PHE
72	TB	55	ASP
72	TB	61	ILE
72	TB	65	LEU
72	TB	80	ASN
72	TB	82	LYS

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Mol	Chain	Res	Type
72	TB	86	ILE
72	TB	92	ASN
72	TB	93	LEU
72	TB	101	TYR
72	TB	103	ILE
72	TB	104	LEU
72	TB	120	HIS
73	UB	3	LYS
73	UB	7	ARG
73	UB	13	ARG
73	UB	73	ARG
73	UB	78	LYS
73	UB	82	LYS
73	UB	109	ARG
73	UB	121	ARG
74	VB	29	HIS
74	VB	62	THR
74	VB	72	PHE
74	VB	77	ASN
74	VB	99	LYS
74	VB	108	ARG
74	VB	124	ARG
74	VB	127	LYS
75	WB	42	LEU
75	WB	57	TYR
75	WB	82	HIS
75	WB	100	ILE
76	XB	10	ARG
76	XB	12	LYS
76	XB	17	HIS
76	XB	18	VAL
76	XB	19	LYS
76	XB	36	ILE
76	XB	37	LYS
76	XB	41	ILE
76	XB	46	GLU
76	XB	53	LEU
76	XB	70	LYS
76	XB	91	ASP
77	YB	3	LEU
77	YB	4	VAL
77	YB	20	LYS

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Mol	Chain	Res	Type
77	YB	24	LEU
77	YB	29	ARG
77	YB	46	VAL
77	YB	51	GLN
78	ZB	18	ARG
78	ZB	32	PHE
78	ZB	64	ARG
79	AC	6	VAL
79	AC	14	TYR
79	AC	28	THR
79	AC	37	ASN
79	AC	39	CYS
79	AC	44	ARG
80	BC	20	LYS
80	BC	26	LYS
80	BC	28	LYS
80	BC	36	LYS
80	BC	39	LEU
80	BC	40	TYR
80	BC	55	ARG
82	DC	14	ASP
82	DC	22	MET
82	DC	28	VAL
82	DC	42	ARG
82	DC	55	ARG
82	DC	56	PHE
82	DC	61	LYS
82	DC	69	THR
82	DC	71	LYS
82	DC	75	ILE
82	DC	101	ASN
82	DC	104	ASP
82	DC	111	PHE
82	DC	136	CYS
82	DC	139	THR
82	DC	142	VAL
82	DC	144	ARG
82	DC	145	GLN
82	DC	151	ILE
82	DC	183	GLU
82	DC	188	ILE
82	DC	191	THR

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Mol	Chain	Res	Type
82	DC	194	ASP
82	DC	218	TRP
82	DC	242	ASP
82	DC	245	TRP
82	DC	259	ASN
82	DC	270	GLU
82	DC	274	ASN
82	DC	281	ILE
82	DC	288	ILE
82	DC	293	LYS
82	DC	298	VAL
82	DC	300	LEU
82	DC	315	GLU
82	DC	334	LEU
82	DC	340	LEU
82	DC	342	LEU
82	DC	346	VAL
82	DC	380	LEU
82	DC	404	THR
82	DC	420	PRO
82	DC	429	LYS
82	DC	435	VAL
82	DC	437	MET
82	DC	440	ARG
82	DC	447	ASP
82	DC	453	ILE
82	DC	456	LEU
82	DC	465	LYS
82	DC	491	VAL
82	DC	519	LEU
82	DC	521	TYR
82	DC	524	GLU
82	DC	538	LEU
82	DC	544	ASP
82	DC	552	VAL
82	DC	561	VAL
82	DC	563	TYR
82	DC	587	TYR
82	DC	588	LEU
82	DC	597	VAL
82	DC	609	ARG
82	DC	612	PHE

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Mol	Chain	Res	Type
82	DC	625	TRP
82	DC	626	ASP
82	DC	627	VAL
82	DC	647	ILE
82	DC	649	GLN
82	DC	653	VAL
82	DC	659	ILE
82	DC	677	PHE
82	DC	687	ASN
82	DC	693	LEU
82	DC	694	HIS
82	DC	714	TYR
82	DC	729	PHE
82	DC	731	VAL
82	DC	743	ILE
82	DC	747	LEU
82	DC	753	GLN
82	DC	757	GLU
82	DC	759	GLN
82	DC	784	LEU
82	DC	788	THR
82	DC	800	HIS
82	DC	836	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (352) such sidechains are listed below:

Mol	Chain	Res	Type
5	E	8	GLN
5	E	12	HIS
5	E	35	GLN
5	E	96	ASN
5	E	127	GLN
5	E	181	ASN
6	F	8	GLN
6	F	24	GLN
6	F	47	GLN
6	F	79	ASN
6	F	100	ASN
6	F	132	ASN
6	F	187	HIS
6	F	215	ASN
6	F	217	GLN

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Mol	Chain	Res	Type
6	F	250	GLN
7	G	109	HIS
7	G	173	GLN
7	G	198	HIS
7	G	211	GLN
7	G	212	ASN
7	G	231	HIS
7	G	243	HIS
7	G	259	HIS
7	G	331	ASN
7	G	371	GLN
8	H	9	HIS
8	H	36	HIS
8	H	59	GLN
8	H	87	GLN
8	H	110	ASN
8	H	114	ASN
8	H	221	ASN
8	H	316	ASN
8	H	361	HIS
9	I	39	GLN
9	I	40	HIS
9	I	57	ASN
9	I	63	GLN
9	I	90	HIS
9	I	111	GLN
9	I	175	HIS
9	I	178	ASN
9	I	264	GLN
9	I	296	GLN
10	J	4	GLN
10	J	57	HIS
10	J	61	ASN
10	J	72	ASN
10	J	97	ASN
10	J	138	GLN
10	J	167	ASN
11	K	52	GLN
11	K	80	GLN
11	K	93	ASN
11	K	159	GLN
11	K	166	ASN

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Mol	Chain	Res	Type
11	K	172	ASN
11	K	186	HIS
11	K	194	HIS
11	K	197	GLN
11	K	231	ASN
11	K	237	ASN
11	K	244	ASN
12	L	24	ASN
12	L	28	HIS
12	L	33	ASN
12	L	61	GLN
12	L	138	HIS
12	L	145	ASN
12	L	192	GLN
12	L	232	HIS
13	M	49	ASN
13	M	59	ASN
13	M	102	ASN
13	M	162	GLN
14	N	12	GLN
14	N	23	ASN
14	N	55	ASN
14	N	59	GLN
14	N	92	HIS
14	N	95	HIS
14	N	100	ASN
14	N	144	ASN
14	N	220	GLN
15	O	101	ASN
16	P	103	ASN
17	Q	12	ASN
17	Q	37	ASN
17	Q	99	HIS
17	Q	102	GLN
17	Q	103	ASN
17	Q	120	GLN
18	R	62	GLN
19	S	15	GLN
19	S	23	GLN
19	S	34	ASN
19	S	37	HIS
19	S	57	GLN

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Mol	Chain	Res	Type
19	S	86	ASN
19	S	90	ASN
19	S	138	GLN
19	S	139	HIS
19	S	182	ASN
19	S	195	ASN
20	T	50	ASN
20	T	55	HIS
21	U	10	ASN
21	U	28	ASN
21	U	34	GLN
21	U	37	ASN
21	U	72	GLN
21	U	97	ASN
21	U	101	ASN
21	U	118	GLN
21	U	121	GLN
21	U	137	ASN
21	U	172	GLN
22	V	5	HIS
22	V	58	ASN
22	V	73	GLN
22	V	126	GLN
23	W	3	ASN
23	W	34	GLN
23	W	39	ASN
23	W	58	HIS
23	W	75	HIS
23	W	134	HIS
23	W	166	ASN
23	W	175	GLN
24	X	49	HIS
24	X	108	GLN
24	X	142	GLN
25	Y	26	HIS
25	Y	90	ASN
25	Y	95	HIS
25	Y	98	HIS
25	Y	127	GLN
25	Y	146	ASN
26	Z	25	ASN
26	Z	87	ASN

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Mol	Chain	Res	Type
27	AA	33	ASN
27	AA	47	ASN
27	AA	132	ASN
28	BA	42	GLN
29	CA	53	HIS
29	CA	55	ASN
29	CA	94	GLN
29	CA	111	ASN
30	DA	66	GLN
31	EA	78	ASN
31	EA	106	GLN
32	FA	11	HIS
32	FA	40	HIS
32	FA	44	ASN
32	FA	89	GLN
33	GA	7	HIS
33	GA	12	GLN
33	GA	19	ASN
33	GA	45	HIS
34	HA	12	GLN
34	HA	47	ASN
34	HA	71	GLN
35	IA	80	ASN
36	JA	20	HIS
36	JA	26	HIS
36	JA	31	ASN
36	JA	35	GLN
36	JA	52	GLN
36	JA	60	ASN
36	JA	88	HIS
36	JA	104	ASN
37	KA	77	ASN
37	KA	87	ASN
37	KA	106	ASN
38	LA	18	ASN
38	LA	33	GLN
38	LA	83	ASN
38	LA	98	GLN
39	MA	20	GLN
39	MA	61	GLN
39	MA	62	GLN
39	MA	68	GLN

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Mol	Chain	Res	Type
39	MA	108	GLN
40	NA	92	ASN
41	OA	13	ASN
41	OA	28	HIS
41	OA	79	GLN
42	PA	28	ASN
42	PA	57	ASN
43	QA	4	GLN
43	QA	25	GLN
43	QA	32	ASN
43	QA	38	ASN
43	QA	50	ASN
44	RA	90	ASN
44	RA	109	ASN
46	TA	27	GLN
46	TA	53	GLN
46	TA	82	GLN
46	TA	102	GLN
46	TA	105	GLN
47	UA	25	GLN
48	VA	32	ASN
48	VA	36	GLN
48	VA	37	GLN
48	VA	83	ASN
48	VA	163	ASN
48	VA	167	GLN
49	WA	64	HIS
49	WA	224	ASN
49	WA	237	GLN
49	WA	248	ASN
50	XA	15	GLN
50	XA	32	HIS
50	XA	33	GLN
50	XA	109	ASN
50	XA	163	ASN
50	XA	164	ASN
51	YA	42	ASN
51	YA	74	GLN
51	YA	118	GLN
51	YA	148	ASN
51	YA	177	GLN
51	YA	220	GLN

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Mol	Chain	Res	Type
51	YA	232	HIS
52	ZA	59	HIS
52	ZA	89	GLN
52	ZA	94	GLN
52	ZA	152	HIS
52	ZA	199	GLN
53	AB	67	ASN
53	AB	92	GLN
53	AB	111	ASN
54	BB	17	HIS
54	BB	36	HIS
54	BB	67	GLN
54	BB	69	HIS
54	BB	98	ASN
54	BB	157	ASN
54	BB	197	HIS
54	BB	216	ASN
54	BB	223	ASN
55	CB	95	ASN
55	CB	116	HIS
55	CB	128	ASN
55	CB	139	ASN
55	CB	186	ASN
56	DB	10	ASN
56	DB	210	GLN
57	EB	22	GLN
57	EB	86	GLN
57	EB	108	GLN
57	EB	161	GLN
57	EB	170	GLN
57	EB	174	ASN
57	EB	180	GLN
58	FB	9	HIS
58	FB	20	GLN
58	FB	32	GLN
58	FB	64	ASN
59	GB	112	GLN
59	GB	131	GLN
59	GB	142	ASN
60	HB	28	ASN
60	HB	32	HIS
60	HB	39	ASN

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Mol	Chain	Res	Type
60	HB	62	GLN
60	HB	96	ASN
61	IB	14	GLN
61	IB	16	GLN
61	IB	18	HIS
61	IB	21	ASN
61	IB	106	ASN
61	IB	118	GLN
61	IB	138	ASN
61	IB	152	GLN
63	KB	5	HIS
63	KB	21	ASN
63	KB	49	GLN
63	KB	69	ASN
65	MB	98	ASN
65	MB	104	GLN
66	NB	62	ASN
66	NB	74	HIS
66	NB	83	GLN
66	NB	100	GLN
67	OB	29	GLN
68	PB	12	GLN
68	PB	55	HIS
68	PB	74	GLN
68	PB	75	ASN
68	PB	78	HIS
68	PB	89	GLN
68	PB	122	HIS
68	PB	136	GLN
69	QB	43	ASN
69	QB	101	ASN
69	QB	129	GLN
69	QB	138	GLN
70	RB	18	GLN
70	RB	40	ASN
70	RB	44	ASN
70	RB	48	HIS
70	RB	72	ASN
70	RB	98	GLN
70	RB	105	GLN
71	SB	3	ASN
71	SB	7	GLN

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Mol	Chain	Res	Type
71	SB	29	HIS
71	SB	74	GLN
72	TB	12	ASN
72	TB	39	GLN
72	TB	42	GLN
72	TB	80	ASN
73	UB	22	ASN
73	UB	28	ASN
73	UB	75	GLN
73	UB	99	ASN
74	VB	22	GLN
74	VB	34	ASN
75	WB	37	GLN
75	WB	98	GLN
77	YB	5	GLN
77	YB	19	HIS
78	ZB	27	GLN
79	AC	10	HIS
79	AC	41	GLN
80	BC	17	GLN
82	DC	8	GLN
82	DC	96	ASN
82	DC	101	ASN
82	DC	138	GLN
82	DC	158	ASN
82	DC	176	GLN
82	DC	186	ASN
82	DC	216	HIS
82	DC	224	GLN
82	DC	259	ASN
82	DC	414	GLN
82	DC	452	ASN
82	DC	497	ASN
82	DC	537	HIS
82	DC	644	ASN
82	DC	654	GLN
82	DC	687	ASN
82	DC	704	GLN
82	DC	734	GLN
82	DC	791	GLN
82	DC	795	GLN
82	DC	826	HIS

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Mol	Chain	Res	Type
82	DC	836	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1753/1798 (97%)	368 (20%)	5 (0%)
2	B	3265/3396 (96%)	680 (20%)	26 (0%)
3	C	157/158 (99%)	36 (22%)	2 (1%)
4	D	120/121 (99%)	17 (14%)	0
83	EC	185/201 (92%)	73 (39%)	3 (1%)
All	All	5480/5674 (96%)	1174 (21%)	36 (0%)

All (1174) 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	42	G
1	A	47	A
1	A	57	G
1	A	67	A
1	A	68	A
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	115	G
1	A	116	U
1	A	124	A
1	A	125	U
1	A	129	U
1	A	132	U
1	A	133	U
1	A	134	U
1	A	135	A
1	A	136	C

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Mol	Chain	Res	Type
1	A	137	U
1	A	138	A
1	A	140	A
1	A	141	U
1	A	145	A
1	A	146	U
1	A	153	G
1	A	159	U
1	A	166	C
1	A	178	U
1	A	185	U
1	A	187	G
1	A	191	C
1	A	192	U
1	A	195	G
1	A	197	A
1	A	200	A
1	A	207	U
1	A	215	A
1	A	217	A
1	A	219	A
1	A	226	A
1	A	228	G
1	A	231	U
1	A	233	C
1	A	238	U
1	A	239	C
1	A	240	U
1	A	241	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	302	U
1	A	314	C
1	A	316	A
1	A	320	U

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Mol	Chain	Res	Type
1	A	321	C
1	A	322	G
1	A	327	U
1	A	337	G
1	A	338	C
1	A	350	U
1	A	352	A
1	A	353	A
1	A	359	A
1	A	360	A
1	A	361	C
1	A	366	A
1	A	369	A
1	A	370	A
1	A	373	G
1	A	378	A
1	A	380	U
1	A	381	C
1	A	388	G
1	A	399	A
1	A	402	C
1	A	404	G
1	A	416	A
1	A	417	A
1	A	423	G
1	A	424	C
1	A	425	A
1	A	426	G
1	A	439	U
1	A	444	C
1	A	448	C
1	A	470	A
1	A	475	A
1	A	477	A
1	A	480	G
1	A	488	G
1	A	489	C
1	A	493	U
1	A	495	C
1	A	496	G
1	A	497	G
1	A	502	U

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Mol	Chain	Res	Type
1	A	504	U
1	A	506	A
1	A	510	G
1	A	515	A
1	A	526	A
1	A	532	U
1	A	539	G
1	A	541	A
1	A	542	A
1	A	545	A
1	A	546	U
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	579	A
1	A	580	A
1	A	581	U
1	A	582	U
1	A	583	C
1	A	594	A
1	A	606	A
1	A	619	A
1	A	620	A
1	A	622	A
1	A	624	G
1	A	629	U
1	A	632	U
1	A	638	U
1	A	639	U
1	A	652	G
1	A	655	G
1	A	658	C
1	A	677	G
1	A	685	A
1	A	694	U
1	A	696	C
1	A	697	C
1	A	702	G
1	A	705	U

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Mol	Chain	Res	Type
1	A	707	A
1	A	708	C
1	A	709	C
1	A	710	U
1	A	711	U
1	A	729	G
1	A	730	G
1	A	731	C
1	A	733	A
1	A	738	G
1	A	742	U
1	A	754	A
1	A	755	A
1	A	765	G
1	A	771	A
1	A	774	A
1	A	775	G
1	A	778	G
1	A	781	U
1	A	782	U
1	A	783	G
1	A	784	C
1	A	789	A
1	A	794	U
1	A	806	A
1	A	811	A
1	A	812	A
1	A	815	G
1	A	816	G
1	A	820	U
1	A	821	U
1	A	823	G
1	A	824	G
1	A	831	U
1	A	852	C
1	A	856	A
1	A	860	U
1	A	863	A
1	A	865	A
1	A	877	G
1	A	894	U
1	A	898	A

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Mol	Chain	Res	Type
1	A	912	U
1	A	913	G
1	A	914	G
1	A	915	A
1	A	922	G
1	A	932	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	971	A
1	A	982	U
1	A	988	A
1	A	992	A
1	A	993	A
1	A	996	U
1	A	1004	U
1	A	1005	A
1	A	1012	U
1	A	1016	C
1	A	1018	U
1	A	1028	C
1	A	1032	G
1	A	1035	G
1	A	1043	A
1	A	1052	U
1	A	1053	G
1	A	1058	U
1	A	1061	A
1	A	1063	U
1	A	1072	C
1	A	1074	G
1	A	1080	U
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

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Mol	Chain	Res	Type
1	A	1109	G
1	A	1156	C
1	A	1158	C
1	A	1160	A
1	A	1163	A
1	A	1167	G
1	A	1171	A
1	A	1185	U
1	A	1186	U
1	A	1194	A
1	A	1196	A
1	A	1199	G
1	A	1200	G
1	A	1201	G
1	A	1202	A
1	A	1203	A
1	A	1207	C
1	A	1208	A
1	A	1212	G
1	A	1216	C
1	A	1217	A
1	A	1218	G
1	A	1227	A
1	A	1228	G
1	A	1229	G
1	A	1244	A
1	A	1245	G
1	A	1258	U
1	A	1265	G
1	A	1271	G
1	A	1273	G
1	A	1274	C
1	A	1275	A
1	A	1286	U
1	A	1287	A
1	A	1299	G
1	A	1300	A
1	A	1301	U
1	A	1307	U
1	A	1308	G
1	A	1314	U
1	A	1315	U

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Mol	Chain	Res	Type
1	A	1321	A
1	A	1339	C
1	A	1340	U
1	A	1343	U
1	A	1344	A
1	A	1345	A
1	A	1346	A
1	A	1347	U
1	A	1348	A
1	A	1361	U
1	A	1362	U
1	A	1363	U
1	A	1364	G
1	A	1370	U
1	A	1390	U
1	A	1392	U
1	A	1398	U
1	A	1399	C
1	A	1400	A
1	A	1413	U
1	A	1414	U
1	A	1415	U
1	A	1418	G
1	A	1427	A
1	A	1428	G
1	A	1432	U
1	A	1436	A
1	A	1448	G
1	A	1457	C
1	A	1460	A
1	A	1469	A
1	A	1471	A
1	A	1473	U
1	A	1474	G
1	A	1478	G
1	A	1486	G
1	A	1489	U
1	A	1491	U
1	A	1492	A
1	A	1493	A
1	A	1499	G
1	A	1516	A

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Mol	Chain	Res	Type
1	A	1518	C
1	A	1523	G
1	A	1535	U
1	A	1536	G
1	A	1537	C
1	A	1538	U
1	A	1539	G
1	A	1540	G
1	A	1541	G
1	A	1557	U
1	A	1559	A
1	A	1560	U
1	A	1573	A
1	A	1574	G
1	A	1582	U
1	A	1584	G
1	A	1597	A
1	A	1600	A
1	A	1601	G
1	A	1605	G
1	A	1616	G
1	A	1626	U
1	A	1631	A
1	A	1632	C
1	A	1634	C
1	A	1635	A
1	A	1657	U
1	A	1658	G
1	A	1682	U
1	A	1683	C
1	A	1684	U
1	A	1689	A
1	A	1690	G
1	A	1694	A
1	A	1715	G
1	A	1716	C
1	A	1730	A
1	A	1736	G
1	A	1762	A
1	A	1766	A
1	A	1767	G
1	A	1768	G

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Mol	Chain	Res	Type
1	A	1780	G
1	A	1782	A
1	A	1783	C
1	A	1792	G
1	A	1793	G
1	A	1796	C
2	B	11	A
2	B	14	U
2	B	15	C
2	B	16	A
2	B	18	G
2	B	27	C
2	B	40	A
2	B	43	A
2	B	49	A
2	B	59	G
2	B	60	A
2	B	66	A
2	B	74	G
2	B	75	G
2	B	77	A
2	B	85	A
2	B	92	G
2	B	110	G
2	B	111	C
2	B	113	C
2	B	117	U
2	B	120	G
2	B	121	A
2	B	122	A
2	B	133	U
2	B	135	C
2	B	136	G
2	B	146	U
2	B	148	G
2	B	150	A
2	B	154	U
2	B	156	G
2	B	157	A
2	B	160	G
2	B	161	G
2	B	165	A

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Mol	Chain	Res	Type
2	B	169	U
2	B	170	G
2	B	176	G
2	B	182	U
2	B	187	A
2	B	190	U
2	B	191	U
2	B	193	C
2	B	200	C
2	B	206	G
2	B	208	C
2	B	210	U
2	B	211	A
2	B	212	G
2	B	217	U
2	B	218	G
2	B	219	A
2	B	220	G
2	B	222	A
2	B	241	G
2	B	242	C
2	B	243	G
2	B	245	U
2	B	251	G
2	B	252	U
2	B	269	G
2	B	285	A
2	B	286	U
2	B	295	A
2	B	305	U
2	B	311	C
2	B	315	C
2	B	323	A
2	B	326	U
2	B	329	U
2	B	338	A
2	B	339	C
2	B	341	G
2	B	346	C
2	B	350	C
2	B	352	A
2	B	353	G

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Mol	Chain	Res	Type
2	B	370	U
2	B	372	A
2	B	373	A
2	B	375	A
2	B	376	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	407	A
2	B	421	G
2	B	422	A
2	B	439	C
2	B	441	U
2	B	442	G
2	B	446	U
2	B	447	U
2	B	488	U
2	B	489	C
2	B	491	C
2	B	493	G
2	B	494	G
2	B	503	C
2	B	515	C
2	B	520	U
2	B	521	A
2	B	523	A
2	B	535	G
2	B	536	U
2	B	546	C
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	604	G
2	B	607	A
2	B	609	G
2	B	610	G

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Mol	Chain	Res	Type
2	B	611	A
2	B	620	U
2	B	621	A
2	B	636	C
2	B	637	C
2	B	638	C
2	B	646	A
2	B	649	A
2	B	659	G
2	B	660	A
2	B	662	U
2	B	667	C
2	B	677	A
2	B	681	U
2	B	690	A
2	B	691	A
2	B	705	A
2	B	708	G
2	B	715	A
2	B	716	A
2	B	726	G
2	B	750	G
2	B	764	U
2	B	765	C
2	B	767	U
2	B	776	U
2	B	777	U
2	B	781	G
2	B	785	G
2	B	786	A
2	B	792	G
2	B	793	C
2	B	799	G
2	B	801	A
2	B	806	A
2	B	813	G
2	B	817	A
2	B	826	G
2	B	830	A
2	B	837	A
2	B	845	G
2	B	849	C

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Mol	Chain	Res	Type
2	B	857	G
2	B	874	U
2	B	875	G
2	B	879	U
2	B	880	G
2	B	882	A
2	B	895	A
2	B	907	G
2	B	908	G
2	B	914	A
2	B	916	G
2	B	917	A
2	B	923	C
2	B	924	G
2	B	925	A
2	B	926	A
2	B	937	G
2	B	943	U
2	B	944	C
2	B	959	C
2	B	960	U
2	B	961	C
2	B	979	U
2	B	981	U
2	B	984	G
2	B	991	G
2	B	996	A
2	B	1001	G
2	B	1002	A
2	B	1010	G
2	B	1018	G
2	B	1024	G
2	B	1029	G
2	B	1047	A
2	B	1049	C
2	B	1063	G
2	B	1064	A
2	B	1065	A
2	B	1072	G
2	B	1075	A
2	B	1081	U
2	B	1094	U

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Mol	Chain	Res	Type
2	B	1095	U
2	B	1097	G
2	B	1098	A
2	B	1103	A
2	B	1104	G
2	B	1117	G
2	B	1124	U
2	B	1125	U
2	B	1131	G
2	B	1132	C
2	B	1135	A
2	B	1143	A
2	B	1155	C
2	B	1159	A
2	B	1161	G
2	B	1174	G
2	B	1178	G
2	B	1180	A
2	B	1181	U
2	B	1182	A
2	B	1186	G
2	B	1189	C
2	B	1196	C
2	B	1199	C
2	B	1201	C
2	B	1208	U
2	B	1215	U
2	B	1221	A
2	B	1231	A
2	B	1236	G
2	B	1237	G
2	B	1242	G
2	B	1243	G
2	B	1244	A
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	1285	G
2	B	1286	A

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Mol	Chain	Res	Type
2	B	1290	A
2	B	1292	C
2	B	1295	G
2	B	1306	G
2	B	1308	A
2	B	1309	U
2	B	1325	U
2	B	1329	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	1374	G
2	B	1386	A
2	B	1387	G
2	B	1391	C
2	B	1392	G
2	B	1395	G
2	B	1399	A
2	B	1400	G
2	B	1417	G
2	B	1419	A
2	B	1425	U
2	B	1430	U
2	B	1434	G
2	B	1436	U
2	B	1437	C
2	B	1444	G
2	B	1445	U
2	B	1452	A
2	B	1455	U
2	B	1456	A
2	B	1481	A
2	B	1484	U
2	B	1485	G
2	B	1496	C
2	B	1507	G
2	B	1508	C
2	B	1519	G

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Mol	Chain	Res	Type
2	B	1526	U
2	B	1527	C
2	B	1532	C
2	B	1539	A
2	B	1542	G
2	B	1549	U
2	B	1556	C
2	B	1558	A
2	B	1563	C
2	B	1567	U
2	B	1569	U
2	B	1571	A
2	B	1576	G
2	B	1582	C
2	B	1583	A
2	B	1589	A
2	B	1591	G
2	B	1593	A
2	B	1607	U
2	B	1618	G
2	B	1620	U
2	B	1629	U
2	B	1639	C
2	B	1642	A
2	B	1643	A
2	B	1645	U
2	B	1647	A
2	B	1653	G
2	B	1655	G
2	B	1656	A
2	B	1658	G
2	B	1660	C
2	B	1664	G
2	B	1683	A
2	B	1687	U
2	B	1688	U
2	B	1697	A
2	B	1715	A
2	B	1717	U
2	B	1724	U
2	B	1725	C
2	B	1730	G

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Mol	Chain	Res	Type
2	B	1741	A
2	B	1742	U
2	B	1750	A
2	B	1751	G
2	B	1756	C
2	B	1763	U
2	B	1765	U
2	B	1766	G
2	B	1773	C
2	B	1775	G
2	B	1780	G
2	B	1788	C
2	B	1794	G
2	B	1797	A
2	B	1812	G
2	B	1816	A
2	B	1819	U
2	B	1821	U
2	B	1822	C
2	B	1840	U
2	B	1841	A
2	B	1842	A
2	B	1847	A
2	B	1849	C
2	B	1850	A
2	B	1856	C
2	B	1858	A
2	B	1859	A
2	B	1871	U
2	B	1880	U
2	B	1886	A
2	B	1889	G
2	B	1893	A
2	B	1895	A
2	B	1896	A
2	B	1906	G
2	B	1931	U
2	B	1933	A
2	B	1935	G
2	B	1949	G
2	B	1952	G
2	B	1953	G

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Mol	Chain	Res	Type
2	B	1954	G
2	B	1955	U
2	B	2055	U
2	B	2059	U
2	B	2076	G
2	B	2082	U
2	B	2083	G
2	B	2095	G
2	B	2100	A
2	B	2102	U
2	B	2107	A
2	B	2111	G
2	B	2112	U
2	B	2116	G
2	B	2117	A
2	B	2121	G
2	B	2122	G
2	B	2126	A
2	B	2131	A
2	B	2135	U
2	B	2139	A
2	B	2144	A
2	B	2157	G
2	B	2158	A
2	B	2169	G
2	B	2170	U
2	B	2188	A
2	B	2194	G
2	B	2201	G
2	B	2205	U
2	B	2210	G
2	B	2216	G
2	B	2223	A
2	B	2243	A
2	B	2244	A
2	B	2249	G
2	B	2255	A
2	B	2256	A
2	B	2257	C
2	B	2258	U
2	B	2262	A
2	B	2267	C

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Mol	Chain	Res	Type
2	B	2268	U
2	B	2269	U
2	B	2273	G
2	B	2282	U
2	B	2283	G
2	B	2284	C
2	B	2303	A
2	B	2305	G
2	B	2307	G
2	B	2308	C
2	B	2313	A
2	B	2314	U
2	B	2315	G
2	B	2319	U
2	B	2325	G
2	B	2335	G
2	B	2349	U
2	B	2365	C
2	B	2366	C
2	B	2372	A
2	B	2373	A
2	B	2374	C
2	B	2375	G
2	B	2385	G
2	B	2386	A
2	B	2389	C
2	B	2393	G
2	B	2394	G
2	B	2397	A
2	B	2402	A
2	B	2403	G
2	B	2411	U
2	B	2418	G
2	B	2422	C
2	B	2430	A
2	B	2434	U
2	B	2439	A
2	B	2440	G
2	B	2443	A
2	B	2444	C
2	B	2445	A
2	B	2453	U

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Mol	Chain	Res	Type
2	B	2458	A
2	B	2459	A
2	B	2460	U
2	B	2461	A
2	B	2463	G
2	B	2469	G
2	B	2471	U
2	B	2472	U
2	B	2473	C
2	B	2474	G
2	B	2477	G
2	B	2479	C
2	B	2484	A
2	B	2485	A
2	B	2487	U
2	B	2488	A
2	B	2490	C
2	B	2491	A
2	B	2494	A
2	B	2496	C
2	B	2498	U
2	B	2499	U
2	B	2502	A
2	B	2503	G
2	B	2511	A
2	B	2514	U
2	B	2515	A
2	B	2522	G
2	B	2523	A
2	B	2524	A
2	B	2531	C
2	B	2533	G
2	B	2535	A
2	B	2536	A
2	B	2538	U
2	B	2539	C
2	B	2540	A
2	B	2541	U
2	B	2542	U
2	B	2545	C
2	B	2549	G
2	B	2554	A

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Mol	Chain	Res	Type
2	B	2561	A
2	B	2562	A
2	B	2569	A
2	B	2570	U
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	2590	A
2	B	2593	A
2	B	2595	A
2	B	2596	U
2	B	2600	C
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	2635	A
2	B	2637	A
2	B	2638	C
2	B	2645	G
2	B	2647	A
2	B	2651	G
2	B	2652	U
2	B	2655	U
2	B	2656	A
2	B	2657	A
2	B	2674	A
2	B	2677	G
2	B	2680	A
2	B	2689	A
2	B	2690	G
2	B	2691	A
2	B	2694	A
2	B	2696	A
2	B	2704	A
2	B	2712	U

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Mol	Chain	Res	Type
2	B	2714	G
2	B	2720	G
2	B	2727	A
2	B	2728	G
2	B	2729	U
2	B	2737	C
2	B	2753	G
2	B	2758	A
2	B	2762	A
2	B	2772	C
2	B	2777	G
2	B	2778	G
2	B	2779	A
2	B	2789	U
2	B	2796	G
2	B	2797	C
2	B	2798	C
2	B	2799	A
2	B	2800	G
2	B	2801	A
2	B	2804	A
2	B	2805	G
2	B	2810	C
2	B	2816	G
2	B	2817	A
2	B	2828	G
2	B	2834	G
2	B	2839	G
2	B	2842	U
2	B	2844	C
2	B	2845	A
2	B	2867	C
2	B	2870	C
2	B	2871	G
2	B	2872	A
2	B	2873	U
2	B	2886	U
2	B	2887	A
2	B	2889	C
2	B	2919	A
2	B	2923	U
2	B	2928	C

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Mol	Chain	Res	Type
2	B	2935	U
2	B	2936	A
2	B	2943	G
2	B	2946	A
2	B	2947	G
2	B	2950	G
2	B	2951	G
2	B	2963	C
2	B	2971	A
2	B	2983	C
2	B	2990	G
2	B	2997	G
2	B	3003	G
2	B	3012	A
2	B	3022	G
2	B	3058	U
2	B	3062	G
2	B	3069	G
2	B	3074	G
2	B	3078	U
2	B	3086	A
2	B	3092	C
2	B	3094	A
2	B	3115	C
2	B	3116	G
2	B	3117	C
2	B	3118	C
2	B	3119	U
2	B	3122	A
2	B	3128	G
2	B	3130	A
2	B	3131	U
2	B	3141	A
2	B	3142	A
2	B	3143	C
2	B	3144	G
2	B	3154	C
2	B	3155	U
2	B	3156	U
2	B	3157	U
2	B	3165	A
2	B	3170	A

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Mol	Chain	Res	Type
2	B	3172	A
2	B	3173	G
2	B	3174	A
2	B	3176	G
2	B	3179	U
2	B	3180	A
2	B	3181	C
2	B	3187	A
2	B	3198	U
2	B	3206	C
2	B	3207	U
2	B	3208	G
2	B	3216	G
2	B	3217	C
2	B	3218	A
2	B	3219	G
2	B	3229	G
2	B	3235	C
2	B	3243	A
2	B	3246	G
2	B	3247	G
2	B	3259	U
2	B	3263	G
2	B	3269	U
2	B	3270	U
2	B	3272	C
2	B	3273	A
2	B	3276	G
2	B	3279	A
2	B	3281	U
2	B	3286	G
2	B	3287	U
2	B	3289	G
2	B	3294	A
2	B	3304	U
2	B	3316	A
2	B	3318	G
2	B	3319	U
2	B	3335	A
2	B	3341	U
2	B	3345	G
2	B	3351	U

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Mol	Chain	Res	Type
2	B	3352	U
2	B	3353	G
2	B	3354	U
2	B	3355	U
2	B	3356	G
2	B	3360	C
2	B	3369	G
2	B	3373	U
2	B	3375	A
2	B	3378	C
2	B	3382	U
2	B	3383	G
2	B	3389	U
2	B	3390	G
3	C	13	A
3	C	18	U
3	C	21	C
3	C	23	U
3	C	34	U
3	C	37	A
3	C	38	U
3	C	39	G
3	C	40	A
3	C	41	A
3	C	59	A
3	C	61	A
3	C	62	C
3	C	63	G
3	C	82	U
3	C	83	C
3	C	86	U
3	C	87	G
3	C	89	A
3	C	90	U
3	C	91	C
3	C	95	G
3	C	99	C
3	C	100	U
3	C	105	A
3	C	106	C
3	C	109	A
3	C	111	A

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Mol	Chain	Res	Type
3	C	113	U
3	C	114	G
3	C	125	U
3	C	126	A
3	C	136	G
3	C	142	C
3	C	151	C
3	C	152	G
4	D	7	G
4	D	11	A
4	D	13	A
4	D	22	A
4	D	38	U
4	D	41	G
4	D	42	A
4	D	52	G
4	D	54	U
4	D	65	G
4	D	73	C
4	D	76	A
4	D	99	G
4	D	102	A
4	D	112	G
4	D	113	C
4	D	121	U
83	EC	6768	U
83	EC	6771	U
83	EC	6772	G
83	EC	6774	U
83	EC	6775	U
83	EC	6776	A
83	EC	6777	C
83	EC	6778	C
83	EC	6781	U
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	6797	U
83	EC	6800	G

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Mol	Chain	Res	Type
83	EC	6802	A
83	EC	6803	C
83	EC	6814	G
83	EC	6817	A
83	EC	6819	G
83	EC	6820	C
83	EC	6822	U
83	EC	6823	U
83	EC	6824	C
83	EC	6831	U
83	EC	6832	G
83	EC	6834	U
83	EC	6835	U
83	EC	6836	U
83	EC	6848	U
83	EC	6849	A
83	EC	6851	G
83	EC	6859	U
83	EC	6863	C
83	EC	6864	A
83	EC	6868	C
83	EC	6878	G
83	EC	6879	U
83	EC	6884	G
83	EC	6889	A
83	EC	6890	A
83	EC	6896	A
83	EC	6898	U
83	EC	6899	C
83	EC	6900	A
83	EC	6905	G
83	EC	6906	G
83	EC	6907	G
83	EC	6908	C
83	EC	6912	G
83	EC	6913	U
83	EC	6917	C
83	EC	6919	G
83	EC	6920	C
83	EC	6921	C
83	EC	6925	C
83	EC	6927	U

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Mol	Chain	Res	Type
83	EC	6933	G
83	EC	6935	G
83	EC	6936	G
83	EC	6940	U
83	EC	6941	U
83	EC	6942	A
83	EC	6943	A
83	EC	6945	U
83	EC	6946	A
83	EC	6948	U
83	EC	6953	G
83	EC	6954	C
83	EC	6955	U
83	EC	6956	A

All (36) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	1081	A
1	A	1344	A
1	A	1573	A
1	A	1615	C
1	A	1761	U
2	B	65	A
2	B	169	U
2	B	588	G
2	B	637	C
2	B	770	G
2	B	780	A
2	B	961	C
2	B	1064	A
2	B	1103	A
2	B	1230	G
2	B	1307	G
2	B	1329	U
2	B	1352	A
2	B	1391	C
2	B	1815	U
2	B	2101	C
2	B	2513	U
2	B	2818	U
2	B	2950	G

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Mol	Chain	Res	Type
2	B	3121	U
2	B	3208	G
2	B	3218	A
2	B	3228	C
2	B	3242	G
2	B	3269	U
2	B	3317	U
3	C	38	U
3	C	85	G
83	EC	6852	U
83	EC	6930	G
83	EC	6949	G

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	2.84	8 (44%)	17,28,30	2.31	6 (35%)

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	-	4/20/21/23	0/1/1/1

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	699	DDE	CD2-CG	7.98	1.53	1.36
82	DC	699	DDE	CBW-CBI	4.56	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	699	DDE	CAT-CE1	3.88	1.56	1.49
82	DC	699	DDE	CB-CG	3.16	1.58	1.49
82	DC	699	DDE	CBW-NCB	3.04	1.60	1.54
82	DC	699	DDE	CB-CA	2.42	1.58	1.53
82	DC	699	DDE	OAG-CBI	2.09	1.27	1.23
82	DC	699	DDE	CAU-CBW	2.03	1.59	1.54

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
82	DC	699	DDE	CAU-CAT-CE1	7.21	141.28	114.38
82	DC	699	DDE	CD2-NE2-CE1	3.11	110.15	107.55
82	DC	699	DDE	CAU-CBW-CBI	-2.79	105.77	111.22
82	DC	699	DDE	CD2-CG-ND1	-2.36	104.11	108.87
82	DC	699	DDE	OAG-CBI-NAD	2.11	126.76	123.04
82	DC	699	DDE	CAC-NCB-CBW	2.10	115.55	110.52

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
82	DC	699	DDE	OAG-CBI-CBW-NCB
82	DC	699	DDE	CE1-CAT-CAU-CBW
82	DC	699	DDE	CA-CB-CG-ND1
82	DC	699	DDE	CA-CB-CG-CD2

There are no ring outliers.

1 monomer is involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
82	DC	699	DDE	2	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	$\#\|Z\| > 2$
86	SO1	DC	903	-	34,39,39	2.52	16 (47%)	38,64,64	2.04	10 (26%)
84	GDP	DC	901	85	29,30,30	2.18	6 (20%)	45,47,47	1.76	11 (24%)

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

All (22) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	DC	901	GDP	PA-O3A	8.29	1.68	1.59
86	DC	903	SO1	O56-C52	-4.42	1.30	1.41
86	DC	903	SO1	O17-C52	4.41	1.47	1.40
86	DC	903	SO1	C8-C2	3.88	1.60	1.53
86	DC	903	SO1	C7-C2	3.81	1.60	1.54
86	DC	903	SO1	C12-C6	3.77	1.62	1.53
84	DC	901	GDP	PB-O1B	3.77	1.62	1.50
86	DC	903	SO1	C10-C6	3.74	1.61	1.53
86	DC	903	SO1	C1-C5	3.66	1.59	1.50
86	DC	903	SO1	C3-C9	3.61	1.64	1.56
86	DC	903	SO1	C55-C56	3.59	1.59	1.52
86	DC	903	SO1	C12-C4	3.51	1.61	1.54
84	DC	901	GDP	PA-O1A	3.40	1.62	1.50
84	DC	901	GDP	O4'-C1'	2.94	1.48	1.42
86	DC	903	SO1	C4-C13	2.77	1.60	1.54
84	DC	901	GDP	C2-N2	2.40	1.39	1.34
86	DC	903	SO1	C24-C18	2.34	1.60	1.54
86	DC	903	SO1	C52-C53	2.21	1.59	1.52
84	DC	901	GDP	PB-O3B	2.11	1.62	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
86	DC	903	SO1	C54-C55	2.10	1.58	1.52
86	DC	903	SO1	C24-C22	2.07	1.60	1.53
86	DC	903	SO1	C7-C16	2.01	1.56	1.53

All (21) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
86	DC	903	SO1	C12-C6-C10	-5.57	103.56	107.92
84	DC	901	GDP	C2-N3-C4	5.52	121.81	112.30
84	DC	901	GDP	C5-C4-N3	-5.35	119.88	128.39
86	DC	903	SO1	C25-C22-C24	5.33	130.59	113.64
84	DC	901	GDP	N9-C4-N3	4.10	134.14	125.95
86	DC	903	SO1	C1-C4-C13	3.67	122.29	118.36
86	DC	903	SO1	C10-C6-C2	3.58	108.37	104.12
86	DC	903	SO1	C18-C9-C16	-3.18	99.38	103.72
84	DC	901	GDP	C8-N7-C5	2.86	109.36	104.26
86	DC	903	SO1	C65-O64-C55	-2.77	107.36	114.47
86	DC	903	SO1	C61-C56-C55	-2.67	109.42	113.39
86	DC	903	SO1	C7-C2-C6	2.49	116.81	112.05
84	DC	901	GDP	C6-C5-N7	2.45	134.75	130.29
86	DC	903	SO1	O64-C55-C56	2.37	112.58	107.70
84	DC	901	GDP	C2-N1-C6	-2.29	120.96	125.11
86	DC	903	SO1	C12-C6-C2	-2.20	101.69	105.09
84	DC	901	GDP	C4-C5-N7	-2.19	107.19	110.67
84	DC	901	GDP	O2A-PA-O1A	2.18	122.59	112.44
84	DC	901	GDP	O6-C6-C5	-2.14	120.88	126.53
84	DC	901	GDP	C5-C6-N1	2.03	118.41	113.25
84	DC	901	GDP	C3'-C2'-C1'	2.01	105.27	101.46

There are no chirality outliers.

All (6) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
84	DC	901	GDP	O4'-C4'-C5'-O5'
86	DC	903	SO1	C2-C1-C5-O14
86	DC	903	SO1	C2-C1-C5-O15
84	DC	901	GDP	C3'-C4'-C5'-O5'
84	DC	901	GDP	C5'-O5'-PA-O1A
86	DC	903	SO1	O19-C11-C3-C9

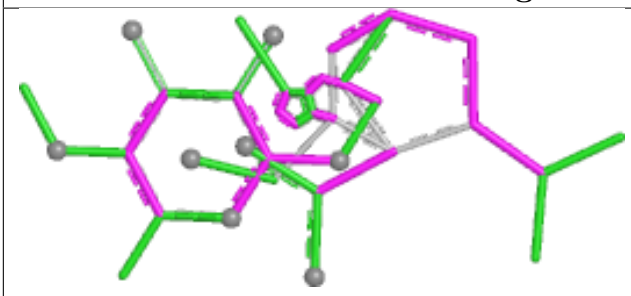
There are no ring outliers.

2 monomers are involved in 9 short contacts:

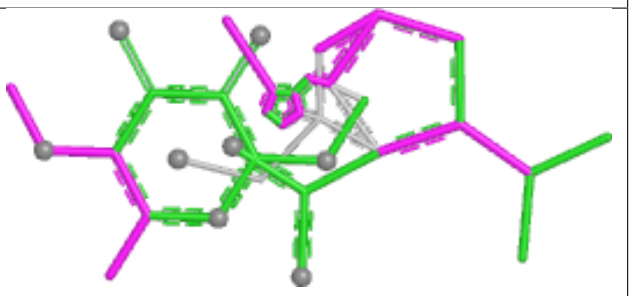
Mol	Chain	Res	Type	Clashes	Symm-Clashes
86	DC	903	SO1	6	0
84	DC	901	GDP	3	0

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.

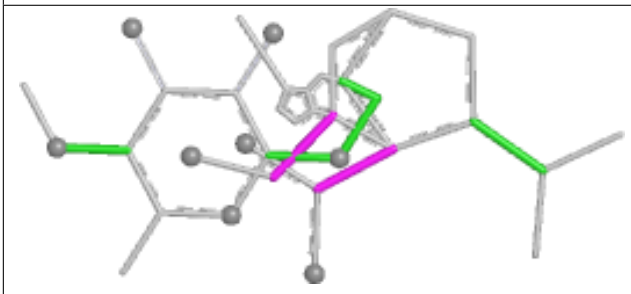
Ligand SO1 DC 903



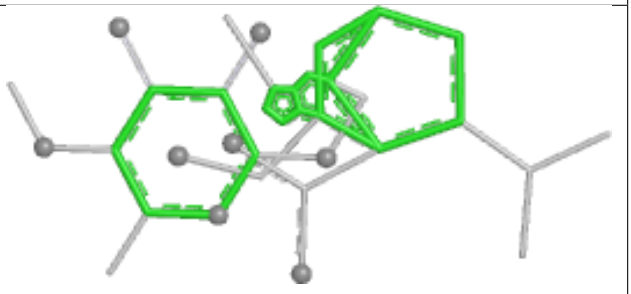
Bond lengths



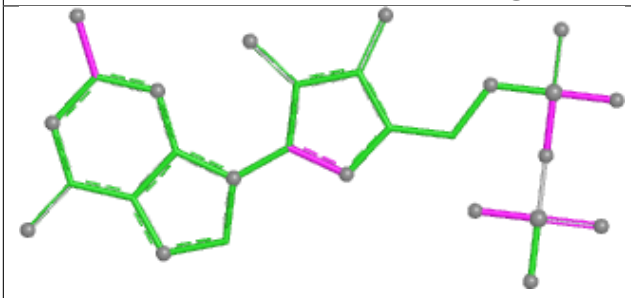
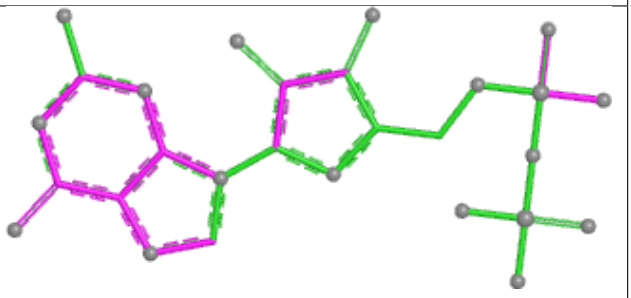
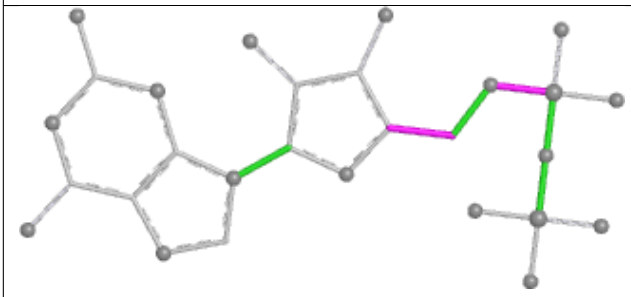
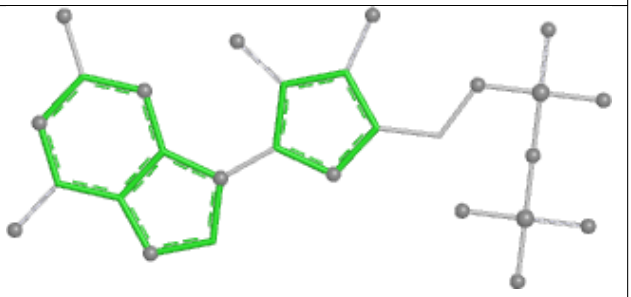
Bond angles



Torsions



Rings

Ligand GDP DC 901	
 Bond lengths	 Bond angles
 Torsions	 Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

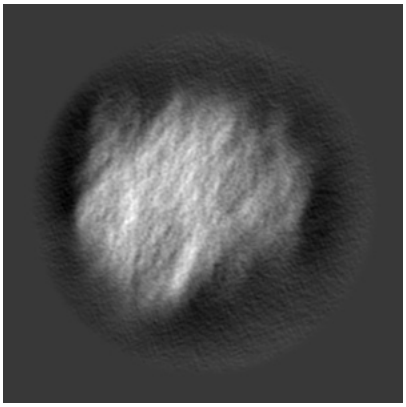
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-6643. These allow visual inspection of the internal detail of the map and identification of artifacts.

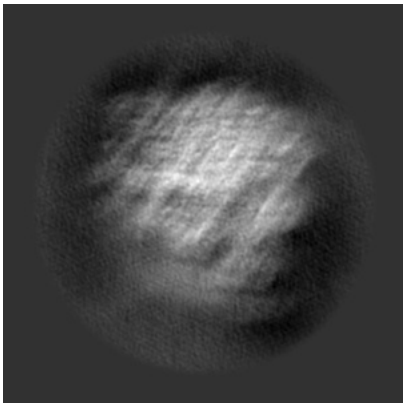
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

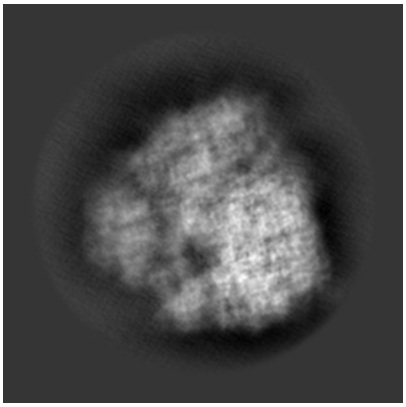
6.1.1 Primary map



X



Y

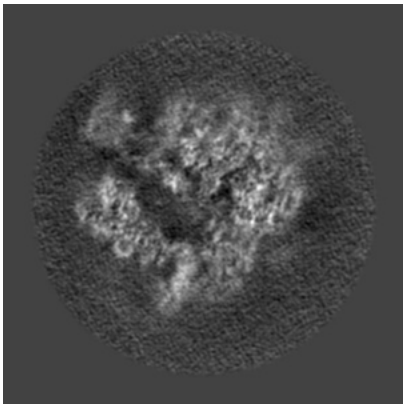


Z

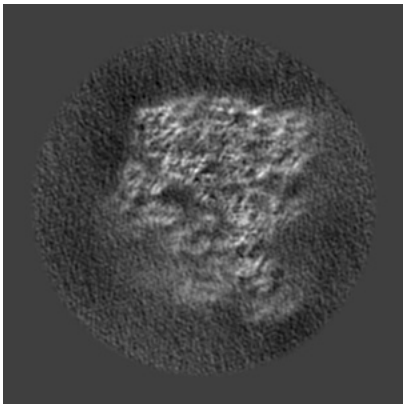
The images above show the map projected in three orthogonal directions.

6.2 Central slices

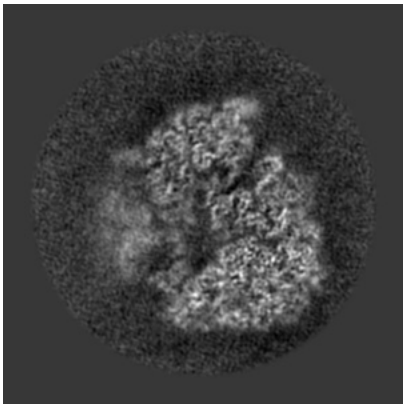
6.2.1 Primary map



X Index: 128



Y Index: 128

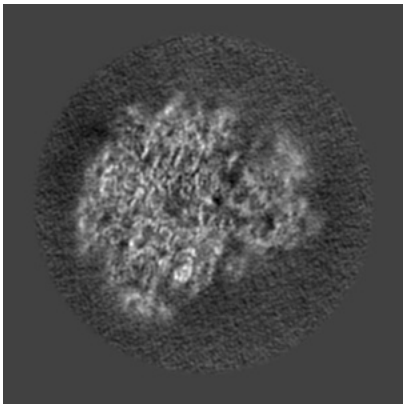


Z Index: 128

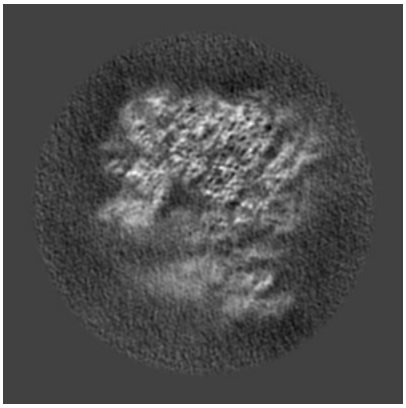
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

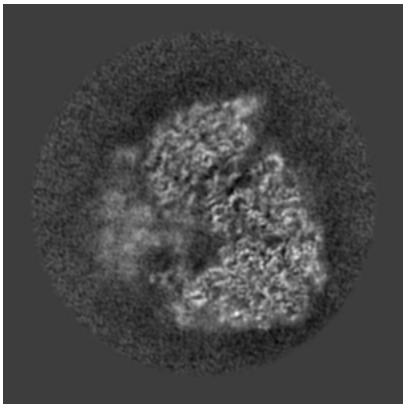
6.3.1 Primary map



X Index: 146



Y Index: 117

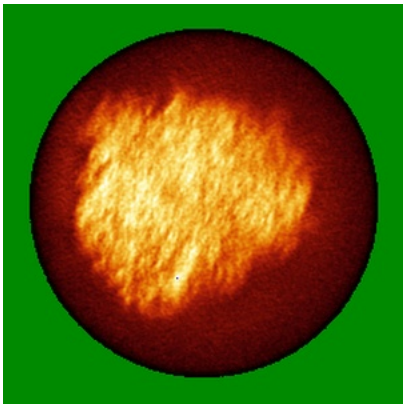


Z Index: 130

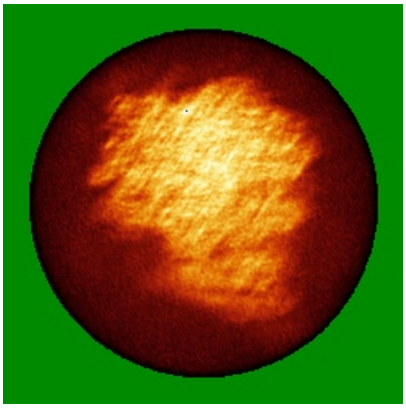
The images above show the largest variance slices of the map in three orthogonal directions.

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

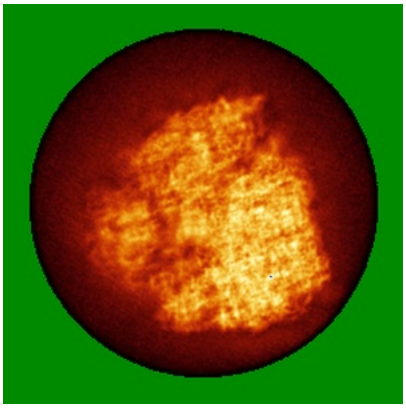
6.4.1 Primary map



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)

This section was not generated.

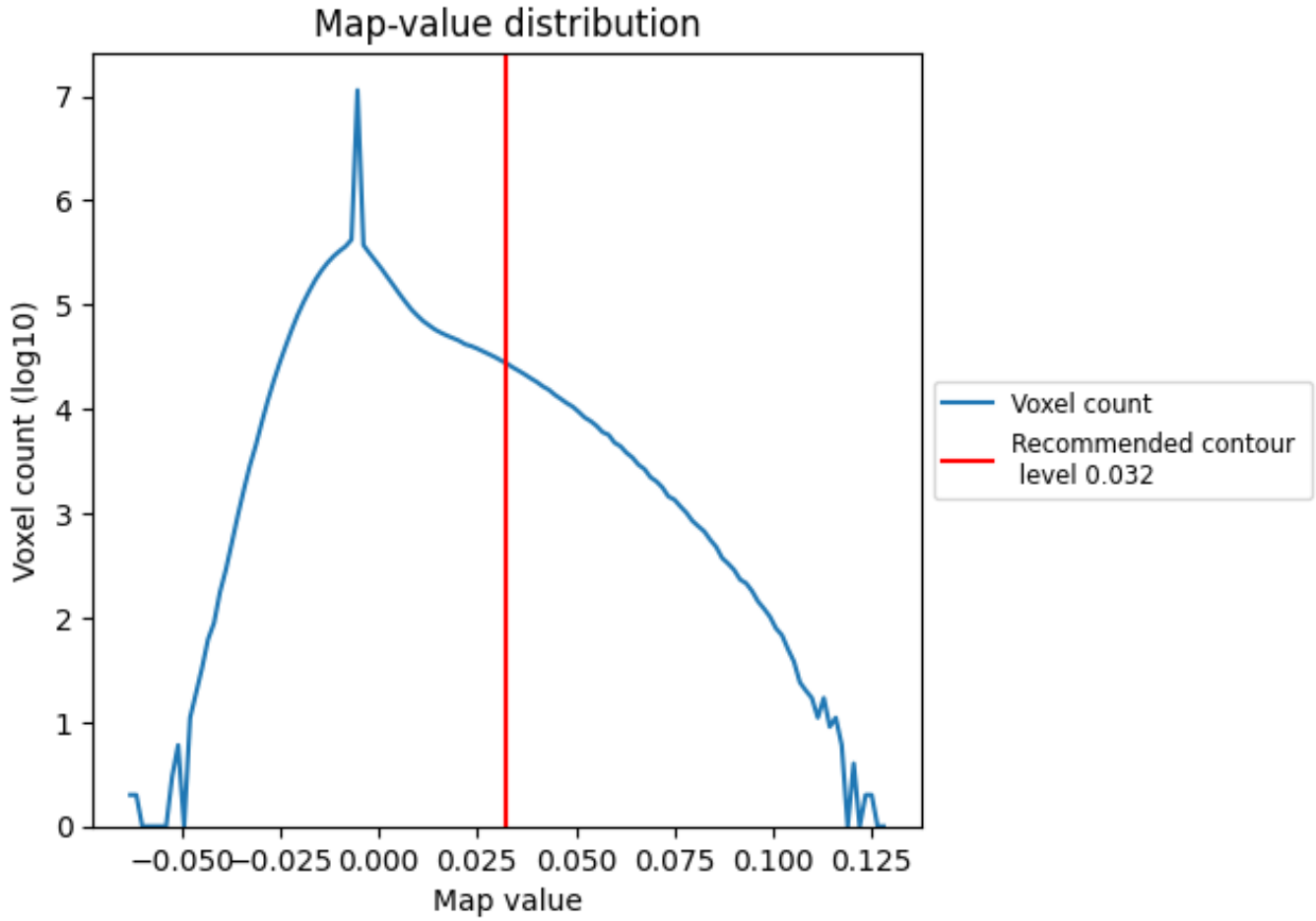
6.6 Mask visualisation (i)

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

7 Map analysis

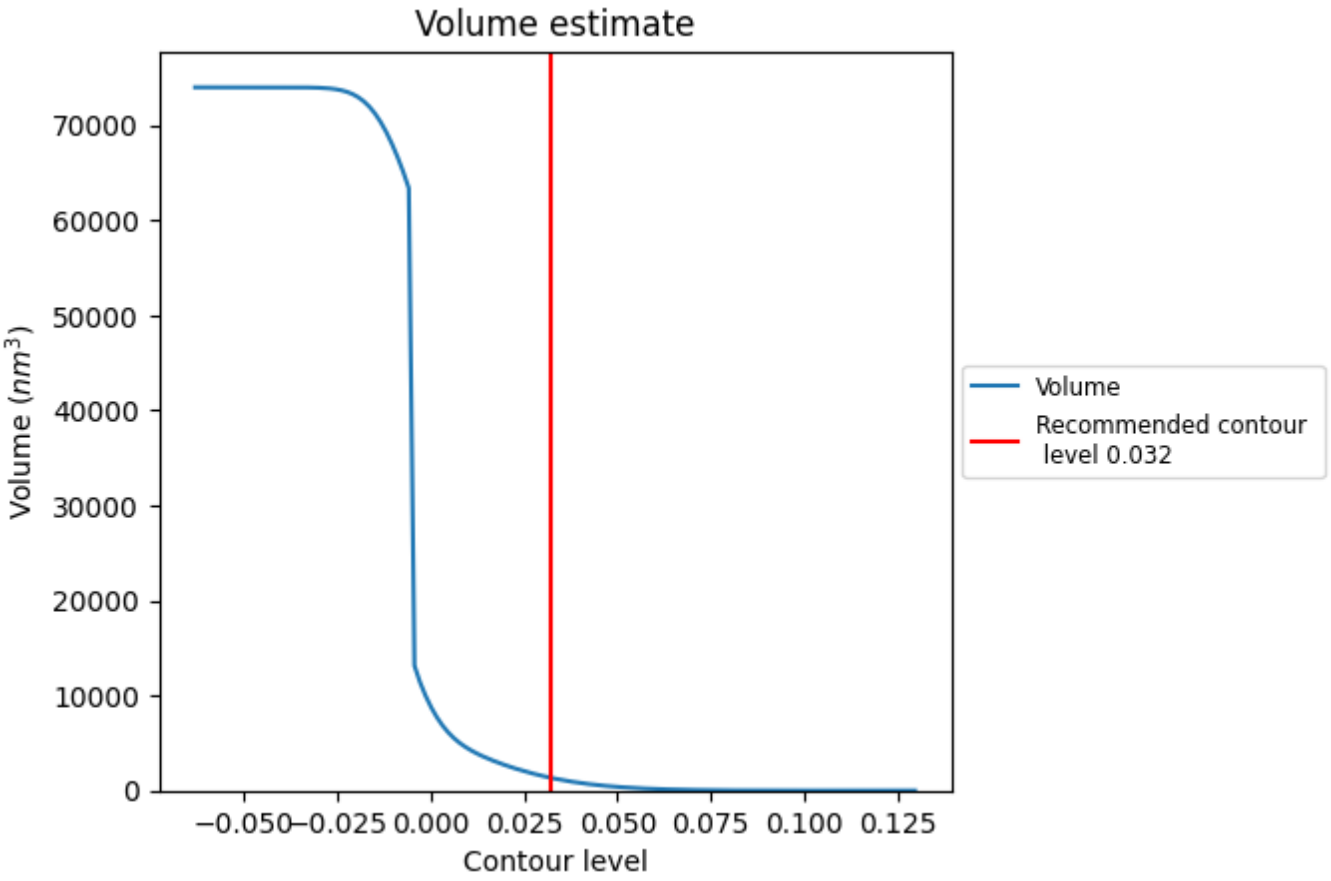
This section contains the results of statistical analysis of the map.

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.

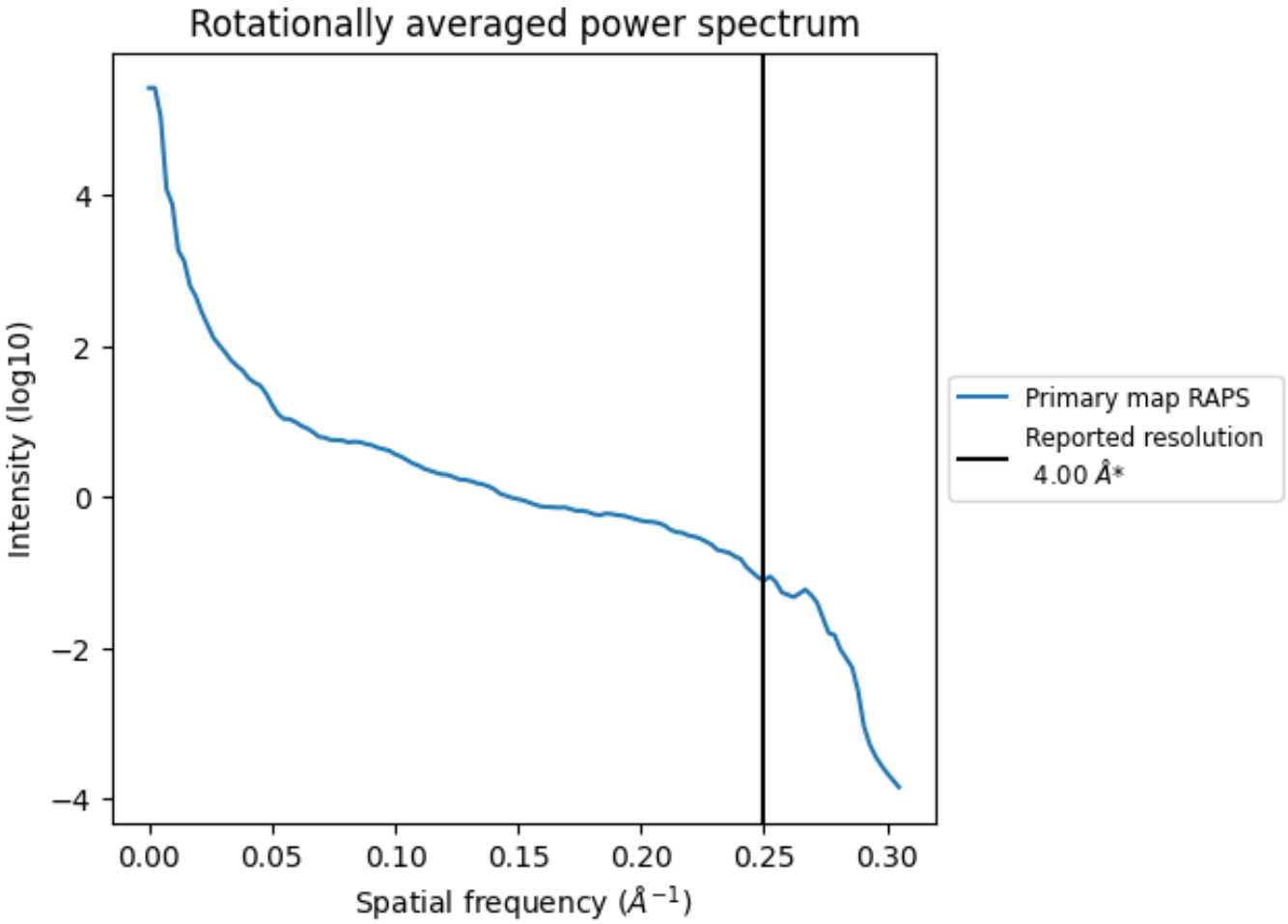
7.2 Volume estimate



The volume at the recommended contour level is 1358 nm^3; this corresponds to an approximate mass of 1227 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 0.250 Å^{-1}

8 Fourier-Shell correlation

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

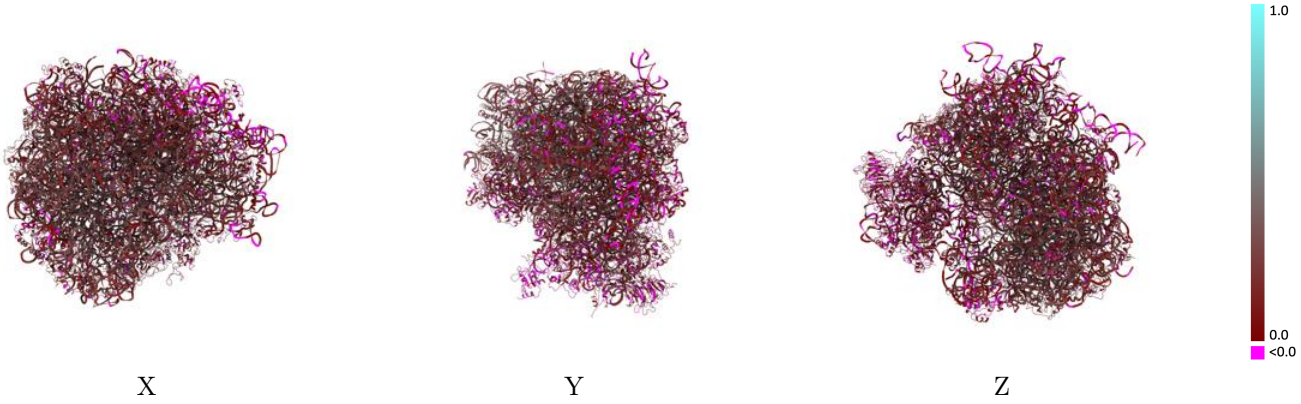
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-6643 and PDB model 5JUO. Per-residue inclusion information can be found in section 3 on page 21.

9.1 Map-model overlay

This section was not generated.

9.2 Q-score mapped to coordinate model



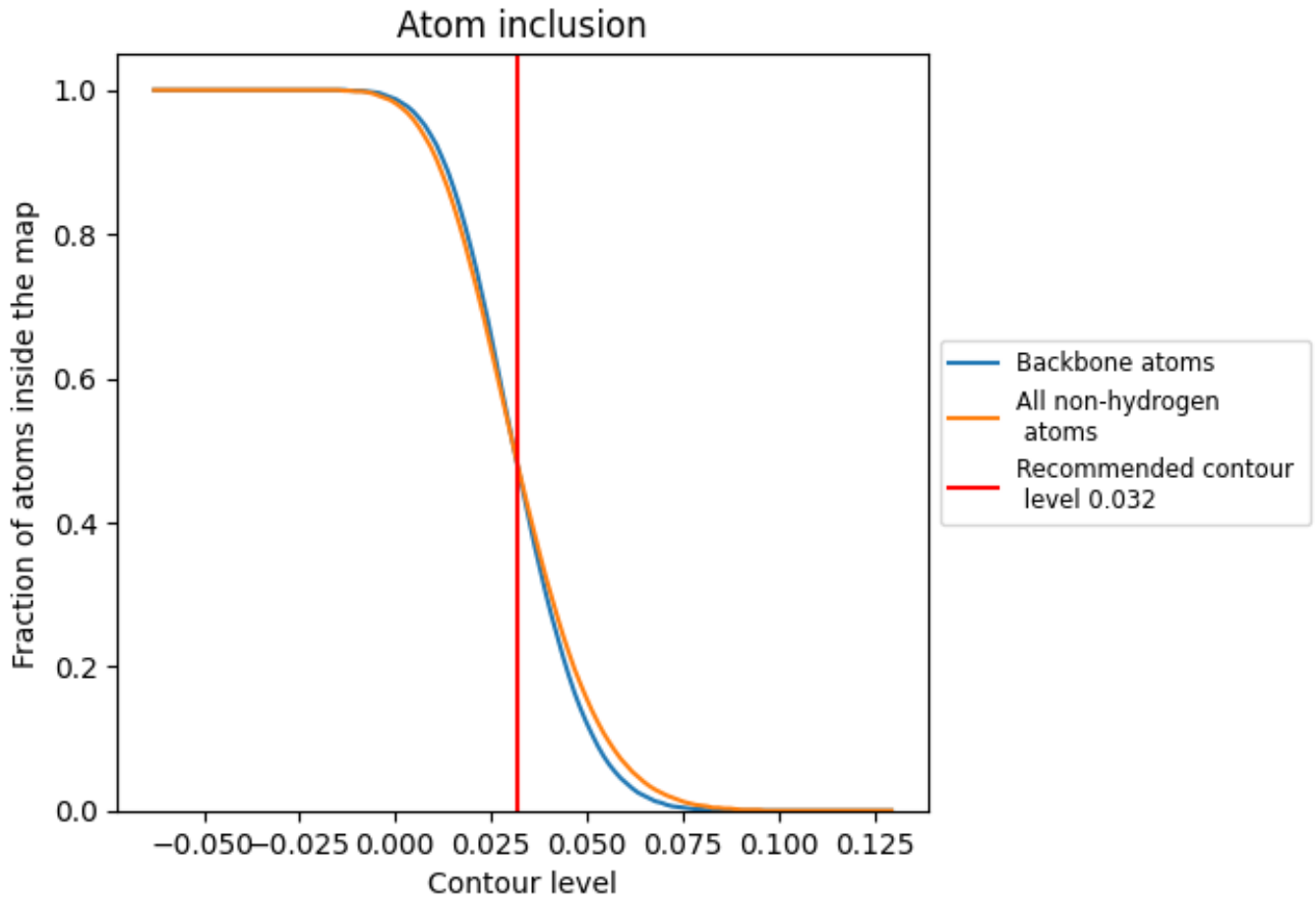
X Y Z

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

This section was not generated.

9.4 Atom inclusion (i)



At the recommended contour level, 48% of all backbone atoms, 48% 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 (0.032) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.4790	0.2040
A	0.5020	0.1890
AA	0.2860	0.2560
AB	0.0840	0.1120
AC	0.2730	0.0780
B	0.6760	0.2440
BA	0.2490	0.2340
BB	0.5170	0.2050
BC	0.1370	0.1810
C	0.6460	0.2300
CA	0.2220	0.1680
CB	0.2280	0.1330
CC	0.0040	0.0250
D	0.7830	0.2300
DA	0.4960	0.1870
DB	0.2600	0.1630
DC	0.2620	0.1730
E	0.0780	0.0830
EA	0.2580	0.1320
EB	0.0630	0.1030
EC	0.1850	0.0860
F	0.5130	0.2250
FA	0.5830	0.2770
FB	0.3170	0.1660
G	0.4450	0.2470
GA	0.5470	0.2670
GB	0.4620	0.2120
H	0.5310	0.2540
HA	0.4980	0.1840
HB	0.2070	0.0580
I	0.4220	0.1740
IA	0.4830	0.2370
IB	0.2400	0.1850
J	0.2760	0.2090
JA	0.5340	0.2640

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Chain	Atom inclusion	Q-score
JB	0.0000	-0.0160
K	0.4580	0.2370
KA	0.3270	0.2730
KB	0.1760	0.1510
L	0.2940	0.1830
LA	0.4690	0.1970
LB	0.4510	0.2010
M	0.3530	0.2500
MA	0.2290	0.1810
MB	0.0910	0.0360
N	0.3750	0.2290
NA	0.4760	0.2190
NB	0.1380	0.1110
O	0.3620	0.1810
OA	0.5350	0.2400
OB	0.0860	0.1320
P	0.1850	0.0540
PA	0.0120	0.0860
PB	0.0730	0.0680
Q	0.6390	0.2500
QA	0.5480	0.2280
QB	0.0830	0.0800
R	0.4670	0.2300
RA	0.5070	0.2640
RB	0.0790	0.0760
S	0.4480	0.2420
SA	0.2820	0.2650
SB	0.1970	0.1990
T	0.4520	0.2620
TA	0.5670	0.2180
TB	0.3050	0.2100
U	0.5480	0.2400
UA	0.5120	0.2050
UB	0.2210	0.2240
V	0.6090	0.2550
VA	0.2270	0.1130
VB	0.2730	0.2120
W	0.3260	0.1760
WA	0.0130	0.1100
WB	0.0550	0.1060
X	0.4410	0.2430
XA	0.1060	0.1600

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Chain	Atom inclusion	Q-score
XB	0.3990	0.2400
Y	0.3970	0.2310
YA	0.2160	0.1710
YB	0.2130	0.1690
Z	0.1920	0.1390
ZA	0.2460	0.2020
ZB	0.3740	0.1580