Full wwPDB EM Validation Report ⓘ

Jun 26, 2025 – 07:22 AM JST

PDB ID	:	8I0T / pdb_00008i0t
EMDB ID	:	EMD-35109
Title	:	The cryo-EM structure of human Bact-III complex
Authors	:	Zhan, X.; Lu, Y.; Shi, Y.
Deposited on	:	2023-01-11
Resolution	:	3.00 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 ⓘ symbol.

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

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

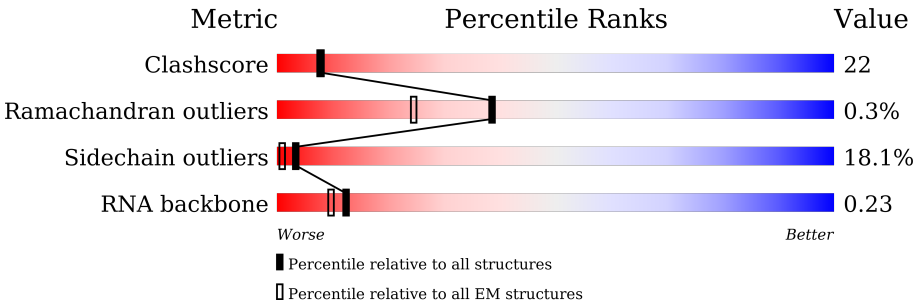
EMDB validation analysis	:	0.0.1.dev118
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4-5-2 with Phenix2.0rc1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.44

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.00 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)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415
RNA backbone	6643	2191

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	2335	49% 38% 9%
2	B	117	29% 36% 19% 16%
3	C	972	35% 43% 10% 12%
4	D	2136	53% 75% 5% 19%
5	E	357	29% 47% 8% 16%
6	F	107	21% 34% 36% 9%
7	G	220	13% 15% 67%

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Mol	Chain	Length	Quality of chain
8	H	188	22% 17% 51% 21% 11%
9	I	855	51% 63% 33%
10	J	848	14% 13% 71%
11	K	343	6% 8% 86%
12	L	802	15% 26% 13% 59%
13	N	144	49% 44% 6%
14	O	420	5% 60% 9% 31%
15	P	229	19% 21% 56%
16	Q	1485	71% 83% 7% 11%
17	R	536	39% 24% 5% 33%
18	S	166	6% 85% 10% 5%
19	T	514	30% 25% 7% 38%
20	U	2752	97%
21	V	908	10% 37% 12% 49%
22	W	579	38% 78% 8% 13%
23	X	1041	28% 39% 8% 24%
24	Y	492	23% 34% 8% 35%
25	Z	225	53% 66% 31%
26	1	1304	26% 29% 7% 37%
27	3	1217	36% 50% 11%
28	p	225	42% 68% 6% 26%
29	w	501	43% 71% 13% 13%
30	2	895	18% 8% 72%
31	4	424	10% 35% 62%
32	7	110	25% 38% 10% 26%

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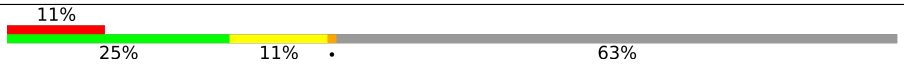
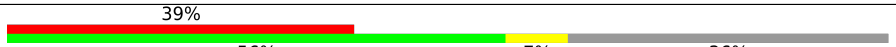
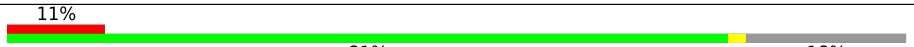
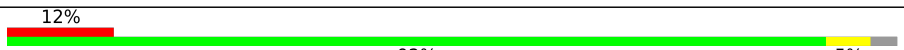
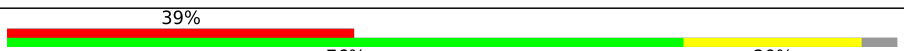
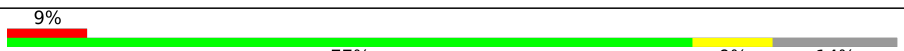
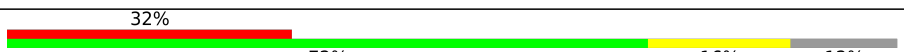
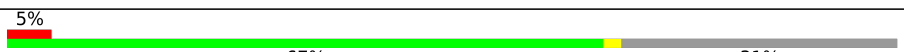
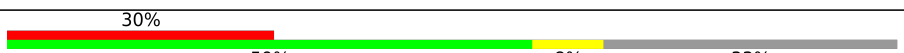
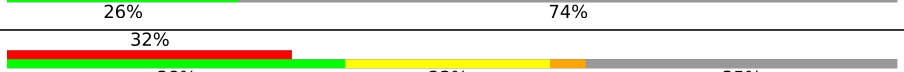
Mol	Chain	Length	Quality of chain
33	5	86	
34	y	301	
35	v	464	
36	o	255	
37	c	118	
37	h	118	
38	d	86	
38	i	86	
39	a	240	
39	m	240	
40	g	126	
40	l	126	
41	f	76	
41	k	76	
42	e	92	
42	j	92	
43	b	119	
43	n	119	
44	u	793	
45	q	504	
45	r	504	
45	s	504	
45	t	504	
46	9	520	

2 Entry composition

There are 50 unique types of molecules in this entry. The entry contains 120623 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 protein called Pre-mRNA-processing-splicing factor 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	2242	18543	11943	3241	3280	79	0	0

- Molecule 2 is a RNA chain called U5 snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	B	98	2066	925	347	696	98	0	0

- Molecule 3 is a protein called 116 kDa U5 small nuclear ribonucleoprotein component.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	860	6724	4298	1122	1272	32	0	0

- Molecule 4 is a protein called U5 small nuclear ribonucleoprotein 200 kDa helicase.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
4	D	1722	8528	5084	1722	1722	0	0

- Molecule 5 is a protein called U5 small nuclear ribonucleoprotein 40 kDa protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	E	299	2338	1470	410	445	13	0	0

- Molecule 6 is a RNA chain called U6 snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
6	F	97	2075	928	381	669	97	0	0

- Molecule 7 is a RNA chain called Pre-mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	72	Total	C	N	O	P	0	0
			1503	673	248	510	72		

- Molecule 8 is a RNA chain called U2 snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	167	Total	C	N	O	P	0	0
			3539	1581	607	1184	167		

- Molecule 9 is a protein called Pre-mRNA-splicing factor SYF1.

Mol	Chain	Residues	Atoms				AltConf	Trace
9	I	571	Total	C	N	O	0	0
			2880	1738	571	571		

- Molecule 10 is a protein called Crooked neck-like protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	J	249	Total	C	N	O	S	0	0
			2116	1355	380	375	6		

- Molecule 11 is a protein called RING finger protein 113A.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	K	49	Total	C	N	O	S	0	0
			411	258	70	80	3		

- Molecule 12 is a protein called Cell division cycle 5-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	L	328	Total	C	N	O	S	0	0
			2192	1361	421	406	4		

- Molecule 13 is a protein called Protein BUD31 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	N	143	Total	C	N	O	S	0	0
			1184	746	217	209	12		

- Molecule 14 is a protein called Pre-mRNA-splicing factor RBM22.

Mol	Chain	Residues	Atoms				AltConf	Trace
14	O	290	Total 1447	C 862	N 292	O 293	0	0

- Molecule 15 is a protein called Spliceosome-associated protein CWC15 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	P	101	Total 876	C 537	N 175	O 162	S 2	0	0

- Molecule 16 is a protein called RNA helicase aquarius.

Mol	Chain	Residues	Atoms				AltConf	Trace
16	Q	1329	Total 6730	C 4072	N 1329	O 1329	0	0

- Molecule 17 is a protein called SNW domain-containing protein 1.

Mol	Chain	Residues	Atoms						AltConf	Trace
17	R	361	Total 2760	C 1694	N 524	O 529	P 1	S 12	0	0

- Molecule 18 is a protein called Peptidyl-prolyl cis-trans isomerase-like 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
18	S	158	Total 770	C 454	N 158	O 158	0	0

- Molecule 19 is a protein called Pleiotropic regulator 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	T	320	Total 2507	C 1582	N 456	O 462	S 7	0	0

- Molecule 20 is a protein called Serine/arginine repetitive matrix protein 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	U	72	Total 422	C 257	N 82	O 82	S 1	0	0

- Molecule 21 is a protein called Pre-mRNA-splicing factor CWC22 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	V	462	Total 2959	C 1842	N 537	O 567	S 13	0	0

- Molecule 22 is a protein called Pre-mRNA-processing factor 17.

Mol	Chain	Residues	Atoms				AltConf	Trace
22	W	501	Total 2473	C 1471	N 501	O 501	0	0

- Molecule 23 is a protein called Pre-mRNA-splicing factor ATP-dependent RNA helicase DHX16.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	X	786	Total 6357	C 4010	N 1133	O 1184	S 30	0	0

- Molecule 24 is a protein called Peptidyl-prolyl cis-trans isomerase-like 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	Y	320	Total 2556	C 1616	N 420	O 508	S 12	0	0

- Molecule 25 is a protein called Pre-mRNA-splicing factor SPF27.

Mol	Chain	Residues	Atoms				AltConf	Trace
25	Z	155	Total 772	C 462	N 155	O 155	0	0

- Molecule 26 is a protein called Splicing factor 3B subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	1	816	Total 6486	C 4163	N 1119	O 1165	S 39	0	0

- Molecule 27 is a protein called Splicing factor 3B subunit 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	3	1177	Total 9220	C 5854	N 1566	O 1755	S 45	0	0

- Molecule 28 is a protein called U2 small nuclear ribonucleoprotein B".

Mol	Chain	Residues	Atoms				AltConf	Trace
28	p	167	Total 841	C 507	N 167	O 167	0	0

- Molecule 29 is a protein called Splicing factor 3A subunit 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	w	434	Total 2275	C 1287	N 491	O 493	S 4	0	0

- Molecule 30 is a protein called Splicing factor 3B subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	2	250	Total 1807	C 1134	N 340	O 326	S 7	0	0

- Molecule 31 is a protein called Splicing factor 3B subunit 4.

Mol	Chain	Residues	Atoms				AltConf	Trace
31	4	161	Total 792	C 470	N 161	O 161	0	0

- Molecule 32 is a protein called PHD finger-like domain-containing protein 5A.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	7	81	Total 613	C 376	N 109	O 115	S 13	0	0

- Molecule 33 is a protein called Splicing factor 3B subunit 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	5	77	Total 635	C 403	N 110	O 117	S 5	0	0

- Molecule 34 is a protein called Peptidyl-prolyl cis-trans isomerase E.

Mol	Chain	Residues	Atoms				AltConf	Trace
34	y	79	Total 390	C 232	N 79	O 79	0	0

- Molecule 35 is a protein called Splicing factor 3A subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	v	173	Total	C	N	O	S	0	0
			1041	602	219	217	3		

- Molecule 36 is a protein called U2 small nuclear ribonucleoprotein A'.

Mol	Chain	Residues	Atoms				AltConf	Trace
36	o	162	Total	C	N	O	0	0
			816	492	162	162		

- Molecule 37 is a protein called Small nuclear ribonucleoprotein Sm D2.

Mol	Chain	Residues	Atoms				AltConf	Trace
37	h	95	Total	C	N	O	0	0
			482	292	95	95		
37	c	97	Total	C	N	O	0	0
			388	194	97	97		

- Molecule 38 is a protein called Small nuclear ribonucleoprotein F.

Mol	Chain	Residues	Atoms				AltConf	Trace
38	i	72	Total	C	N	O	0	0
			359	215	72	72		
38	d	74	Total	C	N	O	0	0
			296	148	74	74		

- Molecule 39 is a protein called Small nuclear ribonucleoprotein-associated proteins B and B'.

Mol	Chain	Residues	Atoms				AltConf	Trace
39	m	82	Total	C	N	O	0	0
			413	249	82	82		
39	a	86	Total	C	N	O	0	0
			344	172	86	86		

- Molecule 40 is a protein called Small nuclear ribonucleoprotein Sm D3.

Mol	Chain	Residues	Atoms				AltConf	Trace
40	l	83	Total	C	N	O	0	0
			415	249	83	83		
40	g	81	Total	C	N	O	0	0
			324	162	81	81		

- Molecule 41 is a protein called Small nuclear ribonucleoprotein G.

Mol	Chain	Residues	Atoms				AltConf	Trace
41	k	73	Total 364	C 218	N 73	O 73	0	0
41	f	74	Total 296	C 148	N 74	O 74	0	0

- Molecule 42 is a protein called Small nuclear ribonucleoprotein E.

Mol	Chain	Residues	Atoms				AltConf	Trace
42	j	81	Total 403	C 241	N 81	O 81	0	0
42	e	79	Total 316	C 158	N 79	O 79	0	0

- Molecule 43 is a protein called Small nuclear ribonucleoprotein Sm D1.

Mol	Chain	Residues	Atoms				AltConf	Trace
43	n	80	Total 402	C 242	N 80	O 80	0	0
43	b	82	Total 328	C 164	N 82	O 82	0	0

- Molecule 44 is a protein called Splicing factor 3A subunit 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
44	u	187	Total 834	C 460	N 187	O 187	0	0

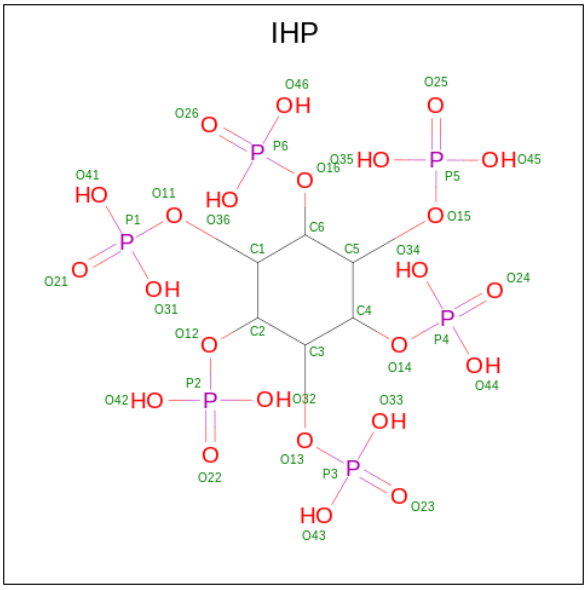
- Molecule 45 is a protein called Pre-mRNA-processing factor 19.

Mol	Chain	Residues	Atoms				AltConf	Trace
45	q	132	Total 659	C 395	N 132	O 132	0	0
45	r	131	Total 654	C 392	N 131	O 131	0	0
45	s	132	Total 659	C 395	N 132	O 132	0	0
45	t	131	Total 654	C 392	N 131	O 131	0	0

- Molecule 46 is a protein called RING-type E3 ubiquitin-protein ligase PPIL2.

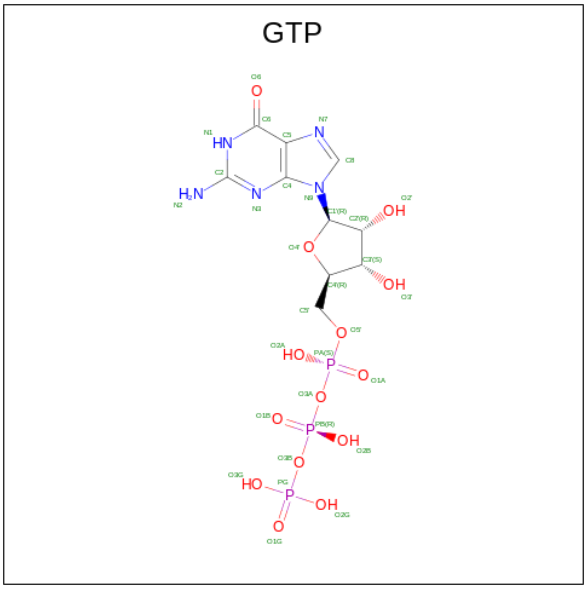
Mol	Chain	Residues	Atoms					AltConf	Trace
46	9	338	Total	C	N	O	S	0	0
			2307	1429	420	450	8		

- Molecule 47 is INOSITOL HEXAKISPHOSPHATE (CCD ID: IHP) (formula: $C_6H_{18}O_{24}P_6$).



Mol	Chain	Residues	Atoms				AltConf
47	A	1	Total	C	O	P	0
			36	6	24	6	

- Molecule 48 is GUANOSINE-5'-TRIPHOSPHATE (CCD ID: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$).



Mol	Chain	Residues	Atoms					AltConf
48	C	1	Total	C	N	O	P	0
			32	10	5	14	3	

- Molecule 49 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
49	C	1	Total	Mg	0
			1	1	
49	F	6	Total	Mg	0
			6	6	

- Molecule 50 is ZINC ION (CCD ID: ZN) (formula: Zn).

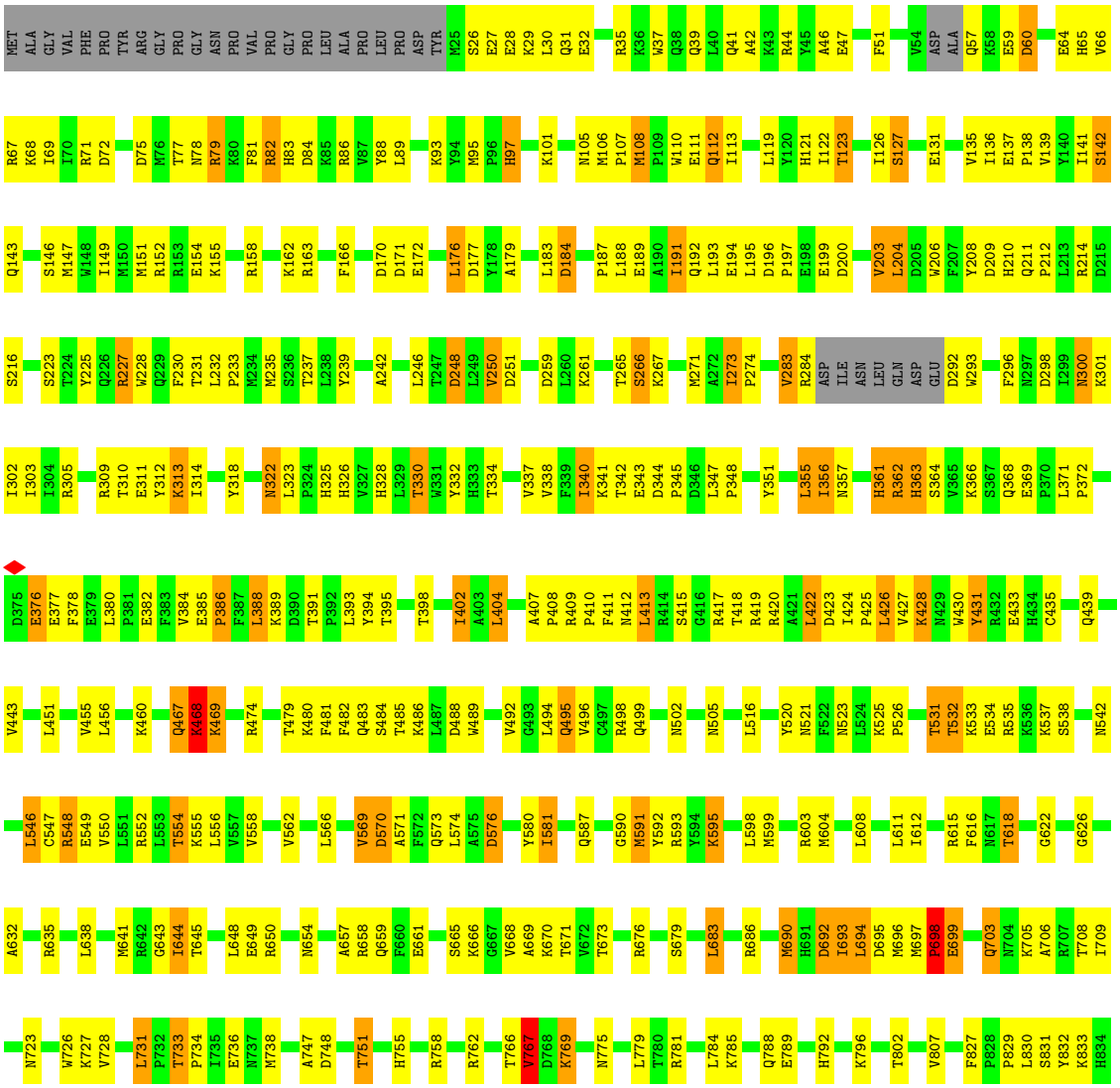
Mol	Chain	Residues	Atoms		AltConf
50	K	1	Total	Zn	0
			1	1	
50	N	3	Total	Zn	0
			3	3	
50	7	3	Total	Zn	0
			3	3	

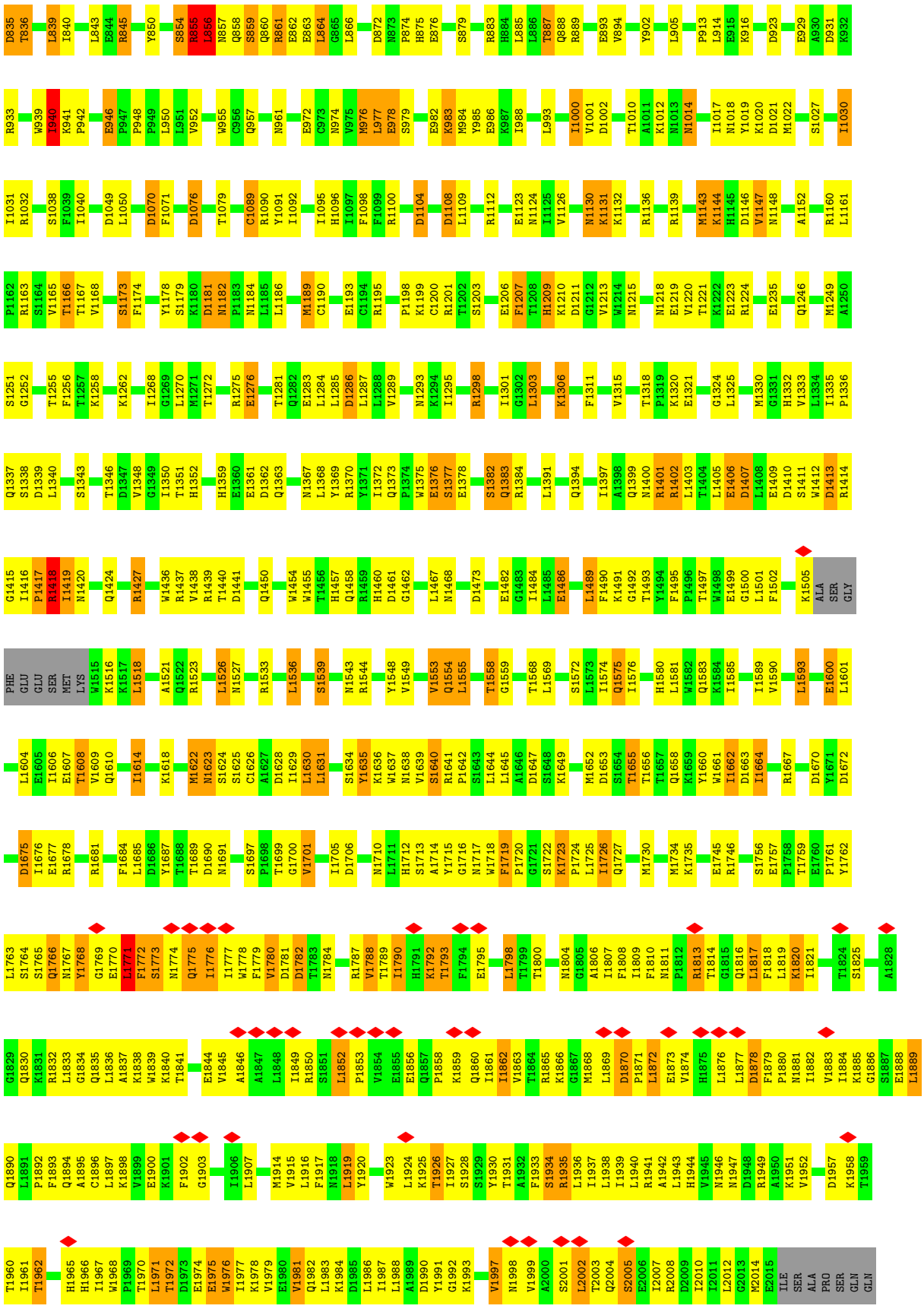
3 Residue-property plots (i)

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: Pre-mRNA-processing-splicing factor 8

Chain A:




D835 T836 L839 I840 L843 E844 R845 Y850 S854 R855 L856 N857 Q858 S859 Q860 R861 E862 E863 L864 G865 L866 D872 N873 P874 H875 E876 S879 R883 H884 L885 L886 T887 Q888 R889 E893 V894 Y902 L905 P913 L914 E915 K916 D923 E929 A930 D931 K932
R933 W939 I940 K941 P942 E946 P947 P948 P949 L950 L951 V952 W955 C956 Q957 N961 E972 C973 N974 V975 M976 L977 E978 S979 E982 K983 M984 Y985 E986 K987 I988 L993 I1000 V1001 D1002 T1010 A1011 K1012 N1013 N1014 I1017 N1018 Y1019 K1020 D1021 M1022 S1027 I1030
I1031 R1032 S1038 F1039 I1040 D1049 L1050 D1070 F1071 D1076 T1079 C1089 R1090 Y1091 I1092 I1095 H1096 I1097 F1098 F1099 R1100 D1104 D1108 L1109 R1112 E1123 N1124 I1125 V1126 N1130 K1131 K1132 R1136 R1139 M1143 K1144 H1145 D1146 V1147 N1148 A1152 R1160 L1161
P1162 R1163 S1164 V1165 T1166 T1167 V1168 S1173 F1174 Y1178 S1179 K1180 D1181 N1182 P1183 N1184 L1185 L1186 M1189 C1190 E1193 C1194 R1195 P1198 K1199 C1200 R1201 T1202 S1203 E1206 F1207 T1208 H1209 K1210 D1211 G1212 V1213 W1214 N1215 N1218 E1219 V1220 T1221 K1222 E1223 R1224 E1235 Q1246 M1249 A1250
S1251 G1252 T1255 F1256 T1257 K1258 K1262 I1268 G1269 L1270 M1271 T1272 R1275 E1276 T1281 Q1282 E1283 L1284 L1285 D1286 L1287 L1288 V1289 N1293 K1294 I1295 R1298 I1301 G1302 L1303 K1306 F1311 V1315 T1318 P1319 K1320 E1321 G1324 L1325 M1330 G1331 H1332 V1333 L1334 I1335 P1336
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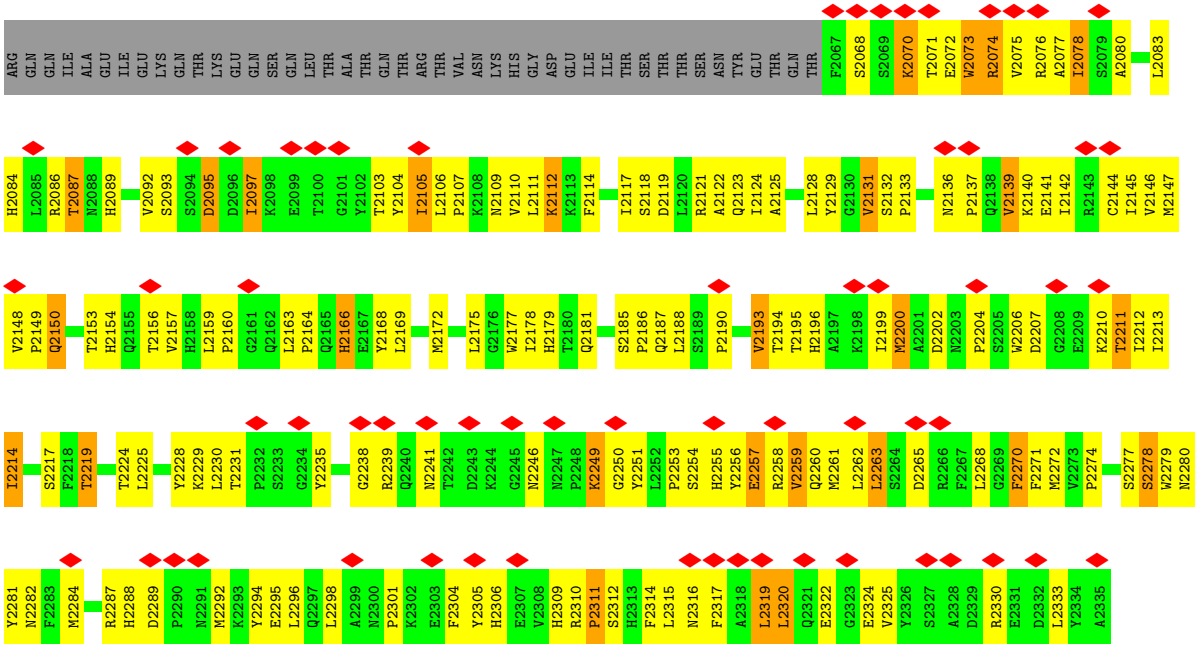
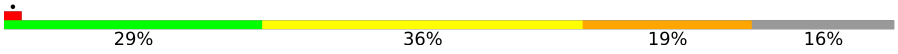
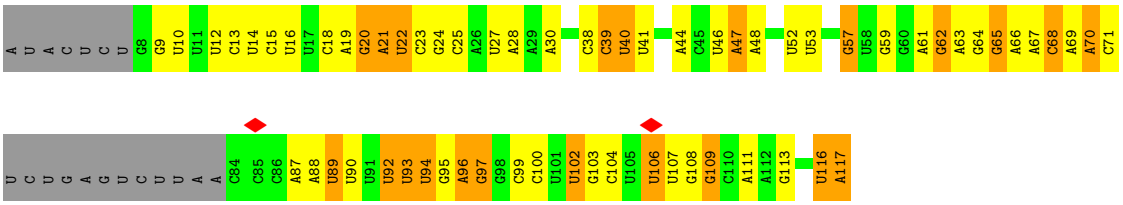


• Molecule 2: U5 snRNA

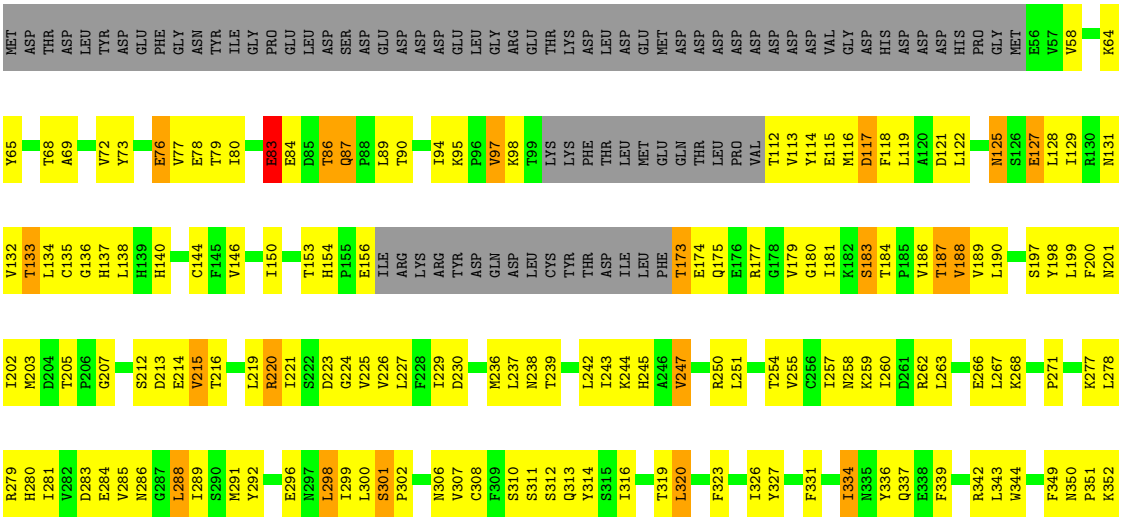
Chain B:

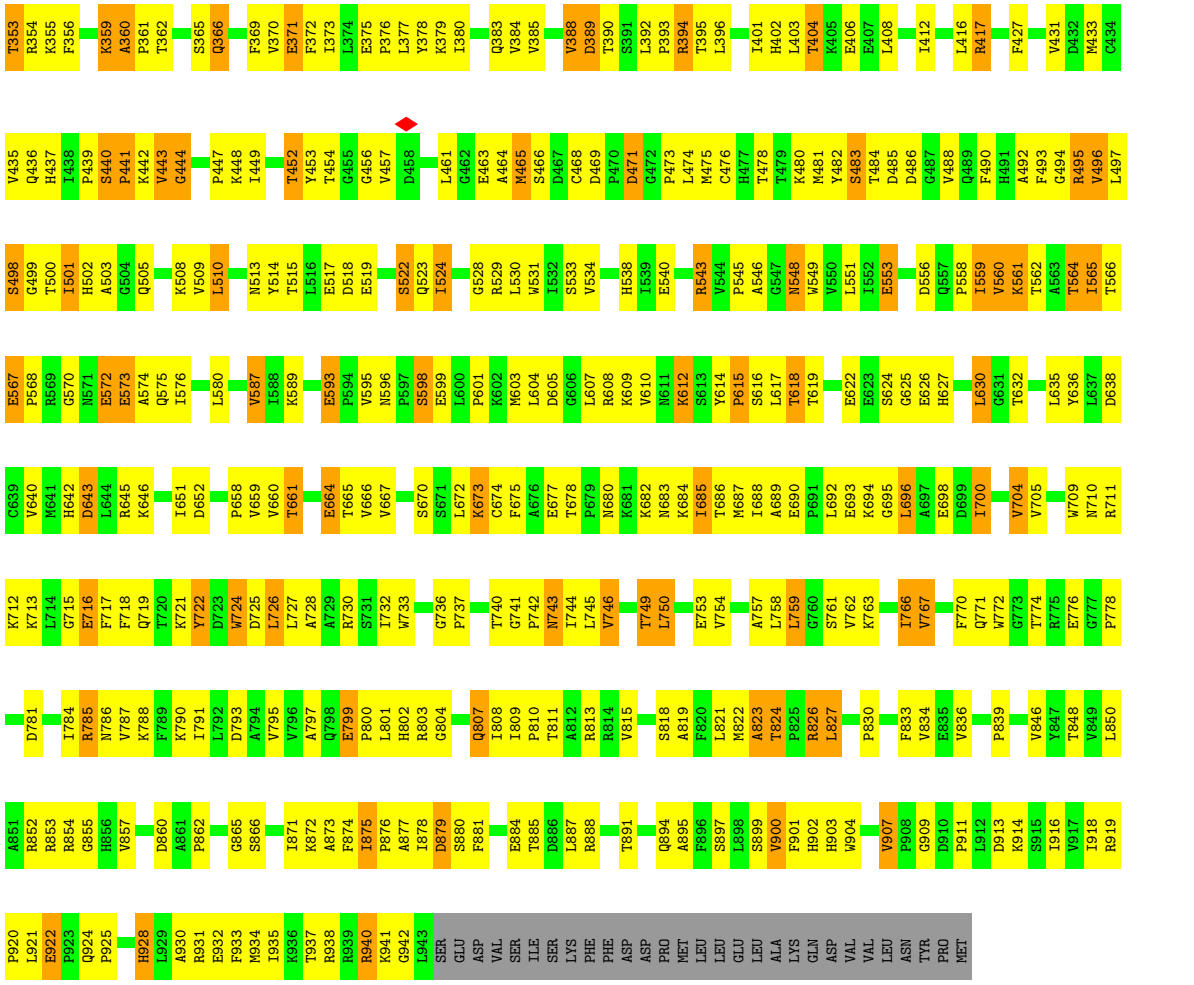




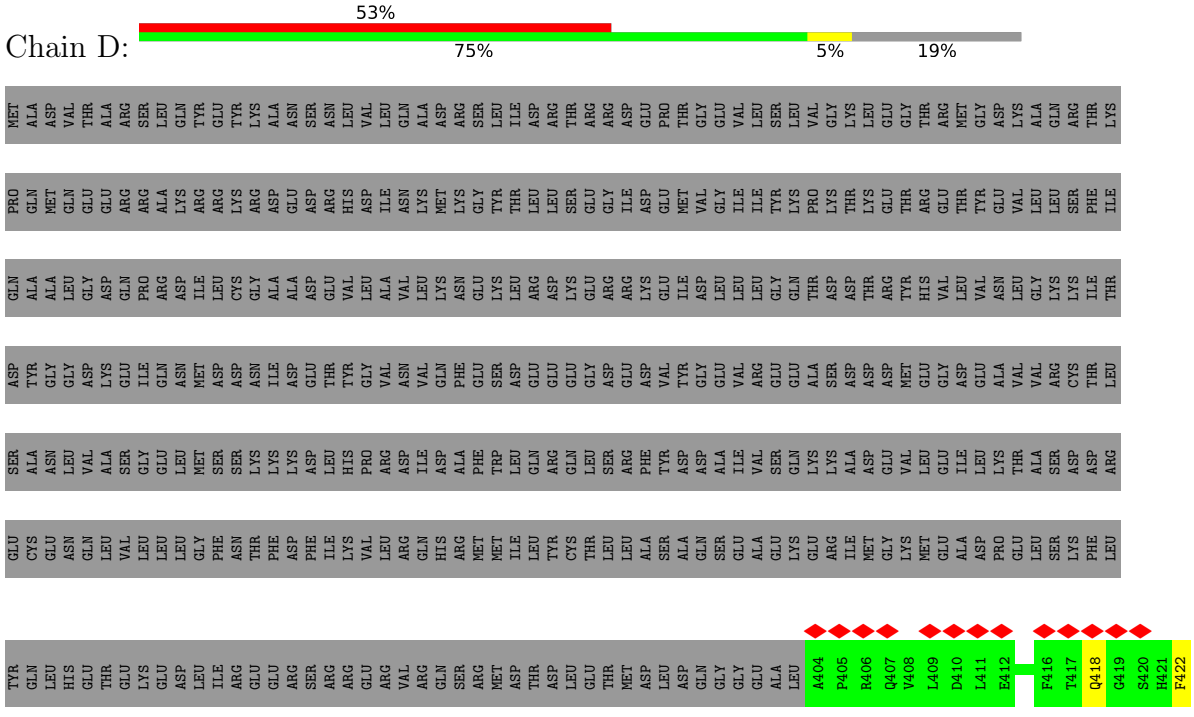
• Molecule 3: 116 kDa U5 small nuclear ribonucleoprotein component

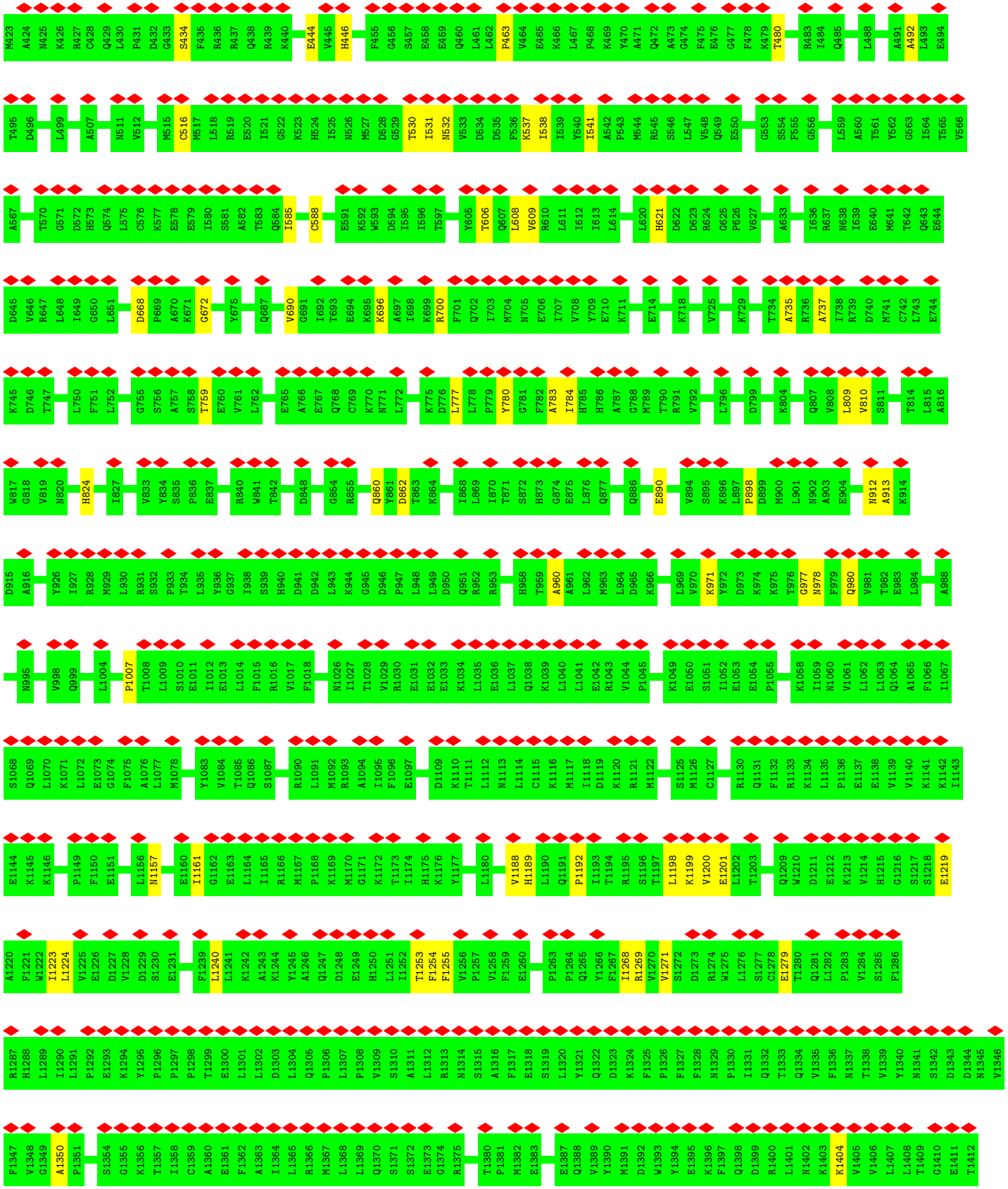
Chain C:





• Molecule 4: U5 small nuclear ribonucleoprotein 200 kDa helicase

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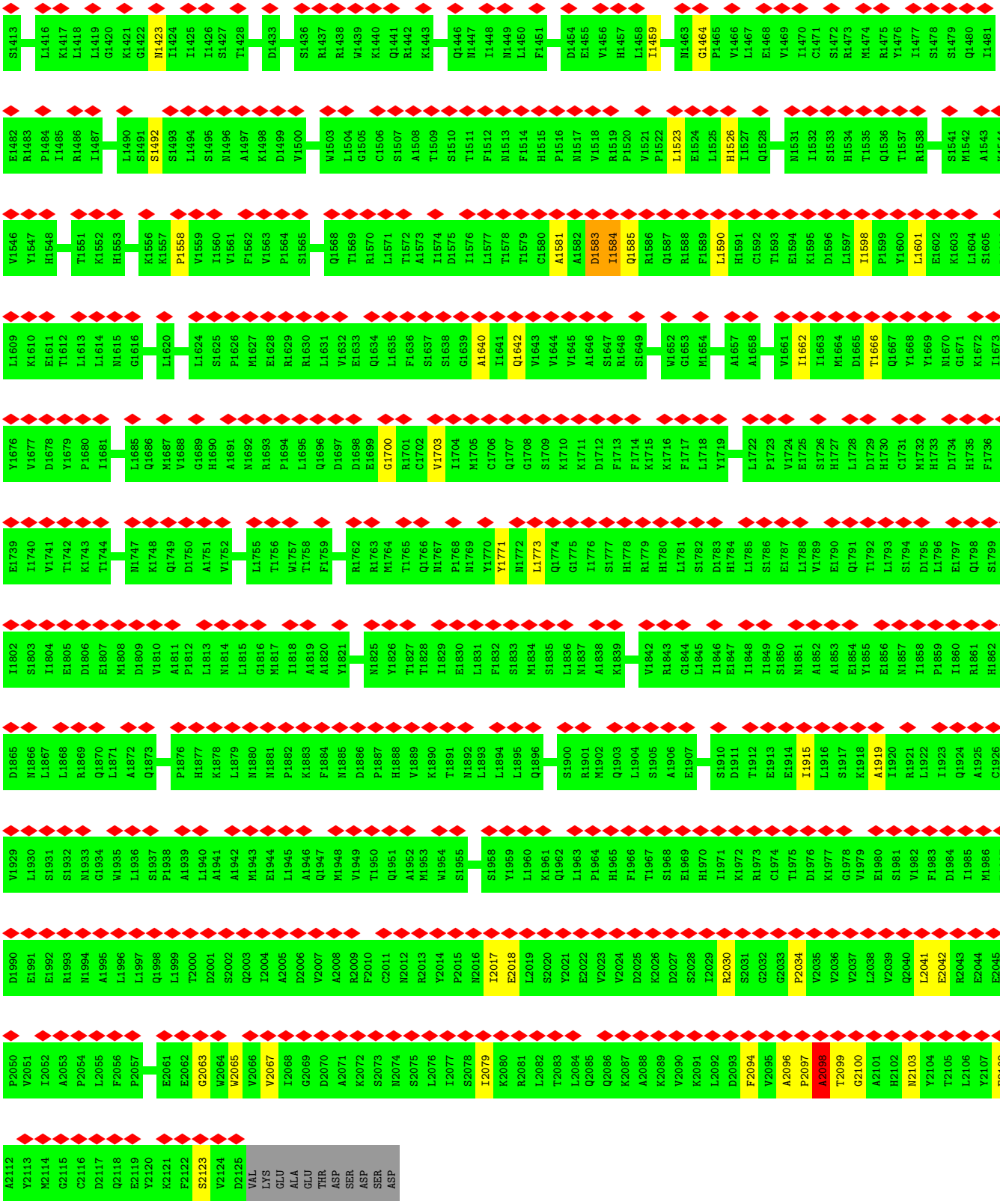
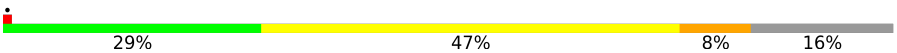
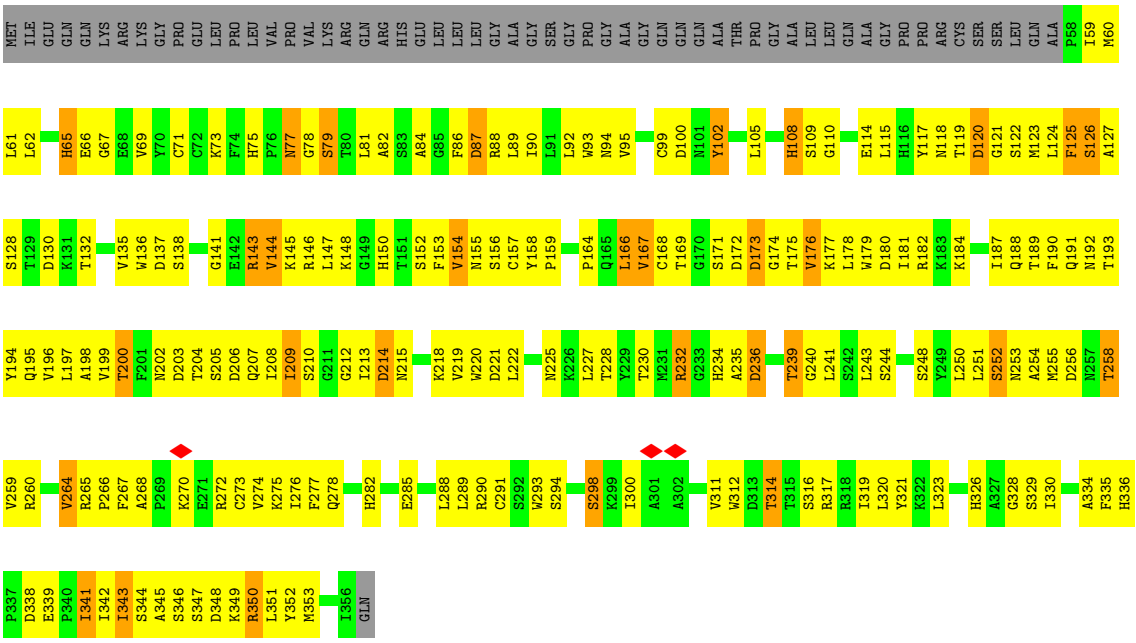


• Molecule 5: U5 small nuclear ribonucleoprotein 40 kDa protein

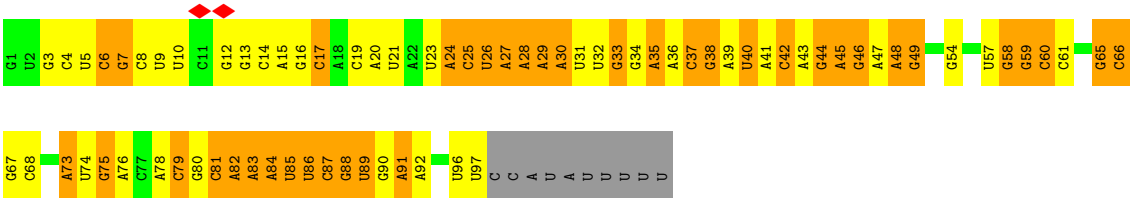
Chain E:





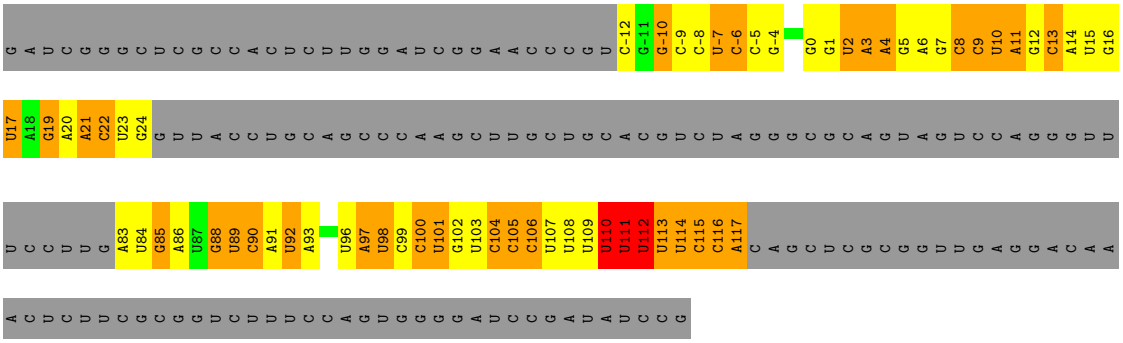
• Molecule 6: U6 snRNA

Chain F:



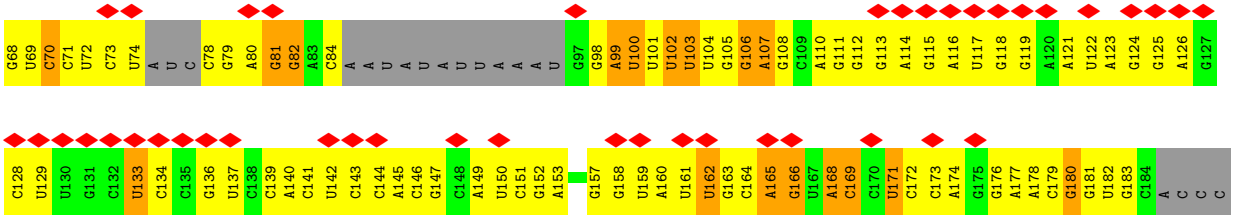
• Molecule 7: Pre-mRNA

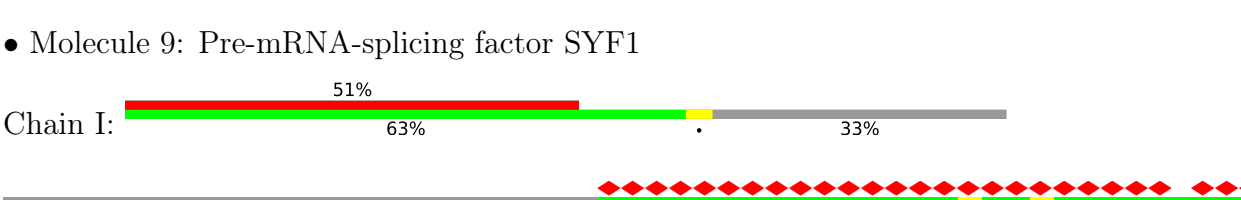
Chain G:



• Molecule 8: U2 snRNA

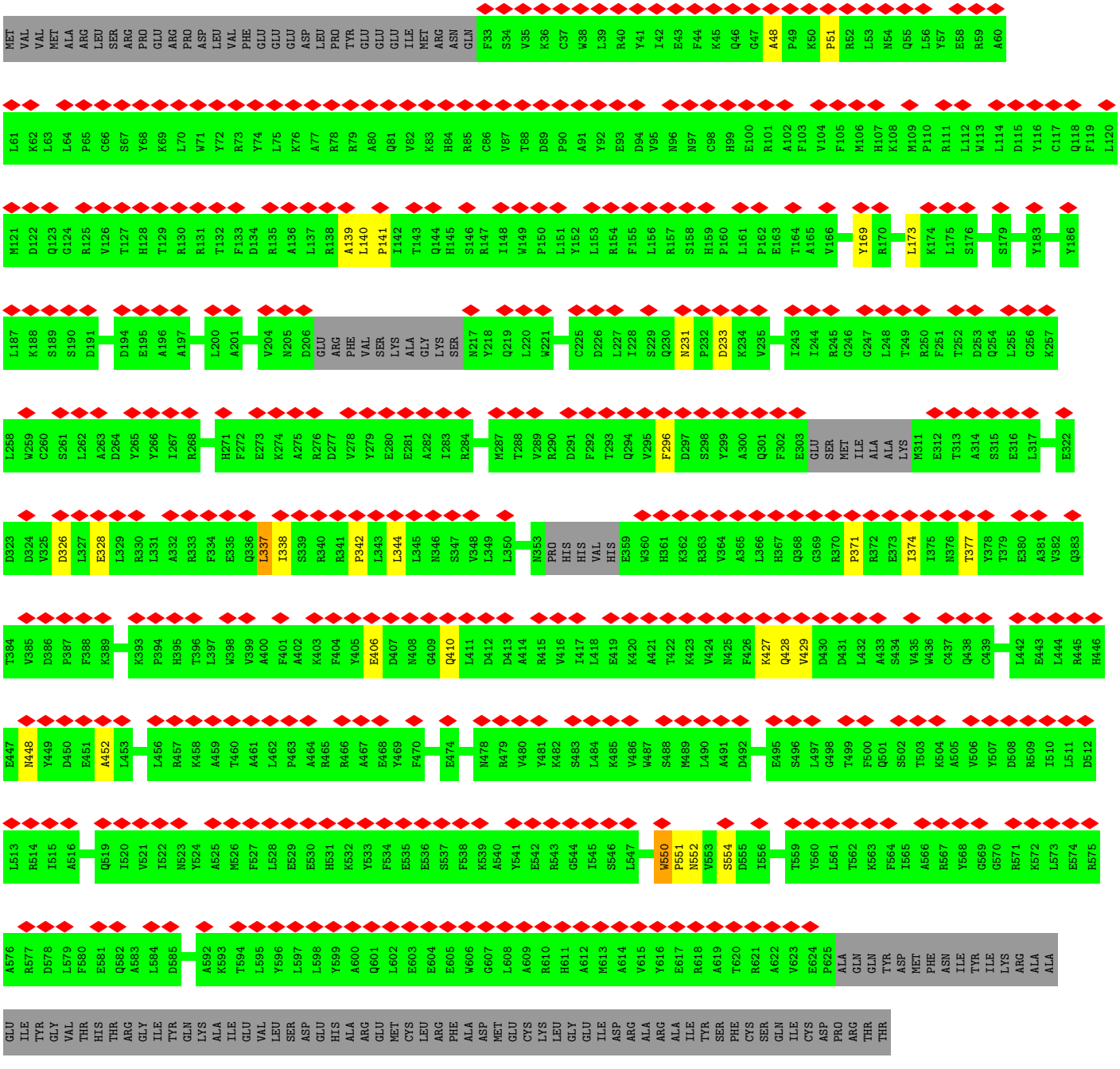
Chain H:

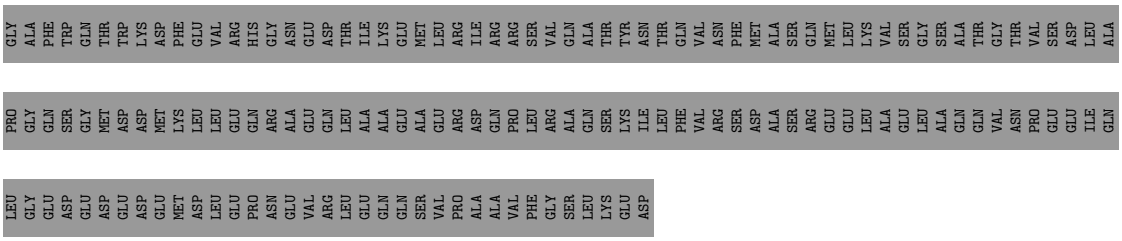


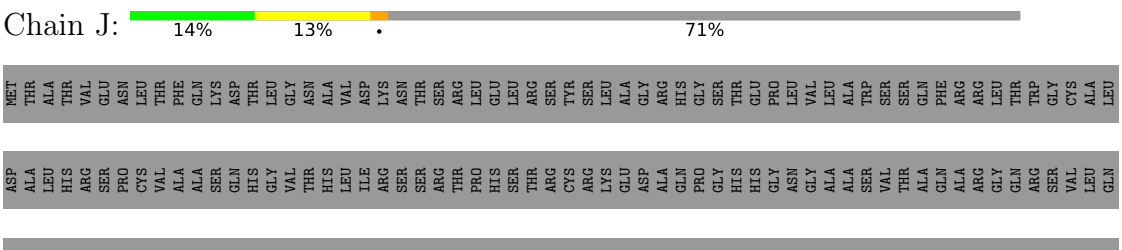


• Molecule 9: Pre-mRNA-splicing factor SYF1

Chain I:

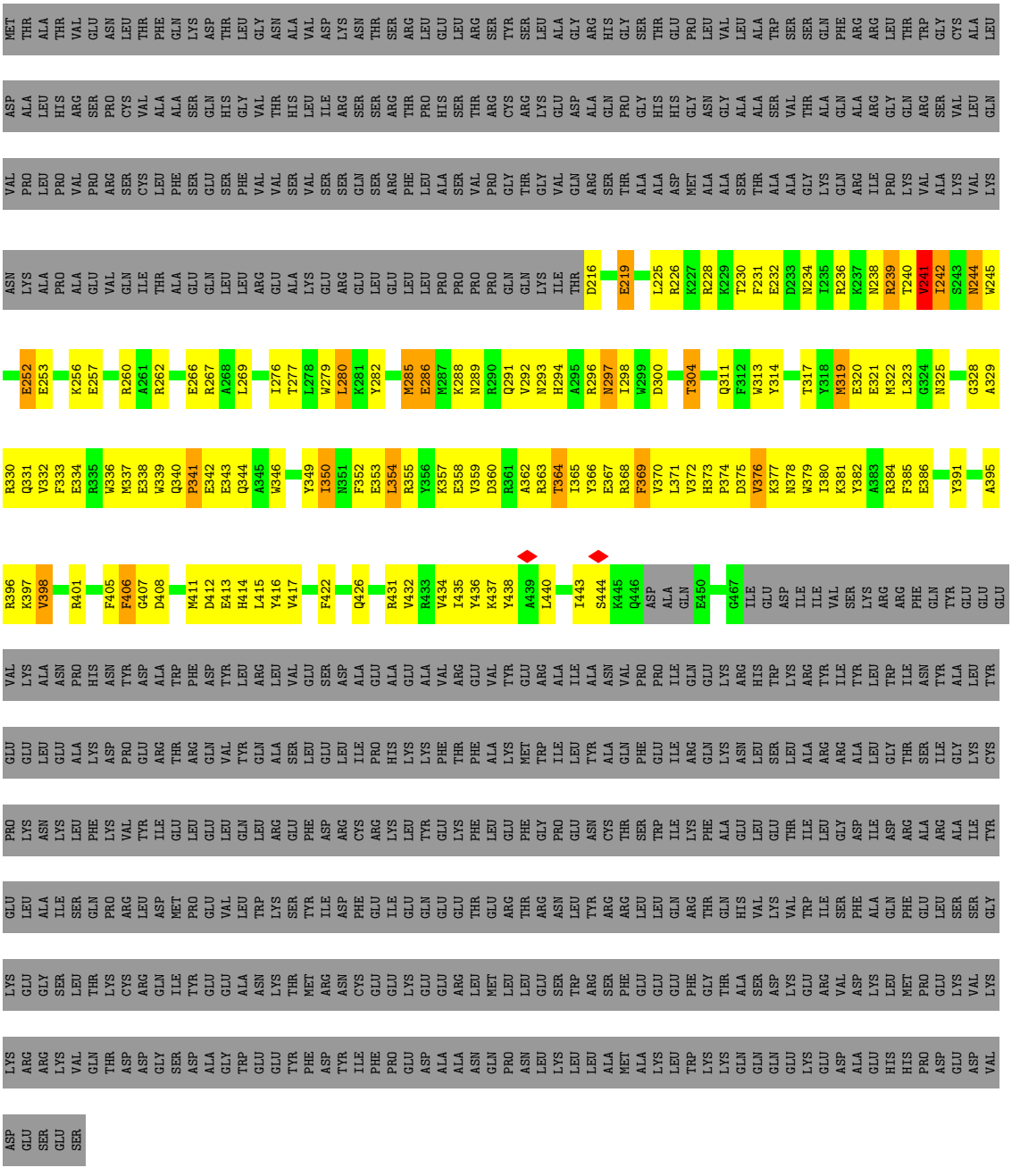






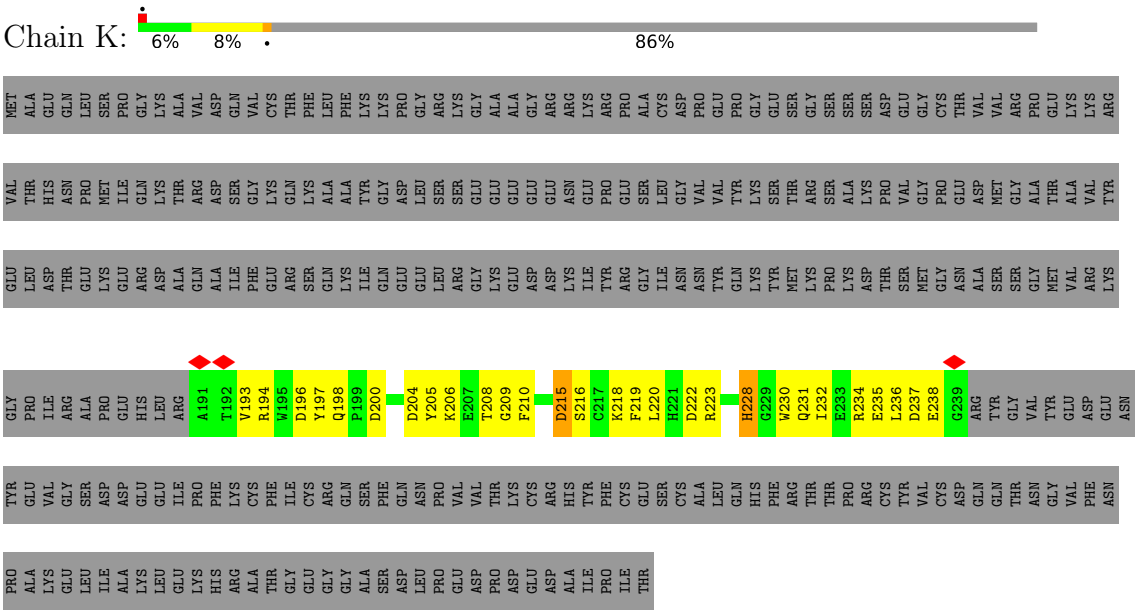
• Molecule 10: Crooked neck-like protein 1

Chain J:



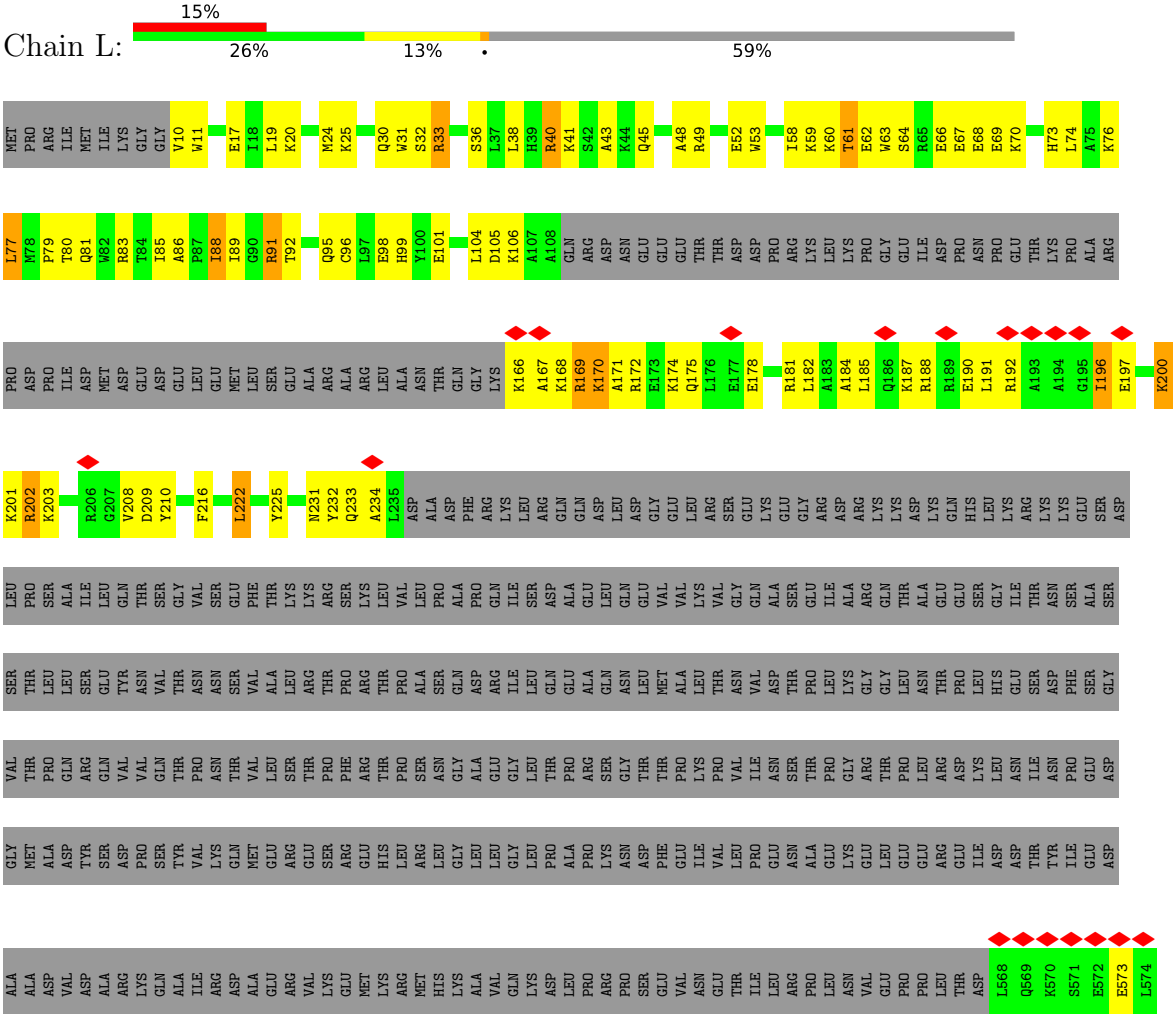
• Molecule 11: RING finger protein 113A

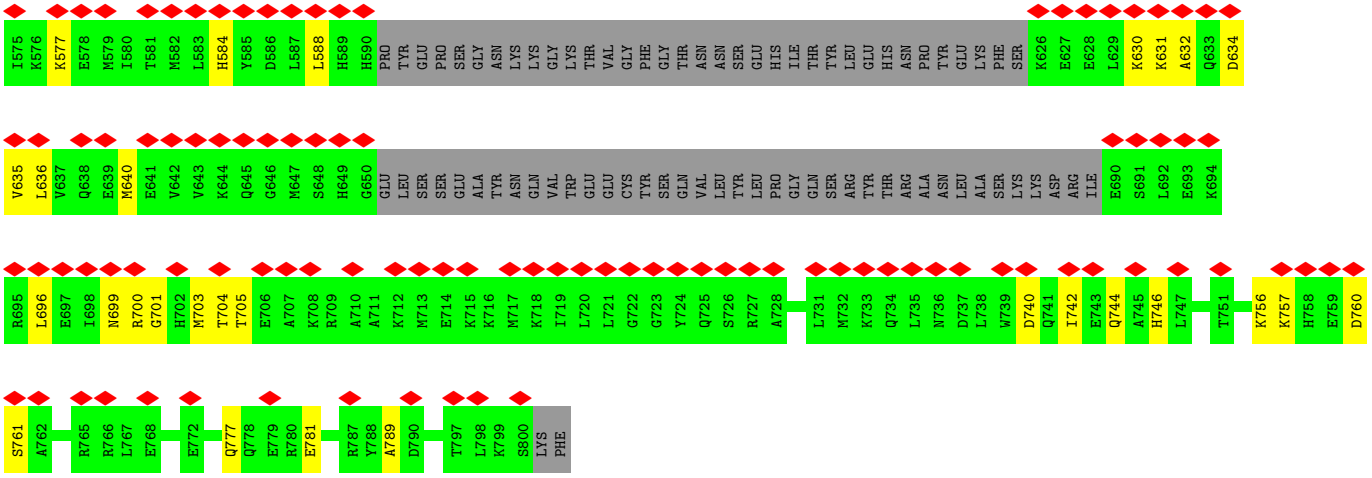
Chain K:



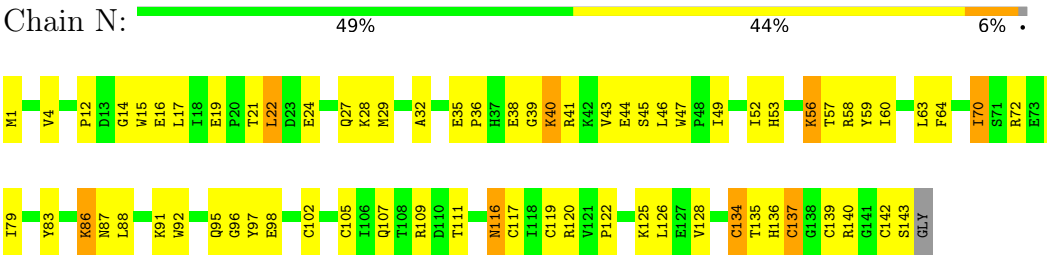
• Molecule 12: Cell division cycle 5-like protein

Chain L:

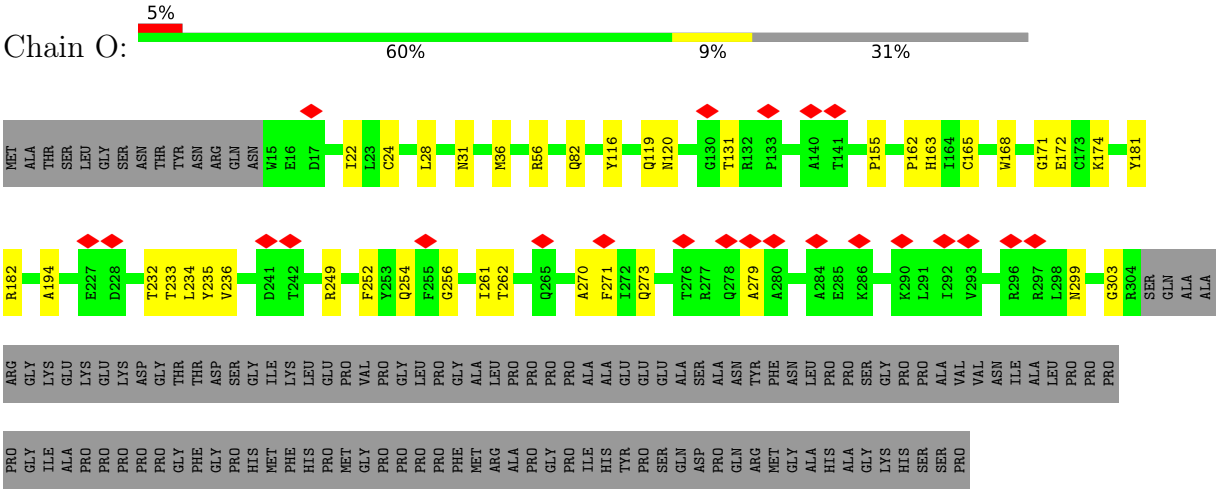




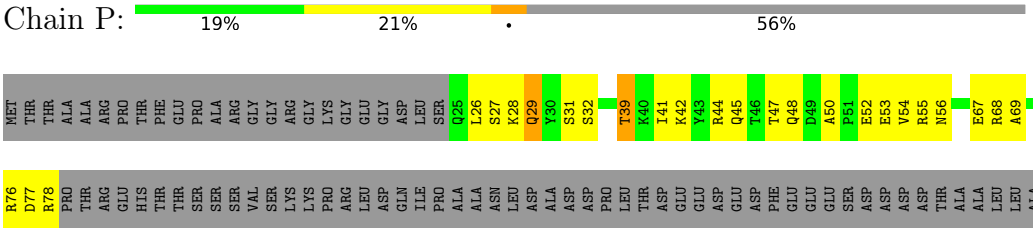
• Molecule 13: Protein BUD31 homolog

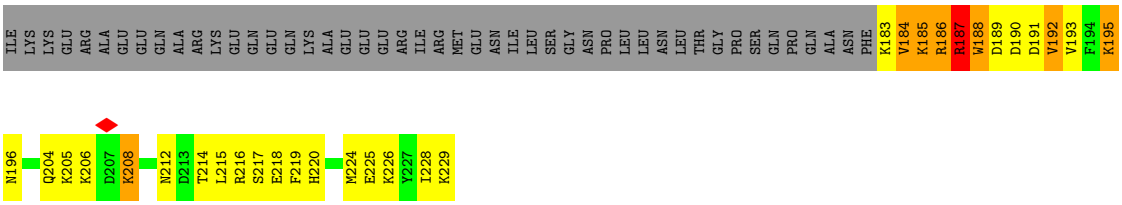


• Molecule 14: Pre-mRNA-splicing factor RBM22



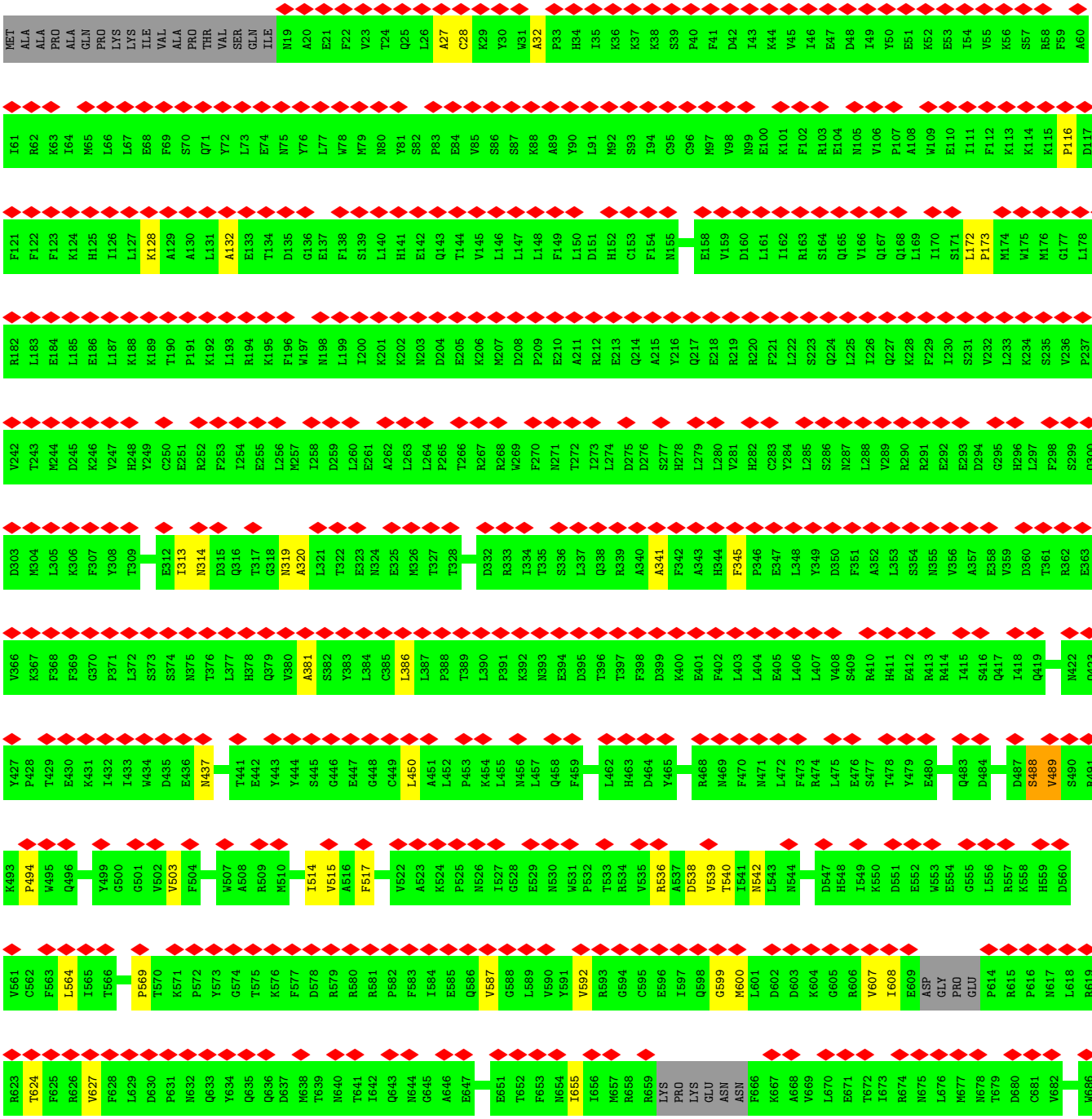
• Molecule 15: Spliceosome-associated protein CWC15 homolog

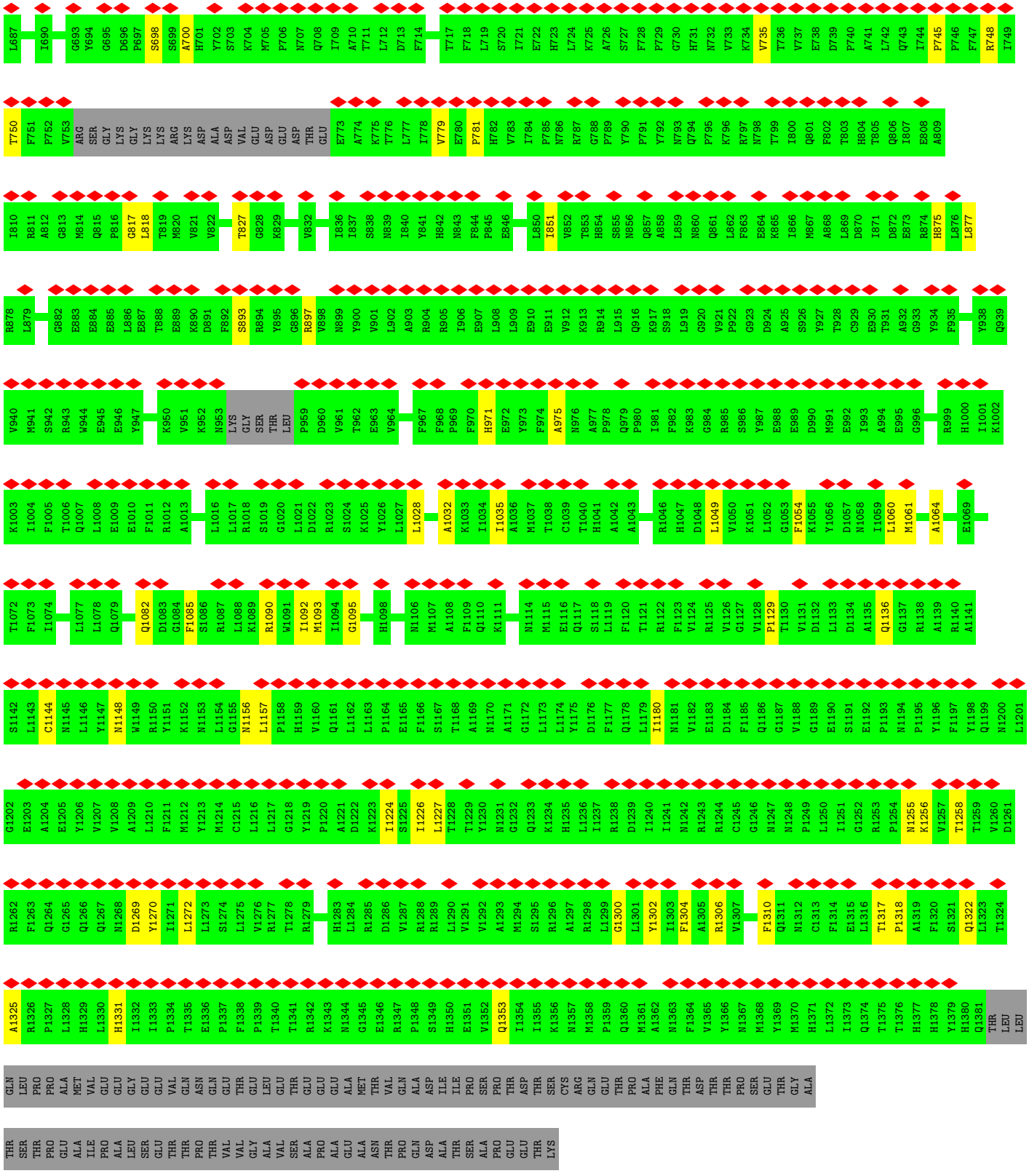




• Molecule 16: RNA helicase aquarius

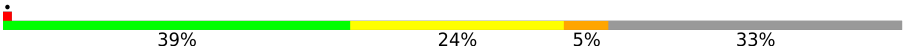
Chain Q:

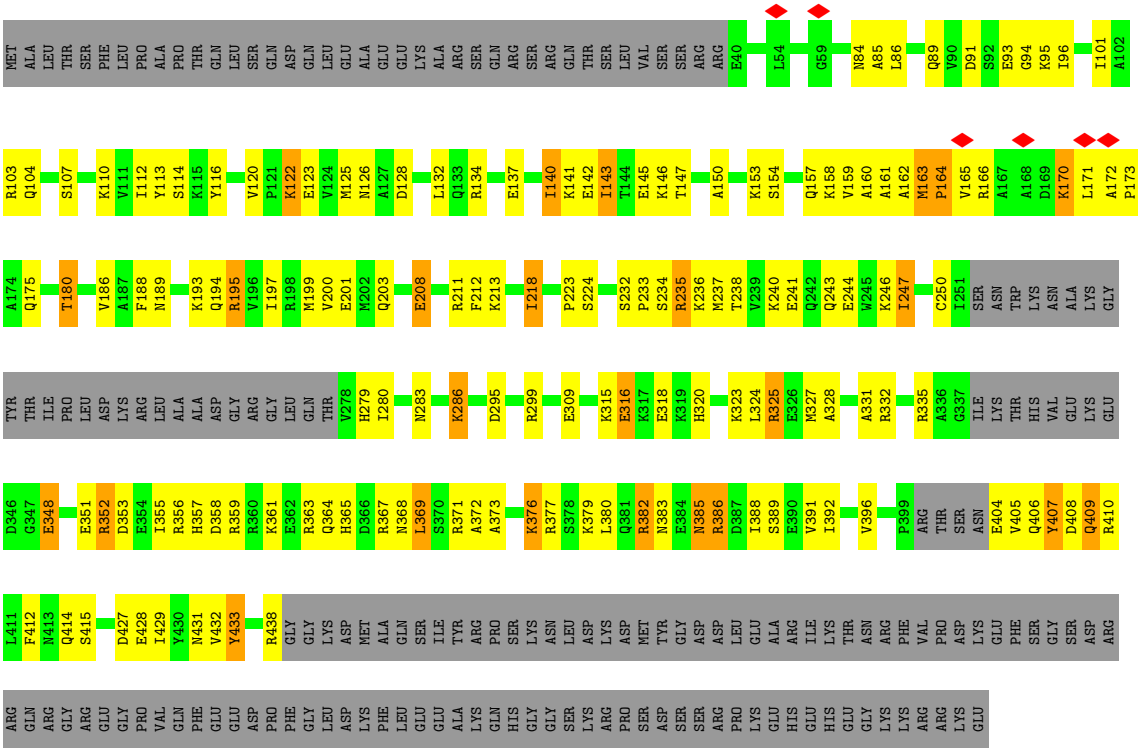




- Molecule 17: SNW domain-containing protein 1

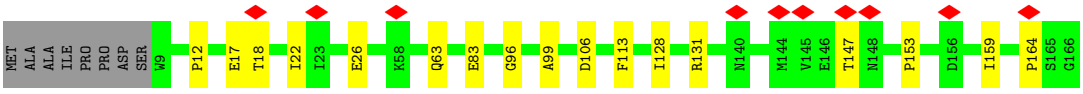
Chain R:





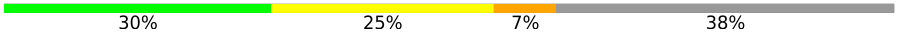
• Molecule 18: Peptidyl-prolyl cis-trans isomerase-like 1

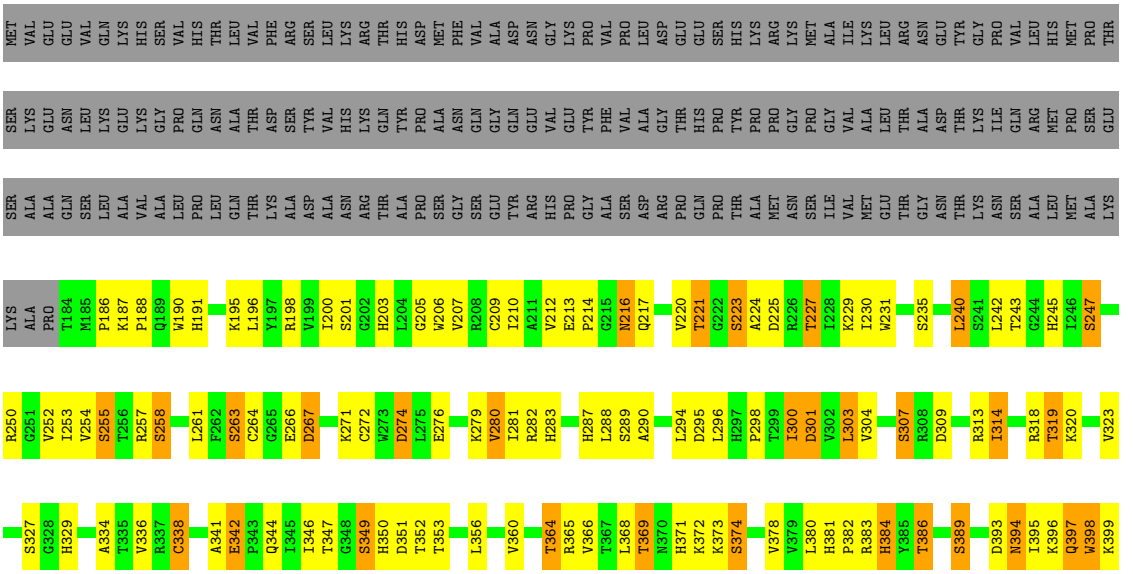
Chain S:

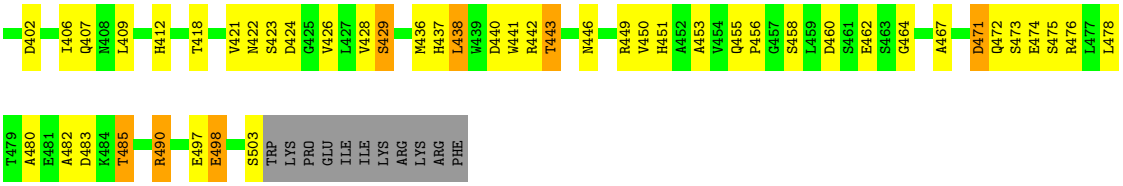


• Molecule 19: Pleiotropic regulator 1

Chain T:

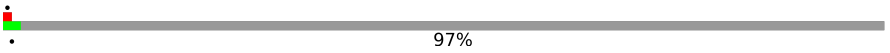


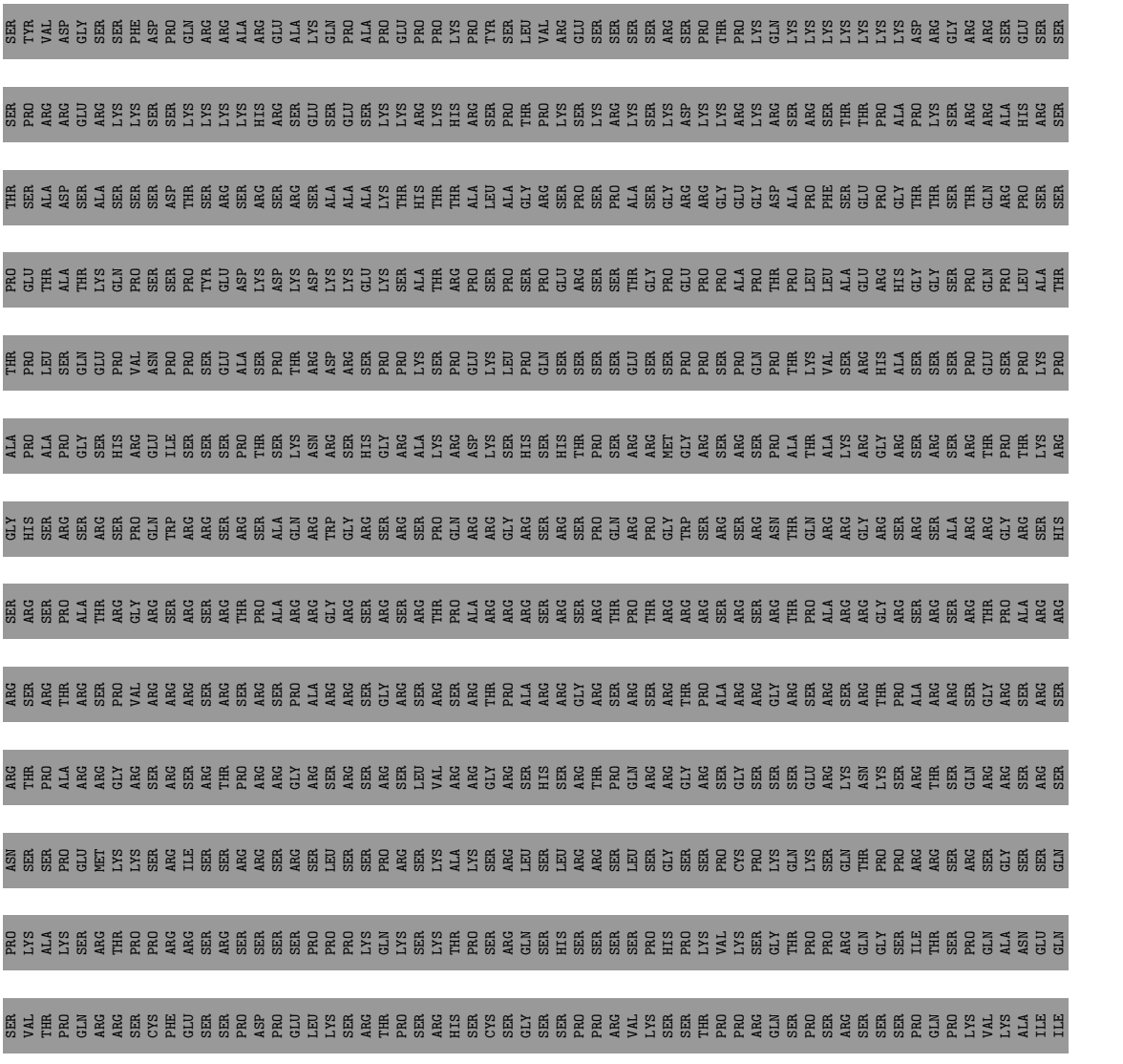


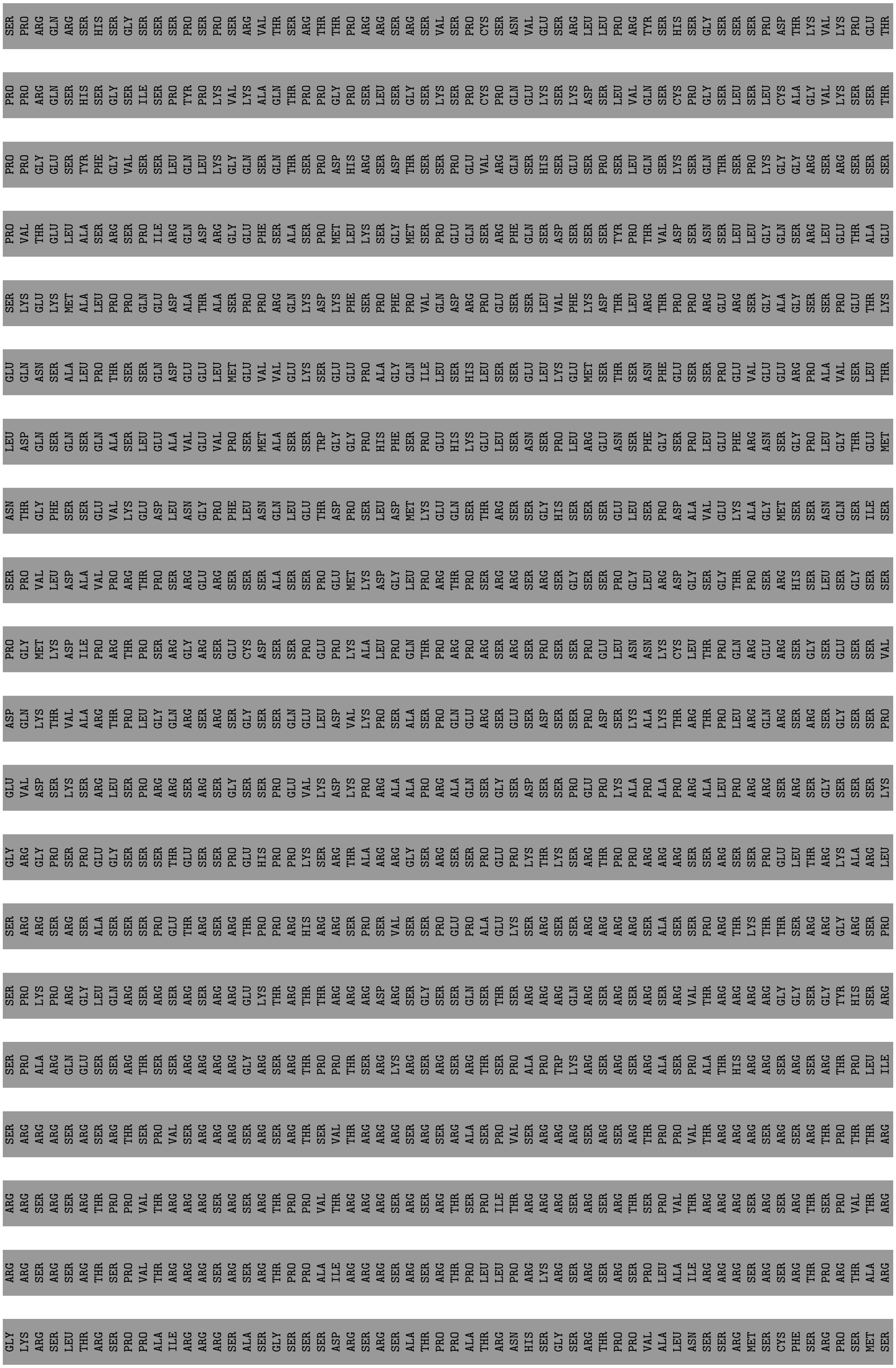


• Molecule 20: Serine/arginine repetitive matrix protein 2

Chain U:



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PRO PRO ARG GLN SER HIS SER GLY SER ILE SER PRO TYR PRO LYS VAL LYS ALA GLN THR PRO PRO GLY PRO SER LEU SER GLY SER LYS SER PRO CYS PRO GLN GLU LYS SER LYS ASP SER LEU VAL GLN SER CYS PRO GLY SER LEU SER LEU CYS ALA GLY VAL LYS SER SER THR
PRO PRO GLY GLU SER TYR PHE GLY VAL SER SER LEU GLN LEU LYS GLY GLN SER GLN THR SER PRO ASP HIS ARG SER ASP THR SER SER PRO GLU VAL ARG GLN SER HIS SER GLU SER PRO SER LEU GLN SER LYS SER GLN THR SER PRO LYS GLY GLY ARG SER ARG SER SER SER
PRO VAL THR GLU LEU ALA SER ARG SER PRO ILE ARG GLN ASP ARG GLY GLU PHE SER ALA SER PRO MET LEU LYS SER GLY MET SER PRO GLU GLN SER ARG PHE GLN SER ASP SER SER SER TYR PRO THR VAL ASP SER ASN SER LEU LEU GLY GLN SER ARG LEU GLU THR ALA GLU
SER LYS GLU LYS MET ALA LEU PRO PRO GLN GLU ASP ALA THR ALA SER PRO PRO ARG GLN LYS ASP LYS PHE SER PRO PHE PRO VAL GLN ASP ARG PRO GLU SER SER LEU VAL PHE LYS ASP THR LEU ARG THR PRO PRO ARG GLU ARG SER GLY ALA GLY SER SER PRO GLU THR LYS
GLU GLN ASN SER ALA LEU PRO THR SER SER GLN ASP GLU GLU LEU MET GLU VAL VAL GLU LYS SER GLU GLU PRO ALA GLY GLN ILE LEU SER HIS LEU SER SER GLU LEU LYS GLU MET SER THR SER ASN PHE GLU SER SER PRO GLU VAL GLU GLU ARG PRO ALA VAL SER LEU THR
LEU ASP GLN SER GLN SER GLN ALA SER LEU GLU ALA VAL GLU VAL PRO SER MET ALA SER SER TRP GLY GLY PRO HIS PHE SER PRO GLU HIS LYS GLU LEU SER ASN SER PRO LEU ARG GLU ASN SER PHE GLY SER PRO LEU GLU PHE ARG ASN SER GLY PRO LEU GLY THR GLU MET
ASN THR GLY PHE SER SER GLU VAL LYS GLU ASP LEU ASN GLY PRO PHE LEU ASN GLN LEU GLU THR ASP PRO SER LEU ASP MET LYS GLU GLN SER THR ARG SER SER GLY HIS SER SER SER GLU LEU SER PRO ASP ALA VAL GLU LYS ALA GLY MET SER SER ASN GLN SER ILE SER
SER PRO VAL LEU ASP ALA VAL PRO ARG THR PRO SER ARG GLU ARG SER SER ALA SER SER PRO GLU MET LYS ASP GLY LEU PRO ARG THR PRO SER ARG ARG SER ARG SER GLY SER SER PRO GLY LEU ARG ASP GLY SER GLY THR PRO SER ARG HIS SER LEU SER GLY SER SER
PRO GLY MET LYS ASP ILE PRO ARG THR PRO SER ARG GLY ARG SER GLU CYS ASP SER SER PRO GLU PRO LYS ALA LEU PRO GLN THR PRO ARG PRO ARG SER ARG SER PRO SER SER PRO GLU LEU ASN ASN LYS CYS LEU THR PRO GLN ARG GLU ARG SER GLY SER GLU SER SER VAL
ASP GLN LYS THR VAL ALA ARG THR PRO LEU GLY GLN ARG SER ARG SER GLY SER SER GLN GLU LEU ASP VAL LYS PRO SER ALA SER PRO GLN GLU ARG SER GLU SER ASP SER SER PRO ASP SER LYS ALA LYS THR ARG THR PRO LEU ARG GLN ARG SER ARG SER GLY SER SER PRO
GLU VAL ASP SER LYS SER ARG LEU SER PRO ARG ARG SER ARG SER GLY SER SER PRO GLU VAL LYS ASP LYS PRO ARG ALA ALA PRO ARG ALA GLN SER GLY SER ASP SER SER PRO GLU PRO LYS ALA PRO ALA PRO ARG ALA LEU PRO ARG ARG SER ARG SER GLY SER SER SER LYS
GLY ARG GLY PRO SER PRO GLU GLY SER SER SER THR GLU SER SER PRO GLU HIS PRO PRO LYS SER ARG THR ALA ARG ARG GLY SER ARG SER SER PRO GLU PRO LYS THR LYS SER ARG THR PRO PRO ARG ARG SER SER ARG SER SER PRO GLU LEU THR ARG LYS ALA ARG LEU
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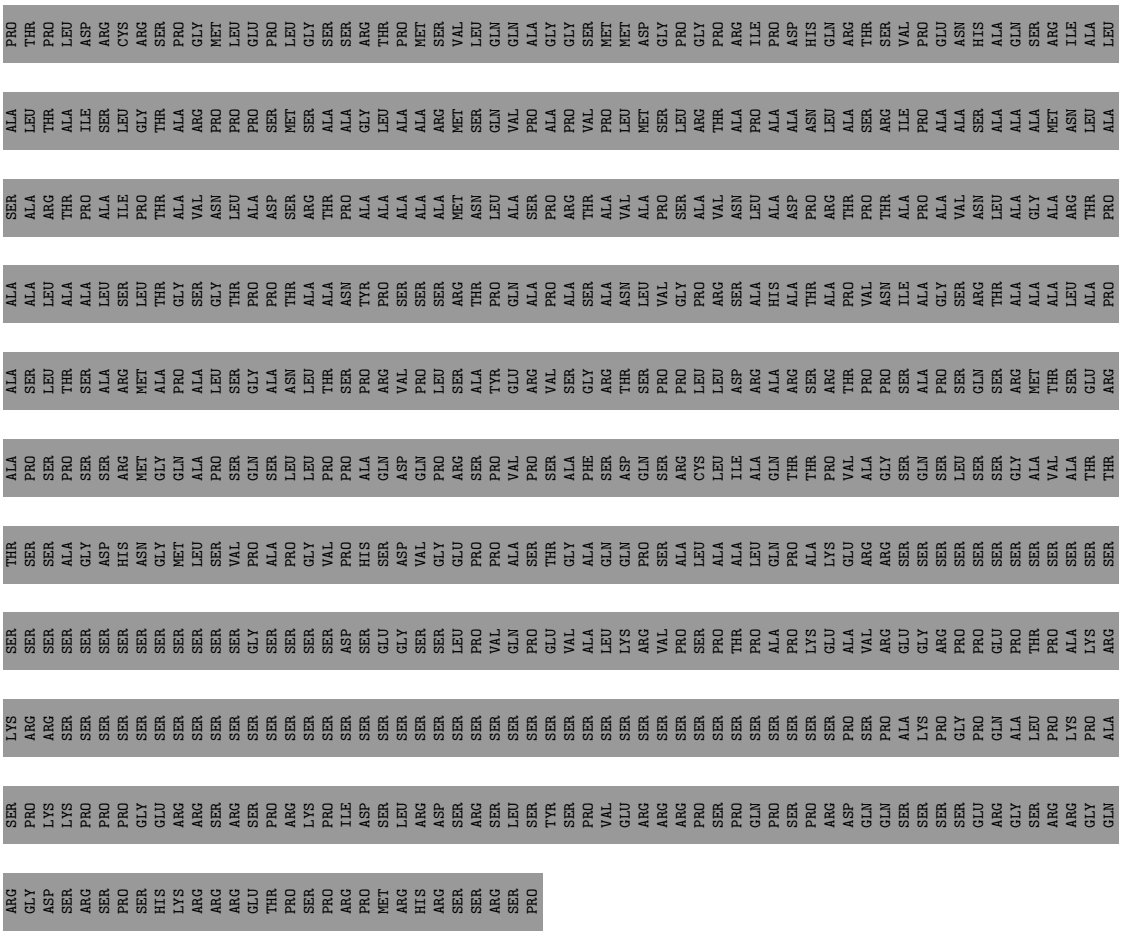
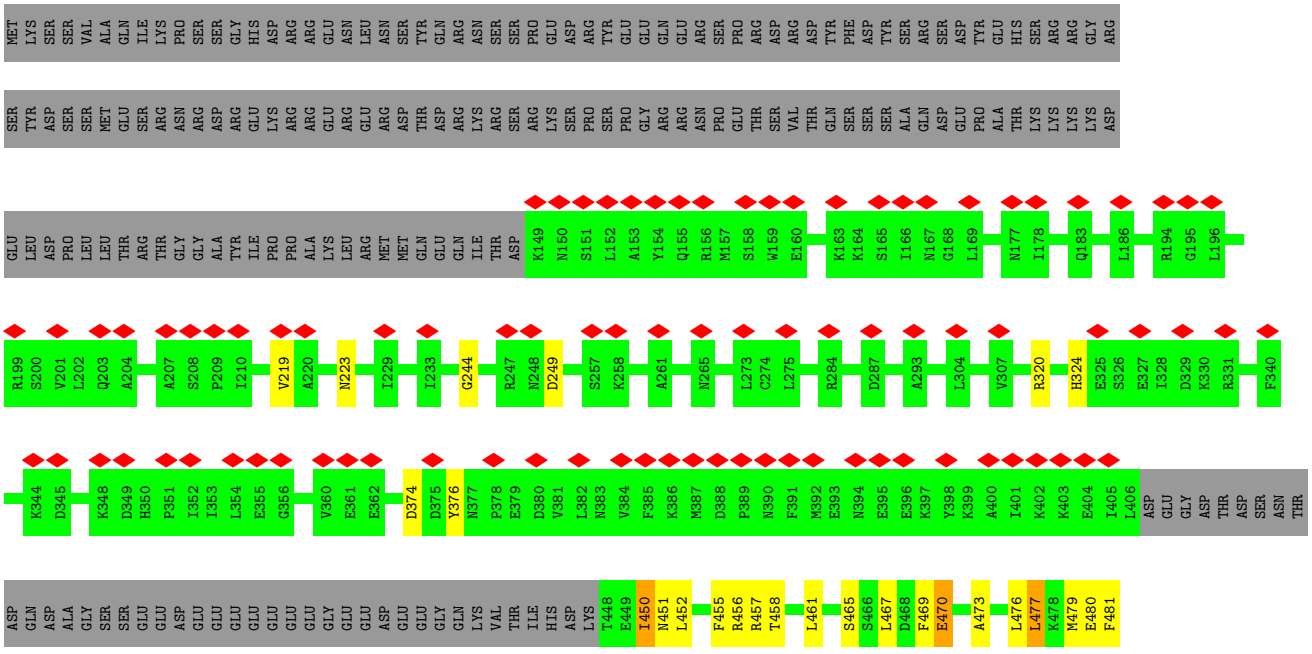
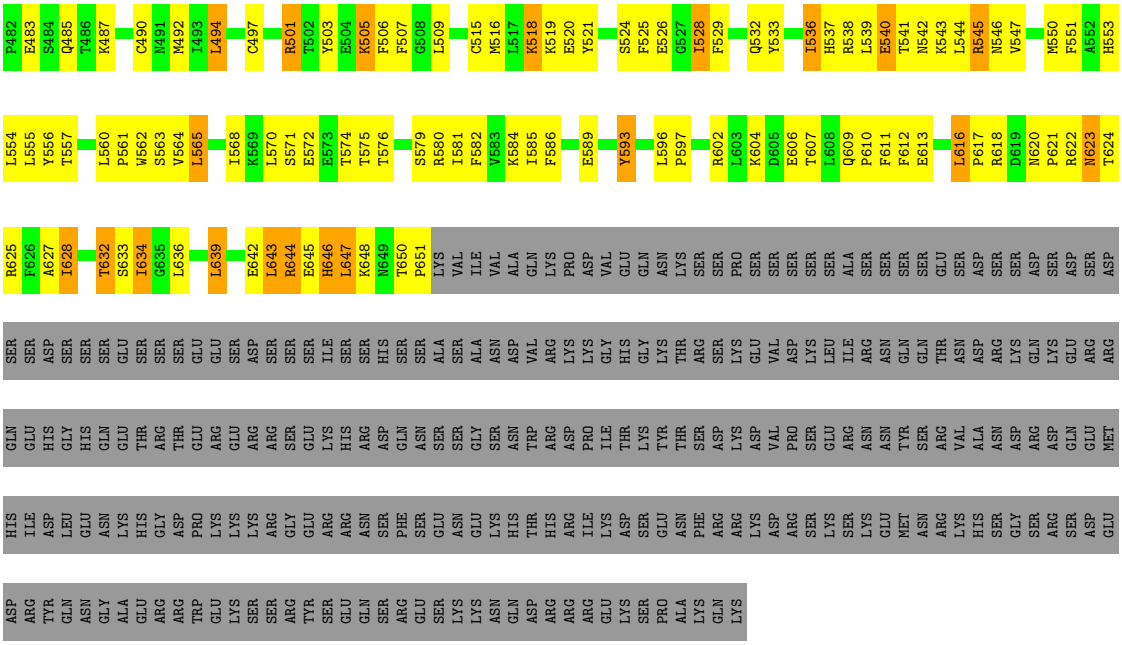
SER PRO LYS PRO ARG GLY LEU GLN ARG SER ARG SER ARG SER ARG ARG GLU LYS THR ARG THR THR ARG ARG ARG ASP ARG SER GLY SER SER GLN SER THR SER ARG ARG ARG GLN ARG SER ARG SER ARG SER ARG VAL THR ARG ARG ARG ARG GLY GLY SER GLY TYR HIS SER ARG
SER PRO ALA ARG GLN GLU SER SER ARG THR SER SER ARG ARG ARG ARG GLY ARG SER ARG THR PRO PRO THR SER ARG LYS ARG SER ARG SER ARG THR SER PRO ALA PRO TRP LYS ARG SER ARG SER ARG ALA SER PRO ALA THR HIS ARG ARG SER ARG SER ARG THR PRO LEU ILE
SER ARG ARG ARG SER ARG SER ARG THR SER PRO VAL SER ARG ARG ARG ARG SER ARG SER ARG THR SER VAL THR ARG ARG ARG SER ARG SER ARG ALA SER PRO VAL SER ARG ARG ARG SER ARG SER ARG THR PRO PRO VAL THR ARG ARG ARG SER ARG SER ARG THR PRO THR THR ARG
ARG ARG SER ARG SER ARG THR PRO PRO VAL THR ARG ARG ARG SER ARG SER ARG THR PRO PRO VAL THR ARG ARG ARG SER ARG SER ARG THR SER PRO ILE THR ARG ARG ARG SER ARG SER ARG THR SER PRO VAL THR ARG ARG ARG SER ARG SER ARG THR SER PRO VAL THR ARG
ARG ARG SER ARG SER ARG THR SER PRO VAL THR ARG ARG ARG SER ARG SER ARG THR PRO PRO ALA ILE ARG ARG ARG SER ARG SER ARG THR PRO LEU LEU PRO ARG LYS ARG SER ARG SER ARG SER PRO LEU ALA ILE ARG ARG ARG SER ARG SER ARG THR PRO ARG THR ALA ARG
GLY LYS ARG SER LEU THR ARG SER PRO PRO ALA ILE ARG ARG ARG SER ALA SER GLY SER SER SER ASP ARG SER ARG SER ALA THR PRO PRO ALA THR ARG ASN HIS SER GLY SER ARG THR PRO PRO VAL ALA LEU ASN SER SER ARG MET SER CYS PHE SER ARG PRO SER MET SER



• Molecule 21: Pre-mRNA-splicing factor CWC22 homolog

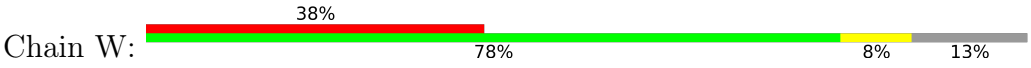
Chain V:

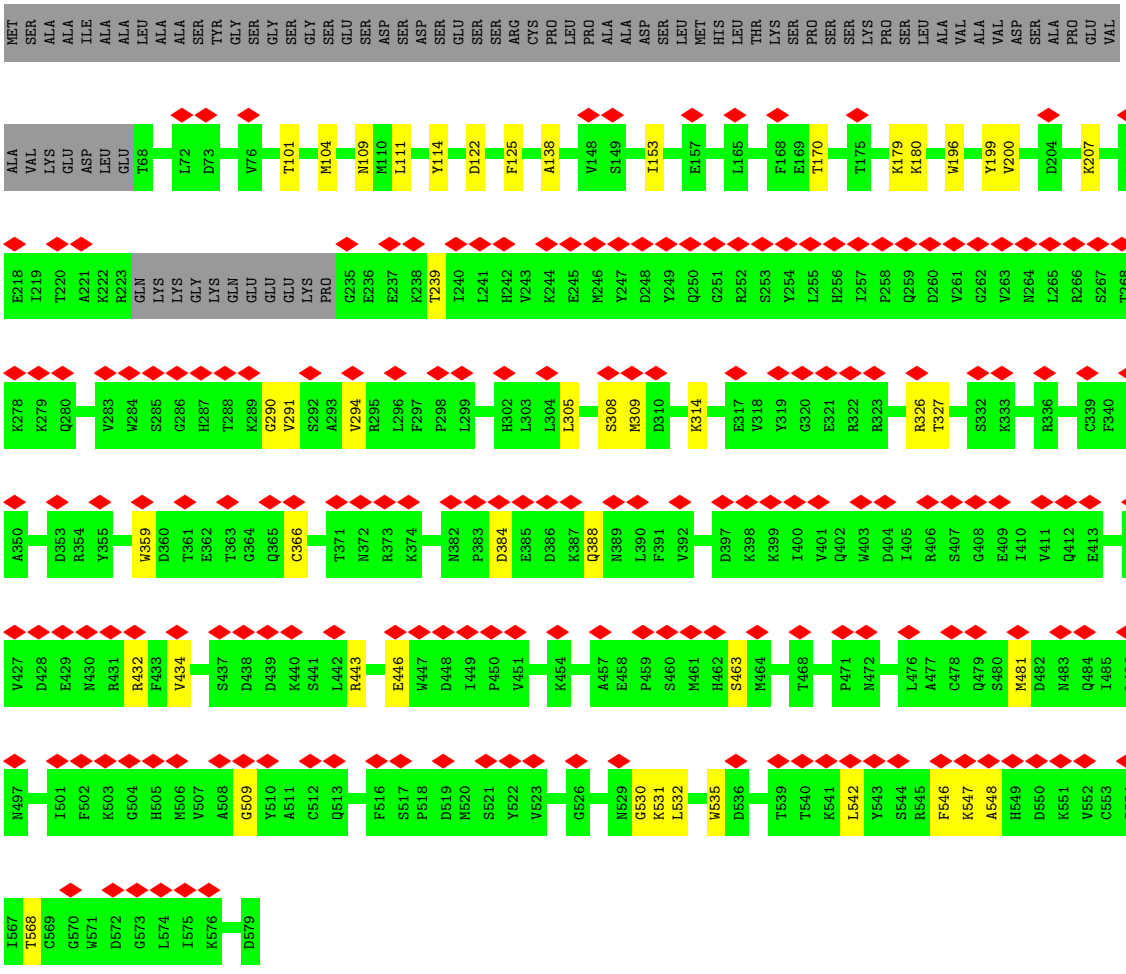




• Molecule 22: Pre-mRNA-processing factor 17

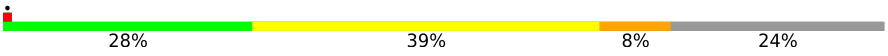
Chain W:

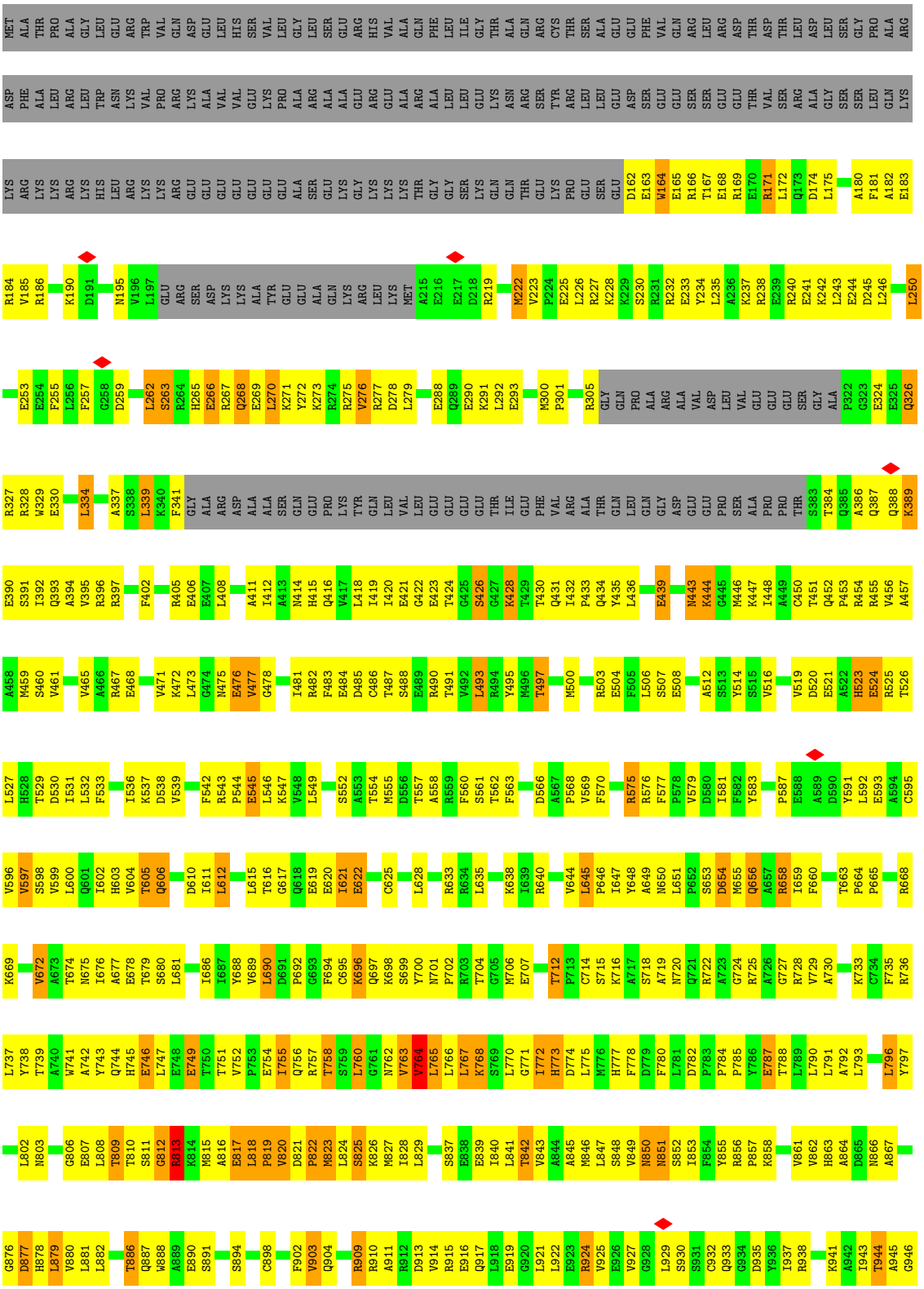


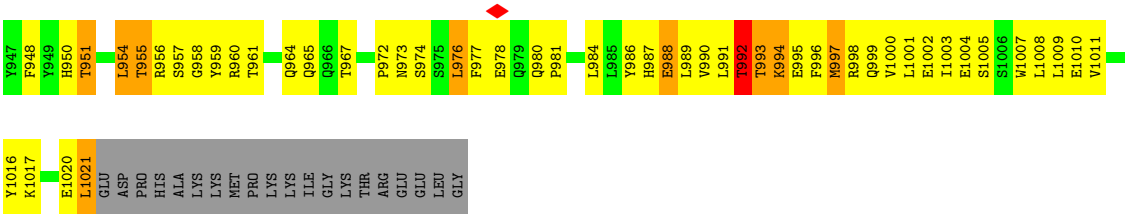


• Molecule 23: Pre-mRNA-splicing factor ATP-dependent RNA helicase DHX16

Chain X:

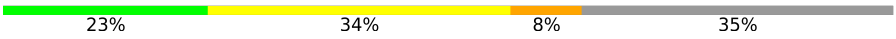


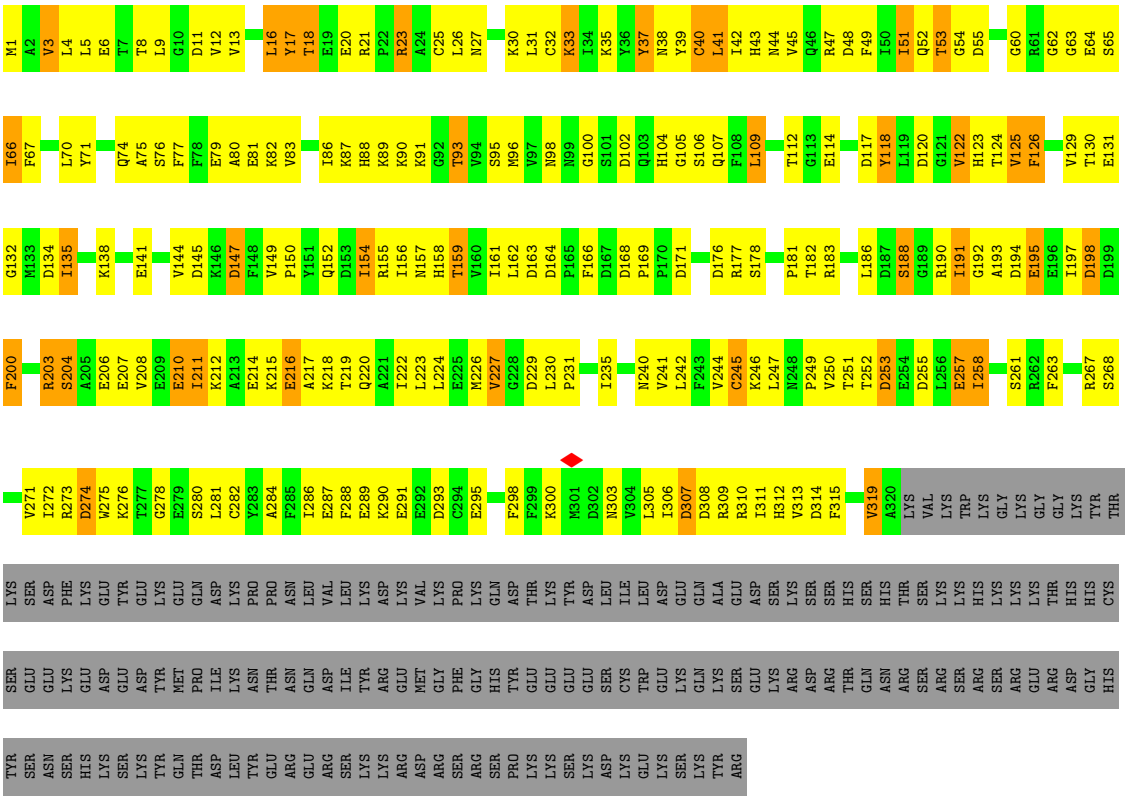




• Molecule 24: Peptidyl-prolyl cis-trans isomerase-like 4

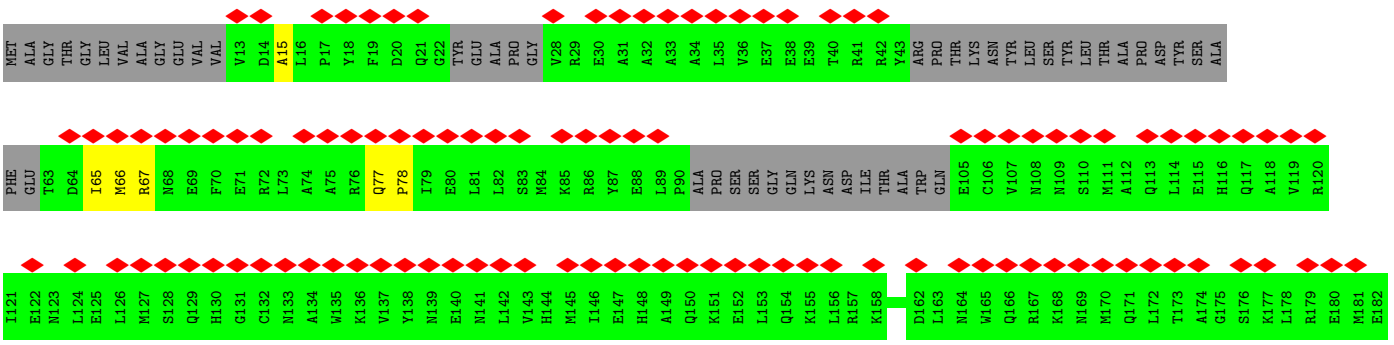
Chain Y:

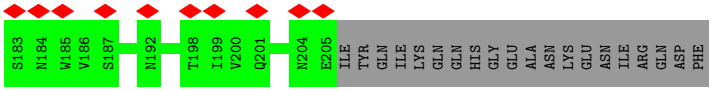




• Molecule 25: Pre-mRNA-splicing factor SPF27

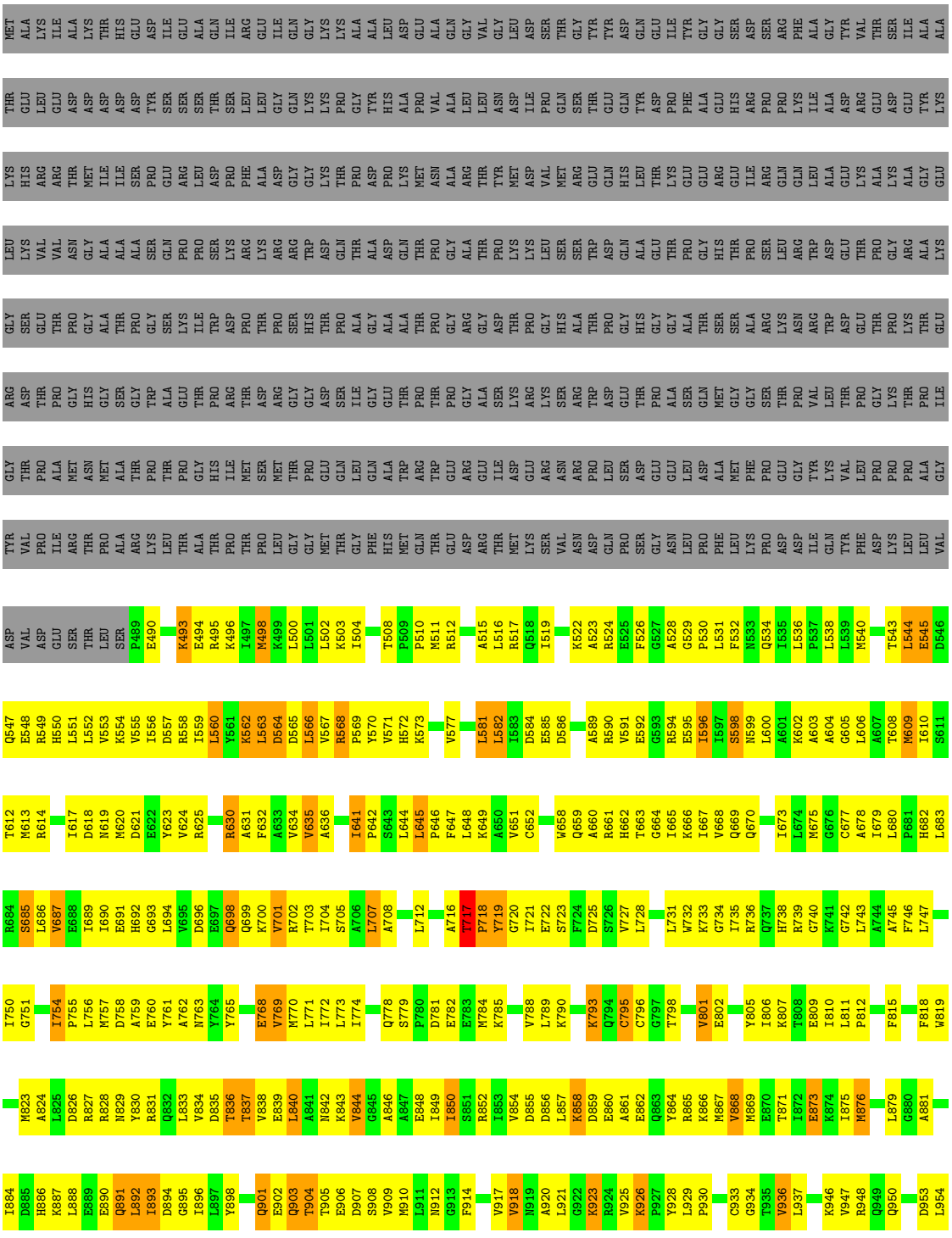
Chain Z:

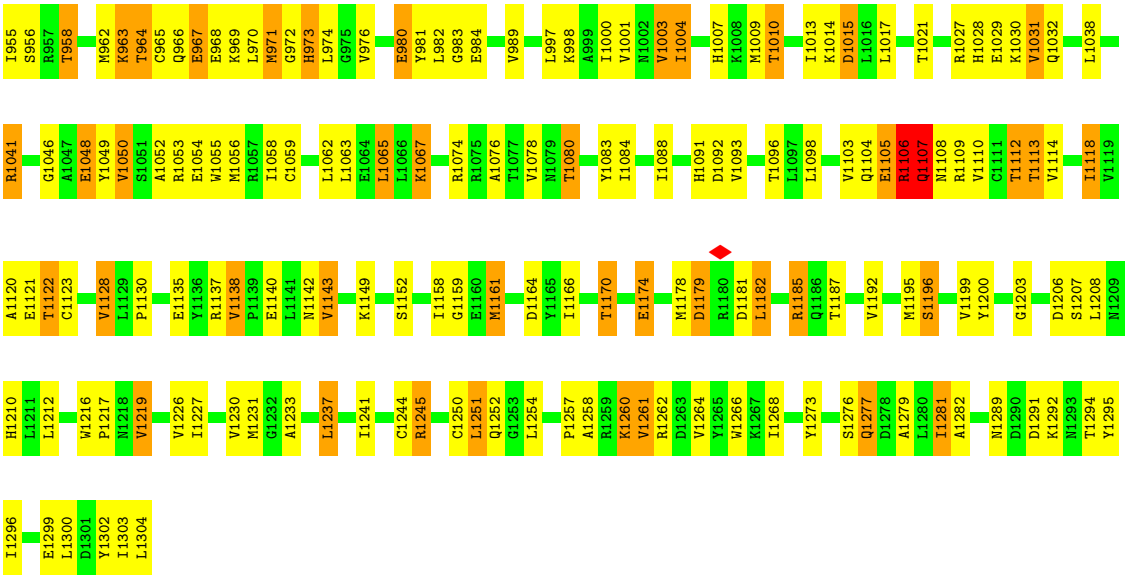




• Molecule 26: Splicing factor 3B subunit 1

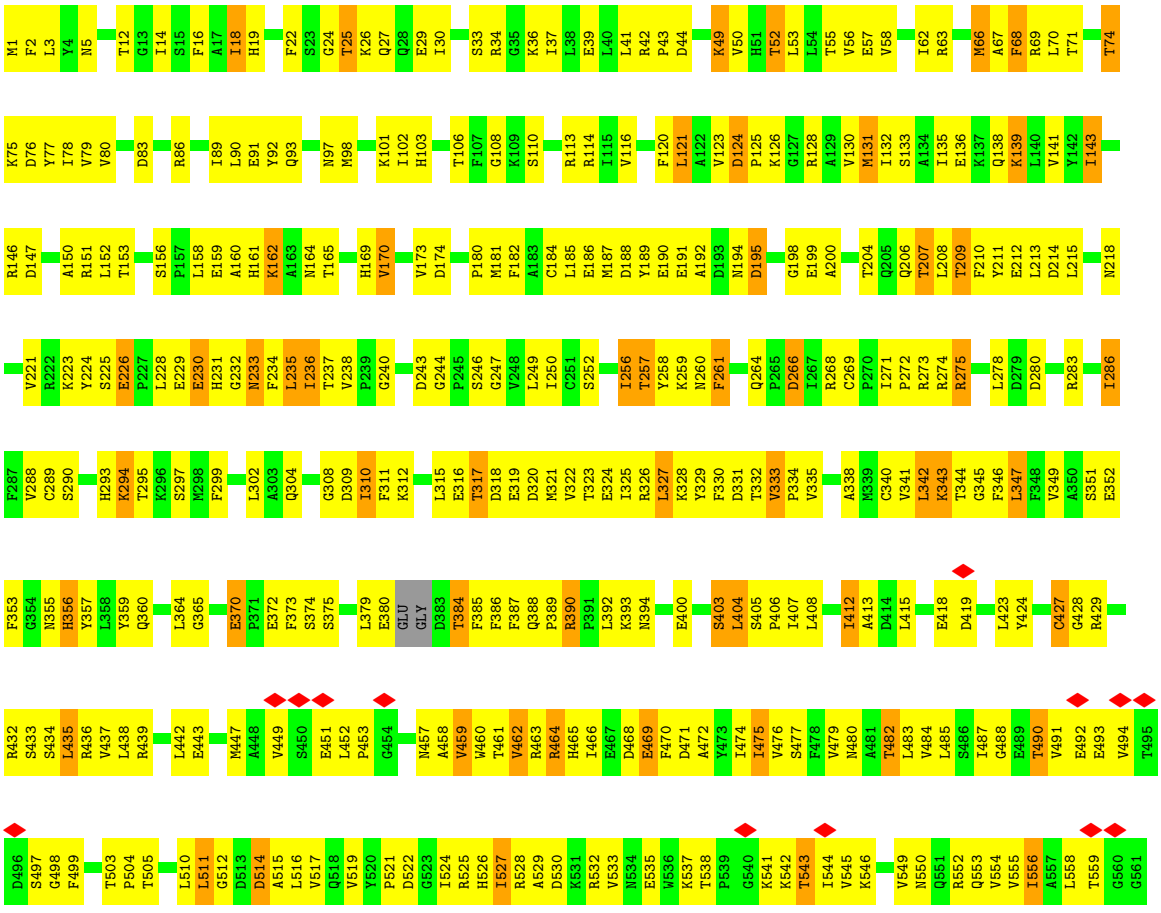
Chain 1: 26% 29% 7% 37%

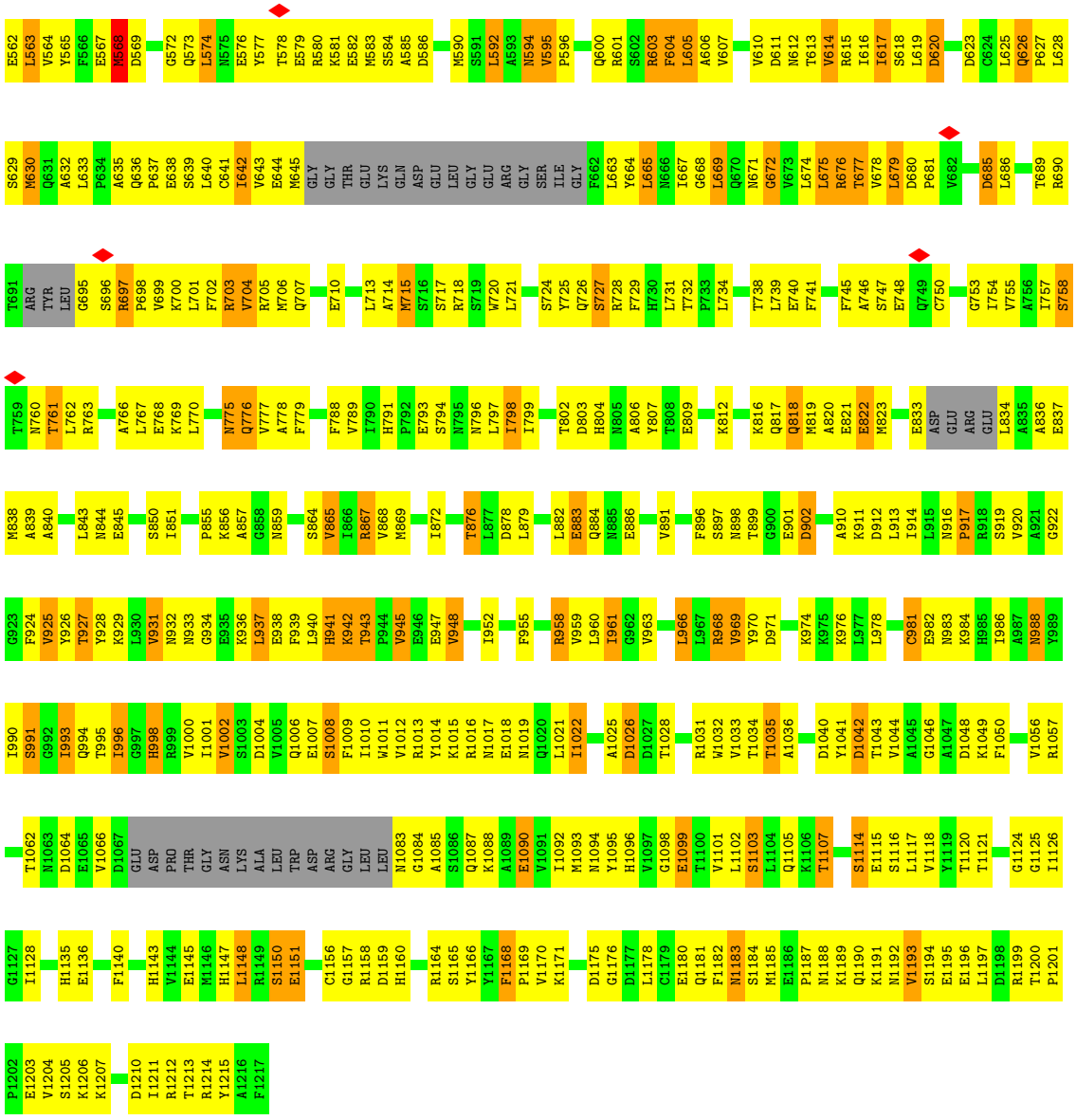




• Molecule 27: Splicing factor 3B subunit 3

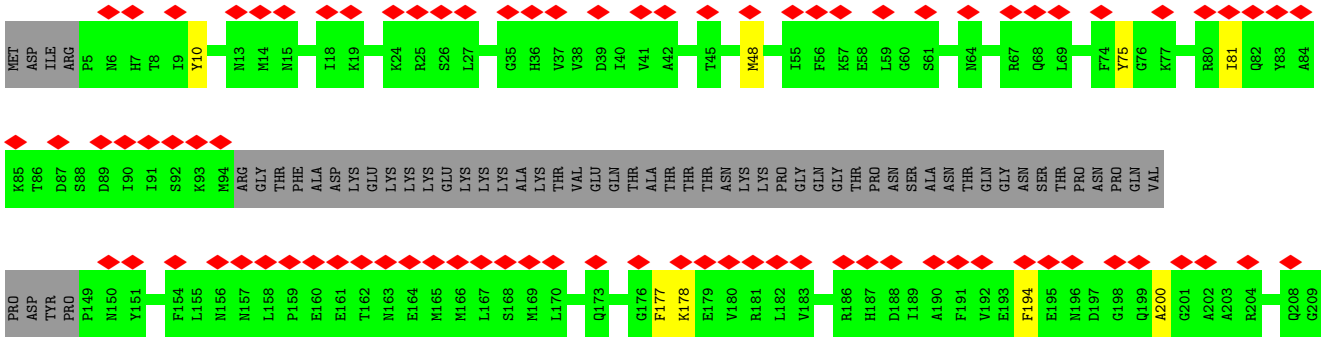
Chain 3:

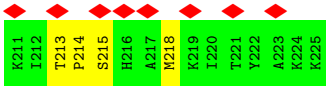




• Molecule 28: U2 small nuclear ribonucleoprotein B”

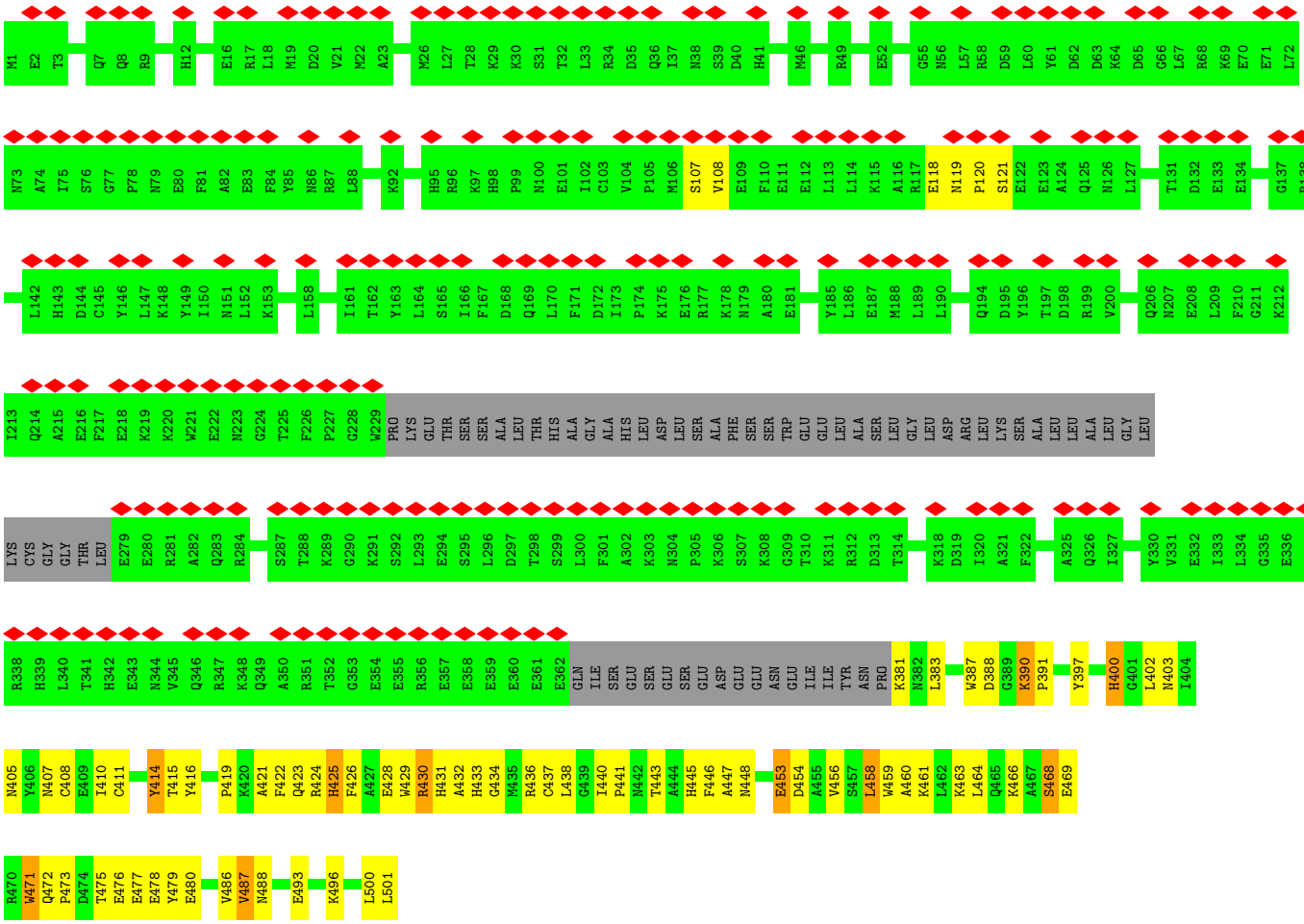
Chain p:





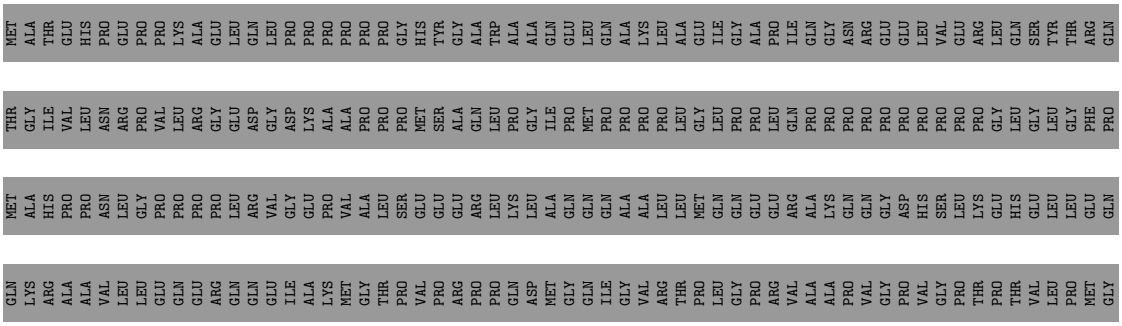
• Molecule 29: Splicing factor 3A subunit 3

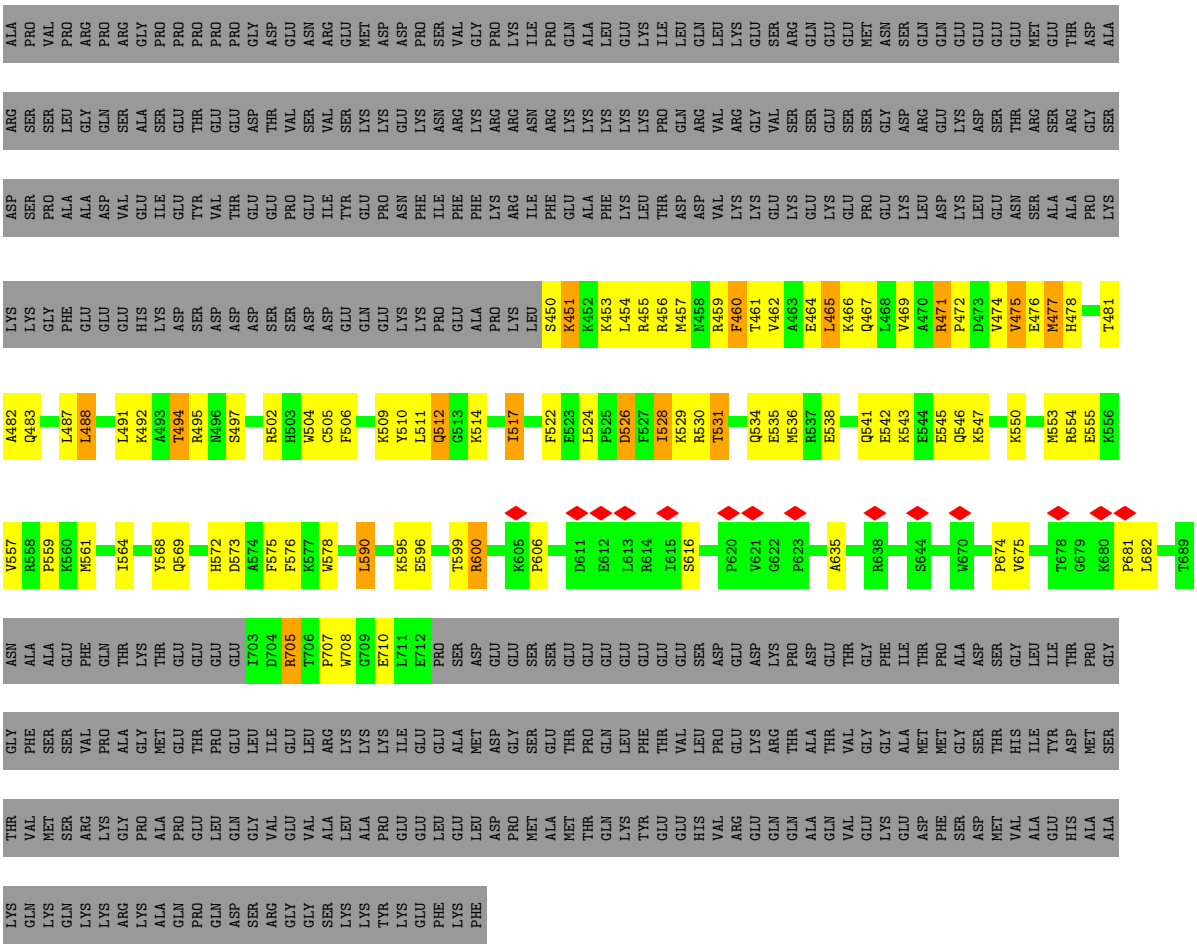
Chain w:



• Molecule 30: Splicing factor 3B subunit 2

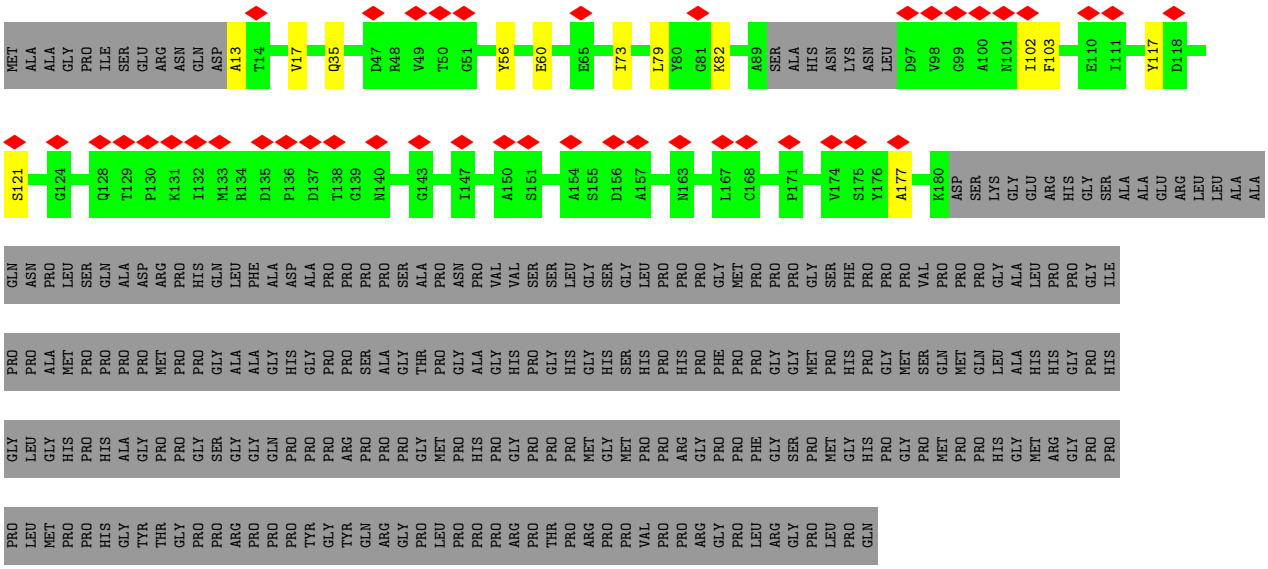
Chain 2:





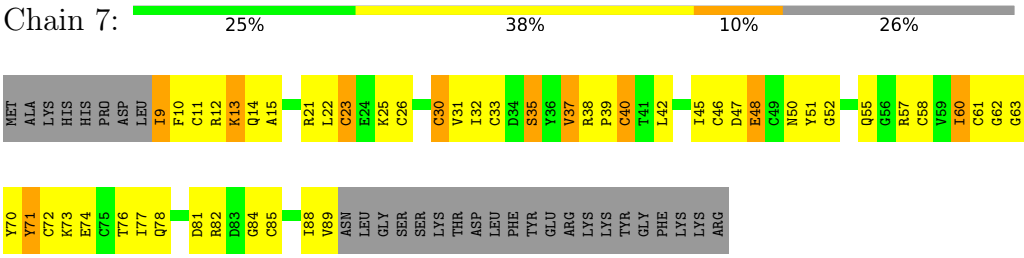
• Molecule 31: Splicing factor 3B subunit 4

Chain 4:



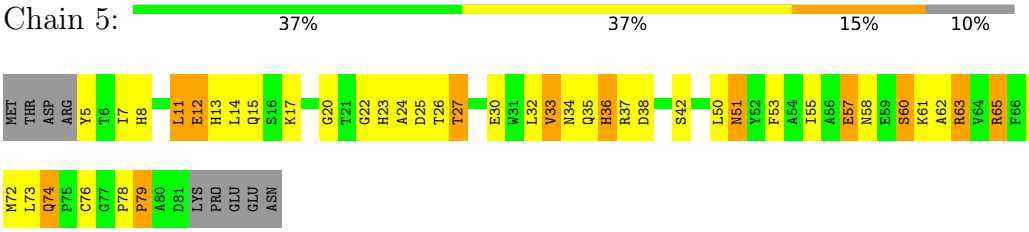
• Molecule 32: PHD finger-like domain-containing protein 5A

Chain 7:



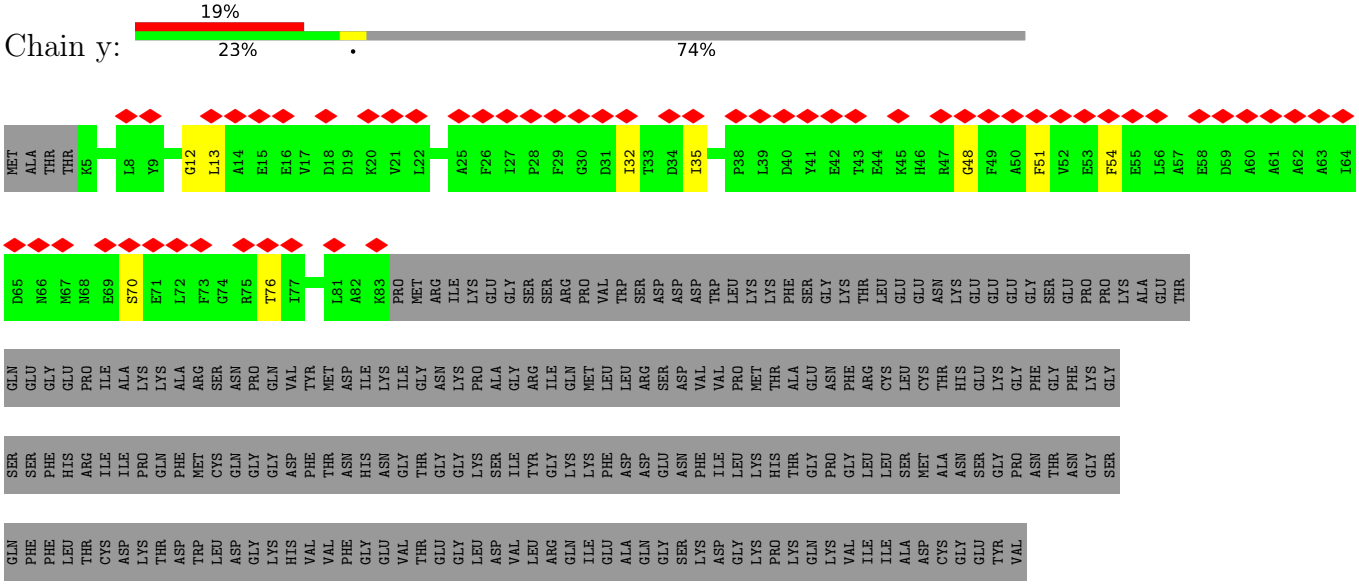
• Molecule 33: Splicing factor 3B subunit 5

Chain 5:



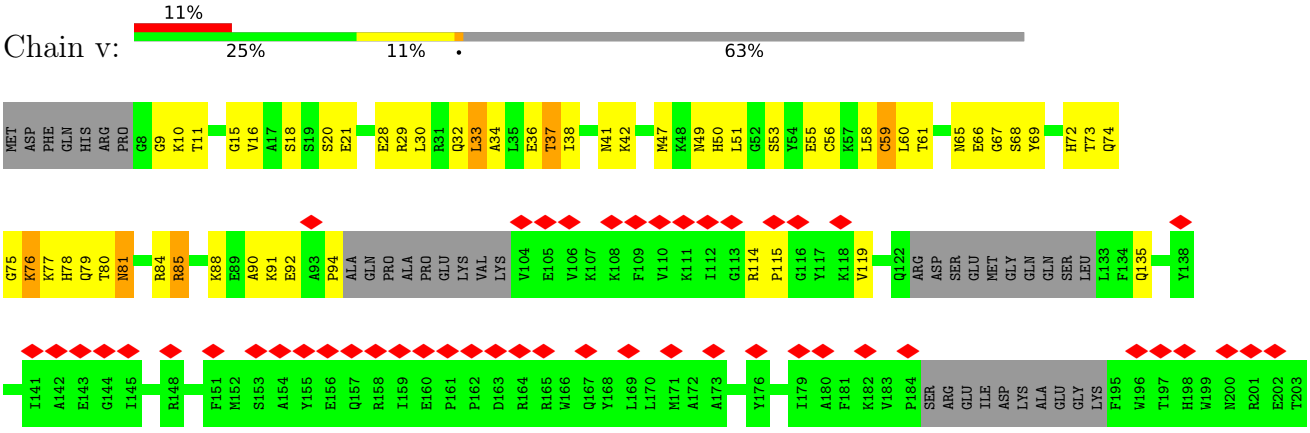
• Molecule 34: Peptidyl-prolyl cis-trans isomerase E

Chain y:



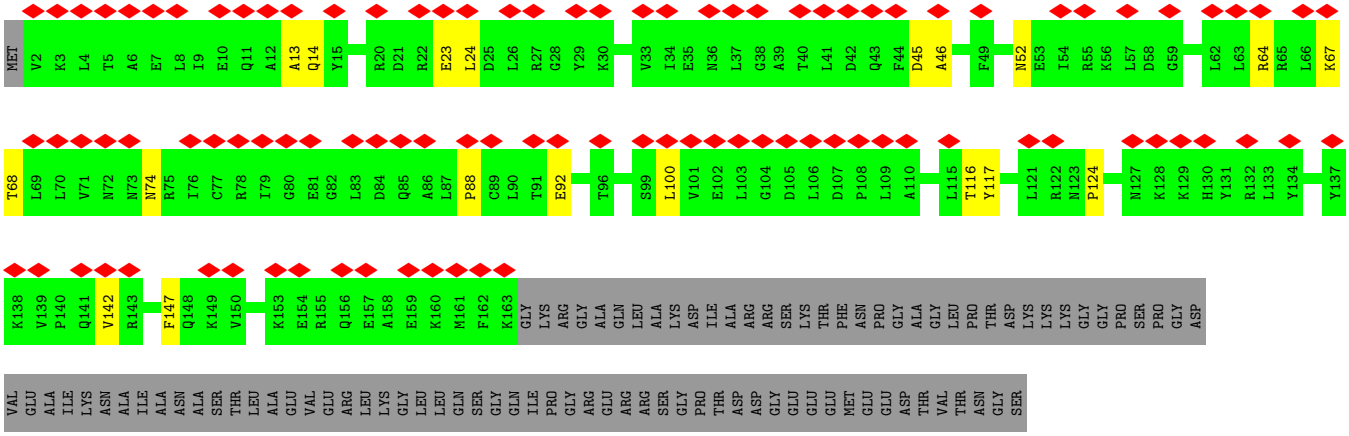
• Molecule 35: Splicing factor 3A subunit 2

Chain v:



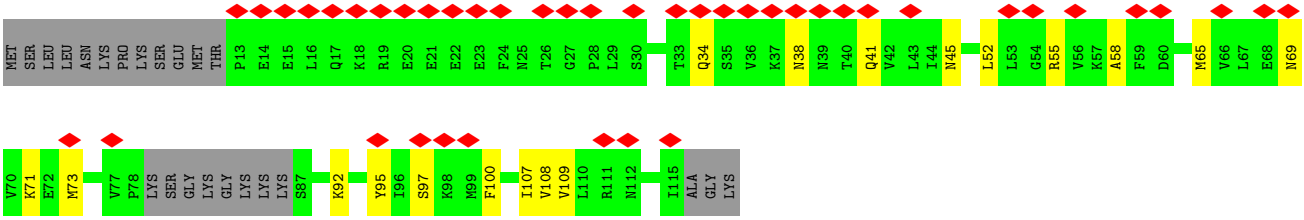
• Molecule 36: U2 small nuclear ribonucleoprotein A'

Chain o:



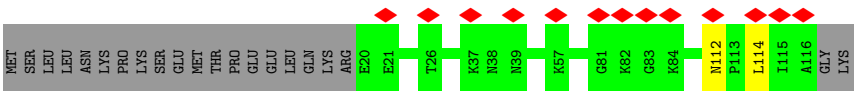
• Molecule 37: Small nuclear ribonucleoprotein Sm D2

Chain h:



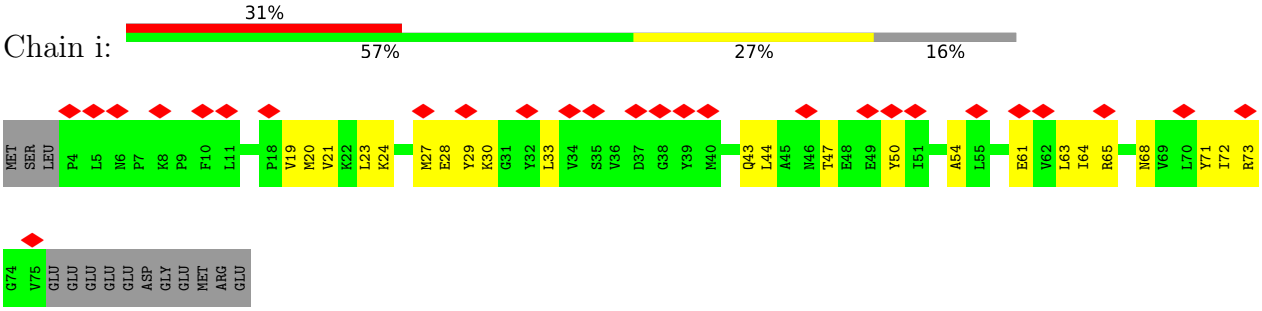
• Molecule 37: Small nuclear ribonucleoprotein Sm D2

Chain c:



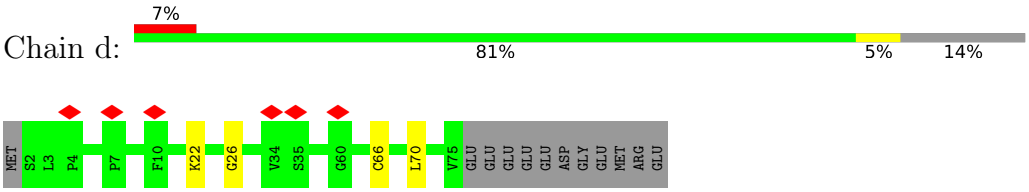
• Molecule 38: Small nuclear ribonucleoprotein F

Chain i:



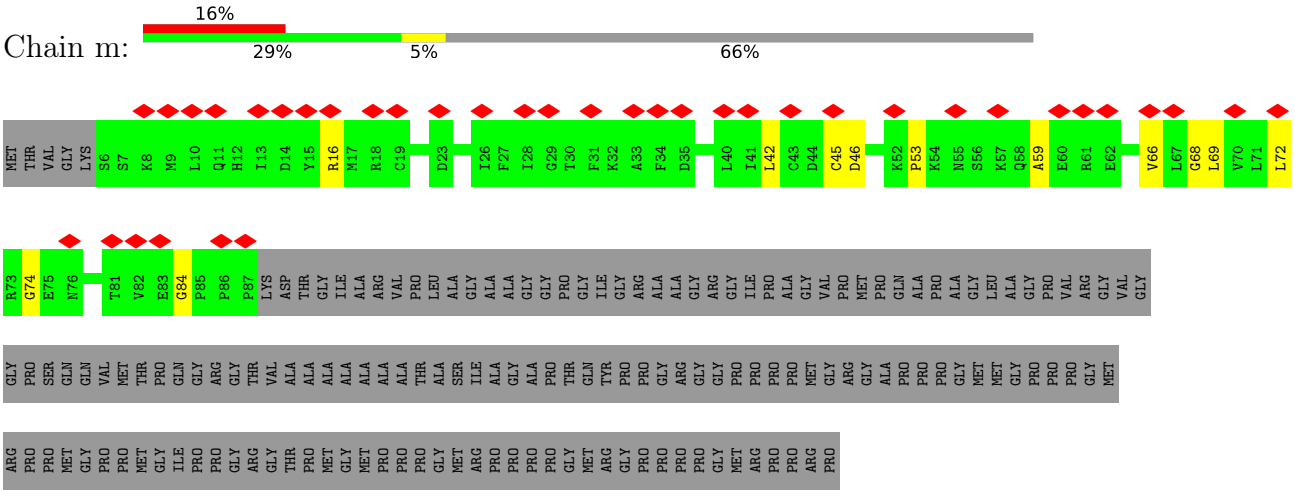
• Molecule 38: Small nuclear ribonucleoprotein F

Chain d:



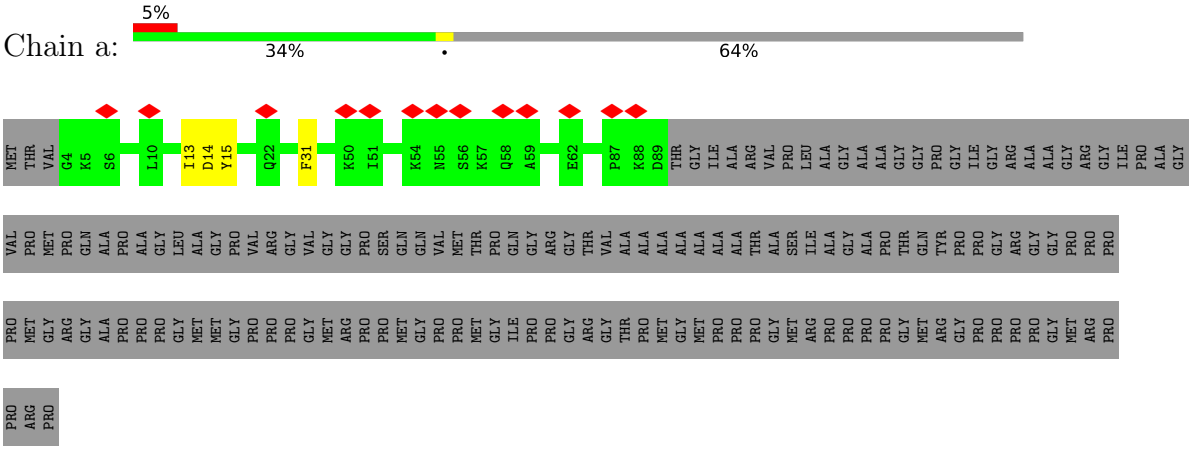
• Molecule 39: Small nuclear ribonucleoprotein-associated proteins B and B'

Chain m:



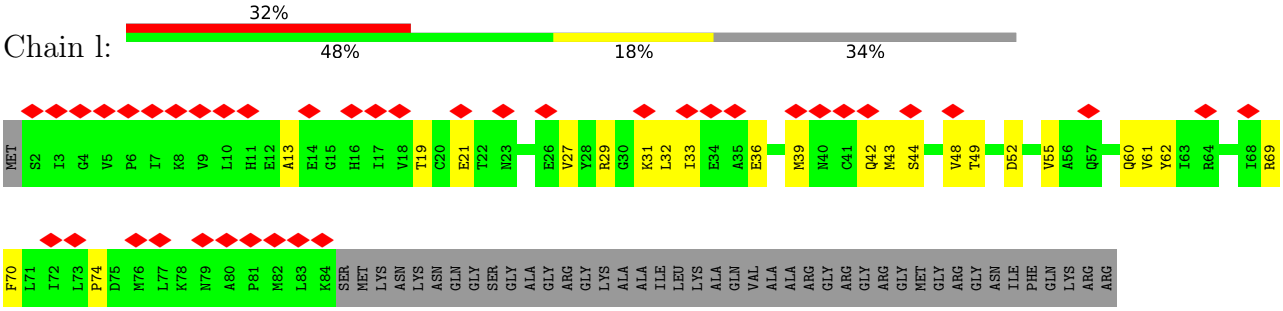
• Molecule 39: Small nuclear ribonucleoprotein-associated proteins B and B'

Chain a:



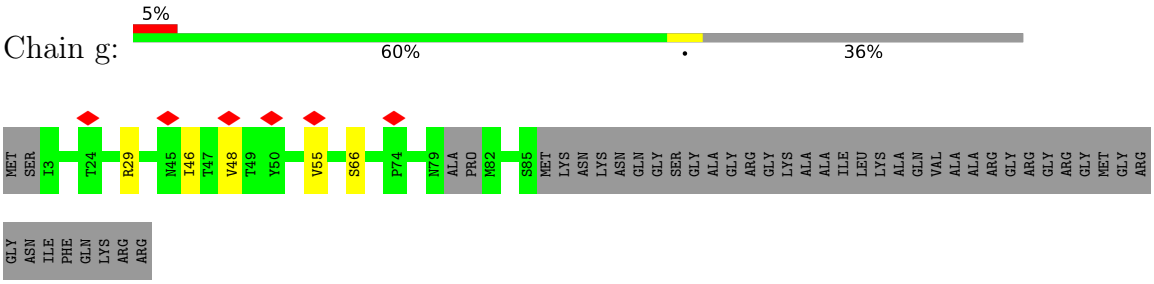
• Molecule 40: Small nuclear ribonucleoprotein Sm D3

Chain l:



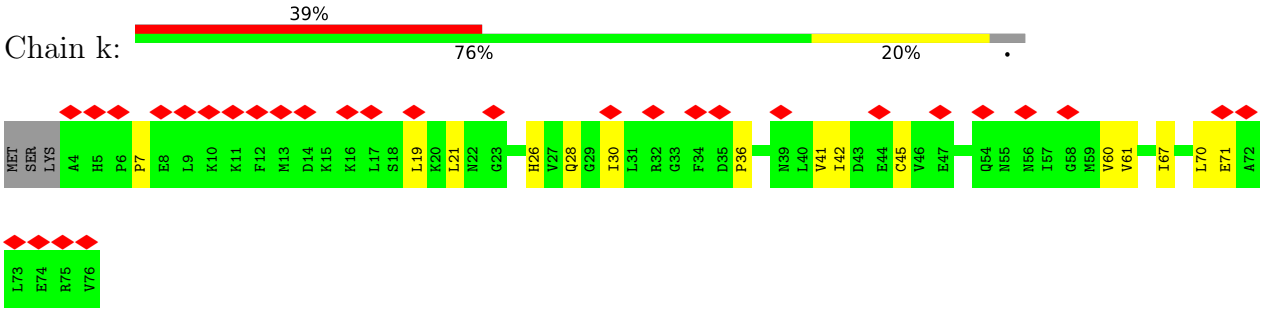
• Molecule 40: Small nuclear ribonucleoprotein Sm D3

Chain g:



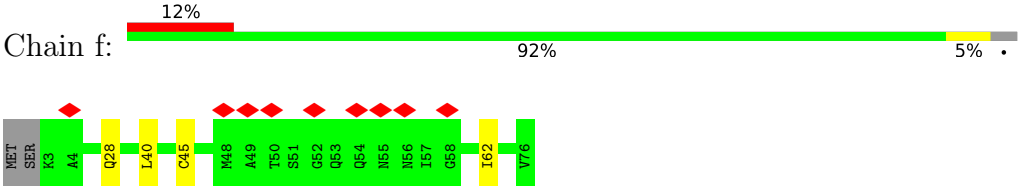
• Molecule 41: Small nuclear ribonucleoprotein G

Chain k:



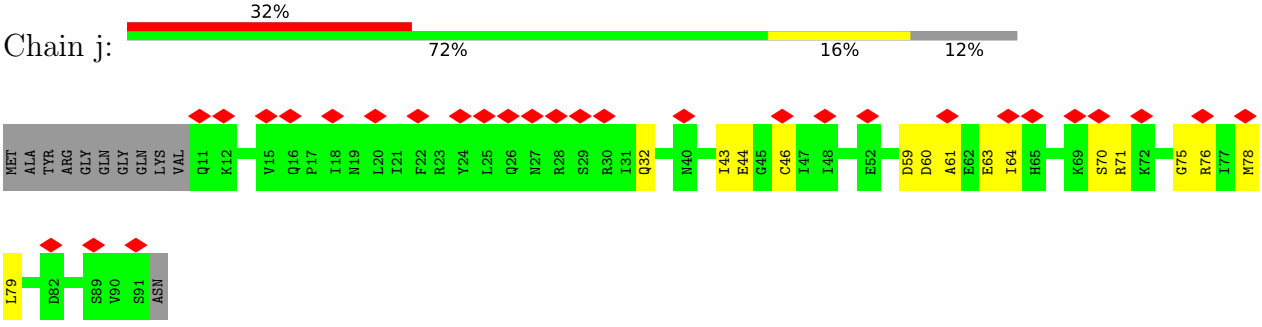
• Molecule 41: Small nuclear ribonucleoprotein G

Chain f:



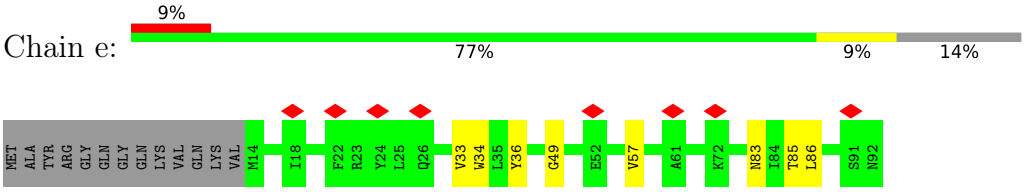
• Molecule 42: Small nuclear ribonucleoprotein E

Chain j:



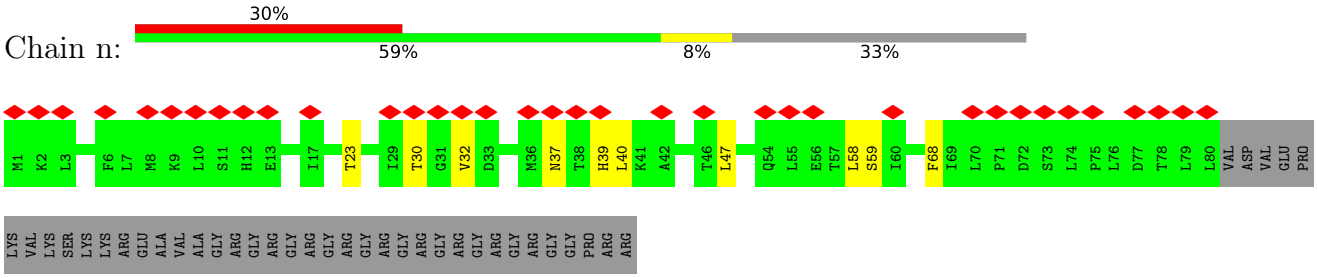
• Molecule 42: Small nuclear ribonucleoprotein E

Chain e:



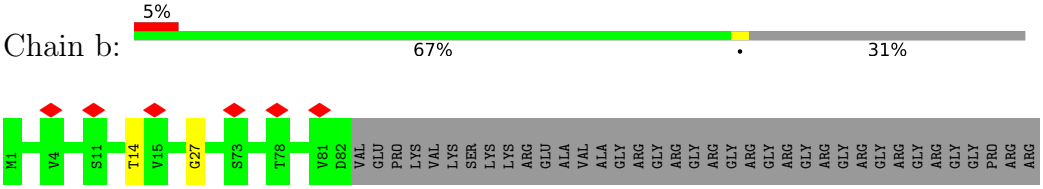
• Molecule 43: Small nuclear ribonucleoprotein Sm D1

Chain n:



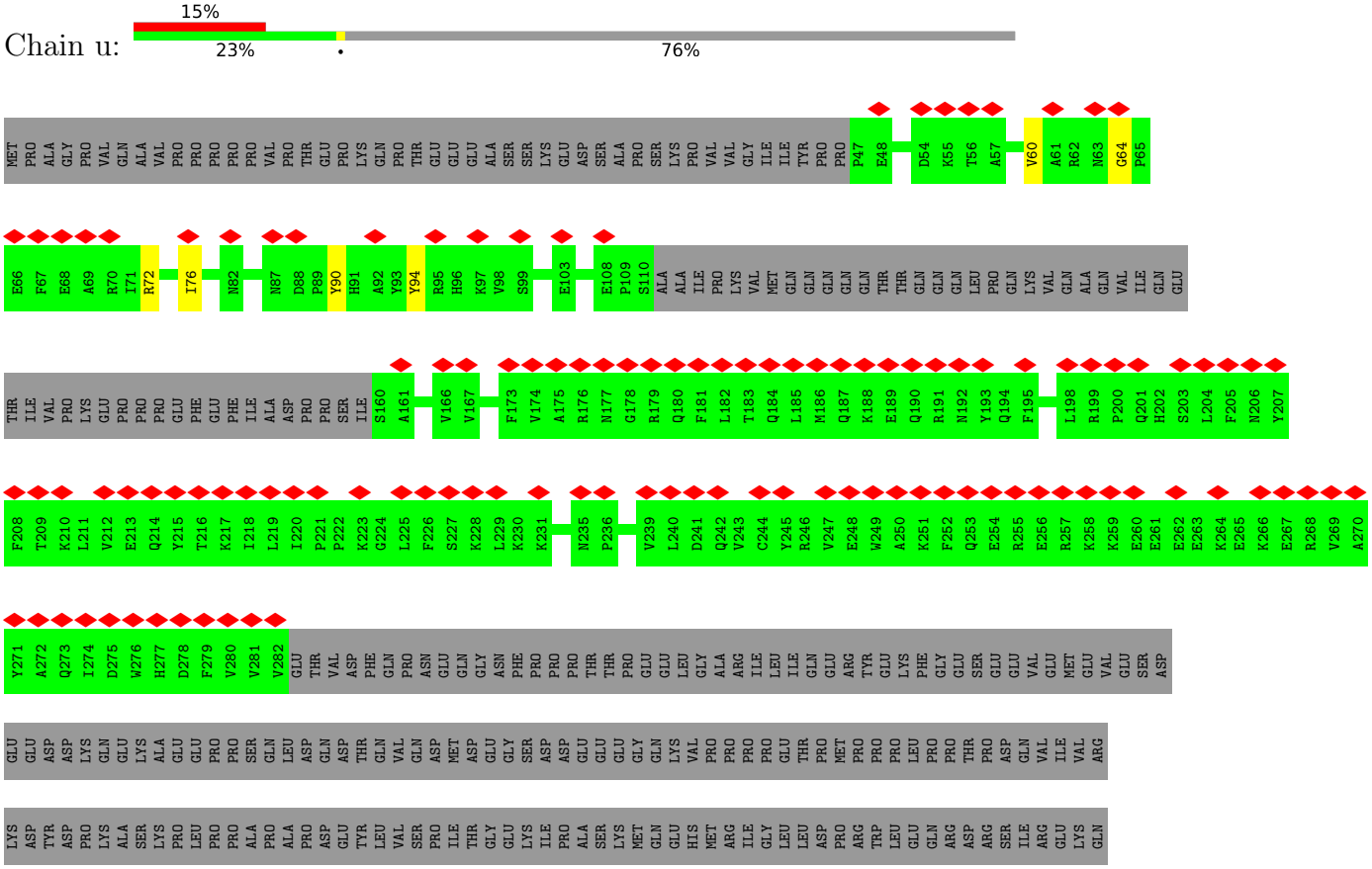
• Molecule 43: Small nuclear ribonucleoprotein Sm D1

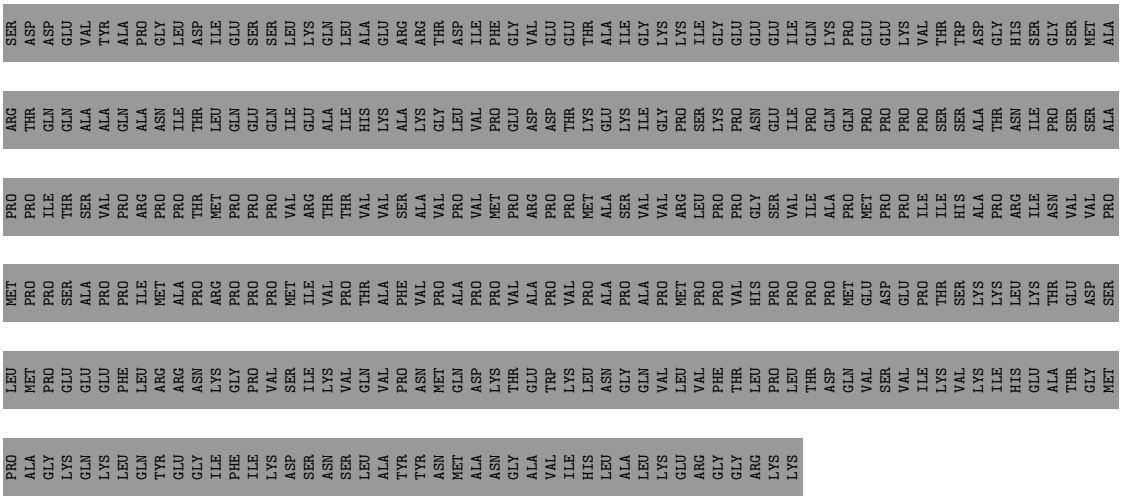
Chain b:



• Molecule 44: Splicing factor 3A subunit 1

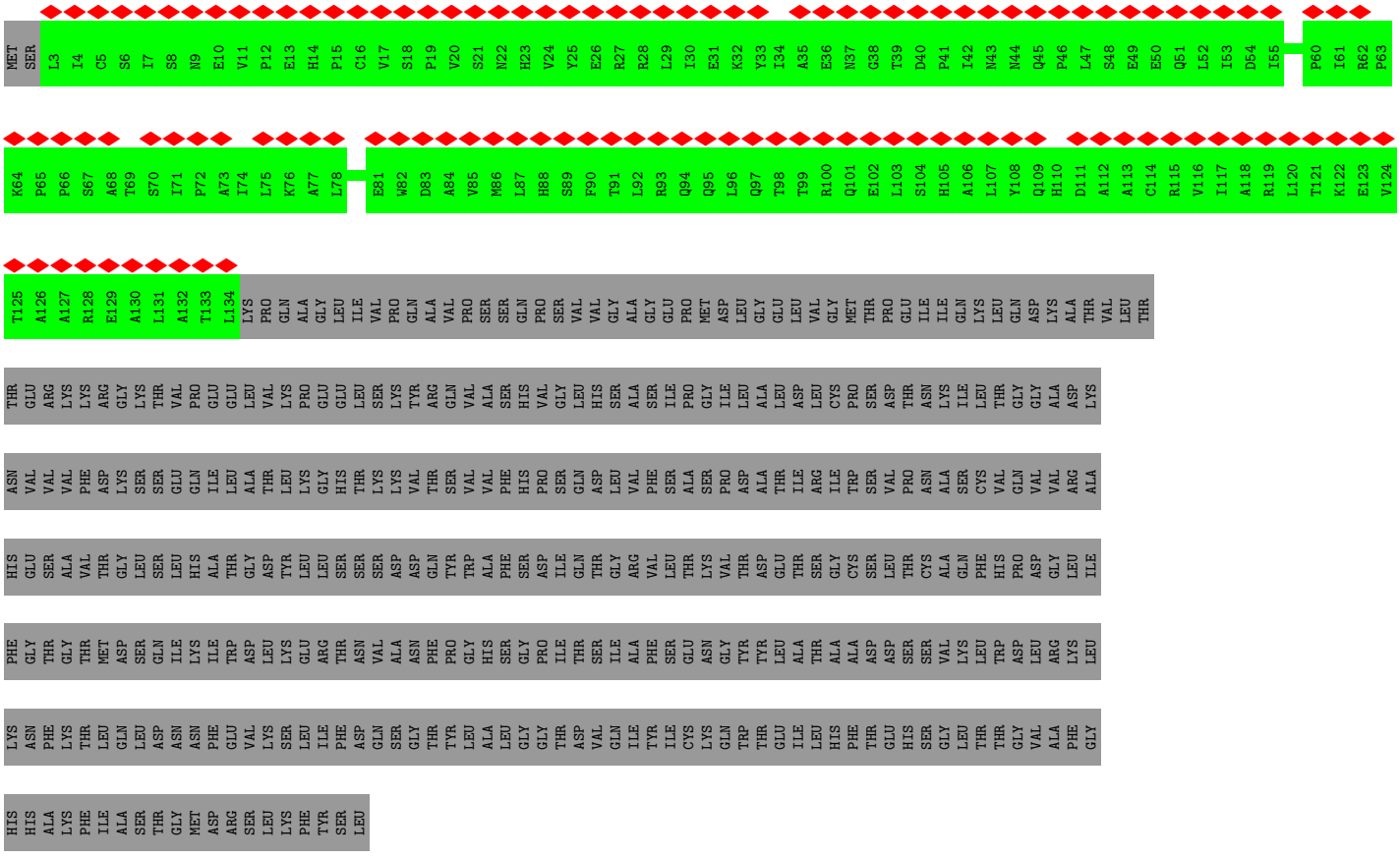
Chain u:





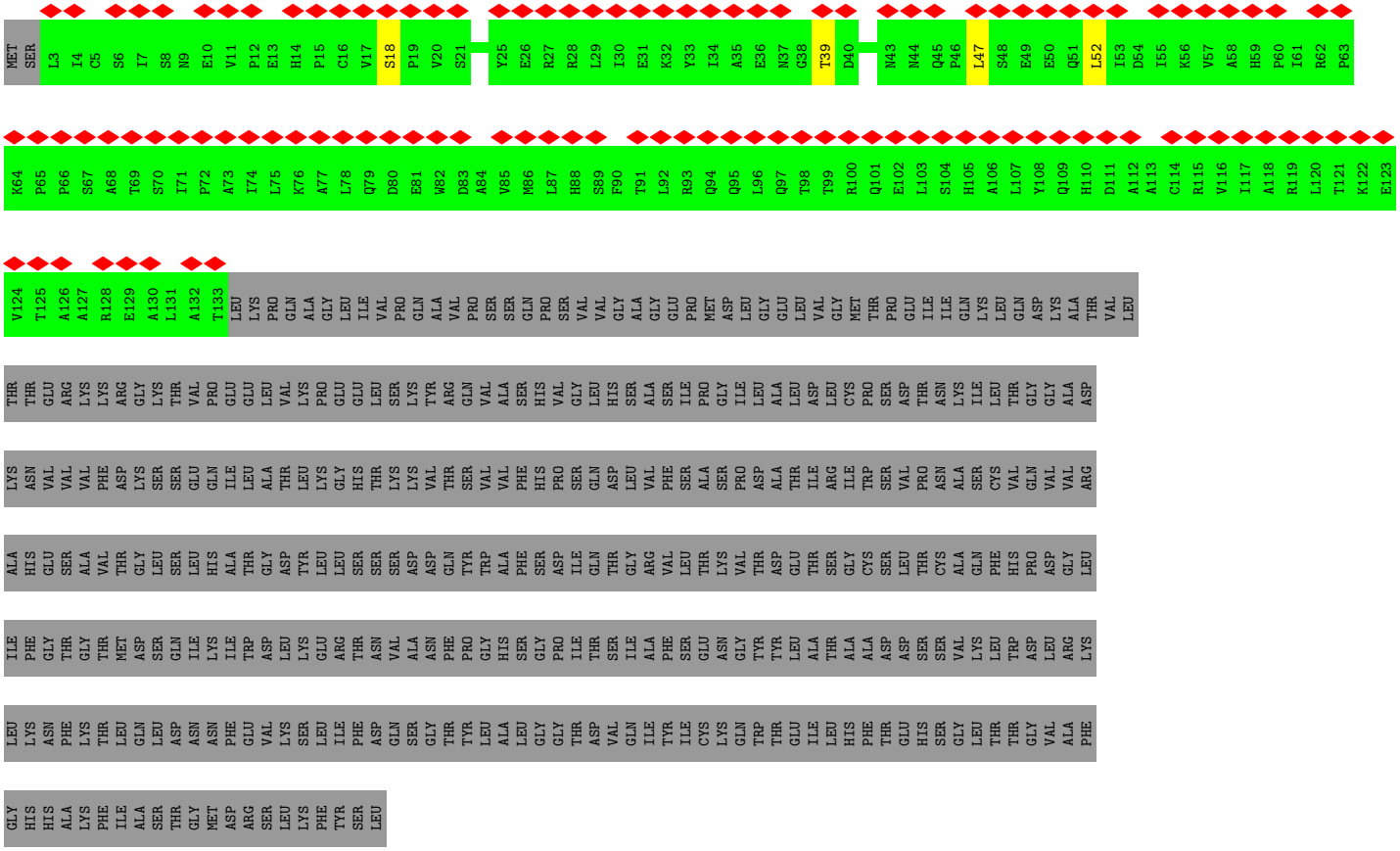
• Molecule 45: Pre-mRNA-processing factor 19

Chain q:

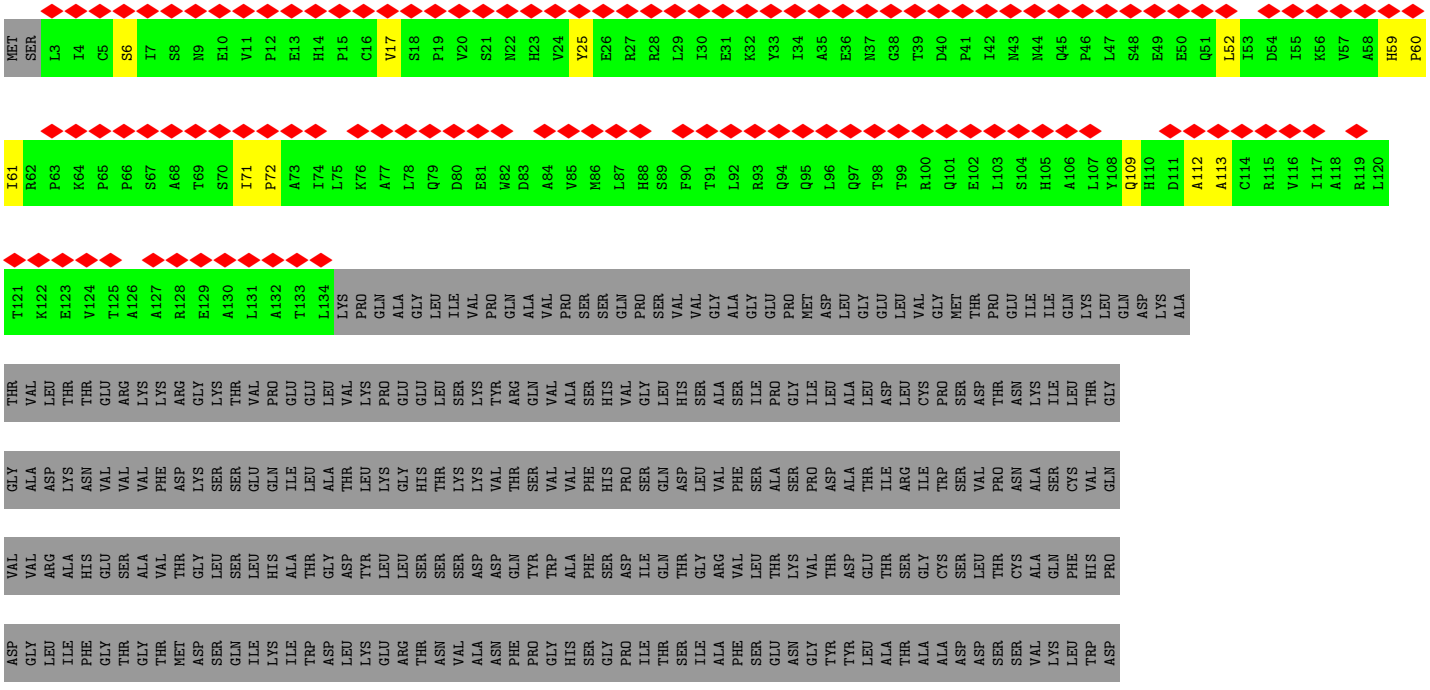


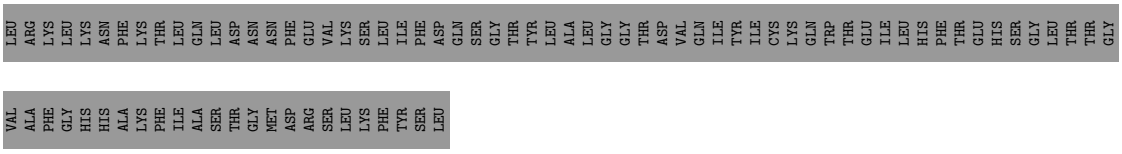
• Molecule 45: Pre-mRNA-processing factor 19

Chain r:



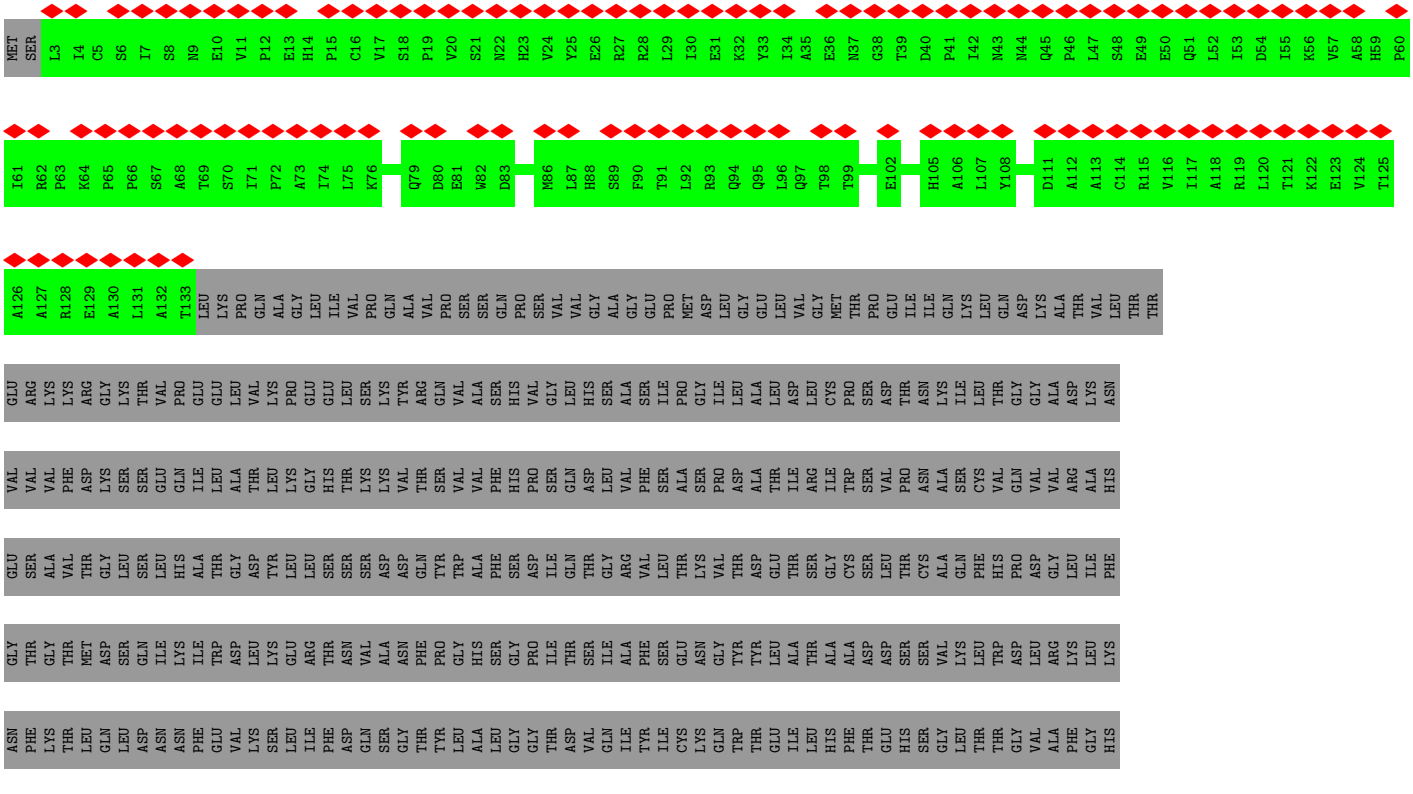
• Molecule 45: Pre-mRNA-processing factor 19





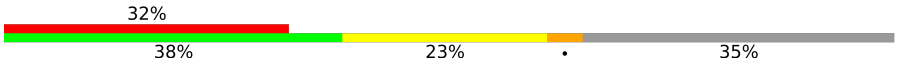
• Molecule 45: Pre-mRNA-processing factor 19

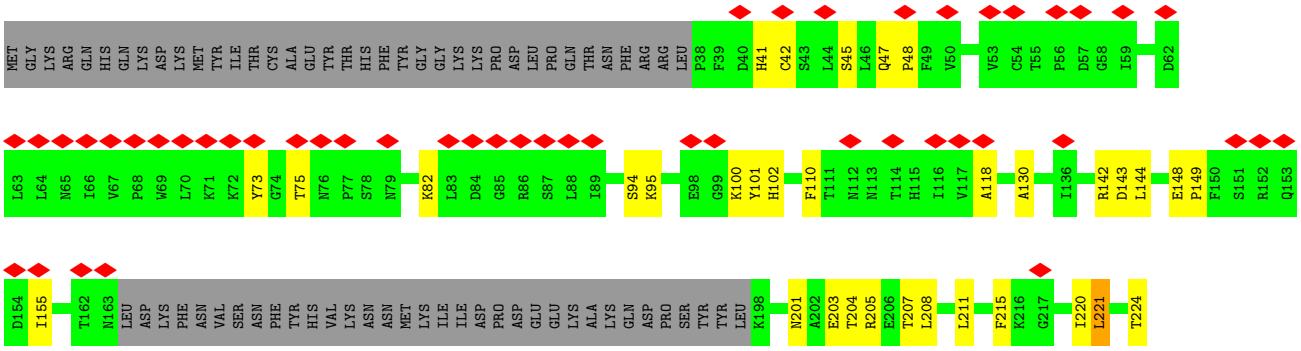
Chain t:

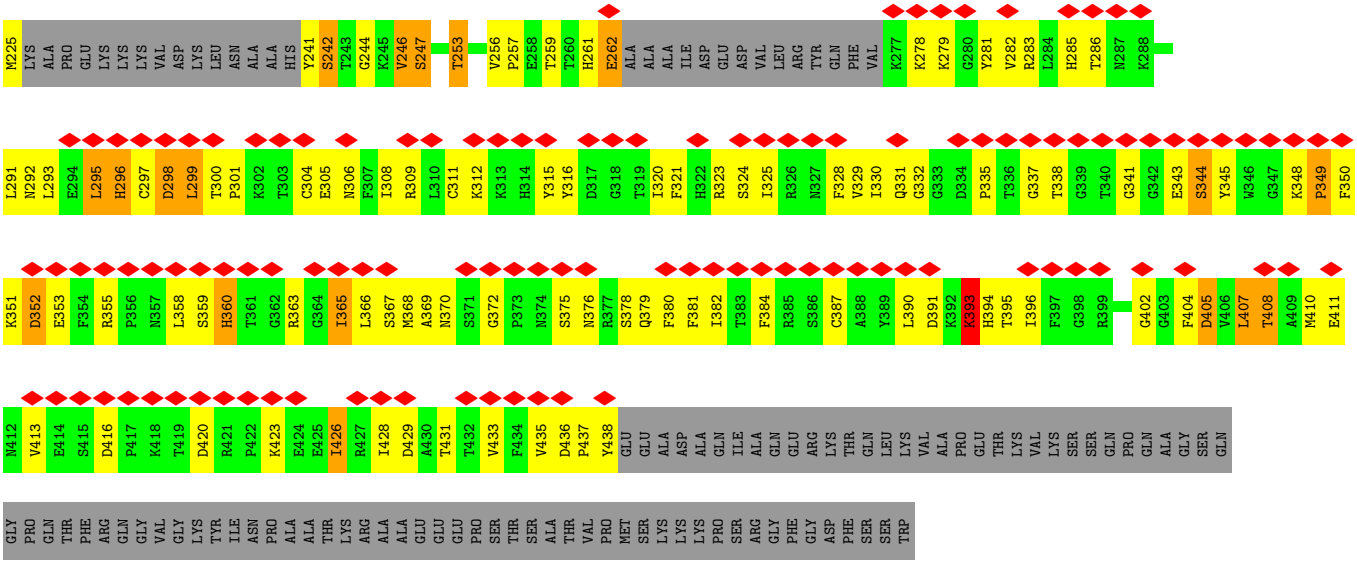


• Molecule 46: RING-type E3 ubiquitin-protein ligase PPIL2

Chain 9:






M225 LYS ALA PRO GLU LYS LYS LYS VAL ASP LYS LEU ASN ALA ALA HIS Y241 S242 T243 G244 K245 V246 S247 T253 V256 P257 E258 T259 T260 H261 E262 ALA ALA ALA ILE ASP GLU ASP VAL LEU ARG TYR GLN PHE VAL K277 K278 K279 G280 Y281 V282 R283 L284 H285 T286 N287 K288
L291 N292 L293 E294 L295 H296 C297 D298 L299 T300 P301 K302 T303 C304 E305 N306 F307 I308 R309 L310 C311 K312 K313 H314 Y315 Y316 D317 G318 T319 I320 F321 H322 R323 S324 I325 R326 N327 F328 V329 I330 Q331 G332 G333 D334 P335 T336 G337 T338 G339 T340 G341 G342 E343 S344 Y345 W346 G347 K348 P349 F350
K351 D352 E353 F354 R355 P356 N357 L358 S359 H360 T361 G362 R363 G364 I365 L366 S367 M368 A369 N370 S371 G372 P373 N374 S375 N376 R377 S378 Q379 F380 F381 I382 T383 F384 R385 S386 C387 A388 Y389 L390 D391 K392 K393 H394 T395 I396 F397 G398 R399 G402 G403 F404 D405 Y406 L407 T408 A409 M410 E411
N412 V413 E414 S415 D416 P417 K418 T419 D420 R421 P422 K423 E424 E425 I426 R427 I428 D429 A430 T431 T432 V433 F434 V435 D436 P437 Y438 GLU GLU ALA ASP ALA GLN ILE ALA GLN GLU ARG LYS THR GLN LEU LYS VAL ALA PRO GLU THR LYS VAL LYS SER SER GLN PRO GLN ALA GLY SER GLN
GLY PRO GLN THR PHE ARG GLN GLY VAL GLY LYS TYR ILE ASN PRO ALA ALA THR LYS ARG ALA ALA GLU GLU GLU PRO SER THR SER ALA THR VAL PRO MET SER LYS LYS LYS PRO SER ARG GLY PHE GLY ASP PHE SER SER TRP

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	111205	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	1400	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	3.975	Depositor
Minimum map value	-2.446	Depositor
Average map value	0.007	Depositor
Map value standard deviation	0.082	Depositor
Recommended contour level	0.22	Depositor
Map size (Å)	516.96, 516.96, 516.96	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.077, 1.077, 1.077	Depositor

5 Model quality

5.1 Standard geometry

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

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	0.84	2/19056 (0.0%)	0.78	17/25857 (0.1%)
2	B	0.55	0/2303	0.50	0/3579
3	C	0.33	0/6873	0.65	3/9346 (0.0%)
4	D	0.21	0/8527	0.53	0/11887
5	E	0.27	0/2392	0.63	0/3242
6	F	0.72	0/2323	0.58	0/3619
7	G	0.54	1/1673 (0.1%)	0.71	5/2597 (0.2%)
8	H	0.39	0/3947	0.48	0/6138
9	I	0.21	0/2898	0.54	0/4057
10	J	0.36	0/2171	0.63	0/2929
11	K	0.50	0/423	0.68	0/568
12	L	0.46	1/2216 (0.0%)	0.60	0/3007
13	N	0.32	0/1210	0.64	0/1622
14	O	0.27	0/1447	0.59	0/2013
15	P	0.79	1/888 (0.1%)	0.93	5/1177 (0.4%)
16	Q	0.22	0/6796	0.50	2/9527 (0.0%)
17	R	0.46	0/2789	0.66	0/3747
18	S	0.22	0/769	0.57	0/1063
19	T	0.81	0/2574	0.74	0/3511
20	U	0.46	0/424	0.63	0/582
21	V	0.39	1/2993 (0.0%)	0.61	0/4088
22	W	0.22	0/2471	0.54	0/3437
23	X	0.42	1/6479 (0.0%)	0.75	10/8747 (0.1%)
24	Y	0.33	0/2605	0.66	2/3522 (0.1%)
25	Z	0.25	0/768	0.51	0/1067
26	1	0.57	0/6609	0.75	2/8947 (0.0%)
27	3	0.47	0/9408	0.73	5/12767 (0.0%)
28	p	0.22	0/847	0.49	0/1181
29	w	0.24	0/2311	0.54	0/3008
30	2	0.43	0/1837	0.66	0/2473
31	4	0.22	0/790	0.55	0/1095
32	7	0.46	0/621	0.74	0/833

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	5	0.65	0/654	0.78	0/885
34	y	0.23	0/389	0.52	0/540
35	v	0.35	0/1054	0.62	0/1385
36	o	0.21	0/821	0.55	0/1149
37	c	0.22	0/387	0.58	0/482
37	h	0.21	0/485	0.46	0/677
38	d	0.18	0/295	0.56	0/367
38	i	0.23	0/362	0.52	0/502
39	a	0.20	0/343	0.63	0/427
39	m	0.23	0/416	0.58	0/581
40	g	0.24	0/322	0.60	0/399
40	l	0.23	0/417	0.55	0/581
41	f	0.21	0/295	0.54	0/367
41	k	0.24	0/366	0.54	0/509
42	e	0.19	0/315	0.55	0/392
42	j	0.22	0/403	0.50	0/561
43	b	0.20	0/327	0.50	0/407
43	n	0.23	0/404	0.57	0/564
44	u	0.22	0/842	0.43	0/1110
45	q	0.21	0/658	0.58	0/919
45	r	0.22	0/653	0.50	0/912
45	s	0.23	0/658	0.62	0/919
45	t	0.21	0/653	0.51	0/912
46	9	0.27	0/2342	0.60	1/3182 (0.0%)
All	All	0.50	7/123299 (0.0%)	0.65	52/169962 (0.0%)

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	16
3	C	0	6
4	D	0	2
9	I	0	3
10	J	0	3
11	K	0	1
12	L	0	2
13	N	0	2
15	P	0	2
16	Q	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
17	R	0	1
18	S	0	1
23	X	0	1
24	Y	0	3
25	Z	0	1
26	1	0	4
27	3	0	5
30	2	0	1
32	7	0	1
33	5	0	1
46	9	0	2
All	All	0	60

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	P	188	TRP	C-O	-9.83	1.11	1.23
7	G	109	U	O3'-P	7.56	1.72	1.61
23	X	605	THR	C-N	-7.40	1.22	1.33
1	A	1281	THR	CA-CB	-7.37	1.43	1.53
12	L	81	GLN	CA-CB	-6.69	1.41	1.53
21	V	477	LEU	CA-C	-6.59	1.43	1.52
1	A	1182	ASN	C-N	-5.98	1.28	1.34

All (52) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	G	110	U	C4'-C3'-O3'	-11.75	91.77	109.40
1	A	692	ASP	CA-C-N	-11.10	111.89	122.66
1	A	692	ASP	C-N-CA	-11.10	111.89	122.66
26	1	1107	GLN	CA-C-N	-10.40	105.90	122.24
26	1	1107	GLN	C-N-CA	-10.40	105.90	122.24
27	3	568	MET	CA-C-N	9.83	134.05	120.39
27	3	568	MET	C-N-CA	9.83	134.05	120.39
7	G	110	U	C3'-C2'-O2'	8.83	127.85	114.60
15	P	188	TRP	CA-C-O	-8.01	112.23	120.96
23	X	813	ARG	CB-CA-C	-7.72	99.07	110.96
1	A	1165	VAL	N-CA-C	-7.41	105.76	111.62
23	X	822	PRO	CB-CA-C	-7.41	101.28	113.06
1	A	1343	SER	CA-C-N	-7.01	111.01	122.65
1	A	1343	SER	C-N-CA	-7.01	111.01	122.65
1	A	767	VAL	N-CA-C	-6.97	106.34	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	9	393	LYS	N-CA-C	-6.48	106.33	114.56
7	G	109	U	P-O3'-C3'	6.37	129.75	120.20
23	X	813	ARG	O-C-N	6.04	128.31	122.03
16	Q	750	THR	CA-C-N	-5.90	112.62	121.83
16	Q	750	THR	C-N-CA	-5.90	112.62	121.83
23	X	813	ARG	N-CA-CB	5.78	118.35	109.91
24	Y	48	ASP	CA-C-N	-5.73	114.68	121.90
24	Y	48	ASP	C-N-CA	-5.73	114.68	121.90
1	A	1834	GLY	N-CA-C	5.64	119.04	112.50
3	C	94	ILE	CA-C-N	-5.61	104.53	121.98
3	C	94	ILE	C-N-CA	-5.61	104.53	121.98
1	A	1252	GLY	N-CA-C	-5.59	99.92	113.18
1	A	1418	ARG	N-CA-C	-5.59	98.90	110.80
7	G	111	U	C4'-C3'-O3'	5.56	117.74	109.40
1	A	1418	ARG	CA-C-N	-5.52	111.98	121.09
1	A	1418	ARG	C-N-CA	-5.52	111.98	121.09
23	X	823	MET	N-CA-C	-5.50	104.31	111.02
1	A	1771	LEU	CA-CB-CG	5.48	135.50	116.30
15	P	188	TRP	CA-C-N	5.46	135.75	125.66
15	P	188	TRP	C-N-CA	5.46	135.75	125.66
23	X	819	PRO	CA-C-N	5.37	131.64	121.97
23	X	819	PRO	C-N-CA	5.37	131.64	121.97
7	G	112	U	C3'-C2'-O2'	5.36	118.74	110.70
1	A	1303	LEU	CA-C-N	-5.28	111.45	121.54
1	A	1303	LEU	C-N-CA	-5.28	111.45	121.54
3	C	98	LYS	N-CA-C	5.25	115.21	108.34
23	X	812	GLY	CA-C-O	-5.22	115.36	121.00
15	P	187	ARG	CA-C-N	5.16	128.43	121.05
15	P	187	ARG	C-N-CA	5.16	128.43	121.05
27	3	1008	SER	N-CA-C	5.16	114.65	107.73
1	A	698	PRO	CA-C-N	5.16	131.39	121.54
1	A	698	PRO	C-N-CA	5.16	131.39	121.54
23	X	822	PRO	N-CA-C	5.13	120.81	113.47
27	3	498	GLY	N-CA-C	-5.12	108.16	115.64
1	A	1539	SER	N-CA-C	5.11	121.10	109.81
27	3	917	PRO	N-CA-C	-5.04	102.10	112.47
23	X	764	VAL	N-CA-C	-5.03	105.59	110.42

There are no chirality outliers.

All (60) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
26	1	1105	GLU	Peptide
26	1	1107	GLN	Peptide
26	1	1179	ASP	Peptide
26	1	717	THR	Peptide
30	2	502	ARG	Peptide
27	3	268	ARG	Peptide
27	3	342	LEU	Peptide
27	3	490	THR	Peptide
27	3	916	ASN	Peptide
27	3	971	ASP	Peptide
33	5	79	PRO	Peptide
32	7	13	LYS	Peptide
46	9	329	VAL	Peptide
46	9	349	PRO	Peptide
1	A	108	MET	Peptide
1	A	1338	SER	Peptide
1	A	1416	ILE	Peptide
1	A	187	PRO	Peptide
1	A	203	VAL	Peptide
1	A	2150	GLN	Peptide
1	A	376	GLU	Peptide
1	A	386	PRO	Peptide
1	A	467	GLN	Peptide
1	A	468	LYS	Peptide
1	A	698	PRO	Peptide
1	A	703	GLN	Peptide
1	A	855	ARG	Peptide
1	A	940	ILE	Peptide
1	A	941	LYS	Peptide
1	A	982	GLU	Peptide
3	C	360	ALA	Peptide
3	C	427	PHE	Peptide
3	C	443	VAL	Peptide
3	C	533	SER	Peptide
3	C	534	VAL	Peptide
3	C	823	ALA	Peptide
4	D	1583	ASP	Peptide
4	D	2098	ALA	Peptide
9	I	337	LEU	Peptide
9	I	338	ILE	Peptide
9	I	550	TRP	Peptide
10	J	241	VAL	Peptide
10	J	354	LEU	Peptide

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Mol	Chain	Res	Type	Group
10	J	413	GLU	Peptide
11	K	196	ASP	Peptide
12	L	200	LYS	Peptide
12	L	202	ARG	Peptide
13	N	12	PRO	Peptide
13	N	36	PRO	Peptide
15	P	29	GLN	Peptide
15	P	56	ASN	Peptide
16	Q	488	SER	Peptide
16	Q	489	VAL	Peptide
17	R	163	MET	Peptide
18	S	164	PRO	Peptide
23	X	326	GLN	Peptide
24	Y	204	SER	Peptide
24	Y	274	ASP	Peptide
24	Y	37	TYR	Peptide
25	Z	77	GLN	Peptide

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	18543	0	18403	875	0
2	B	2066	0	1047	61	0
3	C	6724	0	6696	459	0
4	D	8528	0	3745	61	0
5	E	2338	0	2275	174	0
6	F	2075	0	1048	123	0
7	G	1503	0	766	138	0
8	H	3539	0	1791	141	0
9	I	2880	0	1411	16	0
10	J	2116	0	1977	112	0
11	K	411	0	362	21	0
12	L	2192	0	1775	88	0
13	N	1184	0	1190	61	0
14	O	1447	0	638	28	0
15	P	876	0	875	62	0
16	Q	6730	0	3268	57	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
17	R	2760	0	2639	136	0
18	S	770	0	356	8	0
19	T	2507	0	2451	120	0
20	U	422	0	291	11	0
21	V	2959	0	2237	110	0
22	W	2473	0	1096	30	0
23	X	6357	0	6349	497	0
24	Y	2556	0	2492	186	0
25	Z	772	0	342	2	0
26	1	6486	0	6690	403	0
27	3	9220	0	9139	624	0
28	p	841	0	420	8	0
29	w	2275	0	1347	65	0
30	2	1807	0	1622	79	0
31	4	792	0	367	9	0
32	7	613	0	597	44	0
33	5	635	0	595	37	0
34	y	390	0	190	5	0
35	v	1041	0	800	53	0
36	o	816	0	386	11	0
37	c	388	0	102	1	0
37	h	482	0	220	12	0
38	d	296	0	87	3	0
38	i	359	0	179	16	0
39	a	344	0	93	2	0
39	m	413	0	194	8	0
40	g	324	0	89	3	0
40	l	415	0	198	15	0
41	f	296	0	84	3	0
41	k	364	0	176	11	0
42	e	316	0	85	4	0
42	j	403	0	173	9	0
43	b	328	0	89	1	0
43	n	402	0	184	6	0
44	u	834	0	325	3	0
45	q	659	0	296	0	0
45	r	654	0	294	3	0
45	s	659	0	296	8	0
45	t	654	0	294	0	0
46	9	2307	0	1898	126	0
47	A	36	0	6	2	0
48	C	32	0	12	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
49	C	1	0	0	0	0
49	F	6	0	0	0	0
50	7	3	0	0	0	0
50	K	1	0	0	0	0
50	N	3	0	0	0	0
All	All	120623	0	93047	4742	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 22.

All (4742) 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)
23:X:819:PRO:HD3	23:X:921:LEU:CD1	1.48	1.39
15:P:184:VAL:HG22	24:Y:123:HIS:CE1	1.61	1.33
23:X:819:PRO:CD	23:X:921:LEU:CD1	2.11	1.28
15:P:184:VAL:CG2	24:Y:123:HIS:HE1	1.46	1.26
23:X:819:PRO:CD	23:X:921:LEU:HD12	1.66	1.24
15:P:184:VAL:CG2	24:Y:123:HIS:CE1	2.19	1.21
21:V:532:GLN:O	21:V:536:ILE:HB	1.47	1.13
23:X:815:MET:SD	23:X:829:LEU:HD11	1.89	1.12
23:X:242:LYS:O	23:X:246:LEU:HB2	1.53	1.07
23:X:818:LEU:HD22	23:X:819:PRO:HD2	1.34	1.06
27:3:616:ILE:HB	27:3:629:SER:O	1.54	1.06
7:G:99:C:N4	8:H:32:U:H3	1.50	1.06
2:B:40:U:O4	7:G:0:G:N2	1.88	1.05
24:Y:246:LYS:HE3	24:Y:312:HIS:HB2	1.36	1.04
16:Q:1331:HIS:HA	16:Q:1353:GLN:O	1.59	1.02
36:o:46:ALA:HA	36:o:68:THR:O	1.60	1.00
6:F:38:G:H2'	6:F:39:A:H8	1.25	1.00
1:A:1768:TYR:HA	1:A:1771:LEU:HB3	1.43	0.99
23:X:819:PRO:HD2	23:X:921:LEU:HD12	1.44	0.99
27:3:477:SER:HB2	27:3:505:THR:H	1.28	0.98
3:C:255:VAL:O	3:C:307:VAL:HA	1.64	0.97
6:F:59:G:N2	6:F:76:A:N1	2.12	0.97
33:5:36:HIS:HD1	33:5:76:CYS:HG	1.06	0.97
7:G:112:U:O4	23:X:503:ARG:NH2	1.96	0.96
6:F:36:A:H3'	6:F:37:C:H5"	1.44	0.96
36:o:13:ALA:O	36:o:24:LEU:HA	1.65	0.96
23:X:819:PRO:HD3	23:X:921:LEU:HD13	1.46	0.96
7:G:111:U:O4	23:X:820:VAL:HA	1.65	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:411:MET:HE1	10:J:415:LEU:HB3	1.48	0.94
6:F:59:G:H1	6:F:76:A:N6	1.64	0.94
27:3:114:ARG:NH1	33:5:38:ASP:OD1	2.00	0.94
23:X:760:LEU:HB2	23:X:764:VAL:HG23	1.49	0.94
7:G:99:C:H42	8:H:32:U:H3	0.95	0.92
27:3:516:LEU:O	27:3:527:ILE:HB	1.70	0.92
27:3:459:VAL:HG21	27:3:757:ILE:HG21	1.51	0.92
19:T:257:ARG:NH2	19:T:301:ASP:OD1	2.03	0.91
4:D:1224:LEU:O	4:D:1268:ILE:HA	1.69	0.91
16:Q:851:ILE:HA	16:Q:1060:LEU:O	1.70	0.91
23:X:819:PRO:HD3	23:X:921:LEU:HD11	1.50	0.91
1:A:26:SER:HB2	1:A:29:LYS:HB2	1.51	0.90
32:7:33:CYS:HG	32:7:35:SER:HG	1.07	0.90
6:F:85:U:H3	8:H:14:C:H42	1.20	0.90
23:X:506:LEU:CD2	23:X:770:LEU:HD21	2.02	0.89
27:3:463:ARG:H	27:3:510:LEU:HD22	1.35	0.89
46:9:321:PHE:HA	46:9:332:GLY:HA3	1.54	0.89
24:Y:35:LYS:NZ	24:Y:159:THR:O	2.04	0.89
15:P:185:LYS:O	24:Y:49:PHE:HE1	1.56	0.89
26:1:564:ASP:O	26:1:568:ARG:NH2	2.06	0.89
1:A:435:CYS:HG	7:G:-10:G:H1	1.13	0.88
36:o:23:GLU:HA	36:o:46:ALA:HB3	1.56	0.88
2:B:18:C:N3	2:B:59:G:N1	2.20	0.88
18:S:18:THR:HA	18:S:159:ILE:HA	1.56	0.88
42:e:34:TRP:O	42:e:85:THR:N	2.06	0.88
46:9:352:ASP:OD1	46:9:376:ASN:ND2	2.07	0.88
17:R:348:GLU:O	17:R:352:ARG:HB2	1.74	0.88
23:X:527:LEU:HD13	23:X:763:VAL:HG11	1.56	0.88
23:X:650:ASN:O	23:X:904:GLN:NE2	2.07	0.87
1:A:1637:TRP:O	1:A:1656:THR:HA	1.73	0.87
27:3:668:GLY:HA3	27:3:699:VAL:HG11	1.57	0.87
42:j:63:GLU:O	42:j:71:ARG:HA	1.75	0.87
8:H:19:G:N2	8:H:20:G:O6	2.08	0.86
27:3:139:LYS:HG3	27:3:160:ALA:HB3	1.57	0.86
13:N:58:ARG:NH2	13:N:98:GLU:O	2.08	0.86
1:A:2003:THR:HA	26:1:858:LYS:HD3	1.56	0.86
3:C:480:LYS:HB2	3:C:493:PHE:HB3	1.58	0.86
17:R:134:ARG:NH1	19:T:382:PRO:O	2.09	0.85
23:X:725:ARG:HD3	23:X:728:ARG:HH12	1.42	0.85
1:A:957:GLN:O	1:A:961:ASN:ND2	2.08	0.85
4:D:1558:PRO:HA	4:D:1642:GLN:O	1.75	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:325:HIS:HD2	1:A:326:HIS:HD2	1.25	0.85
27:3:806:ALA:HA	27:3:856:LYS:HB3	1.58	0.85
1:A:1581:LEU:HD22	1:A:1746:ARG:HH11	1.41	0.85
19:T:483:ASP:OD2	19:T:485:THR:OG1	1.95	0.85
14:O:236:VAL:HA	14:O:299:ASN:O	1.77	0.84
23:X:878:HIS:HA	23:X:881:LEU:HD12	1.59	0.84
7:G:19:G:N2	14:O:194:ALA:O	2.09	0.84
32:7:40:CYS:SG	32:7:73:LYS:NZ	2.51	0.84
17:R:103:ARG:NH1	17:R:110:LYS:O	2.11	0.84
46:9:305:GLU:OE1	46:9:309:ARG:NH1	2.11	0.84
3:C:605:ASP:HA	3:C:608:ARG:HD2	1.59	0.84
29:w:388:ASP:OD2	29:w:390:LYS:NZ	2.10	0.84
1:A:888:GLN:O	1:A:889:ARG:NH1	2.10	0.83
2:B:46:U:O2	20:U:11:ARG:NH2	2.10	0.83
2:B:18:C:N4	2:B:59:G:O6	2.10	0.83
3:C:529:ARG:HH22	3:C:540:GLU:HB2	1.42	0.83
24:Y:245:CYS:SG	24:Y:246:LYS:N	2.51	0.83
17:R:359:ARG:HB3	17:R:363:ARG:HH21	1.42	0.83
27:3:280:ASP:HB3	27:3:283:ARG:HG3	1.60	0.83
24:Y:246:LYS:HB2	24:Y:311:ILE:HA	1.60	0.83
1:A:2146:VAL:HG13	1:A:2272:MET:HB3	1.59	0.83
26:1:734:GLY:O	26:1:738:HIS:HB2	1.77	0.83
3:C:301:SER:H	3:C:306:ASN:HD22	1.27	0.83
3:C:670:SER:HA	3:C:823:ALA:HB3	1.60	0.83
27:3:352:GLU:OE2	27:3:429:ARG:NH1	2.12	0.83
1:A:385:GLU:O	3:C:327:TYR:OH	1.95	0.82
10:J:431:ARG:HA	10:J:434:VAL:HG12	1.59	0.82
27:3:585:ALA:HB1	27:3:610:VAL:HG12	1.59	0.82
15:P:44:ARG:NH2	19:T:255:SER:O	2.12	0.82
32:7:33:CYS:SG	32:7:35:SER:OG	2.31	0.82
33:5:36:HIS:ND1	33:5:76:CYS:SG	2.49	0.82
27:3:568:MET:HB3	27:3:574:LEU:HD12	1.60	0.82
17:R:175:GLN:HB2	17:R:199:MET:HB2	1.61	0.82
26:1:665:ILE:HD13	26:1:705:SER:HB2	1.61	0.82
1:A:214:ARG:NH2	1:A:223:SER:O	2.11	0.82
6:F:91:A:H2'	6:F:92:A:H8	1.43	0.82
5:E:240:GLY:O	5:E:252:SER:HA	1.80	0.82
1:A:875:HIS:HE1	23:X:866:ASN:HB3	1.42	0.82
7:G:112:U:C5	23:X:506:LEU:HD12	2.15	0.82
26:1:725:ASP:HA	26:1:728:LEU:HG	1.61	0.82
1:A:858:GLN:OE1	1:A:861:ARG:NH1	2.13	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:946:GLU:HB3	1:A:950:LEU:HD23	1.61	0.81
21:V:624:THR:HG21	21:V:647:LEU:HD13	1.61	0.81
15:P:186:ARG:NE	15:P:190:ASP:OD2	2.14	0.81
38:i:44:LEU:O	38:i:61:GLU:HA	1.79	0.81
26:1:652:CYS:HB2	26:1:692:HIS:HE1	1.46	0.81
1:A:1819:LEU:HB3	1:A:1915:VAL:HG23	1.62	0.81
1:A:2320:LEU:HD23	1:A:2322:GLU:H	1.44	0.81
14:O:234:LEU:O	14:O:271:PHE:HA	1.81	0.81
1:A:1962:THR:HG23	1:A:1966:HIS:HB2	1.61	0.81
17:R:233:PRO:O	17:R:235:ARG:NH2	2.14	0.81
13:N:15:TRP:HZ3	13:N:22:LEU:HD12	1.46	0.80
17:R:369:LEU:HA	17:R:376:LYS:HE3	1.64	0.80
23:X:234:TYR:OH	23:X:238:ARG:NH1	2.14	0.80
24:Y:135:ILE:HA	24:Y:138:LYS:HD2	1.63	0.80
27:3:29:GLU:HG3	27:3:42:ARG:HG3	1.63	0.80
1:A:1518:LEU:O	1:A:1523:ARG:NH1	2.12	0.80
27:3:108:GLY:O	32:7:82:ARG:NH1	2.14	0.80
41:k:21:LEU:HA	41:k:67:ILE:HA	1.62	0.80
5:E:239:THR:HG23	5:E:254:ALA:HA	1.63	0.80
6:F:85:U:H3	8:H:14:C:N4	1.78	0.80
23:X:760:LEU:H	23:X:760:LEU:HD12	1.45	0.80
23:X:821:ASP:HB2	23:X:822:PRO:HD2	1.61	0.80
5:E:61:LEU:HD21	5:E:350:ARG:HD3	1.62	0.80
19:T:245:HIS:HE2	19:T:263:SER:HG	1.26	0.80
21:V:521:TYR:HA	21:V:524:SER:HB2	1.63	0.80
3:C:561:LYS:NZ	3:C:614:TYR:O	2.15	0.80
6:F:41:A:N1	7:G:6:A:N6	2.29	0.80
27:3:170:VAL:HG23	27:3:184:CYS:HB3	1.64	0.80
3:C:488:VAL:HG13	3:C:609:LYS:HD3	1.64	0.79
23:X:819:PRO:CD	23:X:921:LEU:HD11	2.05	0.79
27:3:412:ILE:HG12	27:3:423:LEU:HD22	1.63	0.79
1:A:310:THR:HA	1:A:313:LYS:HG3	1.64	0.79
7:G:112:U:OP1	23:X:503:ARG:HG2	1.81	0.79
19:T:191:HIS:NE2	19:T:440:ASP:OD1	2.15	0.79
1:A:1412:TRP:O	1:A:1420:ASN:ND2	2.14	0.79
3:C:464:ALA:HB1	3:C:473:PRO:HG3	1.65	0.79
3:C:686:THR:HB	3:C:793:ASP:HB3	1.63	0.79
15:P:67:GLU:OE2	19:T:476:ARG:NH2	2.16	0.79
27:3:162:LYS:HE3	27:3:165:THR:HG21	1.62	0.79
1:A:155:LYS:NZ	1:A:622:GLY:O	2.15	0.79
26:1:963:LYS:O	26:1:966:GLN:N	2.14	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:38:G:H2'	6:F:39:A:C8	2.15	0.79
26:1:598:SER:O	26:1:602:LYS:HB2	1.83	0.79
3:C:255:VAL:HB	3:C:307:VAL:HG12	1.65	0.79
13:N:120:ARG:NH1	13:N:142:CYS:SG	2.55	0.79
19:T:307:SER:OG	19:T:309:ASP:OD1	2.00	0.79
23:X:961:THR:O	23:X:965:GLN:NE2	2.15	0.79
26:1:805:TYR:O	26:1:809:GLU:HB2	1.82	0.79
27:3:412:ILE:HD12	27:3:1107:THR:HG21	1.64	0.79
3:C:396:LEU:HD21	3:C:403:LEU:HB2	1.63	0.79
3:C:495:ARG:HD2	3:C:497:LEU:HG	1.62	0.79
23:X:263:SER:O	23:X:267:ARG:HB2	1.83	0.79
1:A:1320:LYS:NZ	1:A:1325:LEU:O	2.15	0.78
6:F:59:G:H1	6:F:76:A:H61	0.84	0.78
11:K:206:LYS:O	11:K:223:ARG:NH1	2.16	0.78
26:1:1137:ARG:NH1	30:2:522:PHE:O	2.16	0.78
35:v:85:ARG:HH12	35:v:88:LYS:HB3	1.47	0.78
23:X:819:PRO:CG	23:X:921:LEU:HD11	2.14	0.78
26:1:757:MET:HB3	26:1:762:ALA:HB2	1.64	0.78
1:A:318:TYR:O	3:C:645:ARG:NH2	2.16	0.78
3:C:674:CYS:HB3	3:C:818:SER:HB2	1.66	0.78
10:J:293:ASN:HA	10:J:296:ARG:HD2	1.64	0.78
23:X:324:GLU:OE1	23:X:327:ARG:NH2	2.16	0.78
23:X:653:SER:HA	23:X:656:GLN:HG3	1.65	0.78
27:3:228:LEU:HD21	27:3:250:ILE:HG21	1.66	0.78
10:J:266:GLU:OE2	10:J:282:TYR:OH	2.00	0.78
16:Q:1272:LEU:HA	16:Q:1302:TYR:O	1.84	0.78
23:X:526:THR:HG23	23:X:529:THR:H	1.46	0.78
26:1:544:LEU:HD21	26:1:549:ARG:HG3	1.64	0.78
27:3:136:GLU:OE2	27:3:189:TYR:OH	2.00	0.78
27:3:592:LEU:HD22	27:3:605:LEU:HD13	1.65	0.78
26:1:834:VAL:HG22	26:1:871:THR:HG23	1.65	0.77
1:A:1014:ASN:ND2	1:A:1014:ASN:O	2.16	0.77
3:C:300:LEU:HD23	3:C:306:ASN:HB3	1.64	0.77
3:C:510:LEU:HB2	3:C:564:THR:O	1.82	0.77
21:V:518:LYS:HD3	21:V:519:LYS:H	1.49	0.77
23:X:610:ASP:HB3	23:X:686:ILE:HD13	1.66	0.77
23:X:882:LEU:O	23:X:886:THR:OG1	2.01	0.77
3:C:677:GLU:HA	3:C:683:ASN:O	1.83	0.77
19:T:267:ASP:N	19:T:267:ASP:OD1	2.17	0.77
19:T:349:SER:OG	19:T:351:ASP:OD1	1.99	0.77
43:n:32:VAL:HA	43:n:37:ASN:O	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:9:300:THR:OG1	46:9:304:CYS:SG	2.39	0.77
1:A:155:LYS:HG3	1:A:626:GLY:HA3	1.66	0.77
1:A:1497:THR:OG1	1:A:1499:GLU:OE1	2.02	0.77
27:3:1008:SER:OG	27:3:1009:PHE:N	2.07	0.77
1:A:1631:LEU:HB2	1:A:1660:TYR:HB3	1.67	0.77
23:X:617:GLY:O	23:X:621:ILE:HB	1.84	0.77
23:X:819:PRO:HG3	23:X:921:LEU:HD11	1.64	0.77
10:J:354:LEU:HD21	10:J:362:ALA:HB2	1.67	0.77
1:A:2188:LEU:O	1:A:2251:TYR:OH	2.01	0.77
19:T:406:ILE:HG22	19:T:407:GLN:HG2	1.67	0.77
23:X:263:SER:HA	23:X:267:ARG:HH21	1.49	0.77
23:X:434:GLN:NE2	23:X:468:GLU:OE2	2.18	0.77
26:1:972:GLY:HA2	26:1:1010:THR:HG21	1.64	0.77
1:A:325:HIS:CD2	1:A:326:HIS:HD2	2.02	0.77
5:E:255:MET:HB2	5:E:282:HIS:HB3	1.67	0.77
6:F:84:A:H1'	6:F:85:U:H5'	1.67	0.77
15:P:42:LYS:NZ	19:T:276:GLU:OE1	2.18	0.77
23:X:768:LYS:HE3	23:X:773:HIS:HA	1.65	0.77
6:F:36:A:N1	7:G:10:U:N3	2.32	0.77
27:3:878:ASP:OD1	27:3:879:LEU:N	2.18	0.77
27:3:1013:ARG:NH2	27:3:1064:ASP:OD1	2.19	0.77
1:A:1014:ASN:HD21	12:L:83:ARG:HB2	1.51	0.76
6:F:31:U:O4	7:G:15:U:N3	2.17	0.76
27:3:351:SER:H	27:3:356:HIS:HB3	1.50	0.76
3:C:687:MET:HE2	3:C:791:ILE:HG12	1.66	0.76
6:F:45:A:OP2	30:2:554:ARG:NH1	2.18	0.76
26:1:565:ASP:HA	26:1:568:ARG:HE	1.51	0.76
26:1:861:ALA:O	26:1:864:TYR:N	2.17	0.76
27:3:929:LYS:HE3	27:3:938:GLU:HB2	1.65	0.76
23:X:605:THR:OG1	23:X:606:GLN:NE2	2.19	0.76
26:1:524:ARG:NH1	26:1:562:LYS:O	2.18	0.76
30:2:635:ALA:HB3	31:4:73:ILE:HA	1.67	0.76
32:7:22:LEU:N	32:7:67:SER:O	2.18	0.76
23:X:765:LEU:HD12	23:X:765:LEU:O	1.85	0.76
26:1:554:LYS:HA	26:1:558:ARG:HH21	1.50	0.76
27:3:464:ARG:HG2	27:3:516:LEU:HD11	1.67	0.76
6:F:28:A:O2'	13:N:39:GLY:O	2.02	0.76
12:L:17:GLU:OE2	35:v:74:GLN:NE2	2.19	0.76
13:N:32:ALA:HA	13:N:35:GLU:HG3	1.67	0.76
16:Q:1136:GLN:H	16:Q:1156:ASN:HA	1.50	0.76
17:R:160:ALA:HA	17:R:163:MET:HG2	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:527:LEU:CD1	23:X:763:VAL:HG11	2.16	0.75
38:i:20:MET:HA	38:i:29:TYR:O	1.86	0.75
1:A:79:ARG:HH11	1:A:82:ARG:HH21	1.35	0.75
24:Y:145:ASP:OD2	24:Y:190:ARG:NH2	2.18	0.75
1:A:163:ARG:NH2	1:A:576:ASP:OD1	2.19	0.75
1:A:1407:ASP:OD1	1:A:1407:ASP:N	2.18	0.75
1:A:1892:PRO:HG2	1:A:1940:LEU:HB2	1.67	0.75
26:1:793:LYS:HE2	26:1:839:GLU:HG3	1.67	0.75
1:A:171:ASP:OD1	1:A:521:ASN:ND2	2.17	0.75
3:C:154:HIS:HB3	3:C:156:GLU:HB3	1.67	0.75
23:X:620:GLU:OE1	23:X:696:LYS:NZ	2.19	0.75
1:A:531:THR:OG1	1:A:534:GLU:OE1	2.04	0.75
27:3:463:ARG:HB2	27:3:510:LEU:HD13	1.66	0.75
5:E:90:ILE:HD12	5:E:105:LEU:HD22	1.68	0.75
12:L:701:GLY:O	12:L:705:THR:N	2.17	0.75
26:1:838:VAL:HG13	26:1:875:ILE:HG12	1.67	0.75
27:3:89:ILE:HD12	27:3:103:HIS:HB2	1.67	0.75
27:3:902:ASP:OD1	27:3:902:ASP:N	2.19	0.75
27:3:1026:ASP:OD1	27:3:1026:ASP:N	2.18	0.75
21:V:490:CYS:HB2	21:V:525:PHE:HE2	1.51	0.75
27:3:525:ARG:HG3	27:3:533:VAL:HG13	1.67	0.75
1:A:972:GLU:N	1:A:972:GLU:OE1	2.19	0.75
1:A:2272:MET:HG3	1:A:2296:LEU:HD22	1.69	0.75
21:V:589:GLU:O	21:V:593:TYR:HB2	1.86	0.75
23:X:819:PRO:CG	23:X:921:LEU:CD1	2.65	0.75
27:3:459:VAL:HG22	27:3:476:VAL:HA	1.68	0.75
27:3:969:VAL:HB	27:3:981:CYS:HB2	1.69	0.75
10:J:228:ARG:HG2	12:L:210:TYR:HB3	1.67	0.74
1:A:789:GLU:HB2	46:9:253:THR:HB	1.69	0.74
3:C:392:LEU:O	3:C:396:LEU:HB2	1.87	0.74
26:1:630:ARG:HE	26:1:670:GLN:CD	1.95	0.74
27:3:932:ASN:HB2	27:3:936:LYS:HE3	1.69	0.74
29:w:421:ALA:HA	29:w:424:ARG:HE	1.53	0.74
1:A:366:LYS:HE3	21:V:324:HIS:HA	1.69	0.74
1:A:532:THR:OG1	7:G:3:A:OP1	2.05	0.74
7:G:112:U:H5	23:X:506:LEU:HD12	1.49	0.74
23:X:164:TRP:HB2	23:X:538:ASP:HB3	1.70	0.74
1:A:1201:ARG:O	1:A:1203:SER:N	2.20	0.74
3:C:177:ARG:NH2	3:C:638:ASP:OD2	2.20	0.74
8:H:181:G:N2	40:l:52:ASP:O	2.19	0.74
23:X:822:PRO:HA	23:X:825:SER:OG	1.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Y:12:VAL:HG22	24:Y:132:GLY:HA3	1.68	0.74
30:2:491:LEU:O	30:2:494:THR:OG1	2.06	0.74
7:G:115:C:H3'	7:G:116:C:H4'	1.70	0.74
27:3:511:LEU:HD23	27:3:512:GLY:H	1.52	0.74
1:A:762:ARG:HH12	15:P:226:LYS:HZ1	1.33	0.74
6:F:91:A:H2'	6:F:92:A:C8	2.22	0.74
46:9:390:LEU:HD22	46:9:393:LYS:HE2	1.68	0.74
1:A:402:ILE:HG21	3:C:268:LYS:HE3	1.70	0.74
11:K:200:ASP:HB3	11:K:219:PHE:HD1	1.53	0.74
23:X:288:GLU:HA	23:X:291:LYS:HD3	1.70	0.74
23:X:815:MET:HG3	23:X:825:SER:HB3	1.70	0.74
1:A:419:ARG:NH2	1:A:423:ASP:O	2.20	0.74
8:H:12:G:O2'	8:H:13:C:O4'	2.05	0.74
22:W:555:GLY:O	22:W:568:THR:HA	1.87	0.74
23:X:164:TRP:HE1	23:X:539:VAL:HG22	1.52	0.74
23:X:167:THR:HG23	23:X:771:GLY:HA3	1.68	0.74
23:X:850:ASN:O	23:X:852:SER:N	2.21	0.74
29:w:480:GLU:HA	29:w:486:VAL:HA	1.70	0.74
35:v:90:ALA:HA	35:v:94:PRO:HD2	1.70	0.74
1:A:1784:ASN:HD21	1:A:1894:GLN:HB2	1.51	0.73
3:C:277:LYS:HD2	3:C:865:GLY:HA3	1.70	0.73
3:C:349:PHE:HE1	3:C:354:ARG:HA	1.53	0.73
6:F:90:G:H2'	6:F:91:A:C8	2.22	0.73
6:F:42:C:H2'	6:F:43:A:O4'	1.88	0.73
27:3:206:GLN:HG3	27:3:231:HIS:HD2	1.52	0.73
46:9:298:ASP:N	46:9:298:ASP:OD1	2.19	0.73
3:C:262:ARG:NH2	3:C:266:GLU:OE2	2.21	0.73
16:Q:515:VAL:N	16:Q:540:THR:O	2.21	0.73
23:X:506:LEU:HD21	23:X:770:LEU:HD21	1.70	0.73
27:3:228:LEU:HD12	27:3:229:GLU:H	1.52	0.73
5:E:172:ASP:HA	5:E:195:GLN:HB3	1.70	0.73
8:H:43:U:O2'	8:H:44:U:O5'	2.04	0.73
21:V:616:LEU:HB2	21:V:643:LEU:HD12	1.71	0.73
35:v:37:THR:O	35:v:41:ASN:ND2	2.19	0.73
3:C:476:CYS:HB2	3:C:565:ILE:HB	1.71	0.73
32:7:73:LYS:O	32:7:77:ILE:HG13	1.88	0.73
1:A:498:ARG:O	1:A:502:ASN:ND2	2.21	0.73
1:A:1778:TRP:HH2	1:A:1852:LEU:HD21	1.52	0.73
7:G:111:U:H5	23:X:820:VAL:H	1.35	0.73
23:X:706:MET:HE2	23:X:991:LEU:HB3	1.71	0.73
1:A:1638:ASN:HA	1:A:1655:THR:O	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:183:SER:HB3	3:C:205:THR:HA	1.70	0.73
10:J:414:HIS:HA	10:J:417:VAL:HG22	1.71	0.73
15:P:186:ARG:HB2	15:P:186:ARG:HH11	1.53	0.73
17:R:161:ALA:HA	17:R:166:ARG:HH22	1.52	0.73
27:3:565:TYR:HE1	27:3:619:LEU:HB2	1.54	0.73
15:P:185:LYS:O	24:Y:49:PHE:CE1	2.42	0.73
21:V:622:ARG:HA	21:V:625:ARG:HH21	1.54	0.73
27:3:412:ILE:H	27:3:1105:GLN:HE22	1.34	0.73
5:E:87:ASP:N	5:E:87:ASP:OD1	2.19	0.73
23:X:715:SER:OG	23:X:749:GLU:O	2.07	0.73
27:3:325:ILE:N	27:3:375:SER:OG	2.20	0.73
27:3:487:ILE:HA	27:3:491:VAL:HG13	1.69	0.73
27:3:1040:ASP:OD2	27:3:1043:THR:N	2.20	0.73
30:2:526:ASP:OD1	30:2:526:ASP:N	2.17	0.73
32:7:21:ARG:NH1	32:7:68:ASP:OD1	2.21	0.73
19:T:349:SER:OG	19:T:350:HIS:N	2.17	0.73
1:A:1771:LEU:HD21	1:A:1779:PHE:HZ	1.54	0.72
1:A:2080:ALA:HA	1:A:2083:LEU:HG	1.70	0.72
3:C:131:ASN:HD22	3:C:495:ARG:HH22	1.36	0.72
15:P:208:LYS:O	15:P:208:LYS:NZ	2.20	0.72
23:X:815:MET:HG2	23:X:825:SER:HB2	1.70	0.72
3:C:132:VAL:HG11	3:C:226:VAL:HG23	1.70	0.72
37:h:73:MET:HA	37:h:92:LYS:O	1.89	0.72
15:P:184:VAL:HG23	24:Y:123:HIS:HE1	1.49	0.72
27:3:581:LYS:HD2	27:3:625:LEU:HD22	1.71	0.72
6:F:30:A:H61	7:G:16:G:H1'	1.53	0.72
24:Y:251:THR:OG1	24:Y:307:ASP:OD2	2.08	0.72
27:3:208:LEU:HD13	27:3:250:ILE:HD11	1.71	0.72
1:A:784:LEU:O	1:A:788:GLN:HG3	1.89	0.72
12:L:188:ARG:HA	12:L:191:LEU:HB2	1.71	0.72
1:A:1160:ARG:HD3	15:P:192:VAL:HG21	1.72	0.72
1:A:2068:SER:HB3	1:A:2072:GLU:HB3	1.69	0.72
3:C:496:VAL:HB	3:C:546:ALA:HA	1.71	0.72
1:A:428:LYS:NZ	2:B:27:U:OP2	2.23	0.72
1:A:1713:SER:OG	1:A:1714:ALA:N	2.21	0.72
19:T:201:SER:OG	19:T:455:GLN:NE2	2.23	0.72
1:A:119:LEU:HD11	1:A:482:PHE:HB3	1.72	0.72
1:A:979:SER:HB3	1:A:1173:SER:HB2	1.70	0.72
1:A:1104:ASP:OD1	1:A:1104:ASP:N	2.22	0.72
3:C:313:GLN:O	3:C:417:ARG:NE	2.22	0.72
7:G:111:U:C5	23:X:819:PRO:HA	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1:553:VAL:HA	26:1:556:ILE:HG22	1.72	0.72
26:1:600:LEU:O	26:1:604:ALA:HB2	1.90	0.72
37:h:108:VAL:HA	38:i:64:ILE:HA	1.72	0.72
1:A:51:PHE:HB3	5:E:88:ARG:HH11	1.55	0.71
1:A:64:GLU:N	1:A:64:GLU:OE1	2.22	0.71
1:A:835:ASP:N	1:A:835:ASP:OD1	2.19	0.71
3:C:642:HIS:O	3:C:646:LYS:HB2	1.90	0.71
8:H:43:U:H2'	8:H:44:U:C6	2.25	0.71
26:1:717:THR:HB	26:1:718:PRO:HD3	1.72	0.71
26:1:1299:GLU:HA	26:1:1302:TYR:HE2	1.55	0.71
5:E:153:PHE:HB2	5:E:172:ASP:HB2	1.72	0.71
7:G:110:U:H5"	23:X:455:ARG:HG3	1.72	0.71
1:A:658:ARG:NH1	6:F:67:G:OP2	2.24	0.71
15:P:212:ASN:ND2	19:T:458:SER:OG	2.23	0.71
23:X:760:LEU:HD12	23:X:760:LEU:N	2.05	0.71
24:Y:40:CYS:O	24:Y:155:ARG:HA	1.90	0.71
26:1:802:GLU:HB2	26:1:805:TYR:H	1.55	0.71
26:1:876:MET:HE3	26:1:920:ALA:HB3	1.72	0.71
46:9:300:THR:HA	46:9:353:GLU:HG2	1.72	0.71
17:R:367:ARG:HD3	17:R:371:ARG:HD2	1.71	0.71
22:W:291:VAL:HA	22:W:308:SER:HA	1.71	0.71
24:Y:71:TYR:O	24:Y:74:GLN:NE2	2.23	0.71
24:Y:122:VAL:HB	24:Y:123:HIS:HD2	1.55	0.71
27:3:487:ILE:HG13	27:3:491:VAL:HG22	1.73	0.71
1:A:1558:THR:OG1	1:A:1559:GLY:N	2.20	0.71
10:J:350:ILE:HD11	10:J:365:ILE:HB	1.72	0.71
17:R:371:ARG:HH12	24:Y:282:CYS:HB2	1.55	0.71
23:X:232:ARG:HA	23:X:235:LEU:HG	1.73	0.71
23:X:991:LEU:HA	23:X:995:GLU:HA	1.72	0.71
26:1:528:ALA:HA	26:1:531:LEU:HB2	1.72	0.71
27:3:642:ILE:O	27:3:703:ARG:NE	2.24	0.71
7:G:111:U:OP2	23:X:482:ARG:HB2	1.91	0.71
8:H:53:U:OP1	30:2:450:SER:OG	2.05	0.71
23:X:646:PRO:HA	23:X:672:VAL:HG12	1.71	0.71
1:A:135:VAL:O	1:A:418:THR:OG1	2.08	0.71
6:F:86:U:N3	8:H:12:G:O6	2.23	0.71
16:Q:875:HIS:HA	16:Q:1032:ALA:HA	1.72	0.71
17:R:163:MET:O	17:R:165:VAL:N	2.23	0.71
17:R:373:ALA:HB3	17:R:376:LYS:HB2	1.71	0.71
27:3:22:PHE:O	27:3:75:LYS:NZ	2.19	0.71
1:A:1640:SER:OG	1:A:1641:ARG:N	2.21	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:107:U:OP1	23:X:696:LYS:NZ	2.19	0.71
16:Q:971:HIS:O	16:Q:975:ALA:HB2	1.90	0.71
23:X:774:ASP:CG	23:X:777:HIS:HD1	1.99	0.71
23:X:846:MET:HG3	23:X:881:LEU:HB3	1.71	0.71
23:X:862:VAL:O	23:X:866:ASN:ND2	2.24	0.71
26:1:503:LYS:HE2	26:1:511:MET:HG2	1.72	0.71
33:5:62:ALA:HA	33:5:65:ARG:HH12	1.55	0.71
19:T:471:ASP:OD2	19:T:472:GLN:N	2.23	0.71
41:k:19:LEU:O	41:k:26:HIS:HA	1.90	0.71
3:C:711:ARG:NH2	3:C:732:ILE:O	2.23	0.71
26:1:1108:ASN:O	26:1:1112:THR:HG22	1.91	0.71
1:A:658:ARG:NH2	6:F:65:G:OP2	2.23	0.70
1:A:1835:GLN:HA	1:A:1838:LYS:HG3	1.72	0.70
26:1:1273:TYR:OH	33:5:38:ASP:OD2	2.09	0.70
16:Q:536:ARG:HA	16:Q:627:VAL:O	1.91	0.70
23:X:257:PHE:HA	23:X:262:LEU:HD21	1.73	0.70
23:X:772:ILE:HG21	23:X:775:LEU:HD23	1.73	0.70
27:3:1048:ASP:OD1	27:3:1049:LYS:N	2.24	0.70
1:A:1132:LYS:HG3	1:A:1139:ARG:HH21	1.55	0.70
6:F:81:C:H1'	6:F:82:A:C5	2.25	0.70
27:3:384:THR:OG1	27:3:385:PHE:O	2.08	0.70
27:3:565:TYR:HB3	27:3:577:TYR:HB3	1.72	0.70
12:L:632:ALA:O	12:L:636:LEU:N	2.24	0.70
19:T:371:HIS:NE2	19:T:389:SER:OG	2.23	0.70
23:X:246:LEU:HG	23:X:277:ARG:HE	1.56	0.70
46:9:143:ASP:N	46:9:148:GLU:O	2.23	0.70
1:A:1618:LYS:NZ	1:A:1663:ASP:OD1	2.24	0.70
3:C:394:ARG:NH1	3:C:395:THR:OG1	2.25	0.70
26:1:586:ASP:OD1	26:1:589:ALA:N	2.24	0.70
29:w:422:PHE:O	29:w:425:HIS:ND1	2.20	0.70
1:A:31:GLN:OE1	5:E:194:TYR:OH	2.08	0.70
1:A:1130:ASN:OD1	1:A:1130:ASN:N	2.22	0.70
3:C:117:ASP:OD1	3:C:117:ASP:N	2.14	0.70
3:C:713:LYS:HA	3:C:716:GLU:CD	2.15	0.70
3:C:818:SER:O	3:C:822:MET:HB2	1.91	0.70
6:F:48:A:O3'	12:L:33:ARG:NH1	2.24	0.70
8:H:28:C:O2'	8:H:29:A:N3	2.25	0.70
19:T:342:GLU:OE1	19:T:365:ARG:NH1	2.20	0.70
23:X:785:PRO:O	23:X:788:THR:OG1	2.09	0.70
26:1:582:LEU:HG	26:1:634:VAL:HG21	1.72	0.70
32:7:71:TYR:CE2	32:7:81:ASP:HB2	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1070:ASP:OD1	1:A:1070:ASP:N	2.25	0.70
13:N:107:GLN:OE1	13:N:109:ARG:NH1	2.25	0.70
15:P:205:LYS:HB2	15:P:208:LYS:HB3	1.73	0.70
23:X:423:GLU:O	23:X:426:SER:OG	2.08	0.70
23:X:701:ASN:ND2	23:X:704:THR:OG1	2.24	0.70
40:l:62:TYR:N	41:k:70:LEU:O	2.22	0.70
2:B:12:U:O2	2:B:65:G:N2	2.19	0.70
19:T:455:GLN:HG2	19:T:456:PRO:HD2	1.74	0.70
24:Y:6:GLU:O	24:Y:157:ASN:N	2.24	0.70
3:C:854:ARG:NH1	3:C:879:ASP:OD2	2.25	0.70
6:F:38:G:OP1	6:F:38:G:H8	1.74	0.70
6:F:46:G:O3'	12:L:166:LYS:NZ	2.23	0.70
13:N:120:ARG:O	13:N:143:SER:OG	2.09	0.70
26:1:699:GLN:HE22	26:1:738:HIS:HE1	1.40	0.70
1:A:1181:ASP:OD1	1:A:1181:ASP:N	2.24	0.69
23:X:839:GLU:N	23:X:839:GLU:OE2	2.22	0.69
26:1:1181:ASP:OD1	26:1:1182:LEU:N	2.24	0.69
27:3:1182:PHE:O	27:3:1190:GLN:NE2	2.24	0.69
3:C:667:VAL:HG22	3:C:824:THR:HG21	1.74	0.69
6:F:41:A:H2'	6:F:42:C:C6	2.28	0.69
26:1:612:THR:HB	26:1:613:MET:HE2	1.73	0.69
1:A:494:LEU:HD21	1:A:562:VAL:HG21	1.74	0.69
1:A:857:ASN:ND2	1:A:860:GLN:OE1	2.25	0.69
1:A:1146:ASP:OD2	1:A:1182:ASN:ND2	2.25	0.69
7:G:98:U:OP2	26:1:1106:ARG:NH2	2.25	0.69
23:X:695:CYS:HB3	23:X:722:ARG:HH22	1.58	0.69
23:X:765:LEU:HD11	23:X:816:ALA:HB2	1.74	0.69
35:v:75:GLY:HA2	35:v:78:HIS:HB3	1.74	0.69
11:K:223:ARG:NH2	26:1:1054:GLU:OE2	2.25	0.69
23:X:225:GLU:HA	23:X:228:LYS:HG2	1.73	0.69
27:3:1194:SER:OG	27:3:1199:ARG:O	2.10	0.69
1:A:1838:LYS:HD3	1:A:1868:MET:HG3	1.73	0.69
2:B:66:A:H2'	2:B:67:A:C8	2.27	0.69
5:E:274:VAL:HG12	5:E:275:LYS:HG3	1.74	0.69
23:X:698:LYS:HZ1	23:X:758:THR:HA	1.58	0.69
1:A:105:ASN:O	1:A:489:TRP:NE1	2.26	0.69
1:A:1427:ARG:NE	23:X:326:GLN:OE1	2.17	0.69
3:C:933:PHE:O	3:C:937:THR:OG1	2.07	0.69
17:R:382:ARG:HH21	17:R:385:ASN:HD22	1.40	0.69
27:3:833:GLU:O	27:3:836:ALA:N	2.23	0.69
36:o:116:THR:HA	36:o:142:VAL:HA	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:106:C:OP2	23:X:998:ARG:NH2	2.26	0.69
27:3:328:LYS:NZ	27:3:370:GLU:OE2	2.26	0.69
32:7:46:CYS:H	32:7:85:CYS:HB2	1.58	0.69
3:C:509:VAL:O	3:C:522:SER:OG	2.07	0.69
5:E:158:TYR:CE1	5:E:200:THR:HG22	2.28	0.69
6:F:36:A:C3'	6:F:37:C:H5"	2.21	0.69
6:F:81:C:H1'	6:F:82:A:C4	2.27	0.69
18:S:83:GLU:HA	18:S:106:ASP:HA	1.74	0.69
23:X:226:LEU:HD22	24:Y:315:PHE:HE2	1.56	0.69
23:X:554:THR:HG22	23:X:555:MET:H	1.58	0.69
24:Y:30:LYS:HE3	24:Y:168:ASP:HA	1.74	0.69
26:1:621:ASP:HB3	26:1:624:VAL:HG22	1.75	0.69
26:1:680:LEU:HA	26:1:683:LEU:HB2	1.75	0.69
26:1:948:ARG:NH2	26:1:984:GLU:OE2	2.25	0.69
30:2:675:VAL:HA	30:2:681:PRO:HA	1.73	0.69
40:l:49:THR:HA	40:l:55:VAL:HA	1.74	0.69
3:C:495:ARG:HB2	3:C:495:ARG:HH11	1.58	0.69
7:G:92:U:O2'	35:v:65:ASN:ND2	2.26	0.69
19:T:188:PRO:HB3	19:T:443:THR:HG21	1.74	0.69
19:T:423:SER:OG	19:T:424:ASP:OD1	2.09	0.69
23:X:1009:LEU:HD23	23:X:1021:LEU:HD11	1.73	0.69
26:1:1252:GLN:NE2	30:2:497:SER:OG	2.26	0.69
26:1:1262:ARG:NH1	33:5:24:ALA:O	2.18	0.69
33:5:62:ALA:HA	33:5:65:ARG:NH1	2.07	0.69
1:A:2289:ASP:HB2	1:A:2292:MET:HB3	1.73	0.69
14:O:165:CYS:O	14:O:168:TRP:N	2.26	0.69
4:D:913:ALA:N	4:D:977:GLY:O	2.23	0.68
23:X:516:VAL:HG22	23:X:547:LYS:HB2	1.75	0.68
23:X:654:ASP:OD1	23:X:654:ASP:N	2.25	0.68
1:A:1676:ILE:HD12	1:A:1706:ASP:HB2	1.74	0.68
3:C:188:VAL:HG23	3:C:190:LEU:HD11	1.75	0.68
5:E:209:ILE:HG21	5:E:250:LEU:HD11	1.75	0.68
10:J:285:MET:O	10:J:289:ASN:ND2	2.26	0.68
24:Y:53:THR:OG1	24:Y:54:GLY:N	2.24	0.68
27:3:745:PHE:HB2	27:3:755:VAL:HG23	1.75	0.68
27:3:968:ARG:HB2	27:3:970:TYR:HE2	1.57	0.68
32:7:37:VAL:HB	32:7:38:ARG:HG3	1.75	0.68
38:i:33:LEU:HA	38:i:44:LEU:HA	1.73	0.68
3:C:604:LEU:HA	3:C:607:LEU:HG	1.74	0.68
4:D:971:LYS:O	4:D:980:GLN:N	2.26	0.68
5:E:202:ASN:ND2	5:E:204:THR:OG1	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:822:PRO:O	23:X:826:LYS:N	2.23	0.68
26:1:734:GLY:O	26:1:738:HIS:CB	2.40	0.68
3:C:737:PRO:HD2	3:C:741:GLY:HA3	1.74	0.68
5:E:202:ASN:ND2	5:E:207:GLN:OE1	2.26	0.68
23:X:422:GLY:O	23:X:428:LYS:NZ	2.22	0.68
35:v:88:LYS:HA	35:v:91:LYS:HE2	1.74	0.68
1:A:1516:LYS:H	1:A:1516:LYS:HD3	1.57	0.68
1:A:1807:ILE:HD11	1:A:1841:THR:HG22	1.74	0.68
5:E:188:GLN:NE2	5:E:189:THR:H	1.91	0.68
6:F:26:U:H5'	6:F:27:A:H8	1.59	0.68
23:X:595:CYS:O	23:X:598:SER:OG	2.12	0.68
27:3:981:CYS:SG	27:3:1019:ASN:ND2	2.66	0.68
1:A:1866:LYS:HG3	1:A:1886:GLY:HA3	1.76	0.68
1:A:2105:ILE:HB	1:A:2141:GLU:HG3	1.76	0.68
6:F:30:A:H2'	6:F:31:U:O4'	1.94	0.68
8:H:173:C:H2'	8:H:174:A:C8	2.28	0.68
23:X:387:GLN:NE2	23:X:390:GLU:OE2	2.26	0.68
23:X:659:ILE:O	23:X:669:LYS:NZ	2.27	0.68
27:3:449:VAL:HG13	27:3:763:ARG:HG2	1.76	0.68
27:3:485:LEU:HD23	27:3:491:VAL:HG12	1.76	0.68
27:3:775:ASN:HD22	27:3:775:ASN:H	1.40	0.68
1:A:57:GLN:O	13:N:107:GLN:NE2	2.24	0.68
22:W:432:ARG:HA	22:W:446:GLU:HA	1.74	0.68
26:1:498:MET:HE1	26:1:530:PRO:HB2	1.76	0.68
27:3:812:LYS:HD2	27:3:856:LYS:HE3	1.74	0.68
1:A:2235:TYR:OH	1:A:2239:ARG:NH2	2.24	0.68
23:X:845:ALA:HB2	23:X:915:ARG:HB2	1.76	0.68
27:3:867:ARG:HD2	27:3:869:MET:HE3	1.76	0.68
1:A:296:PHE:HZ	3:C:593:GLU:HB2	1.59	0.68
10:J:330:ARG:NE	10:J:353:GLU:OE2	2.25	0.68
27:3:427:CYS:SG	27:3:428:GLY:N	2.66	0.68
9:I:448:ASN:O	9:I:452:ALA:CB	2.42	0.67
16:Q:1028:LEU:HA	16:Q:1032:ALA:HB3	1.74	0.67
27:3:603:ARG:HG3	27:3:604:PHE:CE1	2.29	0.67
27:3:840:ALA:O	27:3:844:ASN:ND2	2.27	0.67
30:2:674:PRO:O	30:2:682:LEU:N	2.24	0.67
1:A:1719:PHE:HB2	1:A:1720:PRO:HD2	1.75	0.67
3:C:480:LYS:NZ	3:C:482:TYR:OH	2.26	0.67
22:W:535:TRP:HA	22:W:542:LEU:HA	1.76	0.67
1:A:1768:TYR:HA	1:A:1771:LEU:CB	2.23	0.67
7:G:111:U:C5	23:X:820:VAL:N	2.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1:1052:ALA:HA	26:1:1088:ILE:HD11	1.75	0.67
26:1:1276:SER:O	26:1:1276:SER:OG	2.07	0.67
1:A:1735:LYS:NZ	1:A:1763:LEU:O	2.28	0.67
17:R:325:ARG:HH11	24:Y:222:ILE:HG23	1.59	0.67
21:V:609:GLN:HE22	21:V:616:LEU:HD21	1.58	0.67
27:3:700:LYS:HB3	27:3:702:PHE:CZ	2.30	0.67
5:E:209:ILE:HG12	5:E:219:VAL:HG22	1.75	0.67
26:1:732:TRP:NE1	26:1:768:GLU:OE2	2.27	0.67
27:3:147:ASP:OD1	27:3:151:ARG:N	2.28	0.67
1:A:1782:ASP:OD2	1:A:1782:ASP:N	2.28	0.67
3:C:221:ILE:HD13	3:C:493:PHE:HE1	1.59	0.67
12:L:89:ILE:HD11	12:L:96:CYS:SG	2.34	0.67
23:X:808:LEU:HD23	23:X:813:ARG:HD3	1.75	0.67
29:w:473:PRO:O	29:w:477:GLU:HB3	1.95	0.67
1:A:1792:LYS:HA	1:A:1798:LEU:HA	1.75	0.67
5:E:122:SER:HB3	5:E:123:MET:HE2	1.77	0.67
21:V:636:LEU:HB3	21:V:639:LEU:HD12	1.77	0.67
24:Y:42:ILE:HB	24:Y:154:ILE:HD12	1.76	0.67
27:3:697:ARG:NH2	27:3:717:SER:OG	2.28	0.67
46:9:323:ARG:HB3	46:9:331:GLN:HB3	1.76	0.67
1:A:875:HIS:CE1	23:X:866:ASN:HB3	2.29	0.67
1:A:1622:MET:O	1:A:1687:TYR:OH	2.12	0.67
27:3:39:GLU:OE2	27:3:55:THR:OG1	2.12	0.67
27:3:434:SER:OG	27:3:436:ARG:NE	2.25	0.67
27:3:926:TYR:HB3	27:3:928:TYR:HE2	1.60	0.67
16:Q:517:PHE:HA	16:Q:538:ASP:O	1.94	0.67
46:9:416:ASP:O	46:9:420:ASP:N	2.28	0.67
1:A:384:VAL:HG12	3:C:331:PHE:HB3	1.76	0.67
1:A:2093:SER:OG	1:A:2095:ASP:OD2	2.11	0.67
27:3:499:PHE:HZ	27:3:516:LEU:HD22	1.57	0.67
27:3:665:LEU:HD11	27:3:667:ILE:HG13	1.77	0.67
27:3:876:THR:O	27:3:876:THR:OG1	2.12	0.67
27:3:1160:HIS:NE2	27:3:1175:ASP:OD2	2.20	0.67
1:A:142:SER:HA	1:A:242:ALA:HB2	1.76	0.66
1:A:2123:GLN:HB3	1:A:2157:VAL:HB	1.78	0.66
1:A:2263:LEU:HD23	1:A:2263:LEU:H	1.59	0.66
19:T:336:VAL:HG23	19:T:347:THR:HG22	1.77	0.66
43:n:23:THR:HA	43:n:47:LEU:HA	1.77	0.66
3:C:80:ILE:HD11	19:T:198:ARG:HD3	1.77	0.66
3:C:144:CYS:SG	3:C:312:SER:OG	2.52	0.66
5:E:312:TRP:HD1	5:E:319:ILE:HA	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:110:U:OP1	23:X:455:ARG:HG3	1.95	0.66
12:L:79:PRO:O	12:L:80:THR:OG1	2.13	0.66
23:X:957:SER:OG	23:X:960:ARG:NH2	2.28	0.66
27:3:521:PRO:O	27:3:543:THR:OG1	2.12	0.66
46:9:142:ARG:HA	46:9:149:PRO:HA	1.77	0.66
3:C:453:TYR:CE1	3:C:465:MET:HE1	2.30	0.66
8:H:125:G:H2'	8:H:126:A:C8	2.30	0.66
27:3:288:VAL:HG23	27:3:289:CYS:H	1.59	0.66
1:A:37:TRP:NE1	1:A:41:GLN:OE1	2.27	0.66
1:A:762:ARG:HH22	15:P:226:LYS:HZ3	1.44	0.66
1:A:1764:SER:O	1:A:1766:GLN:N	2.29	0.66
3:C:774:THR:HG22	3:C:784:ILE:HD11	1.78	0.66
23:X:276:VAL:HG13	24:Y:227:VAL:HG12	1.78	0.66
13:N:38:GLU:C	13:N:40:LYS:H	2.02	0.66
21:V:604:LYS:HZ2	21:V:639:LEU:HD23	1.60	0.66
23:X:592:LEU:HD12	23:X:593:GLU:H	1.61	0.66
1:A:1878:ASP:OD1	1:A:1878:ASP:N	2.21	0.66
3:C:146:VAL:O	3:C:150:ILE:HG13	1.94	0.66
3:C:887:LEU:O	3:C:891:THR:HG22	1.95	0.66
5:E:146:ARG:HD2	5:E:148:LYS:HE2	1.76	0.66
10:J:434:VAL:O	10:J:438:TYR:HB3	1.96	0.66
19:T:203:HIS:CE1	19:T:229:LYS:HG3	2.29	0.66
27:3:215:LEU:H	27:3:215:LEU:HD12	1.59	0.66
27:3:680:ASP:CG	27:3:681:PRO:HD2	2.21	0.66
27:3:705:ARG:HA	27:3:710:GLU:HA	1.76	0.66
27:3:983:ASN:ND2	27:3:1021:LEU:O	2.25	0.66
1:A:1780:VAL:HB	1:A:1863:VAL:HG23	1.77	0.66
5:E:135:VAL:HG21	5:E:181:ILE:HD13	1.77	0.66
7:G:111:U:O4	23:X:820:VAL:CA	2.41	0.66
12:L:73:HIS:HD2	46:9:220:ILE:HB	1.60	0.66
26:1:923:LYS:HG2	26:1:926:LYS:HE3	1.78	0.66
27:3:169:HIS:HD2	27:3:170:VAL:H	1.44	0.66
27:3:1188:ASN:OD1	27:3:1189:LYS:N	2.28	0.66
3:C:137:HIS:ND1	3:C:236:MET:HE2	2.10	0.66
4:D:2065:TRP:O	4:D:2108:PHE:HA	1.95	0.66
4:D:2098:ALA:O	4:D:2100:GLY:N	2.29	0.66
21:V:494:LEU:HD23	21:V:550:MET:HE1	1.76	0.66
24:Y:244:VAL:HG12	24:Y:247:LEU:HD21	1.77	0.66
26:1:770:MET:HE1	26:1:795:CYS:SG	2.36	0.66
41:f:40:LEU:O	41:f:62:ILE:N	2.27	0.66
46:9:286:THR:HG22	46:9:428:ILE:HD13	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1790:ILE:HG23	1:A:1800:THR:HB	1.77	0.66
2:B:63:A:H2'	2:B:64:G:C8	2.31	0.66
3:C:515:THR:HG22	3:C:518:ASP:HB2	1.77	0.66
3:C:778:PRO:HB2	3:C:821:LEU:HD21	1.78	0.66
5:E:75:HIS:HB3	5:E:78:GLY:H	1.60	0.66
5:E:135:VAL:O	5:E:144:VAL:N	2.28	0.66
24:Y:183:ARG:HA	24:Y:183:ARG:HE	1.61	0.66
27:3:185:LEU:HG	27:3:235:LEU:HD11	1.77	0.66
27:3:206:GLN:HG3	27:3:231:HIS:CD2	2.31	0.66
27:3:1009:PHE:HE1	27:3:1036:ALA:HB2	1.61	0.66
1:A:2076:ARG:NH1	1:A:2305:TYR:OH	2.29	0.66
7:G:112:U:H5	23:X:506:LEU:CD1	2.08	0.66
12:L:696:LEU:O	12:L:700:ARG:N	2.26	0.66
24:Y:17:TYR:HB3	24:Y:20:GLU:HG3	1.78	0.66
26:1:758:ASP:O	26:1:762:ALA:N	2.15	0.66
26:1:796:CYS:HA	26:1:801:VAL:HG11	1.78	0.66
26:1:862:GLU:OE1	26:1:904:THR:OG1	2.14	0.66
1:A:2001:SER:HA	26:1:855:ASP:HB3	1.77	0.65
13:N:29:MET:HB2	13:N:52:ILE:HG21	1.78	0.65
14:O:36:MET:HA	14:O:56:ARG:O	1.96	0.65
26:1:1299:GLU:HA	26:1:1302:TYR:CE2	2.30	0.65
27:3:191:GLU:HA	27:3:194:ASN:HD22	1.59	0.65
27:3:586:ASP:HB3	27:3:610:VAL:HB	1.77	0.65
27:3:777:VAL:HG22	27:3:779:PHE:HE1	1.61	0.65
26:1:694:LEU:HD12	26:1:694:LEU:H	1.59	0.65
27:3:169:HIS:ND1	27:3:234:PHE:HB2	2.10	0.65
27:3:620:ASP:N	27:3:620:ASP:OD1	2.27	0.65
1:A:2207:ASP:HB2	1:A:2210:LYS:HD2	1.79	0.65
7:G:99:C:N4	8:H:32:U:N3	2.25	0.65
26:1:712:LEU:O	26:1:716:ALA:HB3	1.97	0.65
27:3:511:LEU:HD21	27:3:517:VAL:HG23	1.78	0.65
27:3:1117:LEU:O	27:3:1128:ILE:HA	1.96	0.65
22:W:179:LYS:O	22:W:200:VAL:N	2.28	0.65
32:7:26:CYS:SG	32:7:61:CYS:HB2	2.36	0.65
46:9:341:GLY:O	46:9:379:GLN:NE2	2.28	0.65
8:H:12:G:H2'	8:H:13:C:C6	2.31	0.65
10:J:300:ASP:O	10:J:304:THR:OG1	2.15	0.65
15:P:184:VAL:HG21	24:Y:123:HIS:CE1	2.26	0.65
35:v:85:ARG:HA	35:v:85:ARG:NH1	2.11	0.65
1:A:139:VAL:O	1:A:143:GLN:HG3	1.97	0.65
1:A:325:HIS:HD2	1:A:326:HIS:CD2	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:140:HIS:CD2	3:C:230:ASP:HB2	2.32	0.65
5:E:321:TYR:HB3	5:E:323:LEU:HG	1.79	0.65
6:F:35:A:H8	7:G:12:G:C6	2.15	0.65
9:I:448:ASN:O	9:I:452:ALA:HB2	1.96	0.65
22:W:101:THR:O	22:W:104:MET:N	2.30	0.65
23:X:822:PRO:O	23:X:825:SER:N	2.29	0.65
26:1:696:ASP:O	26:1:702:ARG:NH1	2.29	0.65
29:w:387:TRP:HE3	35:v:88:LYS:HD2	1.61	0.65
30:2:476:GLU:HG2	30:2:477:MET:H	1.61	0.65
46:9:118:ALA:O	46:9:155:ILE:HA	1.96	0.65
1:A:176:LEU:H	1:A:176:LEU:HD23	1.61	0.65
12:L:636:LEU:O	12:L:640:MET:N	2.26	0.65
23:X:850:ASN:O	23:X:853:ILE:HG13	1.97	0.65
26:1:662:HIS:CE1	26:1:700:LYS:HB3	2.32	0.65
29:w:460:ALA:O	29:w:464:LEU:HG	1.97	0.65
1:A:850:TYR:OH	1:A:863:GLU:OE1	2.13	0.65
40:l:27:VAL:O	40:l:48:VAL:HA	1.96	0.65
24:Y:39:TYR:N	24:Y:156:ILE:O	2.29	0.65
27:3:911:LYS:HB3	27:3:922:GLY:O	1.96	0.65
28:p:178:LYS:H	28:p:194:PHE:HA	1.62	0.65
1:A:138:PRO:O	1:A:142:SER:OG	2.14	0.64
1:A:2125:ALA:HB2	1:A:2157:VAL:HG11	1.79	0.64
1:A:2128:LEU:HD22	1:A:2142:ILE:HG21	1.79	0.64
3:C:709:TRP:HB3	3:C:713:LYS:HB2	1.78	0.64
3:C:759:LEU:HA	3:C:762:VAL:HG12	1.79	0.64
7:G:88:G:O2'	7:G:89:U:H5'	1.98	0.64
7:G:98:U:O4	8:H:33:G:N1	2.25	0.64
17:R:408:ASP:OD1	17:R:409:GLN:N	2.30	0.64
24:Y:87:LYS:NZ	24:Y:120:ASP:OD2	2.30	0.64
27:3:734:LEU:HD12	27:3:767:LEU:HD22	1.79	0.64
1:A:82:ARG:NH1	7:G:15:U:O4	2.29	0.64
1:A:248:ASP:OD1	1:A:248:ASP:N	2.27	0.64
5:E:153:PHE:O	5:E:172:ASP:N	2.30	0.64
8:H:119:G:H8	8:H:119:G:O5'	1.80	0.64
10:J:334:GLU:OE2	10:J:349:TYR:OH	2.11	0.64
26:1:1174:GLU:OE2	26:1:1210:HIS:NE2	2.26	0.64
46:9:360:HIS:HB2	46:9:387:CYS:O	1.97	0.64
5:E:260:ARG:HD3	5:E:276:ILE:HG12	1.79	0.64
12:L:630:LYS:O	12:L:634:ASP:N	2.29	0.64
14:O:232:THR:O	14:O:273:GLN:HA	1.97	0.64
27:3:121:LEU:HB2	27:3:132:ILE:HD12	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:857:ASN:OD1	1:A:860:GLN:N	2.24	0.64
1:A:1941:ARG:NH2	1:A:2012:LEU:O	2.23	0.64
1:A:2281:TYR:O	1:A:2284:MET:N	2.24	0.64
3:C:492:ALA:O	3:C:551:LEU:HA	1.97	0.64
26:1:662:HIS:CD2	26:1:704:ILE:HG21	2.33	0.64
27:3:1017:ASN:OD1	27:3:1018:GLU:N	2.31	0.64
1:A:60:ASP:OD1	1:A:60:ASP:N	2.30	0.64
1:A:1660:TYR:OH	1:A:1717:ASN:O	2.06	0.64
3:C:227:LEU:HD11	3:C:239:THR:HG22	1.80	0.64
3:C:925:PRO:HG2	3:C:928:HIS:CE1	2.33	0.64
6:F:60:C:H2'	10:J:236:ARG:HH21	1.62	0.64
19:T:223:SER:OG	19:T:225:ASP:OD2	2.09	0.64
23:X:483:PHE:CE1	23:X:917:GLN:HG3	2.32	0.64
27:3:1031:ARG:HG2	27:3:1031:ARG:HH11	1.63	0.64
5:E:174:GLY:HA2	5:E:194:TYR:C	2.23	0.64
9:I:406:GLU:HA	9:I:410:GLN:HA	1.79	0.64
19:T:351:ASP:O	19:T:352:THR:OG1	2.15	0.64
23:X:523:HIS:O	23:X:525:ARG:HG2	1.97	0.64
26:1:843:LYS:HB3	26:1:844:VAL:HG22	1.80	0.64
27:3:260:ASN:OD1	27:3:261:PHE:N	2.30	0.64
27:3:512:GLY:HA3	27:3:515:ALA:HB3	1.79	0.64
27:3:747:SER:N	27:3:750:CYS:O	2.31	0.64
5:E:105:LEU:HD11	5:E:136:TRP:CD2	2.32	0.64
12:L:757:LYS:O	12:L:761:SER:N	2.28	0.64
30:2:606:PRO:HA	31:4:35:GLN:HA	1.78	0.64
46:9:75:THR:HA	46:9:82:LYS:HA	1.79	0.64
3:C:223:ASP:OD1	3:C:495:ARG:NH2	2.31	0.64
26:1:568:ARG:NH1	26:1:605:GLY:H	1.96	0.64
1:A:1575:GLN:HB2	11:K:220:LEU:HD21	1.79	0.64
1:A:1581:LEU:HD22	1:A:1746:ARG:NH1	2.13	0.64
3:C:137:HIS:HB3	3:C:140:HIS:CE1	2.33	0.64
8:H:18:U:O2'	8:H:19:G:O5'	2.16	0.64
16:Q:700:ALA:O	16:Q:818:LEU:N	2.31	0.64
21:V:509:LEU:HG	21:V:553:HIS:HE1	1.62	0.64
23:X:171:ARG:O	23:X:174:ASP:HB3	1.98	0.64
26:1:1120:ALA:HB2	26:1:1128:VAL:HG21	1.80	0.64
30:2:469:VAL:HG12	30:2:471:ARG:H	1.62	0.64
2:B:12:U:H2'	2:B:13:C:C6	2.33	0.64
3:C:877:ALA:O	3:C:880:SER:OG	2.16	0.64
26:1:717:THR:O	26:1:719:TYR:N	2.30	0.64
27:3:568:MET:HA	27:3:574:LEU:HA	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:878:HIS:CE1	23:X:1001:LEU:HB2	2.33	0.63
26:1:859:ASP:O	26:1:865:ARG:NE	2.27	0.63
27:3:635:ALA:HB3	27:3:669:LEU:HD13	1.78	0.63
29:w:429:TRP:O	29:w:432:ALA:N	2.31	0.63
1:A:1544:ARG:NE	1:A:1672:ASP:OD2	2.31	0.63
3:C:286:ASN:HD21	3:C:300:LEU:H	1.44	0.63
23:X:715:SER:O	23:X:718:SER:OG	2.10	0.63
27:3:794:SER:O	27:3:796:ASN:ND2	2.31	0.63
27:3:1201:PRO:HA	27:3:1204:VAL:HG22	1.80	0.63
29:w:458:LEU:HD11	30:2:466:LYS:HB2	1.81	0.63
7:G:112:U:C4	23:X:503:ARG:NH2	2.64	0.63
27:3:1004:ASP:OD1	27:3:1006:GLN:N	2.28	0.63
32:7:10:PHE:HB3	32:7:12:ARG:HG2	1.79	0.63
40:l:61:VAL:HA	41:k:71:GLU:HA	1.80	0.63
1:A:2153:THR:HG22	1:A:2154:HIS:H	1.63	0.63
3:C:173:THR:O	3:C:177:ARG:HB2	1.98	0.63
23:X:625:CYS:HA	23:X:628:LEU:HD12	1.80	0.63
23:X:815:MET:CE	23:X:829:LEU:CD1	2.75	0.63
24:Y:62:GLY:O	24:Y:107:GLN:NE2	2.30	0.63
26:1:826:ASP:OD1	26:1:827:ARG:N	2.32	0.63
46:9:221:LEU:HA	46:9:224:THR:HB	1.80	0.63
1:A:1892:PRO:HG3	1:A:1941:ARG:HE	1.64	0.63
4:D:1583:ASP:O	4:D:1585:GLN:N	2.31	0.63
17:R:170:LYS:H	17:R:170:LYS:HD2	1.64	0.63
21:V:525:PHE:HB3	21:V:560:LEU:HD21	1.81	0.63
24:Y:230:LEU:HD13	24:Y:231:PRO:HD2	1.81	0.63
26:1:625:ARG:NH1	26:1:659:GLN:OE1	2.31	0.63
26:1:967:GLU:HG3	26:1:970:LEU:HB3	1.81	0.63
27:3:1010:ILE:HG12	27:3:1026:ASP:HB3	1.80	0.63
1:A:68:LYS:O	1:A:72:ASP:HB2	1.98	0.63
1:A:1553:VAL:HG22	11:K:194:ARG:HB3	1.80	0.63
1:A:2129:TYR:CD2	1:A:2172:MET:HE3	2.33	0.63
3:C:685:ILE:HD11	3:C:808:ILE:HD11	1.81	0.63
12:L:61:THR:OG1	12:L:62:GLU:N	2.32	0.63
23:X:937:ILE:HG22	23:X:941:LYS:HD2	1.81	0.63
26:1:699:GLN:HE22	26:1:738:HIS:CE1	2.15	0.63
27:3:233:ASN:ND2	27:3:233:ASN:H	1.95	0.63
35:v:58:LEU:HD23	35:v:78:HIS:CE1	2.34	0.63
1:A:988:ILE:HD12	1:A:1030:ILE:HD12	1.81	0.63
21:V:490:CYS:HB2	21:V:525:PHE:CE2	2.32	0.63
21:V:621:PRO:O	21:V:625:ARG:NE	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:7:39:PRO:HB2	32:7:70:TYR:HD1	1.63	0.63
37:h:107:ILE:O	38:i:65:ARG:N	2.29	0.63
46:9:211:LEU:O	46:9:215:PHE:HB3	1.99	0.63
1:A:615:ARG:O	1:A:618:THR:OG1	2.16	0.63
27:3:958:ARG:NH2	27:3:1014:TYR:OH	2.31	0.63
32:7:30:CYS:SG	32:7:31:VAL:N	2.72	0.63
32:7:52:GLY:H	32:7:55:GLN:HE21	1.47	0.63
41:k:28:GLN:O	41:k:45:CYS:HA	1.98	0.63
1:A:1681:ARG:NH1	1:A:1681:ARG:HB3	2.14	0.63
2:B:99:C:H2'	2:B:100:C:C6	2.33	0.63
18:S:17:GLU:HA	18:S:22:ILE:HA	1.79	0.63
23:X:276:VAL:HG22	24:Y:227:VAL:HA	1.79	0.63
23:X:784:PRO:HB2	23:X:788:THR:OG1	1.98	0.63
12:L:777:GLN:O	12:L:781:GLU:N	2.31	0.62
13:N:140:ARG:H	22:W:196:TRP:HA	1.64	0.62
23:X:615:LEU:HB2	23:X:621:ILE:HG13	1.81	0.62
27:3:884:GLN:NE2	27:3:884:GLN:O	2.32	0.62
27:3:1193:VAL:HA	27:3:1196:GLU:HG2	1.81	0.62
29:w:429:TRP:HB3	29:w:430:ARG:HH12	1.63	0.62
41:k:42:ILE:N	41:k:60:VAL:O	2.27	0.62
1:A:858:GLN:O	1:A:862:GLU:HG3	1.98	0.62
8:H:46:U:O2'	8:H:47:U:OP2	2.16	0.62
23:X:815:MET:SD	23:X:829:LEU:CD1	2.77	0.62
24:Y:244:VAL:HG22	24:Y:313:VAL:HG13	1.82	0.62
26:1:742:GLY:O	26:1:746:PHE:HB2	1.99	0.62
27:3:545:VAL:HG12	27:3:546:LYS:HG2	1.79	0.62
29:w:447:ALA:O	30:2:466:LYS:NZ	2.20	0.62
1:A:372:PRO:O	3:C:342:ARG:NH2	2.31	0.62
1:A:595:LYS:NZ	2:B:30:A:OP1	2.32	0.62
4:D:1192:PRO:HA	4:D:1198:LEU:HA	1.81	0.62
5:E:69:VAL:HG11	5:E:351:LEU:HD21	1.80	0.62
19:T:195:LYS:NZ	19:T:490:ARG:HH21	1.96	0.62
29:w:434:GLY:O	29:w:438:LEU:HG	1.99	0.62
32:7:33:CYS:HB3	32:7:72:CYS:SG	2.39	0.62
46:9:279:LYS:HA	46:9:295:LEU:O	2.00	0.62
1:A:361:HIS:O	1:A:362:ARG:NH1	2.32	0.62
1:A:467:GLN:HG2	2:B:19:A:H62	1.64	0.62
5:E:206:ASP:C	5:E:222:LEU:HG	2.24	0.62
10:J:375:ASP:OD2	10:J:378:ASN:ND2	2.31	0.62
21:V:620:ASN:ND2	21:V:623:ASN:OD1	2.31	0.62
23:X:648:TYR:CE2	23:X:651:LEU:HB3	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:3:70:LEU:HD11	27:3:152:LEU:HD13	1.80	0.62
27:3:207:THR:O	27:3:209:THR:HG22	1.98	0.62
27:3:966:LEU:HB2	27:3:968:ARG:HD2	1.81	0.62
27:3:1009:PHE:HZ	27:3:1046:GLY:HA3	1.65	0.62
35:v:85:ARG:HA	35:v:85:ARG:HH11	1.65	0.62
3:C:201:ASN:HB3	3:C:549:TRP:CZ3	2.33	0.62
4:D:912:ASN:HA	4:D:978:ASN:HA	1.81	0.62
13:N:116:ASN:OD1	13:N:116:ASN:N	2.31	0.62
26:1:683:LEU:O	26:1:723:SER:OG	2.15	0.62
26:1:1013:ILE:HD11	26:1:1049:TYR:CD2	2.34	0.62
27:3:452:LEU:HD12	27:3:453:PRO:HD2	1.80	0.62
1:A:340:ILE:HG22	1:A:355:LEU:HD13	1.81	0.62
5:E:176:VAL:HG22	5:E:196:VAL:HG21	1.80	0.62
15:P:187:ARG:O	15:P:187:ARG:HG2	1.95	0.62
19:T:450:VAL:C	19:T:451:HIS:HD1	2.06	0.62
23:X:645:LEU:HD11	23:X:669:LYS:HD2	1.82	0.62
24:Y:244:VAL:HG13	24:Y:313:VAL:HG22	1.80	0.62
32:7:46:CYS:O	32:7:50:ASN:HB2	1.99	0.62
46:9:306:ASN:OD1	46:9:345:TYR:N	2.27	0.62
1:A:1346:THR:O	1:A:1346:THR:OG1	2.15	0.62
3:C:384:VAL:HA	3:C:392:LEU:HD11	1.82	0.62
5:E:114:GLU:OE2	5:E:290:ARG:NH2	2.32	0.62
12:L:105:ASP:OD1	23:X:305:ARG:NH1	2.32	0.62
23:X:250:LEU:HA	23:X:253:GLU:HG2	1.82	0.62
23:X:419:ILE:HG22	23:X:569:VAL:HG13	1.81	0.62
1:A:1143:MET:O	1:A:1147:VAL:HG13	1.98	0.62
3:C:665:THR:OG1	3:C:666:VAL:N	2.33	0.62
5:E:120:ASP:OD1	5:E:120:ASP:N	2.28	0.62
16:Q:28:CYS:HA	16:Q:32:ALA:HB3	1.80	0.62
17:R:315:LYS:O	17:R:318:GLU:HG3	1.99	0.62
23:X:230:SER:O	23:X:234:TYR:HB2	1.99	0.62
26:1:550:HIS:HD2	26:1:551:LEU:HD22	1.64	0.62
26:1:1292:LYS:NZ	33:5:79:PRO:O	2.33	0.62
27:3:1136:GLU:OE1	27:3:1136:GLU:N	2.27	0.62
1:A:2324:GLU:O	1:A:2330:ARG:NH1	2.33	0.62
3:C:112:THR:HB	3:C:115:GLU:HB2	1.81	0.62
3:C:281:ILE:O	3:C:285:VAL:HG12	1.99	0.62
3:C:604:LEU:HD23	3:C:607:LEU:HD21	1.80	0.62
8:H:99:A:O2'	8:H:100:U:OP2	2.18	0.62
10:J:328:GLY:O	10:J:332:VAL:HG13	2.00	0.62
23:X:488:SER:O	23:X:491:THR:OG1	2.10	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:3:387:PHE:HE1	27:3:389:PRO:HG3	1.64	0.62
27:3:758:SER:N	27:3:761:THR:O	2.25	0.62
1:A:348:PRO:HG2	1:A:351:TYR:HB2	1.80	0.62
3:C:116:MET:HA	3:C:119:LEU:HG	1.82	0.62
12:L:192:ARG:HA	12:L:196:ILE:O	1.99	0.62
21:V:544:LEU:HD21	21:V:582:PHE:HB2	1.82	0.62
26:1:490:GLU:O	26:1:494:GLU:HG2	1.98	0.62
14:O:256:GLY:HA3	14:O:279:ALA:HB1	1.82	0.61
15:P:184:VAL:HG22	24:Y:123:HIS:NE2	2.11	0.61
23:X:846:MET:HB3	23:X:881:LEU:HD22	1.82	0.61
43:b:14:THR:CA	43:b:27:GLY:O	2.48	0.61
46:9:306:ASN:HD21	46:9:344:SER:HA	1.65	0.61
1:A:44:ARG:NH2	5:E:285:GLU:O	2.26	0.61
1:A:1000:ILE:HG22	1:A:1001:VAL:HG13	1.82	0.61
3:C:510:LEU:HD13	3:C:514:TYR:CE2	2.34	0.61
24:Y:207:GLU:HA	24:Y:210:GLU:HB3	1.82	0.61
26:1:617:ILE:HD12	26:1:660:ALA:HB1	1.81	0.61
27:3:25:THR:OG1	27:3:27:GLN:N	2.31	0.61
38:i:72:ILE:O	42:j:78:MET:N	2.31	0.61
24:Y:21:ARG:NH1	24:Y:83:VAL:O	2.33	0.61
26:1:743:LEU:O	26:1:747:LEU:HB2	2.01	0.61
27:3:293:HIS:NE2	27:3:295:THR:HB	2.15	0.61
27:3:928:TYR:HB3	27:3:937:LEU:HB3	1.81	0.61
46:9:42:CYS:N	46:9:47:GLN:O	2.33	0.61
46:9:349:PRO:HB2	46:9:375:SER:HA	1.82	0.61
1:A:1949:ARG:HA	1:A:1952:VAL:HG12	1.83	0.61
4:D:2063:GLY:O	4:D:2110:SER:HA	1.99	0.61
17:R:408:ASP:OD1	17:R:410:ARG:N	2.24	0.61
19:T:250:ARG:HD2	19:T:266:GLU:HG3	1.81	0.61
26:1:1091:HIS:HE2	30:2:568:TYR:HE1	1.49	0.61
27:3:214:ASP:O	27:3:218:ASN:N	2.33	0.61
27:3:325:ILE:O	27:3:374:SER:HA	2.00	0.61
29:w:464:LEU:O	29:w:468:SER:OG	2.18	0.61
46:9:358:LEU:HD22	46:9:396:ILE:HB	1.83	0.61
3:C:614:TYR:OH	3:C:643:ASP:OD2	2.17	0.61
5:E:300:ILE:HD11	5:E:314:THR:HG23	1.82	0.61
6:F:90:G:H2'	6:F:91:A:H8	1.65	0.61
17:R:110:LYS:NZ	19:T:364:THR:O	2.32	0.61
23:X:525:ARG:NH1	23:X:530:ASP:OD1	2.33	0.61
26:1:595:GLU:O	26:1:599:ASN:ND2	2.33	0.61
27:3:12:THR:O	27:3:34:ARG:NH1	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:3:384:THR:OG1	27:3:385:PHE:N	2.31	0.61
1:A:1298:ARG:HH11	1:A:1298:ARG:HB2	1.65	0.61
1:A:2117:ILE:HD13	1:A:2301:PRO:HB2	1.82	0.61
4:D:530:THR:C	4:D:532:ASN:H	2.09	0.61
5:E:208:ILE:O	5:E:219:VAL:HA	2.01	0.61
9:I:550:TRP:O	9:I:552:ASN:N	2.32	0.61
10:J:262:ARG:O	10:J:266:GLU:HG2	2.01	0.61
21:V:606:GLU:OE2	21:V:609:GLN:HG3	1.99	0.61
26:1:669:GLN:HB2	26:1:708:ALA:HA	1.83	0.61
26:1:1212:LEU:HD13	26:1:1237:LEU:HD13	1.81	0.61
27:3:1180:GLU:CD	27:3:1212:ARG:HH21	2.08	0.61
1:A:641:MET:O	1:A:645:THR:HG23	2.01	0.61
4:D:1223:ILE:HA	4:D:1269:ARG:O	2.00	0.61
5:E:277:PHE:CE2	5:E:300:ILE:HG13	2.36	0.61
23:X:557:THR:HA	23:X:560:PHE:HB2	1.82	0.61
27:3:318:ASP:OD1	27:3:319:GLU:N	2.33	0.61
1:A:343:GLU:HG3	1:A:344:ASP:H	1.62	0.61
1:A:1554:GLN:NE2	1:A:1558:THR:O	2.34	0.61
3:C:216:THR:HG22	3:C:245:HIS:HE1	1.65	0.61
3:C:609:LYS:HA	3:C:612:LYS:HD2	1.82	0.61
3:C:811:THR:O	3:C:815:VAL:HG23	1.99	0.61
4:D:1404:LYS:O	4:D:1423:ASN:N	2.33	0.61
4:D:1662:ILE:HA	4:D:1703:VAL:O	2.01	0.61
6:F:96:U:H2'	6:F:97:U:C6	2.36	0.61
16:Q:313:ILE:HA	16:Q:320:ALA:HA	1.83	0.61
21:V:620:ASN:HB3	21:V:623:ASN:HD21	1.64	0.61
23:X:418:LEU:HD13	23:X:568:PRO:HG2	1.82	0.61
46:9:316:TYR:HE1	46:9:378:SER:HB2	1.66	0.61
1:A:1610:GLN:HB3	1:A:1630:LEU:HB3	1.83	0.61
5:E:264:VAL:HA	5:E:272:ARG:NH1	2.16	0.61
23:X:619:GLU:HA	23:X:622:GLU:OE1	2.01	0.61
23:X:621:ILE:HG12	23:X:672:VAL:HG13	1.82	0.61
23:X:803:ASN:OD1	23:X:806:GLY:N	2.32	0.61
27:3:565:TYR:CE1	27:3:619:LEU:HB2	2.33	0.61
27:3:807:TYR:H	27:3:856:LYS:HD2	1.65	0.61
27:3:883:GLU:OE2	27:3:884:GLN:N	2.33	0.61
35:v:34:ALA:O	35:v:38:ILE:HD12	2.01	0.61
41:k:19:LEU:HA	41:k:70:LEU:HA	1.83	0.61
1:A:2306:HIS:O	1:A:2310:ARG:HB2	2.00	0.61
3:C:137:HIS:CD2	3:C:138:LEU:H	2.18	0.61
3:C:855:GLY:HA2	3:C:875:ILE:HD12	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:668:ASP:O	4:D:672:GLY:N	2.34	0.61
4:D:1201:GLU:HA	4:D:1253:THR:HA	1.83	0.61
15:P:186:ARG:HH11	15:P:186:ARG:CB	2.13	0.61
17:R:137:GLU:HA	17:R:140:ILE:HB	1.83	0.61
17:R:382:ARG:NH2	17:R:385:ASN:HD22	1.99	0.61
26:1:495:ARG:HH21	26:1:530:PRO:HB3	1.66	0.61
26:1:664:GLY:HA2	26:1:667:ILE:HD12	1.82	0.61
26:1:834:VAL:O	26:1:838:VAL:HG23	2.01	0.61
1:A:1935:ARG:O	1:A:1939:ILE:HG13	2.01	0.60
3:C:133:THR:HG22	3:C:225:VAL:HG23	1.81	0.60
3:C:560:VAL:HG12	3:C:561:LYS:H	1.65	0.60
7:G:112:U:C6	23:X:503:ARG:HG3	2.36	0.60
16:Q:27:ALA:O	16:Q:32:ALA:N	2.28	0.60
27:3:71:THR:O	27:3:146:ARG:NH2	2.33	0.60
27:3:330:PHE:O	27:3:390:ARG:NH2	2.32	0.60
3:C:463:GLU:H	3:C:463:GLU:CD	2.08	0.60
3:C:712:LYS:O	3:C:716:GLU:HG3	2.01	0.60
15:P:206:LYS:O	15:P:218:GLU:HG3	2.01	0.60
23:X:754:GLU:HA	23:X:757:ARG:NH2	2.16	0.60
1:A:1089:CYS:SG	1:A:1096:HIS:HD2	2.24	0.60
1:A:2131:VAL:HG12	1:A:2132:SER:H	1.66	0.60
3:C:476:CYS:O	3:C:564:THR:HA	2.01	0.60
6:F:36:A:N6	7:G:10:U:O4	2.33	0.60
13:N:16:GLU:H	13:N:16:GLU:CD	2.09	0.60
19:T:356:LEU:HD13	19:T:366:VAL:HB	1.82	0.60
35:v:76:LYS:O	35:v:80:THR:HG23	2.01	0.60
1:A:762:ARG:NH1	15:P:226:LYS:HZ1	1.99	0.60
4:D:1219:GLU:O	4:D:1240:LEU:HA	2.02	0.60
8:H:16:U:H1'	8:H:17:U:H5'	1.82	0.60
26:1:508:THR:HB	26:1:510:PRO:HD2	1.83	0.60
26:1:1028:HIS:O	26:1:1032:GLN:HB2	2.01	0.60
29:w:432:ALA:O	29:w:436:ARG:HD3	2.01	0.60
30:2:477:MET:SD	30:2:478:HIS:ND1	2.75	0.60
19:T:446:ASN:HD21	19:T:449:ARG:HE	1.49	0.60
46:9:315:TYR:CE1	46:9:335:PRO:HG2	2.36	0.60
1:A:1131:LYS:NZ	1:A:1193:GLU:OE2	2.29	0.60
2:B:96:A:H4'	2:B:97:G:H5"	1.82	0.60
6:F:36:A:H3'	6:F:37:C:C5'	2.28	0.60
18:S:147:THR:HA	18:S:153:PRO:HA	1.82	0.60
26:1:1166:ILE:O	26:1:1170:THR:HG22	2.01	0.60
26:1:1192:VAL:O	26:1:1196:SER:OG	2.20	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:3:138:GLN:HG2	27:3:161:HIS:CE1	2.36	0.60
27:3:139:LYS:NZ	27:3:160:ALA:O	2.34	0.60
31:4:17:VAL:O	31:4:56:TYR:HA	2.01	0.60
1:A:261:LYS:HB2	1:A:330:THR:HB	1.82	0.60
3:C:444:GLY:O	3:C:447:PRO:HD2	2.01	0.60
8:H:29:A:N6	12:L:32:SER:OG	2.34	0.60
12:L:740:ASP:O	12:L:744:GLN:N	2.33	0.60
26:1:590:ARG:O	26:1:594:ARG:HB2	2.02	0.60
38:i:30:LYS:O	38:i:47:THR:HA	2.02	0.60
1:A:1837:ALA:O	1:A:1841:THR:HG23	2.02	0.60
3:C:125:ASN:OD1	3:C:128:LEU:N	2.25	0.60
8:H:48:A:C2	8:H:65:U:H2'	2.37	0.60
16:Q:489:VAL:O	16:Q:494:PRO:HD3	2.02	0.60
27:3:947:GLU:HB3	27:3:963:VAL:HG13	1.82	0.60
46:9:330:ILE:HD13	46:9:410:MET:HB3	1.84	0.60
1:A:570:ASP:OD1	1:A:571:ALA:N	2.34	0.60
1:A:1457:HIS:ND1	1:A:1460:HIS:HD2	2.00	0.60
19:T:295:ASP:OD1	19:T:296:LEU:N	2.31	0.60
23:X:837:SER:O	23:X:841:LEU:HG	2.02	0.60
26:1:619:ASN:OD1	26:1:620:MET:N	2.32	0.60
27:3:695:GLY:O	27:3:697:ARG:NE	2.30	0.60
1:A:292:ASP:CG	1:A:293:TRP:H	2.10	0.60
12:L:584:HIS:O	12:L:588:LEU:N	2.32	0.60
23:X:810:THR:HA	23:X:813:ARG:HE	1.66	0.60
24:Y:192:GLY:N	24:Y:195:GLU:OE2	2.35	0.60
27:3:246:SER:OG	27:3:247:GLY:N	2.35	0.60
27:3:615:ARG:NH2	27:3:630:MET:HB3	2.17	0.60
1:A:1189:MET:CG	1:A:1190:CYS:H	2.14	0.59
1:A:1644:LEU:HD23	1:A:1715:TYR:HD1	1.67	0.59
3:C:630:LEU:HD21	3:C:661:THR:HG21	1.84	0.59
12:L:36:SER:OG	35:v:29:ARG:NH2	2.35	0.59
17:R:86:LEU:HD23	17:R:86:LEU:H	1.66	0.59
23:X:164:TRP:NE1	23:X:539:VAL:HG22	2.17	0.59
26:1:617:ILE:HD13	26:1:651:VAL:HB	1.83	0.59
26:1:1110:VAL:O	26:1:1113:THR:HG22	2.02	0.59
1:A:1303:LEU:HD12	1:A:1311:PHE:CE1	2.37	0.59
8:H:125:G:H2'	8:H:126:A:H8	1.67	0.59
1:A:467:GLN:HE21	1:A:469:LYS:HG2	1.67	0.59
1:A:1581:LEU:O	1:A:1585:ILE:HG13	2.03	0.59
1:A:1819:LEU:HD22	1:A:1902:PHE:HD1	1.67	0.59
8:H:106:G:N2	38:i:24:LYS:O	2.34	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:T:255:SER:OG	19:T:258:SER:O	2.19	0.59
23:X:405:ARG:HG3	23:X:435:TYR:CE2	2.38	0.59
23:X:424:THR:HG21	23:X:728:ARG:HH21	1.67	0.59
27:3:994:GLN:HE22	27:3:1036:ALA:C	2.10	0.59
3:C:724:TRP:HE1	3:C:732:ILE:HD11	1.66	0.59
5:E:259:VAL:HG22	5:E:277:PHE:HB2	1.84	0.59
5:E:330:ILE:HA	5:E:346:SER:HA	1.83	0.59
5:E:345:ALA:HA	5:E:351:LEU:HD23	1.84	0.59
10:J:289:ASN:HB3	12:L:232:TYR:CE2	2.38	0.59
17:R:150:ALA:O	17:R:153:LYS:HG3	2.02	0.59
19:T:383:ARG:O	19:T:384:HIS:ND1	2.31	0.59
24:Y:3:VAL:HG23	24:Y:16:LEU:HD21	1.85	0.59
26:1:1258:ALA:HB3	26:1:1261:VAL:HG13	1.83	0.59
27:3:680:ASP:OD2	27:3:681:PRO:HD2	2.02	0.59
1:A:693:ILE:O	1:A:695:ASP:N	2.34	0.59
1:A:1925:LYS:HE2	21:V:457:ARG:HH21	1.67	0.59
6:F:85:U:O2	8:H:14:C:N3	2.36	0.59
21:V:505:LYS:NZ	21:V:593:TYR:OH	2.35	0.59
26:1:677:CYS:O	26:1:680:LEU:HD12	2.01	0.59
27:3:435:LEU:HD13	27:3:799:ILE:HD11	1.84	0.59
27:3:910:ALA:HB1	27:3:913:LEU:HD11	1.83	0.59
46:9:366:LEU:HD11	46:9:380:PHE:HB2	1.84	0.59
1:A:1286:ASP:OD1	1:A:1286:ASP:N	2.26	0.59
2:B:107:U:H2'	2:B:108:G:O4'	2.03	0.59
3:C:531:TRP:CE3	3:C:540:GLU:HB3	2.37	0.59
7:G:111:U:OP2	23:X:482:ARG:HD3	2.03	0.59
21:V:613:GLU:OE1	21:V:618:ARG:NH2	2.36	0.59
22:W:359:TRP:HA	22:W:366:CYS:HA	1.85	0.59
23:X:537:LYS:HD2	23:X:563:PHE:CE1	2.38	0.59
23:X:877:ASP:OD1	23:X:877:ASP:N	2.36	0.59
24:Y:42:ILE:HG21	24:Y:51:ILE:HG22	1.84	0.59
1:A:1124:ASN:ND2	1:A:1148:ASN:OD1	2.32	0.59
1:A:1211:ASP:O	1:A:1213:VAL:N	2.36	0.59
1:A:1502:PHE:HZ	1:A:1505:LYS:HB2	1.68	0.59
1:A:2149:PRO:HD3	1:A:2274:PRO:HG3	1.84	0.59
17:R:147:THR:HG23	19:T:360:VAL:HG22	1.85	0.59
23:X:698:LYS:NZ	23:X:758:THR:HA	2.17	0.59
3:C:493:PHE:HD2	3:C:551:LEU:HG	1.67	0.59
6:F:41:A:H2	7:G:6:A:N1	2.01	0.59
10:J:238:ASN:C	10:J:240:THR:H	2.11	0.59
13:N:72:ARG:O	13:N:76:GLU:HG3	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:P:190:ASP:OD1	24:Y:118:TYR:OH	2.21	0.59
17:R:240:LYS:O	17:R:244:GLU:HG3	2.03	0.59
26:1:630:ARG:HG3	26:1:670:GLN:HG3	1.83	0.59
26:1:698:GLN:HB3	26:1:701:VAL:HG12	1.84	0.59
27:3:69:ARG:NH1	27:3:74:THR:HA	2.18	0.59
27:3:212:GLU:HB2	27:3:223:LYS:HG3	1.84	0.59
27:3:528:ARG:HG2	27:3:532:ARG:HH21	1.67	0.59
27:3:706:MET:HG3	27:3:707:GLN:HG2	1.83	0.59
35:v:18:SER:N	35:v:21:GLU:OE1	2.34	0.59
1:A:274:PRO:HG3	20:U:1:MET:HG3	1.85	0.59
15:P:39:THR:O	19:T:318:ARG:HD3	2.03	0.59
15:P:188:TRP:O	15:P:188:TRP:CG	2.56	0.59
23:X:587:PRO:HB2	26:1:827:ARG:HH12	1.67	0.59
23:X:591:TYR:HD2	23:X:692:PRO:HB2	1.68	0.59
23:X:694:PHE:O	23:X:722:ARG:NH1	2.26	0.59
27:3:700:LYS:HE2	27:3:715:MET:HB3	1.84	0.59
27:3:982:GLU:HG2	27:3:984:LYS:HE3	1.84	0.59
33:5:65:ARG:HB3	33:5:65:ARG:CZ	2.32	0.59
1:A:179:ALA:HA	1:A:183:LEU:HB2	1.84	0.59
1:A:378:PHE:O	3:C:355:LYS:HG3	2.03	0.59
14:O:116:TYR:O	14:O:120:ASN:ND2	2.35	0.59
16:Q:1306:ARG:O	16:Q:1310:PHE:CB	2.51	0.59
26:1:1217:PRO:HD3	30:2:590:LEU:HD13	1.85	0.59
1:A:1209:HIS:CG	1:A:1210:LYS:N	2.71	0.58
7:G:85:G:H2'	7:G:86:A:C8	2.38	0.58
8:H:13:C:H1'	8:H:14:C:H5'	1.84	0.58
16:Q:1322:GLN:HA	16:Q:1325:ALA:HB2	1.85	0.58
17:R:91:ASP:OD1	17:R:94:GLY:N	2.36	0.58
23:X:815:MET:CE	23:X:829:LEU:HD12	2.33	0.58
24:Y:30:LYS:NZ	24:Y:168:ASP:OD1	2.29	0.58
24:Y:51:ILE:O	24:Y:109:LEU:HA	2.03	0.58
26:1:759:ALA:O	26:1:763:ASN:N	2.35	0.58
26:1:854:VAL:HG23	26:1:855:ASP:H	1.68	0.58
27:3:195:ASP:OD2	27:3:198:GLY:N	2.36	0.58
27:3:329:TYR:CE2	27:3:389:PRO:HA	2.37	0.58
1:A:727:LYS:HG3	46:9:244:GLY:HA3	1.86	0.58
3:C:379:LYS:O	3:C:383:GLN:HG2	2.04	0.58
6:F:89:U:H2'	6:F:90:G:O4'	2.03	0.58
21:V:542:ASN:OD1	21:V:545:ARG:NH2	2.35	0.58
23:X:524:GLU:OE2	23:X:529:THR:OG1	2.20	0.58
23:X:960:ARG:HG3	23:X:967:THR:HA	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:1004:GLU:HB2	23:X:1007:TRP:CD2	2.38	0.58
26:1:1203:GLY:HA2	27:3:1171:LYS:HG3	1.84	0.58
27:3:583:MET:HE2	27:3:583:MET:HA	1.85	0.58
27:3:803:ASP:OD2	33:5:58:ASN:ND2	2.36	0.58
42:j:46:CYS:O	42:j:59:ASP:N	2.35	0.58
1:A:1502:PHE:CZ	1:A:1505:LYS:HB2	2.37	0.58
2:B:93:U:O2'	2:B:94:U:O4'	2.22	0.58
5:E:108:HIS:CD2	5:E:128:SER:HB3	2.38	0.58
5:E:334:ALA:HB3	5:E:343:ILE:HG23	1.85	0.58
8:H:180:G:H2'	8:H:181:G:C8	2.38	0.58
23:X:797:TYR:HA	23:X:802:LEU:HB2	1.84	0.58
24:Y:90:LYS:HB2	24:Y:93:THR:HG23	1.84	0.58
26:1:605:GLY:O	26:1:608:THR:OG1	2.16	0.58
26:1:1110:VAL:O	26:1:1114:VAL:HG23	2.04	0.58
27:3:387:PHE:CE1	27:3:389:PRO:HG3	2.38	0.58
29:w:411:CYS:SG	29:w:416:TYR:OH	2.61	0.58
2:B:63:A:H2'	2:B:64:G:H8	1.67	0.58
6:F:43:A:H2	7:G:4:A:H61	1.50	0.58
17:R:137:GLU:OE1	17:R:137:GLU:N	2.32	0.58
26:1:1104:GLN:O	26:1:1105:GLU:HB3	2.03	0.58
27:3:1147:HIS:O	27:3:1151:GLU:HG3	2.03	0.58
1:A:736:GLU:OE2	46:9:247:SER:OG	2.16	0.58
1:A:1817:LEU:HD11	1:A:1819:LEU:HD13	1.84	0.58
1:A:2129:TYR:HD2	1:A:2172:MET:HE3	1.66	0.58
3:C:352:LYS:HE2	3:C:352:LYS:H	1.67	0.58
3:C:500:THR:HG22	3:C:545:PRO:HA	1.83	0.58
4:D:759:THR:N	27:3:680:ASP:OD2	2.31	0.58
7:G:7:G:C5	7:G:8:C:C4	2.92	0.58
26:1:850:ILE:O	26:1:854:VAL:HG13	2.04	0.58
26:1:898:TYR:OH	26:1:902:GLU:HG2	2.03	0.58
27:3:326:ARG:NE	27:3:372:GLU:OE2	2.19	0.58
8:H:6:U:H2'	8:H:7:U:C6	2.38	0.58
8:H:50:C:H2'	8:H:51:A:C8	2.38	0.58
21:V:456:ARG:NE	21:V:492:MET:SD	2.76	0.58
23:X:219:ARG:HA	23:X:222:MET:SD	2.43	0.58
24:Y:87:LYS:O	24:Y:89:LYS:N	2.36	0.58
26:1:512:ARG:O	26:1:516:LEU:HB2	2.04	0.58
26:1:815:PHE:HZ	26:1:849:ILE:HG23	1.67	0.58
27:3:642:ILE:H	27:3:703:ARG:HE	1.52	0.58
1:A:83:HIS:NE2	7:G:16:G:O6	2.37	0.58
1:A:1251:SER:OG	1:A:1298:ARG:HD3	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2086:ARG:NH1	1:A:2219:THR:O	2.36	0.58
3:C:673:LYS:HE2	20:U:57:ILE:HA	1.86	0.58
3:C:925:PRO:O	3:C:928:HIS:ND1	2.36	0.58
23:X:815:MET:CE	23:X:829:LEU:HD11	2.34	0.58
24:Y:33:LYS:HG3	24:Y:161:ILE:HG13	1.85	0.58
27:3:462:VAL:O	27:3:472:ALA:N	2.30	0.58
30:2:457:MET:HE3	30:2:457:MET:HA	1.86	0.58
35:v:56:CYS:SG	35:v:72:HIS:NE2	2.73	0.58
36:o:64:ARG:HA	36:o:88:PRO:HD2	1.85	0.58
1:A:357:ASN:HD22	3:C:862:PRO:HB3	1.69	0.58
1:A:1992:GLY:HA2	1:A:1997:VAL:HG23	1.85	0.58
2:B:53:U:OP1	15:P:39:THR:OG1	2.22	0.58
3:C:115:GLU:OE1	3:C:115:GLU:N	2.37	0.58
23:X:987:HIS:HB3	23:X:999:GLN:HB2	1.85	0.58
26:1:747:LEU:HA	26:1:750:ILE:HG12	1.85	0.58
26:1:1074:ARG:O	26:1:1078:VAL:HG23	2.03	0.58
27:3:141:VAL:HB	27:3:158:LEU:HD12	1.86	0.58
27:3:191:GLU:O	27:3:194:ASN:N	2.26	0.58
30:2:542:GLU:O	30:2:546:GLN:HG2	2.03	0.58
33:5:7:ILE:HG13	33:5:8:HIS:N	2.18	0.58
2:B:20:G:O6	2:B:57:G:N2	2.37	0.58
3:C:441:PRO:HA	3:C:444:GLY:HA3	1.86	0.58
5:E:102:TYR:HD1	5:E:102:TYR:H	1.51	0.58
6:F:37:C:H4'	6:F:38:G:OP2	2.00	0.58
23:X:451:THR:HG22	23:X:519:VAL:HA	1.86	0.58
23:X:543:ARG:NE	23:X:545:GLU:OE1	2.34	0.58
24:Y:263:PHE:HE1	24:Y:300:LYS:HD2	1.69	0.58
27:3:525:ARG:HD3	27:3:533:VAL:HG22	1.85	0.58
27:3:638:GLU:OE2	27:3:698:PRO:HB3	2.04	0.58
46:9:363:ARG:HG3	46:9:384:PHE:HA	1.86	0.58
1:A:1862:ILE:HG23	1:A:1885:LYS:HB3	1.86	0.58
1:A:2004:GLN:OE1	26:1:898:TYR:HB2	2.04	0.58
3:C:78:GLU:HG3	3:C:79:THR:N	2.18	0.58
14:O:233:THR:O	14:O:303:GLY:N	2.29	0.58
23:X:948:PHE:O	23:X:1016:TYR:OH	2.21	0.58
26:1:675:MET:HB3	26:1:678:ALA:HB3	1.84	0.58
27:3:538:THR:OG1	27:3:542:LYS:O	2.22	0.58
5:E:180:ASP:HB2	5:E:187:ILE:HD11	1.84	0.57
6:F:82:A:H1'	6:F:83:A:H2'	1.85	0.57
7:G:105:C:O2'	23:X:619:GLU:OE2	2.21	0.57
7:G:116:C:H5"	17:R:371:ARG:NE	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:257:PHE:CZ	23:X:270:LEU:HB2	2.39	0.57
23:X:772:ILE:HD12	23:X:778:PHE:HD2	1.69	0.57
24:Y:5:LEU:HD22	24:Y:156:ILE:HG23	1.85	0.57
26:1:1262:ARG:HD2	33:5:24:ALA:O	2.04	0.57
27:3:447:MET:HE2	27:3:766:ALA:HB2	1.86	0.57
27:3:449:VAL:HG22	27:3:763:ARG:HB3	1.85	0.57
32:7:33:CYS:HB2	32:7:74:GLU:OE1	2.04	0.57
46:9:316:TYR:CE1	46:9:378:SER:HB2	2.39	0.57
1:A:1870:ASP:OD1	1:A:1870:ASP:N	2.26	0.57
1:A:2074:ARG:HD2	1:A:2078:ILE:HG23	1.86	0.57
3:C:803:ARG:O	3:C:807:GLN:HG2	2.04	0.57
7:G:88:G:H4'	7:G:89:U:OP1	2.04	0.57
7:G:105:C:OP1	23:X:993:THR:OG1	2.21	0.57
17:R:369:LEU:HD23	17:R:377:ARG:HA	1.85	0.57
24:Y:268:SER:OG	24:Y:287:GLU:OE2	2.16	0.57
27:3:479:VAL:HG23	27:3:480:ASN:ND2	2.20	0.57
1:A:525:LYS:HB2	1:A:525:LYS:HZ3	1.69	0.57
1:A:1762:TYR:CE2	1:A:2008:ARG:HG3	2.39	0.57
3:C:572:GLU:CD	3:C:573:GLU:H	2.11	0.57
7:G:116:C:H6	17:R:371:ARG:HG2	1.69	0.57
10:J:408:ASP:OD1	10:J:408:ASP:N	2.36	0.57
23:X:583:TYR:HB3	23:X:739:THR:HA	1.86	0.57
23:X:815:MET:CG	23:X:825:SER:CB	2.82	0.57
23:X:910:ARG:O	23:X:914:VAL:HG13	2.03	0.57
24:Y:141:GLU:OE1	46:9:205:ARG:NH1	2.37	0.57
26:1:1078:VAL:HG12	26:1:1118:ILE:HD12	1.85	0.57
46:9:366:LEU:HD13	46:9:382:ILE:HG13	1.86	0.57
1:A:1220:VAL:HG23	1:A:1221:THR:HG23	1.87	0.57
10:J:230:THR:OG1	10:J:231:PHE:N	2.37	0.57
13:N:63:LEU:HB3	13:N:70:ILE:HD12	1.85	0.57
21:V:515:CYS:HA	21:V:521:TYR:HB2	1.84	0.57
23:X:521:GLU:HB3	23:X:523:HIS:CE1	2.38	0.57
24:Y:74:GLN:CD	24:Y:74:GLN:H	2.13	0.57
24:Y:152:GLN:NE2	24:Y:193:ALA:HA	2.19	0.57
26:1:703:THR:HG22	26:1:745:ALA:HB3	1.87	0.57
1:A:171:ASP:O	1:A:520:TYR:HB2	2.04	0.57
1:A:393:LEU:HD12	3:C:379:LYS:HE2	1.87	0.57
5:E:255:MET:HB2	5:E:282:HIS:CB	2.35	0.57
12:L:742:ILE:O	12:L:746:HIS:N	2.37	0.57
13:N:97:TYR:HD1	13:N:120:ARG:HH21	1.53	0.57
23:X:238:ARG:HH21	24:Y:224:LEU:HD12	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Y:126:PHE:C	24:Y:126:PHE:CD2	2.82	0.57
27:3:345:GLY:O	27:3:360:GLN:HG3	2.04	0.57
27:3:607:VAL:HB	27:3:615:ARG:HB2	1.85	0.57
27:3:1200:THR:O	27:3:1203:GLU:N	2.38	0.57
46:9:278:LYS:HG2	46:9:279:LYS:H	1.69	0.57
1:A:1639:VAL:HG22	1:A:1719:PHE:HB3	1.86	0.57
1:A:2196:HIS:CE1	1:A:2211:THR:HB	2.40	0.57
2:B:97:G:H1	2:B:116:U:H3	1.50	0.57
3:C:216:THR:HG22	3:C:245:HIS:CE1	2.40	0.57
10:J:333:PHE:O	10:J:337:MET:HG2	2.05	0.57
21:V:576:THR:O	21:V:579:SER:OG	2.16	0.57
23:X:707:GLU:O	23:X:990:VAL:HA	2.05	0.57
27:3:310:ILE:O	27:3:311:PHE:HD2	1.87	0.57
1:A:827:PHE:HB2	1:A:1002:ASP:OD2	2.04	0.57
1:A:1773:SER:HB2	1:A:1775:GLN:HG3	1.87	0.57
1:A:2228:TYR:HA	1:A:2258:ARG:HA	1.86	0.57
3:C:439:PRO:O	3:C:443:VAL:HB	2.04	0.57
3:C:560:VAL:HG12	3:C:561:LYS:HG2	1.87	0.57
3:C:704:VAL:HG12	3:C:717:PHE:HE1	1.68	0.57
5:E:75:HIS:ND1	5:E:77:ASN:HB2	2.19	0.57
5:E:197:LEU:HD21	5:E:213:ILE:HD11	1.87	0.57
5:E:208:ILE:HG13	5:E:222:LEU:HD21	1.86	0.57
24:Y:118:TYR:N	24:Y:118:TYR:CD1	2.72	0.57
26:1:631:ALA:O	26:1:635:VAL:HG13	2.05	0.57
27:3:329:TYR:HE2	27:3:389:PRO:HA	1.69	0.57
27:3:791:HIS:HD2	27:3:794:SER:OG	1.87	0.57
32:7:68:ASP:OD1	32:7:68:ASP:N	2.38	0.57
1:A:872:ASP:O	1:A:874:PRO:HD3	2.04	0.57
1:A:1978:LYS:O	1:A:1981:VAL:HG12	2.05	0.57
4:D:668:ASP:O	4:D:672:GLY:CA	2.53	0.57
8:H:68:G:H2'	8:H:69:U:C6	2.39	0.57
10:J:406:PHE:HD1	10:J:411:MET:HA	1.69	0.57
12:L:756:LYS:O	12:L:760:ASP:N	2.35	0.57
17:R:335:ARG:CB	23:X:272:TYR:HB2	2.35	0.57
26:1:1056:MET:HE2	26:1:1096:THR:HG21	1.86	0.57
28:p:213:THR:O	28:p:215:SER:N	2.38	0.57
42:e:36:TYR:N	42:e:83:ASN:O	2.37	0.57
46:9:360:HIS:HB3	46:9:365:ILE:HG21	1.85	0.57
1:A:265:THR:OG1	1:A:328:HIS:O	2.23	0.57
1:A:1275:ARG:O	1:A:1369:TYR:HE1	1.88	0.57
1:A:1971:LEU:HD22	1:A:1972:THR:H	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:543:ARG:CZ	3:C:543:ARG:HB2	2.34	0.57
3:C:670:SER:HB2	3:C:689:ALA:H	1.70	0.57
5:E:81:LEU:O	5:E:92:LEU:HA	2.04	0.57
11:K:205:TYR:O	11:K:209:GLY:N	2.36	0.57
21:V:532:GLN:O	21:V:536:ILE:CB	2.39	0.57
21:V:609:GLN:HA	21:V:612:PHE:HB2	1.85	0.57
24:Y:30:LYS:HE3	24:Y:169:PRO:HD2	1.86	0.57
26:1:720:GLY:HA2	26:1:756:LEU:HD23	1.86	0.57
29:w:425:HIS:HA	29:w:428:GLU:HB2	1.85	0.57
46:9:312:LYS:NZ	46:9:436:ASP:OD2	2.37	0.57
3:C:258:ASN:OD1	3:C:259:LYS:N	2.37	0.57
3:C:928:HIS:ND1	3:C:928:HIS:N	2.53	0.57
8:H:41:U:H2'	8:H:42:G:C8	2.39	0.57
8:H:70:C:H2'	8:H:71:C:C6	2.39	0.57
23:X:598:SER:O	23:X:602:ILE:HG13	2.05	0.57
24:Y:55:ASP:OD2	24:Y:60:GLY:N	2.37	0.57
26:1:716:ALA:O	26:1:756:LEU:HD21	2.05	0.57
27:3:365:GLY:HA2	27:3:394:ASN:ND2	2.19	0.57
1:A:250:VAL:HG23	1:A:251:ASP:OD2	2.05	0.56
5:E:251:LEU:HD21	5:E:300:ILE:HG23	1.87	0.56
12:L:38:LEU:HB3	12:L:41:LYS:HB2	1.87	0.56
13:N:41:ARG:O	13:N:45:SER:OG	2.23	0.56
17:R:389:SER:HA	17:R:392:ILE:HD12	1.87	0.56
19:T:247:SER:OG	19:T:267:ASP:OD1	2.20	0.56
23:X:265:HIS:O	23:X:268:GLN:HG2	2.04	0.56
24:Y:8:THR:HG23	24:Y:155:ARG:HB2	1.86	0.56
26:1:557:ASP:HB2	26:1:558:ARG:NH2	2.20	0.56
27:3:616:ILE:HG22	27:3:628:LEU:HB3	1.86	0.56
27:3:1148:LEU:HA	27:3:1151:GLU:OE2	2.05	0.56
46:9:323:ARG:HB3	46:9:331:GLN:HE21	1.70	0.56
1:A:123:THR:O	1:A:123:THR:OG1	2.23	0.56
1:A:1771:LEU:HD13	1:A:1777:ILE:HD12	1.86	0.56
4:D:434:SER:HA	4:D:446:HIS:O	2.05	0.56
6:F:89:U:H3	8:H:9:U:H3	1.52	0.56
14:O:116:TYR:HA	17:R:218:ILE:HD13	1.87	0.56
17:R:353:ASP:O	17:R:357:HIS:HB2	2.05	0.56
24:Y:272:ILE:HG22	24:Y:281:LEU:HD12	1.86	0.56
26:1:784:MET:O	26:1:788:VAL:HG12	2.05	0.56
29:w:461:LYS:HA	29:w:464:LEU:HD12	1.86	0.56
43:n:39:HIS:HA	43:n:59:SER:HA	1.87	0.56
1:A:170:ASP:OD1	1:A:171:ASP:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2144:CYS:HB2	1:A:2270:PHE:HE1	1.69	0.56
3:C:136:GLY:HA2	3:C:227:LEU:HD12	1.86	0.56
3:C:286:ASN:HD21	3:C:300:LEU:N	2.02	0.56
3:C:380:ILE:O	3:C:384:VAL:HG23	2.05	0.56
5:E:197:LEU:HD11	5:E:213:ILE:HD13	1.87	0.56
6:F:21:U:N3	13:N:125:LYS:HE3	2.20	0.56
6:F:87:C:C2	6:F:88:G:C8	2.94	0.56
12:L:631:LYS:O	12:L:635:VAL:N	2.37	0.56
13:N:49:ILE:H	13:N:49:ILE:HD12	1.70	0.56
17:R:180:THR:HG23	17:R:194:GLN:HE21	1.71	0.56
21:V:604:LYS:NZ	21:V:639:LEU:HD23	2.21	0.56
24:Y:257:GLU:O	24:Y:261:SER:HB3	2.05	0.56
27:3:169:HIS:CD2	27:3:170:VAL:H	2.22	0.56
27:3:1140:PHE:HE1	27:3:1197:LEU:HD13	1.67	0.56
32:7:13:LYS:NZ	32:7:48:GLU:OE1	2.26	0.56
40:l:31:LYS:O	40:l:44:SER:N	2.38	0.56
43:n:40:LEU:N	43:n:58:LEU:O	2.39	0.56
2:B:13:C:H2'	2:B:14:U:O4'	2.05	0.56
3:C:733:TRP:CG	3:C:763:LYS:HZ3	2.24	0.56
19:T:272:CYS:HB3	19:T:282:ARG:HB3	1.86	0.56
23:X:171:ARG:NH2	23:X:506:LEU:O	2.38	0.56
23:X:457:ALA:O	23:X:460:SER:OG	2.21	0.56
27:3:418:GLU:OE1	27:3:419:ASP:N	2.28	0.56
27:3:552:ARG:HH21	27:3:567:GLU:HB3	1.70	0.56
27:3:592:LEU:HD11	27:3:619:LEU:HD21	1.88	0.56
1:A:435:CYS:SG	7:G:-10:G:N1	2.60	0.56
1:A:1482:GLU:O	1:A:1486:GLU:HG2	2.05	0.56
3:C:350:ASN:ND2	3:C:353:THR:OG1	2.38	0.56
17:R:172:ALA:HB1	17:R:173:PRO:HD2	1.86	0.56
23:X:596:VAL:O	23:X:600:LEU:HG	2.05	0.56
23:X:681:LEU:H	23:X:725:ARG:HH22	1.52	0.56
24:Y:65:SER:N	24:Y:76:SER:O	2.33	0.56
24:Y:253:ASP:OD1	24:Y:253:ASP:N	2.30	0.56
26:1:754:ILE:HG22	26:1:755:PRO:HD3	1.88	0.56
26:1:954:LEU:O	26:1:958:THR:HG22	2.05	0.56
40:l:43:MET:O	40:l:60:GLN:HA	2.05	0.56
2:B:12:U:H2'	2:B:13:C:H6	1.70	0.56
17:R:325:ARG:NH1	24:Y:226:MET:HE2	2.21	0.56
19:T:227:THR:HG22	19:T:243:THR:HG22	1.88	0.56
19:T:381:HIS:HD2	19:T:441:TRP:CE2	2.23	0.56
21:V:570:LEU:HD13	21:V:627:ALA:HB1	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:716:LYS:N	23:X:747:LEU:HD12	2.20	0.56
26:1:739:ARG:HA	26:1:743:LEU:HD22	1.88	0.56
33:5:14:LEU:HA	33:5:17:LYS:HB2	1.86	0.56
1:A:693:ILE:HB	1:A:738:MET:SD	2.46	0.56
1:A:1014:ASN:ND2	12:L:83:ARG:HB2	2.18	0.56
1:A:1211:ASP:C	1:A:1213:VAL:H	2.14	0.56
1:A:1359:HIS:HD2	1:A:1361:GLU:O	1.89	0.56
1:A:1629:ILE:HB	1:A:1662:ILE:HB	1.88	0.56
1:A:1655:THR:OG1	1:A:1656:THR:N	2.38	0.56
1:A:1787:ARG:NH1	1:A:1788:VAL:O	2.39	0.56
8:H:72:U:H2'	8:H:73:C:C6	2.41	0.56
13:N:97:TYR:HA	13:N:120:ARG:HH21	1.71	0.56
24:Y:67:PHE:HB2	24:Y:75:ALA:O	2.05	0.56
26:1:970:LEU:O	26:1:973:HIS:HB2	2.06	0.56
26:1:1098:LEU:HD12	26:1:1135:GLU:HG2	1.87	0.56
27:3:607:VAL:N	27:3:615:ARG:O	2.29	0.56
1:A:1923:TRP:HB3	1:A:1927:ILE:HD11	1.87	0.56
1:A:2076:ARG:NH1	1:A:2119:ASP:OD2	2.39	0.56
2:B:99:C:H2'	2:B:100:C:H6	1.71	0.56
3:C:68:THR:OG1	3:C:69:ALA:N	2.37	0.56
3:C:510:LEU:HB2	3:C:564:THR:HG23	1.87	0.56
5:E:221:ASP:HB2	5:E:228:THR:OG1	2.06	0.56
24:Y:263:PHE:CE1	24:Y:300:LYS:HD2	2.40	0.56
26:1:807:LYS:HG3	26:1:844:VAL:HG11	1.88	0.56
27:3:69:ARG:HH12	27:3:74:THR:HA	1.71	0.56
27:3:86:ARG:NH1	27:3:1157:GLY:O	2.38	0.56
27:3:510:LEU:HD23	27:3:510:LEU:H	1.70	0.56
27:3:703:ARG:HH11	27:3:703:ARG:HB2	1.70	0.56
1:A:940:ILE:HD13	1:A:1090:ARG:HH12	1.71	0.56
1:A:1984:LYS:HA	1:A:1987:ILE:HD12	1.88	0.56
3:C:375:GLU:O	3:C:379:LYS:HG3	2.06	0.56
3:C:587:VAL:HG11	3:C:830:PRO:HG3	1.87	0.56
12:L:187:LYS:O	12:L:191:LEU:N	2.35	0.56
23:X:388:GLN:O	23:X:392:ILE:HG13	2.06	0.56
23:X:405:ARG:NH1	23:X:406:GLU:OE1	2.39	0.56
23:X:819:PRO:HG3	23:X:921:LEU:CD1	2.30	0.56
27:3:206:GLN:NE2	27:3:231:HIS:HA	2.21	0.56
27:3:717:SER:HB2	27:3:718:ARG:NH1	2.21	0.56
27:3:1083:ASN:OD1	27:3:1084:GLY:N	2.39	0.56
46:9:382:ILE:HG21	46:9:407:LEU:HD12	1.88	0.56
1:A:1339:ASP:OD1	1:A:1339:ASP:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1782:ASP:HB3	1:A:1807:ILE:HD13	1.88	0.56
1:A:1861:ILE:HG23	1:A:1884:ILE:HG23	1.86	0.56
3:C:461:LEU:HA	3:C:464:ALA:HB3	1.86	0.56
3:C:478:THR:HA	3:C:494:GLY:HA3	1.87	0.56
3:C:875:ILE:HG13	3:C:876:PRO:HD2	1.89	0.56
7:G:85:G:H1	8:H:45:C:H42	1.53	0.56
10:J:360:ASP:O	10:J:364:THR:OG1	2.22	0.56
17:R:372:ALA:HB3	17:R:376:LYS:HE2	1.87	0.56
24:Y:91:LYS:HG3	24:Y:114:GLU:HG3	1.88	0.56
24:Y:217:ALA:O	24:Y:220:GLN:HG3	2.05	0.56
27:3:68:PHE:CE2	27:3:77:TYR:HB2	2.41	0.56
1:A:172:GLU:OE1	1:A:172:GLU:N	2.39	0.55
1:A:591:MET:HB3	1:A:598:LEU:HD21	1.87	0.55
1:A:876:GLU:O	1:A:879:SER:OG	2.23	0.55
1:A:1184:ASN:OD1	1:A:1195:ARG:NH1	2.36	0.55
3:C:913:ASP:O	3:C:931:ARG:NE	2.39	0.55
10:J:416:TYR:HE2	10:J:443:ILE:HD13	1.71	0.55
19:T:220:VAL:HG23	19:T:230:ILE:HG12	1.87	0.55
23:X:821:ASP:O	23:X:825:SER:OG	2.23	0.55
24:Y:126:PHE:C	24:Y:126:PHE:HD2	2.14	0.55
27:3:288:VAL:HG12	33:5:62:ALA:HB3	1.89	0.55
27:3:527:ILE:HG12	27:3:532:ARG:O	2.06	0.55
27:3:819:MET:HA	27:3:822:GLU:CD	2.31	0.55
27:3:1115:GLU:HG2	30:2:708:TRP:HE1	1.70	0.55
46:9:297:CYS:SG	46:9:437:PRO:HG3	2.46	0.55
1:A:1336:PRO:HB2	1:A:1350:ILE:HG12	1.88	0.55
1:A:1813:ARG:HE	1:A:1814:THR:HG23	1.71	0.55
1:A:2305:TYR:O	1:A:2310:ARG:NH1	2.37	0.55
3:C:827:LEU:HD12	3:C:911:PRO:HB3	1.88	0.55
9:I:169:TYR:O	9:I:173:LEU:CB	2.54	0.55
13:N:140:ARG:NE	22:W:196:TRP:O	2.36	0.55
17:R:348:GLU:HG2	23:X:266:GLU:OE1	2.05	0.55
23:X:772:ILE:HG21	23:X:775:LEU:CD2	2.36	0.55
27:3:926:TYR:HB3	27:3:928:TYR:CE2	2.41	0.55
27:3:1191:LYS:O	27:3:1195:GLU:HG3	2.07	0.55
37:h:109:VAL:N	38:i:63:LEU:O	2.27	0.55
1:A:296:PHE:CZ	3:C:593:GLU:HB2	2.41	0.55
1:A:341:LYS:HA	1:A:341:LYS:HE2	1.87	0.55
1:A:939:TRP:NE1	1:A:1049:ASP:OD2	2.33	0.55
1:A:1836:LEU:HA	1:A:1839:TRP:HD1	1.70	0.55
3:C:694:LYS:HA	3:C:786:ASN:OD1	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:326:HIS:CE1	5:E:344:SER:HG	2.21	0.55
6:F:83:A:N6	8:H:16:U:C4	2.74	0.55
10:J:376:VAL:HA	10:J:379:TRP:HD1	1.71	0.55
12:L:48:ALA:O	12:L:52:GLU:HG2	2.07	0.55
14:O:119:GLN:CD	17:R:218:ILE:HD11	2.32	0.55
23:X:226:LEU:HD22	24:Y:315:PHE:CE2	2.39	0.55
27:3:226:GLU:OE1	27:3:259:LYS:HD3	2.07	0.55
27:3:373:PHE:HE1	27:3:385:PHE:HB3	1.70	0.55
42:j:59:ASP:HA	42:j:76:ARG:HA	1.88	0.55
1:A:84:ASP:O	1:A:88:TYR:HB2	2.07	0.55
1:A:1131:LYS:HG2	1:A:1193:GLU:OE2	2.06	0.55
5:E:227:LEU:O	5:E:227:LEU:HD12	2.07	0.55
6:F:21:U:C4	13:N:125:LYS:HE3	2.41	0.55
8:H:28:C:O2'	8:H:29:A:O5'	2.25	0.55
10:J:226:ARG:O	10:J:230:THR:HG23	2.06	0.55
10:J:262:ARG:HH22	10:J:291:GLN:HG2	1.70	0.55
10:J:342:GLU:OE2	10:J:344:GLN:N	2.37	0.55
17:R:113:TYR:OH	19:T:402:ASP:O	2.20	0.55
19:T:274:ASP:HB2	19:T:281:ILE:HD13	1.88	0.55
21:V:518:LYS:HD2	21:V:520:GLU:OE1	2.06	0.55
21:V:543:LYS:HA	21:V:546:ASN:ND2	2.22	0.55
21:V:618:ARG:HB3	21:V:646:HIS:CE1	2.42	0.55
21:V:622:ARG:CA	21:V:625:ARG:HH21	2.19	0.55
23:X:706:MET:HE2	23:X:991:LEU:CB	2.36	0.55
24:Y:181:PRO:HB2	24:Y:186:LEU:HG	1.89	0.55
24:Y:271:VAL:HG22	24:Y:284:ALA:HB2	1.88	0.55
26:1:826:ASP:HB3	26:1:829:ASN:HB2	1.87	0.55
27:3:567:GLU:OE2	27:3:601:ARG:NH2	2.40	0.55
46:9:324:SER:O	46:9:420:ASP:HB3	2.06	0.55
1:A:322:ASN:N	1:A:322:ASN:OD1	2.38	0.55
1:A:2005:SER:HB2	1:A:2008:ARG:HH22	1.70	0.55
3:C:759:LEU:O	3:C:762:VAL:N	2.38	0.55
7:G:85:G:N2	8:H:45:C:N3	2.51	0.55
7:G:111:U:H5	23:X:819:PRO:HA	1.69	0.55
24:Y:247:LEU:HB2	24:Y:282:CYS:C	2.32	0.55
26:1:549:ARG:NH2	26:1:592:GLU:OE1	2.30	0.55
27:3:2:PHE:C	27:3:3:LEU:HD23	2.32	0.55
27:3:1015:LYS:O	27:3:1019:ASN:N	2.40	0.55
29:w:429:TRP:HB3	29:w:430:ARG:NH1	2.22	0.55
1:A:81:PHE:O	1:A:83:HIS:N	2.39	0.55
1:A:1858:PRO:C	1:A:1859:LYS:HD2	2.31	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2072:GLU:HA	1:A:2075:VAL:HG22	1.87	0.55
1:A:2095:ASP:CG	1:A:2258:ARG:HH21	2.14	0.55
3:C:746:VAL:O	3:C:791:ILE:HG13	2.06	0.55
3:C:772:TRP:HH2	46:9:130:ALA:HA	1.71	0.55
8:H:50:C:H2'	8:H:51:A:H8	1.71	0.55
21:V:497:CYS:HB2	21:V:507:PHE:CB	2.36	0.55
21:V:553:HIS:CD2	21:V:556:TYR:HE1	2.25	0.55
27:3:791:HIS:NE2	27:3:934:GLY:HA3	2.22	0.55
27:3:1143:HIS:O	27:3:1147:HIS:ND1	2.39	0.55
33:5:27:THR:HG23	33:5:30:GLU:HG3	1.88	0.55
42:e:49:GLY:O	42:e:57:VAL:N	2.36	0.55
40:g:48:VAL:O	40:g:55:VAL:CA	2.55	0.55
1:A:298:ASP:CG	1:A:300:ASN:HD22	2.15	0.55
1:A:1275:ARG:C	1:A:1276:GLU:HG3	2.32	0.55
1:A:1787:ARG:HD3	1:A:1788:VAL:N	2.22	0.55
5:E:268:ALA:O	5:E:270:LYS:HD2	2.07	0.55
6:F:16:G:H2'	6:F:17:C:C6	2.41	0.55
8:H:107:A:H2'	8:H:108:G:C8	2.42	0.55
10:J:368:ARG:HA	10:J:368:ARG:NE	2.22	0.55
17:R:280:ILE:H	46:9:225:MET:HA	1.72	0.55
19:T:213:GLU:OE1	19:T:217:GLN:N	2.30	0.55
23:X:600:LEU:O	23:X:604:VAL:HG23	2.06	0.55
25:Z:15:ALA:HB1	45:s:112:ALA:HB1	1.88	0.55
26:1:1252:GLN:NE2	30:2:492:LYS:HA	2.22	0.55
27:3:294:LYS:HZ2	27:3:294:LYS:C	2.15	0.55
30:2:451:LYS:HB2	30:2:455:ARG:NH1	2.22	0.55
1:A:27:GLU:O	1:A:31:GLN:HG2	2.07	0.55
3:C:189:VAL:HA	3:C:198:TYR:O	2.06	0.55
3:C:390:THR:O	3:C:393:PRO:HD2	2.07	0.55
21:V:529:PHE:CE1	21:V:564:VAL:HB	2.42	0.55
22:W:138:ALA:N	22:W:153:ILE:O	2.37	0.55
23:X:837:SER:HB3	23:X:930:SER:H	1.71	0.55
26:1:818:PHE:HD1	26:1:823:MET:HE2	1.72	0.55
27:3:526:HIS:CG	27:3:573:GLN:HE21	2.25	0.55
27:3:1145:GLU:HA	27:3:1148:LEU:HB2	1.88	0.55
29:w:107:SER:O	29:w:119:ASN:N	2.38	0.55
46:9:308:ILE:HA	46:9:311:CYS:HB2	1.87	0.55
1:A:608:LEU:HD13	1:A:632:ALA:HB1	1.89	0.55
1:A:1303:LEU:HD12	1:A:1311:PHE:HE1	1.72	0.55
1:A:1670:ASP:N	1:A:1670:ASP:OD1	2.37	0.55
1:A:1947:ASN:O	1:A:1951:LYS:HG3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:330:ILE:H	5:E:330:ILE:HD12	1.72	0.55
7:G:90:C:O5'	7:G:90:C:H6	1.88	0.55
7:G:106:C:H42	23:X:988:GLU:CD	2.14	0.55
8:H:57:A:H5'	30:2:481:THR:HG21	1.88	0.55
13:N:120:ARG:CZ	13:N:143:SER:HB3	2.37	0.55
23:X:593:GLU:O	23:X:597:VAL:HG22	2.06	0.55
27:3:233:ASN:HD21	27:3:286:ILE:CG2	2.19	0.55
27:3:406:PRO:HG2	27:3:408:LEU:HD11	1.89	0.55
40:l:21:GLU:O	40:l:69:ARG:N	2.39	0.55
40:l:36:GLU:O	40:l:39:MET:N	2.24	0.55
46:9:375:SER:O	46:9:375:SER:OG	2.22	0.55
1:A:176:LEU:H	1:A:176:LEU:CD2	2.20	0.55
1:A:2163:LEU:HD11	1:A:2206:TRP:HE1	1.71	0.55
3:C:441:PRO:O	3:C:444:GLY:HA3	2.07	0.55
3:C:465:MET:O	3:C:468:CYS:N	2.37	0.55
5:E:110:GLY:H	5:E:130:ASP:CG	2.15	0.55
8:H:36:G:H2'	8:H:37:U:C6	2.42	0.55
16:Q:514:ILE:H	16:Q:655:ILE:HA	1.71	0.55
23:X:475:ASN:HB3	23:X:490:ARG:HD3	1.89	0.55
26:1:819:TRP:HZ2	26:1:837:THR:HG21	1.71	0.55
26:1:1062:LEU:HA	26:1:1065:LEU:HD12	1.88	0.55
27:3:911:LYS:CB	27:3:922:GLY:O	2.55	0.55
31:4:13:ALA:O	31:4:60:GLU:HA	2.06	0.55
46:9:368:MET:O	46:9:394:HIS:ND1	2.40	0.55
1:A:305:ARG:NH1	3:C:924:GLN:O	2.37	0.54
1:A:389:LYS:HA	3:C:379:LYS:NZ	2.22	0.54
1:A:705:LYS:O	1:A:708:THR:HG22	2.07	0.54
1:A:1787:ARG:HD3	1:A:1788:VAL:H	1.71	0.54
1:A:2188:LEU:HD13	1:A:2228:TYR:CD1	2.42	0.54
1:A:2311:PRO:O	1:A:2315:LEU:N	2.37	0.54
3:C:118:PHE:O	3:C:122:LEU:HD12	2.07	0.54
4:D:418:GLN:O	4:D:422:PHE:N	2.40	0.54
8:H:165:A:O2'	8:H:166:G:O5'	2.24	0.54
14:O:249:ARG:O	14:O:252:PHE:N	2.39	0.54
14:O:261:ILE:HA	14:O:271:PHE:O	2.07	0.54
16:Q:1049:LEU:O	16:Q:1054:PHE:N	2.39	0.54
16:Q:1136:GLN:N	16:Q:1156:ASN:HA	2.21	0.54
23:X:822:PRO:HA	23:X:825:SER:CB	2.37	0.54
24:Y:21:ARG:NH2	24:Y:81:GLU:O	2.41	0.54
27:3:342:LEU:HB3	27:3:343:LYS:O	2.06	0.54
27:3:542:LYS:HB2	27:3:558:LEU:HD11	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:2:531:THR:O	30:2:531:THR:OG1	2.25	0.54
46:9:301:PRO:O	46:9:305:GLU:HB2	2.06	0.54
1:A:854:SER:OG	1:A:855:ARG:N	2.39	0.54
1:A:1091:TYR:O	1:A:1092:ILE:C	2.48	0.54
1:A:1761:PRO:O	1:A:1930:TYR:OH	2.25	0.54
3:C:260:ILE:HG13	3:C:310:SER:O	2.05	0.54
7:G:85:G:N1	8:H:44:U:N3	2.55	0.54
11:K:209:GLY:HA2	11:K:223:ARG:HD3	1.89	0.54
19:T:223:SER:OG	19:T:224:ALA:N	2.38	0.54
19:T:243:THR:O	19:T:243:THR:OG1	2.24	0.54
23:X:815:MET:CG	23:X:825:SER:HB3	2.36	0.54
26:1:735:ILE:HD12	26:1:747:LEU:HD12	1.88	0.54
26:1:1206:ASP:OD1	26:1:1207:SER:N	2.41	0.54
27:3:639:SER:OG	27:3:699:VAL:O	2.14	0.54
1:A:65:HIS:CD2	13:N:46:LEU:HD13	2.43	0.54
1:A:1224:ARG:HG3	1:A:1224:ARG:HH11	1.73	0.54
3:C:224:GLY:HA2	3:C:251:LEU:HB3	1.89	0.54
3:C:719:GLN:HG3	3:C:724:TRP:O	2.06	0.54
5:E:214:ASP:N	5:E:214:ASP:OD1	2.39	0.54
10:J:407:GLY:O	10:J:411:MET:HB3	2.07	0.54
13:N:21:THR:O	13:N:24:GLU:HG3	2.06	0.54
13:N:122:PRO:HG2	13:N:125:LYS:HE2	1.89	0.54
17:R:143:ILE:O	17:R:147:THR:OG1	2.18	0.54
23:X:597:VAL:HA	23:X:600:LEU:HD12	1.89	0.54
24:Y:210:GLU:O	24:Y:214:GLU:HG3	2.08	0.54
26:1:769:VAL:HA	26:1:772:ILE:HD13	1.89	0.54
27:3:747:SER:OG	27:3:748:GLU:N	2.40	0.54
27:3:883:GLU:HB3	27:3:886:GLU:HG3	1.89	0.54
27:3:943:THR:HG23	27:3:976:LYS:HB3	1.89	0.54
32:7:57:ARG:NH1	32:7:62:GLY:O	2.39	0.54
1:A:380:LEU:HB2	3:C:354:ARG:HB3	1.89	0.54
7:G:83:A:P	7:G:83:A:H8	2.31	0.54
23:X:561:SER:O	23:X:566:ASP:N	2.32	0.54
24:Y:70:LEU:HD23	24:Y:171:ASP:HB2	1.89	0.54
26:1:728:LEU:HB3	26:1:765:TYR:OH	2.08	0.54
27:3:25:THR:OG1	27:3:26:LYS:N	2.35	0.54
28:p:177:PHE:HA	28:p:194:PHE:HA	1.89	0.54
1:A:233:PRO:O	1:A:237:THR:HG23	2.07	0.54
1:A:1536:LEU:HG	1:A:1572:SER:HB3	1.89	0.54
3:C:404:THR:O	3:C:408:LEU:HD12	2.08	0.54
6:F:89:U:H2'	6:F:90:G:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:200:ASP:HB3	11:K:219:PHE:CD1	2.40	0.54
26:1:785:LYS:O	26:1:789:LEU:HD12	2.07	0.54
27:3:718:ARG:HB2	27:3:720:TRP:NE1	2.21	0.54
1:A:657:ALA:O	1:A:661:GLU:HG3	2.08	0.54
3:C:213:ASP:OD2	3:C:616:SER:OG	2.17	0.54
3:C:857:VAL:HA	3:C:873:ALA:HB2	1.89	0.54
5:E:294:SER:HB2	5:E:298:SER:H	1.73	0.54
23:X:195:ASN:HD21	24:Y:310:ARG:HH12	1.55	0.54
26:1:953:ASP:O	26:1:956:SER:OG	2.18	0.54
27:3:234:PHE:CE1	27:3:236:ILE:HG12	2.42	0.54
27:3:984:LYS:NZ	29:w:469:GLU:O	2.34	0.54
46:9:321:PHE:N	46:9:426:ILE:O	2.38	0.54
1:A:467:GLN:HG2	2:B:19:A:N6	2.23	0.54
1:A:703:GLN:O	1:A:705:LYS:N	2.41	0.54
3:C:692:LEU:HB2	3:C:786:ASN:ND2	2.23	0.54
3:C:772:TRP:CH2	46:9:130:ALA:HA	2.42	0.54
26:1:1122:THR:OG1	26:1:1123:CYS:N	2.41	0.54
26:1:1257:PRO:HD3	30:2:482:ALA:HB2	1.90	0.54
1:A:39:GLN:HE22	22:W:170:THR:H	1.55	0.54
1:A:792:HIS:HE1	17:R:279:HIS:HD2	1.56	0.54
1:A:1777:ILE:HG23	1:A:1860:GLN:HG3	1.89	0.54
3:C:715:GLY:HA2	3:C:719:GLN:HE22	1.73	0.54
15:P:41:ILE:HG13	19:T:318:ARG:HG3	1.89	0.54
23:X:481:ILE:HD11	23:X:484:GLU:HB3	1.90	0.54
24:Y:21:ARG:HH12	24:Y:83:VAL:N	2.06	0.54
26:1:565:ASP:OD1	26:1:566:LEU:N	2.41	0.54
26:1:778:GLN:N	26:1:778:GLN:OE1	2.41	0.54
31:4:79:LEU:N	31:4:82:LYS:O	2.41	0.54
35:v:28:GLU:O	35:v:32:GLN:NE2	2.41	0.54
1:A:1979:VAL:HA	1:A:1982:GLN:HB2	1.89	0.54
3:C:215:VAL:HG11	3:C:242:LEU:HD21	1.89	0.54
3:C:719:GLN:NE2	3:C:726:LEU:HA	2.23	0.54
3:C:891:THR:HG21	3:C:895:ALA:HB3	1.90	0.54
6:F:38:G:H8	6:F:38:G:P	2.31	0.54
7:G:7:G:H2'	7:G:8:C:C6	2.42	0.54
7:G:100:C:H4'	7:G:101:U:C6	2.42	0.54
12:L:74:LEU:O	12:L:77:LEU:N	2.41	0.54
23:X:454:ARG:NH1	23:X:680:SER:OG	2.40	0.54
23:X:932:CYS:HB2	23:X:938:ARG:HD2	1.90	0.54
26:1:652:CYS:SG	26:1:689:ILE:HG23	2.48	0.54
26:1:1092:ASP:O	26:1:1096:THR:HG23	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:w:429:TRP:CE3	29:w:430:ARG:HG3	2.43	0.54
30:2:495:ARG:O	30:2:497:SER:N	2.41	0.54
33:5:8:HIS:NE2	33:5:12:GLU:OE2	2.37	0.54
33:5:14:LEU:HD23	33:5:17:LYS:HD2	1.88	0.54
1:A:1819:LEU:HB3	1:A:1915:VAL:CG2	2.37	0.54
1:A:2125:ALA:HB2	1:A:2179:HIS:HB3	1.89	0.54
1:A:2148:VAL:HG13	1:A:2149:PRO:O	2.07	0.54
3:C:658:PRO:HB2	3:C:881:PHE:CZ	2.43	0.54
5:E:78:GLY:HA3	5:E:336:HIS:CE1	2.42	0.54
5:E:197:LEU:HG	5:E:212:GLY:HA2	1.89	0.54
5:E:334:ALA:HB3	5:E:343:ILE:CG2	2.38	0.54
19:T:329:HIS:CE1	19:T:349:SER:HB3	2.43	0.54
26:1:933:CYS:O	26:1:936:VAL:N	2.41	0.54
27:3:164:ASN:HA	27:3:189:TYR:CZ	2.43	0.54
37:h:69:ASN:N	37:h:97:SER:O	2.41	0.54
1:A:1780:VAL:HA	1:A:1808:PHE:O	2.09	0.53
1:A:2177:TRP:CZ3	1:A:2179:HIS:HD2	2.26	0.53
1:A:2181:GLN:O	1:A:2217:SER:HA	2.09	0.53
1:A:2246:ASN:OD1	1:A:2246:ASN:N	2.40	0.53
3:C:884:GLU:O	3:C:888:ARG:HG3	2.07	0.53
5:E:62:LEU:HB2	5:E:351:LEU:HB2	1.89	0.53
12:L:11:TRP:CD2	12:L:49:ARG:HD3	2.43	0.53
13:N:139:CYS:SG	13:N:140:ARG:N	2.82	0.53
16:Q:564:LEU:O	16:Q:592:VAL:HA	2.07	0.53
26:1:896:ILE:HD12	26:1:917:VAL:HG11	1.90	0.53
27:3:289:CYS:SG	27:3:338:ALA:HA	2.48	0.53
35:v:66:GLU:O	35:v:69:TYR:N	2.41	0.53
44:u:72:ARG:O	44:u:76:ILE:CB	2.55	0.53
1:A:1661:TRP:HH2	1:A:1684:PHE:HE1	1.56	0.53
1:A:1771:LEU:HD21	1:A:1779:PHE:CZ	2.40	0.53
1:A:1811:ASN:HB3	1:A:1814:THR:OG1	2.09	0.53
1:A:2095:ASP:OD2	1:A:2258:ARG:NH2	2.42	0.53
3:C:529:ARG:NH2	3:C:540:GLU:HB2	2.19	0.53
3:C:558:PRO:HG2	3:C:559:ILE:HG23	1.91	0.53
6:F:49:G:N7	12:L:33:ARG:HB3	2.23	0.53
23:X:767:LEU:O	23:X:767:LEU:HD13	2.08	0.53
26:1:933:CYS:SG	26:1:970:LEU:HD21	2.48	0.53
27:3:234:PHE:C	27:3:235:LEU:HD12	2.33	0.53
27:3:777:VAL:HG22	27:3:779:PHE:CE1	2.43	0.53
33:5:63:ARG:O	33:5:67:ASN:ND2	2.42	0.53
37:h:58:ALA:O	37:h:65:MET:HA	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:9:94:SER:O	46:9:101:TYR:HA	2.09	0.53
1:A:37:TRP:O	1:A:41:GLN:HG2	2.08	0.53
3:C:320:LEU:HD22	3:C:343:LEU:HB2	1.90	0.53
3:C:622:GLU:O	3:C:625:GLY:N	2.41	0.53
8:H:151:C:H2'	8:H:152:G:C8	2.43	0.53
17:R:125:MET:HB2	19:T:186:PRO:HG2	1.90	0.53
17:R:427:ASP:OD1	17:R:428:GLU:N	2.41	0.53
24:Y:267:ARG:N	24:Y:287:GLU:O	2.34	0.53
27:3:269:CYS:SG	27:3:327:LEU:HD11	2.48	0.53
27:3:623:ASP:OD2	27:3:626:GLN:NE2	2.41	0.53
27:3:642:ILE:N	27:3:703:ARG:HE	2.06	0.53
29:w:430:ARG:HH11	29:w:430:ARG:H	1.56	0.53
32:7:46:CYS:N	32:7:85:CYS:HB2	2.22	0.53
39:m:72:LEU:HA	40:l:70:PHE:HA	1.91	0.53
1:A:550:VAL:O	1:A:554:THR:HG23	2.09	0.53
1:A:1199:LYS:HE2	1:A:1206:GLU:CD	2.34	0.53
1:A:1362:ASP:CG	1:A:1363:GLN:H	2.16	0.53
1:A:1778:TRP:CH2	1:A:1852:LEU:HD21	2.40	0.53
1:A:2164:PRO:HB3	1:A:2296:LEU:HD11	1.88	0.53
3:C:928:HIS:N	3:C:928:HIS:HD1	2.07	0.53
5:E:75:HIS:CE1	5:E:121:GLY:HA3	2.43	0.53
8:H:36:G:H2'	8:H:37:U:H6	1.73	0.53
11:K:204:ASP:OD1	35:v:11:THR:OG1	2.19	0.53
17:R:361:LYS:HA	17:R:364:GLN:HG3	1.90	0.53
27:3:18:ILE:HG21	27:3:67:ALA:H	1.72	0.53
27:3:477:SER:CB	27:3:505:THR:H	2.11	0.53
35:v:85:ARG:NH1	35:v:88:LYS:HB3	2.22	0.53
46:9:323:ARG:O	46:9:331:GLN:N	2.36	0.53
1:A:699:GLU:OE1	1:A:699:GLU:HA	2.08	0.53
1:A:1333:VAL:HG11	21:V:467:LEU:HD13	1.90	0.53
1:A:1793:THR:HB	1:A:1795:GLU:H	1.73	0.53
4:D:2018:GLU:O	4:D:2041:LEU:HA	2.09	0.53
7:G:88:G:O6	8:H:40:C:N4	2.41	0.53
8:H:78:C:H2'	8:H:79:G:H8	1.72	0.53
9:I:374:ILE:O	9:I:377:THR:N	2.42	0.53
17:R:162:ALA:C	17:R:164:PRO:HD3	2.33	0.53
17:R:201:GLU:H	17:R:201:GLU:CD	2.16	0.53
21:V:555:LEU:HG	21:V:586:PHE:HZ	1.73	0.53
24:Y:104:HIS:CD2	24:Y:124:THR:HG1	2.23	0.53
24:Y:255:ASP:O	24:Y:258:ILE:HB	2.09	0.53
26:1:693:GLY:HA2	26:1:696:ASP:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1:806:ILE:HG23	26:1:810:ILE:HB	1.90	0.53
30:2:530:ARG:HH12	30:2:578:TRP:CD1	2.26	0.53
46:9:296:HIS:H	46:9:296:HIS:CD2	2.26	0.53
3:C:298:LEU:HD21	3:C:300:LEU:HG	1.89	0.53
3:C:323:PHE:CE2	3:C:373:ILE:HG12	2.44	0.53
3:C:711:ARG:HB3	3:C:730:ARG:HH22	1.74	0.53
7:G:9:C:O2'	7:G:10:U:O4'	2.12	0.53
17:R:91:ASP:OD1	17:R:95:LYS:N	2.26	0.53
17:R:383:ASN:HA	17:R:386:ARG:NH1	2.23	0.53
19:T:245:HIS:NE2	19:T:263:SER:OG	2.23	0.53
21:V:244:GLY:O	21:V:249:ASP:N	2.30	0.53
23:X:180:ALA:O	23:X:184:ARG:HG3	2.09	0.53
26:1:523:ALA:C	26:1:563:LEU:HD11	2.33	0.53
26:1:833:LEU:O	26:1:837:THR:OG1	2.23	0.53
27:3:92:TYR:OH	27:3:97:ASN:OD1	2.18	0.53
27:3:769:LYS:HD3	27:3:769:LYS:N	2.24	0.53
27:3:833:GLU:C	27:3:836:ALA:H	2.14	0.53
31:4:102:ILE:C	31:4:177:ALA:HB2	2.33	0.53
46:9:360:HIS:ND1	46:9:396:ILE:HD11	2.23	0.53
2:B:89:U:O2	40:g:66:SER:N	2.37	0.53
3:C:604:LEU:HD21	3:C:627:HIS:HE1	1.73	0.53
5:E:117:TYR:HB3	5:E:118:ASN:O	2.09	0.53
5:E:253:ASN:ND2	5:E:291:CYS:HB3	2.23	0.53
7:G:116:C:C6	17:R:371:ARG:HG2	2.44	0.53
12:L:573:GLU:O	12:L:577:LYS:N	2.37	0.53
12:L:699:ASN:O	12:L:703:MET:N	2.42	0.53
16:Q:599:GLY:HA3	16:Q:608:ILE:H	1.74	0.53
17:R:352:ARG:HG3	17:R:355:ILE:HD12	1.90	0.53
26:1:1058:ILE:O	26:1:1062:LEU:HG	2.08	0.53
27:3:939:PHE:CZ	27:3:942:LYS:HG2	2.44	0.53
42:j:60:ASP:N	42:j:75:GLY:O	2.42	0.53
1:A:35:ARG:HG2	1:A:35:ARG:HH11	1.72	0.53
1:A:697:MET:N	1:A:698:PRO:HD3	2.24	0.53
7:G:112:U:C4	23:X:503:ARG:NE	2.76	0.53
19:T:423:SER:HB3	19:T:474:GLU:OE1	2.08	0.53
23:X:689:VAL:C	23:X:690:LEU:HD23	2.34	0.53
23:X:741:TRP:CH2	26:1:782:GLU:HB3	2.44	0.53
23:X:815:MET:CG	23:X:825:SER:HB2	2.39	0.53
24:Y:9:LEU:O	24:Y:135:ILE:HD13	2.08	0.53
24:Y:147:ASP:OD2	24:Y:147:ASP:N	2.40	0.53
26:1:731:LEU:O	26:1:735:ILE:HG12	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1:1103:VAL:O	26:1:1109:ARG:HD3	2.08	0.53
27:3:34:ARG:HB2	27:3:37:ILE:HB	1.91	0.53
27:3:266:ASP:OD1	27:3:266:ASP:N	2.40	0.53
27:3:632:ALA:O	27:3:633:LEU:HD23	2.09	0.53
27:3:1168:PHE:N	27:3:1168:PHE:CD2	2.77	0.53
29:w:440:ILE:HG12	29:w:459:TRP:CG	2.44	0.53
30:2:460:PHE:HB3	30:2:464:GLU:HG2	1.91	0.53
46:9:296:HIS:HE1	46:9:358:LEU:HD21	1.74	0.53
1:A:283:VAL:HG13	1:A:284:ARG:H	1.74	0.53
1:A:1019:TYR:O	1:A:1020:LYS:C	2.51	0.53
1:A:1108:ASP:O	1:A:1112:ARG:HG3	2.09	0.53
1:A:1427:ARG:HB3	23:X:329:TRP:CE3	2.44	0.53
3:C:682:LYS:HB3	3:C:797:ALA:HB2	1.90	0.53
7:G:116:C:H3'	7:G:117:A:H8	1.73	0.53
10:J:377:LYS:NZ	10:J:381:LYS:HE3	2.23	0.53
12:L:68:GLU:OE2	12:L:99:HIS:NE2	2.38	0.53
12:L:73:HIS:CD2	46:9:220:ILE:HB	2.44	0.53
17:R:137:GLU:HB2	17:R:141:LYS:HE3	1.89	0.53
17:R:369:LEU:HD12	17:R:376:LYS:NZ	2.24	0.53
23:X:913:ASP:O	23:X:916:GLU:HG3	2.09	0.53
24:Y:203:ARG:HH21	24:Y:203:ARG:HA	1.74	0.53
26:1:515:ALA:O	26:1:519:ILE:HG22	2.09	0.53
26:1:796:CYS:C	26:1:801:VAL:HG21	2.34	0.53
27:3:530:ASP:O	27:3:532:ARG:N	2.40	0.53
27:3:803:ASP:OD1	27:3:804:HIS:N	2.41	0.53
27:3:1025:ALA:HA	27:3:1087:GLN:O	2.09	0.53
1:A:75:ASP:O	1:A:77:THR:N	2.41	0.53
1:A:1764:SER:C	1:A:1766:GLN:H	2.17	0.53
1:A:1818:PHE:HD1	1:A:1914:MET:HE3	1.74	0.53
3:C:879:ASP:OD1	3:C:879:ASP:N	2.41	0.53
4:D:1157:ASN:O	4:D:1161:ILE:N	2.31	0.53
5:E:191:GLN:HE21	5:E:193:THR:HA	1.74	0.53
5:E:239:THR:OG1	5:E:289:LEU:HB3	2.09	0.53
6:F:20:A:O4'	13:N:96:GLY:HA3	2.08	0.53
7:G:15:U:H3'	7:G:16:G:H8	1.73	0.53
7:G:112:U:C5	23:X:503:ARG:NE	2.77	0.53
9:I:326:ASP:C	9:I:328:GLU:H	2.17	0.53
19:T:418:THR:HG21	19:T:467:ALA:HA	1.90	0.53
23:X:476:GLU:HA	23:X:491:THR:HA	1.90	0.53
23:X:743:TYR:O	23:X:747:LEU:HB2	2.08	0.53
23:X:879:LEU:HD23	23:X:879:LEU:H	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Y:3:VAL:HG11	24:Y:32:CYS:SG	2.48	0.53
27:3:206:GLN:NE2	27:3:232:GLY:H	2.07	0.53
27:3:390:ARG:HD3	27:3:393:LYS:HE3	1.91	0.53
27:3:484:VAL:C	27:3:485:LEU:HD12	2.34	0.53
27:3:940:LEU:HB3	27:3:941:HIS:CE1	2.43	0.53
1:A:1436:TRP:O	1:A:1440:THR:HG23	2.08	0.52
1:A:1767:ASN:O	1:A:1770:GLU:HB3	2.09	0.52
3:C:227:LEU:HD21	3:C:229:ILE:HD11	1.91	0.52
3:C:490:PHE:HB2	3:C:556:ASP:HB3	1.91	0.52
4:D:2103:ASN:HA	4:D:2123:SER:HA	1.91	0.52
8:H:118:G:H2'	8:H:119:G:C8	2.43	0.52
10:J:292:VAL:HG12	10:J:296:ARG:HE	1.75	0.52
17:R:348:GLU:HG3	23:X:262:LEU:HB2	1.89	0.52
26:1:609:MET:HE1	26:1:635:VAL:HG11	1.91	0.52
26:1:815:PHE:HA	26:1:819:TRP:CD1	2.43	0.52
26:1:1231:MET:HE1	26:1:1268:ILE:HG12	1.90	0.52
46:9:282:VAL:HG22	46:9:433:VAL:HG13	1.90	0.52
1:A:1649:LYS:HB3	1:A:1880:PRO:HB2	1.92	0.52
3:C:480:LYS:HB3	3:C:482:TYR:CE1	2.44	0.52
5:E:65:HIS:CE1	5:E:84:ALA:HA	2.44	0.52
6:F:31:U:H3'	6:F:32:U:H6	1.74	0.52
7:G:8:C:H2'	7:G:9:C:C6	2.45	0.52
16:Q:735:VAL:HA	16:Q:779:VAL:O	2.08	0.52
17:R:320:HIS:NE2	17:R:324:LEU:HD11	2.24	0.52
26:1:846:ALA:HB1	26:1:850:ILE:HG12	1.91	0.52
27:3:550:ASN:HD22	27:3:553:GLN:HB2	1.75	0.52
27:3:642:ILE:HB	27:3:703:ARG:HH21	1.73	0.52
1:A:65:HIS:O	1:A:69:ILE:HG13	2.10	0.52
1:A:305:ARG:HG3	3:C:878:ILE:HG21	1.92	0.52
1:A:1437:ARG:NH1	1:A:1455:TRP:O	2.43	0.52
1:A:2196:HIS:NE2	1:A:2211:THR:HB	2.24	0.52
3:C:441:PRO:C	3:C:444:GLY:HA3	2.34	0.52
6:F:13:G:H2'	6:F:14:C:C6	2.44	0.52
10:J:328:GLY:HA2	10:J:331:GLN:HE21	1.74	0.52
12:L:175:GLN:O	12:L:178:GLU:N	2.42	0.52
19:T:207:VAL:HG12	19:T:480:ALA:HB1	1.90	0.52
21:V:642:GLU:O	21:V:645:GLU:HB3	2.10	0.52
23:X:954:LEU:HG	23:X:956:ARG:NH1	2.25	0.52
24:Y:23:ARG:O	24:Y:26:LEU:HG	2.09	0.52
24:Y:198:ASP:HA	24:Y:200:PHE:CE2	2.43	0.52
27:3:120:PHE:HB2	27:3:133:SER:OG	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:2:453:LYS:HB3	30:2:456:ARG:HH21	1.74	0.52
1:A:361:HIS:HB2	3:C:280:HIS:ND1	2.24	0.52
1:A:857:ASN:OD1	1:A:859:SER:N	2.42	0.52
1:A:1189:MET:HG3	1:A:1190:CYS:H	1.75	0.52
1:A:1352:HIS:CE1	20:U:21:ARG:HB2	2.43	0.52
7:G:85:G:O6	8:H:44:U:O4	2.28	0.52
14:O:172:GLU:O	14:O:174:LYS:N	2.42	0.52
15:P:186:ARG:CD	15:P:190:ASP:OD2	2.57	0.52
16:Q:381:ALA:O	16:Q:386:LEU:N	2.30	0.52
23:X:257:PHE:CE1	23:X:270:LEU:HB2	2.44	0.52
23:X:803:ASN:OD1	23:X:807:GLU:N	2.37	0.52
26:1:842:ASN:OD1	26:1:879:LEU:HD11	2.10	0.52
26:1:1260:LYS:O	26:1:1264:VAL:HG22	2.10	0.52
27:3:519:VAL:HB	27:3:524:ILE:HG23	1.92	0.52
46:9:413:VAL:HG11	46:9:426:ILE:HD11	1.90	0.52
1:A:362:ARG:HA	1:A:362:ARG:HH11	1.74	0.52
3:C:125:ASN:OD1	3:C:127:GLU:N	2.39	0.52
3:C:314:TYR:CD2	3:C:416:LEU:HD22	2.44	0.52
4:D:2017:ILE:HA	4:D:2042:GLU:O	2.10	0.52
5:E:191:GLN:NE2	5:E:193:THR:HA	2.24	0.52
10:J:267:ARG:HD3	12:L:216:PHE:O	2.10	0.52
15:P:205:LYS:CB	15:P:208:LYS:HB3	2.39	0.52
16:Q:748:ARG:O	16:Q:779:VAL:HA	2.08	0.52
23:X:957:SER:OG	23:X:957:SER:O	2.19	0.52
1:A:1983:LEU:O	1:A:1987:ILE:HG13	2.08	0.52
3:C:89:LEU:HD12	19:T:240:LEU:HD11	1.90	0.52
12:L:178:GLU:O	12:L:181:ARG:HG3	2.09	0.52
27:3:442:LEU:HD13	27:3:770:LEU:HD23	1.91	0.52
27:3:700:LYS:HB3	27:3:702:PHE:HZ	1.74	0.52
27:3:872:ILE:HD12	27:3:872:ILE:H	1.75	0.52
1:A:212:PRO:HD2	1:A:225:TYR:OH	2.10	0.52
6:F:84:A:C1'	6:F:85:U:H5'	2.37	0.52
6:F:87:C:H2'	6:F:88:G:O4'	2.08	0.52
10:J:376:VAL:HG13	10:J:415:LEU:HB2	1.92	0.52
23:X:240:ARG:O	23:X:243:LEU:HB3	2.10	0.52
23:X:257:PHE:HZ	23:X:267:ARG:HA	1.74	0.52
23:X:991:LEU:HB2	23:X:995:GLU:OE1	2.10	0.52
26:1:886:HIS:HD2	26:1:887:LYS:HD3	1.74	0.52
27:3:605:LEU:O	27:3:617:ILE:N	2.42	0.52
46:9:320:ILE:HD11	46:9:337:GLY:O	2.10	0.52
1:A:1590:VAL:HG12	1:A:1664:ILE:HG13	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:693:GLU:HB3	3:C:696:LEU:HD21	1.92	0.52
3:C:742:PRO:HG2	3:C:785:ARG:HA	1.92	0.52
10:J:314:TYR:CE1	10:J:336:TRP:HH2	2.28	0.52
17:R:369:LEU:HG	17:R:376:LYS:HG2	1.91	0.52
19:T:371:HIS:CE1	19:T:396:LYS:HG3	2.45	0.52
21:V:555:LEU:HD22	21:V:560:LEU:HB2	1.91	0.52
23:X:558:ALA:O	23:X:562:THR:OG1	2.21	0.52
23:X:973:ASN:OD1	23:X:973:ASN:N	2.42	0.52
26:1:1289:ASN:HB3	26:1:1295:TYR:H	1.75	0.52
27:3:233:ASN:HD21	27:3:286:ILE:HG22	1.75	0.52
27:3:312:LYS:HB2	27:3:330:PHE:HD1	1.72	0.52
29:w:496:LYS:HA	29:w:501:LEU:HB2	1.92	0.52
32:7:58:CYS:HB3	32:7:62:GLY:N	2.25	0.52
40:l:33:ILE:N	40:l:42:GLN:O	2.43	0.52
1:A:650:ARG:O	1:A:654:ASN:ND2	2.40	0.52
2:B:102:U:H2'	2:B:103:G:C8	2.44	0.52
3:C:223:ASP:HA	3:C:448:LYS:NZ	2.25	0.52
3:C:311:SER:OG	3:C:314:TYR:HB2	2.09	0.52
5:E:203:ASP:N	5:E:203:ASP:OD1	2.43	0.52
11:K:228:HIS:HB2	11:K:231:GLN:NE2	2.25	0.52
17:R:170:LYS:H	17:R:170:LYS:CD	2.20	0.52
23:X:242:LYS:HD2	23:X:246:LEU:HD22	1.92	0.52
27:3:229:GLU:HB2	27:3:230:GLU:OE1	2.09	0.52
31:4:117:TYR:O	31:4:121:SER:CB	2.58	0.52
1:A:758:ARG:HH21	1:A:775:ASN:HD22	1.58	0.52
1:A:2279:TRP:CD1	1:A:2301:PRO:HB3	2.44	0.52
5:E:166:LEU:HD12	5:E:178:LEU:HD11	1.91	0.52
6:F:35:A:C8	7:G:12:G:C6	2.97	0.52
17:R:414:GLN:HG2	23:X:633:ARG:NH1	2.24	0.52
21:V:539:LEU:HB3	21:V:543:LYS:HB2	1.91	0.52
22:W:294:VAL:HA	22:W:305:LEU:O	2.10	0.52
23:X:504:GLU:O	23:X:507:SER:OG	2.21	0.52
23:X:527:LEU:N	23:X:754:GLU:OE2	2.38	0.52
23:X:714:CYS:SG	23:X:722:ARG:NH1	2.84	0.52
26:1:661:ARG:HG2	26:1:692:HIS:NE2	2.25	0.52
26:1:1007:HIS:HB3	26:1:1049:TYR:OH	2.10	0.52
1:A:121:HIS:HD2	1:A:482:PHE:CE1	2.29	0.51
1:A:209:ASP:HB2	1:A:212:PRO:HA	1.92	0.51
1:A:1580:HIS:HD2	1:A:1583:GLN:NE2	2.08	0.51
1:A:2002:LEU:HB2	1:A:2007:ILE:HG23	1.92	0.51
1:A:2148:VAL:HG22	1:A:2149:PRO:HD2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2231:THR:HG22	1:A:2257:GLU:HG2	1.92	0.51
5:E:218:LYS:HG3	5:E:230:THR:HG22	1.92	0.51
8:H:172:C:N4	8:H:173:C:H41	2.07	0.51
10:J:377:LYS:HA	10:J:380:ILE:HB	1.92	0.51
14:O:31:ASN:O	17:R:195:ARG:NH2	2.43	0.51
16:Q:827:THR:HA	16:Q:1136:GLN:HA	1.93	0.51
23:X:257:PHE:CZ	23:X:267:ARG:HA	2.45	0.51
26:1:740:GLY:H	26:1:743:LEU:HD22	1.74	0.51
27:3:1008:SER:HG	27:3:1009:PHE:N	2.06	0.51
35:v:34:ALA:HB2	35:v:66:GLU:HG2	1.91	0.51
1:A:417:ARG:HB3	1:A:417:ARG:NH1	2.24	0.51
1:A:599:MET:O	1:A:603:ARG:HG3	2.10	0.51
1:A:1076:ASP:N	1:A:1076:ASP:OD2	2.43	0.51
1:A:1268:ILE:O	1:A:1272:THR:OG1	2.25	0.51
1:A:1406:GLU:N	1:A:1406:GLU:OE1	2.43	0.51
1:A:2074:ARG:HD3	1:A:2077:ALA:HB3	1.92	0.51
5:E:190:PHE:HE1	5:E:225:ASN:HA	1.75	0.51
7:G:85:G:H2'	7:G:86:A:N9	2.25	0.51
10:J:337:MET:HE3	10:J:346:TRP:CE3	2.45	0.51
15:P:186:ARG:CG	15:P:186:ARG:NH1	2.72	0.51
23:X:790:LEU:HA	23:X:793:LEU:HD12	1.92	0.51
27:3:674:LEU:C	27:3:675:LEU:HD12	2.34	0.51
1:A:1838:LYS:HA	1:A:1868:MET:SD	2.50	0.51
1:A:1895:ALA:HB1	1:A:1943:LEU:HB2	1.92	0.51
2:B:65:G:H2'	2:B:66:A:H8	1.75	0.51
3:C:131:ASN:ND2	3:C:495:ARG:HH12	2.09	0.51
3:C:673:LYS:HZ2	3:C:688:ILE:HG21	1.74	0.51
3:C:724:TRP:HA	3:C:724:TRP:CE3	2.45	0.51
4:D:1523:LEU:HA	4:D:1700:GLY:O	2.10	0.51
5:E:219:VAL:O	5:E:228:THR:N	2.42	0.51
6:F:36:A:H5"	6:F:37:C:OP2	2.10	0.51
10:J:286:GLU:HG2	10:J:298:ILE:HD12	1.91	0.51
10:J:431:ARG:HD2	10:J:434:VAL:HG11	1.93	0.51
10:J:431:ARG:HH11	10:J:434:VAL:HG11	1.76	0.51
13:N:57:THR:HG21	13:N:88:LEU:HD23	1.91	0.51
16:Q:1136:GLN:O	16:Q:1157:LEU:N	2.42	0.51
26:1:641:ILE:N	26:1:642:PRO:HD2	2.26	0.51
26:1:652:CYS:HB2	26:1:692:HIS:CE1	2.35	0.51
26:1:1291:ASP:OD1	26:1:1292:LYS:N	2.43	0.51
27:3:91:GLU:HG2	27:3:92:TYR:N	2.25	0.51
1:A:79:ARG:HD2	1:A:82:ARG:HE	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1957:ASP:OD1	1:A:1958:LYS:N	2.43	0.51
1:A:2103:THR:HB	1:A:2260:GLN:CD	2.36	0.51
3:C:396:LEU:HG	3:C:401:ILE:O	2.11	0.51
5:E:328:GLY:N	5:E:348:ASP:HB3	2.26	0.51
7:G:6:A:C6	7:G:7:G:C5	2.98	0.51
23:X:164:TRP:HE3	23:X:165:GLU:HA	1.75	0.51
23:X:430:THR:O	23:X:433:PRO:HD2	2.10	0.51
23:X:611:ILE:HG12	23:X:688:TYR:HB2	1.92	0.51
26:1:545:GLU:HG2	26:1:548:GLU:HG3	1.91	0.51
26:1:648:LEU:HA	26:1:651:VAL:HG22	1.92	0.51
26:1:823:MET:HE3	26:1:829:ASN:HB3	1.93	0.51
27:3:147:ASP:OD1	27:3:150:ALA:N	2.43	0.51
27:3:644:GLU:HG2	27:3:645:MET:N	2.25	0.51
27:3:720:TRP:CE3	27:3:731:LEU:HG	2.45	0.51
27:3:1114:SER:HB2	27:3:1215:TYR:CE1	2.46	0.51
27:3:1125:GLY:C	27:3:1126:ILE:HG13	2.35	0.51
35:v:49:ASN:ND2	35:v:53:SER:OG	2.40	0.51
1:A:984:MET:O	1:A:988:ILE:HG13	2.11	0.51
1:A:1284:LEU:O	1:A:1287:LEU:N	2.43	0.51
1:A:1454:TRP:H	1:A:1454:TRP:CD1	2.26	0.51
1:A:1645:LEU:HD13	1:A:1718:TRP:CH2	2.46	0.51
8:H:41:U:H2'	8:H:42:G:H8	1.75	0.51
10:J:336:TRP:CD1	10:J:341:PRO:HG3	2.45	0.51
10:J:386:GLU:O	10:J:391:TYR:N	2.40	0.51
16:Q:1180:ILE:O	16:Q:1304:PHE:HA	2.10	0.51
17:R:160:ALA:O	17:R:166:ARG:NH1	2.43	0.51
17:R:243:GLN:HA	17:R:243:GLN:OE1	2.11	0.51
23:X:168:GLU:O	23:X:172:LEU:HG	2.11	0.51
23:X:603:HIS:HA	23:X:668:ARG:CZ	2.40	0.51
23:X:635:LEU:O	23:X:638:LYS:HB2	2.11	0.51
26:1:906:GLU:N	26:1:906:GLU:OE1	2.44	0.51
26:1:1080:THR:HA	26:1:1083:TYR:HD2	1.74	0.51
27:3:628:LEU:HD21	27:3:681:PRO:HA	1.92	0.51
27:3:991:SER:O	27:3:991:SER:OG	2.28	0.51
46:9:95:LYS:HA	46:9:100:LYS:O	2.11	0.51
7:G:108:U:H5"	23:X:676:ILE:HB	1.93	0.51
8:H:133:U:H2'	8:H:134:C:C6	2.46	0.51
10:J:357:LYS:O	10:J:359:VAL:N	2.43	0.51
12:L:30:GLN:HB3	12:L:33:ARG:HD2	1.92	0.51
13:N:38:GLU:C	13:N:40:LYS:N	2.69	0.51
15:P:28:LYS:HD2	17:R:164:PRO:HB3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:P:186:ARG:NH1	15:P:186:ARG:HG2	2.25	0.51
19:T:203:HIS:HE1	19:T:229:LYS:HG3	1.73	0.51
23:X:263:SER:HA	23:X:267:ARG:NH2	2.22	0.51
23:X:272:TYR:O	23:X:276:VAL:HB	2.11	0.51
23:X:411:ALA:HA	23:X:414:ASN:HD22	1.75	0.51
27:3:43:PRO:HB3	27:3:50:VAL:HG22	1.93	0.51
27:3:181:MET:HB3	27:3:212:GLU:HA	1.92	0.51
27:3:413:ALA:HB1	27:3:415:LEU:HD13	1.92	0.51
27:3:515:ALA:HB2	27:3:528:ARG:CZ	2.40	0.51
27:3:695:GLY:HA3	27:3:717:SER:OG	2.10	0.51
32:7:71:TYR:CD2	32:7:81:ASP:HB2	2.46	0.51
1:A:1401:ARG:HB2	1:A:1401:ARG:NH1	2.25	0.51
1:A:1817:LEU:HD22	1:A:1917:PHE:HB2	1.93	0.51
1:A:2117:ILE:HD11	1:A:2147:MET:HE2	1.91	0.51
1:A:2188:LEU:HD23	1:A:2193:VAL:HG12	1.92	0.51
3:C:737:PRO:HD3	3:C:743:ASN:ND2	2.26	0.51
3:C:750:LEU:O	3:C:754:VAL:HG23	2.10	0.51
7:G:117:A:H3'	24:Y:246:LYS:HE2	1.93	0.51
16:Q:1061:MET:O	16:Q:1093:MET:HA	2.11	0.51
19:T:396:LYS:HB2	19:T:398:TRP:HE1	1.76	0.51
19:T:429:SER:O	19:T:429:SER:OG	2.29	0.51
21:V:571:SER:O	21:V:575:THR:OG1	2.27	0.51
21:V:628:ILE:O	21:V:632:THR:OG1	2.27	0.51
23:X:911:ALA:O	23:X:914:VAL:HG22	2.10	0.51
24:Y:306:ILE:HD12	24:Y:311:ILE:HD11	1.93	0.51
26:1:687:VAL:O	26:1:690:ILE:HG13	2.11	0.51
26:1:731:LEU:HD23	26:1:746:PHE:CD1	2.46	0.51
27:3:159:GLU:CD	27:3:161:HIS:H	2.19	0.51
27:3:1011:TRP:HB2	27:3:1025:ALA:O	2.11	0.51
38:d:22:LYS:O	38:d:70:LEU:N	2.40	0.51
1:A:348:PRO:HB3	1:A:394:TYR:CZ	2.45	0.51
1:A:1179:SER:O	1:A:1201:ARG:NH1	2.29	0.51
1:A:1209:HIS:CG	1:A:1210:LYS:H	2.28	0.51
1:A:1397:ILE:HG13	17:R:405:VAL:HG22	1.93	0.51
1:A:1988:LEU:HD12	1:A:2002:LEU:HD13	1.92	0.51
3:C:461:LEU:HB3	3:C:465:MET:HE3	1.93	0.51
15:P:73:GLU:HG2	15:P:76:ARG:HH21	1.76	0.51
24:Y:18:THR:HB	24:Y:166:PHE:CE2	2.46	0.51
27:3:317:THR:HB	27:3:322:VAL:HA	1.92	0.51
29:w:453:GLU:HA	29:w:456:VAL:HG22	1.93	0.51
29:w:472:GLN:O	29:w:476:GLU:HG3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:v:73:THR:HA	35:v:78:HIS:CD2	2.46	0.51
38:i:21:VAL:O	38:i:28:GLU:HA	2.09	0.51
39:m:46:ASP:HA	39:m:66:VAL:HA	1.93	0.51
45:r:39:THR:HA	45:r:47:LEU:H	1.76	0.51
45:s:59:HIS:C	45:s:61:ILE:H	2.17	0.51
46:9:370:ASN:HB2	46:9:375:SER:O	2.10	0.51
1:A:474:ARG:HH21	1:A:474:ARG:HB2	1.76	0.51
1:A:1868:MET:O	1:A:1871:PRO:HD2	2.11	0.51
1:A:1946:ASN:HD22	1:A:1949:ARG:HB2	1.76	0.51
2:B:66:A:H2'	2:B:67:A:H8	1.73	0.51
3:C:187:THR:HA	3:C:200:PHE:O	2.11	0.51
3:C:203:MET:HG3	3:C:221:ILE:HD11	1.92	0.51
6:F:31:U:H3'	6:F:32:U:C6	2.46	0.51
8:H:103:U:H4'	8:H:104:U:H5'	1.92	0.51
16:Q:893:SER:O	16:Q:897:ARG:CB	2.59	0.51
23:X:386:ALA:O	23:X:390:GLU:HG3	2.11	0.51
24:Y:21:ARG:HH12	24:Y:83:VAL:H	1.58	0.51
26:1:1056:MET:HE3	26:1:1059:CYS:HB2	1.91	0.51
27:3:379:LEU:HD12	27:3:380:GLU:H	1.76	0.51
46:9:323:ARG:HE	46:9:325:ILE:HD11	1.76	0.51
1:A:35:ARG:O	1:A:39:GLN:HG3	2.11	0.51
1:A:767:VAL:HG21	2:B:39:C:O2'	2.11	0.51
1:A:976:MET:HE2	1:A:1098:PHE:HD1	1.76	0.51
1:A:1778:TRP:C	1:A:1779:PHE:HD2	2.19	0.51
1:A:1814:THR:OG1	1:A:1816:GLN:HB2	2.11	0.51
1:A:2114:PHE:O	1:A:2118:SER:OG	2.27	0.51
3:C:285:VAL:O	3:C:289:ILE:HG13	2.10	0.51
3:C:369:PHE:CE1	3:C:373:ILE:HD12	2.46	0.51
3:C:442:LYS:HZ1	3:C:469:ASP:HA	1.75	0.51
3:C:465:MET:HE2	3:C:475:MET:HB2	1.92	0.51
3:C:510:LEU:HD12	3:C:576:ILE:HG22	1.92	0.51
3:C:854:ARG:NH1	3:C:876:PRO:HG2	2.26	0.51
8:H:43:U:HO2'	8:H:44:U:P	2.33	0.51
8:H:102:U:O2	39:m:74:GLY:N	2.44	0.51
8:H:165:A:O2'	8:H:166:G:O4'	2.29	0.51
17:R:325:ARG:HE	24:Y:222:ILE:HD12	1.76	0.51
19:T:213:GLU:HG2	19:T:214:PRO:N	2.26	0.51
21:V:620:ASN:HB3	21:V:623:ASN:ND2	2.25	0.51
24:Y:64:GLU:HB3	24:Y:76:SER:HB2	1.93	0.51
26:1:547:GLN:HA	26:1:550:HIS:HB3	1.92	0.51
26:1:573:LYS:H	26:1:573:LYS:HD2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1:712:LEU:O	26:1:716:ALA:CB	2.58	0.51
27:3:185:LEU:HD13	27:3:206:GLN:OE1	2.11	0.51
27:3:477:SER:HB2	27:3:505:THR:N	2.11	0.51
27:3:642:ILE:H	27:3:703:ARG:NE	2.09	0.51
27:3:819:MET:HA	27:3:822:GLU:OE1	2.10	0.51
27:3:1015:LYS:HZ2	27:3:1016:ARG:N	2.09	0.51
42:j:32:GLN:HA	42:j:43:ILE:O	2.10	0.51
46:9:306:ASN:CG	46:9:345:TYR:H	2.17	0.51
1:A:411:PHE:C	1:A:413:LEU:H	2.19	0.50
1:A:1661:TRP:CE3	1:A:1700:GLY:HA3	2.46	0.50
5:E:66:GLU:N	5:E:87:ASP:OD2	2.44	0.50
5:E:248:SER:OG	5:E:265:ARG:NH2	2.44	0.50
5:E:312:TRP:CD1	5:E:319:ILE:HA	2.42	0.50
7:G:12:G:H3'	7:G:13:C:C6	2.46	0.50
7:G:111:U:C4	23:X:820:VAL:N	2.77	0.50
16:Q:128:LYS:O	16:Q:132:ALA:HB2	2.10	0.50
17:R:408:ASP:OD2	17:R:410:ARG:NH1	2.44	0.50
24:Y:305:LEU:HD21	24:Y:308:ASP:HA	1.93	0.50
26:1:663:THR:HA	26:1:666:LYS:HE3	1.93	0.50
27:3:207:THR:O	27:3:207:THR:OG1	2.15	0.50
27:3:606:ALA:HA	27:3:616:ILE:HA	1.92	0.50
27:3:776:GLN:HG2	27:3:777:VAL:N	2.27	0.50
27:3:929:LYS:HG3	27:3:931:VAL:HG22	1.93	0.50
27:3:932:ASN:O	27:3:933:ASN:ND2	2.44	0.50
29:w:478:GLU:HA	29:w:488:ASN:HA	1.92	0.50
46:9:315:TYR:OH	46:9:343:GLU:OE1	2.26	0.50
1:A:136:ILE:HG22	1:A:138:PRO:HD2	1.93	0.50
3:C:440:SER:O	3:C:442:LYS:N	2.44	0.50
6:F:73:A:OP1	6:F:75:G:O2'	2.28	0.50
8:H:151:C:H2'	8:H:152:G:H8	1.76	0.50
10:J:314:TYR:CD1	10:J:336:TRP:HH2	2.29	0.50
10:J:374:PRO:HB3	10:J:405:PHE:HZ	1.76	0.50
19:T:428:VAL:HG22	19:T:438:LEU:HD22	1.92	0.50
23:X:397:ARG:HA	23:X:402:PHE:CG	2.47	0.50
23:X:454:ARG:HH12	23:X:679:THR:CB	2.25	0.50
23:X:531:ILE:HD13	23:X:767:LEU:HD23	1.93	0.50
26:1:495:ARG:HA	26:1:498:MET:HE3	1.94	0.50
26:1:831:ARG:O	26:1:834:VAL:HB	2.11	0.50
27:3:613:THR:HB	27:3:630:MET:HE1	1.93	0.50
32:7:39:PRO:HB2	32:7:70:TYR:CD1	2.45	0.50
37:h:41:GLN:HA	37:h:55:ARG:HA	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1942:ALA:HB2	1:A:1983:LEU:HD23	1.93	0.50
1:A:2073:TRP:CD1	1:A:2074:ARG:HB2	2.47	0.50
3:C:135:CYS:SG	3:C:242:LEU:HD13	2.52	0.50
3:C:694:LYS:O	3:C:698:GLU:HG2	2.11	0.50
6:F:81:C:H4'	6:F:82:A:H5'	1.92	0.50
7:G:104:C:O2'	7:G:105:C:OP2	2.26	0.50
8:H:181:G:H2'	8:H:182:U:C6	2.46	0.50
16:Q:1060:LEU:HA	16:Q:1092:ILE:O	2.12	0.50
19:T:386:THR:HG22	19:T:398:TRP:O	2.11	0.50
23:X:765:LEU:HD12	23:X:765:LEU:C	2.33	0.50
26:1:560:LEU:HD23	26:1:603:ALA:HB3	1.92	0.50
26:1:618:ASP:HA	26:1:660:ALA:HB2	1.92	0.50
26:1:972:GLY:O	26:1:976:VAL:HG12	2.10	0.50
27:3:42:ARG:HB2	27:3:53:LEU:HD11	1.93	0.50
27:3:663:LEU:HD23	27:3:679:LEU:HB3	1.92	0.50
27:3:823:MET:SD	27:3:838:MET:HG3	2.52	0.50
27:3:1040:ASP:OD2	27:3:1042:ASP:N	2.45	0.50
29:w:440:ILE:HG12	29:w:459:TRP:CD2	2.45	0.50
46:9:350:PHE:CE1	46:9:376:ASN:HB3	2.46	0.50
1:A:451:LEU:O	1:A:455:VAL:HG23	2.11	0.50
1:A:516:LEU:HD11	1:A:538:SER:HB2	1.92	0.50
1:A:2004:GLN:CD	26:1:898:TYR:HB2	2.36	0.50
3:C:559:ILE:HD12	3:C:560:VAL:O	2.10	0.50
5:E:122:SER:O	5:E:138:SER:OG	2.28	0.50
5:E:268:ALA:O	5:E:270:LYS:N	2.44	0.50
7:G:85:G:H2'	7:G:86:A:C4	2.47	0.50
8:H:57:A:OP1	30:2:459:ARG:NH1	2.32	0.50
20:U:20:GLN:HG2	20:U:21:ARG:H	1.75	0.50
27:3:233:ASN:ND2	27:3:233:ASN:N	2.59	0.50
27:3:424:TYR:CD1	27:3:437:VAL:HG22	2.46	0.50
27:3:451:GLU:HA	27:3:761:THR:HG22	1.92	0.50
29:w:479:TYR:N	29:w:487:VAL:O	2.40	0.50
46:9:292:ASN:HB2	46:9:402:GLY:H	1.75	0.50
1:A:146:SER:HA	1:A:149:ILE:HD12	1.94	0.50
1:A:196:ASP:OD2	1:A:199:GLU:N	2.29	0.50
1:A:948:PRO:O	1:A:952:VAL:HG23	2.11	0.50
1:A:1841:THR:OG1	1:A:1868:MET:SD	2.64	0.50
1:A:2166:HIS:H	1:A:2169:LEU:HB2	1.76	0.50
3:C:283:ASP:OD2	3:C:284:GLU:N	2.45	0.50
3:C:531:TRP:CZ3	3:C:540:GLU:HB3	2.47	0.50
5:E:167:VAL:O	5:E:178:LEU:HD12	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:Q:1082:GLN:N	16:Q:1085:PHE:O	2.29	0.50
17:R:386:ARG:O	23:X:909:ARG:NH1	2.45	0.50
24:Y:117:ASP:N	24:Y:117:ASP:OD1	2.44	0.50
26:1:830:TYR:O	26:1:834:VAL:HG23	2.11	0.50
26:1:898:TYR:CZ	26:1:902:GLU:HG2	2.47	0.50
26:1:908:SER:OG	26:1:912:ASN:OD1	2.28	0.50
29:w:421:ALA:HA	29:w:424:ARG:NE	2.24	0.50
35:v:80:THR:OG1	35:v:81:ASN:N	2.45	0.50
1:A:154:GLU:OE2	1:A:158:ARG:NE	2.32	0.50
1:A:266:SER:OG	1:A:267:LYS:N	2.42	0.50
1:A:542:ASN:O	1:A:546:LEU:HB2	2.11	0.50
1:A:2253:PRO:HA	1:A:2256:TYR:CE2	2.47	0.50
3:C:144:CYS:HB2	48:C:1500:GTP:H5”	1.94	0.50
3:C:474:LEU:O	3:C:566:THR:HA	2.12	0.50
3:C:692:LEU:HB2	3:C:786:ASN:HD22	1.77	0.50
5:E:118:ASN:ND2	5:E:121:GLY:H	2.09	0.50
10:J:313:TRP:HB3	10:J:336:TRP:CZ3	2.46	0.50
16:Q:1269:ASP:O	16:Q:1300:GLY:N	2.45	0.50
17:R:367:ARG:O	17:R:371:ARG:HG3	2.10	0.50
19:T:190:TRP:CG	19:T:497:GLU:HG3	2.46	0.50
23:X:472:LYS:HB3	23:X:475:ASN:ND2	2.26	0.50
26:1:824:ALA:HB3	26:1:864:TYR:HD1	1.77	0.50
26:1:1003:VAL:HG22	26:1:1004:ILE:N	2.27	0.50
27:3:22:PHE:N	27:3:29:GLU:OE1	2.45	0.50
27:3:616:ILE:O	27:3:628:LEU:N	2.45	0.50
27:3:677:THR:HA	27:3:685:ASP:O	2.12	0.50
30:2:451:LYS:O	30:2:455:ARG:HD2	2.11	0.50
42:j:64:ILE:HA	42:j:70:SER:O	2.11	0.50
1:A:47:GLU:OE1	1:A:47:GLU:N	2.42	0.50
1:A:1628:ASP:OD2	1:A:1663:ASP:HA	2.12	0.50
1:A:1874:VAL:O	1:A:1877:LEU:HG	2.12	0.50
1:A:2142:ILE:HG12	1:A:2175:LEU:HD13	1.93	0.50
3:C:243:ILE:HD11	3:C:288:LEU:HB3	1.94	0.50
3:C:918:ILE:HG22	3:C:920:PRO:HA	1.93	0.50
6:F:58:G:O2’	6:F:59:G:H5’	2.11	0.50
12:L:222:LEU:H	12:L:222:LEU:HD22	1.77	0.50
21:V:490:CYS:SG	21:V:524:SER:HB3	2.51	0.50
21:V:617:PRO:HB3	21:V:623:ASN:HD22	1.77	0.50
21:V:646:HIS:C	21:V:646:HIS:ND1	2.69	0.50
26:1:699:GLN:NE2	26:1:738:HIS:HE1	2.08	0.50
27:3:353:PHE:CE1	33:5:55:ILE:HD11	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:3:458:ALA:HB1	27:3:460:TRP:HZ3	1.76	0.50
1:A:216:SER:O	1:A:216:SER:OG	2.24	0.50
1:A:570:ASP:HB3	1:A:573:GLN:HB2	1.93	0.50
1:A:1719:PHE:CD1	1:A:1719:PHE:C	2.90	0.50
3:C:300:LEU:HA	3:C:306:ASN:ND2	2.27	0.50
3:C:508:LYS:HB2	3:C:524:ILE:HD13	1.93	0.50
5:E:346:SER:HB3	5:E:348:ASP:OD1	2.12	0.50
6:F:7:G:C6	6:F:15:A:C6	3.00	0.50
6:F:41:A:C2	7:G:7:G:N1	2.80	0.50
7:G:111:U:C5	23:X:819:PRO:CA	2.95	0.50
8:H:152:G:H2'	8:H:153:A:C8	2.47	0.50
13:N:119:CYS:HB2	13:N:134:CYS:HB3	1.93	0.50
17:R:351:GLU:O	17:R:355:ILE:HG13	2.11	0.50
23:X:745:HIS:HB2	23:X:746:GLU:OE2	2.11	0.50
23:X:1005:SER:HA	23:X:1008:LEU:HG	1.94	0.50
24:Y:44:ASN:HD22	24:Y:52:GLN:CB	2.24	0.50
27:3:259:LYS:HE2	27:3:266:ASP:HB3	1.94	0.50
27:3:665:LEU:HD21	27:3:667:ILE:HD11	1.94	0.50
27:3:700:LYS:O	27:3:714:ALA:HA	2.11	0.50
27:3:757:ILE:HA	27:3:762:LEU:HA	1.94	0.50
27:3:945:VAL:HG21	27:3:963:VAL:HG21	1.94	0.50
3:C:377:LEU:HA	3:C:380:ILE:HB	1.94	0.50
3:C:568:PRO:C	3:C:570:GLY:H	2.20	0.50
3:C:810:PRO:HA	3:C:813:ARG:HG2	1.93	0.50
10:J:313:TRP:HB3	10:J:336:TRP:CE3	2.47	0.50
10:J:382:TYR:O	10:J:386:GLU:HG2	2.11	0.50
15:P:186:ARG:HH11	15:P:186:ARG:CG	2.23	0.50
22:W:531:LYS:HA	22:W:546:PHE:O	2.11	0.50
23:X:592:LEU:HD12	23:X:593:GLU:N	2.27	0.50
23:X:612:LEU:HD23	23:X:686:ILE:HG13	1.94	0.50
27:3:275:ARG:HB3	27:3:275:ARG:HH21	1.75	0.50
30:2:534:GLN:O	30:2:538:GLU:HG3	2.11	0.50
30:2:616:SER:O	31:4:79:LEU:HA	2.12	0.50
46:9:102:HIS:HA	46:9:110:PHE:H	1.77	0.50
1:A:1817:LEU:HD23	1:A:1917:PHE:H	1.77	0.49
3:C:709:TRP:HZ3	3:C:717:PHE:HB2	1.76	0.49
4:D:538:ILE:O	4:D:585:ILE:HA	2.12	0.49
6:F:88:G:C2	8:H:11:G:C2	3.00	0.49
16:Q:817:GLY:O	16:Q:1090:ARG:HA	2.12	0.49
23:X:752:VAL:O	23:X:757:ARG:NH2	2.44	0.49
24:Y:74:GLN:OE1	24:Y:74:GLN:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:3:503:THR:OG1	27:3:522:ASP:OD2	2.21	0.49
27:3:1165:SER:HB2	27:3:1169:PRO:HA	1.94	0.49
1:A:1218:ASN:OD1	1:A:1220:VAL:HG22	2.12	0.49
1:A:2196:HIS:HE2	1:A:2211:THR:HB	1.77	0.49
3:C:389:ASP:OD2	3:C:389:ASP:N	2.29	0.49
3:C:530:LEU:O	3:C:540:GLU:HA	2.12	0.49
3:C:850:LEU:O	3:C:855:GLY:N	2.45	0.49
5:E:188:GLN:CD	5:E:189:THR:H	2.21	0.49
8:H:173:C:H2'	8:H:174:A:H8	1.76	0.49
27:3:463:ARG:HD3	27:3:468:ASP:HB3	1.94	0.49
27:3:1188:ASN:HA	27:3:1191:LYS:HZ2	1.76	0.49
43:n:30:THR:N	43:n:39:HIS:O	2.31	0.49
41:f:28:GLN:O	41:f:45:CYS:CA	2.60	0.49
46:9:242:SER:HB2	46:9:262:GLU:C	2.37	0.49
46:9:323:ARG:HD2	46:9:324:SER:H	1.77	0.49
1:A:845:ARG:HH12	1:A:1440:THR:HG22	1.77	0.49
1:A:1850:ARG:HG2	1:A:1879:PHE:HE2	1.77	0.49
2:B:87:A:H61	2:B:92:U:P	2.35	0.49
3:C:302:PRO:HG2	3:C:320:LEU:HD11	1.94	0.49
7:G:2:U:H4'	35:v:11:THR:HG21	1.94	0.49
17:R:243:GLN:OE1	17:R:246:LYS:HD2	2.11	0.49
19:T:221:THR:OG1	19:T:231:TRP:NE1	2.36	0.49
19:T:399:LYS:HB2	19:T:406:ILE:HD11	1.94	0.49
23:X:162:ASP:O	23:X:165:GLU:N	2.45	0.49
23:X:443:ASN:O	23:X:444:LYS:HB2	2.12	0.49
23:X:485:ASP:OD1	23:X:487:THR:OG1	2.25	0.49
23:X:772:ILE:HD12	23:X:778:PHE:CD2	2.46	0.49
23:X:842:THR:HB	23:X:882:LEU:HD12	1.94	0.49
23:X:888:TRP:O	23:X:891:SER:OG	2.25	0.49
26:1:522:LYS:HD3	26:1:526:PHE:CE2	2.48	0.49
27:3:316:GLU:O	27:3:323:THR:OG1	2.29	0.49
27:3:614:VAL:HG23	27:3:633:LEU:HD11	1.93	0.49
27:3:704:VAL:C	27:3:710:GLU:HG3	2.37	0.49
27:3:713:LEU:HD13	27:3:714:ALA:N	2.27	0.49
27:3:940:LEU:HB3	27:3:941:HIS:ND1	2.26	0.49
27:3:1187:PRO:O	27:3:1191:LYS:HG3	2.12	0.49
46:9:281:TYR:H	46:9:435:VAL:HG22	1.77	0.49
1:A:137:GLU:O	1:A:141:ILE:HG13	2.12	0.49
1:A:347:LEU:HD22	1:A:351:TYR:CZ	2.47	0.49
1:A:1402:ARG:HD2	23:X:664:PRO:CB	2.42	0.49
1:A:1902:PHE:CE2	1:A:1967:ILE:HD12	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:181:G:H21	40:l:52:ASP:C	2.19	0.49
19:T:422:ASN:OD1	19:T:474:GLU:HB3	2.11	0.49
23:X:620:GLU:CD	23:X:620:GLU:H	2.17	0.49
23:X:651:LEU:HD13	23:X:655:MET:HB2	1.94	0.49
23:X:736:ARG:HB3	23:X:738:TYR:CE1	2.48	0.49
26:1:563:LEU:HB2	26:1:567:VAL:HG13	1.95	0.49
26:1:569:PRO:HD2	26:1:570:TYR:CE2	2.48	0.49
27:3:146:ARG:HB3	27:3:150:ALA:HA	1.93	0.49
27:3:331:ASP:CG	27:3:390:ARG:HH21	2.20	0.49
1:A:197:PRO:HA	1:A:204:LEU:HD13	1.94	0.49
1:A:1089:CYS:SG	1:A:1096:HIS:CD2	3.05	0.49
2:B:21:A:H2'	2:B:21:A:N3	2.26	0.49
4:D:537:LYS:O	4:D:609:VAL:HA	2.13	0.49
7:G:7:G:O2'	7:G:8:C:H5'	2.13	0.49
10:J:320:GLU:OE1	10:J:325:ASN:HB3	2.12	0.49
12:L:196:ILE:HD13	22:W:509:GLY:HA3	1.95	0.49
17:R:237:MET:HE3	17:R:241:GLU:HB3	1.94	0.49
21:V:620:ASN:HD22	21:V:623:ASN:H	1.60	0.49
23:X:655:MET:O	23:X:658:ARG:HG2	2.12	0.49
23:X:932:CYS:HA	23:X:938:ARG:HH11	1.77	0.49
24:Y:224:LEU:HD11	24:Y:229:ASP:HB2	1.94	0.49
26:1:581:LEU:O	26:1:584:ASP:HB3	2.12	0.49
26:1:663:THR:HA	26:1:666:LYS:CE	2.43	0.49
27:3:238:VAL:HB	27:3:247:GLY:O	2.12	0.49
27:3:1207:LYS:O	27:3:1211:ILE:HG12	2.12	0.49
1:A:223:SER:N	2:B:12:U:OP1	2.44	0.49
1:A:332:TYR:O	3:C:888:ARG:NH2	2.41	0.49
1:A:590:GLY:HA2	1:A:592:TYR:CE2	2.47	0.49
1:A:671:THR:O	1:A:676:ARG:NH1	2.46	0.49
1:A:2178:ILE:HG13	1:A:2214:ILE:O	2.13	0.49
3:C:670:SER:OG	3:C:819:ALA:O	2.31	0.49
3:C:711:ARG:HH22	3:C:733:TRP:HA	1.78	0.49
6:F:19:C:H2'	6:F:20:A:C8	2.47	0.49
13:N:70:ILE:HG23	13:N:74:LEU:HD23	1.94	0.49
24:Y:13:VAL:HB	24:Y:131:GLU:HG3	1.95	0.49
27:3:968:ARG:HG2	27:3:982:GLU:OE1	2.12	0.49
32:7:73:LYS:HA	32:7:76:THR:HG22	1.95	0.49
1:A:498:ARG:HG2	1:A:502:ASN:HD21	1.77	0.49
1:A:1642:PRO:HA	1:A:1716:GLY:O	2.13	0.49
3:C:129:ILE:HG22	3:C:199:LEU:HB3	1.93	0.49
3:C:296:GLU:H	3:C:296:GLU:CD	2.21	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:475:MET:HA	3:C:565:ILE:O	2.12	0.49
4:D:759:THR:H	27:3:680:ASP:CG	2.20	0.49
5:E:110:GLY:N	5:E:130:ASP:OD1	2.35	0.49
8:H:7:U:H2'	8:H:8:C:C6	2.47	0.49
8:H:33:G:C6	8:H:34:U:C4	3.01	0.49
8:H:54:U:H2'	8:H:55:U:C6	2.48	0.49
10:J:366:TYR:O	10:J:370:VAL:HG23	2.13	0.49
12:L:52:GLU:O	12:L:58:ILE:HD13	2.12	0.49
19:T:497:GLU:OE1	19:T:497:GLU:N	2.29	0.49
23:X:478:GLY:HA3	23:X:487:THR:HG22	1.94	0.49
23:X:986:TYR:HB3	23:X:997:MET:HE2	1.95	0.49
27:3:18:ILE:HD12	27:3:67:ALA:HB2	1.95	0.49
27:3:740:GLU:HB2	27:3:758:SER:HA	1.95	0.49
1:A:384:VAL:HA	3:C:331:PHE:HD2	1.77	0.49
1:A:872:ASP:C	1:A:874:PRO:HD3	2.38	0.49
1:A:1131:LYS:HE2	1:A:1174:PHE:CE2	2.48	0.49
1:A:1382:SER:HB2	1:A:1415:GLY:HA2	1.93	0.49
1:A:1649:LYS:HG2	1:A:1877:LEU:HD22	1.94	0.49
1:A:1914:MET:HE1	1:A:1916:LEU:HB2	1.94	0.49
2:B:14:U:H2'	2:B:15:C:H6	1.78	0.49
3:C:500:THR:HB	3:C:502:HIS:CE1	2.48	0.49
15:P:68:ARG:HB3	15:P:68:ARG:HH11	1.77	0.49
17:R:283:ASN:N	17:R:283:ASN:OD1	2.44	0.49
17:R:414:GLN:HG2	23:X:633:ARG:HH12	1.77	0.49
23:X:416:GLN:NE2	23:X:546:LEU:O	2.29	0.49
23:X:827:MET:HE3	23:X:840:ILE:HG23	1.94	0.49
23:X:855:TYR:CE2	23:X:857:PRO:HG3	2.48	0.49
26:1:1076:ALA:O	26:1:1080:THR:HG23	2.12	0.49
33:5:60:SER:O	33:5:63:ARG:N	2.46	0.49
35:v:66:GLU:H	35:v:66:GLU:CD	2.21	0.49
37:h:45:ASN:O	37:h:107:ILE:N	2.39	0.49
1:A:176:LEU:HD11	1:A:566:LEU:HD11	1.94	0.49
1:A:1413:ASP:O	1:A:1414:ARG:HG3	2.13	0.49
1:A:1635:TYR:O	1:A:1636:LYS:HG3	2.12	0.49
1:A:1649:LYS:HD2	1:A:1649:LYS:HA	1.58	0.49
1:A:1845:VAL:O	1:A:1849:ILE:HG13	2.13	0.49
1:A:1860:GLN:HA	1:A:1883:VAL:O	2.13	0.49
1:A:1894:GLN:HE21	1:A:1944:HIS:CE1	2.31	0.49
1:A:1902:PHE:HE2	1:A:1967:ILE:HD12	1.77	0.49
3:C:528:GLY:HA3	3:C:553:GLU:HG2	1.95	0.49
5:E:236:ASP:HB2	5:E:256:ASP:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:86:U:C4	8:H:12:G:O6	2.66	0.49
10:J:352:PHE:HA	10:J:355:ARG:NE	2.27	0.49
13:N:46:LEU:HA	13:N:49:ILE:HD13	1.95	0.49
17:R:376:LYS:HA	17:R:379:LYS:HB2	1.94	0.49
19:T:395:ILE:HD12	19:T:395:ILE:H	1.78	0.49
27:3:388:GLN:NE2	27:3:845:GLU:OE1	2.46	0.49
32:7:42:LEU:HG	32:7:70:TYR:CE2	2.47	0.49
40:g:29:ARG:O	40:g:46:ILE:CA	2.60	0.49
1:A:369:GLU:HB2	1:A:371:LEU:HD13	1.95	0.49
1:A:485:THR:HG22	1:A:486:LYS:N	2.27	0.49
1:A:1144:LYS:HD3	46:9:45:SER:O	2.13	0.49
1:A:1402:ARG:HB2	17:R:407:TYR:HA	1.95	0.49
1:A:1623:ASN:HD22	1:A:1623:ASN:C	2.19	0.49
1:A:1846:ALA:O	1:A:1850:ARG:HG3	2.13	0.49
1:A:2087:THR:OG1	1:A:2112:LYS:HD3	2.13	0.49
3:C:64:LYS:HE2	15:P:206:LYS:HD2	1.94	0.49
3:C:201:ASN:HB3	3:C:549:TRP:CE3	2.48	0.49
3:C:301:SER:H	3:C:306:ASN:ND2	2.04	0.49
3:C:433:MET:HE2	3:C:433:MET:HB3	1.75	0.49
4:D:1188:VAL:HA	4:D:1201:GLU:O	2.13	0.49
5:E:171:SER:OG	5:E:173:ASP:OD2	2.25	0.49
10:J:346:TRP:CD1	10:J:369:PHE:HD1	2.30	0.49
23:X:715:SER:OG	23:X:716:LYS:N	2.45	0.49
23:X:811:SER:O	23:X:815:MET:SD	2.71	0.49
26:1:796:CYS:HB3	26:1:806:ILE:HG12	1.95	0.49
26:1:869:MET:HE2	26:1:896:ILE:HD13	1.95	0.49
27:3:39:GLU:CD	27:3:55:THR:HG1	2.20	0.49
27:3:952:ILE:HG12	27:3:961:ILE:HG12	1.95	0.49
29:w:405:ASN:HA	29:w:416:TYR:O	2.13	0.49
30:2:462:VAL:O	30:2:466:LYS:HG3	2.12	0.49
1:A:184:ASP:HB2	13:N:1:MET:H1	1.78	0.48
1:A:246:LEU:HD11	1:A:411:PHE:HE1	1.78	0.48
1:A:693:ILE:C	1:A:695:ASP:N	2.70	0.48
1:A:1836:LEU:HA	1:A:1839:TRP:CD1	2.48	0.48
3:C:250:ARG:NH1	3:C:447:PRO:O	2.46	0.48
3:C:496:VAL:HG13	3:C:501:ILE:HD11	1.94	0.48
3:C:693:GLU:OE1	3:C:695:GLY:N	2.45	0.48
3:C:938:ARG:HG2	3:C:942:GLY:HA3	1.95	0.48
4:D:860:GLN:O	27:3:601:ARG:NH1	2.46	0.48
8:H:182:U:H2'	8:H:183:G:C8	2.48	0.48
21:V:320:ARG:O	21:V:324:HIS:CB	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:W:434:VAL:HA	22:W:443:ARG:O	2.13	0.48
23:X:716:LYS:O	23:X:720:ASN:ND2	2.46	0.48
23:X:932:CYS:SG	23:X:935:ASP:N	2.86	0.48
26:1:717:THR:HB	26:1:718:PRO:CD	2.41	0.48
26:1:796:CYS:HA	26:1:801:VAL:HG21	1.94	0.48
27:3:49:LYS:HD3	27:3:49:LYS:HA	1.59	0.48
27:3:356:HIS:CD2	27:3:403:SER:HG	2.30	0.48
29:w:410:ILE:HD12	29:w:438:LEU:HD11	1.95	0.48
32:7:30:CYS:SG	32:7:33:CYS:HB3	2.53	0.48
1:A:214:ARG:NH2	1:A:223:SER:OG	2.46	0.48
3:C:509:VAL:HG22	3:C:523:GLN:O	2.13	0.48
8:H:64:A:H2'	8:H:65:U:C6	2.48	0.48
8:H:139:C:H2'	8:H:140:A:H8	1.78	0.48
8:H:163:G:O2'	28:p:48:MET:HA	2.13	0.48
9:I:342:PRO:C	9:I:344:LEU:H	2.20	0.48
16:Q:600:MET:O	16:Q:607:VAL:HA	2.13	0.48
17:R:154:SER:O	17:R:157:GLN:HG2	2.12	0.48
21:V:647:LEU:O	21:V:651:PRO:HD3	2.13	0.48
26:1:862:GLU:HA	26:1:865:ARG:NH1	2.27	0.48
26:1:970:LEU:O	26:1:974:LEU:HG	2.13	0.48
27:3:477:SER:HA	27:3:482:THR:HG23	1.95	0.48
1:A:427:VAL:HG12	1:A:430:TRP:CE3	2.49	0.48
1:A:1258:LYS:O	1:A:1262:LYS:HG3	2.13	0.48
1:A:1649:LYS:CB	1:A:1880:PRO:HB2	2.44	0.48
3:C:823:ALA:O	3:C:824:THR:OG1	2.26	0.48
5:E:137:ASP:O	5:E:141:GLY:N	2.26	0.48
6:F:5:U:H5'	6:F:6:C:H4'	1.94	0.48
10:J:232:GLU:HG3	12:L:210:TYR:CE1	2.48	0.48
10:J:375:ASP:HB2	10:J:378:ASN:CG	2.38	0.48
12:L:70:LYS:HG3	46:9:220:ILE:HG21	1.93	0.48
19:T:195:LYS:HZ1	19:T:490:ARG:HH21	1.60	0.48
21:V:616:LEU:HD12	21:V:616:LEU:O	2.13	0.48
23:X:772:ILE:CD1	23:X:778:PHE:HD2	2.26	0.48
24:Y:43:HIS:O	24:Y:149:VAL:HG22	2.13	0.48
26:1:933:CYS:SG	26:1:970:LEU:HD11	2.52	0.48
27:3:469:GLU:HG2	27:3:470:PHE:CD1	2.47	0.48
27:3:1095:TYR:CE1	27:3:1164:ARG:HD2	2.48	0.48
29:w:383:LEU:CD1	29:w:391:PRO:HB3	2.43	0.48
1:A:57:GLN:HG3	2:B:13:C:O2'	2.13	0.48
1:A:693:ILE:HG22	1:A:694:LEU:HD23	1.94	0.48
1:A:1862:ILE:HG21	1:A:1885:LYS:HE2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:366:GLN:HG3	3:C:371:GLU:HG3	1.96	0.48
5:E:176:VAL:O	5:E:189:THR:HA	2.14	0.48
6:F:39:A:C5	6:F:40:U:C5	3.02	0.48
10:J:364:THR:O	10:J:367:GLU:HB3	2.13	0.48
10:J:406:PHE:HB3	10:J:411:MET:SD	2.54	0.48
14:O:162:PRO:CB	14:O:181:TYR:HA	2.43	0.48
17:R:315:LYS:NZ	24:Y:191:ILE:HG12	2.28	0.48
19:T:257:ARG:HD3	19:T:298:PRO:O	2.14	0.48
21:V:551:PHE:O	21:V:555:LEU:HD23	2.14	0.48
23:X:235:LEU:HD22	24:Y:220:GLN:HG2	1.94	0.48
24:Y:274:ASP:O	24:Y:278:GLY:N	2.41	0.48
26:1:770:MET:HA	26:1:773:LEU:HG	1.95	0.48
26:1:795:CYS:O	26:1:798:THR:HG23	2.13	0.48
26:1:967:GLU:CG	26:1:970:LEU:HB3	2.43	0.48
26:1:1300:LEU:HB3	27:3:1032:TRP:CZ3	2.48	0.48
27:3:249:LEU:HA	27:3:257:THR:O	2.12	0.48
27:3:484:VAL:O	27:3:485:LEU:HD12	2.13	0.48
27:3:503:THR:HG22	27:3:504:PRO:HD2	1.95	0.48
27:3:804:HIS:NE2	27:3:859:ASN:O	2.46	0.48
32:7:15:ALA:HB2	32:7:84:GLY:HA2	1.94	0.48
36:o:100:LEU:O	36:o:124:PRO:HD2	2.13	0.48
39:m:16:ARG:O	39:m:84:GLY:N	2.44	0.48
1:A:420:ARG:NH2	1:A:423:ASP:OD1	2.47	0.48
1:A:1384:ARG:HH22	1:A:1414:ARG:NH1	2.11	0.48
3:C:286:ASN:ND2	3:C:300:LEU:O	2.46	0.48
3:C:561:LYS:NZ	3:C:615:PRO:O	2.41	0.48
3:C:666:VAL:HG12	3:C:667:VAL:N	2.29	0.48
3:C:799:GLU:O	3:C:801:LEU:N	2.46	0.48
3:C:850:LEU:HB3	3:C:855:GLY:HA3	1.95	0.48
5:E:67:GLY:C	5:E:349:LYS:HG2	2.39	0.48
10:J:269:LEU:HD21	10:J:279:TRP:CZ3	2.47	0.48
13:N:53:HIS:O	13:N:57:THR:HG22	2.13	0.48
15:P:45:GLN:HA	15:P:45:GLN:HE21	1.79	0.48
24:Y:246:LYS:HD2	24:Y:310:ARG:O	2.14	0.48
26:1:1159:GLY:O	26:1:1161:MET:N	2.46	0.48
27:3:143:ILE:H	27:3:143:ILE:HD12	1.79	0.48
27:3:209:THR:OG1	27:3:210:PHE:N	2.45	0.48
27:3:357:TYR:HE1	27:3:400:GLU:HG3	1.77	0.48
27:3:488:GLY:C	27:3:490:THR:H	2.20	0.48
27:3:603:ARG:HD2	27:3:603:ARG:O	2.13	0.48
27:3:706:MET:HG2	27:3:770:LEU:HD12	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:612:ILE:O	1:A:616:PHE:HB2	2.13	0.48
1:A:1809:ILE:O	1:A:1817:LEU:HA	2.13	0.48
1:A:2004:GLN:CD	1:A:2004:GLN:H	2.21	0.48
2:B:97:G:H2'	2:B:97:G:N3	2.28	0.48
2:B:103:G:C6	2:B:111:A:N1	2.82	0.48
2:B:106:U:H2'	2:B:107:U:C6	2.48	0.48
3:C:69:ALA:HA	3:C:72:VAL:HG12	1.95	0.48
3:C:212:SER:O	3:C:216:THR:HG23	2.13	0.48
3:C:313:GLN:HG3	3:C:417:ARG:HH21	1.78	0.48
6:F:15:A:H2'	6:F:16:G:C8	2.48	0.48
17:R:369:LEU:HA	17:R:376:LYS:CE	2.41	0.48
19:T:342:GLU:CD	19:T:365:ARG:HH12	2.16	0.48
21:V:451:ASN:O	21:V:455:PHE:HB2	2.13	0.48
23:X:391:SER:O	23:X:395:VAL:HG23	2.13	0.48
23:X:450:CYS:HB2	23:X:495:TYR:CD1	2.48	0.48
23:X:592:LEU:O	23:X:595:CYS:HB2	2.14	0.48
26:1:815:PHE:O	26:1:819:TRP:HB2	2.13	0.48
26:1:914:PHE:O	26:1:918:VAL:HG23	2.14	0.48
27:3:642:ILE:H	27:3:703:ARG:HH21	1.61	0.48
27:3:745:PHE:CB	27:3:755:VAL:HG23	2.43	0.48
1:A:30:LEU:HD22	5:E:214:ASP:HA	1.94	0.48
1:A:42:ALA:O	1:A:46:ALA:HB2	2.14	0.48
1:A:408:PRO:C	1:A:410:PRO:HD2	2.38	0.48
1:A:762:ARG:NH2	15:P:226:LYS:HZ3	2.10	0.48
1:A:781:ARG:HH21	8:H:24:A:H5"	1.78	0.48
1:A:1209:HIS:ND1	1:A:1210:LYS:HE2	2.29	0.48
1:A:1726:ILE:O	1:A:1727:GLN:C	2.54	0.48
1:A:2202:ASP:O	1:A:2204:PRO:HD3	2.14	0.48
3:C:618:THR:HG23	3:C:630:LEU:HB3	1.94	0.48
4:D:463:PRO:HA	4:D:480:THR:HA	1.95	0.48
5:E:136:TRP:CZ3	5:E:143:ARG:HB3	2.48	0.48
6:F:48:A:O2'	12:L:33:ARG:NH1	2.39	0.48
19:T:369:THR:O	19:T:369:THR:OG1	2.27	0.48
21:V:584:LYS:HG3	21:V:634:ILE:HG22	1.96	0.48
23:X:606:GLN:HB2	23:X:668:ARG:HH22	1.79	0.48
23:X:964:GLN:HG3	26:1:543:THR:HG21	1.96	0.48
24:Y:214:GLU:O	24:Y:218:LYS:HG3	2.13	0.48
27:3:543:THR:C	27:3:558:LEU:HD12	2.38	0.48
27:3:757:ILE:HG22	27:3:762:LEU:HG	1.94	0.48
27:3:1098:GLY:C	27:3:1099:GLU:HG3	2.37	0.48
1:A:1455:TRP:H	1:A:1455:TRP:CD1	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:103:G:C6	2:B:104:C:C4	3.02	0.48
3:C:938:ARG:HA	3:C:942:GLY:H	1.76	0.48
5:E:75:HIS:O	5:E:78:GLY:N	2.46	0.48
7:G:90:C:H42	8:H:40:C:H42	1.60	0.48
8:H:106:G:H1'	8:H:107:A:N7	2.29	0.48
10:J:396:ARG:HH22	10:J:426:GLN:HG3	1.79	0.48
12:L:178:GLU:HB3	12:L:181:ARG:HH11	1.79	0.48
18:S:96:GLY:O	18:S:131:ARG:HA	2.14	0.48
19:T:271:LYS:HG2	19:T:280:VAL:HG11	1.96	0.48
21:V:505:LYS:HE3	21:V:553:HIS:NE2	2.28	0.48
24:Y:9:LEU:HD23	24:Y:138:LYS:HD3	1.95	0.48
24:Y:37:TYR:OH	24:Y:106:SER:HB3	2.13	0.48
26:1:517:ARG:HB3	26:1:517:ARG:CZ	2.43	0.48
26:1:972:GLY:CA	26:1:1010:THR:HG21	2.41	0.48
27:3:581:LYS:HB2	27:3:625:LEU:HD22	1.94	0.48
27:3:595:VAL:HG21	27:3:600:GLN:C	2.39	0.48
27:3:664:TYR:CG	27:3:729:PHE:HZ	2.32	0.48
27:3:926:TYR:CZ	27:3:942:LYS:HD2	2.48	0.48
29:w:461:LYS:NZ	30:2:467:GLN:O	2.27	0.48
35:v:60:LEU:HA	35:v:60:LEU:HD23	1.58	0.48
1:A:122:ILE:HD13	1:A:483:GLN:HG2	1.96	0.48
1:A:723:ASN:HD22	1:A:788:GLN:NE2	2.12	0.48
1:A:888:GLN:C	1:A:889:ARG:HG2	2.39	0.48
1:A:1375:TRP:O	1:A:1378:GLU:N	2.46	0.48
1:A:1852:LEU:HD23	1:A:1858:PRO:HD3	1.96	0.48
3:C:183:SER:OG	3:C:214:GLU:OE1	2.31	0.48
3:C:607:LEU:HA	3:C:610:VAL:HG22	1.96	0.48
3:C:624:SER:HB2	3:C:626:GLU:HG2	1.96	0.48
3:C:725:ASP:HB3	3:C:728:ALA:H	1.79	0.48
4:D:898:PRO:HA	4:D:960:ALA:HB1	1.96	0.48
5:E:118:ASN:HD21	5:E:122:SER:H	1.61	0.48
5:E:164:PRO:O	5:E:166:LEU:HD23	2.14	0.48
6:F:23:U:H2'	6:F:24:A:O4'	2.14	0.48
6:F:82:A:H2'	6:F:82:A:OP2	2.14	0.48
7:G:5:G:N1	7:G:6:A:N6	2.62	0.48
23:X:929:LEU:H	23:X:929:LEU:HD12	1.78	0.48
26:1:524:ARG:HD3	26:1:563:LEU:HD12	1.96	0.48
26:1:1041:ARG:HD2	26:1:1041:ARG:HA	1.48	0.48
27:3:19:HIS:ND1	27:3:19:HIS:O	2.46	0.48
27:3:407:ILE:HD11	27:3:1124:GLY:CA	2.44	0.48
27:3:415:LEU:HB2	27:3:424:TYR:CE2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:3:914:ILE:HD12	27:3:919:SER:HB3	1.95	0.48
30:2:705:ARG:N	30:2:705:ARG:HD2	2.28	0.48
35:v:47:MET:HB3	35:v:55:GLU:HB2	1.96	0.48
35:v:50:HIS:CE1	35:v:51:LEU:HG	2.48	0.48
1:A:273:ILE:HD11	1:A:314:ILE:HG21	1.96	0.48
1:A:523:ASN:OD1	1:A:552:ARG:NH1	2.43	0.48
1:A:1289:VAL:HG21	1:A:1335:ILE:HD11	1.95	0.48
1:A:1382:SER:HA	1:A:1415:GLY:HA2	1.96	0.48
1:A:1417:PRO:HD2	23:X:337:ALA:HB2	1.95	0.48
1:A:1490:PHE:O	1:A:1493:THR:OG1	2.30	0.48
1:A:1926:THR:O	1:A:1926:THR:OG1	2.24	0.48
1:A:2129:TYR:HD2	1:A:2172:MET:HB2	1.79	0.48
3:C:749:THR:O	3:C:753:GLU:HB2	2.13	0.48
3:C:891:THR:O	3:C:894:GLN:HG2	2.14	0.48
4:D:1199:LYS:HA	4:D:1255:PHE:HA	1.95	0.48
5:E:126:SER:OG	5:E:136:TRP:NE1	2.46	0.48
5:E:150:HIS:NE2	5:E:169:THR:OG1	2.32	0.48
5:E:178:LEU:HB3	5:E:187:ILE:HB	1.96	0.48
7:G:7:G:C2	7:G:8:C:C2	3.02	0.48
8:H:176:G:H8	8:H:176:G:O5'	1.97	0.48
10:J:219:GLU:HB3	12:L:185:LEU:HD11	1.96	0.48
10:J:411:MET:HE3	10:J:412:ASP:O	2.14	0.48
21:V:529:PHE:CD1	21:V:564:VAL:HB	2.49	0.48
23:X:411:ALA:HA	23:X:414:ASN:ND2	2.28	0.48
24:Y:21:ARG:HH22	24:Y:82:LYS:C	2.21	0.48
26:1:789:LEU:HB3	26:1:836:THR:HG21	1.96	0.48
26:1:823:MET:O	26:1:829:ASN:HB2	2.14	0.48
27:3:181:MET:HB2	27:3:211:TYR:O	2.13	0.48
27:3:329:TYR:HB3	27:3:370:GLU:CD	2.39	0.48
27:3:449:VAL:HG11	27:3:763:ARG:NH1	2.29	0.48
27:3:605:LEU:HD23	27:3:617:ILE:HG22	1.95	0.48
46:9:203:GLU:O	46:9:207:THR:OG1	2.12	0.48
46:9:365:ILE:HG23	46:9:396:ILE:HD13	1.95	0.48
1:A:1361:GLU:OE1	1:A:1361:GLU:HA	2.14	0.47
1:A:1647:ASP:OD1	1:A:1881:ASN:HB2	2.14	0.47
1:A:1719:PHE:C	1:A:1719:PHE:HD1	2.22	0.47
4:D:777:LEU:O	4:D:780:TYR:N	2.40	0.47
5:E:244:SER:HB2	5:E:293:TRP:CE2	2.49	0.47
6:F:49:G:H8	6:F:49:G:OP1	1.97	0.47
8:H:106:G:N3	8:H:107:A:C6	2.81	0.47
13:N:15:TRP:NE1	13:N:19:GLU:OE1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:N:102:CYS:SG	13:N:137:CYS:HB2	2.54	0.47
22:W:180:LYS:HA	22:W:200:VAL:H	1.78	0.47
23:X:864:ALA:HA	23:X:902:PHE:CD2	2.48	0.47
23:X:955:THR:OG1	23:X:958:GLY:O	2.15	0.47
23:X:961:THR:HG21	23:X:964:GLN:NE2	2.29	0.47
27:3:16:PHE:HE2	27:3:63:ARG:C	2.22	0.47
27:3:346:PHE:HA	27:3:360:GLN:HA	1.95	0.47
27:3:636:GLN:HG2	27:3:637:PRO:HD2	1.96	0.47
31:4:103:PHE:N	31:4:177:ALA:HB2	2.29	0.47
32:7:52:GLY:N	32:7:55:GLN:HE21	2.10	0.47
38:i:19:VAL:HA	38:i:73:ARG:O	2.14	0.47
46:9:73:TYR:O	46:9:75:THR:N	2.47	0.47
1:A:1019:TYR:O	1:A:1021:ASP:N	2.47	0.47
1:A:1645:LEU:HD13	1:A:1718:TRP:HH2	1.79	0.47
1:A:1675:ASP:OD1	1:A:1678:ARG:N	2.40	0.47
1:A:2097:ILE:HD13	1:A:2260:GLN:HG3	1.96	0.47
1:A:2122:ALA:HB1	1:A:2282:ASN:OD1	2.15	0.47
2:B:102:U:H2'	2:B:103:G:H8	1.79	0.47
3:C:384:VAL:HG11	3:C:416:LEU:HG	1.97	0.47
3:C:495:ARG:HB2	3:C:495:ARG:NH1	2.27	0.47
6:F:29:A:H2'	6:F:30:A:C8	2.49	0.47
7:G:117:A:O5'	24:Y:246:LYS:HE2	2.14	0.47
10:J:257:GLU:OE1	10:J:257:GLU:N	2.47	0.47
16:Q:341:ALA:O	16:Q:345:PHE:N	2.36	0.47
21:V:537:HIS:CE1	21:V:538:ARG:HG2	2.49	0.47
23:X:446:MET:HE1	23:X:512:ALA:O	2.14	0.47
23:X:487:THR:HG22	23:X:491:THR:HG21	1.94	0.47
23:X:516:VAL:HG13	23:X:549:LEU:HD13	1.95	0.47
24:Y:1:MET:HG2	24:Y:163:ASP:OD2	2.13	0.47
24:Y:45:VAL:HG22	24:Y:51:ILE:HG23	1.95	0.47
26:1:570:TYR:HA	26:1:573:LYS:HD3	1.96	0.47
26:1:1299:GLU:O	26:1:1302:TYR:HD2	1.97	0.47
27:3:114:ARG:NH1	33:5:37:ARG:HB2	2.30	0.47
1:A:1427:ARG:HB3	23:X:329:TRP:CZ3	2.49	0.47
4:D:1459:ILE:HA	4:D:1464:GLY:HA3	1.96	0.47
8:H:34:U:H2'	8:H:35:A:C8	2.49	0.47
10:J:406:PHE:HB3	10:J:411:MET:HB2	1.97	0.47
12:L:86:ALA:HB1	12:L:91:ARG:O	2.14	0.47
19:T:412:HIS:ND1	19:T:429:SER:OG	2.44	0.47
23:X:431:GLN:HA	23:X:434:GLN:NE2	2.30	0.47
23:X:702:PRO:HB2	23:X:791:LEU:HD13	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Y:214:GLU:HB3	24:Y:218:LYS:NZ	2.29	0.47
24:Y:291:GLU:O	24:Y:295:GLU:HG3	2.14	0.47
26:1:495:ARG:HA	26:1:498:MET:HB3	1.95	0.47
26:1:632:PHE:O	26:1:635:VAL:HG22	2.13	0.47
26:1:770:MET:O	26:1:774:ILE:HG12	2.14	0.47
27:3:22:PHE:HA	27:3:76:ASP:HB2	1.95	0.47
27:3:169:HIS:CD2	27:3:170:VAL:N	2.82	0.47
27:3:1034:THR:HG22	27:3:1049:LYS:HG3	1.96	0.47
30:2:530:ARG:HH12	30:2:578:TRP:CG	2.32	0.47
32:7:58:CYS:HB3	32:7:62:GLY:H	1.79	0.47
44:u:90:TYR:O	44:u:94:TYR:CB	2.62	0.47
1:A:425:PRO:HB3	1:A:635:ARG:NH1	2.30	0.47
1:A:1527:ASN:ND2	11:K:215:ASP:HB3	2.29	0.47
1:A:1776:ILE:H	1:A:1776:ILE:HG12	1.49	0.47
1:A:1784:ASN:CG	1:A:1897:LEU:HD11	2.39	0.47
1:A:1939:ILE:HG21	1:A:1968:TRP:CE2	2.49	0.47
3:C:73:TYR:OH	19:T:453:ALA:O	2.31	0.47
3:C:483:SER:HA	3:C:490:PHE:HA	1.96	0.47
3:C:589:LYS:HB3	3:C:659:VAL:HG23	1.96	0.47
5:E:168:CYS:SG	5:E:199:VAL:HG21	2.54	0.47
7:G:85:G:N2	8:H:45:C:C2	2.80	0.47
15:P:217:SER:OG	15:P:218:GLU:N	2.47	0.47
21:V:617:PRO:HG2	21:V:623:ASN:O	2.14	0.47
23:X:981:PRO:HB3	23:X:1002:GLU:OE1	2.14	0.47
26:1:609:MET:HB3	26:1:609:MET:HE2	1.51	0.47
26:1:720:GLY:HA2	26:1:756:LEU:HB3	1.97	0.47
26:1:854:VAL:HG11	26:1:891:GLN:HE21	1.79	0.47
27:3:169:HIS:HD2	27:3:170:VAL:N	2.09	0.47
27:3:511:LEU:HD21	27:3:517:VAL:CG2	2.44	0.47
32:7:13:LYS:HD2	32:7:48:GLU:OE2	2.14	0.47
33:5:51:ASN:OD1	33:5:51:ASN:N	2.46	0.47
46:9:246:VAL:HG21	46:9:261:HIS:CG	2.50	0.47
1:A:121:HIS:ND1	1:A:123:THR:HG23	2.30	0.47
1:A:902:TYR:HE2	1:A:1246:GLN:HB3	1.79	0.47
1:A:929:GLU:OE1	1:A:933:ARG:NH2	2.40	0.47
1:A:1332:HIS:CE1	1:A:1359:HIS:HB3	2.50	0.47
1:A:2200:MET:HG3	1:A:2206:TRP:HB2	1.95	0.47
4:D:735:ALA:C	4:D:737:ALA:H	2.22	0.47
5:E:198:ALA:O	5:E:210:SER:HA	2.14	0.47
7:G:15:U:H3'	7:G:16:G:C8	2.49	0.47
8:H:171:U:N3	8:H:172:C:C4	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:139:ALA:C	9:I:141:PRO:HD3	2.40	0.47
21:V:452:LEU:O	21:V:456:ARG:HG3	2.14	0.47
23:X:842:THR:HA	23:X:915:ARG:HD2	1.97	0.47
24:Y:27:ASN:OD1	24:Y:66:ILE:N	2.28	0.47
26:1:625:ARG:HH21	26:1:662:HIS:HB3	1.79	0.47
26:1:666:LYS:HB3	26:1:704:ILE:HD13	1.96	0.47
26:1:1140:GLU:HB2	26:1:1143:VAL:CG1	2.44	0.47
27:3:75:LYS:HE3	27:3:76:ASP:H	1.79	0.47
27:3:347:LEU:CD2	27:3:359:TYR:HB2	2.44	0.47
27:3:1181:GLN:O	27:3:1185:MET:HG3	2.14	0.47
32:7:21:ARG:NH1	32:7:66:VAL:O	2.27	0.47
45:r:18:SER:HA	45:r:52:LEU:HA	1.95	0.47
46:9:300:THR:HA	46:9:353:GLU:CG	2.43	0.47
1:A:211:GLN:HB3	1:A:225:TYR:CE1	2.49	0.47
1:A:214:ARG:HH22	1:A:223:SER:C	2.14	0.47
1:A:386:PRO:HG2	1:A:389:LYS:HD2	1.97	0.47
1:A:569:VAL:O	1:A:570:ASP:HB2	2.14	0.47
1:A:1014:ASN:ND2	1:A:1014:ASN:C	2.73	0.47
1:A:1928:SER:HB2	1:A:1931:THR:H	1.80	0.47
2:B:21:A:O3'	2:B:22:U:H4'	2.14	0.47
3:C:125:ASN:CG	3:C:127:GLU:H	2.23	0.47
5:E:312:TRP:HE1	5:E:319:ILE:HG12	1.80	0.47
6:F:36:A:N6	6:F:38:G:O6	2.48	0.47
6:F:41:A:C2	7:G:7:G:C2	3.03	0.47
7:G:112:U:O2	7:G:112:U:H2'	2.14	0.47
10:J:376:VAL:O	10:J:379:TRP:HB2	2.15	0.47
12:L:202:ARG:O	12:L:203:LYS:HE3	2.14	0.47
13:N:24:GLU:HB2	13:N:28:LYS:HE2	1.95	0.47
16:Q:1224:ILE:O	16:Q:1255:ASN:N	2.46	0.47
17:R:325:ARG:NH1	24:Y:222:ILE:O	2.48	0.47
17:R:391:VAL:HG13	17:R:396:VAL:HB	1.96	0.47
21:V:563:SER:HA	21:V:611:PHE:CD2	2.50	0.47
23:X:919:GLU:O	23:X:922:LEU:HB2	2.15	0.47
26:1:647:PHE:O	26:1:651:VAL:HG13	2.15	0.47
27:3:604:PHE:HA	27:3:618:SER:HA	1.96	0.47
27:3:612:ASN:HA	27:3:636:GLN:HA	1.95	0.47
27:3:823:MET:HE2	27:3:823:MET:HB3	1.70	0.47
27:3:1031:ARG:HG2	27:3:1031:ARG:NH1	2.27	0.47
33:5:13:HIS:ND1	33:5:17:LYS:HE3	2.30	0.47
41:k:30:ILE:O	41:k:42:ILE:HA	2.15	0.47
1:A:110:TRP:O	1:A:192:GLN:NE2	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1206:GLU:HG2	1:A:1207:PHE:N	2.28	0.47
1:A:1401:ARG:HB2	1:A:1401:ARG:CZ	2.44	0.47
1:A:1771:LEU:HD11	1:A:1779:PHE:CE2	2.49	0.47
1:A:1885:LYS:HG2	1:A:1886:GLY:N	2.30	0.47
1:A:1920:TYR:HD2	1:A:1924:LEU:HD11	1.80	0.47
1:A:2107:PRO:HB2	1:A:2109:ASN:OD1	2.14	0.47
1:A:2319:LEU:HD13	1:A:2319:LEU:HA	1.75	0.47
3:C:238:ASN:O	3:C:242:LEU:HB2	2.15	0.47
3:C:514:TYR:CE2	3:C:522:SER:HB2	2.49	0.47
3:C:595:VAL:HG13	3:C:652:ASP:O	2.15	0.47
3:C:636:TYR:O	3:C:640:VAL:HG23	2.15	0.47
3:C:719:GLN:OE1	3:C:724:TRP:HB3	2.13	0.47
4:D:1598:ILE:O	4:D:1601:LEU:N	2.46	0.47
5:E:100:ASP:N	5:E:100:ASP:OD1	2.48	0.47
5:E:193:THR:HG23	5:E:194:TYR:CG	2.50	0.47
5:E:288:LEU:HD21	5:E:290:ARG:HE	1.79	0.47
6:F:84:A:H4'	6:F:85:U:OP1	2.13	0.47
8:H:14:C:H1'	8:H:15:U:H5'	1.97	0.47
12:L:233:GLN:HG3	12:L:234:ALA:H	1.79	0.47
16:Q:542:ASN:HA	16:Q:622:SER:HA	1.96	0.47
19:T:253:ILE:O	19:T:261:LEU:HD12	2.15	0.47
21:V:473:ALA:O	21:V:477:LEU:HG	2.15	0.47
23:X:787:GLU:O	23:X:791:LEU:HD12	2.15	0.47
26:1:573:LYS:O	26:1:577:VAL:HG23	2.15	0.47
26:1:858:LYS:HE2	26:1:858:LYS:HB3	1.67	0.47
27:3:436:ARG:HD3	27:3:776:GLN:OE1	2.14	0.47
27:3:524:ILE:O	27:3:535:GLU:HA	2.15	0.47
27:3:563:LEU:O	27:3:580:ARG:HB3	2.14	0.47
27:3:565:TYR:HE1	27:3:619:LEU:HD12	1.80	0.47
27:3:839:ALA:O	27:3:843:LEU:HD12	2.14	0.47
27:3:864:SER:O	27:3:865:VAL:HG23	2.15	0.47
29:w:426:PHE:CZ	29:w:448:ASN:HA	2.49	0.47
32:7:23:CYS:N	32:7:58:CYS:SG	2.73	0.47
35:v:85:ARG:HH12	35:v:88:LYS:HD3	1.79	0.47
38:i:50:TYR:HA	38:i:54:ALA:O	2.14	0.47
46:9:325:ILE:HD13	46:9:328:PHE:HD1	1.79	0.47
1:A:309:ARG:HD3	1:A:311:GLU:OE1	2.15	0.47
1:A:312:TYR:N	1:A:312:TYR:CD1	2.83	0.47
1:A:644:ILE:HD12	1:A:644:ILE:HA	1.73	0.47
1:A:1373:GLN:NE2	1:A:1377:SER:OG	2.48	0.47
1:A:1661:TRP:HH2	1:A:1684:PHE:CE1	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1865:ARG:NH2	1:A:1865:ARG:HA	2.29	0.47
2:B:64:G:C4	2:B:65:G:C8	3.02	0.47
5:E:177:LYS:HB3	5:E:179:TRP:NE1	2.30	0.47
8:H:107:A:C6	8:H:108:G:C6	3.02	0.47
10:J:285:MET:HE3	10:J:285:MET:HB3	1.72	0.47
12:L:168:LYS:HD3	12:L:171:ALA:HB3	1.96	0.47
17:R:328:ALA:HB2	24:Y:226:MET:SD	2.55	0.47
23:X:976:LEU:HD12	23:X:1000:VAL:HG23	1.96	0.47
24:Y:211:ILE:O	24:Y:215:LYS:HG2	2.15	0.47
24:Y:290:LYS:HB2	24:Y:293:ASP:CG	2.40	0.47
26:1:529:GLY:HA2	26:1:570:TYR:CZ	2.49	0.47
26:1:840:LEU:HD13	26:1:840:LEU:HA	1.80	0.47
26:1:854:VAL:HG12	26:1:892:LEU:CD2	2.45	0.47
26:1:860:GLU:O	26:1:865:ARG:NH2	2.48	0.47
26:1:933:CYS:O	26:1:934:GLY:C	2.58	0.47
26:1:1233:ALA:O	26:1:1237:LEU:HB2	2.15	0.47
26:1:1279:ALA:O	26:1:1281:ILE:N	2.48	0.47
27:3:70:LEU:HD13	27:3:146:ARG:HG2	1.96	0.47
27:3:302:LEU:HA	27:3:311:PHE:O	2.14	0.47
27:3:457:ASN:ND2	27:3:479:VAL:HG12	2.29	0.47
27:3:617:ILE:HG12	27:3:627:PRO:HA	1.95	0.47
27:3:910:ALA:CB	27:3:913:LEU:HD11	2.45	0.47
27:3:1191:LYS:O	27:3:1192:ASN:C	2.57	0.47
27:3:1199:ARG:HH21	27:3:1207:LYS:HD3	1.80	0.47
30:2:466:LYS:HG2	30:2:475:VAL:HG21	1.97	0.47
35:v:32:GLN:O	35:v:36:GLU:HG2	2.15	0.47
1:A:79:ARG:HH11	1:A:82:ARG:NH2	2.09	0.47
1:A:93:LYS:O	1:A:649:GLU:HG2	2.15	0.47
1:A:1283:GLU:OE1	1:A:1283:GLU:N	2.48	0.47
1:A:1788:VAL:HB	1:A:1800:THR:OG1	2.14	0.47
1:A:1860:GLN:HB3	1:A:1883:VAL:HB	1.97	0.47
1:A:2132:SER:HB3	1:A:2137:PRO:HA	1.97	0.47
1:A:2149:PRO:HD3	1:A:2274:PRO:CG	2.45	0.47
3:C:350:ASN:ND2	3:C:353:THR:H	2.13	0.47
3:C:826:ARG:HA	3:C:911:PRO:HG3	1.97	0.47
26:1:582:LEU:HA	26:1:590:ARG:HA	1.97	0.47
26:1:1135:GLU:HG3	26:1:1135:GLU:O	2.15	0.47
27:3:164:ASN:HA	27:3:189:TYR:OH	2.15	0.47
27:3:404:LEU:HD12	27:3:404:LEU:HA	1.77	0.47
1:A:112:GLN:O	1:A:113:ILE:HG13	2.15	0.47
1:A:196:ASP:HB3	1:A:199:GLU:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:388:LEU:HD23	1:A:388:LEU:HA	1.75	0.47
1:A:1275:ARG:NH1	1:A:1373:GLN:O	2.43	0.47
1:A:2212:ILE:HG21	1:A:2259:VAL:HG11	1.96	0.47
6:F:88:G:H2'	6:F:89:U:H5'	1.96	0.47
21:V:540:GLU:H	21:V:540:GLU:HG3	1.51	0.47
23:X:172:LEU:O	23:X:175:LEU:HG	2.15	0.47
23:X:576:ARG:HA	23:X:576:ARG:NH2	2.30	0.47
23:X:754:GLU:HA	23:X:757:ARG:HH22	1.78	0.47
23:X:817:GLU:H	23:X:817:GLU:HG2	1.38	0.47
24:Y:9:LEU:CD2	24:Y:138:LYS:HD3	2.45	0.47
26:1:503:LYS:HE2	26:1:511:MET:CG	2.44	0.47
27:3:333:VAL:HG21	27:3:349:VAL:HG21	1.97	0.47
27:3:558:LEU:HG	27:3:559:THR:N	2.30	0.47
1:A:747:ALA:O	1:A:751:THR:OG1	2.29	0.46
1:A:976:MET:HE2	1:A:976:MET:HB2	1.68	0.46
1:A:1869:LEU:O	1:A:1873:GLU:HB2	2.14	0.46
1:A:1925:LYS:HE2	21:V:457:ARG:NH2	2.30	0.46
3:C:122:LEU:O	3:C:125:ASN:HB3	2.15	0.46
3:C:175:GLN:OE1	3:C:175:GLN:N	2.47	0.46
3:C:302:PRO:HD2	3:C:344:TRP:CD1	2.50	0.46
8:H:51:A:H2'	8:H:52:G:O4'	2.15	0.46
10:J:256:LYS:HE2	12:L:232:TYR:CE1	2.50	0.46
10:J:289:ASN:O	10:J:291:GLN:NE2	2.48	0.46
12:L:166:LYS:HB3	12:L:167:ALA:H	1.59	0.46
17:R:386:ARG:HG2	23:X:909:ARG:HH22	1.80	0.46
21:V:543:LYS:HA	21:V:546:ASN:HD21	1.81	0.46
24:Y:224:LEU:CD1	24:Y:229:ASP:HB2	2.45	0.46
26:1:554:LYS:HD2	26:1:558:ARG:HE	1.80	0.46
26:1:568:ARG:HG3	26:1:568:ARG:HH11	1.79	0.46
26:1:746:PHE:O	26:1:750:ILE:HG23	2.15	0.46
26:1:869:MET:O	26:1:873:GLU:HB3	2.15	0.46
26:1:881:ALA:HB1	26:1:884:ILE:HG12	1.97	0.46
26:1:898:TYR:HA	26:1:901:GLN:OE1	2.15	0.46
26:1:929:LEU:N	26:1:930:PRO:HD2	2.30	0.46
27:3:24:GLY:HA2	27:3:74:THR:O	2.14	0.46
27:3:69:ARG:HG3	27:3:75:LYS:O	2.15	0.46
27:3:867:ARG:NH1	27:3:879:LEU:HD13	2.30	0.46
27:3:1085:ALA:HB3	27:3:1088:LYS:HE2	1.97	0.46
29:w:397:TYR:HE2	29:w:402:LEU:HB2	1.80	0.46
32:7:12:ARG:NH1	32:7:84:GLY:O	2.48	0.46
1:A:1685:LEU:O	1:A:1689:THR:HG23	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:366:GLN:H	3:C:366:GLN:HG2	1.37	0.46
3:C:601:PRO:HA	3:C:604:LEU:HD12	1.97	0.46
4:D:2034:PRO:HA	4:D:2094:PHE:O	2.15	0.46
5:E:75:HIS:HB3	5:E:78:GLY:N	2.29	0.46
8:H:13:C:H1'	8:H:14:C:OP2	2.15	0.46
8:H:166:G:N3	8:H:166:G:H2'	2.29	0.46
9:I:551:PRO:HB3	9:I:554:SER:CB	2.46	0.46
10:J:328:GLY:HA2	10:J:331:GLN:NE2	2.30	0.46
12:L:92:THR:OG1	12:L:95:GLN:HG3	2.15	0.46
17:R:383:ASN:N	17:R:383:ASN:OD1	2.48	0.46
19:T:266:GLU:HG2	19:T:290:ALA:HB1	1.98	0.46
19:T:287:HIS:CE1	19:T:313:ARG:HG3	2.50	0.46
22:W:530:GLY:O	22:W:547:LYS:HA	2.16	0.46
23:X:182:ALA:HB2	23:X:924:ARG:HH11	1.80	0.46
23:X:273:LYS:HA	23:X:276:VAL:HG12	1.96	0.46
23:X:394:ALA:HA	23:X:397:ARG:HD2	1.96	0.46
23:X:503:ARG:O	23:X:506:LEU:HB2	2.16	0.46
23:X:876:GLY:O	23:X:880:VAL:HG23	2.16	0.46
24:Y:31:LEU:HG	24:Y:66:ILE:HB	1.98	0.46
29:w:397:TYR:CE2	29:w:402:LEU:HB2	2.50	0.46
32:7:12:ARG:HD2	32:7:12:ARG:HA	1.68	0.46
35:v:88:LYS:O	35:v:92:GLU:HG3	2.16	0.46
36:o:45:ASP:O	36:o:67:LYS:N	2.35	0.46
1:A:1417:PRO:O	1:A:1461:ASP:O	2.33	0.46
1:A:2185:SER:HB3	1:A:2187:GLN:HE22	1.81	0.46
2:B:103:G:H2'	2:B:104:C:O4'	2.16	0.46
3:C:807:GLN:HE22	46:9:144:LEU:HA	1.80	0.46
13:N:57:THR:HG23	13:N:92:TRP:CH2	2.51	0.46
19:T:210:ILE:HG22	19:T:467:ALA:HB1	1.98	0.46
22:W:384:ASP:O	22:W:388:GLN:N	2.48	0.46
23:X:452:GLN:O	23:X:497:THR:HA	2.15	0.46
23:X:700:TYR:HB3	23:X:757:ARG:O	2.15	0.46
23:X:727:GLY:HA2	23:X:730:ALA:O	2.15	0.46
26:1:516:LEU:HD12	26:1:516:LEU:HA	1.69	0.46
26:1:848:GLU:O	26:1:852:ARG:HG3	2.15	0.46
26:1:967:GLU:HB3	26:1:970:LEU:HB3	1.98	0.46
27:3:304:GLN:HE21	27:3:308:GLY:HA2	1.80	0.46
27:3:477:SER:O	27:3:477:SER:OG	2.32	0.46
27:3:809:GLU:O	27:3:812:LYS:HB2	2.15	0.46
33:5:8:HIS:HA	33:5:11:LEU:HB2	1.97	0.46
42:e:33:VAL:CA	42:e:86:LEU:O	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:340:ILE:H	1:A:340:ILE:HG12	1.37	0.46
2:B:38:C:C5	2:B:39:C:C4	3.03	0.46
3:C:226:VAL:HG22	3:C:254:THR:HB	1.98	0.46
3:C:377:LEU:HD12	3:C:380:ILE:HD12	1.97	0.46
3:C:510:LEU:HD13	3:C:514:TYR:CD2	2.50	0.46
7:G:112:U:C6	23:X:503:ARG:CG	2.98	0.46
9:I:427:LYS:O	9:I:429:VAL:N	2.48	0.46
10:J:289:ASN:HB3	12:L:232:TYR:CZ	2.50	0.46
10:J:339:TRP:HA	17:R:116:TYR:HD2	1.80	0.46
16:Q:1144:CYS:O	16:Q:1148:ASN:N	2.47	0.46
21:V:550:MET:O	21:V:554:LEU:HG	2.15	0.46
23:X:454:ARG:HH12	23:X:679:THR:HB	1.81	0.46
23:X:508:GLU:OE1	23:X:512:ALA:N	2.48	0.46
23:X:575:ARG:HH22	23:X:724:GLY:HA2	1.79	0.46
24:Y:275:TRP:CD1	24:Y:276:LYS:H	2.34	0.46
24:Y:298:PHE:CE2	24:Y:314:ASP:HA	2.50	0.46
27:3:272:PRO:HD3	27:3:327:LEU:HD13	1.97	0.46
27:3:343:LYS:C	27:3:345:GLY:H	2.24	0.46
27:3:665:LEU:CB	27:3:679:LEU:HD23	2.45	0.46
27:3:1102:LEU:HD12	27:3:1102:LEU:HA	1.66	0.46
32:7:47:ASP:HA	32:7:50:ASN:HB3	1.96	0.46
35:v:80:THR:O	35:v:84:ARG:HG2	2.15	0.46
37:h:100:PHE:N	43:n:68:PHE:O	2.43	0.46
46:9:323:ARG:HD2	46:9:420:ASP:HB2	1.97	0.46
46:9:363:ARG:HB3	46:9:363:ARG:CZ	2.45	0.46
1:A:409:ARG:N	1:A:410:PRO:HD2	2.30	0.46
1:A:796:LYS:HB3	1:A:796:LYS:HE3	1.76	0.46
1:A:2144:CYS:HB2	1:A:2270:PHE:CE1	2.49	0.46
1:A:2280:ASN:ND2	1:A:2304:PHE:O	2.47	0.46
3:C:95:LYS:HE2	3:C:95:LYS:HB2	1.58	0.46
3:C:394:ARG:NH1	3:C:395:THR:HG1	2.12	0.46
4:D:621:HIS:HA	4:D:890:GLU:O	2.16	0.46
8:H:15:U:O2'	8:H:16:U:OP2	2.26	0.46
23:X:223:VAL:O	23:X:227:ARG:HG3	2.16	0.46
23:X:675:ASN:O	23:X:678:GLU:HB2	2.16	0.46
24:Y:30:LYS:CE	24:Y:169:PRO:HD2	2.45	0.46
24:Y:215:LYS:O	24:Y:218:LYS:N	2.48	0.46
26:1:864:TYR:O	26:1:868:VAL:HG13	2.15	0.46
26:1:903:GLN:HG2	26:1:910:MET:HG3	1.98	0.46
26:1:1277:GLN:NE2	26:1:1277:GLN:O	2.48	0.46
27:3:226:GLU:HB3	27:3:261:PHE:CE2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:3:451:GLU:HG3	27:3:760:ASN:O	2.16	0.46
27:3:594:ASN:OD1	27:3:594:ASN:N	2.46	0.46
27:3:604:PHE:CE1	27:3:681:PRO:HD3	2.51	0.46
27:3:745:PHE:CG	27:3:755:VAL:HG23	2.51	0.46
28:p:75:TYR:N	36:o:147:PHE:O	2.48	0.46
29:w:410:ILE:HG23	29:w:438:LEU:HD11	1.98	0.46
34:y:13:LEU:H	34:y:48:GLY:HA2	1.80	0.46
35:v:85:ARG:NH1	35:v:88:LYS:HD3	2.30	0.46
38:i:71:TYR:HA	42:j:79:LEU:HA	1.96	0.46
1:A:155:LYS:HE3	1:A:626:GLY:O	2.16	0.46
1:A:344:ASP:OD2	1:A:347:LEU:HD12	2.15	0.46
1:A:549:GLU:HB2	1:A:591:MET:HG3	1.97	0.46
1:A:1411:SER:O	1:A:1419:ILE:HG12	2.15	0.46
1:A:2187:GLN:HB2	1:A:2256:TYR:OH	2.16	0.46
3:C:220:ARG:HA	3:C:220:ARG:HE	1.81	0.46
5:E:311:VAL:HB	5:E:321:TYR:HB2	1.97	0.46
6:F:29:A:H61	7:G:17:U:P	2.39	0.46
8:H:14:C:OP2	8:H:14:C:H2'	2.16	0.46
10:J:411:MET:SD	10:J:415:LEU:HD23	2.56	0.46
10:J:432:VAL:O	10:J:435:ILE:HG13	2.16	0.46
19:T:301:ASP:OD1	19:T:301:ASP:N	2.48	0.46
21:V:374:ASP:O	21:V:376:TYR:N	2.45	0.46
23:X:815:MET:HE1	23:X:829:LEU:HD12	1.97	0.46
24:Y:88:HIS:CE1	24:Y:125:VAL:HG22	2.51	0.46
24:Y:242:LEU:HD23	24:Y:315:PHE:HA	1.96	0.46
26:1:1000:ILE:O	26:1:1003:VAL:HG13	2.16	0.46
26:1:1015:ASP:OD1	26:1:1015:ASP:N	2.49	0.46
27:3:259:LYS:HE3	27:3:259:LYS:HB2	1.68	0.46
27:3:528:ARG:NH1	27:3:572:GLY:O	2.49	0.46
27:3:945:VAL:HG23	27:3:968:ARG:HH12	1.80	0.46
27:3:1158:ARG:HG3	27:3:1159:ASP:H	1.79	0.46
34:y:35:ILE:HA	34:y:51:PHE:O	2.15	0.46
1:A:79:ARG:HD2	1:A:82:ARG:NE	2.31	0.46
1:A:259:ASP:OD1	1:A:259:ASP:N	2.39	0.46
1:A:310:THR:O	1:A:314:ILE:HG22	2.16	0.46
1:A:726:TRP:O	46:9:247:SER:HB2	2.14	0.46
2:B:69:A:H3'	2:B:70:A:C8	2.51	0.46
3:C:118:PHE:CE2	3:C:122:LEU:HD11	2.51	0.46
3:C:721:LYS:HD3	3:C:722:TYR:CZ	2.50	0.46
5:E:192:ASN:CG	5:E:193:THR:H	2.24	0.46
9:I:231:ASN:O	9:I:233:ASP:N	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:367:GLU:O	10:J:371:LEU:HG	2.16	0.46
10:J:395:ALA:O	10:J:398:VAL:HG12	2.16	0.46
12:L:40:ARG:O	12:L:40:ARG:HG2	2.16	0.46
12:L:188:ARG:HD2	12:L:191:LEU:HD12	1.98	0.46
13:N:120:ARG:HA	13:N:120:ARG:HD2	1.51	0.46
15:P:195:LYS:O	15:P:196:ASN:C	2.59	0.46
16:Q:314:ASN:N	16:Q:319:ASN:O	2.43	0.46
23:X:415:HIS:CD2	23:X:568:PRO:HG3	2.50	0.46
24:Y:38:ASN:OD1	24:Y:158:HIS:HA	2.14	0.46
26:1:1231:MET:HE1	26:1:1268:ILE:CG1	2.46	0.46
27:3:373:PHE:CE1	27:3:385:PHE:HB3	2.48	0.46
27:3:676:ARG:HD2	27:3:729:PHE:CD2	2.51	0.46
27:3:725:TYR:O	27:3:728:ARG:HB2	2.16	0.46
32:7:48:GLU:H	32:7:48:GLU:HG3	1.32	0.46
1:A:758:ARG:HD3	1:A:779:LEU:HD11	1.97	0.46
1:A:955:TRP:HE1	1:A:976:MET:HE1	1.80	0.46
1:A:1580:HIS:CD2	1:A:1583:GLN:NE2	2.84	0.46
1:A:1914:MET:HE2	1:A:1915:VAL:O	2.16	0.46
1:A:2194:THR:OG1	1:A:2238:GLY:HA2	2.16	0.46
3:C:388:VAL:HA	3:C:392:LEU:CD1	2.46	0.46
4:D:492:ALA:O	4:D:516:CYS:HA	2.16	0.46
10:J:339:TRP:HA	17:R:116:TYR:CD2	2.51	0.46
12:L:11:TRP:CZ2	12:L:41:LYS:HD2	2.51	0.46
13:N:64:PHE:CZ	13:N:72:ARG:HD2	2.51	0.46
17:R:367:ARG:CD	17:R:371:ARG:HD2	2.42	0.46
23:X:389:LYS:HE2	23:X:389:LYS:O	2.16	0.46
23:X:453:PRO:HB3	23:X:524:GLU:CD	2.40	0.46
23:X:456:VAL:HA	23:X:459:MET:HG3	1.97	0.46
23:X:612:LEU:HB2	23:X:686:ILE:HG21	1.97	0.46
24:Y:204:SER:OG	24:Y:206:GLU:N	2.49	0.46
24:Y:241:VAL:HA	24:Y:286:ILE:O	2.16	0.46
26:1:871:THR:O	26:1:875:ILE:HG13	2.15	0.46
26:1:1216:TRP:O	26:1:1219:VAL:HB	2.16	0.46
27:3:312:LYS:HB2	27:3:330:PHE:CD1	2.50	0.46
27:3:698:PRO:O	27:3:700:LYS:NZ	2.34	0.46
27:3:1203:GLU:HG3	27:3:1206:LYS:HZ1	1.81	0.46
30:2:542:GLU:HA	30:2:545:GLU:HG2	1.98	0.46
30:2:599:THR:O	30:2:600:ARG:HG3	2.16	0.46
46:9:369:ALA:HA	46:9:394:HIS:CE1	2.51	0.46
1:A:108:MET:O	1:A:110:TRP:N	2.48	0.46
1:A:755:HIS:HE1	15:P:220:HIS:CE1	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:836:THR:HG21	23:X:866:ASN:ND2	2.31	0.46
1:A:1189:MET:HG3	1:A:1190:CYS:N	2.31	0.46
1:A:1352:HIS:CD2	20:U:5:ILE:HG13	2.50	0.46
1:A:1644:LEU:HD23	1:A:1644:LEU:HA	1.71	0.46
1:A:2289:ASP:CB	1:A:2292:MET:HB3	2.42	0.46
2:B:18:C:O2	2:B:59:G:N2	2.33	0.46
2:B:65:G:H2'	2:B:66:A:C8	2.51	0.46
3:C:86:THR:OG1	3:C:87:GLN:N	2.47	0.46
3:C:114:TYR:N	3:C:115:GLU:OE1	2.49	0.46
5:E:342:ILE:O	5:E:353:MET:HA	2.16	0.46
23:X:676:ILE:HG12	23:X:681:LEU:HD11	1.97	0.46
26:1:830:TYR:CG	26:1:867:MET:HG3	2.51	0.46
27:3:334:PRO:HB3	27:3:432:ARG:NH1	2.30	0.46
27:3:798:ILE:H	27:3:798:ILE:HG12	1.47	0.46
37:c:112:ASN:O	37:c:114:LEU:N	2.44	0.46
1:A:97:HIS:ND1	1:A:649:GLU:OE2	2.47	0.46
1:A:977:LEU:HG	1:A:978:GLU:N	2.30	0.46
1:A:1974:GLU:O	1:A:1978:LYS:HG3	2.15	0.46
3:C:700:ILE:HG13	3:C:705:VAL:HG11	1.98	0.46
3:C:733:TRP:CD1	3:C:763:LYS:HZ3	2.34	0.46
5:E:124:LEU:C	5:E:125:PHE:HD2	2.24	0.46
6:F:36:A:C6	6:F:38:G:C6	3.04	0.46
6:F:88:G:C2	6:F:89:U:C6	3.04	0.46
10:J:342:GLU:CD	10:J:343:GLU:N	2.74	0.46
16:Q:116:PRO:O	16:Q:120:PRO:HD2	2.16	0.46
16:Q:172:LEU:N	16:Q:173:PRO:HD2	2.31	0.46
17:R:189:ASN:ND2	17:R:195:ARG:HG2	2.30	0.46
17:R:286:LYS:HB2	46:9:215:PHE:CZ	2.50	0.46
17:R:315:LYS:HG2	17:R:316:GLU:N	2.31	0.46
21:V:450:ILE:HD12	21:V:450:ILE:HA	1.83	0.46
22:W:122:ASP:O	22:W:125:PHE:N	2.49	0.46
23:X:290:GLU:O	23:X:293:GLU:HG3	2.16	0.46
24:Y:144:VAL:HA	24:Y:150:PRO:HA	1.98	0.46
27:3:5:ASN:O	27:3:1176:GLY:HA3	2.16	0.46
27:3:185:LEU:O	27:3:186:GLU:HG3	2.16	0.46
27:3:592:LEU:HD11	27:3:619:LEU:HD11	1.97	0.46
27:3:788:PHE:HB2	27:3:799:ILE:HA	1.98	0.46
29:w:408:CYS:HB2	29:w:416:TYR:CE2	2.50	0.46
1:A:547:CYS:O	1:A:548:ARG:C	2.58	0.45
1:A:1030:ILE:HD11	1:A:1040:ILE:HG21	1.98	0.45
1:A:1521:ALA:HB2	35:v:9:GLY:H	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1903:GLY:O	1:A:1907:LEU:HG	2.16	0.45
1:A:1998:ASN:O	1:A:2001:SER:OG	2.28	0.45
2:B:14:U:H2'	2:B:15:C:C6	2.51	0.45
3:C:237:LEU:HD21	3:C:900:VAL:HG13	1.98	0.45
3:C:339:PHE:HE1	3:C:356:PHE:HZ	1.62	0.45
3:C:651:ILE:HG22	3:C:652:ASP:N	2.31	0.45
3:C:857:VAL:HA	3:C:873:ALA:CB	2.46	0.45
5:E:329:SER:N	5:E:347:SER:OG	2.49	0.45
7:G:9:C:H2'	7:G:10:U:C2	2.51	0.45
8:H:150:U:H3	8:H:181:G:H22	1.64	0.45
10:J:296:ARG:HD3	12:L:225:TYR:CE1	2.50	0.45
12:L:201:LYS:HD2	12:L:201:LYS:HA	1.61	0.45
19:T:334:ALA:HB2	19:T:350:HIS:CE1	2.51	0.45
23:X:989:LEU:HD12	23:X:989:LEU:HA	1.84	0.45
26:1:662:HIS:HB2	26:1:701:VAL:HB	1.98	0.45
26:1:907:ASP:OD2	26:1:909:VAL:HB	2.16	0.45
26:1:1135:GLU:O	26:1:1138:VAL:HG12	2.16	0.45
27:3:817:GLN:HG3	27:3:818:GLN:OE1	2.15	0.45
27:3:910:ALA:HB2	27:3:948:VAL:HG23	1.98	0.45
28:p:10:TYR:O	28:p:81:ILE:HA	2.17	0.45
29:w:383:LEU:HD13	29:w:391:PRO:HB3	1.98	0.45
29:w:423:GLN:NE2	30:2:477:MET:HG3	2.31	0.45
46:9:285:HIS:O	46:9:429:ASP:HB2	2.16	0.45
1:A:246:LEU:HD11	1:A:411:PHE:CE1	2.51	0.45
1:A:2133:PRO:HD2	1:A:2136:ASN:O	2.16	0.45
3:C:360:ALA:H	3:C:361:PRO:HD3	1.82	0.45
3:C:442:LYS:CD	3:C:468:CYS:HB3	2.46	0.45
5:E:125:PHE:N	5:E:125:PHE:CD2	2.83	0.45
5:E:251:LEU:HB2	5:E:293:TRP:NE1	2.31	0.45
5:E:266:PRO:HG3	12:L:789:ALA:HB2	1.99	0.45
6:F:85:U:H1'	6:F:86:U:C6	2.51	0.45
7:G:5:G:H2'	7:G:5:G:N3	2.31	0.45
7:G:99:C:N4	8:H:32:U:C4	2.84	0.45
8:H:43:U:H2'	8:H:44:U:C5	2.51	0.45
10:J:334:GLU:O	10:J:338:GLU:HG3	2.16	0.45
12:L:63:TRP:HB3	12:L:68:GLU:HG3	1.99	0.45
12:L:178:GLU:HB3	12:L:181:ARG:NH1	2.32	0.45
13:N:64:PHE:HZ	13:N:72:ARG:HD2	1.81	0.45
15:P:26:LEU:HD12	15:P:26:LEU:HA	1.62	0.45
15:P:27:SER:HB2	15:P:29:GLN:OE1	2.15	0.45
17:R:213:LYS:HB3	17:R:213:LYS:HE3	1.62	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:R:364:GLN:O	17:R:368:ASN:ND2	2.50	0.45
19:T:394:ASN:N	19:T:394:ASN:OD1	2.48	0.45
24:Y:188:SER:HB2	24:Y:190:ARG:HB2	1.98	0.45
26:1:586:ASP:O	26:1:590:ARG:HG3	2.16	0.45
26:1:854:VAL:HG11	26:1:891:GLN:HG3	1.97	0.45
27:3:278:LEU:HD21	27:3:816:LYS:NZ	2.32	0.45
27:3:528:ARG:HG3	27:3:529:ALA:N	2.32	0.45
29:w:496:LYS:HG3	29:w:501:LEU:C	2.41	0.45
30:2:553:MET:HE3	30:2:553:MET:HB2	1.75	0.45
41:k:41:VAL:HA	41:k:61:VAL:HA	1.98	0.45
1:A:526:PRO:HD2	11:K:197:TYR:CD2	2.51	0.45
1:A:531:THR:O	1:A:535:ARG:HB2	2.16	0.45
1:A:643:GLY:HA3	2:B:28:A:O2'	2.16	0.45
1:A:1536:LEU:HD11	1:A:1576:ILE:HD11	1.97	0.45
3:C:174:GLU:CD	3:C:180:GLY:HA2	2.41	0.45
3:C:453:TYR:CE2	3:C:575:GLN:HB2	2.52	0.45
5:E:105:LEU:HD11	5:E:136:TRP:CE3	2.50	0.45
6:F:38:G:C4	6:F:39:A:N7	2.84	0.45
14:O:119:GLN:OE1	17:R:218:ILE:HD11	2.17	0.45
19:T:422:ASN:HB2	19:T:426:VAL:HB	1.98	0.45
21:V:562:TRP:CD2	21:V:602:ARG:HD3	2.51	0.45
23:X:436:LEU:CD2	23:X:516:VAL:HG11	2.46	0.45
23:X:447:LYS:HB2	23:X:514:TYR:CD1	2.51	0.45
23:X:867:ALA:HB3	23:X:902:PHE:HD2	1.80	0.45
23:X:997:MET:C	23:X:998:ARG:HD2	2.42	0.45
26:1:536:LEU:O	26:1:540:MET:HG2	2.16	0.45
26:1:1226:VAL:O	26:1:1230:VAL:HG23	2.17	0.45
27:3:1204:VAL:HG23	27:3:1205:SER:N	2.30	0.45
1:A:122:ILE:HB	1:A:481:PHE:O	2.17	0.45
1:A:929:GLU:O	1:A:933:ARG:HG3	2.16	0.45
1:A:1607:GLU:OE2	1:A:1608:THR:OG1	2.34	0.45
1:A:1634:SER:OG	1:A:1635:TYR:N	2.50	0.45
1:A:1934:SER:O	1:A:1938:LEU:HG	2.17	0.45
3:C:711:ARG:HB3	3:C:730:ARG:NH2	2.31	0.45
3:C:902:HIS:ND1	3:C:903:HIS:HD2	2.14	0.45
9:I:296:PHE:CB	9:I:337:LEU:HA	2.46	0.45
16:Q:437:ASN:O	16:Q:450:LEU:HA	2.17	0.45
17:R:158:LYS:O	17:R:161:ALA:HB3	2.17	0.45
23:X:725:ARG:HD3	23:X:728:ARG:NH1	2.21	0.45
23:X:858:LYS:O	23:X:861:VAL:HG23	2.16	0.45
24:Y:70:LEU:HD22	24:Y:169:PRO:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1:769:VAL:HG13	26:1:773:LEU:HD21	1.99	0.45
27:3:232:GLY:HA3	27:3:252:SER:HA	1.97	0.45
27:3:404:LEU:HB3	27:3:407:ILE:HG12	1.99	0.45
27:3:515:ALA:HA	27:3:528:ARG:HA	1.97	0.45
27:3:633:LEU:HD12	27:3:637:PRO:HG3	1.97	0.45
27:3:996:ILE:HG21	27:3:1041:TYR:CD1	2.52	0.45
27:3:1015:LYS:HD2	27:3:1015:LYS:HA	1.78	0.45
46:9:370:ASN:ND2	46:9:375:SER:H	2.15	0.45
1:A:2107:PRO:HG2	1:A:2110:VAL:HG22	1.99	0.45
3:C:113:VAL:HG23	3:C:114:TYR:H	1.82	0.45
3:C:121:ASP:OD1	3:C:122:LEU:N	2.49	0.45
3:C:510:LEU:CB	3:C:564:THR:HG23	2.47	0.45
3:C:574:ALA:O	3:C:575:GLN:NE2	2.46	0.45
3:C:718:PHE:HB3	3:C:724:TRP:CD1	2.51	0.45
4:D:783:ALA:O	4:D:809:LEU:HA	2.17	0.45
5:E:71:CYS:HB2	5:E:115:LEU:HG	1.99	0.45
17:R:348:GLU:HG3	23:X:262:LEU:CB	2.47	0.45
21:V:533:TYR:CE2	21:V:568:ILE:HG23	2.52	0.45
23:X:396:ARG:NE	23:X:431:GLN:HE22	2.15	0.45
23:X:525:ARG:O	23:X:754:GLU:HB2	2.16	0.45
26:1:856:ASP:HB3	26:1:864:TYR:CE2	2.51	0.45
26:1:857:LEU:HA	26:1:865:ARG:HB3	1.98	0.45
26:1:1195:MET:O	26:1:1199:VAL:HG23	2.16	0.45
26:1:1266:TRP:CZ3	33:5:22:GLY:HA3	2.51	0.45
27:3:93:GLN:O	27:3:97:ASN:N	2.50	0.45
27:3:124:ASP:OD2	27:3:128:ARG:HG3	2.17	0.45
27:3:458:ALA:O	27:3:459:VAL:HG23	2.17	0.45
27:3:485:LEU:HA	27:3:494:VAL:HB	1.99	0.45
27:3:590:MET:HE3	27:3:607:VAL:HG22	1.99	0.45
27:3:615:ARG:C	27:3:616:ILE:HD12	2.41	0.45
27:3:642:ILE:H	27:3:703:ARG:NH2	2.14	0.45
27:3:1159:ASP:OD1	27:3:1160:HIS:N	2.50	0.45
27:3:1210:ASP:HA	27:3:1213:THR:OG1	2.15	0.45
35:v:85:ARG:HA	35:v:85:ARG:HD2	1.77	0.45
36:o:14:GLN:HA	36:o:23:GLU:O	2.15	0.45
46:9:312:LYS:HB2	46:9:312:LYS:HE2	1.76	0.45
1:A:1368:LEU:HA	1:A:1368:LEU:HD23	1.57	0.45
1:A:1418:ARG:HB2	1:A:1462:GLY:HA3	1.98	0.45
1:A:1625:SER:OG	1:A:1687:TYR:HD2	1.99	0.45
1:A:1764:SER:C	1:A:1766:GLN:N	2.73	0.45
1:A:2188:LEU:HD12	1:A:2188:LEU:HA	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:403:LEU:HD23	3:C:403:LEU:HA	1.87	0.45
4:D:668:ASP:O	4:D:672:GLY:HA3	2.16	0.45
8:H:70:C:H2'	8:H:71:C:H6	1.80	0.45
10:J:262:ARG:NH2	10:J:291:GLN:HG2	2.32	0.45
17:R:171:LEU:HD11	17:R:203:GLN:OE1	2.16	0.45
23:X:263:SER:O	23:X:267:ARG:CB	2.60	0.45
23:X:444:LYS:N	23:X:444:LYS:HD2	2.32	0.45
23:X:698:LYS:HD3	23:X:707:GLU:HB2	1.99	0.45
24:Y:80:ALA:HB2	24:Y:102:ASP:O	2.16	0.45
24:Y:186:LEU:HD23	24:Y:186:LEU:HA	1.79	0.45
26:1:1063:LEU:HA	26:1:1063:LEU:HD23	1.64	0.45
26:1:1130:PRO:HD3	30:2:575:PHE:CE2	2.52	0.45
26:1:1142:ASN:H	26:1:1142:ASN:HD22	1.64	0.45
26:1:1276:SER:H	27:3:113:ARG:NH2	2.14	0.45
27:3:424:TYR:HD1	27:3:437:VAL:HG22	1.82	0.45
27:3:565:TYR:CE1	27:3:619:LEU:HD12	2.51	0.45
30:2:541:GLN:O	30:2:545:GLU:HG2	2.17	0.45
46:9:241:TYR:HB2	46:9:242:SER:H	1.61	0.45
1:A:191:ILE:HG12	1:A:571:ALA:HB1	1.99	0.45
1:A:273:ILE:HG23	1:A:274:PRO:HD2	1.99	0.45
3:C:247:VAL:HG11	3:C:292:TYR:HB3	1.98	0.45
4:D:1581:ALA:O	4:D:1584:ILE:HA	2.17	0.45
6:F:39:A:C2'	6:F:40:U:H5'	2.47	0.45
6:F:83:A:H1'	6:F:84:A:C8	2.52	0.45
7:G:-7:U:H5'	7:G:-6:C:OP2	2.17	0.45
8:H:160:A:C2	8:H:171:U:C2	3.05	0.45
14:O:36:MET:CB	17:R:199:MET:HE1	2.46	0.45
14:O:235:TYR:HA	14:O:270:ALA:O	2.17	0.45
17:R:429:ILE:CD1	17:R:431:ASN:HD22	2.30	0.45
21:V:553:HIS:CD2	21:V:556:TYR:CE1	3.05	0.45
21:V:596:LEU:N	21:V:597:PRO:HD2	2.32	0.45
23:X:741:TRP:HE1	26:1:781:ASP:CG	2.25	0.45
23:X:822:PRO:C	23:X:825:SER:H	2.25	0.45
26:1:974:LEU:HG	26:1:974:LEU:H	1.46	0.45
29:w:445:HIS:CD2	29:w:445:HIS:N	2.82	0.45
30:2:471:ARG:HE	30:2:471:ARG:HB3	1.49	0.45
34:y:32:ILE:HA	34:y:54:PHE:HA	1.99	0.45
45:s:17:VAL:O	45:s:52:LEU:HA	2.16	0.45
46:9:437:PRO:HG2	46:9:438:TYR:CE2	2.52	0.45
1:A:1000:ILE:HA	1:A:1000:ILE:HD12	1.58	0.45
2:B:117:A:C2	38:d:26:GLY:HA3	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:567:GLU:H	3:C:567:GLU:HG2	1.50	0.45
3:C:684:LYS:HB3	3:C:795:VAL:HB	1.98	0.45
3:C:776:GLU:O	3:C:781:ASP:HA	2.16	0.45
3:C:801:LEU:HD23	3:C:801:LEU:HA	1.76	0.45
3:C:827:LEU:O	3:C:907:VAL:HG23	2.17	0.45
3:C:852:ARG:HD2	7:G:-12:C:H5'	1.98	0.45
6:F:25:C:H4'	6:F:26:U:OP2	2.17	0.45
6:F:40:U:H2'	6:F:41:A:C8	2.51	0.45
7:G:90:C:H42	8:H:40:C:N4	2.14	0.45
7:G:105:C:H5'	7:G:105:C:O2	2.17	0.45
8:H:105:G:N2	8:H:107:A:H5'	2.32	0.45
16:Q:599:GLY:HA3	16:Q:608:ILE:N	2.31	0.45
18:S:99:ALA:HB2	18:S:128:ILE:HA	1.99	0.45
21:V:219:VAL:O	21:V:223:ASN:CB	2.65	0.45
21:V:570:LEU:HD23	21:V:575:THR:HG21	1.98	0.45
23:X:257:PHE:O	23:X:259:ASP:N	2.49	0.45
23:X:421:GLU:HB2	23:X:557:THR:HG21	1.99	0.45
23:X:620:GLU:OE2	23:X:620:GLU:N	2.44	0.45
23:X:1017:LYS:HB2	23:X:1020:GLU:OE2	2.17	0.45
24:Y:30:LYS:C	24:Y:66:ILE:HD13	2.42	0.45
24:Y:276:LYS:HB3	24:Y:276:LYS:HE2	1.75	0.45
26:1:560:LEU:HD11	26:1:600:LEU:HD12	1.99	0.45
26:1:1017:LEU:HD22	26:1:1050:VAL:HG11	1.98	0.45
26:1:1282:ALA:HB2	27:3:1050:PHE:CE1	2.52	0.45
27:3:185:LEU:HD23	27:3:185:LEU:HA	1.69	0.45
30:2:596:GLU:N	30:2:596:GLU:OE2	2.50	0.45
36:o:52:ASN:O	36:o:74:ASN:HA	2.17	0.45
46:9:221:LEU:HD23	46:9:221:LEU:H	1.81	0.45
46:9:355:ARG:HB3	46:9:358:LEU:HD12	1.99	0.45
1:A:228:TRP:O	1:A:415:SER:HA	2.16	0.45
1:A:426:LEU:H	1:A:426:LEU:HG	1.64	0.45
1:A:839:LEU:O	1:A:843:LEU:HG	2.17	0.45
1:A:1361:GLU:HG3	1:A:1362:ASP:OD2	2.17	0.45
1:A:1526:LEU:O	11:K:216:SER:HB3	2.16	0.45
1:A:1838:LYS:HB3	1:A:1868:MET:HG3	1.99	0.45
1:A:2193:VAL:HB	1:A:2230:LEU:HD21	1.99	0.45
1:A:2278:SER:OG	1:A:2279:TRP:N	2.49	0.45
1:A:2284:MET:HE2	1:A:2287:ARG:HH21	1.81	0.45
3:C:262:ARG:HE	3:C:262:ARG:HB3	1.66	0.45
3:C:349:PHE:CZ	3:C:351:PRO:HA	2.52	0.45
3:C:853:ARG:HD3	3:C:879:ASP:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:65:G:H5"	6:F:66:C:OP2	2.17	0.45
7:G:6:A:H2'	7:G:7:G:C8	2.52	0.45
14:O:256:GLY:HA3	14:O:279:ALA:CB	2.47	0.45
15:P:52:GLU:HB2	15:P:53:GLU:OE1	2.17	0.45
21:V:593:TYR:HD1	21:V:593:TYR:HA	1.73	0.45
23:X:246:LEU:HG	23:X:277:ARG:NE	2.27	0.45
26:1:644:LEU:HB3	26:1:648:LEU:CD1	2.46	0.45
26:1:658:TRP:CZ3	26:1:698:GLN:HG2	2.52	0.45
27:3:27:GLN:OE1	27:3:42:ARG:NH1	2.50	0.45
27:3:147:ASP:OD2	27:3:151:ARG:HG2	2.16	0.45
27:3:184:CYS:SG	27:3:211:TYR:HE1	2.40	0.45
27:3:595:VAL:HG22	27:3:596:PRO:O	2.17	0.45
27:3:601:ARG:HD3	27:3:620:ASP:HB3	1.98	0.45
27:3:911:LYS:HG3	27:3:912:ASP:CG	2.42	0.45
30:2:517:ILE:H	30:2:517:ILE:HG13	1.27	0.45
32:7:9:ILE:O	32:7:88:ILE:HG22	2.17	0.45
33:5:33:VAL:CG2	33:5:76:CYS:HB2	2.47	0.45
35:v:74:GLN:HA	35:v:74:GLN:OE1	2.17	0.45
38:i:24:LYS:N	38:i:68:ASN:O	2.50	0.45
46:9:423:LYS:HB3	46:9:423:LYS:HE3	1.68	0.45
1:A:361:HIS:HB2	3:C:280:HIS:CG	2.52	0.45
1:A:1457:HIS:ND1	1:A:1460:HIS:CD2	2.84	0.45
1:A:1933:PHE:O	1:A:1937:ILE:HG13	2.17	0.45
1:A:2190:PRO:HG3	1:A:2251:TYR:CD2	2.52	0.45
3:C:118:PHE:CZ	3:C:122:LEU:HD11	2.52	0.45
3:C:122:LEU:HD21	3:C:197:SER:OG	2.16	0.45
5:E:75:HIS:HB3	5:E:79:SER:H	1.82	0.45
5:E:125:PHE:CE2	5:E:135:VAL:HG13	2.52	0.45
6:F:84:A:O2'	6:F:85:U:H2'	2.17	0.45
15:P:50:ALA:O	15:P:54:VAL:HG23	2.17	0.45
15:P:186:ARG:HD2	15:P:190:ASP:OD2	2.17	0.45
17:R:299:ARG:NH2	23:X:301:PRO:O	2.26	0.45
22:W:463:SER:O	22:W:481:MET:N	2.29	0.45
23:X:242:LYS:HE3	23:X:242:LYS:HB3	1.48	0.45
23:X:448:ILE:HB	23:X:493:LEU:HD22	1.98	0.45
27:3:249:LEU:HD23	27:3:256:ILE:HD11	1.98	0.45
27:3:325:ILE:HB	27:3:375:SER:HB3	1.99	0.45
27:3:331:ASP:OD2	27:3:393:LYS:N	2.39	0.45
27:3:407:ILE:HD11	27:3:1124:GLY:HA2	1.99	0.45
27:3:753:GLY:O	27:3:754:ILE:HD13	2.17	0.45
30:2:504:TRP:CD1	30:2:504:TRP:H	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:9:325:ILE:HB	46:9:328:PHE:HB3	1.98	0.45
1:A:1614:ILE:H	1:A:1614:ILE:HG13	1.59	0.44
1:A:1645:LEU:HD11	1:A:1727:GLN:HG3	1.99	0.44
1:A:1712:HIS:ND1	1:A:1734:MET:HG3	2.32	0.44
1:A:1793:THR:C	1:A:1795:GLU:H	2.25	0.44
1:A:2004:GLN:NE2	26:1:898:TYR:HB2	2.32	0.44
1:A:2074:ARG:HD3	1:A:2074:ARG:HA	1.69	0.44
3:C:129:ILE:HA	3:C:199:LEU:O	2.16	0.44
5:E:270:LYS:HA	5:E:270:LYS:HE3	1.98	0.44
6:F:81:C:N4	8:H:17:U:H3	2.15	0.44
7:G:99:C:N3	8:H:33:G:C4	2.85	0.44
8:H:105:G:O2'	8:H:107:A:OP1	2.23	0.44
13:N:16:GLU:CD	13:N:16:GLU:N	2.75	0.44
17:R:153:LYS:HD2	17:R:154:SER:N	2.32	0.44
19:T:341:ALA:O	19:T:344:GLN:HG3	2.17	0.44
23:X:644:VAL:O	23:X:645:LEU:HD23	2.18	0.44
23:X:826:LYS:HA	23:X:826:LYS:HD2	1.68	0.44
24:Y:298:PHE:HE2	24:Y:314:ASP:HA	1.82	0.44
24:Y:303:ASN:HA	24:Y:311:ILE:O	2.18	0.44
26:1:781:ASP:O	26:1:785:LYS:HG3	2.17	0.44
27:3:14:ILE:HD11	27:3:356:HIS:CD2	2.51	0.44
27:3:485:LEU:CD2	27:3:491:VAL:HG12	2.46	0.44
27:3:569:ASP:O	27:3:572:GLY:N	2.45	0.44
27:3:739:LEU:HD23	27:3:739:LEU:HA	1.71	0.44
27:3:988:ASN:ND2	27:3:1004:ASP:OD1	2.50	0.44
30:2:477:MET:SD	30:2:478:HIS:CE1	3.10	0.44
46:9:366:LEU:HD11	46:9:380:PHE:CD2	2.52	0.44
1:A:93:LYS:NZ	17:R:165:VAL:HG22	2.32	0.44
1:A:232:LEU:N	1:A:233:PRO:HD2	2.32	0.44
1:A:325:HIS:CD2	1:A:326:HIS:CD2	2.93	0.44
1:A:407:ALA:O	1:A:412:ASN:HB3	2.17	0.44
1:A:485:THR:HG22	1:A:486:LYS:H	1.83	0.44
1:A:683:LEU:HD21	6:F:57:U:H5'	1.99	0.44
1:A:974:ASN:OD1	1:A:1100:ARG:NH1	2.50	0.44
1:A:1207:PHE:CD1	1:A:1207:PHE:C	2.96	0.44
1:A:1219:GLU:HG3	23:X:341:PHE:HD1	1.80	0.44
1:A:1473:ASP:OD1	1:A:1473:ASP:N	2.46	0.44
1:A:1681:ARG:HB3	1:A:1681:ARG:HH11	1.82	0.44
3:C:83:GLU:H	3:C:83:GLU:HG2	1.34	0.44
3:C:138:LEU:HA	3:C:207:GLY:HA3	1.98	0.44
3:C:938:ARG:O	3:C:942:GLY:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:99:C:C4	8:H:33:G:C5	3.05	0.44
10:J:231:PHE:HA	10:J:234:ASN:HD22	1.82	0.44
17:R:211:ARG:HB2	17:R:212:PHE:CE2	2.52	0.44
23:X:419:ILE:O	23:X:569:VAL:HA	2.17	0.44
24:Y:215:LYS:O	24:Y:216:GLU:C	2.61	0.44
26:1:581:LEU:HD13	26:1:589:ALA:HB1	1.98	0.44
26:1:761:TYR:O	26:1:765:TYR:HB2	2.17	0.44
27:3:278:LEU:HD21	27:3:816:LYS:HZ3	1.82	0.44
30:2:526:ASP:O	30:2:528:ILE:N	2.50	0.44
33:5:50:LEU:HD12	33:5:50:LEU:HA	1.54	0.44
46:9:282:VAL:HG13	46:9:433:VAL:HG22	1.98	0.44
1:A:591:MET:HB3	1:A:598:LEU:CD2	2.48	0.44
1:A:693:ILE:C	1:A:695:ASP:H	2.24	0.44
3:C:137:HIS:HB3	3:C:140:HIS:ND1	2.32	0.44
3:C:700:ILE:O	3:C:740:THR:OG1	2.33	0.44
5:E:267:PHE:HD2	5:E:268:ALA:N	2.16	0.44
5:E:343:ILE:HA	5:E:352:TYR:O	2.17	0.44
6:F:7:G:H2'	6:F:8:C:C6	2.52	0.44
6:F:83:A:H1'	6:F:84:A:C4	2.53	0.44
7:G:12:G:H3'	7:G:13:C:C5	2.51	0.44
7:G:110:U:OP1	23:X:455:ARG:CG	2.65	0.44
10:J:346:TRP:CG	10:J:369:PHE:HD1	2.35	0.44
10:J:381:LYS:O	10:J:384:ARG:HB3	2.17	0.44
15:P:74:LYS:HA	15:P:77:ASP:HB3	1.99	0.44
16:Q:698:SER:HA	16:Q:1129:PRO:HD3	1.98	0.44
19:T:295:ASP:O	19:T:303:LEU:HD23	2.18	0.44
21:V:636:LEU:HD23	21:V:636:LEU:HA	1.57	0.44
23:X:242:LYS:HG3	24:Y:227:VAL:HG21	1.98	0.44
23:X:497:THR:H	23:X:500:MET:HB2	1.81	0.44
23:X:898:CYS:SG	23:X:903:VAL:HB	2.57	0.44
23:X:988:GLU:CB	23:X:998:ARG:HB2	2.48	0.44
26:1:1046:GLY:O	26:1:1048:GLU:N	2.50	0.44
26:1:1149:LYS:O	26:1:1152:SER:HB3	2.17	0.44
26:1:1244:CYS:O	26:1:1245:ARG:C	2.60	0.44
26:1:1251:LEU:HD23	26:1:1251:LEU:HA	1.68	0.44
27:3:243:ASP:OD1	27:3:244:GLY:N	2.50	0.44
30:2:569:GLN:O	30:2:573:ASP:HB2	2.17	0.44
32:7:21:ARG:HH11	32:7:66:VAL:C	2.19	0.44
45:s:59:HIS:O	45:s:61:ILE:N	2.50	0.44
1:A:364:SER:O	1:A:366:LYS:HD3	2.17	0.44
1:A:599:MET:H	1:A:599:MET:HG2	1.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:779:LEU:HD12	1:A:905:LEU:HD11	2.00	0.44
1:A:1318:THR:HB	1:A:1324:GLY:HA3	2.00	0.44
1:A:1660:TYR:CE1	1:A:1699:THR:HG22	2.53	0.44
1:A:1687:TYR:HA	1:A:1690:ASP:OD2	2.17	0.44
1:A:1723:LYS:HB3	1:A:1724:PRO:HD3	1.98	0.44
1:A:1889:LEU:HD12	1:A:1889:LEU:HA	1.80	0.44
3:C:485:ASP:OD1	3:C:486:ASP:N	2.51	0.44
3:C:742:PRO:CG	3:C:785:ARG:HG2	2.48	0.44
3:C:788:LYS:HE2	3:C:790:LYS:HE3	1.98	0.44
3:C:802:HIS:CE1	3:C:803:ARG:HH11	2.36	0.44
5:E:235:ALA:HB3	5:E:256:ASP:HB2	1.99	0.44
6:F:40:U:H3	7:G:7:G:H1	1.65	0.44
6:F:82:A:O2'	6:F:83:A:H2'	2.17	0.44
7:G:88:G:H1'	8:H:42:G:N2	2.33	0.44
7:G:99:C:N3	8:H:33:G:C5	2.86	0.44
13:N:75:TYR:O	13:N:79:ILE:HD12	2.18	0.44
16:Q:494:PRO:HB2	16:Q:503:VAL:O	2.17	0.44
24:Y:26:LEU:HB3	24:Y:166:PHE:CE1	2.53	0.44
26:1:750:ILE:HG13	26:1:751:GLY:N	2.32	0.44
26:1:963:LYS:O	26:1:965:CYS:N	2.50	0.44
26:1:1017:LEU:HD21	26:1:1058:ILE:HD11	1.99	0.44
27:3:275:ARG:HH21	27:3:275:ARG:CB	2.31	0.44
27:3:288:VAL:HG23	27:3:289:CYS:N	2.30	0.44
27:3:986:ILE:HG21	27:3:990:ILE:HG12	1.99	0.44
29:w:108:VAL:O	29:w:120:PRO:HD2	2.17	0.44
30:2:535:GLU:H	30:2:535:GLU:CD	2.26	0.44
35:v:91:LYS:HE2	35:v:91:LYS:HB2	1.70	0.44
1:A:863:GLU:HG3	1:A:913:PRO:HB3	2.00	0.44
3:C:291:MET:HA	3:C:291:MET:HE3	1.99	0.44
3:C:743:ASN:HB3	3:C:787:VAL:HG13	2.00	0.44
3:C:921:LEU:HD23	3:C:921:LEU:HA	1.68	0.44
4:D:824:HIS:HA	4:D:862:ASP:CB	2.47	0.44
6:F:5:U:N3	6:F:7:G:N7	2.65	0.44
6:F:19:C:H4'	13:N:95:GLN:NE2	2.32	0.44
8:H:158:G:H2'	8:H:159:U:O4'	2.16	0.44
15:P:45:GLN:HA	15:P:45:GLN:NE2	2.33	0.44
23:X:181:PHE:O	23:X:185:VAL:HG23	2.16	0.44
23:X:576:ARG:HB3	23:X:577:PHE:CD2	2.52	0.44
23:X:992:THR:O	23:X:994:LYS:N	2.51	0.44
23:X:1003:ILE:HD12	23:X:1008:LEU:HD21	1.99	0.44
26:1:781:ASP:HB3	26:1:784:MET:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1:946:LYS:O	26:1:950:GLN:HG3	2.17	0.44
27:3:190:GLU:CD	27:3:194:ASN:HD21	2.26	0.44
27:3:228:LEU:HD12	27:3:229:GLU:N	2.28	0.44
27:3:543:THR:O	27:3:558:LEU:HD12	2.17	0.44
27:3:554:VAL:HG12	27:3:556:ILE:HG23	2.00	0.44
27:3:568:MET:H	27:3:568:MET:HG2	1.58	0.44
27:3:768:GLU:HB3	27:3:769:LYS:H	1.63	0.44
29:w:408:CYS:SG	29:w:431:HIS:CE1	3.11	0.44
29:w:453:GLU:OE1	29:w:454:ASP:N	2.44	0.44
1:A:39:GLN:NE2	22:W:170:THR:H	2.16	0.44
1:A:246:LEU:HA	1:A:246:LEU:HD23	1.68	0.44
1:A:246:LEU:HD22	1:A:408:PRO:HG2	1.99	0.44
1:A:731:LEU:O	46:9:241:TYR:HB3	2.17	0.44
1:A:923:ASP:OD2	1:A:1439:ARG:NH1	2.49	0.44
1:A:1108:ASP:OD1	1:A:1108:ASP:N	2.49	0.44
1:A:1383:GLN:OE1	23:X:339:LEU:HB3	2.17	0.44
1:A:1403:LEU:O	17:R:407:TYR:HB2	2.17	0.44
1:A:1555:LEU:HA	1:A:1555:LEU:HD22	1.67	0.44
1:A:1661:TRP:CH2	1:A:1684:PHE:HE1	2.36	0.44
1:A:2187:GLN:HB2	1:A:2256:TYR:CE1	2.52	0.44
2:B:93:U:O4	38:d:66:CYS:N	2.51	0.44
3:C:219:LEU:HD23	3:C:219:LEU:HA	1.67	0.44
3:C:219:LEU:HD22	3:C:251:LEU:HG	2.00	0.44
3:C:267:LEU:HD23	3:C:267:LEU:HA	1.74	0.44
3:C:678:THR:OG1	3:C:680:ASN:O	2.19	0.44
4:D:1526:HIS:O	4:D:1703:VAL:HA	2.18	0.44
5:E:114:GLU:O	5:E:126:SER:HA	2.18	0.44
6:F:43:A:N6	6:F:44:G:O6	2.50	0.44
6:F:60:C:H2'	10:J:236:ARG:NH2	2.32	0.44
19:T:203:HIS:CD2	19:T:207:VAL:HG22	2.52	0.44
19:T:320:LYS:HE2	19:T:320:LYS:HB2	1.72	0.44
23:X:327:ARG:NH1	23:X:327:ARG:HB3	2.32	0.44
23:X:610:ASP:CG	23:X:669:LYS:HB3	2.42	0.44
23:X:819:PRO:CG	23:X:921:LEU:HD12	2.35	0.44
27:3:1151:GLU:OE2	27:3:1193:VAL:HG21	2.18	0.44
27:3:1211:ILE:HD12	27:3:1214:ARG:HE	1.82	0.44
30:2:512:GLN:N	30:2:512:GLN:OE1	2.51	0.44
34:y:70:SER:O	34:y:76:THR:HA	2.17	0.44
44:u:60:VAL:HA	44:u:64:GLY:H	1.83	0.44
46:9:41:HIS:HA	46:9:48:PRO:HA	1.99	0.44
46:9:295:LEU:HD13	46:9:308:ILE:HD11	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:9:370:ASN:HD22	46:9:375:SER:H	1.66	0.44
1:A:298:ASP:HB3	1:A:301:LYS:HD3	2.00	0.44
1:A:363:HIS:HB2	1:A:366:LYS:NZ	2.31	0.44
1:A:2249:LYS:HE3	1:A:2249:LYS:HB3	1.64	0.44
3:C:280:HIS:HA	3:C:283:ASP:OD1	2.17	0.44
3:C:502:HIS:CE1	3:C:543:ARG:HH12	2.35	0.44
4:D:1915:ILE:O	4:D:1919:ALA:HB2	2.17	0.44
7:G:99:C:C4	8:H:33:G:C6	3.05	0.44
8:H:106:G:N3	8:H:107:A:N6	2.65	0.44
10:J:342:GLU:O	10:J:346:TRP:CD1	2.71	0.44
12:L:76:LYS:NZ	12:L:76:LYS:HB3	2.31	0.44
12:L:169:ARG:HE	12:L:169:ARG:HB2	1.57	0.44
13:N:56:LYS:HB3	13:N:56:LYS:HE2	1.84	0.44
14:O:163:HIS:O	14:O:182:ARG:N	2.51	0.44
17:R:325:ARG:HH11	24:Y:222:ILE:CG2	2.28	0.44
20:U:24:SER:O	20:U:24:SER:OG	2.28	0.44
21:V:525:PHE:HA	21:V:528:ILE:HB	1.99	0.44
21:V:571:SER:HB3	21:V:574:THR:OG1	2.17	0.44
21:V:628:ILE:HG21	21:V:644:ARG:HD2	1.98	0.44
23:X:408:LEU:HB2	23:X:570:PHE:CZ	2.52	0.44
23:X:686:ILE:HD13	23:X:686:ILE:HA	1.87	0.44
24:Y:64:GLU:HG2	24:Y:77:PHE:CE1	2.52	0.44
24:Y:240:ASN:ND2	24:Y:289:GLU:O	2.51	0.44
24:Y:246:LYS:O	24:Y:311:ILE:HG22	2.17	0.44
26:1:834:VAL:O	26:1:835:ASP:C	2.60	0.44
26:1:967:GLU:HB3	26:1:971:MET:H	1.83	0.44
26:1:1080:THR:HA	26:1:1083:TYR:CD2	2.52	0.44
27:3:187:MET:HE3	27:3:231:HIS:NE2	2.32	0.44
27:3:341:VAL:HG12	27:3:347:LEU:HB2	2.00	0.44
27:3:558:LEU:HD23	27:3:562:GLU:HB3	1.99	0.44
27:3:741:PHE:HB3	27:3:757:ILE:HG13	1.99	0.44
27:3:769:LYS:HD3	27:3:769:LYS:H	1.81	0.44
27:3:955:PHE:HZ	27:3:1014:TYR:CD2	2.36	0.44
30:2:528:ILE:O	30:2:531:THR:HG23	2.18	0.44
46:9:292:ASN:HB2	46:9:402:GLY:N	2.33	0.44
1:A:35:ARG:HG2	1:A:35:ARG:NH1	2.33	0.44
1:A:75:ASP:O	1:A:77:THR:HG22	2.18	0.44
1:A:431:TYR:C	1:A:431:TYR:CD1	2.96	0.44
1:A:1189:MET:O	1:A:1190:CYS:C	2.60	0.44
1:A:1866:LYS:HE2	1:A:1866:LYS:HB2	1.83	0.44
1:A:1917:PHE:HD1	1:A:1967:ILE:HD11	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:203:MET:CG	3:C:221:ILE:HD11	2.48	0.44
3:C:686:THR:CB	3:C:793:ASP:HB3	2.42	0.44
8:H:30:A:H2'	8:H:30:A:N3	2.32	0.44
8:H:161:U:H2'	8:H:163:G:N2	2.32	0.44
12:L:62:GLU:N	12:L:62:GLU:OE1	2.51	0.44
12:L:197:GLU:H	12:L:197:GLU:CD	2.26	0.44
13:N:58:ARG:HA	13:N:58:ARG:HD3	1.78	0.44
16:Q:1317:THR:N	16:Q:1318:PRO:HD2	2.33	0.44
17:R:348:GLU:CD	23:X:263:SER:H	2.25	0.44
17:R:382:ARG:HH12	17:R:386:ARG:NE	2.16	0.44
19:T:352:THR:HG22	19:T:373:LYS:C	2.43	0.44
21:V:572:GLU:OE1	21:V:580:ARG:NH2	2.51	0.44
21:V:648:LYS:HD3	21:V:648:LYS:C	2.43	0.44
23:X:587:PRO:CB	26:1:827:ARG:HH12	2.29	0.44
23:X:809:THR:HB	23:X:812:GLY:H	1.82	0.44
23:X:849:VAL:O	23:X:850:ASN:C	2.60	0.44
27:3:164:ASN:HD22	27:3:190:GLU:HG2	1.82	0.44
27:3:249:LEU:HD12	27:3:249:LEU:N	2.33	0.44
27:3:592:LEU:HA	27:3:592:LEU:HD13	1.64	0.44
27:3:717:SER:HB2	27:3:718:ARG:HH12	1.81	0.44
29:w:423:GLN:HE22	30:2:477:MET:HB2	1.81	0.44
35:v:119:VAL:CA	35:v:135:GLN:O	2.66	0.44
38:i:23:LEU:N	38:i:27:MET:O	2.42	0.44
1:A:121:HIS:CD2	1:A:482:PHE:CE1	3.06	0.44
1:A:858:GLN:OE1	1:A:858:GLN:HA	2.17	0.44
1:A:984:MET:HG3	1:A:985:TYR:CD1	2.53	0.44
1:A:1109:LEU:HG	1:A:1152:ALA:HB1	2.00	0.44
1:A:1301:ILE:HA	1:A:1301:ILE:HD13	1.67	0.44
1:A:1337:GLN:HA	1:A:1337:GLN:HE21	1.83	0.44
1:A:1457:HIS:CE1	1:A:1460:HIS:HD2	2.35	0.44
1:A:2001:SER:CA	26:1:855:ASP:HB3	2.47	0.44
2:B:64:G:C6	2:B:65:G:C5	3.05	0.44
3:C:436:GLN:C	3:C:437:HIS:HD2	2.26	0.44
3:C:474:LEU:HD11	3:C:501:ILE:HG23	1.99	0.44
3:C:608:ARG:HB3	3:C:612:LYS:HE3	2.00	0.44
4:D:530:THR:C	4:D:532:ASN:N	2.75	0.44
5:E:81:LEU:HB2	5:E:95:VAL:HG22	1.99	0.44
5:E:125:PHE:HD2	5:E:125:PHE:N	2.16	0.44
5:E:180:ASP:OD1	5:E:182:ARG:N	2.24	0.44
5:E:326:HIS:CE1	5:E:346:SER:HB2	2.53	0.44
7:G:88:G:H2'	7:G:88:G:N3	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:5:C:H2'	8:H:6:U:C6	2.53	0.44
10:J:252:GLU:CD	10:J:260:ARG:HD2	2.43	0.44
10:J:436:TYR:O	10:J:440:LEU:HD23	2.18	0.44
12:L:200:LYS:O	12:L:201:LYS:HB2	2.18	0.44
15:P:216:ARG:NH1	46:9:257:PRO:HG3	2.33	0.44
18:S:12:PRO:O	18:S:26:GLU:HA	2.17	0.44
19:T:195:LYS:HZ3	19:T:490:ARG:HH21	1.64	0.44
19:T:467:ALA:HB3	19:T:480:ALA:HB3	2.00	0.44
22:W:314:LYS:HA	22:W:326:ARG:O	2.17	0.44
23:X:482:ARG:NH2	23:X:914:VAL:HG12	2.33	0.44
23:X:581:ILE:HG21	23:X:736:ARG:NH1	2.33	0.44
23:X:764:VAL:HG11	23:X:792:ALA:HB1	1.99	0.44
24:Y:8:THR:CG2	24:Y:155:ARG:HB2	2.47	0.44
24:Y:27:ASN:HD21	24:Y:65:SER:HA	1.83	0.44
24:Y:37:TYR:CE1	24:Y:106:SER:HB3	2.53	0.44
27:3:184:CYS:HG	27:3:211:TYR:HE1	1.66	0.44
29:w:118:GLU:O	29:w:121:SER:N	2.48	0.44
40:l:32:LEU:HA	40:l:43:MET:HA	1.99	0.44
46:9:300:THR:O	46:9:304:CYS:HB2	2.18	0.44
1:A:983:LYS:HE2	1:A:983:LYS:HB2	1.53	0.43
1:A:1050:LEU:HA	1:A:1050:LEU:HD23	1.80	0.43
1:A:2310:ARG:HE	1:A:2314:PHE:HE1	1.66	0.43
2:B:61:A:H2'	2:B:62:G:O4'	2.18	0.43
3:C:848:THR:O	3:C:852:ARG:HG3	2.18	0.43
3:C:909:GLY:HA3	3:C:930:ALA:HB3	1.99	0.43
5:E:328:GLY:O	5:E:346:SER:OG	2.36	0.43
14:O:171:GLY:O	22:W:207:LYS:HA	2.18	0.43
17:R:376:LYS:HE3	17:R:376:LYS:HB3	1.75	0.43
19:T:498:GLU:H	19:T:498:GLU:HG3	1.42	0.43
21:V:497:CYS:HG	21:V:503:TYR:HE2	1.63	0.43
21:V:609:GLN:N	21:V:610:PRO:HD2	2.33	0.43
23:X:269:GLU:HA	23:X:272:TYR:HB3	2.00	0.43
23:X:808:LEU:HD21	23:X:813:ARG:HA	2.00	0.43
23:X:921:LEU:O	23:X:925:VAL:HG22	2.17	0.43
23:X:950:HIS:CG	23:X:986:TYR:CE2	3.06	0.43
24:Y:44:ASN:HD22	24:Y:52:GLN:HB3	1.82	0.43
26:1:532:PHE:HD2	26:1:570:TYR:CD2	2.35	0.43
26:1:645:LEU:HD13	26:1:682:HIS:CD2	2.52	0.43
26:1:694:LEU:HD13	26:1:727:VAL:HG21	2.00	0.43
26:1:893:ILE:HD13	26:1:893:ILE:HA	1.68	0.43
26:1:1185:ARG:HE	26:1:1185:ARG:HB2	1.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:3:125:PRO:HG2	27:3:174:ASP:HA	1.98	0.43
27:3:526:HIS:HB2	27:3:574:LEU:CD2	2.48	0.43
27:3:993:ILE:HG23	27:3:1002:VAL:HG23	1.99	0.43
29:w:419:PRO:O	29:w:422:PHE:HB3	2.18	0.43
30:2:487:LEU:O	30:2:488:LEU:C	2.61	0.43
45:s:109:GLN:O	45:s:113:ALA:HB2	2.18	0.43
46:9:315:TYR:CZ	46:9:335:PRO:HG2	2.52	0.43
1:A:694:LEU:HD22	1:A:709:ILE:HD12	2.00	0.43
1:A:748:ASP:OD1	15:P:214:THR:HB	2.19	0.43
1:A:1224:ARG:HG3	1:A:1224:ARG:NH1	2.33	0.43
1:A:1276:GLU:OE1	1:A:1375:TRP:N	2.37	0.43
1:A:1853:PRO:HD2	1:A:1856:GLU:OE2	2.17	0.43
1:A:1991:TYR:CD2	1:A:2010:ILE:HG12	2.53	0.43
1:A:2144:CYS:HA	1:A:2270:PHE:O	2.19	0.43
2:B:63:A:C2	2:B:64:G:C5	3.06	0.43
3:C:471:ASP:O	3:C:499:GLY:HA2	2.18	0.43
3:C:745:LEU:HB2	3:C:770:PHE:CD2	2.53	0.43
5:E:145:LYS:HD2	5:E:184:LYS:HE2	1.98	0.43
6:F:36:A:N6	6:F:38:G:C6	2.86	0.43
7:G:6:A:C4	7:G:7:G:C8	3.06	0.43
16:Q:1226:ILE:N	16:Q:1256:LYS:O	2.51	0.43
21:V:451:ASN:OD1	21:V:452:LEU:N	2.51	0.43
21:V:537:HIS:CE1	21:V:538:ARG:HE	2.36	0.43
23:X:416:GLN:NE2	23:X:544:PRO:HA	2.32	0.43
23:X:482:ARG:HH21	23:X:914:VAL:HG12	1.83	0.43
23:X:591:TYR:CD2	23:X:692:PRO:HB2	2.50	0.43
23:X:697:GLN:HB2	23:X:712:THR:HG21	1.99	0.43
23:X:849:VAL:O	23:X:851:ASN:N	2.51	0.43
24:Y:26:LEU:HB3	24:Y:166:PHE:CD1	2.53	0.43
24:Y:47:ARG:NH2	24:Y:141:GLU:O	2.51	0.43
24:Y:96:MET:HE3	24:Y:96:MET:HB3	1.83	0.43
26:1:666:LYS:HB3	26:1:704:ILE:CD1	2.48	0.43
26:1:685:SER:O	26:1:689:ILE:HG12	2.17	0.43
26:1:806:ILE:HA	26:1:810:ILE:HD12	2.00	0.43
26:1:969:LYS:HD2	26:1:969:LYS:H	1.83	0.43
27:3:613:THR:CB	27:3:630:MET:HE1	2.48	0.43
27:3:705:ARG:NH2	27:3:746:ALA:HB2	2.34	0.43
30:2:465:LEU:HB3	30:2:475:VAL:HG11	2.01	0.43
35:v:33:LEU:O	35:v:37:THR:HG22	2.17	0.43
37:h:34:GLN:O	37:h:38:ASN:CB	2.66	0.43
39:a:14:ASP:N	39:a:31:PHE:O	2.38	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:9:321:PHE:HB2	46:9:426:ILE:HB	2.00	0.43
46:9:370:ASN:ND2	46:9:372:GLY:O	2.45	0.43
1:A:75:ASP:OD1	1:A:75:ASP:N	2.52	0.43
1:A:1012:LYS:O	1:A:1012:LYS:HG3	2.19	0.43
1:A:1375:TRP:O	1:A:1377:SER:N	2.51	0.43
1:A:1725:LEU:HD12	1:A:1725:LEU:HA	1.75	0.43
1:A:1769:GLY:HA2	1:A:1772:PHE:CE1	2.53	0.43
1:A:1998:ASN:HB3	1:A:2001:SER:HB3	2.00	0.43
47:A:3000:IHP:O31	47:A:3000:IHP:P6	2.76	0.43
5:E:84:ALA:HB2	5:E:90:ILE:HG12	1.99	0.43
5:E:150:HIS:CE1	5:E:177:LYS:HD2	2.53	0.43
5:E:316:SER:O	5:E:317:ARG:HG3	2.18	0.43
6:F:24:A:OP2	13:N:111:THR:OG1	2.35	0.43
6:F:96:U:OP1	10:J:384:ARG:NH2	2.51	0.43
8:H:10:C:H2'	8:H:11:G:C8	2.52	0.43
8:H:114:A:H2'	8:H:115:G:C8	2.53	0.43
10:J:372:VAL:HG12	10:J:373:HIS:CE1	2.53	0.43
13:N:15:TRP:CZ3	13:N:22:LEU:HD12	2.38	0.43
16:Q:569:PRO:HA	16:Q:587:VAL:O	2.17	0.43
20:U:22:ASN:ND2	21:V:470:GLU:OE2	2.43	0.43
23:X:500:MET:HE3	23:X:500:MET:HB3	1.73	0.43
23:X:972:PRO:HA	23:X:977:PHE:CD2	2.52	0.43
24:Y:21:ARG:O	24:Y:25:CYS:HB2	2.18	0.43
24:Y:177:ARG:HG2	24:Y:178:SER:H	1.83	0.43
24:Y:223:LEU:O	24:Y:226:MET:HB3	2.18	0.43
26:1:830:TYR:HA	26:1:867:MET:SD	2.57	0.43
26:1:963:LYS:HG3	26:1:964:THR:N	2.33	0.43
26:1:998:LYS:HZ1	26:1:1041:ARG:NH1	2.16	0.43
26:1:1053:ARG:NH1	30:2:559:PRO:O	2.52	0.43
27:3:1:MET:HE3	27:3:3:LEU:HD21	1.99	0.43
27:3:514:ASP:OD1	27:3:514:ASP:N	2.52	0.43
27:3:696:SER:O	27:3:696:SER:OG	2.32	0.43
30:2:451:LYS:O	30:2:454:LEU:HG	2.19	0.43
33:5:71:LYS:C	33:5:73:LEU:H	2.26	0.43
1:A:37:TRP:CD1	1:A:37:TRP:C	2.95	0.43
1:A:371:LEU:HD12	1:A:371:LEU:HA	1.81	0.43
1:A:1249:MET:HE3	1:A:1249:MET:HB2	1.66	0.43
1:A:1593:LEU:HD23	1:A:1593:LEU:HA	1.55	0.43
1:A:1781:ASP:HB2	1:A:1808:PHE:HB3	1.99	0.43
1:A:1839:TRP:CE3	1:A:1871:PRO:HB3	2.53	0.43
1:A:1893:PHE:O	1:A:1896:CYS:HB2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:259:LYS:H	3:C:311:SER:HA	1.83	0.43
3:C:502:HIS:CE1	3:C:543:ARG:NH1	2.86	0.43
3:C:560:VAL:O	3:C:561:LYS:C	2.61	0.43
3:C:724:TRP:HA	3:C:724:TRP:HE3	1.80	0.43
3:C:914:LYS:HD2	3:C:931:ARG:NH2	2.33	0.43
4:D:1189:HIS:O	4:D:1200:VAL:HA	2.18	0.43
5:E:176:VAL:HG21	5:E:220:TRP:HE1	1.83	0.43
7:G:90:C:H2'	7:G:91:A:C8	2.53	0.43
9:I:140:LEU:N	9:I:141:PRO:HD3	2.34	0.43
10:J:242:ILE:HA	10:J:245:TRP:HD1	1.83	0.43
10:J:291:GLN:HB3	10:J:294:HIS:ND1	2.33	0.43
15:P:212:ASN:O	15:P:212:ASN:CG	2.61	0.43
19:T:288:LEU:O	19:T:289:SER:OG	2.31	0.43
19:T:473:SER:OG	19:T:475:SER:HB3	2.18	0.43
23:X:269:GLU:HA	23:X:269:GLU:OE2	2.19	0.43
23:X:792:ALA:O	23:X:796:LEU:HG	2.19	0.43
23:X:877:ASP:O	23:X:880:VAL:HB	2.19	0.43
24:Y:208:VAL:O	24:Y:212:LYS:HG3	2.18	0.43
26:1:997:LEU:HD23	26:1:997:LEU:HA	1.84	0.43
27:3:101:LYS:HB2	27:3:101:LYS:HE3	1.65	0.43
27:3:373:PHE:HD1	27:3:385:PHE:CD2	2.36	0.43
29:w:433:HIS:O	29:w:434:GLY:C	2.59	0.43
29:w:477:GLU:HG2	29:w:479:TYR:HE2	1.83	0.43
30:2:483:GLN:OE1	30:2:483:GLN:N	2.51	0.43
41:k:7:PRO:HD3	41:k:36:PRO:HA	2.00	0.43
1:A:785:LYS:HE3	1:A:785:LYS:HB3	1.56	0.43
3:C:530:LEU:HD23	3:C:530:LEU:HA	1.67	0.43
3:C:643:ASP:OD1	3:C:643:ASP:N	2.52	0.43
3:C:745:LEU:HD22	3:C:770:PHE:HB2	1.99	0.43
3:C:766:ILE:HD12	3:C:766:ILE:HA	1.87	0.43
3:C:909:GLY:HA3	3:C:930:ALA:H	1.83	0.43
4:D:606:THR:C	4:D:608:LEU:H	2.26	0.43
5:E:145:LYS:CD	5:E:184:LYS:HE2	2.49	0.43
5:E:154:VAL:HG13	5:E:171:SER:HB3	2.00	0.43
5:E:326:HIS:NE2	5:E:344:SER:OG	2.26	0.43
8:H:7:U:H2'	8:H:8:C:O4'	2.18	0.43
12:L:225:TYR:O	17:R:85:ALA:HB2	2.19	0.43
15:P:74:LYS:O	15:P:77:ASP:HB3	2.18	0.43
19:T:346:ILE:HD13	19:T:380:LEU:HD21	1.99	0.43
23:X:164:TRP:CE3	23:X:164:TRP:C	2.96	0.43
23:X:737:LEU:O	23:X:737:LEU:HD23	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1:508:THR:HB	26:1:510:PRO:CD	2.46	0.43
26:1:551:LEU:O	26:1:555:VAL:HG23	2.18	0.43
26:1:857:LEU:HD13	26:1:895:GLY:C	2.44	0.43
26:1:1158:ILE:HG13	26:1:1159:GLY:N	2.32	0.43
27:3:234:PHE:CD1	27:3:235:LEU:N	2.86	0.43
27:3:549:VAL:HG12	27:3:550:ASN:O	2.18	0.43
27:3:604:PHE:CZ	27:3:681:PRO:HD3	2.53	0.43
27:3:1117:LEU:HD12	27:3:1117:LEU:HA	1.60	0.43
38:i:43:GLN:HA	38:i:63:LEU:HA	2.01	0.43
1:A:101:LYS:HD3	1:A:101:LYS:HA	1.65	0.43
1:A:1255:THR:O	1:A:1256:PHE:C	2.62	0.43
1:A:1636:LYS:HG3	1:A:1658:GLN:HE21	1.84	0.43
1:A:2107:PRO:O	1:A:2110:VAL:HG22	2.18	0.43
3:C:366:GLN:HB2	3:C:370:VAL:HB	2.00	0.43
3:C:721:LYS:HB2	3:C:722:TYR:CE2	2.54	0.43
3:C:839:PRO:HG2	3:C:894:GLN:HB3	1.99	0.43
5:E:202:ASN:OD1	5:E:207:GLN:N	2.38	0.43
7:G:21:A:H4'	7:G:22:C:OP1	2.18	0.43
7:G:100:C:H3'	7:G:100:C:OP2	2.19	0.43
19:T:462:GLU:O	19:T:483:ASP:HB3	2.18	0.43
21:V:497:CYS:HB2	21:V:507:PHE:HB2	1.99	0.43
21:V:563:SER:O	21:V:565:LEU:N	2.52	0.43
23:X:327:ARG:HH12	23:X:328:ARG:NH2	2.17	0.43
23:X:390:GLU:O	23:X:393:GLN:HG3	2.18	0.43
23:X:412:ILE:HB	23:X:418:LEU:HD23	2.01	0.43
23:X:516:VAL:HG22	23:X:547:LYS:CB	2.47	0.43
23:X:647:ILE:HA	23:X:651:LEU:HD21	2.01	0.43
26:1:668:VAL:HG22	26:1:686:LEU:HD23	1.99	0.43
27:3:182:PHE:O	27:3:210:PHE:HA	2.19	0.43
27:3:788:PHE:CD1	27:3:788:PHE:C	2.97	0.43
27:3:925:VAL:O	27:3:942:LYS:HA	2.18	0.43
30:2:707:PRO:HG2	30:2:710:GLU:HG2	2.00	0.43
33:5:63:ARG:HD3	33:5:63:ARG:HA	1.77	0.43
1:A:71:ARG:HG3	1:A:71:ARG:HH11	1.83	0.43
1:A:384:VAL:HA	3:C:331:PHE:CD2	2.54	0.43
1:A:1189:MET:CG	1:A:1190:CYS:N	2.80	0.43
1:A:1500:GLY:O	1:A:1501:LEU:C	2.62	0.43
1:A:1777:ILE:HA	1:A:1860:GLN:O	2.18	0.43
1:A:1781:ASP:OD2	1:A:1893:PHE:HB2	2.18	0.43
3:C:226:VAL:HG13	3:C:254:THR:HG22	2.00	0.43
3:C:243:ILE:HG13	3:C:244:LYS:N	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:632:THR:H	3:C:636:TYR:HD2	1.66	0.43
5:E:125:PHE:CD1	5:E:159:PRO:HG3	2.54	0.43
5:E:175:THR:HB	5:E:189:THR:CG2	2.49	0.43
7:G:6:A:C6	7:G:7:G:C6	3.06	0.43
7:G:90:C:N4	8:H:40:C:H42	2.16	0.43
7:G:104:C:O2	7:G:104:C:H2'	2.18	0.43
10:J:241:VAL:O	10:J:244:ASN:ND2	2.51	0.43
10:J:363:ARG:HB2	10:J:382:TYR:OH	2.18	0.43
13:N:91:LYS:HD3	13:N:91:LYS:HA	1.72	0.43
21:V:506:PHE:CD1	21:V:506:PHE:C	2.96	0.43
23:X:529:THR:O	23:X:532:LEU:HG	2.19	0.43
23:X:845:ALA:CB	23:X:915:ARG:HB2	2.46	0.43
24:Y:275:TRP:CG	24:Y:276:LYS:N	2.86	0.43
27:3:83:ASP:OD1	27:3:83:ASP:C	2.62	0.43
27:3:123:VAL:HG22	27:3:124:ASP:H	1.84	0.43
27:3:499:PHE:CZ	27:3:516:LEU:HD22	2.46	0.43
27:3:924:PHE:HA	27:3:943:THR:O	2.18	0.43
46:9:404:PHE:O	46:9:407:LEU:HD23	2.19	0.43
46:9:405:ASP:OD1	46:9:405:ASP:N	2.38	0.43
1:A:709:ILE:HG12	17:R:247:ILE:HD12	2.00	0.43
1:A:1210:LYS:HE2	1:A:1210:LYS:HB2	1.75	0.43
1:A:1391:LEU:HD23	1:A:1391:LEU:HA	1.73	0.43
1:A:1585:ILE:O	1:A:1589:ILE:HD12	2.18	0.43
3:C:69:ALA:O	3:C:72:VAL:N	2.45	0.43
3:C:453:TYR:HB3	3:C:456:GLY:H	1.83	0.43
3:C:757:ALA:O	3:C:761:SER:HB2	2.18	0.43
3:C:833:PHE:CZ	3:C:872:LYS:HB3	2.54	0.43
10:J:319:MET:HG3	10:J:320:GLU:N	2.33	0.43
11:K:210:PHE:CZ	35:v:15:GLY:HA2	2.54	0.43
13:N:14:GLY:C	13:N:74:LEU:HD22	2.43	0.43
13:N:56:LYS:HD2	13:N:83:TYR:HB3	2.01	0.43
21:V:571:SER:HA	21:V:623:ASN:HB3	2.01	0.43
23:X:733:LYS:HB3	23:X:735:PHE:HE2	1.84	0.43
23:X:765:LEU:CD1	23:X:816:ALA:HB2	2.44	0.43
26:1:630:ARG:O	26:1:634:VAL:HG23	2.19	0.43
26:1:936:VAL:HG12	26:1:937:LEU:HD12	2.01	0.43
27:3:52:THR:O	27:3:52:THR:OG1	2.34	0.43
27:3:462:VAL:HG11	27:3:516:LEU:HD23	2.00	0.43
27:3:590:MET:HB2	27:3:606:ALA:O	2.18	0.43
30:2:472:PRO:O	30:2:475:VAL:HG23	2.19	0.43
30:2:529:LYS:HB2	30:2:529:LYS:HE2	1.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:7:74:GLU:O	32:7:78:GLN:HG3	2.18	0.43
35:v:58:LEU:HG	35:v:59:CYS:SG	2.59	0.43
35:v:66:GLU:O	35:v:67:GLY:C	2.61	0.43
41:k:42:ILE:O	41:k:60:VAL:N	2.48	0.43
1:A:67:ARG:HE	1:A:67:ARG:HB2	1.46	0.43
1:A:1406:GLU:N	1:A:1406:GLU:CD	2.76	0.43
1:A:1768:TYR:CA	1:A:1771:LEU:HB3	2.31	0.43
1:A:2142:ILE:HG23	1:A:2175:LEU:HD13	2.01	0.43
3:C:137:HIS:CD2	3:C:238:ASN:HB2	2.54	0.43
3:C:463:GLU:HA	3:C:466:SER:HB3	2.01	0.43
3:C:493:PHE:HB2	3:C:551:LEU:HD23	2.01	0.43
3:C:710:ASN:OD1	3:C:713:LYS:HG3	2.19	0.43
4:D:1771:TYR:C	4:D:1773:LEU:H	2.27	0.43
7:G:86:A:H2	8:H:44:U:O2	2.02	0.43
10:J:397:LYS:O	10:J:401:ARG:HD3	2.19	0.43
11:K:232:ILE:O	11:K:236:LEU:HG	2.18	0.43
16:Q:488:SER:O	16:Q:489:VAL:C	2.62	0.43
23:X:974:SER:HB3	23:X:977:PHE:HB2	2.00	0.43
23:X:1004:GLU:HG3	23:X:1007:TRP:CZ2	2.54	0.43
26:1:609:MET:HE1	26:1:635:VAL:CG1	2.49	0.43
26:1:666:LYS:O	26:1:670:GLN:HG2	2.19	0.43
26:1:902:GLU:O	26:1:903:GLN:C	2.62	0.43
26:1:1273:TYR:O	26:1:1277:GLN:HB3	2.19	0.43
27:3:528:ARG:HG3	27:3:529:ALA:H	1.83	0.43
27:3:898:ASN:OD1	27:3:899:THR:N	2.52	0.43
27:3:1156:CYS:O	27:3:1158:ARG:N	2.50	0.43
35:v:47:MET:HB2	35:v:47:MET:HE3	1.71	0.43
37:h:52:LEU:HA	37:h:71:LYS:O	2.19	0.43
45:s:109:GLN:O	45:s:113:ALA:CB	2.67	0.43
1:A:407:ALA:HB1	1:A:411:PHE:HB2	2.01	0.43
1:A:690:MET:SD	1:A:706:ALA:HB1	2.59	0.43
1:A:864:LEU:HD12	1:A:864:LEU:HA	1.52	0.43
1:A:1806:ALA:HA	1:A:1821:ILE:HA	2.01	0.43
1:A:2178:ILE:HG13	1:A:2214:ILE:HB	2.00	0.43
2:B:40:U:H5'	2:B:41:U:OP2	2.19	0.43
3:C:298:LEU:O	3:C:299:ILE:HD13	2.19	0.43
3:C:664:GLU:HG3	3:C:784:ILE:HG22	1.99	0.43
4:D:1271:VAL:HA	4:D:1279:GLU:HA	2.00	0.43
5:E:207:GLN:HB3	5:E:219:VAL:HG12	2.01	0.43
5:E:251:LEU:HB2	5:E:293:TRP:CE2	2.54	0.43
7:G:13:C:H2'	7:G:14:A:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:118:G:C6	8:H:140:A:N6	2.87	0.43
14:O:155:PRO:N	17:R:188:PHE:HE1	2.16	0.43
15:P:69:ALA:HA	15:P:72:ARG:NH1	2.34	0.43
23:X:164:TRP:CE3	23:X:165:GLU:HA	2.53	0.43
23:X:235:LEU:HD22	24:Y:220:GLN:CG	2.49	0.43
24:Y:91:LYS:C	24:Y:93:THR:H	2.27	0.43
26:1:1200:TYR:C	26:1:1200:TYR:CD1	2.95	0.43
27:3:58:VAL:HG21	27:3:62:ILE:CD1	2.49	0.43
27:3:436:ARG:HG2	27:3:778:ALA:CB	2.49	0.43
27:3:483:LEU:HD11	27:3:493:GLU:OE2	2.19	0.43
27:3:611:ASP:O	27:3:612:ASN:HB2	2.17	0.43
27:3:638:GLU:O	27:3:638:GLU:HG3	2.19	0.43
27:3:641:CYS:H	27:3:701:LEU:HD23	1.83	0.43
27:3:791:HIS:NE2	27:3:793:GLU:HB2	2.34	0.43
27:3:1158:ARG:HG3	27:3:1159:ASP:N	2.34	0.43
27:3:1183:ASN:OD1	27:3:1183:ASN:N	2.51	0.43
30:2:514:LYS:NZ	30:2:596:GLU:OE1	2.43	0.43
30:2:536:MET:HE2	30:2:536:MET:HB3	1.76	0.43
32:7:58:CYS:N	32:7:63:GLY:O	2.52	0.43
33:5:11:LEU:O	33:5:14:LEU:HB2	2.19	0.43
33:5:20:GLY:HA2	33:5:34:ASN:ND2	2.33	0.43
1:A:126:ILE:C	1:A:127:SER:HG	2.27	0.42
1:A:298:ASP:O	1:A:302:ILE:HG12	2.19	0.42
1:A:456:LEU:O	1:A:460:LYS:HG2	2.18	0.42
1:A:858:GLN:HA	1:A:861:ARG:NH1	2.34	0.42
1:A:1284:LEU:O	1:A:1285:LEU:C	2.60	0.42
2:B:67:A:H2'	2:B:68:C:O4'	2.19	0.42
3:C:474:LEU:HA	3:C:498:SER:O	2.19	0.42
4:D:1590:LEU:HA	4:D:1640:ALA:O	2.19	0.42
5:E:156:SER:OG	5:E:197:LEU:O	2.33	0.42
5:E:171:SER:O	5:E:196:VAL:N	2.44	0.42
7:G:11:A:H2'	7:G:12:G:O4'	2.19	0.42
7:G:90:C:H2'	7:G:91:A:C4	2.54	0.42
8:H:8:C:H2'	8:H:9:U:C6	2.54	0.42
8:H:152:G:C6	8:H:153:A:N6	2.87	0.42
8:H:162:U:H4'	8:H:163:G:O4'	2.18	0.42
17:R:122:LYS:HE2	19:T:399:LYS:NZ	2.34	0.42
19:T:423:SER:N	19:T:474:GLU:OE2	2.52	0.42
23:X:482:ARG:HE	23:X:483:PHE:HE2	1.65	0.42
26:1:823:MET:SD	26:1:829:ASN:ND2	2.92	0.42
27:3:169:HIS:HD2	27:3:170:VAL:O	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:3:199:GLU:OE2	27:3:199:GLU:HA	2.19	0.42
27:3:595:VAL:HG21	27:3:601:ARG:N	2.34	0.42
27:3:779:PHE:N	27:3:779:PHE:CD1	2.86	0.42
46:9:351:LYS:H	46:9:351:LYS:HG2	1.68	0.42
1:A:366:LYS:HG3	21:V:324:HIS:O	2.18	0.42
1:A:2250:GLY:O	1:A:2255:HIS:HE1	2.02	0.42
3:C:366:GLN:HG3	3:C:371:GLU:CD	2.44	0.42
3:C:481:MET:HB3	3:C:490:PHE:CD2	2.55	0.42
3:C:529:ARG:O	3:C:530:LEU:HD23	2.19	0.42
3:C:604:LEU:HD21	3:C:627:HIS:CE1	2.53	0.42
3:C:692:LEU:CD2	3:C:788:LYS:HB2	2.50	0.42
3:C:834:VAL:HG22	3:C:899:SER:HB2	2.01	0.42
3:C:852:ARG:HD2	7:G:-12:C:O5'	2.19	0.42
4:D:444:GLU:HA	4:D:690:VAL:HA	2.02	0.42
4:D:784:ILE:HA	4:D:810:VAL:O	2.19	0.42
5:E:123:MET:HE3	5:E:123:MET:HB2	1.87	0.42
6:F:21:U:H3	13:N:125:LYS:HG2	1.84	0.42
6:F:36:A:C8	6:F:36:A:O5'	2.72	0.42
9:I:448:ASN:O	9:I:452:ALA:HB3	2.18	0.42
17:R:91:ASP:CG	17:R:93:GLU:H	2.26	0.42
17:R:279:HIS:C	17:R:280:ILE:HG12	2.43	0.42
17:R:407:TYR:HE2	17:R:412:PHE:HZ	1.66	0.42
23:X:238:ARG:HH12	24:Y:319:VAL:HG23	1.83	0.42
23:X:527:LEU:HD21	23:X:755:ILE:HA	2.01	0.42
23:X:959:TYR:OH	23:X:980:GLN:O	2.37	0.42
26:1:493:LYS:O	26:1:496:LYS:N	2.52	0.42
26:1:722:GLU:OE1	26:1:722:GLU:N	2.38	0.42
26:1:981:TYR:C	26:1:983:GLY:H	2.27	0.42
26:1:1199:VAL:HG12	26:1:1199:VAL:O	2.19	0.42
26:1:1227:ILE:O	26:1:1231:MET:HG2	2.19	0.42
27:3:131:MET:HB2	27:3:141:VAL:HG22	2.01	0.42
27:3:671:ASN:HA	27:3:696:SER:C	2.44	0.42
27:3:690:ARG:HH12	27:3:696:SER:H	1.67	0.42
1:A:147:MET:O	1:A:151:MET:HG2	2.19	0.42
1:A:170:ASP:CG	1:A:171:ASP:N	2.76	0.42
1:A:206:TRP:HA	1:A:209:ASP:OD2	2.19	0.42
1:A:468:LYS:HA	1:A:468:LYS:HD3	1.53	0.42
1:A:733:THR:O	1:A:734:PRO:C	2.60	0.42
1:A:875:HIS:CE1	23:X:866:ASN:CB	3.01	0.42
1:A:1198:PRO:HG2	1:A:1201:ARG:HB2	2.00	0.42
1:A:1268:ILE:HD11	17:R:432:VAL:HG13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1384:ARG:NH1	1:A:1384:ARG:HB2	2.35	0.42
1:A:1424:GLN:O	1:A:1427:ARG:NH2	2.45	0.42
1:A:1600:GLU:OE1	1:A:1604:LEU:HG	2.19	0.42
1:A:1832:ARG:O	1:A:1836:LEU:HD13	2.20	0.42
1:A:1840:LYS:O	1:A:1844:GLU:HG2	2.18	0.42
1:A:1935:ARG:HA	1:A:1938:LEU:HD12	2.00	0.42
1:A:2122:ALA:O	1:A:2124:ILE:HG23	2.19	0.42
1:A:2229:LYS:O	1:A:2257:GLU:HG3	2.19	0.42
3:C:336:TYR:CE1	3:C:337:GLN:HG2	2.54	0.42
3:C:351:PRO:O	3:C:354:ARG:HD3	2.19	0.42
3:C:503:ALA:C	3:C:505:GLN:H	2.27	0.42
3:C:508:LYS:O	3:C:566:THR:HG22	2.19	0.42
3:C:830:PRO:HA	3:C:904:TRP:HA	2.00	0.42
6:F:6:C:O2'	6:F:7:G:OP1	2.34	0.42
8:H:43:U:OP2	35:v:76:LYS:NZ	2.52	0.42
10:J:416:TYR:CE2	10:J:443:ILE:HD13	2.52	0.42
13:N:86:LYS:HG3	13:N:87:ASN:N	2.33	0.42
15:P:68:ARG:HB3	15:P:68:ARG:NH1	2.33	0.42
19:T:300:ILE:H	19:T:300:ILE:HG13	1.65	0.42
21:V:556:TYR:CE1	21:V:557:THR:HG23	2.54	0.42
22:W:109:ASN:H	22:W:114:TYR:HA	1.84	0.42
23:X:408:LEU:HD13	23:X:570:PHE:CD2	2.55	0.42
23:X:428:LYS:H	23:X:428:LYS:HG3	1.58	0.42
23:X:546:LEU:HD12	23:X:546:LEU:HA	1.87	0.42
24:Y:249:PRO:HA	24:Y:280:SER:HB2	2.01	0.42
24:Y:290:LYS:HB2	24:Y:293:ASP:OD2	2.19	0.42
26:1:548:GLU:O	26:1:552:LEU:HG	2.19	0.42
26:1:551:LEU:O	26:1:554:LYS:HB3	2.19	0.42
26:1:1178:MET:O	26:1:1179:ASP:C	2.62	0.42
26:1:1212:LEU:HD12	26:1:1212:LEU:HA	1.75	0.42
27:3:311:PHE:HZ	27:3:387:PHE:CE2	2.38	0.42
30:2:534:GLN:HG2	30:2:538:GLU:OE1	2.18	0.42
35:v:114:ARG:N	35:v:115:PRO:HD3	2.35	0.42
41:f:40:LEU:C	41:f:62:ILE:H	2.25	0.42
1:A:113:ILE:HG23	1:A:488:ASP:OD1	2.19	0.42
1:A:239:TYR:C	1:A:239:TYR:CD1	2.97	0.42
1:A:940:ILE:HD13	1:A:1090:ARG:NH1	2.34	0.42
2:B:46:U:C2'	2:B:47:A:H5'	2.49	0.42
3:C:263:LEU:HA	3:C:267:LEU:HB2	1.99	0.42
3:C:561:LYS:H	3:C:561:LYS:HG2	1.48	0.42
3:C:716:GLU:HG3	3:C:716:GLU:H	1.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:767:VAL:O	3:C:771:GLN:HG3	2.19	0.42
5:E:124:LEU:HD21	5:E:138:SER:HB3	2.01	0.42
5:E:177:LYS:HB3	5:E:179:TRP:HE1	1.83	0.42
5:E:258:THR:HG23	5:E:278:GLN:HE22	1.84	0.42
6:F:39:A:C4	6:F:40:U:C6	3.07	0.42
10:J:396:ARG:NH2	10:J:426:GLN:HG3	2.35	0.42
11:K:198:GLN:NE2	11:K:198:GLN:HA	2.34	0.42
17:R:365:HIS:O	17:R:369:LEU:HD13	2.20	0.42
17:R:404:GLU:HG3	17:R:405:VAL:N	2.34	0.42
23:X:330:GLU:O	23:X:334:LEU:HD12	2.19	0.42
23:X:430:THR:O	23:X:434:GLN:HG3	2.19	0.42
23:X:577:PHE:HB2	23:X:727:GLY:O	2.19	0.42
26:1:592:GLU:O	26:1:596:ILE:HG23	2.18	0.42
26:1:632:PHE:HA	26:1:635:VAL:HG22	2.02	0.42
26:1:1254:LEU:O	26:1:1262:ARG:HG2	2.19	0.42
27:3:192:ALA:HA	27:3:200:ALA:HB3	2.01	0.42
27:3:234:PHE:HE1	27:3:236:ILE:HG12	1.81	0.42
27:3:405:SER:HA	27:3:406:PRO:HA	1.90	0.42
33:5:61:LYS:HB3	33:5:65:ARG:HH22	1.84	0.42
36:o:92:GLU:HA	36:o:117:TYR:O	2.19	0.42
37:h:71:LYS:HA	37:h:95:TYR:HA	2.01	0.42
46:9:299:LEU:H	46:9:299:LEU:HD23	1.85	0.42
1:A:356:ILE:H	1:A:356:ILE:HG13	1.19	0.42
1:A:1298:ARG:O	1:A:1298:ARG:HG3	2.20	0.42
1:A:1495:PHE:HD1	1:A:1495:PHE:HA	1.74	0.42
1:A:2168:TYR:O	1:A:2172:MET:HE2	2.18	0.42
1:A:2284:MET:HE1	1:A:2311:PRO:HG3	2.00	0.42
1:A:2295:GLU:N	1:A:2295:GLU:OE2	2.52	0.42
1:A:2312:SER:O	1:A:2316:ASN:HB2	2.19	0.42
3:C:680:ASN:O	3:C:682:LYS:N	2.53	0.42
3:C:846:VAL:HG11	3:C:871:ILE:HD12	1.99	0.42
5:E:268:ALA:C	5:E:270:LYS:H	2.28	0.42
6:F:43:A:C2	7:G:5:G:C6	3.07	0.42
6:F:83:A:C5	6:F:84:A:C6	3.08	0.42
14:O:254:GLN:C	14:O:256:GLY:H	2.27	0.42
15:P:53:GLU:H	15:P:53:GLU:CD	2.27	0.42
16:Q:1227:LEU:HA	16:Q:1258:THR:O	2.20	0.42
17:R:392:ILE:HD13	23:X:660:PHE:CE2	2.54	0.42
19:T:393:ASP:OD2	19:T:393:ASP:N	2.53	0.42
22:W:532:LEU:CB	22:W:548:ALA:HB2	2.49	0.42
23:X:238:ARG:HH22	24:Y:230:LEU:HG	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:815:MET:HG3	23:X:825:SER:CB	2.41	0.42
24:Y:195:GLU:H	24:Y:195:GLU:HG3	1.43	0.42
26:1:606:LEU:HA	26:1:606:LEU:HD12	1.76	0.42
26:1:636:ALA:HB3	26:1:675:MET:HE1	2.02	0.42
26:1:876:MET:HE1	26:1:917:VAL:HG23	2.01	0.42
26:1:1266:TRP:CE3	33:5:22:GLY:HA3	2.54	0.42
27:3:582:GLU:H	27:3:582:GLU:CD	2.27	0.42
27:3:665:LEU:HB2	27:3:679:LEU:HD23	2.00	0.42
27:3:789:VAL:HG13	27:3:891:VAL:HG13	2.00	0.42
27:3:896:PHE:H	27:3:896:PHE:HD2	1.68	0.42
30:2:451:LYS:HA	30:2:454:LEU:HD23	2.02	0.42
30:2:526:ASP:HA	30:2:529:LYS:NZ	2.34	0.42
35:v:42:LYS:N	35:v:42:LYS:HD2	2.34	0.42
46:9:408:THR:O	46:9:411:GLU:HB3	2.20	0.42
1:A:71:ARG:HG3	1:A:71:ARG:NH1	2.35	0.42
1:A:166:PHE:CE2	1:A:580:TYR:HD2	2.38	0.42
1:A:235:MET:HB3	1:A:404:LEU:HD11	2.01	0.42
1:A:1215:ASN:HB3	1:A:1224:ARG:NH1	2.34	0.42
1:A:1784:ASN:ND2	1:A:1894:GLN:HB2	2.27	0.42
1:A:1833:LEU:H	1:A:1833:LEU:HG	1.69	0.42
1:A:1975:GLU:O	1:A:1979:VAL:HG22	2.19	0.42
1:A:1990:ASP:HA	1:A:1993:LYS:HD3	2.00	0.42
1:A:2070:LYS:HG3	1:A:2071:THR:N	2.34	0.42
1:A:2121:ARG:HA	1:A:2121:ARG:HD2	1.79	0.42
1:A:2187:GLN:HB2	1:A:2256:TYR:CZ	2.55	0.42
3:C:78:GLU:HG3	3:C:79:THR:H	1.83	0.42
3:C:598:SER:OG	3:C:599:GLU:HG2	2.20	0.42
3:C:852:ARG:HD2	7:G:-12:C:C5’	2.49	0.42
5:E:215:ASN:HB2	5:E:232:ARG:NH1	2.34	0.42
5:E:244:SER:HB2	5:E:293:TRP:CD2	2.54	0.42
6:F:88:G:H2’	6:F:89:U:C5’	2.50	0.42
8:H:27:U:O2’	8:H:28:C:H5’	2.20	0.42
8:H:35:A:H3’	8:H:36:G:H8	1.83	0.42
9:I:48:ALA:O	9:I:51:PRO:HD2	2.20	0.42
10:J:329:ALA:O	10:J:332:VAL:HG22	2.19	0.42
23:X:477:VAL:HG22	23:X:493:LEU:HB2	2.02	0.42
24:Y:12:VAL:HG13	24:Y:131:GLU:O	2.20	0.42
26:1:500:LEU:C	26:1:502:LEU:N	2.76	0.42
26:1:962:MET:O	26:1:967:GLU:HB2	2.18	0.42
26:1:1027:ARG:HD3	26:1:1027:ARG:HA	1.82	0.42
26:1:1109:ARG:O	26:1:1112:THR:HG23	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:3:576:GLU:OE1	27:3:580:ARG:NH2	2.52	0.42
27:3:671:ASN:HB3	27:3:696:SER:HA	2.01	0.42
27:3:996:ILE:O	27:3:998:HIS:N	2.53	0.42
30:2:547:LYS:NZ	30:2:555:GLU:HG2	2.35	0.42
45:s:59:HIS:C	45:s:61:ILE:N	2.77	0.42
1:A:196:ASP:N	1:A:200:ASP:OD2	2.50	0.42
1:A:344:ASP:HB2	1:A:345:PRO:HD2	2.01	0.42
1:A:549:GLU:CB	1:A:591:MET:HG3	2.50	0.42
1:A:1200:CYS:SG	1:A:1201:ARG:N	2.92	0.42
1:A:2114:PHE:HE1	1:A:2178:ILE:HG23	1.84	0.42
3:C:481:MET:CE	3:C:612:LYS:HB3	2.50	0.42
3:C:660:VAL:HG22	3:C:661:THR:O	2.20	0.42
3:C:860:ASP:OD1	3:C:860:ASP:N	2.53	0.42
4:D:1200:VAL:N	4:D:1254:PHE:O	2.45	0.42
5:E:343:ILE:HD11	5:E:351:LEU:HD13	2.01	0.42
10:J:238:ASN:C	10:J:240:THR:N	2.77	0.42
10:J:292:VAL:HG12	10:J:296:ARG:NE	2.35	0.42
10:J:317:THR:O	10:J:320:GLU:N	2.52	0.42
11:K:228:HIS:HD2	11:K:230:TRP:CE2	2.37	0.42
12:L:169:ARG:O	12:L:172:ARG:N	2.48	0.42
19:T:319:THR:O	19:T:319:THR:OG1	2.30	0.42
21:V:542:ASN:HA	21:V:545:ARG:NH2	2.34	0.42
21:V:543:LYS:O	21:V:547:VAL:HG23	2.20	0.42
21:V:585:ILE:H	21:V:585:ILE:HG13	1.71	0.42
23:X:741:TRP:NE1	26:1:781:ASP:HA	2.34	0.42
23:X:743:TYR:CD1	23:X:744:GLN:HG3	2.55	0.42
23:X:976:LEU:HD11	23:X:1001:LEU:HA	2.01	0.42
24:Y:4:LEU:HD11	24:Y:11:ASP:HB3	2.01	0.42
26:1:1106:ARG:H	26:1:1109:ARG:HG3	1.83	0.42
27:3:164:ASN:ND2	27:3:190:GLU:HG2	2.35	0.42
27:3:1022:ILE:HD13	27:3:1022:ILE:HA	1.77	0.42
27:3:1175:ASP:OD1	27:3:1178:LEU:N	2.52	0.42
33:5:12:GLU:HA	33:5:15:GLN:HB3	2.01	0.42
33:5:69:MET:HE2	33:5:69:MET:HB2	1.52	0.42
46:9:285:HIS:N	46:9:285:HIS:CD2	2.87	0.42
1:A:79:ARG:NH1	1:A:82:ARG:HH21	2.10	0.42
1:A:193:LEU:HG	1:A:194:GLU:N	2.35	0.42
1:A:203:VAL:HG12	1:A:206:TRP:CZ2	2.55	0.42
1:A:210:HIS:CE1	1:A:211:GLN:HG3	2.55	0.42
1:A:1337:GLN:HA	1:A:1337:GLN:NE2	2.35	0.42
1:A:1484:ILE:HD13	1:A:1484:ILE:HG21	1.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1840:LYS:O	1:A:1841:THR:C	2.63	0.42
2:B:15:C:H2'	2:B:16:U:H6	1.83	0.42
3:C:308:CYS:SG	3:C:433:MET:HE1	2.59	0.42
3:C:369:PHE:HE1	3:C:373:ILE:HD12	1.84	0.42
3:C:666:VAL:HG12	3:C:667:VAL:H	1.84	0.42
3:C:678:THR:HG21	3:C:683:ASN:HD22	1.84	0.42
5:E:94:ASN:O	5:E:99:CYS:HA	2.19	0.42
6:F:32:U:H2'	6:F:33:G:C8	2.54	0.42
6:F:38:G:C4	6:F:39:A:C8	3.08	0.42
6:F:82:A:C4	6:F:83:A:C8	3.07	0.42
8:H:12:G:H2'	8:H:13:C:N1	2.34	0.42
11:K:234:ARG:HA	11:K:234:ARG:HD3	1.89	0.42
12:L:184:ALA:O	12:L:188:ARG:HB2	2.20	0.42
17:R:141:LYS:O	17:R:145:GLU:HG2	2.20	0.42
21:V:561:PRO:C	21:V:563:SER:N	2.78	0.42
23:X:165:GLU:HG2	23:X:169:ARG:NH2	2.35	0.42
23:X:233:GLU:O	23:X:237:LYS:HB3	2.19	0.42
23:X:268:GLN:HE21	23:X:268:GLN:HB3	1.66	0.42
23:X:648:TYR:O	23:X:656:GLN:NE2	2.51	0.42
23:X:718:SER:OG	23:X:719:ALA:N	2.52	0.42
24:Y:63:GLY:O	24:Y:105:GLY:HA3	2.19	0.42
26:1:621:ASP:CG	26:1:623:TYR:HB3	2.45	0.42
26:1:733:LYS:HB3	26:1:733:LYS:HE3	1.80	0.42
27:3:469:GLU:OE1	27:3:469:GLU:N	2.53	0.42
27:3:484:VAL:O	27:3:494:VAL:HB	2.19	0.42
27:3:675:LEU:HB3	27:3:686:LEU:HD12	2.02	0.42
27:3:791:HIS:CB	27:3:796:ASN:O	2.68	0.42
29:w:429:TRP:O	29:w:430:ARG:C	2.62	0.42
30:2:456:ARG:HA	30:2:459:ARG:HB2	2.02	0.42
40:l:19:THR:HA	40:l:29:ARG:HA	2.02	0.42
39:a:13:ILE:C	39:a:15:TYR:H	2.28	0.42
1:A:599:MET:HE3	1:A:599:MET:HB3	1.81	0.42
1:A:659:GLN:O	1:A:659:GLN:NE2	2.53	0.42
1:A:694:LEU:HD23	1:A:694:LEU:N	2.34	0.42
1:A:694:LEU:HD22	1:A:709:ILE:CD1	2.49	0.42
1:A:1268:ILE:HD13	1:A:1268:ILE:HG21	1.77	0.42
1:A:1436:TRP:CD1	1:A:1436:TRP:H	2.36	0.42
1:A:1810:PHE:CE1	1:A:1919:LEU:HG	2.55	0.42
1:A:1939:ILE:HG21	1:A:1968:TRP:NE1	2.35	0.42
2:B:109:G:H8	2:B:109:G:OP2	2.03	0.42
3:C:366:GLN:HG3	3:C:371:GLU:CG	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:517:GLU:H	3:C:517:GLU:CD	2.28	0.42
3:C:567:GLU:HG3	3:C:570:GLY:O	2.19	0.42
3:C:904:TRP:CD1	3:C:904:TRP:H	2.38	0.42
8:H:63:G:N1	8:H:64:A:N6	2.67	0.42
12:L:188:ARG:O	12:L:192:ARG:HG2	2.20	0.42
21:V:617:PRO:HB2	21:V:624:THR:HA	2.02	0.42
23:X:242:LYS:HG2	23:X:246:LEU:HD13	2.01	0.42
23:X:485:ASP:OD1	23:X:486:CYS:N	2.53	0.42
23:X:527:LEU:HD13	23:X:763:VAL:HG21	2.00	0.42
23:X:610:ASP:OD2	23:X:669:LYS:HB3	2.19	0.42
23:X:677:ALA:O	23:X:725:ARG:NE	2.53	0.42
23:X:948:PHE:O	23:X:951:THR:OG1	2.35	0.42
23:X:961:THR:H	23:X:961:THR:HG1	1.56	0.42
24:Y:30:LYS:CE	24:Y:168:ASP:HA	2.48	0.42
26:1:534:GLN:O	26:1:538:LEU:HD12	2.20	0.42
26:1:679:ILE:O	26:1:682:HIS:N	2.46	0.42
26:1:903:GLN:OE1	26:1:910:MET:HB2	2.19	0.42
27:3:212:GLU:CB	27:3:223:LYS:HG3	2.49	0.42
27:3:274:ARG:NH1	27:3:309:ASP:OD1	2.32	0.42
27:3:275:ARG:HB3	27:3:386:PHE:HB3	2.02	0.42
27:3:408:LEU:HD12	27:3:427:CYS:HA	2.02	0.42
27:3:610:VAL:HA	27:3:636:GLN:HE21	1.85	0.42
27:3:701:LEU:C	27:3:702:PHE:CG	2.98	0.42
27:3:1147:HIS:O	27:3:1150:SER:OG	2.33	0.42
27:3:1199:ARG:HH21	27:3:1207:LYS:NZ	2.18	0.42
46:9:331:GLN:HG3	46:9:381:PHE:HB3	2.00	0.42
1:A:193:LEU:HB3	1:A:208:TYR:OH	2.20	0.42
1:A:283:VAL:O	1:A:284:ARG:HG2	2.20	0.42
1:A:1489:LEU:HD23	1:A:1489:LEU:HA	1.85	0.42
47:A:3000:IHP:O26	47:A:3000:IHP:P1	2.78	0.42
3:C:198:TYR:CZ	3:C:435:VAL:HG11	2.55	0.42
3:C:383:GLN:C	3:C:392:LEU:HD21	2.45	0.42
3:C:833:PHE:HD1	3:C:874:PHE:CE1	2.38	0.42
5:E:168:CYS:SG	5:E:208:ILE:HD13	2.60	0.42
5:E:199:VAL:HA	5:E:209:ILE:O	2.20	0.42
6:F:3:G:H2'	6:F:4:C:C6	2.55	0.42
6:F:58:G:O2'	6:F:59:G:OP1	2.35	0.42
19:T:464:GLY:O	19:T:482:ALA:N	2.49	0.42
23:X:543:ARG:NH2	23:X:546:LEU:HD13	2.35	0.42
23:X:774:ASP:OD2	23:X:777:HIS:ND1	2.45	0.42
26:1:1108:ASN:OD1	26:1:1108:ASN:N	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:3:459:VAL:CG2	27:3:476:VAL:HA	2.45	0.42
27:3:565:TYR:HB3	27:3:577:TYR:CB	2.46	0.42
27:3:577:TYR:HE2	27:3:579:GLU:HB3	1.85	0.42
27:3:1015:LYS:NZ	27:3:1016:ARG:H	2.18	0.42
29:w:383:LEU:HD23	29:w:383:LEU:HA	1.67	0.42
29:w:471:TRP:CZ3	29:w:476:GLU:HB2	2.55	0.42
30:2:510:TYR:O	30:2:511:LEU:HD23	2.20	0.42
30:2:511:LEU:HD23	30:2:511:LEU:HA	1.72	0.42
30:2:550:LYS:HG2	30:2:554:ARG:HH21	1.84	0.42
46:9:350:PHE:O	46:9:376:ASN:HB2	2.20	0.42
1:A:378:PHE:CG	3:C:342:ARG:HD2	2.55	0.41
1:A:692:ASP:OD1	1:A:692:ASP:C	2.63	0.41
1:A:875:HIS:HE1	23:X:866:ASN:CB	2.24	0.41
1:A:1298:ARG:NH2	2:B:39:C:O3’	2.49	0.41
1:A:1637:TRP:O	1:A:1656:THR:CA	2.56	0.41
1:A:2112:LYS:HB2	1:A:2112:LYS:HE2	1.89	0.41
1:A:2150:GLN:O	1:A:2281:TYR:HB2	2.19	0.41
3:C:97:VAL:HG11	15:P:47:THR:HG21	2.01	0.41
3:C:153:THR:HG21	3:C:188:VAL:HG12	2.02	0.41
5:E:259:VAL:CG2	5:E:277:PHE:HB2	2.48	0.41
6:F:13:G:H8	6:F:13:G:O5’	2.03	0.41
7:G:112:U:C4	23:X:503:ARG:CZ	3.03	0.41
8:H:160:A:H2’	8:H:161:U:O4’	2.20	0.41
10:J:289:ASN:HB2	10:J:291:GLN:OE1	2.20	0.41
10:J:321:GLU:OE1	10:J:329:ALA:HB2	2.20	0.41
11:K:230:TRP:CZ3	11:K:231:GLN:HG3	2.55	0.41
12:L:31:TRP:HB3	12:L:43:ALA:HB1	2.02	0.41
12:L:66:GLU:HA	12:L:69:GLU:HG3	2.02	0.41
14:O:262:THR:O	14:O:270:ALA:HA	2.21	0.41
15:P:186:ARG:HD2	15:P:190:ASP:CG	2.45	0.41
16:Q:1224:ILE:HA	16:Q:1270:TYR:O	2.19	0.41
17:R:110:LYS:NZ	19:T:365:ARG:O	2.35	0.41
19:T:205:GLY:O	19:T:206:TRP:C	2.63	0.41
21:V:643:LEU:HD23	21:V:643:LEU:HA	1.48	0.41
23:X:228:LYS:HE3	23:X:232:ARG:NH2	2.35	0.41
23:X:393:GLN:O	23:X:397:ARG:HG3	2.19	0.41
23:X:742:ALA:O	23:X:747:LEU:HD23	2.20	0.41
26:1:620:MET:HE3	26:1:620:MET:HB3	1.90	0.41
27:3:206:GLN:HE22	27:3:232:GLY:H	1.66	0.41
27:3:605:LEU:HB3	27:3:619:LEU:HD22	2.02	0.41
34:y:12:GLY:H	34:y:48:GLY:HA2	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:v:75:GLY:C	35:v:79:GLN:HB2	2.45	0.41
46:9:437:PRO:HG2	46:9:438:TYR:CD2	2.55	0.41
1:A:106:MET:HA	1:A:107:PRO:HD3	1.77	0.41
1:A:126:ILE:HA	1:A:499:GLN:OE1	2.20	0.41
1:A:1166:THR:HG23	1:A:1167:THR:N	2.35	0.41
1:A:1235:GLU:O	1:A:1235:GLU:HG2	2.19	0.41
1:A:1779:PHE:HB3	1:A:1893:PHE:HE2	1.84	0.41
3:C:928:HIS:HD1	3:C:928:HIS:H	1.67	0.41
5:E:60:MET:H	5:E:60:MET:HE2	1.84	0.41
7:G:113:U:H1'	7:G:114:U:OP2	2.19	0.41
13:N:140:ARG:NH2	22:W:196:TRP:O	2.52	0.41
14:O:24:CYS:O	14:O:28:LEU:CB	2.68	0.41
16:Q:539:VAL:O	16:Q:624:THR:HA	2.19	0.41
17:R:241:GLU:HA	17:R:244:GLU:OE2	2.21	0.41
17:R:355:ILE:HD11	23:X:266:GLU:CD	2.44	0.41
19:T:209:CYS:SG	19:T:252:VAL:HG13	2.60	0.41
19:T:352:THR:HG22	19:T:374:SER:N	2.35	0.41
21:V:476:LEU:HD23	21:V:476:LEU:HA	1.77	0.41
22:W:180:LYS:HA	22:W:199:TYR:HA	2.03	0.41
23:X:416:GLN:HE22	23:X:544:PRO:HA	1.86	0.41
23:X:543:ARG:HH21	23:X:545:GLU:CD	2.28	0.41
23:X:621:ILE:HG12	23:X:672:VAL:CG1	2.50	0.41
26:1:826:ASP:OD1	26:1:828:ARG:N	2.42	0.41
26:1:892:LEU:HD22	26:1:892:LEU:HA	1.70	0.41
26:1:1142:ASN:HD22	26:1:1142:ASN:N	2.19	0.41
27:3:128:ARG:HH21	27:3:180:PRO:HG3	1.85	0.41
27:3:423:LEU:HB2	27:3:438:LEU:HB2	2.02	0.41
27:3:715:MET:HE3	27:3:739:LEU:H	1.85	0.41
27:3:855:PRO:O	27:3:856:LYS:HD3	2.20	0.41
27:3:947:GLU:HG3	27:3:948:VAL:H	1.84	0.41
29:w:381:LYS:HE2	29:w:381:LYS:HB2	1.70	0.41
1:A:46:ALA:HB1	1:A:47:GLU:OE1	2.20	0.41
1:A:227:ARG:HE	1:A:227:ARG:HB2	1.70	0.41
1:A:668:VAL:HG23	1:A:669:ALA:H	1.84	0.41
1:A:984:MET:C	1:A:986:GLU:H	2.28	0.41
1:A:1376:GLU:O	1:A:1376:GLU:HG3	2.14	0.41
1:A:1745:GLU:OE1	26:1:980:GLU:HG2	2.20	0.41
1:A:2177:TRP:O	1:A:2213:ILE:HA	2.20	0.41
1:A:2207:ASP:O	1:A:2211:THR:OG1	2.38	0.41
1:A:2284:MET:HB3	1:A:2287:ARG:HB3	2.03	0.41
3:C:453:TYR:CZ	3:C:575:GLN:HB2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:901:PHE:CD2	3:C:901:PHE:C	2.97	0.41
3:C:911:PRO:O	3:C:934:MET:HE2	2.20	0.41
3:C:932:GLU:O	3:C:933:PHE:C	2.64	0.41
4:D:696:LYS:O	4:D:700:ARG:CB	2.69	0.41
4:D:2030:ARG:O	4:D:2096:ALA:HB3	2.20	0.41
5:E:135:VAL:HG21	5:E:181:ILE:CD1	2.45	0.41
5:E:241:LEU:HA	5:E:251:LEU:O	2.19	0.41
10:J:297:ASN:OD1	12:L:225:TYR:HB2	2.20	0.41
10:J:362:ALA:O	10:J:366:TYR:HD2	2.03	0.41
13:N:47:TRP:NE1	13:N:135:THR:O	2.48	0.41
17:R:352:ARG:HG2	17:R:356:ARG:HH21	1.85	0.41
19:T:424:ASP:OD1	19:T:424:ASP:N	2.53	0.41
23:X:164:TRP:HE3	23:X:165:GLU:CA	2.33	0.41
23:X:756:GLN:NE2	23:X:782:ASP:OD2	2.53	0.41
23:X:760:LEU:HA	23:X:763:VAL:HG13	2.01	0.41
23:X:819:PRO:O	23:X:819:PRO:HG2	2.19	0.41
23:X:840:ILE:HD13	23:X:840:ILE:HA	1.95	0.41
23:X:994:LYS:HD2	23:X:996:PHE:CZ	2.56	0.41
27:3:43:PRO:HA	27:3:50:VAL:HA	2.01	0.41
27:3:724:SER:HB2	27:3:727:SER:HA	2.01	0.41
27:3:820:ALA:HA	27:3:823:MET:HE2	2.03	0.41
28:p:194:PHE:CB	28:p:200:ALA:HB2	2.50	0.41
1:A:368:GLN:HA	1:A:368:GLN:OE1	2.21	0.41
1:A:696:MET:C	1:A:698:PRO:HD3	2.45	0.41
1:A:769:LYS:HA	1:A:769:LYS:HD2	1.44	0.41
1:A:883:ARG:O	1:A:887:THR:HG23	2.20	0.41
1:A:1521:ALA:HB2	35:v:9:GLY:N	2.35	0.41
1:A:1677:GLU:HA	1:A:1677:GLU:OE2	2.19	0.41
1:A:1936:LEU:HG	1:A:1940:LEU:HD21	2.02	0.41
1:A:2140:LYS:NZ	1:A:2210:LYS:HG2	2.35	0.41
1:A:2148:VAL:HG23	1:A:2294:TYR:CZ	2.56	0.41
1:A:2160:PRO:HD3	1:A:2288:HIS:CE1	2.56	0.41
1:A:2188:LEU:HD13	1:A:2228:TYR:CE1	2.55	0.41
3:C:154:HIS:C	3:C:156:GLU:H	2.29	0.41
3:C:736:GLY:O	3:C:771:GLN:HG2	2.21	0.41
3:C:919:ARG:HB2	3:C:922:GLU:HG2	2.03	0.41
3:C:940:ARG:HG2	3:C:941:LYS:HG3	2.01	0.41
5:E:118:ASN:ND2	5:E:122:SER:H	2.17	0.41
6:F:88:G:N3	8:H:11:G:C2	2.88	0.41
7:G:7:G:C6	7:G:8:C:N3	2.88	0.41
7:G:111:U:O4	23:X:820:VAL:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:40:C:H5'	35:v:61:THR:HG22	2.02	0.41
8:H:44:U:OP2	8:H:44:U:H6	2.02	0.41
10:J:328:GLY:O	10:J:331:GLN:HG2	2.20	0.41
10:J:331:GLN:HA	10:J:334:GLU:HG2	2.02	0.41
12:L:19:LEU:O	12:L:20:LYS:C	2.63	0.41
16:Q:1064:ALA:HB3	16:Q:1095:GLY:HA3	2.02	0.41
17:R:358:ASP:OD2	23:X:255:PHE:HZ	2.03	0.41
23:X:408:LEU:HD13	23:X:570:PHE:CG	2.55	0.41
23:X:497:THR:HG23	23:X:500:MET:HG3	2.01	0.41
23:X:563:PHE:HE2	23:X:780:PHE:O	2.04	0.41
23:X:648:TYR:HB2	23:X:649:ALA:H	1.79	0.41
23:X:664:PRO:HA	23:X:665:PRO:HD2	1.91	0.41
23:X:815:MET:HE1	23:X:829:LEU:CD1	2.46	0.41
23:X:1007:TRP:HA	23:X:1010:GLU:HB2	2.02	0.41
24:Y:194:ASP:OD2	24:Y:194:ASP:N	2.53	0.41
26:1:555:VAL:HG12	26:1:559:ILE:HD13	2.02	0.41
26:1:703:THR:HG23	26:1:742:GLY:HA2	2.03	0.41
27:3:1:MET:HG3	27:3:1092:ILE:HD12	2.02	0.41
27:3:91:GLU:OE1	27:3:102:ILE:HD11	2.20	0.41
27:3:299:PHE:CD1	27:3:299:PHE:C	2.99	0.41
27:3:914:ILE:HG22	27:3:917:PRO:HD2	2.02	0.41
27:3:969:VAL:HB	27:3:981:CYS:CB	2.45	0.41
27:3:1001:ILE:HG21	27:3:1044:VAL:HG21	2.03	0.41
29:w:407:ASN:O	29:w:407:ASN:ND2	2.54	0.41
29:w:411:CYS:O	29:w:414:TYR:HB2	2.21	0.41
30:2:456:ARG:HE	30:2:456:ARG:HB3	1.79	0.41
30:2:529:LYS:O	30:2:530:ARG:C	2.64	0.41
1:A:648:LEU:HD23	1:A:648:LEU:HA	1.86	0.41
1:A:1427:ARG:HE	23:X:326:GLN:CD	2.15	0.41
1:A:1661:TRP:CD2	1:A:1700:GLY:HA3	2.55	0.41
1:A:1675:ASP:OD1	1:A:1675:ASP:C	2.63	0.41
1:A:2185:SER:HA	1:A:2186:PRO:HD3	1.92	0.41
1:A:2277:SER:HB3	1:A:2281:TYR:HE1	1.86	0.41
3:C:223:ASP:HA	3:C:448:LYS:HZ1	1.85	0.41
3:C:258:ASN:HD21	3:C:312:SER:HB3	1.85	0.41
3:C:334:ILE:HD11	3:C:339:PHE:CD2	2.55	0.41
3:C:349:PHE:CE1	3:C:354:ARG:HA	2.43	0.41
4:D:2067:VAL:HA	4:D:2079:ILE:HA	2.02	0.41
6:F:79:C:O2'	12:L:170:LYS:HD2	2.21	0.41
7:G:93:A:C2	8:H:38:A:C2	3.08	0.41
7:G:111:U:OP2	23:X:482:ARG:CB	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:411:MET:HE2	10:J:416:TYR:CE2	2.56	0.41
12:L:63:TRP:HD1	12:L:67:GLU:HB3	1.85	0.41
13:N:98:GLU:CD	13:N:98:GLU:N	2.77	0.41
16:Q:877:LEU:O	16:Q:1035:ILE:HA	2.21	0.41
19:T:460:ASP:N	46:9:259:THR:O	2.46	0.41
23:X:275:ARG:O	23:X:279:LEU:HG	2.21	0.41
23:X:736:ARG:C	23:X:738:TYR:H	2.27	0.41
24:Y:95:SER:OG	24:Y:109:LEU:HD21	2.20	0.41
24:Y:267:ARG:HB3	24:Y:287:GLU:HG2	2.03	0.41
26:1:914:PHE:O	26:1:917:VAL:HG12	2.21	0.41
27:3:66:MET:HE3	27:3:123:VAL:HG12	2.03	0.41
27:3:164:ASN:N	27:3:164:ASN:OD1	2.53	0.41
27:3:289:CYS:SG	27:3:290:SER:N	2.94	0.41
27:3:1035:THR:HG21	27:3:1103:SER:HA	2.01	0.41
35:v:30:LEU:HA	35:v:30:LEU:HD23	1.72	0.41
46:9:300:THR:OG1	46:9:300:THR:O	2.37	0.41
46:9:350:PHE:CZ	46:9:376:ASN:HB3	2.55	0.41
46:9:360:HIS:CE1	46:9:391:ASP:HB2	2.54	0.41
1:A:845:ARG:HH12	1:A:1440:THR:CG2	2.32	0.41
1:A:855:ARG:NH1	1:A:1523:ARG:HB3	2.35	0.41
1:A:1352:HIS:ND1	20:U:21:ARG:HA	2.35	0.41
1:A:1402:ARG:HD2	23:X:664:PRO:HB2	2.02	0.41
1:A:1971:LEU:HD23	1:A:1971:LEU:HA	1.82	0.41
3:C:140:HIS:CE1	3:C:236:MET:HE1	2.56	0.41
3:C:221:ILE:O	3:C:549:TRP:NE1	2.53	0.41
5:E:193:THR:HG23	5:E:194:TYR:CD2	2.55	0.41
7:G:111:U:OP1	23:X:500:MET:HG2	2.20	0.41
8:H:41:U:C2	8:H:42:G:C8	3.08	0.41
8:H:42:G:C6	8:H:43:U:C4	3.09	0.41
8:H:55:U:H2'	8:H:57:A:OP2	2.21	0.41
12:L:168:LYS:HA	12:L:168:LYS:HE3	2.01	0.41
13:N:27:GLN:OE1	13:N:27:GLN:HA	2.21	0.41
13:N:63:LEU:O	13:N:70:ILE:HB	2.21	0.41
19:T:437:HIS:C	19:T:438:LEU:HD23	2.45	0.41
24:Y:64:GLU:HG2	24:Y:77:PHE:CZ	2.56	0.41
26:1:504:ILE:HG13	26:1:515:ALA:HB3	2.03	0.41
26:1:556:ILE:O	26:1:560:LEU:HB2	2.21	0.41
26:1:769:VAL:O	26:1:772:ILE:HB	2.21	0.41
27:3:412:ILE:H	27:3:1105:GLN:NE2	2.09	0.41
27:3:637:PRO:HB3	27:3:640:LEU:HD21	2.03	0.41
27:3:1096:HIS:ND1	27:3:1166:TYR:HB2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:3:1180:GLU:OE2	27:3:1212:ARG:NH2	2.45	0.41
30:2:572:HIS:O	30:2:576:PHE:HB2	2.20	0.41
33:5:74:GLN:NE2	33:5:78:PRO:HA	2.36	0.41
1:A:533:LYS:NZ	7:G:5:G:OP2	2.25	0.41
1:A:755:HIS:CD2	15:P:219:PHE:HE2	2.38	0.41
1:A:1330:MET:HB3	1:A:1330:MET:HE2	1.86	0.41
1:A:1638:ASN:O	1:A:1652:MET:HB3	2.21	0.41
1:A:1701:VAL:HA	1:A:1716:GLY:HA3	2.02	0.41
1:A:1820:LYS:O	1:A:1820:LYS:HG3	2.21	0.41
1:A:1850:ARG:NH1	1:A:1878:ASP:OD2	2.54	0.41
1:A:1938:LEU:HD22	1:A:1984:LYS:HG3	2.02	0.41
1:A:2166:HIS:HB3	1:A:2169:LEU:HG	2.02	0.41
1:A:2228:TYR:CD2	1:A:2258:ARG:HG3	2.56	0.41
3:C:311:SER:OG	3:C:311:SER:O	2.32	0.41
3:C:465:MET:HE2	3:C:475:MET:CB	2.50	0.41
3:C:810:PRO:HG3	3:C:813:ARG:HH22	1.85	0.41
5:E:82:ALA:HA	5:E:92:LEU:HD23	2.03	0.41
5:E:90:ILE:HB	5:E:105:LEU:HB3	2.01	0.41
5:E:127:ALA:HB2	5:E:157:CYS:HB2	2.03	0.41
5:E:243:LEU:HD23	5:E:243:LEU:HA	1.95	0.41
7:G:12:G:H8	7:G:12:G:O5’	2.03	0.41
8:H:5:C:O2’	8:H:6:U:H5’	2.20	0.41
16:Q:745:PRO:HG2	16:Q:781:PRO:HA	2.03	0.41
17:R:125:MET:HA	19:T:442:ARG:HH12	1.85	0.41
17:R:125:MET:HA	19:T:442:ARG:NH1	2.35	0.41
17:R:160:ALA:O	17:R:163:MET:HB2	2.21	0.41
21:V:562:TRP:CE2	21:V:602:ARG:HD3	2.55	0.41
23:X:754:GLU:HG3	23:X:757:ARG:HH12	1.84	0.41
24:Y:27:ASN:ND2	24:Y:65:SER:HB2	2.36	0.41
26:1:802:GLU:HG2	26:1:805:TYR:HB2	2.02	0.41
27:3:280:ASP:H	27:3:857:ALA:CB	2.33	0.41
27:3:1001:ILE:HD12	27:3:1011:TRP:NE1	2.36	0.41
27:3:1004:ASP:OD2	27:3:1007:GLU:HB2	2.21	0.41
28:p:210:PHE:O	28:p:218:MET:N	2.49	0.41
29:w:445:HIS:CD2	29:w:445:HIS:H	2.38	0.41
32:7:26:CYS:SG	32:7:60:ILE:HG13	2.61	0.41
39:m:53:PRO:HG3	39:m:59:ALA:C	2.46	0.41
40:l:13:ALA:HA	40:l:74:PRO:HD2	2.03	0.41
1:A:32:GLU:HA	1:A:35:ARG:HB3	2.03	0.41
1:A:152:ARG:HG3	1:A:616:PHE:CE2	2.56	0.41
1:A:611:LEU:HD12	1:A:611:LEU:HA	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:727:LYS:HE2	1:A:727:LYS:HB3	1.74	0.41
1:A:1161:LEU:HD22	1:A:1166:THR:HG22	2.03	0.41
1:A:1178:TYR:CD2	1:A:1178:TYR:C	2.99	0.41
1:A:1220:VAL:HG23	1:A:1221:THR:N	2.36	0.41
1:A:1287:LEU:HD12	1:A:1287:LEU:HA	1.83	0.41
1:A:1468:ASN:OD1	17:R:433:TYR:HB3	2.20	0.41
1:A:1610:GLN:HB3	1:A:1630:LEU:CB	2.51	0.41
3:C:69:ALA:O	3:C:72:VAL:HG12	2.20	0.41
3:C:259:LYS:HE3	48:C:1500:GTP:C4	2.56	0.41
3:C:695:GLY:O	3:C:698:GLU:HB2	2.20	0.41
3:C:700:ILE:HG21	3:C:742:PRO:HA	2.02	0.41
3:C:727:LEU:HA	3:C:730:ARG:HG2	2.03	0.41
3:C:758:LEU:HD22	3:C:800:PRO:HD3	2.02	0.41
3:C:932:GLU:HA	3:C:935:ILE:HD12	2.03	0.41
5:E:69:VAL:HG12	5:E:345:ALA:HB1	2.03	0.41
11:K:232:ILE:HA	11:K:235:GLU:HG2	2.03	0.41
12:L:25:LYS:HZ2	12:L:25:LYS:HG3	1.80	0.41
14:O:131:THR:O	22:W:111:LEU:HA	2.20	0.41
19:T:350:HIS:HA	19:T:374:SER:HB3	2.03	0.41
23:X:431:GLN:HA	23:X:434:GLN:HE21	1.86	0.41
23:X:606:GLN:HG3	23:X:688:TYR:CE1	2.56	0.41
24:Y:49:PHE:N	24:Y:112:THR:OG1	2.54	0.41
26:1:664:GLY:O	26:1:668:VAL:HG23	2.20	0.41
26:1:1067:LYS:HB3	26:1:1067:LYS:HE2	1.67	0.41
27:3:77:TYR:HE2	27:3:152:LEU:HD22	1.85	0.41
27:3:497:SER:OG	27:3:499:PHE:HB2	2.21	0.41
27:3:615:ARG:O	27:3:616:ILE:HD12	2.21	0.41
27:3:664:TYR:HA	27:3:677:THR:O	2.21	0.41
27:3:966:LEU:H	27:3:966:LEU:HG	1.72	0.41
29:w:466:LYS:HE3	29:w:466:LYS:HB2	1.73	0.41
33:5:53:PHE:O	33:5:57:GLU:HG2	2.21	0.41
35:v:49:ASN:OD1	35:v:49:ASN:N	2.50	0.41
1:A:59:GLU:HA	1:A:59:GLU:OE2	2.20	0.41
1:A:136:ILE:HG13	1:A:225:TYR:HE2	1.85	0.41
1:A:225:TYR:O	1:A:418:THR:HG21	2.21	0.41
1:A:303:ILE:HG22	1:A:305:ARG:HG2	2.03	0.41
1:A:1173:SER:OG	1:A:1174:PHE:N	2.52	0.41
1:A:1403:LEU:HB2	17:R:407:TYR:HB3	2.03	0.41
1:A:1543:ASN:HB2	1:A:1569:LEU:HD21	2.02	0.41
1:A:1872:LEU:HD12	1:A:1884:ILE:HD13	2.02	0.41
1:A:1927:ILE:HD12	1:A:1931:THR:HG22	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1936:LEU:O	1:A:1940:LEU:HG	2.21	0.41
1:A:1976:TRP:HA	1:A:1979:VAL:HG22	2.03	0.41
1:A:2294:TYR:HD2	1:A:2295:GLU:O	2.03	0.41
1:A:2298:LEU:HA	1:A:2298:LEU:HD23	1.88	0.41
3:C:83:GLU:HB2	3:C:84:GLU:H	1.75	0.41
3:C:336:TYR:CZ	3:C:337:GLN:HG2	2.56	0.41
3:C:556:ASP:OD1	3:C:556:ASP:N	2.54	0.41
3:C:678:THR:HG23	3:C:683:ASN:HB2	2.03	0.41
3:C:750:LEU:HG	20:U:67:GLU:CB	2.50	0.41
4:D:541:ILE:HA	4:D:588:CYS:O	2.21	0.41
4:D:1350:ALA:O	4:D:1492:SER:HA	2.21	0.41
5:E:94:ASN:N	5:E:100:ASP:O	2.40	0.41
5:E:147:LEU:HD21	5:E:179:TRP:HB3	2.02	0.41
5:E:339:GLU:HB3	5:E:341:ILE:HG13	2.02	0.41
7:G:85:G:H1	8:H:45:C:N4	2.18	0.41
7:G:90:C:N3	8:H:40:C:N3	2.68	0.41
7:G:96:U:H5”	7:G:97:A:OP2	2.21	0.41
8:H:142:U:C2	8:H:143:C:C5	3.09	0.41
8:H:182:U:H2’	8:H:183:G:H8	1.85	0.41
10:J:319:MET:O	10:J:323:LEU:HD13	2.20	0.41
10:J:431:ARG:CA	10:J:434:VAL:HG12	2.41	0.41
19:T:314:ILE:O	19:T:323:VAL:HG22	2.20	0.41
21:V:469:PHE:CE1	21:V:509:LEU:HD13	2.56	0.41
23:X:326:GLN:O	23:X:326:GLN:HG2	2.21	0.41
23:X:616:THR:HB	23:X:696:LYS:HE2	2.03	0.41
23:X:716:LYS:HG3	23:X:747:LEU:HB3	2.03	0.41
23:X:768:LYS:C	23:X:768:LYS:CD	2.93	0.41
23:X:822:PRO:O	23:X:825:SER:CA	2.68	0.41
23:X:843:VAL:HG23	23:X:882:LEU:HD13	2.02	0.41
23:X:856:ARG:CZ	23:X:856:ARG:HB3	2.51	0.41
23:X:887:GLN:O	23:X:890:GLU:HB3	2.20	0.41
23:X:941:LYS:HA	23:X:944:THR:OG1	2.21	0.41
23:X:1007:TRP:HA	23:X:1010:GLU:OE2	2.20	0.41
24:Y:183:ARG:HH21	24:Y:186:LEU:HB3	1.85	0.41
24:Y:242:LEU:HD13	24:Y:313:VAL:HG11	2.01	0.41
24:Y:242:LEU:HD12	24:Y:288:PHE:CZ	2.56	0.41
26:1:641:ILE:H	26:1:641:ILE:HG13	1.56	0.41
26:1:834:VAL:HG22	26:1:871:THR:CG2	2.44	0.41
26:1:926:LYS:HE2	26:1:965:CYS:HA	2.03	0.41
26:1:1028:HIS:HB3	26:1:1031:VAL:HG13	2.02	0.41
26:1:1029:GLU:H	26:1:1029:GLU:HG3	1.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:3:70:LEU:HD23	27:3:70:LEU:HA	1.78	0.41
27:3:174:ASP:HB3	27:3:240:GLY:H	1.86	0.41
27:3:526:HIS:HB2	27:3:574:LEU:HD21	2.03	0.41
27:3:542:LYS:H	27:3:542:LYS:HG3	1.45	0.41
27:3:926:TYR:CD1	27:3:942:LYS:HB3	2.56	0.41
29:w:390:LYS:NZ	35:v:84:ARG:HH21	2.19	0.41
29:w:429:TRP:HE3	29:w:430:ARG:NH1	2.19	0.41
30:2:469:VAL:HG12	30:2:471:ARG:N	2.31	0.41
46:9:220:ILE:HG22	46:9:221:LEU:N	2.36	0.41
46:9:221:LEU:H	46:9:221:LEU:CD2	2.32	0.41
46:9:281:TYR:HB3	46:9:283:ARG:HH12	1.86	0.41
46:9:320:ILE:HG13	46:9:337:GLY:HA2	2.01	0.41
1:A:580:TYR:O	1:A:581:ILE:C	2.63	0.41
1:A:615:ARG:HE	1:A:615:ARG:HB2	1.62	0.41
1:A:2188:LEU:HD22	1:A:2228:TYR:CB	2.51	0.41
3:C:372:PHE:O	3:C:376:PRO:HG3	2.20	0.41
3:C:519:GLU:H	3:C:519:GLU:CD	2.28	0.41
3:C:718:PHE:HB3	3:C:724:TRP:HD1	1.86	0.41
6:F:84:A:C4	6:F:85:U:C6	3.09	0.41
8:H:168:A:H5”	8:H:169:C:C6	2.56	0.41
10:J:239:ARG:O	10:J:239:ARG:HG2	2.21	0.41
13:N:59:TYR:CZ	13:N:63:LEU:HD11	2.56	0.41
19:T:213:GLU:OE1	19:T:216:ASN:N	2.54	0.41
19:T:338:CYS:HA	19:T:344:GLN:O	2.20	0.41
19:T:397:GLN:C	19:T:398:TRP:CD1	2.99	0.41
19:T:471:ASP:CG	19:T:472:GLN:N	2.79	0.41
21:V:636:LEU:HD13	21:V:639:LEU:HD11	2.03	0.41
23:X:826:LYS:HB3	23:X:946:GLY:HA2	2.02	0.41
24:Y:41:LEU:HB3	24:Y:155:ARG:NH1	2.36	0.41
26:1:550:HIS:CD2	26:1:551:LEU:HD22	2.49	0.41
26:1:1208:LEU:HB3	26:1:1237:LEU:HD21	2.03	0.41
27:3:224:TYR:HB3	27:3:261:PHE:CD1	2.56	0.41
27:3:941:HIS:CE1	27:3:974:LYS:HA	2.56	0.41
30:2:487:LEU:HD12	30:2:487:LEU:HA	1.85	0.41
1:A:147:MET:HE1	1:A:191:ILE:O	2.21	0.40
1:A:162:LYS:HE2	1:A:163:ARG:O	2.21	0.40
1:A:699:GLU:HB3	17:R:237:MET:SD	2.60	0.40
1:A:1070:ASP:O	1:A:1071:PHE:C	2.64	0.40
1:A:1284:LEU:HD23	1:A:1284:LEU:HA	1.77	0.40
1:A:1492:GLY:HA2	1:A:1710:ASN:ND2	2.34	0.40
1:A:1949:ARG:NH2	1:A:1986:LEU:HD21	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2071:THR:O	1:A:2075:VAL:HG13	2.21	0.40
1:A:2073:TRP:HH2	1:A:2310:ARG:NE	2.19	0.40
1:A:2195:THR:O	1:A:2199:ILE:HG13	2.21	0.40
3:C:258:ASN:HA	3:C:310:SER:O	2.21	0.40
3:C:286:ASN:OD1	3:C:300:LEU:HD12	2.21	0.40
3:C:496:VAL:HG23	3:C:548:ASN:H	1.86	0.40
7:G:112:U:O2	7:G:112:U:C2'	2.68	0.40
7:G:117:A:O3'	24:Y:312:HIS:HD2	2.03	0.40
8:H:34:U:H2'	8:H:35:A:C1'	2.51	0.40
8:H:81:G:H2'	8:H:82:G:O4'	2.21	0.40
10:J:280:LEU:HD23	10:J:280:LEU:HA	1.75	0.40
15:P:188:TRP:O	15:P:188:TRP:CD1	2.74	0.40
17:R:126:ASN:C	17:R:128:ASP:H	2.29	0.40
17:R:208:GLU:OE2	17:R:211:ARG:NH2	2.50	0.40
19:T:289:SER:O	19:T:290:ALA:C	2.62	0.40
21:V:501:ARG:HH11	21:V:501:ARG:HB2	1.86	0.40
23:X:482:ARG:O	23:X:483:PHE:HB2	2.21	0.40
23:X:887:GLN:HA	23:X:890:GLU:HB3	2.03	0.40
26:1:646:PRO:O	26:1:649:LYS:HB2	2.20	0.40
26:1:862:GLU:O	26:1:866:LYS:HB2	2.21	0.40
26:1:953:ASP:O	26:1:956:SER:N	2.55	0.40
27:3:686:LEU:HD13	27:3:686:LEU:HA	1.96	0.40
27:3:706:MET:HG2	27:3:770:LEU:CD1	2.51	0.40
29:w:400:HIS:HB3	29:w:402:LEU:HD22	2.02	0.40
32:7:51:TYR:CG	32:7:52:GLY:N	2.90	0.40
45:s:6:SER:N	45:s:25:TYR:HA	2.37	0.40
1:A:829:PRO:HD2	1:A:832:TYR:CG	2.56	0.40
1:A:1306:LYS:HZ3	1:A:1306:LYS:HG3	1.56	0.40
1:A:1352:HIS:HB2	20:U:5:ILE:HG21	2.03	0.40
1:A:2104:TYR:HB3	1:A:2142:ILE:HD11	2.03	0.40
2:B:113:G:O5'	2:B:113:G:H8	2.04	0.40
3:C:76:GLU:H	3:C:76:GLU:CD	2.29	0.40
3:C:930:ALA:HA	3:C:933:PHE:HB2	2.02	0.40
6:F:40:U:H3'	6:F:41:A:C8	2.56	0.40
7:G:111:U:P	23:X:482:ARG:HB2	2.60	0.40
12:L:701:GLY:O	12:L:704:THR:N	2.55	0.40
15:P:74:LYS:HA	15:P:77:ASP:CB	2.52	0.40
17:R:116:TYR:HD1	17:R:120:VAL:HG13	1.86	0.40
19:T:280:VAL:H	19:T:280:VAL:HG23	1.67	0.40
19:T:368:LEU:HD13	19:T:398:TRP:CE3	2.56	0.40
21:V:520:GLU:O	21:V:524:SER:OG	2.27	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:428:LYS:HE2	23:X:428:LYS:HB2	1.94	0.40
23:X:506:LEU:HD23	23:X:770:LEU:HD21	1.97	0.40
23:X:532:LEU:O	23:X:536:ILE:HG13	2.21	0.40
23:X:543:ARG:HE	23:X:545:GLU:CD	2.25	0.40
23:X:747:LEU:HA	23:X:747:LEU:HD13	1.86	0.40
23:X:978:GLU:OE1	23:X:978:GLU:HA	2.21	0.40
24:Y:27:ASN:CG	24:Y:65:SER:HB2	2.47	0.40
24:Y:40:CYS:O	24:Y:155:ARG:CA	2.66	0.40
24:Y:98:ASN:C	24:Y:100:GLY:H	2.30	0.40
24:Y:161:ILE:HG21	24:Y:164:ASP:HB2	2.03	0.40
26:1:572:HIS:CE1	26:1:613:MET:HE1	2.56	0.40
26:1:614:ARG:C	26:1:614:ARG:HD3	2.47	0.40
26:1:686:LEU:HA	26:1:689:ILE:HG12	2.03	0.40
26:1:1216:TRP:CH2	26:1:1268:ILE:HD13	2.56	0.40
27:3:184:CYS:SG	27:3:211:TYR:CE1	3.14	0.40
27:3:258:TYR:CG	27:3:259:LYS:N	2.90	0.40
27:3:328:LYS:NZ	27:3:370:GLU:HB3	2.36	0.40
27:3:334:PRO:HG2	27:3:357:TYR:CD2	2.56	0.40
27:3:459:VAL:HA	27:3:475:ILE:O	2.21	0.40
27:3:510:LEU:HG	27:3:510:LEU:O	2.21	0.40
27:3:610:VAL:HG23	27:3:636:GLN:NE2	2.36	0.40
27:3:1040:ASP:OD2	27:3:1040:ASP:C	2.63	0.40
27:3:1057:ARG:O	27:3:1090:GLU:HG3	2.22	0.40
29:w:414:TYR:HD1	29:w:416:TYR:CE1	2.38	0.40
30:2:506:PHE:N	30:2:506:PHE:CD1	2.88	0.40
1:A:389:LYS:HA	3:C:379:LYS:HZ2	1.85	0.40
1:A:431:TYR:HB3	1:A:611:LEU:HD21	2.02	0.40
1:A:495:GLN:HE21	1:A:495:GLN:HB2	1.62	0.40
1:A:1362:ASP:OD1	1:A:1363:GLN:N	2.34	0.40
1:A:1518:LEU:HD23	1:A:1518:LEU:N	2.36	0.40
1:A:1618:LYS:HG3	1:A:1626:CYS:HB2	2.02	0.40
2:B:14:U:C2	2:B:15:C:C5	3.10	0.40
3:C:271:PRO:HG3	3:C:378:TYR:CD2	2.57	0.40
6:F:38:G:P	6:F:38:G:C8	3.14	0.40
7:G:7:G:C5	7:G:8:C:N4	2.90	0.40
7:G:111:U:C6	23:X:819:PRO:HA	2.55	0.40
8:H:28:C:N4	12:L:32:SER:OG	2.54	0.40
11:K:237:ASP:OD1	11:K:238:GLU:N	2.54	0.40
17:R:352:ARG:O	17:R:355:ILE:HB	2.22	0.40
21:V:503:TYR:OH	21:V:550:MET:HA	2.21	0.40
22:W:290:GLY:O	22:W:309:MET:N	2.42	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:941:LYS:HE2	23:X:1007:TRP:NE1	2.37	0.40
23:X:984:LEU:HD23	23:X:984:LEU:HA	1.96	0.40
26:1:893:ILE:HG22	26:1:894:ASP:OD2	2.22	0.40
26:1:1055:TRP:CE3	26:1:1055:TRP:HA	2.56	0.40
27:3:212:GLU:HG2	27:3:213:LEU:N	2.35	0.40
27:3:316:GLU:HG3	27:3:324:GLU:OE1	2.22	0.40
27:3:672:GLY:H	27:3:696:SER:CA	2.34	0.40
27:3:838:MET:H	27:3:838:MET:HG2	1.73	0.40
27:3:896:PHE:CD2	27:3:896:PHE:N	2.90	0.40
27:3:927:THR:HG23	27:3:940:LEU:HB2	2.04	0.40
27:3:998:HIS:HE1	27:3:1041:TYR:OH	2.04	0.40
29:w:493:GLU:HA	29:w:496:LYS:HB3	2.03	0.40
39:m:42:LEU:O	39:m:69:LEU:HA	2.21	0.40
42:j:44:GLU:O	42:j:61:ALA:HA	2.22	0.40
46:9:323:ARG:CB	46:9:331:GLN:HE21	2.32	0.40
1:A:422:LEU:HD22	1:A:638:LEU:HD13	2.02	0.40
1:A:520:TYR:O	1:A:555:LYS:NZ	2.26	0.40
1:A:781:ARG:NH2	8:H:24:A:H5"	2.36	0.40
1:A:856:LEU:H	1:A:856:LEU:HG	1.38	0.40
1:A:1136:ARG:HG2	1:A:1139:ARG:NH1	2.36	0.40
1:A:1839:TRP:CZ3	1:A:1871:PRO:HB3	2.56	0.40
1:A:1865:ARG:HA	1:A:1865:ARG:HD2	1.86	0.40
1:A:2172:MET:HE3	1:A:2172:MET:HB2	1.69	0.40
2:B:99:C:C2	2:B:100:C:C5	3.09	0.40
3:C:242:LEU:HA	3:C:242:LEU:HD23	1.50	0.40
3:C:366:GLN:NE2	3:C:375:GLU:OE1	2.53	0.40
3:C:690:GLU:CD	3:C:788:LYS:HD3	2.46	0.40
3:C:749:THR:O	3:C:753:GLU:N	2.53	0.40
3:C:804:GLY:O	3:C:808:ILE:HB	2.22	0.40
3:C:834:VAL:HG22	3:C:899:SER:CB	2.52	0.40
5:E:260:ARG:HD2	5:E:273:CYS:SG	2.62	0.40
6:F:85:U:C2	8:H:14:C:N3	2.89	0.40
12:L:98:GLU:O	12:L:101:GLU:HG3	2.21	0.40
13:N:75:TYR:CZ	13:N:79:ILE:HD11	2.57	0.40
14:O:22:ILE:O	14:O:82:GLN:N	2.43	0.40
17:R:331:ALA:HA	23:X:275:ARG:HH12	1.87	0.40
18:S:63:GLN:HA	18:S:113:PHE:HA	2.03	0.40
22:W:239:THR:HA	22:W:327:THR:O	2.21	0.40
23:X:257:PHE:CD1	23:X:270:LEU:HG	2.57	0.40
24:Y:134:ASP:O	24:Y:138:LYS:HG3	2.20	0.40
26:1:517:ARG:HB3	26:1:517:ARG:NH1	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1:811:LEU:HB2	26:1:812:PRO:HD3	2.03	0.40
26:1:1080:THR:O	26:1:1084:ILE:HG13	2.21	0.40
39:m:45:CYS:N	39:m:68:GLY:O	2.24	0.40
39:m:53:PRO:HG3	39:m:59:ALA:O	2.22	0.40
45:r:39:THR:HA	45:r:47:LEU:N	2.35	0.40
46:9:204:THR:O	46:9:208:LEU:HG	2.22	0.40
46:9:367:SER:HA	46:9:395:THR:O	2.21	0.40
1:A:435:CYS:HA	7:G:-10:G:H22	1.87	0.40
1:A:902:TYR:CE2	1:A:1246:GLN:HB3	2.57	0.40
1:A:2133:PRO:HD3	1:A:2139:VAL:O	2.22	0.40
3:C:448:LYS:O	3:C:452:THR:OG1	2.40	0.40
3:C:732:ILE:HG12	3:C:744:ILE:HG21	2.03	0.40
5:E:86:PHE:HD2	5:E:86:PHE:O	2.04	0.40
5:E:123:MET:C	5:E:124:LEU:HD23	2.47	0.40
12:L:85:ILE:O	12:L:88:ILE:HG13	2.22	0.40
12:L:208:VAL:C	12:L:210:TYR:H	2.29	0.40
15:P:77:ASP:O	15:P:78:ARG:HG2	2.21	0.40
19:T:395:ILE:HB	19:T:409:LEU:HB2	2.03	0.40
21:V:555:LEU:HG	21:V:586:PHE:CZ	2.53	0.40
21:V:618:ARG:HE	21:V:618:ARG:HB2	1.78	0.40
23:X:164:TRP:HE3	23:X:164:TRP:C	2.30	0.40
23:X:432:ILE:HB	23:X:433:PRO:HD3	2.02	0.40
23:X:439:GLU:OE1	23:X:439:GLU:N	2.55	0.40
23:X:461:VAL:O	23:X:465:VAL:HG23	2.22	0.40
23:X:762:ASN:HB2	23:X:821:ASP:HA	2.03	0.40
23:X:766:LEU:HD12	23:X:766:LEU:HA	1.81	0.40
23:X:796:LEU:HB2	23:X:802:LEU:CD1	2.51	0.40
23:X:945:ALA:HA	23:X:1011:VAL:HG11	2.04	0.40
25:Z:65:ILE:C	25:Z:67:ARG:N	2.80	0.40
26:1:549:ARG:O	26:1:553:VAL:HG22	2.22	0.40
26:1:669:GLN:NE2	26:1:707:LEU:HD22	2.37	0.40
26:1:758:ASP:OD2	26:1:761:TYR:HB2	2.21	0.40
26:1:784:MET:O	26:1:785:LYS:C	2.65	0.40
26:1:840:LEU:O	26:1:844:VAL:HG23	2.21	0.40
26:1:850:ILE:HG22	26:1:888:LEU:HD11	2.02	0.40
26:1:912:ASN:OD1	26:1:912:ASN:N	2.53	0.40
27:3:180:PRO:HD2	27:3:215:LEU:HD11	2.03	0.40
27:3:346:PHE:HB3	27:3:359:TYR:O	2.22	0.40
27:3:1114:SER:HB2	27:3:1215:TYR:HE1	1.83	0.40
29:w:441:PRO:HB2	29:w:443:THR:HG23	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
1	A	2232/2335 (96%)	1971 (88%)	250 (11%)	11 (0%)	25 61
3	C	854/972 (88%)	737 (86%)	110 (13%)	7 (1%)	16 51
4	D	1720/2136 (80%)	1589 (92%)	124 (7%)	7 (0%)	30 66
5	E	297/357 (83%)	271 (91%)	26 (9%)	0	100 100
9	I	563/855 (66%)	481 (85%)	80 (14%)	2 (0%)	30 66
10	J	245/848 (29%)	215 (88%)	27 (11%)	3 (1%)	11 41
11	K	47/343 (14%)	41 (87%)	6 (13%)	0	100 100
12	L	318/802 (40%)	294 (92%)	24 (8%)	0	100 100
13	N	141/144 (98%)	119 (84%)	21 (15%)	1 (1%)	19 54
14	O	288/420 (69%)	242 (84%)	46 (16%)	0	100 100
15	P	97/229 (42%)	85 (88%)	11 (11%)	1 (1%)	13 46
16	Q	1319/1485 (89%)	1207 (92%)	112 (8%)	0	100 100
17	R	352/536 (66%)	314 (89%)	36 (10%)	2 (1%)	22 57
18	S	156/166 (94%)	147 (94%)	9 (6%)	0	100 100
19	T	318/514 (62%)	289 (91%)	29 (9%)	0	100 100
20	U	68/2752 (2%)	62 (91%)	6 (9%)	0	100 100
21	V	458/908 (50%)	430 (94%)	28 (6%)	0	100 100
22	W	497/579 (86%)	442 (89%)	55 (11%)	0	100 100
23	X	778/1041 (75%)	691 (89%)	82 (10%)	5 (1%)	22 57
24	Y	318/492 (65%)	277 (87%)	41 (13%)	0	100 100
25	Z	147/225 (65%)	132 (90%)	13 (9%)	2 (1%)	9 37
26	1	814/1304 (62%)	705 (87%)	105 (13%)	4 (0%)	25 61
27	3	1165/1217 (96%)	991 (85%)	173 (15%)	1 (0%)	48 81
28	p	163/225 (72%)	147 (90%)	15 (9%)	1 (1%)	22 57
29	w	428/501 (85%)	380 (89%)	48 (11%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
30	2	246/895 (28%)	212 (86%)	33 (13%)	1 (0%)	30 66
31	4	157/424 (37%)	138 (88%)	19 (12%)	0	100 100
32	7	79/110 (72%)	65 (82%)	14 (18%)	0	100 100
33	5	75/86 (87%)	64 (85%)	11 (15%)	0	100 100
34	y	77/301 (26%)	64 (83%)	13 (17%)	0	100 100
35	v	165/464 (36%)	149 (90%)	16 (10%)	0	100 100
36	o	160/255 (63%)	136 (85%)	24 (15%)	0	100 100
37	c	95/118 (80%)	85 (90%)	10 (10%)	0	100 100
37	h	91/118 (77%)	82 (90%)	9 (10%)	0	100 100
38	d	72/86 (84%)	63 (88%)	9 (12%)	0	100 100
38	i	70/86 (81%)	64 (91%)	6 (9%)	0	100 100
39	a	84/240 (35%)	71 (84%)	13 (16%)	0	100 100
39	m	80/240 (33%)	72 (90%)	8 (10%)	0	100 100
40	g	77/126 (61%)	69 (90%)	8 (10%)	0	100 100
40	l	81/126 (64%)	70 (86%)	11 (14%)	0	100 100
41	f	72/76 (95%)	61 (85%)	11 (15%)	0	100 100
41	k	71/76 (93%)	63 (89%)	8 (11%)	0	100 100
42	e	77/92 (84%)	71 (92%)	6 (8%)	0	100 100
42	j	79/92 (86%)	73 (92%)	6 (8%)	0	100 100
43	b	80/119 (67%)	65 (81%)	15 (19%)	0	100 100
43	n	78/119 (66%)	67 (86%)	11 (14%)	0	100 100
44	u	183/793 (23%)	170 (93%)	13 (7%)	0	100 100
45	q	130/504 (26%)	116 (89%)	14 (11%)	0	100 100
45	r	129/504 (26%)	119 (92%)	10 (8%)	0	100 100
45	s	130/504 (26%)	107 (82%)	20 (15%)	3 (2%)	5 26
45	t	129/504 (26%)	120 (93%)	9 (7%)	0	100 100
46	9	330/520 (64%)	292 (88%)	38 (12%)	0	100 100
All	All	16880/28964 (58%)	14987 (89%)	1842 (11%)	51 (0%)	38 70

All (51) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
17	R	164	PRO

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Mol	Chain	Res	Type
17	R	223	PRO
23	X	820	VAL
1	A	699	GLU
1	A	1417	PRO
3	C	83	GLU
3	C	824	THR
4	D	2098	ALA
4	D	2099	THR
10	J	241	VAL
23	X	851	ASN
26	1	1107	GLN
1	A	698	PRO
1	A	856	LEU
1	A	1548	TYR
1	A	1765	SER
3	C	359	LYS
4	D	1584	ILE
9	I	371	PRO
13	N	40	LYS
23	X	993	THR
26	1	718	PRO
26	1	1106	ARG
1	A	1418	ARG
4	D	1007	PRO
10	J	358	GLU
23	X	523	HIS
23	X	992	THR
25	Z	66	MET
25	Z	78	PRO
26	1	717	THR
1	A	570	ASP
1	A	942	PRO
3	C	440	SER
4	D	1666	THR
9	I	428	GLN
30	2	600	ARG
45	s	60	PRO
1	A	189	GLU
3	C	441	PRO
15	P	48	GLN
28	p	214	PRO
45	s	71	ILE

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Mol	Chain	Res	Type
3	C	444	GLY
4	D	2097	PRO
10	J	341	PRO
27	3	672	GLY
4	D	531	ILE
1	A	2311	PRO
3	C	615	PRO
45	s	72	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
1	A	2012/2108 (95%)	1651 (82%)	361 (18%)	1 8
3	C	747/866 (86%)	614 (82%)	133 (18%)	1 8
5	E	256/300 (85%)	212 (83%)	44 (17%)	1 8
9	I	22/749 (3%)	22 (100%)	0	100 100
10	J	205/751 (27%)	175 (85%)	30 (15%)	2 12
11	K	43/294 (15%)	37 (86%)	6 (14%)	3 13
12	L	141/709 (20%)	117 (83%)	24 (17%)	1 9
13	N	130/130 (100%)	112 (86%)	18 (14%)	3 14
14	O	3/361 (1%)	3 (100%)	0	100 100
15	P	95/203 (47%)	74 (78%)	21 (22%)	1 4
16	Q	71/1336 (5%)	71 (100%)	0	100 100
17	R	268/458 (58%)	213 (80%)	55 (20%)	1 5
19	T	273/441 (62%)	216 (79%)	57 (21%)	1 4
20	U	21/2432 (1%)	18 (86%)	3 (14%)	2 13
21	V	188/838 (22%)	150 (80%)	38 (20%)	1 5
23	X	682/897 (76%)	568 (83%)	114 (17%)	2 9
24	Y	286/451 (63%)	235 (82%)	51 (18%)	1 8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
26	1	700/1104 (63%)	572 (82%)	128 (18%)	1 7
27	3	1018/1051 (97%)	792 (78%)	226 (22%)	1 4
28	p	8/195 (4%)	8 (100%)	0	100 100
29	w	112/446 (25%)	95 (85%)	17 (15%)	2 11
30	2	152/776 (20%)	127 (84%)	25 (16%)	2 9
32	7	69/95 (73%)	53 (77%)	16 (23%)	0 3
33	5	68/77 (88%)	48 (71%)	20 (29%)	0 1
35	v	78/382 (20%)	67 (86%)	11 (14%)	3 13
36	o	6/218 (3%)	6 (100%)	0	100 100
37	h	5/110 (4%)	5 (100%)	0	100 100
38	i	4/74 (5%)	4 (100%)	0	100 100
39	m	4/177 (2%)	4 (100%)	0	100 100
40	l	3/101 (3%)	3 (100%)	0	100 100
41	k	3/66 (4%)	3 (100%)	0	100 100
42	j	1/84 (1%)	1 (100%)	0	100 100
43	n	3/101 (3%)	3 (100%)	0	100 100
44	u	10/709 (1%)	10 (100%)	0	100 100
46	9	185/456 (41%)	158 (85%)	27 (15%)	2 12
All	All	7872/19546 (40%)	6447 (82%)	1425 (18%)	3 7

All (1425) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	28	GLU
1	A	60	ASP
1	A	66	VAL
1	A	78	ASN
1	A	79	ARG
1	A	82	ARG
1	A	86	ARG
1	A	89	LEU
1	A	95	MET
1	A	97	HIS
1	A	111	GLU
1	A	112	GLN
1	A	123	THR

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Mol	Chain	Res	Type
1	A	127	SER
1	A	131	GLU
1	A	142	SER
1	A	176	LEU
1	A	177	ASP
1	A	184	ASP
1	A	188	LEU
1	A	191	ILE
1	A	195	LEU
1	A	204	LEU
1	A	227	ARG
1	A	230	PHE
1	A	231	THR
1	A	248	ASP
1	A	250	VAL
1	A	266	SER
1	A	271	MET
1	A	273	ILE
1	A	283	VAL
1	A	300	ASN
1	A	313	LYS
1	A	322	ASN
1	A	323	LEU
1	A	330	THR
1	A	334	THR
1	A	337	VAL
1	A	338	VAL
1	A	340	ILE
1	A	342	THR
1	A	355	LEU
1	A	356	ILE
1	A	361	HIS
1	A	362	ARG
1	A	363	HIS
1	A	376	GLU
1	A	377	GLU
1	A	382	GLU
1	A	388	LEU
1	A	391	THR
1	A	395	THR
1	A	398	THR
1	A	402	ILE

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Mol	Chain	Res	Type
1	A	404	LEU
1	A	413	LEU
1	A	422	LEU
1	A	424	ILE
1	A	426	LEU
1	A	428	LYS
1	A	431	TYR
1	A	433	GLU
1	A	439	GLN
1	A	443	VAL
1	A	468	LYS
1	A	469	LYS
1	A	479	THR
1	A	480	LYS
1	A	484	SER
1	A	492	VAL
1	A	495	GLN
1	A	496	VAL
1	A	505	ASN
1	A	531	THR
1	A	532	THR
1	A	537	LYS
1	A	546	LEU
1	A	548	ARG
1	A	554	THR
1	A	556	LEU
1	A	558	VAL
1	A	569	VAL
1	A	574	LEU
1	A	576	ASP
1	A	581	ILE
1	A	587	GLN
1	A	591	MET
1	A	593	ARG
1	A	595	LYS
1	A	604	MET
1	A	618	THR
1	A	644	ILE
1	A	665	SER
1	A	666	LYS
1	A	670	LYS
1	A	673	THR

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Mol	Chain	Res	Type
1	A	679	SER
1	A	683	LEU
1	A	686	ARG
1	A	690	MET
1	A	693	ILE
1	A	694	LEU
1	A	728	VAL
1	A	731	LEU
1	A	733	THR
1	A	751	THR
1	A	766	THR
1	A	767	VAL
1	A	769	LYS
1	A	802	THR
1	A	807	VAL
1	A	830	LEU
1	A	831	SER
1	A	833	LYS
1	A	835	ASP
1	A	836	THR
1	A	839	LEU
1	A	840	ILE
1	A	845	ARG
1	A	854	SER
1	A	855	ARG
1	A	856	LEU
1	A	859	SER
1	A	861	ARG
1	A	864	LEU
1	A	866	LEU
1	A	885	LEU
1	A	887	THR
1	A	893	GLU
1	A	894	VAL
1	A	914	LEU
1	A	916	LYS
1	A	931	ASP
1	A	940	ILE
1	A	946	GLU
1	A	976	MET
1	A	977	LEU
1	A	978	GLU

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Mol	Chain	Res	Type
1	A	983	LYS
1	A	993	LEU
1	A	1000	ILE
1	A	1010	THR
1	A	1014	ASN
1	A	1017	ILE
1	A	1018	ASN
1	A	1022	MET
1	A	1027	SER
1	A	1030	ILE
1	A	1031	ILE
1	A	1032	ARG
1	A	1038	SER
1	A	1070	ASP
1	A	1076	ASP
1	A	1079	THR
1	A	1089	CYS
1	A	1095	ILE
1	A	1104	ASP
1	A	1108	ASP
1	A	1123	GLU
1	A	1126	VAL
1	A	1130	ASN
1	A	1131	LYS
1	A	1143	MET
1	A	1144	LYS
1	A	1147	VAL
1	A	1163	ARG
1	A	1166	THR
1	A	1168	VAL
1	A	1173	SER
1	A	1181	ASP
1	A	1186	LEU
1	A	1189	MET
1	A	1207	PHE
1	A	1209	HIS
1	A	1223	GLU
1	A	1270	LEU
1	A	1276	GLU
1	A	1286	ASP
1	A	1293	ASN
1	A	1295	ILE

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Mol	Chain	Res	Type
1	A	1298	ARG
1	A	1306	LYS
1	A	1315	VAL
1	A	1321	GLU
1	A	1340	LEU
1	A	1348	VAL
1	A	1351	THR
1	A	1367	ASN
1	A	1370	ARG
1	A	1372	ILE
1	A	1376	GLU
1	A	1377	SER
1	A	1382	SER
1	A	1383	GLN
1	A	1394	GLN
1	A	1399	GLN
1	A	1400	ASN
1	A	1401	ARG
1	A	1402	ARG
1	A	1405	LEU
1	A	1406	GLU
1	A	1407	ASP
1	A	1409	GLU
1	A	1410	ASP
1	A	1413	ASP
1	A	1419	ILE
1	A	1427	ARG
1	A	1438	VAL
1	A	1441	ASP
1	A	1450	GLN
1	A	1458	GLN
1	A	1467	LEU
1	A	1486	GLU
1	A	1489	LEU
1	A	1491	LYS
1	A	1518	LEU
1	A	1526	LEU
1	A	1533	ARG
1	A	1536	LEU
1	A	1539	SER
1	A	1549	VAL
1	A	1553	VAL

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Mol	Chain	Res	Type
1	A	1554	GLN
1	A	1555	LEU
1	A	1558	THR
1	A	1568	THR
1	A	1574	ILE
1	A	1575	GLN
1	A	1593	LEU
1	A	1600	GLU
1	A	1601	LEU
1	A	1606	ILE
1	A	1608	THR
1	A	1609	VAL
1	A	1614	ILE
1	A	1622	MET
1	A	1623	ASN
1	A	1624	SER
1	A	1630	LEU
1	A	1631	LEU
1	A	1635	TYR
1	A	1640	SER
1	A	1653	ASP
1	A	1655	THR
1	A	1662	ILE
1	A	1664	ILE
1	A	1667	ARG
1	A	1675	ASP
1	A	1691	ASN
1	A	1697	SER
1	A	1701	VAL
1	A	1705	ILE
1	A	1719	PHE
1	A	1722	SER
1	A	1723	LYS
1	A	1726	ILE
1	A	1730	MET
1	A	1756	SER
1	A	1757	GLU
1	A	1759	THR
1	A	1766	GLN
1	A	1768	TYR
1	A	1771	LEU
1	A	1772	PHE

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Mol	Chain	Res	Type
1	A	1773	SER
1	A	1774	ASN
1	A	1775	GLN
1	A	1776	ILE
1	A	1780	VAL
1	A	1782	ASP
1	A	1788	VAL
1	A	1789	THR
1	A	1790	ILE
1	A	1792	LYS
1	A	1793	THR
1	A	1798	LEU
1	A	1804	ASN
1	A	1813	ARG
1	A	1817	LEU
1	A	1820	LYS
1	A	1825	SER
1	A	1830	GLN
1	A	1852	LEU
1	A	1862	ILE
1	A	1870	ASP
1	A	1872	LEU
1	A	1876	LEU
1	A	1878	ASP
1	A	1882	ILE
1	A	1888	GLU
1	A	1889	LEU
1	A	1890	GLN
1	A	1898	LYS
1	A	1900	GLU
1	A	1919	LEU
1	A	1926	THR
1	A	1934	SER
1	A	1935	ARG
1	A	1960	THR
1	A	1961	ILE
1	A	1962	THR
1	A	1965	HIS
1	A	1970	THR
1	A	1971	LEU
1	A	1972	THR
1	A	1975	GLU

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Mol	Chain	Res	Type
1	A	1976	TRP
1	A	1977	ILE
1	A	1981	VAL
1	A	1997	VAL
1	A	1999	VAL
1	A	2002	LEU
1	A	2005	SER
1	A	2014	MET
1	A	2070	LYS
1	A	2073	TRP
1	A	2074	ARG
1	A	2078	ILE
1	A	2084	HIS
1	A	2087	THR
1	A	2089	HIS
1	A	2092	VAL
1	A	2095	ASP
1	A	2097	ILE
1	A	2105	ILE
1	A	2106	LEU
1	A	2111	LEU
1	A	2112	LYS
1	A	2131	VAL
1	A	2139	VAL
1	A	2145	ILE
1	A	2156	THR
1	A	2159	LEU
1	A	2166	HIS
1	A	2193	VAL
1	A	2200	MET
1	A	2211	THR
1	A	2214	ILE
1	A	2219	THR
1	A	2224	THR
1	A	2225	LEU
1	A	2241	ASN
1	A	2249	LYS
1	A	2254	SER
1	A	2257	GLU
1	A	2259	VAL
1	A	2261	MET
1	A	2262	LEU

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Mol	Chain	Res	Type
1	A	2263	LEU
1	A	2265	ASP
1	A	2268	LEU
1	A	2270	PHE
1	A	2271	PHE
1	A	2278	SER
1	A	2309	HIS
1	A	2317	PHE
1	A	2319	LEU
1	A	2320	LEU
1	A	2325	VAL
1	A	2333	LEU
3	C	58	VAL
3	C	65	TYR
3	C	76	GLU
3	C	77	VAL
3	C	83	GLU
3	C	86	THR
3	C	87	GLN
3	C	90	THR
3	C	97	VAL
3	C	117	ASP
3	C	125	ASN
3	C	127	GLU
3	C	133	THR
3	C	134	LEU
3	C	173	THR
3	C	179	VAL
3	C	181	ILE
3	C	183	SER
3	C	184	THR
3	C	186	VAL
3	C	187	THR
3	C	188	VAL
3	C	202	ILE
3	C	215	VAL
3	C	220	ARG
3	C	247	VAL
3	C	257	ILE
3	C	278	LEU
3	C	279	ARG
3	C	288	LEU

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Mol	Chain	Res	Type
3	C	298	LEU
3	C	301	SER
3	C	316	ILE
3	C	319	THR
3	C	320	LEU
3	C	326	ILE
3	C	334	ILE
3	C	353	THR
3	C	359	LYS
3	C	362	THR
3	C	365	SER
3	C	366	GLN
3	C	371	GLU
3	C	385	VAL
3	C	388	VAL
3	C	389	ASP
3	C	394	ARG
3	C	402	HIS
3	C	404	THR
3	C	406	GLU
3	C	412	ILE
3	C	417	ARG
3	C	431	VAL
3	C	449	ILE
3	C	452	THR
3	C	454	THR
3	C	457	VAL
3	C	465	MET
3	C	471	ASP
3	C	483	SER
3	C	484	THR
3	C	495	ARG
3	C	496	VAL
3	C	498	SER
3	C	501	ILE
3	C	510	LEU
3	C	513	ASN
3	C	522	SER
3	C	524	ILE
3	C	538	HIS
3	C	543	ARG
3	C	548	ASN

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Mol	Chain	Res	Type
3	C	553	GLU
3	C	559	ILE
3	C	560	VAL
3	C	561	LYS
3	C	562	THR
3	C	564	THR
3	C	565	ILE
3	C	567	GLU
3	C	572	GLU
3	C	573	GLU
3	C	580	LEU
3	C	587	VAL
3	C	593	GLU
3	C	596	ASN
3	C	598	SER
3	C	603	MET
3	C	612	LYS
3	C	617	LEU
3	C	618	THR
3	C	619	THR
3	C	630	LEU
3	C	635	LEU
3	C	643	ASP
3	C	661	THR
3	C	664	GLU
3	C	672	LEU
3	C	673	LYS
3	C	675	PHE
3	C	685	ILE
3	C	696	LEU
3	C	700	ILE
3	C	704	VAL
3	C	716	GLU
3	C	722	TYR
3	C	724	TRP
3	C	726	LEU
3	C	743	ASN
3	C	746	VAL
3	C	749	THR
3	C	750	LEU
3	C	759	LEU
3	C	766	ILE

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Mol	Chain	Res	Type
3	C	767	VAL
3	C	785	ARG
3	C	799	GLU
3	C	807	GLN
3	C	809	ILE
3	C	826	ARG
3	C	827	LEU
3	C	836	VAL
3	C	866	SER
3	C	875	ILE
3	C	879	ASP
3	C	885	THR
3	C	897	SER
3	C	900	VAL
3	C	907	VAL
3	C	916	ILE
3	C	922	GLU
3	C	928	HIS
3	C	940	ARG
5	E	59	ILE
5	E	65	HIS
5	E	73	LYS
5	E	77	ASN
5	E	79	SER
5	E	87	ASP
5	E	89	LEU
5	E	93	TRP
5	E	102	TYR
5	E	108	HIS
5	E	109	SER
5	E	119	THR
5	E	120	ASP
5	E	125	PHE
5	E	126	SER
5	E	132	THR
5	E	143	ARG
5	E	144	VAL
5	E	152	SER
5	E	154	VAL
5	E	155	ASN
5	E	166	LEU
5	E	167	VAL

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Mol	Chain	Res	Type
5	E	173	ASP
5	E	176	VAL
5	E	200	THR
5	E	205	SER
5	E	209	ILE
5	E	214	ASP
5	E	232	ARG
5	E	234	HIS
5	E	236	ASP
5	E	239	THR
5	E	252	SER
5	E	258	THR
5	E	264	VAL
5	E	298	SER
5	E	314	THR
5	E	320	LEU
5	E	335	PHE
5	E	338	ASP
5	E	341	ILE
5	E	343	ILE
5	E	350	ARG
10	J	216	ASP
10	J	219	GLU
10	J	225	LEU
10	J	239	ARG
10	J	242	ILE
10	J	244	ASN
10	J	252	GLU
10	J	253	GLU
10	J	276	ILE
10	J	277	THR
10	J	280	LEU
10	J	285	MET
10	J	286	GLU
10	J	288	LYS
10	J	297	ASN
10	J	304	THR
10	J	311	GLN
10	J	319	MET
10	J	322	MET
10	J	340	GLN
10	J	350	ILE

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Mol	Chain	Res	Type
10	J	364	THR
10	J	369	PHE
10	J	376	VAL
10	J	385	PHE
10	J	398	VAL
10	J	406	PHE
10	J	422	PHE
10	J	437	LYS
10	J	444	SER
11	K	193	VAL
11	K	208	THR
11	K	215	ASP
11	K	218	LYS
11	K	222	ASP
11	K	228	HIS
12	L	10	VAL
12	L	24	MET
12	L	33	ARG
12	L	40	ARG
12	L	45	GLN
12	L	53	TRP
12	L	59	LYS
12	L	60	LYS
12	L	61	THR
12	L	64	SER
12	L	77	LEU
12	L	88	ILE
12	L	91	ARG
12	L	104	LEU
12	L	106	LYS
12	L	169	ARG
12	L	170	LYS
12	L	174	LYS
12	L	182	LEU
12	L	190	GLU
12	L	196	ILE
12	L	209	ASP
12	L	222	LEU
12	L	231	ASN
13	N	4	VAL
13	N	17	LEU
13	N	22	LEU

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Mol	Chain	Res	Type
13	N	43	VAL
13	N	44	GLU
13	N	56	LYS
13	N	60	ILE
13	N	70	ILE
13	N	75	TYR
13	N	86	LYS
13	N	105	CYS
13	N	116	ASN
13	N	117	CYS
13	N	126	LEU
13	N	128	VAL
13	N	134	CYS
13	N	136	HIS
13	N	137	CYS
15	P	31	SER
15	P	32	SER
15	P	39	THR
15	P	55	ARG
15	P	183	LYS
15	P	184	VAL
15	P	185	LYS
15	P	186	ARG
15	P	187	ARG
15	P	189	ASP
15	P	191	ASP
15	P	192	VAL
15	P	193	VAL
15	P	195	LYS
15	P	204	GLN
15	P	208	LYS
15	P	215	LEU
15	P	224	MET
15	P	225	GLU
15	P	228	ILE
15	P	229	LYS
17	R	84	ASN
17	R	89	GLN
17	R	96	ILE
17	R	101	ILE
17	R	104	GLN
17	R	107	SER

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Mol	Chain	Res	Type
17	R	112	ILE
17	R	114	SER
17	R	122	LYS
17	R	123	GLU
17	R	132	LEU
17	R	140	ILE
17	R	142	GLU
17	R	143	ILE
17	R	146	LYS
17	R	159	VAL
17	R	170	LYS
17	R	180	THR
17	R	186	VAL
17	R	193	LYS
17	R	195	ARG
17	R	197	ILE
17	R	200	VAL
17	R	208	GLU
17	R	218	ILE
17	R	232	SER
17	R	234	SER
17	R	235	ARG
17	R	236	LYS
17	R	238	THR
17	R	247	ILE
17	R	250	CYS
17	R	286	LYS
17	R	295	ASP
17	R	309	GLU
17	R	316	GLU
17	R	323	LYS
17	R	325	ARG
17	R	327	MET
17	R	332	ARG
17	R	348	GLU
17	R	352	ARG
17	R	369	LEU
17	R	376	LYS
17	R	380	LEU
17	R	382	ARG
17	R	385	ASN
17	R	386	ARG

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Mol	Chain	Res	Type
17	R	388	ILE
17	R	406	GLN
17	R	407	TYR
17	R	409	GLN
17	R	415	SER
17	R	433	TYR
17	R	438	ARG
19	T	187	LYS
19	T	196	LEU
19	T	200	ILE
19	T	212	VAL
19	T	216	ASN
19	T	221	THR
19	T	223	SER
19	T	227	THR
19	T	235	SER
19	T	240	LEU
19	T	242	LEU
19	T	247	SER
19	T	254	VAL
19	T	255	SER
19	T	258	SER
19	T	263	SER
19	T	264	CYS
19	T	267	ASP
19	T	274	ASP
19	T	279	LYS
19	T	280	VAL
19	T	283	HIS
19	T	294	LEU
19	T	300	ILE
19	T	301	ASP
19	T	303	LEU
19	T	304	VAL
19	T	307	SER
19	T	314	ILE
19	T	319	THR
19	T	327	SER
19	T	338	CYS
19	T	342	GLU
19	T	349	SER
19	T	353	THR

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Mol	Chain	Res	Type
19	T	364	THR
19	T	369	THR
19	T	372	LYS
19	T	374	SER
19	T	378	VAL
19	T	384	HIS
19	T	386	THR
19	T	389	SER
19	T	394	ASN
19	T	397	GLN
19	T	398	TRP
19	T	421	VAL
19	T	429	SER
19	T	436	MET
19	T	438	LEU
19	T	443	THR
19	T	471	ASP
19	T	478	LEU
19	T	485	THR
19	T	490	ARG
19	T	498	GLU
19	T	503	SER
20	U	1	MET
20	U	9	THR
20	U	16	ASN
21	V	450	ILE
21	V	458	THR
21	V	461	LEU
21	V	465	SER
21	V	470	GLU
21	V	479	MET
21	V	480	GLU
21	V	481	PHE
21	V	483	GLU
21	V	485	GLN
21	V	487	LYS
21	V	494	LEU
21	V	501	ARG
21	V	505	LYS
21	V	516	MET
21	V	518	LYS
21	V	526	GLU

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Mol	Chain	Res	Type
21	V	528	ILE
21	V	536	ILE
21	V	540	GLU
21	V	541	THR
21	V	545	ARG
21	V	565	LEU
21	V	581	ILE
21	V	593	TYR
21	V	607	THR
21	V	616	LEU
21	V	623	ASN
21	V	628	ILE
21	V	632	THR
21	V	633	SER
21	V	634	ILE
21	V	639	LEU
21	V	643	LEU
21	V	644	ARG
21	V	646	HIS
21	V	647	LEU
21	V	650	THR
23	X	163	GLU
23	X	164	TRP
23	X	166	ARG
23	X	171	ARG
23	X	183	GLU
23	X	186	ARG
23	X	190	LYS
23	X	222	MET
23	X	241	GLU
23	X	244	GLU
23	X	245	ASP
23	X	250	LEU
23	X	262	LEU
23	X	263	SER
23	X	266	GLU
23	X	268	GLN
23	X	270	LEU
23	X	271	LYS
23	X	276	VAL
23	X	278	ASP
23	X	292	LEU

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Mol	Chain	Res	Type
23	X	300	MET
23	X	334	LEU
23	X	339	LEU
23	X	384	THR
23	X	389	LYS
23	X	420	ILE
23	X	426	SER
23	X	428	LYS
23	X	439	GLU
23	X	443	ASN
23	X	444	LYS
23	X	467	ARG
23	X	471	VAL
23	X	473	LEU
23	X	476	GLU
23	X	477	VAL
23	X	493	LEU
23	X	497	THR
23	X	520	ASP
23	X	524	GLU
23	X	533	PHE
23	X	542	PHE
23	X	545	GLU
23	X	552	SER
23	X	575	ARG
23	X	579	VAL
23	X	597	VAL
23	X	599	VAL
23	X	606	GLN
23	X	612	LEU
23	X	621	ILE
23	X	622	GLU
23	X	640	ARG
23	X	645	LEU
23	X	654	ASP
23	X	656	GLN
23	X	658	ARG
23	X	663	THR
23	X	672	VAL
23	X	674	THR
23	X	690	LEU
23	X	696	LYS

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Mol	Chain	Res	Type
23	X	699	SER
23	X	712	THR
23	X	729	VAL
23	X	746	GLU
23	X	749	GLU
23	X	751	THR
23	X	755	ILE
23	X	758	THR
23	X	760	LEU
23	X	763	VAL
23	X	764	VAL
23	X	765	LEU
23	X	767	LEU
23	X	768	LYS
23	X	772	ILE
23	X	773	HIS
23	X	787	GLU
23	X	796	LEU
23	X	809	THR
23	X	813	ARG
23	X	817	GLU
23	X	818	LEU
23	X	823	MET
23	X	824	LEU
23	X	825	SER
23	X	828	ILE
23	X	842	THR
23	X	847	LEU
23	X	848	SER
23	X	850	ASN
23	X	863	HIS
23	X	877	ASP
23	X	879	LEU
23	X	886	THR
23	X	894	SER
23	X	903	VAL
23	X	909	ARG
23	X	924	ARG
23	X	927	VAL
23	X	933	GLN
23	X	943	ILE
23	X	944	THR

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Mol	Chain	Res	Type
23	X	951	THR
23	X	954	LEU
23	X	955	THR
23	X	976	LEU
23	X	988	GLU
23	X	992	THR
23	X	994	LYS
23	X	997	MET
23	X	1021	LEU
24	Y	3	VAL
24	Y	16	LEU
24	Y	17	TYR
24	Y	18	THR
24	Y	23	ARG
24	Y	33	LYS
24	Y	40	CYS
24	Y	41	LEU
24	Y	51	ILE
24	Y	53	THR
24	Y	66	ILE
24	Y	79	GLU
24	Y	86	ILE
24	Y	93	THR
24	Y	109	LEU
24	Y	118	TYR
24	Y	122	VAL
24	Y	125	VAL
24	Y	126	PHE
24	Y	129	VAL
24	Y	130	THR
24	Y	135	ILE
24	Y	147	ASP
24	Y	154	ILE
24	Y	159	THR
24	Y	162	LEU
24	Y	176	ASP
24	Y	182	THR
24	Y	188	SER
24	Y	191	ILE
24	Y	195	GLU
24	Y	197	ILE
24	Y	198	ASP

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Mol	Chain	Res	Type
24	Y	200	PHE
24	Y	203	ARG
24	Y	210	GLU
24	Y	211	ILE
24	Y	216	GLU
24	Y	219	THR
24	Y	227	VAL
24	Y	235	ILE
24	Y	245	CYS
24	Y	250	VAL
24	Y	252	THR
24	Y	253	ASP
24	Y	257	GLU
24	Y	258	ILE
24	Y	273	ARG
24	Y	307	ASP
24	Y	309	ARG
24	Y	319	VAL
26	1	493	LYS
26	1	498	MET
26	1	544	LEU
26	1	545	GLU
26	1	560	LEU
26	1	562	LYS
26	1	563	LEU
26	1	564	ASP
26	1	566	LEU
26	1	568	ARG
26	1	571	VAL
26	1	581	LEU
26	1	582	LEU
26	1	585	GLU
26	1	591	VAL
26	1	596	ILE
26	1	598	SER
26	1	609	MET
26	1	610	ILE
26	1	630	ARG
26	1	635	VAL
26	1	641	ILE
26	1	645	LEU
26	1	673	ILE

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Mol	Chain	Res	Type
26	1	685	SER
26	1	687	VAL
26	1	691	GLU
26	1	698	GLN
26	1	701	VAL
26	1	707	LEU
26	1	719	TYR
26	1	721	ILE
26	1	736	ARG
26	1	754	ILE
26	1	760	GLU
26	1	768	GLU
26	1	769	VAL
26	1	771	LEU
26	1	779	SER
26	1	790	LYS
26	1	793	LYS
26	1	795	CYS
26	1	801	VAL
26	1	836	THR
26	1	837	THR
26	1	840	LEU
26	1	844	VAL
26	1	850	ILE
26	1	858	LYS
26	1	868	VAL
26	1	873	GLU
26	1	876	MET
26	1	890	GLU
26	1	891	GLN
26	1	892	LEU
26	1	893	ILE
26	1	901	GLN
26	1	903	GLN
26	1	904	THR
26	1	905	THR
26	1	918	VAL
26	1	921	LEU
26	1	923	LYS
26	1	925	VAL
26	1	926	LYS
26	1	928	TYR

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Mol	Chain	Res	Type
26	1	936	VAL
26	1	947	VAL
26	1	955	ILE
26	1	958	THR
26	1	963	LYS
26	1	964	THR
26	1	967	GLU
26	1	968	GLU
26	1	971	MET
26	1	973	HIS
26	1	980	GLU
26	1	982	LEU
26	1	989	VAL
26	1	1001	VAL
26	1	1003	VAL
26	1	1004	ILE
26	1	1009	MET
26	1	1010	THR
26	1	1014	LYS
26	1	1015	ASP
26	1	1021	THR
26	1	1030	LYS
26	1	1031	VAL
26	1	1038	LEU
26	1	1041	ARG
26	1	1048	GLU
26	1	1050	VAL
26	1	1065	LEU
26	1	1067	LYS
26	1	1080	THR
26	1	1093	VAL
26	1	1106	ARG
26	1	1112	THR
26	1	1113	THR
26	1	1118	ILE
26	1	1121	GLU
26	1	1122	THR
26	1	1128	VAL
26	1	1138	VAL
26	1	1143	VAL
26	1	1161	MET
26	1	1164	ASP

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Mol	Chain	Res	Type
26	1	1170	THR
26	1	1174	GLU
26	1	1182	LEU
26	1	1185	ARG
26	1	1187	THR
26	1	1196	SER
26	1	1219	VAL
26	1	1237	LEU
26	1	1241	ILE
26	1	1245	ARG
26	1	1250	CYS
26	1	1251	LEU
26	1	1260	LYS
26	1	1261	VAL
26	1	1277	GLN
26	1	1281	ILE
26	1	1294	THR
26	1	1296	ILE
26	1	1303	ILE
26	1	1304	LEU
27	3	18	ILE
27	3	25	THR
27	3	30	ILE
27	3	33	SER
27	3	36	LYS
27	3	41	LEU
27	3	44	ASP
27	3	49	LYS
27	3	52	THR
27	3	56	VAL
27	3	57	GLU
27	3	66	MET
27	3	68	PHE
27	3	74	THR
27	3	78	ILE
27	3	79	VAL
27	3	80	VAL
27	3	90	LEU
27	3	98	MET
27	3	106	THR
27	3	110	SER
27	3	116	VAL

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Mol	Chain	Res	Type
27	3	121	LEU
27	3	124	ASP
27	3	126	LYS
27	3	130	VAL
27	3	131	MET
27	3	135	ILE
27	3	139	LYS
27	3	143	ILE
27	3	153	THR
27	3	156	SER
27	3	162	LYS
27	3	170	VAL
27	3	173	VAL
27	3	188	ASP
27	3	195	ASP
27	3	204	THR
27	3	207	THR
27	3	209	THR
27	3	221	VAL
27	3	225	SER
27	3	226	GLU
27	3	230	GLU
27	3	233	ASN
27	3	235	LEU
27	3	236	ILE
27	3	237	THR
27	3	256	ILE
27	3	257	THR
27	3	261	PHE
27	3	264	GLN
27	3	266	ASP
27	3	271	ILE
27	3	273	ARG
27	3	275	ARG
27	3	286	ILE
27	3	294	LYS
27	3	297	SER
27	3	310	ILE
27	3	315	LEU
27	3	317	THR
27	3	320	ASP
27	3	321	MET

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Mol	Chain	Res	Type
27	3	327	LEU
27	3	332	THR
27	3	333	VAL
27	3	335	VAL
27	3	340	CYS
27	3	343	LYS
27	3	344	THR
27	3	347	LEU
27	3	355	ASN
27	3	356	HIS
27	3	364	LEU
27	3	370	GLU
27	3	384	THR
27	3	390	ARG
27	3	392	LEU
27	3	403	SER
27	3	404	LEU
27	3	412	ILE
27	3	427	CYS
27	3	433	SER
27	3	435	LEU
27	3	439	ARG
27	3	443	GLU
27	3	459	VAL
27	3	461	THR
27	3	462	VAL
27	3	464	ARG
27	3	465	HIS
27	3	466	ILE
27	3	469	GLU
27	3	471	ASP
27	3	474	ILE
27	3	475	ILE
27	3	482	THR
27	3	492	GLU
27	3	511	LEU
27	3	514	ASP
27	3	527	ILE
27	3	537	LYS
27	3	541	LYS
27	3	543	THR
27	3	544	ILE

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Mol	Chain	Res	Type
27	3	555	VAL
27	3	556	ILE
27	3	563	LEU
27	3	564	VAL
27	3	568	MET
27	3	574	LEU
27	3	578	THR
27	3	584	SER
27	3	592	LEU
27	3	594	ASN
27	3	595	VAL
27	3	603	ARG
27	3	604	PHE
27	3	605	LEU
27	3	614	VAL
27	3	617	ILE
27	3	620	ASP
27	3	626	GLN
27	3	630	MET
27	3	642	ILE
27	3	643	VAL
27	3	665	LEU
27	3	669	LEU
27	3	675	LEU
27	3	676	ARG
27	3	677	THR
27	3	678	VAL
27	3	679	LEU
27	3	685	ASP
27	3	689	THR
27	3	697	ARG
27	3	703	ARG
27	3	704	VAL
27	3	715	MET
27	3	721	LEU
27	3	726	GLN
27	3	727	SER
27	3	732	THR
27	3	738	THR
27	3	758	SER
27	3	761	THR
27	3	775	ASN

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Mol	Chain	Res	Type
27	3	776	GLN
27	3	797	LEU
27	3	798	ILE
27	3	802	THR
27	3	818	GLN
27	3	821	GLU
27	3	822	GLU
27	3	834	LEU
27	3	837	GLU
27	3	850	SER
27	3	851	ILE
27	3	865	VAL
27	3	867	ARG
27	3	868	VAL
27	3	876	THR
27	3	882	LEU
27	3	883	GLU
27	3	897	SER
27	3	901	GLU
27	3	902	ASP
27	3	920	VAL
27	3	925	VAL
27	3	927	THR
27	3	931	VAL
27	3	937	LEU
27	3	941	HIS
27	3	942	LYS
27	3	943	THR
27	3	945	VAL
27	3	948	VAL
27	3	958	ARG
27	3	959	VAL
27	3	960	LEU
27	3	961	ILE
27	3	966	LEU
27	3	968	ARG
27	3	969	VAL
27	3	978	LEU
27	3	981	CYS
27	3	988	ASN
27	3	991	SER
27	3	993	ILE

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Mol	Chain	Res	Type
27	3	995	THR
27	3	996	ILE
27	3	998	HIS
27	3	1000	VAL
27	3	1002	VAL
27	3	1012	VAL
27	3	1022	ILE
27	3	1026	ASP
27	3	1028	THR
27	3	1033	VAL
27	3	1035	THR
27	3	1042	ASP
27	3	1056	VAL
27	3	1062	THR
27	3	1066	VAL
27	3	1090	GLU
27	3	1093	MET
27	3	1094	ASN
27	3	1099	GLU
27	3	1101	VAL
27	3	1103	SER
27	3	1107	THR
27	3	1114	SER
27	3	1116	SER
27	3	1118	VAL
27	3	1120	THR
27	3	1121	THR
27	3	1135	HIS
27	3	1148	LEU
27	3	1150	SER
27	3	1151	GLU
27	3	1168	PHE
27	3	1170	VAL
27	3	1183	ASN
27	3	1184	SER
27	3	1193	VAL
29	w	390	LYS
29	w	400	HIS
29	w	403	ASN
29	w	414	TYR
29	w	415	THR
29	w	425	HIS

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Mol	Chain	Res	Type
29	w	430	ARG
29	w	437	CYS
29	w	446	PHE
29	w	453	GLU
29	w	458	LEU
29	w	463	LYS
29	w	468	SER
29	w	471	TRP
29	w	475	THR
29	w	487	VAL
29	w	500	LEU
30	2	451	LYS
30	2	460	PHE
30	2	461	THR
30	2	465	LEU
30	2	471	ARG
30	2	474	VAL
30	2	475	VAL
30	2	477	MET
30	2	488	LEU
30	2	494	THR
30	2	505	CYS
30	2	509	LYS
30	2	512	GLN
30	2	517	ILE
30	2	524	LEU
30	2	526	ASP
30	2	528	ILE
30	2	531	THR
30	2	543	LYS
30	2	557	VAL
30	2	561	MET
30	2	564	ILE
30	2	590	LEU
30	2	595	LYS
30	2	705	ARG
32	7	9	ILE
32	7	11	CYS
32	7	14	GLN
32	7	23	CYS
32	7	25	LYS
32	7	30	CYS

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Mol	Chain	Res	Type
32	7	32	ILE
32	7	35	SER
32	7	37	VAL
32	7	40	CYS
32	7	45	ILE
32	7	48	GLU
32	7	60	ILE
32	7	68	ASP
32	7	71	TYR
32	7	89	VAL
33	5	5	TYR
33	5	11	LEU
33	5	12	GLU
33	5	23	HIS
33	5	25	ASP
33	5	26	THR
33	5	27	THR
33	5	32	LEU
33	5	33	VAL
33	5	35	GLN
33	5	36	HIS
33	5	42	SER
33	5	51	ASN
33	5	57	GLU
33	5	60	SER
33	5	63	ARG
33	5	65	ARG
33	5	69	MET
33	5	72	MET
33	5	74	GLN
35	v	10	LYS
35	v	16	VAL
35	v	20	SER
35	v	33	LEU
35	v	37	THR
35	v	59	CYS
35	v	68	SER
35	v	76	LYS
35	v	77	LYS
35	v	81	ASN
35	v	85	ARG
46	9	201	ASN

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Mol	Chain	Res	Type
46	9	221	LEU
46	9	242	SER
46	9	246	VAL
46	9	247	SER
46	9	253	THR
46	9	256	VAL
46	9	262	GLU
46	9	291	LEU
46	9	293	LEU
46	9	295	LEU
46	9	296	HIS
46	9	298	ASP
46	9	299	LEU
46	9	338	THR
46	9	344	SER
46	9	348	LYS
46	9	352	ASP
46	9	359	SER
46	9	360	HIS
46	9	365	ILE
46	9	393	LYS
46	9	405	ASP
46	9	407	LEU
46	9	408	THR
46	9	426	ILE
46	9	431	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (195) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	39	GLN
1	A	78	ASN
1	A	121	HIS
1	A	181	ASN
1	A	244	GLN
1	A	300	ASN
1	A	325	HIS
1	A	326	HIS
1	A	328	HIS
1	A	357	ASN
1	A	368	GLN
1	A	439	GLN

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Mol	Chain	Res	Type
1	A	467	GLN
1	A	495	GLN
1	A	499	GLN
1	A	502	ASN
1	A	584	HIS
1	A	659	GLN
1	A	675	GLN
1	A	752	ASN
1	A	755	HIS
1	A	775	ASN
1	A	788	GLN
1	A	792	HIS
1	A	815	HIS
1	A	904	HIS
1	A	1096	HIS
1	A	1293	ASN
1	A	1304	ASN
1	A	1337	GLN
1	A	1400	ASN
1	A	1460	HIS
1	A	1487	HIS
1	A	1527	ASN
1	A	1552	GLN
1	A	1580	HIS
1	A	1583	GLN
1	A	1623	ASN
1	A	1710	ASN
1	A	1784	ASN
1	A	1811	ASN
1	A	1830	GLN
1	A	1875	HIS
1	A	1894	GLN
1	A	1947	ASN
1	A	1965	HIS
1	A	2123	GLN
1	A	2136	ASN
1	A	2138	GLN
1	A	2155	GLN
1	A	2241	ASN
1	A	2276	GLN
3	C	82	GLN
3	C	131	ASN

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Mol	Chain	Res	Type
3	C	139	HIS
3	C	140	HIS
3	C	210	ASN
3	C	245	HIS
3	C	286	ASN
3	C	306	ASN
3	C	313	GLN
3	C	350	ASN
3	C	627	HIS
3	C	743	ASN
3	C	802	HIS
5	E	94	ASN
5	E	101	ASN
5	E	116	HIS
5	E	188	GLN
5	E	287	ASN
5	E	331	ASN
10	J	234	ASN
10	J	238	ASN
10	J	244	ASN
10	J	289	ASN
10	J	331	GLN
10	J	347	HIS
10	J	351	ASN
11	K	198	GLN
11	K	228	HIS
12	L	29	ASN
13	N	87	ASN
13	N	95	GLN
14	O	120	ASN
15	P	45	GLN
15	P	204	GLN
15	P	212	ASN
17	R	175	GLN
17	R	184	GLN
17	R	279	HIS
17	R	368	ASN
17	R	385	ASN
17	R	398	ASN
17	R	431	ASN
19	T	203	HIS
19	T	269	GLN

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Mol	Chain	Res	Type
19	T	407	GLN
19	T	437	HIS
19	T	446	ASN
19	T	455	GLN
20	U	20	GLN
21	V	474	HIS
21	V	499	GLN
21	V	553	HIS
21	V	609	GLN
21	V	620	ASN
23	X	195	ASN
23	X	265	HIS
23	X	268	GLN
23	X	414	ASN
23	X	475	ASN
23	X	606	GLN
23	X	656	GLN
23	X	720	ASN
23	X	745	HIS
23	X	866	ASN
23	X	870	ASN
23	X	883	ASN
23	X	887	GLN
23	X	904	GLN
23	X	950	HIS
23	X	964	GLN
23	X	971	HIS
23	X	979	GLN
23	X	987	HIS
24	Y	44	ASN
24	Y	123	HIS
24	Y	158	HIS
24	Y	312	HIS
26	1	550	HIS
26	1	599	ASN
26	1	669	GLN
26	1	682	HIS
26	1	817	HIS
26	1	829	ASN
26	1	886	HIS
26	1	1026	ASN
26	1	1028	HIS

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Mol	Chain	Res	Type
26	1	1032	GLN
26	1	1069	HIS
26	1	1104	GLN
26	1	1209	ASN
26	1	1252	GLN
26	1	1256	HIS
26	1	1277	GLN
27	3	19	HIS
27	3	46	ASN
27	3	145	ASN
27	3	169	HIS
27	3	179	ASN
27	3	194	ASN
27	3	205	GLN
27	3	206	GLN
27	3	231	HIS
27	3	233	ASN
27	3	264	GLN
27	3	304	GLN
27	3	411	GLN
27	3	440	HIS
27	3	480	ASN
27	3	518	GLN
27	3	550	ASN
27	3	573	GLN
27	3	612	ASN
27	3	636	GLN
27	3	671	ASN
27	3	709	GLN
27	3	730	HIS
27	3	775	ASN
27	3	796	ASN
27	3	844	ASN
27	3	861	GLN
27	3	881	GLN
27	3	933	ASN
27	3	956	GLN
27	3	994	GLN
27	3	998	HIS
27	3	1019	ASN
27	3	1052	ASN
27	3	1105	GLN

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Mol	Chain	Res	Type
29	w	407	ASN
29	w	413	ASN
29	w	423	GLN
30	2	546	GLN
30	2	579	GLN
32	7	14	GLN
32	7	55	GLN
35	v	50	HIS
35	v	65	ASN
35	v	79	GLN
46	9	287	ASN
46	9	327	ASN
46	9	331	GLN
46	9	370	ASN
46	9	412	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	B	96/117 (82%)	33 (34%)	1 (1%)
6	F	96/107 (89%)	48 (50%)	4 (4%)
7	G	70/220 (31%)	46 (65%)	9 (12%)
8	H	163/188 (86%)	73 (44%)	6 (3%)
All	All	425/632 (67%)	200 (47%)	20 (4%)

All (200) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
2	B	9	G
2	B	10	U
2	B	20	G
2	B	21	A
2	B	22	U
2	B	23	C
2	B	24	G
2	B	25	C
2	B	40	U
2	B	44	A
2	B	47	A
2	B	48	A
2	B	52	U

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Mol	Chain	Res	Type
2	B	57	G
2	B	62	G
2	B	65	G
2	B	68	C
2	B	70	A
2	B	71	C
2	B	88	A
2	B	89	U
2	B	90	U
2	B	92	U
2	B	93	U
2	B	94	U
2	B	95	G
2	B	96	A
2	B	97	G
2	B	102	U
2	B	106	U
2	B	109	G
2	B	116	U
2	B	117	A
6	F	6	C
6	F	7	G
6	F	9	U
6	F	10	U
6	F	12	G
6	F	17	C
6	F	24	A
6	F	25	C
6	F	26	U
6	F	27	A
6	F	28	A
6	F	29	A
6	F	30	A
6	F	33	G
6	F	34	G
6	F	35	A
6	F	37	C
6	F	38	G
6	F	40	U
6	F	42	C
6	F	44	G
6	F	45	A

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Mol	Chain	Res	Type
6	F	46	G
6	F	48	A
6	F	49	G
6	F	54	G
6	F	59	G
6	F	60	C
6	F	61	C
6	F	65	G
6	F	66	C
6	F	68	C
6	F	73	A
6	F	74	U
6	F	75	G
6	F	78	A
6	F	79	C
6	F	80	G
6	F	81	C
6	F	82	A
6	F	83	A
6	F	84	A
6	F	85	U
6	F	86	U
6	F	87	C
6	F	88	G
6	F	89	U
6	F	91	A
7	G	-10	G
7	G	-9	C
7	G	-8	C
7	G	-7	U
7	G	-6	C
7	G	-5	C
7	G	-4	G
7	G	1	G
7	G	2	U
7	G	3	A
7	G	4	A
7	G	8	C
7	G	9	C
7	G	10	U
7	G	11	A
7	G	13	C

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Mol	Chain	Res	Type
7	G	17	U
7	G	19	G
7	G	20	A
7	G	21	A
7	G	22	C
7	G	23	U
7	G	24	G
7	G	84	U
7	G	85	G
7	G	88	G
7	G	89	U
7	G	90	C
7	G	92	U
7	G	97	A
7	G	98	U
7	G	100	C
7	G	101	U
7	G	102	G
7	G	103	U
7	G	104	C
7	G	105	C
7	G	106	C
7	G	110	U
7	G	111	U
7	G	112	U
7	G	113	U
7	G	114	U
7	G	115	C
7	G	116	C
7	G	117	A
8	H	2	U
8	H	13	C
8	H	14	C
8	H	15	U
8	H	16	U
8	H	17	U
8	H	18	U
8	H	19	G
8	H	23	A
8	H	24	A
8	H	29	A
8	H	30	A

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Mol	Chain	Res	Type
8	H	31	G
8	H	33	G
8	H	34	U
8	H	35	A
8	H	44	U
8	H	45	C
8	H	46	U
8	H	47	U
8	H	48	A
8	H	49	U
8	H	53	U
8	H	63	G
8	H	64	A
8	H	65	U
8	H	70	C
8	H	74	U
8	H	80	A
8	H	81	G
8	H	82	G
8	H	84	C
8	H	98	G
8	H	99	A
8	H	100	U
8	H	101	U
8	H	102	U
8	H	103	U
8	H	106	G
8	H	107	A
8	H	110	A
8	H	111	G
8	H	112	G
8	H	113	G
8	H	116	A
8	H	117	U
8	H	121	A
8	H	122	U
8	H	123	A
8	H	124	G
8	H	128	C
8	H	129	U
8	H	133	U
8	H	136	G

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Mol	Chain	Res	Type
8	H	137	U
8	H	141	C
8	H	144	C
8	H	145	A
8	H	146	C
8	H	147	G
8	H	149	A
8	H	157	G
8	H	162	U
8	H	164	C
8	H	165	A
8	H	166	G
8	H	168	A
8	H	169	C
8	H	171	U
8	H	177	A
8	H	178	A
8	H	179	C
8	H	180	G

All (20) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	B	39	C
6	F	37	C
6	F	47	A
6	F	48	A
6	F	58	G
7	G	21	A
7	G	84	U
7	G	88	G
7	G	89	U
7	G	101	U
7	G	105	C
7	G	110	U
7	G	111	U
7	G	113	U
8	H	13	C
8	H	18	U
8	H	43	U
8	H	45	C
8	H	47	U

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Mol	Chain	Res	Type
8	H	165	A

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

1 non-standard protein/DNA/RNA residue is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
17	SEP	R	224	17	8,9,10	1.42	1 (12%)	8,12,14	2.10	2 (25%)

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
17	SEP	R	224	17	-	0/5/8/10	-

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	R	224	SEP	P-O1P	3.12	1.60	1.50

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	R	224	SEP	P-OG-CB	-4.46	106.02	118.30
17	R	224	SEP	OG-CB-CA	3.47	111.52	108.14

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 16 ligands modelled in this entry, 14 are 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	$\#\|Z\| > 2$
48	GTP	C	1500	49	26,34,34	1.14	1 (3%)	32,54,54	1.91	7 (21%)
47	IHP	A	3000	-	36,36,36	1.44	6 (16%)	54,60,60	1.91	18 (33%)

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
48	GTP	C	1500	49	-	4/18/38/38	0/3/3/3
47	IHP	A	3000	-	-	8/30/54/54	0/1/1/1

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	C	1500	GTP	C5-C6	-4.13	1.39	1.47
47	A	3000	IHP	P6-O16	4.02	1.66	1.59
47	A	3000	IHP	P5-O15	2.73	1.64	1.59
47	A	3000	IHP	C5-C4	2.41	1.57	1.52
47	A	3000	IHP	C6-C5	2.31	1.57	1.52
47	A	3000	IHP	P1-O41	-2.18	1.46	1.54
47	A	3000	IHP	P2-O12	2.18	1.63	1.59

All (25) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	C	1500	GTP	PA-O3A-PB	-5.10	115.31	132.83
48	C	1500	GTP	PB-O3B-PG	-5.09	115.36	132.83
47	A	3000	IHP	O46-P6-O26	-4.04	94.87	110.68
47	A	3000	IHP	O14-C4-C5	3.70	117.41	108.69
48	C	1500	GTP	C5-C6-N1	3.42	119.98	113.95
47	A	3000	IHP	C4-C3-C2	3.39	117.83	110.41
47	A	3000	IHP	O41-P1-O21	3.37	123.88	110.68
48	C	1500	GTP	C3'-C2'-C1'	3.32	105.98	100.98
47	A	3000	IHP	C6-C1-C2	3.18	117.38	110.41
48	C	1500	GTP	C2-N1-C6	-3.14	119.32	125.10
47	A	3000	IHP	O31-P1-O21	-3.13	98.43	110.68
47	A	3000	IHP	O12-C2-C3	3.10	115.98	108.69
47	A	3000	IHP	O43-P3-O33	3.03	119.22	107.64
48	C	1500	GTP	C8-N7-C5	2.99	108.69	102.99
47	A	3000	IHP	O14-C4-C3	-2.92	101.80	108.69
47	A	3000	IHP	O12-C2-C1	2.68	114.99	108.69
47	A	3000	IHP	O36-P6-O26	2.58	120.76	110.68
47	A	3000	IHP	O41-P1-O31	2.51	117.22	107.64
47	A	3000	IHP	O13-C3-C4	2.43	114.41	108.69
47	A	3000	IHP	O15-P5-O25	-2.41	100.07	109.39
47	A	3000	IHP	O16-P6-O26	-2.31	100.47	109.39
47	A	3000	IHP	O44-P4-O34	2.31	116.47	107.64
48	C	1500	GTP	O6-C6-C5	-2.27	119.93	124.37
47	A	3000	IHP	O16-C6-C5	2.16	113.77	108.69
47	A	3000	IHP	O15-C5-C4	2.02	113.45	108.69

There are no chirality outliers.

All (12) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
47	A	3000	IHP	C1-C6-O16-P6
47	A	3000	IHP	C5-C6-O16-P6
48	C	1500	GTP	C4'-C5'-O5'-PA
48	C	1500	GTP	C3'-C4'-C5'-O5'
48	C	1500	GTP	O4'-C4'-C5'-O5'
47	A	3000	IHP	C1-O11-P1-O41
47	A	3000	IHP	C3-O13-P3-O23
47	A	3000	IHP	C6-O16-P6-O26
47	A	3000	IHP	C2-O12-P2-O42
47	A	3000	IHP	C6-O16-P6-O36
47	A	3000	IHP	C6-O16-P6-O46

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Mol	Chain	Res	Type	Atoms
48	C	1500	GTP	C5'-O5'-PA-O1A

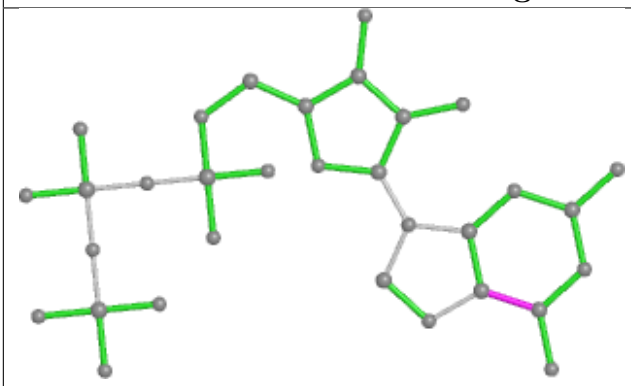
There are no ring outliers.

2 monomers are involved in 4 short contacts:

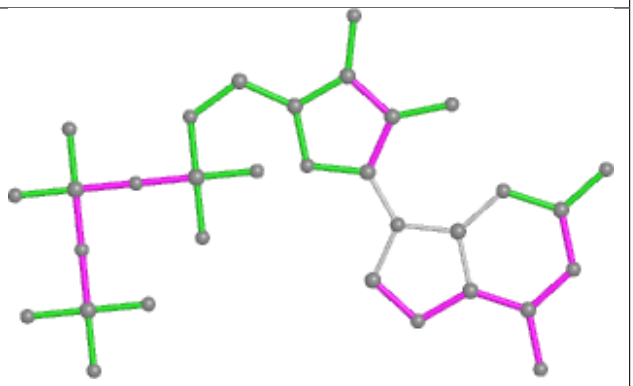
Mol	Chain	Res	Type	Clashes	Symm-Clashes
48	C	1500	GTP	2	0
47	A	3000	IHP	2	0

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

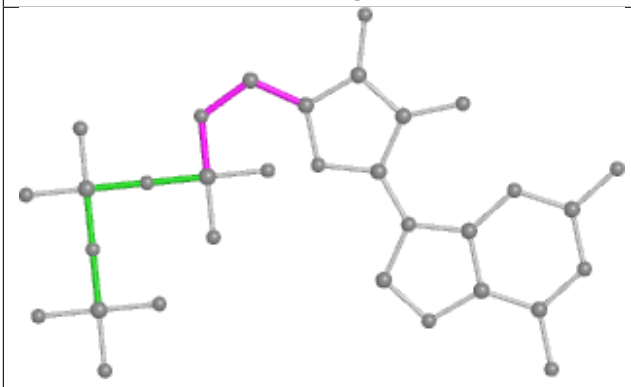
Ligand GTP C 1500



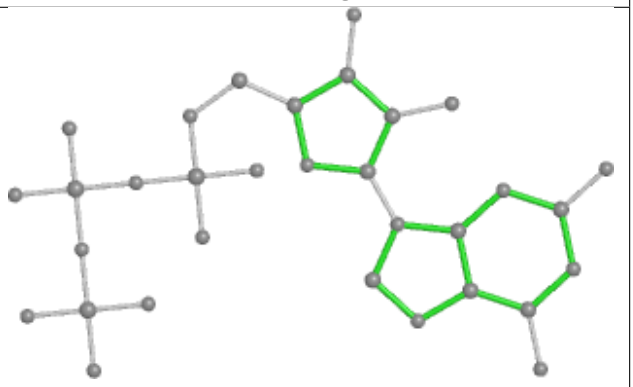
Bond lengths



Bond angles

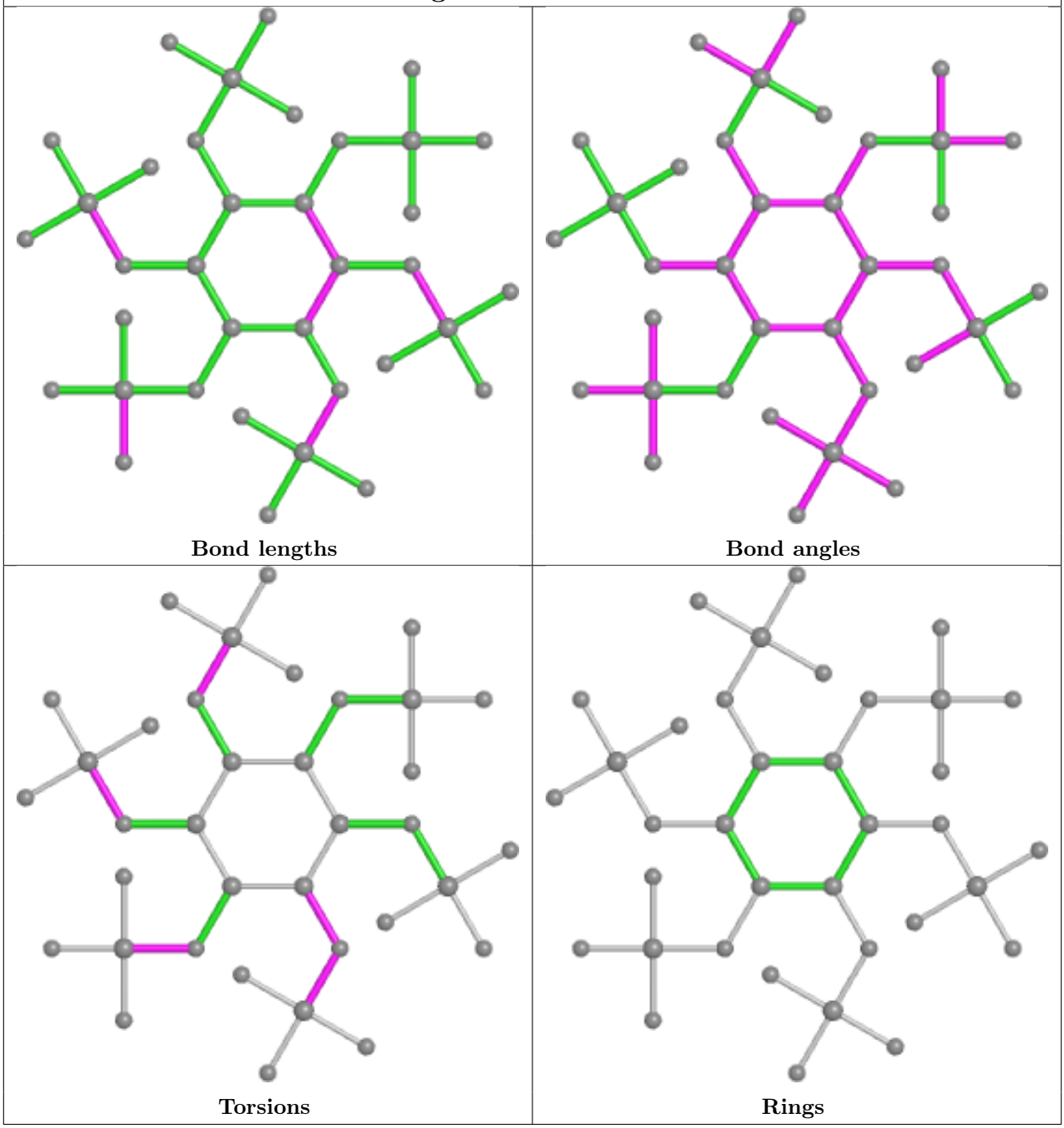


Torsions



Rings

Ligand IHP A 3000



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.

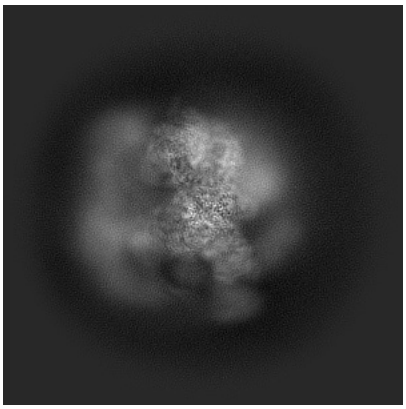
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-35109. These allow visual inspection of the internal detail of the map and identification of artifacts.

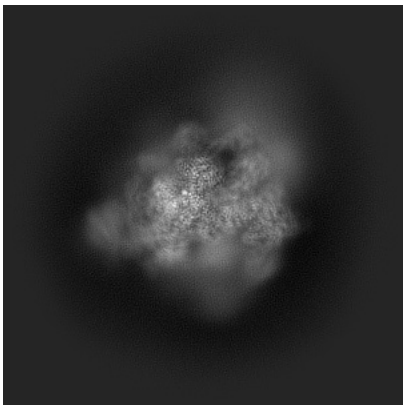
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

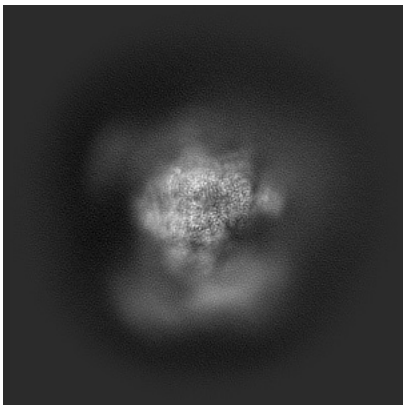
6.1.1 Primary map



X

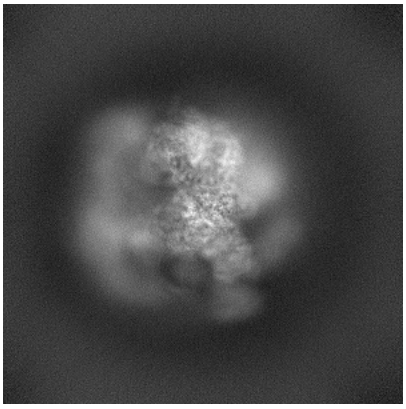


Y

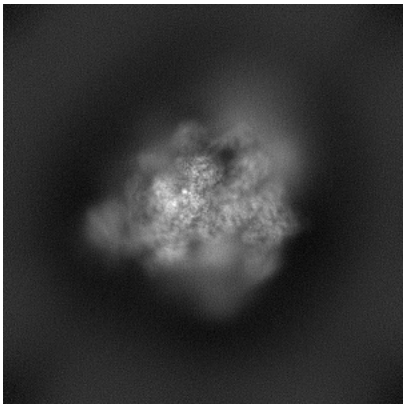


Z

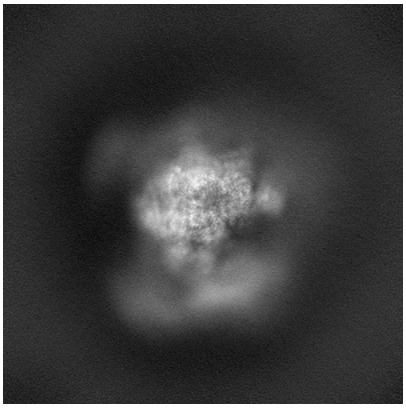
6.1.2 Raw map



X



Y

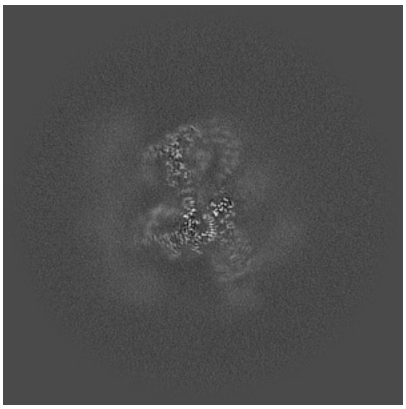


Z

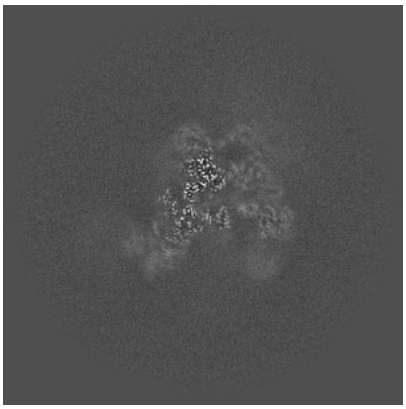
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

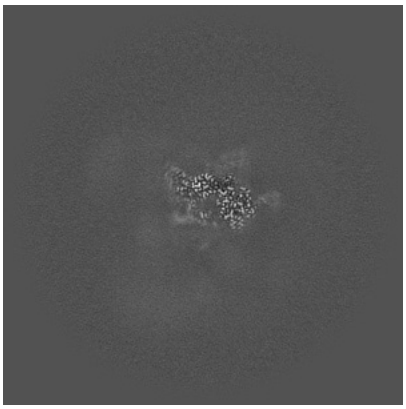
6.2.1 Primary map



X Index: 240

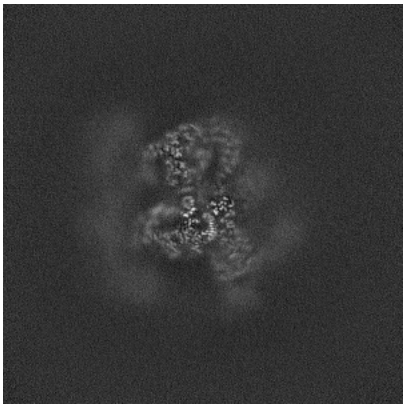


Y Index: 240

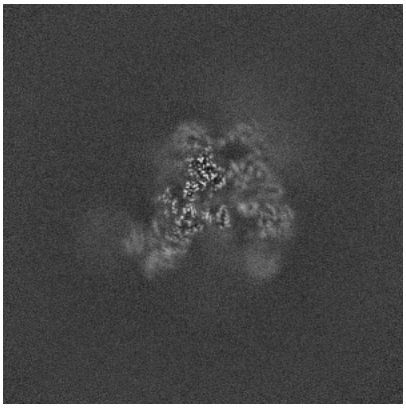


Z Index: 240

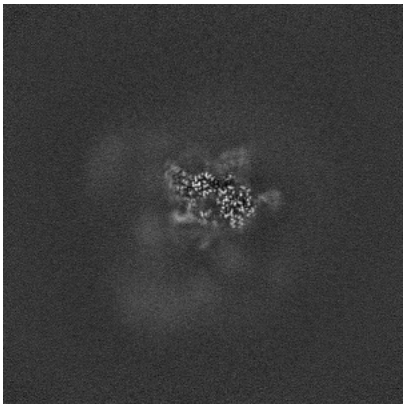
6.2.2 Raw map



X Index: 240



Y Index: 240

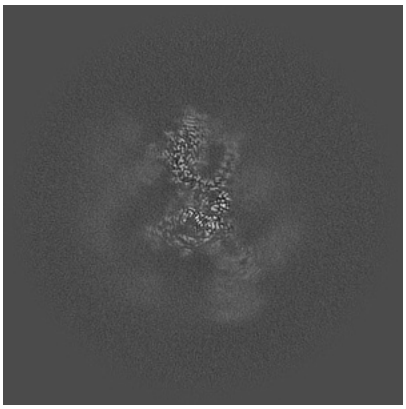


Z Index: 240

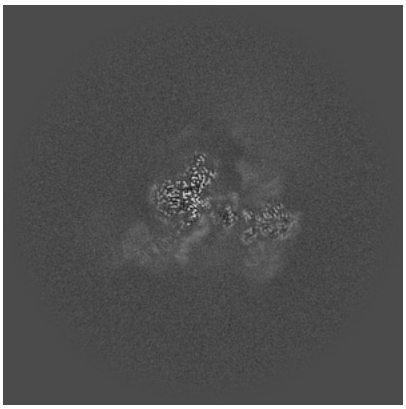
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

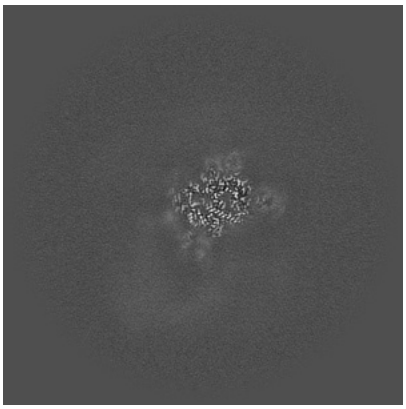
6.3.1 Primary map



X Index: 227

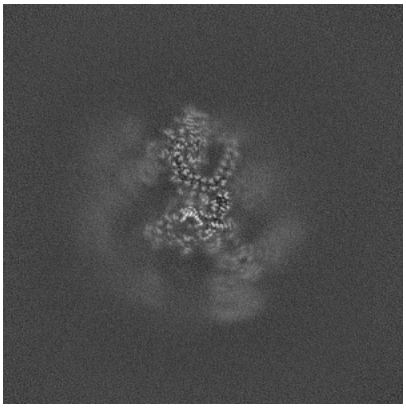


Y Index: 226

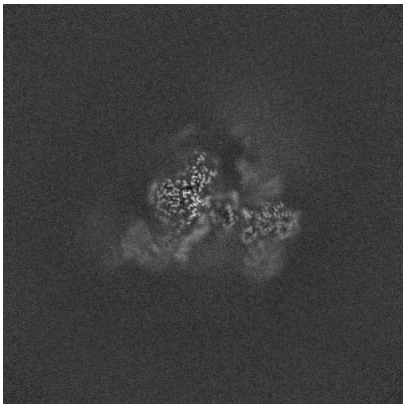


Z Index: 227

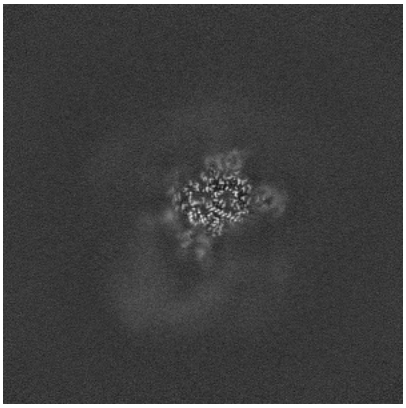
6.3.2 Raw map



X Index: 226



Y Index: 226

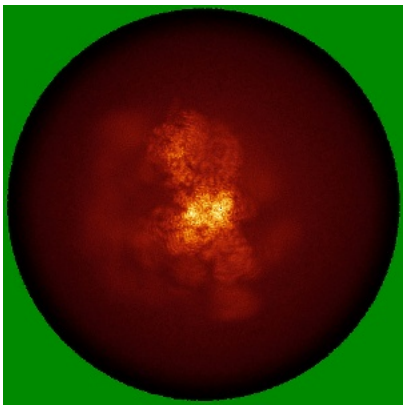


Z Index: 227

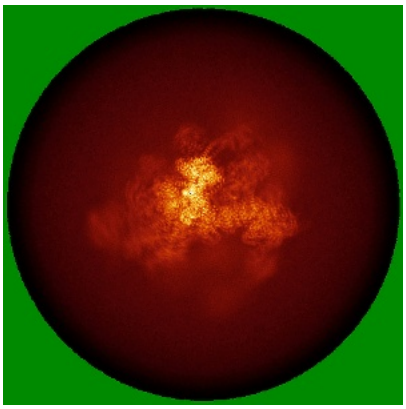
The images above show the largest variance slices of the map in three orthogonal directions.

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

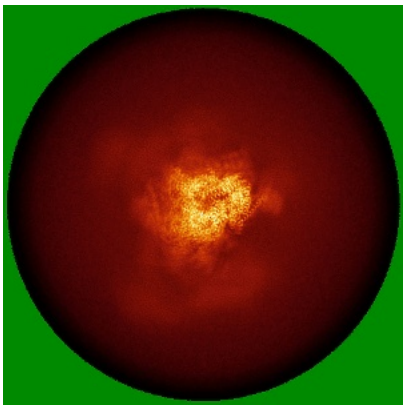
6.4.1 Primary map



X

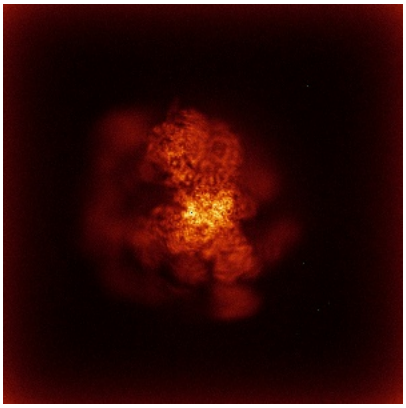


Y

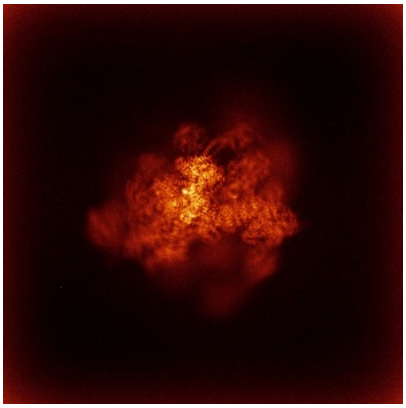


Z

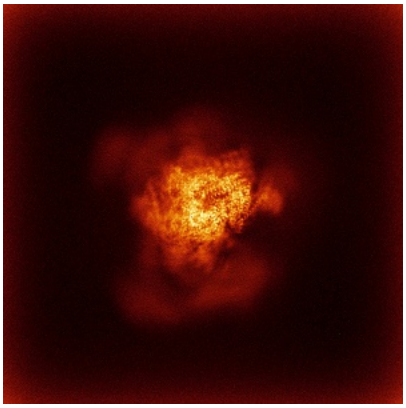
6.4.2 Raw map



X



Y

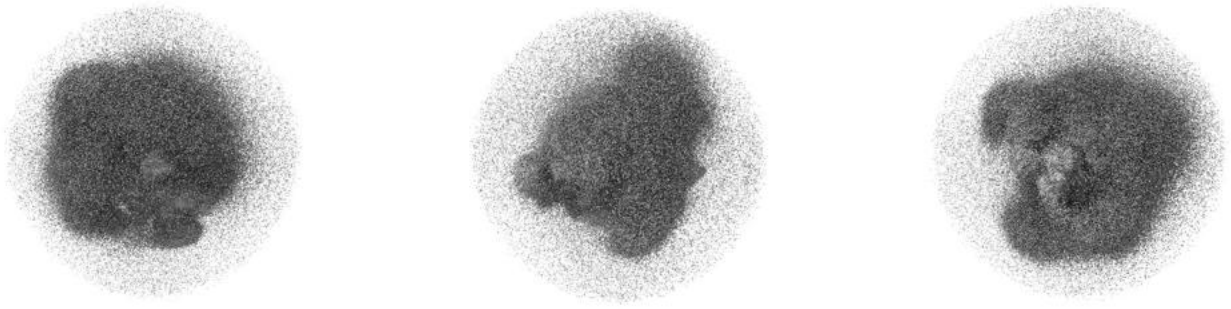


Z

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

6.5 Orthogonal surface views (i)

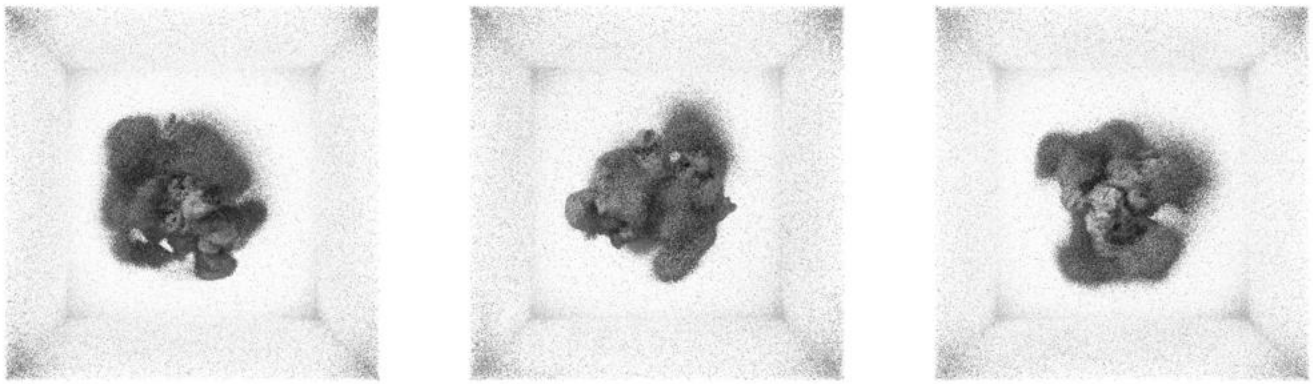
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.22. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

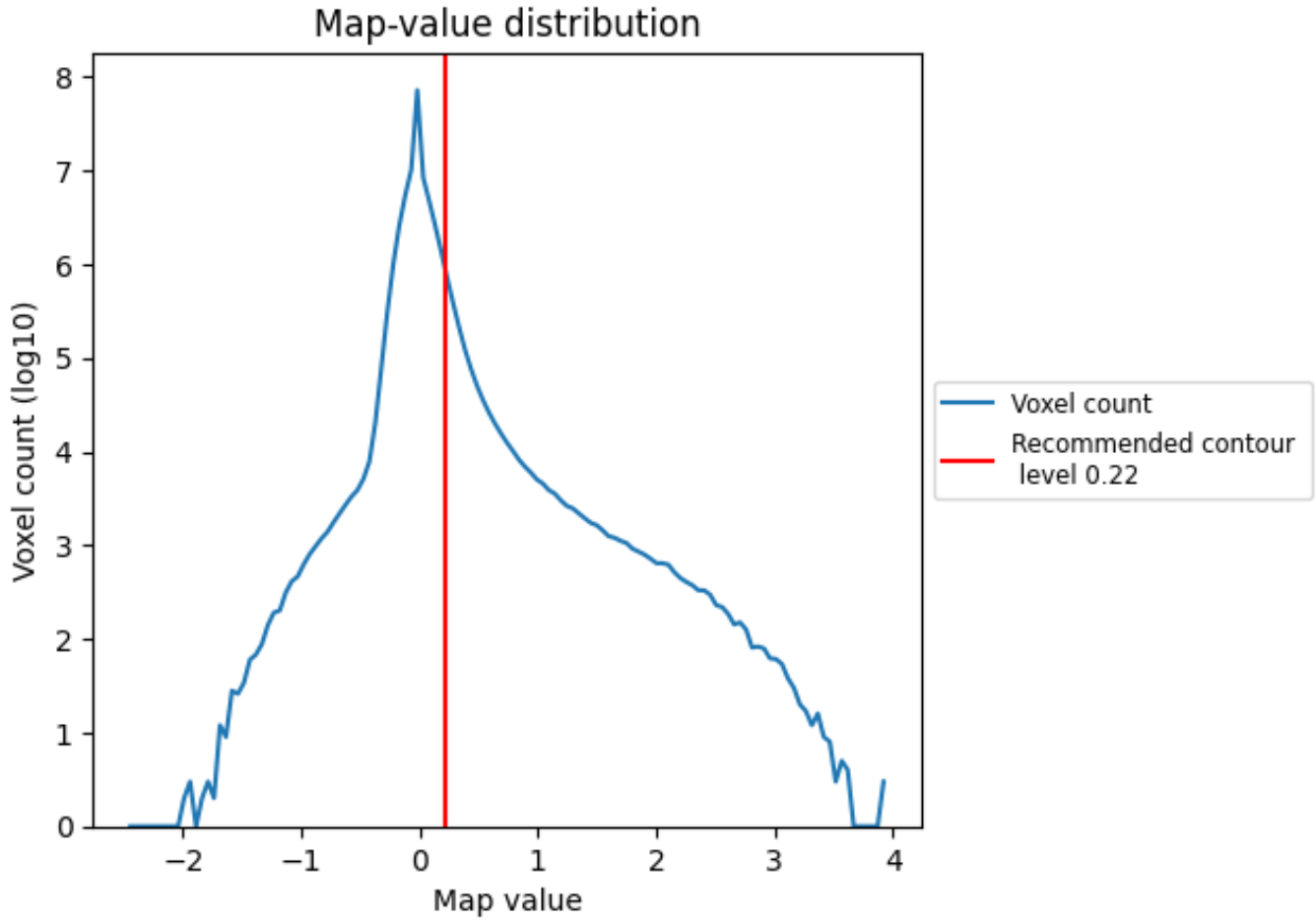
6.6 Mask visualisation (i)

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

7 Map analysis

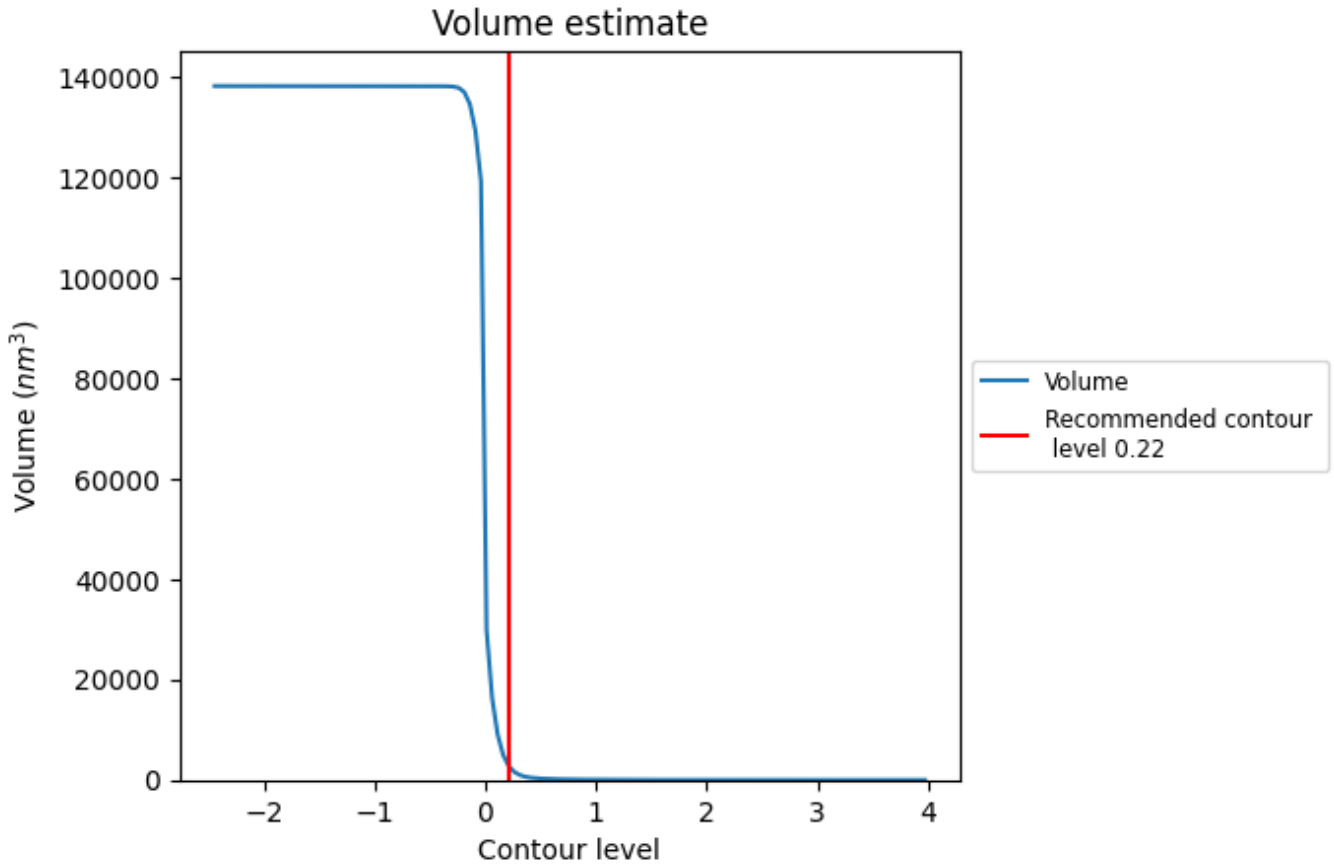
This section contains the results of statistical analysis of the map.

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.

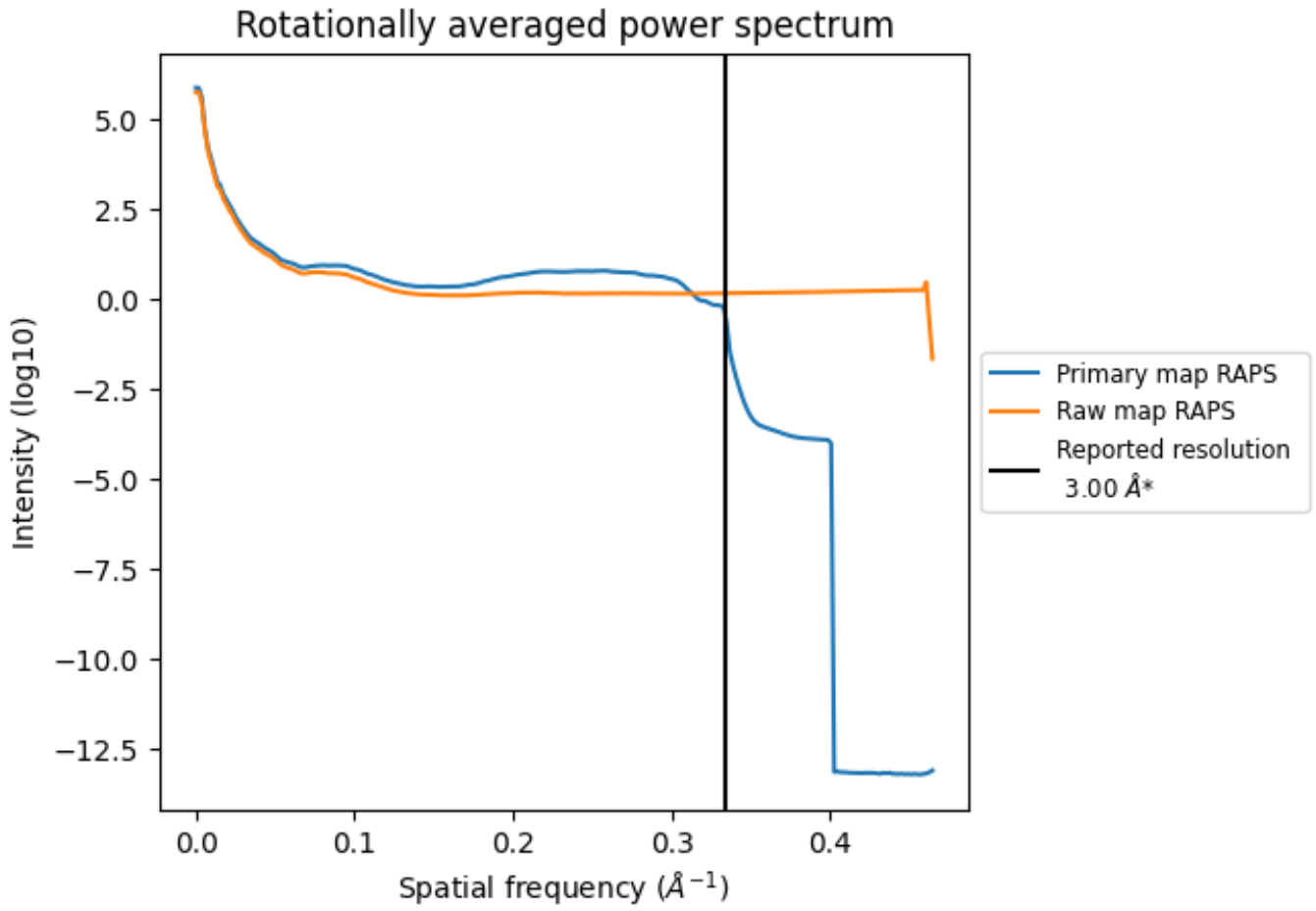
7.2 Volume estimate



The volume at the recommended contour level is 2586 nm^3; this corresponds to an approximate mass of 2336 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)

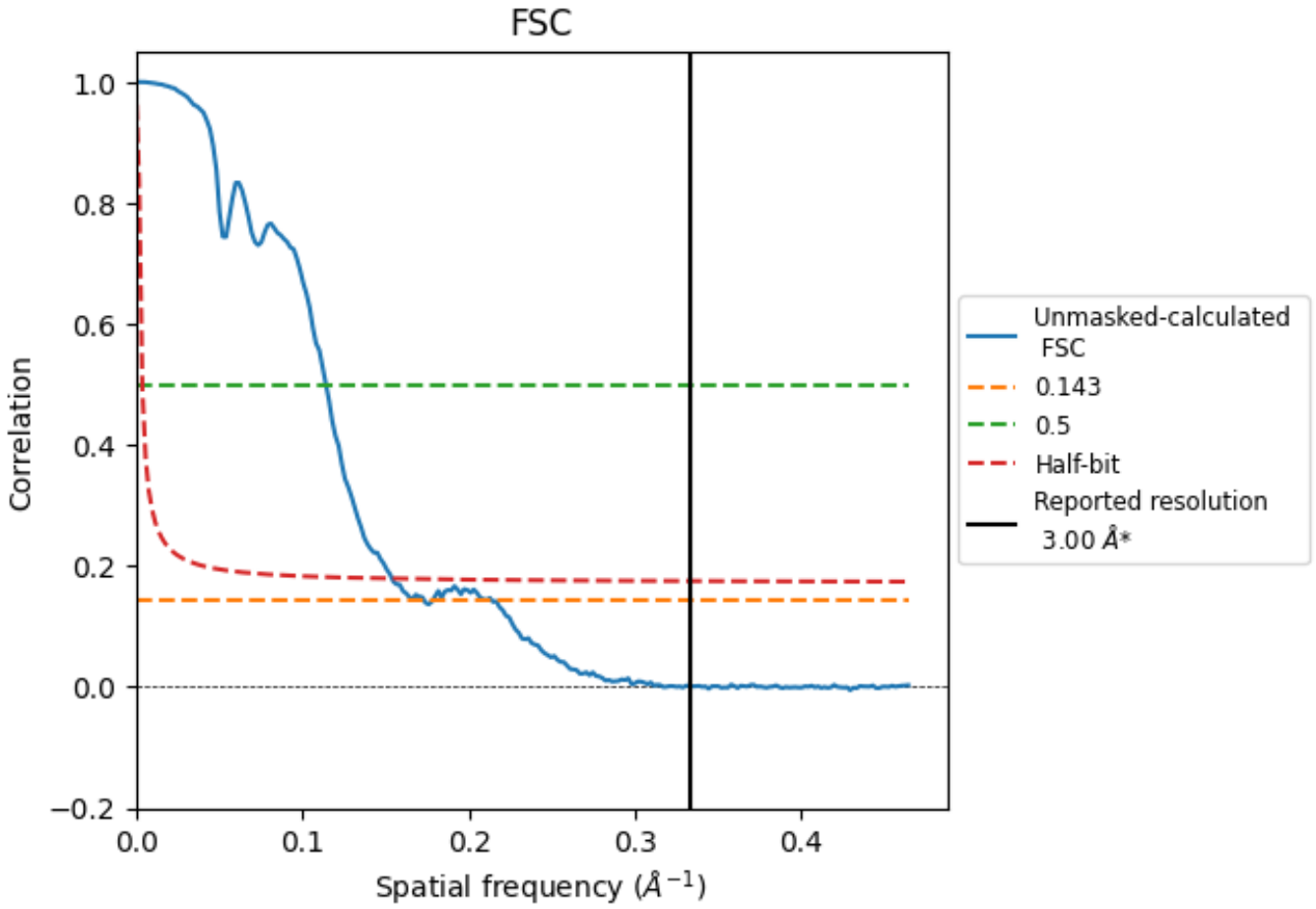


*Reported resolution corresponds to spatial frequency of 0.333 $Å^{-1}$

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.333 Å^{-1}

8.2 Resolution estimates (i)

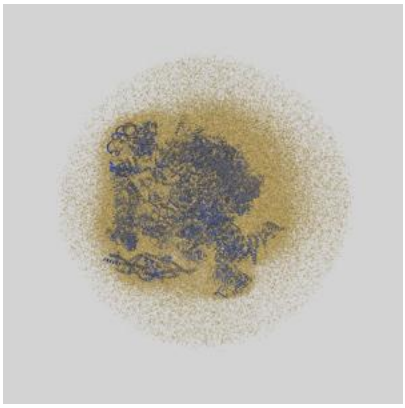
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.00	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	5.77	8.75	6.49

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 5.77 differs from the reported value 3.0 by more than 10 %

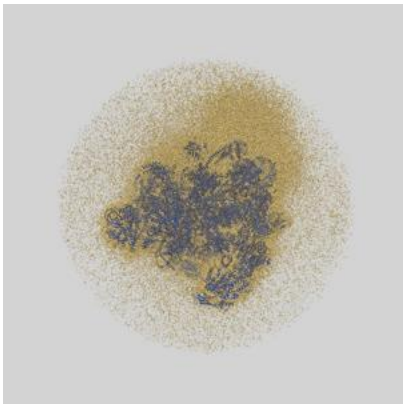
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-35109 and PDB model 8I0T. Per-residue inclusion information can be found in section 3 on page 14.

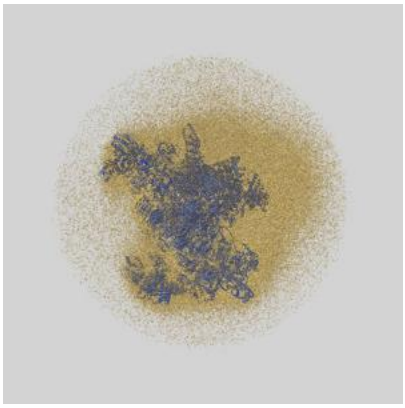
9.1 Map-model overlay



X



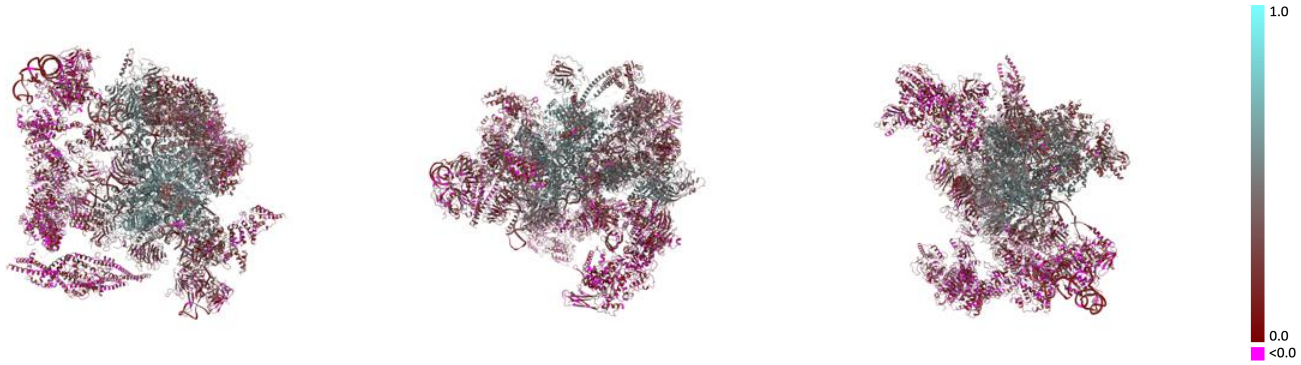
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.22 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

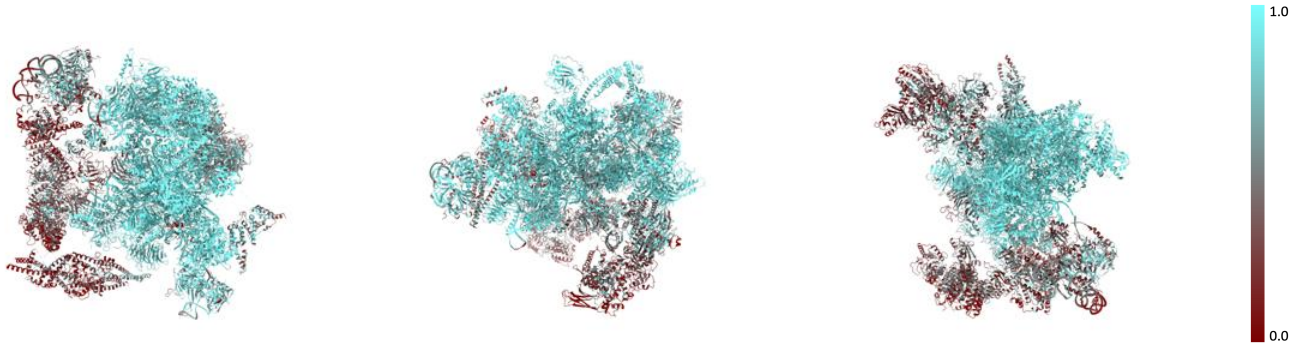
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

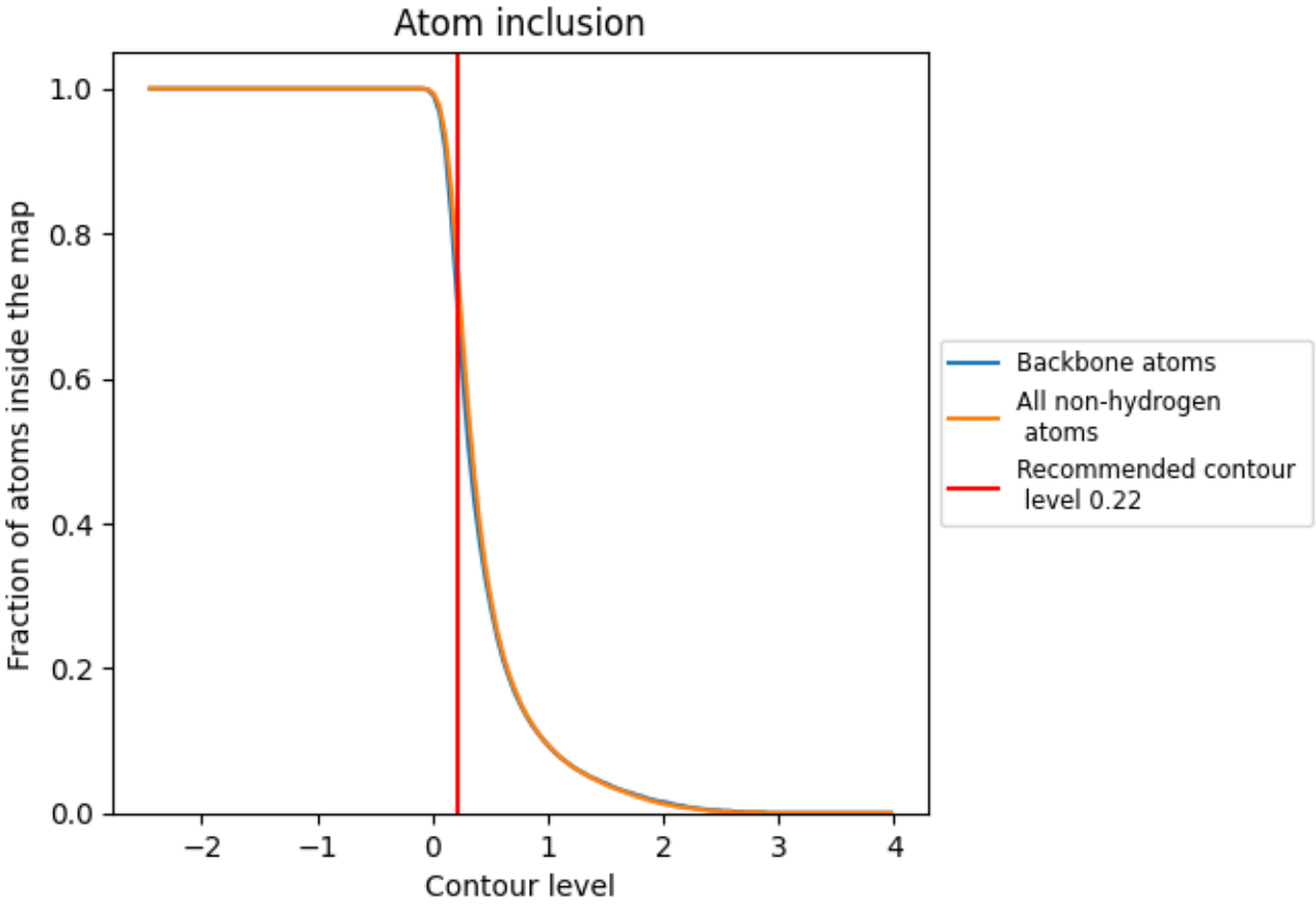
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.22).

9.4 Atom inclusion (i)



At the recommended contour level, 70% of all backbone atoms, 75% 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 (0.22) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7470	0.3400
1	0.9470	0.4170
2	0.9040	0.4390
3	0.9370	0.4190
4	0.6830	0.2090
5	0.9520	0.5020
7	0.9570	0.4140
9	0.4520	0.2830
A	0.8920	0.4820
B	0.9000	0.3660
C	0.9540	0.3650
D	0.3940	0.1750
E	0.9150	0.3000
F	0.9420	0.3810
G	0.9570	0.3900
H	0.6440	0.2330
I	0.3090	0.1700
J	0.9390	0.3760
K	0.8850	0.4640
L	0.6680	0.3730
N	0.9700	0.4350
O	0.8640	0.3330
P	0.9430	0.5100
Q	0.2830	0.1700
R	0.9220	0.4390
S	0.8830	0.2600
T	0.9940	0.5820
U	0.7840	0.4100
V	0.7860	0.2850
W	0.5610	0.2430
X	0.9240	0.3760
Y	0.9390	0.3500
Z	0.3080	0.1640
a	0.7850	0.2140
b	0.8480	0.2330

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Chain	Atom inclusion	Q-score
c	0.7780	0.2450
d	0.7900	0.2360
e	0.7660	0.1910
f	0.7130	0.2310
g	0.8240	0.2150
h	0.5620	0.1710
i	0.5820	0.1510
j	0.5860	0.1740
k	0.5490	0.1770
l	0.4940	0.1640
m	0.5280	0.1770
n	0.5020	0.1600
o	0.4150	0.1780
p	0.4570	0.2020
q	0.1870	0.1670
r	0.2950	0.1550
s	0.1850	0.1630
t	0.1960	0.1830
u	0.3570	0.1770
v	0.7080	0.3850
w	0.5410	0.2370
y	0.3260	0.1650