Full wwPDB EM Validation Report

Jun 3, 2025 – 03:57 PM EDT

PDB ID	:	9BUI / pdb_00009bui
EMDB ID	:	EMD-44910
Title	:	M1A Midnolin-Proteasome (with Ubl)
Authors	:	Gao, J.; Yip, M.C.J.; Shao, S.
Deposited on	:	2024-05-17
Resolution	:	3.90 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:

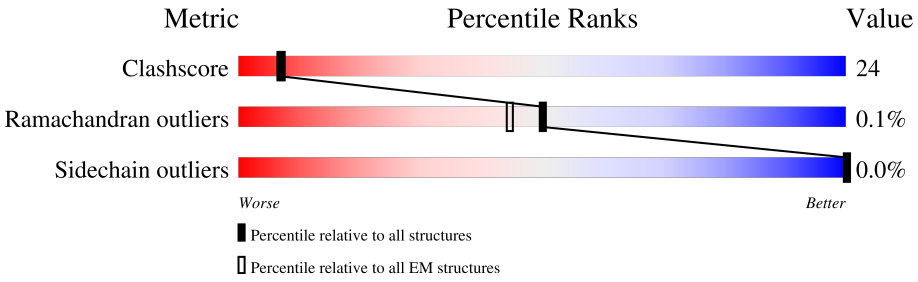
EMDB validation analysis	:	0.0.1.dev118
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0rc1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.43.1

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 3.90 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

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	U	953	48% 37% 15%
2	V	534	47% 36% 17%
3	W	456	42% 53%
4	X	422	21% 60% 38%
5	Y	389	54% 44%
6	Z	324	44% 45% 11%
7	a	376	56% 44%
8	b	377	24% 26% 49%

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Mol	Chain	Length	Quality of chain
9	c	310	41% 52% 7%
10	d	350	41% 34% 25%
11	e	70	31% 20% 49%
12	f	908	28% 50% 41% 9%
13	y	505	14% 8% 78%
14	A	433	6% 48% 37% 14%
15	B	440	14% 51% 34% 16%
16	C	406	7% 50% 35% 14%
17	D	418	5% 45% 44% 10%
18	E	389	46% 42% 13%
19	F	439	38% 39% 23%
20	G	246	55% 40% 5%
21	H	234	59% 37%
22	I	261	8% 57% 39%
23	J	248	12% 50% 46%
24	L	263	58% 32% 10%
25	M	255	56% 38% 5%
26	N	239	54% 29% 17%
26	n	239	8% 45% 30% 25%
27	O	277	9% 46% 34% 20%
27	o	277	19% 42% 21% 36%
28	P	205	13% 51% 49%
28	p	205	44% 46% 34% 20%
29	Q	201	5% 61% 37%
29	q	201	38% 58% 28% 14%

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Mol	Chain	Length	Quality of chain
30	R	263	49% 27% 24%
30	r	263	37% 40% 31% 29%
31	S	241	56% 32% 12%
31	s	241	44% 54% 32% 15%
32	T	264	43% 38% 19%
32	t	264	19% 50% 28% 22%
33	K	241	59% 34% 7%
34	z	213	20% 8% 72%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
35	ATP	D	501	-	-	X	-

2 Entry composition

There are 37 unique types of molecules in this entry. The entry contains 90266 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 26S proteasome non-ATPase regulatory subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	U	812	6334	4021	1078	1190	45	0	0

- Molecule 2 is a protein called 26S proteasome non-ATPase regulatory subunit 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	V	444	3610	2300	644	653	13	0	0

- Molecule 3 is a protein called 26S proteasome non-ATPase regulatory subunit 12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	W	436	3552	2249	608	672	23	0	0

- Molecule 4 is a protein called 26S proteasome non-ATPase regulatory subunit 11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	X	413	3259	2073	556	618	12	0	0

- Molecule 5 is a protein called 26S proteasome non-ATPase regulatory subunit 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	Y	379	3123	1993	534	579	17	0	0

- Molecule 6 is a protein called 26S proteasome non-ATPase regulatory subunit 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	Z	287	2290	1462	394	429	5	0	0

- Molecule 7 is a protein called 26S proteasome non-ATPase regulatory subunit 13.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	a	375	Total	C	N	O	S	0	0
			3012	1921	513	563	15		

- Molecule 8 is a protein called 26S proteasome non-ATPase regulatory subunit 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	b	191	Total	C	N	O	S	0	0
			1459	910	261	281	7		

- Molecule 9 is a protein called 26S proteasome non-ATPase regulatory subunit 14.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	c	287	Total	C	N	O	S	0	0
			2260	1430	389	422	19		

- Molecule 10 is a protein called 26S proteasome non-ATPase regulatory subunit 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	d	262	Total	C	N	O	S	0	0
			2131	1381	349	392	9		

- Molecule 11 is a protein called 26S proteasome complex subunit SEM1.

Mol	Chain	Residues	Atoms				AltConf	Trace
11	e	36	Total	C	N	O	0	0
			314	193	50	71		

- Molecule 12 is a protein called 26S proteasome non-ATPase regulatory subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	f	829	Total	C	N	O	S	0	0
			6420	4063	1086	1226	45		

- Molecule 13 is a protein called Midnolin.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	y	111	Total	C	N	O	S	0	0
			879	543	176	158	2		

There are 38 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
y	-36	MET	-	initiating methionine	UNP Q504T8
y	-35	ASP	-	expression tag	UNP Q504T8
y	-34	TYR	-	expression tag	UNP Q504T8
y	-33	LYS	-	expression tag	UNP Q504T8
y	-32	ASP	-	expression tag	UNP Q504T8
y	-31	ASP	-	expression tag	UNP Q504T8
y	-30	ASP	-	expression tag	UNP Q504T8
y	-29	ASP	-	expression tag	UNP Q504T8
y	-28	LYS	-	expression tag	UNP Q504T8
y	-27	ASP	-	expression tag	UNP Q504T8
y	-26	TYR	-	expression tag	UNP Q504T8
y	-25	LYS	-	expression tag	UNP Q504T8
y	-24	ASP	-	expression tag	UNP Q504T8
y	-23	ASP	-	expression tag	UNP Q504T8
y	-22	ASP	-	expression tag	UNP Q504T8
y	-21	ASP	-	expression tag	UNP Q504T8
y	-20	LYS	-	expression tag	UNP Q504T8
y	-19	GLY	-	expression tag	UNP Q504T8
y	-18	GLY	-	expression tag	UNP Q504T8
y	-17	GLY	-	expression tag	UNP Q504T8
y	-16	GLY	-	expression tag	UNP Q504T8
y	-15	SER	-	expression tag	UNP Q504T8
y	-14	GLY	-	expression tag	UNP Q504T8
y	-13	GLY	-	expression tag	UNP Q504T8
y	-12	GLY	-	expression tag	UNP Q504T8
y	-11	GLY	-	expression tag	UNP Q504T8
y	-10	PHE	-	expression tag	UNP Q504T8
y	-9	GLU	-	expression tag	UNP Q504T8
y	-8	THR	-	expression tag	UNP Q504T8
y	-7	SER	-	expression tag	UNP Q504T8
y	-6	LEU	-	expression tag	UNP Q504T8
y	-5	TYR	-	expression tag	UNP Q504T8
y	-4	LYS	-	expression tag	UNP Q504T8
y	-3	LYS	-	expression tag	UNP Q504T8
y	-2	ALA	-	expression tag	UNP Q504T8
y	-1	GLY	-	expression tag	UNP Q504T8
y	0	THR	-	expression tag	UNP Q504T8
y	457	ALA	VAL	conflict	UNP Q504T8

- Molecule 14 is a protein called 26S proteasome regulatory subunit 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	A	373	Total 2930	C 1846	N 519	O 548	S 17	0	0

- Molecule 15 is a protein called 26S proteasome regulatory subunit 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	B	371	Total 2933	C 1846	N 499	O 574	S 14	0	0

- Molecule 16 is a protein called 26S protease regulatory subunit 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	C	348	Total 2729	C 1715	N 499	O 502	S 13	0	0

- Molecule 17 is a protein called 26S proteasome regulatory subunit 6B.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	D	376	Total 3009	C 1903	N 519	O 574	S 13	0	0

- Molecule 18 is a protein called 26S protease regulatory subunit 10B.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	E	339	Total 2678	C 1683	N 474	O 505	S 16	0	0

- Molecule 19 is a protein called 26S proteasome regulatory subunit 6A.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	F	339	Total 2646	C 1672	N 454	O 505	S 15	0	0

- Molecule 20 is a protein called Proteasome subunit alpha type-6.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	G	234	Total 1836	C 1170	N 304	O 349	S 13	0	0

- Molecule 21 is a protein called Proteasome subunit alpha type-2.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	H	226	Total	C	N	O	S	0	0
			1760	1124	298	332	6		

- Molecule 22 is a protein called Proteasome subunit alpha type-4.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	I	252	Total	C	N	O	S	0	0
			1990	1258	340	382	10		

- Molecule 23 is a protein called Proteasome subunit alpha type-7.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	J	239	Total	C	N	O	S	0	0
			1887	1183	334	365	5		

- Molecule 24 is a protein called Proteasome subunit alpha type-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	L	237	Total	C	N	O	S	0	0
			1868	1168	338	351	11		

- Molecule 25 is a protein called Proteasome subunit alpha type-3.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	M	242	Total	C	N	O	S	0	0
			1905	1206	323	365	11		

- Molecule 26 is a protein called Proteasome subunit beta type-6.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	N	198	Total	C	N	O	S	0	0
			1487	931	254	290	12		
26	n	179	Total	C	N	O	S	0	0
			1336	836	230	258	12		

- Molecule 27 is a protein called Proteasome subunit beta type-7.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	O	221	Total	C	N	O	S	0	0
			1667	1050	284	321	12		
27	o	176	Total	C	N	O	S	0	0
			1315	823	228	253	11		

- Molecule 28 is a protein called Proteasome subunit beta type-3.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	P	204	Total	C	N	O	S	0	0
			1591	1013	265	294	19		
28	p	164	Total	C	N	O	S	0	0
			1264	802	210	235	17		

- Molecule 29 is a protein called Proteasome subunit beta type-2.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	Q	197	Total	C	N	O	S	0	0
			1578	1011	268	290	9		
29	q	173	Total	C	N	O	S	0	0
			1380	890	234	248	8		

- Molecule 30 is a protein called Proteasome subunit beta type-5.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	R	199	Total	C	N	O	S	0	0
			1549	977	272	291	9		
30	r	187	Total	C	N	O	S	0	0
			1432	904	248	271	9		

- Molecule 31 is a protein called Proteasome subunit beta type-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	S	212	Total	C	N	O	S	0	0
			1643	1041	280	312	10		
31	s	206	Total	C	N	O	S	0	0
			1597	1015	269	303	10		

- Molecule 32 is a protein called Proteasome subunit beta type-4.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	T	213	Total	C	N	O	S	0	0
			1665	1050	288	316	11		
32	t	206	Total	C	N	O	S	0	0
			1609	1016	279	302	12		

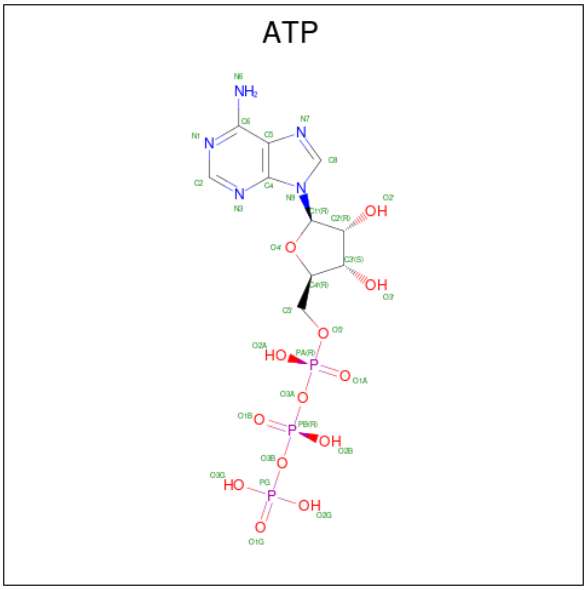
- Molecule 33 is a protein called Proteasome subunit alpha type-5.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	K	224	Total	C	N	O	S	0	0
			1715	1080	285	339	11		

- Molecule 34 is a protein called AN1-type zinc finger protein 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	z	59	Total	C	N	O	S	0	0
			471	295	89	80	7		

- Molecule 35 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$).



Mol	Chain	Residues	Atoms					AltConf
35	A	1	Total	C	N	O	P	0
			31	10	5	13	3	
35	D	1	Total	C	N	O	P	0
			31	10	5	13	3	
35	E	1	Total	C	N	O	P	0
			31	10	5	13	3	
35	F	1	Total	C	N	O	P	0
			31	10	5	13	3	

- Molecule 36 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
36	A	1	Total	Mg	0
			1	1	

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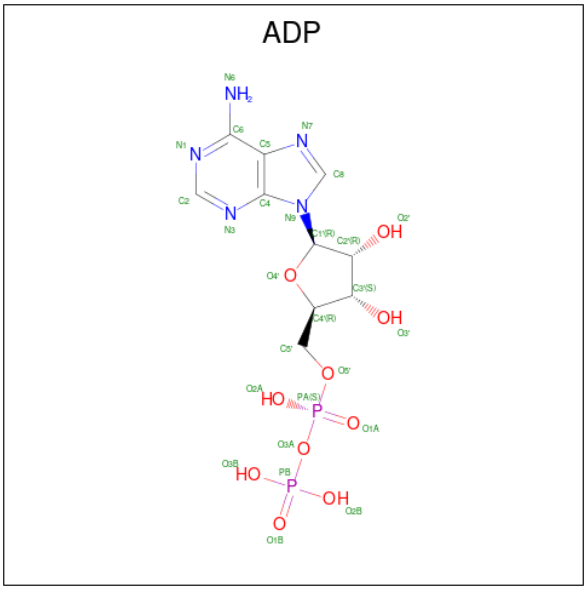
Mol	Chain	Residues	Atoms		AltConf
36	B	1	Total	Mg	0
			1	1	

- Molecule 37 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$).



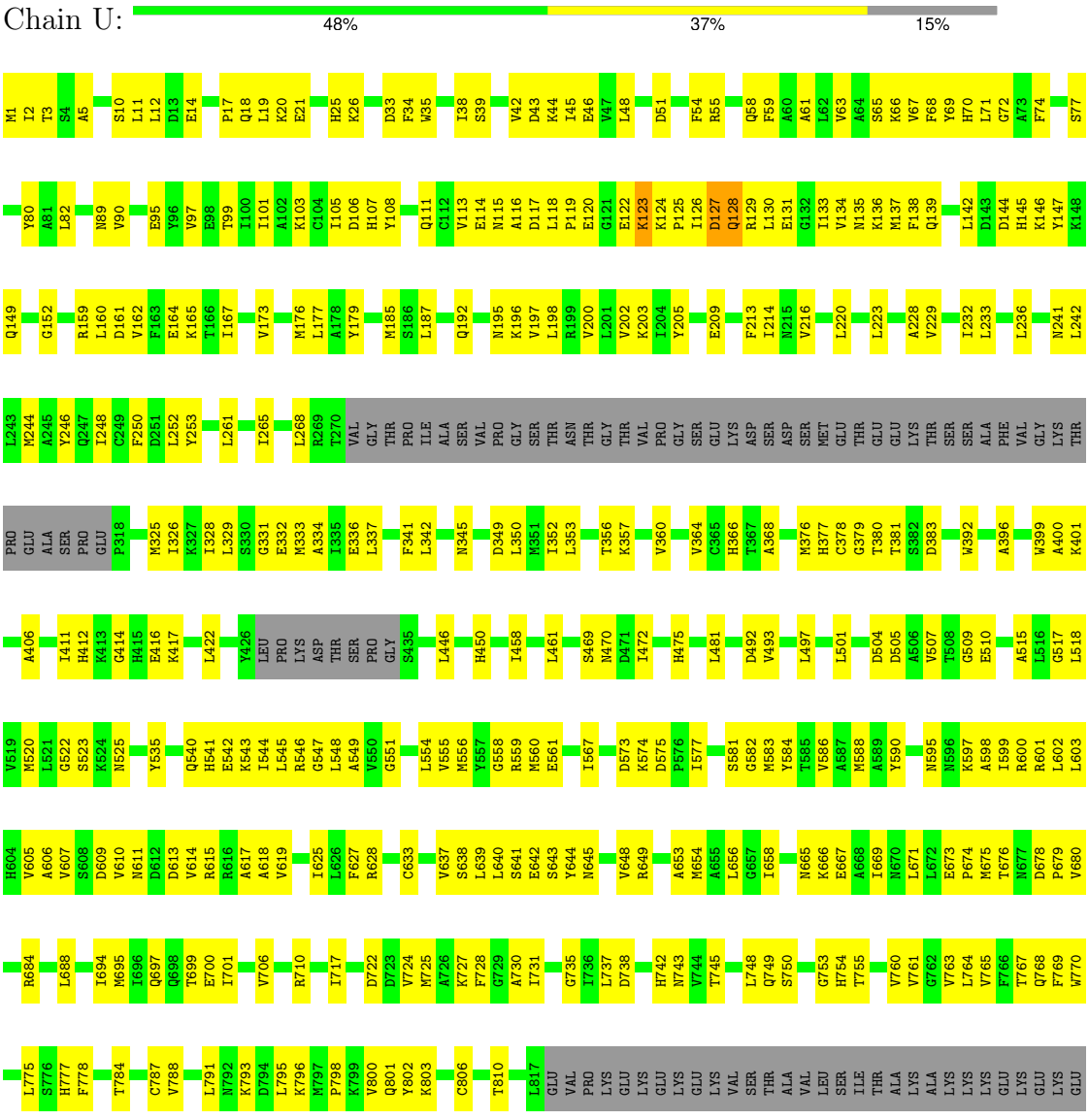
Mol	Chain	Residues	Atoms					AltConf
37	B	1	Total	C	N	O	P	0
			27	10	5	10	2	

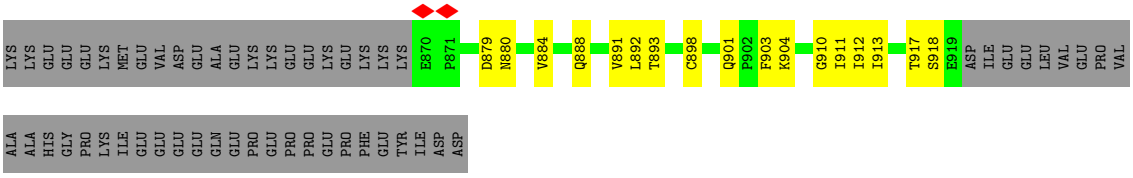
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: 26S proteasome non-ATPase regulatory subunit 1

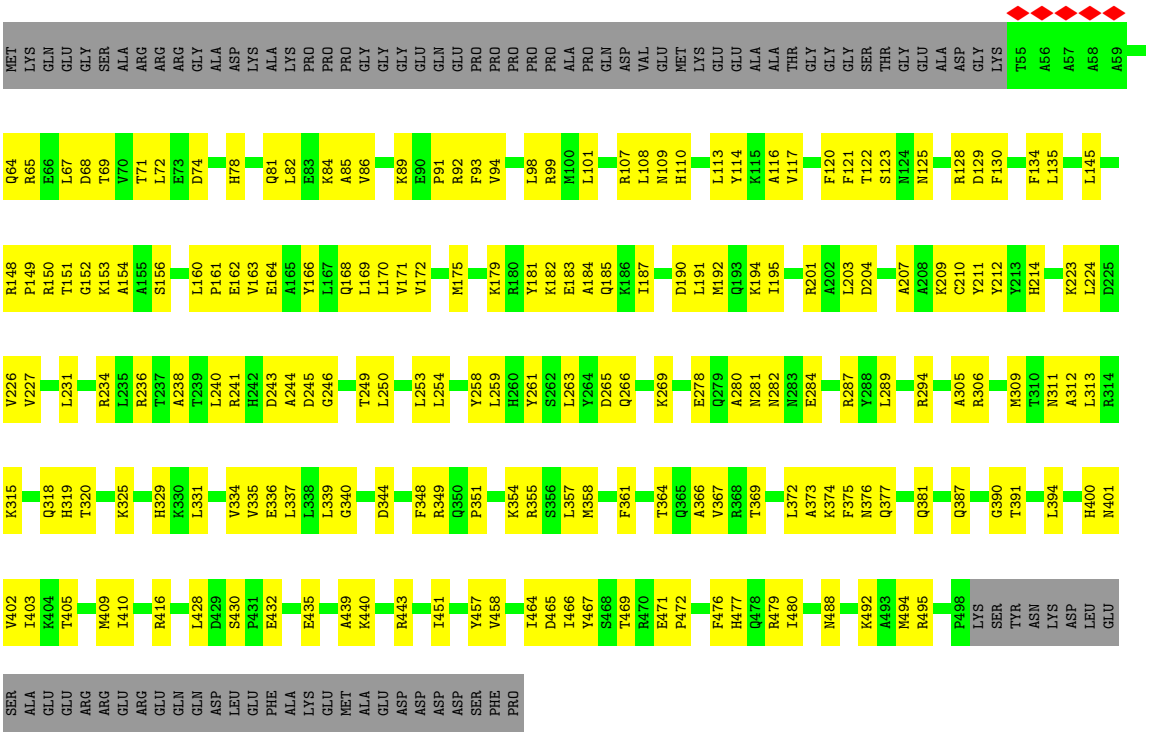
Chain U:





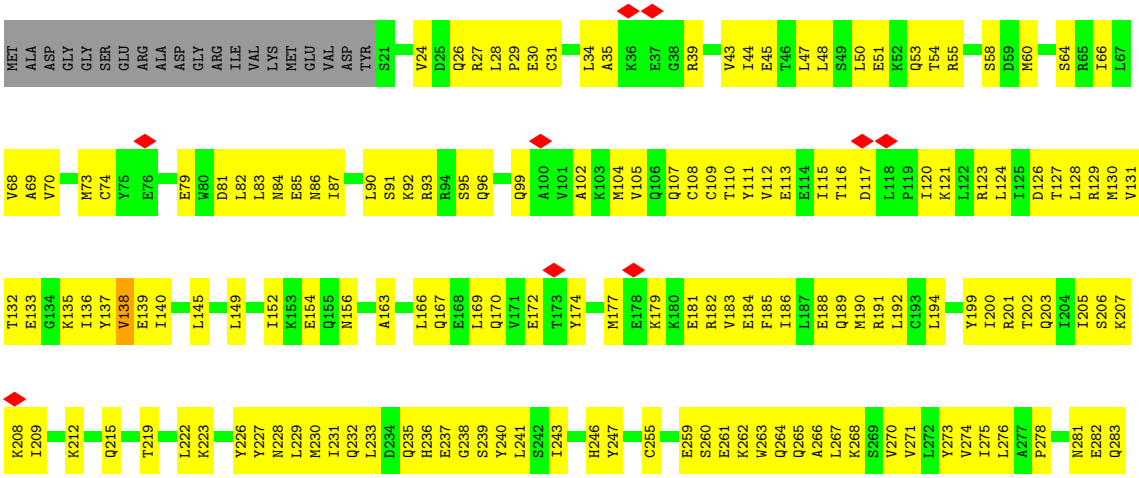
• Molecule 2: 26S proteasome non-ATPase regulatory subunit 3

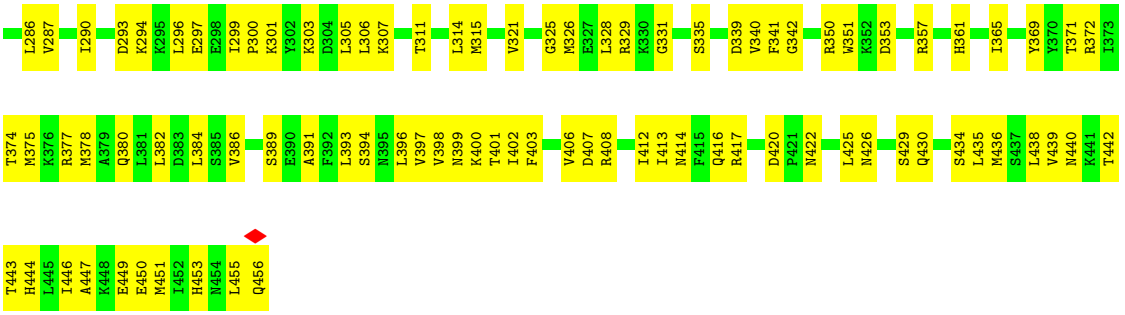
Chain V:



• Molecule 3: 26S proteasome non-ATPase regulatory subunit 12

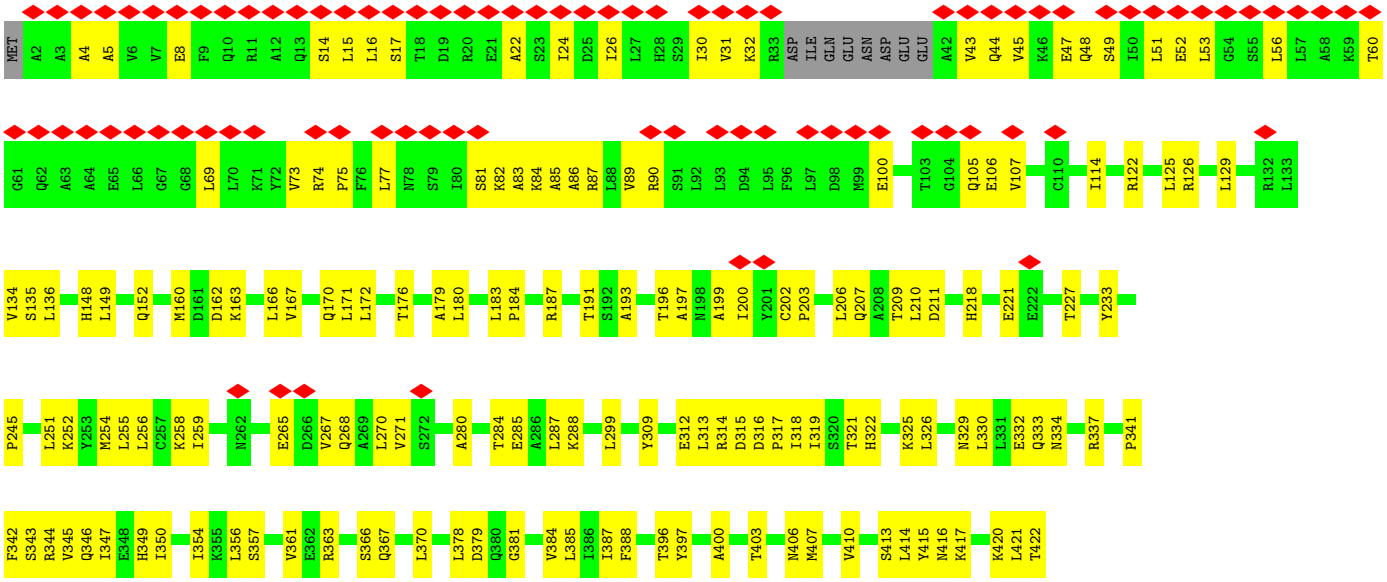
Chain W:





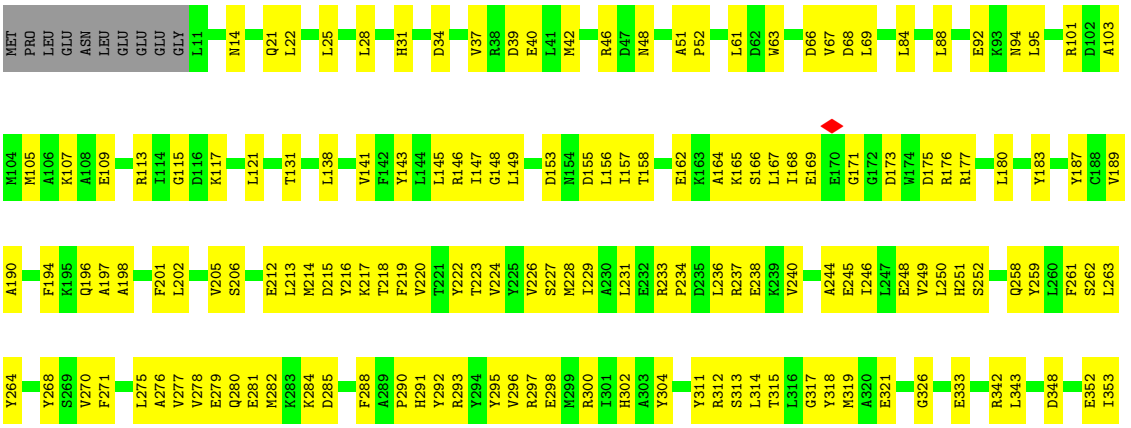
• Molecule 4: 26S proteasome non-ATPase regulatory subunit 11

Chain X:



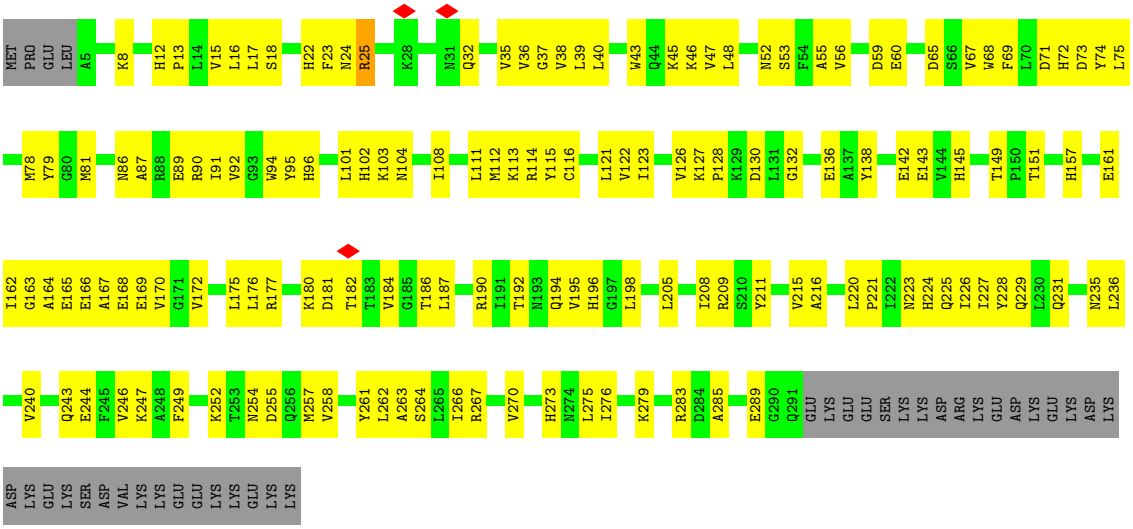
• Molecule 5: 26S proteasome non-ATPase regulatory subunit 6

Chain Y:



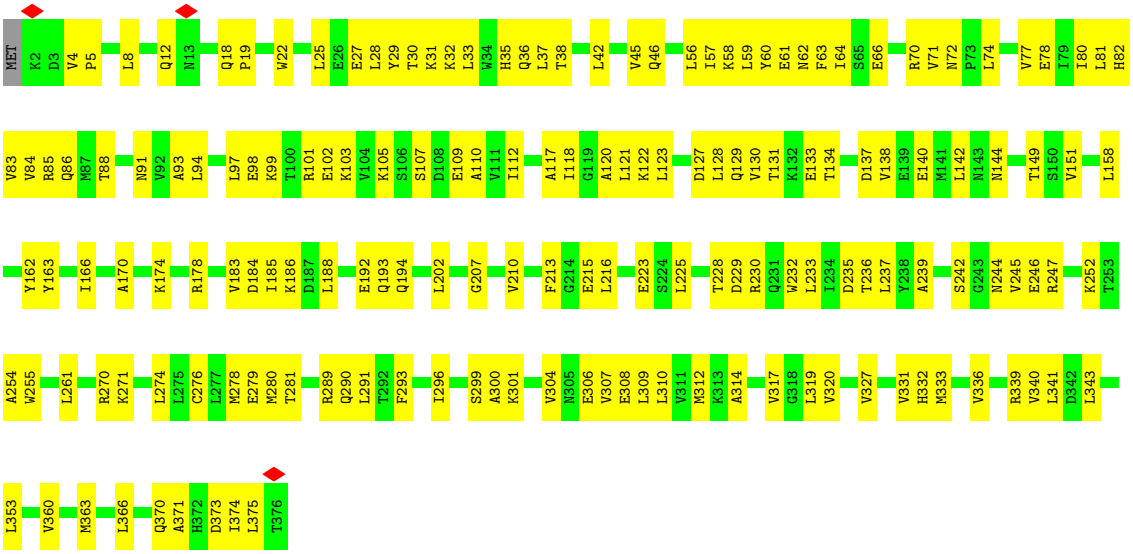
• Molecule 6: 26S proteasome non-ATPase regulatory subunit 7

Chain Z:



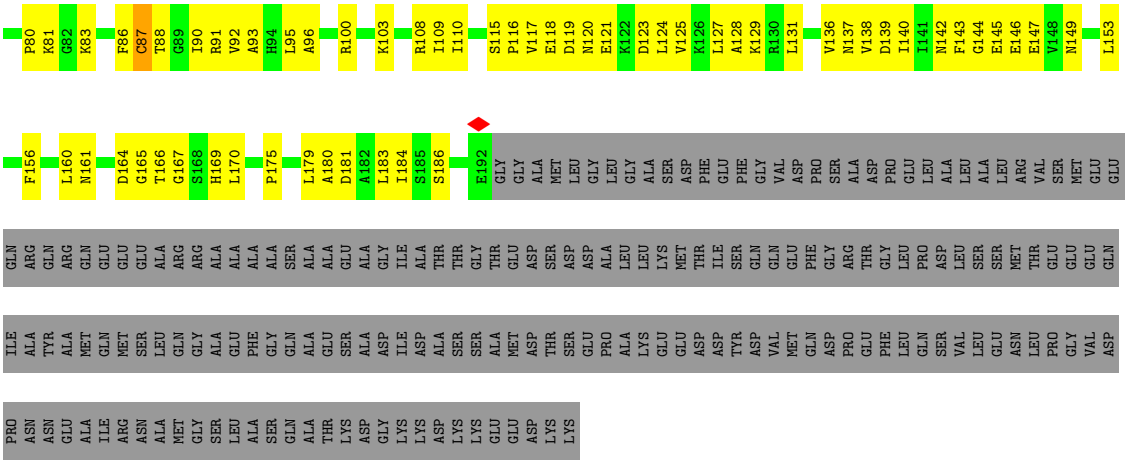
• Molecule 7: 26S proteasome non-ATPase regulatory subunit 13

Chain a:



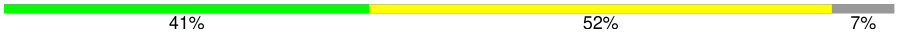
• Molecule 8: 26S proteasome non-ATPase regulatory subunit 4

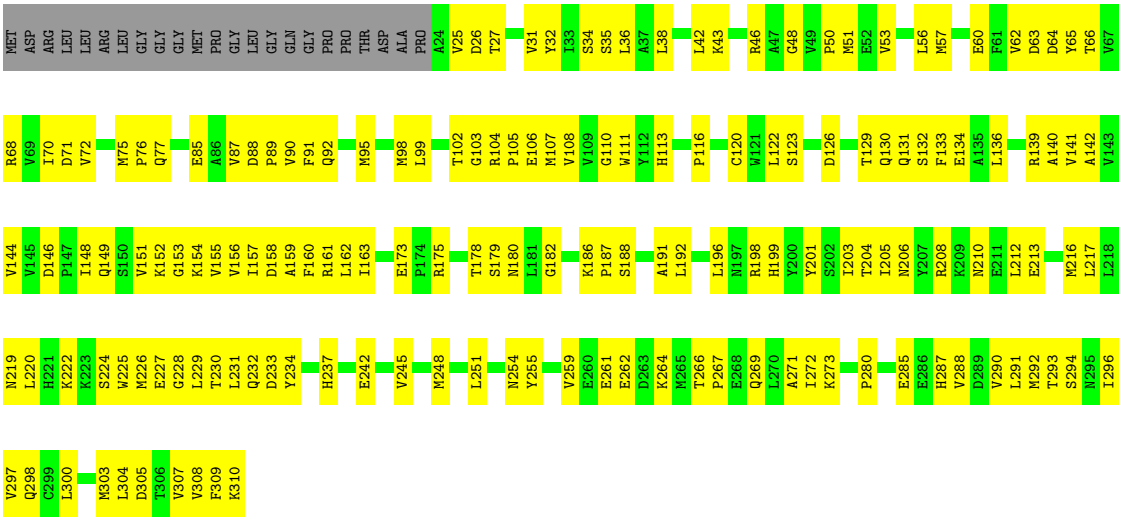
Chain b:



• Molecule 9: 26S proteasome non-ATPase regulatory subunit 14

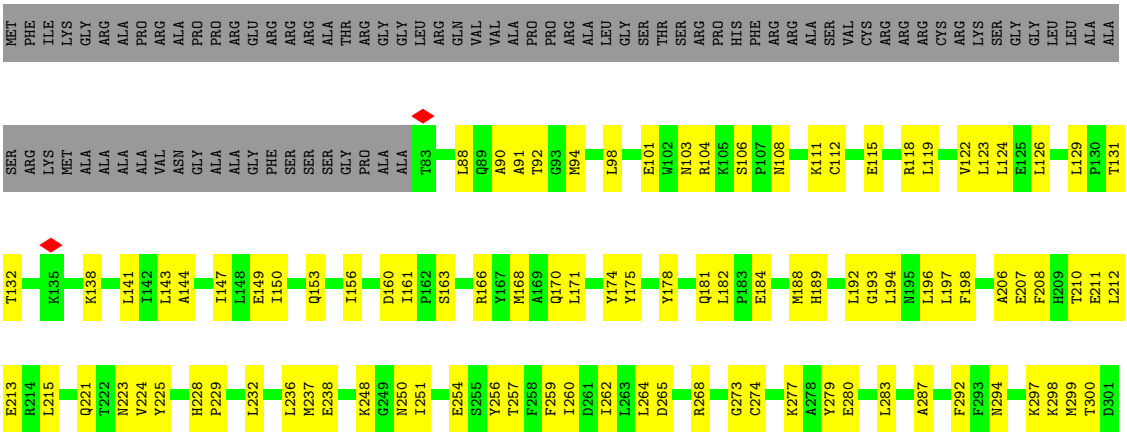
Chain c:

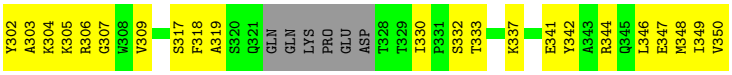




• Molecule 10: 26S proteasome non-ATPase regulatory subunit 8

Chain d:



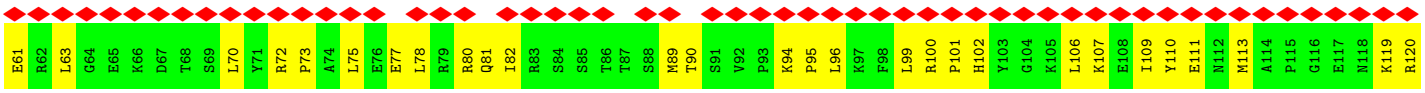


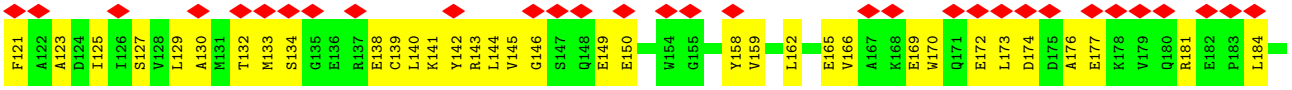
• Molecule 11: 26S proteasome complex subunit SEM1

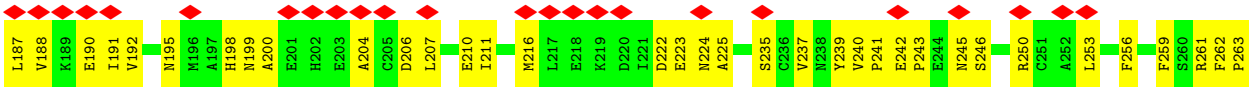
Chain e:

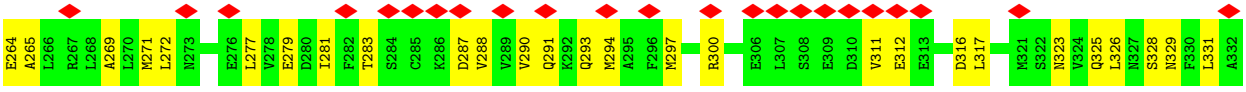
• Molecule 12: 26S proteasome non-ATPase regulatory subunit 2

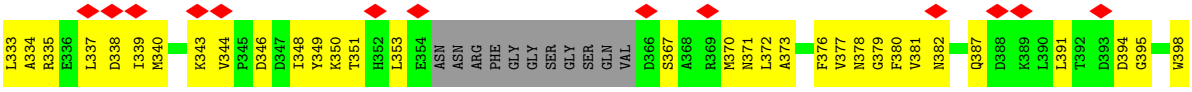
Chain f:

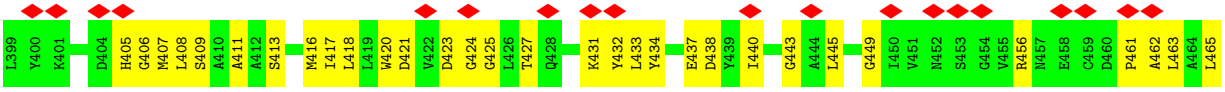


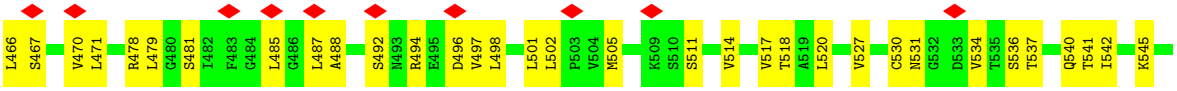


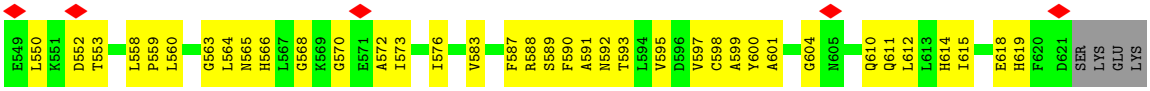


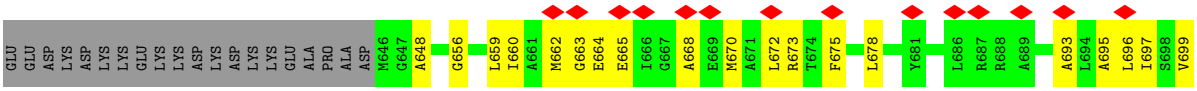


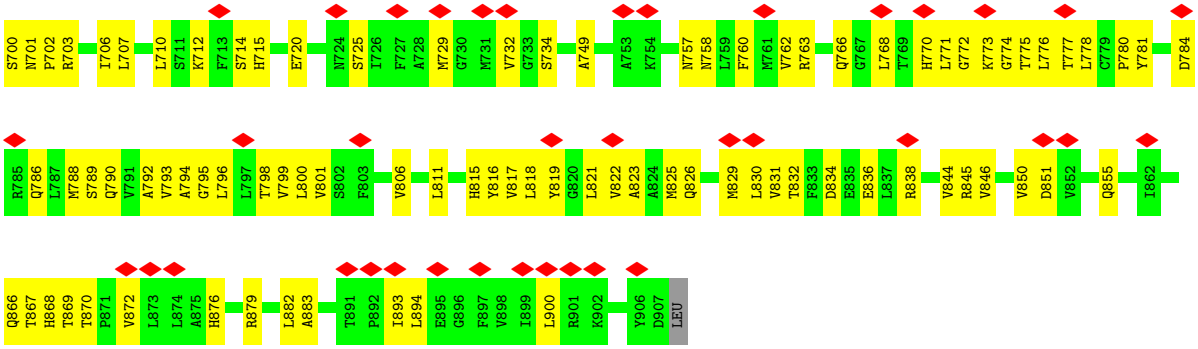




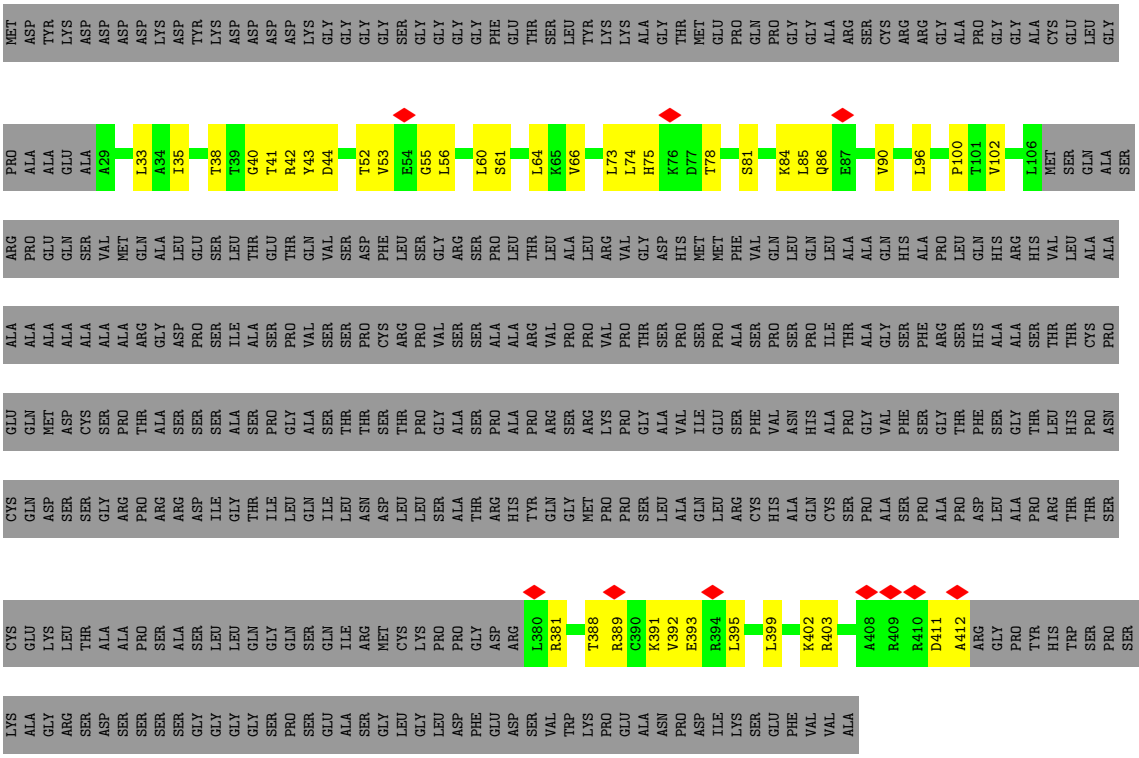




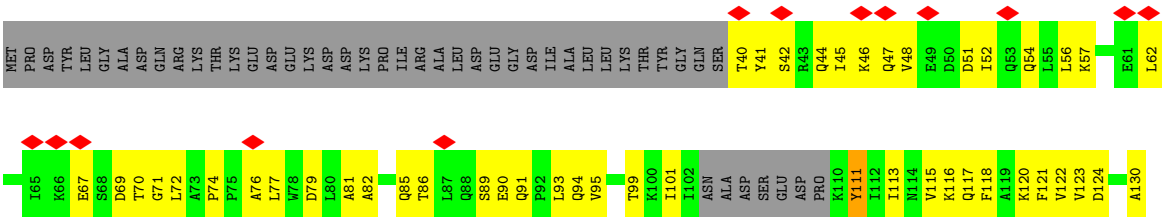


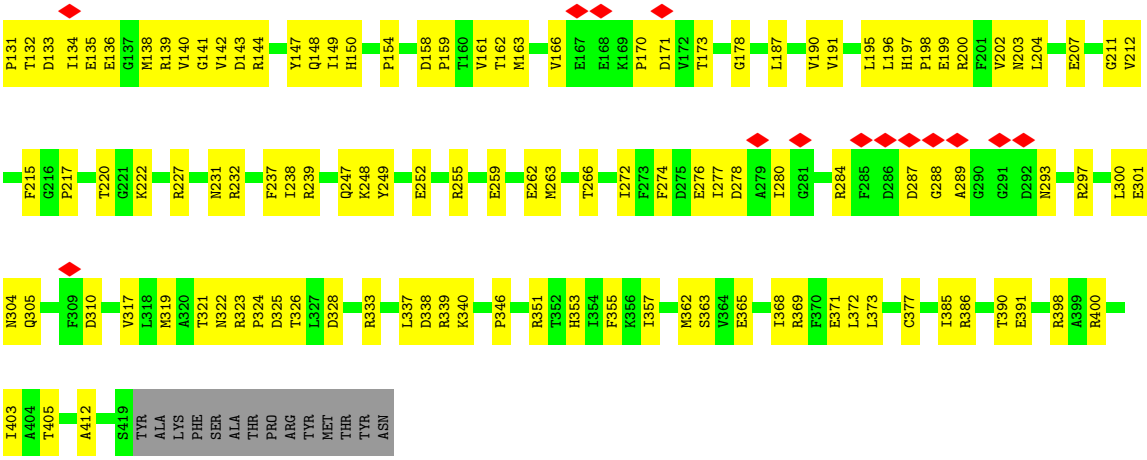


• Molecule 13: Midnolin



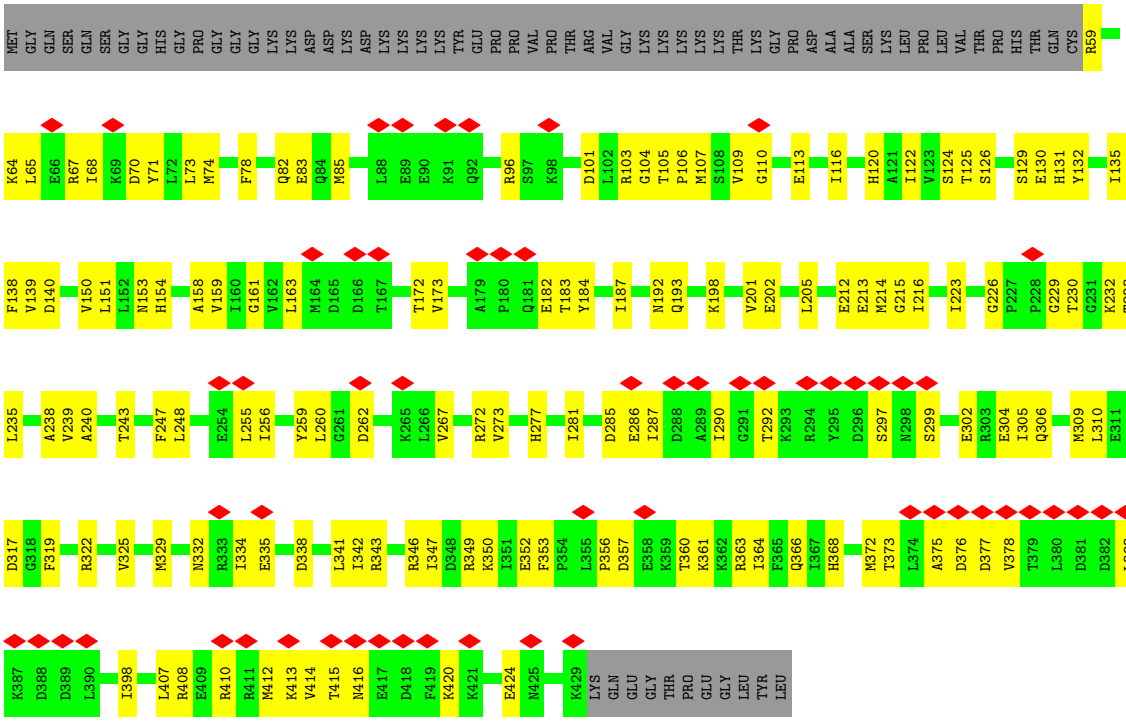
• Molecule 14: 26S proteasome regulatory subunit 7





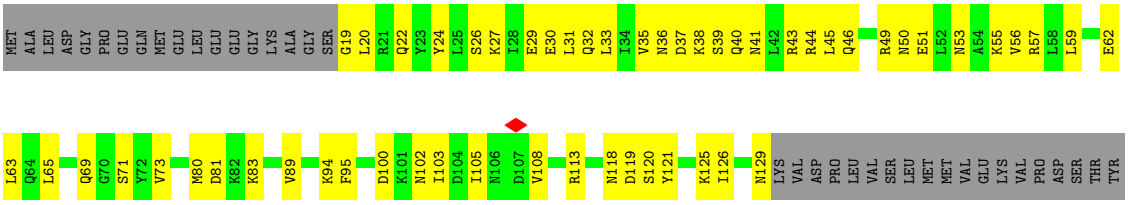
• Molecule 15: 26S proteasome regulatory subunit 4

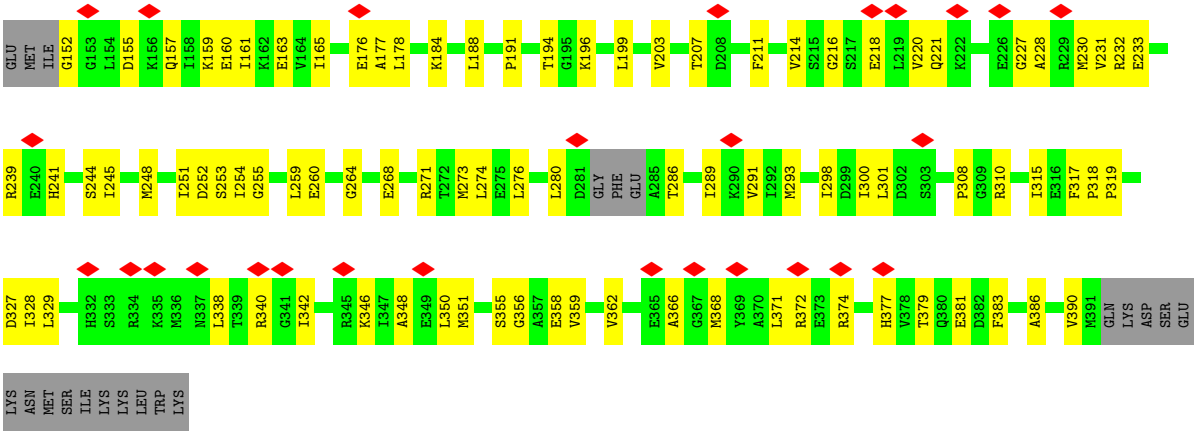
Chain B:



• Molecule 16: 26S protease regulatory subunit 8

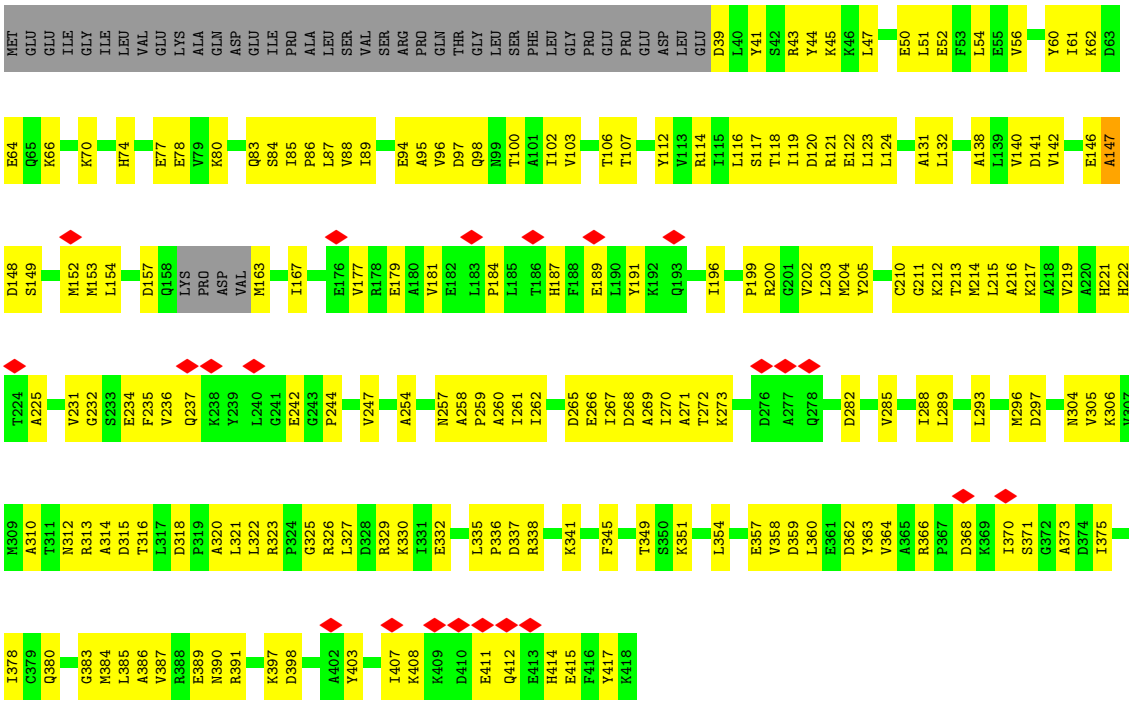
Chain C:





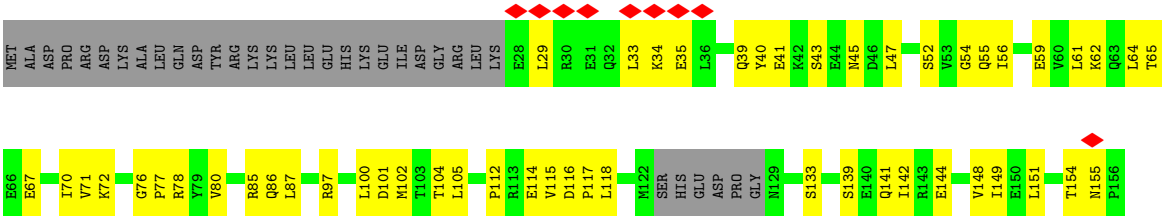
• Molecule 17: 26S proteasome regulatory subunit 6B

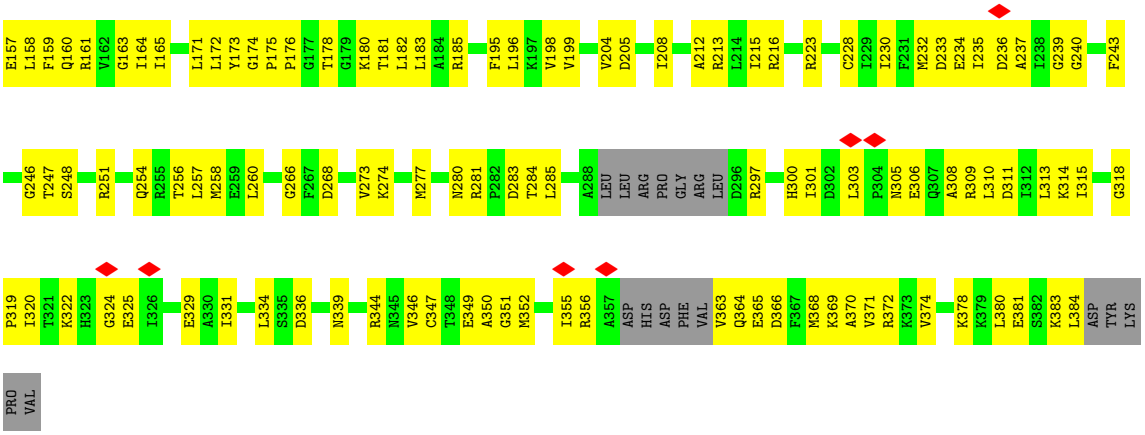
Chain D:



• Molecule 18: 26S protease regulatory subunit 10B

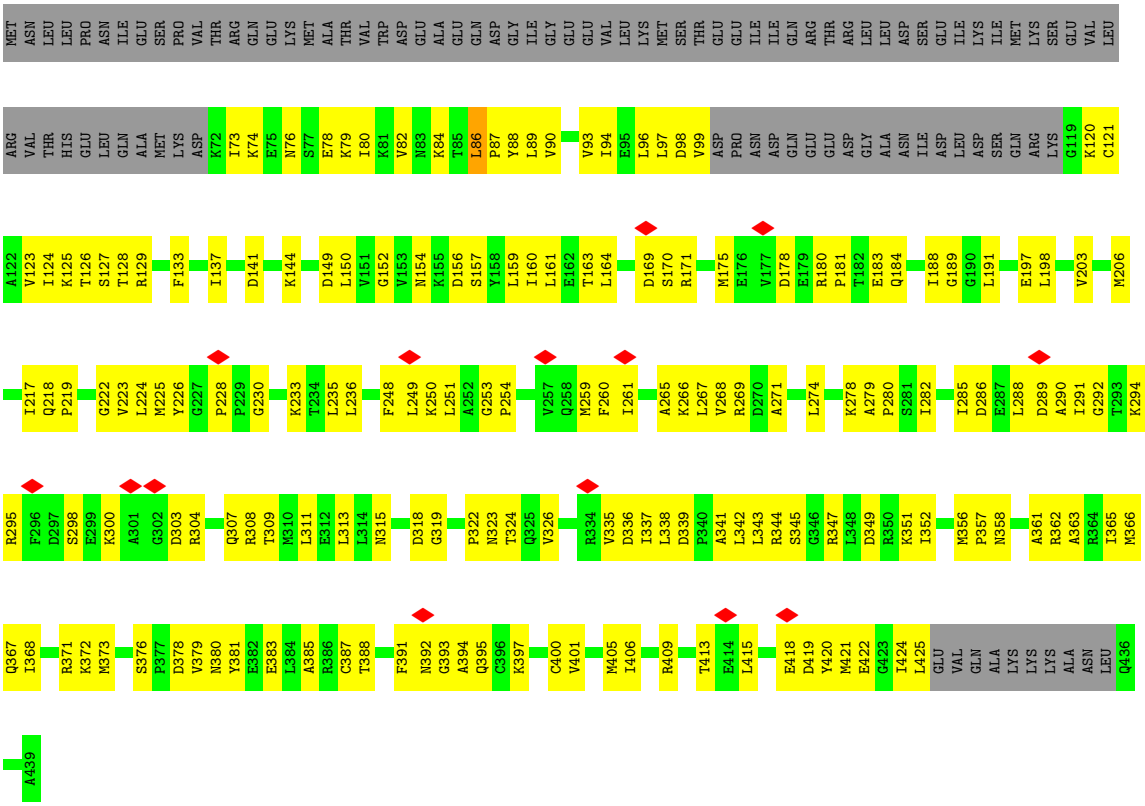
Chain E:





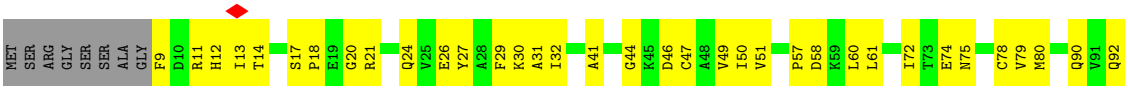
• Molecule 19: 26S proteasome regulatory subunit 6A

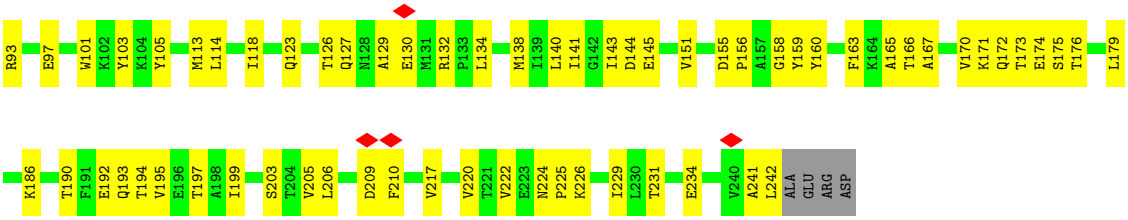
Chain F:



• Molecule 20: Proteasome subunit alpha type-6

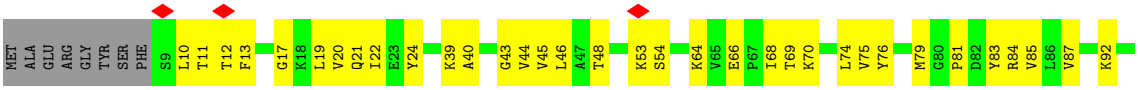
Chain G:

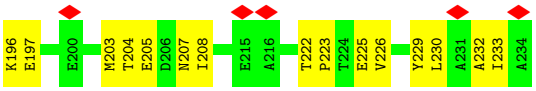




• Molecule 21: Proteasome subunit alpha type-2

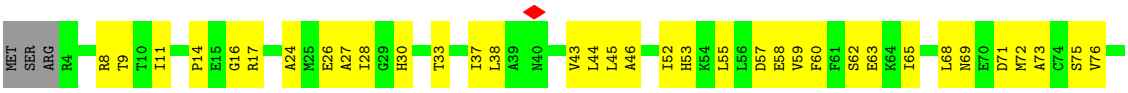
Chain H:

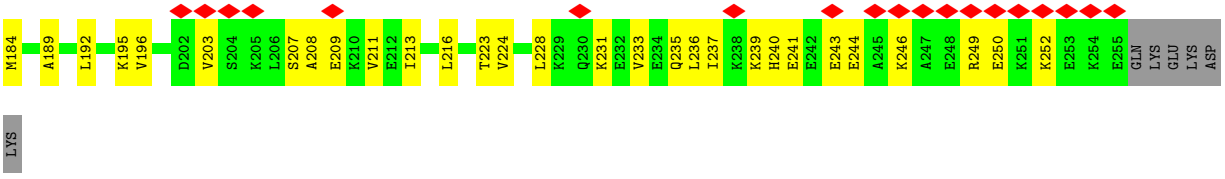




• Molecule 22: Proteasome subunit alpha type-4

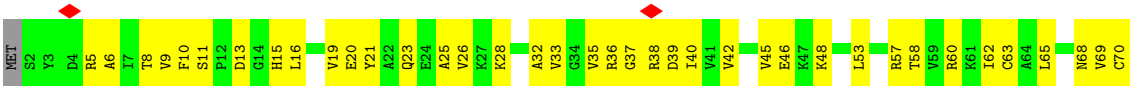
Chain I:

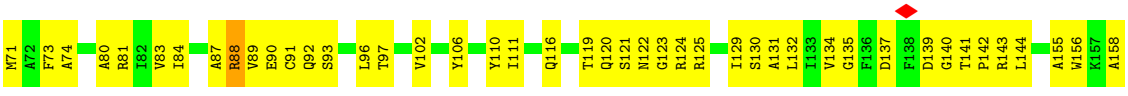


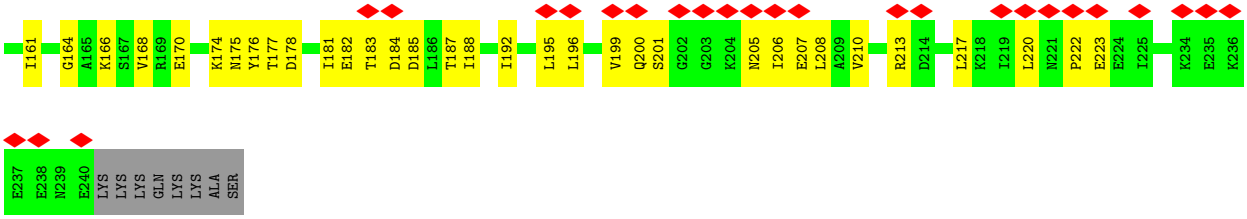


• Molecule 23: Proteasome subunit alpha type-7

Chain J:

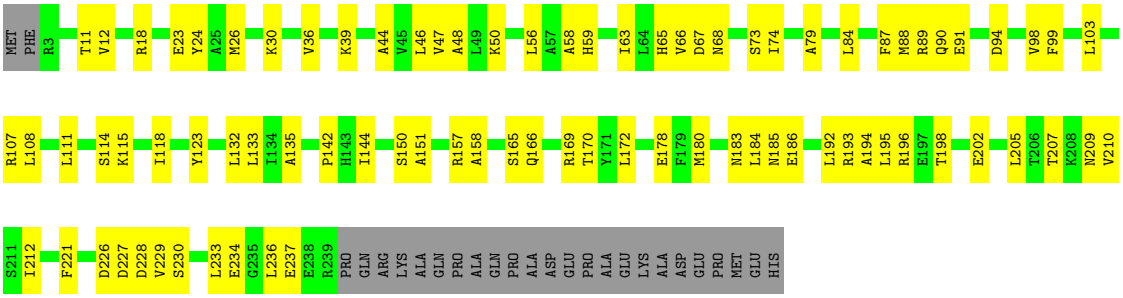






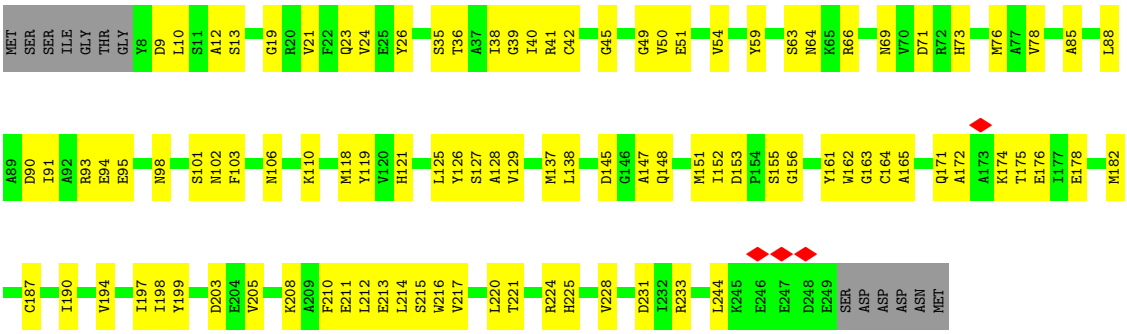
• Molecule 24: Proteasome subunit alpha type-1

Chain L:



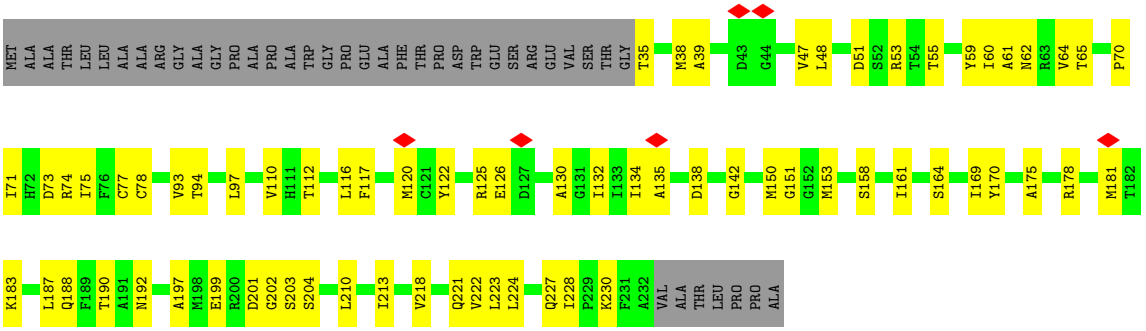
• Molecule 25: Proteasome subunit alpha type-3

Chain M:



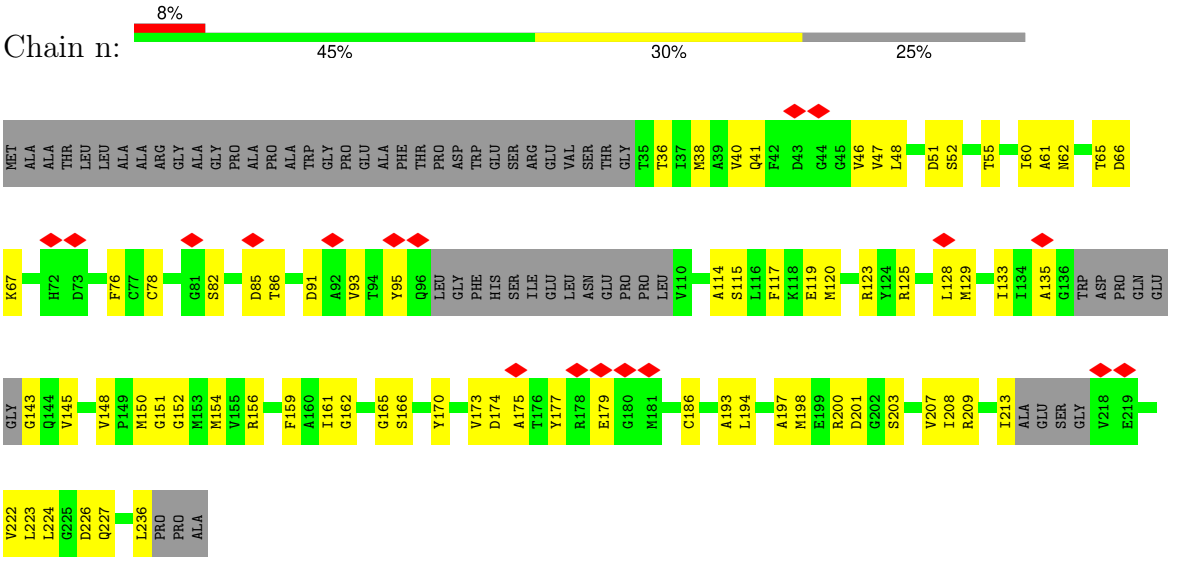
• Molecule 26: Proteasome subunit beta type-6

Chain N:



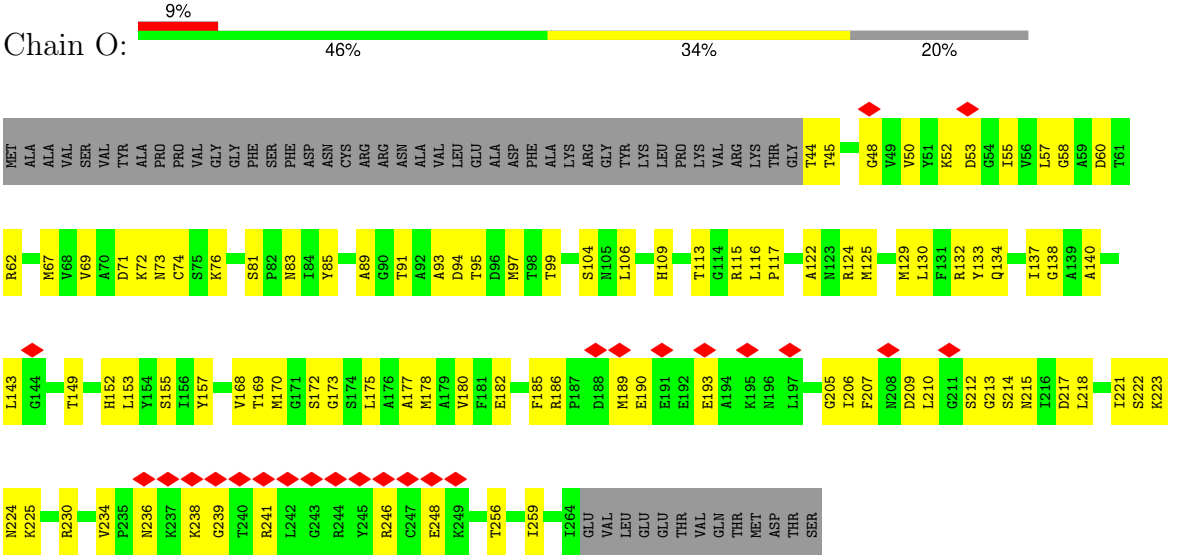
• Molecule 26: Proteasome subunit beta type-6

Chain n:



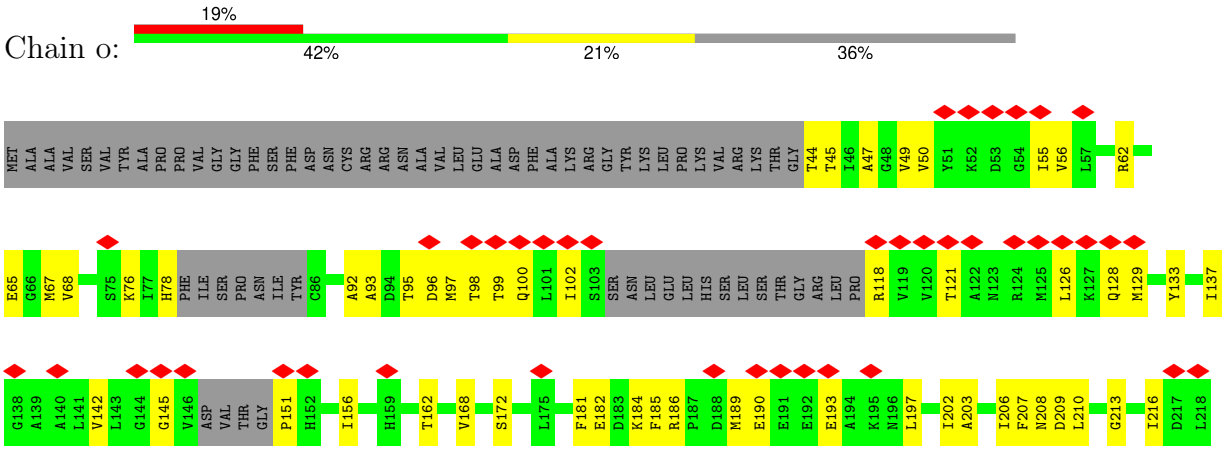
• Molecule 27: Proteasome subunit beta type-7

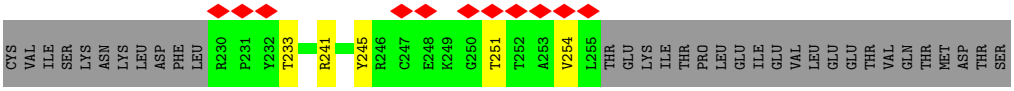
Chain O:



• Molecule 27: Proteasome subunit beta type-7

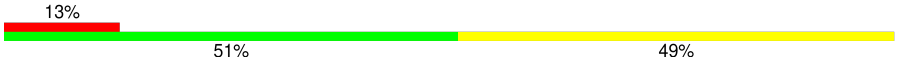
Chain o:

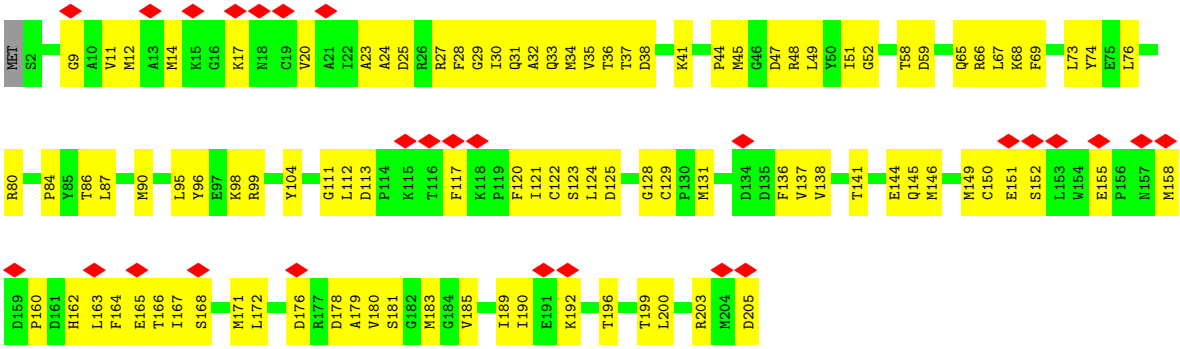




• Molecule 28: Proteasome subunit beta type-3

Chain P:



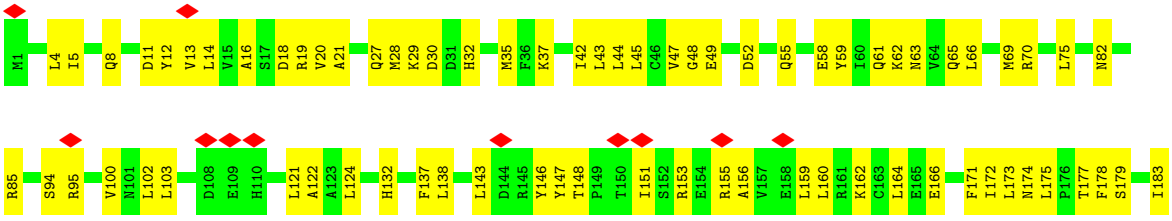


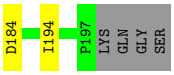
• Molecule 28: Proteasome subunit beta type-3

Chain p:

• Molecule 29: Proteasome subunit beta type-2

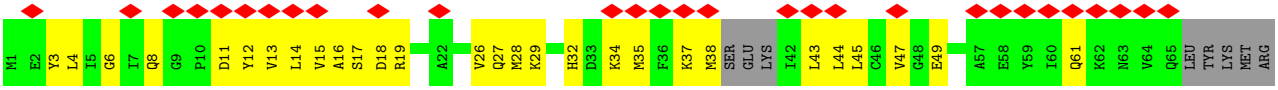
Chain Q:

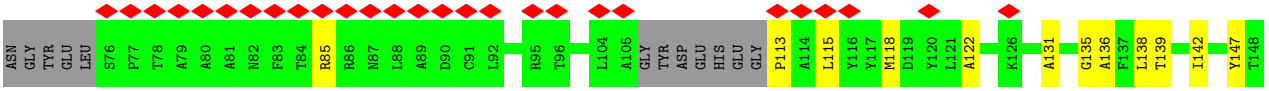




• Molecule 29: Proteasome subunit beta type-2

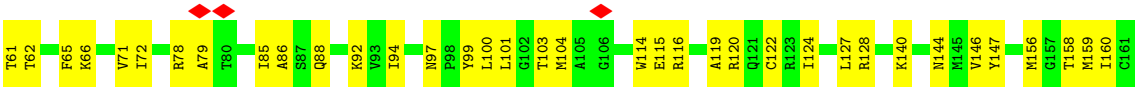
Chain q:

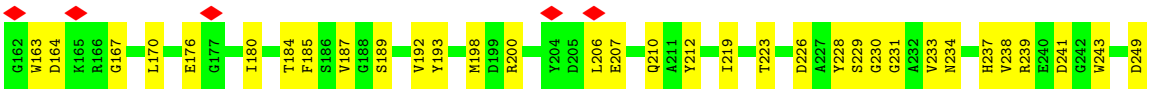




• Molecule 30: Proteasome subunit beta type-5

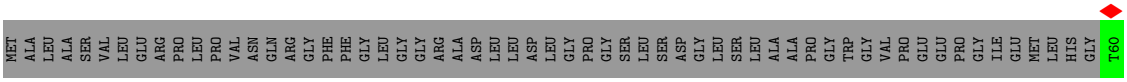
Chain R:

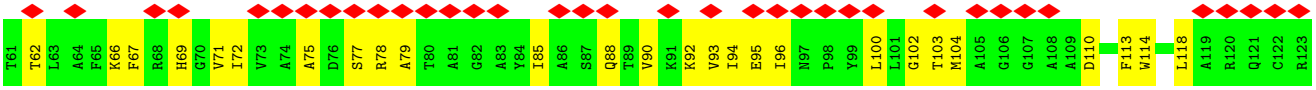


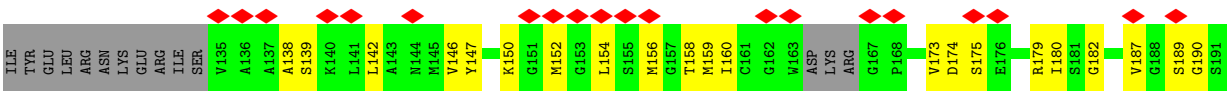


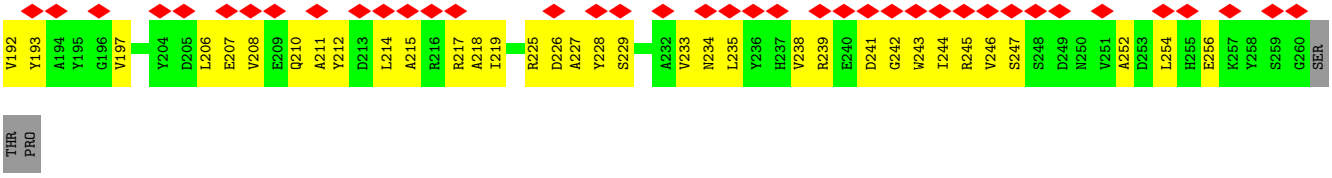
• Molecule 30: Proteasome subunit beta type-5

Chain r:



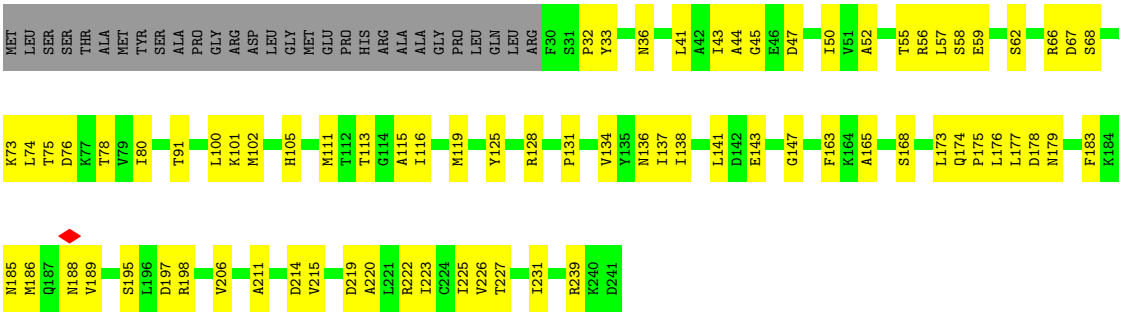






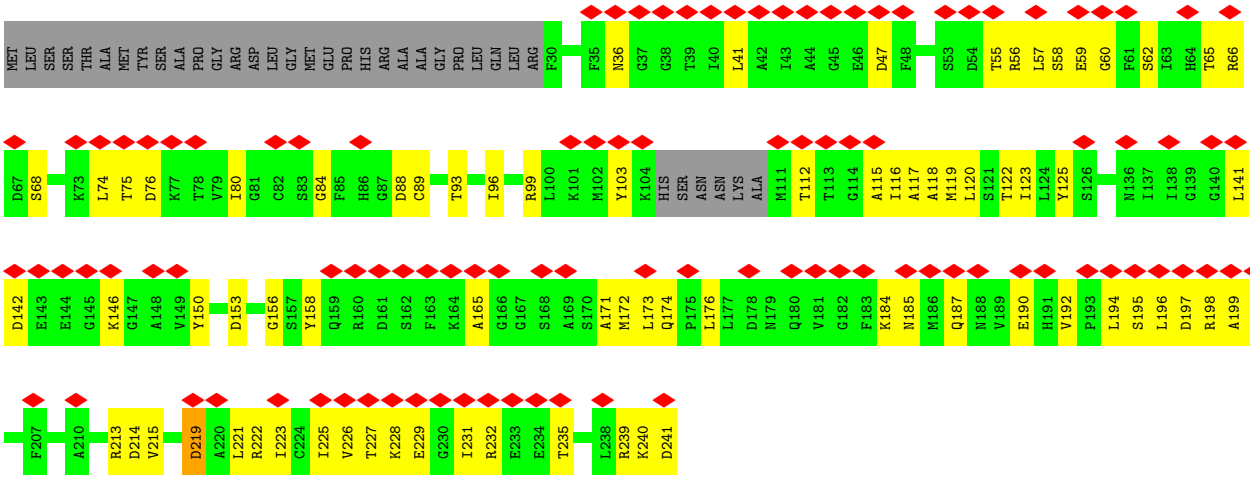
• Molecule 31: Proteasome subunit beta type-1

Chain S:



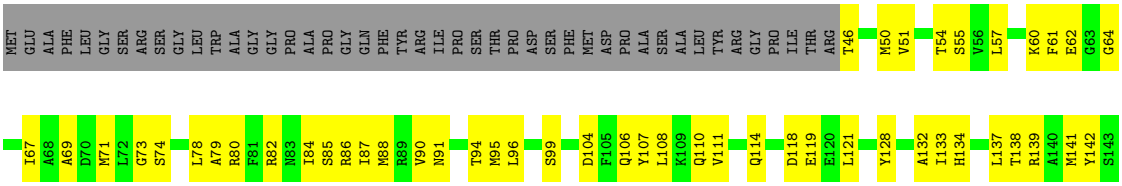
• Molecule 31: Proteasome subunit beta type-1

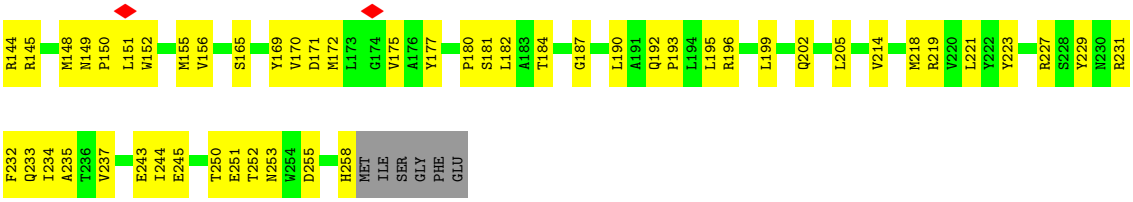
Chain s:



• Molecule 32: Proteasome subunit beta type-4

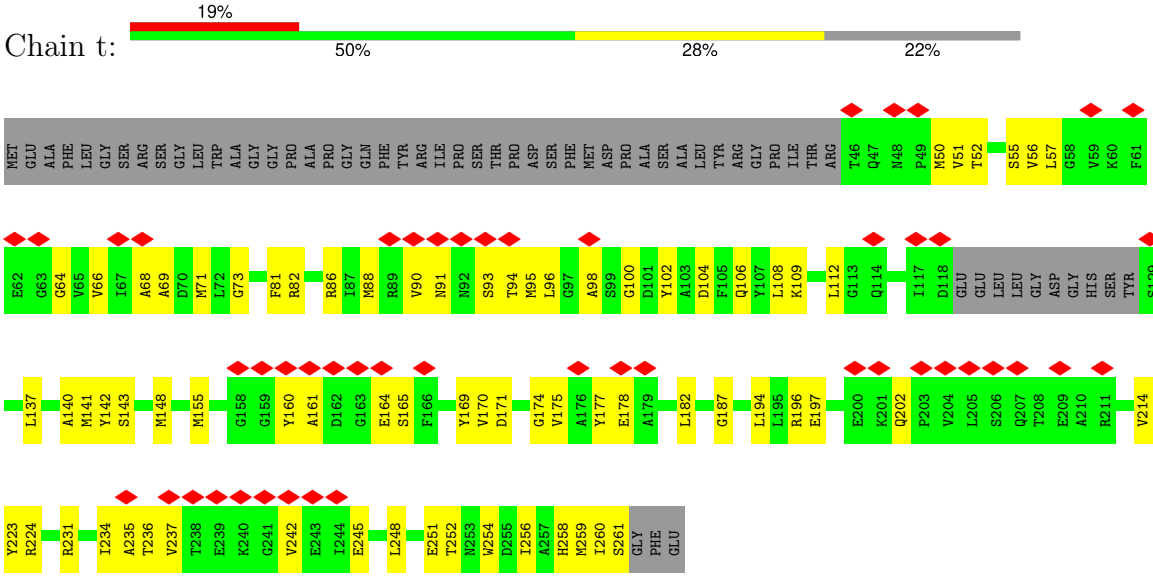
Chain T:





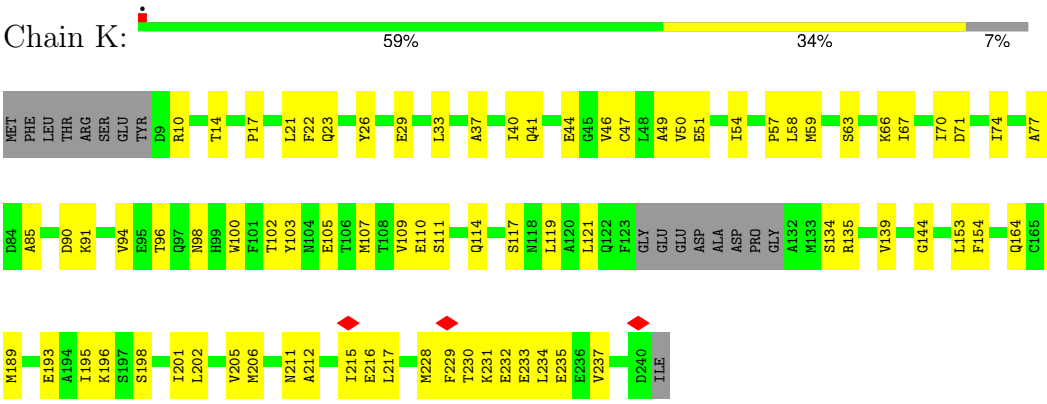
• Molecule 32: Proteasome subunit beta type-4

Chain t:



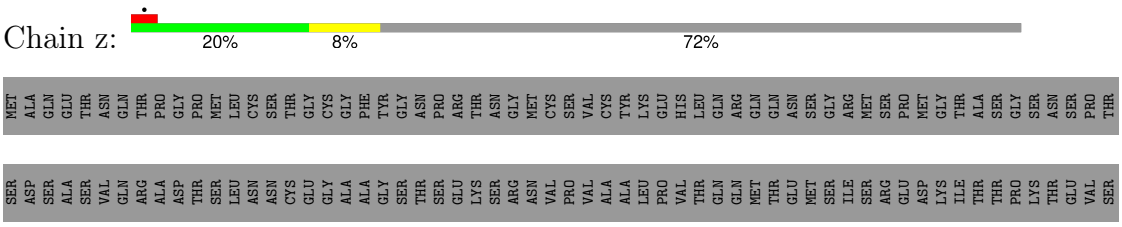
• Molecule 33: Proteasome subunit alpha type-5

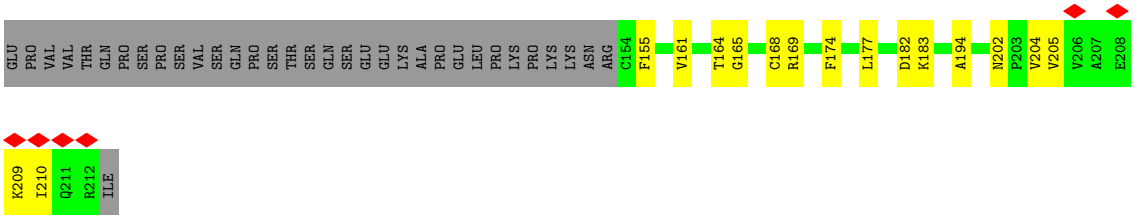
Chain K:



• Molecule 34: AN1-type zinc finger protein 5

Chain z:




GLU
PRO
VAL
VAL
THR
GLN
PRO
SER
PRO
SER
VAL
SER
GLN
PRO
SER
THR
SER
GLN
SER
GLU
GLU
LYS
ALA
PRO
GLU
LEU
PRO
LYS
PRO
LYS
LYS
ASN
ARG
C154
F155
V161
T164
G165
C168
R169
F174
L177
D182
K183
A194
N202
P203
V204
V205
V206
A207
E208
K209
I210
Q211
R212
ILE

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	35838	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	53	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.719	Depositor
Minimum map value	-0.325	Depositor
Average map value	0.004	Depositor
Map value standard deviation	0.040	Depositor
Recommended contour level	0.15	Depositor
Map size (Å)	363.0, 363.0, 363.0	wwPDB
Map dimensions	440, 440, 440	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.825, 0.825, 0.825	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, ATP, ADP

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	U	0.24	0/6446	0.40	0/8720
2	V	0.23	0/3680	0.38	0/4970
3	W	0.22	0/3599	0.43	1/4840 (0.0%)
4	X	0.18	0/3304	0.36	0/4453
5	Y	0.22	0/3181	0.38	0/4285
6	Z	0.28	0/2333	0.43	0/3162
7	a	0.23	0/3070	0.40	0/4155
8	b	0.18	0/1479	0.33	0/2003
9	c	0.27	0/2302	0.43	0/3110
10	d	0.20	0/2175	0.39	0/2938
11	e	0.22	0/322	0.42	0/436
12	f	0.14	0/6529	0.36	0/8839
13	y	0.15	0/886	0.30	0/1186
14	A	0.17	0/2975	0.39	0/4012
15	B	0.16	0/2974	0.37	0/4009
16	C	0.17	0/2762	0.33	0/3713
17	D	0.21	0/3057	0.42	0/4121
18	E	0.19	0/2713	0.39	0/3648
19	F	0.20	0/2683	0.45	0/3617
20	G	0.21	0/1870	0.34	0/2529
21	H	0.21	0/1797	0.35	0/2434
22	I	0.16	0/2020	0.31	0/2718
23	J	0.16	0/1913	0.35	0/2581
24	L	0.16	0/1902	0.33	0/2569
25	M	0.17	0/1940	0.37	0/2612
26	N	0.16	0/1513	0.31	0/2047
26	n	0.14	0/1352	0.31	0/1822
27	O	0.17	0/1694	0.32	0/2293
27	o	0.12	0/1331	0.30	0/1791
28	P	0.17	0/1620	0.38	0/2184
28	p	0.15	0/1282	0.37	0/1722
29	Q	0.16	0/1611	0.29	0/2180

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
29	q	0.12	0/1405	0.26	0/1899
30	R	0.14	0/1580	0.29	0/2134
30	r	0.16	0/1460	0.40	2/1972 (0.1%)
31	S	0.14	0/1673	0.29	0/2254
31	s	0.14	0/1625	0.32	0/2188
32	T	0.16	0/1698	0.32	0/2299
32	t	0.13	0/1639	0.31	0/2217
33	K	0.16	0/1740	0.36	0/2348
34	z	0.16	0/480	0.39	0/640
All	All	0.19	0/91615	0.37	3/123650 (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
6	Z	0	1
23	J	0	1
All	All	0	2

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	W	138	VAL	N-CA-C	-5.74	107.69	113.20
30	r	113	PHE	CA-C-N	-5.06	112.29	121.14
30	r	113	PHE	C-N-CA	-5.06	112.29	121.14

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
23	J	88	ARG	Sidechain
6	Z	25	ARG	Sidechain

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen

atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	U	6334	0	6368	343	0
2	V	3610	0	3676	177	0
3	W	3552	0	3676	226	0
4	X	3259	0	3371	160	0
5	Y	3123	0	3130	171	0
6	Z	2290	0	2320	180	0
7	a	3012	0	3029	162	0
8	b	1459	0	1499	91	0
9	c	2260	0	2276	201	0
10	d	2131	0	2164	117	0
11	e	314	0	247	17	0
12	f	6420	0	6442	331	0
13	y	879	0	944	33	0
14	A	2930	0	3003	169	0
15	B	2933	0	2994	166	0
16	C	2729	0	2835	137	0
17	D	3009	0	3042	212	0
18	E	2678	0	2743	171	0
19	F	2646	0	2711	168	0
20	G	1836	0	1848	99	0
21	H	1760	0	1761	96	0
22	I	1990	0	2012	83	0
23	J	1887	0	1905	112	0
24	L	1868	0	1858	69	0
25	M	1905	0	1880	88	0
26	N	1487	0	1452	65	0
26	n	1336	0	1324	57	0
27	O	1667	0	1689	96	0
27	o	1315	0	1321	45	0
28	P	1591	0	1609	105	0
28	p	1264	0	1255	73	0
29	Q	1578	0	1580	80	0
29	q	1380	0	1399	46	0
30	R	1549	0	1512	64	0
30	r	1432	0	1384	76	0
31	S	1643	0	1640	70	0
31	s	1597	0	1597	79	0
32	T	1665	0	1638	94	0
32	t	1609	0	1597	66	0
33	K	1715	0	1714	76	0
34	z	471	0	472	27	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
35	A	31	0	12	2	0
35	D	31	0	12	13	0
35	E	31	0	12	3	0
35	F	31	0	12	5	0
36	A	1	0	0	0	0
36	B	1	0	0	0	0
37	B	27	0	12	8	0
All	All	90266	0	90977	4332	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 24.

All (4332) 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)
27:o:44:THR:N	27:o:172:SER:HG	1.56	1.03
31:S:41:LEU:HD11	31:S:177:LEU:HD11	1.39	1.03
27:o:118:ARG:N	27:o:121:THR:HG1	1.58	1.01
17:D:214:MET:HE3	35:D:501:ATP:H5'2	1.40	1.00
10:d:141:LEU:HD13	10:d:182:LEU:HD12	1.43	0.97
23:J:45:VAL:HG11	23:J:62:ILE:HD11	1.42	0.97
6:Z:215:VAL:HG22	6:Z:220:LEU:HD11	1.47	0.95
5:Y:233:ARG:NH2	5:Y:264:TYR:O	1.99	0.95
29:q:18:ASP:O	29:q:34:LYS:NZ	1.99	0.95
30:r:110:ASP:OD1	31:s:125:TYR:OH	1.85	0.93
17:D:214:MET:HE3	35:D:501:ATP:C5'	1.98	0.93
17:D:378:ILE:HD11	17:D:407:ILE:HD11	1.49	0.93
2:V:287:ARG:NH2	11:e:17:ASP:OD2	2.02	0.92
13:y:61:SER:OG	13:y:66:VAL:O	1.87	0.92
3:W:47:LEU:HD13	3:W:70:VAL:HG22	1.48	0.92
26:n:62:ASN:OD1	26:n:65:THR:OG1	1.87	0.92
14:A:74:PRO:O	15:B:96:ARG:NH2	2.02	0.91
9:c:107:MET:HE1	13:y:40:GLY:HA2	1.52	0.91
21:H:66:GLU:OE1	21:H:83:TYR:OH	1.89	0.91
29:Q:8:GLN:O	29:Q:147:TYR:OH	1.88	0.91
31:s:36:ASN:ND2	31:s:59:GLU:OE2	2.05	0.90
20:G:158:GLY:O	21:H:84:ARG:NH2	2.04	0.90
28:P:44:PRO:O	28:P:68:LYS:NZ	2.03	0.90
12:f:188:VAL:HG12	12:f:216:MET:HE2	1.54	0.89
8:b:115:SER:O	8:b:149:ASN:ND2	2.05	0.89
3:W:84:ASN:OD1	3:W:85:GLU:N	2.06	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:n:143:GLY:O	26:n:156:ARG:NH2	2.06	0.88
32:T:46:THR:OG1	32:T:150:PRO:O	1.92	0.88
18:E:70:ILE:HG22	18:E:80:VAL:HG12	1.55	0.88
22:I:178:ASP:OD2	22:I:195:LYS:NZ	2.07	0.88
15:B:317:ASP:O	15:B:346:ARG:NH2	2.07	0.88
23:J:68:ASN:O	23:J:135:GLY:CA	2.21	0.88
17:D:214:MET:HE1	35:D:501:ATP:C4	2.08	0.87
23:J:88:ARG:NH2	29:Q:69:MET:SD	2.47	0.87
4:X:77:LEU:HD21	4:X:89:VAL:HG22	1.54	0.87
12:f:110:TYR:O	12:f:119:LYS:NZ	2.08	0.87
23:J:68:ASN:O	23:J:135:GLY:HA3	1.75	0.87
30:r:235:LEU:O	30:r:245:ARG:NH1	2.08	0.87
12:f:829:MET:SD	12:f:831:VAL:HG13	2.14	0.87
14:A:86:THR:O	14:A:89:SER:O	1.93	0.87
27:O:169:THR:HG21	27:O:177:ALA:HB1	1.56	0.87
28:P:74:TYR:OH	28:P:80:ARG:NH1	2.08	0.87
18:E:151:LEU:O	18:E:154:THR:OG1	1.93	0.87
19:F:385:ALA:O	19:F:388:THR:OG1	1.91	0.87
30:R:60:THR:N	30:R:228:TYR:O	2.08	0.86
3:W:129:ARG:O	3:W:132:THR:OG1	1.91	0.86
3:W:51:GLU:OE2	3:W:93:ARG:NH1	2.07	0.86
1:U:628:ARG:NH1	1:U:749:GLN:OE1	2.10	0.85
4:X:363:ARG:O	4:X:366:SER:OG	1.92	0.85
14:A:67:GLU:OE2	14:A:70:THR:N	2.09	0.85
1:U:898:CYS:O	1:U:901:GLN:NE2	2.09	0.85
28:P:145:GLN:OE1	28:P:149:MET:HE3	1.76	0.85
17:D:417:TYR:O	20:G:21:ARG:NH2	2.09	0.85
15:B:173:VAL:HG23	16:C:274:LEU:HD22	1.59	0.85
20:G:11:ARG:O	20:G:24:GLN:NE2	2.08	0.85
9:c:226:MET:O	9:c:230:THR:OG1	1.95	0.84
18:E:239:GLY:O	18:E:284:THR:OG1	1.94	0.84
4:X:407:MET:HE2	6:Z:266:ILE:HD13	1.60	0.84
24:L:157:ARG:NH1	25:M:59:TYR:O	2.09	0.84
29:q:17:SER:OG	29:q:35:MET:SD	2.34	0.84
2:V:265:ASP:OD2	2:V:269:LYS:NZ	2.10	0.84
12:f:664:GLU:OE1	12:f:664:GLU:N	2.11	0.84
21:H:192:ILE:HD11	21:H:230:LEU:HD23	1.58	0.84
32:T:144:ARG:NE	32:T:149:ASN:O	2.11	0.84
26:N:53:ARG:NH1	26:N:202:GLY:O	2.11	0.83
28:P:178:ASP:OD2	28:P:181:SER:OG	1.94	0.83
28:p:12:MET:HB2	28:p:138:VAL:HG12	1.61	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:b:48:ASN:OD1	8:b:65:THR:N	2.12	0.83
7:a:84:VAL:HG21	7:a:97:LEU:HD21	1.58	0.83
29:Q:52:ASP:OD1	30:R:147:TYR:OH	1.95	0.83
31:S:176:LEU:HD23	31:S:206:VAL:HG12	1.58	0.83
33:K:78:MET:HE1	33:K:82:ILE:HA	1.60	0.83
27:O:69:VAL:O	31:s:213:ARG:NH2	2.12	0.83
22:I:119:GLN:OE1	23:J:125:ARG:NH2	2.10	0.82
25:M:212:LEU:HD11	25:M:214:LEU:HD21	1.61	0.82
8:b:86:PHE:O	8:b:88:THR:N	2.13	0.82
6:Z:65:ASP:O	6:Z:104:ASN:ND2	2.12	0.82
8:b:147:GLU:OE1	8:b:147:GLU:N	2.12	0.82
28:P:34:MET:O	30:r:225:ARG:NH1	2.11	0.82
2:V:466:ILE:O	2:V:469:THR:OG1	1.98	0.82
12:f:409:SER:O	12:f:819:TYR:OH	1.96	0.82
7:a:29:TYR:O	7:a:32:LYS:NZ	2.11	0.82
20:G:231:THR:N	20:G:234:GLU:OE1	2.13	0.82
17:D:184:PRO:O	17:D:187:HIS:ND1	2.12	0.82
17:D:78:GLU:N	17:D:78:GLU:OE1	2.12	0.82
12:f:600:TYR:HD1	12:f:660:ILE:HD11	1.45	0.82
19:F:383:GLU:HG2	24:L:170:THR:HG22	1.62	0.82
27:O:207:PHE:O	32:t:196:ARG:NH1	2.13	0.82
31:S:186:MET:SD	28:p:169:GLN:NE2	2.53	0.82
2:V:451:ILE:HD13	2:V:458:VAL:HG12	1.61	0.81
1:U:209:GLU:N	1:U:209:GLU:OE1	2.12	0.81
24:L:230:SER:OG	24:L:234:GLU:OE2	1.98	0.81
26:N:61:ALA:O	32:t:224:ARG:NH1	2.13	0.81
6:Z:38:VAL:HG21	6:Z:75:LEU:HD13	1.62	0.81
3:W:265:GLN:OE1	3:W:268:LYS:NZ	2.13	0.81
9:c:107:MET:HE1	13:y:40:GLY:CA	2.09	0.81
25:M:164:CYS:SG	25:M:165:ALA:N	2.54	0.81
7:a:276:CYS:SG	7:a:299:SER:OG	2.39	0.81
18:E:280:ASN:OD1	19:F:295:ARG:NH2	2.13	0.81
30:R:78:ARG:NE	30:R:88:GLN:OE1	2.13	0.81
16:C:113:ARG:NH2	16:C:129:ASN:O	2.14	0.81
12:f:700:SER:HG	12:f:734:SER:HG	1.21	0.81
9:c:26:ASP:OD1	9:c:27:THR:N	2.13	0.81
31:s:59:GLU:O	31:s:62:SER:OG	1.99	0.81
22:I:123:GLN:NE2	23:J:125:ARG:O	2.14	0.81
1:U:345:ASN:O	1:U:743:ASN:ND2	2.14	0.80
1:U:561:GLU:OE1	1:U:590:TYR:OH	1.99	0.80
18:E:329:GLU:OE1	18:E:329:GLU:N	2.13	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:M:41:ARG:NE	25:M:147:ALA:O	2.14	0.80
23:J:11:SER:OG	23:J:13:ASP:OD1	1.97	0.80
32:T:73:GLY:O	32:T:80:ARG:N	2.14	0.80
1:U:665:ASN:OD1	1:U:666:LYS:N	2.14	0.80
9:c:129:THR:O	9:c:132:SER:OG	1.99	0.80
32:t:252:THR:OG1	32:t:254:TRP:NE1	2.14	0.80
9:c:107:MET:HE3	13:y:38:THR:O	1.82	0.80
10:d:349:ILE:O	17:D:62:LYS:NZ	2.14	0.80
17:D:380:GLN:NE2	18:E:165:ILE:O	2.15	0.80
4:X:187:ARG:NH1	4:X:191:THR:OG1	2.14	0.80
3:W:203:GLN:O	3:W:206:SER:OG	1.98	0.80
14:A:170:PRO:O	14:A:231:ASN:ND2	2.14	0.80
31:s:142:ASP:OD1	31:s:146:LYS:N	2.14	0.80
18:E:97:ARG:NH1	18:E:114:GLU:OE1	2.14	0.79
1:U:129:ARG:O	1:U:133:ILE:HD12	1.82	0.79
27:O:71:ASP:OD1	27:O:73:ASN:N	2.16	0.79
31:S:56:ARG:NE	31:S:219:ASP:OD2	2.15	0.79
10:d:223:ASN:OD1	10:d:224:VAL:N	2.16	0.79
12:f:367:SER:N	12:f:370:MET:SD	2.55	0.79
2:V:495:ARG:NH2	16:C:40:GLN:OE1	2.14	0.79
7:a:246:GLU:OE2	7:a:301:LYS:NZ	2.16	0.79
9:c:85:GLU:OE1	9:c:85:GLU:N	2.15	0.79
7:a:185:ILE:O	7:a:193:GLN:NE2	2.15	0.79
18:E:144:GLU:OE2	18:E:297:ARG:NH1	2.16	0.79
30:R:116:ARG:NH2	33:K:100:TRP:O	2.15	0.79
28:p:26:ARG:NH1	28:p:37:THR:O	2.15	0.79
32:t:82:ARG:O	32:t:231:ARG:NH1	2.16	0.79
20:G:93:ARG:NH1	20:G:97:GLU:OE2	2.16	0.79
30:r:208:VAL:HG12	30:r:212:TYR:CE2	2.18	0.79
31:s:222:ARG:NH2	31:s:235:THR:OG1	2.16	0.78
17:D:141:ASP:OD1	17:D:142:VAL:N	2.16	0.78
20:G:74:GLU:OE1	20:G:226:LYS:NZ	2.16	0.78
26:n:46:VAL:HG11	26:n:135:ALA:HB1	1.65	0.78
1:U:788:VAL:HG23	1:U:910:GLY:O	1.84	0.78
3:W:398:VAL:HG21	4:X:337:ARG:CZ	2.13	0.78
30:R:200:ARG:NH1	30:R:200:ARG:O	2.16	0.78
31:S:55:THR:OG1	31:S:219:ASP:O	2.02	0.78
27:o:44:THR:O	27:o:172:SER:N	2.17	0.78
1:U:609:ASP:O	1:U:615:ARG:NH1	2.16	0.78
9:c:46:ARG:NH2	18:E:67:GLU:OE1	2.16	0.78
17:D:271:ALA:HB1	17:D:321:LEU:HD22	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:a:215:GLU:OE1	7:a:215:GLU:N	2.17	0.78
8:b:2:VAL:N	8:b:44:ASN:OD1	2.16	0.78
8:b:183:LEU:O	8:b:186:SER:OG	2.00	0.78
13:y:75:HIS:O	13:y:78:THR:OG1	2.02	0.78
2:V:443:ARG:NH1	10:d:273:GLY:O	2.17	0.78
12:f:89:MET:HE3	14:A:398:ARG:O	1.84	0.78
22:I:209:GLU:OE1	22:I:209:GLU:N	2.16	0.78
28:p:168:SER:HB3	28:p:200:LEU:HD21	1.64	0.78
1:U:599:ILE:HD11	1:U:625:ILE:HG21	1.66	0.78
3:W:24:VAL:HG12	3:W:50:LEU:HD21	1.66	0.78
24:L:166:GLN:O	24:L:170:THR:HG23	1.84	0.78
7:a:27:GLU:OE1	7:a:31:LYS:NZ	2.17	0.77
12:f:568:GLY:N	12:f:599:ALA:O	2.17	0.77
14:A:158:ASP:O	14:A:162:THR:HG23	1.83	0.77
17:D:349:THR:HB	17:D:354:LEU:HD11	1.65	0.77
1:U:128:GLN:OE1	1:U:128:GLN:N	2.17	0.77
6:Z:169:GLU:OE1	9:c:152:LYS:NZ	2.17	0.77
7:a:280:MET:HE1	7:a:296:ILE:HD13	1.66	0.77
19:F:226:TYR:CD1	19:F:335:VAL:HG12	2.20	0.77
32:T:90:VAL:HG22	32:T:96:LEU:HD23	1.66	0.77
30:r:77:SER:OG	30:r:88:GLN:O	2.02	0.77
31:s:187:GLN:OE1	31:s:187:GLN:N	2.18	0.77
8:b:121:GLU:OE1	8:b:121:GLU:N	2.17	0.77
23:J:182:GLU:OE1	23:J:182:GLU:N	2.17	0.77
25:M:171:GLN:O	25:M:175:THR:HG23	1.85	0.77
5:Y:355:GLU:OE1	5:Y:357:ASN:ND2	2.17	0.77
16:C:241:HIS:O	16:C:244:SER:OG	2.00	0.77
1:U:520:MET:HE3	1:U:523:SER:OG	1.85	0.77
3:W:183:VAL:HG11	3:W:222:LEU:HD13	1.67	0.77
9:c:192:LEU:O	9:c:198:ARG:NH1	2.18	0.77
14:A:86:THR:O	14:A:89:SER:C	2.28	0.77
14:A:304:ASN:OD1	14:A:305:GLN:N	2.18	0.77
27:O:67:MET:HE1	31:s:215:VAL:HG22	1.66	0.77
12:f:560:LEU:HD21	12:f:798:THR:HA	1.66	0.76
18:E:181:THR:HG21	19:F:318:ASP:O	1.85	0.76
31:s:88:ASP:OD1	32:t:142:TYR:OH	2.03	0.76
32:t:90:VAL:HG22	32:t:112:LEU:HD11	1.65	0.76
18:E:41:GLU:OE2	18:E:45:ASN:ND2	2.19	0.76
19:F:249:LEU:HD21	19:F:271:ALA:HB1	1.67	0.76
6:Z:167:ALA:HB1	9:c:42:LEU:HD21	1.67	0.76
10:d:88:LEU:O	10:d:92:THR:HG23	1.86	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Q:162:LYS:NZ	29:Q:166:GLU:OE2	2.17	0.76
12:f:413:SER:HA	12:f:416:MET:HE2	1.68	0.76
26:n:177:TYR:OH	26:n:179:GLU:OE1	2.02	0.76
15:B:408:ARG:O	15:B:410:ARG:NH1	2.18	0.76
3:W:293:ASP:OD1	3:W:294:LYS:N	2.19	0.76
30:R:97:ASN:OD1	30:R:100:LEU:N	2.18	0.76
1:U:695:MET:HB2	1:U:737:LEU:HD21	1.66	0.76
4:X:416:ASN:OD1	4:X:417:LYS:N	2.18	0.76
28:p:106:GLU:OE1	28:p:139:SER:OG	2.01	0.76
9:c:233:ASP:OD1	9:c:234:TYR:N	2.18	0.76
18:E:306:GLU:OE1	18:E:306:GLU:N	2.19	0.76
19:F:76:ASN:OD1	19:F:79:LYS:NZ	2.19	0.76
10:d:254:GLU:O	10:d:257:THR:OG1	2.03	0.76
18:E:223:ARG:NH1	18:E:268:ASP:O	2.19	0.75
22:I:145:PHE:O	22:I:146:GLN:NE2	2.18	0.75
15:B:109:VAL:HG12	16:C:95:PHE:CE2	2.21	0.75
23:J:201:SER:OG	23:J:205:ASN:ND2	2.20	0.75
24:L:207:THR:OG1	24:L:226:ASP:O	2.05	0.75
9:c:210:ASN:N	9:c:213:GLU:OE2	2.17	0.75
27:O:206:ILE:HD12	27:O:213:GLY:O	1.87	0.75
1:U:69:TYR:CE1	1:U:99:THR:HG21	2.22	0.75
14:A:333:ARG:NH1	35:F:501:ATP:O2B	2.20	0.75
29:Q:62:LYS:NZ	29:Q:65:GLN:OE1	2.15	0.75
20:G:127:GLN:OE1	21:H:128:ARG:NH2	2.18	0.75
29:Q:30:ASP:OD1	29:Q:177:THR:OG1	2.05	0.75
9:c:130:GLN:CD	9:c:142:ALA:HB2	2.12	0.75
9:c:139:ARG:O	9:c:161:ARG:NH2	2.19	0.75
15:B:375:ALA:HB3	15:B:378:VAL:HG23	1.68	0.75
18:E:199:VAL:HG21	19:F:315:ASN:ND2	2.02	0.75
19:F:184:GLN:OE1	34:z:169:ARG:NH1	2.19	0.75
17:D:258:ALA:HB3	17:D:259:PRO:HD3	1.68	0.74
16:C:362:VAL:HG22	16:C:390:VAL:HG21	1.67	0.74
28:p:178:ASP:OD2	28:p:181:SER:OG	1.99	0.74
1:U:567:ILE:HD12	1:U:586:VAL:HG23	1.69	0.74
21:H:222:THR:N	21:H:225:GLU:OE1	2.21	0.74
26:n:120:MET:SD	26:n:123:ARG:NH2	2.60	0.74
5:Y:352:GLU:OE1	5:Y:352:GLU:N	2.20	0.74
14:A:391:GLU:OE2	15:B:349:ARG:NH1	2.20	0.74
33:K:195:ILE:HD11	33:K:217:LEU:HD21	1.69	0.74
9:c:217:LEU:HA	9:c:220:LEU:HD23	1.69	0.74
14:A:116:LYS:NZ	14:A:117:GLN:O	2.21	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:10:SER:O	10:d:166:ARG:NH1	2.21	0.74
1:U:722:ASP:O	1:U:727:LYS:NZ	2.20	0.74
3:W:212:LYS:O	3:W:215:GLN:NE2	2.19	0.74
7:a:162:TYR:CZ	7:a:166:ILE:HD11	2.21	0.74
7:a:207:GLY:O	7:a:271:LYS:NZ	2.15	0.74
12:f:720:GLU:OE2	12:f:806:VAL:N	2.21	0.74
15:B:212:GLU:OE1	15:B:212:GLU:N	2.20	0.74
15:B:299:SER:OG	15:B:302:GLU:OE1	2.04	0.74
26:n:38:MET:HE1	26:n:193:ALA:HB3	1.70	0.74
9:c:269:GLN:N	9:c:269:GLN:OE1	2.20	0.74
14:A:252:GLU:OE1	14:A:252:GLU:N	2.21	0.74
30:R:226:ASP:OD2	30:R:229:SER:N	2.19	0.74
32:T:233:GLN:HB3	32:T:244:ILE:HD11	1.68	0.74
30:r:100:LEU:HD13	30:r:160:ILE:HD11	1.70	0.74
27:O:241:ARG:NH2	28:P:151:GLU:O	2.20	0.74
26:n:125:ARG:NH2	26:n:128:LEU:O	2.20	0.74
7:a:232:TRP:CE2	7:a:254:ALA:HB3	2.23	0.74
8:b:51:LEU:O	8:b:52:ILE:HD13	1.88	0.73
12:f:413:SER:O	12:f:417:ILE:HD12	1.88	0.73
14:A:120:LYS:HE2	19:F:90:VAL:HG23	1.70	0.73
18:E:311:ASP:O	18:E:315:ILE:HD12	1.88	0.73
27:O:206:ILE:HD13	27:O:212:SER:HB3	1.70	0.73
3:W:290:ILE:O	3:W:296:LEU:HD21	1.87	0.73
27:O:53:ASP:O	27:O:223:LYS:NZ	2.21	0.73
27:O:81:SER:HB3	27:O:106:LEU:HD23	1.71	0.73
6:Z:167:ALA:HB3	9:c:43:LYS:HZ1	1.51	0.73
27:O:55:ILE:HD11	27:O:221:ILE:HD12	1.70	0.73
33:K:96:THR:HA	33:K:107:MET:HE3	1.68	0.73
14:A:139:ARG:NH1	14:A:154:PRO:O	2.21	0.73
18:E:331:ILE:HD12	18:E:374:VAL:HG21	1.70	0.73
14:A:148:GLN:O	14:A:149:ILE:HG23	1.89	0.73
3:W:380:GLN:OE1	3:W:380:GLN:N	2.21	0.73
16:C:152:GLY:N	16:C:327:ASP:OD2	2.21	0.73
16:C:377:HIS:O	16:C:379:THR:HG23	1.89	0.73
25:M:216:TRP:CE3	25:M:228:VAL:HG22	2.24	0.73
12:f:866:GLN:OE1	34:z:209:LYS:NZ	2.15	0.73
13:y:42:ARG:NH1	13:y:44:ASP:OD2	2.22	0.73
25:M:10:LEU:O	25:M:23:GLN:NE2	2.21	0.73
1:U:644:TYR:CE1	16:C:56:VAL:HG22	2.23	0.73
15:B:377:ASP:O	15:B:416:ASN:ND2	2.21	0.73
4:X:414:LEU:HD21	6:Z:273:HIS:CD2	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:d:207:GLU:OE1	10:d:207:GLU:N	2.20	0.73
12:f:470:VAL:O	12:f:478:ARG:NE	2.21	0.73
14:A:222:LYS:NZ	14:A:322:ASN:OD1	2.18	0.73
22:I:118:LYS:O	22:I:122:THR:HG23	1.89	0.73
3:W:436:MET:HE2	9:c:226:MET:HA	1.70	0.73
4:X:313:LEU:O	4:X:319:ILE:HD12	1.87	0.73
5:Y:387:ILE:O	6:Z:279:LYS:NZ	2.22	0.73
17:D:202:VAL:CG1	17:D:308:ILE:HG23	2.18	0.73
18:E:236:ASP:OD2	19:F:295:ARG:NH1	2.21	0.73
27:o:65:GLU:N	27:o:65:GLU:OE1	2.22	0.73
1:U:798:PRO:O	1:U:880:ASN:ND2	2.21	0.72
4:X:255:LEU:HB2	4:X:287:LEU:HD13	1.71	0.72
15:B:368:HIS:NE2	37:B:501:ADP:O2'	2.18	0.72
20:G:144:ASP:OD1	20:G:145:GLU:N	2.22	0.72
15:B:110:GLY:N	15:B:150:VAL:O	2.22	0.72
15:B:110:GLY:O	15:B:150:VAL:N	2.22	0.72
32:T:91:ASN:OD1	32:T:94:THR:N	2.22	0.72
28:p:178:ASP:OD1	28:p:179:ALA:N	2.21	0.72
1:U:644:TYR:CZ	16:C:56:VAL:HG22	2.24	0.72
1:U:654:MET:HE1	1:U:767:THR:HG22	1.70	0.72
4:X:171:LEU:HD13	4:X:209:THR:HG22	1.72	0.72
6:Z:177:ARG:NH1	17:D:78:GLU:OE2	2.23	0.72
12:f:239:TYR:OH	12:f:604:GLY:N	2.22	0.72
14:A:323:ARG:NH2	15:B:306:GLN:OE1	2.22	0.72
11:e:49:GLU:OE2	11:e:55:GLN:NE2	2.22	0.72
12:f:696:LEU:CD1	12:f:800:LEU:HD13	2.20	0.72
17:D:177:VAL:O	17:D:181:VAL:HG12	1.88	0.72
17:D:213:THR:HG21	18:E:266:GLY:HA2	1.72	0.72
1:U:642:GLU:O	16:C:53:ASN:ND2	2.22	0.72
9:c:90:VAL:HG23	13:y:74:LEU:HD22	1.72	0.72
9:c:111:TRP:NE1	9:c:130:GLN:OE1	2.22	0.72
12:f:316:ASP:OD1	12:f:317:LEU:N	2.22	0.72
16:C:125:LYS:NZ	17:D:112:TYR:OH	2.17	0.72
16:C:105:ILE:HG23	16:C:108:VAL:HB	1.71	0.72
28:p:13:ALA:HB1	28:p:121:ILE:HG22	1.72	0.72
12:f:836:GLU:OE1	12:f:838:ARG:NH2	2.22	0.72
17:D:272:THR:OG1	17:D:316:THR:OG1	2.08	0.72
26:N:130:ALA:N	26:N:150:MET:SD	2.63	0.72
6:Z:262:LEU:HD22	9:c:248:MET:HE1	1.72	0.72
19:F:298:SER:OG	19:F:304:ARG:NH2	2.23	0.72
5:Y:311:TYR:CG	5:Y:314:LEU:HD12	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:b:86:PHE:CZ	8:b:90:ILE:HD11	2.25	0.71
23:J:16:LEU:HB2	23:J:19:VAL:HG12	1.72	0.71
28:P:144:GLU:O	31:s:172:MET:HE1	1.89	0.71
15:B:286:GLU:OE2	15:B:332:ASN:N	2.23	0.71
25:M:98:ASN:OD1	25:M:102:ASN:ND2	2.21	0.71
26:N:59:TYR:CD1	27:O:175:LEU:HD11	2.25	0.71
10:d:260:ILE:O	10:d:264:LEU:HD23	1.90	0.71
17:D:214:MET:CE	35:D:501:ATP:H3'	2.20	0.71
27:O:109:HIS:O	27:O:113:THR:HG23	1.89	0.71
29:q:19:ARG:NH1	29:q:32:HIS:O	2.23	0.71
12:f:712:LYS:HE2	14:A:77:LEU:HD23	1.73	0.71
33:K:212:ALA:O	33:K:231:LYS:NZ	2.22	0.71
1:U:179:TYR:HH	17:D:39:ASP:N	1.88	0.71
2:V:224:LEU:HD12	2:V:261:TYR:CZ	2.25	0.71
3:W:281:ASN:OD1	3:W:282:GLU:N	2.24	0.71
6:Z:167:ALA:HB1	9:c:42:LEU:CD2	2.20	0.71
19:F:279:ALA:HB1	19:F:280:PRO:HD2	1.72	0.71
5:Y:51:ALA:HB3	5:Y:52:PRO:HD3	1.72	0.71
7:a:128:LEU:HD12	7:a:129:GLN:N	2.06	0.71
12:f:552:ASP:O	12:f:553:THR:OG1	2.09	0.71
1:U:122:GLU:O	1:U:123:LYS:C	2.34	0.71
10:d:223:ASN:OD1	10:d:225:TYR:N	2.24	0.71
15:B:357:ASP:N	15:B:360:THR:OG1	2.24	0.71
32:T:60:LYS:NZ	32:T:165:SER:O	2.20	0.71
7:a:81:LEU:HD11	7:a:117:ALA:HB2	1.73	0.71
20:G:60:LEU:HD13	25:M:163:GLY:O	1.91	0.71
23:J:5:ARG:NH1	23:J:6:ALA:O	2.23	0.71
17:D:329:ARG:NH1	17:D:330:LYS:O	2.24	0.71
19:F:248:PHE:HE1	19:F:282:ILE:HD13	1.56	0.71
7:a:235:ASP:OD1	7:a:236:THR:N	2.24	0.70
18:E:380:LEU:HD13	19:F:351:LYS:HZ3	1.56	0.70
4:X:14:SER:O	4:X:17:SER:OG	2.09	0.70
29:Q:37:LYS:O	29:Q:61:GLN:NE2	2.25	0.70
2:V:494:MET:HE1	6:Z:275:LEU:HA	1.73	0.70
3:W:128:LEU:HB3	3:W:145:LEU:HD21	1.73	0.70
20:G:9:PHE:O	20:G:12:HIS:ND1	2.24	0.70
24:L:18:ARG:NE	24:L:23:GLU:OE2	2.23	0.70
31:S:195:SER:OG	31:S:197:ASP:OD1	2.02	0.70
3:W:276:LEU:O	3:W:357:ARG:NE	2.25	0.70
6:Z:165:GLU:OE2	9:c:43:LYS:NZ	2.22	0.70
12:f:349:TYR:OH	12:f:377:VAL:HG21	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:W:372:ARG:CZ	7:a:327:VAL:HG23	2.22	0.70
26:N:122:TYR:O	26:N:125:ARG:NH1	2.25	0.70
27:O:73:ASN:O	27:O:230:ARG:NH2	2.24	0.70
27:O:113:THR:O	27:O:115:ARG:NH1	2.23	0.70
30:R:86:ALA:O	28:p:177:ARG:NH1	2.23	0.70
12:f:611:GLN:O	12:f:615:ILE:HG23	1.90	0.70
17:D:200:ARG:NH2	17:D:296:MET:O	2.24	0.70
28:p:4:MET:HE1	28:p:126:LEU:HD22	1.74	0.70
9:c:106:GLU:OE1	9:c:106:GLU:N	2.25	0.70
12:f:59:LEU:O	12:f:63:LEU:HD23	1.91	0.70
14:A:284:ARG:NH1	14:A:328:ASP:OD2	2.25	0.70
17:D:96:VAL:HB	17:D:100:THR:HG23	1.72	0.70
18:E:101:ASP:OD1	18:E:102:MET:N	2.24	0.70
1:U:628:ARG:HH21	1:U:755:THR:HG23	1.56	0.70
3:W:123:ARG:NH2	3:W:126:ASP:OD2	2.25	0.70
29:Q:16:ALA:HB2	29:Q:160:LEU:HD21	1.74	0.70
1:U:341:PHE:CD2	1:U:342:LEU:HD22	2.26	0.70
2:V:289:LEU:HB3	2:V:312:ALA:HB2	1.72	0.70
6:Z:165:GLU:HG2	6:Z:166:GLU:H	1.57	0.70
25:M:93:ARG:NH2	32:T:118:ASP:O	2.24	0.70
1:U:33:ASP:OD1	1:U:34:PHE:N	2.23	0.69
1:U:748:LEU:HD22	1:U:760:VAL:HG22	1.73	0.69
3:W:237:GLU:OE1	3:W:239:SER:N	2.25	0.69
4:X:167:VAL:HB	4:X:206:LEU:HD21	1.74	0.69
15:B:136:LEU:HD23	15:B:158:ALA:HB1	1.74	0.69
1:U:233:LEU:HD23	1:U:268:LEU:HD11	1.75	0.69
6:Z:161:GLU:OE1	6:Z:162:ILE:N	2.25	0.69
15:B:184:TYR:OH	15:B:198:LYS:NZ	2.22	0.69
15:B:363:ARG:NH2	15:B:366:GLN:OE1	2.25	0.69
2:V:278:GLU:OE1	2:V:278:GLU:N	2.25	0.69
4:X:15:LEU:HD23	4:X:22:ALA:CB	2.21	0.69
11:e:17:ASP:OD1	11:e:18:GLU:N	2.24	0.69
2:V:72:LEU:CD2	2:V:116:ALA:HB2	2.22	0.69
6:Z:94:TRP:CE2	6:Z:121:LEU:HD13	2.27	0.69
12:f:781:TYR:HH	12:f:876:HIS:CD2	2.10	0.69
18:E:178:THR:HB	18:E:301:ILE:HG22	1.75	0.69
27:O:246:ARG:NH1	28:P:155:GLU:OE1	2.25	0.69
5:Y:263:LEU:HD12	5:Y:271:PHE:CE2	2.27	0.69
16:C:51:GLU:OE2	16:C:55:LYS:NZ	2.25	0.69
28:p:149:MET:HE3	28:p:173:ASN:CB	2.22	0.69
2:V:281:ASN:CG	5:Y:389:MET:HE1	2.16	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:A:123:VAL:HG21	14:A:147:TYR:O	1.93	0.69
15:B:116:ILE:HD11	15:B:122:ILE:HD11	1.73	0.69
26:N:125:ARG:NH2	32:T:46:THR:HG22	2.06	0.69
29:Q:164:LEU:HD22	29:Q:178:PHE:CD2	2.27	0.69
4:X:171:LEU:HD11	4:X:210:LEU:HD22	1.73	0.69
16:C:227:GLY:O	16:C:231:VAL:HG23	1.92	0.69
17:D:87:LEU:HD13	17:D:131:ALA:HB1	1.75	0.69
18:E:86:GLN:OE1	18:E:86:GLN:N	2.25	0.69
32:T:114:GLN:NE2	32:T:118:ASP:OD1	2.25	0.69
32:t:245:GLU:OE1	32:t:245:GLU:N	2.26	0.69
1:U:520:MET:HE2	1:U:525:ASN:HB2	1.74	0.69
3:W:328:LEU:HD11	3:W:351:TRP:CH2	2.28	0.69
5:Y:249:VAL:O	5:Y:252:SER:OG	2.11	0.69
5:Y:262:SER:OG	5:Y:270:VAL:HG23	1.92	0.69
6:Z:86:ASN:OD1	6:Z:87:ALA:N	2.25	0.69
10:d:166:ARG:O	10:d:170:GLN:NE2	2.25	0.69
16:C:255:GLY:HA2	16:C:273:MET:HE2	1.75	0.69
19:F:393:GLY:N	19:F:395:GLN:OE1	2.25	0.69
23:J:57:ARG:O	23:J:60:ARG:NH1	2.26	0.69
23:J:123:GLY:O	23:J:124:ARG:NE	2.20	0.69
25:M:208:LYS:NZ	34:z:177:LEU:HD11	2.07	0.69
28:P:59:ASP:OD2	28:P:104:TYR:N	2.24	0.69
29:Q:35:MET:SD	29:Q:179:SER:OG	2.48	0.69
28:p:12:MET:CB	28:p:138:VAL:HG12	2.23	0.69
29:q:4:LEU:HD22	29:q:45:LEU:HB3	1.73	0.69
3:W:93:ARG:O	3:W:96:GLN:N	2.26	0.69
8:b:7:MET:HE1	8:b:50:GLY:HA3	1.73	0.69
17:D:56:VAL:HG12	17:D:60:TYR:CZ	2.27	0.69
29:Q:27:GLN:NE2	29:q:169:LYS:O	2.26	0.69
30:R:219:ILE:HG21	30:R:233:VAL:HG13	1.75	0.69
32:T:46:THR:N	32:T:149:ASN:OD1	2.25	0.69
17:D:157:ASP:O	17:D:221:HIS:ND1	2.26	0.69
22:I:91:ARG:NH2	28:P:76:LEU:O	2.25	0.69
9:c:158:ASP:OD1	9:c:159:ALA:N	2.25	0.68
15:B:335:GLU:OE1	15:B:335:GLU:N	2.26	0.68
23:J:87:ALA:HB2	23:J:111:ILE:HD11	1.76	0.68
30:r:150:LYS:NZ	30:r:174:ASP:O	2.26	0.68
30:r:159:MET:HE1	30:r:187:VAL:HG22	1.75	0.68
3:W:136:ILE:HG21	17:D:390:ASN:O	1.94	0.68
7:a:112:ILE:HG13	7:a:138:VAL:HG13	1.75	0.68
16:C:356:GLY:O	16:C:359:VAL:N	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:o:216:ILE:HD12	27:o:233:THR:CG2	2.23	0.68
2:V:315:LYS:O	5:Y:382:LYS:NZ	2.27	0.68
6:Z:145:HIS:O	7:a:178:ARG:NH2	2.26	0.68
15:B:407:LEU:O	15:B:410:ARG:NH2	2.26	0.68
17:D:266:GLU:HB2	18:E:258:MET:HE3	1.75	0.68
26:N:73:ASP:OD1	26:N:74:ARG:N	2.27	0.68
30:R:101:LEU:O	30:R:160:ILE:HD12	1.94	0.68
2:V:313:LEU:HD11	2:V:329:HIS:CE1	2.27	0.68
2:V:467:TYR:OH	6:Z:255:ASP:OD1	2.11	0.68
8:b:16:MET:N	8:b:16:MET:HE2	2.09	0.68
8:b:117:VAL:HG23	8:b:149:ASN:HD22	1.58	0.68
20:G:113:MET:HE1	27:O:113:THR:HA	1.75	0.68
23:J:70:CYS:SG	23:J:217:LEU:HD22	2.34	0.68
27:O:93:ALA:C	27:O:97:MET:HE3	2.18	0.68
30:R:164:ASP:OD1	30:R:167:GLY:N	2.26	0.68
5:Y:292:TYR:OH	5:Y:293:ARG:NH2	2.26	0.68
9:c:231:LEU:HD13	9:c:234:TYR:CE1	2.29	0.68
17:D:56:VAL:HG12	17:D:60:TYR:CE2	2.29	0.68
18:E:305:ASN:HD21	18:E:308:ALA:HB3	1.57	0.68
27:O:140:ALA:HB1	27:O:170:MET:HE2	1.74	0.68
31:S:185:ASN:ND2	28:p:176:ASP:OD2	2.26	0.68
1:U:126:ILE:O	1:U:127:ASP:C	2.36	0.68
4:X:321:THR:OG1	4:X:325:LYS:NZ	2.27	0.68
9:c:34:SER:OG	9:c:70:ILE:O	2.07	0.68
14:A:72:LEU:O	15:B:96:ARG:NH2	2.27	0.68
25:M:9:ASP:OD2	25:M:26:TYR:OH	2.11	0.68
8:b:62:THR:HG21	8:b:71:ILE:CD1	2.23	0.68
9:c:57:MET:HE1	9:c:111:TRP:C	2.18	0.68
17:D:123:LEU:HB2	17:D:142:VAL:HG11	1.76	0.68
22:I:76:VAL:HG12	22:I:134:LEU:HD11	1.74	0.68
27:o:129:MET:HE2	27:o:129:MET:N	2.09	0.68
5:Y:314:LEU:HD23	5:Y:315:THR:N	2.08	0.68
8:b:51:LEU:HB3	8:b:62:THR:HG22	1.75	0.68
10:d:206:ALA:O	10:d:210:THR:HG23	1.93	0.68
29:q:38:MET:HE1	29:q:44:LEU:HB2	1.76	0.68
1:U:349:ASP:O	1:U:352:ILE:HG22	1.94	0.68
12:f:592:ASN:OD1	12:f:593:THR:N	2.26	0.68
17:D:320:ALA:O	17:D:323:ARG:NH2	2.27	0.68
18:E:141:GLN:NE2	18:E:300:HIS:O	2.27	0.68
20:G:192:GLU:OE1	20:G:192:GLU:N	2.27	0.68
32:t:171:ASP:OD1	32:t:174:GLY:N	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:G:51:VAL:HG13	20:G:217:VAL:HG12	1.76	0.67
21:H:100:VAL:HG23	21:H:101:TYR:H	1.59	0.67
27:O:83:ASN:ND2	27:O:116:LEU:HD13	2.09	0.67
5:Y:146:ARG:NH2	5:Y:212:GLU:OE2	2.27	0.67
7:a:279:GLU:OE1	7:a:339:ARG:NH2	2.28	0.67
17:D:304:ASN:OD1	17:D:306:LYS:NZ	2.27	0.67
31:S:80:ILE:HD12	31:S:137:ILE:O	1.94	0.67
4:X:167:VAL:CG1	4:X:210:LEU:HD21	2.24	0.67
4:X:422:THR:OG1	6:Z:283:ARG:NH2	2.27	0.67
5:Y:246:ILE:O	5:Y:250:LEU:HD23	1.95	0.67
7:a:56:LEU:HD23	7:a:86:GLN:CG	2.25	0.67
28:P:36:THR:OG1	28:P:38:ASP:OD1	2.07	0.67
26:n:51:ASP:HB2	26:n:198:MET:HE1	1.77	0.67
1:U:127:ASP:O	1:U:130:LEU:N	2.27	0.67
3:W:420:ASP:OD2	3:W:422:ASN:N	2.27	0.67
9:c:163:ILE:N	9:c:199:HIS:O	2.27	0.67
15:B:107:MET:HE3	16:C:95:PHE:CG	2.29	0.67
18:E:175:PRO:HD2	18:E:178:THR:HG21	1.75	0.67
19:F:249:LEU:CD2	19:F:271:ALA:HB1	2.23	0.67
22:I:99:LEU:HD22	28:P:66:ARG:NH2	2.10	0.67
27:O:236:ASN:OD1	31:s:240:LYS:N	2.28	0.67
30:R:85:ILE:HG23	28:p:179:ALA:HA	1.76	0.67
28:p:28:PHE:O	28:p:35:VAL:N	2.25	0.67
32:t:104:ASP:O	32:t:108:LEU:HD23	1.94	0.67
1:U:653:ALA:HB2	1:U:675:MET:SD	2.34	0.67
1:U:699:THR:HG21	1:U:810:THR:O	1.94	0.67
4:X:218:HIS:CE1	4:X:227:THR:HG1	2.13	0.67
4:X:325:LYS:O	4:X:329:ASN:ND2	2.28	0.67
5:Y:297:ARG:NH2	11:e:46:ASP:OD2	2.27	0.67
20:G:138:MET:SD	20:G:140:LEU:HD21	2.35	0.67
30:R:212:TYR:OH	30:R:237:HIS:ND1	2.27	0.67
14:A:238:ILE:HB	14:A:272:ILE:HD12	1.76	0.67
23:J:139:ASP:OD1	23:J:140:GLY:N	2.27	0.67
1:U:213:PHE:HB2	1:U:248:ILE:HD11	1.76	0.67
2:V:246:GLY:O	2:V:250:LEU:HD23	1.94	0.67
7:a:363:MET:SD	9:c:307:VAL:HG13	2.34	0.67
16:C:65:LEU:HD12	17:D:114:ARG:NH2	2.10	0.67
19:F:84:LYS:O	19:F:88:TYR:OH	2.11	0.67
27:O:169:THR:HG21	27:O:177:ALA:CB	2.24	0.67
31:s:89:CYS:O	31:s:93:THR:HG23	1.94	0.67
1:U:586:VAL:HG11	1:U:602:LEU:HD21	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:91:PRO:O	2:V:94:VAL:HG12	1.93	0.67
5:Y:215:ASP:OD1	5:Y:216:TYR:N	2.27	0.67
31:S:41:LEU:HD11	31:S:177:LEU:CD1	2.21	0.67
2:V:231:LEU:HD12	2:V:250:LEU:HD12	1.76	0.67
2:V:451:ILE:HD12	2:V:457:TYR:O	1.95	0.67
6:Z:263:ALA:CB	9:c:291:LEU:HD11	2.25	0.67
7:a:360:VAL:HG22	9:c:308:VAL:CG2	2.25	0.67
16:C:327:ASP:OD1	16:C:328:ILE:N	2.28	0.67
18:E:331:ILE:HG23	18:E:374:VAL:HG21	1.77	0.67
17:D:271:ALA:CB	17:D:321:LEU:HD22	2.24	0.67
29:Q:174:ASN:N	29:q:172:ILE:O	2.28	0.67
26:n:162:GLY:N	26:n:166:SER:OG	2.27	0.67
19:F:405:MET:HE3	19:F:405:MET:O	1.95	0.66
22:I:33:THR:OG1	22:I:166:ASN:O	2.12	0.66
25:M:40:ILE:HD13	25:M:194:VAL:HG22	1.77	0.66
9:c:50:PRO:HB3	18:E:104:THR:HG21	1.76	0.66
14:A:166:VAL:HG11	14:A:239:ARG:HB3	1.78	0.66
19:F:98:ASP:OD1	19:F:99:VAL:N	2.28	0.66
21:H:101:TYR:HD1	28:P:86:THR:HG23	1.59	0.66
31:S:188:ASN:OD1	27:o:251:THR:OG1	2.12	0.66
32:T:243:GLU:OE1	32:T:243:GLU:N	2.28	0.66
27:o:142:VAL:HG13	27:o:168:VAL:HG23	1.76	0.66
17:D:214:MET:O	17:D:215:LEU:C	2.39	0.66
18:E:115:VAL:HB	18:E:118:LEU:HD12	1.77	0.66
18:E:380:LEU:HD13	19:F:351:LYS:NZ	2.10	0.66
28:p:161:ASP:OD1	28:p:162:HIS:ND1	2.27	0.66
1:U:124:LYS:O	1:U:126:ILE:HG13	1.95	0.66
2:V:85:ALA:HB2	2:V:93:PHE:HB2	1.78	0.66
5:Y:219:PHE:O	5:Y:223:THR:HG23	1.94	0.66
6:Z:22:HIS:CD2	6:Z:35:VAL:HG11	2.30	0.66
7:a:289:ARG:NE	7:a:333:MET:O	2.27	0.66
12:f:184:LEU:HA	12:f:187:LEU:HD12	1.75	0.66
14:A:178:GLY:O	35:A:501:ATP:N6	2.28	0.66
17:D:354:LEU:HD13	17:D:358:VAL:HG21	1.77	0.66
24:L:194:ALA:O	24:L:198:THR:HG23	1.95	0.66
5:Y:153:ASP:O	5:Y:157:ILE:HD12	1.95	0.66
14:A:198:PRO:HG3	34:z:204:VAL:HG12	1.76	0.66
30:r:93:VAL:HG13	30:r:102:GLY:O	1.95	0.66
2:V:280:ALA:O	5:Y:385:ARG:NH2	2.26	0.66
6:Z:182:THR:OG1	17:D:70:LYS:NZ	2.17	0.66
7:a:123:LEU:HB2	7:a:131:THR:HG21	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:L:44:ALA:HB1	24:L:144:ILE:HD11	1.76	0.66
34:z:168:CYS:SG	34:z:169:ARG:N	2.68	0.66
12:f:845:ARG:HG2	12:f:867:THR:HG22	1.77	0.66
28:P:125:ASP:OD1	28:P:128:GLY:N	2.29	0.66
7:a:112:ILE:HG23	7:a:151:VAL:HG21	1.77	0.66
12:f:619:HIS:CB	15:B:85:MET:HE1	2.26	0.66
17:D:202:VAL:HG11	17:D:308:ILE:HG23	1.77	0.66
1:U:603:LEU:HD13	17:D:60:TYR:CG	2.30	0.66
29:q:3:TYR:OH	29:q:139:THR:HG21	1.96	0.66
29:q:49:GLU:OE1	29:q:49:GLU:N	2.28	0.66
1:U:364:VAL:HG11	1:U:724:VAL:HG12	1.78	0.66
4:X:378:LEU:HD23	4:X:379:ASP:N	2.10	0.66
5:Y:168:ILE:CD1	5:Y:180:LEU:HD13	2.26	0.66
10:d:106:SER:OG	10:d:108:ASN:OD1	2.06	0.66
21:H:101:TYR:CD1	28:P:86:THR:HG23	2.30	0.66
31:s:74:LEU:HD11	31:s:96:ILE:HD12	1.78	0.66
32:t:71:MET:HE2	32:t:71:MET:HA	1.77	0.66
4:X:148:HIS:NE2	4:X:152:GLN:OE1	2.29	0.65
6:Z:170:VAL:HG22	9:c:152:LYS:HA	1.77	0.65
12:f:479:LEU:HG	12:f:517:VAL:HG21	1.78	0.65
16:C:62:GLU:OE2	17:D:117:SER:N	2.28	0.65
19:F:345:SER:N	19:F:349:ASP:OD1	2.24	0.65
20:G:75:ASN:ND2	20:G:225:PRO:O	2.29	0.65
32:t:91:ASN:OD1	32:t:94:THR:N	2.29	0.65
9:c:25:VAL:HG13	9:c:175:ARG:HG2	1.78	0.65
27:O:44:THR:HG21	27:O:89:ALA:HA	1.78	0.65
27:O:172:SER:OG	27:O:209:ASP:OD2	2.11	0.65
27:O:210:LEU:HD12	31:s:60:GLY:O	1.96	0.65
26:n:223:LEU:C	26:n:224:LEU:HD12	2.21	0.65
1:U:879:ASP:OD1	1:U:880:ASN:N	2.28	0.65
8:b:52:ILE:HD12	8:b:60:VAL:HG12	1.79	0.65
10:d:208:PHE:O	10:d:212:LEU:HD23	1.96	0.65
12:f:346:ASP:O	12:f:349:TYR:C	2.39	0.65
22:I:38:LEU:O	22:I:179:TYR:OH	2.13	0.65
25:M:76:MET:HB3	25:M:138:LEU:HD23	1.78	0.65
2:V:89:LYS:O	16:C:36:ASN:ND2	2.29	0.65
8:b:128:ALA:HB1	8:b:160:LEU:HD22	1.78	0.65
15:B:173:VAL:CG2	16:C:274:LEU:HD22	2.25	0.65
19:F:339:ASP:OD1	19:F:341:ALA:N	2.30	0.65
32:T:71:MET:HE2	32:T:231:ARG:HG2	1.79	0.65
1:U:3:THR:CG2	2:V:263:LEU:HD11	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:161:ASP:OD1	1:U:162:VAL:N	2.29	0.65
6:Z:12:HIS:ND1	6:Z:163:GLY:O	2.29	0.65
6:Z:67:VAL:HG13	8:b:92:VAL:HG23	1.78	0.65
6:Z:168:GLU:O	6:Z:172:VAL:HG12	1.97	0.65
9:c:201:TYR:HE1	9:c:203:ILE:HD11	1.61	0.65
21:H:99:LEU:HD21	27:O:104:SER:CB	2.25	0.65
4:X:183:LEU:HD13	4:X:221:GLU:HB2	1.78	0.65
7:a:363:MET:CE	9:c:307:VAL:HG13	2.27	0.65
17:D:131:ALA:C	17:D:132:LEU:HD12	2.21	0.65
28:p:138:VAL:HG11	28:p:146:MET:HG2	1.78	0.65
30:r:79:ALA:CB	30:r:90:VAL:HG21	2.26	0.65
3:W:172:GLU:O	3:W:182:ARG:NH2	2.30	0.65
5:Y:148:GLY:O	5:Y:157:ILE:HD11	1.96	0.65
5:Y:314:LEU:HD22	5:Y:319:MET:HE2	1.77	0.65
6:Z:240:VAL:HG13	9:c:310:LYS:NZ	2.12	0.65
15:B:420:LYS:NZ	15:B:424:GLU:OE2	2.24	0.65
28:P:44:PRO:C	28:P:45:MET:HE2	2.21	0.65
28:P:164:PHE:CE1	28:P:189:ILE:HD13	2.31	0.65
1:U:520:MET:HE2	1:U:525:ASN:CB	2.27	0.65
2:V:284:GLU:OE1	2:V:287:ARG:NH1	2.30	0.65
26:n:161:ILE:HD11	26:n:170:TYR:CD1	2.31	0.65
30:r:233:VAL:HG21	30:r:254:LEU:HD22	1.78	0.65
2:V:305:ALA:HB3	2:V:335:VAL:HG21	1.78	0.65
3:W:307:LYS:O	3:W:311:THR:HG23	1.97	0.65
9:c:75:MET:HA	9:c:75:MET:HE3	1.78	0.65
12:f:173:LEU:O	12:f:181:ARG:NH2	2.30	0.65
12:f:418:LEU:HD13	12:f:425:GLY:HA2	1.79	0.65
24:L:205:LEU:HD22	24:L:210:VAL:HG22	1.79	0.65
27:O:217:ASP:OD2	27:O:230:ARG:NH1	2.29	0.65
12:f:438:ASP:OD1	13:y:381:ARG:NH1	2.30	0.65
21:H:11:THR:HG21	22:I:9:THR:CG2	2.27	0.65
28:P:45:MET:SD	28:P:67:LEU:HD22	2.37	0.65
30:R:219:ILE:CG2	30:R:233:VAL:HG13	2.27	0.65
31:S:101:LYS:O	31:S:105:HIS:ND1	2.30	0.65
34:z:161:VAL:HG12	34:z:161:VAL:O	1.97	0.65
1:U:66:LYS:O	1:U:70:HIS:ND1	2.30	0.64
2:V:169:LEU:HD12	2:V:210:CYS:SG	2.38	0.64
3:W:226:TYR:HA	3:W:229:LEU:HD12	1.79	0.64
3:W:255:CYS:O	3:W:262:LYS:NZ	2.20	0.64
5:Y:263:LEU:HD12	5:Y:271:PHE:HE2	1.60	0.64
7:a:304:VAL:O	7:a:307:VAL:HG22	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:d:349:ILE:O	10:d:349:ILE:HG23	1.97	0.64
18:E:196:LEU:HD23	18:E:228:CYS:SG	2.37	0.64
18:E:363:VAL:HG13	18:E:364:GLN:H	1.62	0.64
19:F:383:GLU:OE1	19:F:383:GLU:N	2.30	0.64
20:G:72:ILE:HG21	20:G:114:LEU:HD21	1.78	0.64
1:U:149:GLN:OE1	1:U:149:GLN:N	2.29	0.64
2:V:376:ASN:OD1	2:V:377:GLN:N	2.30	0.64
6:Z:52:ASN:OD1	6:Z:53:SER:N	2.28	0.64
12:f:437:GLU:O	12:f:440:ILE:N	2.29	0.64
20:G:80:MET:HE3	20:G:80:MET:HA	1.78	0.64
25:M:88:LEU:HA	25:M:91:ILE:HD12	1.79	0.64
32:T:223:TYR:O	26:n:60:ILE:HD11	1.98	0.64
28:p:172:LEU:HD11	28:p:200:LEU:HD22	1.79	0.64
32:t:141:MET:HE1	32:t:174:GLY:N	2.12	0.64
1:U:510:GLU:OE1	1:U:547:GLY:N	2.31	0.64
1:U:588:MET:HE3	1:U:764:LEU:HD22	1.78	0.64
6:Z:263:ALA:HB2	9:c:291:LEU:HD11	1.79	0.64
20:G:58:ASP:OD1	20:G:60:LEU:N	2.30	0.64
25:M:78:VAL:HG21	25:M:85:ALA:CB	2.27	0.64
30:R:159:MET:HE1	30:R:187:VAL:HG22	1.79	0.64
29:q:27:GLN:NE2	29:q:29:LYS:O	2.29	0.64
31:s:172:MET:N	31:s:172:MET:HE2	2.13	0.64
7:a:149:THR:HG23	7:a:151:VAL:HG12	1.78	0.64
12:f:771:LEU:O	12:f:774:GLY:N	2.31	0.64
14:A:40:THR:OG1	14:A:41:TYR:N	2.29	0.64
15:B:129:SER:OG	15:B:131:HIS:ND1	2.30	0.64
15:B:287:ILE:HG22	15:B:329:MET:HE2	1.80	0.64
23:J:68:ASN:O	23:J:135:GLY:HA2	1.96	0.64
31:S:56:ARG:NH1	31:S:215:VAL:O	2.30	0.64
12:f:339:ILE:HG22	12:f:339:ILE:O	1.98	0.64
18:E:199:VAL:HG13	18:E:234:GLU:OE1	1.98	0.64
22:I:69:ASN:ND2	22:I:71:ASP:OD1	2.31	0.64
31:S:66:ARG:NH2	27:o:207:PHE:O	2.31	0.64
5:Y:214:MET:HE2	5:Y:219:PHE:N	2.12	0.64
6:Z:8:LYS:NZ	6:Z:161:GLU:OE2	2.31	0.64
6:Z:38:VAL:HG21	6:Z:75:LEU:CD1	2.27	0.64
21:H:99:LEU:HD21	27:O:104:SER:HB2	1.79	0.64
2:V:191:LEU:HD21	2:V:210:CYS:SG	2.38	0.64
2:V:351:PRO:O	2:V:354:LYS:NZ	2.25	0.64
5:Y:224:VAL:HG12	5:Y:228:MET:HE2	1.79	0.64
12:f:224:ASN:OD1	12:f:225:ALA:N	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:E:284:THR:C	18:E:285:LEU:HD12	2.23	0.64
18:E:372:ARG:NH1	25:M:175:THR:OG1	2.31	0.64
24:L:185:ASN:OD1	24:L:186:GLU:N	2.31	0.64
29:Q:155:ARG:NH1	29:Q:159:LEU:HD22	2.13	0.64
3:W:382:LEU:HD23	3:W:382:LEU:O	1.98	0.64
6:Z:25:ARG:HE	9:c:105:PRO:HD3	1.63	0.64
12:f:416:MET:SD	12:f:822:VAL:HG21	2.37	0.64
23:J:156:TRP:CE3	33:K:59:MET:HE1	2.33	0.64
1:U:599:ILE:HD11	1:U:625:ILE:CG2	2.28	0.64
2:V:67:LEU:O	2:V:71:THR:HG23	1.97	0.64
2:V:86:VAL:HG11	2:V:160:LEU:HD13	1.80	0.64
12:f:868:HIS:ND1	12:f:868:HIS:O	2.30	0.64
14:A:363:SER:OG	15:B:214:MET:O	2.14	0.64
15:B:248:LEU:HD11	15:B:277:HIS:HE1	1.63	0.64
3:W:179:LYS:O	3:W:183:VAL:HG23	1.98	0.64
28:P:48:ARG:NH1	28:P:192:LYS:O	2.30	0.64
3:W:440:ASN:O	3:W:444:HIS:ND1	2.31	0.63
5:Y:183:TYR:CD1	5:Y:213:LEU:HD11	2.32	0.63
20:G:173:THR:OG1	20:G:174:GLU:OE1	2.16	0.63
22:I:161:ALA:HB3	23:J:53:LEU:HD23	1.81	0.63
23:J:183:THR:O	23:J:187:THR:OG1	2.16	0.63
24:L:46:LEU:HD13	24:L:135:ALA:HB2	1.79	0.63
24:L:103:LEU:HD22	24:L:108:LEU:HB2	1.80	0.63
27:o:118:ARG:N	27:o:121:THR:OG1	2.27	0.63
30:r:252:ALA:O	30:r:256:GLU:OE1	2.16	0.63
1:U:356:THR:HG22	1:U:717:ILE:HD13	1.80	0.63
2:V:366:ALA:O	2:V:369:THR:OG1	2.16	0.63
3:W:328:LEU:HD13	3:W:329:ARG:NH1	2.12	0.63
6:Z:164:ALA:HB1	6:Z:168:GLU:HB2	1.79	0.63
12:f:300:ARG:NH2	12:f:826:GLN:OE1	2.31	0.63
12:f:505:MET:HE1	12:f:518:THR:HG22	1.79	0.63
18:E:158:LEU:HD12	18:E:160:GLN:H	1.63	0.63
19:F:235:LEU:HD21	35:F:501:ATP:H2'	1.79	0.63
23:J:36:ARG:NE	23:J:142:PRO:O	2.31	0.63
1:U:242:LEU:HD13	1:U:793:LYS:HE3	1.81	0.63
2:V:116:ALA:HB1	2:V:120:PHE:CE2	2.33	0.63
12:f:90:THR:OG1	14:A:400:ARG:NE	2.30	0.63
31:S:41:LEU:HD13	31:S:165:ALA:HB2	1.80	0.63
6:Z:208:ILE:HG23	7:a:353:LEU:HD21	1.80	0.63
14:A:262:GLU:O	14:A:266:THR:HG23	1.99	0.63
21:H:98:TYR:O	21:H:101:TYR:O	2.15	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:H:140:ASN:C	21:H:140:ASN:HD22	2.02	0.63
27:O:60:ASP:HB2	27:O:206:ILE:HD11	1.78	0.63
32:T:190:LEU:HD11	32:T:221:LEU:HD23	1.81	0.63
28:p:180:VAL:O	28:p:180:VAL:HG13	1.97	0.63
1:U:242:LEU:HD13	1:U:793:LYS:CE	2.28	0.63
1:U:545:LEU:HG	1:U:577:ILE:HG21	1.81	0.63
2:V:282:ASN:OD1	5:Y:385:ARG:NH1	2.31	0.63
4:X:265:GLU:N	4:X:265:GLU:OE1	2.31	0.63
5:Y:173:ASP:O	5:Y:177:ARG:NH1	2.31	0.63
10:d:123:LEU:HD22	10:d:147:ILE:HD11	1.80	0.63
10:d:297:LYS:O	10:d:300:THR:OG1	2.16	0.63
12:f:334:ALA:O	12:f:338:ASP:HA	1.97	0.63
17:D:148:ASP:OD1	17:D:149:SER:N	2.31	0.63
18:E:239:GLY:HA2	18:E:257:LEU:HD12	1.79	0.63
20:G:114:LEU:O	20:G:118:ILE:HD12	1.98	0.63
30:r:75:ALA:O	30:r:234:ASN:ND2	2.31	0.63
1:U:39:SER:OG	1:U:71:LEU:HD11	1.98	0.63
5:Y:282:MET:HE3	5:Y:295:TYR:CD2	2.34	0.63
15:B:151:LEU:N	15:B:161:GLY:O	2.30	0.63
15:B:368:HIS:CE1	37:B:501:ADP:HO2'	2.17	0.63
19:F:357:PRO:O	19:F:362:ARG:NH1	2.31	0.63
32:T:171:ASP:OD1	32:T:175:VAL:N	2.32	0.63
28:p:99:ARG:HD2	28:p:127:ILE:HD12	1.80	0.63
1:U:750:SER:N	1:U:754:HIS:O	2.28	0.63
3:W:163:ALA:HA	3:W:192:LEU:HD13	1.80	0.63
7:a:280:MET:CE	7:a:296:ILE:HD13	2.28	0.63
9:c:305:ASP:HA	9:c:308:VAL:HG12	1.79	0.63
12:f:381:VAL:HG22	12:f:770:HIS:HB2	1.80	0.63
12:f:799:VAL:HG21	12:f:821:LEU:HB2	1.80	0.63
19:F:372:LYS:HB3	34:z:194:ALA:HB2	1.80	0.63
22:I:69:ASN:OD1	22:I:72:MET:N	2.32	0.63
26:N:224:LEU:HD21	32:t:258:HIS:NE2	2.12	0.63
31:S:80:ILE:HD13	31:S:138:ILE:HG12	1.81	0.63
30:r:226:ASP:O	30:r:229:SER:N	2.27	0.63
1:U:214:ILE:HG12	1:U:244:MET:HE1	1.80	0.63
4:X:218:HIS:CG	4:X:227:THR:HG1	2.16	0.63
10:d:178:TYR:HB2	10:d:182:LEU:HD23	1.79	0.63
16:C:184:LYS:NZ	16:C:286:THR:O	2.21	0.63
25:M:12:ALA:N	25:M:23:GLN:OE1	2.31	0.63
25:M:73:HIS:ND1	25:M:106:ASN:OD1	2.31	0.63
28:P:164:PHE:CZ	28:P:189:ILE:HG21	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:o:44:THR:N	27:o:172:SER:OG	2.31	0.63
32:t:237:VAL:HG12	32:t:242:VAL:HG22	1.81	0.63
4:X:318:ILE:O	4:X:318:ILE:HG22	1.98	0.63
5:Y:94:ASN:OD1	5:Y:95:LEU:N	2.32	0.63
5:Y:314:LEU:HD13	5:Y:319:MET:HE1	1.80	0.63
6:Z:23:PHE:CE2	6:Z:126:VAL:HG21	2.34	0.63
7:a:122:LYS:NZ	7:a:134:THR:HG21	2.14	0.63
12:f:542:ILE:HD13	12:f:583:VAL:HG11	1.81	0.63
12:f:696:LEU:HD11	12:f:800:LEU:HD13	1.79	0.63
13:y:64:LEU:O	13:y:66:VAL:HG23	1.99	0.63
19:F:198:LEU:HD22	19:F:236:LEU:HD21	1.79	0.63
20:G:29:PHE:HA	20:G:32:ILE:HD12	1.81	0.63
24:L:46:LEU:HD23	24:L:73:SER:HB2	1.79	0.63
25:M:110:LYS:NZ	25:M:145:ASP:OD2	2.31	0.63
12:f:496:ASP:OD1	12:f:497:VAL:N	2.32	0.62
14:A:386:ARG:NH1	14:A:390:THR:OG1	2.31	0.62
27:O:91:THR:N	27:O:138:GLY:O	2.31	0.62
2:V:69:THR:HG22	2:V:145:LEU:HD11	1.79	0.62
14:A:77:LEU:HD13	15:B:138:PHE:HA	1.81	0.62
16:C:105:ILE:HG22	16:C:105:ILE:O	2.00	0.62
18:E:178:THR:HG22	18:E:303:LEU:HA	1.80	0.62
8:b:33:VAL:HG11	8:b:75:LEU:HD13	1.80	0.62
9:c:308:VAL:HG13	9:c:309:PHE:HD1	1.64	0.62
15:B:183:THR:HG22	15:B:184:TYR:H	1.64	0.62
16:C:368:MET:HA	16:C:368:MET:HE3	1.81	0.62
19:F:288:LEU:HD23	19:F:288:LEU:O	1.99	0.62
25:M:69:ASN:OD1	25:M:225:HIS:ND1	2.32	0.62
1:U:583:MET:N	1:U:583:MET:HE2	2.14	0.62
1:U:803:LYS:O	1:U:892:LEU:HD12	1.99	0.62
5:Y:117:LYS:O	5:Y:121:LEU:HD23	1.99	0.62
15:B:373:THR:OG1	16:C:177:ALA:O	2.17	0.62
17:D:272:THR:OG1	17:D:316:THR:O	2.15	0.62
18:E:39:GLN:HB2	19:F:73:ILE:HD13	1.80	0.62
1:U:353:LEU:HD11	1:U:376:MET:HG3	1.81	0.62
2:V:98:LEU:HD22	2:V:101:LEU:HD11	1.81	0.62
3:W:45:GLU:OE1	3:W:45:GLU:N	2.32	0.62
5:Y:194:PHE:HD2	5:Y:229:ILE:HG21	1.63	0.62
21:H:135:LEU:O	21:H:135:LEU:HD23	1.99	0.62
21:H:140:ASN:O	21:H:140:ASN:ND2	2.29	0.62
1:U:160:LEU:HD21	1:U:197:VAL:HG12	1.80	0.62
9:c:292:MET:O	9:c:296:ILE:HG22	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:d:341:GLU:OE1	10:d:344:ARG:NE	2.30	0.62
16:C:65:LEU:HD12	17:D:114:ARG:HH21	1.62	0.62
21:H:96:GLN:O	21:H:100:VAL:HG22	1.98	0.62
23:J:93:SER:O	23:J:97:THR:HG23	1.98	0.62
1:U:357:LYS:O	1:U:360:VAL:HG12	1.98	0.62
3:W:328:LEU:HD21	3:W:351:TRP:CZ3	2.35	0.62
7:a:129:GLN:O	7:a:133:GLU:OE1	2.17	0.62
14:A:48:VAL:HG22	15:B:68:ILE:HD13	1.80	0.62
16:C:371:LEU:O	16:C:374:ARG:NH2	2.32	0.62
19:F:137:ILE:HG23	19:F:160:ILE:HD12	1.81	0.62
19:F:356:MET:SD	19:F:392:ASN:ND2	2.70	0.62
29:Q:5:ILE:CD1	29:Q:143:LEU:HD11	2.29	0.62
32:T:55:SER:OG	32:T:187:GLY:N	2.29	0.62
30:r:139:SER:OG	30:r:179:ARG:NH2	2.33	0.62
1:U:58:GLN:OE1	1:U:58:GLN:N	2.32	0.62
2:V:439:ALA:HB1	10:d:274:CYS:SG	2.39	0.62
6:Z:215:VAL:HG22	6:Z:220:LEU:CD1	2.26	0.62
12:f:377:VAL:HG22	12:f:763:ARG:O	2.00	0.62
12:f:559:PRO:HG2	12:f:591:ALA:HB1	1.79	0.62
6:Z:71:ASP:CG	8:b:63:THR:HG21	2.24	0.62
7:a:129:GLN:N	7:a:129:GLN:OE1	2.27	0.62
9:c:308:VAL:HG13	9:c:309:PHE:CD1	2.34	0.62
17:D:210:CYS:SG	17:D:335:LEU:HD23	2.40	0.62
20:G:13:ILE:HD12	20:G:129:ALA:C	2.25	0.62
27:o:190:GLU:N	27:o:193:GLU:OE2	2.33	0.62
31:s:165:ALA:HB3	31:s:174:GLN:HB2	1.82	0.62
1:U:644:TYR:CD1	16:C:56:VAL:HG13	2.34	0.62
3:W:188:GLU:OE2	3:W:191:ARG:NH2	2.32	0.62
12:f:58:MET:O	12:f:58:MET:HE3	1.98	0.62
12:f:222:ASP:OD1	12:f:223:GLU:N	2.33	0.62
14:A:89:SER:O	14:A:90:GLU:HG2	2.00	0.62
30:R:85:ILE:HD11	28:p:176:ASP:O	2.00	0.62
31:s:153:ASP:OD1	31:s:156:GLY:N	2.32	0.62
6:Z:175:LEU:HD13	9:c:35:SER:OG	1.99	0.61
6:Z:227:ILE:HG22	6:Z:231:GLN:OE1	2.00	0.61
15:B:290:ILE:O	15:B:309:MET:HE3	2.00	0.61
21:H:192:ILE:HD11	21:H:230:LEU:CD2	2.27	0.61
4:X:15:LEU:HD23	4:X:22:ALA:HB3	1.81	0.61
5:Y:228:MET:HE1	5:Y:259:TYR:CE2	2.34	0.61
12:f:830:LEU:HD12	12:f:872:VAL:CG2	2.29	0.61
20:G:32:ILE:HD11	20:G:156:PRO:HG3	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:K:206:MET:HE1	33:K:215:ILE:CG2	2.29	0.61
32:t:57:LEU:HD22	32:t:214:VAL:HG23	1.82	0.61
1:U:368:ALA:HB2	1:U:728:PHE:CD2	2.35	0.61
4:X:378:LEU:HD22	5:Y:311:TYR:CE2	2.36	0.61
7:a:98:GLU:O	7:a:102:GLU:OE1	2.17	0.61
9:c:254:ASN:OD1	9:c:255:TYR:N	2.33	0.61
19:F:124:ILE:CG2	19:F:160:ILE:HD11	2.30	0.61
29:Q:5:ILE:HD11	29:Q:143:LEU:HD11	1.82	0.61
29:Q:172:ILE:HG23	29:q:173:LEU:HD12	1.82	0.61
30:R:120:ARG:NH1	33:K:98:ASN:OD1	2.33	0.61
30:r:85:ILE:HG21	30:r:88:GLN:HG2	1.82	0.61
2:V:318:GLN:O	2:V:325:LYS:NZ	2.31	0.61
3:W:109:CYS:O	3:W:112:VAL:HG12	2.00	0.61
4:X:309:TYR:O	4:X:313:LEU:N	2.32	0.61
7:a:270:ARG:O	7:a:274:LEU:HD23	2.00	0.61
10:d:101:GLU:OE1	10:d:111:LYS:NZ	2.32	0.61
14:A:325:ASP:OD1	14:A:326:THR:N	2.33	0.61
15:B:376:ASP:OD1	15:B:377:ASP:N	2.33	0.61
25:M:216:TRP:CZ3	25:M:228:VAL:HG22	2.35	0.61
26:n:51:ASP:OD1	26:n:67:LYS:NZ	2.21	0.61
29:q:4:LEU:HD21	29:q:34:LYS:HD2	1.81	0.61
5:Y:61:LEU:HD22	5:Y:63:TRP:CZ2	2.36	0.61
12:f:587:PHE:CE2	12:f:591:ALA:HB3	2.35	0.61
12:f:762:VAL:O	12:f:766:GLN:NE2	2.34	0.61
18:E:246:GLY:O	18:E:247:THR:OG1	2.18	0.61
18:E:305:ASN:ND2	18:E:308:ALA:HB3	2.15	0.61
28:P:45:MET:HE2	28:P:45:MET:N	2.16	0.61
32:T:54:THR:O	32:T:86:ARG:NH1	2.34	0.61
1:U:522:GLY:N	1:U:555:VAL:O	2.33	0.61
3:W:132:THR:CG2	3:W:145:LEU:HD23	2.31	0.61
3:W:386:VAL:O	3:W:389:SER:OG	2.18	0.61
7:a:42:LEU:O	7:a:46:GLN:OE1	2.18	0.61
9:c:57:MET:CB	9:c:72:VAL:HG12	2.31	0.61
10:d:254:GLU:OE2	10:d:257:THR:OG1	2.13	0.61
12:f:348:ILE:HG12	12:f:381:VAL:HG21	1.81	0.61
12:f:406:GLY:C	12:f:407:MET:HE2	2.25	0.61
22:I:76:VAL:HG11	22:I:83:ALA:HB1	1.82	0.61
2:V:148:ARG:HE	2:V:152:GLY:HA3	1.65	0.61
4:X:414:LEU:HD22	6:Z:276:ILE:HD12	1.82	0.61
12:f:461:PRO:O	12:f:465:LEU:HD13	2.00	0.61
14:A:42:SER:OG	14:A:46:LYS:NZ	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:A:123:VAL:HG22	14:A:124:ASP:H	1.65	0.61
19:F:79:LYS:HA	19:F:82:VAL:HG12	1.82	0.61
28:P:27:ARG:NH1	28:P:180:VAL:O	2.34	0.61
29:Q:12:TYR:OH	29:Q:151:ILE:HG23	2.00	0.61
30:r:156:MET:N	30:r:175:SER:OG	2.33	0.61
1:U:695:MET:HA	1:U:695:MET:HE3	1.80	0.61
2:V:259:LEU:HD11	2:V:294:ARG:HD3	1.81	0.61
9:c:232:GLN:O	9:c:298:GLN:NE2	2.33	0.61
10:d:181:GLN:C	10:d:182:LEU:HD22	2.26	0.61
16:C:38:LYS:HB3	17:D:54:LEU:HD22	1.82	0.61
19:F:183:GLU:OE1	19:F:183:GLU:N	2.32	0.61
31:S:75:THR:OG1	31:S:78:THR:OG1	2.02	0.61
1:U:137:MET:N	1:U:137:MET:HE2	2.14	0.61
2:V:440:LYS:NZ	10:d:236:LEU:O	2.32	0.61
2:V:476:PHE:CZ	6:Z:258:VAL:HG22	2.35	0.61
3:W:26:GLN:NE2	3:W:30:GLU:OE1	2.33	0.61
26:N:78:CYS:O	26:N:132:ILE:HD12	2.00	0.61
1:U:26:LYS:NZ	10:d:131:THR:OG1	2.32	0.61
2:V:162:GLU:OE1	2:V:162:GLU:N	2.34	0.61
7:a:57:ILE:HD13	7:a:83:VAL:HG13	1.83	0.61
12:f:259:PHE:O	12:f:261:ARG:NH1	2.34	0.61
20:G:44:GLY:HA3	20:G:194:THR:HG21	1.82	0.61
23:J:45:VAL:CG1	23:J:62:ILE:HD11	2.26	0.61
1:U:352:ILE:O	1:U:356:THR:HG23	2.01	0.60
1:U:599:ILE:HG22	17:D:60:TYR:OH	2.00	0.60
3:W:314:LEU:HD23	3:W:315:MET:N	2.16	0.60
3:W:375:MET:CA	3:W:413:ILE:HD11	2.31	0.60
5:Y:22:LEU:HA	5:Y:25:LEU:HD12	1.82	0.60
7:a:91:ASN:O	7:a:93:ALA:N	2.31	0.60
7:a:274:LEU:HD22	7:a:310:LEU:HD11	1.83	0.60
8:b:161:ASN:OD1	8:b:165:GLY:N	2.34	0.60
23:J:45:VAL:HG11	23:J:62:ILE:CD1	2.24	0.60
29:Q:155:ARG:HH12	29:Q:159:LEU:HD22	1.65	0.60
26:n:93:VAL:HG11	26:n:117:PHE:CE1	2.36	0.60
28:p:198:ARG:HH12	28:p:200:LEU:HD23	1.66	0.60
1:U:638:SER:CB	1:U:671:LEU:HD21	2.30	0.60
8:b:31:ASP:OD2	8:b:180:ALA:HB2	2.00	0.60
9:c:217:LEU:CA	9:c:220:LEU:HD23	2.31	0.60
10:d:228:HIS:CE1	10:d:232:LEU:HD11	2.36	0.60
10:d:262:ILE:O	10:d:265:ASP:OD1	2.20	0.60
18:E:71:VAL:HG21	18:E:100:LEU:HD11	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:I:26:GLU:O	22:I:30:HIS:ND1	2.34	0.60
4:X:83:ALA:O	4:X:122:ARG:NH2	2.34	0.60
15:B:82:GLN:O	15:B:85:MET:C	2.44	0.60
16:C:80:MET:SD	16:C:81:ASP:N	2.74	0.60
17:D:189:GLU:OE1	17:D:189:GLU:N	2.34	0.60
19:F:322:PRO:HB2	19:F:324:THR:HG23	1.83	0.60
25:M:217:VAL:HG23	25:M:224:ARG:C	2.26	0.60
28:P:123:SER:C	28:P:124:LEU:HD12	2.26	0.60
28:P:152:SER:OG	31:s:176:LEU:HD22	2.02	0.60
4:X:15:LEU:HD22	4:X:26:ILE:CD1	2.30	0.60
9:c:89:PRO:HB2	13:y:74:LEU:HD21	1.84	0.60
16:C:89:VAL:HG23	16:C:89:VAL:O	2.01	0.60
3:W:274:VAL:O	3:W:283:GLN:NE2	2.34	0.60
3:W:436:MET:HE3	9:c:225:TRP:CE3	2.37	0.60
7:a:28:LEU:HD22	7:a:37:LEU:HB3	1.84	0.60
7:a:74:LEU:O	7:a:78:GLU:OE1	2.19	0.60
10:d:221:GLN:OE1	10:d:221:GLN:N	2.32	0.60
12:f:195:ASN:ND2	12:f:200:ALA:O	2.34	0.60
20:G:58:ASP:OD2	20:G:60:LEU:HD12	2.00	0.60
27:O:173:GLY:N	27:O:209:ASP:OD2	2.34	0.60
32:T:96:LEU:HD12	32:T:96:LEU:O	2.01	0.60
2:V:71:THR:HG22	2:V:107:ARG:NH1	2.16	0.60
2:V:195:ILE:HD11	2:V:207:ALA:HB2	1.84	0.60
13:y:389:ARG:O	13:y:393:GLU:OE1	2.19	0.60
14:A:130:ALA:O	14:A:133:ASP:N	2.33	0.60
25:M:42:CYS:SG	25:M:45:GLY:N	2.74	0.60
27:O:67:MET:CE	31:s:215:VAL:HG22	2.30	0.60
31:s:117:ALA:HB2	31:s:150:TYR:HD2	1.67	0.60
6:Z:86:ASN:ND2	6:Z:89:GLU:OE2	2.35	0.60
27:O:52:LYS:N	27:O:189:MET:O	2.33	0.60
28:p:149:MET:HE3	28:p:173:ASN:HB3	1.84	0.60
1:U:82:LEU:HD13	1:U:130:LEU:HD23	1.83	0.60
2:V:309:MET:SD	2:V:331:LEU:HD23	2.42	0.60
3:W:205:ILE:HD12	3:W:208:LYS:HD2	1.84	0.60
3:W:377:ARG:NH2	7:a:308:GLU:OE2	2.35	0.60
4:X:82:LYS:O	4:X:85:ALA:N	2.34	0.60
5:Y:189:VAL:HG13	5:Y:288:PHE:CE1	2.36	0.60
10:d:228:HIS:NE2	10:d:232:LEU:HD11	2.17	0.60
17:D:297:ASP:OD1	17:D:326:ARG:NH2	2.34	0.60
27:O:190:GLU:OE1	27:O:190:GLU:N	2.34	0.60
2:V:243:ASP:OD1	2:V:244:ALA:N	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:E:324:GLY:N	18:E:365:GLU:OE2	2.35	0.60
19:F:323:ASN:O	19:F:326:VAL:HG12	2.01	0.60
1:U:633:CYS:O	1:U:637:VAL:HG22	2.02	0.60
2:V:245:ASP:O	2:V:249:THR:HG23	2.02	0.60
3:W:190:MET:CB	3:W:229:LEU:HD13	2.32	0.60
3:W:287:VAL:HG13	3:W:306:LEU:HD11	1.83	0.60
12:f:256:PHE:HB3	12:f:265:ALA:HB2	1.84	0.60
12:f:520:LEU:HD21	12:f:560:LEU:HD23	1.82	0.60
14:A:203:ASN:OD1	14:A:204:LEU:N	2.35	0.60
16:C:176:GLU:OE1	16:C:176:GLU:N	2.34	0.60
17:D:378:ILE:HD11	17:D:407:ILE:CD1	2.27	0.60
23:J:176:TYR:OH	23:J:181:ILE:HD13	2.01	0.60
25:M:78:VAL:HG11	25:M:85:ALA:HB1	1.83	0.60
27:O:122:ALA:HB3	27:O:143:LEU:HD21	1.84	0.60
32:T:234:ILE:O	32:T:244:ILE:HD12	2.02	0.60
12:f:619:HIS:CG	15:B:85:MET:HE1	2.37	0.59
14:A:52:ILE:HD11	15:B:68:ILE:HG23	1.83	0.59
14:A:99:THR:N	14:A:136:GLU:OE2	2.35	0.59
16:C:31:LEU:HB3	17:D:47:LEU:HD22	1.83	0.59
23:J:158:ALA:HB3	33:K:58:LEU:HD21	1.84	0.59
30:R:192:VAL:HG22	29:q:138:LEU:HG	1.84	0.59
3:W:166:LEU:O	3:W:189:GLN:NE2	2.35	0.59
3:W:297:GLU:OE1	3:W:307:LYS:NZ	2.32	0.59
32:T:46:THR:HG21	32:T:104:ASP:OD2	2.02	0.59
29:q:13:VAL:O	29:q:15:VAL:HG13	2.02	0.59
9:c:57:MET:HB3	9:c:72:VAL:HG12	1.83	0.59
12:f:703:ARG:O	12:f:707:LEU:HD23	2.01	0.59
15:B:172:THR:OG1	16:C:274:LEU:HD21	2.02	0.59
17:D:191:TYR:HD1	17:D:196:ILE:HG23	1.67	0.59
1:U:115:ASN:HA	1:U:118:LEU:HD12	1.83	0.59
18:E:195:PHE:C	18:E:196:LEU:HD22	2.27	0.59
27:O:62:ARG:O	27:O:76:LYS:NZ	2.35	0.59
1:U:160:LEU:HD13	1:U:200:VAL:HG21	1.83	0.59
5:Y:258:GLN:OE1	5:Y:258:GLN:N	2.32	0.59
15:B:107:MET:HE3	16:C:95:PHE:CD1	2.37	0.59
17:D:257:ASN:O	17:D:260:ALA:HB2	2.02	0.59
18:E:40:TYR:CD2	19:F:73:ILE:HD11	2.37	0.59
24:L:79:ALA:CB	33:K:121:LEU:HD22	2.32	0.59
27:O:210:LEU:HD11	31:s:58:SER:OG	2.03	0.59
31:s:226:VAL:HG22	31:s:231:ILE:CD1	2.32	0.59
2:V:337:LEU:HD11	2:V:367:VAL:HG11	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:X:316:ASP:HA	4:X:319:ILE:HG22	1.84	0.59
8:b:119:ASP:OD1	8:b:120:ASN:N	2.36	0.59
12:f:323:ASN:HB3	12:f:326:LEU:HD23	1.84	0.59
18:E:346:VAL:HG21	18:E:370:ALA:HA	1.83	0.59
19:F:175:MET:HE1	19:F:250:LYS:O	2.03	0.59
30:r:110:ASP:OD1	30:r:114:TRP:CZ3	2.56	0.59
7:a:225:LEU:HD22	7:a:230:ARG:HB2	1.84	0.59
12:f:57:GLU:O	12:f:60:VAL:N	2.36	0.59
12:f:601:ALA:HA	12:f:660:ILE:HD13	1.85	0.59
12:f:772:GLY:O	12:f:775:THR:HG22	2.03	0.59
23:J:183:THR:HG22	23:J:184:ASP:H	1.67	0.59
27:O:169:THR:HG23	27:O:178:MET:CE	2.32	0.59
30:r:62:THR:HG22	30:r:75:ALA:CB	2.33	0.59
1:U:603:LEU:HD22	17:D:60:TYR:CD1	2.38	0.59
5:Y:234:PRO:O	5:Y:238:GLU:OE1	2.20	0.59
9:c:216:MET:O	9:c:219:ASN:N	2.36	0.59
13:y:33:LEU:HD21	13:y:96:LEU:HD12	1.85	0.59
17:D:205:TYR:OH	17:D:332:GLU:OE2	2.20	0.59
33:K:51:GLU:HB2	33:K:202:LEU:HD11	1.85	0.59
28:p:61:GLN:OE1	29:q:85:ARG:NH1	2.35	0.59
28:p:161:ASP:OD1	28:p:162:HIS:N	2.35	0.59
1:U:106:ASP:OD1	1:U:107:HIS:N	2.36	0.59
1:U:127:ASP:CG	1:U:129:ARG:HE	2.11	0.59
3:W:267:LEU:HD11	3:W:296:LEU:CD1	2.33	0.59
6:Z:249:PHE:CE2	9:c:303:MET:HE1	2.37	0.59
6:Z:263:ALA:CB	9:c:292:MET:HE2	2.32	0.59
7:a:360:VAL:HG22	9:c:308:VAL:HG22	1.84	0.59
8:b:131:LEU:HD12	8:b:136:VAL:HG11	1.85	0.59
14:A:158:ASP:OD1	14:A:161:VAL:HG12	2.02	0.59
18:E:59:GLU:OE1	18:E:59:GLU:N	2.27	0.59
18:E:70:ILE:CG2	18:E:80:VAL:HG12	2.31	0.59
18:E:384:LEU:HD23	19:F:343:LEU:HD13	1.85	0.59
32:T:88:MET:HB2	32:T:96:LEU:HD11	1.83	0.59
12:f:559:PRO:HB3	12:f:595:VAL:HG23	1.85	0.59
17:D:387:VAL:HG21	18:E:161:ARG:CD	2.33	0.59
20:G:113:MET:CE	27:O:113:THR:HG22	2.33	0.59
22:I:86:LEU:HD21	22:I:130:PHE:CD2	2.38	0.59
24:L:107:ARG:O	24:L:111:LEU:HD23	2.02	0.59
25:M:38:ILE:HD13	25:M:198:ILE:HD13	1.83	0.59
28:P:48:ARG:C	28:P:190:ILE:HD13	2.27	0.59
3:W:154:GLU:OE1	3:W:191:ARG:NH2	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:X:162:ASP:OD2	4:X:163:LYS:NZ	2.34	0.58
5:Y:311:TYR:CD1	5:Y:314:LEU:HD12	2.38	0.58
11:e:46:ASP:O	11:e:48:VAL:HG13	2.04	0.58
14:A:48:VAL:HG22	15:B:68:ILE:HG21	1.84	0.58
18:E:331:ILE:HD12	18:E:374:VAL:CG2	2.33	0.58
21:H:10:LEU:HD13	21:H:21:GLN:HB3	1.85	0.58
23:J:90:GLU:OE2	23:J:106:TYR:OH	2.17	0.58
25:M:175:THR:OG1	25:M:176:GLU:OE1	2.21	0.58
27:O:93:ALA:HB2	28:P:129:CYS:SG	2.43	0.58
33:K:195:ILE:CD1	33:K:217:LEU:HD11	2.32	0.58
30:r:79:ALA:HB2	30:r:90:VAL:HG21	1.84	0.58
3:W:267:LEU:HD21	3:W:296:LEU:HD12	1.85	0.58
18:E:158:LEU:HD12	18:E:160:GLN:N	2.18	0.58
18:E:336:ASP:O	18:E:378:LYS:NZ	2.29	0.58
26:N:55:THR:HG22	26:N:60:ILE:HD13	1.85	0.58
1:U:583:MET:SD	1:U:605:VAL:HG11	2.43	0.58
1:U:649:ARG:NH2	1:U:678:ASP:OD2	2.36	0.58
5:Y:157:ILE:HG21	5:Y:187:TYR:CD1	2.38	0.58
7:a:56:LEU:HD23	7:a:86:GLN:HG3	1.84	0.58
5:Y:148:GLY:C	5:Y:157:ILE:HD11	2.28	0.58
5:Y:317:GLY:O	5:Y:321:GLU:OE1	2.22	0.58
10:d:317:SER:OG	10:d:318:PHE:N	2.34	0.58
21:H:159:LYS:N	22:I:55:LEU:O	2.36	0.58
25:M:208:LYS:HZ1	34:z:177:LEU:HD11	1.68	0.58
26:N:38:MET:HG2	26:N:161:ILE:HD13	1.86	0.58
32:T:57:LEU:HD11	32:T:195:LEU:HD11	1.85	0.58
29:q:4:LEU:HD23	29:q:17:SER:HB2	1.86	0.58
1:U:725:MET:HE1	9:c:182:GLY:C	2.28	0.58
2:V:477:HIS:ND1	10:d:342:TYR:OH	2.22	0.58
5:Y:314:LEU:O	5:Y:353:ILE:HD12	2.04	0.58
6:Z:59:ASP:OD1	6:Z:60:GLU:N	2.36	0.58
8:b:140:ILE:HD13	8:b:153:LEU:HD12	1.86	0.58
12:f:780:PRO:HB3	12:f:793:VAL:HG12	1.86	0.58
15:B:153:ASN:OD1	15:B:154:HIS:N	2.36	0.58
17:D:345:PHE:CZ	17:D:375:ILE:HD12	2.39	0.58
18:E:39:GLN:CB	19:F:73:ILE:HD13	2.32	0.58
25:M:121:HIS:NE2	25:M:125:LEU:HD11	2.18	0.58
31:S:141:LEU:HD11	31:S:227:THR:HA	1.86	0.58
31:s:96:ILE:HG21	31:s:120:LEU:HD11	1.85	0.58
6:Z:262:LEU:HD22	9:c:248:MET:CE	2.33	0.58
10:d:103:ASN:OD1	10:d:104:ARG:N	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:M:21:VAL:HG23	25:M:24:VAL:HG22	1.85	0.58
25:M:90:ASP:O	25:M:94:GLU:OE1	2.22	0.58
30:R:223:THR:HG23	30:R:230:GLY:HA2	1.85	0.58
31:S:226:VAL:HG22	31:S:231:ILE:HG12	1.85	0.58
1:U:124:LYS:HG3	1:U:125:PRO:HD2	1.86	0.58
10:d:150:ILE:O	10:d:153:GLN:NE2	2.35	0.58
12:f:382:ASN:OD1	12:f:387:GLN:NE2	2.36	0.58
14:A:52:ILE:CD1	15:B:68:ILE:HG23	2.33	0.58
14:A:94:GLN:OE1	14:A:115:VAL:HG12	2.04	0.58
17:D:152:MET:HA	17:D:152:MET:HE3	1.86	0.58
17:D:242:GLU:OE1	17:D:242:GLU:N	2.37	0.58
18:E:61:LEU:HD11	18:E:72:LYS:HB2	1.86	0.58
19:F:358:ASN:OD1	19:F:361:ALA:N	2.28	0.58
23:J:32:ALA:HB2	23:J:45:VAL:HG23	1.85	0.58
1:U:678:ASP:O	1:U:684:ARG:NE	2.35	0.58
5:Y:298:GLU:OE2	5:Y:342:ARG:NH2	2.37	0.58
9:c:130:GLN:O	9:c:133:PHE:N	2.36	0.58
19:F:379:VAL:HG12	19:F:415:LEU:HD12	1.85	0.58
33:K:91:LYS:HG2	33:K:119:LEU:HD22	1.84	0.58
3:W:240:TYR:OH	3:W:353:ASP:OD2	2.22	0.58
6:Z:12:HIS:O	6:Z:15:VAL:HG12	2.03	0.58
6:Z:112:MET:N	6:Z:112:MET:HE2	2.19	0.58
12:f:100:ARG:NE	12:f:133:MET:SD	2.77	0.58
17:D:116:LEU:HB3	17:D:119:ILE:HD11	1.85	0.58
19:F:372:LYS:HD3	34:z:194:ALA:HB2	1.84	0.58
20:G:138:MET:HE3	20:G:140:LEU:HG	1.85	0.58
29:Q:4:LEU:HD13	29:Q:45:LEU:CB	2.34	0.58
31:S:91:THR:HG21	32:T:142:TYR:CE2	2.39	0.58
32:T:67:ILE:HD11	32:T:95:MET:HG3	1.86	0.58
8:b:62:THR:HG21	8:b:71:ILE:HD13	1.86	0.58
17:D:254:ALA:CB	17:D:262:ILE:HD11	2.33	0.58
19:F:156:ASP:OD1	19:F:157:SER:N	2.36	0.58
23:J:122:ASN:OD1	33:K:134:SER:N	2.37	0.58
1:U:265:ILE:HD11	1:U:329:LEU:HB2	1.84	0.57
5:Y:21:GLN:HE21	5:Y:25:LEU:HD11	1.69	0.57
7:a:290:GLN:OE1	7:a:332:HIS:ND1	2.37	0.57
7:a:370:GLN:O	10:d:344:ARG:NH2	2.37	0.57
20:G:174:GLU:OE1	20:G:174:GLU:N	2.36	0.57
22:I:90:LEU:HD21	22:I:114:LEU:HD22	1.85	0.57
28:P:164:PHE:HA	28:P:167:ILE:HG22	1.86	0.57
31:S:52:ALA:HB2	31:S:223:ILE:HG23	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:n:41:GLN:HB3	26:n:145:VAL:HG23	1.86	0.57
1:U:19:LEU:HD22	10:d:124:LEU:HD22	1.85	0.57
1:U:145:HIS:ND1	1:U:147:TYR:OH	2.37	0.57
3:W:31:CYS:SG	3:W:47:LEU:HD21	2.43	0.57
5:Y:290:PRO:O	5:Y:291:HIS:ND1	2.37	0.57
12:f:712:LYS:HD2	14:A:76:ALA:HB3	1.86	0.57
14:A:79:ASP:HB3	14:A:82:ALA:HB3	1.86	0.57
22:I:151:ASP:OD2	22:I:153:SER:OG	2.21	0.57
23:J:137:ASP:O	23:J:140:GLY:N	2.36	0.57
1:U:639:LEU:O	16:C:49:ARG:NH2	2.37	0.57
4:X:167:VAL:HG12	4:X:210:LEU:HD21	1.85	0.57
6:Z:73:ASP:OD2	8:b:63:THR:N	2.28	0.57
7:a:239:ALA:O	7:a:242:SER:O	2.21	0.57
12:f:531:ASN:N	12:f:565:ASN:OD1	2.35	0.57
26:N:117:PHE:HD2	26:N:134:ILE:HD11	1.69	0.57
31:S:75:THR:HG1	31:S:78:THR:CB	2.16	0.57
32:T:108:LEU:HD11	32:T:151:LEU:HD13	1.87	0.57
26:n:48:LEU:HD23	26:n:78:CYS:SG	2.44	0.57
1:U:38:ILE:HG21	1:U:67:VAL:HG21	1.87	0.57
2:V:117:VAL:HG12	2:V:121:PHE:HE2	1.68	0.57
12:f:799:VAL:HG22	12:f:817:VAL:HG22	1.85	0.57
14:A:190:VAL:HG13	14:A:191:VAL:HG23	1.87	0.57
15:B:105:THR:N	15:B:106:PRO:HD3	2.20	0.57
29:Q:42:ILE:HD11	29:Q:75:LEU:O	2.05	0.57
1:U:504:ASP:OD1	1:U:541:HIS:NE2	2.38	0.57
3:W:369:TYR:HB2	7:a:312:MET:HE1	1.86	0.57
22:I:216:LEU:HD21	22:I:223:THR:HG23	1.87	0.57
24:L:202:GLU:OE1	24:L:202:GLU:N	2.33	0.57
31:S:206:VAL:HG13	27:o:245:TYR:OH	2.03	0.57
33:K:85:ALA:HB2	33:K:139:VAL:HG21	1.86	0.57
4:X:4:ALA:O	4:X:8:GLU:OE1	2.22	0.57
9:c:46:ARG:O	18:E:85:ARG:NH1	2.37	0.57
9:c:156:VAL:C	9:c:157:ILE:HD12	2.30	0.57
14:A:365:GLU:OE1	14:A:405:THR:HG22	2.05	0.57
15:B:120:HIS:ND1	15:B:132:TYR:OH	2.37	0.57
16:C:252:ASP:OD1	16:C:253:SER:N	2.37	0.57
27:O:93:ALA:O	27:O:97:MET:HE3	2.05	0.57
28:P:37:THR:HG22	28:P:37:THR:O	2.04	0.57
28:P:67:LEU:HD23	28:P:67:LEU:O	2.05	0.57
29:Q:162:LYS:O	29:Q:166:GLU:OE1	2.22	0.57
27:o:172:SER:OG	27:o:209:ASP:OD2	2.22	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:s:41:LEU:HB2	31:s:173:LEU:HD23	1.87	0.57
1:U:118:LEU:HD13	1:U:122:GLU:HB3	1.84	0.57
1:U:768:GLN:O	1:U:775:LEU:HD12	2.04	0.57
12:f:600:TYR:CD1	12:f:660:ILE:HD11	2.33	0.57
15:B:201:VAL:HG13	15:B:281:ILE:HD11	1.86	0.57
18:E:47:LEU:HD13	19:F:80:ILE:HD11	1.86	0.57
20:G:114:LEU:HD23	20:G:140:LEU:HD13	1.86	0.57
20:G:190:THR:N	20:G:193:GLN:OE1	2.32	0.57
32:T:169:TYR:CG	32:T:169:TYR:O	2.57	0.57
28:p:185:VAL:CG1	28:p:200:LEU:HD12	2.34	0.57
32:t:52:THR:HG22	32:t:100:GLY:C	2.29	0.57
1:U:144:ASP:OD2	1:U:146:LYS:NZ	2.27	0.57
5:Y:183:TYR:CE1	5:Y:213:LEU:HD11	2.40	0.57
6:Z:262:LEU:O	6:Z:262:LEU:HD23	2.05	0.57
12:f:610:GLN:O	12:f:614:HIS:ND1	2.34	0.57
18:E:381:GLU:HA	19:F:344:ARG:HH12	1.70	0.57
21:H:20:VAL:HG22	21:H:24:TYR:CZ	2.39	0.57
2:V:168:GLN:OE1	2:V:191:LEU:HD22	2.05	0.57
5:Y:227:SER:HA	5:Y:231:LEU:HD13	1.87	0.57
7:a:122:LYS:HZ2	7:a:134:THR:HG21	1.68	0.57
9:c:56:LEU:HD21	9:c:108:VAL:HG22	1.86	0.57
12:f:109:ILE:HG22	12:f:113:MET:HE2	1.86	0.57
22:I:62:SER:OG	22:I:65:ILE:O	2.15	0.57
28:P:27:ARG:NH2	28:P:31:GLN:O	2.37	0.57
28:P:28:PHE:HD2	28:P:35:VAL:HG11	1.70	0.57
30:R:94:ILE:HD11	30:R:104:MET:SD	2.45	0.57
27:o:96:ASP:O	27:o:99:THR:OG1	2.17	0.57
5:Y:236:LEU:O	5:Y:240:VAL:HG12	2.04	0.57
8:b:7:MET:HA	8:b:7:MET:HE2	1.86	0.57
19:F:379:VAL:HG12	19:F:415:LEU:CD1	2.35	0.57
22:I:38:LEU:N	22:I:160:LYS:O	2.37	0.57
25:M:205:VAL:HA	34:z:177:LEU:HD13	1.87	0.57
32:T:71:MET:HE1	32:T:232:PHE:C	2.30	0.57
31:s:227:THR:HG22	31:s:228:LYS:H	1.70	0.57
1:U:160:LEU:HD13	1:U:200:VAL:CG2	2.35	0.56
4:X:171:LEU:CD1	4:X:210:LEU:HD22	2.35	0.56
6:Z:224:HIS:CE1	7:a:340:VAL:HG23	2.39	0.56
7:a:84:VAL:CG2	7:a:97:LEU:HD21	2.34	0.56
18:E:86:GLN:C	18:E:87:LEU:HD22	2.30	0.56
18:E:344:ARG:NH2	19:F:219:PRO:O	2.32	0.56
23:J:131:ALA:C	23:J:132:LEU:HD22	2.29	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:J:205:ASN:OD1	23:J:206:ILE:HG23	2.04	0.56
24:L:65:HIS:ND1	24:L:221:PHE:O	2.38	0.56
25:M:35:SER:O	25:M:36:THR:HG23	2.04	0.56
25:M:205:VAL:HA	34:z:177:LEU:HD22	1.86	0.56
26:N:51:ASP:OD2	26:N:204:SER:OG	2.17	0.56
29:Q:44:LEU:HD12	29:Q:103:LEU:O	2.04	0.56
30:R:207:GLU:OE1	30:R:210:GLN:N	2.36	0.56
3:W:64:SER:O	3:W:68:VAL:HG23	2.04	0.56
4:X:415:TYR:HD1	5:Y:383:LEU:HD11	1.70	0.56
12:f:127:SER:OG	12:f:158:TYR:OH	2.23	0.56
12:f:130:ALA:O	12:f:134:SER:N	2.38	0.56
20:G:17:SER:OG	20:G:20:GLY:O	2.23	0.56
31:s:117:ALA:HB2	31:s:150:TYR:CD2	2.40	0.56
32:t:64:GLY:N	32:t:165:SER:OG	2.38	0.56
1:U:65:SER:O	1:U:77:SER:OG	2.21	0.56
1:U:185:MET:CE	1:U:198:LEU:HD21	2.36	0.56
3:W:264:GLN:N	3:W:264:GLN:OE1	2.38	0.56
5:Y:141:VAL:HG11	5:Y:164:ALA:HB2	1.87	0.56
6:Z:43:TRP:HD1	6:Z:48:LEU:HD13	1.70	0.56
10:d:131:THR:O	10:d:131:THR:HG22	2.04	0.56
10:d:143:LEU:HD12	10:d:144:ALA:N	2.20	0.56
10:d:156:ILE:HD13	10:d:194:LEU:HD21	1.88	0.56
12:f:89:MET:HE1	14:A:400:ARG:HG2	1.86	0.56
12:f:372:LEU:HD11	12:f:405:HIS:O	2.05	0.56
12:f:423:ASP:OD1	13:y:402:LYS:NZ	2.38	0.56
14:A:159:PRO:O	14:A:163:MET:SD	2.63	0.56
17:D:214:MET:HE1	35:D:501:ATP:N3	2.20	0.56
17:D:411:GLU:CD	17:D:412:GLN:H	2.12	0.56
21:H:11:THR:HG21	22:I:9:THR:HG23	1.87	0.56
22:I:8:ARG:CZ	22:I:11:ILE:HD13	2.35	0.56
23:J:210:VAL:HG22	23:J:220:LEU:HD11	1.86	0.56
28:P:29:GLY:HA2	28:P:35:VAL:HG23	1.88	0.56
28:P:144:GLU:C	31:s:172:MET:HE1	2.30	0.56
28:P:163:LEU:O	28:P:166:THR:OG1	2.22	0.56
28:P:205:ASP:O	30:r:78:ARG:NH1	2.38	0.56
28:p:143:ALA:HA	28:p:146:MET:SD	2.45	0.56
1:U:520:MET:HB3	1:U:555:VAL:HG23	1.87	0.56
2:V:99:ARG:NH2	5:Y:389:MET:O	2.38	0.56
3:W:183:VAL:HA	3:W:186:ILE:HG12	1.86	0.56
3:W:226:TYR:CD2	3:W:230:MET:HE1	2.41	0.56
6:Z:273:HIS:NE2	9:c:262:GLU:OE1	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:a:162:TYR:CE1	7:a:166:ILE:HD11	2.40	0.56
12:f:100:ARG:HB2	12:f:101:PRO:HD3	1.87	0.56
12:f:672:LEU:HG	12:f:697:ILE:HG21	1.87	0.56
14:A:62:LEU:HD21	15:B:83:GLU:CG	2.35	0.56
19:F:279:ALA:HB1	19:F:280:PRO:CD	2.35	0.56
20:G:190:THR:O	20:G:194:THR:HG23	2.05	0.56
21:H:185:GLU:OE1	21:H:229:TYR:OH	2.22	0.56
22:I:76:VAL:HG12	22:I:134:LEU:CD1	2.36	0.56
30:r:233:VAL:HG21	30:r:254:LEU:CD2	2.35	0.56
1:U:416:GLU:OE1	1:U:450:HIS:NE2	2.38	0.56
1:U:603:LEU:HD13	17:D:60:TYR:CD2	2.40	0.56
2:V:249:THR:O	2:V:253:LEU:HD23	2.05	0.56
3:W:132:THR:HG23	3:W:145:LEU:HD23	1.88	0.56
15:B:67:ARG:O	15:B:71:TYR:CD2	2.59	0.56
15:B:273:VAL:O	15:B:277:HIS:ND1	2.37	0.56
17:D:293:LEU:HD21	17:D:321:LEU:HA	1.87	0.56
18:E:247:THR:C	18:E:251:ARG:HE	2.13	0.56
35:E:401:ATP:O3B	19:F:347:ARG:NH2	2.38	0.56
27:O:93:ALA:N	28:P:129:CYS:SG	2.79	0.56
29:q:135:GLY:O	29:q:139:THR:HG23	2.06	0.56
3:W:266:ALA:O	3:W:270:VAL:HG23	2.06	0.56
4:X:15:LEU:HD23	4:X:22:ALA:HB1	1.85	0.56
7:a:80:ILE:O	7:a:84:VAL:HG23	2.06	0.56
8:b:27:GLN:OE1	8:b:27:GLN:N	2.38	0.56
8:b:125:VAL:HG12	8:b:129:LYS:HE3	1.88	0.56
12:f:517:VAL:HG11	12:f:816:TYR:OH	2.05	0.56
17:D:297:ASP:HB2	17:D:327:LEU:HD21	1.87	0.56
27:O:248:GLU:OE1	27:O:248:GLU:N	2.34	0.56
28:P:203:ARG:NH1	31:s:185:ASN:OD1	2.39	0.56
31:S:33:TYR:OH	31:S:131:PRO:O	2.18	0.56
1:U:700:GLU:OE1	1:U:700:GLU:N	2.36	0.56
5:Y:198:ALA:HB2	5:Y:226:VAL:HG22	1.87	0.56
12:f:49:ASP:OD1	12:f:94:LYS:NZ	2.36	0.56
20:G:113:MET:HE3	27:O:113:THR:HG22	1.88	0.56
23:J:120:GLN:OE1	33:K:135:ARG:NH2	2.38	0.56
24:L:59:HIS:NE2	24:L:209:ASN:OD1	2.37	0.56
31:S:50:ILE:HG23	31:S:225:ILE:HG13	1.87	0.56
27:o:78:HIS:HB2	27:o:99:THR:HG21	1.87	0.56
1:U:111:GLN:HA	1:U:114:GLU:OE1	2.05	0.56
1:U:595:ASN:OD1	1:U:598:ALA:N	2.32	0.56
4:X:345:VAL:HG13	4:X:350:ILE:HD11	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Y:249:VAL:HG13	5:Y:250:LEU:HD22	1.87	0.56
8:b:48:ASN:OD1	8:b:49:VAL:N	2.39	0.56
9:c:213:GLU:OE1	9:c:213:GLU:N	2.28	0.56
9:c:267:PRO:O	9:c:271:ALA:N	2.36	0.56
18:E:185:ARG:NH2	19:F:319:GLY:O	2.35	0.56
19:F:149:ASP:OD1	19:F:150:LEU:N	2.38	0.56
24:L:48:ALA:CB	24:L:63:ILE:HD11	2.36	0.56
26:N:93:VAL:HG11	26:N:117:PHE:CE1	2.40	0.56
1:U:554:LEU:HD21	1:U:761:VAL:HG23	1.88	0.56
6:Z:263:ALA:HB1	9:c:292:MET:HE2	1.87	0.56
15:B:375:ALA:HB2	15:B:413:LYS:HG3	1.86	0.56
26:n:66:ASP:OD1	26:n:209:ARG:NE	2.38	0.56
1:U:236:LEU:HD12	1:U:241:ASN:HB3	1.86	0.56
2:V:65:ARG:O	2:V:69:THR:HG23	2.06	0.56
3:W:68:VAL:HG22	3:W:107:GLN:HG3	1.86	0.56
4:X:256:LEU:HD13	4:X:317:PRO:HB2	1.87	0.56
8:b:4:GLU:N	8:b:47:ASN:OD1	2.36	0.56
9:c:38:LEU:C	9:c:38:LEU:HD23	2.31	0.56
9:c:149:GLN:OE1	17:D:84:SER:OG	2.18	0.56
12:f:846:VAL:HG21	34:z:209:LYS:HZ2	1.71	0.56
18:E:199:VAL:HG22	18:E:233:ASP:OD1	2.05	0.56
30:R:239:ARG:NH2	30:R:241:ASP:OD2	2.39	0.56
33:K:47:CYS:SG	33:K:195:ILE:HD13	2.46	0.56
8:b:86:PHE:CE2	8:b:90:ILE:HD11	2.41	0.55
9:c:56:LEU:HD23	9:c:57:MET:N	2.20	0.55
9:c:291:LEU:HD12	9:c:292:MET:N	2.20	0.55
12:f:619:HIS:HB2	15:B:85:MET:HE1	1.87	0.55
18:E:64:LEU:O	18:E:65:THR:OG1	2.21	0.55
24:L:98:VAL:HG23	32:T:139:ARG:HH21	1.71	0.55
1:U:108:TYR:OH	1:U:159:ARG:NH1	2.38	0.55
6:Z:132:GLY:O	9:c:222:LYS:NZ	2.38	0.55
7:a:57:ILE:O	7:a:61:GLU:OE1	2.23	0.55
7:a:137:ASP:OD1	7:a:138:VAL:N	2.38	0.55
17:D:52:GLU:O	17:D:56:VAL:HG23	2.05	0.55
19:F:419:ASP:O	19:F:422:GLU:HG3	2.07	0.55
28:P:37:THR:HG23	28:P:183:MET:SD	2.46	0.55
3:W:136:ILE:HG23	3:W:137:TYR:CD2	2.42	0.55
4:X:114:ILE:HG12	4:X:129:LEU:HD22	1.88	0.55
4:X:256:LEU:HD13	4:X:317:PRO:CB	2.36	0.55
9:c:36:LEU:HD22	9:c:71:ASP:OD1	2.07	0.55
14:A:77:LEU:HD12	15:B:96:ARG:NH2	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:D:386:ALA:O	17:D:391:ARG:N	2.39	0.55
3:W:259:GLU:OE1	3:W:261:GLU:N	2.32	0.55
12:f:762:VAL:HG12	12:f:766:GLN:HE22	1.70	0.55
14:A:289:ALA:O	14:A:293:ASN:ND2	2.39	0.55
15:B:356:PRO:O	15:B:361:LYS:NZ	2.21	0.55
27:O:224:ASN:OD1	27:O:225:LYS:N	2.40	0.55
28:p:4:MET:HE3	28:p:104:TYR:HD1	1.71	0.55
1:U:107:HIS:O	1:U:111:GLN:OE1	2.25	0.55
4:X:160:MET:HE1	21:H:177:ARG:HB2	1.88	0.55
6:Z:15:VAL:HG23	6:Z:53:SER:HB3	1.87	0.55
6:Z:32:GLN:OE1	6:Z:32:GLN:N	2.40	0.55
17:D:212:LYS:HE2	35:D:501:ATP:O1B	2.06	0.55
21:H:208:ILE:HG21	21:H:230:LEU:HD11	1.89	0.55
21:H:223:PRO:HA	21:H:226:VAL:HG12	1.88	0.55
25:M:91:ILE:O	25:M:95:GLU:OE1	2.25	0.55
26:N:153:MET:N	26:N:153:MET:SD	2.79	0.55
33:K:41:GLN:HA	33:K:46:VAL:HG22	1.89	0.55
26:n:91:ASP:O	26:n:95:TYR:HD1	1.88	0.55
29:q:11:ASP:OD1	29:q:12:TYR:N	2.40	0.55
1:U:586:VAL:HG11	1:U:602:LEU:CD2	2.35	0.55
4:X:259:ILE:HG23	4:X:267:VAL:HG21	1.87	0.55
7:a:70:ARG:O	7:a:71:VAL:HG23	2.07	0.55
7:a:192:GLU:N	7:a:192:GLU:OE1	2.40	0.55
12:f:850:VAL:O	12:f:850:VAL:HG12	2.07	0.55
13:y:399:LEU:HD21	13:y:403:ARG:HH12	1.70	0.55
15:B:342:ILE:HG21	15:B:350:LYS:HD3	1.88	0.55
17:D:147:ALA:O	18:E:78:ARG:NH2	2.40	0.55
18:E:56:ILE:HD12	18:E:102:MET:HE2	1.89	0.55
19:F:289:ASP:OD1	19:F:290:ALA:N	2.39	0.55
23:J:11:SER:OG	23:J:15:HIS:O	2.23	0.55
32:T:69:ALA:HB3	32:T:87:ILE:HD11	1.89	0.55
31:s:119:MET:HE2	31:s:119:MET:N	2.21	0.55
6:Z:39:LEU:HD11	6:Z:122:VAL:HG22	1.88	0.55
9:c:231:LEU:HD12	9:c:231:LEU:O	2.06	0.55
12:f:325:GLN:OE1	12:f:328:SER:OG	2.08	0.55
24:L:66:VAL:HG23	24:L:89:ARG:HG2	1.89	0.55
24:L:79:ALA:HB2	33:K:121:LEU:HD22	1.88	0.55
27:O:215:ASN:OD1	27:O:234:VAL:HG13	2.06	0.55
29:Q:146:TYR:O	29:Q:155:ARG:NH1	2.39	0.55
33:K:46:VAL:HG11	33:K:144:GLY:HA3	1.87	0.55
4:X:24:ILE:HD11	4:X:60:THR:HG21	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:c:75:MET:HE3	9:c:76:PRO:HD2	1.88	0.55
15:B:259:TYR:OH	19:F:300:LYS:NZ	2.29	0.55
21:H:139:TRP:CG	21:H:139:TRP:O	2.60	0.55
25:M:91:ILE:HD13	25:M:119:TYR:CE2	2.42	0.55
26:N:77:CYS:HB2	26:N:132:ILE:HD11	1.88	0.55
28:P:84:PRO:HB2	28:P:120:PHE:CD2	2.42	0.55
31:S:36:ASN:ND2	31:S:58:SER:O	2.40	0.55
33:K:44:GLU:OE1	33:K:44:GLU:N	2.39	0.55
31:s:118:ALA:O	31:s:122:THR:HG23	2.06	0.55
1:U:125:PRO:O	1:U:126:ILE:C	2.50	0.55
5:Y:39:ASP:HA	5:Y:42:MET:HE2	1.89	0.55
12:f:409:SER:OG	12:f:815:HIS:NE2	2.28	0.55
14:A:120:LYS:CE	19:F:90:VAL:HG23	2.37	0.55
16:C:216:GLY:O	16:C:218:GLU:N	2.40	0.55
17:D:123:LEU:CB	17:D:142:VAL:HG11	2.36	0.55
17:D:387:VAL:HG21	18:E:161:ARG:HD3	1.87	0.55
19:F:169:ASP:O	19:F:170:SER:OG	2.22	0.55
24:L:66:VAL:HG23	24:L:89:ARG:CG	2.37	0.55
25:M:78:VAL:HG21	25:M:85:ALA:HB1	1.89	0.55
2:V:391:THR:O	2:V:394:LEU:N	2.40	0.55
3:W:434:SER:O	3:W:438:LEU:HD23	2.07	0.55
4:X:407:MET:HE2	6:Z:266:ILE:CD1	2.35	0.55
5:Y:326:GLY:N	11:e:59:GLU:OE2	2.40	0.55
6:Z:22:HIS:NE2	6:Z:35:VAL:HG11	2.22	0.55
6:Z:176:LEU:HD23	6:Z:180:LYS:HG2	1.89	0.55
9:c:201:TYR:CE1	9:c:203:ILE:HD11	2.41	0.55
12:f:195:ASN:CG	12:f:204:ALA:HB2	2.31	0.55
13:y:86:GLN:NE2	13:y:90:VAL:O	2.40	0.55
15:B:290:ILE:HG23	15:B:305:ILE:HG23	1.89	0.55
17:D:345:PHE:CD2	17:D:364:VAL:HG22	2.42	0.55
18:E:34:LYS:NZ	18:E:35:GLU:OE2	2.38	0.55
26:n:148:VAL:HG13	26:n:152:GLY:HA2	1.89	0.55
30:r:67:PHE:CB	30:r:206:LEU:HD23	2.37	0.55
1:U:802:TYR:HB3	1:U:892:LEU:HD11	1.89	0.54
6:Z:69:PHE:CD2	8:b:96:ALA:HA	2.42	0.54
10:d:268:ARG:NH2	10:d:292:PHE:O	2.39	0.54
12:f:373:ALA:O	12:f:377:VAL:HG23	2.07	0.54
14:A:346:PRO:O	14:A:351:ARG:NH1	2.40	0.54
15:B:420:LYS:O	15:B:424:GLU:OE1	2.25	0.54
17:D:211:GLY:N	35:D:501:ATP:O2B	2.40	0.54
17:D:358:VAL:HG22	17:D:360:LEU:HG	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:F:303:ASP:OD1	19:F:307:GLN:NE2	2.39	0.54
21:H:204:THR:OG1	21:H:207:ASN:ND2	2.40	0.54
27:O:182:GLU:OE2	32:t:224:ARG:NH2	2.38	0.54
32:t:161:ALA:HB3	32:t:164:GLU:OE2	2.07	0.54
2:V:71:THR:HG22	2:V:107:ARG:CZ	2.37	0.54
3:W:375:MET:HA	3:W:413:ILE:HD11	1.88	0.54
4:X:73:VAL:O	4:X:77:LEU:N	2.40	0.54
4:X:170:GLN:HB3	4:X:193:ALA:HB2	1.88	0.54
4:X:191:THR:HG21	16:C:381:GLU:HG3	1.90	0.54
4:X:356:LEU:HD22	4:X:361:VAL:HG13	1.88	0.54
7:a:202:LEU:CD2	7:a:261:LEU:HD21	2.37	0.54
11:e:50:ASP:O	11:e:55:GLN:NE2	2.39	0.54
12:f:587:PHE:HE2	12:f:591:ALA:HB3	1.71	0.54
22:I:208:ALA:HA	22:I:233:VAL:HG11	1.90	0.54
23:J:8:THR:O	23:J:8:THR:HG22	2.06	0.54
28:P:33:GLN:OE1	28:P:34:MET:N	2.41	0.54
26:n:129:MET:N	26:n:129:MET:HE2	2.22	0.54
29:q:37:LYS:O	29:q:61:GLN:NE2	2.39	0.54
30:r:206:LEU:HD21	30:r:211:ALA:HB2	1.89	0.54
31:s:55:THR:O	31:s:68:SER:OG	2.24	0.54
4:X:106:GLU:CD	4:X:136:LEU:HD11	2.32	0.54
6:Z:142:GLU:OE1	6:Z:142:GLU:N	2.40	0.54
12:f:195:ASN:OD1	12:f:204:ALA:HB2	2.07	0.54
25:M:71:ASP:N	32:T:121:LEU:HD21	2.22	0.54
28:P:176:ASP:OD2	31:s:184:LYS:NZ	2.40	0.54
26:n:115:SER:O	26:n:119:GLU:OE1	2.25	0.54
1:U:679:PRO:O	1:U:680:VAL:HG23	2.07	0.54
2:V:129:ASP:OD1	2:V:130:PHE:N	2.40	0.54
5:Y:229:ILE:HD11	5:Y:295:TYR:CD1	2.43	0.54
14:A:62:LEU:HD23	14:A:62:LEU:C	2.32	0.54
14:A:207:GLU:HB3	19:F:401:VAL:HG22	1.89	0.54
18:E:52:SER:O	19:F:159:LEU:HD11	2.08	0.54
21:H:68:ILE:HD11	21:H:74:LEU:HD13	1.90	0.54
26:N:175:ALA:O	26:N:178:ARG:NH2	2.40	0.54
31:s:41:LEU:HD13	31:s:165:ALA:HB2	1.88	0.54
1:U:187:LEU:HD12	17:D:45:LYS:HG2	1.90	0.54
2:V:211:TYR:HD2	2:V:250:LEU:HD21	1.73	0.54
2:V:494:MET:HE1	6:Z:275:LEU:CA	2.37	0.54
6:Z:25:ARG:HH12	9:c:102:THR:HA	1.73	0.54
7:a:77:VAL:O	7:a:81:LEU:HD23	2.08	0.54
18:E:234:GLU:HB3	19:F:311:LEU:HD23	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:W:397:VAL:HG23	3:W:403:PHE:HA	1.90	0.54
5:Y:162:GLU:OE2	5:Y:166:SER:OG	2.24	0.54
7:a:107:SER:O	7:a:110:ALA:N	2.41	0.54
7:a:134:THR:O	7:a:138:VAL:HG23	2.08	0.54
12:f:337:LEU:HD13	34:z:210:ILE:HG12	1.88	0.54
16:C:358:GLU:O	16:C:362:VAL:HG23	2.07	0.54
22:I:240:HIS:NE2	22:I:244:GLU:OE2	2.41	0.54
31:S:43:ILE:HD13	31:S:163:PHE:HB2	1.90	0.54
28:p:53:LEU:HB2	28:p:60:VAL:HG13	1.90	0.54
2:V:149:PRO:O	2:V:152:GLY:N	2.41	0.54
5:Y:296:VAL:HG11	11:e:51:ASP:HB2	1.90	0.54
6:Z:94:TRP:CD2	6:Z:121:LEU:HD13	2.42	0.54
8:b:123:ASP:OD1	8:b:124:LEU:N	2.40	0.54
12:f:293:GLN:O	12:f:297:MET:HE2	2.07	0.54
12:f:381:VAL:HG22	12:f:770:HIS:CB	2.38	0.54
14:A:93:LEU:HD12	14:A:93:LEU:C	2.33	0.54
14:A:94:GLN:HB2	14:A:115:VAL:HG13	1.90	0.54
16:C:255:GLY:CA	16:C:273:MET:HE2	2.36	0.54
17:D:345:PHE:CE2	17:D:375:ILE:HD12	2.42	0.54
21:H:136:ILE:O	21:H:146:LEU:HD12	2.07	0.54
22:I:181:GLU:N	22:I:181:GLU:OE1	2.41	0.54
32:T:218:MET:HA	32:T:221:LEU:HD12	1.89	0.54
6:Z:67:VAL:HG13	8:b:92:VAL:CG2	2.37	0.54
7:a:127:ASP:CG	7:a:131:THR:HG23	2.33	0.54
8:b:14:GLU:OE2	8:b:17:ARG:NH1	2.40	0.54
12:f:844:VAL:HG22	12:f:869:THR:O	2.08	0.54
16:C:37:ASP:OD1	16:C:38:LYS:N	2.40	0.54
18:E:158:LEU:O	18:E:161:ARG:CB	2.56	0.54
20:G:14:THR:OG1	20:G:126:THR:O	2.16	0.54
21:H:75:VAL:HG22	21:H:76:TYR:H	1.73	0.54
22:I:116:ASP:OD1	23:J:81:ARG:NH1	2.41	0.54
2:V:74:ASP:O	2:V:78:HIS:ND1	2.41	0.54
3:W:128:LEU:O	3:W:132:THR:HG23	2.07	0.54
3:W:232:GLN:O	3:W:236:HIS:ND1	2.41	0.54
3:W:416:GLN:OE1	3:W:417:ARG:N	2.41	0.54
7:a:213:PHE:HD1	7:a:216:LEU:HD12	1.72	0.54
12:f:344:VAL:O	12:f:348:ILE:HD12	2.08	0.54
22:I:239:LYS:O	22:I:243:GLU:OE1	2.25	0.54
30:R:233:VAL:O	30:R:233:VAL:HG12	2.08	0.54
3:W:87:ILE:HD11	3:W:108:CYS:SG	2.48	0.54
3:W:194:LEU:HD12	3:W:229:LEU:HD23	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:X:166:LEU:HD22	4:X:196:THR:HG21	1.89	0.54
4:X:171:LEU:HD21	4:X:210:LEU:HD13	1.89	0.54
4:X:251:LEU:HA	4:X:254:MET:HE3	1.90	0.54
8:b:128:ALA:CB	8:b:160:LEU:HD22	2.37	0.54
12:f:778:LEU:HD23	12:f:825:MET:CE	2.39	0.54
19:F:222:GLY:O	19:F:349:ASP:N	2.38	0.54
23:J:155:ALA:O	33:K:63:SER:OG	2.11	0.54
25:M:190:ILE:O	25:M:194:VAL:HG23	2.08	0.54
26:N:38:MET:SD	26:N:39:ALA:N	2.81	0.54
28:P:11:VAL:HG11	28:P:52:GLY:HA3	1.89	0.54
32:T:251:GLU:OE1	32:T:251:GLU:N	2.40	0.54
27:o:49:VAL:HG12	27:o:56:VAL:HB	1.88	0.54
1:U:164:GLU:OE2	1:U:203:LYS:NZ	2.36	0.53
3:W:136:ILE:HG23	3:W:137:TYR:CE2	2.43	0.53
5:Y:356:THR:HG23	5:Y:356:THR:O	2.07	0.53
5:Y:388:ASN:OD1	5:Y:389:MET:N	2.41	0.53
10:d:103:ASN:OD1	10:d:104:ARG:NH1	2.41	0.53
20:G:173:THR:O	20:G:176:THR:OG1	2.24	0.53
22:I:68:LEU:HD21	22:I:90:LEU:HD13	1.90	0.53
23:J:37:GLY:N	23:J:40:ILE:O	2.39	0.53
33:K:29:GLU:O	33:K:33:LEU:HD23	2.08	0.53
1:U:584:TYR:CE1	1:U:617:ALA:HB1	2.43	0.53
3:W:408:ARG:NH1	4:X:346:GLN:OE1	2.41	0.53
12:f:235:SER:O	15:B:59:ARG:NE	2.41	0.53
12:f:795:GLY:O	12:f:799:VAL:HG23	2.09	0.53
19:F:93:VAL:O	19:F:93:VAL:HG12	2.08	0.53
19:F:94:ILE:HD13	19:F:125:LYS:HB2	1.89	0.53
20:G:17:SER:N	20:G:20:GLY:O	2.36	0.53
20:G:41:ALA:CB	20:G:50:ILE:HG22	2.38	0.53
28:P:12:MET:HE1	28:P:14:MET:CE	2.39	0.53
26:n:46:VAL:HG11	26:n:135:ALA:CB	2.36	0.53
26:n:46:VAL:HG12	26:n:47:VAL:N	2.23	0.53
30:r:233:VAL:O	30:r:233:VAL:HG12	2.07	0.53
1:U:42:VAL:O	1:U:45:ILE:N	2.41	0.53
1:U:669:ILE:HD11	1:U:694:ILE:HG21	1.89	0.53
1:U:697:GLN:NE2	1:U:742:HIS:O	2.41	0.53
3:W:446:ILE:CD1	6:Z:226:ILE:HD11	2.39	0.53
8:b:109:ILE:HG23	8:b:138:VAL:HG23	1.90	0.53
12:f:670:MET:HG3	15:B:71:TYR:CE1	2.44	0.53
12:f:882:LEU:HD23	12:f:883:ALA:N	2.23	0.53
13:y:411:ASP:OD1	13:y:412:ALA:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:B:192:ASN:OD1	15:B:193:GLN:N	2.40	0.53
17:D:106:THR:HG21	18:E:78:ARG:H	1.73	0.53
20:G:32:ILE:HD11	20:G:156:PRO:CG	2.38	0.53
30:r:238:VAL:HG23	30:r:238:VAL:O	2.08	0.53
1:U:606:ALA:HB1	1:U:619:VAL:HG23	1.90	0.53
2:V:179:LYS:HA	2:V:181:TYR:CZ	2.43	0.53
3:W:231:ILE:HG22	3:W:235:GLN:OE1	2.09	0.53
7:a:309:LEU:HD23	7:a:309:LEU:C	2.33	0.53
12:f:323:ASN:CB	12:f:326:LEU:HD23	2.38	0.53
12:f:378:ASN:ND2	12:f:394:ASP:OD2	2.40	0.53
12:f:456:ARG:NH2	12:f:492:SER:OG	2.41	0.53
14:A:248:LYS:NZ	15:B:262:ASP:OD2	2.40	0.53
22:I:72:MET:SD	22:I:73:ALA:N	2.82	0.53
27:O:169:THR:HG23	27:O:178:MET:HE3	1.91	0.53
1:U:135:ASN:O	1:U:139:GLN:OE1	2.27	0.53
3:W:109:CYS:O	3:W:113:GLU:OE1	2.27	0.53
5:Y:314:LEU:HD21	5:Y:318:TYR:HD2	1.74	0.53
9:c:103:GLY:O	9:c:104:ARG:NE	2.41	0.53
10:d:192:LEU:HD21	10:d:215:LEU:HD21	1.90	0.53
12:f:350:LYS:HB3	12:f:353:LEU:HD13	1.89	0.53
12:f:700:SER:OG	12:f:734:SER:OG	2.02	0.53
14:A:122:VAL:HG13	14:A:122:VAL:O	2.08	0.53
18:E:215:ILE:HD13	18:E:260:LEU:HD22	1.91	0.53
20:G:113:MET:CE	27:O:113:THR:HA	2.38	0.53
22:I:203:VAL:HG23	22:I:203:VAL:O	2.08	0.53
23:J:96:LEU:HD22	29:Q:62:LYS:HG3	1.91	0.53
30:R:146:VAL:HG21	30:R:156:MET:SD	2.48	0.53
31:S:45:GLY:O	31:S:147:GLY:N	2.39	0.53
31:S:175:PRO:HB2	28:p:149:MET:HE2	1.90	0.53
1:U:573:ASP:OD1	1:U:574:LYS:N	2.36	0.53
3:W:112:VAL:O	3:W:121:LYS:NZ	2.34	0.53
7:a:12:GLN:NE2	7:a:19:PRO:O	2.40	0.53
8:b:121:GLU:HA	8:b:124:LEU:HD12	1.89	0.53
9:c:90:VAL:CG2	13:y:74:LEU:HD22	2.38	0.53
12:f:139:CYS:SG	12:f:140:LEU:N	2.82	0.53
18:E:344:ARG:NE	19:F:218:GLN:O	2.41	0.53
19:F:304:ARG:HB3	19:F:308:ARG:NH1	2.24	0.53
19:F:397:LYS:O	19:F:401:VAL:HG23	2.09	0.53
27:O:94:ASP:HB3	27:O:137:ILE:HG23	1.91	0.53
28:P:69:PHE:O	28:P:73:LEU:HD23	2.08	0.53
28:P:96:TYR:O	28:P:98:LYS:N	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:P:122:CYS:N	28:P:137:VAL:HG11	2.24	0.53
31:s:112:THR:HG23	31:s:115:ALA:H	1.73	0.53
1:U:97:VAL:O	1:U:101:ILE:HG12	2.09	0.53
4:X:397:TYR:OH	6:Z:258:VAL:HG21	2.09	0.53
7:a:229:ASP:OD1	7:a:230:ARG:N	2.42	0.53
12:f:325:GLN:O	12:f:329:ASN:ND2	2.42	0.53
12:f:703:ARG:HB2	12:f:706:ILE:HD13	1.90	0.53
12:f:778:LEU:HD13	12:f:796:LEU:HD11	1.90	0.53
14:A:99:THR:HG23	14:A:99:THR:O	2.08	0.53
16:C:35:VAL:HG21	17:D:50:GLU:OE2	2.09	0.53
16:C:372:ARG:NE	17:D:179:GLU:OE1	2.36	0.53
19:F:123:VAL:O	19:F:123:VAL:HG12	2.08	0.53
22:I:99:LEU:HD12	28:P:65:GLN:HB3	1.91	0.53
22:I:108:GLU:OE2	23:J:60:ARG:NH1	2.42	0.53
25:M:176:GLU:HB3	25:M:197:ILE:CD1	2.39	0.53
25:M:187:CYS:SG	25:M:220:LEU:HD13	2.49	0.53
28:p:60:VAL:HG22	28:p:105:THR:HG23	1.91	0.53
31:s:195:SER:OG	31:s:197:ASP:OD1	2.18	0.53
32:t:56:VAL:HG21	32:t:98:ALA:O	2.09	0.53
1:U:95:GLU:O	1:U:99:THR:HG22	2.08	0.53
1:U:505:ASP:C	1:U:544:ILE:HD11	2.33	0.53
7:a:296:ILE:O	7:a:299:SER:C	2.51	0.53
9:c:50:PRO:CB	18:E:104:THR:HG21	2.39	0.53
9:c:213:GLU:O	9:c:217:LEU:HD13	2.09	0.53
12:f:466:LEU:HD13	12:f:485:LEU:HA	1.89	0.53
14:A:77:LEU:HD22	15:B:137:SER:HB2	1.91	0.53
16:C:108:VAL:HG22	16:C:126:ILE:CD1	2.38	0.53
19:F:265:ALA:HB1	19:F:268:VAL:HG23	1.90	0.53
33:K:37:ALA:HB1	33:K:50:VAL:HG12	1.91	0.53
3:W:372:ARG:HH11	3:W:412:ILE:HG23	1.74	0.53
4:X:69:LEU:O	4:X:73:VAL:HG13	2.08	0.53
4:X:87:ARG:NE	21:H:232:ALA:HB2	2.24	0.53
8:b:170:LEU:HD12	8:b:170:LEU:O	2.08	0.53
10:d:344:ARG:HG2	10:d:348:MET:SD	2.49	0.53
12:f:271:MET:SD	12:f:786:GLN:NE2	2.82	0.53
17:D:407:ILE:HG22	17:D:408:LYS:N	2.24	0.53
23:J:84:ILE:HG22	23:J:88:ARG:HD3	1.91	0.53
24:L:46:LEU:CD1	24:L:135:ALA:HB2	2.39	0.53
26:N:38:MET:HE3	26:N:190:THR:HG23	1.90	0.53
29:Q:178:PHE:O	29:Q:194:ILE:N	2.41	0.53
27:o:241:ARG:NH2	28:p:151:GLU:O	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:1:MET:HA	10:d:132:THR:HG21	1.90	0.53
4:X:354:ILE:O	4:X:354:ILE:HG22	2.09	0.53
5:Y:293:ARG:NH1	11:e:49:GLU:O	2.42	0.53
32:t:93:SER:OG	32:t:160:TYR:O	2.26	0.53
2:V:432:GLU:OE1	2:V:432:GLU:N	2.42	0.52
3:W:44:ILE:O	3:W:48:LEU:HD13	2.09	0.52
3:W:136:ILE:HG22	17:D:391:ARG:HH12	1.75	0.52
4:X:69:LEU:O	4:X:73:VAL:HG22	2.09	0.52
7:a:274:LEU:CD1	7:a:314:ALA:HB2	2.39	0.52
10:d:300:THR:O	10:d:303:ALA:HB3	2.09	0.52
12:f:590:PHE:CE1	12:f:648:ALA:HB1	2.44	0.52
14:A:123:VAL:HG22	14:A:124:ASP:N	2.24	0.52
16:C:346:LYS:O	16:C:350:LEU:HD23	2.09	0.52
19:F:74:LYS:O	19:F:78:GLU:OE1	2.27	0.52
19:F:141:ASP:OD2	19:F:144:LYS:NZ	2.35	0.52
21:H:68:ILE:HD12	21:H:74:LEU:HB2	1.90	0.52
21:H:79:MET:HE2	21:H:79:MET:HA	1.90	0.52
21:H:166:ASN:OD1	21:H:169:ASN:ND2	2.41	0.52
23:J:33:VAL:HG12	23:J:195:LEU:HD11	1.90	0.52
27:O:60:ASP:CB	27:O:206:ILE:HD11	2.39	0.52
1:U:1:MET:SD	1:U:1:MET:N	2.77	0.52
14:A:276:GLU:HB3	15:B:310:LEU:HD22	1.90	0.52
17:D:51:LEU:HD23	17:D:51:LEU:C	2.35	0.52
18:E:164:ILE:HG13	18:E:165:ILE:N	2.24	0.52
20:G:50:ILE:HG21	20:G:141:ILE:HG13	1.90	0.52
21:H:140:ASN:C	21:H:140:ASN:ND2	2.66	0.52
23:J:88:ARG:CZ	29:Q:69:MET:SD	2.97	0.52
29:q:3:TYR:CZ	29:q:139:THR:HG21	2.43	0.52
1:U:325:MET:N	1:U:325:MET:HE2	2.24	0.52
5:Y:376:LEU:HD23	5:Y:376:LEU:C	2.35	0.52
6:Z:167:ALA:HB3	9:c:43:LYS:NZ	2.20	0.52
12:f:542:ILE:HD13	12:f:583:VAL:CG1	2.38	0.52
15:B:377:ASP:OD1	15:B:378:VAL:N	2.43	0.52
17:D:417:TYR:CE2	20:G:21:ARG:NE	2.77	0.52
24:L:229:VAL:HG12	24:L:233:LEU:HD13	1.91	0.52
28:p:142:CYS:SG	28:p:146:MET:HE1	2.49	0.52
1:U:123:LYS:NZ	1:U:126:ILE:HD12	2.25	0.52
1:U:517:GLY:HA3	1:U:551:GLY:HA2	1.91	0.52
1:U:637:VAL:HG21	1:U:656:LEU:HG	1.91	0.52
4:X:48:GLN:O	4:X:52:GLU:OE1	2.26	0.52
6:Z:198:LEU:HD21	9:c:304:LEU:CD2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:c:32:TYR:CD1	9:c:206:ASN:HB2	2.44	0.52
14:A:195:LEU:HD13	34:z:205:VAL:CG1	2.39	0.52
17:D:236:VAL:N	17:D:237:GLN:OE1	2.43	0.52
22:I:180:LYS:HB2	22:I:184:MET:HE2	1.92	0.52
29:Q:4:LEU:HD13	29:Q:45:LEU:HB3	1.91	0.52
32:t:256:ILE:O	32:t:260:ILE:HG12	2.09	0.52
1:U:475:HIS:ND1	1:U:507:VAL:O	2.36	0.52
5:Y:244:ALA:O	5:Y:248:GLU:HG2	2.09	0.52
6:Z:69:PHE:CE2	8:b:96:ALA:HA	2.45	0.52
8:b:65:THR:OG1	8:b:70:ARG:NH2	2.43	0.52
8:b:100:ARG:NH2	8:b:103:LYS:O	2.42	0.52
10:d:192:LEU:HD21	10:d:215:LEU:CD2	2.40	0.52
11:e:52:PHE:O	11:e:53:SER:C	2.52	0.52
16:C:254:ILE:HG13	16:C:254:ILE:O	2.09	0.52
17:D:383:GLY:O	17:D:387:VAL:HG23	2.09	0.52
1:U:763:VAL:O	1:U:767:THR:HG23	2.09	0.52
1:U:791:LEU:HD21	1:U:795:LEU:HD13	1.90	0.52
3:W:69:ALA:HB1	3:W:73:MET:HE1	1.91	0.52
6:Z:257:MET:HA	6:Z:257:MET:HE2	1.92	0.52
9:c:75:MET:HE3	9:c:76:PRO:CD	2.39	0.52
9:c:116:PRO:O	9:c:148:ILE:HD12	2.09	0.52
12:f:466:LEU:HD13	12:f:485:LEU:CA	2.40	0.52
14:A:71:GLY:N	15:B:140:ASP:OD2	2.42	0.52
16:C:119:ASP:OD1	16:C:120:SER:N	2.43	0.52
16:C:214:VAL:HG12	16:C:218:GLU:CB	2.39	0.52
17:D:142:VAL:O	17:D:142:VAL:HG13	2.09	0.52
18:E:116:ASP:HB2	18:E:117:PRO:HD3	1.91	0.52
20:G:90:GLN:HG3	20:G:134:LEU:HD11	1.92	0.52
21:H:118:MET:O	21:H:118:MET:HE3	2.09	0.52
29:Q:66:LEU:O	29:Q:70:ARG:HG3	2.09	0.52
31:S:73:LYS:CD	31:S:231:ILE:HD12	2.40	0.52
33:K:96:THR:CA	33:K:107:MET:HE3	2.37	0.52
1:U:21:GLU:O	1:U:25:HIS:ND1	2.43	0.52
1:U:39:SER:HA	1:U:42:VAL:HG23	1.91	0.52
1:U:152:GLY:HA3	17:D:41:TYR:HD2	1.75	0.52
2:V:305:ALA:CB	2:V:335:VAL:HG21	2.39	0.52
2:V:311:ASN:OD1	2:V:315:LYS:NZ	2.35	0.52
2:V:492:LYS:NZ	10:d:350:VAL:HG22	2.25	0.52
3:W:117:ASP:HB3	3:W:120:ILE:HG22	1.91	0.52
6:Z:243:GLN:O	6:Z:247:LYS:NZ	2.40	0.52
7:a:22:TRP:CH2	7:a:59:LEU:HD11	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:a:56:LEU:HD23	7:a:86:GLN:HG2	1.90	0.52
12:f:339:ILE:O	12:f:773:LYS:NZ	2.43	0.52
12:f:511:SER:OG	12:f:514:VAL:HG23	2.09	0.52
12:f:589:SER:O	12:f:591:ALA:N	2.42	0.52
13:y:73:LEU:O	13:y:74:LEU:HD23	2.09	0.52
14:A:143:ASP:OD1	14:A:144:ARG:N	2.41	0.52
16:C:39:SER:OG	16:C:43:ARG:NH2	2.42	0.52
21:H:135:LEU:HD12	21:H:163:MET:HE3	1.92	0.52
26:N:210:LEU:HD12	26:N:221:GLN:NE2	2.25	0.52
27:O:178:MET:HA	27:O:178:MET:HE2	1.92	0.52
33:K:228:MET:HA	33:K:228:MET:HE3	1.90	0.52
26:n:222:VAL:HB	26:n:224:LEU:HD11	1.92	0.52
28:p:13:ALA:HB2	28:p:110:ALA:HB2	1.92	0.52
28:p:58:THR:HG23	28:p:59:ASP:N	2.25	0.52
32:t:95:MET:HE1	32:t:235:ALA:HB3	1.91	0.52
32:t:202:GLN:HG2	32:t:202:GLN:O	2.08	0.52
1:U:89:ASN:OD1	1:U:90:VAL:N	2.43	0.52
2:V:318:GLN:OE1	2:V:318:GLN:N	2.37	0.52
2:V:355:ARG:HA	2:V:358:MET:SD	2.50	0.52
3:W:177:MET:HE3	3:W:182:ARG:N	2.24	0.52
4:X:77:LEU:HD21	4:X:89:VAL:CG2	2.36	0.52
8:b:127:LEU:O	8:b:131:LEU:HD23	2.09	0.52
12:f:158:TYR:O	12:f:162:LEU:HD13	2.10	0.52
12:f:778:LEU:HD12	12:f:778:LEU:O	2.10	0.52
16:C:26:SER:O	16:C:30:GLU:OE1	2.27	0.52
17:D:96:VAL:HG21	17:D:112:TYR:HE2	1.74	0.52
27:o:142:VAL:HG13	27:o:168:VAL:CG2	2.40	0.52
1:U:115:ASN:O	1:U:116:ALA:C	2.53	0.52
1:U:611:ASN:OD1	1:U:613:ASP:N	2.42	0.52
6:Z:78:MET:CE	9:c:98:MET:HB3	2.40	0.52
7:a:202:LEU:HD23	7:a:261:LEU:HD21	1.92	0.52
15:B:349:ARG:NE	15:B:349:ARG:HA	2.24	0.52
19:F:421:MET:HA	19:F:424:ILE:HD12	1.91	0.52
31:S:57:LEU:HD22	32:T:177:TYR:CE2	2.45	0.52
1:U:111:GLN:HA	1:U:114:GLU:CD	2.35	0.52
3:W:321:VAL:O	3:W:325:GLY:N	2.42	0.52
4:X:8:GLU:HB3	4:X:30:ILE:HD11	1.92	0.52
14:A:77:LEU:HD12	15:B:96:ARG:HH21	1.75	0.52
22:I:151:ASP:OD1	22:I:155:ASN:N	2.43	0.52
24:L:90:GLN:NE2	24:L:94:ASP:OD1	2.43	0.52
26:N:170:TYR:OH	26:n:200:ARG:NH2	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:R:88:GLN:NE2	28:p:205:ASP:OD2	2.43	0.52
29:q:16:ALA:HB2	29:q:180:VAL:HG12	1.92	0.52
1:U:520:MET:O	1:U:523:SER:OG	2.25	0.51
1:U:658:ILE:HD12	1:U:763:VAL:HG21	1.91	0.51
6:Z:209:ARG:HB2	7:a:353:LEU:HD23	1.90	0.51
7:a:230:ARG:O	7:a:233:LEU:N	2.42	0.51
12:f:199:ASN:OD1	14:A:403:ILE:HG12	2.10	0.51
12:f:789:SER:O	12:f:793:VAL:HG13	2.11	0.51
17:D:384:MET:HE2	17:D:384:MET:HA	1.90	0.51
21:H:74:LEU:HD22	21:H:87:VAL:HG12	1.92	0.51
23:J:134:VAL:HG12	23:J:144:LEU:HD12	1.92	0.51
23:J:195:LEU:CD2	23:J:206:ILE:HG22	2.40	0.51
26:n:76:PHE:CD2	26:n:213:ILE:HD11	2.46	0.51
1:U:246:TYR:CE1	1:U:325:MET:HE1	2.45	0.51
3:W:226:TYR:CG	3:W:230:MET:HE1	2.45	0.51
3:W:440:ASN:O	3:W:443:THR:HG22	2.10	0.51
5:Y:175:ASP:OD2	5:Y:176:ARG:NH1	2.43	0.51
6:Z:205:LEU:HA	6:Z:208:ILE:HG22	1.91	0.51
11:e:52:PHE:O	11:e:55:GLN:N	2.43	0.51
18:E:350:ALA:N	18:E:369:LYS:HZ2	2.08	0.51
31:S:67:ASP:O	31:S:68:SER:OG	2.22	0.51
1:U:609:ASP:OD1	1:U:610:VAL:N	2.42	0.51
1:U:722:ASP:C	1:U:727:LYS:HZ3	2.18	0.51
1:U:892:LEU:HD12	1:U:893:THR:H	1.75	0.51
2:V:114:TYR:N	2:V:135:LEU:HD21	2.25	0.51
12:f:768:LEU:O	12:f:771:LEU:HG	2.11	0.51
17:D:146:GLU:O	17:D:147:ALA:HB2	2.10	0.51
17:D:271:ALA:HB2	17:D:289:LEU:CD1	2.40	0.51
20:G:13:ILE:HD12	20:G:130:GLU:N	2.25	0.51
25:M:49:GLY:HA2	25:M:214:LEU:HD23	1.91	0.51
25:M:171:GLN:HG2	25:M:172:ALA:N	2.26	0.51
26:N:169:ILE:O	26:N:169:ILE:HG22	2.10	0.51
26:N:224:LEU:HD21	32:t:258:HIS:CD2	2.45	0.51
30:r:189:SER:OG	30:r:226:ASP:OD2	2.28	0.51
2:V:72:LEU:HD23	2:V:116:ALA:HB2	1.91	0.51
3:W:66:ILE:O	3:W:70:VAL:HG23	2.11	0.51
6:Z:187:LEU:HD21	9:c:293:THR:HA	1.92	0.51
9:c:261:GLU:OE1	9:c:261:GLU:N	2.43	0.51
14:A:199:GLU:HA	14:A:202:VAL:HG12	1.92	0.51
18:E:39:GLN:HB3	19:F:73:ILE:HG21	1.93	0.51
19:F:88:TYR:O	19:F:89:LEU:C	2.52	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:F:96:LEU:HD23	19:F:97:LEU:N	2.26	0.51
19:F:291:ILE:HG22	19:F:292:GLY:N	2.26	0.51
28:p:63:VAL:HB	28:p:103:TYR:CD2	2.45	0.51
30:r:189:SER:OG	30:r:229:SER:OG	2.27	0.51
7:a:42:LEU:O	7:a:45:VAL:HG22	2.10	0.51
7:a:363:MET:SD	9:c:308:VAL:HB	2.51	0.51
9:c:261:GLU:O	9:c:264:LYS:N	2.44	0.51
12:f:50:LYS:HE2	12:f:50:LYS:HA	1.92	0.51
12:f:749:ALA:HB2	12:f:762:VAL:HG11	1.91	0.51
31:S:47:ASP:OD1	31:S:47:ASP:N	2.41	0.51
30:r:147:TYR:HA	30:r:150:LYS:HG2	1.93	0.51
1:U:167:ILE:HD11	1:U:177:LEU:HD12	1.93	0.51
1:U:567:ILE:HD12	1:U:586:VAL:CG2	2.39	0.51
4:X:318:ILE:O	4:X:322:HIS:N	2.27	0.51
9:c:31:VAL:O	9:c:31:VAL:HG13	2.10	0.51
14:A:47:GLN:NE2	14:A:51:ASP:OD2	2.43	0.51
14:A:353:HIS:CE1	14:A:357:ILE:HD11	2.46	0.51
16:C:298:ILE:HG13	16:C:301:LEU:HD11	1.92	0.51
20:G:194:THR:O	20:G:197:THR:OG1	2.26	0.51
23:J:45:VAL:HG13	23:J:207:GLU:CG	2.40	0.51
24:L:39:LYS:NZ	24:L:142:PRO:O	2.40	0.51
25:M:174:LYS:O	25:M:178:GLU:OE1	2.29	0.51
27:O:95:THR:O	27:O:99:THR:HG23	2.11	0.51
29:Q:58:GLU:OE1	30:R:140:LYS:NZ	2.38	0.51
32:T:80:ARG:O	26:n:200:ARG:NH1	2.41	0.51
29:q:147:TYR:CD1	29:q:151:ILE:HG21	2.46	0.51
1:U:17:PRO:O	1:U:20:LYS:N	2.44	0.51
1:U:701:ILE:HD12	1:U:810:THR:HA	1.93	0.51
6:Z:81:MET:HE1	9:c:91:PHE:CD2	2.45	0.51
10:d:309:VAL:O	10:d:309:VAL:HG12	2.10	0.51
12:f:159:VAL:HG13	12:f:191:ILE:HD11	1.93	0.51
12:f:777:THR:O	12:f:826:GLN:NE2	2.43	0.51
17:D:89:ILE:HD11	18:E:80:VAL:HG13	1.92	0.51
17:D:271:ALA:HB2	17:D:289:LEU:HD13	1.92	0.51
19:F:343:LEU:HG	19:F:344:ARG:HD3	1.92	0.51
20:G:203:SER:HA	20:G:210:PHE:HE2	1.76	0.51
21:H:101:TYR:CD1	28:P:90:MET:HE3	2.45	0.51
24:L:56:LEU:O	33:K:166:ASP:N	2.43	0.51
24:L:212:ILE:HD13	24:L:229:VAL:HG13	1.92	0.51
30:R:163:TRP:HD1	30:R:238:VAL:HG12	1.76	0.51
2:V:236:ARG:O	2:V:240:LEU:HD23	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:b:83:LYS:NZ	8:b:116:PRO:O	2.44	0.51
9:c:57:MET:SD	9:c:110:GLY:C	2.94	0.51
12:f:144:LEU:HD21	12:f:190:GLU:OE1	2.11	0.51
12:f:192:VAL:HG21	12:f:216:MET:HE3	1.93	0.51
12:f:348:ILE:O	12:f:350:LYS:NZ	2.43	0.51
12:f:775:THR:HG23	12:f:776:LEU:HG	1.93	0.51
13:y:35:ILE:N	13:y:44:ASP:OD1	2.37	0.51
15:B:239:VAL:O	15:B:243:THR:HG22	2.11	0.51
16:C:239:ARG:HA	16:C:289:ILE:HD11	1.93	0.51
17:D:87:LEU:CD1	17:D:131:ALA:HB1	2.39	0.51
18:E:86:GLN:O	18:E:87:LEU:HD22	2.11	0.51
18:E:199:VAL:HG21	19:F:315:ASN:HD21	1.73	0.51
20:G:241:ALA:C	20:G:242:LEU:HD22	2.36	0.51
26:N:48:LEU:HD11	26:N:135:ALA:HB3	1.91	0.51
26:N:48:LEU:HD21	26:N:135:ALA:HB3	1.93	0.51
26:N:71:ILE:HG22	26:N:97:LEU:HD23	1.92	0.51
27:O:205:GLY:O	27:O:209:ASP:HB3	2.10	0.51
28:P:125:ASP:OD1	28:P:129:CYS:N	2.39	0.51
28:P:164:PHE:CE1	28:P:189:ILE:HG21	2.45	0.51
29:Q:164:LEU:HD22	29:Q:178:PHE:CE2	2.45	0.51
28:p:98:LYS:HE3	28:p:102:PRO:HA	1.93	0.51
31:s:66:ARG:NH1	31:s:219:ASP:OD1	2.44	0.51
2:V:181:TYR:HA	2:V:184:ALA:HB3	1.93	0.51
2:V:195:ILE:HD12	2:V:203:LEU:CD2	2.41	0.51
3:W:203:GLN:HB3	3:W:207:LYS:NZ	2.26	0.51
3:W:340:VAL:HG12	3:W:350:ARG:HD3	1.93	0.51
3:W:391:ALA:O	3:W:394:SER:OG	2.25	0.51
5:Y:206:SER:O	16:C:340:ARG:NH1	2.44	0.51
6:Z:198:LEU:HD22	9:c:229:LEU:HD21	1.92	0.51
12:f:245:ASN:OD1	12:f:246:SER:N	2.41	0.51
15:B:184:TYR:HH	15:B:239:VAL:HG22	1.76	0.51
23:J:177:THR:HG22	23:J:178:ASP:N	2.25	0.51
24:L:74:ILE:HG22	24:L:132:LEU:CD2	2.41	0.51
26:n:128:LEU:C	26:n:129:MET:HE2	2.35	0.51
28:p:56:LEU:HD23	28:p:104:TYR:HB3	1.93	0.51
31:s:57:LEU:HD12	31:s:68:SER:CB	2.41	0.51
1:U:3:THR:HG23	2:V:263:LEU:HD11	1.91	0.51
3:W:375:MET:HB3	3:W:413:ILE:HD11	1.93	0.51
4:X:206:LEU:O	4:X:210:LEU:HD23	2.11	0.51
12:f:829:MET:SD	12:f:831:VAL:N	2.79	0.51
15:B:187:ILE:HD13	15:B:235:LEU:HD23	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:D:296:MET:HG3	17:D:327:LEU:HD23	1.93	0.51
18:E:43:SER:O	18:E:47:LEU:HD23	2.11	0.51
18:E:247:THR:HG22	18:E:248:SER:N	2.26	0.51
19:F:336:ASP:OD1	19:F:337:ILE:N	2.45	0.51
21:H:46:LEU:HD23	21:H:75:VAL:HG12	1.93	0.51
27:O:71:ASP:OD1	27:O:74:CYS:N	2.44	0.51
29:Q:174:ASN:ND2	29:q:173:LEU:O	2.44	0.51
31:S:102:MET:HE2	31:S:102:MET:HA	1.93	0.51
30:r:62:THR:HG22	30:r:75:ALA:HB1	1.92	0.51
1:U:177:LEU:HD23	1:U:205:TYR:CZ	2.46	0.50
1:U:399:TRP:HB2	9:c:178:THR:HG21	1.92	0.50
2:V:172:VAL:HA	2:V:175:MET:HE3	1.92	0.50
5:Y:263:LEU:HD23	5:Y:263:LEU:C	2.37	0.50
5:Y:296:VAL:HG12	5:Y:300:ARG:HH12	1.76	0.50
6:Z:94:TRP:O	6:Z:121:LEU:HD12	2.11	0.50
7:a:18:GLN:NE2	7:a:25:LEU:HD12	2.25	0.50
7:a:371:ALA:O	7:a:375:LEU:HD23	2.11	0.50
9:c:140:ALA:O	9:c:161:ARG:NH2	2.43	0.50
9:c:273:LYS:HE3	17:D:95:ALA:HB1	1.93	0.50
12:f:462:ALA:O	12:f:466:LEU:HD12	2.11	0.50
12:f:465:LEU:HD11	13:y:395:LEU:HD21	1.93	0.50
12:f:670:MET:HE1	12:f:673:ARG:CZ	2.41	0.50
14:A:134:ILE:O	14:A:134:ILE:HG22	2.11	0.50
15:B:113:GLU:OE1	15:B:124:SER:N	2.44	0.50
15:B:116:ILE:HD11	15:B:122:ILE:CD1	2.39	0.50
17:D:88:VAL:HG12	17:D:89:ILE:N	2.26	0.50
22:I:37:ILE:HD13	22:I:161:ALA:HB1	1.92	0.50
27:O:236:ASN:ND2	31:s:240:LYS:O	2.36	0.50
1:U:107:HIS:ND1	1:U:111:GLN:OE1	2.44	0.50
1:U:493:VAL:O	1:U:497:LEU:HD13	2.11	0.50
7:a:58:LYS:NZ	7:a:62:ASN:OD1	2.43	0.50
14:A:117:GLN:HG3	14:A:118:PHE:N	2.27	0.50
17:D:326:ARG:O	17:D:327:LEU:HB2	2.11	0.50
23:J:91:CYS:HA	23:J:102:VAL:HG11	1.93	0.50
29:Q:18:ASP:OD1	29:Q:19:ARG:N	2.44	0.50
1:U:904:LYS:HB3	1:U:912:ILE:HG23	1.93	0.50
2:V:175:MET:SD	2:V:184:ALA:HA	2.51	0.50
2:V:354:LYS:O	2:V:358:MET:SD	2.70	0.50
3:W:84:ASN:O	3:W:87:ILE:HG22	2.11	0.50
3:W:328:LEU:HD23	3:W:341:PHE:CD2	2.46	0.50
4:X:397:TYR:CE1	6:Z:258:VAL:HG11	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Y:276:ALA:O	5:Y:280:GLN:OE1	2.29	0.50
14:A:297:ARG:O	14:A:301:GLU:OE1	2.30	0.50
15:B:109:VAL:HG12	16:C:95:PHE:CD2	2.47	0.50
16:C:199:LEU:HD22	16:C:317:PHE:CE1	2.46	0.50
17:D:391:ARG:NH1	17:D:391:ARG:HA	2.26	0.50
19:F:419:ASP:OD1	19:F:422:GLU:OE2	2.30	0.50
28:p:149:MET:HE3	28:p:173:ASN:HB2	1.90	0.50
31:s:96:ILE:CG2	31:s:120:LEU:HD11	2.41	0.50
32:t:171:ASP:CG	32:t:175:VAL:HG22	2.37	0.50
1:U:43:ASP:OD1	1:U:43:ASP:N	2.43	0.50
2:V:192:MET:HE1	2:V:211:TYR:HD1	1.76	0.50
2:V:357:LEU:O	2:V:358:MET:C	2.54	0.50
4:X:363:ARG:O	4:X:367:GLN:OE1	2.28	0.50
5:Y:101:ARG:HE	5:Y:131:THR:HA	1.75	0.50
7:a:118:ILE:HG22	7:a:122:LYS:HE2	1.93	0.50
8:b:15:TYR:C	8:b:16:MET:HE2	2.37	0.50
15:B:412:MET:HE3	16:C:177:ALA:HB3	1.93	0.50
16:C:308:PRO:O	16:C:310:ARG:NH1	2.44	0.50
27:O:133:TYR:CD2	27:O:137:ILE:HD11	2.47	0.50
30:r:235:LEU:HD23	30:r:246:VAL:HG11	1.93	0.50
1:U:3:THR:HG22	2:V:263:LEU:HD11	1.93	0.50
1:U:19:LEU:HD22	10:d:124:LEU:HD13	1.92	0.50
3:W:111:TYR:O	3:W:115:ILE:HG12	2.11	0.50
3:W:425:LEU:HD23	9:c:234:TYR:CD2	2.47	0.50
4:X:318:ILE:HD12	4:X:322:HIS:CE1	2.46	0.50
7:a:320:VAL:HG12	7:a:336:VAL:HG12	1.93	0.50
9:c:291:LEU:HD12	9:c:291:LEU:C	2.36	0.50
14:A:148:GLN:O	14:A:148:GLN:CD	2.54	0.50
15:B:232:LYS:N	37:B:501:ADP:O1A	2.45	0.50
17:D:100:THR:HG21	17:D:112:TYR:OH	2.11	0.50
20:G:195:VAL:HG22	20:G:199:ILE:CD1	2.41	0.50
22:I:174:MET:HE1	22:I:196:VAL:HG22	1.92	0.50
32:T:74:SER:OG	32:T:227:ARG:NH1	2.44	0.50
30:r:142:LEU:HD23	30:r:173:VAL:HG21	1.93	0.50
32:t:260:ILE:O	32:t:261:SER:OG	2.25	0.50
1:U:366:HIS:NE2	1:U:392:TRP:O	2.41	0.50
1:U:501:LEU:HD21	1:U:535:TYR:CD1	2.47	0.50
2:V:319:HIS:CE1	2:V:320:THR:HG1	2.29	0.50
3:W:81:ASP:O	3:W:84:ASN:N	2.44	0.50
3:W:81:ASP:O	3:W:85:GLU:OE1	2.30	0.50
8:b:11:ASP:OD1	8:b:11:ASP:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:d:330:ILE:O	10:d:332:SER:N	2.42	0.50
12:f:612:LEU:O	12:f:615:ILE:HG12	2.12	0.50
17:D:322:LEU:HD22	17:D:330:LYS:HD2	1.92	0.50
19:F:188:ILE:HG23	19:F:189:GLY:N	2.27	0.50
23:J:199:VAL:HG22	23:J:200:GLN:N	2.26	0.50
23:J:205:ASN:O	23:J:206:ILE:CG1	2.60	0.50
28:P:179:ALA:HB2	30:r:85:ILE:HD11	1.93	0.50
30:R:71:VAL:CG1	30:R:170:LEU:HD12	2.42	0.50
30:r:92:LYS:C	30:r:104:MET:HE1	2.37	0.50
1:U:42:VAL:O	1:U:45:ILE:HG22	2.10	0.50
2:V:92:ARG:NH2	5:Y:387:ILE:O	2.44	0.50
7:a:163:TYR:HA	7:a:166:ILE:HD12	1.94	0.50
7:a:232:TRP:O	7:a:235:ASP:OD1	2.30	0.50
7:a:244:ASN:O	7:a:247:ARG:N	2.45	0.50
9:c:146:ASP:OD1	9:c:149:GLN:N	2.43	0.50
14:A:93:LEU:HG	15:B:130:GLU:OE1	2.11	0.50
17:D:384:MET:HE2	17:D:384:MET:CA	2.42	0.50
19:F:278:LYS:HD2	19:F:279:ALA:N	2.27	0.50
2:V:201:ARG:O	2:V:204:ASP:N	2.37	0.50
2:V:400:HIS:ND1	2:V:401:ASN:OD1	2.44	0.50
7:a:235:ASP:OD1	7:a:235:ASP:C	2.55	0.50
10:d:208:PHE:CZ	10:d:212:LEU:HD21	2.47	0.50
10:d:248:LYS:HD3	10:d:264:LEU:HD21	1.93	0.50
10:d:344:ARG:O	10:d:348:MET:SD	2.70	0.50
12:f:794:ALA:O	12:f:798:THR:HG23	2.12	0.50
14:A:94:GLN:CD	14:A:115:VAL:HG12	2.37	0.50
14:A:142:VAL:HG23	14:A:150:HIS:ND1	2.27	0.50
14:A:211:GLY:O	14:A:338:ASP:N	2.44	0.50
14:A:255:ARG:O	14:A:259:GLU:OE1	2.30	0.50
26:N:222:VAL:HG13	26:N:224:LEU:HD11	1.93	0.50
27:o:96:ASP:O	27:o:100:GLN:OE1	2.30	0.50
30:r:207:GLU:N	30:r:207:GLU:OE1	2.44	0.50
1:U:14:GLU:OE2	10:d:166:ARG:NE	2.45	0.50
1:U:146:LYS:HZ3	16:C:19:GLY:N	2.10	0.50
2:V:306:ARG:NH2	2:V:336:GLU:OE2	2.44	0.50
4:X:347:ILE:HD11	4:X:384:VAL:C	2.37	0.50
7:a:210:VAL:O	7:a:271:LYS:NZ	2.44	0.50
9:c:32:TYR:CE2	9:c:66:THR:HG23	2.47	0.50
12:f:57:GLU:O	12:f:61:GLU:OE1	2.29	0.50
23:J:132:LEU:HD23	23:J:161:ILE:CD1	2.42	0.50
31:S:179:ASN:ND2	28:p:173:ASN:OD1	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:s:194:LEU:HA	31:s:198:ARG:NH2	2.27	0.50
32:t:252:THR:HG1	32:t:254:TRP:NE1	2.08	0.50
1:U:138:PHE:CZ	1:U:162:VAL:HG11	2.47	0.49
1:U:378:CYS:SG	1:U:379:GLY:N	2.85	0.49
1:U:803:LYS:NZ	1:U:893:THR:OG1	2.35	0.49
5:Y:113:ARG:HA	5:Y:113:ARG:CZ	2.42	0.49
5:Y:165:LYS:O	5:Y:169:GLU:OE1	2.29	0.49
5:Y:201:PHE:CD2	5:Y:223:THR:HG22	2.47	0.49
7:a:149:THR:CG2	7:a:151:VAL:HG12	2.42	0.49
9:c:151:VAL:HG22	9:c:152:LYS:N	2.27	0.49
12:f:89:MET:HE3	14:A:398:ARG:C	2.36	0.49
12:f:99:LEU:HB3	12:f:102:HIS:HB2	1.94	0.49
12:f:597:VAL:HG13	12:f:656:GLY:HA2	1.94	0.49
14:A:62:LEU:HD21	15:B:83:GLU:HG3	1.94	0.49
17:D:282:ASP:HA	17:D:285:VAL:HG12	1.94	0.49
18:E:383:LYS:NZ	19:F:351:LYS:O	2.45	0.49
21:H:12:THR:HG23	21:H:12:THR:O	2.11	0.49
22:I:246:LYS:O	22:I:250:GLU:OE1	2.30	0.49
31:S:43:ILE:CD1	31:S:177:LEU:HD13	2.42	0.49
5:Y:177:ARG:NE	5:Y:177:ARG:HA	2.27	0.49
12:f:82:ILE:HD12	12:f:125:ILE:CD1	2.41	0.49
18:E:54:GLY:O	18:E:102:MET:HE3	2.12	0.49
19:F:226:TYR:C	19:F:228:PRO:HD3	2.37	0.49
19:F:376:SER:OG	19:F:413:THR:O	2.26	0.49
20:G:155:ASP:OD1	20:G:159:TYR:N	2.45	0.49
26:n:165:GLY:N	26:n:201:ASP:OD2	2.45	0.49
3:W:124:LEU:O	3:W:128:LEU:HD23	2.12	0.49
6:Z:143:GLU:O	6:Z:151:THR:HG23	2.12	0.49
8:b:6:THR:HG23	8:b:6:THR:O	2.13	0.49
9:c:36:LEU:HD23	9:c:36:LEU:C	2.38	0.49
9:c:60:GLU:N	9:c:68:ARG:O	2.45	0.49
14:A:171:ASP:OD1	14:A:227:ARG:NH2	2.45	0.49
14:A:277:ILE:HD13	14:A:319:MET:SD	2.52	0.49
15:B:214:MET:SD	15:B:216:ILE:HG12	2.52	0.49
17:D:47:LEU:O	17:D:47:LEU:HD23	2.11	0.49
18:E:283:ASP:O	18:E:284:THR:C	2.56	0.49
20:G:209:ASP:OD1	20:G:210:PHE:N	2.46	0.49
23:J:84:ILE:HG22	23:J:88:ARG:CD	2.42	0.49
26:N:53:ARG:HG3	26:N:60:ILE:HG23	1.94	0.49
26:N:59:TYR:CE1	27:O:175:LEU:HD11	2.47	0.49
30:R:71:VAL:HG13	30:R:170:LEU:HD12	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:S:219:ASP:O	31:S:220:ALA:HB3	2.12	0.49
27:o:50:VAL:HG13	27:o:151:PRO:HB2	1.93	0.49
3:W:299:ILE:HG23	3:W:299:ILE:O	2.13	0.49
5:Y:105:MET:HE3	5:Y:105:MET:O	2.11	0.49
6:Z:16:LEU:HD23	9:c:216:MET:HE3	1.94	0.49
6:Z:165:GLU:HG2	6:Z:166:GLU:N	2.26	0.49
6:Z:228:TYR:HA	6:Z:231:GLN:NE2	2.28	0.49
6:Z:254:ASN:O	6:Z:258:VAL:HG23	2.12	0.49
7:a:60:TYR:OH	7:a:99:LYS:NZ	2.45	0.49
12:f:174:ASP:O	12:f:176:ALA:N	2.45	0.49
12:f:291:GLN:HA	12:f:294:MET:HE2	1.94	0.49
16:C:252:ASP:HB2	16:C:300:ILE:HD11	1.93	0.49
17:D:373:ALA:HA	35:D:501:ATP:H1'	1.93	0.49
21:H:92:LYS:O	21:H:96:GLN:OE1	2.31	0.49
32:T:138:THR:HG22	32:T:170:VAL:HG13	1.94	0.49
28:p:150:CYS:O	28:p:154:TRP:HB2	2.13	0.49
1:U:119:PRO:HB2	1:U:120:GLU:OE1	2.13	0.49
3:W:128:LEU:HA	3:W:131:VAL:HG22	1.94	0.49
3:W:446:ILE:HD13	6:Z:226:ILE:HD11	1.93	0.49
5:Y:228:MET:HE1	5:Y:259:TYR:CD2	2.47	0.49
5:Y:304:TYR:OH	5:Y:333:GLU:OE1	2.29	0.49
12:f:696:LEU:HG	12:f:800:LEU:HD13	1.95	0.49
14:A:122:VAL:HG12	19:F:88:TYR:O	2.12	0.49
24:L:36:VAL:HG22	24:L:195:LEU:HD11	1.94	0.49
24:L:212:ILE:CD1	24:L:229:VAL:HG13	2.43	0.49
29:Q:137:PHE:HB3	30:r:192:VAL:HG11	1.95	0.49
32:T:133:ILE:HG22	32:T:137:LEU:HD11	1.94	0.49
2:V:98:LEU:HD22	2:V:101:LEU:CD1	2.42	0.49
3:W:55:ARG:NH2	3:W:95:SER:OG	2.46	0.49
3:W:135:LYS:O	3:W:139:GLU:HB2	2.13	0.49
3:W:203:GLN:HG3	3:W:233:LEU:HD21	1.94	0.49
7:a:299:SER:O	7:a:300:ALA:C	2.56	0.49
10:d:305:LYS:O	10:d:306:ARG:HG2	2.11	0.49
14:A:195:LEU:HD13	34:z:205:VAL:HG13	1.94	0.49
18:E:115:VAL:O	18:E:115:VAL:HG23	2.11	0.49
22:I:59:VAL:HG13	22:I:60:PHE:N	2.28	0.49
29:Q:13:VAL:HG12	29:Q:183:ILE:HB	1.94	0.49
27:o:67:MET:SD	27:o:68:VAL:HG23	2.52	0.49
1:U:353:LEU:HD21	1:U:376:MET:HE3	1.94	0.49
2:V:254:LEU:HD21	2:V:258:TYR:CE2	2.46	0.49
2:V:377:GLN:OE1	2:V:381:GLN:NE2	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:W:81:ASP:O	3:W:82:LEU:C	2.56	0.49
3:W:328:LEU:HD13	3:W:329:ARG:HH12	1.77	0.49
3:W:446:ILE:O	3:W:447:ALA:C	2.56	0.49
6:Z:263:ALA:HB1	9:c:288:VAL:HG23	1.94	0.49
9:c:99:LEU:HA	9:c:102:THR:O	2.13	0.49
14:A:272:ILE:HG12	14:A:274:PHE:CE1	2.48	0.49
15:B:136:LEU:CD2	15:B:158:ALA:HB1	2.40	0.49
17:D:214:MET:HE2	35:D:501:ATP:H3'	1.92	0.49
18:E:235:ILE:HG22	18:E:235:ILE:O	2.12	0.49
26:N:62:ASN:OD1	26:N:65:THR:N	2.46	0.49
26:N:178:ARG:H	26:N:181:MET:HE2	1.77	0.49
29:Q:153:ARG:NH1	29:Q:184:ASP:OD2	2.45	0.49
30:R:100:LEU:O	30:R:101:LEU:HD23	2.12	0.49
30:r:190:GLY:N	30:r:226:ASP:OD2	2.45	0.49
32:t:51:VAL:HG23	32:t:102:TYR:HB2	1.94	0.49
32:t:73:GLY:N	32:t:81:PHE:O	2.36	0.49
1:U:640:LEU:O	1:U:643:SER:HB2	2.12	0.49
2:V:160:LEU:O	2:V:164:GLU:OE1	2.30	0.49
2:V:409:MET:SD	2:V:410:ILE:N	2.85	0.49
3:W:186:ILE:HD12	3:W:209:ILE:HG12	1.95	0.49
3:W:439:VAL:HA	3:W:442:THR:HG22	1.94	0.49
3:W:453:HIS:O	3:W:456:GLN:N	2.43	0.49
7:a:184:ASP:OD1	7:a:186:LYS:N	2.45	0.49
12:f:96:LEU:HD22	12:f:132:THR:HG21	1.93	0.49
15:B:234:LEU:HD22	37:B:501:ADP:C8	2.48	0.49
18:E:105:LEU:N	18:E:105:LEU:HD12	2.28	0.49
18:E:172:LEU:O	18:E:173:TYR:C	2.55	0.49
19:F:418:GLU:HA	19:F:421:MET:HE2	1.93	0.49
21:H:110:LEU:C	21:H:110:LEU:HD23	2.38	0.49
22:I:58:GLU:OE1	22:I:58:GLU:N	2.45	0.49
26:N:35:THR:O	26:N:164:SER:N	2.45	0.49
28:P:164:PHE:CZ	28:P:189:ILE:HD13	2.48	0.49
26:n:55:THR:HG21	26:n:203:SER:HA	1.95	0.49
27:o:92:ALA:O	27:o:95:THR:OG1	2.25	0.49
31:s:116:ILE:O	31:s:120:LEU:HD23	2.12	0.49
1:U:42:VAL:O	1:U:43:ASP:C	2.56	0.49
1:U:138:PHE:CE1	1:U:162:VAL:HG11	2.48	0.49
3:W:219:THR:O	3:W:223:LYS:HG2	2.13	0.49
4:X:15:LEU:HD22	4:X:26:ILE:HD11	1.93	0.49
5:Y:226:VAL:HA	5:Y:229:ILE:HD12	1.95	0.49
5:Y:385:ARG:O	5:Y:389:MET:HG2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:Z:47:VAL:O	6:Z:47:VAL:HG13	2.12	0.49
9:c:130:GLN:O	9:c:131:GLN:C	2.54	0.49
12:f:665:GLU:OE1	12:f:665:GLU:N	2.37	0.49
15:B:235:LEU:O	15:B:239:VAL:HG23	2.13	0.49
15:B:360:THR:O	15:B:364:ILE:HG12	2.13	0.49
16:C:63:LEU:O	16:C:63:LEU:HD23	2.12	0.49
19:F:406:ILE:HA	19:F:409:ARG:HD3	1.95	0.49
20:G:172:GLN:O	20:G:176:THR:HG23	2.13	0.49
22:I:207:SER:O	22:I:211:VAL:HG22	2.13	0.49
23:J:208:LEU:HD23	23:J:220:LEU:HD22	1.95	0.49
28:P:183:MET:SD	28:P:183:MET:O	2.71	0.49
33:K:54:ILE:HG23	33:K:59:MET:HB2	1.94	0.49
29:q:4:LEU:CD1	29:q:47:VAL:HG22	2.43	0.49
31:s:74:LEU:HD11	31:s:80:ILE:HD13	1.94	0.49
1:U:458:ILE:HG23	1:U:481:LEU:HD11	1.95	0.49
1:U:606:ALA:HB2	1:U:618:ALA:HB3	1.95	0.49
2:V:195:ILE:HD12	2:V:203:LEU:HD21	1.95	0.49
3:W:247:TYR:HB3	3:W:270:VAL:HG22	1.93	0.49
3:W:396:LEU:HD21	3:W:402:ILE:HG22	1.95	0.49
4:X:252:LYS:NZ	4:X:312:GLU:O	2.44	0.49
4:X:268:GLN:OE1	4:X:288:LYS:NZ	2.29	0.49
6:Z:262:LEU:HD23	6:Z:262:LEU:C	2.38	0.49
8:b:156:PHE:O	8:b:160:LEU:HD23	2.12	0.49
9:c:116:PRO:C	9:c:148:ILE:HD12	2.38	0.49
10:d:197:LEU:HD23	10:d:259:PHE:HB2	1.95	0.49
12:f:337:LEU:O	12:f:339:ILE:HG12	2.12	0.49
13:y:391:LYS:O	13:y:395:LEU:HD23	2.13	0.49
15:B:125:THR:HG22	15:B:126:SER:N	2.27	0.49
15:B:297:SER:OG	15:B:306:GLN:NE2	2.44	0.49
16:C:19:GLY:O	16:C:22:GLN:N	2.45	0.49
21:H:45:VAL:HG11	21:H:188:ILE:HG13	1.95	0.49
22:I:44:LEU:HD21	22:I:189:ALA:HB1	1.95	0.49
28:P:33:GLN:NE2	30:r:193:TYR:OH	2.46	0.49
29:Q:102:LEU:O	29:Q:132:HIS:NE2	2.45	0.49
32:T:96:LEU:HD12	32:T:96:LEU:C	2.38	0.49
32:t:88:MET:HE1	32:t:109:LYS:HB3	1.95	0.49
1:U:177:LEU:HD23	1:U:205:TYR:CE1	2.48	0.48
2:V:134:PHE:CD2	2:V:187:ILE:HD11	2.48	0.48
2:V:430:SER:O	2:V:432:GLU:N	2.34	0.48
3:W:436:MET:HA	3:W:439:VAL:HG22	1.95	0.48
7:a:109:GLU:OE1	7:a:109:GLU:N	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:72:ARG:HB3	12:f:73:PRO:HD3	1.95	0.48
14:A:212:VAL:HG13	14:A:339:ARG:O	2.12	0.48
15:B:125:THR:HG22	15:B:126:SER:H	1.77	0.48
18:E:243:PHE:N	18:E:254:GLN:OE1	2.45	0.48
18:E:310:LEU:O	18:E:313:LEU:HG	2.13	0.48
19:F:259:MET:O	19:F:261:ILE:N	2.46	0.48
25:M:221:THR:HG22	25:M:221:THR:O	2.13	0.48
27:O:48:GLY:C	27:O:153:LEU:HD21	2.38	0.48
28:p:56:LEU:O	28:p:60:VAL:HG23	2.12	0.48
31:s:47:ASP:O	31:s:227:THR:HG23	2.12	0.48
1:U:603:LEU:HB3	17:D:60:TYR:CE1	2.48	0.48
3:W:436:MET:O	3:W:439:VAL:HG22	2.12	0.48
5:Y:42:MET:SD	5:Y:46:ARG:NH2	2.85	0.48
5:Y:387:ILE:HG23	5:Y:388:ASN:N	2.28	0.48
7:a:70:ARG:NH1	8:b:17:ARG:HE	2.11	0.48
7:a:239:ALA:O	7:a:242:SER:C	2.56	0.48
10:d:228:HIS:NE2	10:d:250:ASN:O	2.47	0.48
12:f:778:LEU:HD23	12:f:825:MET:HE2	1.94	0.48
15:B:183:THR:HG22	15:B:184:TYR:N	2.26	0.48
18:E:257:LEU:C	18:E:257:LEU:HD23	2.37	0.48
19:F:373:MET:HE2	19:F:400:CYS:O	2.13	0.48
22:I:88:ASN:O	22:I:92:LEU:HD13	2.14	0.48
23:J:89:VAL:HG22	29:Q:66:LEU:HD21	1.95	0.48
23:J:166:LYS:O	23:J:170:GLU:OE1	2.31	0.48
25:M:110:LYS:NZ	25:M:148:GLN:OE1	2.31	0.48
26:N:126:GLU:OE1	26:N:126:GLU:N	2.45	0.48
26:N:158:SER:OG	26:n:236:LEU:O	2.30	0.48
32:T:137:LEU:HB3	32:T:141:MET:HE1	1.96	0.48
28:p:155:GLU:O	28:p:157:ASN:N	2.46	0.48
1:U:192:GLN:OE1	1:U:196:LYS:NZ	2.33	0.48
4:X:16:LEU:HD12	4:X:56:LEU:HD11	1.95	0.48
9:c:123:SER:N	9:c:126:ASP:OD2	2.37	0.48
9:c:237:HIS:NE2	9:c:294:SER:OG	2.40	0.48
9:c:300:LEU:C	9:c:300:LEU:HD23	2.38	0.48
10:d:251:ILE:HG23	10:d:256:TYR:HB2	1.95	0.48
12:f:132:THR:HG23	12:f:133:MET:HG2	1.95	0.48
16:C:46:GLN:HA	17:D:61:ILE:HD11	1.95	0.48
16:C:211:PHE:CE2	16:C:245:ILE:HG21	2.48	0.48
17:D:203:LEU:O	17:D:204:MET:C	2.56	0.48
17:D:235:PHE:CD2	17:D:288:ILE:HG21	2.48	0.48
19:F:378:ASP:OD1	19:F:378:ASP:N	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:H:95:GLN:O	21:H:99:LEU:HD23	2.13	0.48
21:H:99:LEU:HD21	27:O:104:SER:HB3	1.95	0.48
23:J:183:THR:HG22	23:J:184:ASP:N	2.28	0.48
25:M:231:ASP:OD1	25:M:231:ASP:N	2.46	0.48
27:O:132:ARG:O	27:O:134:GLN:NE2	2.46	0.48
31:S:91:THR:HG21	32:T:142:TYR:CZ	2.48	0.48
27:o:129:MET:O	27:o:133:TYR:CD2	2.65	0.48
1:U:582:GLY:C	1:U:583:MET:HE2	2.39	0.48
3:W:53:GLN:OE1	3:W:54:THR:HG23	2.13	0.48
3:W:136:ILE:O	3:W:137:TYR:CG	2.66	0.48
15:B:150:VAL:HG12	15:B:151:LEU:N	2.28	0.48
16:C:276:LEU:HD11	16:C:280:LEU:HD11	1.95	0.48
19:F:362:ARG:NE	19:F:388:THR:OG1	2.46	0.48
21:H:196:LYS:HG3	21:H:203:MET:HE2	1.95	0.48
23:J:42:VAL:HG23	23:J:210:VAL:HG12	1.95	0.48
26:N:224:LEU:HD23	32:t:254:TRP:O	2.14	0.48
27:O:256:THR:HG22	28:P:199:THR:OG1	2.13	0.48
28:P:49:LEU:CD2	28:P:87:LEU:HD22	2.44	0.48
1:U:48:LEU:O	1:U:48:LEU:HD23	2.12	0.48
2:V:204:ASP:N	2:V:204:ASP:OD1	2.46	0.48
3:W:27:ARG:O	3:W:31:CYS:N	2.36	0.48
3:W:301:LYS:O	3:W:305:LEU:HD23	2.12	0.48
3:W:325:GLY:O	3:W:328:LEU:HD12	2.13	0.48
5:Y:373:GLY:O	5:Y:377:LEU:HD23	2.12	0.48
8:b:43:SER:OG	8:b:47:ASN:ND2	2.47	0.48
9:c:173:GLU:OE1	9:c:173:GLU:N	2.47	0.48
12:f:291:GLN:CD	12:f:317:LEU:HD11	2.38	0.48
12:f:380:PHE:O	12:f:772:GLY:N	2.40	0.48
14:A:386:ARG:NH1	14:A:390:THR:HG1	2.11	0.48
17:D:269:ALA:HB2	18:E:258:MET:SD	2.53	0.48
17:D:384:MET:HE2	17:D:384:MET:N	2.28	0.48
18:E:322:LYS:O	18:E:365:GLU:HG2	2.14	0.48
18:E:381:GLU:OE1	19:F:344:ARG:NH2	2.46	0.48
26:N:125:ARG:HH21	32:T:46:THR:HG22	1.79	0.48
29:Q:13:VAL:O	29:Q:13:VAL:HG13	2.13	0.48
29:Q:14:LEU:CD2	29:Q:160:LEU:HD22	2.43	0.48
32:t:88:MET:HB2	32:t:96:LEU:HB3	1.94	0.48
1:U:399:TRP:CH2	1:U:472:ILE:HD12	2.48	0.48
12:f:53:GLN:O	12:f:54:ASP:C	2.56	0.48
12:f:144:LEU:HD13	12:f:187:LEU:CD2	2.43	0.48
15:B:139:VAL:HG11	15:B:159:VAL:HG12	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:D:100:THR:HA	17:D:114:ARG:HA	1.95	0.48
17:D:326:ARG:NH1	17:D:327:LEU:HD13	2.28	0.48
18:E:363:VAL:HG13	18:E:364:GLN:N	2.26	0.48
19:F:422:GLU:O	19:F:425:LEU:HG	2.12	0.48
23:J:42:VAL:CG2	23:J:208:LEU:HD11	2.44	0.48
31:S:168:SER:OG	31:S:214:ASP:OD2	2.24	0.48
32:T:82:ARG:O	32:T:84:ILE:N	2.43	0.48
26:n:76:PHE:CG	26:n:213:ILE:HD11	2.49	0.48
26:n:161:ILE:HD12	26:n:166:SER:HA	1.95	0.48
1:U:127:ASP:O	1:U:129:ARG:N	2.47	0.48
1:U:540:GLN:OE1	9:c:208:ARG:NH1	2.42	0.48
3:W:267:LEU:HD11	3:W:296:LEU:HD13	1.95	0.48
5:Y:222:TYR:OH	5:Y:285:ASP:OD1	2.31	0.48
6:Z:225:GLN:OE1	6:Z:225:GLN:HA	2.14	0.48
12:f:140:LEU:HD22	12:f:165:GLU:CB	2.44	0.48
12:f:379:GLY:HA3	12:f:416:MET:HE3	1.96	0.48
12:f:675:PHE:CE2	12:f:693:ALA:HB1	2.49	0.48
15:B:226:GLY:O	15:B:332:ASN:HA	2.14	0.48
16:C:20:LEU:HD23	16:C:20:LEU:C	2.39	0.48
17:D:225:ALA:HB1	17:D:259:PRO:O	2.14	0.48
19:F:152:GLY:O	19:F:161:LEU:N	2.41	0.48
19:F:367:GLN:NE2	34:z:182:ASP:OD2	2.45	0.48
21:H:39:LYS:HB2	21:H:44:VAL:HG22	1.95	0.48
21:H:66:GLU:OE1	21:H:66:GLU:N	2.47	0.48
25:M:51:GLU:O	25:M:66:ARG:NH2	2.46	0.48
26:N:71:ILE:CG2	26:N:97:LEU:HD23	2.44	0.48
32:T:181:SER:OG	32:T:195:LEU:HD13	2.12	0.48
31:s:227:THR:HG22	31:s:228:LYS:N	2.28	0.48
1:U:127:ASP:O	1:U:128:GLN:C	2.57	0.48
1:U:198:LEU:HB2	1:U:223:LEU:HD21	1.95	0.48
6:Z:38:VAL:HG23	6:Z:56:VAL:HG21	1.96	0.48
9:c:266:THR:O	9:c:269:GLN:NE2	2.41	0.48
12:f:395:GLY:HA2	12:f:398:TRP:NE1	2.28	0.48
12:f:494:ARG:HH21	12:f:497:VAL:HG21	1.79	0.48
14:A:355:PHE:CD1	14:A:385:ILE:HG23	2.48	0.48
24:L:47:VAL:HG12	24:L:195:LEU:HD22	1.96	0.48
25:M:121:HIS:CE1	25:M:125:LEU:HD11	2.48	0.48
26:N:48:LEU:N	26:N:48:LEU:HD12	2.28	0.48
28:P:12:MET:HB3	28:P:146:MET:SD	2.53	0.48
28:P:138:VAL:HB	28:P:146:MET:SD	2.53	0.48
29:Q:151:ILE:HD11	29:Q:156:ALA:HA	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:5:ALA:HB2	1:U:34:PHE:HD2	1.79	0.48
2:V:337:LEU:HD11	2:V:367:VAL:HG21	1.95	0.48
10:d:91:ALA:HB2	10:d:122:VAL:HG11	1.96	0.48
13:y:33:LEU:HD23	13:y:35:ILE:HD11	1.94	0.48
17:D:403:TYR:CD1	17:D:407:ILE:HD12	2.49	0.48
18:E:29:LEU:O	18:E:33:LEU:HD13	2.13	0.48
18:E:97:ARG:NH1	18:E:112:PRO:O	2.46	0.48
18:E:171:LEU:C	18:E:172:LEU:HD22	2.39	0.48
18:E:318:GLY:N	18:E:319:PRO:HD2	2.29	0.48
21:H:141:GLU:HG2	21:H:142:GLY:H	1.78	0.48
23:J:45:VAL:HG13	23:J:207:GLU:HG2	1.95	0.48
27:O:44:THR:HG23	27:O:76:LYS:HE3	1.96	0.48
29:Q:184:ASP:N	29:Q:184:ASP:OD1	2.47	0.48
31:s:172:MET:HE2	31:s:172:MET:CA	2.44	0.48
1:U:745:THR:O	1:U:784:THR:OG1	2.29	0.48
3:W:130:MET:HA	3:W:133:GLU:HG2	1.95	0.48
3:W:396:LEU:HG	3:W:401:THR:OG1	2.14	0.48
4:X:16:LEU:C	4:X:16:LEU:HD23	2.38	0.48
4:X:343:SER:O	4:X:344:ARG:C	2.57	0.48
4:X:378:LEU:HD22	5:Y:311:TYR:CD2	2.49	0.48
10:d:143:LEU:O	10:d:147:ILE:HG23	2.14	0.48
12:f:144:LEU:HD22	12:f:187:LEU:CD2	2.43	0.48
12:f:237:VAL:HG11	15:B:67:ARG:NH2	2.28	0.48
12:f:550:LEU:HD13	12:f:587:PHE:CG	2.49	0.48
16:C:102:ASN:OD1	16:C:103:ILE:N	2.40	0.48
17:D:337:ASP:OD1	17:D:338:ARG:N	2.41	0.48
20:G:13:ILE:HG22	20:G:14:THR:HG23	1.95	0.48
20:G:57:PRO:O	20:G:58:ASP:OD1	2.32	0.48
20:G:58:ASP:OD1	20:G:58:ASP:C	2.56	0.48
20:G:92:GLN:HG3	25:M:118:MET:CE	2.44	0.48
33:K:217:LEU:O	33:K:228:MET:HE3	2.13	0.48
27:o:47:ALA:CB	27:o:202:ILE:HD11	2.44	0.48
30:r:100:LEU:HD13	30:r:160:ILE:CD1	2.43	0.48
32:t:71:MET:HE1	32:t:86:ARG:H	1.79	0.48
1:U:19:LEU:HD13	10:d:124:LEU:HD13	1.96	0.47
1:U:127:ASP:C	1:U:129:ARG:N	2.71	0.47
1:U:669:ILE:HD11	1:U:694:ILE:CG2	2.44	0.47
4:X:400:ALA:HB1	6:Z:262:LEU:HD12	1.95	0.47
6:Z:211:TYR:O	6:Z:215:VAL:HG23	2.14	0.47
15:B:240:ALA:HB2	15:B:247:PHE:CG	2.49	0.47
16:C:102:ASN:O	16:C:103:ILE:HG23	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:D:214:MET:HE3	35:D:501:ATP:H5'1	1.93	0.47
17:D:297:ASP:HA	17:D:327:LEU:HD11	1.95	0.47
18:E:352:MET:O	18:E:356:ARG:HG2	2.14	0.47
20:G:46:ASP:O	20:G:222:VAL:HG23	2.14	0.47
20:G:130:GLU:OE2	25:M:127:SER:OG	2.28	0.47
25:M:103:PHE:CE1	26:N:116:LEU:HD21	2.49	0.47
28:P:178:ASP:O	28:P:180:VAL:N	2.45	0.47
30:R:103:THR:O	30:R:158:THR:HG23	2.14	0.47
30:R:128:ARG:NH2	33:K:90:ASP:OD1	2.47	0.47
1:U:378:CYS:O	1:U:411:ILE:HA	2.14	0.47
3:W:326:MET:O	3:W:326:MET:HE3	2.14	0.47
4:X:322:HIS:O	4:X:326:LEU:HD23	2.14	0.47
4:X:403:THR:HG21	6:Z:262:LEU:HD21	1.96	0.47
5:Y:275:LEU:HD23	11:e:52:PHE:CE2	2.49	0.47
5:Y:277:VAL:O	5:Y:281:GLU:OE1	2.31	0.47
6:Z:68:TRP:CE2	6:Z:108:ILE:HD11	2.49	0.47
7:a:77:VAL:HG21	7:a:110:ALA:HB1	1.95	0.47
10:d:178:TYR:CB	10:d:182:LEU:HD23	2.44	0.47
10:d:349:ILE:HG23	17:D:62:LYS:HZ2	1.79	0.47
12:f:534:VAL:HG11	12:f:565:ASN:HB2	1.94	0.47
12:f:757:ASN:OD1	12:f:811:LEU:HD22	2.13	0.47
15:B:136:LEU:O	15:B:139:VAL:HG13	2.14	0.47
16:C:157:GLN:CB	16:C:199:LEU:HD21	2.44	0.47
18:E:236:ASP:OD1	18:E:237:ALA:N	2.47	0.47
18:E:363:VAL:HG22	18:E:364:GLN:N	2.29	0.47
20:G:141:ILE:HD12	20:G:151:VAL:HG22	1.95	0.47
22:I:213:ILE:HG21	22:I:228:LEU:HD12	1.96	0.47
23:J:141:THR:O	23:J:143:ARG:N	2.44	0.47
24:L:165:SER:OG	24:L:169:ARG:NH1	2.47	0.47
33:K:107:MET:HB3	33:K:111:SER:OG	2.13	0.47
27:o:78:HIS:NE2	27:o:96:ASP:OD1	2.47	0.47
27:o:93:ALA:C	27:o:97:MET:HE3	2.39	0.47
31:s:56:ARG:NE	31:s:219:ASP:OD1	2.46	0.47
1:U:396:ALA:O	1:U:401:LYS:NZ	2.34	0.47
1:U:639:LEU:HD11	16:C:46:GLN:HG2	1.95	0.47
3:W:455:LEU:HD22	6:Z:103:LYS:HE2	1.95	0.47
4:X:406:ASN:C	4:X:406:ASN:HD22	2.20	0.47
5:Y:145:LEU:O	5:Y:149:LEU:HD13	2.14	0.47
5:Y:261:PHE:O	5:Y:262:SER:C	2.57	0.47
8:b:145:GLU:OE1	8:b:145:GLU:N	2.47	0.47
10:d:115:GLU:OE1	10:d:118:ARG:NH2	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:d:208:PHE:CE2	10:d:212:LEU:HD21	2.50	0.47
12:f:287:ASP:OD2	12:f:290:VAL:HG23	2.15	0.47
12:f:407:MET:HE2	12:f:407:MET:HA	1.96	0.47
12:f:790:GLN:O	12:f:793:VAL:HG22	2.14	0.47
15:B:173:VAL:HG21	16:C:264:GLY:HA2	1.96	0.47
16:C:251:ILE:HD13	16:C:293:MET:SD	2.54	0.47
17:D:235:PHE:CE2	17:D:288:ILE:HG21	2.50	0.47
18:E:182:LEU:HD22	35:E:401:ATP:H2'	1.96	0.47
21:H:19:LEU:HD23	21:H:19:LEU:H	1.79	0.47
24:L:67:ASP:OD1	24:L:68:ASN:N	2.43	0.47
24:L:68:ASN:O	24:L:221:PHE:N	2.40	0.47
25:M:203:ASP:OD1	25:M:203:ASP:N	2.47	0.47
31:S:143:GLU:N	31:S:143:GLU:OE1	2.46	0.47
32:T:232:PHE:CE1	32:T:250:THR:HG23	2.49	0.47
26:n:82:SER:O	26:n:86:THR:HG23	2.14	0.47
28:p:203:ARG:NH2	28:p:205:ASP:OD2	2.41	0.47
29:q:14:LEU:HD12	29:q:181:ARG:O	2.13	0.47
4:X:285:GLU:OE1	4:X:309:TYR:OH	2.16	0.47
5:Y:202:LEU:O	5:Y:205:VAL:HG12	2.14	0.47
7:a:162:TYR:CE2	7:a:166:ILE:HD11	2.50	0.47
8:b:91:ARG:O	8:b:95:LEU:HD23	2.14	0.47
12:f:144:LEU:O	12:f:144:LEU:HD23	2.15	0.47
14:A:362:MET:O	14:A:363:SER:OG	2.32	0.47
17:D:94:GLU:O	17:D:102:ILE:N	2.39	0.47
17:D:305:VAL:HG23	17:D:305:VAL:O	2.13	0.47
25:M:212:LEU:O	25:M:233:ARG:NH1	2.47	0.47
27:O:129:MET:SD	27:O:130:LEU:N	2.87	0.47
31:S:111:MET:HE3	31:S:115:ALA:HB3	1.96	0.47
32:T:128:TYR:CG	32:T:133:ILE:HD11	2.49	0.47
32:T:192:GLN:N	32:T:193:PRO:CD	2.77	0.47
30:r:69:HIS:O	30:r:239:ARG:NH2	2.47	0.47
30:r:243:TRP:O	30:r:244:ILE:HD13	2.15	0.47
31:s:117:ALA:HB1	31:s:158:TYR:CG	2.49	0.47
31:s:118:ALA:C	31:s:119:MET:HE2	2.39	0.47
31:s:171:ALA:C	31:s:172:MET:HE2	2.39	0.47
32:t:56:VAL:HG22	32:t:69:ALA:HB2	1.96	0.47
32:t:106:GLN:O	32:t:109:LYS:HG2	2.14	0.47
1:U:38:ILE:CG2	1:U:67:VAL:HG21	2.43	0.47
1:U:113:VAL:O	1:U:116:ALA:HB3	2.14	0.47
1:U:261:LEU:HD23	1:U:329:LEU:O	2.15	0.47
1:U:810:THR:O	1:U:810:THR:HG22	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:W:123:ARG:O	3:W:127:THR:HG23	2.14	0.47
3:W:128:LEU:O	3:W:131:VAL:HG22	2.14	0.47
7:a:28:LEU:HD23	7:a:28:LEU:C	2.39	0.47
9:c:120:CYS:HA	9:c:144:VAL:HG11	1.96	0.47
10:d:94:MET:HE3	10:d:118:ARG:NH1	2.29	0.47
10:d:141:LEU:HD13	10:d:182:LEU:CD1	2.30	0.47
12:f:391:LEU:HD13	12:f:417:ILE:HG21	1.96	0.47
14:A:132:THR:O	14:A:138:MET:HE1	2.15	0.47
15:B:322:ARG:NH2	15:B:325:VAL:O	2.47	0.47
18:E:305:ASN:OD1	18:E:308:ALA:HB3	2.14	0.47
23:J:26:VAL:HG13	23:J:74:ALA:O	2.14	0.47
26:N:55:THR:CG2	26:N:60:ILE:HD13	2.44	0.47
28:P:45:MET:HE3	28:P:51:ILE:HG22	1.96	0.47
32:T:87:ILE:O	32:T:88:MET:HE2	2.15	0.47
1:U:122:GLU:OE1	1:U:123:LYS:N	2.48	0.47
1:U:644:TYR:O	16:C:57:ARG:CZ	2.62	0.47
2:V:150:ARG:HD2	2:V:154:ALA:HB3	1.97	0.47
4:X:43:VAL:HG21	4:X:81:SER:OG	2.15	0.47
4:X:82:LYS:C	4:X:84:LYS:N	2.72	0.47
4:X:416:ASN:OD1	4:X:420:LYS:NZ	2.46	0.47
7:a:4:VAL:O	7:a:8:LEU:HG	2.15	0.47
7:a:281:THR:OG1	7:a:291:LEU:HD11	2.14	0.47
9:c:126:ASP:O	9:c:129:THR:OG1	2.31	0.47
10:d:149:GLU:HG3	10:d:171:LEU:HD21	1.96	0.47
12:f:120:ARG:HA	12:f:123:ALA:HB3	1.96	0.47
12:f:379:GLY:HA2	12:f:417:ILE:HD11	1.97	0.47
21:H:168:VAL:HG23	21:H:169:ASN:N	2.30	0.47
23:J:20:GLU:O	23:J:23:GLN:HG3	2.14	0.47
24:L:11:THR:HG22	24:L:11:THR:O	2.15	0.47
33:K:111:SER:O	33:K:114:GLN:NE2	2.46	0.47
30:r:71:VAL:HB	30:r:238:VAL:HG22	1.96	0.47
1:U:583:MET:HE2	1:U:583:MET:CA	2.45	0.47
1:U:765:VAL:HG11	1:U:778:PHE:CD2	2.49	0.47
2:V:128:ARG:NE	2:V:128:ARG:HA	2.29	0.47
3:W:227:TYR:HA	3:W:230:MET:HE2	1.97	0.47
3:W:396:LEU:O	3:W:399:ASN:HB3	2.15	0.47
3:W:412:ILE:HG22	3:W:414:ASN:H	1.79	0.47
3:W:422:ASN:OD1	6:Z:252:LYS:NZ	2.46	0.47
3:W:455:LEU:HD22	6:Z:103:LYS:CE	2.44	0.47
4:X:5:ALA:CB	4:X:45:VAL:HG22	2.44	0.47
4:X:207:GLN:NE2	4:X:211:ASP:OD2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:X:387:ILE:HG22	4:X:388:PHE:N	2.30	0.47
6:Z:121:LEU:HD12	6:Z:122:VAL:H	1.79	0.47
6:Z:130:ASP:N	6:Z:130:ASP:OD1	2.44	0.47
7:a:82:HIS:O	7:a:85:ARG:HG2	2.15	0.47
12:f:57:GLU:O	12:f:58:MET:C	2.57	0.47
12:f:343:LYS:HB2	12:f:348:ILE:HD11	1.97	0.47
12:f:893:ILE:O	12:f:893:ILE:HG22	2.14	0.47
14:A:143:ASP:HB3	14:A:149:ILE:HG13	1.97	0.47
14:A:391:GLU:HB2	14:A:412:ALA:HB1	1.96	0.47
15:B:101:ASP:OD1	15:B:105:THR:HG21	2.15	0.47
16:C:251:ILE:O	16:C:254:ILE:C	2.58	0.47
18:E:381:GLU:HA	19:F:344:ARG:NH1	2.29	0.47
19:F:344:ARG:HD2	19:F:351:LYS:HZ1	1.80	0.47
20:G:143:ILE:HD11	20:G:220:VAL:HG23	1.95	0.47
21:H:45:VAL:C	21:H:46:LEU:HD12	2.39	0.47
21:H:74:LEU:HD11	21:H:134:LEU:HD23	1.97	0.47
21:H:98:TYR:O	21:H:102:GLN:HA	2.14	0.47
24:L:46:LEU:HD21	24:L:133:LEU:O	2.15	0.47
24:L:180:MET:HE2	24:L:180:MET:HA	1.97	0.47
24:L:227:ASP:OD1	24:L:228:ASP:N	2.47	0.47
25:M:176:GLU:HB3	25:M:197:ILE:HD13	1.97	0.47
25:M:210:PHE:CG	25:M:211:GLU:N	2.83	0.47
27:O:222:SER:OG	27:O:224:ASN:OD1	2.32	0.47
28:P:11:VAL:HG11	28:P:52:GLY:CA	2.45	0.47
31:S:165:ALA:O	31:S:174:GLN:NE2	2.38	0.47
27:o:206:ILE:HG23	27:o:213:GLY:HA2	1.96	0.47
28:p:62:THR:O	28:p:66:ARG:HG2	2.15	0.47
28:p:144:GLU:HA	28:p:147:TYR:HD2	1.78	0.47
29:q:12:TYR:OH	29:q:151:ILE:HG23	2.14	0.47
2:V:160:LEU:O	2:V:163:VAL:N	2.46	0.47
3:W:339:ASP:OD1	3:W:340:VAL:N	2.48	0.47
4:X:416:ASN:OD1	4:X:416:ASN:C	2.57	0.47
5:Y:236:LEU:HD23	5:Y:236:LEU:C	2.40	0.47
6:Z:35:VAL:HG12	6:Z:36:VAL:N	2.30	0.47
6:Z:71:ASP:OD1	8:b:63:THR:HG21	2.14	0.47
18:E:339:ASN:HB3	19:F:345:SER:HB3	1.97	0.47
21:H:205:GLU:HA	21:H:230:LEU:HD12	1.96	0.47
22:I:192:LEU:O	22:I:196:VAL:HG23	2.14	0.47
27:o:203:ALA:HB2	27:o:216:ILE:HD11	1.97	0.47
28:p:62:THR:O	28:p:66:ARG:NH1	2.47	0.47
30:r:66:LYS:NZ	30:r:182:GLY:O	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:607:VAL:HG11	17:D:64:GLU:HA	1.96	0.47
2:V:344:ASP:OD1	2:V:344:ASP:N	2.48	0.47
3:W:450:GLU:N	3:W:450:GLU:OE1	2.48	0.47
7:a:306:GLU:OE1	7:a:306:GLU:N	2.48	0.47
9:c:77:GLN:HB3	9:c:87:VAL:HG13	1.96	0.47
12:f:162:LEU:O	12:f:166:VAL:HG23	2.15	0.47
14:A:362:MET:HE3	15:B:213:GLU:O	2.15	0.47
28:P:67:LEU:HD23	28:P:67:LEU:C	2.40	0.47
30:R:66:LYS:HG2	30:R:71:VAL:HG22	1.97	0.47
31:S:128:ARG:O	31:S:128:ARG:NH1	2.42	0.47
33:K:41:GLN:NE2	33:K:166:ASP:OD1	2.47	0.47
26:n:48:LEU:HD21	26:n:135:ALA:HB3	1.96	0.47
1:U:176:MET:HE2	1:U:176:MET:HA	1.97	0.47
3:W:70:VAL:HG11	3:W:90:LEU:HD11	1.96	0.47
5:Y:246:ILE:O	5:Y:246:ILE:HG22	2.15	0.47
5:Y:298:GLU:O	5:Y:302:HIS:ND1	2.48	0.47
6:Z:25:ARG:NE	9:c:103:GLY:O	2.48	0.47
8:b:144:GLY:O	8:b:146:GLU:N	2.48	0.47
12:f:102:HIS:O	12:f:106:LEU:HD13	2.14	0.47
12:f:144:LEU:HD12	12:f:162:LEU:HD23	1.97	0.47
12:f:467:SER:O	12:f:470:VAL:HG12	2.14	0.47
14:A:132:THR:O	14:A:135:GLU:N	2.47	0.47
14:A:143:ASP:O	14:A:147:TYR:HA	2.15	0.47
18:E:114:GLU:OE2	19:F:123:VAL:HG11	2.15	0.47
18:E:149:ILE:HD12	18:E:274:LYS:HB3	1.96	0.47
19:F:120:LYS:C	19:F:137:ILE:HD11	2.40	0.47
20:G:17:SER:HG	20:G:20:GLY:C	2.24	0.47
21:H:10:LEU:HD13	21:H:21:GLN:CB	2.44	0.47
21:H:75:VAL:HG22	21:H:76:TYR:N	2.30	0.47
23:J:25:ALA:O	23:J:28:LYS:HG3	2.15	0.47
27:O:214:SER:OG	31:s:239:ARG:NH2	2.48	0.47
29:Q:82:ASN:HA	29:Q:124:LEU:HD11	1.96	0.47
32:T:255:ASP:OD1	32:T:258:HIS:ND1	2.45	0.47
28:p:3:ILE:HG21	28:p:104:TYR:CE1	2.50	0.47
1:U:164:GLU:HA	1:U:167:ILE:HG22	1.96	0.46
1:U:265:ILE:HD13	1:U:326:ILE:HD13	1.97	0.46
1:U:671:LEU:O	1:U:674:PRO:HD2	2.14	0.46
1:U:770:TRP:HB3	9:c:180:ASN:OD1	2.15	0.46
8:b:86:PHE:O	8:b:87:CYS:C	2.58	0.46
9:c:224:SER:OG	9:c:227:GLU:OE1	2.33	0.46
10:d:123:LEU:HA	10:d:126:LEU:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:583:VAL:HG23	12:f:583:VAL:O	2.15	0.46
15:B:223:ILE:HD12	15:B:347:ILE:HG21	1.97	0.46
19:F:171:ARG:HA	19:F:171:ARG:NE	2.30	0.46
21:H:69:THR:HG22	21:H:70:LYS:N	2.30	0.46
25:M:76:MET:N	25:M:76:MET:SD	2.88	0.46
28:P:58:THR:HG21	29:Q:121:LEU:HB3	1.98	0.46
31:S:113:THR:O	31:S:116:ILE:HG22	2.16	0.46
26:n:38:MET:HA	26:n:133:ILE:HD13	1.96	0.46
32:t:256:ILE:HA	32:t:259:MET:HG3	1.97	0.46
4:X:162:ASP:O	4:X:163:LYS:HB2	2.14	0.46
6:Z:25:ARG:CD	9:c:103:GLY:O	2.63	0.46
6:Z:285:ALA:O	6:Z:289:GLU:OE1	2.32	0.46
9:c:157:ILE:HG22	9:c:158:ASP:N	2.30	0.46
10:d:88:LEU:HD21	10:d:138:LYS:HE2	1.96	0.46
12:f:49:ASP:O	12:f:53:GLN:OE1	2.33	0.46
12:f:53:GLN:O	12:f:56:LEU:N	2.48	0.46
12:f:77:GLU:OE1	12:f:80:ARG:NH2	2.48	0.46
12:f:144:LEU:HD23	12:f:144:LEU:C	2.40	0.46
12:f:541:THR:HG21	12:f:558:LEU:CD2	2.45	0.46
16:C:155:ASP:OD1	16:C:155:ASP:N	2.47	0.46
17:D:386:ALA:HB1	17:D:391:ARG:HB2	1.98	0.46
18:E:55:GLN:OE1	18:E:55:GLN:N	2.48	0.46
20:G:60:LEU:HB2	20:G:61:LEU:HD12	1.96	0.46
20:G:123:GLN:NE2	21:H:81:PRO:O	2.48	0.46
20:G:165:ALA:HB1	20:G:179:LEU:HD13	1.97	0.46
24:L:48:ALA:HB3	24:L:63:ILE:HD11	1.98	0.46
28:P:23:ALA:C	28:P:171:MET:HE2	2.40	0.46
32:t:93:SER:OG	32:t:93:SER:O	2.32	0.46
1:U:250:PHE:CE2	1:U:911:ILE:HG21	2.51	0.46
1:U:396:ALA:HB1	1:U:400:ALA:HB1	1.98	0.46
6:Z:130:ASP:O	6:Z:196:HIS:NE2	2.48	0.46
7:a:60:TYR:CE1	7:a:64:ILE:HG13	2.50	0.46
9:c:242:GLU:O	9:c:245:VAL:HG12	2.14	0.46
12:f:60:VAL:HG11	12:f:102:HIS:ND1	2.30	0.46
12:f:75:LEU:HD23	12:f:78:LEU:HD12	1.98	0.46
12:f:668:ALA:HB1	12:f:697:ILE:HG23	1.97	0.46
12:f:695:ALA:O	12:f:699:VAL:HG23	2.16	0.46
14:A:217:PRO:HD2	14:A:220:THR:HG21	1.96	0.46
14:A:237:PHE:O	14:A:238:ILE:HD13	2.15	0.46
14:A:249:TYR:CG	19:F:259:MET:SD	3.09	0.46
16:C:120:SER:O	16:C:121:TYR:C	2.58	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:D:87:LEU:C	17:D:87:LEU:HD12	2.40	0.46
23:J:132:LEU:HD23	23:J:161:ILE:HD13	1.98	0.46
24:L:79:ALA:HB1	33:K:121:LEU:HD13	1.97	0.46
25:M:153:ASP:OD2	25:M:155:SER:OG	2.32	0.46
26:n:93:VAL:HG11	26:n:117:PHE:HE1	1.78	0.46
30:r:79:ALA:HB3	30:r:90:VAL:HG21	1.97	0.46
1:U:607:VAL:O	1:U:615:ARG:NH2	2.48	0.46
1:U:640:LEU:O	1:U:641:SER:C	2.58	0.46
3:W:115:ILE:HG22	3:W:116:THR:N	2.30	0.46
3:W:300:PRO:O	3:W:303:LYS:HG2	2.14	0.46
6:Z:227:ILE:O	6:Z:228:TYR:C	2.58	0.46
7:a:28:LEU:HD21	7:a:33:LEU:HB2	1.96	0.46
9:c:151:VAL:O	9:c:153:GLY:N	2.48	0.46
9:c:155:VAL:HG23	9:c:157:ILE:HD13	1.97	0.46
15:B:182:GLU:HB3	15:B:234:LEU:HD11	1.96	0.46
16:C:41:ASN:OD1	16:C:44:ARG:NH1	2.49	0.46
18:E:142:ILE:CD1	18:E:183:LEU:HD11	2.46	0.46
22:I:86:LEU:HD23	22:I:89:GLU:OE1	2.15	0.46
22:I:213:ILE:CG2	22:I:228:LEU:HD12	2.45	0.46
22:I:237:ILE:O	22:I:241:GLU:OE1	2.33	0.46
23:J:156:TRP:CE3	33:K:59:MET:CE	2.98	0.46
26:N:201:ASP:OD1	26:N:203:SER:N	2.49	0.46
31:S:43:ILE:HG22	31:S:44:ALA:O	2.15	0.46
33:K:211:ASN:O	33:K:212:ALA:HB3	2.15	0.46
28:p:142:CYS:HA	28:p:145:GLN:HG2	1.98	0.46
29:q:4:LEU:HD12	29:q:47:VAL:HG22	1.98	0.46
30:r:100:LEU:HD12	30:r:100:LEU:C	2.41	0.46
3:W:167:GLN:O	3:W:169:LEU:N	2.47	0.46
4:X:197:ALA:O	4:X:200:ILE:HG23	2.16	0.46
5:Y:277:VAL:HA	5:Y:280:GLN:OE1	2.15	0.46
7:a:232:TRP:HH2	7:a:255:TRP:HB3	1.80	0.46
9:c:296:ILE:HG23	9:c:297:VAL:N	2.30	0.46
12:f:527:VAL:HG22	12:f:790:GLN:HB3	1.98	0.46
12:f:678:LEU:HD23	15:B:78:PHE:CE2	2.50	0.46
35:A:501:ATP:O1G	15:B:343:ARG:NE	2.48	0.46
15:B:105:THR:N	15:B:106:PRO:CD	2.79	0.46
25:M:126:TYR:HB3	25:M:129:VAL:HG22	1.96	0.46
32:T:196:ARG:NH1	27:o:208:ASN:OD1	2.49	0.46
28:p:8:GLY:HA2	28:p:141:THR:HG21	1.97	0.46
3:W:92:LYS:O	3:W:93:ARG:C	2.59	0.46
3:W:372:ARG:HH22	3:W:374:THR:HG23	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Y:196:GLN:N	5:Y:196:GLN:OE1	2.46	0.46
6:Z:25:ARG:NH1	9:c:102:THR:HA	2.29	0.46
6:Z:96:HIS:HD2	6:Z:121:LEU:HD11	1.81	0.46
6:Z:220:LEU:C	6:Z:220:LEU:HD12	2.40	0.46
8:b:142:ASN:OD1	8:b:143:PHE:N	2.48	0.46
9:c:122:LEU:HD12	9:c:122:LEU:N	2.31	0.46
12:f:77:GLU:O	12:f:81:GLN:OE1	2.33	0.46
14:A:101:ILE:O	14:A:111:TYR:HA	2.15	0.46
14:A:124:ASP:OD1	19:F:86:LEU:HD11	2.16	0.46
15:B:214:MET:SD	15:B:215:GLY:N	2.88	0.46
15:B:285:ASP:O	15:B:286:GLU:C	2.59	0.46
16:C:157:GLN:HB2	16:C:199:LEU:HD21	1.97	0.46
16:C:216:GLY:O	16:C:248:MET:HE1	2.16	0.46
25:M:91:ILE:HA	25:M:94:GLU:CD	2.41	0.46
28:P:49:LEU:HD12	28:P:111:GLY:HA3	1.98	0.46
31:S:43:ILE:HD11	31:S:177:LEU:HD13	1.97	0.46
32:T:181:SER:HB2	32:T:199:LEU:HD11	1.97	0.46
33:K:117:SER:O	33:K:121:LEU:HG	2.16	0.46
33:K:230:THR:O	33:K:234:LEU:HD23	2.15	0.46
26:n:36:THR:HG21	26:n:197:ALA:CB	2.45	0.46
30:r:226:ASP:O	30:r:227:ALA:C	2.59	0.46
1:U:399:TRP:CB	9:c:178:THR:HG21	2.45	0.46
1:U:545:LEU:HG	1:U:577:ILE:CG2	2.44	0.46
3:W:177:MET:HE1	3:W:181:GLU:OE1	2.15	0.46
3:W:375:MET:CB	3:W:413:ILE:HD11	2.46	0.46
4:X:396:THR:HG23	9:c:242:GLU:HG2	1.98	0.46
5:Y:21:GLN:NE2	5:Y:25:LEU:HD11	2.31	0.46
5:Y:197:ALA:HB3	5:Y:226:VAL:HG21	1.97	0.46
6:Z:198:LEU:HD21	9:c:304:LEU:HD21	1.98	0.46
9:c:25:VAL:HG22	9:c:26:ASP:N	2.29	0.46
12:f:670:MET:HG3	15:B:71:TYR:HE1	1.79	0.46
12:f:818:LEU:O	12:f:822:VAL:HG23	2.16	0.46
14:A:69:ASP:OD2	16:C:80:MET:HE3	2.14	0.46
15:B:68:ILE:HA	15:B:71:TYR:HD2	1.81	0.46
15:B:357:ASP:N	15:B:360:THR:HG1	2.13	0.46
19:F:251:LEU:HD12	19:F:285:ILE:HG23	1.97	0.46
20:G:44:GLY:N	20:G:47:CYS:O	2.47	0.46
21:H:20:VAL:HG22	21:H:24:TYR:CE1	2.51	0.46
32:T:57:LEU:CD2	32:T:214:VAL:HG12	2.45	0.46
30:r:100:LEU:CD1	30:r:160:ILE:HD11	2.42	0.46
31:s:75:THR:HG22	31:s:76:ASP:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:t:90:VAL:CG2	32:t:112:LEU:HD11	2.42	0.46
32:t:137:LEU:HD11	32:t:155:MET:HG3	1.98	0.46
1:U:242:LEU:HD13	1:U:793:LYS:HE2	1.95	0.46
1:U:554:LEU:CD2	1:U:761:VAL:HG23	2.45	0.46
2:V:183:GLU:O	2:V:187:ILE:HD12	2.15	0.46
6:Z:227:ILE:CG2	7:a:341:LEU:HD12	2.45	0.46
9:c:77:GLN:CB	9:c:87:VAL:HG13	2.46	0.46
9:c:251:LEU:O	9:c:254:ASN:OD1	2.34	0.46
10:d:118:ARG:O	10:d:122:VAL:HG23	2.15	0.46
12:f:240:VAL:N	12:f:241:PRO:HD2	2.31	0.46
14:A:159:PRO:HA	14:A:162:THR:OG1	2.16	0.46
15:B:248:LEU:HD11	15:B:277:HIS:CE1	2.49	0.46
16:C:73:VAL:HG23	16:C:73:VAL:O	2.15	0.46
17:D:265:ASP:O	17:D:266:GLU:C	2.58	0.46
17:D:415:GLU:O	20:G:159:TYR:OH	2.30	0.46
35:D:501:ATP:N3	35:D:501:ATP:H2'	2.31	0.46
18:E:196:LEU:CB	18:E:230:ILE:HD12	2.46	0.46
20:G:195:VAL:HG22	20:G:199:ILE:HD12	1.97	0.46
21:H:40:ALA:N	21:H:43:GLY:O	2.42	0.46
23:J:62:ILE:HD12	23:J:62:ILE:N	2.31	0.46
24:L:46:LEU:HD23	24:L:73:SER:CB	2.46	0.46
24:L:79:ALA:HB1	33:K:121:LEU:HD22	1.98	0.46
24:L:183:ASN:OD1	24:L:184:LEU:N	2.48	0.46
28:P:11:VAL:HG13	28:P:24:ALA:HB2	1.97	0.46
30:R:192:VAL:HG13	30:R:193:TYR:N	2.31	0.46
31:S:74:LEU:HD21	31:S:80:ILE:HG21	1.98	0.46
32:T:96:LEU:HB2	32:T:155:MET:HE1	1.97	0.46
31:s:197:ASP:OD1	31:s:197:ASP:N	2.46	0.46
1:U:55:ARG:O	1:U:55:ARG:HG2	2.16	0.46
2:V:209:LYS:HE2	2:V:209:LYS:HA	1.97	0.46
3:W:329:ARG:NE	3:W:342:GLY:O	2.49	0.46
4:X:172:LEU:O	4:X:176:THR:HG23	2.16	0.46
5:Y:167:LEU:HD23	5:Y:167:LEU:C	2.41	0.46
6:Z:220:LEU:HD12	6:Z:221:PRO:O	2.15	0.46
7:a:70:ARG:HH21	8:b:24:THR:HG21	1.81	0.46
7:a:170:ALA:HB1	7:a:174:LYS:NZ	2.31	0.46
12:f:63:LEU:HD11	12:f:70:LEU:O	2.16	0.46
12:f:141:LYS:O	12:f:145:VAL:HG23	2.16	0.46
12:f:256:PHE:CE1	12:f:264:GLU:HG3	2.50	0.46
12:f:377:VAL:O	12:f:381:VAL:HG23	2.16	0.46
12:f:421:ASP:OD1	12:f:424:GLY:N	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:B:260:LEU:HD13	15:B:304:GLU:CG	2.46	0.46
16:C:39:SER:HA	17:D:54:LEU:HD11	1.98	0.46
16:C:63:LEU:HD23	16:C:63:LEU:C	2.40	0.46
16:C:291:VAL:CG1	16:C:293:MET:HE3	2.46	0.46
18:E:215:ILE:HD11	18:E:256:THR:CG2	2.46	0.46
27:O:97:MET:SD	28:P:96:TYR:CE1	3.09	0.46
30:R:249:ASP:N	30:R:249:ASP:OD1	2.48	0.46
31:S:197:ASP:OD1	31:S:198:ARG:N	2.49	0.46
29:q:131:ALA:CB	29:q:136:ALA:HB1	2.46	0.46
32:t:234:ILE:HG12	32:t:248:LEU:HD12	1.97	0.46
1:U:173:VAL:O	1:U:177:LEU:HD13	2.16	0.46
1:U:232:ILE:O	1:U:236:LEU:HD23	2.16	0.46
2:V:223:LYS:O	2:V:261:TYR:OH	2.32	0.46
2:V:443:ARG:HH22	10:d:277:LYS:C	2.24	0.46
3:W:99:GLN:OE1	3:W:99:GLN:N	2.47	0.46
3:W:231:ILE:HD11	3:W:246:HIS:HB2	1.98	0.46
5:Y:296:VAL:HG11	11:e:51:ASP:CB	2.46	0.46
6:Z:240:VAL:HG13	9:c:310:LYS:HZ2	1.79	0.46
7:a:112:ILE:CG2	7:a:151:VAL:HG21	2.44	0.46
7:a:142:LEU:HD23	7:a:142:LEU:C	2.41	0.46
9:c:63:ASP:OD1	9:c:66:THR:N	2.48	0.46
9:c:231:LEU:HD13	9:c:234:TYR:HE1	1.79	0.46
12:f:107:LYS:O	12:f:111:GLU:OE1	2.33	0.46
12:f:479:LEU:HD21	12:f:816:TYR:OH	2.16	0.46
12:f:702:PRO:HA	12:f:732:VAL:HG22	1.98	0.46
13:y:53:VAL:HG11	13:y:81:SER:C	2.41	0.46
13:y:84:LYS:O	13:y:85:LEU:HB2	2.15	0.46
17:D:270:ILE:HD12	17:D:285:VAL:HG23	1.97	0.46
18:E:284:THR:O	18:E:285:LEU:HD12	2.16	0.46
19:F:251:LEU:HD23	19:F:251:LEU:C	2.41	0.46
23:J:46:GLU:HA	23:J:205:ASN:HB2	1.97	0.46
23:J:195:LEU:HD22	23:J:206:ILE:HG22	1.98	0.46
24:L:114:SER:O	24:L:118:ILE:HG13	2.16	0.46
31:S:185:ASN:OD1	28:p:173:ASN:ND2	2.43	0.46
32:T:69:ALA:HB3	32:T:87:ILE:CD1	2.46	0.46
26:n:222:VAL:O	26:n:227:GLN:NE2	2.49	0.46
27:o:62:ARG:O	27:o:76:LYS:NZ	2.46	0.46
1:U:637:VAL:HG21	1:U:656:LEU:CD2	2.45	0.45
2:V:416:ARG:HB3	5:Y:348:ASP:OD1	2.16	0.45
3:W:149:LEU:HD23	3:W:149:LEU:C	2.41	0.45
3:W:328:LEU:HD11	3:W:351:TRP:CZ2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:X:410:VAL:O	4:X:413:SER:OG	2.34	0.45
9:c:88:ASP:O	9:c:91:PHE:HB3	2.16	0.45
12:f:177:GLU:O	12:f:181:ARG:N	2.49	0.45
12:f:560:LEU:HD13	12:f:801:VAL:HG21	1.98	0.45
12:f:760:PHE:HA	12:f:763:ARG:HE	1.81	0.45
15:B:267:VAL:CG1	15:B:312:LEU:HD23	2.46	0.45
15:B:287:ILE:HA	15:B:290:ILE:HD13	1.98	0.45
18:E:215:ILE:HD13	18:E:260:LEU:CD2	2.46	0.45
18:E:239:GLY:O	18:E:240:GLY:C	2.59	0.45
20:G:60:LEU:O	20:G:61:LEU:HB2	2.15	0.45
23:J:11:SER:OG	23:J:15:HIS:N	2.49	0.45
25:M:51:GLU:HG3	25:M:210:PHE:CE1	2.51	0.45
28:P:171:MET:HE3	28:P:185:VAL:HG13	1.97	0.45
31:S:100:LEU:C	31:S:100:LEU:HD23	2.41	0.45
33:K:10:ARG:O	33:K:14:THR:OG1	2.32	0.45
28:p:171:MET:O	28:p:175:VAL:HG13	2.16	0.45
29:q:4:LEU:CD2	29:q:34:LYS:HD2	2.46	0.45
1:U:446:LEU:HD23	1:U:461:LEU:HD11	1.98	0.45
1:U:510:GLU:OE1	1:U:543:LYS:O	2.33	0.45
2:V:192:MET:HE3	2:V:214:HIS:CB	2.47	0.45
2:V:238:ALA:O	2:V:241:ARG:O	2.34	0.45
2:V:331:LEU:O	2:V:334:VAL:HG12	2.17	0.45
2:V:477:HIS:CG	10:d:342:TYR:HH	2.22	0.45
5:Y:61:LEU:HD22	5:Y:63:TRP:HZ2	1.82	0.45
6:Z:72:HIS:ND1	6:Z:73:ASP:OD1	2.48	0.45
6:Z:187:LEU:HD11	9:c:296:ILE:HG21	1.97	0.45
8:b:33:VAL:HG21	8:b:75:LEU:HD13	1.98	0.45
9:c:62:VAL:CG2	9:c:66:THR:HB	2.46	0.45
12:f:610:GLN:HA	15:B:74:MET:HE1	1.98	0.45
12:f:696:LEU:CG	12:f:800:LEU:HD13	2.45	0.45
14:A:95:VAL:O	14:A:95:VAL:HG23	2.15	0.45
15:B:342:ILE:O	15:B:343:ARG:C	2.57	0.45
18:E:281:ARG:O	18:E:283:ASP:N	2.48	0.45
35:E:401:ATP:O3G	19:F:347:ARG:NH2	2.49	0.45
19:F:391:PHE:CZ	19:F:395:GLN:HB3	2.51	0.45
21:H:19:LEU:HD11	21:H:22:ILE:HG13	1.98	0.45
21:H:119:GLN:NE2	22:I:82:ASP:OD1	2.49	0.45
25:M:153:ASP:OD1	25:M:156:GLY:N	2.48	0.45
29:Q:55:GLN:OE1	30:R:144:ASN:ND2	2.41	0.45
33:K:109:VAL:HG12	33:K:154:PHE:CD1	2.52	0.45
26:n:226:ASP:OD1	26:n:227:GLN:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:q:167:LEU:O	29:q:171:PHE:N	2.39	0.45
31:s:74:LEU:CD1	31:s:96:ILE:HD12	2.46	0.45
1:U:162:VAL:HG13	1:U:165:LYS:HE3	1.99	0.45
1:U:220:LEU:HD22	1:U:228:ALA:HB3	1.98	0.45
2:V:113:LEU:O	2:V:117:VAL:HG22	2.16	0.45
3:W:190:MET:HB3	3:W:229:LEU:HD13	1.98	0.45
4:X:31:VAL:HG21	4:X:53:LEU:HD13	1.98	0.45
5:Y:246:ILE:C	5:Y:250:LEU:HD23	2.41	0.45
6:Z:48:LEU:HD11	6:Z:92:VAL:HG21	1.98	0.45
6:Z:261:TYR:O	6:Z:264:SER:OG	2.28	0.45
7:a:94:LEU:HD22	7:a:122:LYS:HG3	1.98	0.45
7:a:244:ASN:O	7:a:245:VAL:C	2.59	0.45
10:d:283:LEU:HD23	10:d:283:LEU:H	1.80	0.45
12:f:331:LEU:C	12:f:335:ARG:HE	2.24	0.45
12:f:466:LEU:HD13	12:f:485:LEU:N	2.31	0.45
12:f:505:MET:CE	12:f:518:THR:HG22	2.43	0.45
12:f:615:ILE:HA	12:f:618:GLU:OE1	2.15	0.45
14:A:93:LEU:HD13	14:A:139:ARG:CG	2.46	0.45
14:A:369:ARG:NH1	14:A:371:GLU:HB2	2.31	0.45
15:B:223:ILE:HG21	15:B:334:ILE:HD12	1.97	0.45
16:C:37:ASP:O	16:C:40:GLN:HG3	2.16	0.45
16:C:194:THR:HG21	16:C:318:PRO:O	2.17	0.45
16:C:194:THR:HG21	16:C:319:PRO:HA	1.97	0.45
17:D:293:LEU:HD23	17:D:296:MET:CE	2.47	0.45
20:G:167:ALA:CB	20:G:175:SER:OG	2.64	0.45
27:O:222:SER:HB3	27:O:225:LYS:HZ3	1.82	0.45
26:n:174:ASP:OD1	26:n:175:ALA:N	2.49	0.45
29:q:8:GLN:NE2	29:q:113:PRO:O	2.47	0.45
29:q:142:ILE:HG22	29:q:159:LEU:HD11	1.98	0.45
31:s:225:ILE:CG2	31:s:232:ARG:HB2	2.47	0.45
1:U:45:ILE:HD11	1:U:63:VAL:HG21	1.98	0.45
1:U:124:LYS:CG	1:U:125:PRO:HD2	2.46	0.45
1:U:911:ILE:HD12	1:U:911:ILE:H	1.81	0.45
2:V:479:ARG:HH12	5:Y:370:ILE:HA	1.82	0.45
3:W:177:MET:HE1	3:W:185:PHE:CE2	2.52	0.45
5:Y:343:LEU:N	5:Y:343:LEU:HD12	2.32	0.45
6:Z:69:PHE:CG	6:Z:69:PHE:O	2.68	0.45
7:a:120:ALA:HB2	7:a:158:LEU:HD11	1.98	0.45
10:d:141:LEU:CD1	10:d:182:LEU:HD12	2.31	0.45
12:f:53:GLN:O	12:f:57:GLU:OE1	2.34	0.45
12:f:100:ARG:NE	12:f:100:ARG:HA	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:A:166:VAL:O	14:A:166:VAL:HG13	2.15	0.45
14:A:280:ILE:HG13	14:A:280:ILE:O	2.15	0.45
14:A:304:ASN:OD1	14:A:304:ASN:C	2.58	0.45
15:B:73:LEU:HD22	15:B:74:MET:HE2	1.98	0.45
15:B:372:MET:HE1	16:C:178:LEU:HD22	1.99	0.45
15:B:385:MET:O	23:J:200:GLN:NE2	2.50	0.45
16:C:228:ALA:O	16:C:232:ARG:NH1	2.49	0.45
23:J:9:VAL:HG12	23:J:10:PHE:O	2.17	0.45
27:o:209:ASP:OD1	27:o:210:LEU:N	2.49	0.45
30:r:235:LEU:HD23	30:r:246:VAL:CG1	2.46	0.45
32:t:196:ARG:O	32:t:197:GLU:C	2.60	0.45
1:U:48:LEU:HD23	1:U:48:LEU:C	2.42	0.45
1:U:884:VAL:HG13	1:U:888:GLN:O	2.17	0.45
2:V:234:ARG:NE	2:V:234:ARG:HA	2.31	0.45
2:V:372:LEU:HD13	2:V:375:PHE:HD2	1.80	0.45
4:X:107:VAL:HG13	4:X:107:VAL:O	2.17	0.45
6:Z:38:VAL:HG23	6:Z:56:VAL:CG2	2.47	0.45
6:Z:252:LYS:HZ2	9:c:234:TYR:HD2	1.64	0.45
9:c:46:ARG:HG3	18:E:85:ARG:HH22	1.82	0.45
12:f:845:ARG:NH1	14:A:173:THR:OG1	2.41	0.45
15:B:202:GLU:O	15:B:205:LEU:N	2.48	0.45
15:B:272:ARG:NH1	15:B:315:GLN:OE1	2.49	0.45
17:D:163:MET:O	17:D:222:HIS:ND1	2.47	0.45
18:E:212:ALA:HA	18:E:215:ILE:HD12	1.98	0.45
19:F:248:PHE:CE1	19:F:282:ILE:HD13	2.45	0.45
22:I:137:ILE:HG13	22:I:137:ILE:O	2.17	0.45
22:I:207:SER:OG	22:I:208:ALA:N	2.49	0.45
24:L:74:ILE:HG22	24:L:132:LEU:HD22	1.99	0.45
24:L:84:LEU:O	24:L:88:MET:SD	2.74	0.45
26:N:151:GLY:HA2	32:T:50:MET:HE1	1.99	0.45
29:Q:49:GLU:HG3	29:Q:52:ASP:HB2	1.99	0.45
30:R:99:TYR:C	30:R:100:LEU:HD22	2.42	0.45
32:T:78:LEU:O	32:T:79:ALA:C	2.59	0.45
32:T:95:MET:HE1	32:T:237:VAL:N	2.31	0.45
32:T:169:TYR:HB2	32:T:182:LEU:HD22	1.97	0.45
33:K:110:GLU:HG3	33:K:111:SER:N	2.32	0.45
33:K:193:GLU:O	33:K:196:LYS:HG3	2.17	0.45
30:r:215:ALA:O	30:r:219:ILE:HD12	2.16	0.45
31:s:99:ARG:CD	31:s:123:ILE:HD11	2.47	0.45
1:U:48:LEU:HD21	1:U:54:PHE:CD2	2.52	0.45
1:U:61:ALA:HB1	1:U:80:TYR:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:149:GLN:HA	17:D:41:TYR:CE2	2.51	0.45
1:U:253:TYR:HA	1:U:261:LEU:HD21	1.99	0.45
1:U:628:ARG:NH2	1:U:755:THR:HG23	2.29	0.45
2:V:150:ARG:O	2:V:151:THR:HG22	2.17	0.45
2:V:402:VAL:HG13	2:V:403:ILE:N	2.31	0.45
3:W:167:GLN:HG3	3:W:201:ARG:HD3	1.98	0.45
3:W:199:TYR:O	3:W:203:GLN:OE1	2.35	0.45
5:Y:31:HIS:ND1	5:Y:34:ASP:OD2	2.47	0.45
7:a:83:VAL:O	7:a:86:GLN:HB2	2.17	0.45
7:a:317:VAL:HG13	7:a:319:LEU:HG	1.99	0.45
12:f:192:VAL:HG21	12:f:216:MET:CE	2.46	0.45
12:f:411:ALA:HB3	12:f:443:GLY:HA3	1.98	0.45
12:f:494:ARG:NH2	12:f:497:VAL:HG21	2.32	0.45
12:f:564:LEU:HD22	12:f:794:ALA:HB1	1.99	0.45
15:B:285:ASP:O	15:B:329:MET:HE1	2.16	0.45
17:D:124:LEU:N	17:D:124:LEU:HD12	2.32	0.45
17:D:267:ILE:O	17:D:268:ASP:C	2.60	0.45
17:D:370:ILE:CG2	17:D:407:ILE:HD13	2.46	0.45
18:E:178:THR:HG22	18:E:303:LEU:CA	2.47	0.45
18:E:305:ASN:CG	18:E:308:ALA:HB3	2.42	0.45
18:E:310:LEU:O	18:E:314:LYS:HG3	2.16	0.45
19:F:163:THR:C	19:F:164:LEU:HD22	2.41	0.45
23:J:121:SER:HB3	23:J:124:ARG:HG3	1.98	0.45
26:N:47:VAL:HG11	26:N:187:LEU:CD2	2.47	0.45
27:O:44:THR:HG23	27:O:76:LYS:CD	2.46	0.45
27:o:186:ARG:O	27:o:189:MET:HE2	2.17	0.45
31:s:241:ASP:OD1	31:s:241:ASP:N	2.49	0.45
1:U:195:ASN:HA	1:U:223:LEU:HD21	1.98	0.45
1:U:364:VAL:HG11	1:U:724:VAL:CG1	2.46	0.45
1:U:595:ASN:OD1	1:U:597:LYS:N	2.50	0.45
2:V:458:VAL:HG23	2:V:458:VAL:O	2.16	0.45
4:X:31:VAL:HG23	4:X:49:SER:OG	2.16	0.45
4:X:233:TYR:HA	4:X:254:MET:SD	2.57	0.45
4:X:345:VAL:CG1	4:X:350:ILE:HD11	2.46	0.45
5:Y:68:ASP:OD1	5:Y:69:LEU:N	2.48	0.45
12:f:558:LEU:HB2	12:f:559:PRO:HD3	1.99	0.45
14:A:197:HIS:O	14:A:200:ARG:NH1	2.42	0.45
15:B:135:ILE:H	15:B:135:ILE:HD12	1.81	0.45
19:F:137:ILE:HD12	19:F:137:ILE:H	1.81	0.45
22:I:57:ASP:OD1	22:I:58:GLU:N	2.44	0.45
30:R:114:TRP:NE1	31:S:125:TYR:OH	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:T:82:ARG:HE	26:n:200:ARG:CZ	2.29	0.45
32:T:128:TYR:HB3	32:T:133:ILE:HD11	1.97	0.45
33:K:50:VAL:HG13	33:K:67:ILE:HD11	1.99	0.45
1:U:501:LEU:HD21	1:U:535:TYR:CG	2.51	0.45
3:W:371:THR:O	3:W:371:THR:HG22	2.15	0.45
3:W:426:ASN:O	3:W:430:GLN:OE1	2.35	0.45
3:W:446:ILE:HD12	6:Z:211:TYR:CG	2.52	0.45
4:X:48:GLN:O	4:X:49:SER:C	2.59	0.45
5:Y:378:ASN:O	5:Y:381:GLN:NE2	2.49	0.45
6:Z:136:GLU:OE2	6:Z:157:HIS:NE2	2.50	0.45
6:Z:235:ASN:C	6:Z:235:ASN:HD22	2.24	0.45
7:a:293:PHE:HB3	7:a:307:VAL:HG21	1.98	0.45
9:c:285:GLU:HA	9:c:288:VAL:HG12	1.97	0.45
12:f:334:ALA:HB1	12:f:340:MET:SD	2.56	0.45
12:f:868:HIS:C	12:f:869:THR:HG1	2.24	0.45
14:A:187:LEU:CD2	14:A:212:VAL:HG11	2.47	0.45
16:C:27:LYS:NZ	17:D:44:TYR:OH	2.47	0.45
17:D:97:ASP:OD1	17:D:100:THR:HG22	2.16	0.45
18:E:158:LEU:O	18:E:159:PHE:C	2.60	0.45
18:E:349:GLU:HB2	18:E:369:LYS:HZ1	1.81	0.45
19:F:418:GLU:HA	19:F:421:MET:CE	2.46	0.45
24:L:26:MET:HB3	24:L:30:LYS:NZ	2.32	0.45
24:L:115:LYS:HA	24:L:118:ILE:HD12	1.98	0.45
27:O:189:MET:HB3	27:O:193:GLU:OE2	2.16	0.45
29:Q:47:VAL:HG22	29:Q:48:GLY:N	2.31	0.45
32:T:227:ARG:HA	32:T:227:ARG:HE	1.81	0.45
26:n:47:VAL:HG21	26:n:186:CYS:HB2	1.98	0.45
1:U:360:VAL:HG11	1:U:392:TRP:HE1	1.81	0.45
1:U:469:SER:O	1:U:470:ASN:ND2	2.50	0.45
1:U:505:ASP:O	1:U:509:GLY:N	2.43	0.45
1:U:628:ARG:NH2	1:U:753:GLY:O	2.49	0.45
2:V:192:MET:O	2:V:195:ILE:HG22	2.17	0.45
2:V:224:LEU:HA	2:V:227:VAL:HG22	1.99	0.45
3:W:24:VAL:HG12	3:W:50:LEU:CD2	2.41	0.45
4:X:90:ARG:NH2	21:H:233:ILE:HA	2.32	0.45
6:Z:194:GLN:O	6:Z:198:LEU:HD23	2.17	0.45
7:a:60:TYR:HB2	7:a:83:VAL:HG21	1.99	0.45
7:a:363:MET:CE	9:c:307:VAL:HG22	2.47	0.45
8:b:8:VAL:HG23	8:b:51:LEU:HD12	1.98	0.45
10:d:287:ALA:C	10:d:299:MET:HE1	2.42	0.45
12:f:206:ASP:O	12:f:207:LEU:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:663:GLY:O	12:f:664:GLU:C	2.60	0.45
12:f:866:GLN:O	12:f:867:THR:C	2.60	0.45
14:A:91:GLN:CB	14:A:143:ASP:HA	2.47	0.45
14:A:198:PRO:CG	34:z:202:ASN:HD21	2.30	0.45
14:A:198:PRO:CG	34:z:204:VAL:HG12	2.45	0.45
15:B:375:ALA:HB2	15:B:413:LYS:CG	2.47	0.45
16:C:32:GLN:OE1	17:D:47:LEU:HD11	2.16	0.45
18:E:204:VAL:HG12	18:E:205:ASP:N	2.32	0.45
18:E:372:ARG:CZ	25:M:175:THR:OG1	2.65	0.45
23:J:164:GLY:O	23:J:168:VAL:HG22	2.16	0.45
24:L:87:PHE:CE2	24:L:115:LYS:HD2	2.52	0.45
28:P:9:GLY:O	28:P:141:THR:N	2.50	0.45
28:P:155:GLU:HB2	28:P:158:MET:HE3	1.98	0.45
30:R:124:ILE:HD11	33:K:94:VAL:HA	1.99	0.45
32:T:69:ALA:CB	32:T:87:ILE:HD11	2.46	0.45
32:T:219:ARG:HG3	32:T:252:THR:HG22	1.98	0.45
1:U:122:GLU:OE2	1:U:124:LYS:HB2	2.16	0.45
1:U:356:THR:HG22	1:U:717:ILE:CD1	2.47	0.45
1:U:559:ARG:O	1:U:560:MET:C	2.60	0.45
1:U:798:PRO:O	1:U:800:VAL:N	2.50	0.45
2:V:78:HIS:O	2:V:82:LEU:HG	2.17	0.45
2:V:109:ASN:O	2:V:110:HIS:C	2.59	0.45
3:W:74:CYS:SG	3:W:86:ASN:ND2	2.81	0.45
3:W:397:VAL:CG1	4:X:341:PRO:HB3	2.47	0.45
4:X:356:LEU:HD22	4:X:361:VAL:CG1	2.47	0.45
14:A:195:LEU:HB3	34:z:205:VAL:HG13	1.99	0.45
17:D:157:ASP:N	17:D:157:ASP:OD1	2.49	0.45
17:D:167:ILE:O	35:D:501:ATP:N6	2.45	0.45
17:D:261:ILE:HG13	17:D:261:ILE:O	2.16	0.45
19:F:265:ALA:HB2	19:F:309:THR:HG22	1.99	0.45
19:F:274:LEU:HD23	19:F:274:LEU:C	2.42	0.45
22:I:246:LYS:O	22:I:249:ARG:HG2	2.17	0.45
24:L:87:PHE:CZ	24:L:91:GLU:OE2	2.70	0.45
28:P:17:LYS:N	28:P:158:MET:O	2.45	0.45
28:P:20:VAL:HG22	28:P:112:LEU:CD2	2.47	0.45
29:Q:59:TYR:O	29:Q:63:ASN:ND2	2.50	0.45
29:Q:94:SER:OG	29:Q:95:ARG:N	2.49	0.45
30:R:189:SER:OG	30:R:226:ASP:OD1	2.31	0.45
32:T:46:THR:OG1	32:T:46:THR:O	2.32	0.45
27:o:95:THR:O	27:o:98:THR:OG1	2.34	0.45
1:U:3:THR:HG22	1:U:3:THR:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:142:LEU:HD11	1:U:165:LYS:NZ	2.32	0.44
3:W:140:ILE:HA	3:W:174:TYR:OH	2.16	0.44
3:W:451:MET:HE2	6:Z:101:LEU:CD2	2.46	0.44
5:Y:115:GLY:O	5:Y:117:LYS:NZ	2.43	0.44
5:Y:201:PHE:HB3	5:Y:223:THR:HG22	1.99	0.44
7:a:4:VAL:HB	7:a:5:PRO:HD3	1.99	0.44
7:a:140:GLU:O	7:a:144:ASN:ND2	2.46	0.44
8:b:62:THR:HG21	8:b:71:ILE:HD12	1.97	0.44
9:c:32:TYR:CD2	9:c:66:THR:HG23	2.51	0.44
10:d:211:GLU:O	10:d:215:LEU:HG	2.17	0.44
12:f:498:LEU:O	12:f:502:LEU:HD13	2.17	0.44
12:f:893:ILE:O	12:f:894:LEU:C	2.60	0.44
14:A:120:LYS:HD3	19:F:127:SER:HB3	2.00	0.44
16:C:161:ILE:O	16:C:165:ILE:HG22	2.18	0.44
16:C:203:VAL:O	16:C:207:THR:OG1	2.19	0.44
19:F:126:THR:HG22	19:F:127:SER:N	2.32	0.44
19:F:224:LEU:HB3	19:F:351:LYS:HG2	1.99	0.44
20:G:61:LEU:HG	25:M:161:TYR:CE1	2.53	0.44
22:I:160:LYS:N	23:J:53:LEU:O	2.33	0.44
22:I:223:THR:HG22	22:I:224:VAL:N	2.32	0.44
23:J:192:ILE:O	23:J:196:LEU:HD23	2.16	0.44
23:J:201:SER:O	23:J:205:ASN:OD1	2.35	0.44
28:P:25:ASP:OD1	28:P:41:LYS:NZ	2.36	0.44
30:R:65:PHE:CZ	30:R:72:ILE:HG21	2.52	0.44
32:T:46:THR:HG23	32:T:144:ARG:NH2	2.33	0.44
32:T:229:TYR:CE2	32:T:231:ARG:HB3	2.52	0.44
28:p:143:ALA:O	28:p:147:TYR:CD2	2.70	0.44
30:r:152:MET:SD	30:r:152:MET:N	2.87	0.44
32:t:148:MET:HE2	32:t:148:MET:HA	1.99	0.44
34:z:164:THR:O	34:z:164:THR:HG22	2.18	0.44
1:U:244:MET:HE3	1:U:248:ILE:HD11	1.99	0.44
1:U:520:MET:CE	1:U:523:SER:OG	2.60	0.44
3:W:82:LEU:HA	3:W:85:GLU:OE2	2.17	0.44
3:W:109:CYS:O	3:W:110:THR:C	2.59	0.44
3:W:260:SER:O	3:W:264:GLN:NE2	2.50	0.44
3:W:398:VAL:HG21	4:X:337:ARG:NE	2.32	0.44
4:X:385:LEU:HD23	4:X:385:LEU:C	2.43	0.44
5:Y:167:LEU:HD23	5:Y:167:LEU:O	2.17	0.44
6:Z:74:TYR:CE2	9:c:98:MET:HE3	2.52	0.44
7:a:88:THR:HB	7:a:93:ALA:HB2	1.99	0.44
8:b:8:VAL:HG23	8:b:8:VAL:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:b:38:HIS:O	8:b:42:ARG:NE	2.48	0.44
9:c:162:LEU:C	9:c:162:LEU:HD12	2.43	0.44
9:c:186:LYS:O	9:c:187:PRO:C	2.60	0.44
10:d:101:GLU:CD	10:d:112:CYS:HG	2.24	0.44
16:C:81:ASP:HB2	16:C:83:LYS:HG2	1.99	0.44
18:E:70:ILE:HG22	18:E:80:VAL:CG1	2.37	0.44
18:E:144:GLU:O	18:E:148:VAL:HG23	2.17	0.44
18:E:173:TYR:HB2	18:E:300:HIS:HA	1.98	0.44
18:E:174:GLY:HA3	18:E:180:LYS:HD3	2.00	0.44
18:E:198:VAL:HG13	18:E:232:MET:SD	2.57	0.44
19:F:223:VAL:HA	19:F:349:ASP:O	2.17	0.44
20:G:17:SER:OG	20:G:21:ARG:HB2	2.17	0.44
23:J:90:GLU:HG2	23:J:110:TYR:CG	2.52	0.44
23:J:116:GLN:HG3	33:K:83:ALA:HB1	1.99	0.44
26:N:38:MET:HE1	26:N:190:THR:OG1	2.18	0.44
26:N:48:LEU:HD13	26:N:213:ILE:HD13	1.99	0.44
26:N:169:ILE:HG13	26:N:197:ALA:HB2	2.00	0.44
26:N:175:ALA:O	26:N:178:ARG:NH1	2.48	0.44
28:P:37:THR:HA	28:P:183:MET:HE1	1.99	0.44
28:P:47:ASP:OD1	28:P:47:ASP:N	2.49	0.44
29:Q:137:PHE:HB3	30:r:192:VAL:HG21	1.99	0.44
30:R:163:TRP:CD1	30:R:238:VAL:HG12	2.52	0.44
31:S:73:LYS:HD3	31:S:231:ILE:HD12	2.00	0.44
30:r:72:ILE:CG1	30:r:235:LEU:HD11	2.46	0.44
30:r:118:LEU:HD21	30:r:138:ALA:HB1	2.00	0.44
34:z:155:PHE:HB2	34:z:174:PHE:HA	1.98	0.44
1:U:501:LEU:HD11	1:U:548:LEU:HD21	2.00	0.44
1:U:575:ASP:OD1	1:U:577:ILE:N	2.38	0.44
1:U:888:GLN:O	1:U:888:GLN:CD	2.61	0.44
1:U:903:PHE:HB3	1:U:913:ILE:HG23	1.99	0.44
2:V:153:LYS:HB2	2:V:156:SER:HA	1.98	0.44
5:Y:25:LEU:O	5:Y:31:HIS:HB2	2.17	0.44
5:Y:314:LEU:HD21	5:Y:318:TYR:CD2	2.51	0.44
9:c:179:SER:OG	9:c:180:ASN:N	2.50	0.44
9:c:254:ASN:OD1	9:c:280:PRO:HB3	2.17	0.44
12:f:349:TYR:O	12:f:350:LYS:NZ	2.35	0.44
13:y:41:THR:HG22	13:y:43:TYR:HD1	1.82	0.44
15:B:229:GLY:HA2	37:B:501:ADP:PB	2.58	0.44
15:B:256:ILE:HG23	15:B:256:ILE:O	2.17	0.44
16:C:366:ALA:HB1	16:C:383:PHE:CD1	2.52	0.44
17:D:107:THR:HG22	17:D:107:THR:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:E:369:LYS:HA	18:E:372:ARG:HG3	1.99	0.44
20:G:13:ILE:HD11	20:G:132:ARG:NH1	2.32	0.44
27:O:157:TYR:HA	27:O:170:MET:HE1	1.99	0.44
28:P:14:MET:HE1	28:P:167:ILE:HD12	2.00	0.44
28:P:165:GLU:OE2	28:P:166:THR:HG23	2.16	0.44
29:Q:30:ASP:O	29:Q:177:THR:OG1	2.31	0.44
30:R:176:GLU:OE1	30:R:176:GLU:N	2.49	0.44
31:S:59:GLU:N	31:S:62:SER:O	2.50	0.44
33:K:186:HIS:O	33:K:189:MET:HE1	2.17	0.44
31:s:226:VAL:HG13	31:s:231:ILE:CD1	2.47	0.44
1:U:520:MET:CB	1:U:555:VAL:HG23	2.48	0.44
1:U:556:MET:HG2	1:U:556:MET:O	2.18	0.44
4:X:366:SER:O	4:X:370:LEU:HD13	2.15	0.44
5:Y:168:ILE:HG12	5:Y:177:ARG:CZ	2.48	0.44
6:Z:243:GLN:OE1	6:Z:244:GLU:OE2	2.36	0.44
11:e:46:ASP:O	11:e:47:ASN:OD1	2.36	0.44
12:f:832:THR:CB	12:f:870:THR:HG1	2.29	0.44
17:D:351:LYS:NZ	18:E:163:GLY:O	2.50	0.44
18:E:213:ARG:O	18:E:216:ARG:HG2	2.17	0.44
19:F:268:VAL:HG21	19:F:313:LEU:CD2	2.47	0.44
20:G:49:VAL:HG12	20:G:50:ILE:N	2.32	0.44
26:N:38:MET:CG	26:N:161:ILE:HD13	2.47	0.44
27:O:67:MET:HE1	31:s:215:VAL:CG2	2.44	0.44
28:P:14:MET:N	28:P:14:MET:SD	2.90	0.44
29:Q:28:MET:HE2	30:R:185:PHE:CE1	2.52	0.44
32:T:202:GLN:O	32:T:205:LEU:HD21	2.17	0.44
33:K:233:GLU:O	33:K:237:VAL:HG22	2.17	0.44
27:o:47:ALA:HB3	27:o:202:ILE:HD11	1.99	0.44
2:V:125:ASN:O	2:V:128:ARG:N	2.46	0.44
2:V:149:PRO:O	2:V:150:ARG:HG2	2.18	0.44
3:W:87:ILE:HD12	3:W:104:MET:HE3	2.00	0.44
3:W:136:ILE:C	3:W:138:VAL:H	2.25	0.44
3:W:139:GLU:OE1	3:W:174:TYR:CE1	2.70	0.44
3:W:170:GLN:O	3:W:170:GLN:CD	2.60	0.44
3:W:239:SER:O	3:W:243:ILE:HD12	2.17	0.44
6:Z:40:LEU:N	6:Z:40:LEU:HD12	2.32	0.44
7:a:118:ILE:HG22	7:a:122:LYS:CE	2.47	0.44
7:a:280:MET:HE1	7:a:296:ILE:HA	2.00	0.44
8:b:118:GLU:N	8:b:118:GLU:OE1	2.51	0.44
9:c:95:MET:HE2	9:c:95:MET:HA	1.99	0.44
10:d:161:ILE:HG23	10:d:198:PHE:HE1	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:449:GLY:HA2	12:f:488:ALA:HB2	1.98	0.44
14:A:337:LEU:O	14:A:340:LYS:NZ	2.43	0.44
17:D:184:PRO:O	17:D:187:HIS:CE1	2.71	0.44
21:H:100:VAL:HG23	21:H:101:TYR:N	2.29	0.44
28:P:66:ARG:NE	28:P:66:ARG:HA	2.31	0.44
29:Q:138:LEU:H	29:Q:138:LEU:HD12	1.82	0.44
31:S:119:MET:HE2	33:K:102:THR:O	2.16	0.44
31:s:119:MET:HE2	31:s:119:MET:CA	2.47	0.44
1:U:117:ASP:O	1:U:118:LEU:C	2.60	0.44
1:U:123:LYS:HZ1	1:U:126:ILE:HD12	1.83	0.44
1:U:406:ALA:HB3	1:U:777:HIS:CE1	2.53	0.44
2:V:168:GLN:O	2:V:172:VAL:HG23	2.18	0.44
5:Y:22:LEU:HD22	5:Y:37:VAL:HG13	2.00	0.44
5:Y:153:ASP:OD1	5:Y:153:ASP:N	2.45	0.44
9:c:75:MET:HE1	9:c:92:GLN:HG3	1.99	0.44
9:c:188:SER:O	9:c:192:LEU:HD23	2.16	0.44
9:c:254:ASN:OD1	9:c:254:ASN:C	2.61	0.44
10:d:94:MET:HB2	10:d:119:LEU:HD21	1.99	0.44
10:d:98:LEU:O	10:d:101:GLU:HG3	2.16	0.44
12:f:143:ARG:O	12:f:146:GLY:O	2.36	0.44
15:B:310:LEU:O	15:B:310:LEU:HD23	2.18	0.44
16:C:228:ALA:O	16:C:232:ARG:HG2	2.18	0.44
16:C:342:ILE:HD11	16:C:383:PHE:CD2	2.53	0.44
18:E:158:LEU:O	18:E:161:ARG:N	2.36	0.44
19:F:253:GLY:N	19:F:254:PRO:HD3	2.33	0.44
21:H:19:LEU:HG	21:H:22:ILE:HB	2.00	0.44
22:I:95:GLN:HB3	28:P:69:PHE:CD1	2.52	0.44
22:I:179:TYR:CD2	22:I:180:LYS:O	2.70	0.44
27:O:180:VAL:HG22	32:t:194:LEU:HD21	1.98	0.44
28:P:168:SER:O	28:P:172:LEU:HD13	2.17	0.44
29:Q:85:ARG:NH1	29:Q:122:ALA:O	2.50	0.44
31:S:111:MET:HE3	31:S:115:ALA:CB	2.47	0.44
28:p:204:MET:HE2	28:p:204:MET:HA	1.99	0.44
31:s:221:LEU:HD22	31:s:223:ILE:HD11	1.99	0.44
32:t:141:MET:HE3	32:t:170:VAL:CG1	2.48	0.44
1:U:118:LEU:HD13	1:U:122:GLU:CB	2.48	0.44
1:U:669:ILE:HG13	1:U:695:MET:SD	2.58	0.44
2:V:113:LEU:O	2:V:117:VAL:HG13	2.17	0.44
2:V:289:LEU:CB	2:V:312:ALA:HB2	2.45	0.44
3:W:442:THR:N	6:Z:229:GLN:OE1	2.50	0.44
4:X:15:LEU:HD22	4:X:26:ILE:HD12	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:X:183:LEU:N	4:X:184:PRO:CD	2.81	0.44
5:Y:66:ASP:OD1	5:Y:67:VAL:N	2.51	0.44
5:Y:245:GLU:O	5:Y:249:VAL:HG12	2.17	0.44
5:Y:285:ASP:OD2	5:Y:288:PHE:N	2.31	0.44
5:Y:314:LEU:C	5:Y:353:ILE:HD12	2.43	0.44
6:Z:177:ARG:HA	6:Z:180:LYS:HG2	1.99	0.44
7:a:127:ASP:OD2	7:a:130:VAL:HB	2.17	0.44
7:a:331:VAL:HG12	7:a:333:MET:SD	2.58	0.44
9:c:292:MET:O	9:c:293:THR:C	2.61	0.44
12:f:466:LEU:HD22	12:f:481:SER:O	2.18	0.44
12:f:792:ALA:O	12:f:796:LEU:HD13	2.16	0.44
14:A:278:ASP:OD1	14:A:321:THR:OG1	2.24	0.44
15:B:341:LEU:O	15:B:347:ILE:HD13	2.17	0.44
21:H:48:THR:HG21	21:H:64:LYS:CG	2.48	0.44
22:I:24:ALA:O	22:I:28:ILE:HG12	2.18	0.44
23:J:65:LEU:HB2	23:J:69:VAL:HG23	2.00	0.44
32:t:155:MET:SD	32:t:170:VAL:HB	2.58	0.44
1:U:12:LEU:HD12	1:U:20:LYS:HA	2.00	0.44
4:X:129:LEU:HD23	4:X:129:LEU:C	2.43	0.44
4:X:129:LEU:HD23	4:X:129:LEU:O	2.18	0.44
5:Y:14:ASN:OD1	5:Y:146:ARG:NH1	2.51	0.44
7:a:363:MET:HE1	9:c:307:VAL:C	2.43	0.44
12:f:138:GLU:O	12:f:142:TYR:CD2	2.71	0.44
12:f:497:VAL:HG12	12:f:501:LEU:HD12	2.00	0.44
12:f:570:GLY:O	12:f:573:ILE:HG12	2.17	0.44
12:f:829:MET:SD	12:f:830:LEU:N	2.91	0.44
12:f:834:ASP:N	12:f:838:ARG:O	2.41	0.44
14:A:139:ARG:CZ	14:A:154:PRO:O	2.66	0.44
14:A:259:GLU:O	14:A:263:MET:HG3	2.17	0.44
14:A:369:ARG:CD	14:A:372:LEU:HB3	2.48	0.44
15:B:346:ARG:HB3	15:B:347:ILE:HD12	1.99	0.44
17:D:385:LEU:O	17:D:386:ALA:C	2.60	0.44
18:E:76:GLY:N	18:E:77:PRO:HD2	2.32	0.44
20:G:80:MET:HE1	20:G:138:MET:CB	2.48	0.44
22:I:63:GLU:N	22:I:63:GLU:OE1	2.51	0.44
22:I:84:ASN:O	22:I:87:THR:HG22	2.17	0.44
23:J:116:GLN:CG	33:K:83:ALA:HB1	2.48	0.44
27:o:181:PHE:O	27:o:185:PHE:HB2	2.18	0.44
27:o:184:LYS:HG3	27:o:197:LEU:HD13	1.99	0.44
1:U:769:PHE:O	1:U:770:TRP:C	2.60	0.44
3:W:84:ASN:OD1	3:W:84:ASN:C	2.61	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:W:102:ALA:O	3:W:105:VAL:HG22	2.18	0.44
3:W:259:GLU:OE1	3:W:262:LYS:N	2.46	0.44
4:X:163:LYS:CG	4:X:200:ILE:HA	2.48	0.44
5:Y:168:ILE:O	5:Y:171:GLY:N	2.50	0.44
5:Y:190:ALA:O	5:Y:291:HIS:NE2	2.50	0.44
6:Z:243:GLN:HA	6:Z:246:VAL:HG22	1.99	0.44
8:b:21:PHE:HE1	8:b:175:PRO:HA	1.83	0.44
9:c:151:VAL:HG12	9:c:154:LYS:O	2.18	0.44
10:d:280:GLU:OE1	10:d:318:PHE:HB2	2.18	0.44
12:f:487:LEU:HD12	12:f:823:ALA:HB3	2.00	0.44
12:f:530:CYS:SG	12:f:566:HIS:ND1	2.88	0.44
13:y:52:THR:OG1	13:y:55:GLY:N	2.47	0.44
14:A:45:ILE:O	14:A:48:VAL:HG12	2.18	0.44
14:A:93:LEU:HD13	14:A:139:ARG:HD2	1.99	0.44
15:B:230:THR:HG21	15:B:353:PHE:O	2.18	0.44
15:B:233:THR:N	37:B:501:ADP:O1A	2.51	0.44
17:D:266:GLU:HA	17:D:310:ALA:O	2.18	0.44
19:F:180:ARG:O	19:F:181:PRO:C	2.60	0.44
22:I:249:ARG:HA	22:I:252:LYS:HG2	1.99	0.44
25:M:21:VAL:HG23	25:M:21:VAL:O	2.17	0.44
26:N:188:GLN:O	26:N:192:ASN:ND2	2.51	0.44
28:P:58:THR:HG22	29:Q:122:ALA:C	2.43	0.44
28:P:162:HIS:O	28:P:165:GLU:HG3	2.18	0.44
32:T:245:GLU:OE1	32:T:245:GLU:O	2.36	0.44
30:r:146:VAL:O	30:r:150:LYS:HG2	2.18	0.44
30:r:245:ARG:NH1	30:r:247:SER:O	2.50	0.44
1:U:331:GLY:O	1:U:334:ALA:HB3	2.18	0.43
1:U:336:GLU:OE2	1:U:417:LYS:NZ	2.44	0.43
1:U:601:ARG:O	1:U:605:VAL:HG12	2.17	0.43
1:U:688:LEU:HD23	1:U:730:ALA:CA	2.48	0.43
1:U:892:LEU:HD12	1:U:893:THR:N	2.33	0.43
2:V:81:GLN:O	2:V:84:LYS:HG3	2.18	0.43
2:V:98:LEU:CD2	2:V:101:LEU:HD11	2.47	0.43
2:V:231:LEU:HD12	2:V:250:LEU:CD1	2.45	0.43
2:V:480:ILE:HD11	6:Z:261:TYR:HA	1.99	0.43
4:X:87:ARG:CD	21:H:232:ALA:HB2	2.48	0.43
4:X:318:ILE:HB	4:X:322:HIS:CG	2.53	0.43
5:Y:138:LEU:HD11	5:Y:167:LEU:HD22	2.00	0.43
5:Y:227:SER:CA	5:Y:231:LEU:HD13	2.47	0.43
7:a:33:LEU:O	8:b:18:ASN:HA	2.18	0.43
8:b:57:ASP:OD1	8:b:57:ASP:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:770:HIS:O	12:f:773:LYS:N	2.50	0.43
17:D:266:GLU:O	18:E:258:MET:CE	2.66	0.43
17:D:357:GLU:O	17:D:357:GLU:CD	2.61	0.43
18:E:29:LEU:H	18:E:29:LEU:HD12	1.83	0.43
20:G:127:GLN:HG3	21:H:121:TYR:OH	2.18	0.43
27:O:48:GLY:O	27:O:153:LEU:HD21	2.17	0.43
29:Q:103:LEU:HG	29:Q:132:HIS:CD2	2.54	0.43
31:S:179:ASN:HB2	31:S:186:MET:HE1	2.00	0.43
32:T:152:TRP:HA	32:T:172:MET:HE2	2.00	0.43
28:p:60:VAL:O	28:p:63:VAL:HG12	2.17	0.43
1:U:549:ALA:CB	1:U:581:SER:OG	2.66	0.43
3:W:60:MET:N	3:W:60:MET:SD	2.91	0.43
3:W:271:VAL:O	3:W:275:ILE:HG12	2.18	0.43
4:X:74:ARG:N	4:X:75:PRO:HD2	2.33	0.43
4:X:415:TYR:CD1	5:Y:383:LEU:HD11	2.53	0.43
6:Z:180:LYS:HD3	6:Z:181:ASP:O	2.17	0.43
6:Z:184:VAL:HG13	6:Z:184:VAL:O	2.17	0.43
6:Z:249:PHE:CE2	9:c:303:MET:CE	3.01	0.43
7:a:127:ASP:HB3	7:a:131:THR:HG23	2.00	0.43
8:b:108:ARG:HA	8:b:137:ASN:OD1	2.18	0.43
8:b:131:LEU:HD12	8:b:136:VAL:CG1	2.48	0.43
9:c:42:LEU:HD23	9:c:42:LEU:C	2.43	0.43
9:c:57:MET:HB2	9:c:72:VAL:HG12	1.97	0.43
9:c:111:TRP:CZ3	9:c:113:HIS:ND1	2.86	0.43
10:d:168:MET:HA	10:d:171:LEU:HD12	1.99	0.43
10:d:237:MET:HA	10:d:237:MET:HE3	2.00	0.43
12:f:143:ARG:NE	12:f:158:TYR:OH	2.49	0.43
12:f:211:ILE:O	12:f:211:ILE:HG22	2.17	0.43
12:f:381:VAL:HA	12:f:770:HIS:O	2.17	0.43
14:A:81:ALA:O	14:A:85:GLN:OE1	2.36	0.43
14:A:249:TYR:CZ	15:B:259:TYR:CE1	3.06	0.43
16:C:329:LEU:HD13	16:C:351:MET:HE1	2.00	0.43
16:C:371:LEU:HD21	17:D:187:HIS:CD2	2.52	0.43
17:D:54:LEU:HD23	17:D:54:LEU:C	2.43	0.43
17:D:83:GLN:HA	17:D:140:VAL:HG11	2.00	0.43
17:D:191:TYR:CE1	17:D:199:PRO:HD3	2.53	0.43
17:D:312:ASN:OD1	17:D:313:ARG:N	2.50	0.43
17:D:335:LEU:HD22	17:D:371:SER:OG	2.18	0.43
17:D:341:LYS:HZ3	17:D:375:ILE:HD11	1.81	0.43
19:F:294:LYS:NZ	19:F:338:LEU:O	2.46	0.43
20:G:79:VAL:HG22	20:G:80:MET:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:G:105:TYR:CD1	27:O:125:MET:HE1	2.53	0.43
21:H:169:ASN:HA	21:H:172:THR:HG22	2.00	0.43
22:I:14:PRO:HA	23:J:21:TYR:CZ	2.53	0.43
23:J:158:ALA:HB3	33:K:58:LEU:CD2	2.48	0.43
24:L:66:VAL:HG21	24:L:88:MET:HB3	1.98	0.43
28:P:34:MET:SD	28:P:183:MET:HE2	2.58	0.43
29:Q:21:ALA:HB3	29:Q:29:LYS:HB3	2.00	0.43
29:Q:138:LEU:HD21	29:q:26:VAL:HG23	1.99	0.43
29:Q:171:PHE:CE2	29:Q:173:LEU:HD12	2.53	0.43
31:S:136:ASN:O	31:S:137:ILE:HD13	2.18	0.43
32:T:180:PRO:HB2	32:T:199:LEU:HD13	2.00	0.43
31:s:119:MET:O	31:s:122:THR:OG1	2.29	0.43
1:U:35:TRP:O	1:U:39:SER:OG	2.29	0.43
1:U:341:PHE:CE2	1:U:787:CYS:HB3	2.53	0.43
2:V:91:PRO:O	2:V:93:PHE:N	2.51	0.43
2:V:114:TYR:HA	2:V:117:VAL:HG22	1.99	0.43
3:W:181:GLU:OE2	3:W:185:PHE:CE1	2.71	0.43
3:W:200:ILE:HA	3:W:203:GLN:OE1	2.18	0.43
5:Y:88:LEU:CD2	5:Y:103:ALA:HB1	2.48	0.43
5:Y:168:ILE:HD11	5:Y:180:LEU:HD13	1.98	0.43
6:Z:123:ILE:HD11	6:Z:138:TYR:CD2	2.54	0.43
9:c:77:GLN:HB3	9:c:87:VAL:HG22	2.01	0.43
9:c:120:CYS:O	9:c:160:PHE:CZ	2.71	0.43
12:f:144:LEU:HD22	12:f:187:LEU:HD23	2.00	0.43
12:f:250:ARG:NH2	12:f:277:LEU:HD13	2.33	0.43
12:f:367:SER:O	12:f:371:ASN:ND2	2.51	0.43
14:A:44:GLN:HG3	15:B:65:LEU:HD21	2.00	0.43
14:A:297:ARG:HA	14:A:300:LEU:HD12	2.00	0.43
19:F:303:ASP:O	19:F:307:GLN:OE1	2.36	0.43
21:H:121:TYR:HE2	21:H:128:ARG:O	2.01	0.43
29:Q:4:LEU:HD13	29:Q:45:LEU:HB2	1.99	0.43
29:Q:18:ASP:CG	29:Q:20:VAL:HG12	2.43	0.43
30:R:85:ILE:HD11	28:p:177:ARG:HA	2.00	0.43
26:n:91:ASP:O	26:n:95:TYR:CD1	2.70	0.43
32:t:178:GLU:OE1	32:t:178:GLU:N	2.52	0.43
1:U:542:GLU:OE2	9:c:208:ARG:NE	2.52	0.43
2:V:108:LEU:O	2:V:109:ASN:C	2.61	0.43
2:V:348:PHE:CE2	2:V:361:PHE:HA	2.53	0.43
4:X:85:ALA:O	4:X:89:VAL:HG23	2.18	0.43
4:X:90:ARG:CZ	21:H:232:ALA:HB1	2.48	0.43
4:X:356:LEU:HD23	4:X:357:SER:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:Z:13:PRO:O	6:Z:17:LEU:HD13	2.19	0.43
6:Z:145:HIS:HD1	6:Z:149:THR:HG1	1.64	0.43
12:f:120:ARG:NH1	12:f:121:PHE:HB2	2.33	0.43
12:f:445:LEU:HD13	12:f:481:SER:CB	2.48	0.43
15:B:267:VAL:HG11	15:B:312:LEU:HD23	2.01	0.43
16:C:159:LYS:O	16:C:160:GLU:C	2.60	0.43
17:D:103:VAL:HG21	17:D:132:LEU:HD11	2.00	0.43
18:E:71:VAL:HG21	18:E:100:LEU:CD1	2.46	0.43
19:F:178:ASP:OD1	19:F:178:ASP:O	2.36	0.43
19:F:279:ALA:O	19:F:280:PRO:C	2.61	0.43
19:F:362:ARG:HA	19:F:365:ILE:HG22	1.99	0.43
22:I:52:ILE:O	22:I:53:HIS:C	2.61	0.43
22:I:98:LEU:HD23	22:I:98:LEU:C	2.43	0.43
22:I:231:LYS:O	22:I:235:GLN:OE1	2.37	0.43
24:L:24:TYR:CG	33:K:17:PRO:HA	2.53	0.43
29:Q:11:ASP:OD1	29:Q:11:ASP:N	2.50	0.43
31:S:173:LEU:HD22	31:S:206:VAL:HB	2.00	0.43
28:p:98:LYS:O	28:p:98:LYS:HG2	2.18	0.43
1:U:645:ASN:O	1:U:648:VAL:N	2.51	0.43
1:U:917:THR:O	1:U:918:SER:C	2.62	0.43
3:W:91:SER:N	3:W:104:MET:HE1	2.34	0.43
4:X:171:LEU:CD1	4:X:209:THR:HG22	2.43	0.43
7:a:38:THR:CG2	7:a:71:VAL:HG13	2.48	0.43
7:a:71:VAL:HG12	7:a:72:ASN:N	2.33	0.43
7:a:228:THR:HG22	7:a:229:ASP:H	1.84	0.43
8:b:6:THR:HA	8:b:108:ARG:O	2.17	0.43
8:b:51:LEU:CB	8:b:62:THR:HG22	2.47	0.43
9:c:210:ASN:OD1	9:c:213:GLU:OE1	2.37	0.43
9:c:261:GLU:O	9:c:262:GLU:C	2.59	0.43
12:f:50:LYS:O	12:f:50:LYS:HD3	2.19	0.43
12:f:545:LYS:NZ	12:f:550:LEU:HD21	2.33	0.43
12:f:701:ASN:HB2	12:f:876:HIS:NE2	2.34	0.43
14:A:113:ILE:HD12	14:A:132:THR:HG21	1.99	0.43
15:B:173:VAL:HG21	16:C:264:GLY:CA	2.49	0.43
16:C:338:LEU:HD23	16:C:338:LEU:H	1.84	0.43
18:E:56:ILE:CD1	18:E:102:MET:HE2	2.49	0.43
23:J:83:VAL:HG21	23:J:129:ILE:HD13	1.99	0.43
23:J:176:TYR:OH	23:J:181:ILE:HG21	2.19	0.43
24:L:193:ARG:HE	24:L:237:GLU:HG2	1.83	0.43
27:O:67:MET:HE2	31:s:214:ASP:OD1	2.17	0.43
29:Q:172:ILE:CG2	29:q:173:LEU:HD12	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:S:36:ASN:HD22	31:S:36:ASN:C	2.22	0.43
32:t:50:MET:O	32:t:52:THR:HG23	2.18	0.43
1:U:518:LEU:HD23	1:U:554:LEU:HD13	2.00	0.43
1:U:627:PHE:HZ	1:U:755:THR:HG22	1.84	0.43
2:V:306:ARG:HD2	2:V:339:LEU:HD12	1.98	0.43
2:V:364:THR:HA	2:V:367:VAL:HG12	2.00	0.43
2:V:374:LYS:HA	2:V:377:GLN:HG3	2.00	0.43
3:W:449:GLU:OE1	6:Z:223:ASN:ND2	2.48	0.43
5:Y:48:ASN:O	5:Y:113:ARG:O	2.36	0.43
7:a:94:LEU:HD21	7:a:121:LEU:HB3	2.00	0.43
7:a:105:LYS:HE2	7:a:105:LYS:HA	2.01	0.43
7:a:194:GLN:HE22	7:a:228:THR:HG21	1.83	0.43
10:d:193:GLY:O	10:d:196:LEU:HB2	2.18	0.43
12:f:279:GLU:O	12:f:283:THR:OG1	2.33	0.43
12:f:588:ARG:O	12:f:589:SER:C	2.62	0.43
12:f:614:HIS:O	12:f:618:GLU:OE1	2.36	0.43
14:A:90:GLU:O	14:A:144:ARG:NH2	2.50	0.43
17:D:231:VAL:HA	17:D:265:ASP:OD2	2.18	0.43
18:E:139:SER:O	18:E:142:ILE:HG22	2.18	0.43
19:F:254:PRO:HA	19:F:267:LEU:HD23	2.01	0.43
19:F:344:ARG:HD2	19:F:351:LYS:NZ	2.34	0.43
26:N:70:PRO:C	26:N:71:ILE:HD13	2.43	0.43
32:T:134:HIS:O	32:T:138:THR:HG23	2.19	0.43
31:s:229:GLU:OE1	31:s:232:ARG:NH1	2.49	0.43
32:t:171:ASP:OD2	32:t:175:VAL:HG22	2.19	0.43
1:U:383:ASP:OD1	1:U:383:ASP:N	2.50	0.43
1:U:688:LEU:HD23	1:U:730:ALA:HA	2.00	0.43
3:W:181:GLU:OE1	3:W:185:PHE:CZ	2.71	0.43
3:W:202:THR:O	3:W:205:ILE:HG22	2.18	0.43
3:W:442:THR:O	3:W:446:ILE:HG12	2.18	0.43
5:Y:22:LEU:HD11	5:Y:40:GLU:OE2	2.19	0.43
7:a:4:VAL:HG21	7:a:66:GLU:CG	2.49	0.43
8:b:12:ASN:O	8:b:81:LYS:N	2.48	0.43
8:b:46:GLU:OE1	8:b:46:GLU:N	2.36	0.43
10:d:305:LYS:O	10:d:306:ARG:CG	2.66	0.43
15:B:290:ILE:HG23	15:B:305:ILE:CG2	2.47	0.43
17:D:140:VAL:O	17:D:140:VAL:HG12	2.19	0.43
19:F:406:ILE:HA	19:F:409:ARG:CD	2.48	0.43
22:I:95:GLN:HG3	28:P:73:LEU:HD22	2.00	0.43
23:J:63:CYS:SG	23:J:65:LEU:HD21	2.59	0.43
24:L:50:LYS:NZ	24:L:210:VAL:O	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:L:196:ARG:HD2	24:L:236:LEU:HD21	2.00	0.43
25:M:151:MET:SD	25:M:152:ILE:N	2.92	0.43
29:Q:28:MET:HE1	30:R:180:ILE:HG23	1.99	0.43
32:T:71:MET:HG3	32:T:85:SER:HA	2.01	0.43
28:p:175:VAL:HB	28:p:182:GLY:HA2	2.00	0.43
29:q:18:ASP:OD1	29:q:34:LYS:NZ	2.50	0.43
30:r:160:ILE:HG23	30:r:160:ILE:O	2.18	0.43
31:s:226:VAL:HG22	31:s:231:ILE:HD13	2.00	0.43
1:U:265:ILE:HD12	1:U:326:ILE:HG23	2.00	0.43
1:U:675:MET:O	1:U:678:ASP:HB2	2.18	0.43
2:V:451:ILE:HD13	2:V:458:VAL:CG1	2.42	0.43
3:W:190:MET:HB2	3:W:229:LEU:HD13	2.00	0.43
4:X:48:GLN:O	4:X:51:LEU:N	2.52	0.43
4:X:183:LEU:HD12	4:X:184:PRO:N	2.34	0.43
5:Y:217:LYS:O	5:Y:220:VAL:HG22	2.18	0.43
6:Z:24:ASN:OD1	9:c:212:LEU:HD22	2.18	0.43
7:a:30:THR:HA	7:a:32:LYS:HZ3	1.84	0.43
8:b:30:GLN:O	8:b:33:VAL:HG12	2.19	0.43
10:d:156:ILE:HD13	10:d:194:LEU:CD2	2.49	0.43
12:f:53:GLN:C	12:f:57:GLU:OE1	2.61	0.43
12:f:788:MET:HA	12:f:788:MET:HE3	1.99	0.43
14:A:41:TYR:O	14:A:45:ILE:HG12	2.17	0.43
16:C:49:ARG:NH2	16:C:50:ASN:OD1	2.52	0.43
16:C:188:LEU:HD22	16:C:317:PHE:CZ	2.53	0.43
17:D:323:ARG:O	17:D:325:GLY:N	2.51	0.43
18:E:196:LEU:HB2	18:E:230:ILE:HD12	2.00	0.43
25:M:63:SER:O	25:M:64:ASN:C	2.62	0.43
29:Q:43:LEU:HD21	29:Q:45:LEU:HD21	2.00	0.43
26:n:114:ALA:HB3	26:n:154:MET:HE1	2.01	0.43
31:s:56:ARG:HE	31:s:219:ASP:CG	2.26	0.43
32:t:237:VAL:CG1	32:t:242:VAL:HG22	2.48	0.43
1:U:103:LYS:HA	1:U:106:ASP:OD2	2.19	0.43
1:U:366:HIS:CE1	1:U:396:ALA:HB2	2.54	0.43
1:U:600:ARG:HA	17:D:60:TYR:HE1	1.84	0.43
1:U:806:CYS:SG	1:U:891:VAL:HG21	2.59	0.43
2:V:182:LYS:O	2:V:185:GLN:NE2	2.51	0.43
2:V:192:MET:HE3	2:V:214:HIS:HB2	2.00	0.43
2:V:212:TYR:OH	11:e:21:GLU:OE1	2.36	0.43
2:V:494:MET:HB2	16:C:44:ARG:HD2	2.01	0.43
3:W:136:ILE:HG22	17:D:391:ARG:NH1	2.34	0.43
3:W:429:SER:OG	9:c:231:LEU:HD11	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:X:106:GLU:OE2	4:X:136:LEU:HD11	2.18	0.43
5:Y:88:LEU:HD22	5:Y:103:ALA:HB1	2.00	0.43
7:a:188:LEU:O	7:a:193:GLN:NE2	2.47	0.43
7:a:371:ALA:O	7:a:374:ILE:HG22	2.19	0.43
7:a:373:ASP:OD2	10:d:344:ARG:NH1	2.49	0.43
8:b:110:ILE:HA	8:b:139:ASP:O	2.19	0.43
9:c:141:VAL:HG23	9:c:161:ARG:HH21	1.84	0.43
11:e:45:ASP:O	11:e:47:ASN:N	2.52	0.43
11:e:46:ASP:C	11:e:46:ASP:OD1	2.62	0.43
12:f:729:MET:HA	12:f:732:VAL:HG12	2.01	0.43
14:A:195:LEU:HB3	34:z:205:VAL:HG22	1.99	0.43
14:A:368:ILE:HG22	14:A:369:ARG:N	2.34	0.43
17:D:244:PRO:HA	17:D:247:VAL:HG12	2.01	0.43
18:E:199:VAL:HA	18:E:233:ASP:OD1	2.19	0.43
19:F:86:LEU:O	19:F:88:TYR:N	2.49	0.43
19:F:248:PHE:CD1	19:F:282:ILE:HB	2.53	0.43
25:M:35:SER:O	25:M:36:THR:CG2	2.66	0.43
26:N:199:GLU:OE2	32:t:82:ARG:NH1	2.49	0.43
30:R:101:LEU:HD21	30:R:243:TRP:CG	2.53	0.43
30:R:127:LEU:HD21	33:K:71:ASP:H	1.83	0.43
30:R:184:THR:HB	30:R:198:MET:HE1	1.99	0.43
33:K:40:ILE:HD13	33:K:198:SER:HB2	2.01	0.43
33:K:90:ASP:O	33:K:94:VAL:HG23	2.19	0.43
30:r:94:ILE:O	30:r:96:ILE:HD12	2.18	0.43
30:r:114:TRP:CH2	30:r:154:LEU:HD12	2.54	0.43
1:U:12:LEU:HD23	1:U:44:LYS:NZ	2.34	0.43
1:U:567:ILE:HG22	1:U:601:ARG:HH22	1.84	0.43
1:U:764:LEU:O	1:U:767:THR:OG1	2.32	0.43
3:W:55:ARG:O	3:W:58:SER:N	2.51	0.43
6:Z:184:VAL:HG22	6:Z:186:THR:H	1.84	0.43
7:a:225:LEU:CD2	7:a:230:ARG:HB2	2.49	0.43
10:d:184:GLU:OE2	10:d:189:HIS:NE2	2.52	0.43
10:d:210:THR:O	10:d:213:GLU:HG3	2.18	0.43
10:d:305:LYS:C	10:d:307:GLY:H	2.26	0.43
16:C:69:GLN:OE1	16:C:118:ASN:HB2	2.18	0.43
20:G:186:LYS:HE2	20:G:186:LYS:HA	2.00	0.43
20:G:229:ILE:HG13	20:G:229:ILE:O	2.19	0.43
21:H:74:LEU:HD21	21:H:134:LEU:HG	2.01	0.43
21:H:222:THR:OG1	21:H:225:GLU:OE1	2.36	0.43
23:J:174:LYS:O	23:J:175:ASN:OD1	2.37	0.43
26:N:93:VAL:HG23	26:N:120:MET:CE	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:O:94:ASP:O	27:O:97:MET:HG2	2.19	0.43
29:Q:18:ASP:OD1	29:Q:20:VAL:N	2.52	0.43
29:Q:173:LEU:CB	29:Q:175:LEU:HD21	2.49	0.43
30:R:206:LEU:HD22	30:R:210:GLN:OE1	2.18	0.43
31:S:178:ASP:OD2	28:p:177:ARG:NE	2.43	0.43
32:T:106:GLN:O	32:T:110:GLN:OE1	2.36	0.43
33:K:21:LEU:O	33:K:22:PHE:HB3	2.19	0.43
26:n:173:VAL:HG13	26:n:174:ASP:N	2.34	0.43
28:p:13:ALA:CB	28:p:110:ALA:HB2	2.48	0.43
1:U:67:VAL:O	1:U:71:LEU:HD12	2.19	0.42
1:U:68:PHE:HB3	1:U:77:SER:HB2	2.00	0.42
1:U:185:MET:HE1	1:U:198:LEU:HD21	2.01	0.42
1:U:638:SER:OG	1:U:639:LEU:N	2.52	0.42
4:X:183:LEU:HD13	4:X:221:GLU:CB	2.48	0.42
4:X:299:LEU:HA	4:X:330:LEU:HD21	2.02	0.42
4:X:379:ASP:OD1	4:X:381:GLY:N	2.49	0.42
5:Y:117:LYS:CD	5:Y:117:LYS:N	2.81	0.42
5:Y:313:SER:C	5:Y:353:ILE:HD11	2.44	0.42
6:Z:45:LYS:HG2	6:Z:46:LYS:H	1.84	0.42
6:Z:67:VAL:HG11	8:b:91:ARG:HB3	2.00	0.42
7:a:232:TRP:CH2	7:a:255:TRP:HB3	2.54	0.42
8:b:43:SER:OG	8:b:44:ASN:N	2.51	0.42
8:b:161:ASN:O	8:b:165:GLY:N	2.39	0.42
9:c:91:PHE:CD1	9:c:91:PHE:C	2.96	0.42
10:d:98:LEU:HD22	10:d:115:GLU:HG3	2.00	0.42
10:d:280:GLU:OE2	10:d:319:ALA:HB3	2.19	0.42
12:f:333:LEU:HD23	12:f:333:LEU:C	2.44	0.42
12:f:376:PHE:CE1	12:f:818:LEU:HD11	2.54	0.42
14:A:369:ARG:O	14:A:373:LEU:HD23	2.19	0.42
15:B:198:LYS:HE2	15:B:198:LYS:HA	2.00	0.42
15:B:338:ASP:OD2	15:B:341:LEU:N	2.52	0.42
17:D:153:MET:O	17:D:154:LEU:HB2	2.19	0.42
17:D:414:HIS:O	17:D:417:TYR:HB3	2.19	0.42
18:E:155:ASN:O	18:E:157:GLU:N	2.52	0.42
19:F:225:MET:HE1	19:F:233:LYS:HA	2.01	0.42
20:G:101:TRP:CZ2	20:G:113:MET:HG3	2.54	0.42
22:I:236:LEU:O	22:I:239:LYS:HG2	2.19	0.42
23:J:116:GLN:HA	23:J:119:THR:HG22	2.01	0.42
28:P:136:PHE:CG	28:P:150:CYS:HB3	2.54	0.42
29:Q:16:ALA:CB	29:Q:160:LEU:HD21	2.46	0.42
29:Q:151:ILE:HG13	29:Q:155:ARG:HD2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:T:107:TYR:HA	32:T:110:GLN:OE1	2.19	0.42
33:K:70:ILE:HB	33:K:74:ILE:HB	2.01	0.42
33:K:102:THR:HG1	33:K:103:TYR:HD1	1.65	0.42
29:q:6:GLY:HA3	29:q:115:LEU:HD22	2.01	0.42
30:r:197:VAL:HG11	30:r:218:ALA:HA	2.00	0.42
1:U:368:ALA:C	1:U:731:ILE:HG21	2.44	0.42
3:W:393:LEU:O	3:W:397:VAL:HG12	2.20	0.42
9:c:48:GLY:HA3	9:c:53:VAL:HG11	2.00	0.42
10:d:333:THR:O	10:d:337:LYS:HG3	2.19	0.42
10:d:347:GLU:O	17:D:66:LYS:NZ	2.52	0.42
12:f:337:LEU:HD13	34:z:210:ILE:CG1	2.48	0.42
12:f:346:ASP:O	12:f:349:TYR:O	2.37	0.42
12:f:379:GLY:HA2	12:f:417:ILE:CD1	2.49	0.42
14:A:369:ARG:CD	14:A:372:LEU:CB	2.97	0.42
15:B:383:LEU:HD13	15:B:398:ILE:HG21	2.01	0.42
17:D:234:GLU:OE1	17:D:234:GLU:N	2.48	0.42
19:F:394:ALA:HB2	35:F:501:ATP:O4'	2.19	0.42
21:H:48:THR:HG21	21:H:64:LYS:HG2	2.01	0.42
22:I:75:SER:O	22:I:134:LEU:HD13	2.19	0.42
24:L:178:GLU:OE1	24:L:178:GLU:N	2.39	0.42
25:M:162:TRP:HB3	25:M:182:MET:SD	2.60	0.42
26:N:228:ILE:O	26:N:230:LYS:NZ	2.37	0.42
27:O:50:VAL:HG22	27:O:55:ILE:HG22	2.00	0.42
27:O:83:ASN:OD1	27:O:83:ASN:N	2.51	0.42
27:O:155:SER:HB3	27:O:168:VAL:HG21	1.99	0.42
27:O:259:ILE:HD11	28:P:196:THR:HG23	2.01	0.42
26:n:208:ILE:HB	26:n:223:LEU:HB2	2.01	0.42
28:p:133:THR:HG22	28:p:137:VAL:CG1	2.49	0.42
31:s:65:THR:HG22	32:t:177:TYR:HE1	1.84	0.42
31:s:194:LEU:HD11	31:s:199:ALA:HB2	2.01	0.42
1:U:160:LEU:HD11	1:U:196:LYS:HB3	2.01	0.42
2:V:224:LEU:HA	2:V:227:VAL:CG2	2.50	0.42
3:W:69:ALA:O	3:W:73:MET:CE	2.67	0.42
3:W:278:PRO:O	3:W:283:GLN:OE1	2.37	0.42
4:X:160:MET:HE2	21:H:176:LYS:CB	2.49	0.42
5:Y:143:TYR:O	5:Y:147:ILE:HD12	2.18	0.42
6:Z:101:LEU:HD23	6:Z:102:HIS:N	2.34	0.42
6:Z:113:LYS:HA	6:Z:116:CYS:O	2.19	0.42
6:Z:216:ALA:HA	7:a:343:LEU:HD11	2.01	0.42
9:c:303:MET:HA	9:c:303:MET:HE2	2.02	0.42
12:f:170:TRP:CD2	12:f:211:ILE:HG23	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:432:TYR:O	12:f:433:LEU:HB2	2.19	0.42
15:B:107:MET:HE3	16:C:95:PHE:CD2	2.54	0.42
15:B:414:VAL:HG12	15:B:415:THR:N	2.34	0.42
16:C:31:LEU:O	16:C:35:VAL:HG23	2.19	0.42
16:C:366:ALA:HB1	16:C:383:PHE:HD1	1.84	0.42
17:D:358:VAL:HG13	17:D:359:ASP:N	2.35	0.42
18:E:325:GLU:O	18:E:365:GLU:OE1	2.38	0.42
21:H:69:THR:HG22	21:H:70:LYS:H	1.83	0.42
27:O:149:THR:HG23	27:O:152:HIS:NE2	2.34	0.42
28:P:66:ARG:NH2	28:P:69:PHE:CG	2.88	0.42
30:R:62:THR:HG21	30:R:103:THR:CG2	2.49	0.42
31:S:67:ASP:OD1	31:S:222:ARG:NH2	2.52	0.42
31:S:176:LEU:HA	28:p:149:MET:HE1	2.01	0.42
27:o:133:TYR:CD2	27:o:137:ILE:HD11	2.54	0.42
27:o:254:VAL:HG13	28:p:198:ARG:HD3	2.01	0.42
29:q:164:LEU:HD13	29:q:178:PHE:CB	2.50	0.42
32:t:73:GLY:HA2	32:t:102:TYR:OH	2.19	0.42
32:t:96:LEU:HD11	32:t:155:MET:HB2	2.00	0.42
1:U:2:ILE:HG13	1:U:3:THR:N	2.35	0.42
1:U:101:ILE:HG22	1:U:105:ILE:HD11	2.01	0.42
1:U:645:ASN:HB2	1:U:648:VAL:HG23	2.01	0.42
4:X:314:ARG:O	4:X:315:ASP:HB3	2.20	0.42
5:Y:165:LYS:HA	5:Y:168:ILE:HD12	2.00	0.42
6:Z:72:HIS:HB2	6:Z:115:TYR:OH	2.19	0.42
6:Z:257:MET:HE2	6:Z:257:MET:CA	2.49	0.42
10:d:103:ASN:O	10:d:104:ARG:C	2.63	0.42
12:f:89:MET:HE1	14:A:400:ARG:N	2.34	0.42
12:f:870:THR:O	12:f:872:VAL:N	2.52	0.42
15:B:310:LEU:HD23	15:B:310:LEU:C	2.44	0.42
19:F:188:ILE:HD11	19:F:191:LEU:HD12	2.01	0.42
19:F:291:ILE:HG22	19:F:292:GLY:H	1.85	0.42
19:F:380:ASN:O	19:F:381:TYR:C	2.62	0.42
21:H:121:TYR:CE1	21:H:127:VAL:HB	2.55	0.42
22:I:175:LEU:O	22:I:179:TYR:HB2	2.19	0.42
24:L:12:VAL:O	24:L:12:VAL:HG13	2.19	0.42
24:L:192:LEU:HB3	24:L:236:LEU:HD22	2.01	0.42
25:M:91:ILE:HA	25:M:94:GLU:OE1	2.18	0.42
26:N:183:LYS:O	26:N:187:LEU:HG	2.19	0.42
27:O:85:TYR:HB2	27:O:221:ILE:HD11	2.01	0.42
32:T:57:LEU:HD21	32:T:214:VAL:HG12	2.00	0.42
32:T:235:ALA:HB2	32:T:244:ILE:HD13	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:s:99:ARG:HD2	31:s:123:ILE:HD11	2.01	0.42
1:U:381:THR:O	1:U:381:THR:HG22	2.19	0.42
1:U:542:GLU:O	1:U:546:ARG:HG3	2.19	0.42
1:U:695:MET:CB	1:U:737:LEU:HD21	2.44	0.42
6:Z:111:LEU:O	6:Z:114:ARG:HB3	2.20	0.42
7:a:213:PHE:CD1	7:a:216:LEU:HD12	2.52	0.42
8:b:93:ALA:HB1	8:b:109:ILE:HD13	2.01	0.42
12:f:140:LEU:HD21	12:f:166:VAL:HG22	2.02	0.42
12:f:758:ASN:O	12:f:762:VAL:HG23	2.19	0.42
12:f:784:ASP:OD1	12:f:879:ARG:NH1	2.53	0.42
12:f:851:ASP:O	12:f:855:GLN:NE2	2.48	0.42
14:A:54:GLN:HA	14:A:57:LYS:HE3	2.02	0.42
14:A:120:LYS:O	14:A:121:PHE:CG	2.73	0.42
14:A:142:VAL:HG23	14:A:150:HIS:CE1	2.53	0.42
14:A:310:ASP:N	14:A:310:ASP:OD1	2.53	0.42
16:C:29:GLU:O	16:C:33:LEU:HD13	2.19	0.42
16:C:220:VAL:HG22	16:C:221:GLN:N	2.34	0.42
16:C:351:MET:HG3	16:C:351:MET:O	2.19	0.42
17:D:138:ALA:O	17:D:140:VAL:HG23	2.19	0.42
17:D:384:MET:HE1	18:E:164:ILE:HD13	2.02	0.42
18:E:158:LEU:O	18:E:161:ARG:HB2	2.19	0.42
21:H:101:TYR:O	21:H:103:GLU:N	2.48	0.42
25:M:50:VAL:CG1	25:M:213:GLU:HB3	2.50	0.42
32:T:50:MET:HG3	32:T:51:VAL:N	2.35	0.42
28:p:138:VAL:HB	28:p:146:MET:SD	2.59	0.42
29:q:12:TYR:HB2	29:q:182:ILE:HD11	2.00	0.42
30:r:206:LEU:CD1	30:r:210:GLN:OE1	2.68	0.42
32:t:223:TYR:HE1	32:t:252:THR:HG22	1.84	0.42
1:U:176:MET:HE2	1:U:176:MET:CA	2.50	0.42
2:V:224:LEU:O	2:V:226:VAL:N	2.53	0.42
3:W:35:ALA:HA	3:W:39:ARG:HD3	2.02	0.42
4:X:135:SER:HB2	4:X:172:LEU:HD11	2.01	0.42
4:X:166:LEU:C	4:X:166:LEU:HD23	2.44	0.42
4:X:341:PRO:O	4:X:342:PHE:CD1	2.73	0.42
5:Y:214:MET:HE2	5:Y:218:THR:C	2.43	0.42
7:a:363:MET:HE3	7:a:363:MET:HB2	1.83	0.42
9:c:272:ILE:HG22	17:D:98:GLN:NE2	2.35	0.42
9:c:287:HIS:O	9:c:290:VAL:HG12	2.19	0.42
12:f:129:LEU:HA	12:f:132:THR:HG22	2.00	0.42
12:f:287:ASP:OD1	12:f:288:VAL:N	2.52	0.42
14:A:132:THR:C	14:A:138:MET:HE1	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:C:24:TYR:CD2	17:D:41:TYR:CE1	3.08	0.42
16:C:355:SER:O	16:C:359:VAL:HG23	2.20	0.42
17:D:216:ALA:O	17:D:219:VAL:HG22	2.20	0.42
35:D:501:ATP:H5'2	35:D:501:ATP:C8	2.55	0.42
19:F:226:TYR:O	19:F:228:PRO:HD3	2.20	0.42
21:H:11:THR:O	21:H:13:PHE:N	2.49	0.42
23:J:16:LEU:O	23:J:19:VAL:HG12	2.20	0.42
23:J:71:MET:HA	23:J:132:LEU:O	2.19	0.42
28:P:160:PRO:O	28:P:164:PHE:CD2	2.72	0.42
32:T:61:PHE:CD1	32:T:62:GLU:N	2.87	0.42
27:o:102:ILE:HB	27:o:126:LEU:HD21	2.01	0.42
28:p:3:ILE:O	28:p:56:LEU:HD21	2.18	0.42
30:r:94:ILE:HG22	30:r:95:GLU:N	2.34	0.42
30:r:206:LEU:HD21	30:r:211:ALA:CB	2.50	0.42
31:s:141:LEU:HD11	31:s:227:THR:HA	2.02	0.42
1:U:377:HIS:O	1:U:380:THR:HG23	2.19	0.42
1:U:380:THR:N	1:U:411:ILE:O	2.53	0.42
1:U:665:ASN:OD1	1:U:667:GLU:N	2.52	0.42
2:V:443:ARG:NH1	10:d:274:CYS:HA	2.35	0.42
2:V:443:ARG:NH1	10:d:277:LYS:HB2	2.35	0.42
5:Y:282:MET:SD	5:Y:288:PHE:CG	3.13	0.42
7:a:102:GLU:HA	7:a:105:LYS:HE3	2.02	0.42
7:a:363:MET:HE1	9:c:307:VAL:HG22	2.02	0.42
12:f:206:ASP:O	12:f:210:GLU:OE1	2.38	0.42
12:f:550:LEU:HD13	12:f:587:PHE:CD1	2.55	0.42
12:f:559:PRO:CG	12:f:591:ALA:HB1	2.47	0.42
12:f:600:TYR:OH	12:f:612:LEU:HD21	2.19	0.42
14:A:140:VAL:HG13	14:A:141:GLY:N	2.34	0.42
15:B:64:LYS:O	15:B:68:ILE:HD12	2.18	0.42
19:F:121:CYS:N	19:F:137:ILE:HD11	2.35	0.42
20:G:21:ARG:NE	20:G:21:ARG:HA	2.35	0.42
20:G:72:ILE:HD11	20:G:78:CYS:SG	2.59	0.42
20:G:114:LEU:O	20:G:118:ILE:CD1	2.68	0.42
23:J:92:GLN:NE2	29:Q:66:LEU:HD22	2.34	0.42
28:P:149:MET:SD	31:s:176:LEU:HB2	2.60	0.42
33:K:201:ILE:O	33:K:205:VAL:HG22	2.19	0.42
29:q:160:LEU:O	29:q:164:LEU:HG	2.20	0.42
29:q:176:PRO:O	29:q:196:PHE:N	2.44	0.42
30:r:147:TYR:HA	30:r:150:LYS:HE2	2.00	0.42
30:r:192:VAL:HG13	30:r:193:TYR:N	2.35	0.42
31:s:119:MET:HE2	31:s:119:MET:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:t:141:MET:CE	32:t:171:ASP:O	2.67	0.42
2:V:171:VAL:HG12	2:V:175:MET:CE	2.50	0.42
3:W:55:ARG:HE	3:W:95:SER:HB2	1.83	0.42
3:W:378:MET:HE1	3:W:393:LEU:HD11	2.02	0.42
4:X:86:ALA:O	4:X:90:ARG:HD2	2.20	0.42
4:X:255:LEU:HD21	4:X:270:LEU:HD22	2.01	0.42
5:Y:234:PRO:O	5:Y:237:ARG:HB2	2.20	0.42
7:a:97:LEU:HD11	7:a:121:LEU:HD12	2.02	0.42
10:d:198:PHE:HB2	10:d:259:PHE:CE2	2.55	0.42
12:f:132:THR:O	12:f:133:MET:HE2	2.19	0.42
12:f:659:LEU:O	12:f:662:MET:CE	2.68	0.42
14:A:272:ILE:HG23	14:A:317:VAL:HG13	2.01	0.42
15:B:235:LEU:HD13	15:B:353:PHE:CZ	2.54	0.42
17:D:332:GLU:OE1	17:D:332:GLU:N	2.51	0.42
17:D:370:ILE:HD12	17:D:375:ILE:CD1	2.50	0.42
18:E:235:ILE:H	18:E:235:ILE:HD12	1.85	0.42
19:F:339:ASP:HB3	19:F:342:LEU:HB3	2.02	0.42
20:G:80:MET:HE1	20:G:138:MET:HG3	2.01	0.42
23:J:92:GLN:O	23:J:96:LEU:HD23	2.20	0.42
27:O:106:LEU:HD11	27:O:117:PRO:HB2	2.02	0.42
27:O:259:ILE:CD1	28:P:196:THR:HG23	2.50	0.42
28:P:67:LEU:HD21	28:P:87:LEU:HD11	2.02	0.42
31:S:134:VAL:O	31:S:134:VAL:HG23	2.19	0.42
32:T:54:THR:OG1	32:T:55:SER:N	2.52	0.42
26:n:52:SER:HB2	26:n:207:VAL:HG22	2.00	0.42
26:n:61:ALA:O	26:n:62:ASN:C	2.62	0.42
29:q:147:TYR:HD1	29:q:151:ILE:HG21	1.83	0.42
34:z:182:ASP:OD1	34:z:183:LYS:N	2.52	0.42
1:U:376:MET:HE2	1:U:735:GLY:HA2	2.00	0.42
1:U:492:ASP:N	1:U:492:ASP:OD1	2.50	0.42
3:W:74:CYS:CB	3:W:83:LEU:HD13	2.49	0.42
4:X:114:ILE:O	4:X:126:ARG:NH1	2.47	0.42
4:X:270:LEU:HD23	4:X:270:LEU:C	2.45	0.42
5:Y:88:LEU:HD11	5:Y:107:LYS:CD	2.50	0.42
5:Y:246:ILE:O	5:Y:250:LEU:CD2	2.65	0.42
5:Y:275:LEU:HA	5:Y:278:VAL:HG22	2.02	0.42
6:Z:79:TYR:OH	6:Z:90:ARG:HB2	2.18	0.42
9:c:107:MET:HE3	13:y:38:THR:C	2.42	0.42
12:f:326:LEU:HD11	12:f:420:TRP:HB3	2.00	0.42
12:f:710:LEU:HD23	12:f:729:MET:N	2.35	0.42
12:f:834:ASP:OD1	12:f:900:LEU:N	2.43	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:B:201:VAL:HG13	15:B:281:ILE:CD1	2.50	0.42
16:C:19:GLY:O	16:C:20:LEU:C	2.61	0.42
16:C:45:LEU:HB3	17:D:61:ILE:HG21	2.00	0.42
17:D:85:ILE:HB	17:D:86:PRO:HD3	2.02	0.42
17:D:417:TYR:CZ	20:G:21:ARG:NE	2.88	0.42
19:F:133:PHE:CD1	19:F:133:PHE:C	2.98	0.42
19:F:387:CYS:O	19:F:388:THR:C	2.63	0.42
20:G:170:VAL:HG23	20:G:171:LYS:HG2	2.02	0.42
21:H:118:MET:O	21:H:122:THR:OG1	2.29	0.42
22:I:99:LEU:CD1	28:P:65:GLN:HB3	2.50	0.42
23:J:46:GLU:HG2	23:J:48:LYS:H	1.85	0.42
24:L:158:ALA:HB1	24:L:172:LEU:HD22	2.01	0.42
28:P:32:ALA:HB2	30:r:228:TYR:CD2	2.54	0.42
28:P:121:ILE:HB	28:P:137:VAL:HG13	2.02	0.42
30:R:128:ARG:NE	33:K:90:ASP:OD1	2.51	0.42
32:T:108:LEU:HA	32:T:111:VAL:HG22	2.02	0.42
32:T:169:TYR:CD1	32:T:184:THR:HG22	2.55	0.42
1:U:12:LEU:HD11	1:U:20:LYS:HG2	2.02	0.42
1:U:213:PHE:HA	1:U:216:VAL:HB	2.01	0.42
1:U:522:GLY:HA2	1:U:558:GLY:H	1.84	0.42
2:V:161:PRO:HA	2:V:164:GLU:OE2	2.20	0.42
3:W:190:MET:SD	3:W:205:ILE:HG23	2.60	0.42
3:W:263:TRP:CZ2	3:W:264:GLN:NE2	2.88	0.42
4:X:183:LEU:HD12	4:X:183:LEU:C	2.45	0.42
4:X:271:VAL:CG2	4:X:288:LYS:HZ3	2.32	0.42
6:Z:15:VAL:HA	6:Z:18:SER:OG	2.20	0.42
7:a:120:ALA:CA	7:a:158:LEU:HD11	2.50	0.42
9:c:51:MET:O	9:c:53:VAL:N	2.53	0.42
9:c:155:VAL:C	9:c:157:ILE:HD12	2.45	0.42
9:c:303:MET:HE2	9:c:303:MET:CA	2.50	0.42
10:d:160:ASP:OD1	10:d:163:SER:OG	2.37	0.42
12:f:536:SER:O	12:f:540:GLN:OE1	2.37	0.42
12:f:770:HIS:O	12:f:771:LEU:C	2.62	0.42
14:A:94:GLN:CD	14:A:117:GLN:HG2	2.45	0.42
16:C:59:LEU:HD23	16:C:59:LEU:C	2.45	0.42
18:E:273:VAL:HG12	18:E:274:LYS:N	2.35	0.42
19:F:88:TYR:CD1	19:F:161:LEU:HD12	2.54	0.42
19:F:141:ASP:CG	19:F:144:LYS:HZ1	2.24	0.42
21:H:68:ILE:CD1	21:H:74:LEU:HD13	2.49	0.42
22:I:122:THR:HG22	22:I:129:PRO:HB3	2.02	0.42
23:J:188:ILE:HG23	23:J:208:LEU:HD21	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:M:38:ILE:HD13	25:M:198:ILE:CD1	2.47	0.42
27:O:44:THR:HG23	27:O:76:LYS:HD2	2.01	0.42
27:O:44:THR:HG22	27:O:45:THR:N	2.35	0.42
28:P:30:ILE:HG22	28:P:31:GLN:HG2	2.01	0.42
29:Q:19:ARG:O	29:Q:32:HIS:N	2.37	0.42
33:K:21:LEU:C	33:K:23:GLN:H	2.28	0.42
33:K:67:ILE:HD13	33:K:77:ALA:HA	2.02	0.42
26:n:82:SER:OG	26:n:85:ASP:OD2	2.37	0.42
28:p:6:TYR:HB3	28:p:56:LEU:HD13	2.01	0.42
29:q:15:VAL:HG21	29:q:43:LEU:HD22	2.02	0.42
32:t:66:VAL:CG2	32:t:236:THR:HG22	2.50	0.42
32:t:237:VAL:HG12	32:t:242:VAL:HG13	2.02	0.42
1:U:252:LEU:HD23	1:U:329:LEU:HD22	2.03	0.41
1:U:583:MET:HE2	1:U:583:MET:HA	2.02	0.41
1:U:701:ILE:CG2	1:U:810:THR:HG23	2.49	0.41
1:U:800:VAL:HG22	1:U:801:GLN:N	2.35	0.41
2:V:266:GLN:HA	2:V:269:LYS:HE2	2.01	0.41
6:Z:127:LYS:HD2	6:Z:128:PRO:O	2.20	0.41
9:c:219:ASN:O	9:c:222:LYS:HG2	2.20	0.41
12:f:406:GLY:O	12:f:407:MET:HE2	2.20	0.41
12:f:465:LEU:HD11	13:y:395:LEU:CD2	2.50	0.41
14:A:130:ALA:O	14:A:131:PRO:C	2.63	0.41
15:B:125:THR:HB	15:B:129:SER:HB3	2.01	0.41
16:C:348:ALA:HA	16:C:351:MET:HE2	2.02	0.41
17:D:97:ASP:OD1	17:D:98:GLN:N	2.49	0.41
17:D:117:SER:O	17:D:118:THR:HG22	2.20	0.41
17:D:196:ILE:HG23	17:D:196:ILE:O	2.20	0.41
17:D:272:THR:HG1	17:D:316:THR:HG1	1.57	0.41
19:F:230:GLY:HA3	35:F:501:ATP:PG	2.59	0.41
19:F:266:LYS:HA	19:F:269:ARG:HE	1.85	0.41
21:H:147:PHE:HZ	22:I:59:VAL:HG11	1.85	0.41
23:J:68:ASN:ND2	23:J:102:VAL:O	2.53	0.41
23:J:222:PRO:HD2	23:J:223:GLU:H	1.85	0.41
26:N:138:ASP:N	26:N:138:ASP:OD1	2.52	0.41
26:N:151:GLY:CA	32:T:50:MET:HE1	2.50	0.41
28:P:149:MET:N	28:P:149:MET:HE2	2.35	0.41
30:R:119:ALA:HA	30:R:122:CYS:SG	2.60	0.41
28:p:4:MET:HE3	28:p:104:TYR:CD1	2.54	0.41
31:s:36:ASN:HB2	31:s:84:GLY:O	2.20	0.41
1:U:645:ASN:HB2	1:U:648:VAL:CG2	2.50	0.41
2:V:168:GLN:NE2	2:V:187:ILE:HG22	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:190:ASP:O	2:V:194:LYS:HG2	2.20	0.41
2:V:349:ARG:HA	2:V:349:ARG:NE	2.35	0.41
3:W:34:LEU:HB3	3:W:43:VAL:CG2	2.49	0.41
4:X:122:ARG:HG3	4:X:125:LEU:HD12	2.01	0.41
4:X:163:LYS:CE	4:X:199:ALA:HB3	2.50	0.41
4:X:170:GLN:OE1	4:X:193:ALA:N	2.53	0.41
5:Y:314:LEU:HB3	5:Y:319:MET:HE2	2.01	0.41
6:Z:23:PHE:CD2	6:Z:126:VAL:HG21	2.54	0.41
9:c:191:ALA:HB1	9:c:196:LEU:HB2	2.01	0.41
9:c:203:ILE:HG22	9:c:204:THR:N	2.35	0.41
14:A:147:TYR:N	14:A:147:TYR:CD1	2.87	0.41
14:A:196:LEU:O	14:A:200:ARG:NH1	2.53	0.41
14:A:325:ASP:OD1	14:A:326:THR:HG23	2.20	0.41
16:C:230:MET:O	16:C:233:GLU:HG2	2.19	0.41
16:C:327:ASP:OD1	16:C:328:ILE:HG13	2.19	0.41
16:C:368:MET:HE1	17:D:191:TYR:OH	2.20	0.41
17:D:415:GLU:HB3	20:G:159:TYR:CE2	2.55	0.41
18:E:176:PRO:HB3	19:F:341:ALA:HA	2.02	0.41
19:F:415:LEU:HD22	19:F:420:TYR:OH	2.21	0.41
20:G:31:ALA:HB2	25:M:19:GLY:O	2.20	0.41
20:G:92:GLN:HG3	25:M:118:MET:HE2	2.01	0.41
23:J:11:SER:HG	23:J:15:HIS:H	1.67	0.41
24:L:91:GLU:OE1	24:L:108:LEU:CD1	2.68	0.41
25:M:54:VAL:HG13	25:M:54:VAL:O	2.20	0.41
27:O:71:ASP:CB	28:P:131:MET:HE2	2.50	0.41
29:Q:172:ILE:O	29:q:174:ASN:N	2.45	0.41
32:T:141:MET:HE2	32:T:170:VAL:HG11	2.02	0.41
1:U:414:GLY:O	1:U:416:GLU:N	2.51	0.41
1:U:497:LEU:HD21	1:U:515:ALA:HB1	2.01	0.41
1:U:560:MET:N	1:U:560:MET:HE2	2.34	0.41
2:V:432:GLU:HA	2:V:435:GLU:CD	2.45	0.41
3:W:229:LEU:HA	3:W:232:GLN:OE1	2.20	0.41
3:W:237:GLU:OE1	3:W:238:GLY:N	2.53	0.41
4:X:406:ASN:C	4:X:406:ASN:ND2	2.78	0.41
6:Z:198:LEU:HD21	9:c:304:LEU:HD22	2.02	0.41
7:a:35:HIS:O	7:a:36:GLN:NE2	2.53	0.41
8:b:20:ASP:CG	8:b:25:ARG:HE	2.28	0.41
8:b:181:ASP:HA	8:b:184:ILE:HG22	2.02	0.41
10:d:90:ALA:O	10:d:94:MET:HG3	2.20	0.41
12:f:140:LEU:HD22	12:f:165:GLU:HB3	2.01	0.41
12:f:331:LEU:O	12:f:335:ARG:NE	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:B:70:ASP:O	15:B:74:MET:HG2	2.21	0.41
15:B:255:LEU:HD23	15:B:255:LEU:H	1.85	0.41
17:D:293:LEU:HD23	17:D:296:MET:HE2	2.02	0.41
19:F:87:PRO:O	19:F:89:LEU:N	2.54	0.41
19:F:230:GLY:HA3	35:F:501:ATP:O3B	2.20	0.41
20:G:205:VAL:HG23	20:G:206:LEU:CD2	2.49	0.41
23:J:39:ASP:O	23:J:213:ARG:N	2.54	0.41
23:J:88:ARG:HH22	29:Q:69:MET:C	2.27	0.41
23:J:131:ALA:O	23:J:132:LEU:HD22	2.19	0.41
24:L:89:ARG:NE	31:S:105:HIS:HB3	2.35	0.41
25:M:91:ILE:C	25:M:95:GLU:OE1	2.64	0.41
25:M:98:ASN:O	25:M:101:SER:OG	2.30	0.41
31:S:36:ASN:ND2	31:S:36:ASN:O	2.50	0.41
33:K:22:PHE:CE2	33:K:26:TYR:CZ	3.08	0.41
27:o:45:THR:O	27:o:202:ILE:HD12	2.19	0.41
31:s:197:ASP:O	31:s:200:MET:HG3	2.20	0.41
34:z:164:THR:O	34:z:165:GLY:C	2.64	0.41
1:U:160:LEU:HD22	1:U:200:VAL:HG21	2.02	0.41
1:U:250:PHE:CE1	1:U:328:ILE:HG23	2.56	0.41
1:U:333:MET:O	1:U:337:LEU:HD13	2.21	0.41
3:W:273:TYR:CZ	3:W:340:VAL:HG13	2.56	0.41
3:W:446:ILE:HD13	6:Z:226:ILE:CD1	2.49	0.41
4:X:202:CYS:N	4:X:203:PRO:CD	2.83	0.41
5:Y:84:LEU:O	5:Y:88:LEU:HG	2.20	0.41
5:Y:279:GLU:CD	5:Y:296:VAL:HG21	2.45	0.41
6:Z:223:ASN:O	6:Z:226:ILE:HG22	2.19	0.41
7:a:130:VAL:O	7:a:134:THR:HG23	2.20	0.41
7:a:366:LEU:HD23	7:a:366:LEU:C	2.45	0.41
9:c:133:PHE:HE1	13:y:102:VAL:HG12	1.85	0.41
9:c:136:LEU:HD21	13:y:100:PRO:HG3	2.01	0.41
10:d:171:LEU:HD22	10:d:175:TYR:CE2	2.55	0.41
10:d:194:LEU:HD13	10:d:256:TYR:HA	2.02	0.41
18:E:204:VAL:HG12	18:E:205:ASP:H	1.84	0.41
18:E:319:PRO:O	18:E:320:ILE:C	2.63	0.41
18:E:368:MET:O	18:E:371:VAL:HG12	2.20	0.41
20:G:26:GLU:HB3	20:G:30:LYS:NZ	2.36	0.41
24:L:123:TYR:O	24:L:123:TYR:CG	2.72	0.41
25:M:54:VAL:HG23	25:M:59:TYR:HB2	2.02	0.41
26:N:210:LEU:HD12	26:N:221:GLN:HE21	1.85	0.41
27:O:129:MET:SD	27:O:130:LEU:HG	2.60	0.41
28:P:95:LEU:HD21	28:P:125:ASP:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:R:231:GLY:N	28:p:205:ASP:OD1	2.53	0.41
32:T:119:GLU:OE1	32:T:128:TYR:N	2.50	0.41
32:T:223:TYR:HB3	27:o:182:GLU:OE2	2.21	0.41
33:K:49:ALA:HB2	33:K:217:LEU:CD1	2.50	0.41
26:n:129:MET:SD	26:n:150:MET:HE1	2.61	0.41
26:n:224:LEU:HD12	26:n:224:LEU:N	2.35	0.41
27:o:156:ILE:HG12	27:o:162:THR:HG22	2.02	0.41
32:t:169:TYR:HB2	32:t:182:LEU:HD13	2.02	0.41
1:U:38:ILE:HG21	1:U:67:VAL:CG2	2.51	0.41
1:U:220:LEU:HD13	1:U:229:VAL:HG13	2.02	0.41
1:U:332:GLU:O	1:U:333:MET:HB2	2.21	0.41
2:V:122:THR:HG23	2:V:123:SER:N	2.36	0.41
2:V:169:LEU:C	2:V:169:LEU:HD23	2.45	0.41
2:V:351:PRO:HA	2:V:354:LYS:CE	2.50	0.41
3:W:28:LEU:HB3	3:W:29:PRO:HD3	2.02	0.41
4:X:53:LEU:HD23	4:X:53:LEU:C	2.45	0.41
4:X:100:GLU:OE1	4:X:245:PRO:HB2	2.21	0.41
7:a:63:PHE:HA	7:a:66:GLU:HB2	2.03	0.41
7:a:88:THR:HG22	7:a:88:THR:O	2.20	0.41
8:b:179:LEU:HD23	8:b:179:LEU:O	2.20	0.41
12:f:262:PHE:N	12:f:263:PRO:HD2	2.36	0.41
12:f:427:THR:O	12:f:431:LYS:HE2	2.19	0.41
12:f:485:LEU:HD21	12:f:497:VAL:HG13	2.02	0.41
14:A:196:LEU:O	14:A:197:HIS:C	2.63	0.41
14:A:227:ARG:NH1	15:B:319:PHE:O	2.39	0.41
15:B:234:LEU:CD2	37:B:501:ADP:C8	3.03	0.41
15:B:412:MET:CE	16:C:177:ALA:HB3	2.50	0.41
16:C:386:ALA:O	16:C:390:VAL:HG23	2.20	0.41
17:D:39:ASP:OD2	17:D:43:ARG:NH1	2.52	0.41
17:D:336:PRO:HB2	17:D:341:LYS:HD2	2.03	0.41
17:D:368:ASP:OD2	17:D:407:ILE:HG21	2.20	0.41
18:E:195:PHE:O	18:E:196:LEU:HD22	2.20	0.41
18:E:235:ILE:HD13	18:E:277:MET:HB3	2.02	0.41
19:F:198:LEU:CD1	19:F:223:VAL:HG11	2.50	0.41
20:G:127:GLN:OE1	20:G:127:GLN:HA	2.20	0.41
20:G:132:ARG:NH2	25:M:13:SER:N	2.68	0.41
20:G:224:ASN:O	20:G:226:LYS:N	2.51	0.41
21:H:157:ALA:HB1	22:I:57:ASP:HB3	2.02	0.41
21:H:194:THR:O	21:H:197:GLU:HG3	2.19	0.41
22:I:216:LEU:CD2	22:I:223:THR:HG23	2.50	0.41
24:L:123:TYR:N	25:M:128:ALA:O	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:O:71:ASP:OD1	27:O:72:LYS:N	2.53	0.41
28:P:168:SER:HB2	28:P:200:LEU:HD13	2.02	0.41
29:Q:100:VAL:HG23	29:Q:100:VAL:O	2.20	0.41
30:R:79:ALA:O	30:R:86:ALA:N	2.43	0.41
30:R:233:VAL:O	30:R:234:ASN:C	2.63	0.41
31:S:183:PHE:HB2	31:S:189:VAL:HG11	2.03	0.41
33:K:100:TRP:HA	33:K:105:GLU:O	2.20	0.41
33:K:110:GLU:HB3	33:K:154:PHE:CZ	2.55	0.41
1:U:376:MET:SD	1:U:738:ASP:HB3	2.60	0.41
3:W:27:ARG:HG3	3:W:50:LEU:HD22	2.02	0.41
3:W:241:LEU:HD11	3:W:286:LEU:HD11	2.01	0.41
3:W:361:HIS:O	3:W:365:ILE:HG12	2.21	0.41
3:W:397:VAL:O	3:W:400:LYS:N	2.47	0.41
5:Y:138:LEU:HD21	5:Y:167:LEU:HD22	2.03	0.41
6:Z:37:GLY:HA3	6:Z:95:TYR:CE2	2.54	0.41
7:a:8:LEU:HD22	7:a:22:TRP:HZ3	1.85	0.41
7:a:183:VAL:HG22	7:a:184:ASP:N	2.36	0.41
12:f:269:ALA:O	12:f:272:LEU:O	2.38	0.41
12:f:407:MET:HE2	12:f:407:MET:CA	2.50	0.41
12:f:471:LEU:HD23	12:f:471:LEU:H	1.84	0.41
12:f:563:GLY:HA3	12:f:598:CYS:HB3	2.03	0.41
12:f:587:PHE:CE2	12:f:589:SER:O	2.73	0.41
13:y:56:LEU:O	13:y:60:LEU:HD23	2.20	0.41
14:A:259:GLU:O	14:A:262:GLU:HG3	2.20	0.41
15:B:352:GLU:O	15:B:353:PHE:HD1	2.04	0.41
17:D:363:TYR:O	17:D:366:ARG:NE	2.42	0.41
18:E:366:ASP:O	18:E:369:LYS:N	2.44	0.41
19:F:197:GLU:HB3	19:F:352:ILE:HD11	2.03	0.41
19:F:260:PHE:C	19:F:261:ILE:HD12	2.45	0.41
22:I:16:GLY:O	22:I:17:ARG:HG3	2.21	0.41
23:J:73:PHE:CG	23:J:80:ALA:HB2	2.56	0.41
30:R:97:ASN:OD1	30:R:97:ASN:C	2.64	0.41
31:S:211:ALA:O	31:S:239:ARG:NH2	2.53	0.41
32:T:54:THR:O	32:T:99:SER:OG	2.37	0.41
30:r:103:THR:O	30:r:158:THR:OG1	2.21	0.41
30:r:233:VAL:O	30:r:234:ASN:C	2.63	0.41
31:s:41:LEU:CD1	31:s:165:ALA:HB2	2.50	0.41
1:U:48:LEU:O	1:U:51:ASP:OD1	2.38	0.41
1:U:89:ASN:O	1:U:97:VAL:HG21	2.20	0.41
1:U:675:MET:O	1:U:676:THR:C	2.64	0.41
2:V:400:HIS:HD1	2:V:401:ASN:CG	2.27	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:W:186:ILE:HD12	3:W:209:ILE:HG23	2.03	0.41
3:W:200:ILE:HG23	3:W:201:ARG:N	2.35	0.41
3:W:426:ASN:O	3:W:429:SER:N	2.53	0.41
4:X:343:SER:OG	4:X:344:ARG:N	2.53	0.41
4:X:421:LEU:O	6:Z:283:ARG:NH2	2.53	0.41
5:Y:155:ASP:OD1	5:Y:156:LEU:N	2.53	0.41
5:Y:157:ILE:HD12	5:Y:157:ILE:H	1.85	0.41
7:a:123:LEU:HA	7:a:127:ASP:O	2.21	0.41
7:a:252:LYS:HA	7:a:255:TRP:CE2	2.55	0.41
8:b:67:ASP:HB3	8:b:70:ARG:HE	1.86	0.41
8:b:140:ILE:O	8:b:140:ILE:HG13	2.20	0.41
9:c:151:VAL:HG22	17:D:77:GLU:OE2	2.21	0.41
9:c:292:MET:HG3	10:d:346:LEU:HD21	2.03	0.41
10:d:153:GLN:HA	10:d:156:ILE:HD12	2.02	0.41
10:d:228:HIS:HB3	10:d:229:PRO:HD3	2.02	0.41
12:f:348:ILE:HD12	12:f:348:ILE:H	1.86	0.41
12:f:408:LEU:HB2	12:f:443:GLY:CA	2.50	0.41
16:C:188:LEU:HD23	16:C:315:ILE:CG2	2.50	0.41
17:D:349:THR:HG21	17:D:360:LEU:HD11	2.01	0.41
18:E:215:ILE:HD11	18:E:256:THR:HG23	2.02	0.41
18:E:366:ASP:HB2	18:E:369:LYS:HB2	2.02	0.41
19:F:94:ILE:HD11	19:F:123:VAL:O	2.21	0.41
20:G:123:GLN:NE2	21:H:85:VAL:HG23	2.36	0.41
20:G:163:PHE:HB2	20:G:166:THR:HB	2.03	0.41
21:H:92:LYS:O	21:H:95:GLN:N	2.54	0.41
22:I:37:ILE:O	22:I:43:VAL:HG23	2.21	0.41
26:N:64:VAL:HG21	32:t:260:ILE:HD11	2.01	0.41
27:O:55:ILE:HD12	27:O:57:LEU:CD1	2.51	0.41
29:Q:12:TYR:HH	29:Q:151:ILE:C	2.28	0.41
29:Q:14:LEU:HD21	29:Q:160:LEU:HD22	2.01	0.41
33:K:50:VAL:CG1	33:K:67:ILE:HD11	2.50	0.41
26:n:194:LEU:O	26:n:198:MET:HG2	2.21	0.41
29:q:118:MET:SD	29:q:122:ALA:HA	2.61	0.41
30:r:241:ASP:OD1	30:r:242:GLY:N	2.53	0.41
31:s:66:ARG:NH2	31:s:241:ASP:O	2.52	0.41
1:U:510:GLU:OE1	1:U:547:GLY:CA	2.69	0.41
2:V:400:HIS:HA	10:d:238:GLU:OE2	2.21	0.41
3:W:74:CYS:HB2	3:W:83:LEU:HD13	2.02	0.41
4:X:32:LYS:HA	4:X:32:LYS:HE3	2.02	0.41
4:X:44:GLN:O	4:X:47:GLU:HG3	2.20	0.41
4:X:86:ALA:O	4:X:87:ARG:C	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Y:220:VAL:O	5:Y:224:VAL:HG23	2.20	0.41
6:Z:170:VAL:HG13	9:c:151:VAL:O	2.21	0.41
7:a:223:GLU:N	7:a:223:GLU:OE1	2.54	0.41
8:b:24:THR:HG22	8:b:25:ARG:H	1.85	0.41
9:c:259:VAL:HA	9:c:262:GLU:HB2	2.03	0.41
10:d:294:ASN:HB2	10:d:298:LYS:HG2	2.02	0.41
10:d:302:TYR:C	10:d:304:LYS:N	2.78	0.41
12:f:169:GLU:HA	12:f:172:GLU:HG2	2.03	0.41
12:f:514:VAL:HA	12:f:517:VAL:HG22	2.02	0.41
12:f:781:TYR:OH	12:f:876:HIS:CD2	2.73	0.41
15:B:375:ALA:HB3	15:B:378:VAL:CG2	2.45	0.41
17:D:94:GLU:OE2	17:D:95:ALA:O	2.39	0.41
18:E:62:LYS:HB3	18:E:70:ILE:HD11	2.02	0.41
18:E:104:THR:O	18:E:105:LEU:HB2	2.21	0.41
18:E:305:ASN:OD1	18:E:308:ALA:N	2.53	0.41
18:E:347:CYS:HB3	19:F:217:ILE:HG13	2.02	0.41
18:E:351:GLY:O	18:E:355:ILE:HG12	2.20	0.41
19:F:368:ILE:HD13	19:F:371:ARG:CZ	2.51	0.41
23:J:26:VAL:HG11	23:J:130:SER:OG	2.20	0.41
23:J:73:PHE:CD1	23:J:80:ALA:HB2	2.55	0.41
23:J:88:ARG:HH21	29:Q:70:ARG:HG3	1.86	0.41
27:O:238:LYS:HD3	27:O:239:GLY:N	2.35	0.41
30:R:97:ASN:O	30:R:243:TRP:NE1	2.53	0.41
28:p:142:CYS:O	28:p:146:MET:SD	2.79	0.41
32:t:55:SER:OG	32:t:187:GLY:N	2.53	0.41
1:U:17:PRO:O	1:U:18:GLN:C	2.62	0.41
1:U:25:HIS:HA	1:U:59:PHE:CZ	2.56	0.41
1:U:45:ILE:HD11	1:U:63:VAL:CG2	2.50	0.41
1:U:131:GLU:HA	1:U:134:VAL:HG12	2.03	0.41
1:U:202:VAL:HG13	1:U:216:VAL:HG13	2.03	0.41
1:U:350:LEU:HD23	1:U:350:LEU:H	1.85	0.41
1:U:412:HIS:ND1	1:U:422:LEU:HD21	2.36	0.41
1:U:586:VAL:CG1	1:U:602:LEU:HD21	2.46	0.41
1:U:605:VAL:HG13	1:U:606:ALA:N	2.36	0.41
1:U:606:ALA:HB2	1:U:618:ALA:CB	2.51	0.41
1:U:611:ASN:O	1:U:614:VAL:HG12	2.20	0.41
1:U:673:GLU:HG3	1:U:674:PRO:HD3	2.03	0.41
1:U:791:LEU:HD11	1:U:796:LYS:N	2.36	0.41
2:V:150:ARG:O	2:V:150:ARG:HG3	2.21	0.41
2:V:224:LEU:CA	2:V:227:VAL:HG22	2.51	0.41
2:V:309:MET:CE	2:V:335:VAL:HG11	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:V:373:ALA:O	2:V:376:ASN:OD1	2.39	0.41
2:V:403:ILE:HD12	2:V:428:LEU:HD21	2.03	0.41
2:V:464:ILE:HG22	2:V:465:ASP:N	2.36	0.41
3:W:228:ASN:O	3:W:232:GLN:OE1	2.39	0.41
3:W:372:ARG:HA	3:W:414:ASN:HA	2.03	0.41
3:W:382:LEU:CD2	3:W:384:LEU:HD12	2.50	0.41
5:Y:109:GLU:OE2	5:Y:113:ARG:NH1	2.45	0.41
5:Y:143:TYR:N	5:Y:143:TYR:CD1	2.87	0.41
5:Y:155:ASP:O	5:Y:158:THR:HG22	2.21	0.41
5:Y:165:LYS:HG3	5:Y:166:SER:N	2.36	0.41
5:Y:353:ILE:HD12	5:Y:354:VAL:H	1.86	0.41
5:Y:376:LEU:HD23	5:Y:376:LEU:O	2.21	0.41
6:Z:101:LEU:HD23	6:Z:102:HIS:O	2.20	0.41
7:a:35:HIS:C	7:a:37:LEU:H	2.29	0.41
7:a:98:GLU:O	7:a:101:ARG:HB3	2.21	0.41
8:b:67:ASP:OD2	8:b:70:ARG:N	2.41	0.41
8:b:164:ASP:O	8:b:166:THR:N	2.52	0.41
8:b:170:LEU:HD12	8:b:170:LEU:C	2.45	0.41
9:c:64:ASP:C	9:c:65:TYR:HD1	2.28	0.41
9:c:130:GLN:O	9:c:134:GLU:OE1	2.39	0.41
10:d:349:ILE:O	10:d:349:ILE:CG2	2.66	0.41
12:f:45:LEU:HD12	12:f:45:LEU:N	2.36	0.41
12:f:82:ILE:HD12	12:f:125:ILE:HD13	2.03	0.41
12:f:94:LYS:N	12:f:95:PRO:HD2	2.36	0.41
12:f:714:SER:HA	12:f:725:SER:HB2	2.02	0.41
14:A:79:ASP:OD2	15:B:137:SER:OG	2.38	0.41
14:A:196:LEU:HD11	14:A:232:ARG:NH2	2.35	0.41
15:B:73:LEU:CD2	15:B:74:MET:HE2	2.51	0.41
15:B:290:ILE:O	15:B:309:MET:CE	2.67	0.41
15:B:364:ILE:HD12	37:B:501:ADP:C5	2.55	0.41
16:C:71:SER:O	17:D:112:TYR:N	2.54	0.41
16:C:159:LYS:O	16:C:163:GLU:OE1	2.39	0.41
16:C:298:ILE:CG1	16:C:301:LEU:HD11	2.51	0.41
17:D:80:LYS:O	17:D:83:GLN:N	2.53	0.41
17:D:231:VAL:HG12	17:D:232:GLY:N	2.35	0.41
17:D:314:ALA:O	17:D:315:ASP:C	2.64	0.41
17:D:362:ASP:O	17:D:366:ARG:HG3	2.19	0.41
17:D:370:ILE:HD12	17:D:375:ILE:HD11	2.02	0.41
17:D:397:LYS:HG3	17:D:398:ASP:N	2.35	0.41
18:E:43:SER:CB	19:F:73:ILE:HG23	2.51	0.41
18:E:334:LEU:HD11	18:E:374:VAL:HG11	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:F:128:THR:O	19:F:129:ARG:C	2.62	0.41
19:F:363:ALA:O	19:F:366:MET:HG3	2.20	0.41
20:G:103:TYR:O	27:O:124:ARG:HD3	2.21	0.41
21:H:17:GLY:O	22:I:27:ALA:HB2	2.21	0.41
21:H:207:ASN:OD1	21:H:207:ASN:C	2.62	0.41
23:J:88:ARG:NH2	29:Q:70:ARG:HG3	2.36	0.41
24:L:58:ALA:HB2	33:K:164:GLN:NE2	2.35	0.41
25:M:103:PHE:CD1	26:N:112:THR:HG23	2.55	0.41
26:N:71:ILE:O	26:N:94:THR:HG23	2.20	0.41
26:N:75:ILE:HG12	26:N:110:VAL:HG22	2.02	0.41
28:P:98:LYS:O	28:P:99:ARG:C	2.64	0.41
31:S:32:PRO:HG3	32:T:148:MET:HE1	2.03	0.41
33:K:57:PRO:O	33:K:58:LEU:HB3	2.21	0.41
33:K:206:MET:HE1	33:K:215:ILE:HG21	2.02	0.41
26:n:151:GLY:HA2	32:t:50:MET:HE2	2.03	0.41
27:o:55:ILE:HD13	27:o:145:GLY:N	2.36	0.41
28:p:58:THR:HG23	28:p:59:ASP:H	1.86	0.41
30:r:114:TRP:CH2	30:r:154:LEU:CD1	3.04	0.41
31:s:196:LEU:HD21	31:s:225:ILE:HD11	2.02	0.41
1:U:11:LEU:HG	10:d:170:GLN:OE1	2.21	0.41
1:U:638:SER:HB2	1:U:671:LEU:HD21	2.03	0.41
1:U:706:VAL:HG22	1:U:710:ARG:NH2	2.36	0.41
2:V:64:GLN:O	2:V:68:ASP:CG	2.64	0.41
2:V:281:ASN:OD1	5:Y:389:MET:HE1	2.21	0.41
2:V:374:LYS:HA	2:V:377:GLN:CG	2.50	0.41
2:V:467:TYR:O	6:Z:254:ASN:ND2	2.54	0.41
2:V:488:ASN:O	2:V:492:LYS:HG2	2.21	0.41
3:W:408:ARG:NH1	4:X:349:HIS:CG	2.89	0.41
4:X:280:ALA:HA	4:X:284:THR:HG21	2.02	0.41
4:X:322:HIS:HA	4:X:325:LYS:HE2	2.03	0.41
7:a:99:LYS:O	7:a:103:LYS:HG3	2.21	0.41
7:a:230:ARG:C	7:a:232:TRP:N	2.78	0.41
10:d:175:TYR:CE2	10:d:188:MET:HG2	2.56	0.41
12:f:311:VAL:HG22	12:f:312:GLU:N	2.36	0.41
12:f:346:ASP:HB3	12:f:351:THR:HG22	2.03	0.41
12:f:572:ALA:O	12:f:576:ILE:HG12	2.21	0.41
13:y:388:THR:O	13:y:392:VAL:HG23	2.21	0.41
14:A:48:VAL:HB	15:B:65:LEU:HD23	2.02	0.41
14:A:93:LEU:N	15:B:130:GLU:OE2	2.38	0.41
14:A:122:VAL:O	19:F:87:PRO:HA	2.21	0.41
14:A:247:GLN:HB2	14:A:252:GLU:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:A:277:ILE:HD12	14:A:280:ILE:HG13	2.02	0.41
15:B:290:ILE:O	15:B:292:THR:N	2.53	0.41
16:C:214:VAL:HG12	16:C:218:GLU:HB2	2.02	0.41
17:D:120:ASP:O	17:D:122:GLU:N	2.54	0.41
18:E:305:ASN:HB3	18:E:309:ARG:HB2	2.02	0.41
19:F:372:LYS:CB	34:z:194:ALA:HB2	2.50	0.41
20:G:160:TYR:O	20:G:160:TYR:CD2	2.74	0.41
21:H:74:LEU:CD2	21:H:83:TYR:HE1	2.34	0.41
23:J:16:LEU:HB2	23:J:19:VAL:CG1	2.47	0.41
23:J:38:ARG:HA	23:J:38:ARG:NE	2.35	0.41
26:N:93:VAL:HG21	26:N:117:PHE:HD1	1.86	0.41
28:P:113:ASP:O	28:P:117:PHE:HD1	2.04	0.41
30:R:92:LYS:HA	30:R:104:MET:HE2	2.02	0.41
32:T:61:PHE:N	32:T:64:GLY:O	2.53	0.41
32:T:71:MET:HG3	32:T:85:SER:CA	2.51	0.41
32:T:156:VAL:HG22	32:T:184:THR:HG21	2.02	0.41
33:K:232:GLU:O	33:K:235:GLU:HG3	2.21	0.41
26:n:40:VAL:HG23	26:n:159:PHE:HB3	2.02	0.41
28:p:142:CYS:SG	28:p:146:MET:CE	3.09	0.41
30:r:147:TYR:HA	30:r:150:LYS:CG	2.51	0.41
30:r:208:VAL:HG12	30:r:212:TYR:HE2	1.81	0.41
31:s:99:ARG:NH2	31:s:103:TYR:OH	2.54	0.41
32:t:56:VAL:HG22	32:t:69:ALA:CB	2.51	0.41
32:t:68:ALA:HB1	32:t:218:MET:HE1	2.03	0.41
2:V:166:TYR:CZ	2:V:170:LEU:HD21	2.56	0.40
3:W:152:ILE:O	3:W:156:ASN:ND2	2.54	0.40
3:W:267:LEU:HD21	3:W:296:LEU:CD1	2.50	0.40
3:W:331:GLY:HA2	3:W:335:SER:O	2.21	0.40
4:X:162:ASP:OD1	4:X:196:THR:HG22	2.21	0.40
4:X:258:LYS:HG2	4:X:267:VAL:HG23	2.03	0.40
4:X:414:LEU:HD11	6:Z:273:HIS:HB2	2.04	0.40
5:Y:248:GLU:O	5:Y:251:HIS:HB2	2.21	0.40
5:Y:378:ASN:OD1	5:Y:381:GLN:NE2	2.54	0.40
6:Z:90:ARG:O	6:Z:91:ILE:C	2.65	0.40
6:Z:94:TRP:CZ2	6:Z:121:LEU:HD13	2.56	0.40
6:Z:190:ARG:NH1	9:c:297:VAL:HG21	2.36	0.40
6:Z:246:VAL:HG12	10:d:330:ILE:HD11	2.02	0.40
6:Z:267:ARG:O	6:Z:270:VAL:HG12	2.20	0.40
8:b:167:GLY:O	8:b:169:HIS:ND1	2.55	0.40
9:c:303:MET:O	9:c:307:VAL:HG12	2.21	0.40
10:d:129:LEU:HD13	10:d:174:TYR:CE2	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:f:57:GLU:C	12:f:61:GLU:OE1	2.64	0.40
12:f:423:ASP:HB3	13:y:403:ARG:HH22	1.85	0.40
12:f:829:MET:HE1	12:f:831:VAL:HG22	2.03	0.40
17:D:54:LEU:HD23	17:D:54:LEU:O	2.20	0.40
17:D:74:HIS:O	17:D:78:GLU:OE1	2.39	0.40
17:D:120:ASP:O	17:D:121:ARG:C	2.63	0.40
19:F:265:ALA:HB1	19:F:268:VAL:CG2	2.50	0.40
19:F:344:ARG:HG3	19:F:345:SER:OG	2.20	0.40
29:Q:148:THR:O	29:Q:151:ILE:HG22	2.20	0.40
29:Q:173:LEU:HB2	29:Q:175:LEU:HD21	2.03	0.40
32:T:234:ILE:C	32:T:244:ILE:HD12	2.46	0.40
33:K:111:SER:HA	33:K:114:GLN:HG3	2.03	0.40
27:o:128:GLN:C	27:o:129:MET:HE2	2.45	0.40
28:p:183:MET:HA	28:p:204:MET:HE1	2.03	0.40
29:q:4:LEU:HD21	29:q:34:LYS:CD	2.48	0.40
29:q:28:MET:SD	30:r:180:ILE:CD1	3.09	0.40
32:t:140:ALA:O	32:t:143:SER:OG	2.37	0.40
1:U:42:VAL:HG12	1:U:46:GLU:HG2	2.03	0.40
1:U:72:GLY:HA2	1:U:74:PHE:CZ	2.56	0.40
2:V:160:LEU:O	2:V:161:PRO:C	2.63	0.40
2:V:439:ALA:HB2	10:d:279:TYR:CE2	2.56	0.40
3:W:93:ARG:O	3:W:95:SER:N	2.54	0.40
3:W:181:GLU:HG2	3:W:184:GLU:OE1	2.21	0.40
3:W:406:VAL:O	3:W:407:ASP:C	2.63	0.40
4:X:134:VAL:HG22	4:X:149:LEU:HB3	2.03	0.40
4:X:179:ALA:C	4:X:180:LEU:HD23	2.47	0.40
5:Y:268:TYR:C	5:Y:270:VAL:H	2.30	0.40
6:Z:167:ALA:HB1	9:c:42:LEU:HD23	2.02	0.40
6:Z:180:LYS:CD	6:Z:181:ASP:O	2.69	0.40
9:c:227:GLU:O	9:c:228:GLY:C	2.63	0.40
10:d:143:LEU:O	10:d:147:ILE:HG12	2.22	0.40
14:A:52:ILE:O	14:A:56:LEU:HD23	2.21	0.40
14:A:69:ASP:CA	15:B:163:LEU:HD21	2.51	0.40
14:A:287:ASP:OD1	14:A:288:GLY:N	2.54	0.40
15:B:103:ARG:O	15:B:104:GLY:C	2.64	0.40
16:C:191:PRO:O	16:C:196:LYS:NZ	2.53	0.40
16:C:259:LEU:HD12	16:C:260:GLU:HB2	2.04	0.40
17:D:269:ALA:O	17:D:270:ILE:HD13	2.22	0.40
18:E:315:ILE:HD12	18:E:315:ILE:H	1.85	0.40
19:F:203:VAL:O	19:F:206:MET:N	2.55	0.40
19:F:251:LEU:HD13	19:F:286:ASP:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:J:35:VAL:HG12	23:J:36:ARG:N	2.36	0.40
24:L:150:SER:O	24:L:151:ALA:HB3	2.21	0.40
25:M:39:GLY:N	25:M:137:MET:HE1	2.36	0.40
25:M:198:ILE:HG21	25:M:212:LEU:HD13	2.02	0.40
26:N:218:VAL:O	26:N:218:VAL:HG23	2.22	0.40
31:S:32:PRO:O	32:T:145:ARG:NH1	2.53	0.40
30:r:95:GLU:HG3	30:r:243:TRP:CZ2	2.56	0.40
1:U:135:ASN:O	1:U:138:PHE:HB2	2.21	0.40
1:U:136:LYS:C	1:U:137:MET:HE2	2.47	0.40
1:U:149:GLN:O	17:D:41:TYR:HE2	2.04	0.40
2:V:281:ASN:C	5:Y:385:ARG:NH2	2.80	0.40
3:W:79:GLU:O	3:W:83:LEU:HB3	2.22	0.40
3:W:203:GLN:NE2	3:W:233:LEU:HD11	2.36	0.40
3:W:296:LEU:HD12	3:W:297:GLU:H	1.86	0.40
4:X:334:ASN:OD1	4:X:354:ILE:HD12	2.22	0.40
5:Y:148:GLY:HA2	5:Y:153:ASP:OD1	2.21	0.40
5:Y:312:ARG:HA	5:Y:356:THR:HG22	2.02	0.40
5:Y:314:LEU:HD22	5:Y:319:MET:CE	2.47	0.40
6:Z:78:MET:HA	6:Z:81:MET:HB3	2.04	0.40
7:a:278:MET:C	7:a:278:MET:SD	3.04	0.40
9:c:261:GLU:O	9:c:264:LYS:HB2	2.21	0.40
10:d:150:ILE:HA	10:d:153:GLN:HG3	2.04	0.40
12:f:463:LEU:HD23	12:f:463:LEU:C	2.46	0.40
12:f:590:PHE:CZ	12:f:648:ALA:HB1	2.57	0.40
12:f:597:VAL:O	12:f:600:TYR:O	2.38	0.40
12:f:707:LEU:HD13	12:f:729:MET:HG3	2.03	0.40
14:A:76:ALA:O	14:A:77:LEU:HB2	2.22	0.40
14:A:132:THR:HB	14:A:135:GLU:O	2.21	0.40
14:A:377:CYS:O	14:A:377:CYS:SG	2.79	0.40
15:B:187:ILE:HD11	15:B:238:ALA:CB	2.51	0.40
15:B:260:LEU:HD13	15:B:304:GLU:HG3	2.04	0.40
16:C:94:LYS:C	16:C:95:PHE:CD1	3.00	0.40
16:C:100:ASP:OD1	16:C:102:ASN:ND2	2.54	0.40
19:F:121:CYS:CA	19:F:137:ILE:HD11	2.52	0.40
19:F:154:ASN:CG	19:F:161:LEU:HD11	2.47	0.40
21:H:53:LYS:O	21:H:54:SER:OG	2.35	0.40
21:H:98:TYR:O	21:H:101:TYR:C	2.65	0.40
21:H:121:TYR:CE1	21:H:127:VAL:HG12	2.56	0.40
21:H:189:HIS:O	21:H:192:ILE:HG22	2.22	0.40
23:J:185:ASP:OD1	23:J:185:ASP:O	2.39	0.40
25:M:91:ILE:HA	25:M:94:GLU:OE2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:M:151:MET:HB3	25:M:161:TYR:CE2	2.56	0.40
25:M:199:TYR:HB3	25:M:244:LEU:HD11	2.03	0.40
25:M:215:SER:HA	25:M:228:VAL:HG23	2.02	0.40
26:N:138:ASP:H	26:N:142:GLY:HA2	1.86	0.40
26:N:223:LEU:HD22	26:N:227:GLN:HB3	2.03	0.40
28:P:164:PHE:CE1	28:P:189:ILE:CG2	3.04	0.40
29:Q:137:PHE:CB	30:r:192:VAL:HG21	2.52	0.40
30:R:60:THR:O	30:R:61:THR:OG1	2.29	0.40
30:R:159:MET:N	30:R:159:MET:SD	2.94	0.40
31:S:165:ALA:H	31:S:174:GLN:HG2	1.87	0.40
33:K:153:LEU:O	33:K:164:GLN:HA	2.22	0.40
26:n:125:ARG:O	26:n:129:MET:HE1	2.22	0.40
26:n:159:PHE:CE1	26:n:173:VAL:HG22	2.57	0.40
30:r:214:LEU:O	30:r:217:ARG:HG2	2.21	0.40
31:s:75:THR:O	31:s:76:ASP:C	2.65	0.40
32:t:219:ARG:NH1	32:t:251:GLU:O	2.54	0.40
2:V:387:GLN:O	2:V:390:GLY:N	2.55	0.40
2:V:471:GLU:N	2:V:472:PRO:CD	2.85	0.40
3:W:132:THR:O	3:W:133:GLU:C	2.65	0.40
3:W:435:LEU:HA	6:Z:236:LEU:HD23	2.03	0.40
4:X:105:GLN:O	4:X:106:GLU:HB2	2.22	0.40
5:Y:28:LEU:HB2	5:Y:31:HIS:HB2	2.04	0.40
5:Y:88:LEU:O	5:Y:92:GLU:HG2	2.22	0.40
5:Y:216:TYR:CZ	16:C:340:ARG:NH2	2.89	0.40
6:Z:192:THR:HA	6:Z:195:VAL:HG12	2.03	0.40
6:Z:227:ILE:O	6:Z:231:GLN:OE1	2.39	0.40
8:b:43:SER:O	8:b:44:ASN:C	2.63	0.40
9:c:31:VAL:HG13	9:c:205:ILE:HA	2.04	0.40
12:f:405:HIS:C	12:f:407:MET:H	2.28	0.40
12:f:534:VAL:O	12:f:537:THR:HG22	2.21	0.40
12:f:777:THR:N	12:f:826:GLN:O	2.54	0.40
14:A:144:ARG:HA	14:A:147:TYR:CD1	2.56	0.40
14:A:215:PHE:CD2	14:A:324:PRO:HG3	2.56	0.40
15:B:342:ILE:O	15:B:342:ILE:HG22	2.21	0.40
16:C:268:GLU:O	16:C:271:ARG:N	2.55	0.40
17:D:214:MET:O	17:D:217:LYS:N	2.54	0.40
17:D:297:ASP:OD1	17:D:326:ARG:CZ	2.70	0.40
18:E:331:ILE:HD11	18:E:371:VAL:N	2.36	0.40
20:G:17:SER:HB2	20:G:18:PRO:HD2	2.03	0.40
22:I:45:LEU:HD23	22:I:46:ALA:N	2.36	0.40
25:M:217:VAL:O	25:M:217:VAL:HG13	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:O:44:THR:HG23	27:O:76:LYS:CE	2.51	0.40
27:O:58:GLY:HA2	27:O:218:LEU:HD23	2.04	0.40
30:R:100:LEU:HD12	30:R:160:ILE:HD11	2.02	0.40
32:T:253:ASN:OD1	32:T:255:ASP:N	2.55	0.40
33:K:229:PHE:HB3	33:K:234:LEU:HD22	2.04	0.40
31:s:190:GLU:OE1	31:s:192:VAL:HB	2.22	0.40
34:z:161:VAL:O	34:z:161:VAL:CG1	2.65	0.40
2:V:340:GLY:HA2	2:V:405:THR:HG23	2.03	0.40
2:V:467:TYR:OH	4:X:397:TYR:OH	2.32	0.40
3:W:44:ILE:HG22	3:W:48:LEU:HD13	2.03	0.40
4:X:332:GLU:OE1	4:X:333:GLN:N	2.54	0.40
5:Y:280:GLN:O	5:Y:284:LYS:HG2	2.21	0.40
5:Y:364:TRP:O	5:Y:368:GLU:HG2	2.22	0.40
6:Z:22:HIS:NE2	6:Z:55:ALA:HB1	2.37	0.40
6:Z:263:ALA:HB3	9:c:292:MET:HE2	2.02	0.40
7:a:233:LEU:O	7:a:237:LEU:HD13	2.22	0.40
7:a:374:ILE:HG13	10:d:347:GLU:HG2	2.03	0.40
8:b:12:ASN:O	8:b:80:PRO:HA	2.22	0.40
12:f:149:GLU:HG3	12:f:150:GLU:H	1.87	0.40
12:f:242:GLU:HB3	12:f:243:PRO:HD3	2.04	0.40
12:f:253:LEU:HD21	12:f:281:ILE:HD11	2.03	0.40
12:f:712:LYS:O	12:f:715:HIS:CE1	2.75	0.40
16:C:356:GLY:C	16:C:358:GLU:N	2.79	0.40
17:D:273:LYS:HA	17:D:318:ASP:OD1	2.22	0.40
17:D:389:GLU:HG2	17:D:391:ARG:HG2	2.03	0.40
18:E:133:SER:O	18:E:133:SER:OG	2.34	0.40
19:F:224:LEU:HD12	19:F:225:MET:H	1.86	0.40
20:G:27:TYR:HA	20:G:30:LYS:HE2	2.02	0.40
20:G:101:TRP:CH2	20:G:113:MET:HG3	2.56	0.40
21:H:97:TYR:CD1	21:H:97:TYR:C	3.00	0.40
22:I:158:GLY:HA3	23:J:58:THR:HG21	2.03	0.40
23:J:176:TYR:CZ	23:J:181:ILE:HG21	2.56	0.40
24:L:87:PHE:CD2	24:L:115:LYS:HD2	2.55	0.40
24:L:99:PHE:HB3	32:T:132:ALA:HB1	2.04	0.40
27:O:185:PHE:O	27:O:186:ARG:NE	2.54	0.40
28:P:11:VAL:HG22	28:P:24:ALA:HB1	2.02	0.40
28:P:32:ALA:HB2	30:r:228:TYR:CG	2.56	0.40
30:R:94:ILE:HB	30:R:115:GLU:OE2	2.22	0.40
30:R:97:ASN:OD1	30:R:99:TYR:N	2.51	0.40
31:S:76:ASP:OD1	31:S:76:ASP:N	2.51	0.40
33:K:54:ILE:HG23	33:K:59:MET:CB	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:K:66:LYS:N	33:K:216:GLU:OE1	2.50	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	U	804/953 (84%)	716 (89%)	85 (11%)	3 (0%)	30 65
2	V	442/534 (83%)	397 (90%)	45 (10%)	0	100 100
3	W	434/456 (95%)	371 (86%)	63 (14%)	0	100 100
4	X	409/422 (97%)	361 (88%)	48 (12%)	0	100 100
5	Y	377/389 (97%)	354 (94%)	23 (6%)	0	100 100
6	Z	285/324 (88%)	258 (90%)	27 (10%)	0	100 100
7	a	373/376 (99%)	338 (91%)	35 (9%)	0	100 100
8	b	189/377 (50%)	166 (88%)	22 (12%)	1 (0%)	25 60
9	c	285/310 (92%)	238 (84%)	47 (16%)	0	100 100
10	d	258/350 (74%)	214 (83%)	44 (17%)	0	100 100
11	e	32/70 (46%)	22 (69%)	10 (31%)	0	100 100
12	f	823/908 (91%)	697 (85%)	124 (15%)	2 (0%)	44 75
13	y	107/505 (21%)	98 (92%)	9 (8%)	0	100 100
14	A	369/433 (85%)	315 (85%)	53 (14%)	1 (0%)	37 70
15	B	369/440 (84%)	322 (87%)	47 (13%)	0	100 100
16	C	342/406 (84%)	290 (85%)	52 (15%)	0	100 100
17	D	372/418 (89%)	316 (85%)	55 (15%)	1 (0%)	37 70
18	E	331/389 (85%)	265 (80%)	65 (20%)	1 (0%)	37 70
19	F	333/439 (76%)	264 (79%)	68 (20%)	1 (0%)	37 70

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	G	232/246 (94%)	209 (90%)	23 (10%)	0	100	100
21	H	224/234 (96%)	204 (91%)	20 (9%)	0	100	100
22	I	250/261 (96%)	235 (94%)	15 (6%)	0	100	100
23	J	237/248 (96%)	212 (90%)	25 (10%)	0	100	100
24	L	235/263 (89%)	218 (93%)	17 (7%)	0	100	100
25	M	240/255 (94%)	218 (91%)	22 (9%)	0	100	100
26	N	196/239 (82%)	175 (89%)	21 (11%)	0	100	100
26	n	171/239 (72%)	160 (94%)	11 (6%)	0	100	100
27	O	219/277 (79%)	199 (91%)	20 (9%)	0	100	100
27	o	166/277 (60%)	154 (93%)	12 (7%)	0	100	100
28	P	202/205 (98%)	175 (87%)	27 (13%)	0	100	100
28	p	152/205 (74%)	132 (87%)	20 (13%)	0	100	100
29	Q	195/201 (97%)	178 (91%)	17 (9%)	0	100	100
29	q	163/201 (81%)	150 (92%)	13 (8%)	0	100	100
30	R	197/263 (75%)	181 (92%)	16 (8%)	0	100	100
30	r	181/263 (69%)	163 (90%)	18 (10%)	0	100	100
31	S	210/241 (87%)	191 (91%)	19 (9%)	0	100	100
31	s	202/241 (84%)	187 (93%)	14 (7%)	1 (0%)	25	60
32	T	211/264 (80%)	190 (90%)	21 (10%)	0	100	100
32	t	202/264 (76%)	184 (91%)	18 (9%)	0	100	100
33	K	220/241 (91%)	201 (91%)	19 (9%)	0	100	100
34	z	57/213 (27%)	51 (90%)	6 (10%)	0	100	100
All	All	11296/13840 (82%)	9969 (88%)	1316 (12%)	11 (0%)	50	80

All (11) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
8	b	87	CYS
17	D	147	ALA
19	F	86	LEU
1	U	127	ASP
1	U	128	GLN
12	f	434	TYR
18	E	208	ILE

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Mol	Chain	Res	Type
12	f	198	HIS
1	U	123	LYS
14	A	111	TYR
31	s	219	ASP

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	U	691/816 (85%)	691 (100%)	0	100	100
2	V	390/460 (85%)	390 (100%)	0	100	100
3	W	401/416 (96%)	401 (100%)	0	100	100
4	X	353/362 (98%)	353 (100%)	0	100	100
5	Y	335/344 (97%)	335 (100%)	0	100	100
6	Z	258/295 (88%)	258 (100%)	0	100	100
7	a	335/336 (100%)	335 (100%)	0	100	100
8	b	167/312 (54%)	167 (100%)	0	100	100
9	c	252/268 (94%)	252 (100%)	0	100	100
10	d	231/294 (79%)	231 (100%)	0	100	100
11	e	34/63 (54%)	34 (100%)	0	100	100
12	f	700/763 (92%)	700 (100%)	0	100	100
13	y	96/403 (24%)	96 (100%)	0	100	100
14	A	321/372 (86%)	321 (100%)	0	100	100
15	B	329/385 (86%)	329 (100%)	0	100	100
16	C	297/352 (84%)	297 (100%)	0	100	100
17	D	329/366 (90%)	329 (100%)	0	100	100
18	E	295/341 (86%)	295 (100%)	0	100	100
19	F	288/379 (76%)	288 (100%)	0	100	100
20	G	202/210 (96%)	202 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	H	185/191 (97%)	184 (100%)	1 (0%)	86	90
22	I	212/221 (96%)	212 (100%)	0	100	100
23	J	203/211 (96%)	203 (100%)	0	100	100
24	L	203/224 (91%)	203 (100%)	0	100	100
25	M	201/212 (95%)	201 (100%)	0	100	100
26	N	154/181 (85%)	154 (100%)	0	100	100
26	n	138/181 (76%)	138 (100%)	0	100	100
27	O	182/228 (80%)	182 (100%)	0	100	100
27	o	139/228 (61%)	139 (100%)	0	100	100
28	P	173/174 (99%)	173 (100%)	0	100	100
28	p	136/174 (78%)	136 (100%)	0	100	100
29	Q	168/171 (98%)	168 (100%)	0	100	100
29	q	148/171 (86%)	148 (100%)	0	100	100
30	R	155/202 (77%)	155 (100%)	0	100	100
30	r	142/202 (70%)	142 (100%)	0	100	100
31	S	177/199 (89%)	177 (100%)	0	100	100
31	s	172/199 (86%)	172 (100%)	0	100	100
32	T	176/215 (82%)	176 (100%)	0	100	100
32	t	171/215 (80%)	171 (100%)	0	100	100
33	K	189/203 (93%)	189 (100%)	0	100	100
34	z	50/185 (27%)	50 (100%)	0	100	100
All	All	9778/11724 (83%)	9777 (100%)	1 (0%)	100	100

All (1) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
21	H	140	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (35) such sidechains are listed below:

Mol	Chain	Res	Type
1	U	215	ASN
1	U	340	GLN
1	U	384	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	U	453	HIS
1	U	500	ASN
2	V	199	ASN
2	V	283	ASN
4	X	380	GLN
5	Y	351	ASN
6	Z	194	GLN
8	b	34	ASN
10	d	195	ASN
10	d	313	ASN
12	f	198	HIS
12	f	737	ASN
12	f	786	GLN
14	A	44	GLN
17	D	380	GLN
18	E	225	HIS
19	F	315	ASN
20	G	238	HIS
21	H	95	GLN
21	H	119	GLN
22	I	146	GLN
23	J	200	GLN
23	J	205	ASN
24	L	60	GLN
26	N	144	GLN
27	O	78	HIS
28	P	157	ASN
28	P	169	GLN
29	Q	110	HIS
31	S	86	HIS
29	q	189	HIS
30	r	69	HIS

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 7 ligands modelled in this entry, 2 are monoatomic - leaving 5 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	$\#\|Z\| > 2$
35	ATP	A	501	36	28,33,33	0.71	0	34,52,52	0.96	1 (2%)
37	ADP	B	501	36	24,29,29	0.87	1 (4%)	29,45,45	1.33	2 (6%)
35	ATP	D	501	-	28,33,33	0.70	0	34,52,52	0.84	1 (2%)
35	ATP	F	501	-	28,33,33	0.63	0	34,52,52	0.92	1 (2%)
35	ATP	E	401	-	28,33,33	0.83	1 (3%)	34,52,52	0.95	1 (2%)

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
35	ATP	A	501	36	-	6/18/38/38	0/3/3/3
37	ADP	B	501	36	-	1/12/32/32	0/3/3/3
35	ATP	D	501	-	-	3/18/38/38	0/3/3/3
35	ATP	F	501	-	-	5/18/38/38	0/3/3/3
35	ATP	E	401	-	-	4/18/38/38	0/3/3/3

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	B	501	ADP	O4'-C1'	2.04	1.43	1.40
35	E	401	ATP	PA-O3A	-2.03	1.57	1.59

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	B	501	ADP	N3-C2-N1	-4.03	123.21	128.67
37	B	501	ADP	C4-C5-N7	-2.66	106.53	109.34
35	F	501	ATP	C5-C6-N6	2.30	123.81	120.31
35	E	401	ATP	C5-C6-N6	2.29	123.80	120.31
35	A	501	ATP	C5-C6-N6	2.23	123.71	120.31
35	D	501	ATP	C5-C6-N6	2.08	123.49	120.31

There are no chirality outliers.

All (19) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
35	A	501	ATP	C5'-O5'-PA-O2A
35	A	501	ATP	O4'-C4'-C5'-O5'
35	A	501	ATP	C3'-C4'-C5'-O5'
35	D	501	ATP	C5'-O5'-PA-O2A
35	D	501	ATP	C5'-O5'-PA-O3A
35	D	501	ATP	C4'-C5'-O5'-PA
35	E	401	ATP	C5'-O5'-PA-O1A
35	E	401	ATP	C5'-O5'-PA-O2A
35	E	401	ATP	C5'-O5'-PA-O3A
35	F	501	ATP	PB-O3B-PG-O2G
35	F	501	ATP	C5'-O5'-PA-O1A
35	F	501	ATP	C5'-O5'-PA-O3A
35	A	501	ATP	C5'-O5'-PA-O1A
35	A	501	ATP	C5'-O5'-PA-O3A
37	B	501	ADP	C5'-O5'-PA-O1A
35	E	401	ATP	C3'-C4'-C5'-O5'
35	F	501	ATP	PB-O3B-PG-O1G
35	F	501	ATP	C4'-C5'-O5'-PA
35	A	501	ATP	PA-O3A-PB-O2B

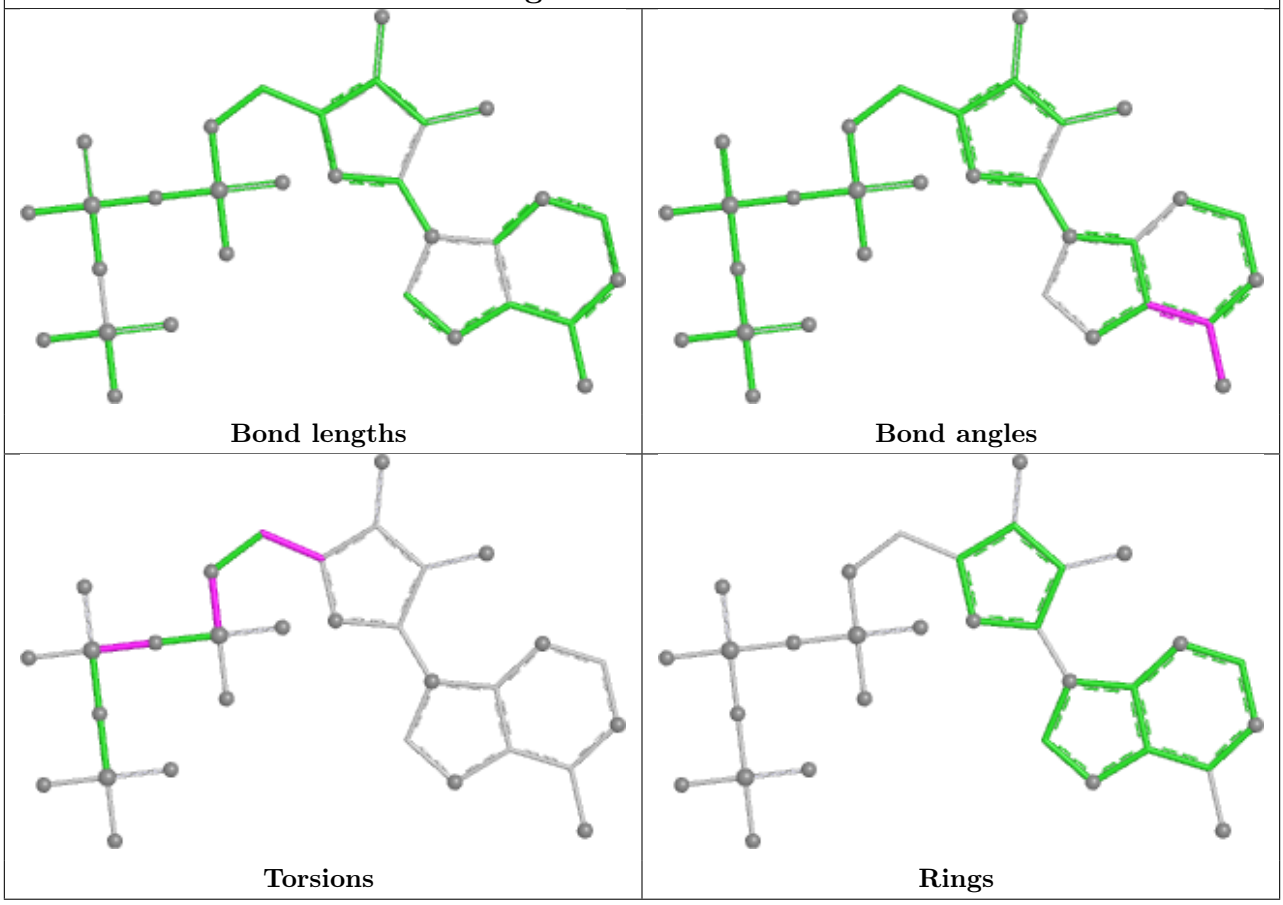
There are no ring outliers.

5 monomers are involved in 31 short contacts:

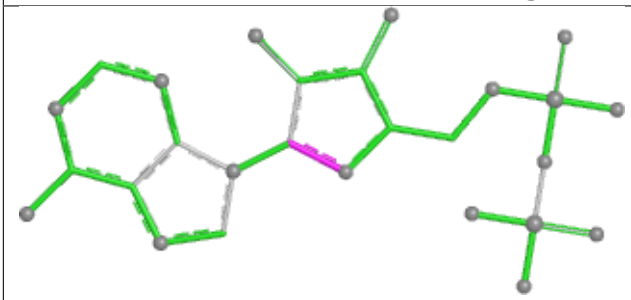
Mol	Chain	Res	Type	Clashes	Symm-Clashes
35	A	501	ATP	2	0
37	B	501	ADP	8	0
35	D	501	ATP	13	0
35	F	501	ATP	5	0
35	E	401	ATP	3	0

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

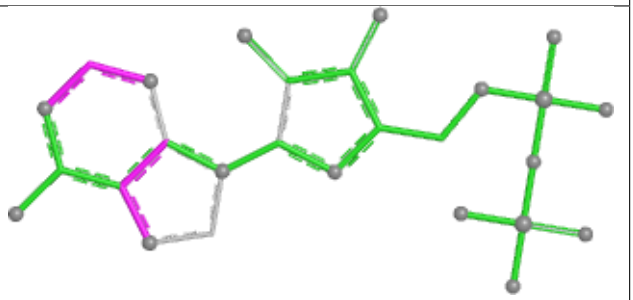
Ligand ATP A 501



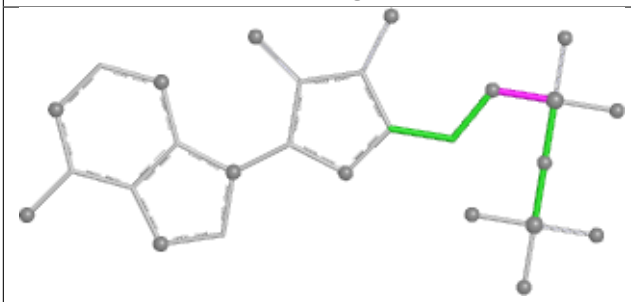
Ligand ADP B 501



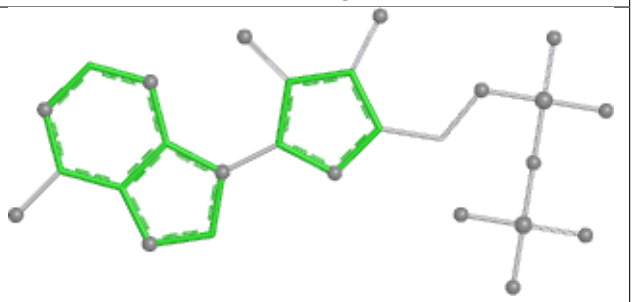
Bond lengths



Bond angles

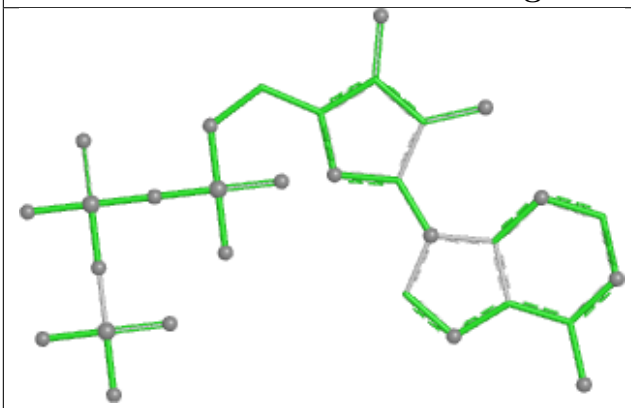


Torsions

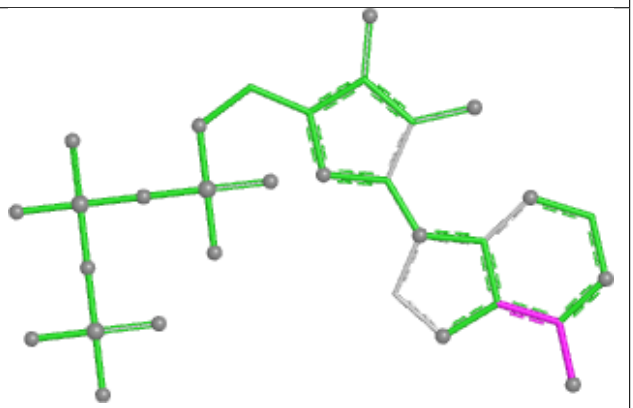


Rings

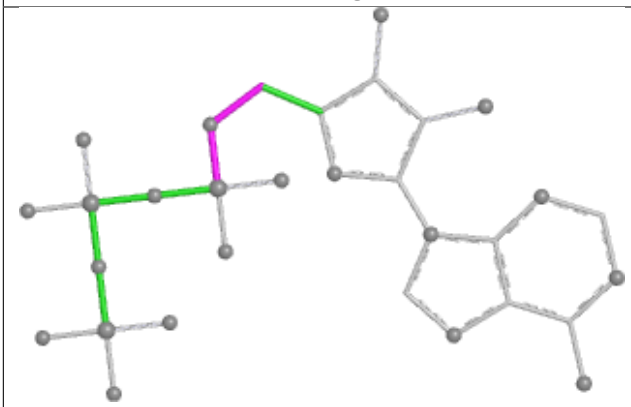
Ligand ATP D 501



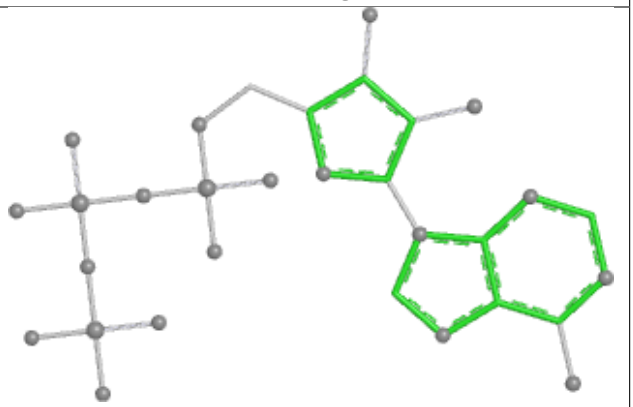
Bond lengths



Bond angles

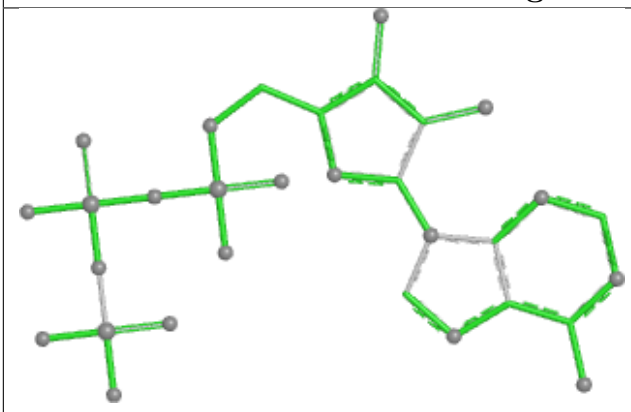


Torsions

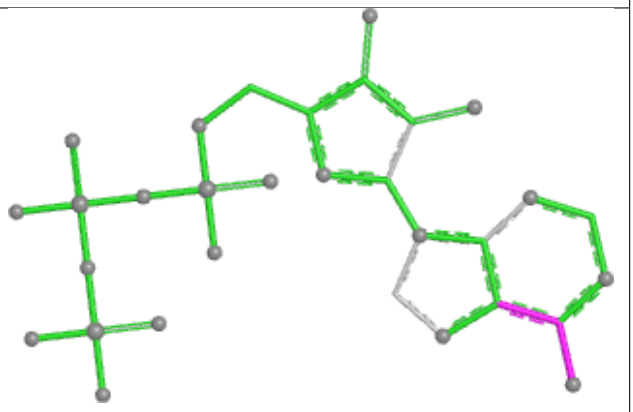


Rings

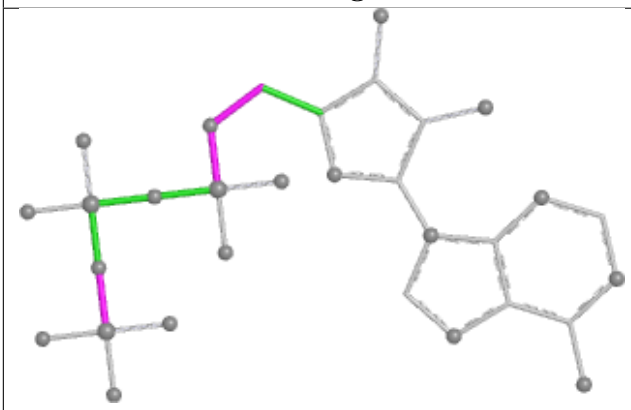
Ligand ATP F 501



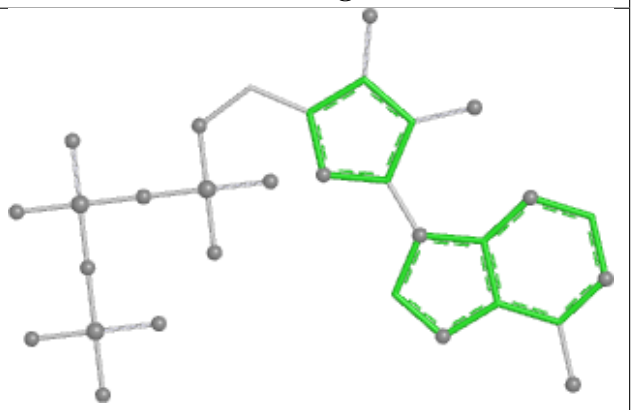
Bond lengths



Bond angles

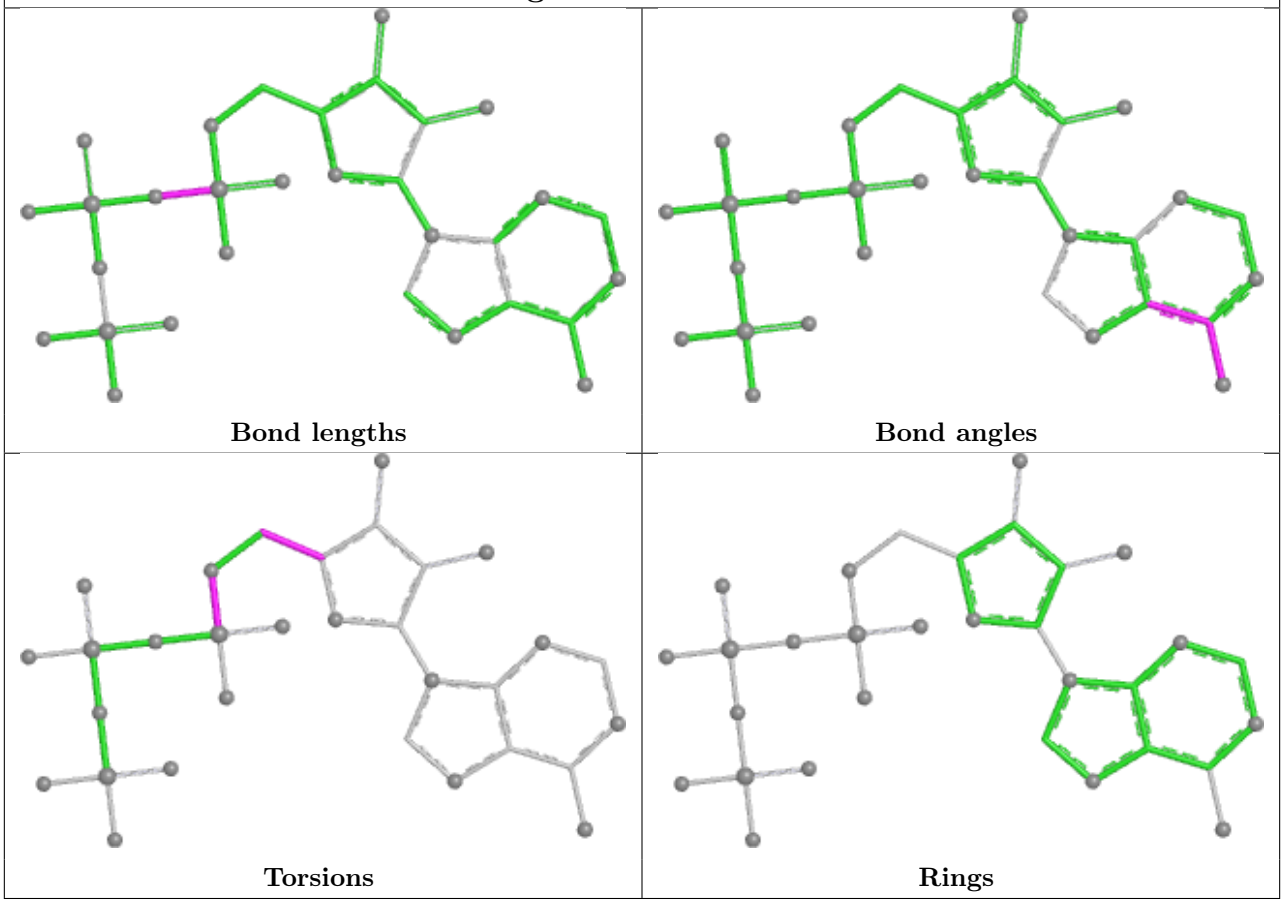


Torsions



Rings

Ligand ATP E 401



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.

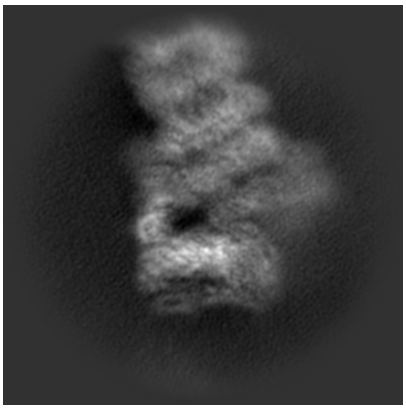
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-44910. These allow visual inspection of the internal detail of the map and identification of artifacts.

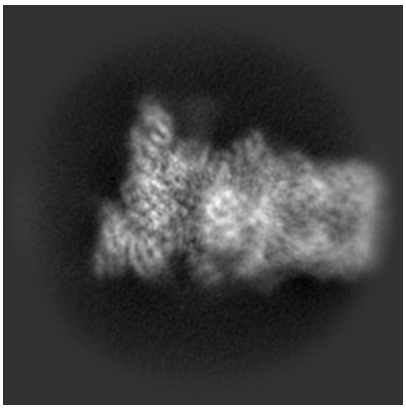
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

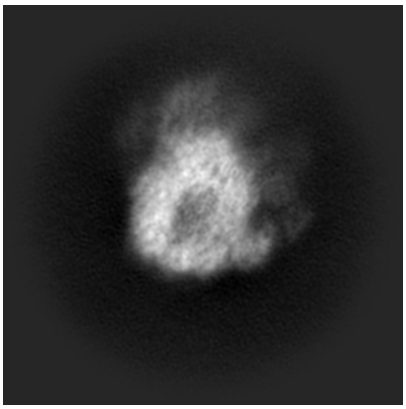
6.1.1 Primary map



X

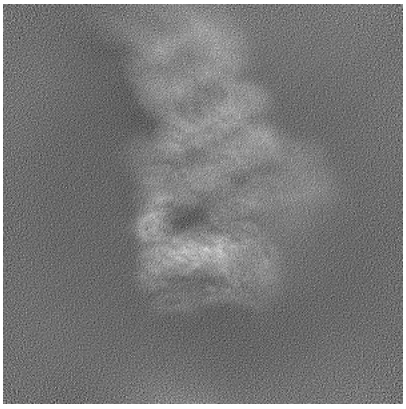


Y

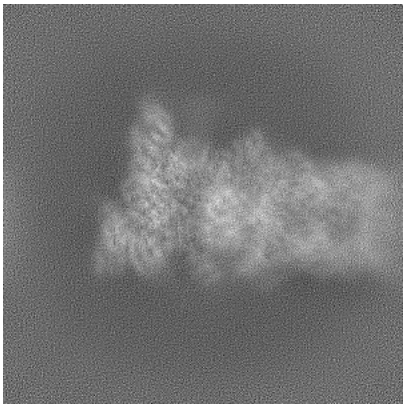


Z

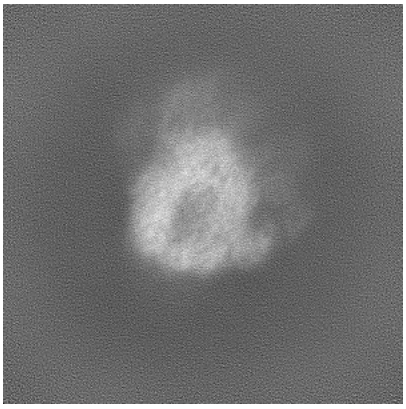
6.1.2 Raw map



X



Y

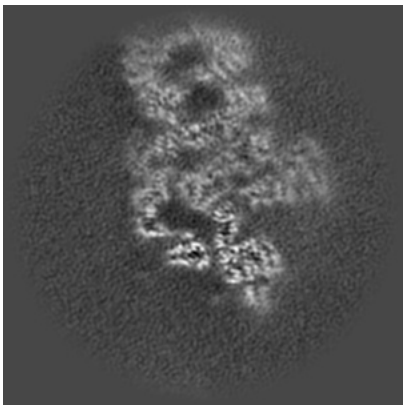


Z

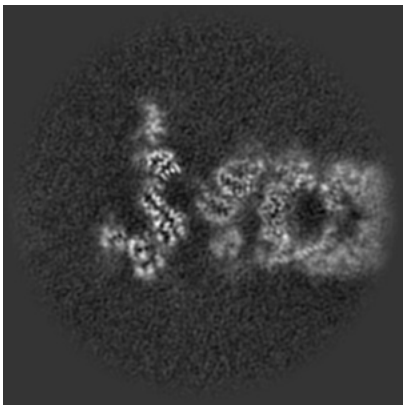
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

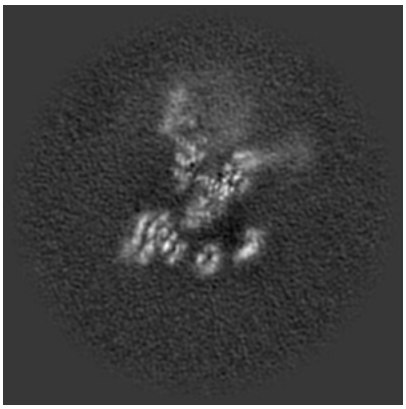
6.2.1 Primary map



X Index: 220

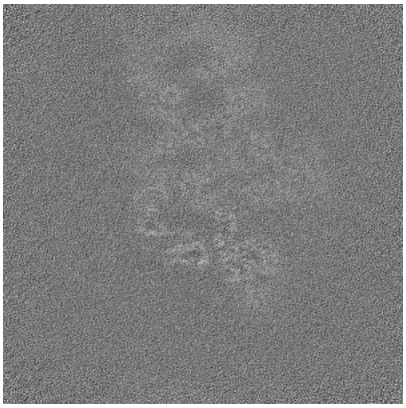


Y Index: 220

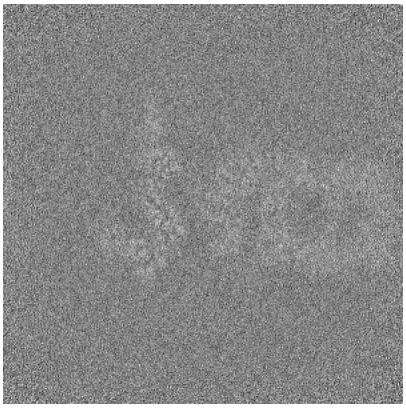


Z Index: 220

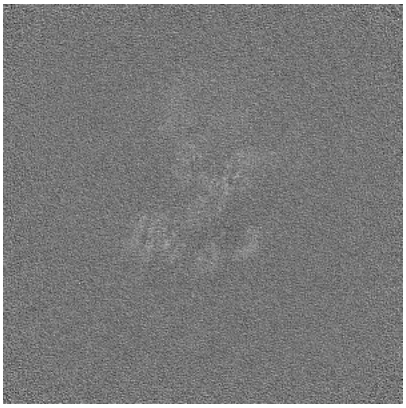
6.2.2 Raw map



X Index: 220



Y Index: 220

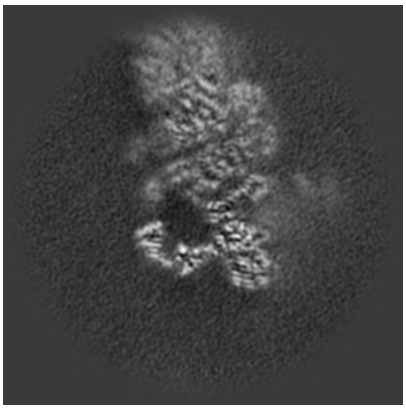


Z Index: 220

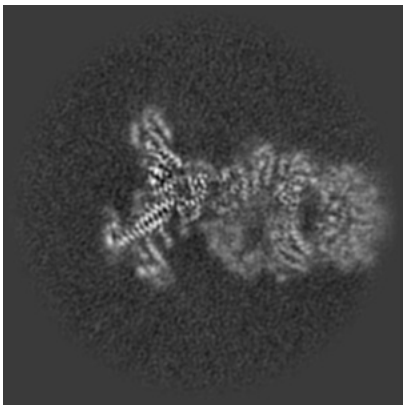
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

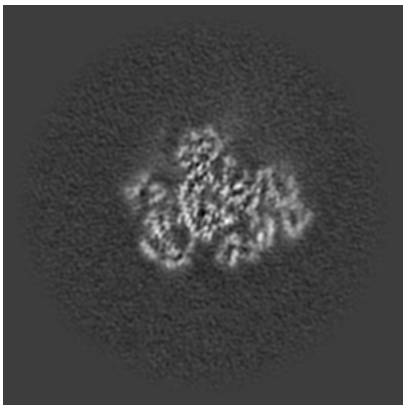
6.3.1 Primary map



X Index: 240

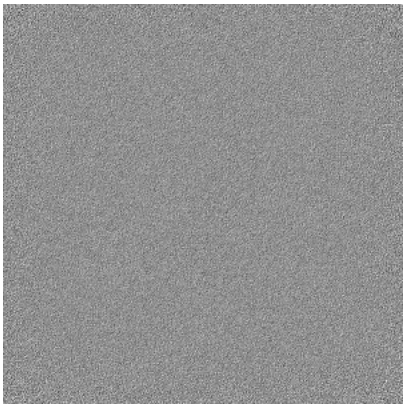


Y Index: 239

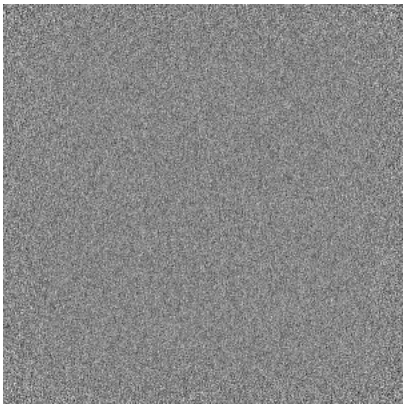


Z Index: 167

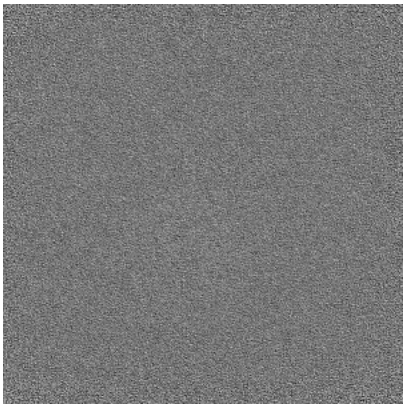
6.3.2 Raw map



X Index: 0



Y Index: 0

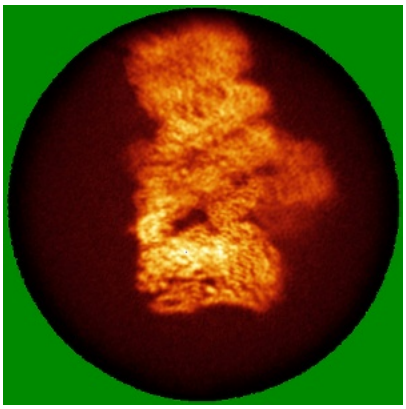


Z Index: 0

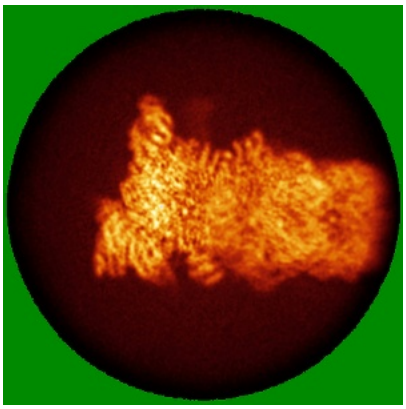
The images above show the largest variance slices of the map in three orthogonal directions.

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

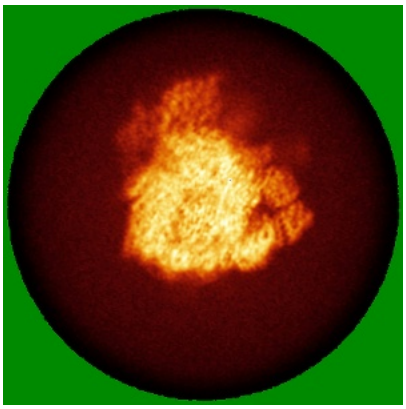
6.4.1 Primary map



X

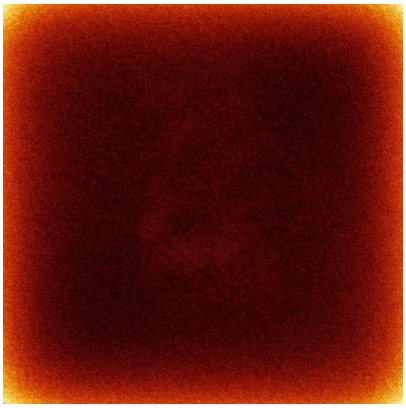


Y

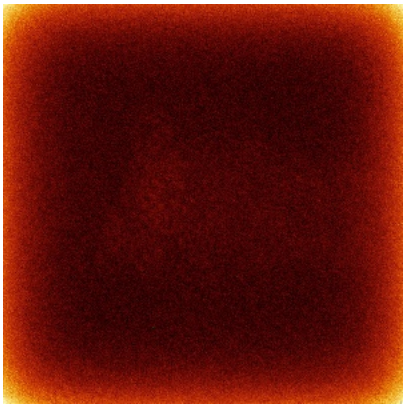


Z

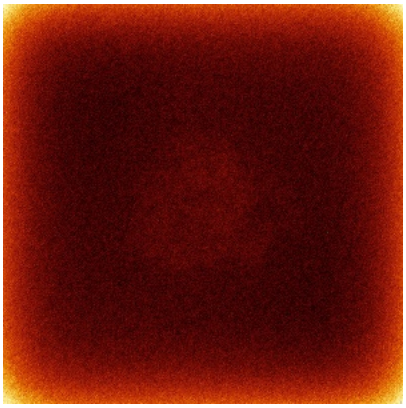
6.4.2 Raw map



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.

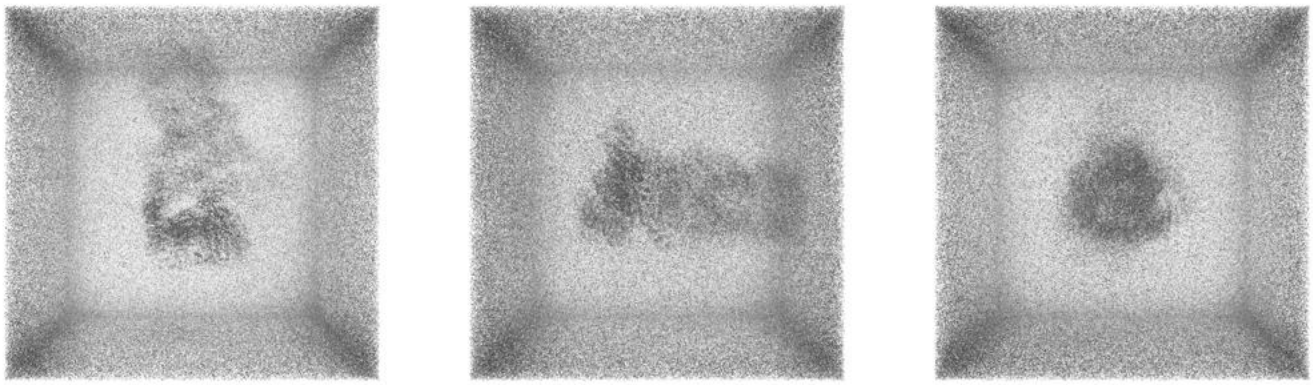
6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.15. 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.

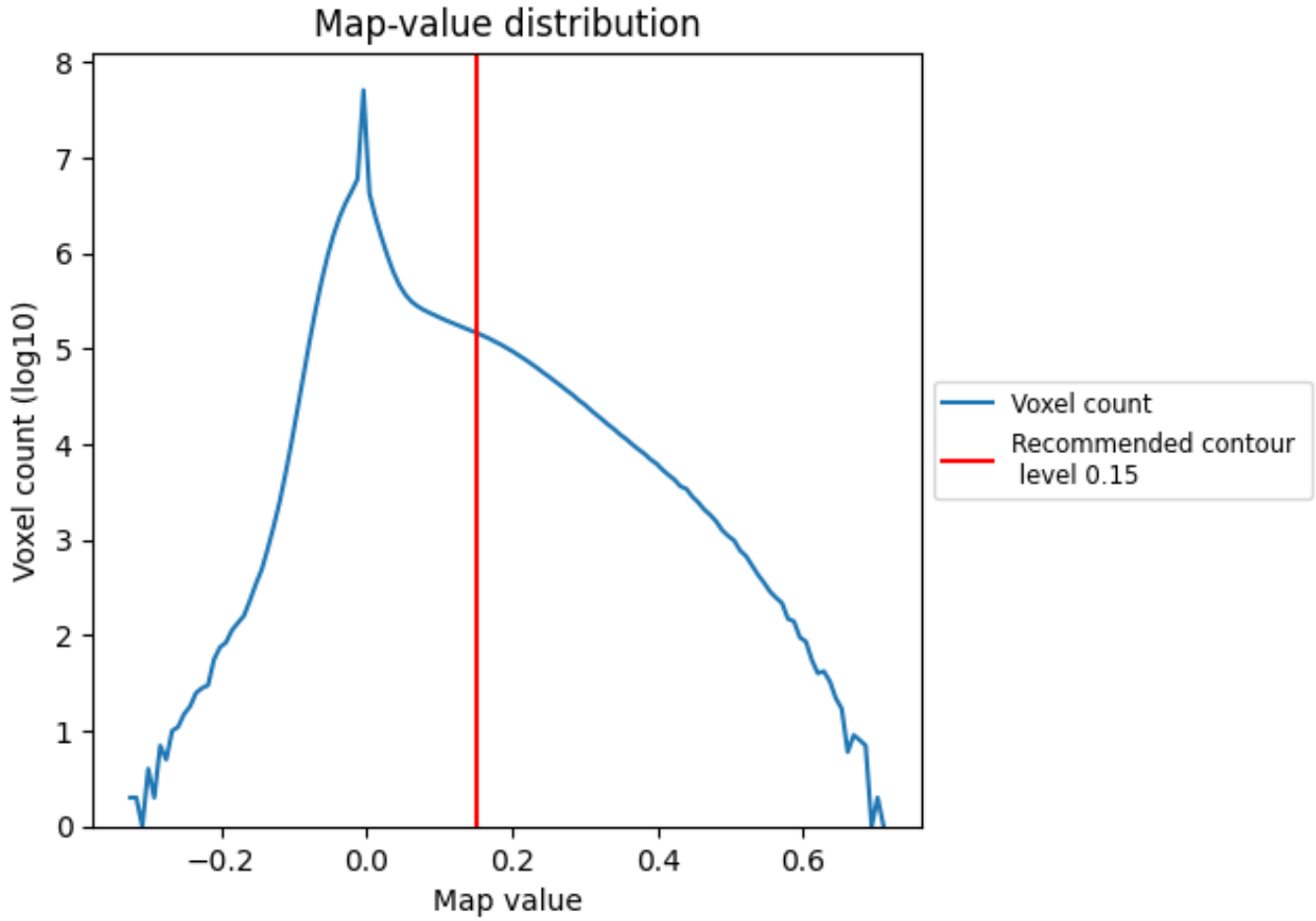
6.6 Mask visualisation (i)

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

7 Map analysis

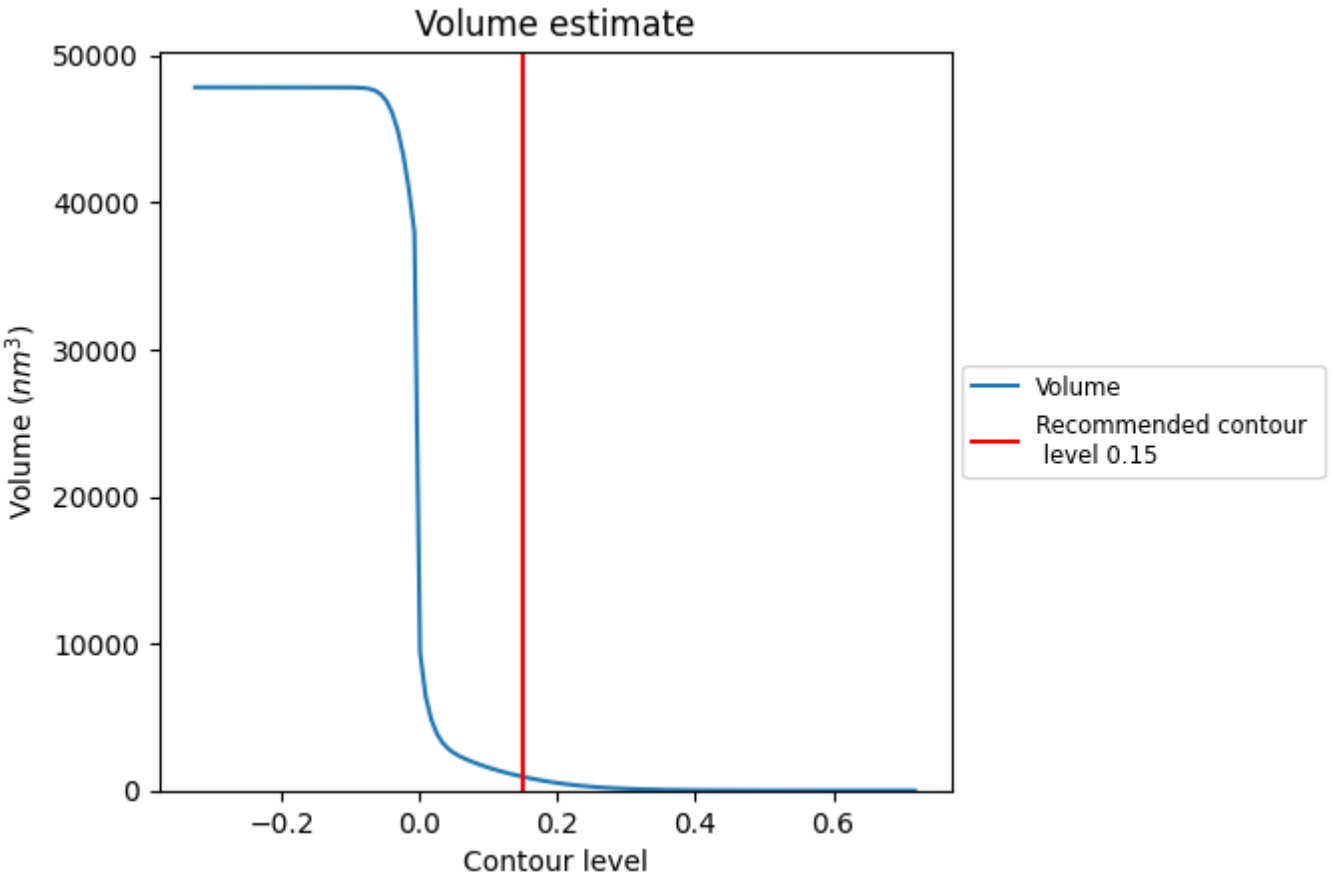
This section contains the results of statistical analysis of the map.

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.

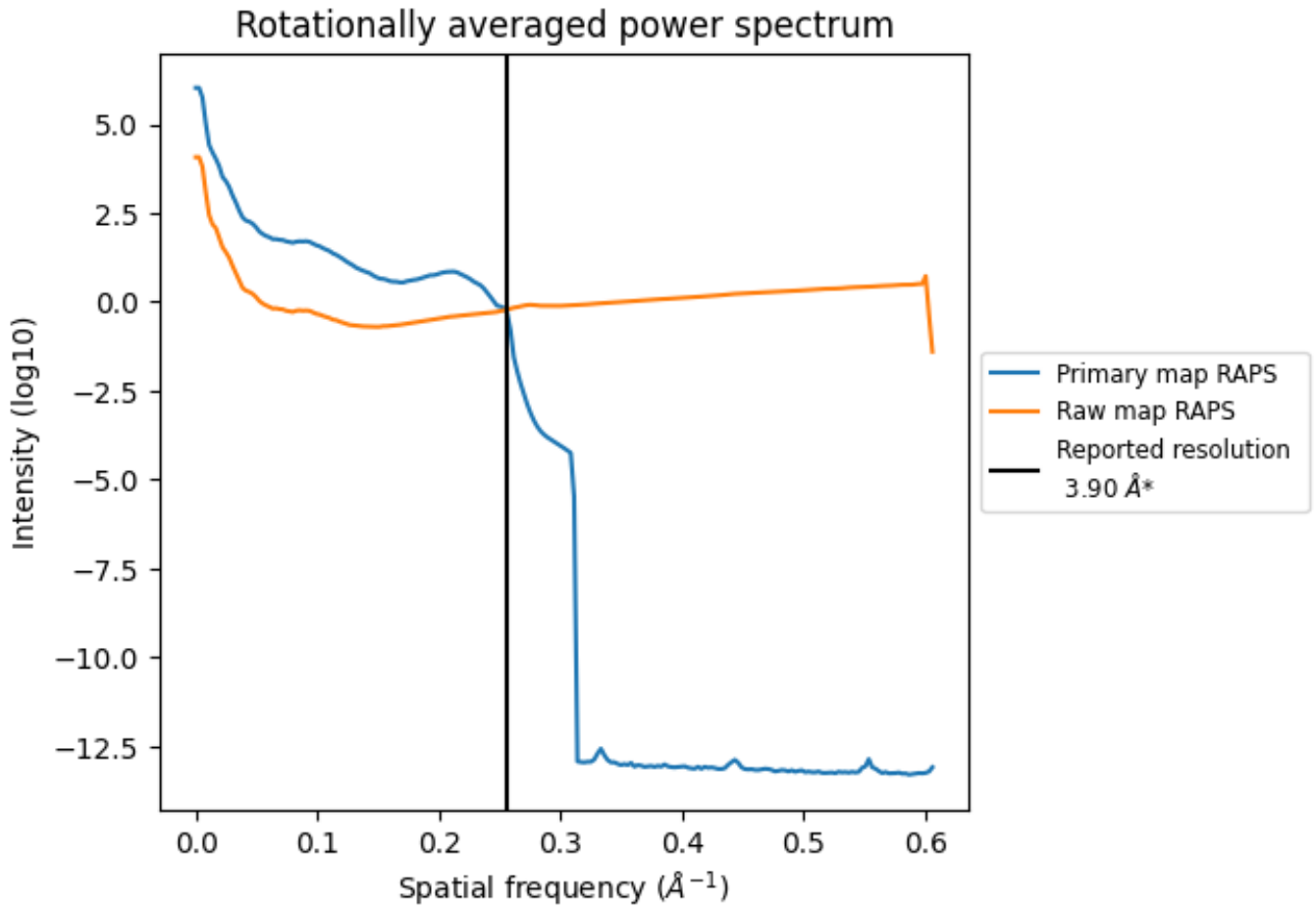
7.2 Volume estimate



The volume at the recommended contour level is 943 nm^3; this corresponds to an approximate mass of 852 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)

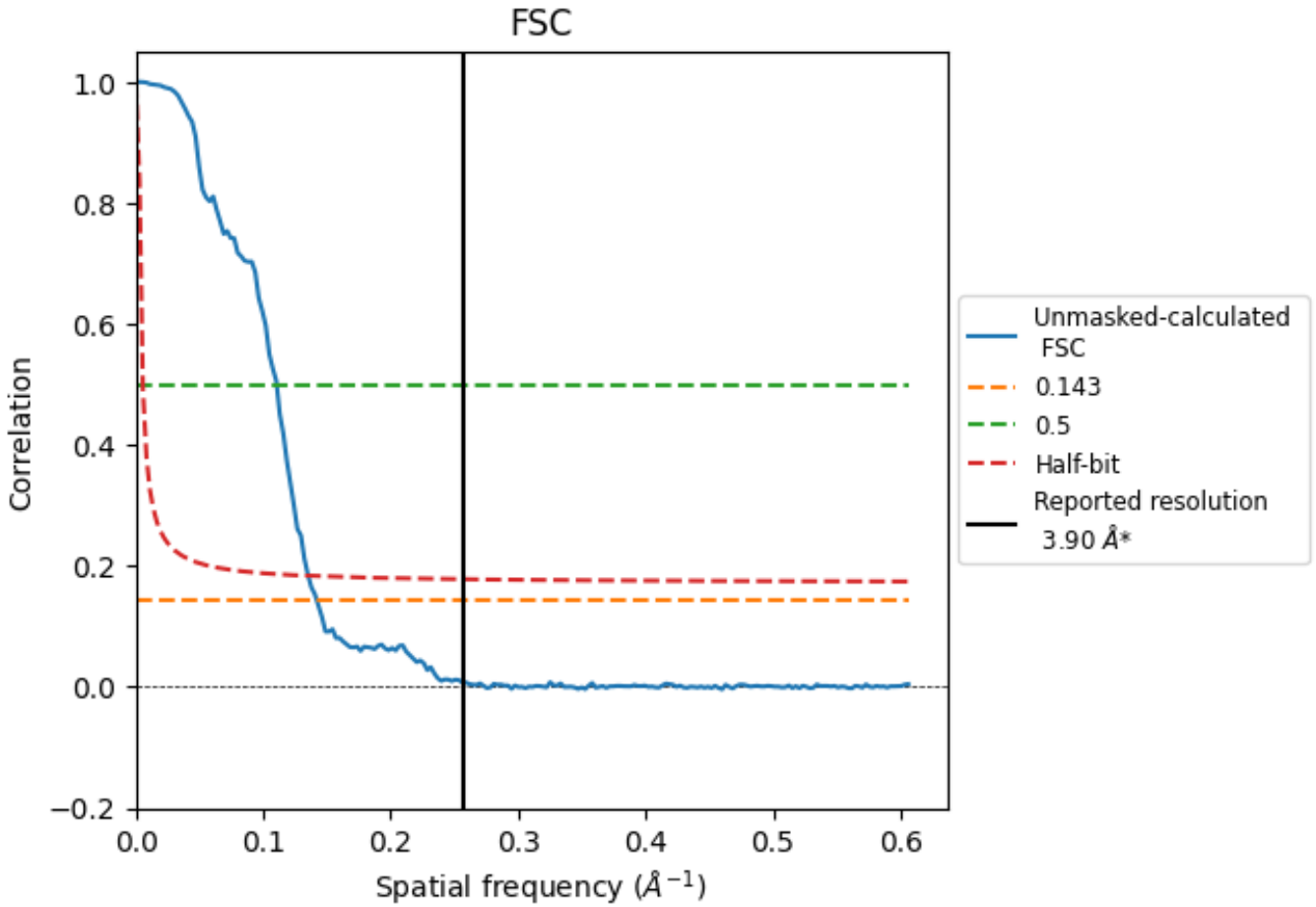


*Reported resolution corresponds to spatial frequency of 0.256 Å^{-1}

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 0.256 Å^{-1}

8.2 Resolution estimates (i)

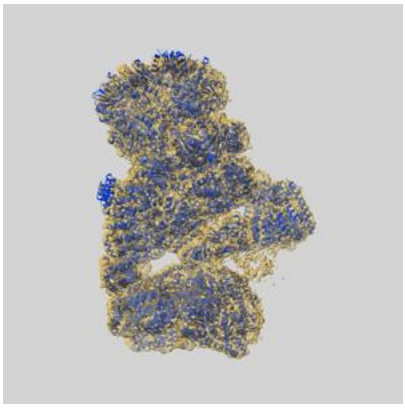
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.90	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	7.05	9.05	7.40

*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 7.05 differs from the reported value 3.9 by more than 10 %

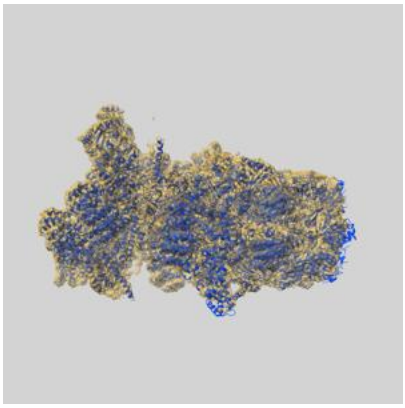
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-44910 and PDB model 9BUI. Per-residue inclusion information can be found in section 3 on page 13.

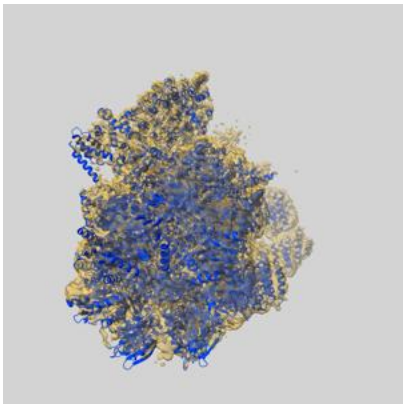
9.1 Map-model overlay



X



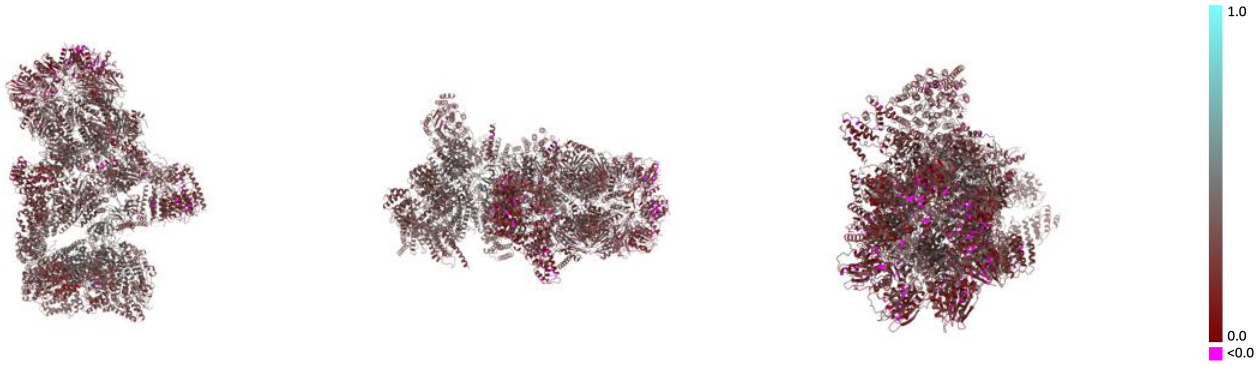
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.15 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.

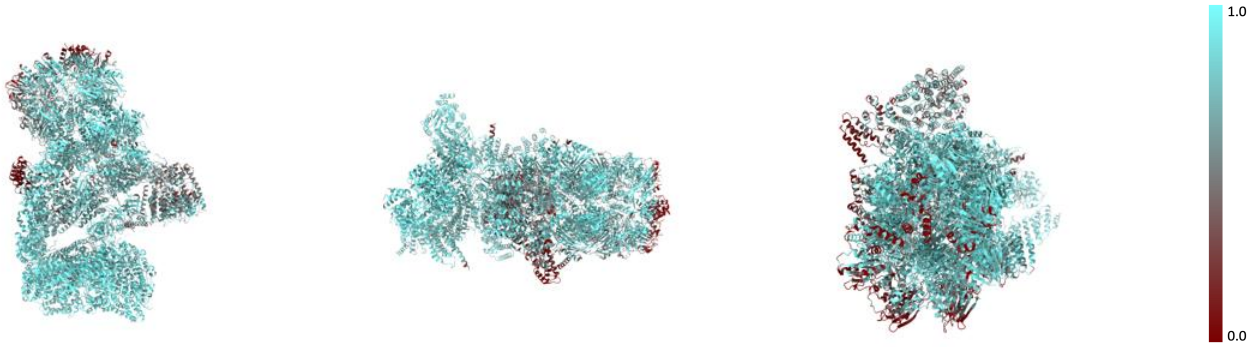
9.2 Q-score mapped to coordinate model (i)



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.

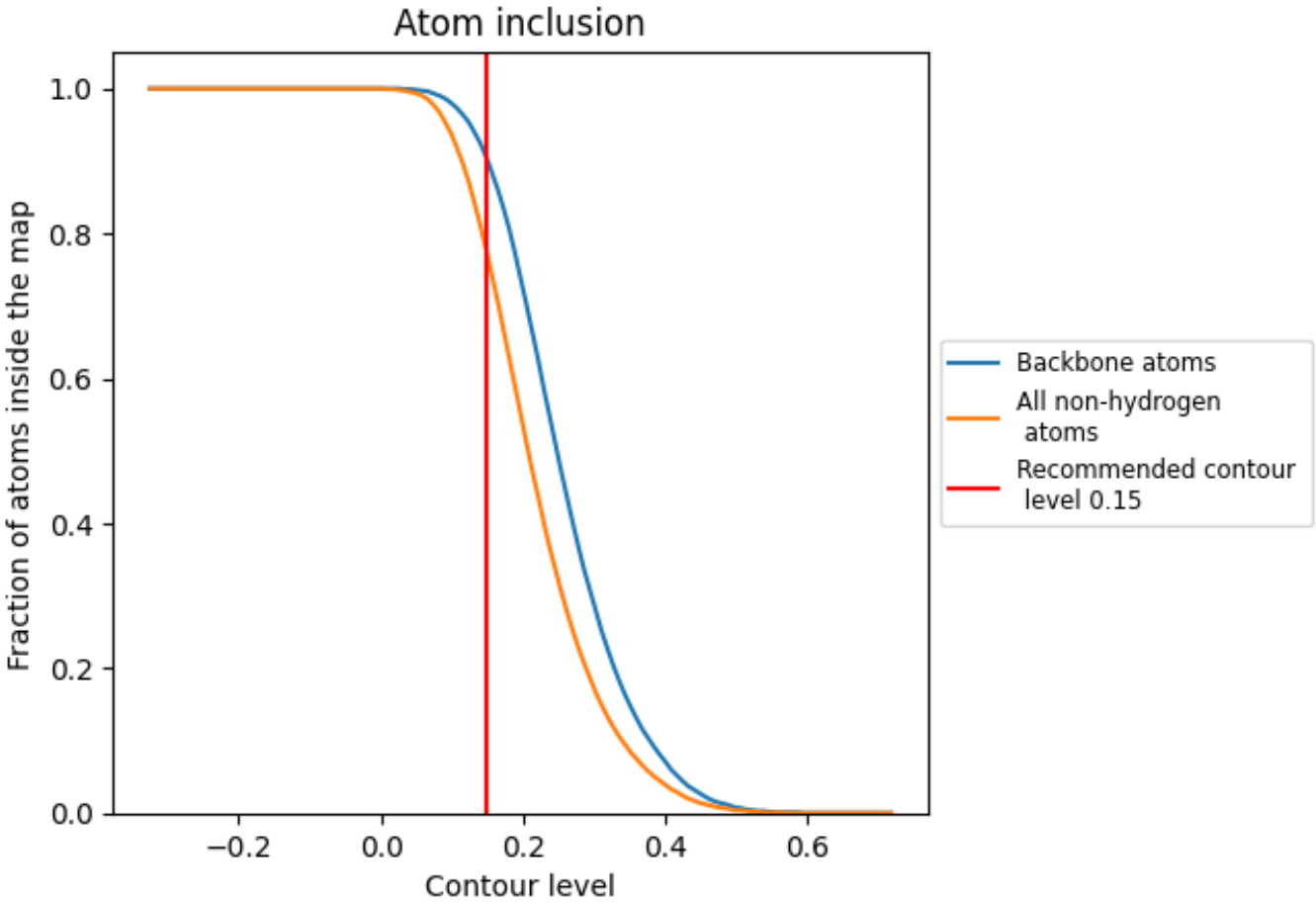
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.15).

9.4 Atom inclusion (i)



At the recommended contour level, 90% of all backbone atoms, 77% 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 (0.15) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7710	0.3010
A	0.7720	0.3100
B	0.6670	0.2880
C	0.7580	0.2930
D	0.7780	0.3470
E	0.8130	0.3460
F	0.8000	0.3330
G	0.8390	0.3610
H	0.8450	0.3510
I	0.7600	0.3150
J	0.7610	0.3020
K	0.8450	0.3050
L	0.9130	0.3330
M	0.8760	0.3500
N	0.8330	0.3080
O	0.7680	0.3160
P	0.7350	0.2900
Q	0.8210	0.2760
R	0.8730	0.2690
S	0.8630	0.2740
T	0.9020	0.2750
U	0.9000	0.3440
V	0.8580	0.3290
W	0.8300	0.3020
X	0.6800	0.2960
Y	0.8660	0.3200
Z	0.8850	0.3970
a	0.8950	0.3110
b	0.8680	0.3120
c	0.8710	0.3900
d	0.8630	0.2960
e	0.9190	0.3460
f	0.5430	0.2250
n	0.7750	0.2350
o	0.6180	0.1750

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Chain	Atom inclusion	Q-score
p	0.3920	0.1750
q	0.4610	0.2030
r	0.4330	0.2050
s	0.4300	0.2260
t	0.6230	0.2210
y	0.6920	0.3370
z	0.7970	0.2770