Full wwPDB X-ray Structure Validation Report ⓘ

Sep 9, 2024 – 10:11 AM EDT

PDB ID	:	8U9X
Title	:	STRUCTURAL BASIS OF TRANSCRIPTION: RNA POLYMERASE II SUBSTRATE BINDING AND METAL COORDINATION AT 3.0 A OF T834P MUTANT USING A FREE-ELECTRON LASER
Authors	:	Arjunan, P.; Calero, G.; Kaplan, C.D.
Deposited on	:	2023-09-20
Resolution	:	3.05 Å(reported)

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp
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:

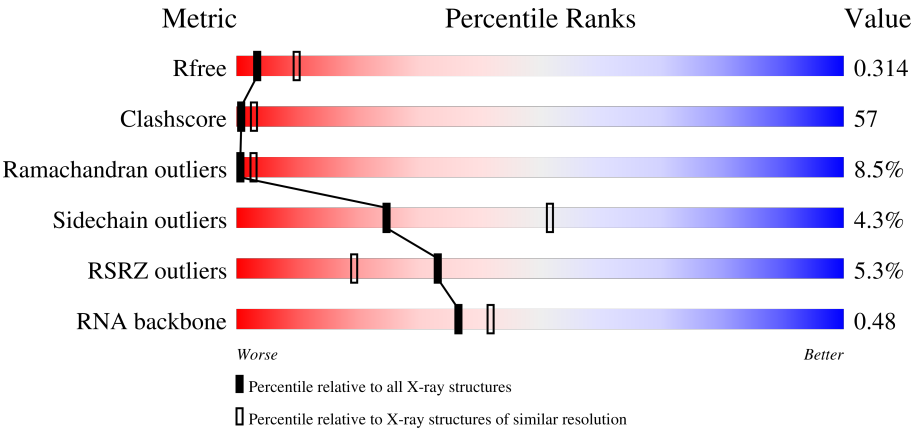
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.20.1
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.002 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.38.3

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.05 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)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	2258 (3.10-3.02)
Clashscore	180529	2399 (3.10-3.02)
Ramachandran outliers	177936	2269 (3.10-3.02)
Sidechain outliers	177891	2268 (3.10-3.02)
RSRZ outliers	164620	2258 (3.10-3.02)
RNA backbone	3690	1166 (3.32-2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	1733	4% 22% 52% 7% 19%
2	B	1224	5% 21% 58% 7% 13%
3	C	318	% 30% 50% • 16%

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Mol	Chain	Length	Quality of chain
4	D	221	2% 21% 46% 6% 27%
5	E	215	7% 36% 56% 5%
6	F	155	18% 34% 46%
7	G	171	7% 35% 57% 7%
8	H	146	9% 24% 50% 6% 20%
9	I	122	14% 34% 52% 11%
10	J	70	20% 64% 7% 7%
11	K	120	33% 55% 8%
12	L	70	6% 10% 27% 24% 39%
13	R	10	40% 50% 10%
14	T	13	15% 85%

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
15	ZN	L	101	-	-	X	-

2 Entry composition (i)

There are 19 unique types of molecules in this entry. The entry contains 30893 atoms, of which 8 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 DNA-directed RNA polymerase II subunit RPB1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1398	Total	C	N	O	S	0	0	0
			10987	6934	1918	2073	62			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	834	PRO	THR	conflict	UNP P04050

- Molecule 2 is a protein called DNA-directed RNA polymerase subunit beta.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	1060	Total	C	N	O	S	0	0	0
			8424	5346	1475	1549	54			

- Molecule 3 is a protein called DNA-directed RNA polymerase II subunit RPB3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	266	Total	C	N	O	S	0	0	0
			2095	1317	348	417	13			

- Molecule 4 is a protein called DNA-directed RNA polymerase II subunit RPB4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	D	162	Total	C	N	O	S	0	0	0
			1287	799	224	262	2			

- Molecule 5 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	E	208	Total	C	N	O	S	0	0	0
			1713	1089	303	312	9			

- Molecule 6 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	F	84	Total	C	N	O	S	0	0	0
			679	434	115	127	3			

- Molecule 7 is a protein called DNA-directed RNA polymerase II subunit RPB7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	G	171	Total	C	N	O	S	0	0	0
			1340	861	222	249	8			

- Molecule 8 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	H	117	Total	C	N	O	S	0	0	0
			951	605	158	184	4			

- Molecule 9 is a protein called DNA-directed RNA polymerase II subunit RPB9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	I	119	Total	C	N	O	S	0	0	0
			971	596	179	186	10			

- Molecule 10 is a protein called DNA-directed RNA polymerases II subunit RPABC5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	J	65	Total	C	N	O	S	0	0	0
			526	336	90	94	6			

- Molecule 11 is a protein called DNA-directed RNA polymerase II subunit RPB11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	K	115	Total	C	N	O	S	0	0	1
			920	590	157	171	2			

- Molecule 12 is a protein called DNA-directed RNA polymerases II subunit RPABC4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	L	43	Total	C	N	O	S	0	0	0
			343	211	69	59	4			

- Molecule 13 is a RNA chain called MOL_ID: 13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	R	10	Total	C	N	O	P	0	0	0
			217	98	45	65	9			

- Molecule 14 is a DNA chain called MOL_ID: 14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	T	13	Total	C	N	O	P	0	0	0
			260	124	44	79	13			

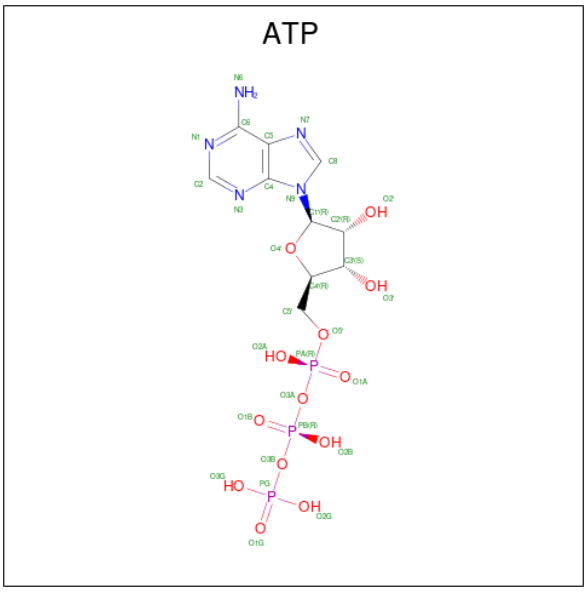
- Molecule 15 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
15	A	2	Total	Zn	0	0
			2	2		
15	B	1	Total	Zn	0	0
			1	1		
15	C	1	Total	Zn	0	0
			1	1		
15	I	2	Total	Zn	0	0
			2	2		
15	J	1	Total	Zn	0	0
			1	1		
15	L	1	Total	Zn	0	0
			1	1		

- Molecule 16 is MANGANESE (II) ION (three-letter code: MN) (formula: Mn) (labeled as "Ligand of Interest" by depositor).

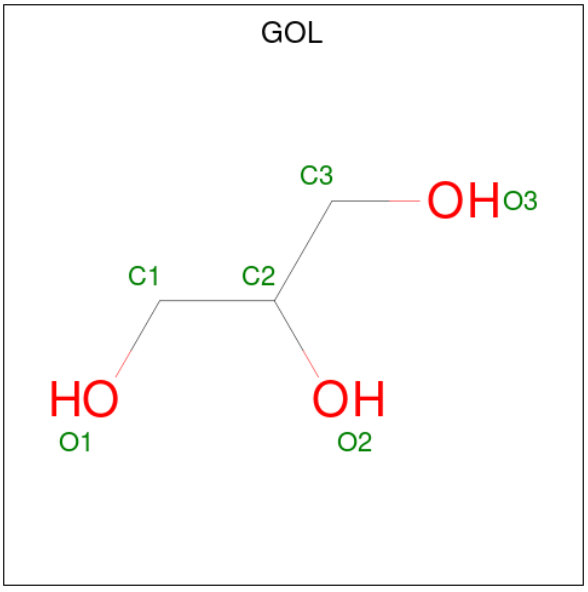
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
16	A	2	Total	Mn	0	0
			2	2		
16	B	1	Total	Mn	0	0
			1	1		

- Molecule 17 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
17	B	1	Total	C	N	O	P	0	0
			31	10	5	13	3		

- Molecule 18 is GLYCEROL (three-letter code: GOL) (formula: $C_3H_8O_3$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
18	E	1	Total	C	H	O	0	0
			14	3	8	3		

- Molecule 19 is water.

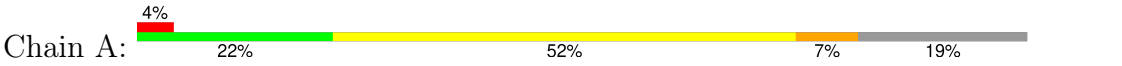
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
19	A	46	Total O 46 46	0	0
19	B	38	Total O 38 38	0	0
19	C	6	Total O 6 6	0	0
19	D	5	Total O 5 5	0	0
19	E	7	Total O 7 7	0	0
19	F	3	Total O 3 3	0	0
19	G	4	Total O 4 4	0	0
19	H	3	Total O 3 3	0	0
19	J	2	Total O 2 2	0	0
19	K	5	Total O 5 5	0	0
19	L	2	Total O 2 2	0	0
19	R	1	Total O 1 1	0	0
19	T	2	Total O 2 2	0	0

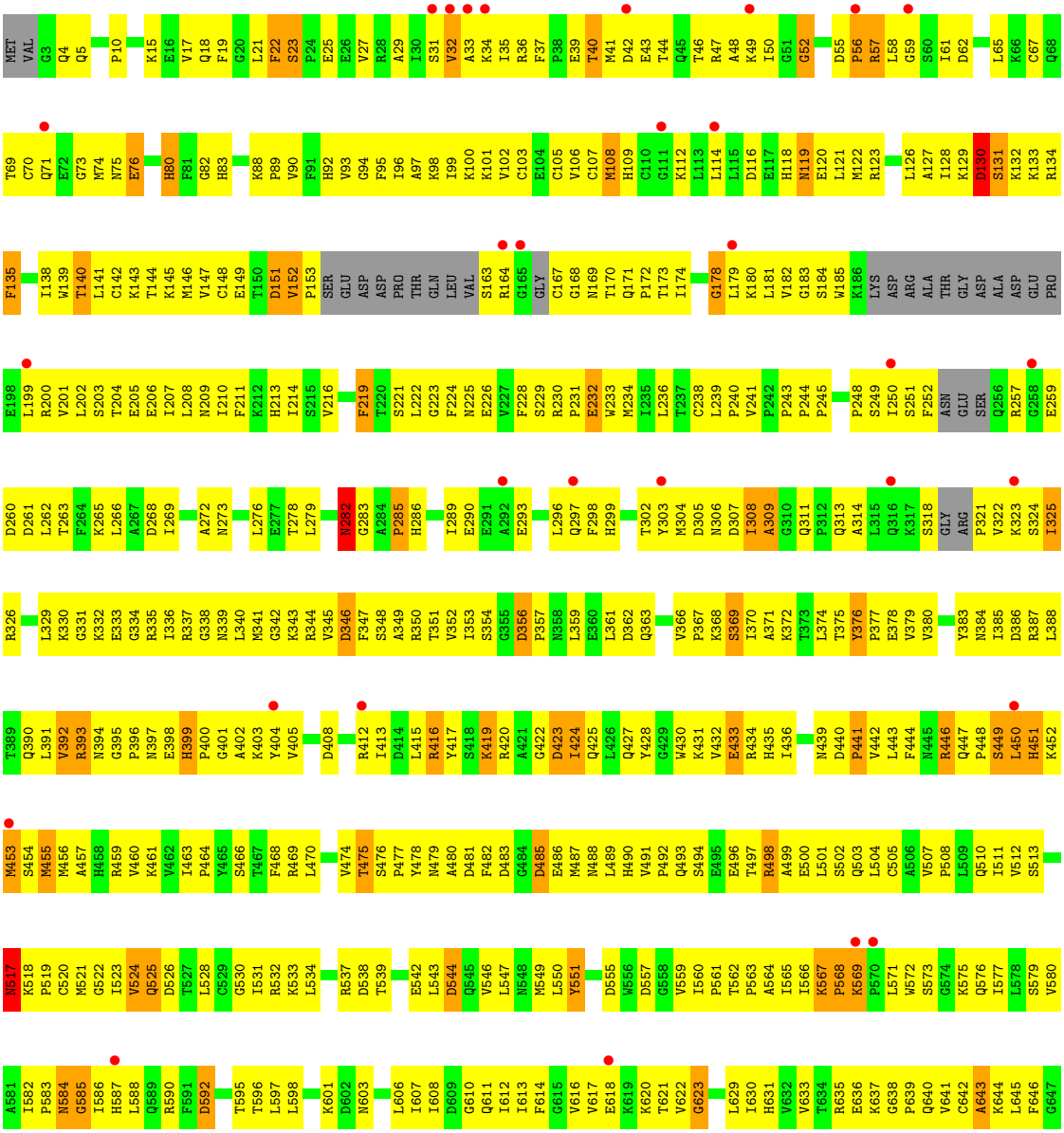
3 Residue-property plots (i)

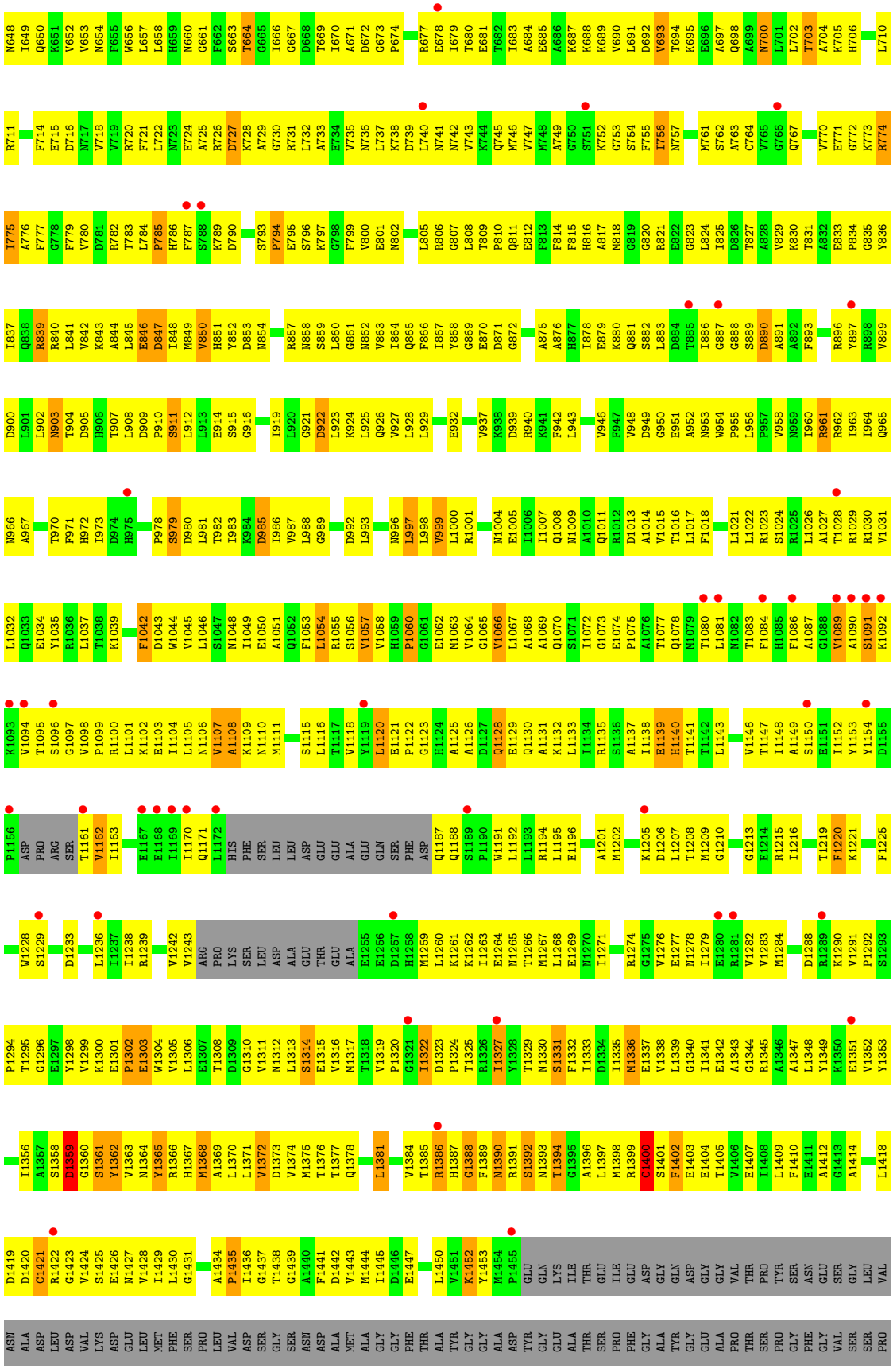
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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 dot above a residue indicates a poor fit to the electron density (RSRZ > 2). 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: DNA-directed RNA polymerase II subunit RPB1

Chain A:

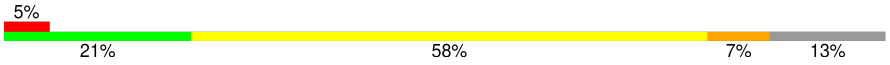


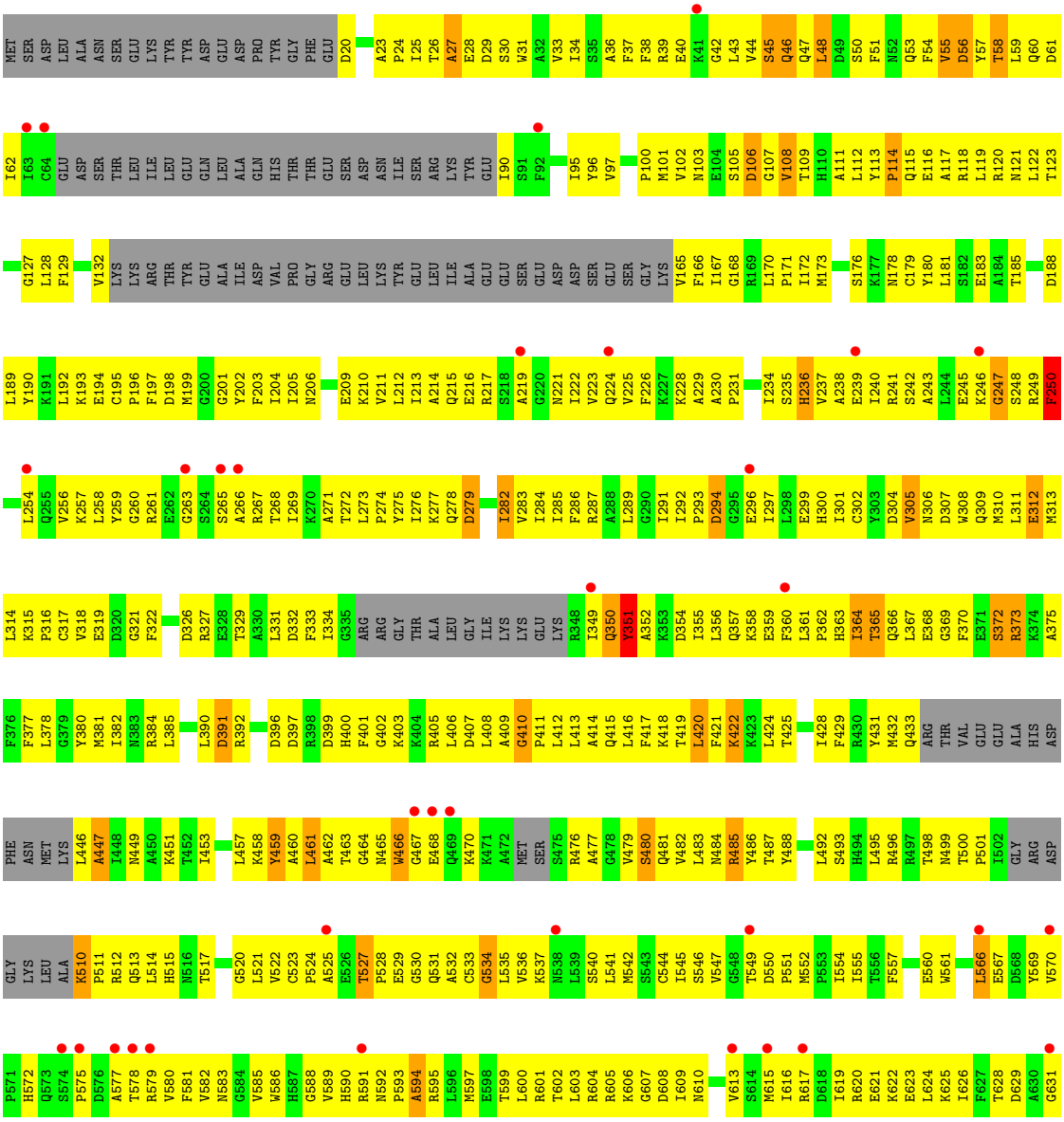


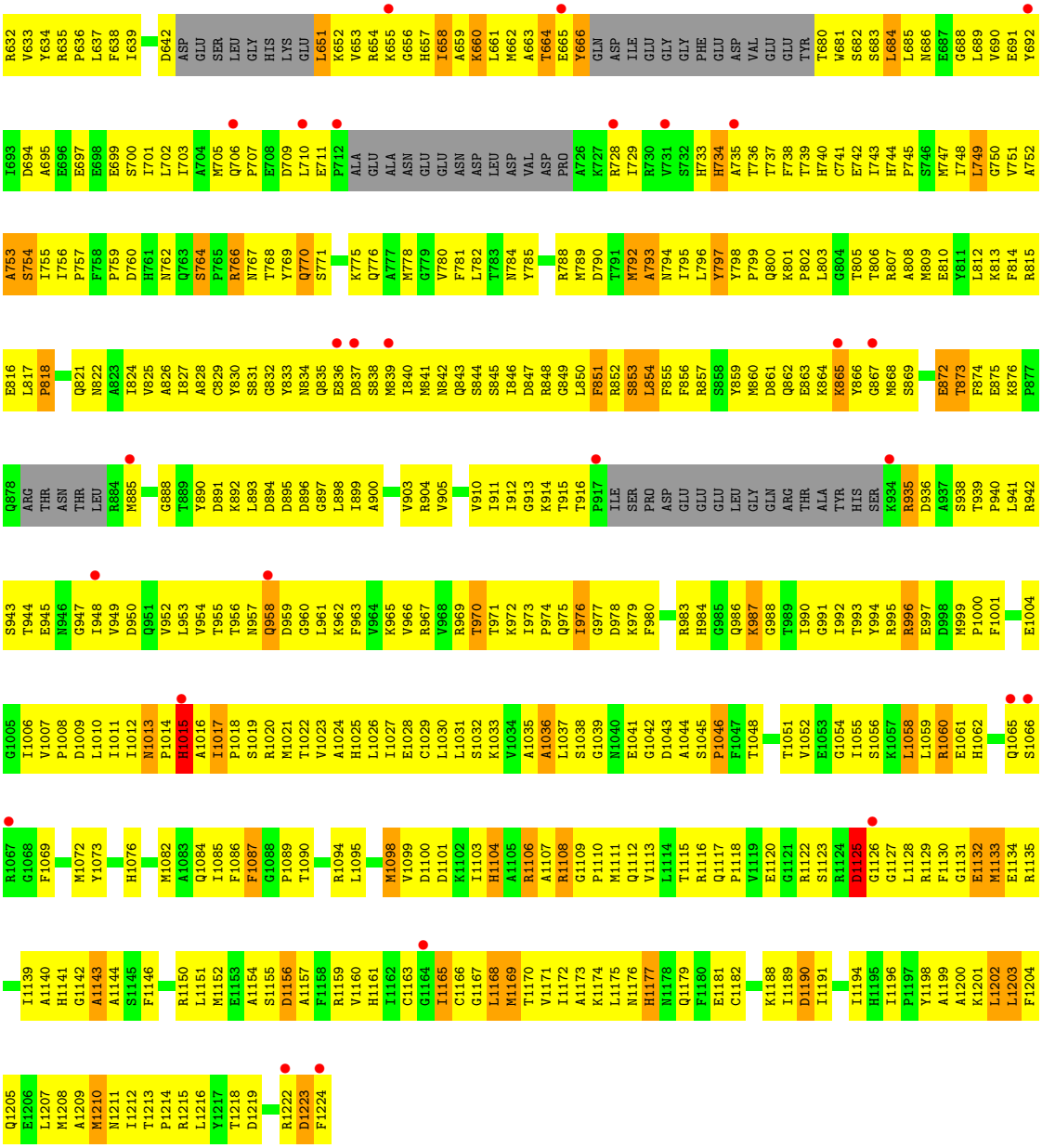


• Molecule 2: DNA-directed RNA polymerase subunit beta

Chain B:

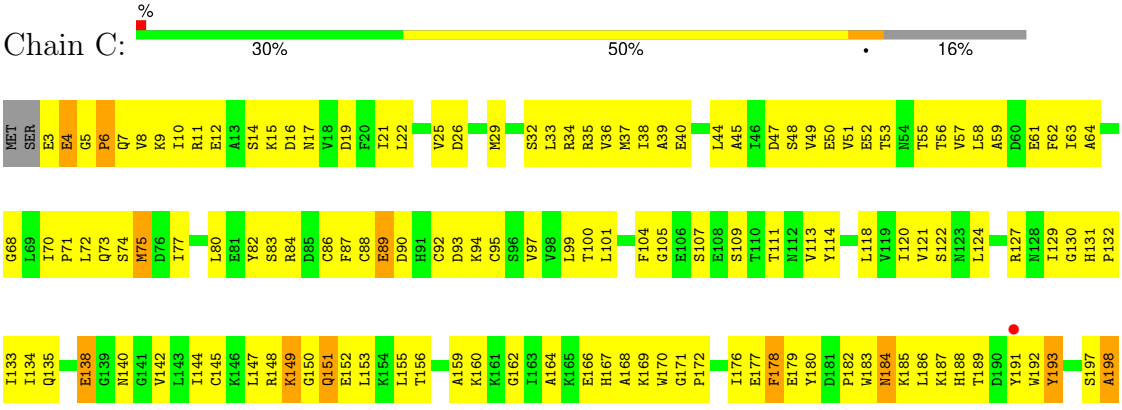


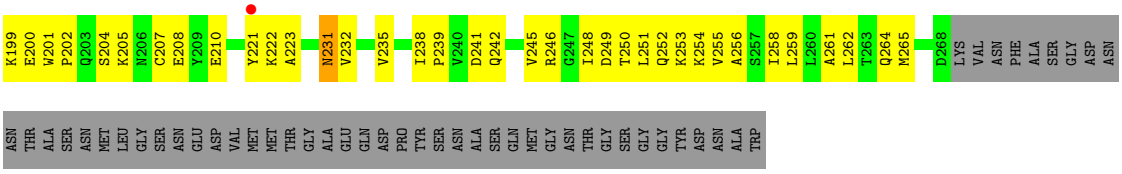




• Molecule 3: DNA-directed RNA polymerase II subunit RPB3

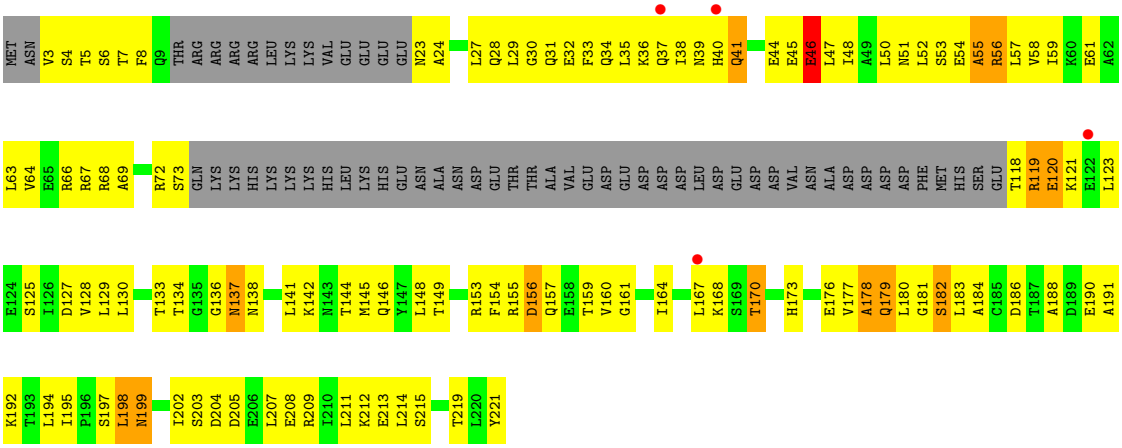
Chain C:





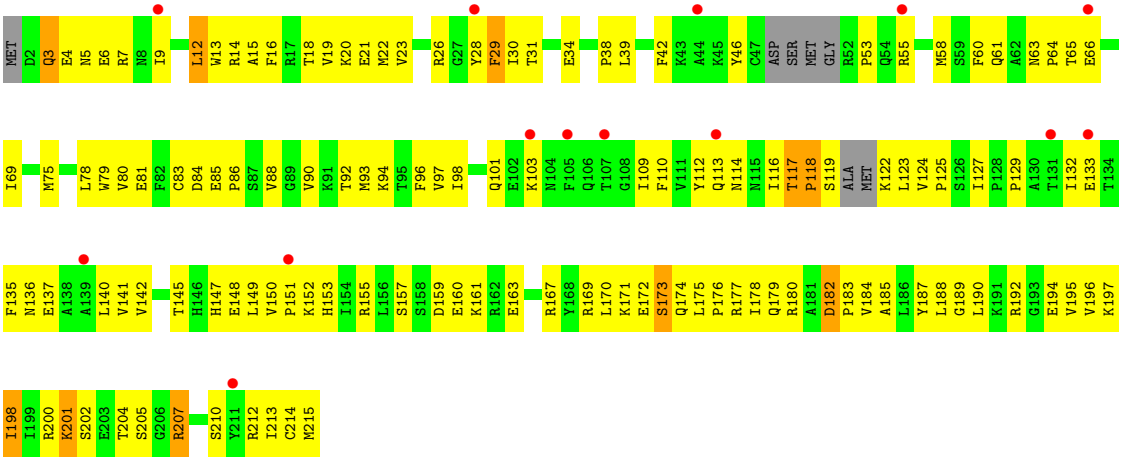
• Molecule 4: DNA-directed RNA polymerase II subunit RPB4

Chain D:



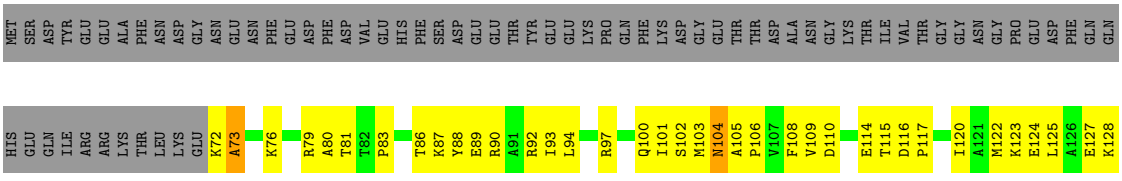
• Molecule 5: DNA-directed RNA polymerases I, II, and III subunit RPABC1

Chain E:

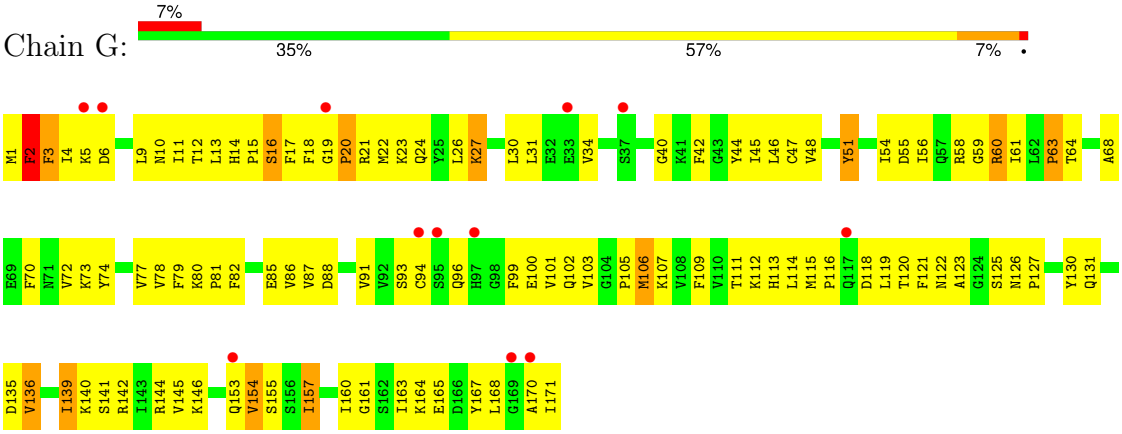


• Molecule 6: DNA-directed RNA polymerases I, II, and III subunit RPABC2

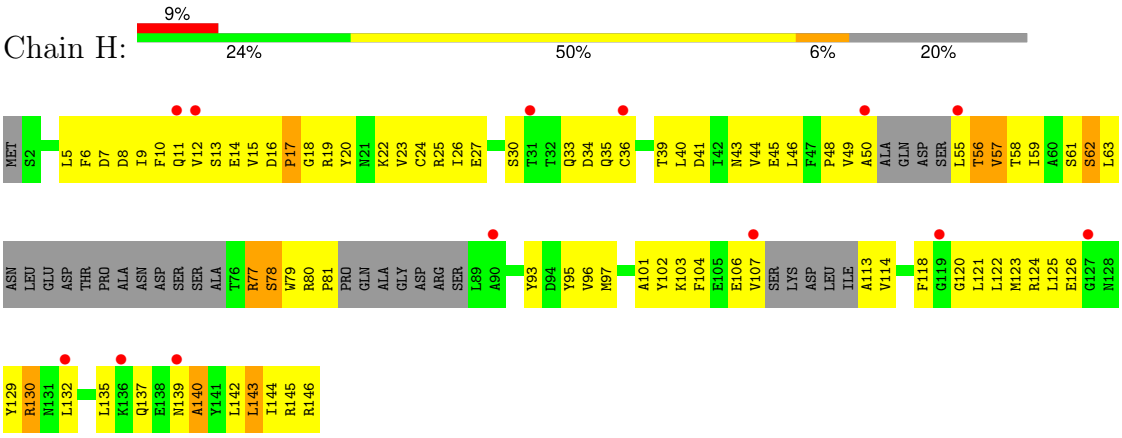
Chain F:



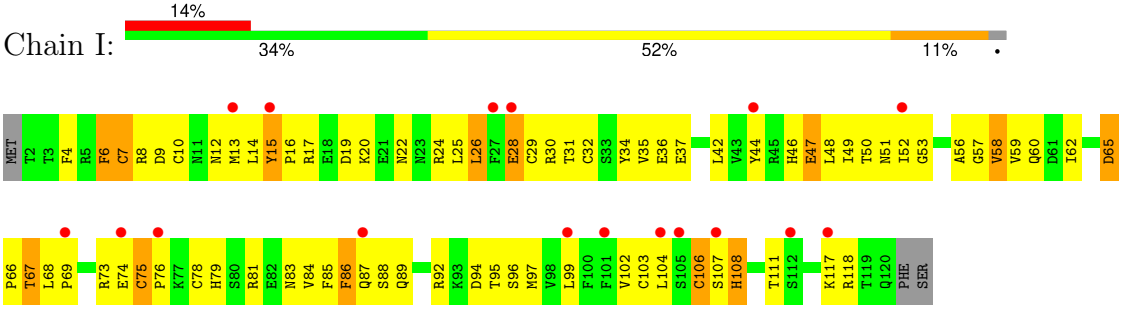
• Molecule 7: DNA-directed RNA polymerase II subunit RPB7



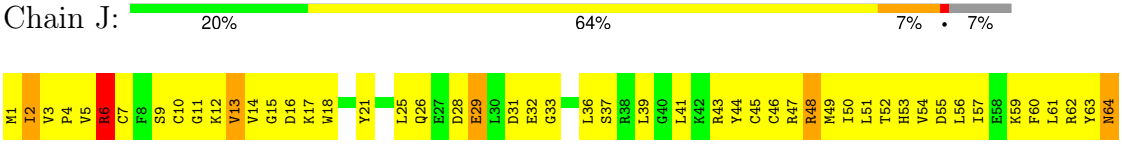
• Molecule 8: DNA-directed RNA polymerases I, II, and III subunit RPABC3



• Molecule 9: DNA-directed RNA polymerase II subunit RPB9

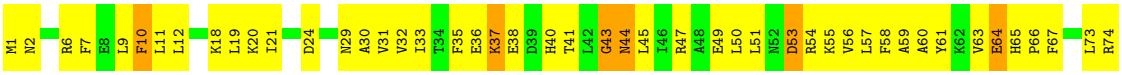


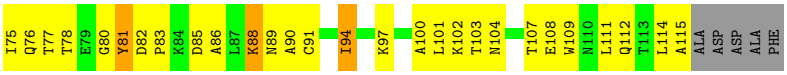
• Molecule 10: DNA-directed RNA polymerases II subunit RPABC5



• Molecule 11: DNA-directed RNA polymerase II subunit RPB11

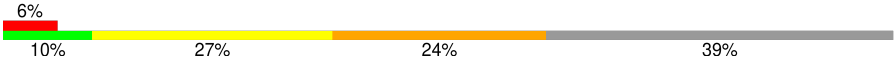
Chain K:

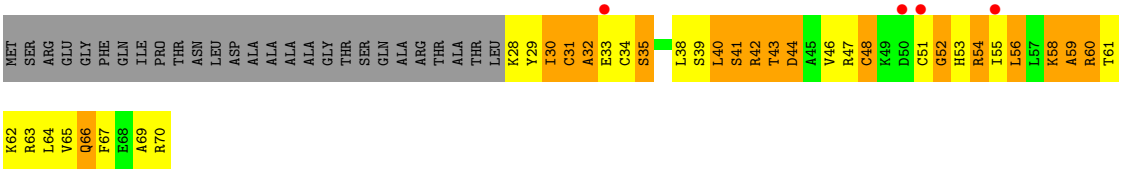




• Molecule 12: DNA-directed RNA polymerases II subunit RPABC4

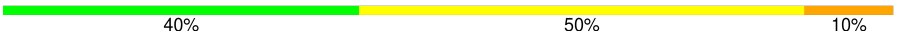
Chain L:

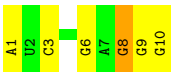




• Molecule 13: MOL_ID: 13

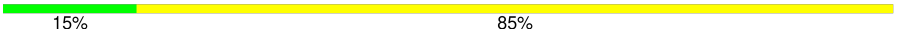
Chain R:

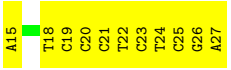




• Molecule 14: MOL_ID: 14

Chain T:





4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	220.17Å 392.60Å 280.92Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	18.00 – 3.05 18.00 – 3.05	Depositor EDS
% Data completeness (in resolution range)	98.0 (18.00-3.05) 99.2 (18.00-3.05)	Depositor EDS
R_{merge}	0.67	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.10 (at 3.00Å)	Xtriage
Refinement program	PHENIX (1.19.2_4158: ???)	Depositor
R, R_{free}	0.283 , 0.307 0.293 , 0.314	Depositor DCC
R_{free} test set	6982 reflections (3.07%)	wwPDB-VP
Wilson B-factor (Å^2)	76.8	Xtriage
Anisotropy	0.192	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.15 , 0.0	EDS
L-test for twinning[2]	$< \|L\| > = 0.33$, $< L^2 > = 0.17$	Xtriage
Estimated twinning fraction	0.073 for 1/2*h-1/2*k,-3/2*h-1/2*k,-l 0.078 for 1/2*h+1/2*k,3/2*h-1/2*k,-l	Xtriage
F_o,F_c correlation	0.89	EDS
Total number of atoms	30893	wwPDB-VP
Average B, all atoms (Å^2)	110.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.27% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, MN, GOL, ATP

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.58	0/11181	0.76	0/15114
2	B	0.54	0/8589	0.75	0/11581
3	C	0.51	0/2133	0.71	0/2891
4	D	0.47	0/1296	0.67	0/1741
5	E	0.66	0/1747	0.82	0/2349
6	F	0.70	1/691 (0.1%)	0.80	0/933
7	G	0.73	0/1368	0.85	0/1844
8	H	0.47	0/965	0.66	0/1302
9	I	0.46	0/989	0.68	0/1331
10	J	0.54	0/535	0.71	0/720
11	K	0.53	0/938	0.68	0/1267
12	L	0.61	0/345	0.77	0/457
13	R	0.55	0/244	1.11	0/380
14	T	1.06	0/289	1.05	0/442
All	All	0.57	1/31310 (0.0%)	0.76	0/42352

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	F	104	ASN	C-N	-5.56	1.21	1.34

There are no bond angle outliers.

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	56	PRO	Mainchain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	10987	0	11060	1415	0
2	B	8424	0	8455	1094	0
3	C	2095	0	2052	230	0
4	D	1287	0	1296	157	0
5	E	1713	0	1739	186	0
6	F	679	0	701	85	0
7	G	1340	0	1357	172	0
8	H	951	0	926	132	0
9	I	971	0	930	116	0
10	J	526	0	533	85	0
11	K	920	0	929	104	0
12	L	343	0	364	70	0
13	R	217	0	109	15	0
14	T	260	0	147	20	0
15	A	2	0	0	0	0
15	B	1	0	0	0	0
15	C	1	0	0	0	0
15	I	2	0	0	0	0
15	J	1	0	0	0	0
15	L	1	0	0	2	0
16	A	2	0	0	0	0
16	B	1	0	0	0	0
17	B	31	0	12	3	0
18	E	6	8	8	2	0
19	A	46	0	0	0	0
19	B	38	0	0	0	0
19	C	6	0	0	0	0
19	D	5	0	0	0	0
19	E	7	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	F	3	0	0	0	0
19	G	4	0	0	0	0
19	H	3	0	0	1	0
19	J	2	0	0	0	0
19	K	5	0	0	0	0
19	L	2	0	0	0	0
19	R	1	0	0	0	0
19	T	2	0	0	0	0
All	All	30885	8	30618	3486	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 57.

All (3486) 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)
12:L:48:CYS:SG	12:L:51:CYS:HB2	1.92	1.09
12:L:48:CYS:SG	12:L:51:CYS:CB	2.41	1.09
2:B:1082:MET:HA	3:C:189:THR:HA	1.38	1.05
12:L:30:ILE:HG22	12:L:31:CYS:H	1.23	1.04
2:B:963:PHE:HE2	2:B:965:LYS:HE2	1.22	1.03
2:B:496:ARG:HD3	2:B:751:VAL:HG21	1.44	0.99
2:B:1100:ASP:OD1	11:K:1:MET:HB3	1.62	0.99
1:A:575:LYS:HE3	8:H:120:GLY:HA3	1.46	0.96
1:A:666:ILE:HD12	1:A:667:GLY:N	1.83	0.94
1:A:1343:ALA:HB1	5:E:149:LEU:HD12	1.47	0.94
12:L:48:CYS:HG	15:L:101:ZN:ZN	0.62	0.94
1:A:279:LEU:HB3	1:A:289:ILE:HG22	1.50	0.94
1:A:1343:ALA:O	5:E:149:LEU:HD13	1.69	0.93
2:B:963:PHE:CE2	2:B:965:LYS:HE2	2.04	0.91
2:B:837:ASP:OD1	2:B:1016:ALA:HB2	1.70	0.91
1:A:351:THR:HG22	1:A:468:PHE:CD2	2.06	0.91
2:B:876:LYS:HE3	2:B:893:LEU:HB2	1.52	0.91
1:A:88:LYS:HD3	1:A:205:GLU:OE2	1.72	0.89
1:A:666:ILE:HG23	2:B:1026:LEU:HB3	1.54	0.89
2:B:39:ARG:HH22	2:B:665:GLU:HG3	1.37	0.89
9:I:85:PHE:HB2	9:I:99:LEU:HD21	1.54	0.89
4:D:40:HIS:NE2	7:G:73:LYS:HE2	1.89	0.88
8:H:56:THR:HG22	8:H:57:VAL:H	1.39	0.87
7:G:13:LEU:HD13	7:G:26:LEU:HD21	1.57	0.87
13:R:6:G:H1	14:T:23:DC:H42	1.21	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1263:ILE:O	1:A:1263:ILE:HG22	1.75	0.86
2:B:1106:ARG:NH1	2:B:1126:GLY:HA2	1.90	0.86
4:D:67:ARG:HG2	4:D:67:ARG:HH11	1.40	0.86
1:A:789:LYS:HE3	9:I:67:THR:HB	1.55	0.86
3:C:242:GLN:HB3	3:C:246:ARG:NH2	1.91	0.86
2:B:496:ARG:HD3	2:B:751:VAL:CG2	2.06	0.85
1:A:335:ARG:NH2	2:B:1115:THR:HG22	1.91	0.85
2:B:1112:GLN:HG3	2:B:1113:VAL:H	1.42	0.85
2:B:247:GLY:HA2	2:B:418:LYS:HZ2	1.43	0.84
1:A:595:THR:HG22	1:A:603:ASN:HB2	1.58	0.84
1:A:808:LEU:H	1:A:808:LEU:HD12	1.43	0.84
10:J:16:ASP:OD2	10:J:17:LYS:HG3	1.76	0.84
2:B:911:ILE:HG21	2:B:966:VAL:HG21	1.59	0.83
1:A:738:LYS:HD3	1:A:739:ASP:N	1.93	0.83
1:A:525:GLN:HG3	2:B:836:GLU:OE2	1.79	0.83
12:L:30:ILE:HG22	12:L:31:CYS:N	1.93	0.83
1:A:461:LYS:O	1:A:463:ILE:HG23	1.79	0.83
1:A:1390:ASN:OD1	1:A:1402:PHE:HB3	1.78	0.83
1:A:695:LYS:HA	1:A:698:GLN:HG2	1.60	0.83
5:E:55:ARG:CZ	5:E:113:GLN:HE22	1.92	0.82
1:A:757:ASN:O	1:A:761:MET:HG3	1.80	0.82
7:G:1:MET:HG3	7:G:2:PHE:N	1.95	0.81
2:B:247:GLY:HA2	2:B:418:LYS:NZ	1.93	0.81
1:A:346:ASP:HB3	1:A:347:PHE:HD1	1.44	0.81
12:L:46:VAL:O	12:L:47:ARG:HG2	1.79	0.81
1:A:524:VAL:HG22	1:A:525:GLN:H	1.46	0.81
2:B:841:MET:HE1	2:B:990:ILE:HD11	1.61	0.81
12:L:55:ILE:HG23	12:L:56:LEU:H	1.46	0.80
1:A:1319:VAL:HG13	1:A:1320:PRO:HD2	1.63	0.80
7:G:1:MET:HG3	7:G:2:PHE:H	1.46	0.80
2:B:228:LYS:HG3	2:B:229:ALA:H	1.46	0.80
1:A:1343:ALA:HB1	5:E:149:LEU:CD1	2.11	0.80
2:B:1171:VAL:HG12	2:B:1182:CYS:HB2	1.63	0.80
1:A:49:LYS:HD2	1:A:55:ASP:HB3	1.64	0.80
2:B:1106:ARG:HD2	2:B:1126:GLY:C	2.03	0.80
1:A:103:CYS:HB3	1:A:108:MET:HE1	1.64	0.80
1:A:449:SER:O	2:B:1133:MET:HG3	1.80	0.79
9:I:17:ARG:NH2	9:I:20:LYS:HE3	1.97	0.79
1:A:32:VAL:HG23	1:A:33:ALA:H	1.47	0.79
1:A:353:ILE:HG21	1:A:487:MET:HB2	1.63	0.79
1:A:49:LYS:CD	1:A:55:ASP:HB3	2.13	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1005:GLU:HG2	1:A:1009:ASN:ND2	1.98	0.79
4:D:66:ARG:HG3	7:G:51:TYR:HD2	1.48	0.79
2:B:635:ARG:HH21	2:B:637:LEU:HD13	1.45	0.79
8:H:135:LEU:CD1	8:H:137:GLN:HE21	1.95	0.79
1:A:41:MET:HB2	1:A:49:LYS:HA	1.65	0.78
1:A:666:ILE:HD12	1:A:666:ILE:C	2.03	0.78
2:B:181:LEU:HD11	2:B:189:LEU:HD23	1.64	0.78
2:B:839:MET:SD	2:B:1010:LEU:HD11	2.23	0.78
1:A:1141:THR:OG1	1:A:1205:LYS:HD3	1.84	0.77
5:E:55:ARG:NH2	5:E:113:GLN:HE22	1.81	0.77
1:A:549:MET:HE1	1:A:656:TRP:HD1	1.50	0.77
2:B:1017:ILE:HG13	2:B:1018:PRO:HD3	1.66	0.77
2:B:464:GLY:O	2:B:479:VAL:HG12	1.85	0.77
2:B:770:GLN:OE1	2:B:983:ARG:HA	1.84	0.77
1:A:1356:ILE:HD12	1:A:1368:MET:CE	2.14	0.77
1:A:1443:VAL:HG23	7:G:61:ILE:HB	1.67	0.77
3:C:235:VAL:HG11	10:J:6:ARG:HH21	1.49	0.77
1:A:450:LEU:HD11	1:A:1074:GLU:HG2	1.66	0.76
2:B:1207:LEU:HD22	2:B:1212:ILE:HD11	1.67	0.76
8:H:11:GLN:HG2	8:H:12:VAL:H	1.49	0.76
1:A:601:LYS:HB2	1:A:603:ASN:ND2	2.00	0.76
2:B:825:VAL:HG23	2:B:1010:LEU:HB3	1.67	0.76
2:B:619:ILE:HD13	9:I:65:ASP:CG	2.06	0.76
2:B:853:SER:HB3	2:B:972:LYS:HB2	1.67	0.76
8:H:97:MET:HG3	8:H:118:PHE:CE2	2.19	0.76
1:A:601:LYS:CB	1:A:603:ASN:HD21	1.99	0.76
1:A:457:ALA:O	1:A:507:VAL:HG23	1.86	0.76
2:B:542:MET:HG3	2:B:747:MET:HE2	1.66	0.75
8:H:118:PHE:HB2	8:H:121:LEU:HB2	1.67	0.75
1:A:896:ARG:HD3	1:A:1030:ARG:HD2	1.67	0.75
1:A:453:MET:O	1:A:456:MET:HE3	1.87	0.75
4:D:40:HIS:HB2	7:G:6:ASP:OD2	1.85	0.75
3:C:37:MET:HE2	3:C:176:ILE:HD13	1.68	0.75
1:A:341:MET:HE3	1:A:1401:SER:HB3	1.69	0.75
1:A:367:PRO:HD2	1:A:370:ILE:HD12	1.68	0.75
1:A:899:VAL:HG22	1:A:1029:ARG:HE	1.51	0.75
2:B:396:ASP:HB3	2:B:403:LYS:NZ	2.01	0.75
4:D:59:ILE:H	4:D:59:ILE:HD12	1.51	0.75
1:A:1313:LEU:O	1:A:1315:GLU:N	2.20	0.74
2:B:39:ARG:HH22	2:B:665:GLU:CG	1.99	0.74
2:B:210:LYS:HA	2:B:482:VAL:HA	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:335:ARG:HH21	2:B:1115:THR:HG22	1.51	0.74
1:A:666:ILE:CG2	2:B:1026:LEU:HB3	2.17	0.74
1:A:907:THR:HG22	1:A:908:LEU:H	1.52	0.74
1:A:899:VAL:HB	1:A:929:LEU:CD1	2.17	0.74
2:B:637:LEU:HD21	2:B:703:ILE:HG12	1.70	0.74
10:J:57:ILE:HA	10:J:60:PHE:CD2	2.22	0.74
1:A:4:GLN:HB3	2:B:1159:ARG:HH21	1.52	0.74
1:A:341:MET:CE	1:A:1429:ILE:HD11	2.18	0.74
1:A:404:TYR:CA	1:A:415:LEU:CD1	2.65	0.74
2:B:1152:MET:CE	2:B:1157:ALA:HA	2.18	0.74
9:I:8:ARG:HG2	9:I:34:TYR:CE2	2.22	0.74
9:I:22:ASN:HD22	9:I:24:ARG:HD2	1.52	0.74
1:A:1420:ASP:O	1:A:1421:CYS:HB2	1.87	0.74
1:A:1424:VAL:HG21	2:B:1139:ILE:HD13	1.68	0.74
7:G:9:LEU:HD21	7:G:11:ILE:HD11	1.69	0.74
7:G:80:LYS:HD3	7:G:82:PHE:CE1	2.21	0.74
1:A:542:GLU:O	1:A:546:VAL:HG23	1.86	0.74
1:A:851:HIS:O	1:A:1060:PRO:HB3	1.87	0.74
2:B:684:LEU:O	2:B:690:VAL:HG22	1.87	0.74
3:C:6:PRO:HB3	3:C:25:VAL:HG22	1.67	0.74
1:A:415:LEU:HD12	1:A:415:LEU:H	1.53	0.74
2:B:663:ALA:O	2:B:666:TYR:HB2	1.88	0.74
6:F:76:LYS:HD2	6:F:79:ARG:NH2	2.03	0.74
7:G:112:LYS:HD2	7:G:113:HIS:CE1	2.23	0.74
1:A:403:LYS:O	1:A:404:TYR:CD1	2.40	0.74
1:A:560:ILE:HG23	8:H:79:TRP:HB3	1.70	0.74
1:A:754:SER:H	1:A:757:ASN:HD22	1.36	0.74
2:B:283:VAL:CG2	2:B:321:GLY:HA3	2.18	0.74
8:H:36:CYS:HB2	8:H:126:GLU:O	1.87	0.74
8:H:93:TYR:CE1	8:H:143:LEU:HD22	2.23	0.74
2:B:826:ALA:HB2	2:B:1087:PHE:CD1	2.23	0.73
2:B:1125:ASP:O	2:B:1125:ASP:OD2	2.06	0.73
4:D:8:PHE:HD2	4:D:38:ILE:HD12	1.52	0.73
1:A:960:ILE:HG13	1:A:1021:LEU:HD21	1.70	0.73
2:B:247:GLY:CA	2:B:418:LYS:NZ	2.51	0.73
3:C:121:VAL:HG23	3:C:121:VAL:O	1.87	0.73
4:D:211:LEU:HD13	4:D:214:LEU:HD22	1.71	0.73
7:G:13:LEU:HD13	7:G:26:LEU:CD2	2.18	0.73
1:A:567:LYS:C	1:A:569:LYS:H	1.90	0.73
2:B:979:LYS:HG2	2:B:1095:LEU:HD12	1.70	0.73
3:C:162:GLY:HA3	3:C:170:TRP:CD2	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:55:ARG:CD	5:E:113:GLN:OE1	2.36	0.73
9:I:35:VAL:HG12	9:I:36:GLU:N	2.03	0.73
1:A:55:ASP:HB2	1:A:59:GLY:O	1.89	0.73
2:B:706:GLN:NE2	2:B:707:PRO:HD2	2.03	0.73
2:B:752:ALA:O	2:B:755:ILE:HG12	1.88	0.73
3:C:80:LEU:HD11	3:C:95:CYS:CA	2.18	0.73
4:D:37:GLN:NE2	4:D:47:LEU:CD1	2.51	0.73
1:A:351:THR:HG23	1:A:352:VAL:O	1.87	0.73
1:A:637:LYS:O	1:A:641:VAL:HG21	1.88	0.73
1:A:353:ILE:HG22	1:A:468:PHE:HB2	1.70	0.73
1:A:779:PHE:CE2	1:A:785:PRO:HD3	2.22	0.73
2:B:465:ASN:O	2:B:467:GLY:N	2.22	0.73
2:B:1084:GLN:HE22	3:C:191:TYR:HA	1.53	0.73
1:A:483:ASP:OD1	1:A:483:ASP:O	2.06	0.73
1:A:1148:ILE:HG13	9:I:49:ILE:HB	1.71	0.73
2:B:805:THR:HG22	2:B:1042:GLY:O	1.89	0.73
2:B:824:ILE:HD11	10:J:44:TYR:CE2	2.23	0.73
2:B:977:GLY:H	2:B:990:ILE:HB	1.53	0.73
3:C:48:SER:HB3	12:L:66:GLN:NE2	2.04	0.73
1:A:1105:LEU:HD23	1:A:1384:VAL:HG21	1.69	0.73
2:B:807:ARG:H	2:B:1045:SER:HB3	1.53	0.73
2:B:855:PHE:HB3	2:B:970:THR:HG23	1.70	0.73
2:B:1033:LYS:O	2:B:1037:LEU:HD12	1.88	0.73
1:A:914:GLU:HG3	1:A:979:SER:O	1.89	0.73
2:B:237:VAL:HG22	2:B:257:LYS:HB3	1.71	0.73
7:G:111:THR:HB	7:G:114:LEU:HD23	1.71	0.73
7:G:165:GLU:O	7:G:168:LEU:HD12	1.88	0.73
13:R:1:A:H62	14:T:27:DA:N6	1.85	0.73
1:A:1008:GLN:O	1:A:1011:GLN:N	2.20	0.73
2:B:352:ALA:O	2:B:356:LEU:HD12	1.89	0.73
3:C:86:CYS:SG	3:C:87:PHE:N	2.62	0.73
11:K:32:VAL:HG22	11:K:74:ARG:HG3	1.71	0.73
1:A:526:ASP:HB2	2:B:835:GLN:NE2	2.03	0.72
1:A:1438:THR:CG2	6:F:92:ARG:HB2	2.19	0.72
7:G:13:LEU:CD1	7:G:26:LEU:CD2	2.67	0.72
1:A:149:GLU:OE1	1:A:152:VAL:CG2	2.37	0.72
1:A:208:LEU:HD12	1:A:209:ASN:N	2.04	0.72
2:B:367:LEU:N	2:B:367:LEU:HD23	2.03	0.72
6:F:109:VAL:HG22	6:F:123:LYS:HE3	1.71	0.72
8:H:13:SER:HB3	8:H:27:GLU:O	1.90	0.72
9:I:8:ARG:HG2	9:I:34:TYR:HE2	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1404:GLU:HB3	1:A:1407:GLU:OE2	1.88	0.72
1:A:1324:PRO:HB3	5:E:142:VAL:HG21	1.71	0.72
1:A:1450:LEU:HD11	7:G:19:GLY:HA2	1.70	0.72
3:C:36:VAL:HG21	3:C:251:LEU:HD13	1.72	0.72
6:F:103:MET:O	7:G:14:HIS:HE1	1.72	0.72
7:G:44:TYR:HB2	7:G:79:PHE:HB3	1.70	0.72
8:H:135:LEU:CD1	8:H:137:GLN:HG2	2.19	0.72
1:A:469:ARG:NH2	2:B:991:GLY:O	2.22	0.72
1:A:559:VAL:O	1:A:561:PRO:HD3	1.89	0.72
1:A:1344:GLY:O	1:A:1347:ALA:N	2.22	0.72
2:B:826:ALA:HB2	2:B:1087:PHE:CE1	2.24	0.72
2:B:978:ASP:OD1	2:B:1099:VAL:HG12	1.89	0.72
2:B:1031:LEU:HD21	2:B:1042:GLY:HA3	1.71	0.72
6:F:138:LEU:HB3	6:F:139:PRO:HD2	1.71	0.72
1:A:496:GLU:OE2	7:G:64:THR:HA	1.90	0.72
1:A:579:SER:HB3	1:A:611:GLN:HA	1.70	0.72
2:B:680:THR:HB	2:B:683:SER:HB2	1.70	0.72
1:A:404:TYR:HA	1:A:415:LEU:HD12	1.71	0.72
1:A:806:ARG:HG2	2:B:728:ARG:HA	1.72	0.72
1:A:816:HIS:ND1	2:B:764:SER:HB3	2.04	0.72
1:A:879:GLU:OE2	1:A:962:ARG:NH2	2.23	0.72
2:B:635:ARG:HH22	2:B:742:GLU:CD	1.91	0.72
5:E:175:LEU:HD23	5:E:213:ILE:HB	1.70	0.72
11:K:47:ARG:HD3	11:K:61:TYR:HD1	1.54	0.72
1:A:346:ASP:HB3	1:A:347:PHE:CD1	2.25	0.72
1:A:596:THR:HG22	1:A:597:LEU:N	2.05	0.72
1:A:1263:ILE:HG23	1:A:1267:MET:HG3	1.72	0.72
2:B:603:LEU:HD23	2:B:609:ILE:HG13	1.70	0.72
2:B:900:ALA:O	2:B:903:VAL:HG23	1.89	0.72
3:C:44:LEU:HD12	3:C:160:LYS:O	1.89	0.72
1:A:525:GLN:NE2	2:B:836:GLU:CD	2.43	0.72
1:A:728:LYS:HA	1:A:731:ARG:HG2	1.72	0.72
1:A:808:LEU:HD12	1:A:808:LEU:N	2.05	0.72
2:B:36:ALA:HA	2:B:39:ARG:HD2	1.72	0.72
2:B:283:VAL:HG21	2:B:321:GLY:HA3	1.70	0.72
3:C:44:LEU:HD11	3:C:159:ALA:O	1.90	0.72
1:A:870:GLU:OE1	5:E:202:SER:HB2	1.90	0.72
1:A:1363:VAL:HG12	1:A:1364:ASN:H	1.54	0.72
2:B:240:ILE:CG2	2:B:254:LEU:HB3	2.20	0.72
1:A:455:MET:HE1	2:B:1134:GLU:HB3	1.72	0.71
2:B:875:GLU:CG	2:B:876:LYS:N	2.53	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:6:SER:OG	4:D:7:THR:N	2.21	0.71
1:A:436:ILE:HG13	1:A:436:ILE:O	1.89	0.71
1:A:441:PRO:HG2	1:A:498:ARG:HB3	1.71	0.71
4:D:50:LEU:HD23	4:D:50:LEU:N	2.05	0.71
6:F:72:LYS:HG3	6:F:72:LYS:O	1.89	0.71
1:A:592:ASP:H	1:A:595:THR:HG21	1.55	0.71
6:F:125:LEU:HA	6:F:130:ILE:HD11	1.72	0.71
1:A:341:MET:HE2	1:A:1429:ILE:HD11	1.70	0.71
1:A:1074:GLU:HB3	1:A:1075:PRO:HD3	1.73	0.71
5:E:12:LEU:O	5:E:12:LEU:HD23	1.90	0.71
1:A:96:ILE:HG13	1:A:97:ALA:H	1.55	0.71
1:A:298:PHE:O	1:A:302:THR:HG22	1.91	0.71
1:A:308:ILE:HG22	1:A:309:ALA:H	1.56	0.71
2:B:707:PRO:HD3	2:B:741:CYS:SG	2.31	0.71
2:B:800:GLN:NE2	10:J:52:THR:OG1	2.23	0.71
2:B:830:TYR:CZ	2:B:1000:PRO:HD3	2.25	0.71
2:B:1152:MET:HE3	2:B:1157:ALA:HA	1.73	0.71
8:H:12:VAL:HG21	8:H:50:ALA:O	1.90	0.71
1:A:592:ASP:O	1:A:595:THR:HG23	1.89	0.71
2:B:44:VAL:HG23	2:B:48:LEU:HD13	1.72	0.71
2:B:577:ALA:HB1	2:B:589:VAL:HG11	1.73	0.71
5:E:195:VAL:HG12	5:E:196:VAL:H	1.55	0.71
1:A:44:THR:HB	1:A:46:THR:OG1	1.91	0.71
1:A:1299:VAL:HG22	1:A:1300:LYS:H	1.54	0.71
1:A:998:LEU:HD13	1:A:1001:ARG:HG3	1.73	0.71
2:B:331:LEU:HB2	2:B:352:ALA:HB3	1.72	0.71
2:B:512:ARG:NH2	2:B:532:ALA:HA	2.05	0.71
7:G:139:ILE:HG12	7:G:140:LYS:HG2	1.72	0.71
1:A:1018:PHE:O	1:A:1021:LEU:N	2.23	0.71
2:B:957:ASN:OD1	2:B:958:GLN:HG3	1.91	0.71
7:G:165:GLU:OE1	7:G:165:GLU:HA	1.91	0.71
2:B:995:ARG:HH12	11:K:9:LEU:CD1	2.03	0.71
7:G:80:LYS:HD3	7:G:82:PHE:CZ	2.26	0.71
10:J:1:MET:O	10:J:2:ILE:HG22	1.91	0.71
1:A:441:PRO:HD2	1:A:498:ARG:CZ	2.21	0.70
1:A:598:LEU:HG	1:A:598:LEU:O	1.89	0.70
1:A:1407:GLU:HA	1:A:1410:PHE:HB2	1.70	0.70
2:B:527:THR:OG1	2:B:528:PRO:HD2	1.91	0.70
3:C:11:ARG:HB3	3:C:19:ASP:HB3	1.73	0.70
5:E:98:ILE:HA	5:E:101:GLN:HB3	1.72	0.70
5:E:192:ARG:HA	5:E:214:CYS:O	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:64:ASN:HB3	10:J:65:PRO:HD3	1.72	0.70
1:A:244:PRO:N	1:A:245:PRO:HD2	2.06	0.70
1:A:404:TYR:HA	1:A:415:LEU:CD1	2.20	0.70
1:A:601:LYS:HB2	1:A:603:ASN:OD1	1.91	0.70
5:E:4:GLU:HA	5:E:6:GLU:OE1	1.91	0.70
1:A:451:HIS:CE1	1:A:453:MET:HB2	2.26	0.70
2:B:289:LEU:HD13	2:B:375:ALA:HB2	1.71	0.70
2:B:1100:ASP:OD1	11:K:1:MET:CB	2.38	0.70
5:E:117:THR:HB	5:E:118:PRO:HD2	1.72	0.70
8:H:97:MET:SD	8:H:142:LEU:HD23	2.30	0.70
1:A:547:LEU:HB3	11:K:58:PHE:CE2	2.26	0.70
7:G:13:LEU:HD11	7:G:26:LEU:HD23	1.73	0.70
7:G:85:GLU:HG3	7:G:85:GLU:O	1.90	0.70
1:A:845:LEU:HD13	1:A:1068:ALA:HB3	1.73	0.70
1:A:1263:ILE:CG2	1:A:1267:MET:HG3	2.22	0.70
3:C:193:TYR:HB3	3:C:197:SER:HA	1.73	0.70
1:A:843:LYS:HE2	1:A:1401:SER:HB2	1.74	0.70
3:C:153:LEU:HD11	3:C:155:LEU:HD23	1.73	0.70
4:D:141:LEU:HD13	7:G:46:LEU:O	1.90	0.70
4:D:188:ALA:HA	4:D:191:ALA:HB3	1.72	0.70
1:A:335:ARG:NH2	2:B:1115:THR:CG2	2.55	0.70
1:A:383:TYR:HB3	6:F:115:THR:HA	1.72	0.70
3:C:61:GLU:HA	3:C:64:ALA:CB	2.22	0.70
4:D:176:GLU:O	4:D:180:LEU:HB2	1.92	0.70
1:A:489:LEU:HD23	1:A:490:HIS:O	1.91	0.70
1:A:1057:VAL:HG22	1:A:1058:VAL:O	1.92	0.70
2:B:361:LEU:N	2:B:362:PRO:HD3	2.06	0.70
3:C:39:ALA:CA	3:C:164:ALA:HB3	2.21	0.70
1:A:453:MET:O	1:A:456:MET:CE	2.40	0.70
1:A:716:ASP:O	1:A:720:ARG:HG2	1.91	0.70
2:B:425:THR:O	2:B:428:ILE:HG13	1.90	0.70
2:B:581:PHE:O	2:B:626:ILE:N	2.21	0.70
5:E:149:LEU:HD12	5:E:149:LEU:O	1.91	0.70
1:A:568:PRO:HG3	8:H:95:TYR:HA	1.74	0.70
1:A:1004:ASN:CG	5:E:167:ARG:HD2	2.11	0.70
1:A:1442:ASP:HB2	6:F:137:TYR:HE2	1.57	0.70
3:C:265:MET:HE1	11:K:21:ILE:HG13	1.74	0.70
5:E:65:THR:O	5:E:69:ILE:HG12	1.91	0.70
5:E:136:ASN:O	5:E:140:LEU:HG	1.92	0.70
10:J:36:LEU:HD21	10:J:50:ILE:HG21	1.72	0.70
1:A:350:ARG:NE	1:A:486:GLU:OE1	2.24	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:504:LEU:HD21	6:F:88:TYR:CD1	2.27	0.69
1:A:867:ILE:HG22	1:A:872:GLY:N	2.07	0.69
2:B:824:ILE:HG22	2:B:1009:ASP:CG	2.12	0.69
3:C:97:VAL:HG21	3:C:129:ILE:HG23	1.73	0.69
5:E:12:LEU:CD1	5:E:55:ARG:HE	2.04	0.69
1:A:942:PHE:CD1	1:A:942:PHE:O	2.46	0.69
1:A:1081:LEU:HD23	1:A:1081:LEU:O	1.92	0.69
1:A:1341:ILE:HG23	1:A:1342:GLU:H	1.56	0.69
1:A:1434:ALA:O	1:A:1436:ILE:N	2.25	0.69
2:B:372:SER:OG	2:B:567:GLU:HG3	1.90	0.69
2:B:837:ASP:OD2	2:B:1020:ARG:NH2	2.26	0.69
2:B:963:PHE:HE2	2:B:965:LYS:CE	2.03	0.69
2:B:999:MET:HG2	2:B:1000:PRO:HD2	1.73	0.69
5:E:178:ILE:O	5:E:214:CYS:HA	1.92	0.69
11:K:112:GLN:HA	11:K:112:GLN:OE1	1.92	0.69
1:A:83:HIS:CA	1:A:241:VAL:HG23	2.23	0.69
1:A:483:ASP:CB	2:B:988:GLY:HA2	2.22	0.69
1:A:833:GLU:HB3	1:A:834:PRO:HD3	1.72	0.69
2:B:590:HIS:NE2	2:B:592:ASN:O	2.21	0.69
2:B:664:THR:HG23	2:B:665:GLU:H	1.58	0.69
2:B:766:ARG:CZ	2:B:1020:ARG:HG2	2.21	0.69
2:B:841:MET:CE	2:B:990:ILE:HD11	2.21	0.69
5:E:109:ILE:HG22	5:E:133:GLU:HB2	1.75	0.69
7:G:160:ILE:N	7:G:160:ILE:HD12	2.06	0.69
1:A:335:ARG:HH21	2:B:1115:THR:CG2	2.05	0.69
1:A:500:GLU:O	1:A:504:LEU:HB2	1.93	0.69
1:A:982:THR:HB	1:A:985:ASP:H	1.58	0.69
2:B:1189:ILE:HG13	2:B:1190:ASP:H	1.56	0.69
1:A:542:GLU:HG2	1:A:543:LEU:H	1.57	0.69
1:A:1146:VAL:HG13	1:A:1201:ALA:CB	2.21	0.69
2:B:411:PRO:O	2:B:414:ALA:HB3	1.93	0.69
2:B:581:PHE:HB2	2:B:625:LYS:HA	1.75	0.69
2:B:827:ILE:HD12	2:B:1012:ILE:HD12	1.75	0.69
18:E:301:GOL:H32	6:F:80:ALA:HB3	1.74	0.69
9:I:22:ASN:ND2	9:I:24:ARG:HD2	2.08	0.69
2:B:805:THR:HG21	2:B:1041:GLU:HG2	1.74	0.69
3:C:8:VAL:HG13	3:C:22:LEU:HD23	1.74	0.69
1:A:569:LYS:CB	8:H:46:LEU:HD22	2.22	0.69
1:A:703:THR:O	1:A:705:LYS:HD2	1.92	0.69
1:A:1043:ASP:HA	1:A:1046:LEU:HB2	1.73	0.69
1:A:1398:MET:HE3	1:A:1423:GLY:HA3	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1402:PHE:CE1	1:A:1403:GLU:CG	2.75	0.69
2:B:364:ILE:O	2:B:365:THR:HB	1.90	0.69
3:C:39:ALA:HA	3:C:164:ALA:HB3	1.74	0.69
4:D:48:ILE:HG21	7:G:4:ILE:HD12	1.75	0.69
6:F:109:VAL:CG2	6:F:123:LYS:HE3	2.23	0.69
1:A:359:LEU:HD22	1:A:363:GLN:HG3	1.75	0.69
1:A:1146:VAL:HG13	1:A:1201:ALA:HB3	1.75	0.69
1:A:1263:ILE:O	1:A:1263:ILE:CG2	2.41	0.69
2:B:409:ALA:O	2:B:413:LEU:HD12	1.93	0.69
2:B:613:VAL:HG12	2:B:628:THR:HA	1.75	0.69
1:A:814:PHE:O	1:A:817:ALA:HB3	1.93	0.69
2:B:525:ALA:HB1	2:B:768:THR:OG1	1.92	0.69
8:H:93:TYR:CD1	8:H:143:LEU:HD22	2.27	0.69
9:I:85:PHE:O	9:I:86:PHE:HB3	1.93	0.69
1:A:18:GLN:HE21	1:A:19:PHE:N	1.91	0.68
1:A:569:LYS:HB2	8:H:46:LEU:HD22	1.74	0.68
1:A:737:LEU:N	1:A:737:LEU:HD23	2.08	0.68
2:B:610:ASN:O	2:B:613:VAL:HG22	1.93	0.68
1:A:808:LEU:H	1:A:808:LEU:CD1	2.06	0.68
2:B:1198:TYR:O	2:B:1201:LYS:HB3	1.94	0.68
3:C:51:VAL:HG22	3:C:155:LEU:HB3	1.73	0.68
3:C:100:THR:HG23	3:C:156:THR:HG22	1.74	0.68
1:A:269:ILE:HG12	1:A:299:HIS:HB3	1.75	0.68
1:A:446:ARG:HD3	1:A:448:PRO:HD2	1.74	0.68
1:A:1381:LEU:H	1:A:1381:LEU:HD12	1.58	0.68
2:B:1106:ARG:NH2	2:B:1110:PRO:O	2.27	0.68
7:G:1:MET:HE2	7:G:79:PHE:CD2	2.28	0.68
8:H:58:THR:HB	8:H:143:LEU:HD13	1.74	0.68
1:A:491:VAL:HG13	1:A:491:VAL:O	1.92	0.68
2:B:824:ILE:HD11	10:J:44:TYR:HE2	1.57	0.68
6:F:147:SER:HB3	6:F:150:GLU:HG2	1.76	0.68
8:H:97:MET:HG3	8:H:118:PHE:HE2	1.58	0.68
1:A:693:VAL:O	1:A:693:VAL:HG22	1.91	0.68
1:A:784:LEU:O	1:A:786:HIS:N	2.26	0.68
1:A:1356:ILE:HD12	1:A:1368:MET:HE3	1.74	0.68
2:B:657:HIS:HA	2:B:660:LYS:HB2	1.74	0.68
1:A:35:ILE:HG13	1:A:241:VAL:HG11	1.76	0.68
1:A:151:ASP:HA	1:A:163:SER:HA	1.74	0.68
1:A:211:PHE:HA	1:A:214:ILE:HG12	1.74	0.68
1:A:911:SER:C	1:A:912:LEU:HD23	2.13	0.68
1:A:996:ASN:O	1:A:998:LEU:N	2.25	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:307:ASP:O	2:B:311:LEU:HD12	1.92	0.68
2:B:354:ASP:HB3	2:B:358:LYS:HE3	1.75	0.68
13:R:9:G:H1	14:T:20:DC:N4	1.92	0.68
1:A:601:LYS:HB2	1:A:603:ASN:CG	2.14	0.68
2:B:216:GLU:HA	2:B:406:LEU:HA	1.76	0.68
3:C:22:LEU:HB3	3:C:25:VAL:HG21	1.74	0.68
3:C:166:GLU:OE1	12:L:70:ARG:NH2	2.27	0.68
1:A:960:ILE:CG1	1:A:1021:LEU:HD21	2.23	0.68
1:A:1035:TYR:HB3	1:A:1037:LEU:CD1	2.24	0.68
2:B:492:LEU:O	2:B:495:LEU:N	2.26	0.68
2:B:702:LEU:CD2	2:B:737:THR:HG23	2.24	0.68
3:C:186:LEU:HD23	3:C:223:ALA:HB1	1.75	0.68
3:C:235:VAL:HB	10:J:13:VAL:HG13	1.76	0.68
1:A:106:VAL:HG11	1:A:214:ILE:HD11	1.76	0.68
1:A:134:ARG:HD2	1:A:221:SER:O	1.94	0.68
8:H:101:ALA:HB1	8:H:104:PHE:CZ	2.29	0.68
1:A:88:LYS:HD3	1:A:205:GLU:CD	2.14	0.67
1:A:377:PRO:HD2	1:A:493:GLN:HG3	1.75	0.67
2:B:36:ALA:O	2:B:39:ARG:HG2	1.92	0.67
2:B:53:GLN:HE22	2:B:58:THR:HG23	1.60	0.67
1:A:448:PRO:HA	14:T:19:DC:O2	1.94	0.67
1:A:618:GLU:OE2	1:A:620:LYS:HE3	1.94	0.67
1:A:888:GLY:O	1:A:940:ARG:NH2	2.25	0.67
5:E:170:LEU:N	5:E:170:LEU:HD23	2.10	0.67
9:I:6:PHE:HB3	9:I:12:ASN:O	1.94	0.67
2:B:604:ARG:HG3	2:B:605:ARG:N	2.07	0.67
2:B:658:ILE:HG22	2:B:659:ALA:N	2.09	0.67
2:B:685:LEU:HD12	2:B:686:ASN:N	2.09	0.67
3:C:39:ALA:CB	3:C:164:ALA:HB3	2.23	0.67
4:D:7:THR:HG21	4:D:32:GLU:OE2	1.94	0.67
2:B:416:LEU:O	2:B:420:LEU:HB2	1.94	0.67
3:C:52:GLU:HG2	3:C:53:THR:HG23	1.75	0.67
4:D:66:ARG:HG3	7:G:51:TYR:CD2	2.29	0.67
1:A:122:MET:HE2	1:A:122:MET:HA	1.75	0.67
1:A:1121:GLU:O	1:A:1125:ALA:HB2	1.94	0.67
1:A:1444:MET:HA	7:G:59:GLY:O	1.94	0.67
2:B:956:THR:HG22	2:B:961:LEU:C	2.15	0.67
3:C:33:LEU:O	3:C:37:MET:HG3	1.95	0.67
1:A:19:PHE:HZ	1:A:1397:LEU:HD21	1.60	0.67
1:A:440:ASP:H	1:A:460:VAL:HG23	1.59	0.67
1:A:890:ASP:H	1:A:1296:GLY:HA3	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:875:GLU:HG3	2:B:876:LYS:H	1.58	0.67
4:D:160:VAL:O	4:D:164:ILE:HG12	1.94	0.67
4:D:194:LEU:HD22	7:G:86:VAL:HG11	1.77	0.67
1:A:946:VAL:HG13	5:E:201:LYS:HD2	1.77	0.67
1:A:1120:LEU:HD11	1:A:1304:TRP:HB2	1.76	0.67
1:A:1267:MET:HA	1:A:1271:ILE:HG13	1.77	0.67
1:A:1418:LEU:HD13	1:A:1419:ASP:N	2.10	0.67
2:B:373:ARG:HB3	2:B:566:LEU:HD11	1.75	0.67
12:L:48:CYS:SG	12:L:51:CYS:N	2.68	0.67
1:A:151:ASP:OD2	1:A:163:SER:N	2.28	0.67
1:A:881:GLN:HA	1:A:961:ARG:NH2	2.09	0.67
1:A:1118:VAL:HG12	1:A:1306:LEU:O	1.95	0.67
1:A:1141:THR:HG23	1:A:1205:LYS:CD	2.24	0.67
2:B:354:ASP:O	2:B:358:LYS:HG3	1.95	0.67
2:B:595:ARG:O	2:B:599:THR:HG23	1.95	0.67
5:E:113:GLN:HA	5:E:137:GLU:HG2	1.76	0.67
6:F:152:ILE:HG22	6:F:153:VAL:N	2.09	0.67
10:J:16:ASP:CG	10:J:17:LYS:HG3	2.15	0.67
1:A:783:THR:O	1:A:784:LEU:HD23	1.94	0.67
10:J:55:ASP:OD1	10:J:57:ILE:HG22	1.95	0.67
1:A:433:GLU:OE1	2:B:1108:ARG:NH2	2.27	0.67
2:B:31:TRP:CE3	2:B:31:TRP:HA	2.29	0.67
2:B:171:PRO:HB3	2:B:205:ILE:HD11	1.76	0.67
11:K:82:ASP:OD1	11:K:83:PRO:HD2	1.94	0.67
1:A:962:ARG:HA	1:A:965:GLN:OE1	1.95	0.66
2:B:956:THR:HA	2:B:961:LEU:O	1.95	0.66
4:D:40:HIS:NE2	7:G:73:LYS:HB3	2.10	0.66
2:B:1173:ALA:O	2:B:1175:LEU:N	2.28	0.66
8:H:10:PHE:O	8:H:55:LEU:N	2.28	0.66
1:A:148:CYS:HB3	1:A:168:GLY:HA2	1.76	0.66
1:A:504:LEU:HD21	6:F:88:TYR:CE1	2.31	0.66
1:A:1363:VAL:HG12	1:A:1364:ASN:N	2.10	0.66
2:B:788:ARG:NH2	2:B:790:ASP:OD2	2.28	0.66
3:C:21:ILE:HD12	3:C:21:ILE:O	1.95	0.66
4:D:130:LEU:HD13	4:D:142:LYS:HA	1.78	0.66
9:I:19:ASP:CB	9:I:24:ARG:HG2	2.24	0.66
1:A:1195:LEU:HD11	1:A:1238:ILE:HD13	1.76	0.66
2:B:841:MET:CE	2:B:990:ILE:CD1	2.73	0.66
5:E:15:ALA:O	5:E:19:VAL:HG23	1.95	0.66
6:F:79:ARG:HD2	6:F:146:TRP:CE2	2.30	0.66
10:J:57:ILE:O	10:J:60:PHE:HB2	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:40:THR:HG21	1:A:259:GLU:HG3	1.75	0.66
1:A:83:HIS:HA	1:A:241:VAL:HG23	1.77	0.66
1:A:1238:ILE:N	1:A:1238:ILE:HD12	2.09	0.66
2:B:115:GLN:OE1	2:B:194:GLU:HG2	1.94	0.66
2:B:639:ILE:HD13	2:B:688:GLY:O	1.94	0.66
2:B:797:TYR:HB3	2:B:798:TYR:CD1	2.30	0.66
2:B:912:ILE:HB	2:B:939:THR:OG1	1.96	0.66
1:A:62:ASP:OD1	1:A:65:LEU:HB2	1.94	0.66
1:A:219:PHE:HA	1:A:222:LEU:HB3	1.77	0.66
2:B:38:PHE:O	2:B:42:GLY:N	2.28	0.66
2:B:222:ILE:HG22	2:B:223:VAL:H	1.59	0.66
2:B:798:TYR:CE2	10:J:4:PRO:HB3	2.31	0.66
2:B:973:ILE:HG22	2:B:974:PRO:HD2	1.78	0.66
11:K:47:ARG:HA	11:K:50:LEU:HD12	1.78	0.66
12:L:61:THR:OG1	12:L:63:ARG:HD3	1.95	0.66
1:A:463:ILE:HD12	1:A:469:ARG:HD3	1.78	0.66
1:A:575:LYS:HB3	1:A:612:ILE:HG21	1.76	0.66
4:D:35:LEU:HD11	4:D:46:GLU:HG2	1.76	0.66
9:I:10:CYS:SG	9:I:31:THR:CG2	2.84	0.66
1:A:56:PRO:O	1:A:57:ARG:HG3	1.95	0.66
1:A:1011:GLN:HE22	1:A:1015:VAL:CG1	2.09	0.66
2:B:850:LEU:HD12	2:B:851:PHE:N	2.10	0.66
2:B:941:LEU:HG	2:B:942:ARG:H	1.61	0.66
3:C:61:GLU:HA	3:C:64:ALA:HB3	1.77	0.66
3:C:253:LYS:O	3:C:256:ALA:HB3	1.96	0.66
1:A:476:SER:O	1:A:479:ASN:N	2.26	0.66
1:A:601:LYS:HB2	1:A:603:ASN:HD21	1.58	0.66
2:B:784:ASN:ND2	2:B:788:ARG:HG3	2.10	0.66
3:C:10:ILE:HD13	11:K:108:GLU:O	1.95	0.66
4:D:55:ALA:O	4:D:57:LEU:N	2.29	0.66
6:F:116:ASP:O	6:F:120:ILE:HG13	1.95	0.66
1:A:474:VAL:O	1:A:478:TYR:HD2	1.79	0.66
1:A:779:PHE:CZ	1:A:785:PRO:HD3	2.31	0.66
1:A:1195:LEU:HD12	1:A:1195:LEU:O	1.95	0.66
2:B:941:LEU:HG	2:B:942:ARG:N	2.10	0.66
3:C:50:GLU:HB2	12:L:64:LEU:HD23	1.78	0.66
8:H:58:THR:HG22	8:H:59:ILE:H	1.61	0.66
1:A:689:LYS:HE3	1:A:721:PHE:CE1	2.31	0.65
1:A:1436:ILE:O	1:A:1439:GLY:N	2.28	0.65
2:B:37:PHE:HE2	2:B:542:MET:HA	1.60	0.65
2:B:222:ILE:HG22	2:B:223:VAL:N	2.10	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:541:LEU:HD12	2:B:747:MET:CE	2.26	0.65
2:B:654:ARG:O	2:B:657:HIS:N	2.29	0.65
2:B:831:SER:HG	2:B:833:TYR:HD2	1.43	0.65
2:B:859:TYR:HB2	2:B:966:VAL:HG22	1.78	0.65
2:B:1204:PHE:CE2	2:B:1216:LEU:HD11	2.31	0.65
6:F:127:GLU:O	6:F:129:LYS:HG2	1.96	0.65
12:L:48:CYS:O	12:L:51:CYS:N	2.29	0.65
1:A:174:ILE:HG12	1:A:202:LEU:HD11	1.77	0.65
2:B:1160:VAL:HG11	2:B:1169:MET:HB3	1.76	0.65
8:H:135:LEU:HD11	8:H:137:GLN:HE21	1.60	0.65
10:J:1:MET:SD	10:J:60:PHE:HE2	2.19	0.65
10:J:57:ILE:HG12	10:J:61:LEU:HD21	1.78	0.65
1:A:910:PRO:HB3	1:A:916:GLY:HA3	1.78	0.65
2:B:459:TYR:CE1	2:B:463:THR:HG21	2.31	0.65
4:D:68:ARG:O	4:D:72:ARG:HG3	1.97	0.65
4:D:198:LEU:N	4:D:198:LEU:HD23	2.12	0.65
1:A:282:ASN:HD22	1:A:283:GLY:H	1.42	0.65
1:A:889:SER:OG	1:A:891:ALA:HB3	1.97	0.65
2:B:222:ILE:CG2	2:B:223:VAL:H	2.09	0.65
2:B:657:HIS:HA	2:B:660:LYS:CB	2.27	0.65
2:B:846:ILE:C	2:B:846:ILE:HD12	2.17	0.65
4:D:138:ASN:OD1	4:D:141:LEU:HB3	1.97	0.65
1:A:596:THR:HG22	1:A:598:LEU:H	1.61	0.65
1:A:715:GLU:OE1	1:A:774:ARG:HD3	1.96	0.65
2:B:31:TRP:NE1	2:B:807:ARG:HG3	2.12	0.65
2:B:170:LEU:HD23	2:B:172:ILE:CD1	2.27	0.65
2:B:228:LYS:CG	2:B:229:ALA:H	2.10	0.65
2:B:759:PRO:HB3	2:B:767:ASN:ND2	2.12	0.65
2:B:1204:PHE:O	2:B:1208:MET:HG3	1.96	0.65
1:A:73:GLY:O	1:A:75:ASN:N	2.30	0.65
1:A:335:ARG:HA	1:A:339:ASN:HB2	1.77	0.65
1:A:531:ILE:CD1	1:A:617:VAL:HG11	2.27	0.65
2:B:899:ILE:HD12	2:B:949:VAL:HG21	1.78	0.65
5:E:163:GLU:HA	5:E:163:GLU:OE1	1.97	0.65
1:A:337:ARG:HG2	1:A:337:ARG:HH11	1.62	0.65
1:A:449:SER:O	2:B:1133:MET:CG	2.45	0.65
1:A:690:VAL:CG2	1:A:718:VAL:HG13	2.27	0.65
1:A:946:VAL:HG22	5:E:201:LYS:HB2	1.79	0.65
1:A:1361:SER:O	1:A:1362:TYR:HB3	1.97	0.65
2:B:225:VAL:HA	2:B:237:VAL:O	1.96	0.65
3:C:57:VAL:HG11	10:J:60:PHE:CG	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:21:ILE:HD12	11:K:21:ILE:O	1.96	0.65
11:K:73:LEU:HD12	11:K:74:ARG:N	2.11	0.65
2:B:225:VAL:HG12	2:B:238:ALA:HA	1.77	0.65
4:D:56:ARG:H	4:D:148:LEU:HD13	1.62	0.65
5:E:198:ILE:H	5:E:198:ILE:HD12	1.62	0.65
1:A:341:MET:HE3	1:A:1401:SER:CB	2.27	0.65
1:A:648:ASN:O	1:A:652:VAL:HG12	1.97	0.65
1:A:678:GLU:HA	1:A:681:GLU:OE1	1.97	0.65
1:A:775:ILE:HG12	1:A:797:LYS:HA	1.79	0.65
1:A:809:THR:HB	1:A:810:PRO:HD2	1.79	0.65
1:A:896:ARG:O	1:A:1029:ARG:HD2	1.97	0.65
1:A:1037:LEU:HD23	1:A:1042:PHE:HB2	1.79	0.65
2:B:546:SER:HB3	2:B:631:GLY:H	1.62	0.65
2:B:903:VAL:HG12	2:B:905:VAL:HG22	1.78	0.65
2:B:976:ILE:CD1	2:B:992:ILE:HA	2.27	0.65
1:A:899:VAL:HG22	1:A:1029:ARG:NE	2.10	0.65
4:D:202:ILE:HD13	4:D:207:LEU:HD13	1.79	0.65
1:A:660:ASN:OD1	2:B:1082:MET:HB2	1.97	0.64
2:B:402:GLY:HA2	2:B:695:ALA:HB3	1.79	0.64
2:B:546:SER:HB3	2:B:632:ARG:H	1.62	0.64
2:B:1152:MET:O	2:B:1157:ALA:HB2	1.97	0.64
3:C:80:LEU:HD12	3:C:94:LYS:O	1.98	0.64
4:D:56:ARG:HH22	4:D:155:ARG:HD3	1.61	0.64
5:E:169:ARG:C	5:E:170:LEU:HD23	2.18	0.64
8:H:12:VAL:HG21	8:H:50:ALA:C	2.17	0.64
12:L:31:CYS:SG	12:L:32:ALA:N	2.65	0.64
1:A:457:ALA:HB2	1:A:501:LEU:HD22	1.78	0.64
1:A:640:GLN:OE1	1:A:640:GLN:N	2.22	0.64
11:K:56:VAL:HG22	11:K:77:THR:HG22	1.79	0.64
3:C:59:ALA:O	3:C:63:ILE:HG13	1.98	0.64
3:C:179:GLU:HG2	3:C:180:TYR:N	2.12	0.64
1:A:93:VAL:HG21	1:A:305:ASP:HB3	1.79	0.64
1:A:148:CYS:O	1:A:149:GLU:HG2	1.96	0.64
1:A:566:ILE:O	8:H:96:VAL:HB	1.96	0.64
1:A:1081:LEU:O	1:A:1081:LEU:CD2	2.46	0.64
1:A:1269:GLU:OE2	2:B:263:GLY:HA3	1.98	0.64
2:B:228:LYS:HG3	2:B:229:ALA:N	2.12	0.64
2:B:515:HIS:ND1	2:B:517:THR:OG1	2.28	0.64
2:B:796:LEU:HD23	2:B:798:TYR:H	1.62	0.64
3:C:93:ASP:O	3:C:127:ARG:NH2	2.31	0.64
4:D:207:LEU:HG	4:D:211:LEU:HD23	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:51:LEU:HD12	11:K:59:ALA:HB3	1.79	0.64
14:T:22:DT:H2'	14:T:23:DC:O4'	1.96	0.64
1:A:404:TYR:N	1:A:415:LEU:HD13	2.12	0.64
1:A:1170:ILE:O	1:A:1170:ILE:HD12	1.98	0.64
1:A:1398:MET:HB2	1:A:1426:GLU:OE2	1.98	0.64
2:B:195:CYS:HB3	2:B:198:ASP:HB2	1.80	0.64
2:B:219:ALA:HB2	2:B:405:ARG:HG2	1.80	0.64
2:B:432:MET:HB2	2:B:433:GLN:OE1	1.97	0.64
2:B:865:LYS:HB2	2:B:961:LEU:HD11	1.80	0.64
1:A:830:LYS:HE2	1:A:1094:VAL:HG23	1.78	0.64
1:A:960:ILE:HG13	1:A:1021:LEU:CD2	2.27	0.64
1:A:1153:TYR:HB2	1:A:1192:LEU:HB3	1.79	0.64
1:A:1343:ALA:CB	5:E:149:LEU:HD12	2.27	0.64
2:B:639:ILE:HD11	2:B:689:LEU:HA	1.79	0.64
1:A:1333:ILE:O	1:A:1337:GLU:HG3	1.98	0.64
2:B:377:PHE:O	2:B:380:TYR:N	2.31	0.64
3:C:37:MET:CE	3:C:232:VAL:HG11	2.27	0.64
5:E:185:ALA:O	5:E:189:GLY:N	2.31	0.64
1:A:1398:MET:CE	1:A:1423:GLY:HA3	2.28	0.64
2:B:301:ILE:HD12	2:B:301:ILE:N	2.13	0.64
2:B:1166:CYS:SG	2:B:1168:LEU:HD11	2.37	0.64
3:C:242:GLN:HA	3:C:245:VAL:HG12	1.78	0.64
7:G:44:TYR:HB3	7:G:46:LEU:HG	1.80	0.64
9:I:103:CYS:SG	9:I:107:SER:N	2.71	0.64
1:A:260:ASP:O	1:A:263:THR:N	2.29	0.64
1:A:534:LEU:HA	1:A:539:THR:HG21	1.80	0.64
1:A:83:HIS:N	1:A:241:VAL:HG23	2.12	0.64
1:A:95:PHE:CD2	1:A:234:MET:HG2	2.33	0.64
1:A:299:HIS:HA	1:A:302:THR:HG22	1.80	0.64
1:A:444:PHE:CE2	1:A:470:LEU:HD23	2.33	0.64
1:A:463:ILE:HB	1:A:464:PRO:HD2	1.78	0.64
1:A:1011:GLN:HE22	1:A:1015:VAL:HG11	1.62	0.64
1:A:1399:ARG:O	1:A:1401:SER:N	2.31	0.64
1:A:1420:ASP:OD1	2:B:1222:ARG:HD3	1.98	0.64
2:B:53:GLN:HG3	2:B:547:VAL:CG1	2.27	0.64
2:B:256:VAL:HG22	2:B:271:ALA:HB2	1.80	0.64
1:A:42:ASP:OD1	1:A:42:ASP:N	2.31	0.63
1:A:483:ASP:OD1	1:A:483:ASP:C	2.35	0.63
2:B:1189:ILE:HG13	2:B:1190:ASP:N	2.14	0.63
4:D:37:GLN:HE21	4:D:47:LEU:HD12	1.63	0.63
1:A:116:ASP:OD2	1:A:164:ARG:HD2	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:878:ILE:HD12	1:A:1366:ARG:HH22	1.63	0.63
2:B:407:ASP:HB3	2:B:411:PRO:HB2	1.80	0.63
2:B:1112:GLN:HG3	2:B:1113:VAL:N	2.09	0.63
3:C:73:GLN:HB3	3:C:131:HIS:H	1.63	0.63
4:D:37:GLN:NE2	4:D:47:LEU:HD12	2.13	0.63
1:A:671:ALA:HB1	1:A:736:ASN:HD22	1.62	0.63
1:A:902:LEU:O	1:A:903:ASN:HB2	1.99	0.63
1:A:1078:GLN:CG	1:A:1078:GLN:O	2.46	0.63
1:A:1336:MET:HG3	1:A:1381:LEU:CD1	2.27	0.63
2:B:373:ARG:HA	2:B:566:LEU:HD11	1.81	0.63
3:C:48:SER:HB3	12:L:66:GLN:HE22	1.61	0.63
4:D:37:GLN:HE22	7:G:5:LYS:HD3	1.63	0.63
4:D:129:LEU:O	4:D:133:THR:N	2.31	0.63
9:I:7:CYS:SG	9:I:9:ASP:N	2.66	0.63
1:A:56:PRO:O	1:A:57:ARG:CB	2.47	0.63
1:A:384:ASN:O	1:A:387:ARG:N	2.22	0.63
1:A:446:ARG:NH1	1:A:480:ALA:HA	2.13	0.63
1:A:1265:ASN:O	1:A:1268:LEU:N	2.32	0.63
2:B:206:ASN:OD1	2:B:458:LYS:HE2	1.99	0.63
2:B:874:PHE:HB3	2:B:897:GLY:HA3	1.80	0.63
3:C:68:GLY:O	3:C:169:LYS:HB2	1.97	0.63
4:D:48:ILE:HD12	4:D:48:ILE:N	2.12	0.63
1:A:525:GLN:HA	2:B:1015:HIS:CD2	2.34	0.63
2:B:365:THR:OG1	2:B:367:LEU:HG	1.98	0.63
3:C:44:LEU:HD12	3:C:160:LYS:C	2.18	0.63
11:K:40:HIS:HE1	11:K:63:VAL:HG21	1.61	0.63
12:L:32:ALA:CB	12:L:55:ILE:HG21	2.29	0.63
12:L:48:CYS:SG	15:L:101:ZN:ZN	1.79	0.63
1:A:243:PRO:C	1:A:245:PRO:HD2	2.19	0.63
1:A:282:ASN:ND2	1:A:283:GLY:H	1.95	0.63
1:A:948:VAL:O	1:A:950:GLY:N	2.32	0.63
2:B:301:ILE:HG21	2:B:314:LEU:HD11	1.80	0.63
2:B:1060:ARG:HH21	3:C:202:PRO:HB3	1.63	0.63
3:C:238:ILE:HD11	3:C:246:ARG:NH2	2.14	0.63
7:G:116:PRO:HG3	7:G:164:LYS:HA	1.79	0.63
9:I:73:ARG:O	9:I:81:ARG:HA	1.97	0.63
1:A:374:LEU:O	1:A:436:ILE:HG23	1.98	0.63
1:A:1027:ALA:HB3	1:A:1030:ARG:HB2	1.78	0.63
1:A:1402:PHE:CE1	1:A:1403:GLU:HG3	2.34	0.63
2:B:102:VAL:HB	2:B:112:LEU:HD22	1.81	0.63
2:B:512:ARG:HH21	2:B:532:ALA:HA	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1109:GLY:O	2:B:1111:MET:HE2	1.98	0.63
3:C:147:LEU:HD23	3:C:151:GLN:HB3	1.81	0.63
1:A:268:ASP:HB3	1:A:299:HIS:CE1	2.34	0.63
1:A:375:THR:OG1	1:A:433:GLU:HB3	1.98	0.63
1:A:455:MET:HE1	2:B:1130:PHE:HE1	1.64	0.63
2:B:50:SER:OG	2:B:410:GLY:N	2.30	0.63
2:B:865:LYS:HG2	2:B:866:TYR:N	2.13	0.63
10:J:1:MET:SD	10:J:60:PHE:CE2	2.92	0.63
1:A:973:ILE:HD12	1:A:973:ILE:O	1.98	0.63
1:A:1011:GLN:O	1:A:1015:VAL:HG22	1.98	0.63
1:A:1089:VAL:HG23	1:A:1090:ALA:H	1.63	0.63
7:G:1:MET:HE3	7:G:80:LYS:H	1.64	0.63
1:A:476:SER:HB2	1:A:477:PRO:CD	2.29	0.62
2:B:217:ARG:NH1	2:B:405:ARG:CB	2.61	0.62
2:B:397:ASP:HB3	2:B:400:HIS:HB2	1.80	0.62
2:B:830:TYR:CE1	2:B:1000:PRO:HD3	2.33	0.62
3:C:68:GLY:HA3	12:L:69:ALA:HB1	1.81	0.62
9:I:10:CYS:SG	9:I:31:THR:HG21	2.38	0.62
9:I:58:VAL:HG22	9:I:58:VAL:O	1.96	0.62
1:A:452:LYS:HG3	2:B:1140:ALA:HB1	1.80	0.62
2:B:1106:ARG:HG3	2:B:1106:ARG:HH11	1.63	0.62
3:C:12:GLU:H	3:C:19:ASP:HB3	1.64	0.62
1:A:99:ILE:HG23	1:A:211:PHE:HE2	1.65	0.62
1:A:391:LEU:O	1:A:394:ASN:N	2.32	0.62
1:A:868:TYR:CZ	1:A:1366:ARG:HD2	2.34	0.62
2:B:541:LEU:HD12	2:B:747:MET:HE3	1.80	0.62
2:B:832:GLY:O	2:B:835:GLN:HG3	2.00	0.62
3:C:37:MET:HE3	3:C:232:VAL:HG11	1.82	0.62
7:G:81:PRO:HG3	7:G:106:MET:SD	2.39	0.62
12:L:48:CYS:SG	12:L:51:CYS:CA	2.88	0.62
2:B:1030:LEU:HD21	2:B:1056:SER:OG	1.99	0.62
5:E:55:ARG:HD3	5:E:113:GLN:OE1	1.99	0.62
11:K:73:LEU:HD12	11:K:74:ARG:H	1.64	0.62
1:A:752:LYS:HD2	2:B:1019:SER:HB2	1.81	0.62
1:A:868:TYR:CE2	1:A:1366:ARG:HD2	2.34	0.62
1:A:1363:VAL:CG1	1:A:1364:ASN:H	2.11	0.62
3:C:57:VAL:HG11	10:J:60:PHE:CD2	2.35	0.62
3:C:259:LEU:HD22	3:C:259:LEU:H	1.65	0.62
4:D:190:GLU:HB2	7:G:167:TYR:CD1	2.35	0.62
1:A:19:PHE:CZ	1:A:1397:LEU:HD21	2.33	0.62
3:C:58:LEU:HB3	3:C:62:PHE:CD1	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:22:MET:SD	5:E:26:ARG:NH2	2.72	0.62
8:H:139:ASN:O	8:H:140:ALA:HB2	1.98	0.62
10:J:9:SER:OG	10:J:45:CYS:HB2	2.00	0.62
1:A:249:SER:C	1:A:250:ILE:HD12	2.20	0.62
1:A:491:VAL:O	1:A:491:VAL:CG1	2.48	0.62
1:A:530:GLY:HA2	1:A:533:LYS:HG3	1.80	0.62
1:A:569:LYS:HG2	8:H:46:LEU:HD21	1.80	0.62
1:A:671:ALA:O	1:A:673:GLY:N	2.32	0.62
1:A:833:GLU:O	1:A:837:ILE:HG12	2.00	0.62
1:A:880:LYS:HA	1:A:954:TRP:O	1.99	0.62
1:A:998:LEU:O	1:A:1053:PHE:HE1	1.83	0.62
2:B:360:PHE:CE2	2:B:361:LEU:HD12	2.35	0.62
2:B:837:ASP:OD1	2:B:1016:ALA:CB	2.45	0.62
1:A:308:ILE:HG22	1:A:309:ALA:N	2.14	0.62
1:A:857:ARG:HG2	1:A:863:VAL:HA	1.82	0.62
1:A:1402:PHE:CD1	1:A:1403:GLU:HG2	2.35	0.62
2:B:619:ILE:H	2:B:619:ILE:HD12	1.64	0.62
2:B:995:ARG:HD3	11:K:6:ARG:HH22	1.64	0.62
2:B:1072:MET:HG3	2:B:1085:ILE:HB	1.82	0.62
10:J:6:ARG:HA	10:J:14:VAL:H	1.65	0.62
12:L:60:ARG:HG3	12:L:61:THR:O	1.99	0.62
1:A:875:ALA:HA	1:A:1366:ARG:NH2	2.14	0.62
11:K:19:LEU:HD12	11:K:19:LEU:N	2.13	0.62
1:A:483:ASP:HB2	2:B:988:GLY:N	2.14	0.62
1:A:970:THR:HG22	1:A:971:PHE:CD1	2.34	0.62
2:B:304:ASP:O	2:B:306:ASN:N	2.28	0.62
2:B:522:VAL:HG12	2:B:523:CYS:N	2.14	0.62
11:K:10:PHE:CD1	11:K:11:LEU:N	2.68	0.62
1:A:361:LEU:HD21	1:A:511:ILE:HD11	1.80	0.61
1:A:455:MET:HE1	2:B:1130:PHE:CE1	2.34	0.61
1:A:1116:LEU:CD1	1:A:1311:VAL:HA	2.30	0.61
1:A:1148:ILE:CG2	1:A:1196:GLU:HG2	2.30	0.61
1:A:1313:LEU:HD22	1:A:1338:VAL:HG11	1.81	0.61
3:C:99:LEU:HD23	3:C:120:ILE:HA	1.82	0.61
12:L:65:VAL:HG23	12:L:67:PHE:CZ	2.35	0.61
1:A:523:ILE:HG22	1:A:528:LEU:HB2	1.81	0.61
1:A:867:ILE:CG2	1:A:872:GLY:N	2.64	0.61
1:A:1011:GLN:NE2	1:A:1015:VAL:HG11	2.15	0.61
2:B:217:ARG:N	2:B:405:ARG:O	2.33	0.61
7:G:13:LEU:CD1	7:G:26:LEU:HD21	2.26	0.61
1:A:1215:ARG:O	1:A:1219:THR:HG23	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1006:ILE:HG13	10:J:43:ARG:HD2	1.83	0.61
3:C:70:ILE:HG23	3:C:71:PRO:HD2	1.82	0.61
5:E:16:PHE:CE2	5:E:20:LYS:HE2	2.34	0.61
5:E:171:LYS:HD3	5:E:173:SER:HB3	1.80	0.61
5:E:196:VAL:HG13	5:E:198:ILE:CD1	2.30	0.61
9:I:86:PHE:C	9:I:99:LEU:HD12	2.21	0.61
1:A:466:SER:HB2	2:B:1099:VAL:HG22	1.82	0.61
1:A:739:ASP:OD1	8:H:19:ARG:HD3	2.00	0.61
1:A:1284:MET:HB3	1:A:1306:LEU:HD23	1.80	0.61
2:B:424:LEU:O	2:B:428:ILE:HG23	2.00	0.61
2:B:680:THR:HB	2:B:683:SER:CB	2.30	0.61
1:A:525:GLN:NE2	2:B:836:GLU:OE2	2.34	0.61
1:A:1376:THR:O	1:A:1378:GLN:N	2.33	0.61
4:D:118:THR:O	4:D:121:LYS:HB3	2.00	0.61
1:A:49:LYS:HE2	1:A:61:ILE:HG22	1.82	0.61
1:A:251:SER:HB2	1:A:257:ARG:HH11	1.66	0.61
1:A:711:ARG:HH11	9:I:97:MET:HG2	1.65	0.61
2:B:291:ILE:HG21	2:B:300:HIS:CD2	2.35	0.61
2:B:1007:VAL:HG12	2:B:1008:PRO:O	2.00	0.61
2:B:1106:ARG:HH12	2:B:1110:PRO:HD2	1.66	0.61
10:J:36:LEU:HD21	10:J:50:ILE:CG2	2.30	0.61
11:K:108:GLU:OE1	11:K:111:LEU:HD12	2.01	0.61
12:L:32:ALA:HB2	12:L:55:ILE:HD13	1.82	0.61
1:A:102:VAL:HG23	1:A:211:PHE:CZ	2.36	0.61
1:A:739:ASP:CG	8:H:19:ARG:HD3	2.21	0.61
1:A:864:ILE:O	1:A:865:GLN:HG3	1.99	0.61
3:C:134:ILE:HG13	3:C:134:ILE:O	1.99	0.61
1:A:601:LYS:HB3	1:A:603:ASN:HD21	1.65	0.61
1:A:993:LEU:HD23	1:A:1022:LEU:HD21	1.80	0.61
2:B:226:PHE:HE1	2:B:396:ASP:HB2	1.64	0.61
2:B:635:ARG:HH21	2:B:637:LEU:CD1	2.13	0.61
2:B:1036:ALA:HB1	10:J:44:TYR:HB2	1.82	0.61
2:B:1166:CYS:HB2	2:B:1168:LEU:HD11	1.82	0.61
3:C:255:VAL:HG21	11:K:94:ILE:HG21	1.81	0.61
4:D:54:GLU:O	4:D:58:VAL:HG12	2.00	0.61
4:D:168:LYS:HE3	4:D:177:VAL:HG11	1.83	0.61
7:G:96:GLN:HG3	7:G:121:PHE:CZ	2.36	0.61
10:J:37:SER:OG	10:J:47:ARG:NH2	2.23	0.61
1:A:139:TRP:O	1:A:142:CYS:N	2.34	0.61
1:A:447:GLN:O	1:A:448:PRO:C	2.38	0.61
1:A:989:GLY:O	1:A:992:ASP:N	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:998:LEU:O	1:A:999:VAL:HG23	2.01	0.61
2:B:120:ARG:NH2	2:B:956:THR:O	2.30	0.61
2:B:217:ARG:O	2:B:405:ARG:N	2.34	0.61
2:B:803:LEU:HG	10:J:52:THR:HG21	1.82	0.61
4:D:56:ARG:N	4:D:59:ILE:CD1	2.64	0.61
4:D:69:ALA:O	4:D:72:ARG:HB2	2.01	0.61
5:E:127:ILE:HG22	5:E:127:ILE:O	2.01	0.61
7:G:91:VAL:HG22	7:G:101:VAL:HG12	1.83	0.61
9:I:111:THR:HG21	9:I:118:ARG:HG2	1.82	0.61
1:A:369:SER:HB3	11:K:2:ASN:OD1	2.01	0.61
1:A:526:ASP:OD2	2:B:829:CYS:HB3	2.00	0.61
1:A:687:LYS:O	1:A:691:LEU:N	2.33	0.61
1:A:987:VAL:CG1	1:A:1028:THR:OG1	2.49	0.61
2:B:226:PHE:CE1	2:B:396:ASP:HB2	2.36	0.61
1:A:1342:GLU:HG2	5:E:212:ARG:HE	1.66	0.60
2:B:248:SER:OG	2:B:249:ARG:N	2.34	0.60
2:B:446:LEU:O	2:B:447:ALA:HB3	2.00	0.60
3:C:48:SER:HB3	12:L:66:GLN:CD	2.21	0.60
3:C:48:SER:HB3	12:L:66:GLN:OE1	2.01	0.60
7:G:1:MET:HB2	7:G:3:PHE:HE1	1.66	0.60
7:G:119:LEU:HD13	7:G:131:GLN:O	2.02	0.60
9:I:92:ARG:HB3	9:I:95:THR:HG23	1.83	0.60
11:K:7:PHE:HA	11:K:10:PHE:CE2	2.35	0.60
12:L:48:CYS:SG	12:L:48:CYS:O	2.59	0.60
1:A:443:LEU:HB3	1:A:490:HIS:HB2	1.82	0.60
1:A:444:PHE:HE2	1:A:470:LEU:HD23	1.65	0.60
1:A:800:VAL:HG13	1:A:812:GLU:HB3	1.83	0.60
1:A:869:GLY:C	1:A:871:ASP:H	2.04	0.60
1:A:899:VAL:HB	1:A:929:LEU:HD12	1.83	0.60
1:A:349:ALA:HB3	1:A:489:LEU:HB3	1.83	0.60
1:A:542:GLU:HG2	1:A:543:LEU:N	2.16	0.60
1:A:738:LYS:HD2	1:A:740:LEU:HB2	1.84	0.60
1:A:784:LEU:C	1:A:786:HIS:H	2.05	0.60
1:A:867:ILE:HG22	1:A:872:GLY:H	1.64	0.60
1:A:910:PRO:C	1:A:912:LEU:H	2.05	0.60
1:A:1120:LEU:O	1:A:1323:ASP:HB2	2.00	0.60
2:B:254:LEU:CD2	2:B:381:MET:HE1	2.32	0.60
2:B:841:MET:HE3	2:B:990:ILE:CD1	2.31	0.60
2:B:1188:LYS:C	2:B:1191:ILE:HD11	2.21	0.60
5:E:55:ARG:CZ	5:E:113:GLN:NE2	2.63	0.60
10:J:3:VAL:HG21	10:J:18:TRP:CG	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:96:ILE:HG13	1:A:97:ALA:N	2.16	0.60
1:A:318:SER:HG	1:A:321:PRO:N	1.99	0.60
1:A:568:PRO:HD3	8:H:96:VAL:HG23	1.84	0.60
1:A:640:GLN:H	1:A:640:GLN:CD	1.99	0.60
2:B:170:LEU:HD23	2:B:172:ILE:HD13	1.84	0.60
8:H:15:VAL:HA	8:H:26:ILE:HD12	1.83	0.60
1:A:1128:GLN:HG3	1:A:1304:TRP:CZ2	2.36	0.60
2:B:240:ILE:HG22	2:B:254:LEU:HB3	1.83	0.60
2:B:522:VAL:CG1	2:B:537:LYS:HB3	2.32	0.60
2:B:1017:ILE:H	2:B:1018:PRO:CD	2.14	0.60
2:B:1058:LEU:H	2:B:1058:LEU:HD12	1.66	0.60
7:G:127:PRO:HG2	7:G:139:ILE:HG21	1.82	0.60
1:A:451:HIS:CD2	1:A:454:SER:HB2	2.36	0.60
1:A:583:PRO:HG2	1:A:586:ILE:HG13	1.83	0.60
1:A:848:ILE:HB	1:A:1065:GLY:HA3	1.84	0.60
2:B:431:TYR:CZ	2:B:447:ALA:HB3	2.35	0.60
2:B:651:LEU:O	2:B:651:LEU:HG	2.01	0.60
8:H:113:ALA:HA	8:H:125:LEU:O	2.01	0.60
1:A:419:LYS:HG3	1:A:420:ARG:N	2.16	0.60
1:A:820:GLY:O	1:A:824:LEU:N	2.34	0.60
1:A:1139:GLU:O	1:A:1139:GLU:HG2	2.01	0.60
2:B:115:GLN:HG2	2:B:193:LYS:HB2	1.83	0.60
2:B:405:ARG:NH1	2:B:629:ASP:OD2	2.35	0.60
2:B:1006:ILE:HD11	10:J:43:ARG:HG2	1.84	0.60
3:C:80:LEU:HD11	3:C:95:CYS:C	2.21	0.60
1:A:852:TYR:CE1	6:F:136:ARG:HG2	2.37	0.60
1:A:1138:ILE:O	1:A:1140:HIS:N	2.35	0.60
2:B:108:VAL:HG23	2:B:109:THR:H	1.67	0.60
2:B:806:THR:HG22	2:B:1044:ALA:C	2.22	0.60
2:B:947:GLY:C	2:B:948:ILE:HD12	2.21	0.60
5:E:29:PHE:O	5:E:30:ILE:HD13	2.02	0.60
7:G:99:PHE:O	7:G:99:PHE:CD1	2.54	0.60
1:A:272:ALA:HB2	1:A:299:HIS:HD2	1.67	0.60
1:A:830:LYS:HE2	1:A:1094:VAL:CG2	2.32	0.60
2:B:331:LEU:HB2	2:B:352:ALA:CB	2.31	0.60
2:B:582:VAL:HA	2:B:626:ILE:O	2.02	0.60
11:K:63:VAL:O	11:K:65:HIS:N	2.34	0.60
12:L:40:LEU:HD21	12:L:44:ASP:HB3	1.82	0.60
1:A:928:LEU:HD13	1:A:988:LEU:HD11	1.82	0.60
1:A:1339:LEU:HD13	5:E:147:HIS:HD2	1.66	0.60
1:A:1386:ARG:HB3	1:A:1403:GLU:HB2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:357:GLN:CD	2:B:368:GLU:HG3	2.22	0.60
2:B:402:GLY:CA	2:B:695:ALA:HB3	2.32	0.60
2:B:498:THR:HG23	2:B:537:LYS:O	2.01	0.60
3:C:45:ALA:HA	3:C:72:LEU:HD12	1.84	0.60
1:A:741:ASN:O	1:A:745:GLN:HG3	2.02	0.59
1:A:1431:GLY:HA3	2:B:1152:MET:SD	2.42	0.59
2:B:50:SER:HG	2:B:410:GLY:H	1.50	0.59
2:B:431:TYR:OH	2:B:447:ALA:HB3	2.01	0.59
2:B:706:GLN:HB3	2:B:709:ASP:HB2	1.84	0.59
2:B:798:TYR:CD2	10:J:4:PRO:HB3	2.36	0.59
10:J:43:ARG:HB3	10:J:45:CYS:SG	2.41	0.59
1:A:1349:TYR:HH	1:A:1353:TYR:HD2	1.49	0.59
5:E:3:GLN:HG3	5:E:5:ASN:H	1.68	0.59
5:E:204:THR:OG1	5:E:205:SER:N	2.33	0.59
7:G:163:ILE:O	7:G:163:ILE:HG22	2.01	0.59
10:J:10:CYS:SG	10:J:43:ARG:NH2	2.75	0.59
1:A:216:VAL:HA	1:A:219:PHE:CE1	2.37	0.59
1:A:340:LEU:C	1:A:342:GLY:H	2.05	0.59
1:A:353:ILE:CG2	1:A:487:MET:HB2	2.32	0.59
1:A:446:ARG:NH2	1:A:485:ASP:OD2	2.31	0.59
1:A:569:LYS:HD3	3:C:221:TYR:HB2	1.83	0.59
1:A:715:GLU:OE1	1:A:774:ARG:CD	2.51	0.59
1:A:1402:PHE:CD1	1:A:1403:GLU:CG	2.86	0.59
3:C:73:GLN:HE21	3:C:75:MET:H	1.50	0.59
1:A:507:VAL:N	1:A:508:PRO:CD	2.65	0.59
1:A:511:ILE:HD13	1:A:521:MET:HE3	1.84	0.59
2:B:953:LEU:CD2	2:B:955:THR:HG22	2.33	0.59
3:C:37:MET:HE2	3:C:176:ILE:CD1	2.31	0.59
1:A:843:LYS:HE2	1:A:1401:SER:CB	2.31	0.59
1:A:1384:VAL:O	1:A:1385:THR:HG22	2.01	0.59
2:B:222:ILE:O	2:B:240:ILE:HD12	2.02	0.59
5:E:86:PRO:HB3	5:E:114:ASN:HB2	1.83	0.59
5:E:153:HIS:HB3	5:E:196:VAL:CG2	2.33	0.59
8:H:25:ARG:HG3	8:H:26:ILE:N	2.16	0.59
8:H:145:ARG:O	8:H:146:ARG:HB2	2.03	0.59
1:A:404:TYR:C	1:A:415:LEU:HD11	2.23	0.59
1:A:501:LEU:HD23	1:A:505:CYS:HB2	1.84	0.59
1:A:789:LYS:HG2	1:A:790:ASP:H	1.66	0.59
1:A:1261:LYS:NZ	2:B:265:SER:OG	2.36	0.59
2:B:173:MET:HG3	2:B:176:SER:HB3	1.83	0.59
2:B:805:THR:CG2	2:B:1041:GLU:HG2	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1084:GLN:NE2	3:C:191:TYR:HA	2.17	0.59
3:C:176:ILE:HG12	3:C:232:VAL:HG13	1.84	0.59
3:C:245:VAL:HA	3:C:248:ILE:HD12	1.85	0.59
5:E:80:VAL:HG23	5:E:109:ILE:O	2.03	0.59
7:G:96:GLN:CG	7:G:121:PHE:CZ	2.85	0.59
1:A:423:ASP:OD1	1:A:424:ILE:N	2.35	0.59
1:A:1004:ASN:HB3	5:E:167:ARG:CZ	2.33	0.59
1:A:1332:PHE:HD1	1:A:1381:LEU:HD21	1.67	0.59
2:B:549:THR:HG22	2:B:550:ASP:N	2.18	0.59
2:B:735:ALA:O	2:B:737:THR:HG22	2.03	0.59
2:B:846:ILE:HA	2:B:850:LEU:HB3	1.84	0.59
2:B:1013:ASN:HD22	2:B:1014:PRO:HD2	1.68	0.59
8:H:43:ASN:OD1	8:H:44:VAL:N	2.35	0.59
12:L:55:ILE:HG23	12:L:56:LEU:N	2.17	0.59
1:A:525:GLN:CG	2:B:836:GLU:OE2	2.49	0.59
1:A:827:THR:HG21	1:A:1084:PHE:HB3	1.84	0.59
2:B:780:VAL:CG2	2:B:799:PRO:HG2	2.33	0.59
2:B:813:LYS:HA	2:B:816:GLU:OE1	2.03	0.59
2:B:859:TYR:O	2:B:965:LYS:HA	2.02	0.59
3:C:248:ILE:HG12	11:K:101:LEU:HD23	1.85	0.59
4:D:8:PHE:CD2	4:D:38:ILE:HB	2.37	0.59
4:D:40:HIS:CE1	7:G:73:LYS:HE2	2.37	0.59
1:A:130:ASP:HB3	1:A:133:LYS:HE2	1.85	0.59
1:A:350:ARG:HD2	2:B:1128:LEU:HD11	1.84	0.59
1:A:693:VAL:HG22	1:A:714:PHE:CE1	2.37	0.59
1:A:1011:GLN:NE2	1:A:1015:VAL:CG1	2.66	0.59
2:B:843:GLN:N	2:B:994:TYR:O	2.34	0.59
2:B:1010:LEU:HD23	2:B:1011:ILE:N	2.18	0.59
3:C:142:VAL:HG23	10:J:16:ASP:N	2.17	0.59
4:D:8:PHE:CD2	4:D:38:ILE:HD12	2.37	0.59
8:H:56:THR:HG22	8:H:57:VAL:N	2.13	0.59
1:A:993:LEU:CD2	1:A:1022:LEU:HD21	2.32	0.59
1:A:1402:PHE:HD1	1:A:1403:GLU:H	1.49	0.59
1:A:1424:VAL:HG13	1:A:1425:SER:N	2.18	0.59
2:B:1168:LEU:HD12	2:B:1168:LEU:O	2.03	0.59
5:E:12:LEU:HD11	5:E:55:ARG:HE	1.66	0.59
1:A:114:LEU:HD21	1:A:171:GLN:HG3	1.84	0.58
1:A:455:MET:CE	2:B:1130:PHE:HE1	2.15	0.58
1:A:499:ALA:HA	1:A:502:SER:OG	2.03	0.58
1:A:669:THR:O	1:A:805:LEU:HD12	2.03	0.58
1:A:843:LYS:CE	1:A:1401:SER:HB2	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:956:LEU:HD11	1:A:1017:LEU:HD22	1.84	0.58
2:B:520:GLY:H	2:B:748:ILE:HG22	1.68	0.58
3:C:97:VAL:HG21	3:C:129:ILE:CG2	2.33	0.58
8:H:135:LEU:HD12	8:H:137:GLN:HG2	1.84	0.58
9:I:35:VAL:CG1	9:I:36:GLU:N	2.66	0.58
1:A:419:LYS:HG3	1:A:420:ARG:H	1.67	0.58
1:A:567:LYS:C	1:A:569:LYS:N	2.57	0.58
1:A:1118:VAL:CG1	1:A:1306:LEU:HB2	2.33	0.58
1:A:1143:LEU:HD11	1:A:1147:THR:CG2	2.34	0.58
2:B:1175:LEU:HD12	2:B:1176:ASN:N	2.18	0.58
9:I:17:ARG:HH22	9:I:20:LYS:HE3	1.68	0.58
1:A:350:ARG:HD2	2:B:1128:LEU:CD1	2.33	0.58
1:A:722:LEU:HD22	1:A:799:PHE:CD1	2.38	0.58
1:A:890:ASP:HB2	1:A:1296:GLY:HA3	1.85	0.58
1:A:999:VAL:HG12	1:A:1000:LEU:N	2.18	0.58
1:A:1004:ASN:ND2	5:E:167:ARG:HD2	2.18	0.58
1:A:1043:ASP:N	1:A:1043:ASP:OD1	2.35	0.58
2:B:128:LEU:HB2	2:B:168:GLY:H	1.69	0.58
2:B:217:ARG:NH1	2:B:405:ARG:HB2	2.18	0.58
2:B:653:VAL:O	2:B:654:ARG:HG3	2.04	0.58
2:B:865:LYS:HG2	2:B:866:TYR:H	1.68	0.58
11:K:49:GLU:OE2	11:K:97:LYS:NZ	2.30	0.58
1:A:18:GLN:NE2	1:A:18:GLN:HA	2.19	0.58
1:A:456:MET:CE	1:A:477:PRO:HB2	2.33	0.58
1:A:1037:LEU:HD23	1:A:1042:PHE:CA	2.33	0.58
2:B:552:MET:O	2:B:555:ILE:HG13	2.03	0.58
2:B:578:THR:HG22	2:B:622:LYS:HB3	1.85	0.58
2:B:832:GLY:CA	2:B:835:GLN:HG3	2.33	0.58
4:D:67:ARG:HG2	4:D:67:ARG:NH1	2.11	0.58
7:G:23:LYS:CG	7:G:56:ILE:HD13	2.33	0.58
8:H:43:ASN:OD1	8:H:45:GLU:N	2.35	0.58
1:A:122:MET:O	1:A:126:LEU:HB2	2.03	0.58
1:A:450:LEU:CD1	1:A:1074:GLU:HG2	2.34	0.58
1:A:456:MET:HE1	1:A:477:PRO:HB2	1.85	0.58
1:A:523:ILE:N	1:A:523:ILE:HD12	2.18	0.58
1:A:524:VAL:HG13	1:A:525:GLN:N	2.18	0.58
1:A:714:PHE:O	1:A:718:VAL:HG23	2.02	0.58
1:A:780:VAL:CG2	1:A:789:LYS:HE2	2.34	0.58
1:A:1438:THR:HG22	6:F:92:ARG:HB2	1.85	0.58
2:B:48:LEU:HD12	2:B:173:MET:HE1	1.85	0.58
2:B:266:ALA:O	2:B:268:THR:HG22	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:284:ILE:CD1	2:B:333:PHE:HD2	2.16	0.58
2:B:533:CYS:O	2:B:535:LEU:N	2.36	0.58
5:E:93:MET:O	5:E:97:VAL:HG12	2.03	0.58
6:F:83:PRO:HA	6:F:146:TRP:CZ3	2.39	0.58
9:I:92:ARG:HG3	9:I:94:ASP:OD1	2.03	0.58
1:A:415:LEU:HD12	1:A:415:LEU:N	2.17	0.58
1:A:595:THR:HG22	1:A:603:ASN:CB	2.30	0.58
1:A:821:ARG:O	1:A:825:ILE:N	2.36	0.58
1:A:823:GLY:O	1:A:827:THR:HG23	2.03	0.58
1:A:1339:LEU:CD1	5:E:147:HIS:CD2	2.86	0.58
2:B:350:GLN:O	2:B:352:ALA:N	2.36	0.58
3:C:183:TRP:O	3:C:185:LYS:N	2.37	0.58
4:D:5:THR:HG23	7:G:42:PHE:CE2	2.38	0.58
6:F:114:GLU:O	6:F:120:ILE:HD11	2.04	0.58
7:G:34:VAL:HG11	7:G:74:TYR:CE2	2.39	0.58
11:K:47:ARG:HD3	11:K:61:TYR:CD1	2.37	0.58
1:A:463:ILE:CD1	1:A:469:ARG:HD3	2.33	0.58
1:A:596:THR:CG2	1:A:597:LEU:N	2.66	0.58
2:B:308:TRP:CZ2	9:I:52:ILE:HD11	2.39	0.58
2:B:770:GLN:CD	2:B:983:ARG:HA	2.23	0.58
2:B:1190:ASP:C	2:B:1191:ILE:HG13	2.22	0.58
5:E:112:TYR:CD2	5:E:116:ILE:HD12	2.38	0.58
5:E:153:HIS:HB3	5:E:196:VAL:HG21	1.86	0.58
10:J:44:TYR:HA	10:J:47:ARG:HB2	1.86	0.58
1:A:557:ASP:CG	1:A:559:VAL:HG22	2.24	0.58
1:A:886:ILE:HG23	1:A:887:GLY:H	1.68	0.58
2:B:221:ASN:N	2:B:241:ARG:O	2.33	0.58
2:B:632:ARG:CZ	2:B:632:ARG:HB2	2.34	0.58
2:B:973:ILE:HG22	2:B:974:PRO:CD	2.34	0.58
6:F:143:PHE:O	6:F:143:PHE:HD1	1.87	0.58
7:G:96:GLN:HG2	7:G:121:PHE:CE2	2.38	0.58
9:I:76:PRO:HD2	9:I:108:HIS:CE1	2.39	0.58
1:A:304:MET:HG2	2:B:1210:MET:HG2	1.86	0.58
1:A:1442:ASP:CG	7:G:60:ARG:HH21	2.07	0.58
2:B:766:ARG:NH1	2:B:1020:ARG:HG2	2.19	0.58
3:C:57:VAL:HG11	10:J:60:PHE:HB3	1.86	0.58
3:C:68:GLY:CA	12:L:69:ALA:HB1	2.34	0.58
4:D:167:LEU:O	4:D:170:THR:HG23	2.03	0.58
7:G:102:GLN:NE2	7:G:107:LYS:HG2	2.18	0.58
12:L:46:VAL:C	12:L:47:ARG:CG	2.72	0.58
1:A:276:LEU:HD22	1:A:293:GLU:HA	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:393:ARG:HB3	1:A:393:ARG:NH1	2.18	0.58
1:A:649:ILE:O	1:A:653:VAL:HG23	2.04	0.58
2:B:97:VAL:HA	2:B:127:GLY:O	2.03	0.58
2:B:577:ALA:HB1	2:B:589:VAL:CG1	2.34	0.58
2:B:757:PRO:HA	2:B:1044:ALA:HB1	1.85	0.58
3:C:238:ILE:HG13	3:C:239:PRO:HD2	1.85	0.58
1:A:10:PRO:HD2	2:B:1191:ILE:O	2.04	0.57
1:A:76:GLU:HB2	2:B:1159:ARG:HH22	1.68	0.57
1:A:637:LYS:HB3	1:A:641:VAL:HG11	1.85	0.57
2:B:34:ILE:HD13	2:B:747:MET:SD	2.44	0.57
2:B:242:SER:OG	2:B:362:PRO:HD2	2.04	0.57
2:B:521:LEU:HD13	2:B:633:VAL:HB	1.85	0.57
2:B:639:ILE:CD1	2:B:688:GLY:O	2.52	0.57
2:B:780:VAL:HG21	10:J:56:LEU:HD13	1.84	0.57
3:C:114:TYR:O	3:C:144:ILE:HD12	2.04	0.57
4:D:202:ILE:O	4:D:202:ILE:HG23	2.04	0.57
6:F:127:GLU:HB2	6:F:129:LYS:HG3	1.86	0.57
7:G:119:LEU:HD12	7:G:130:TYR:HB3	1.86	0.57
1:A:377:PRO:CD	1:A:493:GLN:HG3	2.34	0.57
1:A:997:LEU:HD22	1:A:1053:PHE:CG	2.39	0.57
2:B:53:GLN:NE2	2:B:58:THR:HG23	2.20	0.57
2:B:872:GLU:O	2:B:873:THR:HB	2.03	0.57
2:B:1212:ILE:HG13	2:B:1212:ILE:O	2.04	0.57
7:G:13:LEU:HD11	7:G:26:LEU:CD2	2.34	0.57
12:L:32:ALA:HB2	12:L:55:ILE:HG21	1.85	0.57
1:A:412:ARG:O	1:A:413:ILE:HD13	2.04	0.57
1:A:1091:SER:HA	1:A:1095:THR:OG1	2.04	0.57
2:B:180:TYR:O	2:B:183:GLU:HB3	2.04	0.57
2:B:1101:ASP:O	2:B:1122:ARG:CZ	2.52	0.57
3:C:182:PRO:HD2	3:C:210:GLU:CD	2.24	0.57
5:E:192:ARG:HB3	5:E:215:MET:O	2.04	0.57
1:A:250:ILE:HD12	1:A:250:ILE:N	2.18	0.57
2:B:217:ARG:NH1	2:B:405:ARG:HB3	2.19	0.57
2:B:405:ARG:CZ	2:B:632:ARG:HG3	2.33	0.57
2:B:498:THR:O	2:B:498:THR:OG1	2.19	0.57
2:B:1020:ARG:NH1	17:B:2501:ATP:O3G	2.37	0.57
6:F:103:MET:HB3	7:G:14:HIS:CE1	2.39	0.57
8:H:8:ASP:OD1	8:H:30:SER:OG	2.22	0.57
9:I:85:PHE:CB	9:I:99:LEU:HD21	2.32	0.57
1:A:347:PHE:H	2:B:1107:ALA:HA	1.68	0.57
1:A:857:ARG:NH2	6:F:139:PRO:HG3	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1342:GLU:HG3	5:E:198:ILE:HG12	1.86	0.57
2:B:190:TYR:O	2:B:193:LYS:N	2.37	0.57
2:B:203:PHE:N	2:B:203:PHE:CD1	2.73	0.57
2:B:287:ARG:O	2:B:327:ARG:HG3	2.04	0.57
2:B:701:ILE:HD12	2:B:703:ILE:HD11	1.87	0.57
2:B:1106:ARG:CZ	2:B:1126:GLY:HA2	2.35	0.57
2:B:1179:GLN:HG3	2:B:1188:LYS:NZ	2.18	0.57
3:C:5:GLY:O	3:C:7:GLN:HG3	2.03	0.57
4:D:192:LYS:NZ	4:D:199:ASN:O	2.29	0.57
5:E:185:ALA:HA	5:E:190:LEU:HD12	1.86	0.57
6:F:105:ALA:HA	7:G:16:SER:HA	1.86	0.57
7:G:27:LYS:O	7:G:31:LEU:HG	2.05	0.57
1:A:41:MET:HG3	1:A:41:MET:O	2.04	0.57
1:A:946:VAL:HG13	5:E:201:LYS:CD	2.34	0.57
2:B:850:LEU:HD12	2:B:851:PHE:H	1.69	0.57
2:B:1194:ILE:HD12	2:B:1196:ILE:HG21	1.85	0.57
5:E:117:THR:CB	5:E:118:PRO:HD2	2.34	0.57
1:A:331:GLY:O	1:A:332:LYS:HB2	2.04	0.57
1:A:455:MET:HE1	2:B:1134:GLU:HG2	1.86	0.57
1:A:590:ARG:NH1	1:A:621:THR:HG23	2.19	0.57
2:B:802:PRO:HG3	2:B:814:PHE:HE2	1.69	0.57
5:E:179:GLN:O	5:E:182:ASP:HB2	2.05	0.57
1:A:49:LYS:HD3	1:A:55:ASP:HB3	1.85	0.57
1:A:899:VAL:O	1:A:929:LEU:HD12	2.05	0.57
1:A:907:THR:HG22	1:A:908:LEU:N	2.18	0.57
1:A:1279:ILE:HG22	1:A:1279:ILE:O	2.03	0.57
2:B:29:ASP:CG	2:B:658:ILE:HG12	2.25	0.57
2:B:522:VAL:HG11	2:B:537:LYS:HB3	1.87	0.57
11:K:85:ASP:O	11:K:88:LYS:HB3	2.05	0.57
1:A:567:LYS:O	1:A:569:LYS:N	2.38	0.57
1:A:693:VAL:O	1:A:693:VAL:CG2	2.52	0.57
1:A:741:ASN:OD1	1:A:742:ASN:N	2.38	0.57
1:A:789:LYS:HG2	1:A:790:ASP:N	2.20	0.57
1:A:1302:PRO:O	1:A:1303:GLU:HB3	2.05	0.57
1:A:1400:CYS:SG	1:A:1409:LEU:HD11	2.45	0.57
1:A:1427:ASN:O	1:A:1430:LEU:N	2.37	0.57
2:B:20:ASP:OD1	2:B:20:ASP:N	2.36	0.57
2:B:34:ILE:O	2:B:37:PHE:N	2.37	0.57
2:B:642:ASP:OD1	2:B:642:ASP:N	2.37	0.57
2:B:875:GLU:CG	2:B:876:LYS:H	2.17	0.57
3:C:39:ALA:HB1	3:C:164:ALA:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:73:GLN:N	3:C:131:HIS:O	2.35	0.57
4:D:48:ILE:HG21	7:G:4:ILE:CG1	2.34	0.57
10:J:53:HIS:CD2	10:J:54:VAL:N	2.73	0.57
1:A:354:SER:HB2	1:A:469:ARG:NH1	2.19	0.57
1:A:455:MET:CE	2:B:1134:GLU:HG2	2.35	0.57
1:A:586:ILE:HD12	1:A:633:VAL:HG12	1.87	0.57
1:A:690:VAL:O	1:A:690:VAL:HG12	2.05	0.57
1:A:1148:ILE:HG22	1:A:1196:GLU:HG2	1.87	0.57
1:A:1384:VAL:C	1:A:1385:THR:CG2	2.73	0.57
3:C:164:ALA:HA	3:C:167:HIS:O	2.04	0.57
4:D:52:LEU:HD22	4:D:148:LEU:HD23	1.87	0.57
4:D:55:ALA:O	4:D:58:VAL:HG12	2.04	0.57
13:R:1:A:H62	14:T:27:DA:H62	1.50	0.57
1:A:44:THR:HG22	1:A:44:THR:O	2.05	0.56
1:A:286:HIS:O	1:A:290:GLU:HG3	2.05	0.56
1:A:424:ILE:O	1:A:424:ILE:HG23	2.04	0.56
1:A:563:PRO:HB3	1:A:572:TRP:CE2	2.39	0.56
1:A:607:ILE:HG13	1:A:607:ILE:O	2.03	0.56
1:A:1153:TYR:HB2	1:A:1192:LEU:HD23	1.87	0.56
1:A:1371:LEU:O	1:A:1374:VAL:HB	2.05	0.56
1:A:1447:GLU:HA	1:A:1450:LEU:HB3	1.87	0.56
2:B:222:ILE:CG2	2:B:223:VAL:N	2.68	0.56
2:B:525:ALA:O	2:B:768:THR:HG23	2.05	0.56
2:B:616:ILE:HD12	2:B:697:GLU:HA	1.87	0.56
7:G:86:VAL:HG22	7:G:146:LYS:HB2	1.87	0.56
8:H:93:TYR:H	8:H:93:TYR:HD1	1.53	0.56
8:H:125:LEU:C	8:H:125:LEU:HD12	2.25	0.56
1:A:40:THR:CG2	1:A:259:GLU:HG3	2.35	0.56
1:A:208:LEU:HD12	1:A:208:LEU:C	2.26	0.56
1:A:1141:THR:HG23	1:A:1205:LYS:HD2	1.86	0.56
2:B:864:LYS:H	2:B:872:GLU:CD	2.08	0.56
3:C:52:GLU:O	3:C:53:THR:HG23	2.06	0.56
4:D:134:THR:HG23	4:D:134:THR:O	2.05	0.56
13:R:10:G:O6	14:T:19:DC:N4	2.38	0.56
1:A:362:ASP:OD1	1:A:362:ASP:N	2.24	0.56
1:A:1370:LEU:O	1:A:1374:VAL:HG23	2.06	0.56
1:A:1399:ARG:C	1:A:1401:SER:H	2.07	0.56
2:B:529:GLU:OE1	2:B:769:TYR:CE1	2.58	0.56
2:B:744:HIS:CG	2:B:745:PRO:HD2	2.41	0.56
3:C:99:LEU:HD21	3:C:120:ILE:HG12	1.86	0.56
3:C:107:SER:HB3	3:C:111:THR:HB	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:166:GLU:O	11:K:6:ARG:HD3	2.04	0.56
4:D:59:ILE:HD12	4:D:59:ILE:N	2.19	0.56
8:H:16:ASP:C	8:H:16:ASP:OD1	2.44	0.56
8:H:40:LEU:HD13	8:H:123:MET:SD	2.46	0.56
9:I:14:LEU:HD22	9:I:29:CYS:HB2	1.87	0.56
10:J:13:VAL:HG23	10:J:13:VAL:O	2.05	0.56
10:J:51:LEU:HD23	10:J:51:LEU:O	2.05	0.56
1:A:225:ASN:OD1	1:A:228:PHE:N	2.35	0.56
1:A:512:VAL:HA	1:A:519:PRO:HA	1.85	0.56
1:A:537:ARG:HG3	8:H:20:TYR:HE2	1.70	0.56
1:A:1008:GLN:O	1:A:1011:GLN:HB3	2.06	0.56
1:A:1259:MET:O	1:A:1262:LYS:HB2	2.05	0.56
1:A:1402:PHE:CD1	1:A:1403:GLU:N	2.67	0.56
2:B:840:ILE:HG12	2:B:1011:ILE:HB	1.87	0.56
11:K:40:HIS:CE1	11:K:63:VAL:HG21	2.39	0.56
13:R:1:A:N6	14:T:27:DA:H62	2.04	0.56
1:A:23:SER:O	1:A:27:VAL:HG23	2.06	0.56
1:A:452:LYS:HG3	2:B:1140:ALA:CB	2.36	0.56
1:A:775:ILE:CG1	1:A:797:LYS:HA	2.35	0.56
1:A:839:ARG:HH22	1:A:1402:PHE:HA	1.70	0.56
1:A:846:GLU:O	1:A:848:ILE:N	2.38	0.56
1:A:1120:LEU:HD21	1:A:1131:ALA:HB2	1.88	0.56
1:A:1195:LEU:CD1	1:A:1238:ILE:HD13	2.36	0.56
1:A:1312:ASN:O	1:A:1316:VAL:HG23	2.06	0.56
1:A:1345:ARG:NH1	1:A:1373:ASP:OD2	2.39	0.56
2:B:299:GLU:OE1	2:B:570:VAL:CG1	2.53	0.56
2:B:363:HIS:O	2:B:585:VAL:HG22	2.06	0.56
2:B:1189:ILE:CG1	2:B:1190:ASP:N	2.69	0.56
3:C:88:CYS:O	3:C:89:GLU:C	2.43	0.56
4:D:5:THR:HG23	7:G:42:PHE:HE2	1.70	0.56
1:A:642:CYS:O	1:A:645:LEU:HB3	2.06	0.56
1:A:783:THR:HG21	1:A:796:SER:OG	2.05	0.56
1:A:914:GLU:O	1:A:916:GLY:N	2.39	0.56
2:B:123:THR:HG22	2:B:205:ILE:HG23	1.88	0.56
2:B:283:VAL:HG23	2:B:284:ILE:N	2.20	0.56
2:B:752:ALA:O	2:B:754:SER:N	2.38	0.56
2:B:824:ILE:O	2:B:1009:ASP:HB2	2.04	0.56
3:C:138:GLU:OE1	3:C:140:ASN:ND2	2.38	0.56
3:C:182:PRO:HB2	3:C:207:CYS:SG	2.45	0.56
5:E:63:ASN:CB	5:E:64:PRO:CD	2.83	0.56
7:G:106:MET:HG3	7:G:157:ILE:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:987:VAL:HG13	1:A:1028:THR:OG1	2.05	0.56
1:A:1042:PHE:CE2	1:A:1046:LEU:HD13	2.40	0.56
1:A:1330:ASN:O	1:A:1332:PHE:N	2.38	0.56
2:B:1027:ILE:CD1	2:B:1052:VAL:HG22	2.36	0.56
5:E:39:LEU:HA	5:E:42:PHE:HB3	1.86	0.56
7:G:3:PHE:HB2	7:G:78:VAL:CG2	2.36	0.56
13:R:9:G:H1	14:T:20:DC:H42	1.54	0.56
1:A:618:GLU:OE2	1:A:620:LYS:CE	2.53	0.56
1:A:1004:ASN:O	1:A:1008:GLN:HG2	2.06	0.56
1:A:1053:PHE:O	1:A:1056:SER:N	2.38	0.56
2:B:1055:ILE:O	2:B:1058:LEU:HD12	2.05	0.56
12:L:61:THR:C	12:L:63:ARG:H	2.09	0.56
1:A:262:LEU:HD21	1:A:325:ILE:HG12	1.88	0.56
1:A:314:ALA:O	1:A:322:VAL:HG12	2.05	0.56
1:A:507:VAL:N	1:A:508:PRO:HD3	2.20	0.56
1:A:845:LEU:CD2	1:A:848:ILE:HD12	2.35	0.56
2:B:211:VAL:HG21	2:B:483:LEU:HD13	1.87	0.56
2:B:792:MET:O	2:B:793:ALA:HB2	2.05	0.56
4:D:119:ARG:HG3	4:D:121:LYS:H	1.70	0.56
5:E:75:MET:O	5:E:75:MET:HG2	2.05	0.56
9:I:83:ASN:CB	9:I:103:CYS:HA	2.36	0.56
1:A:181:LEU:O	1:A:202:LEU:N	2.37	0.56
1:A:636:GLU:OE2	1:A:962:ARG:NH1	2.39	0.56
1:A:998:LEU:HD13	1:A:1001:ARG:CG	2.35	0.56
2:B:43:LEU:O	2:B:496:ARG:NH1	2.39	0.56
2:B:302:CYS:SG	2:B:310:MET:CE	2.94	0.56
2:B:766:ARG:HG2	2:B:1022:THR:CG2	2.36	0.56
2:B:950:ASP:OD1	2:B:969:ARG:HD3	2.06	0.56
2:B:1027:ILE:HD13	2:B:1052:VAL:HG22	1.88	0.56
3:C:99:LEU:CD2	3:C:120:ILE:HG12	2.36	0.56
3:C:124:LEU:HD11	3:C:127:ARG:O	2.06	0.56
4:D:29:LEU:HD23	4:D:33:PHE:HB3	1.87	0.56
5:E:94:LYS:HA	5:E:97:VAL:HG12	1.87	0.56
6:F:79:ARG:HD2	6:F:146:TRP:CZ2	2.40	0.56
8:H:56:THR:OG1	8:H:146:ARG:NH2	2.39	0.56
8:H:143:LEU:O	8:H:144:ILE:HD13	2.06	0.56
10:J:45:CYS:O	10:J:48:ARG:NE	2.35	0.56
1:A:17:VAL:HG23	1:A:1421:CYS:SG	2.46	0.55
1:A:80:HIS:O	1:A:243:PRO:HB3	2.05	0.55
1:A:896:ARG:NH1	1:A:1034:GLU:OE2	2.40	0.55
2:B:520:GLY:HA2	2:B:748:ILE:HG22	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:843:GLN:HB2	2:B:993:THR:HB	1.88	0.55
2:B:1106:ARG:HD2	2:B:1126:GLY:O	2.05	0.55
2:B:1176:ASN:O	2:B:1177:HIS:ND1	2.39	0.55
4:D:8:PHE:HD2	4:D:38:ILE:CD1	2.19	0.55
7:G:135:ASP:O	7:G:136:VAL:HG23	2.06	0.55
8:H:93:TYR:CD1	8:H:93:TYR:N	2.74	0.55
10:J:6:ARG:HA	10:J:14:VAL:N	2.21	0.55
1:A:131:SER:OG	1:A:132:LYS:N	2.39	0.55
1:A:1332:PHE:CD1	1:A:1381:LEU:HD21	2.41	0.55
1:A:1349:TYR:HB2	1:A:1372:VAL:HG21	1.87	0.55
1:A:1402:PHE:CE1	1:A:1403:GLU:HG2	2.40	0.55
2:B:247:GLY:CA	2:B:418:LYS:HZ2	2.14	0.55
2:B:1046:PRO:O	2:B:1048:THR:HG23	2.06	0.55
6:F:152:ILE:CG2	6:F:153:VAL:N	2.69	0.55
7:G:47:CYS:HB3	7:G:77:VAL:HG12	1.88	0.55
10:J:5:VAL:O	10:J:6:ARG:HG2	2.06	0.55
1:A:49:LYS:HE2	1:A:61:ILE:CG2	2.36	0.55
2:B:552:MET:HA	2:B:555:ILE:CG1	2.37	0.55
2:B:1179:GLN:HG3	2:B:1188:LYS:HZ2	1.72	0.55
8:H:7:ASP:C	8:H:7:ASP:OD1	2.45	0.55
11:K:57:LEU:HD13	11:K:76:GLN:HE21	1.71	0.55
1:A:56:PRO:O	1:A:57:ARG:CG	2.54	0.55
1:A:107:CYS:HA	1:A:171:GLN:OE1	2.06	0.55
1:A:199:LEU:HD23	1:A:199:LEU:O	2.06	0.55
1:A:330:LYS:HG2	1:A:331:GLY:N	2.20	0.55
1:A:747:VAL:HG13	1:A:753:GLY:O	2.07	0.55
1:A:756:ILE:HG21	1:A:1086:PHE:HE2	1.70	0.55
2:B:211:VAL:HG12	2:B:212:LEU:H	1.72	0.55
2:B:832:GLY:C	2:B:835:GLN:HG3	2.27	0.55
3:C:14:SER:HA	11:K:114:LEU:HD12	1.88	0.55
3:C:49:VAL:N	12:L:66:GLN:OE1	2.39	0.55
7:G:44:TYR:HE2	7:G:106:MET:HB2	1.72	0.55
9:I:19:ASP:HB2	9:I:24:ARG:HG3	1.86	0.55
1:A:455:MET:HE1	2:B:1134:GLU:CB	2.37	0.55
1:A:617:VAL:HG13	1:A:622:VAL:HB	1.89	0.55
1:A:882:SER:HB3	1:A:953:ASN:OD1	2.06	0.55
1:A:1339:LEU:CD1	5:E:147:HIS:HD2	2.19	0.55
2:B:97:VAL:CG2	2:B:128:LEU:HD23	2.37	0.55
2:B:283:VAL:HG21	2:B:321:GLY:CA	2.36	0.55
2:B:757:PRO:HG2	2:B:984:HIS:CE1	2.42	0.55
3:C:178:PHE:HD1	3:C:179:GLU:N	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:152:ILE:O	6:F:153:VAL:HG22	2.06	0.55
7:G:34:VAL:HG13	7:G:45:ILE:HG21	1.87	0.55
7:G:120:THR:O	7:G:120:THR:HG23	2.07	0.55
8:H:9:ILE:HG13	8:H:56:THR:HA	1.87	0.55
1:A:98:LYS:HA	1:A:101:LYS:HB2	1.87	0.55
1:A:265:LYS:O	1:A:269:ILE:HG13	2.07	0.55
1:A:899:VAL:HG11	1:A:908:LEU:CG	2.37	0.55
1:A:1037:LEU:HD23	1:A:1042:PHE:CB	2.35	0.55
2:B:217:ARG:CZ	2:B:405:ARG:HB2	2.37	0.55
2:B:1072:MET:HG3	2:B:1085:ILE:HD12	1.89	0.55
5:E:150:VAL:HG13	5:E:150:VAL:O	2.07	0.55
5:E:178:ILE:HG22	5:E:213:ILE:O	2.06	0.55
1:A:147:VAL:HA	1:A:170:THR:HA	1.88	0.55
1:A:447:GLN:HG2	14:T:20:DC:H1'	1.88	0.55
1:A:1097:GLY:H	1:A:1099:PRO:HD2	1.71	0.55
1:A:1319:VAL:CG1	1:A:1320:PRO:HD2	2.36	0.55
2:B:590:HIS:CG	2:B:591:ARG:N	2.75	0.55
2:B:995:ARG:HH12	11:K:9:LEU:HD11	1.72	0.55
2:B:1046:PRO:C	2:B:1048:THR:HG23	2.27	0.55
3:C:179:GLU:HG2	3:C:180:TYR:H	1.72	0.55
4:D:195:ILE:HG22	4:D:198:LEU:HG	1.88	0.55
5:E:119:SER:HA	5:E:122:LYS:HE3	1.87	0.55
6:F:133:VAL:HG21	7:G:58:ARG:NH1	2.22	0.55
9:I:7:CYS:SG	9:I:8:ARG:N	2.79	0.55
9:I:34:TYR:CD1	9:I:35:VAL:N	2.75	0.55
1:A:18:GLN:HB3	2:B:1215:ARG:HB2	1.89	0.55
1:A:139:TRP:O	1:A:141:LEU:N	2.39	0.55
1:A:564:ALA:O	1:A:565:ILE:HD13	2.06	0.55
1:A:642:CYS:O	1:A:645:LEU:N	2.40	0.55
1:A:845:LEU:HD23	1:A:848:ILE:HD12	1.89	0.55
2:B:210:LYS:HG3	2:B:482:VAL:HG12	1.89	0.55
2:B:617:ARG:HB2	2:B:624:LEU:HD13	1.88	0.55
2:B:1037:LEU:HD22	2:B:1062:HIS:HB3	1.89	0.55
4:D:155:ARG:H	4:D:219:THR:HG21	1.72	0.55
1:A:172:PRO:HG2	1:A:174:ILE:HG13	1.89	0.55
1:A:690:VAL:HG21	1:A:718:VAL:HG13	1.87	0.55
1:A:800:VAL:HG22	1:A:812:GLU:HB3	1.88	0.55
1:A:1054:LEU:O	1:A:1057:VAL:HG12	2.06	0.55
2:B:703:ILE:HA	2:B:740:HIS:O	2.05	0.55
8:H:135:LEU:HD11	8:H:137:GLN:HG2	1.88	0.55
1:A:108:MET:HA	1:A:210:ILE:HG21	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:118:HIS:O	1:A:119:ASN:HB2	2.06	0.55
1:A:344:ARG:NH1	14:T:21:DC:OP1	2.40	0.55
1:A:379:VAL:HG12	1:A:380:VAL:H	1.72	0.55
1:A:380:VAL:HG12	1:A:428:TYR:HD1	1.71	0.55
2:B:53:GLN:HE22	2:B:58:THR:CG2	2.20	0.55
2:B:510:LYS:N	2:B:513:GLN:OE1	2.40	0.55
2:B:522:VAL:CG1	2:B:523:CYS:N	2.70	0.55
2:B:1142:GLY:O	2:B:1144:ALA:N	2.40	0.55
8:H:16:ASP:OD1	8:H:17:PRO:N	2.40	0.55
8:H:96:VAL:HG12	8:H:97:MET:H	1.72	0.55
9:I:6:PHE:HA	9:I:14:LEU:HG	1.88	0.55
1:A:1267:MET:HA	1:A:1271:ILE:CG1	2.36	0.54
1:A:1438:THR:HG23	6:F:92:ARG:HB2	1.88	0.54
1:A:1445:ILE:HD11	7:G:70:PHE:CE1	2.42	0.54
2:B:203:PHE:CD2	2:B:461:LEU:HD11	2.42	0.54
2:B:211:VAL:O	2:B:480:SER:HA	2.07	0.54
2:B:1103:ILE:HG13	2:B:1104:HIS:H	1.72	0.54
4:D:202:ILE:HD13	4:D:207:LEU:CD1	2.38	0.54
5:E:61:GLN:HB2	5:E:79:TRP:CE3	2.42	0.54
9:I:75:CYS:O	9:I:79:HIS:ND1	2.40	0.54
10:J:37:SER:HG	10:J:47:ARG:HH21	1.51	0.54
11:K:12:LEU:HD21	11:K:18:LYS:CG	2.37	0.54
1:A:105:CYS:SG	1:A:139:TRP:HA	2.48	0.54
1:A:122:MET:HG3	1:A:126:LEU:HD13	1.88	0.54
1:A:219:PHE:H	1:A:219:PHE:HD1	1.51	0.54
1:A:359:LEU:CD2	1:A:363:GLN:HG3	2.38	0.54
1:A:1447:GLU:OE1	7:G:23:LYS:HD2	2.06	0.54
2:B:378:LEU:O	2:B:382:ILE:HG13	2.08	0.54
2:B:745:PRO:O	2:B:748:ILE:HG12	2.06	0.54
3:C:153:LEU:CD1	3:C:155:LEU:HD23	2.38	0.54
5:E:200:ARG:HG3	5:E:201:LYS:O	2.07	0.54
9:I:26:LEU:HD23	9:I:26:LEU:H	1.73	0.54
11:K:55:LYS:HB3	11:K:78:THR:OG1	2.07	0.54
11:K:57:LEU:HD13	11:K:76:GLN:NE2	2.23	0.54
1:A:392:VAL:O	1:A:394:ASN:N	2.40	0.54
1:A:863:VAL:HG12	1:A:865:GLN:N	2.22	0.54
1:A:883:LEU:HD23	1:A:952:ALA:O	2.08	0.54
1:A:1080:THR:HG23	1:A:1080:THR:O	2.05	0.54
1:A:1116:LEU:HD21	1:A:1313:LEU:HB2	1.88	0.54
1:A:1120:LEU:HB2	1:A:1125:ALA:HB1	1.88	0.54
2:B:197:PHE:CD2	2:B:817:LEU:HD11	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:198:ASP:OD2	2:B:202:TYR:OH	2.25	0.54
2:B:550:ASP:OD1	2:B:551:PRO:HD2	2.06	0.54
3:C:9:LYS:HA	11:K:108:GLU:HG3	1.89	0.54
3:C:101:LEU:HD13	3:C:118:LEU:HD23	1.88	0.54
7:G:1:MET:CG	7:G:2:PHE:H	2.13	0.54
12:L:28:LYS:HE2	12:L:41:SER:HA	1.88	0.54
1:A:83:HIS:N	1:A:241:VAL:CG2	2.70	0.54
1:A:202:LEU:HB3	1:A:207:ILE:HD11	1.89	0.54
1:A:1141:THR:HG23	1:A:1205:LYS:HZ2	1.72	0.54
1:A:1152:ILE:HD12	9:I:44:TYR:HB3	1.88	0.54
2:B:179:CYS:SG	2:B:181:LEU:N	2.79	0.54
2:B:254:LEU:HD11	2:B:360:PHE:CE1	2.41	0.54
2:B:492:LEU:HA	2:B:495:LEU:HD12	1.89	0.54
2:B:789:MET:HB2	2:B:967:ARG:HD3	1.89	0.54
5:E:6:GLU:HA	5:E:9:ILE:HB	1.90	0.54
6:F:97:ARG:HG3	6:F:101:ILE:HD12	1.89	0.54
12:L:32:ALA:O	12:L:34:CYS:N	2.40	0.54
1:A:450:LEU:HD22	1:A:1074:GLU:HA	1.89	0.54
1:A:827:THR:O	1:A:831:THR:HB	2.07	0.54
1:A:1143:LEU:CD1	1:A:1147:THR:CG2	2.85	0.54
1:A:1194:ARG:O	1:A:1194:ARG:HG2	2.06	0.54
2:B:368:GLU:O	2:B:370:PHE:N	2.40	0.54
2:B:976:ILE:HD11	2:B:993:THR:N	2.21	0.54
3:C:162:GLY:O	3:C:170:TRP:HB3	2.07	0.54
3:C:167:HIS:CD2	12:L:70:ARG:HB3	2.43	0.54
3:C:189:THR:HG23	3:C:189:THR:O	2.07	0.54
4:D:5:THR:O	7:G:42:PHE:CE2	2.61	0.54
4:D:138:ASN:OD1	4:D:141:LEU:CB	2.55	0.54
7:G:157:ILE:O	7:G:157:ILE:HG23	2.07	0.54
9:I:75:CYS:SG	9:I:108:HIS:HE1	2.31	0.54
1:A:167:CYS:SG	1:A:168:GLY:N	2.79	0.54
1:A:924:LYS:O	1:A:927:VAL:CG1	2.55	0.54
1:A:1378:GLN:HG3	1:A:1378:GLN:O	2.08	0.54
1:A:1424:VAL:HG23	1:A:1436:ILE:HD11	1.89	0.54
2:B:213:ILE:HD12	2:B:499:ASN:HB2	1.89	0.54
2:B:247:GLY:CA	2:B:418:LYS:HZ1	2.21	0.54
2:B:453:ILE:HD12	2:B:453:ILE:H	1.72	0.54
4:D:211:LEU:O	4:D:215:SER:OG	2.26	0.54
1:A:174:ILE:HA	1:A:182:VAL:O	2.08	0.54
1:A:226:GLU:CG	1:A:226:GLU:O	2.56	0.54
1:A:889:SER:OG	1:A:891:ALA:CB	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1339:LEU:CD2	5:E:147:HIS:CD2	2.91	0.54
6:F:109:VAL:CG1	6:F:123:LYS:HD3	2.37	0.54
7:G:51:TYR:C	7:G:51:TYR:HD1	2.11	0.54
9:I:6:PHE:HD1	9:I:13:MET:HA	1.71	0.54
11:K:18:LYS:NZ	11:K:36:GLU:O	2.40	0.54
1:A:56:PRO:O	1:A:57:ARG:HB2	2.07	0.54
1:A:415:LEU:O	1:A:417:TYR:N	2.40	0.54
1:A:446:ARG:CD	1:A:448:PRO:HD2	2.37	0.54
2:B:37:PHE:CD2	2:B:542:MET:HG2	2.42	0.54
7:G:40:GLY:O	7:G:80:LYS:NZ	2.40	0.54
7:G:80:LYS:CD	7:G:82:PHE:CE1	2.90	0.54
1:A:88:LYS:O	1:A:90:VAL:HG13	2.08	0.54
1:A:121:LEU:HB3	1:A:141:LEU:CD1	2.38	0.54
1:A:629:LEU:HD12	1:A:629:LEU:O	2.08	0.54
1:A:775:ILE:HG13	1:A:797:LYS:HG2	1.90	0.54
1:A:825:ILE:HD13	2:B:512:ARG:HB2	1.90	0.54
1:A:899:VAL:HB	1:A:929:LEU:HD11	1.88	0.54
1:A:1363:VAL:CG1	1:A:1364:ASN:N	2.71	0.54
4:D:119:ARG:HG3	4:D:121:LYS:N	2.23	0.54
5:E:171:LYS:HE2	5:E:172:GLU:HB2	1.89	0.54
8:H:18:GLY:O	8:H:20:TYR:HD1	1.91	0.54
9:I:19:ASP:CB	9:I:24:ARG:CG	2.86	0.54
11:K:31:VAL:O	11:K:74:ARG:HA	2.08	0.54
1:A:340:LEU:C	1:A:342:GLY:N	2.61	0.54
2:B:285:ILE:O	2:B:289:LEU:HG	2.08	0.54
2:B:655:LYS:HA	2:B:658:ILE:HB	1.90	0.54
4:D:63:LEU:HD22	4:D:133:THR:OG1	2.07	0.54
5:E:4:GLU:HA	5:E:6:GLU:CD	2.28	0.54
11:K:114:LEU:HD13	11:K:115:ALA:N	2.22	0.54
1:A:171:GLN:C	1:A:185:TRP:HE1	2.11	0.53
1:A:278:THR:O	1:A:279:LEU:C	2.46	0.53
1:A:354:SER:O	1:A:469:ARG:HA	2.07	0.53
1:A:1141:THR:CG2	1:A:1205:LYS:CD	2.86	0.53
1:A:1146:VAL:HG22	1:A:1201:ALA:HB1	1.90	0.53
2:B:128:LEU:CB	2:B:167:ILE:HB	2.39	0.53
2:B:211:VAL:HG12	2:B:212:LEU:N	2.23	0.53
2:B:874:PHE:CE1	2:B:914:LYS:HB2	2.43	0.53
2:B:1152:MET:HE1	2:B:1157:ALA:HA	1.88	0.53
4:D:8:PHE:CE1	7:G:6:ASP:O	2.61	0.53
7:G:16:SER:O	7:G:17:PHE:CD1	2.61	0.53
12:L:29:TYR:O	12:L:38:LEU:HB3	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:49:LYS:CE	1:A:61:ILE:HG22	2.38	0.53
1:A:83:HIS:HA	1:A:239:LEU:O	2.07	0.53
1:A:519:PRO:HG3	1:A:631:HIS:HB2	1.91	0.53
1:A:525:GLN:HB3	2:B:1015:HIS:CD2	2.43	0.53
1:A:670:ILE:HG22	1:A:805:LEU:HD11	1.90	0.53
1:A:825:ILE:HG23	1:A:829:VAL:HG21	1.89	0.53
1:A:1208:THR:HG22	1:A:1210:GLY:H	1.74	0.53
2:B:23:ALA:O	2:B:654:ARG:HB3	2.08	0.53
2:B:332:ASP:OD1	2:B:332:ASP:O	2.25	0.53
2:B:487:THR:HG22	2:B:488:TYR:N	2.23	0.53
2:B:890:TYR:O	2:B:892:LYS:N	2.41	0.53
2:B:944:THR:OG1	2:B:945:GLU:HG3	2.08	0.53
2:B:1060:ARG:HD3	2:B:1060:ARG:C	2.29	0.53
7:G:51:TYR:C	7:G:51:TYR:CD1	2.81	0.53
7:G:154:VAL:HG13	7:G:155:SER:N	2.23	0.53
9:I:46:HIS:CD2	9:I:48:LEU:HG	2.42	0.53
1:A:92:HIS:HB2	1:A:236:LEU:CD1	2.37	0.53
1:A:670:ILE:HG13	1:A:670:ILE:O	2.09	0.53
1:A:767:GLN:OE1	1:A:799:PHE:HB2	2.09	0.53
1:A:834:PRO:HA	1:A:837:ILE:HG12	1.90	0.53
1:A:858:ASN:OD1	1:A:860:LEU:N	2.40	0.53
1:A:1364:ASN:O	1:A:1365:TYR:C	2.47	0.53
2:B:859:TYR:HB2	2:B:966:VAL:CG2	2.38	0.53
4:D:48:ILE:HG21	7:G:4:ILE:HB	1.90	0.53
4:D:179:GLN:HB3	4:D:195:ILE:HD11	1.91	0.53
10:J:46:CYS:O	10:J:49:MET:HB2	2.08	0.53
1:A:337:ARG:HD2	1:A:839:ARG:NH1	2.23	0.53
1:A:344:ARG:O	2:B:1155:SER:HB3	2.07	0.53
1:A:372:LYS:HA	1:A:435:HIS:CE1	2.42	0.53
1:A:504:LEU:CD2	6:F:88:TYR:HE1	2.21	0.53
1:A:523:ILE:N	1:A:523:ILE:CD1	2.71	0.53
1:A:843:LYS:HD2	2:B:1135:ARG:HH22	1.73	0.53
1:A:1107:VAL:HG12	1:A:1108:ALA:N	2.24	0.53
1:A:1384:VAL:C	1:A:1385:THR:HG23	2.29	0.53
2:B:230:ALA:HB3	2:B:231:PRO:HD3	1.90	0.53
3:C:56:THR:HA	3:C:151:GLN:CD	2.28	0.53
3:C:57:VAL:HG11	10:J:60:PHE:CB	2.39	0.53
11:K:44:ASN:HA	11:K:61:TYR:CE1	2.43	0.53
1:A:106:VAL:HG22	1:A:107:CYS:N	2.23	0.53
1:A:231:PRO:O	1:A:233:TRP:N	2.42	0.53
1:A:504:LEU:CD2	6:F:88:TYR:CE1	2.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:528:LEU:O	1:A:531:ILE:HG22	2.09	0.53
2:B:132:VAL:HG11	2:B:165:VAL:HG11	1.91	0.53
2:B:604:ARG:O	2:B:607:GLY:N	2.42	0.53
2:B:635:ARG:NH2	2:B:742:GLU:OE1	2.40	0.53
2:B:875:GLU:HG2	2:B:876:LYS:N	2.24	0.53
2:B:890:TYR:O	2:B:893:LEU:HG	2.09	0.53
4:D:48:ILE:HG21	7:G:4:ILE:CD1	2.38	0.53
4:D:138:ASN:OD1	4:D:138:ASN:O	2.26	0.53
5:E:63:ASN:HB3	5:E:64:PRO:HD2	1.89	0.53
12:L:53:HIS:O	12:L:55:ILE:N	2.41	0.53
1:A:149:GLU:HB2	1:A:164:ARG:NE	2.23	0.53
1:A:1239:ARG:NH1	1:A:1239:ARG:HG2	2.23	0.53
1:A:1427:ASN:O	1:A:1428:VAL:C	2.47	0.53
2:B:855:PHE:HB3	2:B:970:THR:CG2	2.37	0.53
4:D:194:LEU:HD22	7:G:86:VAL:HG21	1.90	0.53
5:E:177:ARG:HG2	5:E:213:ILE:HG22	1.90	0.53
1:A:19:PHE:HE1	2:B:1214:PRO:HB3	1.74	0.53
1:A:446:ARG:HG3	1:A:446:ARG:HH11	1.73	0.53
1:A:575:LYS:HB3	1:A:612:ILE:CG2	2.39	0.53
1:A:681:GLU:O	1:A:685:GLU:N	2.36	0.53
1:A:837:ILE:HD11	1:A:1102:LYS:HD2	1.90	0.53
1:A:837:ILE:O	1:A:841:LEU:HG	2.08	0.53
1:A:878:ILE:CD1	1:A:1366:ARG:HH22	2.21	0.53
1:A:1128:GLN:HG3	1:A:1304:TRP:CE2	2.44	0.53
2:B:354:ASP:HB3	2:B:358:LYS:CE	2.37	0.53
2:B:431:TYR:CE1	2:B:447:ALA:HB3	2.43	0.53
2:B:525:ALA:HB1	2:B:768:THR:HG1	1.72	0.53
2:B:759:PRO:CB	2:B:767:ASN:HD21	2.21	0.53
3:C:249:ASP:O	3:C:253:LYS:HG2	2.09	0.53
4:D:52:LEU:O	4:D:148:LEU:HD22	2.08	0.53
9:I:83:ASN:HB2	9:I:103:CYS:HA	1.91	0.53
10:J:60:PHE:O	10:J:63:TYR:HD1	1.91	0.53
1:A:46:THR:HG22	1:A:48:ALA:H	1.73	0.53
1:A:344:ARG:NH2	2:B:1120:GLU:HG3	2.23	0.53
1:A:1105:LEU:CD2	1:A:1384:VAL:HG21	2.36	0.53
1:A:1195:LEU:HD23	1:A:1267:MET:HE1	1.90	0.53
1:A:1356:ILE:HD12	1:A:1368:MET:HE2	1.89	0.53
2:B:165:VAL:HG21	2:B:446:LEU:HD12	1.90	0.53
2:B:1058:LEU:O	2:B:1061:GLU:HG2	2.08	0.53
6:F:90:ARG:O	6:F:93:ILE:N	2.42	0.53
9:I:84:VAL:HG22	9:I:85:PHE:H	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:103:THR:O	11:K:107:THR:HG23	2.08	0.53
1:A:43:GLU:HB3	1:A:50:ILE:HD13	1.91	0.53
1:A:526:ASP:HB2	2:B:835:GLN:HE22	1.74	0.53
1:A:1450:LEU:HD11	7:G:19:GLY:CA	2.38	0.53
2:B:349:ILE:HG22	2:B:349:ILE:O	2.09	0.53
2:B:872:GLU:OE1	2:B:914:LYS:HD2	2.09	0.53
2:B:1082:MET:HE1	19:H:203:HOH:O	2.08	0.53
5:E:196:VAL:HG13	5:E:198:ILE:HD12	1.90	0.53
8:H:125:LEU:HD11	8:H:130:ARG:NH1	2.24	0.53
9:I:14:LEU:HD22	9:I:28:GLU:O	2.08	0.53
14:T:25:DC:H2"	14:T:26:DG:H8	1.73	0.53
1:A:399:HIS:HB3	1:A:400:PRO:HD3	1.90	0.53
1:A:453:MET:N	1:A:453:MET:SD	2.82	0.53
1:A:534:LEU:O	1:A:539:THR:HG21	2.08	0.53
1:A:853:ASP:O	1:A:854:ASN:HB2	2.07	0.53
1:A:1013:ASP:OD1	5:E:207:ARG:HD2	2.09	0.53
1:A:1405:THR:O	1:A:1409:LEU:HD12	2.09	0.53
1:A:1420:ASP:O	1:A:1421:CYS:CB	2.56	0.53
2:B:27:ALA:O	2:B:29:ASP:N	2.42	0.53
2:B:53:GLN:HG3	2:B:547:VAL:HG11	1.90	0.53
2:B:465:ASN:HA	2:B:477:ALA:HA	1.90	0.53
2:B:590:HIS:CG	2:B:591:ARG:H	2.27	0.53
6:F:143:PHE:O	6:F:143:PHE:CD1	2.62	0.53
7:G:22:MET:HG2	7:G:26:LEU:CD1	2.39	0.53
11:K:55:LYS:HB3	11:K:78:THR:CG2	2.39	0.53
1:A:299:HIS:HA	1:A:302:THR:CG2	2.39	0.52
1:A:722:LEU:O	1:A:725:ALA:HB3	2.09	0.52
1:A:896:ARG:HD2	1:A:897:TYR:CE2	2.44	0.52
1:A:1014:ALA:HA	5:E:205:SER:OG	2.08	0.52
2:B:459:TYR:CZ	2:B:463:THR:HG21	2.44	0.52
2:B:510:LYS:HB2	2:B:511:PRO:HD2	1.91	0.52
2:B:770:GLN:HG2	2:B:983:ARG:O	2.09	0.52
2:B:780:VAL:HG23	2:B:799:PRO:HG2	1.90	0.52
2:B:975:GLN:NE2	2:B:1100:ASP:OD2	2.42	0.52
2:B:996:ARG:HG3	2:B:1007:VAL:HG21	1.91	0.52
2:B:1175:LEU:O	2:B:1177:HIS:N	2.42	0.52
3:C:255:VAL:O	3:C:258:ILE:HB	2.08	0.52
7:G:103:VAL:O	7:G:103:VAL:HG12	2.08	0.52
1:A:450:LEU:C	1:A:450:LEU:HD12	2.30	0.52
1:A:531:ILE:HD11	1:A:617:VAL:HG11	1.91	0.52
1:A:691:LEU:O	1:A:694:THR:HB	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1035:TYR:HB3	1:A:1037:LEU:HD12	1.91	0.52
2:B:360:PHE:H	2:B:362:PRO:HG3	1.75	0.52
2:B:812:LEU:O	2:B:813:LYS:C	2.47	0.52
2:B:996:ARG:CB	2:B:996:ARG:HH11	2.21	0.52
2:B:1167:GLY:H	2:B:1215:ARG:HG2	1.73	0.52
3:C:169:LYS:C	3:C:171:GLY:H	2.12	0.52
6:F:101:ILE:HD13	6:F:120:ILE:HG22	1.90	0.52
7:G:13:LEU:HB3	7:G:17:PHE:HD2	1.72	0.52
8:H:106:GLU:O	8:H:107:VAL:HG13	2.09	0.52
9:I:14:LEU:CD2	9:I:29:CYS:HB2	2.39	0.52
9:I:26:LEU:HD23	9:I:26:LEU:N	2.24	0.52
11:K:50:LEU:CD1	11:K:75:ILE:HD11	2.39	0.52
1:A:338:GLY:O	2:B:1129:ARG:NH1	2.39	0.52
1:A:432:VAL:HG22	1:A:432:VAL:O	2.09	0.52
1:A:448:PRO:HG3	17:B:2501:ATP:O2'	2.09	0.52
1:A:1340:GLY:HA2	5:E:183:PRO:HD2	1.92	0.52
2:B:817:LEU:O	2:B:818:PRO:O	2.27	0.52
3:C:135:GLN:NE2	3:C:235:VAL:O	2.42	0.52
4:D:51:ASN:HB2	4:D:182:SER:HG	1.75	0.52
5:E:94:LYS:HA	5:E:97:VAL:CG1	2.38	0.52
6:F:109:VAL:HG21	6:F:123:LYS:HG2	1.90	0.52
11:K:64:GLU:O	11:K:65:HIS:HB2	2.10	0.52
1:A:525:GLN:HA	2:B:1015:HIS:HD2	1.74	0.52
1:A:1055:ARG:NE	6:F:154:ASP:OD2	2.38	0.52
2:B:459:TYR:CE2	2:B:470:LYS:HD3	2.44	0.52
2:B:890:TYR:HD1	2:B:890:TYR:H	1.56	0.52
2:B:1033:LYS:HD2	2:B:1087:PHE:O	2.10	0.52
3:C:5:GLY:O	3:C:7:GLN:N	2.42	0.52
3:C:38:ILE:HG22	3:C:39:ALA:N	2.24	0.52
3:C:48:SER:O	3:C:49:VAL:CG2	2.57	0.52
5:E:90:VAL:HG23	5:E:123:LEU:HD22	1.92	0.52
8:H:6:PHE:O	8:H:58:THR:HG23	2.09	0.52
1:A:388:LEU:HD22	1:A:432:VAL:HG11	1.92	0.52
1:A:590:ARG:NH1	1:A:621:THR:CG2	2.73	0.52
1:A:671:ALA:HB1	1:A:736:ASN:ND2	2.25	0.52
1:A:869:GLY:HA2	1:A:1366:ARG:HG2	1.92	0.52
1:A:1339:LEU:HD13	5:E:147:HIS:CD2	2.45	0.52
1:A:1443:VAL:HG12	6:F:134:ILE:HD13	1.91	0.52
2:B:247:GLY:C	2:B:418:LYS:NZ	2.63	0.52
2:B:419:THR:O	2:B:422:LYS:HB3	2.10	0.52
2:B:515:HIS:CE1	2:B:517:THR:HG1	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:653:VAL:HG23	2:B:657:HIS:HB2	1.92	0.52
2:B:1130:PHE:CE1	2:B:1134:GLU:HB3	2.45	0.52
5:E:109:ILE:O	5:E:109:ILE:HG13	2.09	0.52
5:E:175:LEU:HD12	5:E:176:PRO:HD2	1.91	0.52
7:G:112:LYS:C	7:G:112:LYS:HD3	2.29	0.52
8:H:93:TYR:CD2	8:H:143:LEU:HB3	2.45	0.52
11:K:43:GLY:O	11:K:45:LEU:N	2.42	0.52
1:A:134:ARG:O	1:A:138:ILE:HG13	2.10	0.52
1:A:139:TRP:O	1:A:140:THR:C	2.47	0.52
1:A:306:ASN:HB2	1:A:324:SER:HB2	1.90	0.52
1:A:601:LYS:CB	1:A:603:ASN:ND2	2.64	0.52
1:A:899:VAL:CG1	1:A:908:LEU:HG	2.40	0.52
2:B:45:SER:O	2:B:47:GLN:N	2.42	0.52
2:B:603:LEU:HG	2:B:608:ASP:HB2	1.91	0.52
2:B:794:ASN:O	2:B:795:ILE:HD13	2.09	0.52
2:B:1106:ARG:NH1	2:B:1106:ARG:HG3	2.25	0.52
3:C:52:GLU:O	3:C:53:THR:CG2	2.58	0.52
8:H:55:LEU:HD13	8:H:146:ARG:O	2.10	0.52
8:H:77:ARG:NH1	8:H:78:SER:H	2.08	0.52
9:I:66:PRO:O	9:I:67:THR:C	2.45	0.52
1:A:368:LYS:O	1:A:371:ALA:N	2.42	0.52
1:A:377:PRO:HG2	1:A:493:GLN:CG	2.40	0.52
1:A:868:TYR:CE1	1:A:1064:VAL:HG21	2.44	0.52
4:D:24:ALA:H	4:D:28:GLN:HB3	1.75	0.52
4:D:51:ASN:HB2	4:D:181:GLY:O	2.09	0.52
8:H:135:LEU:HD11	8:H:137:GLN:NE2	2.24	0.52
1:A:32:VAL:HG23	1:A:33:ALA:N	2.21	0.52
1:A:57:ARG:HB3	1:A:69:THR:OG1	2.10	0.52
1:A:67:CYS:HB3	1:A:70:CYS:O	2.09	0.52
1:A:75:ASN:O	1:A:76:GLU:HB3	2.09	0.52
1:A:899:VAL:CG2	1:A:1029:ARG:HB2	2.40	0.52
1:A:982:THR:O	1:A:985:ASP:HB2	2.10	0.52
2:B:313:MET:O	2:B:316:PRO:HD2	2.10	0.52
2:B:401:PHE:CD2	2:B:521:LEU:HD12	2.45	0.52
2:B:525:ALA:O	2:B:768:THR:HA	2.10	0.52
2:B:659:ALA:O	2:B:661:LEU:N	2.41	0.52
6:F:127:GLU:HB3	6:F:129:LYS:NZ	2.25	0.52
1:A:385:ILE:HD12	1:A:428:TYR:CE1	2.45	0.52
2:B:313:MET:C	2:B:315:LYS:H	2.13	0.52
3:C:36:VAL:HG12	3:C:40:GLU:OE1	2.10	0.52
5:E:180:ARG:HB2	5:E:215:MET:OXT	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:213:ILE:HG12	5:E:214:CYS:H	1.74	0.52
7:G:44:TYR:CZ	7:G:105:PRO:HB2	2.45	0.52
9:I:75:CYS:SG	9:I:108:HIS:CE1	3.03	0.52
1:A:148:CYS:HG	1:A:167:CYS:N	2.07	0.52
1:A:336:ILE:HG21	1:A:1400:CYS:O	2.10	0.52
1:A:378:GLU:O	1:A:431:LYS:HA	2.10	0.52
1:A:457:ALA:HB3	1:A:505:CYS:O	2.09	0.52
1:A:577:ILE:O	1:A:580:VAL:HG23	2.09	0.52
1:A:1242:VAL:HG22	1:A:1260:LEU:HD13	1.91	0.52
1:A:1384:VAL:O	1:A:1385:THR:CG2	2.58	0.52
2:B:116:GLU:O	2:B:120:ARG:HB2	2.09	0.52
2:B:855:PHE:CD2	2:B:972:LYS:HE3	2.45	0.52
3:C:80:LEU:HD11	3:C:95:CYS:HA	1.92	0.52
5:E:151:PRO:HB2	5:E:198:ILE:HG23	1.92	0.52
5:E:187:TYR:CD1	5:E:187:TYR:O	2.63	0.52
1:A:82:GLY:C	1:A:241:VAL:HG23	2.30	0.51
1:A:511:ILE:HA	1:A:521:MET:HE2	1.92	0.51
1:A:870:GLU:OE1	5:E:202:SER:CB	2.56	0.51
1:A:916:GLY:O	1:A:919:ILE:HG22	2.10	0.51
2:B:132:VAL:CG1	2:B:165:VAL:HG11	2.39	0.51
3:C:57:VAL:HG21	10:J:60:PHE:HB3	1.92	0.51
4:D:125:SER:O	4:D:128:VAL:CG1	2.58	0.51
1:A:481:ASP:OD1	1:A:481:ASP:N	2.43	0.51
1:A:951:GLU:OE1	1:A:951:GLU:HA	2.10	0.51
1:A:1078:GLN:O	1:A:1078:GLN:HG3	2.11	0.51
1:A:1317:MET:HB3	5:E:142:VAL:HG11	1.92	0.51
1:A:1341:ILE:O	1:A:1344:GLY:N	2.42	0.51
2:B:40:GLU:OE1	2:B:681:TRP:HB3	2.09	0.51
2:B:293:PRO:HB2	2:B:296:GLU:HB2	1.92	0.51
2:B:601:ARG:O	2:B:605:ARG:HG3	2.10	0.51
2:B:619:ILE:HD13	9:I:65:ASP:OD2	2.09	0.51
2:B:757:PRO:O	2:B:1024:ALA:HB1	2.10	0.51
12:L:32:ALA:CB	12:L:55:ILE:HD13	2.40	0.51
1:A:667:GLY:HA3	3:C:192:TRP:CH2	2.45	0.51
1:A:1398:MET:CE	1:A:1423:GLY:CA	2.88	0.51
2:B:29:ASP:OD1	2:B:658:ILE:HG12	2.10	0.51
2:B:243:ALA:HB2	2:B:250:PHE:O	2.10	0.51
2:B:274:PRO:O	2:B:275:TYR:HB2	2.11	0.51
2:B:899:ILE:CD1	2:B:949:VAL:HG21	2.39	0.51
3:C:169:LYS:NZ	12:L:69:ALA:HB3	2.25	0.51
3:C:184:ASN:ND2	3:C:187:LYS:HA	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:222:LYS:HG2	3:C:222:LYS:O	2.10	0.51
5:E:88:VAL:HG13	5:E:92:THR:OG1	2.10	0.51
6:F:104:ASN:O	7:G:16:SER:HB3	2.11	0.51
7:G:94:CYS:HG	7:G:130:TYR:HE2	1.56	0.51
7:G:99:PHE:HD2	7:G:115:MET:HE1	1.75	0.51
9:I:111:THR:HG21	9:I:118:ARG:H	1.74	0.51
1:A:58:LEU:HD22	1:A:80:HIS:O	2.10	0.51
1:A:89:PRO:O	1:A:204:THR:HG21	2.10	0.51
1:A:132:LYS:O	1:A:135:PHE:HB3	2.11	0.51
1:A:297:GLN:O	1:A:297:GLN:HG2	2.09	0.51
1:A:537:ARG:N	1:A:575:LYS:HZ1	2.07	0.51
1:A:741:ASN:OD1	1:A:743:VAL:N	2.44	0.51
1:A:1004:ASN:OD1	1:A:1007:ILE:HG13	2.11	0.51
1:A:1154:TYR:HB2	1:A:1191:TRP:CZ3	2.45	0.51
2:B:357:GLN:NE2	2:B:368:GLU:HG3	2.25	0.51
5:E:66:GLU:HA	5:E:69:ILE:HD11	1.92	0.51
10:J:6:ARG:HB3	10:J:13:VAL:HA	1.92	0.51
1:A:447:GLN:CG	14:T:20:DC:H1'	2.40	0.51
1:A:483:ASP:HA	2:B:988:GLY:HA2	1.91	0.51
1:A:683:ILE:HD12	1:A:801:GLU:OE2	2.11	0.51
1:A:807:GLY:O	2:B:728:ARG:HD2	2.10	0.51
1:A:904:THR:HG23	1:A:905:ASP:OD1	2.10	0.51
1:A:1116:LEU:HD12	1:A:1310:GLY:O	2.10	0.51
2:B:266:ALA:O	2:B:268:THR:N	2.38	0.51
2:B:296:GLU:O	2:B:299:GLU:HG2	2.10	0.51
2:B:385:LEU:HD23	2:B:385:LEU:C	2.31	0.51
2:B:652:LYS:HB3	2:B:689:LEU:HD23	1.92	0.51
2:B:952:VAL:CG1	2:B:966:VAL:HG12	2.40	0.51
2:B:1125:ASP:O	2:B:1125:ASP:CG	2.48	0.51
3:C:142:VAL:O	3:C:142:VAL:CG1	2.57	0.51
3:C:169:LYS:HZ2	12:L:69:ALA:HB3	1.74	0.51
8:H:63:LEU:C	8:H:63:LEU:HD12	2.30	0.51
8:H:135:LEU:HD11	8:H:137:GLN:CG	2.40	0.51
1:A:542:GLU:CG	1:A:543:LEU:H	2.23	0.51
1:A:678:GLU:OE2	1:A:732:LEU:HD23	2.11	0.51
2:B:242:SER:OG	2:B:362:PRO:CD	2.58	0.51
2:B:496:ARG:CD	2:B:751:VAL:CG2	2.84	0.51
2:B:520:GLY:N	2:B:748:ILE:HG22	2.26	0.51
2:B:635:ARG:NH2	2:B:637:LEU:HD13	2.22	0.51
2:B:636:PRO:O	2:B:743:ILE:HD11	2.11	0.51
2:B:702:LEU:HD23	2:B:737:THR:HG23	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1152:MET:HE3	2:B:1157:ALA:CA	2.40	0.51
3:C:142:VAL:O	3:C:142:VAL:HG13	2.09	0.51
3:C:259:LEU:O	3:C:262:LEU:HB3	2.10	0.51
5:E:18:THR:HA	5:E:21:GLU:HB2	1.93	0.51
7:G:86:VAL:HA	7:G:146:LYS:HA	1.92	0.51
10:J:46:CYS:O	10:J:49:MET:N	2.42	0.51
11:K:29:ASN:O	11:K:76:GLN:HB2	2.11	0.51
1:A:15:LYS:CD	2:B:1218:THR:O	2.59	0.51
1:A:29:ALA:C	1:A:31:SER:H	2.13	0.51
1:A:35:ILE:HB	1:A:83:HIS:O	2.11	0.51
1:A:239:LEU:HG	1:A:240:PRO:HD2	1.92	0.51
1:A:344:ARG:HG2	2:B:1129:ARG:HA	1.92	0.51
1:A:470:LEU:HD12	1:A:470:LEU:O	2.10	0.51
1:A:635:ARG:NH1	1:A:876:ALA:O	2.44	0.51
1:A:779:PHE:CZ	1:A:785:PRO:CD	2.93	0.51
2:B:702:LEU:HD22	2:B:737:THR:HG23	1.91	0.51
2:B:785:TYR:HE1	10:J:60:PHE:CZ	2.28	0.51
5:E:55:ARG:NE	5:E:113:GLN:OE1	2.43	0.51
7:G:27:LYS:HD2	7:G:51:TYR:HE1	1.76	0.51
7:G:80:LYS:CE	7:G:82:PHE:HE1	2.24	0.51
1:A:408:ASP:N	1:A:408:ASP:OD1	2.36	0.51
1:A:492:PRO:CG	1:A:498:ARG:HG2	2.41	0.51
1:A:967:ALA:HA	1:A:1044:TRP:CZ3	2.46	0.51
1:A:1325:THR:O	5:E:148:GLU:HG3	2.11	0.51
1:A:1336:MET:HG3	1:A:1381:LEU:HD13	1.93	0.51
1:A:1336:MET:SD	1:A:1336:MET:C	2.89	0.51
2:B:789:MET:CB	2:B:967:ARG:HD3	2.41	0.51
2:B:862:GLN:OE1	2:B:963:PHE:HE1	1.93	0.51
2:B:1051:THR:OG1	2:B:1054:GLY:N	2.43	0.51
2:B:1166:CYS:CB	2:B:1168:LEU:HD11	2.41	0.51
3:C:8:VAL:CG1	3:C:22:LEU:HD23	2.39	0.51
8:H:139:ASN:O	8:H:140:ALA:CB	2.59	0.51
1:A:361:LEU:HG	1:A:507:VAL:HG11	1.92	0.51
1:A:375:THR:O	1:A:376:TYR:HB2	2.11	0.51
1:A:380:VAL:HG21	1:A:430:TRP:HB2	1.93	0.51
1:A:504:LEU:HD21	6:F:88:TYR:HD1	1.75	0.51
1:A:598:LEU:HD12	8:H:122:LEU:HB3	1.93	0.51
1:A:610:GLY:C	1:A:611:GLN:HG2	2.32	0.51
1:A:789:LYS:HE3	9:I:67:THR:CB	2.34	0.51
1:A:825:ILE:O	1:A:829:VAL:HB	2.11	0.51
1:A:1018:PHE:CE2	1:A:1053:PHE:HD2	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1037:LEU:HD23	1:A:1042:PHE:HA	1.91	0.51
2:B:319:GLU:HA	2:B:322:PHE:HB2	1.93	0.51
2:B:756:ILE:HB	2:B:759:PRO:HG3	1.93	0.51
2:B:1108:ARG:CZ	2:B:1108:ARG:HB2	2.41	0.51
6:F:125:LEU:HA	6:F:130:ILE:CD1	2.40	0.51
12:L:46:VAL:C	12:L:47:ARG:HG2	2.32	0.51
12:L:61:THR:OG1	12:L:63:ARG:HB2	2.11	0.51
1:A:363:GLN:HA	1:A:459:ARG:O	2.11	0.51
1:A:568:PRO:O	1:A:569:LYS:HB2	2.11	0.51
1:A:807:GLY:HA2	2:B:760:ASP:O	2.10	0.51
1:A:910:PRO:C	1:A:912:LEU:N	2.64	0.51
1:A:1229:SER:HB2	1:A:1233:ASP:OD2	2.10	0.51
2:B:57:TYR:O	2:B:59:LEU:N	2.44	0.51
2:B:118:ARG:HG2	2:B:204:ILE:HD13	1.93	0.51
2:B:118:ARG:HE	2:B:204:ILE:CD1	2.23	0.51
2:B:757:PRO:CB	2:B:1028:GLU:HG3	2.41	0.51
4:D:183:LEU:HD23	4:D:194:LEU:HD13	1.92	0.51
5:E:196:VAL:CG1	5:E:198:ILE:HD11	2.41	0.51
7:G:9:LEU:CD2	7:G:11:ILE:HD11	2.41	0.51
1:A:144:THR:O	1:A:146:MET:HG2	2.10	0.50
1:A:391:LEU:HG	1:A:400:PRO:O	2.10	0.50
1:A:569:LYS:CB	8:H:46:LEU:CD2	2.88	0.50
1:A:657:LEU:O	1:A:661:GLY:N	2.35	0.50
1:A:666:ILE:C	1:A:666:ILE:CD1	2.75	0.50
1:A:693:VAL:HG22	1:A:714:PHE:CD1	2.46	0.50
1:A:1141:THR:HG23	1:A:1205:LYS:NZ	2.26	0.50
2:B:51:PHE:O	2:B:54:PHE:HB3	2.10	0.50
2:B:210:LYS:NZ	2:B:462:ALA:HA	2.26	0.50
2:B:733:HIS:O	2:B:734:HIS:HB2	2.11	0.50
2:B:953:LEU:HD21	2:B:955:THR:CG2	2.41	0.50
4:D:157:GLN:O	4:D:160:VAL:HG22	2.11	0.50
8:H:23:VAL:HG12	8:H:24:CYS:N	2.27	0.50
8:H:114:VAL:O	8:H:124:ARG:HA	2.11	0.50
10:J:2:ILE:HG13	10:J:3:VAL:N	2.26	0.50
1:A:397:ASN:OD1	1:A:397:ASN:N	2.43	0.50
1:A:439:ASN:HA	1:A:459:ARG:HB3	1.93	0.50
1:A:663:SER:O	1:A:664:THR:HB	2.10	0.50
1:A:692:ASP:C	1:A:694:THR:H	2.15	0.50
1:A:847:ASP:OD2	1:A:859:SER:HB2	2.11	0.50
1:A:1277:GLU:O	1:A:1278:ASN:HB2	2.11	0.50
1:A:1427:ASN:O	1:A:1431:GLY:N	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:25:ILE:HG22	2:B:651:LEU:HD12	1.93	0.50
2:B:272:THR:OG1	2:B:279:ASP:OD2	2.29	0.50
7:G:47:CYS:HB3	7:G:77:VAL:CG1	2.41	0.50
8:H:12:VAL:HG21	8:H:50:ALA:CA	2.42	0.50
8:H:130:ARG:N	8:H:130:ARG:HD2	2.26	0.50
9:I:19:ASP:HB2	9:I:24:ARG:CG	2.41	0.50
9:I:65:ASP:OD1	9:I:67:THR:HG23	2.11	0.50
12:L:46:VAL:O	12:L:47:ARG:CG	2.56	0.50
1:A:44:THR:C	1:A:46:THR:H	2.14	0.50
1:A:575:LYS:O	1:A:579:SER:OG	2.29	0.50
1:A:1386:ARG:O	1:A:1390:ASN:HB3	2.10	0.50
1:A:1397:LEU:N	1:A:1397:LEU:HD23	2.26	0.50
2:B:272:THR:C	2:B:273:LEU:HD22	2.32	0.50
2:B:400:HIS:CE1	2:B:517:THR:HG21	2.45	0.50
2:B:604:ARG:NH2	2:B:691:GLU:OE2	2.36	0.50
4:D:59:ILE:HG22	4:D:63:LEU:HD12	1.93	0.50
4:D:188:ALA:O	4:D:191:ALA:N	2.44	0.50
5:E:145:THR:HG21	5:E:187:TYR:CE1	2.46	0.50
5:E:169:ARG:HD2	18:E:301:GOL:O2	2.11	0.50
5:E:185:ALA:HA	5:E:190:LEU:CD1	2.41	0.50
6:F:81:THR:OG1	6:F:136:ARG:NH1	2.44	0.50
1:A:5:GLN:NE2	2:B:1175:LEU:CD1	2.74	0.50
1:A:490:HIS:CG	2:B:1150:ARG:HH12	2.29	0.50
1:A:1099:PRO:HA	1:A:1102:LYS:HB2	1.93	0.50
1:A:1101:LEU:HD11	1:A:1105:LEU:HD11	1.93	0.50
1:A:1330:ASN:OD1	1:A:1331:SER:N	2.45	0.50
1:A:1341:ILE:HG23	1:A:1342:GLU:N	2.25	0.50
2:B:37:PHE:CE2	2:B:542:MET:HG2	2.46	0.50
2:B:170:LEU:HD12	2:B:457:LEU:HD13	1.93	0.50
2:B:904:ARG:HG3	2:B:948:ILE:HG13	1.93	0.50
6:F:125:LEU:CA	6:F:130:ILE:HD11	2.40	0.50
11:K:12:LEU:H	11:K:12:LEU:HD12	1.75	0.50
1:A:821:ARG:O	1:A:824:LEU:N	2.43	0.50
1:A:899:VAL:HG11	1:A:908:LEU:HG	1.94	0.50
1:A:1116:LEU:HD11	1:A:1311:VAL:HA	1.93	0.50
1:A:1267:MET:O	1:A:1271:ILE:HB	2.11	0.50
2:B:27:ALA:O	2:B:30:SER:N	2.36	0.50
2:B:759:PRO:CB	2:B:767:ASN:ND2	2.73	0.50
2:B:980:PHE:HE1	2:B:1094:ARG:HG3	1.76	0.50
2:B:1163:CYS:HB3	2:B:1166:CYS:O	2.12	0.50
8:H:96:VAL:HG12	8:H:97:MET:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:12:LEU:HD21	11:K:18:LYS:HG3	1.93	0.50
1:A:22:PHE:CD2	2:B:1213:THR:HG22	2.47	0.50
1:A:92:HIS:HB2	1:A:236:LEU:HD13	1.93	0.50
1:A:119:ASN:H	1:A:123:ARG:HH11	1.59	0.50
1:A:351:THR:CG2	1:A:468:PHE:H	2.25	0.50
1:A:370:ILE:O	1:A:374:LEU:HB2	2.11	0.50
1:A:513:SER:HB3	1:A:520:CYS:HB3	1.92	0.50
1:A:677:ARG:O	1:A:680:THR:OG1	2.29	0.50
1:A:679:ILE:HG22	1:A:679:ILE:O	2.11	0.50
1:A:1344:GLY:O	1:A:1345:ARG:C	2.49	0.50
1:A:1422:ARG:NH2	2:B:1223:ASP:O	2.42	0.50
2:B:214:ALA:HB1	2:B:406:LEU:HD13	1.93	0.50
2:B:282:ILE:HD11	2:B:317:CYS:SG	2.52	0.50
2:B:885:MET:HA	2:B:936:ASP:HB2	1.94	0.50
6:F:101:ILE:HG22	6:F:117:PRO:HB3	1.93	0.50
1:A:106:VAL:HG23	1:A:112:LYS:O	2.12	0.50
1:A:483:ASP:HB2	2:B:988:GLY:HA2	1.93	0.50
1:A:508:PRO:O	1:A:511:ILE:HG12	2.12	0.50
1:A:592:ASP:H	1:A:595:THR:CG2	2.22	0.50
1:A:857:ARG:HD3	1:A:861:GLY:O	2.12	0.50
1:A:923:LEU:HD23	1:A:923:LEU:H	1.77	0.50
2:B:419:THR:O	2:B:422:LYS:CB	2.60	0.50
2:B:464:GLY:HA2	2:B:480:SER:H	1.77	0.50
2:B:639:ILE:CD1	2:B:689:LEU:HA	2.40	0.50
2:B:860:MET:HG3	2:B:965:LYS:NZ	2.26	0.50
4:D:146:GLN:O	4:D:149:THR:OG1	2.27	0.50
7:G:154:VAL:HG13	7:G:155:SER:H	1.77	0.50
11:K:56:VAL:HA	11:K:77:THR:HA	1.93	0.50
1:A:344:ARG:HH12	14:T:21:DC:P	2.34	0.50
1:A:510:GLN:OE1	2:B:1141:HIS:CE1	2.65	0.50
1:A:598:LEU:CD1	8:H:122:LEU:HB3	2.42	0.50
1:A:926:GLN:HG3	1:A:926:GLN:O	2.12	0.50
1:A:1150:SER:O	1:A:1150:SER:OG	2.29	0.50
2:B:97:VAL:HG22	2:B:127:GLY:O	2.11	0.50
2:B:132:VAL:HG12	2:B:165:VAL:CG1	2.41	0.50
2:B:963:PHE:CE2	2:B:965:LYS:CE	2.87	0.50
3:C:61:GLU:HA	3:C:64:ALA:HB2	1.91	0.50
3:C:135:GLN:OE1	10:J:13:VAL:HG21	2.12	0.50
3:C:235:VAL:HB	10:J:13:VAL:CG1	2.41	0.50
4:D:211:LEU:CD1	4:D:214:LEU:HD22	2.42	0.50
5:E:61:GLN:HB2	5:E:79:TRP:HE3	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:96:PHE:CD1	5:E:96:PHE:C	2.86	0.50
8:H:93:TYR:HB3	8:H:144:ILE:O	2.11	0.50
9:I:75:CYS:H	9:I:79:HIS:HA	1.76	0.50
1:A:343:LYS:HE3	2:B:1151:LEU:HA	1.93	0.50
1:A:455:MET:HE1	2:B:1134:GLU:CG	2.42	0.50
1:A:563:PRO:HD2	8:H:79:TRP:CD1	2.46	0.50
1:A:784:LEU:HD11	1:A:815:PHE:CZ	2.47	0.50
1:A:868:TYR:CD1	1:A:1064:VAL:HG21	2.47	0.50
1:A:909:ASP:C	1:A:909:ASP:OD1	2.50	0.50
1:A:1343:ALA:HA	5:E:149:LEU:O	2.12	0.50
2:B:420:LEU:C	2:B:422:LYS:N	2.65	0.50
2:B:433:GLN:OE1	2:B:433:GLN:N	2.45	0.50
2:B:620:ARG:NH2	9:I:89:GLN:OE1	2.44	0.50
2:B:801:LYS:O	10:J:52:THR:HB	2.11	0.50
2:B:831:SER:HG	2:B:833:TYR:HB2	1.77	0.50
2:B:1029:CYS:SG	2:B:1090:THR:OG1	2.70	0.50
3:C:82:TYR:O	3:C:83:SER:C	2.50	0.50
3:C:111:THR:HG22	3:C:147:LEU:O	2.12	0.50
8:H:56:THR:CG2	8:H:57:VAL:H	2.19	0.50
9:I:12:ASN:ND2	9:I:31:THR:OG1	2.44	0.50
10:J:53:HIS:HD2	10:J:54:VAL:N	2.10	0.50
1:A:106:VAL:HG21	1:A:214:ILE:CD1	2.42	0.49
1:A:347:PHE:HB3	1:A:491:VAL:HG12	1.94	0.49
1:A:756:ILE:HG21	1:A:1086:PHE:CE2	2.47	0.49
1:A:1018:PHE:CE2	1:A:1053:PHE:CD2	3.00	0.49
1:A:1116:LEU:HD12	1:A:1311:VAL:HA	1.93	0.49
1:A:1436:ILE:O	1:A:1438:THR:N	2.45	0.49
2:B:128:LEU:HB2	2:B:167:ILE:HB	1.93	0.49
2:B:753:ALA:C	2:B:755:ILE:H	2.16	0.49
2:B:778:MET:HE1	2:B:1094:ARG:HH11	1.77	0.49
2:B:803:LEU:HD12	2:B:822:ASN:HB3	1.94	0.49
2:B:806:THR:HB	2:B:1045:SER:HA	1.94	0.49
2:B:987:LYS:NZ	13:R:10:G:P	2.85	0.49
6:F:72:LYS:O	6:F:72:LYS:CG	2.58	0.49
11:K:40:HIS:HE1	11:K:63:VAL:CG2	2.26	0.49
12:L:43:THR:O	12:L:43:THR:OG1	2.27	0.49
1:A:135:PHE:CE1	1:A:222:LEU:HD11	2.48	0.49
1:A:432:VAL:O	1:A:434:ARG:N	2.45	0.49
1:A:674:PRO:HA	1:A:677:ARG:HB3	1.94	0.49
1:A:1161:THR:O	1:A:1162:VAL:C	2.50	0.49
2:B:247:GLY:C	2:B:418:LYS:HZ1	2.14	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:797:TYR:HB3	2:B:798:TYR:HD1	1.76	0.49
2:B:863:GLU:OE2	2:B:962:LYS:HD2	2.12	0.49
2:B:894:ASP:HB2	2:B:896:ASP:OD1	2.12	0.49
3:C:50:GLU:HA	12:L:65:VAL:O	2.12	0.49
3:C:193:TYR:CD2	3:C:197:SER:N	2.80	0.49
8:H:27:GLU:OE1	8:H:39:THR:CG2	2.60	0.49
12:L:42:ARG:HB2	12:L:43:THR:HG23	1.95	0.49
13:R:1:A:N6	14:T:27:DA:N6	2.56	0.49
1:A:380:VAL:HG12	1:A:428:TYR:CD1	2.47	0.49
1:A:525:GLN:CB	2:B:1015:HIS:HD2	2.24	0.49
1:A:566:ILE:O	1:A:567:LYS:HB2	2.12	0.49
1:A:727:ASP:O	1:A:729:ALA:N	2.41	0.49
1:A:1141:THR:CG2	1:A:1205:LYS:HD3	2.41	0.49
2:B:44:VAL:HG23	2:B:48:LEU:CD1	2.40	0.49
2:B:305:VAL:HG13	2:B:572:HIS:CE1	2.47	0.49
2:B:309:GLN:O	2:B:312:GLU:HG3	2.12	0.49
2:B:493:SER:CB	2:B:775:LYS:HE2	2.43	0.49
2:B:523:CYS:SG	2:B:750:GLY:N	2.85	0.49
2:B:805:THR:O	2:B:1044:ALA:N	2.32	0.49
2:B:1202:LEU:O	2:B:1203:LEU:C	2.50	0.49
3:C:21:ILE:O	3:C:21:ILE:CD1	2.61	0.49
3:C:37:MET:CE	3:C:232:VAL:CG1	2.90	0.49
3:C:177:GLU:HB2	3:C:231:ASN:HB3	1.94	0.49
5:E:88:VAL:HB	5:E:116:ILE:HG12	1.94	0.49
8:H:18:GLY:C	8:H:20:TYR:H	2.16	0.49
9:I:89:GLN:O	9:I:89:GLN:HG2	2.11	0.49
10:J:5:VAL:HG12	10:J:6:ARG:HD2	1.93	0.49
13:R:6:G:H1	14:T:23:DC:N4	2.01	0.49
1:A:15:LYS:HD3	2:B:1218:THR:O	2.12	0.49
1:A:184:SER:O	1:A:185:TRP:CG	2.66	0.49
1:A:1138:ILE:C	1:A:1140:HIS:H	2.15	0.49
2:B:48:LEU:O	2:B:51:PHE:N	2.44	0.49
2:B:849:GLY:HA2	2:B:852:ARG:NE	2.28	0.49
3:C:3:GLU:HG2	3:C:4:GLU:OE1	2.12	0.49
8:H:130:ARG:NH1	8:H:130:ARG:HG3	2.28	0.49
1:A:152:VAL:HG13	1:A:153:PRO:HD2	1.94	0.49
1:A:816:HIS:CE1	2:B:764:SER:H	2.30	0.49
1:A:846:GLU:OE2	1:A:1425:SER:OG	2.29	0.49
1:A:1153:TYR:CD2	1:A:1192:LEU:HD23	2.47	0.49
2:B:800:GLN:HA	10:J:52:THR:O	2.13	0.49
2:B:814:PHE:O	2:B:816:GLU:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:899:ILE:HD11	2:B:911:ILE:HG23	1.93	0.49
2:B:1209:ALA:C	2:B:1211:ASN:H	2.16	0.49
3:C:56:THR:HG21	3:C:145:CYS:SG	2.52	0.49
7:G:1:MET:CE	7:G:80:LYS:N	2.76	0.49
8:H:93:TYR:CD1	8:H:143:LEU:CD2	2.94	0.49
10:J:60:PHE:O	10:J:63:TYR:CD1	2.65	0.49
11:K:20:LYS:O	11:K:33:ILE:HA	2.13	0.49
1:A:500:GLU:HG2	2:B:1143:ALA:HA	1.93	0.49
1:A:1284:MET:HB3	1:A:1306:LEU:CD2	2.43	0.49
1:A:1390:ASN:OD1	1:A:1402:PHE:CB	2.56	0.49
2:B:466:TRP:O	2:B:468:GLU:HG2	2.12	0.49
2:B:520:GLY:O	2:B:521:LEU:HD23	2.13	0.49
2:B:653:VAL:O	2:B:654:ARG:CG	2.60	0.49
2:B:971:THR:HG22	2:B:972:LYS:N	2.28	0.49
3:C:26:ASP:O	3:C:29:MET:HB3	2.13	0.49
3:C:47:ASP:HA	3:C:169:LYS:HZ2	1.78	0.49
4:D:33:PHE:CD1	4:D:33:PHE:N	2.80	0.49
5:E:152:LYS:HA	5:E:152:LYS:HE3	1.95	0.49
7:G:14:HIS:CG	7:G:15:PRO:HD2	2.47	0.49
1:A:337:ARG:HH12	2:B:1132:GLU:HG3	1.77	0.49
1:A:568:PRO:HG3	8:H:96:VAL:H	1.77	0.49
1:A:702:LEU:HD23	1:A:710:LEU:HG	1.95	0.49
1:A:868:TYR:CE1	1:A:1064:VAL:CG2	2.96	0.49
1:A:999:VAL:HG12	1:A:1000:LEU:HD12	1.95	0.49
1:A:1147:THR:HG22	1:A:1195:LEU:HD13	1.95	0.49
2:B:217:ARG:HH12	2:B:405:ARG:HB3	1.78	0.49
2:B:245:GLU:HG3	2:B:245:GLU:O	2.12	0.49
2:B:533:CYS:C	2:B:535:LEU:H	2.16	0.49
2:B:757:PRO:HG2	2:B:984:HIS:NE2	2.28	0.49
2:B:874:PHE:HA	2:B:913:GLY:O	2.11	0.49
1:A:102:VAL:O	1:A:106:VAL:HG12	2.13	0.49
1:A:135:PHE:HD1	1:A:222:LEU:O	1.95	0.49
1:A:184:SER:O	1:A:185:TRP:CD1	2.66	0.49
1:A:244:PRO:N	1:A:245:PRO:CD	2.75	0.49
1:A:531:ILE:HD13	1:A:617:VAL:HG11	1.94	0.49
1:A:939:ASP:OD2	1:A:1023:ARG:NH1	2.37	0.49
1:A:1329:THR:HG22	1:A:1335:ILE:HD11	1.94	0.49
1:A:1436:ILE:HD13	2:B:1139:ILE:HG23	1.95	0.49
2:B:39:ARG:NH2	2:B:665:GLU:HG3	2.18	0.49
2:B:284:ILE:HD13	2:B:333:PHE:HD2	1.77	0.49
2:B:301:ILE:N	2:B:301:ILE:CD1	2.74	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:424:LEU:O	2:B:424:LEU:HD22	2.12	0.49
4:D:37:GLN:OE1	7:G:5:LYS:HD2	2.11	0.49
4:D:66:ARG:NH2	7:G:48:VAL:HG12	2.28	0.49
4:D:164:ILE:HD13	4:D:164:ILE:N	2.28	0.49
5:E:83:CYS:HB2	5:E:110:PHE:CZ	2.48	0.49
5:E:113:GLN:CA	5:E:137:GLU:HG2	2.42	0.49
5:E:185:ALA:CB	5:E:190:LEU:HD12	2.43	0.49
7:G:3:PHE:HB2	7:G:78:VAL:HG22	1.94	0.49
7:G:21:ARG:HB3	7:G:24:GLN:HB2	1.94	0.49
7:G:109:PHE:O	7:G:161:GLY:N	2.44	0.49
9:I:19:ASP:HB3	9:I:24:ARG:H	1.77	0.49
1:A:83:HIS:CA	1:A:241:VAL:CG2	2.90	0.49
1:A:583:PRO:O	1:A:585:GLY:N	2.45	0.49
1:A:1424:VAL:HG21	2:B:1139:ILE:CD1	2.42	0.49
2:B:103:ASN:OD1	2:B:109:THR:N	2.45	0.49
2:B:684:LEU:C	2:B:690:VAL:HG22	2.32	0.49
2:B:769:TYR:O	2:B:770:GLN:C	2.50	0.49
2:B:1134:GLU:O	2:B:1135:ARG:C	2.51	0.49
2:B:1146:PHE:CG	2:B:1146:PHE:O	2.66	0.49
3:C:21:ILE:HD12	3:C:21:ILE:C	2.33	0.49
6:F:72:LYS:O	6:F:73:ALA:HB3	2.12	0.49
7:G:59:GLY:CA	7:G:70:PHE:CE1	2.95	0.49
11:K:82:ASP:OD1	11:K:83:PRO:CD	2.60	0.49
12:L:44:ASP:OD1	12:L:44:ASP:O	2.29	0.49
1:A:331:GLY:O	1:A:333:GLU:N	2.46	0.49
1:A:405:VAL:O	1:A:413:ILE:HB	2.13	0.49
1:A:564:ALA:N	1:A:576:GLN:HE22	2.11	0.49
1:A:711:ARG:NH1	9:I:97:MET:HG2	2.28	0.49
1:A:777:PHE:HA	1:A:782:ARG:O	2.13	0.49
1:A:922:ASP:OD1	1:A:924:LYS:HG2	2.13	0.49
1:A:1074:GLU:HB3	1:A:1075:PRO:CD	2.42	0.49
2:B:292:ILE:HB	2:B:293:PRO:HD3	1.95	0.49
2:B:401:PHE:HB3	2:B:517:THR:HB	1.95	0.49
2:B:952:VAL:HG13	2:B:966:VAL:HG12	1.94	0.49
2:B:1127:GLY:C	2:B:1128:LEU:HD23	2.33	0.49
4:D:181:GLY:O	4:D:182:SER:OG	2.26	0.49
4:D:202:ILE:HG21	4:D:207:LEU:HD13	1.95	0.49
1:A:375:THR:O	1:A:376:TYR:CB	2.61	0.48
1:A:775:ILE:HG21	1:A:815:PHE:CD1	2.48	0.48
1:A:815:PHE:CD1	1:A:818:MET:CE	2.96	0.48
1:A:948:VAL:C	1:A:950:GLY:H	2.17	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:31:TRP:CZ3	2:B:34:ILE:HD12	2.48	0.48
2:B:766:ARG:NH1	17:B:2501:ATP:PG	2.86	0.48
2:B:789:MET:HG3	2:B:789:MET:O	2.12	0.48
3:C:29:MET:HA	11:K:45:LEU:HD22	1.95	0.48
5:E:22:MET:HE2	5:E:187:TYR:CD2	2.48	0.48
5:E:157:SER:H	5:E:160:GLU:HB2	1.76	0.48
7:G:87:VAL:HG23	7:G:145:VAL:HG22	1.95	0.48
10:J:31:ASP:OD1	10:J:32:GLU:N	2.46	0.48
11:K:65:HIS:ND1	11:K:66:PRO:N	2.61	0.48
1:A:92:HIS:O	1:A:96:ILE:HG23	2.13	0.48
1:A:357:PRO:HB3	1:A:654:ASN:ND2	2.29	0.48
1:A:403:LYS:C	1:A:404:TYR:CD1	2.86	0.48
1:A:446:ARG:HG2	1:A:447:GLN:H	1.78	0.48
1:A:729:ALA:HA	1:A:732:LEU:CD1	2.44	0.48
1:A:1213:GLY:HA2	1:A:1216:ILE:HD12	1.94	0.48
1:A:1402:PHE:CD1	1:A:1403:GLU:HG3	2.47	0.48
2:B:25:ILE:HG22	2:B:651:LEU:CD1	2.42	0.48
2:B:363:HIS:O	2:B:585:VAL:CG2	2.61	0.48
2:B:484:ASN:OD1	2:B:486:TYR:CD2	2.65	0.48
2:B:620:ARG:O	2:B:621:GLU:OE2	2.30	0.48
2:B:703:ILE:HG23	2:B:741:CYS:HA	1.94	0.48
2:B:805:THR:HG21	2:B:1041:GLU:OE2	2.14	0.48
2:B:953:LEU:HD21	2:B:955:THR:HG22	1.94	0.48
4:D:73:SER:HB2	7:G:21:ARG:HH22	1.78	0.48
5:E:117:THR:HB	5:E:118:PRO:CD	2.43	0.48
7:G:34:VAL:HG11	7:G:74:TYR:CZ	2.49	0.48
7:G:121:PHE:CZ	7:G:123:ALA:HB2	2.49	0.48
11:K:47:ARG:O	11:K:50:LEU:HB2	2.13	0.48
1:A:5:GLN:CD	2:B:1175:LEU:HD11	2.34	0.48
1:A:219:PHE:HB2	1:A:224:PHE:HB2	1.95	0.48
1:A:351:THR:HG21	1:A:468:PHE:H	1.77	0.48
1:A:466:SER:HB2	2:B:1099:VAL:CG2	2.43	0.48
1:A:835:GLY:HA3	14:T:18:DT:H1'	1.94	0.48
1:A:846:GLU:HG2	1:A:1424:VAL:HG11	1.95	0.48
1:A:962:ARG:O	1:A:965:GLN:OE1	2.31	0.48
1:A:1187:GLN:HG3	1:A:1188:GLN:HG3	1.95	0.48
1:A:1343:ALA:O	5:E:149:LEU:CD1	2.53	0.48
2:B:100:PRO:HD3	2:B:178:ASN:O	2.14	0.48
2:B:751:VAL:O	2:B:812:LEU:HD21	2.13	0.48
5:E:81:GLU:HB3	5:E:96:PHE:CD2	2.49	0.48
9:I:65:ASP:O	9:I:66:PRO:C	2.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:203:SER:O	1:A:206:GLU:HG2	2.14	0.48
1:A:404:TYR:C	1:A:415:LEU:CD1	2.82	0.48
1:A:566:ILE:O	1:A:568:PRO:HD2	2.13	0.48
1:A:1100:ARG:HH22	1:A:1111:MET:CE	2.27	0.48
2:B:256:VAL:O	2:B:256:VAL:HG12	2.14	0.48
2:B:1104:HIS:CD2	2:B:1122:ARG:HA	2.48	0.48
3:C:15:LYS:HD2	11:K:114:LEU:CD1	2.43	0.48
3:C:105:GLY:O	3:C:149:LYS:HA	2.12	0.48
4:D:57:LEU:C	4:D:57:LEU:HD23	2.33	0.48
8:H:43:ASN:ND2	8:H:46:LEU:HG	2.28	0.48
8:H:93:TYR:CD2	8:H:143:LEU:CB	2.96	0.48
8:H:125:LEU:O	8:H:125:LEU:HD12	2.14	0.48
8:H:144:ILE:HG22	8:H:145:ARG:N	2.28	0.48
1:A:1055:ARG:HE	6:F:154:ASP:CG	2.16	0.48
1:A:1065:GLY:C	1:A:1067:LEU:H	2.16	0.48
1:A:1385:THR:O	1:A:1387:HIS:N	2.47	0.48
1:A:1389:PHE:CZ	1:A:1402:PHE:HE2	2.30	0.48
1:A:1402:PHE:HD1	1:A:1403:GLU:N	2.08	0.48
2:B:235:SER:OG	2:B:258:LEU:HD23	2.14	0.48
2:B:1204:PHE:CD2	2:B:1216:LEU:HD11	2.48	0.48
3:C:242:GLN:CB	3:C:246:ARG:NH2	2.72	0.48
5:E:31:THR:CG2	5:E:34:GLU:H	2.25	0.48
5:E:113:GLN:HB2	5:E:137:GLU:OE2	2.14	0.48
9:I:111:THR:CG2	9:I:118:ARG:H	2.27	0.48
1:A:525:GLN:CA	2:B:1015:HIS:CD2	2.96	0.48
1:A:787:PHE:CD2	1:A:796:SER:HB2	2.48	0.48
1:A:830:LYS:HB2	1:A:830:LYS:HZ2	1.78	0.48
1:A:858:ASN:OD1	1:A:858:ASN:C	2.48	0.48
2:B:222:ILE:O	2:B:240:ILE:HA	2.14	0.48
2:B:536:VAL:HG23	2:B:536:VAL:O	2.12	0.48
2:B:904:ARG:NH1	12:L:67:PHE:HD1	2.12	0.48
2:B:1135:ARG:O	2:B:1139:ILE:HG13	2.13	0.48
3:C:52:GLU:C	3:C:53:THR:HG23	2.34	0.48
3:C:238:ILE:CG1	3:C:246:ARG:HH21	2.27	0.48
3:C:241:ASP:HB3	11:K:109:TRP:CE2	2.48	0.48
4:D:153:ARG:O	4:D:154:PHE:CD1	2.66	0.48
7:G:16:SER:O	7:G:17:PHE:HD1	1.96	0.48
9:I:17:ARG:O	9:I:25:LEU:HD12	2.14	0.48
9:I:81:ARG:N	9:I:81:ARG:HD2	2.29	0.48
12:L:55:ILE:CG2	12:L:56:LEU:H	2.23	0.48
1:A:427:GLN:OE1	1:A:430:TRP:CZ2	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:618:GLU:O	1:A:622:VAL:HG12	2.13	0.48
1:A:642:CYS:O	1:A:643:ALA:C	2.52	0.48
1:A:1100:ARG:NH2	1:A:1351:GLU:HG2	2.28	0.48
1:A:1441:PHE:CE1	6:F:92:ARG:HD3	2.48	0.48
2:B:527:THR:CG2	2:B:534:GLY:H	2.25	0.48
2:B:600:LEU:O	2:B:603:LEU:N	2.37	0.48
2:B:893:LEU:HA	2:B:898:LEU:O	2.13	0.48
2:B:997:GLU:HB3	3:C:38:ILE:HG21	1.94	0.48
2:B:1106:ARG:HD2	2:B:1127:GLY:N	2.29	0.48
3:C:37:MET:HE1	3:C:232:VAL:CG1	2.44	0.48
3:C:51:VAL:CG1	12:L:60:ARG:NH2	2.76	0.48
7:G:88:ASP:OD1	7:G:144:ARG:HG3	2.12	0.48
1:A:353:ILE:HG22	1:A:468:PHE:CB	2.43	0.48
1:A:483:ASP:HB2	2:B:988:GLY:CA	2.43	0.48
1:A:510:GLN:OE1	2:B:1141:HIS:HE1	1.96	0.48
1:A:671:ALA:C	1:A:673:GLY:H	2.16	0.48
1:A:715:GLU:CD	1:A:774:ARG:HH11	2.15	0.48
1:A:862:ASN:CG	5:E:174:GLN:HA	2.33	0.48
2:B:299:GLU:OE1	2:B:570:VAL:HG11	2.14	0.48
2:B:581:PHE:N	2:B:624:LEU:O	2.47	0.48
2:B:890:TYR:N	2:B:890:TYR:CD1	2.81	0.48
8:H:80:ARG:HG2	8:H:81:PRO:HD2	1.96	0.48
8:H:130:ARG:HG3	8:H:130:ARG:HH11	1.78	0.48
1:A:787:PHE:CE2	1:A:796:SER:HB2	2.49	0.48
1:A:954:TRP:HB3	1:A:955:PRO:HD2	1.95	0.48
1:A:1387:HIS:HA	1:A:1391:ARG:HG3	1.96	0.48
1:A:1398:MET:HE1	1:A:1423:GLY:CA	2.44	0.48
2:B:629:ASP:HB3	2:B:632:ARG:HE	1.78	0.48
2:B:766:ARG:HD3	2:B:1020:ARG:HB3	1.96	0.48
2:B:807:ARG:N	2:B:1045:SER:HB3	2.26	0.48
2:B:947:GLY:CA	2:B:948:ILE:HD12	2.43	0.48
4:D:120:GLU:O	4:D:123:LEU:HD23	2.14	0.48
4:D:176:GLU:HG2	4:D:198:LEU:HD21	1.95	0.48
5:E:63:ASN:HB3	5:E:64:PRO:CD	2.44	0.48
5:E:78:LEU:HD23	5:E:78:LEU:O	2.13	0.48
5:E:171:LYS:O	5:E:174:GLN:HG3	2.12	0.48
13:R:8:G:H2'	13:R:9:G:H8	1.77	0.48
1:A:251:SER:HB2	1:A:257:ARG:NH1	2.29	0.48
1:A:842:VAL:HG23	1:A:843:LYS:N	2.28	0.48
1:A:878:ILE:HD12	1:A:1366:ARG:NH2	2.27	0.48
1:A:882:SER:HA	1:A:953:ASN:HA	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1080:THR:O	1:A:1080:THR:OG1	2.23	0.48
2:B:286:PHE:O	2:B:289:LEU:HB2	2.13	0.48
2:B:976:ILE:HD11	2:B:993:THR:H	1.78	0.48
2:B:1001:PHE:CE1	3:C:178:PHE:HB3	2.49	0.48
5:E:13:TRP:CZ2	5:E:38:PRO:HA	2.49	0.48
8:H:10:PHE:CE1	8:H:57:VAL:HG11	2.48	0.48
9:I:83:ASN:HA	9:I:104:LEU:H	1.79	0.48
1:A:18:GLN:NE2	1:A:18:GLN:CA	2.77	0.47
1:A:1055:ARG:HH21	6:F:154:ASP:CG	2.14	0.47
1:A:1441:PHE:HE1	6:F:92:ARG:HD3	1.79	0.47
2:B:205:ILE:O	2:B:206:ASN:C	2.52	0.47
2:B:523:CYS:SG	2:B:524:PRO:HD2	2.54	0.47
2:B:662:MET:HE3	2:B:662:MET:HB3	1.65	0.47
3:C:198:ALA:O	3:C:200:GLU:N	2.47	0.47
4:D:61:GLU:HA	4:D:64:VAL:HG12	1.95	0.47
5:E:26:ARG:HG3	5:E:26:ARG:O	2.14	0.47
1:A:122:MET:HA	1:A:122:MET:CE	2.44	0.47
1:A:243:PRO:HB2	1:A:244:PRO:HD2	1.95	0.47
1:A:305:ASP:OD1	1:A:306:ASN:N	2.47	0.47
1:A:492:PRO:HG2	1:A:498:ARG:HG2	1.95	0.47
1:A:1050:GLU:O	1:A:1054:LEU:HD12	2.13	0.47
1:A:1263:ILE:HA	1:A:1266:THR:HB	1.96	0.47
1:A:1342:GLU:CD	5:E:198:ILE:HG21	2.35	0.47
2:B:862:GLN:HB3	2:B:963:PHE:CD1	2.48	0.47
2:B:1033:LYS:O	2:B:1037:LEU:CD1	2.61	0.47
4:D:8:PHE:CD1	7:G:6:ASP:O	2.66	0.47
4:D:127:ASP:OD1	4:D:127:ASP:O	2.31	0.47
7:G:3:PHE:CD1	7:G:3:PHE:N	2.80	0.47
8:H:14:GLU:O	8:H:26:ILE:HD12	2.13	0.47
1:A:508:PRO:HA	1:A:511:ILE:HG12	1.97	0.47
1:A:960:ILE:O	1:A:962:ARG:N	2.47	0.47
1:A:1065:GLY:C	1:A:1067:LEU:N	2.68	0.47
1:A:1129:GLU:O	1:A:1132:LYS:HB2	2.14	0.47
2:B:269:ILE:HG22	2:B:282:ILE:CG2	2.44	0.47
2:B:460:ALA:C	2:B:462:ALA:N	2.67	0.47
2:B:658:ILE:CG2	2:B:659:ALA:N	2.77	0.47
2:B:762:ASN:HD21	2:B:1024:ALA:HB3	1.78	0.47
2:B:893:LEU:HD23	2:B:899:ILE:HG23	1.97	0.47
2:B:953:LEU:HD23	2:B:955:THR:HG22	1.95	0.47
3:C:51:VAL:HG12	12:L:60:ARG:NH2	2.30	0.47
5:E:19:VAL:HG22	5:E:140:LEU:HD13	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:132:ILE:O	5:E:132:ILE:HG22	2.14	0.47
6:F:76:LYS:HD2	6:F:79:ARG:HH21	1.75	0.47
6:F:108:PHE:HD1	6:F:124:GLU:OE2	1.96	0.47
7:G:88:ASP:OD1	7:G:144:ARG:CG	2.62	0.47
10:J:59:LYS:O	10:J:63:TYR:CE1	2.67	0.47
12:L:52:GLY:C	12:L:53:HIS:ND1	2.68	0.47
1:A:266:LEU:HD23	1:A:269:ILE:HD12	1.96	0.47
1:A:483:ASP:CA	2:B:988:GLY:HA2	2.44	0.47
1:A:924:LYS:O	1:A:927:VAL:HG12	2.14	0.47
1:A:1116:LEU:N	1:A:1308:THR:OG1	2.47	0.47
2:B:215:GLN:NE2	2:B:499:ASN:HB3	2.29	0.47
2:B:590:HIS:HE2	2:B:592:ASN:C	2.15	0.47
2:B:770:GLN:HG2	2:B:983:ARG:C	2.35	0.47
2:B:912:ILE:HD11	2:B:966:VAL:HG13	1.94	0.47
2:B:995:ARG:NH1	11:K:6:ARG:HH21	2.13	0.47
2:B:1056:SER:HB3	2:B:1066:SER:O	2.14	0.47
2:B:1209:ALA:C	2:B:1211:ASN:N	2.68	0.47
4:D:61:GLU:HA	4:D:64:VAL:CG1	2.44	0.47
4:D:125:SER:O	4:D:128:VAL:HG12	2.14	0.47
4:D:190:GLU:HB2	7:G:167:TYR:CE1	2.49	0.47
5:E:135:PHE:HB3	5:E:140:LEU:HD21	1.96	0.47
9:I:86:PHE:CD2	9:I:87:GLN:O	2.68	0.47
11:K:114:LEU:HD22	11:K:115:ALA:N	2.30	0.47
12:L:32:ALA:HB3	12:L:55:ILE:HG21	1.96	0.47
1:A:127:ALA:O	1:A:129:LYS:N	2.47	0.47
1:A:680:THR:O	1:A:683:ILE:CG1	2.62	0.47
1:A:1386:ARG:HE	14:T:15:DA:H1'	1.80	0.47
1:A:1389:PHE:O	1:A:1392:SER:HB2	2.14	0.47
1:A:1445:ILE:HD11	7:G:70:PHE:HE1	1.79	0.47
2:B:549:THR:HG22	2:B:550:ASP:H	1.80	0.47
2:B:602:THR:HA	2:B:605:ARG:HB2	1.95	0.47
2:B:634:TYR:CE2	2:B:692:TYR:CD2	3.01	0.47
2:B:978:ASP:OD2	2:B:1098:MET:HG3	2.15	0.47
2:B:1045:SER:O	2:B:1048:THR:HG21	2.13	0.47
3:C:10:ILE:HG23	11:K:108:GLU:HB3	1.95	0.47
7:G:80:LYS:CE	7:G:82:PHE:CE1	2.97	0.47
10:J:17:LYS:HB3	10:J:39:LEU:HD21	1.95	0.47
11:K:89:ASN:OD1	11:K:89:ASN:N	2.47	0.47
1:A:219:PHE:CD1	1:A:219:PHE:N	2.76	0.47
1:A:512:VAL:O	1:A:512:VAL:HG23	2.15	0.47
1:A:607:ILE:O	1:A:607:ILE:CG1	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:932:GLU:OE2	1:A:1028:THR:HB	2.15	0.47
1:A:1074:GLU:O	1:A:1075:PRO:C	2.53	0.47
1:A:1126:ALA:O	1:A:1128:GLN:OE1	2.32	0.47
2:B:370:PHE:O	2:B:372:SER:N	2.48	0.47
10:J:6:ARG:HA	10:J:14:VAL:HG12	1.96	0.47
10:J:6:ARG:HB2	10:J:12:LYS:C	2.34	0.47
1:A:35:ILE:HD13	1:A:35:ILE:HA	1.76	0.47
1:A:35:ILE:HD13	1:A:52:GLY:O	2.14	0.47
1:A:37:PHE:N	1:A:37:PHE:CD1	2.83	0.47
1:A:99:ILE:HG23	1:A:211:PHE:CE2	2.45	0.47
1:A:135:PHE:O	1:A:138:ILE:N	2.48	0.47
1:A:391:LEU:O	1:A:392:VAL:C	2.50	0.47
1:A:733:ALA:O	1:A:735:VAL:N	2.48	0.47
1:A:836:TYR:OH	1:A:1403:GLU:OE2	2.26	0.47
1:A:842:VAL:HG12	1:A:1069:ALA:CB	2.44	0.47
1:A:909:ASP:OD1	1:A:911:SER:OG	2.26	0.47
1:A:1118:VAL:HG13	1:A:1306:LEU:HB2	1.95	0.47
1:A:1202:MET:HE3	1:A:1207:LEU:C	2.35	0.47
1:A:1391:ARG:O	1:A:1392:SER:O	2.32	0.47
2:B:190:TYR:CZ	2:B:196:PRO:HG3	2.49	0.47
2:B:210:LYS:CG	2:B:482:VAL:HG12	2.44	0.47
2:B:246:LYS:HG3	2:B:246:LYS:O	2.14	0.47
2:B:390:LEU:O	2:B:392:ARG:N	2.48	0.47
2:B:390:LEU:O	2:B:391:ASP:C	2.53	0.47
2:B:588:GLY:C	2:B:589:VAL:CG2	2.83	0.47
2:B:651:LEU:HG	2:B:654:ARG:HE	1.79	0.47
2:B:778:MET:HE1	2:B:853:SER:HB2	1.97	0.47
2:B:789:MET:HB3	2:B:967:ARG:HH11	1.79	0.47
2:B:857:ARG:NH2	14:T:24:DT:OP1	2.47	0.47
2:B:862:GLN:HB3	2:B:963:PHE:HD1	1.79	0.47
2:B:948:ILE:HD12	2:B:948:ILE:N	2.30	0.47
2:B:976:ILE:HG12	2:B:990:ILE:HG22	1.96	0.47
2:B:1160:VAL:HG12	2:B:1161:HIS:N	2.29	0.47
2:B:1181:GLU:HB2	2:B:1188:LYS:HE2	1.96	0.47
3:C:92:CYS:N	3:C:95:CYS:SG	2.87	0.47
3:C:186:LEU:CD2	3:C:223:ALA:HB1	2.45	0.47
4:D:58:VAL:HG22	4:D:58:VAL:O	2.14	0.47
5:E:16:PHE:CE2	5:E:20:LYS:CE	2.98	0.47
6:F:89:GLU:OE2	6:F:136:ARG:NE	2.46	0.47
7:G:94:CYS:SG	7:G:130:TYR:CE2	3.08	0.47
7:G:153:GLN:O	7:G:154:VAL:HG12	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:79:TRP:CH2	8:H:81:PRO:HA	2.50	0.47
12:L:30:ILE:CG2	12:L:31:CYS:N	2.66	0.47
1:A:452:LYS:CG	2:B:1140:ALA:HB1	2.43	0.47
1:A:694:THR:HG22	1:A:695:LYS:N	2.30	0.47
1:A:810:PRO:HG2	2:B:705:MET:CE	2.45	0.47
1:A:896:ARG:CD	1:A:1030:ARG:HD2	2.39	0.47
1:A:997:LEU:HD23	1:A:997:LEU:HA	1.62	0.47
1:A:1342:GLU:HG2	5:E:212:ARG:NE	2.29	0.47
2:B:60:GLN:O	2:B:62:ILE:N	2.48	0.47
2:B:103:ASN:OD1	2:B:108:VAL:HB	2.15	0.47
2:B:257:LYS:HG3	2:B:259:TYR:HE1	1.80	0.47
2:B:969:ARG:O	2:B:970:THR:HB	2.15	0.47
2:B:972:LYS:C	2:B:973:ILE:HG13	2.33	0.47
2:B:1172:ILE:O	2:B:1172:ILE:HG13	2.15	0.47
3:C:61:GLU:O	3:C:64:ALA:HB3	2.14	0.47
3:C:88:CYS:O	3:C:90:ASP:O	2.33	0.47
3:C:193:TYR:CB	3:C:197:SER:HA	2.44	0.47
4:D:5:THR:HG23	4:D:5:THR:O	2.15	0.47
4:D:35:LEU:O	4:D:37:GLN:N	2.47	0.47
5:E:184:VAL:HA	5:E:187:TYR:HB3	1.96	0.47
6:F:86:THR:HG23	6:F:89:GLU:CD	2.35	0.47
6:F:94:LEU:HD13	6:F:122:MET:HG2	1.96	0.47
8:H:101:ALA:CB	8:H:104:PHE:CZ	2.98	0.47
8:H:130:ARG:HD2	8:H:130:ARG:H	1.80	0.47
9:I:19:ASP:HB3	9:I:24:ARG:HG2	1.96	0.47
11:K:80:GLY:O	11:K:81:TYR:C	2.53	0.47
1:A:538:ASP:OD1	8:H:22:LYS:HB2	2.14	0.47
2:B:118:ARG:HE	2:B:204:ILE:HD11	1.80	0.47
2:B:215:GLN:HG3	2:B:476:ARG:HD2	1.95	0.47
2:B:515:HIS:CE1	2:B:517:THR:OG1	2.66	0.47
2:B:554:ILE:HA	2:B:557:PHE:HB2	1.95	0.47
2:B:976:ILE:HD11	2:B:992:ILE:HA	1.97	0.47
2:B:1013:ASN:HD22	2:B:1014:PRO:CD	2.26	0.47
2:B:1023:VAL:O	2:B:1026:LEU:HB2	2.15	0.47
2:B:1082:MET:HA	3:C:189:THR:CA	2.28	0.47
3:C:32:SER:OG	11:K:45:LEU:HD22	2.15	0.47
6:F:106:PRO:HD3	7:G:16:SER:HA	1.95	0.47
1:A:18:GLN:N	2:B:1215:ARG:O	2.48	0.47
1:A:350:ARG:NH1	1:A:488:ASN:OD1	2.48	0.47
1:A:388:LEU:HD13	1:A:432:VAL:HG12	1.97	0.47
1:A:875:ALA:HA	1:A:1366:ARG:HH21	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1261:LYS:HA	1:A:1264:GLU:HB2	1.96	0.47
1:A:1385:THR:O	1:A:1388:GLY:N	2.48	0.47
2:B:211:VAL:N	2:B:481:GLN:O	2.41	0.47
2:B:579:ARG:HB3	2:B:586:TRP:NE1	2.30	0.47
4:D:7:THR:OG1	4:D:8:PHE:N	2.47	0.47
7:G:23:LYS:O	7:G:27:LYS:HG3	2.14	0.47
11:K:50:LEU:HD11	11:K:75:ILE:HD11	1.95	0.47
1:A:329:LEU:HD23	1:A:329:LEU:HA	1.61	0.46
1:A:337:ARG:HH11	1:A:337:ARG:CG	2.26	0.46
1:A:770:VAL:O	1:A:772:GLY:N	2.48	0.46
1:A:980:ASP:H	1:A:981:LEU:HD12	1.79	0.46
1:A:1239:ARG:HG2	1:A:1239:ARG:HH11	1.79	0.46
1:A:1419:ASP:OD1	1:A:1426:GLU:HG2	2.16	0.46
2:B:223:VAL:HA	2:B:239:GLU:O	2.15	0.46
2:B:566:LEU:HD23	2:B:567:GLU:N	2.30	0.46
2:B:910:VAL:HA	2:B:940:PRO:HA	1.97	0.46
2:B:1166:CYS:SG	2:B:1168:LEU:CD1	3.02	0.46
3:C:48:SER:O	3:C:49:VAL:HG23	2.15	0.46
3:C:261:ALA:HA	3:C:264:GLN:HG3	1.97	0.46
4:D:39:ASN:OD1	4:D:41:GLN:N	2.39	0.46
5:E:22:MET:HE2	5:E:22:MET:HB2	1.71	0.46
5:E:23:VAL:HG12	5:E:28:TYR:HB2	1.97	0.46
5:E:198:ILE:HD13	5:E:212:ARG:HG3	1.96	0.46
1:A:380:VAL:CG1	1:A:428:TYR:HA	2.45	0.46
1:A:568:PRO:O	1:A:569:LYS:CB	2.63	0.46
1:A:837:ILE:HD13	1:A:840:ARG:NH1	2.30	0.46
1:A:1120:LEU:HB2	1:A:1125:ALA:CB	2.46	0.46
1:A:1228:TRP:CD2	1:A:1228:TRP:N	2.80	0.46
1:A:1345:ARG:HA	1:A:1376:THR:HG21	1.97	0.46
2:B:275:TYR:CZ	2:B:359:GLU:OE1	2.68	0.46
2:B:579:ARG:NH2	2:B:621:GLU:O	2.48	0.46
2:B:768:THR:HG22	2:B:768:THR:O	2.15	0.46
3:C:11:ARG:N	3:C:19:ASP:O	2.33	0.46
3:C:88:CYS:O	3:C:90:ASP:N	2.48	0.46
5:E:4:GLU:OE2	5:E:6:GLU:OE2	2.33	0.46
5:E:163:GLU:O	5:E:167:ARG:HG2	2.14	0.46
1:A:346:ASP:CB	1:A:347:PHE:HD1	2.20	0.46
1:A:907:THR:CG2	1:A:908:LEU:H	2.23	0.46
1:A:910:PRO:O	1:A:912:LEU:N	2.49	0.46
1:A:971:PHE:CD1	1:A:971:PHE:N	2.84	0.46
1:A:1103:GLU:O	1:A:1104:ILE:C	2.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1195:LEU:HD12	1:A:1195:LEU:C	2.35	0.46
1:A:1313:LEU:O	1:A:1314:SER:C	2.53	0.46
2:B:1152:MET:HE2	2:B:1152:MET:HB3	1.67	0.46
3:C:129:ILE:HG23	3:C:130:GLY:N	2.28	0.46
10:J:61:LEU:C	10:J:63:TYR:H	2.19	0.46
12:L:48:CYS:HB3	12:L:53:HIS:H	1.80	0.46
12:L:61:THR:C	12:L:63:ARG:N	2.67	0.46
1:A:637:LYS:O	1:A:641:VAL:CG2	2.63	0.46
1:A:640:GLN:O	1:A:643:ALA:HB3	2.16	0.46
1:A:786:HIS:CD2	2:B:705:MET:SD	3.09	0.46
1:A:1031:VAL:O	1:A:1035:TYR:HB2	2.16	0.46
1:A:1106:ASN:O	1:A:1107:VAL:HB	2.15	0.46
1:A:1143:LEU:HG	1:A:1147:THR:HG21	1.98	0.46
2:B:254:LEU:HD11	2:B:360:PHE:HE1	1.80	0.46
2:B:286:PHE:HA	2:B:289:LEU:HD12	1.96	0.46
2:B:550:ASP:CG	2:B:551:PRO:HD2	2.36	0.46
2:B:560:GLU:O	2:B:561:TRP:CD1	2.68	0.46
2:B:664:THR:HG23	2:B:665:GLU:N	2.27	0.46
2:B:827:ILE:HG13	2:B:1012:ILE:HG13	1.98	0.46
8:H:55:LEU:N	8:H:55:LEU:HD23	2.31	0.46
8:H:97:MET:CG	8:H:118:PHE:CE2	2.97	0.46
1:A:18:GLN:HG2	1:A:228:PHE:CE2	2.50	0.46
1:A:249:SER:CA	1:A:250:ILE:HD12	2.46	0.46
1:A:517:ASN:O	1:A:517:ASN:ND2	2.48	0.46
1:A:569:LYS:HG2	8:H:46:LEU:CD2	2.45	0.46
1:A:1138:ILE:HG22	1:A:1276:VAL:HG23	1.97	0.46
1:A:1152:ILE:HB	9:I:44:TYR:HB3	1.97	0.46
2:B:293:PRO:HD2	2:B:296:GLU:HG2	1.98	0.46
2:B:784:ASN:HB3	10:J:63:TYR:HE2	1.81	0.46
2:B:1202:LEU:O	2:B:1204:PHE:N	2.48	0.46
3:C:250:THR:O	3:C:254:LYS:HG2	2.15	0.46
5:E:117:THR:CB	5:E:118:PRO:CD	2.93	0.46
7:G:1:MET:CE	7:G:79:PHE:CD2	2.98	0.46
9:I:34:TYR:O	9:I:35:VAL:HG23	2.15	0.46
11:K:112:GLN:OE1	11:K:112:GLN:CA	2.63	0.46
1:A:44:THR:C	1:A:46:THR:N	2.68	0.46
1:A:391:LEU:O	1:A:394:ASN:HB2	2.16	0.46
1:A:555:ASP:OD2	1:A:644:LYS:HG2	2.15	0.46
1:A:607:ILE:HG22	1:A:612:ILE:HA	1.98	0.46
1:A:688:LYS:HA	1:A:691:LEU:HB3	1.98	0.46
1:A:1053:PHE:O	1:A:1055:ARG:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1409:LEU:O	1:A:1412:ALA:HB3	2.15	0.46
2:B:31:TRP:HA	2:B:31:TRP:HE3	1.79	0.46
2:B:269:ILE:HG22	2:B:282:ILE:HG21	1.97	0.46
2:B:520:GLY:CA	2:B:748:ILE:HG22	2.46	0.46
2:B:805:THR:O	2:B:805:THR:HG23	2.16	0.46
2:B:977:GLY:O	2:B:1099:VAL:HB	2.16	0.46
3:C:241:ASP:O	3:C:245:VAL:HG12	2.16	0.46
7:G:15:PRO:HA	7:G:18:PHE:CE2	2.50	0.46
10:J:6:ARG:CA	10:J:14:VAL:HG12	2.46	0.46
11:K:100:ALA:O	11:K:104:ASN:CG	2.54	0.46
1:A:335:ARG:O	1:A:340:LEU:HB2	2.16	0.46
1:A:482:PHE:CD2	2:B:836:GLU:HB2	2.51	0.46
1:A:1051:ALA:O	1:A:1054:LEU:N	2.49	0.46
1:A:1135:ARG:NH1	1:A:1139:GLU:OE2	2.49	0.46
1:A:1282:VAL:HG12	1:A:1283:VAL:N	2.31	0.46
1:A:1399:ARG:C	1:A:1401:SER:N	2.69	0.46
2:B:121:ASN:ND2	2:B:965:LYS:NZ	2.64	0.46
2:B:551:PRO:O	2:B:554:ILE:HG12	2.16	0.46
2:B:769:TYR:C	2:B:771:SER:N	2.68	0.46
2:B:864:LYS:O	2:B:865:LYS:O	2.33	0.46
2:B:1004:GLU:HB2	2:B:1006:ILE:CD1	2.46	0.46
4:D:40:HIS:NE2	7:G:73:LYS:CB	2.78	0.46
5:E:3:GLN:O	5:E:6:GLU:OE2	2.34	0.46
6:F:104:ASN:O	7:G:16:SER:CB	2.63	0.46
8:H:12:VAL:CG2	8:H:50:ALA:O	2.58	0.46
10:J:2:ILE:O	10:J:53:HIS:CE1	2.68	0.46
1:A:350:ARG:O	1:A:351:THR:HB	2.16	0.46
1:A:528:LEU:HA	1:A:531:ILE:HG22	1.98	0.46
1:A:646:PHE:O	1:A:650:GLN:HG3	2.16	0.46
1:A:816:HIS:CE1	2:B:764:SER:HB3	2.51	0.46
1:A:1111:MET:SD	1:A:1331:SER:HA	2.55	0.46
2:B:34:ILE:HG12	2:B:542:MET:CE	2.46	0.46
2:B:129:PHE:CE1	2:B:166:PHE:CD1	3.04	0.46
2:B:228:LYS:CG	2:B:229:ALA:N	2.75	0.46
2:B:275:TYR:CE1	2:B:359:GLU:OE1	2.69	0.46
2:B:841:MET:HE3	2:B:990:ILE:HD13	1.96	0.46
2:B:941:LEU:CG	2:B:942:ARG:N	2.79	0.46
3:C:37:MET:HE1	3:C:232:VAL:CG2	2.46	0.46
3:C:37:MET:HE1	3:C:232:VAL:HG11	1.96	0.46
3:C:38:ILE:HG22	3:C:39:ALA:HB2	1.98	0.46
3:C:61:GLU:CA	3:C:64:ALA:HB3	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:3:GLN:O	5:E:6:GLU:OE1	2.34	0.46
1:A:226:GLU:O	1:A:226:GLU:HG3	2.15	0.46
1:A:525:GLN:NE2	2:B:836:GLU:OE1	2.48	0.46
1:A:683:ILE:HB	1:A:801:GLU:OE2	2.15	0.46
1:A:1389:PHE:CZ	1:A:1402:PHE:CE2	3.03	0.46
2:B:308:TRP:NE1	9:I:52:ILE:CD1	2.78	0.46
2:B:530:GLY:C	2:B:532:ALA:H	2.20	0.46
2:B:619:ILE:HD13	9:I:65:ASP:CB	2.44	0.46
2:B:802:PRO:HA	2:B:822:ASN:HD21	1.80	0.46
2:B:853:SER:OG	2:B:854:LEU:N	2.48	0.46
2:B:947:GLY:HA2	2:B:948:ILE:HD12	1.97	0.46
3:C:186:LEU:CB	3:C:188:HIS:HD2	2.29	0.46
4:D:59:ILE:HG23	7:G:47:CYS:SG	2.56	0.46
5:E:98:ILE:HA	5:E:101:GLN:CB	2.45	0.46
11:K:10:PHE:CE1	11:K:11:LEU:HB2	2.50	0.46
1:A:49:LYS:CD	1:A:55:ASP:CB	2.88	0.46
1:A:118:HIS:O	1:A:119:ASN:CB	2.64	0.46
1:A:324:SER:O	1:A:325:ILE:C	2.54	0.46
1:A:453:MET:O	1:A:456:MET:HE2	2.15	0.46
1:A:693:VAL:HG22	1:A:714:PHE:HE1	1.81	0.46
1:A:839:ARG:NH2	1:A:1402:PHE:HA	2.31	0.46
1:A:1037:LEU:CD2	1:A:1042:PHE:HA	2.46	0.46
2:B:781:PHE:HD1	2:B:782:LEU:HG	1.81	0.46
3:C:142:VAL:O	3:C:144:ILE:HG13	2.16	0.46
4:D:47:LEU:HD11	7:G:5:LYS:NZ	2.31	0.46
6:F:97:ARG:HA	6:F:100:GLN:OE1	2.16	0.46
6:F:132:LEU:HD23	6:F:132:LEU:HA	1.73	0.46
8:H:25:ARG:HA	8:H:41:ASP:HA	1.98	0.46
9:I:42:LEU:C	9:I:42:LEU:HD23	2.35	0.46
9:I:50:THR:O	9:I:51:ASN:OD1	2.34	0.46
1:A:450:LEU:HD11	1:A:1074:GLU:CG	2.41	0.45
1:A:456:MET:HE1	1:A:477:PRO:CB	2.46	0.45
1:A:1118:VAL:HG23	1:A:1327:ILE:HD12	1.98	0.45
2:B:129:PHE:CE1	2:B:166:PHE:HD1	2.34	0.45
2:B:396:ASP:HB3	2:B:403:LYS:HZ3	1.79	0.45
2:B:419:THR:C	2:B:422:LYS:HB2	2.37	0.45
2:B:459:TYR:HE2	2:B:470:LYS:HD3	1.80	0.45
2:B:995:ARG:HH11	11:K:6:ARG:NH2	2.13	0.45
2:B:1065:GLN:HB3	2:B:1069:PHE:O	2.16	0.45
3:C:114:TYR:HB3	3:C:140:ASN:O	2.17	0.45
4:D:27:LEU:HD21	4:D:173:HIS:CG	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:138:ASN:CG	4:D:141:LEU:HB3	2.35	0.45
7:G:23:LYS:HG3	7:G:56:ILE:HD13	1.98	0.45
7:G:23:LYS:HG2	7:G:56:ILE:HG21	1.98	0.45
8:H:43:ASN:OD1	8:H:43:ASN:C	2.54	0.45
8:H:58:THR:HB	8:H:143:LEU:CD1	2.45	0.45
9:I:6:PHE:HB3	9:I:12:ASN:C	2.36	0.45
9:I:24:ARG:HH21	9:I:37:GLU:CB	2.29	0.45
12:L:41:SER:O	12:L:42:ARG:O	2.34	0.45
1:A:49:LYS:HZ2	1:A:55:ASP:HB2	1.82	0.45
1:A:55:ASP:C	1:A:57:ARG:H	2.19	0.45
1:A:847:ASP:OD2	1:A:859:SER:CB	2.64	0.45
1:A:1133:LEU:O	1:A:1137:ALA:HB2	2.16	0.45
1:A:1317:MET:O	1:A:1322:ILE:HD11	2.16	0.45
2:B:173:MET:CE	2:B:201:GLY:HA2	2.46	0.45
2:B:215:GLN:OE1	2:B:501:PRO:HG3	2.16	0.45
2:B:484:ASN:OD1	2:B:486:TYR:HD2	1.98	0.45
2:B:700:SER:C	2:B:701:ILE:HG23	2.37	0.45
2:B:784:ASN:OD1	2:B:788:ARG:HD3	2.16	0.45
2:B:955:THR:O	2:B:963:PHE:N	2.50	0.45
2:B:1167:GLY:HA3	2:B:1215:ARG:HB3	1.99	0.45
3:C:35:ARG:HH21	11:K:41:THR:HG23	1.80	0.45
3:C:37:MET:HE1	3:C:232:VAL:HG21	1.98	0.45
3:C:167:HIS:NE2	12:L:70:ARG:HA	2.31	0.45
5:E:12:LEU:CD1	5:E:55:ARG:HH21	2.29	0.45
7:G:96:GLN:HG2	7:G:121:PHE:CZ	2.51	0.45
8:H:15:VAL:HA	8:H:26:ILE:CD1	2.46	0.45
8:H:97:MET:HE2	8:H:118:PHE:CD2	2.52	0.45
9:I:62:ILE:HD13	9:I:102:VAL:HG11	1.98	0.45
9:I:78:CYS:O	9:I:79:HIS:HB2	2.16	0.45
9:I:103:CYS:SG	9:I:106:CYS:SG	3.07	0.45
11:K:18:LYS:HZ1	11:K:38:GLU:HG2	1.81	0.45
1:A:46:THR:C	1:A:48:ALA:H	2.19	0.45
1:A:148:CYS:O	1:A:149:GLU:CG	2.63	0.45
1:A:299:HIS:CA	1:A:302:THR:HG22	2.45	0.45
1:A:616:VAL:HG12	1:A:617:VAL:O	2.17	0.45
1:A:622:VAL:O	1:A:623:GLY:O	2.34	0.45
1:A:700:ASN:ND2	1:A:700:ASN:O	2.45	0.45
1:A:942:PHE:HE2	5:E:207:ARG:HH21	1.64	0.45
1:A:1070:GLN:O	1:A:1074:GLU:HB2	2.16	0.45
2:B:31:TRP:HE1	2:B:807:ARG:HG3	1.78	0.45
2:B:606:LYS:O	2:B:686:ASN:OD1	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:803:LEU:HB2	2:B:822:ASN:OD1	2.16	0.45
2:B:976:ILE:HA	2:B:990:ILE:CG2	2.47	0.45
2:B:1017:ILE:H	2:B:1018:PRO:HD2	1.81	0.45
2:B:1128:LEU:HD23	2:B:1128:LEU:N	2.30	0.45
2:B:1222:ARG:O	2:B:1223:ASP:HB2	2.16	0.45
3:C:170:TRP:O	3:C:172:PRO:HD3	2.16	0.45
9:I:53:GLY:CA	9:I:56:ALA:HB2	2.46	0.45
11:K:19:LEU:N	11:K:19:LEU:CD1	2.78	0.45
11:K:58:PHE:O	11:K:75:ILE:HA	2.16	0.45
1:A:273:ASN:HA	1:A:296:LEU:HD22	1.97	0.45
1:A:388:LEU:HD13	1:A:432:VAL:CG1	2.47	0.45
1:A:412:ARG:HH22	2:B:1108:ARG:HD3	1.82	0.45
1:A:452:LYS:CG	2:B:1140:ALA:CB	2.95	0.45
1:A:899:VAL:HA	1:A:1029:ARG:HH21	1.82	0.45
1:A:950:GLY:CA	1:A:1298:TYR:CE2	3.00	0.45
3:C:153:LEU:HD11	3:C:155:LEU:CD2	2.44	0.45
5:E:112:TYR:HB3	5:E:116:ILE:HD11	1.98	0.45
5:E:197:LYS:HG2	5:E:197:LYS:O	2.17	0.45
8:H:143:LEU:C	8:H:144:ILE:HG12	2.37	0.45
10:J:18:TRP:O	10:J:21:TYR:N	2.47	0.45
1:A:135:PHE:HE1	1:A:222:LEU:HD11	1.81	0.45
1:A:313:GLN:O	1:A:314:ALA:C	2.55	0.45
1:A:396:PRO:HG3	1:A:402:ALA:O	2.17	0.45
1:A:522:GLY:HA2	1:A:630:ILE:CD1	2.47	0.45
1:A:1005:GLU:HG2	1:A:1009:ASN:HD21	1.78	0.45
1:A:1118:VAL:O	1:A:1305:VAL:HG23	2.17	0.45
1:A:1141:THR:CG2	1:A:1205:LYS:HD2	2.47	0.45
1:A:1372:VAL:O	1:A:1375:MET:N	2.42	0.45
1:A:1418:LEU:HD22	1:A:1418:LEU:HA	1.78	0.45
2:B:25:ILE:HG13	2:B:29:ASP:HB3	1.99	0.45
2:B:361:LEU:N	2:B:362:PRO:CD	2.75	0.45
2:B:510:LYS:HD3	2:B:512:ARG:HG3	1.97	0.45
2:B:729:ILE:O	2:B:729:ILE:CG2	2.64	0.45
2:B:995:ARG:NH1	11:K:6:ARG:NH2	2.64	0.45
3:C:166:GLU:HG2	11:K:6:ARG:HB2	1.98	0.45
4:D:8:PHE:HD2	4:D:38:ILE:CG1	2.29	0.45
6:F:144:GLU:O	6:F:146:TRP:HD1	1.99	0.45
7:G:122:ASN:ND2	7:G:125:SER:HB3	2.31	0.45
1:A:172:PRO:HG2	1:A:174:ILE:CG1	2.47	0.45
1:A:182:VAL:HA	1:A:201:VAL:HA	1.97	0.45
1:A:230:ARG:HG3	1:A:233:TRP:CH2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:243:PRO:HB2	1:A:244:PRO:CD	2.47	0.45
1:A:674:PRO:O	1:A:677:ARG:HB3	2.17	0.45
1:A:775:ILE:HD12	1:A:776:ALA:N	2.32	0.45
2:B:59:LEU:HD11	2:B:417:PHE:CE2	2.52	0.45
2:B:293:PRO:HD2	2:B:296:GLU:CB	2.47	0.45
2:B:493:SER:HB3	2:B:775:LYS:HE2	1.98	0.45
2:B:552:MET:HA	2:B:555:ILE:HG13	1.99	0.45
2:B:857:ARG:NH1	2:B:945:GLU:OE2	2.49	0.45
2:B:859:TYR:N	2:B:859:TYR:CD1	2.85	0.45
5:E:26:ARG:O	5:E:75:MET:CE	2.64	0.45
5:E:190:LEU:HA	5:E:194:GLU:OE1	2.17	0.45
6:F:93:ILE:O	6:F:94:LEU:C	2.54	0.45
7:G:31:LEU:HD22	7:G:48:VAL:HG11	1.99	0.45
9:I:85:PHE:HD1	9:I:99:LEU:HD11	1.82	0.45
1:A:100:LYS:O	1:A:102:VAL:N	2.50	0.45
1:A:230:ARG:HB3	1:A:232:GLU:HG2	1.98	0.45
1:A:660:ASN:OD1	2:B:1082:MET:SD	2.74	0.45
1:A:794:PRO:HD2	1:A:795:GLU:OE1	2.17	0.45
1:A:1358:SER:OG	1:A:1359:ASP:N	2.50	0.45
1:A:1361:SER:O	1:A:1362:TYR:CB	2.65	0.45
2:B:240:ILE:HG23	2:B:254:LEU:HB3	1.97	0.45
2:B:460:ALA:C	2:B:462:ALA:H	2.19	0.45
2:B:483:LEU:HD12	2:B:484:ASN:H	1.82	0.45
2:B:831:SER:OG	2:B:833:TYR:HD2	1.98	0.45
2:B:1146:PHE:CE1	2:B:1150:ARG:HD3	2.52	0.45
3:C:168:ALA:O	3:C:171:GLY:N	2.49	0.45
3:C:184:ASN:HB3	3:C:191:TYR:OH	2.17	0.45
4:D:27:LEU:CD2	4:D:173:HIS:CG	2.99	0.45
4:D:54:GLU:O	4:D:58:VAL:CG1	2.65	0.45
5:E:85:GLU:H	5:E:85:GLU:HG2	1.58	0.45
5:E:188:LEU:O	5:E:188:LEU:HD23	2.17	0.45
7:G:20:PRO:HB2	7:G:21:ARG:H	1.53	0.45
10:J:7:CYS:O	10:J:11:GLY:HA2	2.16	0.45
13:R:10:G:H1	14:T:19:DC:N4	2.15	0.45
1:A:149:GLU:OE1	1:A:152:VAL:HG23	2.15	0.45
1:A:415:LEU:CD1	1:A:415:LEU:H	2.27	0.45
1:A:569:LYS:HB3	8:H:46:LEU:HD13	1.99	0.45
1:A:666:ILE:CG2	2:B:1026:LEU:CB	2.93	0.45
1:A:780:VAL:HG22	2:B:699:GLU:OE1	2.16	0.45
1:A:1279:ILE:HD12	1:A:1279:ILE:N	2.32	0.45
1:A:1332:PHE:HE1	1:A:1381:LEU:HD23	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:225:VAL:O	2:B:226:PHE:CD1	2.69	0.45
2:B:705:MET:O	2:B:742:GLU:HB3	2.17	0.45
4:D:156:ASP:O	4:D:159:THR:OG1	2.34	0.45
5:E:13:TRP:HZ2	5:E:38:PRO:HA	1.81	0.45
5:E:145:THR:HA	5:E:150:VAL:HG11	1.98	0.45
6:F:90:ARG:O	6:F:94:LEU:N	2.49	0.45
7:G:96:GLN:CG	7:G:121:PHE:CE2	3.00	0.45
9:I:67:THR:OG1	9:I:68:LEU:HD12	2.17	0.45
1:A:323:LYS:NZ	13:R:3:C:H4'	2.31	0.45
1:A:726:ARG:HD2	1:A:727:ASP:N	2.32	0.45
1:A:1345:ARG:HH11	1:A:1373:ASP:CG	2.21	0.45
2:B:53:GLN:HG3	2:B:547:VAL:HG12	1.99	0.45
2:B:424:LEU:HD13	2:B:424:LEU:C	2.37	0.45
2:B:541:LEU:HD12	2:B:747:MET:HE1	1.99	0.45
2:B:651:LEU:N	2:B:651:LEU:HD23	2.32	0.45
2:B:831:SER:OG	2:B:833:TYR:HB2	2.17	0.45
2:B:1036:ALA:O	2:B:1038:SER:N	2.50	0.45
2:B:1216:LEU:HD23	2:B:1216:LEU:HA	1.73	0.45
3:C:74:SER:O	3:C:77:ILE:HB	2.17	0.45
7:G:23:LYS:HE2	7:G:27:LYS:NZ	2.32	0.45
8:H:23:VAL:CG1	8:H:24:CYS:N	2.79	0.45
8:H:34:ASP:N	8:H:35:GLN:OE1	2.50	0.45
1:A:21:LEU:N	1:A:228:PHE:O	2.42	0.45
1:A:531:ILE:HD13	1:A:617:VAL:CG1	2.47	0.45
1:A:784:LEU:C	1:A:786:HIS:N	2.69	0.45
1:A:963:ILE:O	1:A:963:ILE:HG22	2.16	0.45
1:A:1004:ASN:ND2	5:E:167:ARG:HH11	2.15	0.45
1:A:1313:LEU:C	1:A:1315:GLU:N	2.70	0.45
1:A:1390:ASN:HD21	1:A:1399:ARG:CB	2.30	0.45
1:A:1443:VAL:CG2	7:G:61:ILE:HB	2.42	0.45
2:B:119:LEU:HD12	2:B:119:LEU:N	2.31	0.45
2:B:209:GLU:CD	2:B:485:ARG:NH1	2.70	0.45
2:B:351:TYR:CE2	2:B:355:ILE:HD11	2.52	0.45
2:B:893:LEU:CD2	2:B:898:LEU:O	2.65	0.45
2:B:1020:ARG:C	2:B:1021:MET:HG3	2.37	0.45
4:D:144:THR:OG1	7:G:105:PRO:HG3	2.16	0.45
5:E:26:ARG:O	5:E:75:MET:HE3	2.17	0.45
7:G:46:LEU:HD11	7:G:105:PRO:HG2	1.98	0.45
7:G:63:PRO:HB2	7:G:64:THR:H	1.66	0.45
8:H:44:VAL:HG23	8:H:48:PRO:HB3	1.98	0.45
8:H:95:TYR:HE1	8:H:97:MET:SD	2.40	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:59:LYS:O	10:J:63:TYR:HE1	1.99	0.45
1:A:463:ILE:HB	1:A:464:PRO:CD	2.44	0.44
1:A:911:SER:O	1:A:912:LEU:HD23	2.17	0.44
1:A:1089:VAL:HG23	1:A:1090:ALA:N	2.31	0.44
1:A:1301:GLU:HG3	1:A:1301:GLU:O	2.17	0.44
1:A:1425:SER:O	1:A:1429:ILE:HD13	2.17	0.44
2:B:179:CYS:SG	2:B:180:TYR:N	2.90	0.44
2:B:293:PRO:O	2:B:296:GLU:HB3	2.17	0.44
2:B:373:ARG:CB	2:B:566:LEU:HD11	2.44	0.44
2:B:396:ASP:HB3	2:B:403:LYS:HZ2	1.79	0.44
2:B:597:MET:SD	2:B:617:ARG:HB3	2.58	0.44
2:B:797:TYR:CD1	2:B:853:SER:O	2.70	0.44
2:B:816:GLU:C	2:B:817:LEU:HD12	2.38	0.44
2:B:834:ASN:HB2	2:B:838:SER:O	2.17	0.44
2:B:941:LEU:CG	2:B:942:ARG:H	2.29	0.44
3:C:258:ILE:HD12	11:K:35:PHE:HE1	1.82	0.44
4:D:50:LEU:HD23	4:D:50:LEU:H	1.78	0.44
5:E:112:TYR:O	5:E:112:TYR:CD1	2.70	0.44
6:F:72:LYS:O	6:F:73:ALA:CB	2.65	0.44
8:H:11:GLN:CG	8:H:12:VAL:H	2.24	0.44
1:A:80:HIS:N	1:A:80:HIS:ND1	2.64	0.44
1:A:262:LEU:HD12	1:A:262:LEU:N	2.32	0.44
1:A:1004:ASN:ND2	5:E:167:ARG:NH1	2.64	0.44
1:A:1042:PHE:O	1:A:1045:VAL:N	2.50	0.44
1:A:1072:ILE:O	1:A:1075:PRO:HD2	2.18	0.44
1:A:1291:VAL:HG13	1:A:1292:PRO:HD2	1.98	0.44
1:A:1317:MET:HG2	5:E:142:VAL:HG11	2.00	0.44
1:A:1390:ASN:ND2	1:A:1399:ARG:HG2	2.33	0.44
2:B:90:ILE:HG13	2:B:90:ILE:O	2.16	0.44
2:B:293:PRO:HD2	2:B:296:GLU:CG	2.47	0.44
2:B:428:ILE:C	2:B:428:ILE:HD12	2.37	0.44
2:B:595:ARG:O	2:B:599:THR:CG2	2.65	0.44
2:B:803:LEU:HG	10:J:52:THR:CG2	2.47	0.44
2:B:805:THR:HG21	2:B:1041:GLU:CG	2.44	0.44
2:B:992:ILE:HD12	11:K:67:PHE:CE1	2.52	0.44
5:E:4:GLU:CA	5:E:6:GLU:OE1	2.63	0.44
7:G:142:ARG:HB2	7:G:171:ILE:HG21	1.99	0.44
7:G:160:ILE:N	7:G:160:ILE:CD1	2.75	0.44
9:I:62:ILE:HD13	9:I:102:VAL:CG1	2.46	0.44
9:I:89:GLN:O	9:I:89:GLN:CG	2.65	0.44
1:A:379:VAL:HG12	1:A:380:VAL:N	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:525:GLN:CB	2:B:1015:HIS:CD2	2.99	0.44
1:A:643:ALA:O	1:A:646:PHE:N	2.50	0.44
1:A:1261:LYS:O	1:A:1264:GLU:HB2	2.17	0.44
2:B:202:TYR:N	2:B:202:TYR:CD1	2.85	0.44
2:B:460:ALA:O	2:B:462:ALA:N	2.50	0.44
2:B:703:ILE:HG23	2:B:741:CYS:CA	2.47	0.44
2:B:873:THR:O	2:B:915:THR:N	2.44	0.44
3:C:34:ARG:NH1	3:C:35:ARG:HG2	2.32	0.44
3:C:166:GLU:O	11:K:6:ARG:NH1	2.50	0.44
7:G:18:PHE:N	7:G:18:PHE:CD1	2.83	0.44
1:A:563:PRO:HD2	8:H:79:TRP:NE1	2.32	0.44
1:A:614:PHE:HB3	8:H:122:LEU:HD11	1.99	0.44
1:A:690:VAL:O	1:A:690:VAL:CG1	2.64	0.44
1:A:724:GLU:HB2	1:A:728:LYS:HD2	2.00	0.44
1:A:836:TYR:OH	1:A:1403:GLU:OE1	2.35	0.44
1:A:850:VAL:HG12	1:A:851:HIS:O	2.18	0.44
1:A:1206:ASP:O	1:A:1274:ARG:NH1	2.50	0.44
1:A:1225:PHE:HB2	1:A:1243:VAL:HG23	1.99	0.44
2:B:97:VAL:HG22	2:B:128:LEU:HD23	2.00	0.44
2:B:115:GLN:HE22	2:B:118:ARG:NH1	2.15	0.44
2:B:663:ALA:O	2:B:664:THR:C	2.56	0.44
2:B:682:SER:HA	2:B:685:LEU:HG	1.99	0.44
2:B:702:LEU:HG	2:B:738:PHE:HD1	1.82	0.44
2:B:710:LEU:HA	2:B:733:HIS:HB3	2.00	0.44
2:B:784:ASN:O	2:B:788:ARG:HB2	2.18	0.44
3:C:104:PHE:CD1	3:C:105:GLY:N	2.85	0.44
4:D:5:THR:O	7:G:42:PHE:HE2	1.99	0.44
4:D:53:SER:O	4:D:56:ARG:HB3	2.17	0.44
5:E:42:PHE:O	5:E:46:TYR:N	2.50	0.44
5:E:124:VAL:HB	5:E:125:PRO:HD3	1.98	0.44
10:J:33:GLY:O	10:J:47:ARG:NH2	2.51	0.44
11:K:29:ASN:O	11:K:29:ASN:OD1	2.35	0.44
11:K:32:VAL:CG2	11:K:74:ARG:HG3	2.45	0.44
1:A:49:LYS:NZ	1:A:55:ASP:HB2	2.33	0.44
1:A:392:VAL:C	1:A:394:ASN:N	2.71	0.44
1:A:1265:ASN:O	1:A:1266:THR:C	2.56	0.44
2:B:279:ASP:N	2:B:279:ASP:OD1	2.50	0.44
2:B:308:TRP:CZ2	9:I:52:ILE:CD1	3.00	0.44
2:B:373:ARG:CA	2:B:566:LEU:HD11	2.48	0.44
2:B:700:SER:O	2:B:701:ILE:CG2	2.66	0.44
2:B:954:VAL:HA	2:B:963:PHE:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:980:PHE:CE2	2:B:990:ILE:HD11	2.52	0.44
3:C:265:MET:CE	11:K:21:ILE:HG13	2.42	0.44
4:D:28:GLN:C	4:D:29:LEU:HD12	2.38	0.44
4:D:52:LEU:O	4:D:55:ALA:HB3	2.17	0.44
9:I:22:ASN:OD1	9:I:22:ASN:O	2.36	0.44
1:A:149:GLU:HB2	1:A:164:ARG:CZ	2.48	0.44
1:A:507:VAL:H	1:A:508:PRO:HD3	1.81	0.44
1:A:742:ASN:O	1:A:746:MET:N	2.50	0.44
1:A:808:LEU:HB3	1:A:812:GLU:HB2	1.99	0.44
1:A:1152:ILE:HD12	9:I:44:TYR:CB	2.46	0.44
1:A:1368:MET:O	1:A:1371:LEU:N	2.50	0.44
1:A:1423:GLY:HA3	1:A:1426:GLU:OE1	2.17	0.44
2:B:173:MET:HB3	2:B:203:PHE:CE1	2.52	0.44
2:B:874:PHE:CE1	2:B:912:ILE:CG2	3.01	0.44
2:B:1107:ALA:C	2:B:1108:ARG:O	2.56	0.44
4:D:63:LEU:CD2	4:D:133:THR:OG1	2.66	0.44
5:E:78:LEU:HD23	5:E:78:LEU:C	2.38	0.44
11:K:47:ARG:HG3	11:K:60:ALA:HA	1.99	0.44
12:L:39:SER:O	12:L:40:LEU:HB2	2.18	0.44
1:A:31:SER:HB2	1:A:82:GLY:HA2	1.99	0.44
1:A:337:ARG:HH12	2:B:1132:GLU:CG	2.31	0.44
1:A:450:LEU:CD1	1:A:450:LEU:C	2.86	0.44
1:A:664:THR:CG2	2:B:1014:PRO:HB3	2.48	0.44
1:A:741:ASN:OD1	1:A:743:VAL:HG12	2.17	0.44
1:A:811:GLN:O	1:A:814:PHE:N	2.49	0.44
1:A:834:PRO:HA	1:A:837:ILE:CG1	2.48	0.44
1:A:955:PRO:O	1:A:956:LEU:HG	2.18	0.44
1:A:1340:GLY:N	5:E:183:PRO:HG2	2.33	0.44
2:B:103:ASN:OD1	2:B:109:THR:HA	2.18	0.44
2:B:128:LEU:HD12	2:B:168:GLY:C	2.38	0.44
2:B:496:ARG:CD	2:B:751:VAL:HG21	2.32	0.44
2:B:654:ARG:O	2:B:656:GLY:N	2.50	0.44
2:B:980:PHE:CE1	2:B:1094:ARG:HG3	2.51	0.44
2:B:1116:ARG:HG2	2:B:1198:TYR:CE2	2.53	0.44
3:C:148:ARG:O	3:C:150:GLY:N	2.51	0.44
4:D:56:ARG:HH12	4:D:155:ARG:HA	1.82	0.44
1:A:330:LYS:HG2	1:A:331:GLY:H	1.82	0.44
1:A:503:GLN:OE1	1:A:503:GLN:HA	2.17	0.44
1:A:683:ILE:O	1:A:687:LYS:HE3	2.18	0.44
1:A:727:ASP:C	1:A:729:ALA:H	2.21	0.44
1:A:789:LYS:O	1:A:790:ASP:C	2.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:858:ASN:ND2	1:A:860:LEU:HD12	2.33	0.44
1:A:1098:VAL:N	1:A:1099:PRO:CD	2.81	0.44
1:A:1133:LEU:O	1:A:1137:ALA:N	2.51	0.44
2:B:588:GLY:O	2:B:589:VAL:HG22	2.18	0.44
3:C:246:ARG:HA	3:C:249:ASP:HB3	2.00	0.44
4:D:209:ARG:NH2	4:D:213:GLU:HG3	2.33	0.44
5:E:12:LEU:HD13	5:E:55:ARG:HE	1.83	0.44
5:E:39:LEU:HD23	5:E:39:LEU:H	1.83	0.44
7:G:59:GLY:HA3	7:G:70:PHE:CE1	2.53	0.44
1:A:262:LEU:O	1:A:266:LEU:HG	2.18	0.44
1:A:341:MET:HE1	1:A:1429:ILE:HD11	1.94	0.44
1:A:834:PRO:HG2	1:A:1077:THR:HA	1.98	0.44
1:A:1055:ARG:NH2	6:F:154:ASP:OD1	2.24	0.44
1:A:1149:ALA:HA	9:I:47:GLU:HA	2.00	0.44
2:B:637:LEU:CD2	2:B:703:ILE:HG12	2.45	0.44
2:B:831:SER:CB	2:B:833:TYR:HD2	2.31	0.44
2:B:853:SER:O	2:B:971:THR:HG23	2.17	0.44
2:B:1168:LEU:HD13	2:B:1170:THR:HG21	2.00	0.44
3:C:84:ARG:HE	11:K:11:LEU:HD22	1.82	0.44
6:F:109:VAL:HG13	6:F:123:LYS:HD3	1.98	0.44
7:G:112:LYS:HD3	7:G:112:LYS:O	2.17	0.44
8:H:5:LEU:O	8:H:6:PHE:HB2	2.17	0.44
1:A:69:THR:HG22	1:A:70:CYS:N	2.33	0.43
1:A:145:LYS:HE3	1:A:147:VAL:HG23	2.00	0.43
1:A:452:LYS:C	1:A:454:SER:H	2.21	0.43
1:A:954:TRP:HB3	1:A:955:PRO:CD	2.48	0.43
1:A:1339:LEU:HD11	5:E:147:HIS:CD2	2.53	0.43
2:B:46:GLN:HG2	2:B:47:GLN:N	2.33	0.43
2:B:122:LEU:HD21	2:B:958:GLN:N	2.33	0.43
2:B:580:VAL:O	2:B:586:TRP:HD1	2.00	0.43
2:B:778:MET:HE1	2:B:1094:ARG:NH1	2.32	0.43
3:C:238:ILE:HD11	3:C:246:ARG:HH21	1.82	0.43
5:E:155:ARG:HD2	5:E:188:LEU:CD2	2.48	0.43
8:H:44:VAL:O	8:H:44:VAL:HG22	2.18	0.43
10:J:64:ASN:HB3	10:J:65:PRO:CD	2.44	0.43
11:K:10:PHE:HA	11:K:37:LYS:HB3	2.00	0.43
11:K:47:ARG:O	11:K:50:LEU:N	2.51	0.43
11:K:90:ALA:O	11:K:94:ILE:HG13	2.17	0.43
1:A:499:ALA:HA	1:A:502:SER:HG	1.81	0.43
1:A:511:ILE:HD13	1:A:521:MET:CE	2.48	0.43
1:A:782:ARG:NH2	2:B:699:GLU:O	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:833:GLU:HB3	1:A:834:PRO:CD	2.44	0.43
1:A:849:MET:HB3	1:A:1063:MET:SD	2.58	0.43
1:A:869:GLY:C	1:A:871:ASP:N	2.70	0.43
1:A:1195:LEU:HD23	1:A:1267:MET:CE	2.46	0.43
1:A:1209:MET:SD	1:A:1236:LEU:HD13	2.58	0.43
2:B:198:ASP:OD1	2:B:199:MET:N	2.51	0.43
2:B:916:THR:O	2:B:935:ARG:HB2	2.18	0.43
2:B:956:THR:HB	2:B:960:GLY:HA2	1.99	0.43
3:C:8:VAL:HG21	11:K:101:LEU:HD12	2.00	0.43
4:D:27:LEU:HD21	4:D:173:HIS:CB	2.48	0.43
7:G:9:LEU:HG	7:G:11:ILE:HG13	2.00	0.43
9:I:65:ASP:OD1	9:I:67:THR:CG2	2.66	0.43
9:I:65:ASP:HB3	9:I:68:LEU:HD12	2.00	0.43
10:J:6:ARG:H	10:J:15:GLY:H	1.65	0.43
1:A:89:PRO:C	1:A:90:VAL:HG13	2.38	0.43
1:A:183:GLY:N	1:A:200:ARG:O	2.46	0.43
1:A:486:GLU:O	1:A:487:MET:HG3	2.19	0.43
1:A:532:ARG:HG2	1:A:749:ALA:HB2	2.01	0.43
1:A:703:THR:HG1	1:A:705:LYS:HD2	1.83	0.43
1:A:902:LEU:N	1:A:902:LEU:HD12	2.34	0.43
2:B:781:PHE:HE2	2:B:793:ALA:HB1	1.82	0.43
2:B:800:GLN:OE1	2:B:821:GLN:HB3	2.18	0.43
2:B:1155:SER:O	2:B:1156:ASP:C	2.57	0.43
3:C:35:ARG:HH21	11:K:41:THR:H	1.66	0.43
3:C:36:VAL:HG11	3:C:251:LEU:CD1	2.49	0.43
6:F:109:VAL:HG11	6:F:123:LYS:HD3	2.00	0.43
8:H:12:VAL:HG21	8:H:50:ALA:N	2.33	0.43
10:J:25:LEU:O	10:J:29:GLU:HA	2.19	0.43
1:A:18:GLN:HE21	1:A:18:GLN:C	2.22	0.43
1:A:405:VAL:O	1:A:405:VAL:HG13	2.19	0.43
1:A:440:ASP:HB2	1:A:460:VAL:CG2	2.48	0.43
1:A:452:LYS:O	1:A:454:SER:N	2.51	0.43
1:A:587:HIS:CD2	1:A:608:ILE:HG23	2.54	0.43
1:A:663:SER:HB2	2:B:827:ILE:O	2.19	0.43
2:B:223:VAL:HG13	2:B:240:ILE:HD13	2.01	0.43
2:B:294:ASP:HB2	2:B:318:VAL:HG13	1.99	0.43
2:B:367:LEU:N	2:B:367:LEU:CD2	2.68	0.43
2:B:401:PHE:CE2	2:B:521:LEU:HD12	2.53	0.43
2:B:496:ARG:NE	2:B:751:VAL:HG22	2.33	0.43
2:B:753:ALA:O	2:B:755:ILE:N	2.50	0.43
2:B:789:MET:CE	2:B:967:ARG:HB2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:860:MET:HG2	2:B:861:ASP:N	2.32	0.43
2:B:973:ILE:O	2:B:975:GLN:N	2.52	0.43
2:B:1013:ASN:ND2	2:B:1014:PRO:HD2	2.31	0.43
2:B:1065:GLN:OE1	3:C:201:TRP:HA	2.18	0.43
2:B:1222:ARG:O	2:B:1223:ASP:CB	2.66	0.43
3:C:208:GLU:CD	3:C:208:GLU:H	2.22	0.43
4:D:48:ILE:CG2	7:G:4:ILE:HG13	2.49	0.43
7:G:16:SER:C	7:G:17:PHE:CD1	2.91	0.43
9:I:24:ARG:NH2	9:I:37:GLU:HG3	2.33	0.43
1:A:106:VAL:HG23	1:A:112:LYS:C	2.38	0.43
1:A:638:GLY:O	1:A:639:PRO:C	2.57	0.43
1:A:738:LYS:C	1:A:740:LEU:H	2.22	0.43
1:A:843:LYS:NZ	1:A:846:GLU:OE2	2.52	0.43
1:A:964:ILE:HG13	1:A:965:GLN:H	1.83	0.43
2:B:222:ILE:C	2:B:240:ILE:HD12	2.39	0.43
2:B:234:ILE:HG21	2:B:237:VAL:CG2	2.49	0.43
2:B:657:HIS:HA	2:B:660:LYS:HB3	1.99	0.43
2:B:986:GLN:HG2	2:B:1025:HIS:CD2	2.54	0.43
2:B:1001:PHE:HE1	3:C:178:PHE:HB3	1.83	0.43
2:B:1169:MET:H	2:B:1169:MET:HG2	1.64	0.43
3:C:242:GLN:O	3:C:246:ARG:HB2	2.18	0.43
7:G:9:LEU:HD23	7:G:30:LEU:HD12	1.98	0.43
10:J:41:LEU:N	10:J:41:LEU:HD12	2.33	0.43
1:A:243:PRO:CB	1:A:244:PRO:CD	2.96	0.43
1:A:903:ASN:O	1:A:907:THR:OG1	2.36	0.43
1:A:962:ARG:CA	1:A:965:GLN:OE1	2.63	0.43
1:A:1133:LEU:O	1:A:1137:ALA:CB	2.67	0.43
2:B:31:TRP:CE3	2:B:34:ILE:HD12	2.53	0.43
2:B:803:LEU:HD12	2:B:822:ASN:OD1	2.19	0.43
2:B:1156:ASP:HB3	2:B:1157:ALA:H	1.31	0.43
2:B:1202:LEU:O	2:B:1205:GLN:N	2.52	0.43
3:C:44:LEU:HG	3:C:45:ALA:N	2.34	0.43
4:D:138:ASN:HD21	4:D:141:LEU:HB2	1.83	0.43
7:G:22:MET:HG2	7:G:26:LEU:HD11	2.00	0.43
1:A:75:ASN:O	1:A:76:GLU:CB	2.67	0.43
1:A:361:LEU:HG	1:A:507:VAL:CG1	2.48	0.43
1:A:738:LYS:HD3	1:A:739:ASP:H	1.78	0.43
1:A:970:THR:CG2	1:A:971:PHE:CD1	2.99	0.43
1:A:1011:GLN:HE22	1:A:1015:VAL:HG13	1.82	0.43
1:A:1042:PHE:CE2	1:A:1046:LEU:CD1	3.02	0.43
1:A:1444:MET:N	6:F:133:VAL:O	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1453:TYR:CE1	6:F:129:LYS:HA	2.53	0.43
2:B:30:SER:O	2:B:33:VAL:HB	2.18	0.43
2:B:216:GLU:HA	2:B:406:LEU:CA	2.46	0.43
2:B:309:GLN:HA	2:B:312:GLU:HG2	2.00	0.43
2:B:451:LYS:HE2	2:B:451:LYS:HB3	1.89	0.43
2:B:460:ALA:O	2:B:461:LEU:C	2.56	0.43
2:B:522:VAL:CG1	2:B:523:CYS:H	2.31	0.43
2:B:569:TYR:CD1	2:B:589:VAL:HG21	2.53	0.43
2:B:583:ASN:HD21	2:B:628:THR:HG1	1.66	0.43
2:B:702:LEU:H	2:B:739:THR:HG23	1.84	0.43
2:B:759:PRO:HB3	2:B:767:ASN:HD21	1.81	0.43
5:E:63:ASN:CB	5:E:64:PRO:HD2	2.49	0.43
10:J:26:GLN:O	10:J:29:GLU:HG2	2.18	0.43
1:A:41:MET:CB	1:A:49:LYS:HA	2.44	0.43
1:A:92:HIS:O	1:A:94:GLY:N	2.52	0.43
1:A:95:PHE:O	1:A:99:ILE:HG13	2.19	0.43
1:A:231:PRO:C	1:A:233:TRP:N	2.72	0.43
1:A:427:GLN:HB2	1:A:430:TRP:CE2	2.54	0.43
2:B:237:VAL:HG12	2:B:238:ALA:N	2.33	0.43
2:B:309:GLN:HG3	2:B:390:LEU:HD13	2.01	0.43
2:B:652:LYS:HG2	2:B:689:LEU:HD23	2.01	0.43
2:B:710:LEU:HB3	2:B:733:HIS:HB3	2.01	0.43
2:B:1073:TYR:OH	3:C:179:GLU:HG3	2.19	0.43
4:D:204:ASP:O	4:D:205:ASP:C	2.57	0.43
7:G:93:SER:HB2	7:G:100:GLU:HB2	2.01	0.43
10:J:45:CYS:SG	10:J:46:CYS:N	2.92	0.43
12:L:66:GLN:C	12:L:67:PHE:CD1	2.92	0.43
1:A:266:LEU:HD21	1:A:303:TYR:CZ	2.52	0.43
1:A:836:TYR:O	1:A:840:ARG:HG3	2.19	0.43
1:A:1389:PHE:HZ	1:A:1402:PHE:CE2	2.37	0.43
2:B:381:MET:HE3	2:B:381:MET:HB3	1.80	0.43
3:C:238:ILE:HG13	3:C:239:PRO:CD	2.49	0.43
4:D:58:VAL:O	4:D:58:VAL:CG2	2.67	0.43
4:D:138:ASN:OD1	4:D:141:LEU:N	2.39	0.43
5:E:83:CYS:HB2	5:E:110:PHE:HZ	1.82	0.43
8:H:62:SER:OG	8:H:63:LEU:N	2.52	0.43
8:H:93:TYR:CG	8:H:143:LEU:HB3	2.54	0.43
9:I:15:TYR:HE1	9:I:30:ARG:HB2	1.84	0.43
12:L:42:ARG:O	12:L:43:THR:C	2.56	0.43
12:L:58:LYS:O	12:L:59:ALA:O	2.37	0.43
1:A:106:VAL:CG2	1:A:107:CYS:N	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:341:MET:CE	1:A:1401:SER:OG	2.67	0.43
1:A:366:VAL:HG21	1:A:489:LEU:HD11	2.01	0.43
1:A:443:LEU:HD23	2:B:1146:PHE:CZ	2.54	0.43
1:A:538:ASP:OD1	8:H:22:LYS:CB	2.66	0.43
1:A:549:MET:HE1	1:A:656:TRP:CD1	2.41	0.43
1:A:588:LEU:HD12	1:A:588:LEU:HA	1.67	0.43
1:A:981:LEU:HD13	1:A:1032:LEU:HD21	2.01	0.43
1:A:1073:GLY:O	1:A:1074:GLU:C	2.57	0.43
1:A:1146:VAL:HG13	1:A:1201:ALA:HB1	2.00	0.43
1:A:1443:VAL:HG22	6:F:92:ARG:HH21	1.83	0.43
2:B:55:VAL:O	2:B:56:ASP:C	2.56	0.43
2:B:365:THR:HG21	2:B:370:PHE:CD2	2.54	0.43
2:B:653:VAL:C	2:B:654:ARG:HG3	2.40	0.43
2:B:849:GLY:HA2	2:B:852:ARG:HE	1.84	0.43
2:B:953:LEU:HD11	12:L:55:ILE:HG13	1.99	0.43
4:D:160:VAL:HG23	4:D:161:GLY:N	2.33	0.43
7:G:112:LYS:HD2	7:G:113:HIS:ND1	2.32	0.43
1:A:597:LEU:HD21	8:H:103:LYS:HB3	2.00	0.42
1:A:775:ILE:HG12	1:A:797:LYS:CA	2.49	0.42
1:A:854:ASN:O	1:A:866:PHE:O	2.37	0.42
1:A:981:LEU:HD12	1:A:981:LEU:N	2.34	0.42
1:A:1017:LEU:CD1	5:E:204:THR:O	2.67	0.42
2:B:31:TRP:CZ3	2:B:34:ILE:CD1	3.02	0.42
2:B:588:GLY:C	2:B:589:VAL:HG23	2.39	0.42
2:B:593:PRO:O	2:B:594:ALA:C	2.57	0.42
2:B:609:ILE:HG22	2:B:610:ASN:N	2.34	0.42
2:B:729:ILE:O	2:B:729:ILE:HG23	2.17	0.42
2:B:1027:ILE:O	2:B:1028:GLU:C	2.58	0.42
3:C:21:ILE:O	3:C:21:ILE:CG1	2.67	0.42
5:E:157:SER:N	5:E:160:GLU:HB2	2.34	0.42
10:J:61:LEU:N	10:J:61:LEU:HD23	2.34	0.42
1:A:39:GLU:HB3	1:A:42:ASP:OD1	2.19	0.42
1:A:49:LYS:HD2	1:A:55:ASP:CB	2.41	0.42
1:A:248:PRO:O	1:A:260:ASP:HB2	2.19	0.42
1:A:308:ILE:HD12	1:A:311:GLN:HG2	2.01	0.42
1:A:444:PHE:HE2	1:A:470:LEU:CD2	2.32	0.42
1:A:681:GLU:O	1:A:684:ALA:N	2.52	0.42
1:A:721:PHE:O	1:A:725:ALA:HB2	2.20	0.42
1:A:754:SER:OG	1:A:755:PHE:N	2.52	0.42
1:A:1191:TRP:CE3	1:A:1191:TRP:HA	2.54	0.42
2:B:122:LEU:HD22	2:B:958:GLN:HB3	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:375:ALA:C	2:B:377:PHE:N	2.72	0.42
2:B:844:SER:HA	2:B:847:ASP:HB2	2.01	0.42
2:B:1059:LEU:HD12	2:B:1059:LEU:HA	1.80	0.42
2:B:1103:ILE:O	2:B:1122:ARG:HD2	2.19	0.42
6:F:152:ILE:O	6:F:153:VAL:CG2	2.66	0.42
8:H:48:PRO:O	8:H:49:VAL:HG13	2.19	0.42
9:I:46:HIS:NE2	9:I:48:LEU:HD21	2.33	0.42
1:A:121:LEU:HB3	1:A:141:LEU:HD12	2.00	0.42
1:A:353:ILE:HG21	1:A:487:MET:CB	2.42	0.42
1:A:359:LEU:HD22	1:A:363:GLN:CG	2.45	0.42
1:A:452:LYS:C	1:A:454:SER:N	2.72	0.42
1:A:606:LEU:O	1:A:613:ILE:HB	2.20	0.42
1:A:703:THR:O	1:A:703:THR:OG1	2.34	0.42
1:A:730:GLY:HA2	1:A:763:ALA:HB2	2.00	0.42
1:A:897:TYR:HE1	1:A:1024:SER:O	2.02	0.42
1:A:1143:LEU:HD23	1:A:1268:LEU:HA	2.01	0.42
1:A:1332:PHE:CE1	1:A:1381:LEU:CD2	3.01	0.42
1:A:1452:LYS:HB2	1:A:1452:LYS:HE3	1.75	0.42
2:B:658:ILE:HG22	2:B:659:ALA:H	1.84	0.42
2:B:702:LEU:H	2:B:739:THR:CG2	2.33	0.42
2:B:876:LYS:HD2	2:B:895:ASP:HA	2.01	0.42
2:B:1103:ILE:HG13	2:B:1104:HIS:N	2.35	0.42
3:C:45:ALA:CA	3:C:72:LEU:HD12	2.50	0.42
4:D:27:LEU:CD1	4:D:197:SER:CB	2.96	0.42
6:F:103:MET:O	6:F:104:ASN:HB2	2.19	0.42
6:F:127:GLU:CB	6:F:129:LYS:HG3	2.48	0.42
11:K:24:ASP:HB3	11:K:30:ALA:HB3	2.00	0.42
13:R:8:G:H2'	13:R:9:G:C8	2.54	0.42
1:A:356:ASP:HB3	1:A:359:LEU:HB2	2.01	0.42
1:A:586:ILE:CD1	1:A:633:VAL:HG12	2.49	0.42
1:A:900:ASP:O	1:A:907:THR:OG1	2.30	0.42
1:A:1004:ASN:HD22	5:E:167:ARG:NH1	2.17	0.42
1:A:1099:PRO:O	1:A:1102:LYS:N	2.52	0.42
2:B:415:GLN:O	2:B:419:THR:OG1	2.29	0.42
2:B:515:HIS:ND1	2:B:517:THR:N	2.60	0.42
2:B:754:SER:OG	2:B:808:ALA:HB1	2.18	0.42
2:B:834:ASN:HB3	2:B:840:ILE:HG23	2.01	0.42
2:B:976:ILE:HD13	2:B:992:ILE:HA	2.01	0.42
2:B:995:ARG:NH1	11:K:9:LEU:CD1	2.78	0.42
3:C:80:LEU:CD1	3:C:95:CYS:HA	2.50	0.42
3:C:251:LEU:HD12	3:C:251:LEU:HA	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:178:ALA:O	4:D:180:LEU:N	2.52	0.42
5:E:161:LYS:C	5:E:163:GLU:H	2.22	0.42
5:E:198:ILE:HD11	5:E:212:ARG:HB2	2.00	0.42
8:H:130:ARG:O	8:H:130:ARG:HG2	2.19	0.42
9:I:15:TYR:CD1	9:I:30:ARG:HG3	2.53	0.42
1:A:178:GLY:O	1:A:180:LYS:N	2.52	0.42
1:A:443:LEU:HD23	2:B:1146:PHE:HZ	1.85	0.42
1:A:446:ARG:NH1	1:A:446:ARG:HG3	2.34	0.42
1:A:617:VAL:CG1	1:A:622:VAL:HB	2.50	0.42
1:A:960:ILE:HG12	1:A:1021:LEU:HD21	2.01	0.42
1:A:1390:ASN:HD21	1:A:1399:ARG:HB3	1.84	0.42
1:A:1409:LEU:HD12	1:A:1409:LEU:H	1.84	0.42
2:B:364:ILE:O	2:B:365:THR:CB	2.63	0.42
2:B:544:CYS:SG	2:B:545:ILE:N	2.88	0.42
2:B:680:THR:HG22	2:B:683:SER:H	1.84	0.42
3:C:186:LEU:HB2	3:C:188:HIS:HD2	1.85	0.42
3:C:252:GLN:HE22	11:K:102:LYS:HD2	1.85	0.42
4:D:59:ILE:HB	4:D:145:MET:SD	2.59	0.42
4:D:153:ARG:NH1	4:D:184:ALA:HA	2.34	0.42
5:E:14:ARG:HH21	5:E:141:VAL:HG22	1.84	0.42
5:E:66:GLU:HA	5:E:69:ILE:CG1	2.50	0.42
6:F:86:THR:O	6:F:87:LYS:C	2.58	0.42
9:I:58:VAL:C	9:I:62:ILE:HG21	2.39	0.42
12:L:32:ALA:C	12:L:34:CYS:N	2.71	0.42
1:A:107:CYS:O	1:A:109:HIS:N	2.52	0.42
1:A:142:CYS:C	1:A:144:THR:H	2.22	0.42
1:A:303:TYR:CZ	1:A:325:ILE:HD11	2.54	0.42
1:A:330:LYS:CG	1:A:331:GLY:N	2.83	0.42
1:A:518:LYS:HB2	1:A:519:PRO:HD2	2.00	0.42
1:A:525:GLN:CA	2:B:1015:HIS:HD2	2.31	0.42
1:A:919:ILE:HD11	1:A:925:LEU:HD23	2.01	0.42
2:B:256:VAL:HG22	2:B:271:ALA:CB	2.48	0.42
2:B:299:GLU:HB3	2:B:572:HIS:NE2	2.34	0.42
2:B:326:ASP:OD2	2:B:329:THR:HG23	2.19	0.42
2:B:384:ARG:NH2	2:B:623:GLU:OE1	2.53	0.42
2:B:583:ASN:ND2	2:B:628:THR:OG1	2.47	0.42
2:B:595:ARG:O	2:B:595:ARG:HG3	2.19	0.42
2:B:778:MET:HG3	2:B:794:ASN:HB3	2.01	0.42
2:B:873:THR:O	2:B:914:LYS:HA	2.19	0.42
2:B:1017:ILE:CG1	2:B:1018:PRO:HD3	2.44	0.42
2:B:1168:LEU:HD13	2:B:1170:THR:CG2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:16:ASP:C	3:C:17:ASN:OD1	2.58	0.42
4:D:50:LEU:N	4:D:50:LEU:CD2	2.77	0.42
4:D:51:ASN:CB	4:D:181:GLY:O	2.66	0.42
5:E:178:ILE:HG13	5:E:182:ASP:OD2	2.19	0.42
9:I:65:ASP:CG	9:I:67:THR:HG1	2.22	0.42
10:J:26:GLN:O	10:J:29:GLU:N	2.53	0.42
1:A:40:THR:HG21	1:A:259:GLU:CG	2.46	0.42
1:A:70:CYS:O	1:A:70:CYS:SG	2.78	0.42
1:A:231:PRO:C	1:A:233:TRP:H	2.22	0.42
1:A:285:PRO:O	1:A:286:HIS:C	2.57	0.42
1:A:440:ASP:H	1:A:460:VAL:H	1.66	0.42
1:A:446:ARG:CG	1:A:447:GLN:H	2.32	0.42
1:A:542:GLU:CG	1:A:543:LEU:N	2.81	0.42
1:A:571:LEU:HD12	1:A:571:LEU:HA	1.86	0.42
1:A:810:PRO:HG2	2:B:705:MET:HE2	2.01	0.42
1:A:1294:PRO:O	1:A:1296:GLY:N	2.53	0.42
1:A:1339:LEU:HD22	5:E:147:HIS:CD2	2.54	0.42
2:B:128:LEU:HB3	2:B:167:ILE:HB	2.01	0.42
2:B:221:ASN:ND2	2:B:243:ALA:O	2.53	0.42
2:B:893:LEU:HD23	2:B:899:ILE:CG2	2.50	0.42
2:B:969:ARG:HG2	2:B:969:ARG:HH11	1.85	0.42
2:B:1039:GLY:HA3	10:J:33:GLY:CA	2.49	0.42
2:B:1200:ALA:O	2:B:1201:LYS:C	2.58	0.42
3:C:58:LEU:HD21	10:J:57:ILE:HD12	2.02	0.42
3:C:132:PRO:O	3:C:133:ILE:C	2.57	0.42
4:D:37:GLN:HE21	4:D:47:LEU:CD1	2.23	0.42
4:D:48:ILE:HG21	7:G:4:ILE:CB	2.49	0.42
7:G:87:VAL:HG23	7:G:145:VAL:CG2	2.50	0.42
7:G:114:LEU:N	7:G:114:LEU:CD2	2.81	0.42
8:H:143:LEU:O	8:H:144:ILE:CD1	2.68	0.42
9:I:28:GLU:HG2	9:I:29:CYS:N	2.34	0.42
11:K:53:ASP:OD1	11:K:81:TYR:OH	2.30	0.42
1:A:95:PHE:CZ	1:A:1414:ALA:HB2	2.54	0.42
1:A:114:LEU:O	1:A:164:ARG:NH2	2.53	0.42
1:A:120:GLU:HA	1:A:123:ARG:NE	2.33	0.42
1:A:345:VAL:O	1:A:348:SER:OG	2.30	0.42
1:A:366:VAL:CG2	1:A:489:LEU:HD11	2.49	0.42
1:A:423:ASP:O	1:A:424:ILE:HG22	2.20	0.42
1:A:457:ALA:CB	1:A:505:CYS:O	2.68	0.42
1:A:569:LYS:HB3	8:H:46:LEU:CD1	2.50	0.42
1:A:1262:LYS:HB3	1:A:1263:ILE:HD12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1268:LEU:CD1	9:I:48:LEU:HD11	2.50	0.42
1:A:1397:LEU:HD13	1:A:1429:ILE:HG21	2.00	0.42
2:B:283:VAL:CG2	2:B:284:ILE:N	2.83	0.42
2:B:546:SER:N	2:B:634:TYR:HE1	2.18	0.42
2:B:753:ALA:C	2:B:755:ILE:N	2.73	0.42
2:B:846:ILE:HB	2:B:974:PRO:HG2	2.00	0.42
2:B:1024:ALA:O	2:B:1028:GLU:HB2	2.20	0.42
2:B:1027:ILE:O	2:B:1030:LEU:N	2.53	0.42
2:B:1029:CYS:HB3	2:B:1086:PHE:HZ	1.84	0.42
2:B:1199:ALA:O	2:B:1202:LEU:HB3	2.19	0.42
4:D:136:GLY:C	4:D:138:ASN:H	2.23	0.42
5:E:142:VAL:HG13	5:E:142:VAL:O	2.20	0.42
8:H:25:ARG:HB2	8:H:41:ASP:OD1	2.20	0.42
8:H:30:SER:HB3	8:H:33:GLN:O	2.20	0.42
8:H:102:TYR:N	8:H:102:TYR:CD1	2.88	0.42
8:H:124:ARG:CZ	8:H:126:GLU:OE2	2.67	0.42
1:A:325:ILE:O	1:A:326:ARG:C	2.58	0.42
1:A:460:VAL:HG12	1:A:461:LYS:N	2.35	0.42
1:A:513:SER:O	1:A:517:ASN:HA	2.20	0.42
1:A:583:PRO:O	1:A:584:ASN:C	2.58	0.42
1:A:1311:VAL:O	1:A:1311:VAL:HG12	2.20	0.42
2:B:113:TYR:HB3	2:B:114:PRO:HD2	2.01	0.42
2:B:956:THR:HG22	2:B:961:LEU:O	2.20	0.42
5:E:123:LEU:HD23	5:E:123:LEU:H	1.84	0.42
9:I:34:TYR:O	9:I:35:VAL:CG2	2.68	0.42
9:I:58:VAL:O	9:I:58:VAL:CG2	2.67	0.42
11:K:50:LEU:HD13	11:K:75:ILE:CD1	2.50	0.42
1:A:76:GLU:OE1	2:B:1159:ARG:NH2	2.53	0.42
1:A:122:MET:HE2	1:A:122:MET:CA	2.47	0.42
1:A:848:ILE:O	1:A:1065:GLY:N	2.33	0.42
1:A:1054:LEU:O	1:A:1057:VAL:CG1	2.68	0.42
1:A:1339:LEU:HD21	5:E:147:HIS:CD2	2.55	0.42
1:A:1345:ARG:HG2	1:A:1372:VAL:CG1	2.50	0.42
2:B:282:ILE:O	2:B:286:PHE:HD2	2.02	0.42
2:B:446:LEU:O	2:B:447:ALA:CB	2.64	0.42
2:B:818:PRO:HD2	10:J:54:VAL:HG11	2.02	0.42
2:B:1110:PRO:O	2:B:1111:MET:HE2	2.19	0.42
4:D:119:ARG:C	4:D:121:LYS:H	2.23	0.42
4:D:202:ILE:O	4:D:202:ILE:CG2	2.68	0.42
6:F:154:ASP:O	6:F:155:LEU:C	2.58	0.42
7:G:171:ILE:O	7:G:171:ILE:CG2	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:97:MET:HB2	9:I:97:MET:HE3	1.95	0.42
1:A:102:VAL:HG23	1:A:211:PHE:CE1	2.54	0.41
1:A:643:ALA:O	1:A:644:LYS:C	2.58	0.41
1:A:1188:GLN:HA	1:A:1243:VAL:HA	2.02	0.41
2:B:333:PHE:O	2:B:333:PHE:CD1	2.73	0.41
2:B:373:ARG:HB3	2:B:566:LEU:HD21	2.02	0.41
2:B:400:HIS:ND1	2:B:517:THR:HG21	2.35	0.41
2:B:458:LYS:O	2:B:459:TYR:C	2.58	0.41
2:B:846:ILE:HD13	2:B:974:PRO:HD2	2.02	0.41
2:B:1188:LYS:HA	2:B:1191:ILE:HD11	2.01	0.41
4:D:23:ASN:HB2	4:D:28:GLN:O	2.20	0.41
4:D:39:ASN:ND2	4:D:45:GLU:OE2	2.53	0.41
4:D:208:GLU:HA	4:D:211:LEU:HB2	2.01	0.41
7:G:30:LEU:HD13	7:G:72:VAL:HG11	2.02	0.41
11:K:100:ALA:O	11:K:104:ASN:ND2	2.53	0.41
1:A:106:VAL:O	1:A:171:GLN:NE2	2.54	0.41
1:A:335:ARG:HD2	2:B:1202:LEU:HD23	2.02	0.41
1:A:474:VAL:O	1:A:478:TYR:CD2	2.66	0.41
1:A:743:VAL:HA	1:A:746:MET:HE3	2.02	0.41
1:A:840:ARG:O	1:A:844:ALA:HB2	2.20	0.41
1:A:845:LEU:O	1:A:846:GLU:C	2.58	0.41
1:A:1109:LYS:O	1:A:1111:MET:N	2.50	0.41
2:B:235:SER:C	2:B:236:HIS:ND1	2.73	0.41
2:B:254:LEU:HD22	2:B:381:MET:HE1	2.02	0.41
2:B:832:GLY:CA	2:B:835:GLN:CG	2.98	0.41
5:E:84:ASP:OD1	5:E:85:GLU:N	2.52	0.41
7:G:109:PHE:O	7:G:160:ILE:HA	2.20	0.41
8:H:9:ILE:HG13	8:H:56:THR:HG23	2.02	0.41
12:L:34:CYS:SG	12:L:35:SER:N	2.92	0.41
1:A:56:PRO:HD2	1:A:58:LEU:HG	2.02	0.41
1:A:345:VAL:HG12	2:B:1150:ARG:O	2.21	0.41
1:A:415:LEU:O	1:A:416:ARG:C	2.57	0.41
1:A:446:ARG:HH12	1:A:480:ALA:HA	1.84	0.41
1:A:579:SER:HA	1:A:582:ILE:HD12	2.02	0.41
1:A:818:MET:HA	2:B:514:LEU:HB3	2.02	0.41
1:A:886:ILE:HD12	1:A:943:LEU:HB3	2.02	0.41
1:A:946:VAL:HG13	5:E:201:LYS:HB2	2.02	0.41
1:A:1056:SER:O	1:A:1057:VAL:C	2.58	0.41
2:B:190:TYR:CE1	2:B:196:PRO:HG3	2.55	0.41
2:B:358:LYS:O	2:B:366:GLN:OE1	2.38	0.41
2:B:540:SER:HB2	2:B:749:LEU:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1156:ASP:OD1	2:B:1198:TYR:HB3	2.20	0.41
2:B:1165:ILE:HG22	2:B:1166:CYS:N	2.35	0.41
2:B:1199:ALA:O	2:B:1200:ALA:C	2.58	0.41
5:E:55:ARG:O	5:E:58:MET:HG2	2.21	0.41
6:F:109:VAL:HG21	6:F:123:LYS:HE3	2.00	0.41
7:G:47:CYS:N	7:G:77:VAL:HG12	2.36	0.41
11:K:57:LEU:N	11:K:76:GLN:O	2.44	0.41
12:L:28:LYS:HB2	12:L:39:SER:HA	2.01	0.41
1:A:108:MET:HG3	1:A:210:ILE:HG13	2.02	0.41
1:A:455:MET:CE	2:B:1134:GLU:CG	2.98	0.41
1:A:590:ARG:HH12	1:A:621:THR:HG23	1.86	0.41
1:A:919:ILE:O	1:A:922:ASP:HB2	2.21	0.41
1:A:923:LEU:HD23	1:A:923:LEU:N	2.35	0.41
1:A:1004:ASN:CB	5:E:167:ARG:CZ	2.98	0.41
1:A:1393:ASN:O	1:A:1394:THR:O	2.38	0.41
2:B:286:PHE:CD2	2:B:297:ILE:HG21	2.56	0.41
2:B:326:ASP:OD1	2:B:329:THR:N	2.49	0.41
2:B:600:LEU:HB3	2:B:615:MET:SD	2.61	0.41
2:B:776:GLN:OE1	13:R:9:G:OP1	2.38	0.41
2:B:797:TYR:CE2	2:B:852:ARG:HD2	2.55	0.41
2:B:904:ARG:HH11	12:L:67:PHE:HD1	1.67	0.41
2:B:1117:GLN:HB3	2:B:1118:PRO:CD	2.50	0.41
3:C:80:LEU:HD11	3:C:95:CYS:N	2.34	0.41
4:D:138:ASN:OD1	4:D:138:ASN:C	2.58	0.41
5:E:16:PHE:CZ	5:E:20:LYS:HD3	2.55	0.41
6:F:83:PRO:HA	6:F:146:TRP:CH2	2.55	0.41
11:K:44:ASN:HA	11:K:61:TYR:HE1	1.81	0.41
1:A:204:THR:HG23	1:A:205:GLU:N	2.36	0.41
1:A:283:GLY:O	1:A:285:PRO:HD3	2.21	0.41
1:A:345:VAL:HA	2:B:1154:ALA:O	2.20	0.41
1:A:663:SER:OG	1:A:664:THR:N	2.53	0.41
1:A:714:PHE:CG	9:I:97:MET:HE1	2.55	0.41
1:A:742:ASN:O	1:A:745:GLN:N	2.53	0.41
1:A:886:ILE:HB	1:A:943:LEU:HD12	2.02	0.41
1:A:921:GLY:O	1:A:922:ASP:C	2.58	0.41
1:A:1026:LEU:HD23	1:A:1026:LEU:HA	1.79	0.41
1:A:1434:ALA:HA	1:A:1435:PRO:HD2	1.90	0.41
2:B:51:PHE:CG	2:B:173:MET:HG2	2.55	0.41
2:B:276:ILE:HD13	2:B:276:ILE:HA	1.95	0.41
2:B:453:ILE:HD12	2:B:453:ILE:N	2.33	0.41
2:B:461:LEU:HD23	2:B:461:LEU:HA	1.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:604:ARG:NH2	2:B:691:GLU:HG2	2.35	0.41
2:B:1155:SER:O	2:B:1156:ASP:O	2.38	0.41
3:C:142:VAL:HG23	10:J:15:GLY:C	2.41	0.41
4:D:3:VAL:HG11	7:G:10:ASN:O	2.19	0.41
4:D:31:GLN:O	4:D:34:GLN:HB3	2.20	0.41
4:D:37:GLN:NE2	4:D:47:LEU:HD13	2.33	0.41
5:E:113:GLN:HB2	5:E:137:GLU:CD	2.41	0.41
5:E:201:LYS:O	5:E:201:LYS:HG3	2.21	0.41
7:G:121:PHE:HB2	7:G:130:TYR:CE1	2.55	0.41
11:K:83:PRO:O	11:K:86:ALA:N	2.52	0.41
1:A:27:VAL:O	1:A:29:ALA:N	2.53	0.41
1:A:249:SER:HB3	1:A:259:GLU:CD	2.41	0.41
1:A:304:MET:CG	2:B:1210:MET:HG2	2.50	0.41
1:A:311:GLN:OE1	1:A:311:GLN:N	2.53	0.41
1:A:334:GLY:O	1:A:335:ARG:HB2	2.21	0.41
1:A:374:LEU:HA	1:A:374:LEU:HD23	1.56	0.41
1:A:439:ASN:OD1	1:A:459:ARG:HB3	2.21	0.41
1:A:447:GLN:OE1	1:A:447:GLN:HA	2.21	0.41
1:A:577:ILE:O	1:A:577:ILE:HD12	2.21	0.41
1:A:1048:ASN:O	1:A:1049:ILE:C	2.59	0.41
1:A:1083:THR:HB	1:A:1092:LYS:CB	2.51	0.41
1:A:1385:THR:O	1:A:1386:ARG:C	2.59	0.41
2:B:132:VAL:HG12	2:B:165:VAL:HG12	2.01	0.41
2:B:203:PHE:CD2	2:B:461:LEU:CD1	3.03	0.41
2:B:629:ASP:CB	2:B:632:ARG:HE	2.34	0.41
2:B:855:PHE:CD1	2:B:856:PHE:N	2.88	0.41
2:B:1117:GLN:HB3	2:B:1118:PRO:HD2	2.01	0.41
3:C:70:ILE:CG2	3:C:71:PRO:HD2	2.48	0.41
3:C:113:VAL:HG23	3:C:144:ILE:HB	2.02	0.41
3:C:264:GLN:HE21	3:C:264:GLN:HB3	1.64	0.41
4:D:8:PHE:O	4:D:38:ILE:CD1	2.68	0.41
4:D:23:ASN:OD1	4:D:23:ASN:O	2.39	0.41
4:D:170:THR:HG23	4:D:170:THR:H	1.45	0.41
5:E:22:MET:O	5:E:22:MET:CG	2.68	0.41
9:I:10:CYS:SG	9:I:31:THR:HG22	2.61	0.41
1:A:100:LYS:O	1:A:103:CYS:N	2.54	0.41
1:A:412:ARG:C	1:A:413:ILE:HD13	2.40	0.41
1:A:494:SER:O	1:A:498:ARG:HD2	2.20	0.41
1:A:698:GLN:HB2	9:I:97:MET:O	2.21	0.41
1:A:710:LEU:HD13	9:I:96:SER:HB2	2.02	0.41
1:A:811:GLN:O	1:A:812:GLU:C	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1292:PRO:HA	1:A:1298:TYR:HA	2.03	0.41
1:A:1396:ALA:N	1:A:1419:ASP:OD2	2.54	0.41
2:B:26:THR:HG23	2:B:29:ASP:H	1.85	0.41
2:B:792:MET:O	2:B:793:ALA:CB	2.68	0.41
2:B:912:ILE:O	2:B:938:SER:HB2	2.20	0.41
2:B:1076:HIS:CG	11:K:40:HIS:CD2	3.08	0.41
2:B:1152:MET:HE3	2:B:1157:ALA:CB	2.51	0.41
2:B:1209:ALA:O	2:B:1211:ASN:N	2.54	0.41
3:C:55:THR:HG1	3:C:152:GLU:H	1.65	0.41
3:C:258:ILE:O	3:C:259:LEU:C	2.58	0.41
4:D:56:ARG:N	4:D:148:LEU:HD13	2.32	0.41
4:D:202:ILE:HG12	4:D:203:SER:O	2.20	0.41
5:E:155:ARG:HD2	5:E:188:LEU:HD22	2.02	0.41
9:I:35:VAL:CG1	9:I:36:GLU:H	2.33	0.41
12:L:61:THR:O	12:L:63:ARG:N	2.53	0.41
1:A:22:PHE:CD1	1:A:27:VAL:HG22	2.55	0.41
1:A:114:LEU:CD2	1:A:171:GLN:HG3	2.48	0.41
1:A:224:PHE:CZ	1:A:231:PRO:HB3	2.56	0.41
1:A:229:SER:CB	1:A:1414:ALA:O	2.69	0.41
1:A:260:ASP:O	1:A:261:ASP:C	2.59	0.41
1:A:451:HIS:HA	1:A:1070:GLN:OE1	2.21	0.41
1:A:1042:PHE:O	1:A:1044:TRP:N	2.54	0.41
1:A:1348:LEU:O	1:A:1352:VAL:HG23	2.20	0.41
2:B:113:TYR:HE2	2:B:192:LEU:HD13	1.86	0.41
2:B:412:LEU:O	2:B:466:TRP:HZ2	2.04	0.41
3:C:83:SER:HA	3:C:95:CYS:HB2	2.03	0.41
4:D:27:LEU:CD1	4:D:197:SER:OG	2.69	0.41
6:F:136:ARG:O	6:F:143:PHE:HA	2.20	0.41
8:H:55:LEU:O	8:H:56:THR:O	2.38	0.41
1:A:15:LYS:O	1:A:1421:CYS:SG	2.79	0.41
1:A:56:PRO:C	1:A:57:ARG:HG3	2.41	0.41
1:A:103:CYS:CB	1:A:108:MET:HE1	2.44	0.41
1:A:107:CYS:C	1:A:109:HIS:H	2.25	0.41
1:A:337:ARG:NH1	2:B:1132:GLU:HG3	2.36	0.41
1:A:347:PHE:CD1	1:A:347:PHE:N	2.89	0.41
1:A:395:GLY:O	1:A:401:GLY:HA3	2.20	0.41
1:A:477:PRO:HG3	1:A:521:MET:SD	2.61	0.41
1:A:496:GLU:HG3	1:A:497:THR:N	2.36	0.41
1:A:697:ALA:HA	1:A:702:LEU:HB2	2.03	0.41
1:A:911:SER:C	1:A:978:PRO:HB3	2.40	0.41
1:A:929:LEU:HA	1:A:929:LEU:HD22	1.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1288:ASP:N	1:A:1288:ASP:OD1	2.53	0.41
1:A:1365:TYR:O	1:A:1366:ARG:C	2.59	0.41
2:B:105:SER:O	2:B:106:ASP:HB2	2.20	0.41
2:B:308:TRP:CE2	9:I:52:ILE:CD1	3.04	0.41
2:B:412:LEU:HA	2:B:412:LEU:HD23	1.83	0.41
2:B:528:PRO:O	2:B:533:CYS:HA	2.21	0.41
2:B:549:THR:CG2	2:B:550:ASP:N	2.82	0.41
2:B:803:LEU:CB	2:B:822:ASN:OD1	2.69	0.41
2:B:832:GLY:HA2	2:B:835:GLN:CG	2.51	0.41
2:B:834:ASN:HB3	2:B:840:ILE:H	1.86	0.41
2:B:845:SER:HA	2:B:848:ARG:HH11	1.85	0.41
2:B:846:ILE:C	2:B:846:ILE:CD1	2.87	0.41
2:B:867:GLY:O	2:B:869:SER:N	2.46	0.41
2:B:992:ILE:CG2	2:B:994:TYR:CE1	3.04	0.41
2:B:1131:GLY:O	2:B:1132:GLU:C	2.60	0.41
3:C:51:VAL:HG11	12:L:60:ARG:HH22	1.85	0.41
4:D:212:LYS:O	4:D:215:SER:HB2	2.21	0.41
7:G:157:ILE:O	7:G:157:ILE:HG12	2.21	0.41
10:J:1:MET:C	10:J:2:ILE:HG22	2.40	0.41
1:A:23:SER:C	1:A:25:GLU:H	2.24	0.41
1:A:34:LYS:HB2	1:A:36:ARG:NH1	2.36	0.41
1:A:107:CYS:HA	1:A:171:GLN:CD	2.42	0.41
1:A:565:ILE:HG21	8:H:46:LEU:CD1	2.50	0.41
1:A:747:VAL:HG22	1:A:752:LYS:O	2.21	0.41
1:A:825:ILE:CD1	2:B:512:ARG:HB2	2.49	0.41
1:A:1220:PHE:O	1:A:1221:LYS:C	2.59	0.41
1:A:1290:LYS:O	1:A:1291:VAL:HG23	2.20	0.41
1:A:1316:VAL:O	1:A:1316:VAL:HG12	2.21	0.41
2:B:431:TYR:CZ	2:B:446:LEU:O	2.74	0.41
2:B:659:ALA:C	2:B:661:LEU:H	2.23	0.41
2:B:661:LEU:O	2:B:664:THR:HG22	2.20	0.41
2:B:780:VAL:HG21	10:J:56:LEU:CD1	2.50	0.41
2:B:809:MET:O	2:B:810:GLU:C	2.60	0.41
2:B:827:ILE:O	2:B:828:ALA:HB2	2.20	0.41
2:B:857:ARG:CZ	2:B:942:ARG:HD3	2.51	0.41
2:B:1043:ASP:OD2	2:B:1045:SER:OG	2.39	0.41
3:C:82:TYR:CD1	3:C:84:ARG:NH1	2.89	0.41
7:G:54:ILE:HG22	7:G:55:ASP:O	2.21	0.41
8:H:125:LEU:CD1	8:H:130:ARG:NH1	2.84	0.41
8:H:137:GLN:HB2	8:H:139:ASN:HB2	2.03	0.41
9:I:37:GLU:O	9:I:37:GLU:HG2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:46:HIS:NE2	9:I:48:LEU:CD2	2.83	0.41
1:A:43:GLU:OE2	1:A:46:THR:HB	2.22	0.40
1:A:239:LEU:HD23	1:A:240:PRO:O	2.21	0.40
1:A:393:ARG:HB3	1:A:393:ARG:HH11	1.85	0.40
1:A:475:THR:HG22	1:A:476:SER:N	2.35	0.40
1:A:728:LYS:H	1:A:728:LYS:HG3	1.71	0.40
1:A:802:ASN:ND2	2:B:729:ILE:HG22	2.36	0.40
1:A:893:PHE:CE1	1:A:937:VAL:HG22	2.56	0.40
1:A:899:VAL:HG11	1:A:908:LEU:HD11	2.03	0.40
1:A:983:ILE:O	1:A:987:VAL:HG22	2.20	0.40
1:A:1039:LYS:HD3	1:A:1039:LYS:C	2.41	0.40
2:B:48:LEU:HD12	2:B:48:LEU:N	2.36	0.40
2:B:331:LEU:HA	2:B:334:ILE:HG13	2.02	0.40
2:B:521:LEU:HD13	2:B:633:VAL:CG1	2.51	0.40
2:B:700:SER:O	2:B:701:ILE:HG23	2.21	0.40
2:B:987:LYS:HB2	2:B:988:GLY:H	1.63	0.40
4:D:33:PHE:N	4:D:33:PHE:HD1	2.19	0.40
5:E:103:LYS:HA	5:E:103:LYS:HD2	1.82	0.40
9:I:42:LEU:C	9:I:42:LEU:CD2	2.89	0.40
1:A:29:ALA:O	1:A:31:SER:N	2.55	0.40
1:A:440:ASP:O	1:A:442:VAL:HG13	2.19	0.40
1:A:800:VAL:HG13	1:A:812:GLU:OE1	2.20	0.40
1:A:1111:MET:HE3	1:A:1332:PHE:CE2	2.56	0.40
1:A:1381:LEU:H	1:A:1381:LEU:CD1	2.31	0.40
1:A:1444:MET:CA	7:G:59:GLY:O	2.65	0.40
2:B:399:ASP:O	2:B:515:HIS:CD2	2.73	0.40
2:B:527:THR:HG23	2:B:528:PRO:N	2.37	0.40
2:B:735:ALA:O	2:B:737:THR:N	2.40	0.40
2:B:802:PRO:HG3	2:B:814:PHE:CE2	2.54	0.40
2:B:892:LYS:HD3	2:B:903:VAL:CG1	2.51	0.40
2:B:1004:GLU:HB2	2:B:1006:ILE:HD12	2.02	0.40
3:C:80:LEU:CD1	3:C:94:LYS:O	2.69	0.40
4:D:55:ALA:C	4:D:59:ILE:CD1	2.90	0.40
5:E:195:VAL:HA	5:E:213:ILE:HA	2.03	0.40
6:F:127:GLU:HB3	6:F:129:LYS:HZ2	1.85	0.40
8:H:13:SER:HB3	8:H:27:GLU:C	2.39	0.40
8:H:124:ARG:NH2	8:H:126:GLU:OE2	2.54	0.40
11:K:91:CYS:O	11:K:94:ILE:HB	2.21	0.40
1:A:398:GLU:O	1:A:399:HIS:C	2.59	0.40
1:A:679:ILE:O	1:A:679:ILE:CG2	2.68	0.40
1:A:964:ILE:HD12	1:A:965:GLN:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:971:PHE:O	1:A:972:HIS:HB2	2.21	0.40
1:A:982:THR:H	1:A:985:ASP:CG	2.22	0.40
2:B:60:GLN:OE1	2:B:95:ILE:HG22	2.21	0.40
2:B:283:VAL:O	2:B:284:ILE:C	2.58	0.40
2:B:706:GLN:HE21	2:B:707:PRO:HG2	1.87	0.40
2:B:872:GLU:O	2:B:873:THR:CB	2.69	0.40
2:B:1032:SER:HA	2:B:1035:ALA:HB3	2.04	0.40
3:C:97:VAL:CG2	3:C:129:ILE:CG2	2.99	0.40
3:C:241:ASP:HB3	11:K:109:TRP:CZ2	2.56	0.40
9:I:15:TYR:HA	9:I:16:PRO:HD2	1.96	0.40
9:I:85:PHE:HB2	9:I:99:LEU:CD2	2.40	0.40
12:L:31:CYS:SG	12:L:48:CYS:HB2	2.62	0.40
1:A:39:GLU:HB3	1:A:42:ASP:CG	2.41	0.40
1:A:119:ASN:H	1:A:123:ARG:NH1	2.19	0.40
1:A:390:GLN:O	1:A:390:GLN:HG3	2.21	0.40
1:A:476:SER:HB2	1:A:477:PRO:HD3	2.02	0.40
1:A:550:LEU:O	1:A:551:TYR:C	2.59	0.40
1:A:666:ILE:HD12	1:A:667:GLY:CA	2.48	0.40
1:A:845:LEU:HD12	1:A:1069:ALA:HB2	2.02	0.40
1:A:864:ILE:C	1:A:865:GLN:HG3	2.41	0.40
1:A:1141:THR:HA	1:A:1205:LYS:HZ3	1.85	0.40
1:A:1407:GLU:O	1:A:1410:PHE:HB2	2.21	0.40
2:B:123:THR:HG21	2:B:458:LYS:HG3	2.03	0.40
2:B:375:ALA:O	2:B:377:PHE:N	2.55	0.40
2:B:500:THR:HB	2:B:535:LEU:O	2.21	0.40
3:C:33:LEU:O	3:C:34:ARG:C	2.59	0.40
3:C:35:ARG:NH2	11:K:41:THR:HG23	2.36	0.40
3:C:58:LEU:N	3:C:58:LEU:HD23	2.36	0.40
4:D:27:LEU:HD21	4:D:173:HIS:HB2	2.02	0.40
6:F:110:ASP:C	6:F:110:ASP:OD1	2.60	0.40
7:G:99:PHE:O	7:G:99:PHE:CG	2.74	0.40
7:G:126:ASN:HA	7:G:127:PRO:HA	1.90	0.40
8:H:58:THR:O	8:H:59:ILE:HG13	2.21	0.40
9:I:17:ARG:O	9:I:26:LEU:CD2	2.69	0.40
9:I:50:THR:C	9:I:51:ASN:OD1	2.60	0.40
11:K:82:ASP:HB3	11:K:85:ASP:HB2	2.02	0.40
1:A:528:LEU:HA	1:A:531:ILE:CG2	2.52	0.40
1:A:670:ILE:O	1:A:670:ILE:CG1	2.69	0.40
1:A:747:VAL:HG22	1:A:753:GLY:HA3	2.04	0.40
1:A:827:THR:HG21	1:A:1084:PHE:CD2	2.55	0.40
1:A:993:LEU:HD23	1:A:1022:LEU:CD2	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1066:VAL:HG22	1:A:1066:VAL:O	2.22	0.40
1:A:1443:VAL:HG22	6:F:92:ARG:NH2	2.36	0.40
1:A:1447:GLU:OE1	7:G:23:LYS:CD	2.70	0.40
2:B:48:LEU:HG	2:B:173:MET:HE2	2.03	0.40
2:B:114:PRO:O	2:B:117:ALA:N	2.49	0.40
2:B:185:THR:H	2:B:188:ASP:HB2	1.85	0.40
2:B:308:TRP:NE1	9:I:52:ILE:HD13	2.35	0.40
2:B:620:ARG:NH1	9:I:68:LEU:HD21	2.37	0.40
2:B:751:VAL:O	2:B:812:LEU:CD2	2.70	0.40
2:B:958:GLN:HG3	2:B:958:GLN:H	1.78	0.40
3:C:88:CYS:SG	3:C:90:ASP:O	2.80	0.40
3:C:184:ASN:HD21	3:C:189:THR:H	1.69	0.40
7:G:11:ILE:HG22	7:G:12:THR:N	2.37	0.40
7:G:12:THR:HA	7:G:68:ALA:O	2.22	0.40
7:G:112:LYS:CD	7:G:113:HIS:ND1	2.85	0.40
9:I:76:PRO:HD2	9:I:108:HIS:HE1	1.85	0.40
11:K:12:LEU:HD21	11:K:18:LYS:HG2	2.02	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 X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	1380/1733 (80%)	959 (70%)	290 (21%)	131 (10%)	0 2
2	B	1036/1224 (85%)	726 (70%)	220 (21%)	90 (9%)	0 3
3	C	264/318 (83%)	205 (78%)	48 (18%)	11 (4%)	2 10
4	D	156/221 (71%)	113 (72%)	29 (19%)	14 (9%)	0 2
5	E	202/215 (94%)	164 (81%)	29 (14%)	9 (4%)	2 9
6	F	82/155 (53%)	56 (68%)	24 (29%)	2 (2%)	5 19
7	G	169/171 (99%)	132 (78%)	27 (16%)	10 (6%)	1 6

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
8	H	107/146 (73%)	73 (68%)	26 (24%)	8 (8%)	1 3
9	I	117/122 (96%)	82 (70%)	24 (20%)	11 (9%)	0 2
10	J	63/70 (90%)	51 (81%)	6 (10%)	6 (10%)	0 2
11	K	113/120 (94%)	77 (68%)	27 (24%)	9 (8%)	1 3
12	L	41/70 (59%)	15 (37%)	10 (24%)	16 (39%)	0 0
All	All	3730/4565 (82%)	2653 (71%)	760 (20%)	317 (8%)	0 3

All (317) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	40	THR
1	A	57	ARG
1	A	76	GLU
1	A	119	ASN
1	A	128	ILE
1	A	178	GLY
1	A	232	GLU
1	A	376	TYR
1	A	525	GLN
1	A	567	LYS
1	A	569	LYS
1	A	584	ASN
1	A	672	ASP
1	A	774	ARG
1	A	847	ASP
1	A	915	SER
1	A	961	ARG
1	A	979	SER
1	A	986	ILE
1	A	997	LEU
1	A	999	VAL
1	A	1091	SER
1	A	1096	SER
1	A	1108	ALA
1	A	1139	GLU
1	A	1162	VAL
1	A	1314	SER
1	A	1365	TYR
1	A	1381	LEU
1	A	1392	SER

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Mol	Chain	Res	Type
1	A	1394	THR
1	A	1435	PRO
1	A	1437	GLY
2	B	45	SER
2	B	46	GLN
2	B	250	PHE
2	B	278	GLN
2	B	365	THR
2	B	422	LYS
2	B	466	TRP
2	B	594	ALA
2	B	749	LEU
2	B	792	MET
2	B	818	PRO
2	B	865	LYS
2	B	970	THR
2	B	1036	ALA
2	B	1108	ARG
2	B	1143	ALA
2	B	1156	ASP
2	B	1177	HIS
2	B	1210	MET
2	B	1219	ASP
3	C	75	MET
3	C	149	LYS
3	C	198	ALA
4	D	55	ALA
4	D	56	ARG
4	D	119	ARG
4	D	178	ALA
5	E	3	GLN
5	E	117	THR
6	F	73	ALA
7	G	63	PRO
7	G	157	ILE
7	G	170	ALA
8	H	17	PRO
8	H	56	THR
8	H	62	SER
8	H	140	ALA
9	I	7	CYS
9	I	58	VAL

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Mol	Chain	Res	Type
9	I	60	GLN
10	J	2	ILE
10	J	6	ARG
10	J	64	ASN
11	K	44	ASN
11	K	54	ARG
12	L	33	GLU
12	L	42	ARG
12	L	44	ASP
12	L	59	ALA
1	A	74	MET
1	A	130	ASP
1	A	131	SER
1	A	140	THR
1	A	151	ASP
1	A	309	ALA
1	A	392	VAL
1	A	393	ARG
1	A	416	ARG
1	A	423	ASP
1	A	517	ASN
1	A	623	GLY
1	A	911	SER
1	A	949	ASP
1	A	985	ASP
1	A	1016	THR
1	A	1087	ALA
1	A	1107	VAL
1	A	1120	LEU
1	A	1140	HIS
1	A	1171	GLN
1	A	1331	SER
1	A	1360	GLY
1	A	1386	ARG
1	A	1388	GLY
1	A	1400	CYS
2	B	24	PRO
2	B	56	ASP
2	B	61	ASP
2	B	108	VAL
2	B	111	ALA
2	B	267	ARG

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Mol	Chain	Res	Type
2	B	277	LYS
2	B	305	VAL
2	B	351	TYR
2	B	369	GLY
2	B	391	ASP
2	B	534	GLY
2	B	660	LYS
2	B	734	HIS
2	B	753	ALA
2	B	754	SER
2	B	854	LEU
2	B	873	THR
2	B	935	ARG
2	B	1017	ILE
2	B	1046	PRO
2	B	1123	SER
2	B	1125	ASP
2	B	1174	LYS
2	B	1223	ASP
3	C	6	PRO
3	C	89	GLU
3	C	184	ASN
4	D	36	LYS
4	D	44	GLU
4	D	46	GLU
4	D	137	ASN
4	D	170	THR
4	D	199	ASN
5	E	12	LEU
5	E	198	ILE
6	F	128	LYS
7	G	20	PRO
7	G	154	VAL
9	I	57	GLY
9	I	59	VAL
9	I	67	THR
10	J	13	VAL
10	J	62	ARG
11	K	43	GLY
11	K	64	GLU
11	K	81	TYR
12	L	32	ALA

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Mol	Chain	Res	Type
12	L	40	LEU
12	L	43	THR
12	L	52	GLY
12	L	54	ARG
1	A	108	MET
1	A	179	LEU
1	A	282	ASN
1	A	346	ASP
1	A	453	MET
1	A	455	MET
1	A	475	THR
1	A	704	ALA
1	A	706	HIS
1	A	727	ASP
1	A	775	ILE
1	A	785	PRO
1	A	846	GLU
1	A	903	ASN
1	A	922	ASP
1	A	1057	VAL
1	A	1089	VAL
1	A	1123	GLY
1	A	1295	THR
1	A	1361	SER
1	A	1367	HIS
1	A	1368	MET
1	A	1369	ALA
1	A	1377	THR
1	A	1421	CYS
2	B	27	ALA
2	B	28	GLU
2	B	106	ASP
2	B	114	PRO
2	B	247	GLY
2	B	260	GLY
2	B	421	PHE
2	B	531	GLN
2	B	711	GLU
2	B	736	THR
2	B	793	ALA
2	B	891	ASP
2	B	1132	GLU

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Mol	Chain	Res	Type
2	B	1133	MET
2	B	1169	MET
3	C	4	GLU
4	D	182	SER
4	D	198	LEU
5	E	210	SER
8	H	77	ARG
10	J	29	GLU
11	K	10	PHE
11	K	88	LYS
12	L	30	ILE
12	L	41	SER
12	L	58	LYS
1	A	32	VAL
1	A	47	ARG
1	A	424	ILE
1	A	449	SER
1	A	643	ALA
1	A	771	GLU
1	A	794	PRO
1	A	1128	GLN
1	A	1362	TYR
1	A	1452	LYS
2	B	48	LEU
2	B	58	THR
2	B	107	GLY
2	B	364	ILE
2	B	447	ALA
2	B	459	TYR
2	B	575	PRO
2	B	638	PHE
2	B	664	THR
2	B	868	MET
2	B	888	GLY
2	B	1203	LEU
3	C	109	SER
3	C	138	GLU
3	C	199	LYS
4	D	120	GLU
5	E	53	PRO
5	E	129	PRO
7	G	16	SER

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Mol	Chain	Res	Type
8	H	61	SER
8	H	78	SER
9	I	28	GLU
9	I	47	GLU
12	L	31	CYS
12	L	56	LEU
1	A	135	PHE
1	A	152	VAL
1	A	169	ASN
1	A	173	THR
1	A	223	GLY
1	A	285	PRO
1	A	433	GLU
1	A	441	PRO
1	A	585	GLY
1	A	664	THR
1	A	703	THR
1	A	850	VAL
1	A	958	VAL
1	A	1042	PHE
1	A	1060	PRO
1	A	1062	GLU
1	A	1115	SER
1	A	1359	ASP
2	B	294	ASP
2	B	658	ILE
2	B	694	ASP
2	B	770	GLN
2	B	815	ARG
2	B	842	ASN
2	B	853	SER
2	B	872	GLU
2	B	943	SER
2	B	1015	HIS
2	B	1202	LEU
3	C	205	LYS
5	E	118	PRO
5	E	207	ARG
7	G	2	PHE
9	I	65	ASP
9	I	69	PRO
11	K	37	LYS

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Mol	Chain	Res	Type
12	L	35	SER
12	L	62	LYS
1	A	71	GLN
1	A	143	LYS
1	A	544	ASP
1	A	562	THR
1	A	568	PRO
1	A	693	VAL
1	A	1302	PRO
2	B	350	GLN
2	B	1089	PRO
4	D	30	GLY
7	G	118	ASP
9	I	86	PHE
1	A	793	SER
2	B	55	VAL
2	B	410	GLY
2	B	976	ILE
1	A	52	GLY
1	A	422	GLY
1	A	1322	ILE
1	A	1372	VAL
2	B	1165	ILE
8	H	57	VAL
1	A	1066	VAL
1	A	1122	PRO
1	A	1163	ILE
1	A	1327	ILE
2	B	282	ILE
11	K	94	ILE
1	A	756	ILE
7	G	136	VAL
1	A	308	ILE
1	A	325	ILE
7	G	139	ILE

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 X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was

analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	1218/1520 (80%)	1173 (96%)	45 (4%)	29 56
2	B	917/1061 (86%)	873 (95%)	44 (5%)	21 48
3	C	234/274 (85%)	228 (97%)	6 (3%)	41 65
4	D	144/200 (72%)	136 (94%)	8 (6%)	17 43
5	E	192/197 (98%)	185 (96%)	7 (4%)	30 57
6	F	74/137 (54%)	70 (95%)	4 (5%)	18 44
7	G	152/152 (100%)	145 (95%)	7 (5%)	23 49
8	H	104/128 (81%)	100 (96%)	4 (4%)	28 55
9	I	113/116 (97%)	102 (90%)	11 (10%)	6 22
10	J	59/65 (91%)	56 (95%)	3 (5%)	20 46
11	K	99/102 (97%)	98 (99%)	1 (1%)	73 85
12	L	38/57 (67%)	34 (90%)	4 (10%)	5 19
All	All	3344/4009 (83%)	3200 (96%)	144 (4%)	25 51

All (144) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	22	PHE
1	A	23	SER
1	A	80	HIS
1	A	130	ASP
1	A	213	HIS
1	A	219	PHE
1	A	238	CYS
1	A	252	PHE
1	A	282	ASN
1	A	307	ASP
1	A	356	ASP
1	A	369	SER
1	A	386	ASP
1	A	399	HIS
1	A	419	LYS
1	A	425	GLN
1	A	446	ARG
1	A	450	LEU
1	A	451	HIS
1	A	485	ASP

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Mol	Chain	Res	Type
1	A	498	ARG
1	A	517	ASN
1	A	524	VAL
1	A	544	ASP
1	A	551	TYR
1	A	573	SER
1	A	592	ASP
1	A	658	LEU
1	A	700	ASN
1	A	762	SER
1	A	764	CYS
1	A	773	LYS
1	A	839	ARG
1	A	890	ASP
1	A	966	ASN
1	A	1054	LEU
1	A	1110	ASN
1	A	1130	GLN
1	A	1220	PHE
1	A	1303	GLU
1	A	1336	MET
1	A	1359	ASP
1	A	1390	ASN
1	A	1400	CYS
1	A	1402	PHE
2	B	96	TYR
2	B	101	MET
2	B	224	GLN
2	B	236	HIS
2	B	250	PHE
2	B	261	ARG
2	B	279	ASP
2	B	312	GLU
2	B	351	TYR
2	B	372	SER
2	B	373	ARG
2	B	408	LEU
2	B	420	LEU
2	B	429	PHE
2	B	449	ASN
2	B	461	LEU
2	B	480	SER

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Mol	Chain	Res	Type
2	B	485	ARG
2	B	510	LYS
2	B	527	THR
2	B	566	LEU
2	B	651	LEU
2	B	666	TYR
2	B	684	LEU
2	B	764	SER
2	B	766	ARG
2	B	797	TYR
2	B	851	PHE
2	B	958	GLN
2	B	959	ASP
2	B	987	LYS
2	B	996	ARG
2	B	1013	ASN
2	B	1015	HIS
2	B	1058	LEU
2	B	1060	ARG
2	B	1087	PHE
2	B	1098	MET
2	B	1104	HIS
2	B	1106	ARG
2	B	1125	ASP
2	B	1168	LEU
2	B	1190	ASP
2	B	1224	PHE
3	C	122	SER
3	C	151	GLN
3	C	178	PHE
3	C	193	TYR
3	C	204	SER
3	C	231	ASN
4	D	4	SER
4	D	41	GLN
4	D	46	GLU
4	D	137	ASN
4	D	156	ASP
4	D	179	GLN
4	D	186	ASP
4	D	221	TYR
5	E	7	ARG

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Mol	Chain	Res	Type
5	E	29	PHE
5	E	60	PHE
5	E	159	ASP
5	E	173	SER
5	E	182	ASP
5	E	201	LYS
6	F	102	SER
6	F	136	ARG
6	F	142	SER
6	F	143	PHE
7	G	2	PHE
7	G	3	PHE
7	G	27	LYS
7	G	51	TYR
7	G	60	ARG
7	G	106	MET
7	G	141	SER
8	H	129	TYR
8	H	130	ARG
8	H	132	LEU
8	H	143	LEU
9	I	4	PHE
9	I	6	PHE
9	I	15	TYR
9	I	26	LEU
9	I	32	CYS
9	I	74	GLU
9	I	75	CYS
9	I	88	SER
9	I	106	CYS
9	I	108	HIS
9	I	117	LYS
10	J	6	ARG
10	J	28	ASP
10	J	48	ARG
11	K	53	ASP
12	L	48	CYS
12	L	54	ARG
12	L	60	ARG
12	L	66	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (45) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	18	GLN
1	A	273	ASN
1	A	282	ASN
1	A	299	HIS
1	A	445	ASN
1	A	545	GLN
1	A	736	ASN
1	A	757	ASN
1	A	768	GLN
1	A	786	HIS
1	A	1009	ASN
1	A	1011	GLN
1	A	1218	GLN
1	A	1390	ASN
2	B	121	ASN
2	B	325	GLN
2	B	706	GLN
2	B	763	GLN
2	B	767	ASN
2	B	975	GLN
2	B	986	GLN
2	B	1013	ASN
2	B	1015	HIS
2	B	1076	HIS
2	B	1141	HIS
3	C	73	GLN
3	C	188	HIS
3	C	203	GLN
3	C	264	GLN
4	D	31	GLN
5	E	99	HIS
5	E	143	ASN
5	E	147	HIS
6	F	104	ASN
7	G	14	HIS
7	G	102	GLN
8	H	128	ASN
8	H	137	GLN
9	I	22	ASN
9	I	23	ASN
10	J	53	HIS
10	J	64	ASN
11	K	40	HIS

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Mol	Chain	Res	Type
11	K	52	ASN
11	K	104	ASN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
13	R	8/10 (80%)	1 (12%)	0

All (1) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
13	R	8	G

There are no RNA pucker outliers to report.

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 13 ligands modelled in this entry, 11 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
18	GOL	E	301	-	5,5,5	1.38	0	5,5,5	1.02	0
17	ATP	B	2501	16	28,33,33	1.07	3 (10%)	34,52,52	1.74	5 (14%)

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
18	GOL	E	301	-	-	2/4/4/4	-
17	ATP	B	2501	16	-	2/18/38/38	0/3/3/3

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	B	2501	ATP	PG-O2G	-2.81	1.44	1.54
17	B	2501	ATP	C1'-N9	-2.61	1.43	1.49
17	B	2501	ATP	PB-O2B	-2.25	1.44	1.55

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	B	2501	ATP	O2G-PG-O3B	-5.73	85.43	104.64
17	B	2501	ATP	O2B-PB-O3B	-5.62	92.07	107.27
17	B	2501	ATP	O3G-PG-O3B	2.71	113.72	104.64
17	B	2501	ATP	C5-C6-N6	2.41	123.98	120.31
17	B	2501	ATP	O3A-PA-O1A	-2.09	104.42	110.70

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
17	B	2501	ATP	O4'-C4'-C5'-O5'
18	E	301	GOL	O1-C1-C2-C3
17	B	2501	ATP	C3'-C4'-C5'-O5'
18	E	301	GOL	O1-C1-C2-O2

There are no ring outliers.

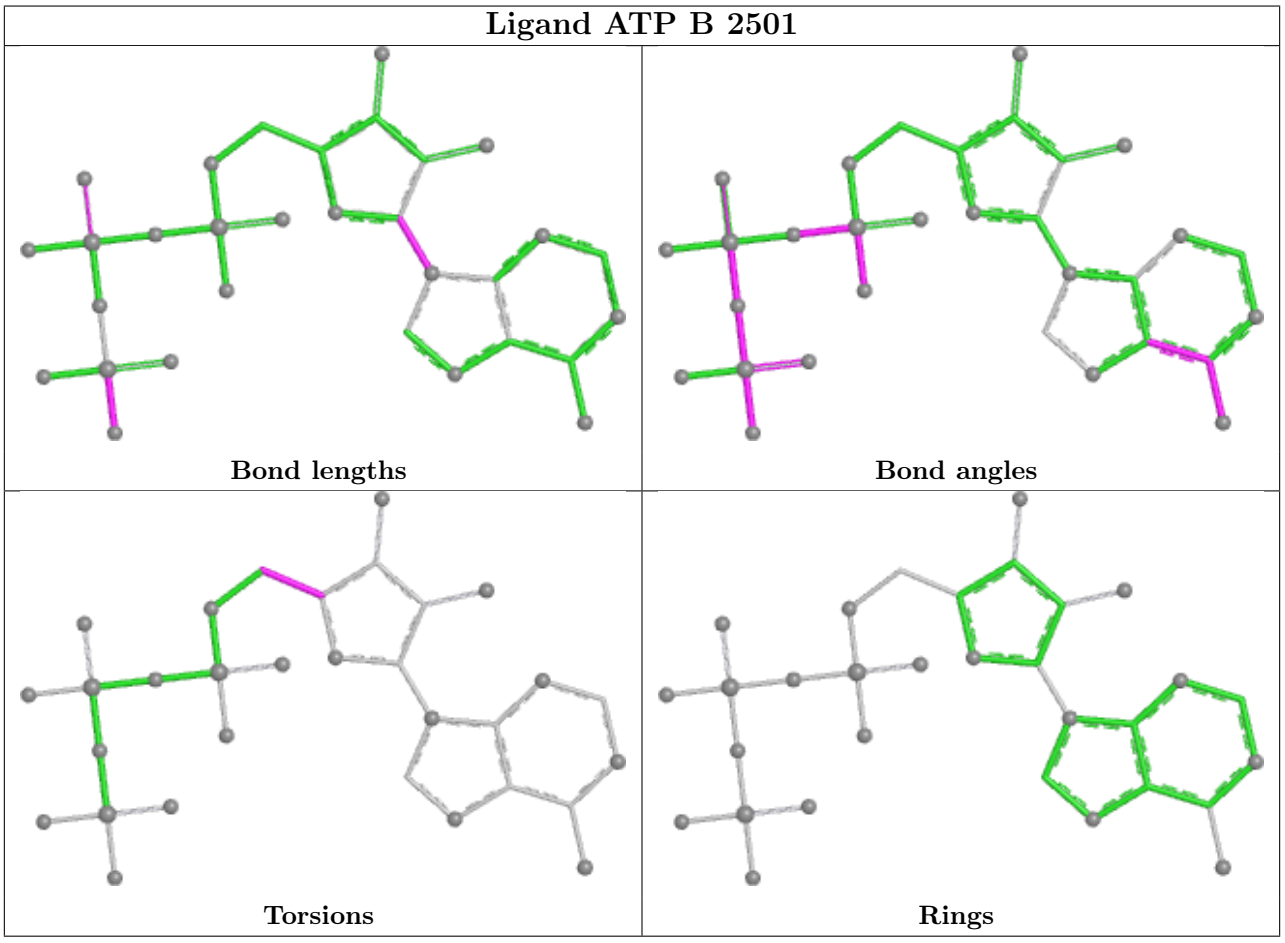
2 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
18	E	301	GOL	2	0
17	B	2501	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 B 2501



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 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	A	1398/1733 (80%)	0.16	76 (5%) 32 19	38, 100, 164, 286	0
2	B	1060/1224 (86%)	0.21	60 (5%) 30 18	40, 103, 172, 273	0
3	C	266/318 (83%)	-0.08	2 (0%) 82 66	50, 102, 153, 197	0
4	D	162/221 (73%)	0.02	4 (2%) 58 39	73, 118, 163, 198	0
5	E	208/215 (96%)	0.45	14 (6%) 25 14	59, 132, 186, 293	0
6	F	84/155 (54%)	-0.03	0 100 100	44, 77, 116, 167	0
7	G	171/171 (100%)	0.35	12 (7%) 24 13	61, 103, 153, 189	0
8	H	117/146 (80%)	0.55	13 (11%) 12 7	93, 133, 189, 235	0
9	I	119/122 (97%)	0.86	17 (14%) 7 4	92, 147, 208, 248	0
10	J	65/70 (92%)	0.02	0 100 100	68, 106, 148, 186	0
11	K	115/120 (95%)	-0.24	0 100 100	54, 95, 154, 175	0
12	L	43/70 (61%)	0.61	4 (9%) 16 9	78, 120, 181, 202	0
13	R	10/10 (100%)	0.55	0 100 100	117, 161, 213, 218	0
14	T	13/13 (100%)	0.92	0 100 100	128, 140, 169, 212	0
All	All	3831/4588 (83%)	0.20	202 (5%) 33 19	38, 106, 173, 293	0

All (202) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
7	G	95	SER	7.9
2	B	728	ARG	6.8
7	G	153	GLN	6.3
1	A	1084	PHE	5.1
2	B	525	ALA	5.0
7	G	5	LYS	4.6
2	B	735	ALA	4.4
1	A	1321	GLY	4.4

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Mol	Chain	Res	Type	RSRZ
9	I	13	MET	4.3
1	A	1080	THR	4.2
1	A	303	TYR	4.1
9	I	105	SER	4.1
2	B	1065	GLN	4.1
9	I	69	PRO	4.1
2	B	1224	PHE	4.1
1	A	258	GLY	4.0
1	A	1094	VAL	3.8
2	B	710	LEU	3.8
1	A	1091	SER	3.8
12	L	55	ILE	3.7
5	E	44	ALA	3.6
4	D	40	HIS	3.6
3	C	191	TYR	3.5
1	A	1161	THR	3.5
8	H	31	THR	3.5
5	E	139	ALA	3.5
2	B	246	LYS	3.5
8	H	36	CYS	3.4
9	I	52	ILE	3.3
1	A	587	HIS	3.3
2	B	349	ILE	3.3
2	B	617	ARG	3.2
2	B	549	THR	3.2
9	I	104	LEU	3.2
7	G	97	HIS	3.1
1	A	1093	LYS	3.1
9	I	74	GLU	3.1
5	E	131	THR	3.1
1	A	1280	GLU	3.0
1	A	1205	LYS	3.0
7	G	37	SER	3.0
1	A	1089	VAL	3.0
1	A	31	SER	3.0
5	E	55	ARG	3.0
8	H	50	ALA	3.0
7	G	6	ASP	3.0
8	H	11	GLN	2.9
2	B	1126	GLY	2.9
1	A	1086	PHE	2.9
1	A	1386	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
2	B	615	MET	2.9
1	A	42	ASP	2.9
1	A	1257	ASP	2.9
5	E	113	GLN	2.9
1	A	56	PRO	2.9
9	I	101	PHE	2.9
8	H	90	ALA	2.9
1	A	751	SER	2.9
1	A	1229	SER	2.9
1	A	1096	SER	2.8
2	B	934	LYS	2.8
1	A	766	GLY	2.8
7	G	19	GLY	2.8
1	A	1455	PRO	2.8
2	B	591	ARG	2.8
2	B	577	ALA	2.8
1	A	323	LYS	2.8
2	B	958	GLN	2.8
12	L	50	ASP	2.8
1	A	1172	LEU	2.8
2	B	1164	GLY	2.7
1	A	1236	LEU	2.7
9	I	99	LEU	2.7
1	A	164	ARG	2.7
5	E	151	PRO	2.7
7	G	117	GLN	2.7
5	E	211	TYR	2.7
2	B	837	ASP	2.7
2	B	578	THR	2.7
5	E	107	THR	2.7
2	B	731	VAL	2.7
1	A	618	GLU	2.6
4	D	122	GLU	2.6
2	B	885	MET	2.6
5	E	105	PHE	2.6
1	A	49	LYS	2.6
1	A	678	GLU	2.6
2	B	631	GLY	2.6
1	A	897	TYR	2.6
1	A	33	ALA	2.6
2	B	1015	HIS	2.6
7	G	33	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
9	I	15	TYR	2.5
7	G	169	GLY	2.5
2	B	219	ALA	2.5
1	A	1167	GLU	2.5
1	A	1168	GLU	2.5
1	A	569	LYS	2.5
8	H	139	ASN	2.5
1	A	71	GLN	2.5
1	A	297	GLN	2.5
1	A	179	LEU	2.5
1	A	1154	TYR	2.5
2	B	579	ARG	2.5
2	B	839	MET	2.5
5	E	133	GLU	2.5
8	H	107	VAL	2.5
1	A	316	GLN	2.5
4	D	167	LEU	2.5
2	B	266	ALA	2.5
8	H	136	LYS	2.5
2	B	836	GLU	2.5
1	A	250	ILE	2.5
2	B	63	ILE	2.5
1	A	1289	ARG	2.5
9	I	28	GLU	2.5
12	L	33	GLU	2.5
2	B	655	LYS	2.4
2	B	574	SER	2.4
1	A	32	VAL	2.4
1	A	1119	TYR	2.4
1	A	165	GLY	2.4
2	B	469	GLN	2.4
1	A	1156	PRO	2.4
1	A	199	LEU	2.4
1	A	1081	LEU	2.4
1	A	1150	SER	2.4
2	B	254	LEU	2.4
2	B	265	SER	2.4
2	B	467	GLY	2.4
1	A	404	TYR	2.3
5	E	103	LYS	2.3
1	A	787	PHE	2.3
7	G	94	CYS	2.3

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Mol	Chain	Res	Type	RSRZ
2	B	570	VAL	2.3
1	A	1327	ILE	2.3
2	B	538	ASN	2.3
1	A	1281	ARG	2.3
1	A	1092	LYS	2.3
1	A	453	MET	2.3
1	A	114	LEU	2.3
2	B	1222	ARG	2.3
2	B	613	VAL	2.3
2	B	1066	SER	2.3
5	E	9	ILE	2.3
2	B	224	GLN	2.3
1	A	788	SER	2.3
8	H	132	LEU	2.3
1	A	975	HIS	2.2
2	B	917	PRO	2.2
2	B	1067	ARG	2.2
2	B	865	LYS	2.2
5	E	66	GLU	2.2
2	B	712	PRO	2.2
2	B	64	CYS	2.2
8	H	119	GLY	2.2
2	B	296	GLU	2.2
1	A	885	THR	2.2
2	B	706	GLN	2.2
9	I	87	GLN	2.2
2	B	468	GLU	2.2
2	B	92	PHE	2.2
9	I	107	SER	2.2
9	I	76	PRO	2.2
1	A	740	LEU	2.2
2	B	692	TYR	2.2
9	I	44	TYR	2.2
9	I	27	PHE	2.2
2	B	263	GLY	2.1
1	A	1170	ILE	2.1
12	L	51	CYS	2.1
1	A	1422	ARG	2.1
1	A	34	LYS	2.1
2	B	239	GLU	2.1
1	A	570	PRO	2.1
8	H	12	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	1169	ILE	2.1
2	B	360	PHE	2.1
2	B	575	PRO	2.1
9	I	112	SER	2.1
5	E	28	TYR	2.1
2	B	867	GLY	2.1
1	A	292	ALA	2.1
2	B	948	ILE	2.1
1	A	59	GLY	2.1
8	H	127	GLY	2.1
4	D	37	GLN	2.1
2	B	665	GLU	2.1
2	B	41	LYS	2.1
1	A	887	GLY	2.1
1	A	1189	SER	2.1
3	C	221	TYR	2.1
2	B	566	LEU	2.0
9	I	117	LYS	2.0
7	G	170	ALA	2.0
1	A	1028	THR	2.0
1	A	450	LEU	2.0
8	H	55	LEU	2.0
1	A	412	ARG	2.0
1	A	1090	ALA	2.0
1	A	1351	GLU	2.0
1	A	111	GLY	2.0

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

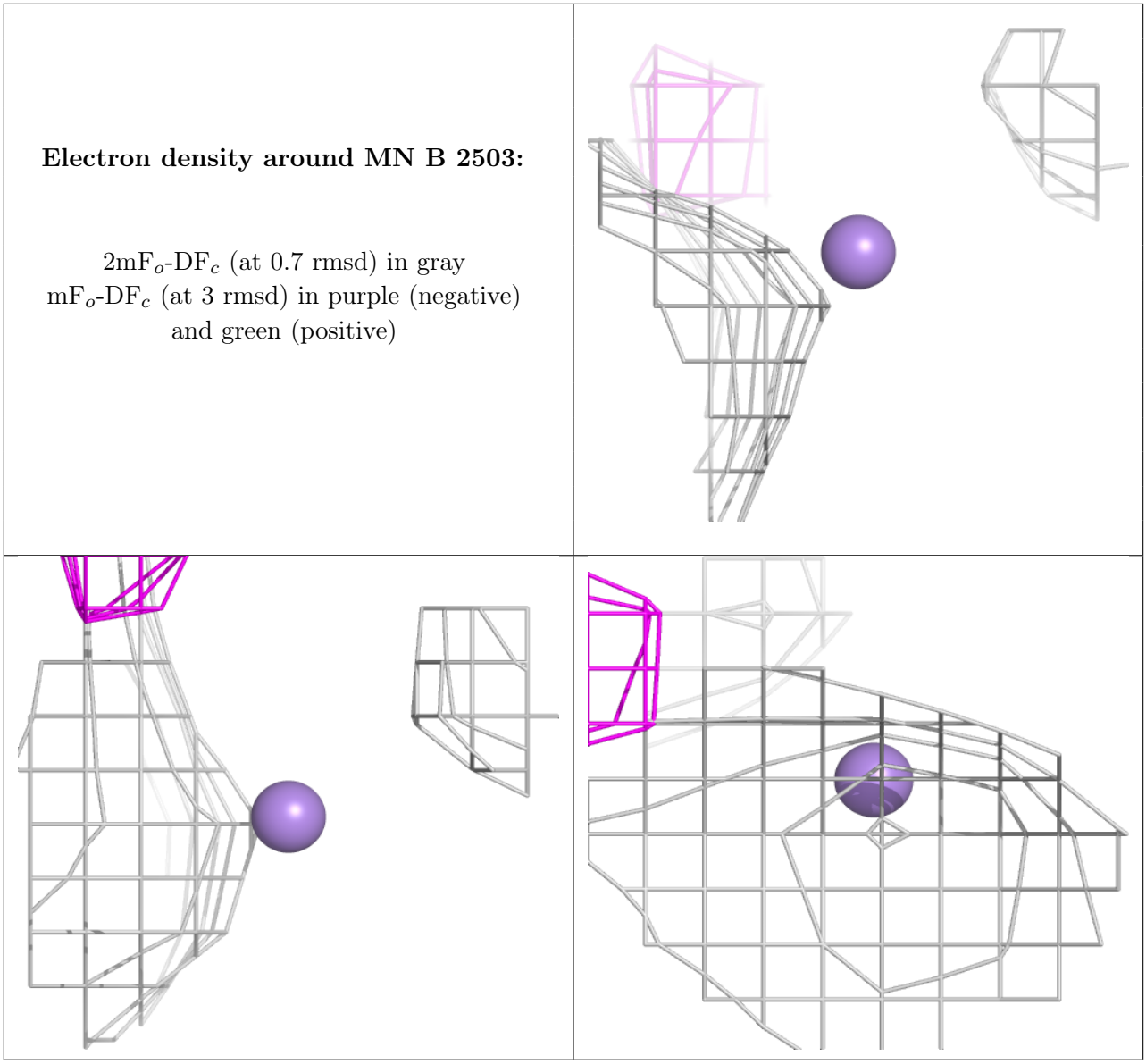
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
18	GOL	E	301	6/6	0.87	0.19	113,136,158,158	0
16	MN	B	2503	1/1	0.89	0.20	138,138,138,138	1
15	ZN	L	101	1/1	0.91	0.06	153,153,153,153	0
17	ATP	B	2501	31/31	0.94	0.12	117,141,170,172	0
15	ZN	I	202	1/1	0.97	0.03	182,182,182,182	0
15	ZN	A	1801	1/1	0.98	0.05	139,139,139,139	0
15	ZN	I	201	1/1	0.98	0.12	119,119,119,119	0
16	MN	A	1804	1/1	0.98	0.04	78,78,78,78	0
15	ZN	C	401	1/1	0.99	0.04	69,69,69,69	0
15	ZN	J	101	1/1	0.99	0.04	85,85,85,85	0
15	ZN	A	1802	1/1	0.99	0.05	65,65,65,65	0
16	MN	A	1803	1/1	0.99	0.04	69,69,69,69	0
15	ZN	B	2502	1/1	1.00	0.02	77,77,77,77	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

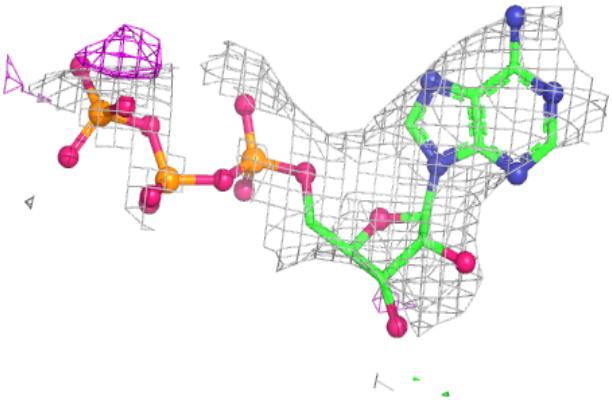
Electron density around MN B 2503:

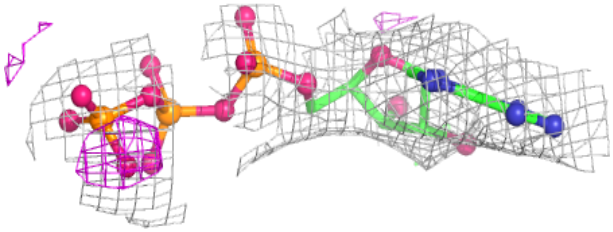
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

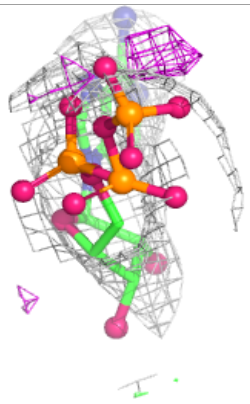


Electron density around ATP B 2501:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

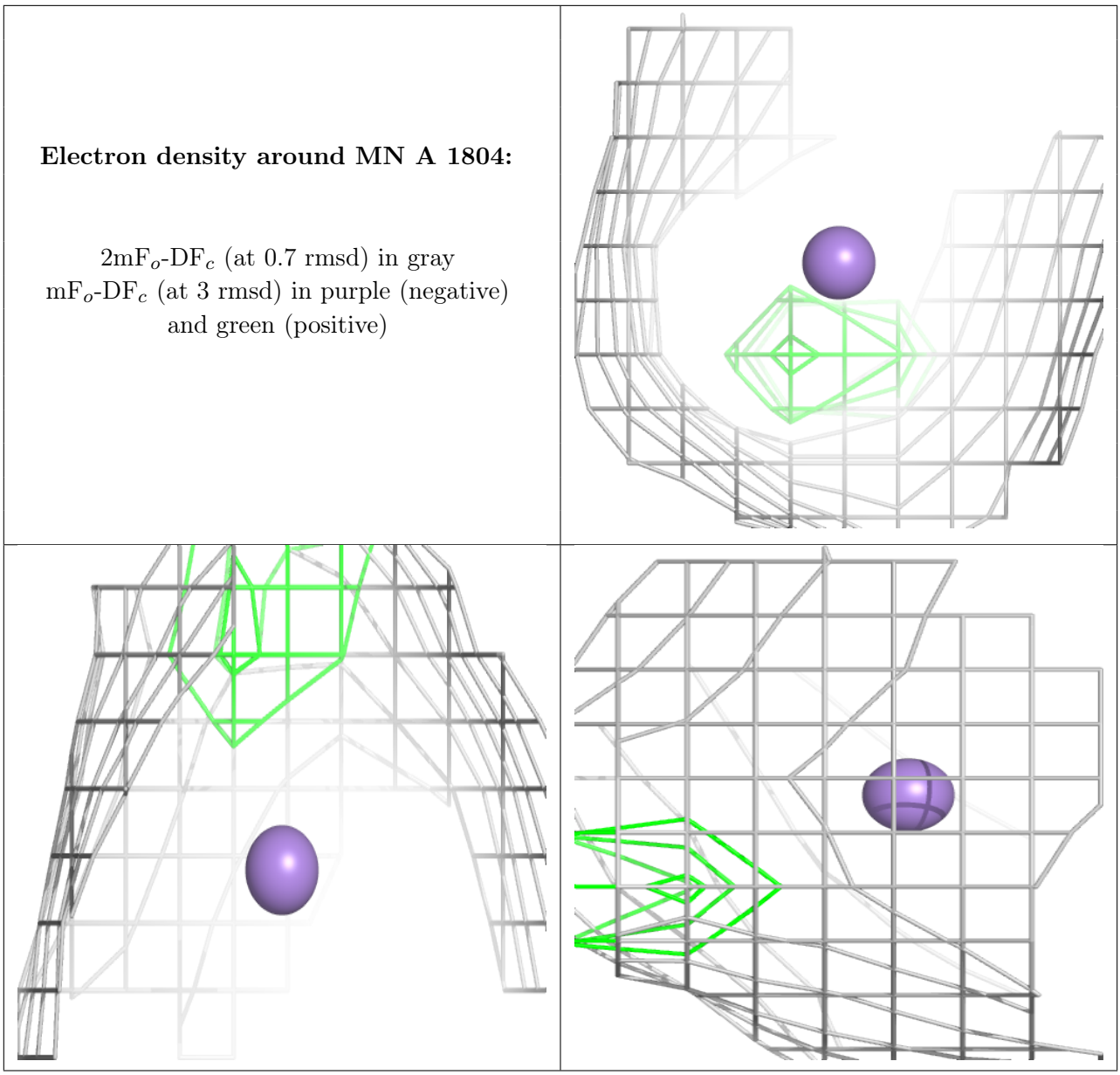






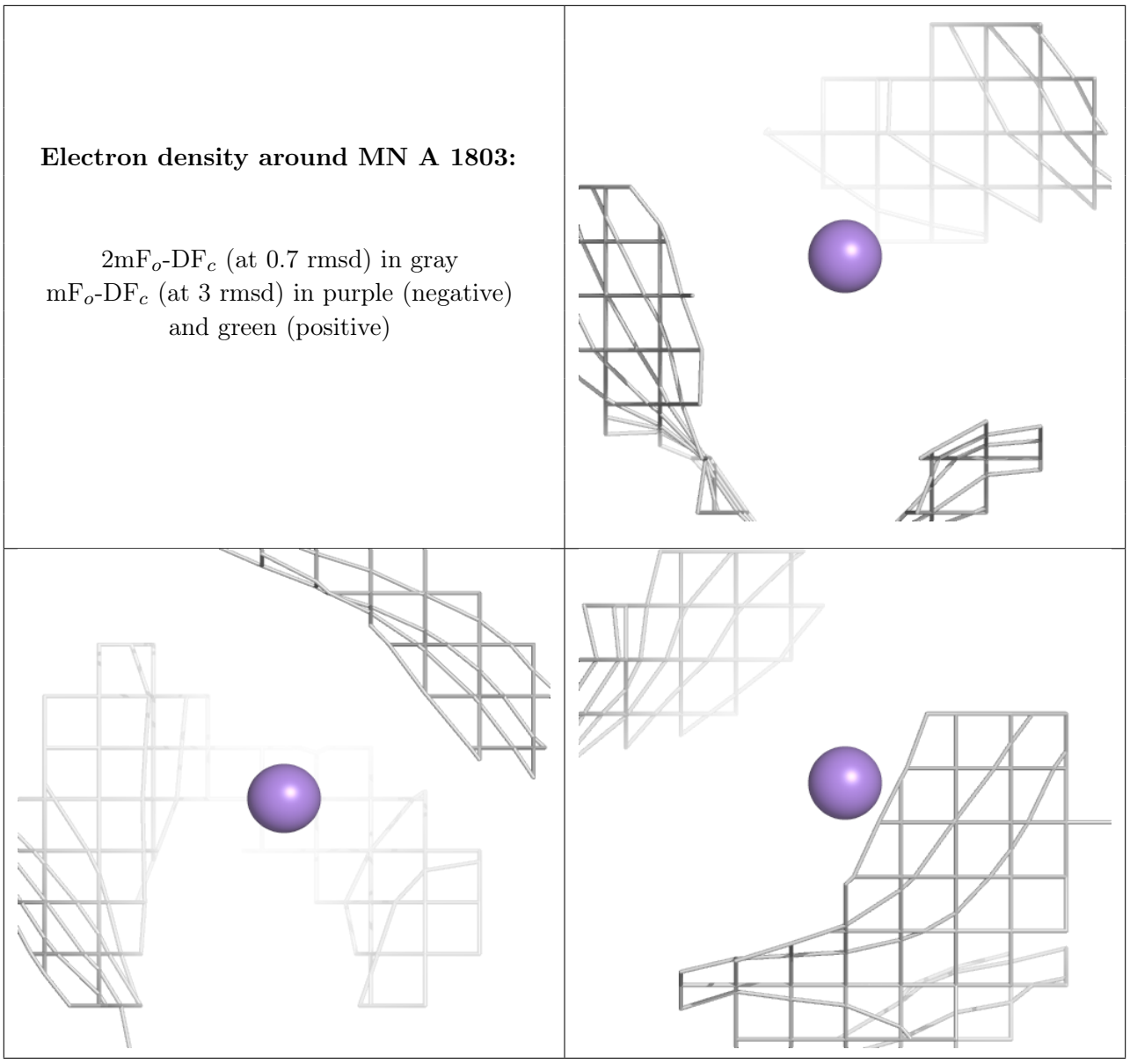
Electron density around MN A 1804:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



Electron density around MN A 1803:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



6.5 Other polymers (i)

There are no such residues in this entry.