



## Full wwPDB EM Validation Report ⓘ

Oct 22, 2024 – 03:48 PM JST

PDB ID : 8Y40  
EMDB ID : EMD-38908  
Title : Structure of chimeric RyR-I4657M/G4819E complex with chlorantraniliprole  
Authors : Lin, L.; Wang, C.; Wang, W.; Jiang, H.; Yuchi, Z.  
Deposited on : 2024-01-29  
Resolution : 3.58 Å (reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

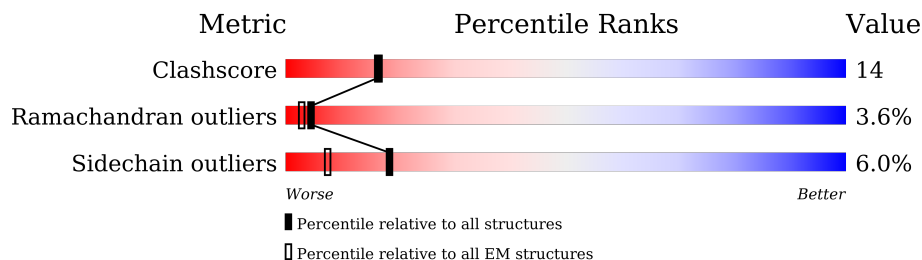
EMDB validation analysis : 0.0.1.dev113  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
MolProbity : 4.02b-467  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.39

# 1 Overall quality at a glance

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

The reported resolution of this entry is 3.58 Å.

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







Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 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  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion  $< 40\%$ ). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	E	107	84% 15% .
1	F	107	84% 15% .
1	G	107	84% 15% .
1	H	107	85% 14% .
2	I	149	11% 68% 21% . 7%
2	J	149	10% 68% 22% . 7%
2	K	149	9% 68% 21% . 7%
2	L	149	7% 68% 22% . 7%

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Mol	Chain	Length	Quality of chain
3	A	5037	 59% 20% 18%
3	B	5037	 59% 20% 18%
3	C	5037	 58% 20% 18%
3	D	5037	 59% 19% 18%

## 2 Entry composition [i](#)

There are 8 unique types of molecules in this entry. The entry contains 123925 atoms, of which 88 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Peptidyl-prolyl cis-trans isomerase FKBP1B.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	E	107	804	510	144	146	4	0	0
1	H	107	804	510	144	146	4	0	0
1	G	107	804	510	144	146	4	0	0
1	F	107	804	510	144	146	4	0	0

- Molecule 2 is a protein called Calmodulin-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	I	139	1023	633	172	209	9	0	0
2	L	139	1023	633	172	209	9	0	0
2	K	139	1023	633	172	209	9	0	0
2	J	139	1023	633	172	209	9	0	0

There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
I	32	ALA	GLU	engineered mutation	UNP P0DP23
I	68	ALA	GLU	engineered mutation	UNP P0DP23
I	105	ALA	GLU	engineered mutation	UNP P0DP23
I	141	ALA	GLU	engineered mutation	UNP P0DP23
L	32	ALA	GLU	engineered mutation	UNP P0DP23
L	68	ALA	GLU	engineered mutation	UNP P0DP23
L	105	ALA	GLU	engineered mutation	UNP P0DP23
L	141	ALA	GLU	engineered mutation	UNP P0DP23
K	32	ALA	GLU	engineered mutation	UNP P0DP23

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Chain	Residue	Modelled	Actual	Comment	Reference
K	68	ALA	GLU	engineered mutation	UNP P0DP23
K	105	ALA	GLU	engineered mutation	UNP P0DP23
K	141	ALA	GLU	engineered mutation	UNP P0DP23
J	32	ALA	GLU	engineered mutation	UNP P0DP23
J	68	ALA	GLU	engineered mutation	UNP P0DP23
J	105	ALA	GLU	engineered mutation	UNP P0DP23
J	141	ALA	GLU	engineered mutation	UNP P0DP23

- Molecule 3 is a protein called Ryanodine receptor 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	A	4121	Total	C	N	O	S	0	0
			29056	18435	5131	5332	158		
3	B	4121	Total	C	N	O	S	0	0
			29059	18438	5131	5332	158		
3	C	4121	Total	C	N	O	S	0	0
			29059	18438	5131	5332	158		
3	D	4121	Total	C	N	O	S	0	0
			29055	18436	5131	5330	158		

There are 20 discrepancies between the modelled and reference sequences:

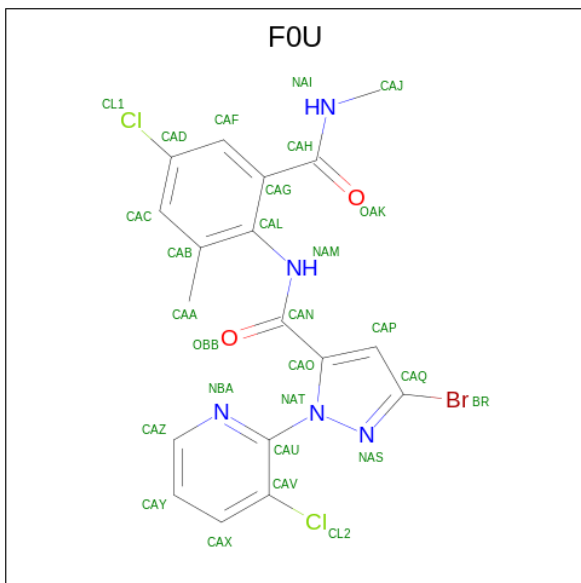
Chain	Residue	Modelled	Actual	Comment	Reference
A	4563	LYS	ARG	engineered mutation	UNP P11716
A	4564	TYR	PHE	engineered mutation	UNP P11716
A	4657	MET	CYS	engineered mutation	UNP P11716
A	4792	SER	LEU	engineered mutation	UNP P11716
A	4819	GLU	GLY	engineered mutation	UNP P11716
B	4563	LYS	ARG	engineered mutation	UNP P11716
B	4564	TYR	PHE	engineered mutation	UNP P11716
B	4657	MET	CYS	engineered mutation	UNP P11716
B	4792	SER	LEU	engineered mutation	UNP P11716
B	4819	GLU	GLY	engineered mutation	UNP P11716
C	4563	LYS	ARG	engineered mutation	UNP P11716
C	4564	TYR	PHE	engineered mutation	UNP P11716
C	4657	MET	CYS	engineered mutation	UNP P11716
C	4792	SER	LEU	engineered mutation	UNP P11716
C	4819	GLU	GLY	engineered mutation	UNP P11716
D	4563	LYS	ARG	engineered mutation	UNP P11716
D	4564	TYR	PHE	engineered mutation	UNP P11716
D	4657	MET	CYS	engineered mutation	UNP P11716
D	4792	SER	LEU	engineered mutation	UNP P11716

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Chain	Residue	Modelled	Actual	Comment	Reference
D	4819	GLU	GLY	engineered mutation	UNP P11716

- Molecule 4 is 5-bromanyl-N-[4-chloranyl-2-methyl-6-(methylcarbamoyl)phenyl]-2-(3-chloranylpyridin-2-yl)pyrazole-3-carboxamide (three-letter code: FOU) (formula: C<sub>18</sub>H<sub>14</sub>BrCl<sub>2</sub>N<sub>5</sub>O<sub>2</sub>) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf	
			Total	Br	C	Cl	N		O
4	A	1	Total	Br	C	Cl	N	O	0
			28	1	18	2	5	2	
4	B	1	Total	Br	C	Cl	N	O	0
			28	1	18	2	5	2	
4	C	1	Total	Br	C	Cl	N	O	0
			28	1	18	2	5	2	
4	D	1	Total	Br	C	Cl	N	O	0
			28	1	18	2	5	2	

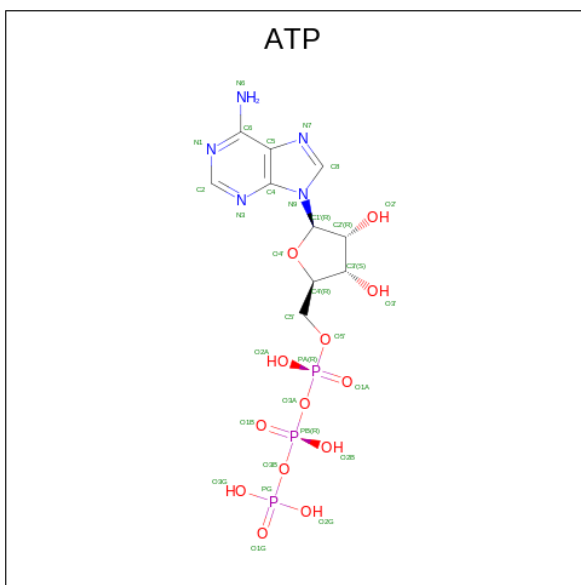
- Molecule 5 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
			Total	Zn	
5	A	1	Total	Zn	0
			1	1	
5	B	1	Total	Zn	0
			1	1	
5	C	1	Total	Zn	0
			1	1	
5	D	1	Total	Zn	0
			1	1	

- Molecule 6 is CALCIUM ION (three-letter code: CA) (formula: Ca).

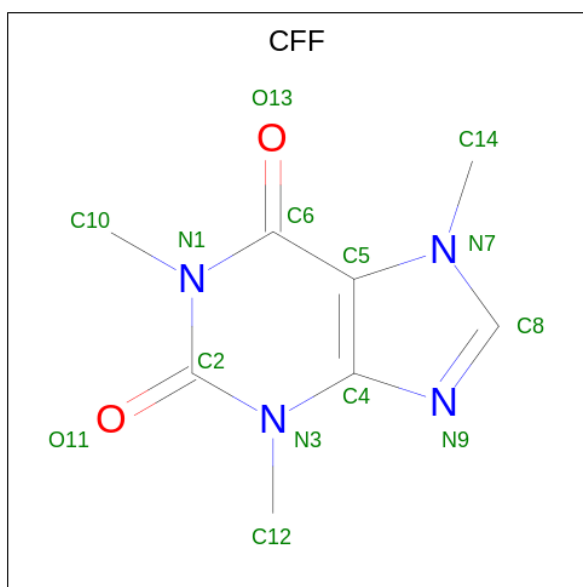
Mol	Chain	Residues	Atoms		AltConf
6	A	1	Total	Ca	0
			1	1	
6	B	1	Total	Ca	0
			1	1	
6	C	1	Total	Ca	0
			1	1	
6	D	1	Total	Ca	0
			1	1	

- Molecule 7 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula: C<sub>10</sub>H<sub>16</sub>N<sub>5</sub>O<sub>13</sub>P<sub>3</sub>).



Mol	Chain	Residues	Atoms					AltConf	
			Total	C	H	N	O		P
7	A	1	Total	C	H	N	O	P	0
			43	10	12	5	13	3	
7	B	1	Total	C	H	N	O	P	0
			43	10	12	5	13	3	
7	C	1	Total	C	H	N	O	P	0
			43	10	12	5	13	3	
7	D	1	Total	C	H	N	O	P	0
			43	10	12	5	13	3	

- Molecule 8 is CAFFEINE (three-letter code: CFF) (formula: C<sub>8</sub>H<sub>10</sub>N<sub>4</sub>O<sub>2</sub>) (labeled as "Ligand of Interest" by depositor).



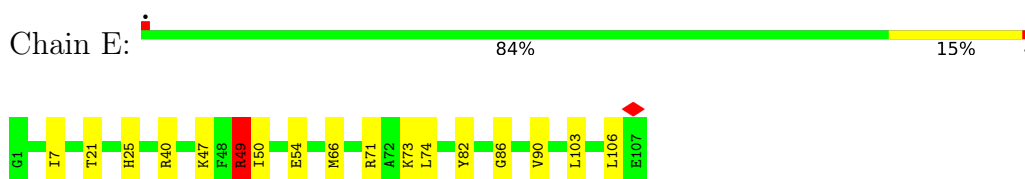
Mol	Chain	Residues	Atoms				AltConf	
			Total	C	H	N		O
8	A	1	Total	C	H	N	O	0
			24	8	10	4	2	
8	B	1	Total	C	H	N	O	0
			24	8	10	4	2	
8	C	1	Total	C	H	N	O	0
			24	8	10	4	2	
8	D	1	Total	C	H	N	O	0
			24	8	10	4	2	



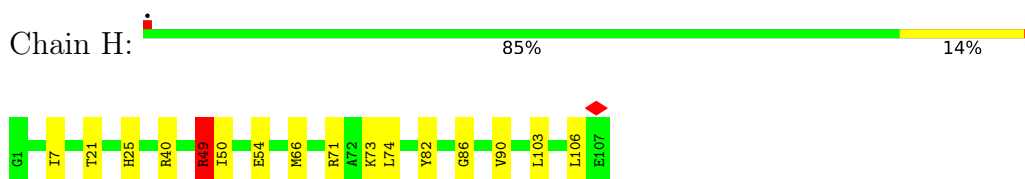
### 3 Residue-property plots [i](#)

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

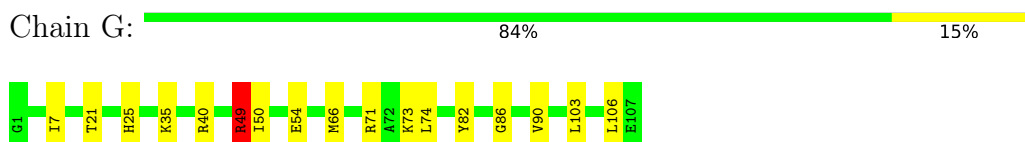
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B



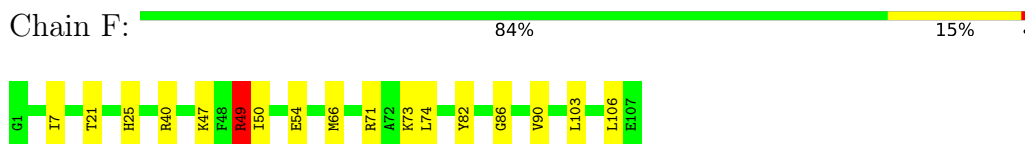
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B



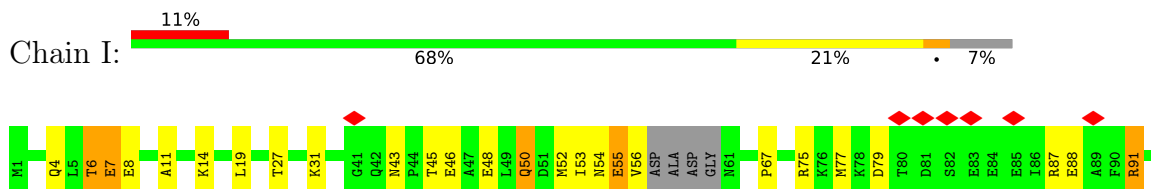
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B



- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

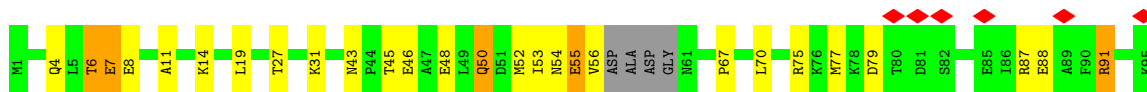


- Molecule 2: Calmodulin-1

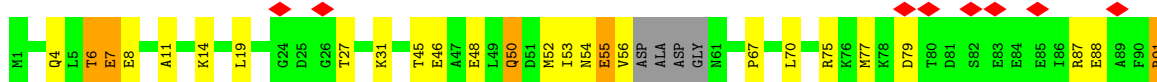




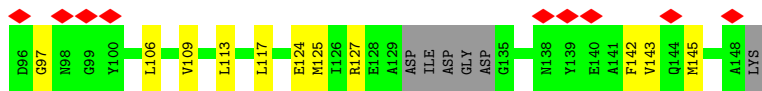
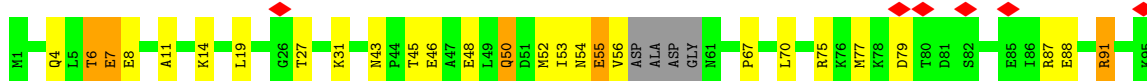
• Molecule 2: Calmodulin-1



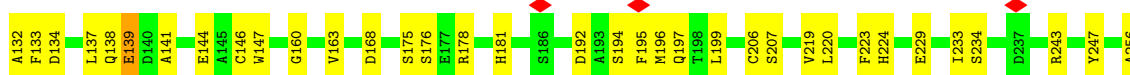
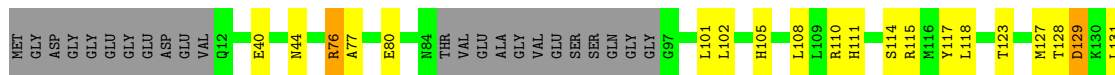
• Molecule 2: Calmodulin-1

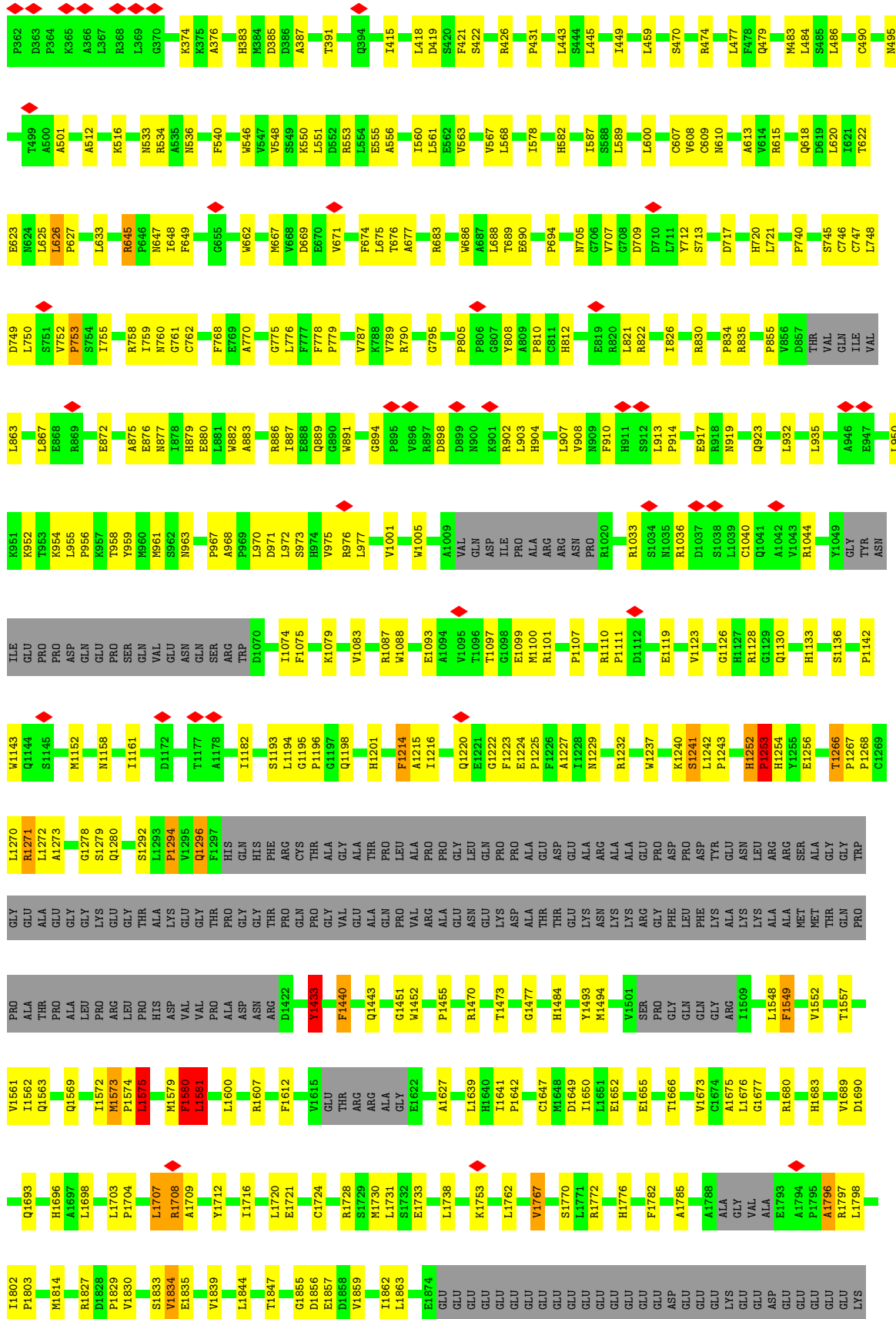


• Molecule 2: Calmodulin-1



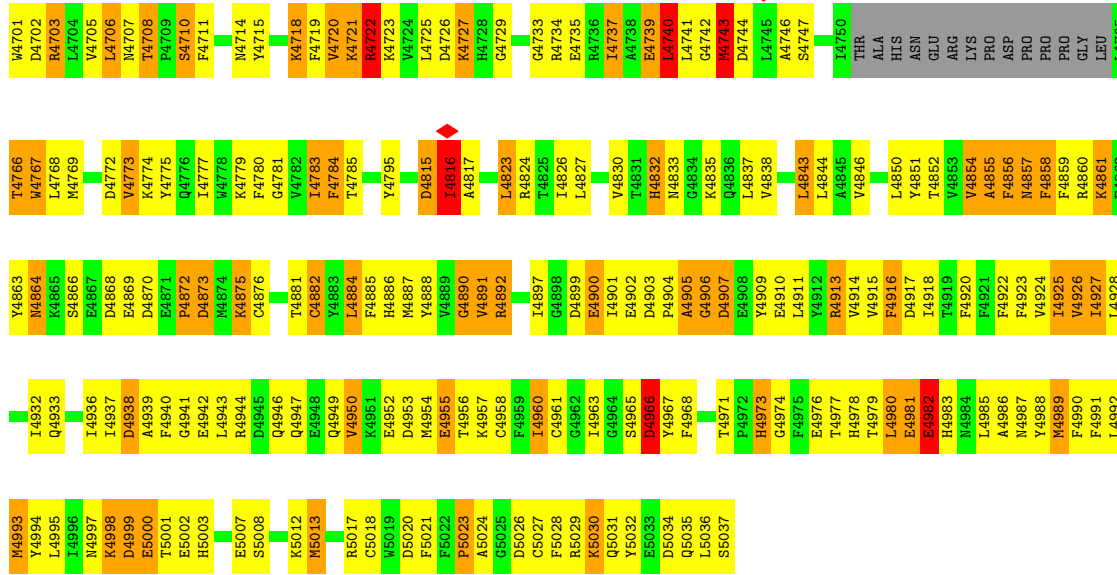
• Molecule 3: Ryanodine receptor 1



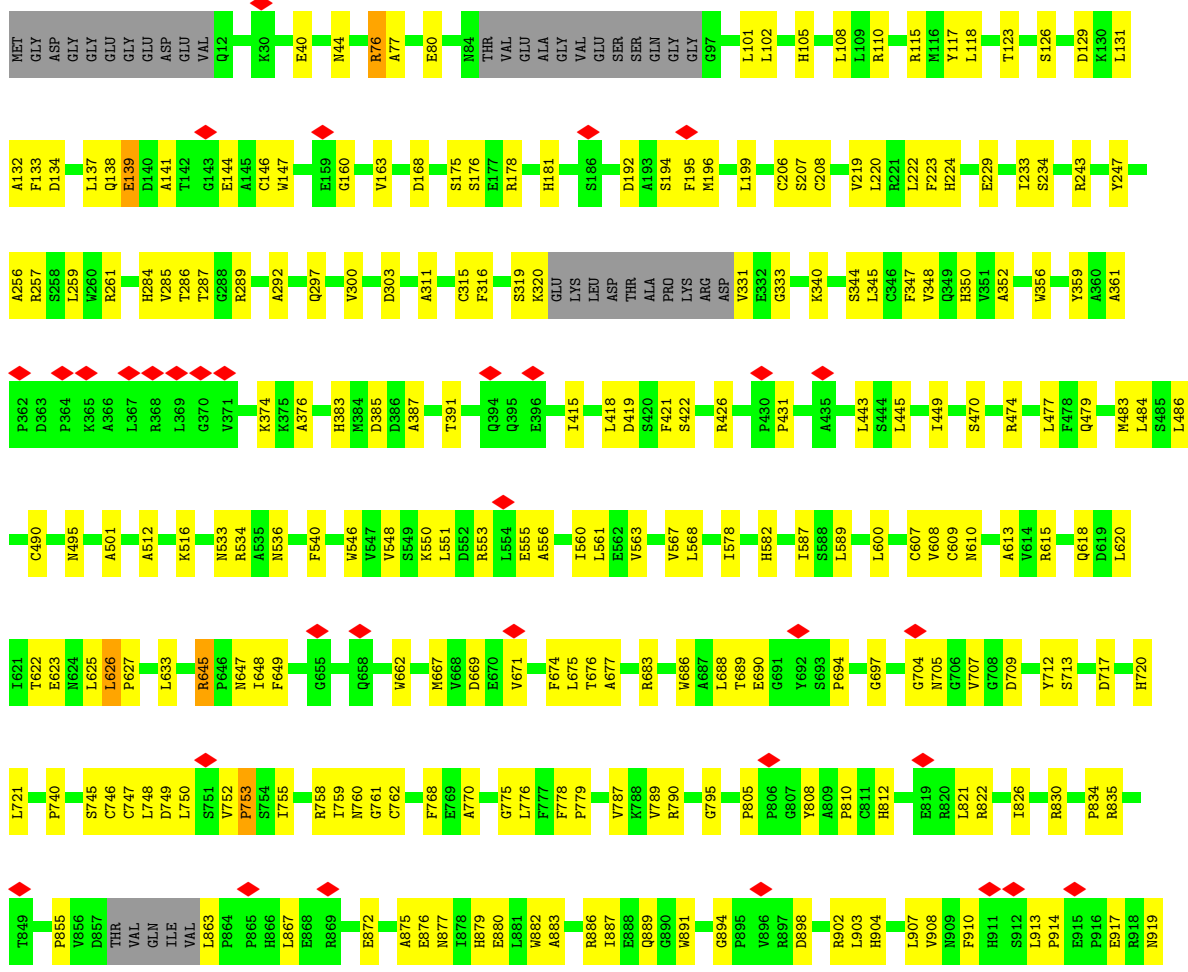




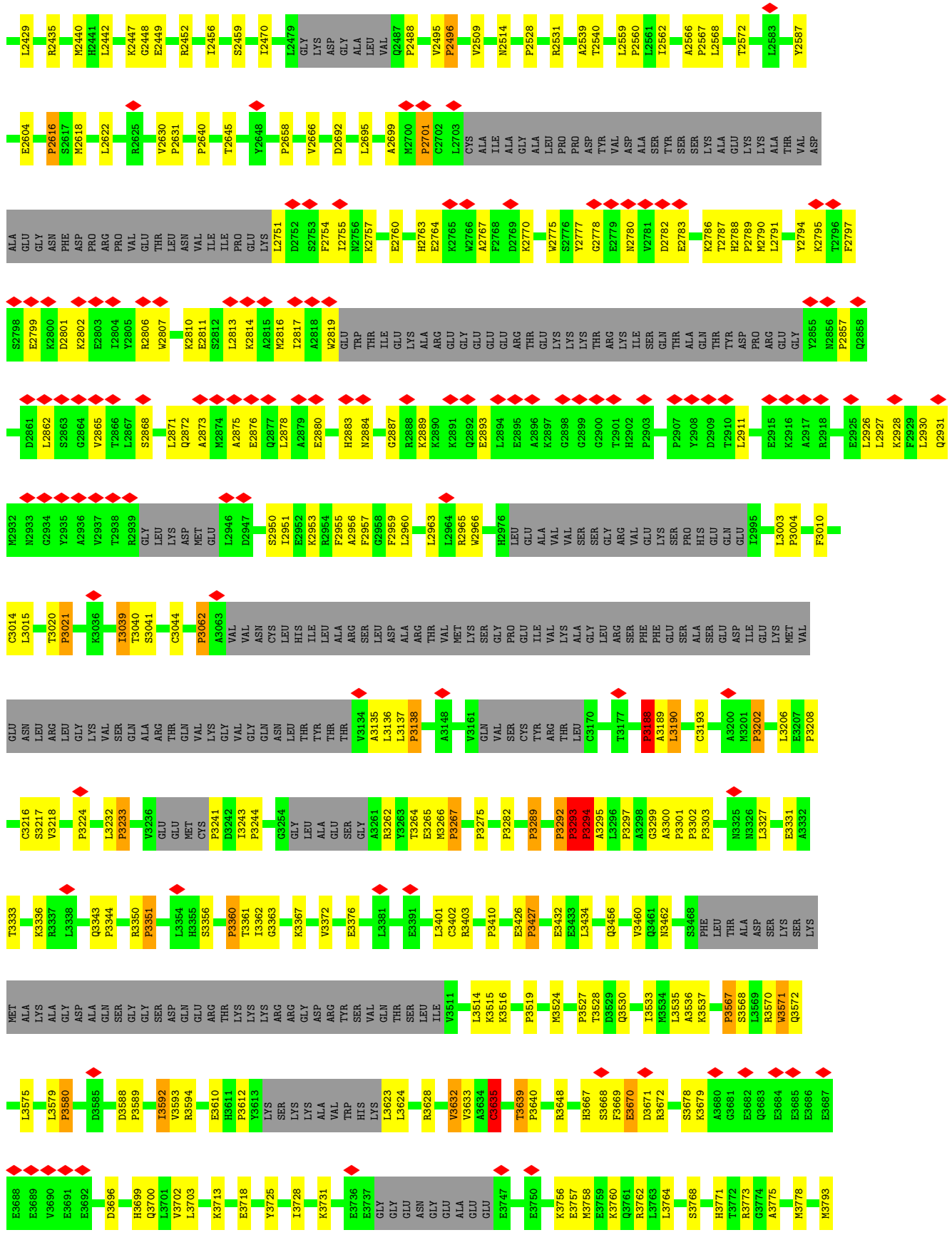




• Molecule 3: Ryanodine receptor 1









S4965	D4070	E4134	V4222	ALA	ASP	ASP	PHE	E4674	G4742	K4835	E4900	S4965
D4966	L4071	P4135	M4223	ALA	GLY	GLY	W4641	K4675	M4743	Q4836	I4901	D4966
F4967	ARG	ARG	E4224	ALA	GLY	GLY	R4548	E4676	D4744	L4837	E4902	F4967
F4968	GLY	GLY	G4225	LEU	VAL	VAL	R4548	E4677	L4744	V4838	D4903	F4968
T4971	S4074	D4138	I4139	LEU	ALA	ALA	L4578	K4680	A4746	L4843	A4904	T4971
P4972	E4075	I4139	G4226	ARG	GLY	GLY	L4578	L4681	S4747	L4844	A4905	P4972
H4973	F4077	F4141	E4227	GLY	HIS	LEU	F4687	L4686	I4750	A4845	G4906	H4973
G4974	Q4078	F4141	A4228	LEU	VAL	VAL	F4687	L4686	T4750	V4846	D4907	G4974
F4975	D4079	V4145	C4238	SER	GLU	PRO	GLY	L4686	THR	V4846	L4911	F4975
E4976	V4080	N4149	Y4081	GLY	GLY	GLY	ASP	I4688	ALA	V4847	Y4912	E4976
E4977	Y4081	N4149	Y4081	ARG	PRO	PRO	ASP	I4688	HIS	V4847	Y4912	E4977
H4978	L4150	N4149	L4242	ARG	PRO	PRO	ASP	T4689	ARG	V4848	R4913	H4978
H4979	T4082	N4149	I4242	SER	GLY	GLY	MET	E4690	ASN	Y4849	R4913	H4979
L4980	D4083	S4151	S4252	LEU	ALA	ALA	GLY	Q4691	ARG	Y4851	Y4914	L4980
E4981	L4087	E4152	PRO	ARG	GLY	GLY	GLY	P4692	GLY	V4852	Y4915	E4981
E4982	L4088	H4153	PRO	THR	GLU	PRO	GLY	G4693	LYS	V4853	F4916	E4982
H4983	L4088	H4153	GLU	ARG	GLY	GLY	SER	G4693	PRO	V4854	D4917	H4983
M4984	D3843	V4154	GLU	VAL	VAL	VAL	ASP	D4695	ASP	A4855	I4918	M4984
L4885	L3844	P4155	GLY	VAL	VAL	VAL	ALA	D4695	PRO	F4856	F4920	L4885
A4986	L3844	P4155	GLY	VAL	VAL	VAL	GLY	D4696	PRO	M4857	F4921	A4986
N4987	L4012	H4156	GLY	ARG	ALA	ALA	ASP	V4698	PRO	F4858	F4922	N4987
M4988	L4012	H4156	GLY	ARG	ALA	ALA	GLY	K4698	GLY	F4859	F4923	M4988
F4989	E4015	D4157	PRO	LEU	VAL	VAL	ASP	W4701	LEU	R4860	F4924	F4989
F4991	E4016	D4157	ASP	LEU	VAL	VAL	GLY	D4702	L4766	K4861	Y4925	F4991
L4992	L4017	F4160	ASP	LEU	VAL	VAL	SER	R4703	W4767	V4863	Y4926	L4992
Y4994	L4017	R4161	GLY	LEU	VAL	VAL	GLY	L4704	L4768	M4864	I4927	Y4994
L4996	Q4020	R4161	GLY	LEU	VAL	VAL	GLY	F4705	M4769	K4865	L4928	L4996
M4997	Q4020	R4161	GLY	LEU	VAL	VAL	GLY	L4706	D4772	S4866	I4931	M4997
K4998	Q4021	R4161	GLY	LEU	VAL	VAL	GLY	L4706	D4772	E4867	I4932	K4998
D4999	Q4021	R4161	GLY	LEU	VAL	VAL	GLY	L4707	D4772	S4867	Y4933	D4999
E5000	Q4022	R4161	GLY	LEU	VAL	VAL	GLY	L4708	D4773	E4868	Q4933	E5000
T5001	D4022	R4161	GLY	LEU	VAL	VAL	GLY	L4708	D4773	E4869	I4934	T5001
E5002	S4029	R4161	GLY	LEU	VAL	VAL	GLY	L4709	D4774	D4870	G4941	E5002
H5003	S4029	R4161	GLY	LEU	VAL	VAL	GLY	L4709	D4774	D4870	E4942	H5003
E5007	E4032	R4161	GLY	LEU	VAL	VAL	GLY	L4709	D4775	C4876	E4943	E5007
S5008	G4033	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4879	R4944	S5008
K5012	G4033	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	K5012
H5013	G4033	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	H5013
R5017	N4034	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	R5017
C5018	V4035	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	C5018
N5019	V4035	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	N5019
D5020	V4035	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	D5020
F5021	V4035	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	F5021
F5022	V4035	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	F5022
F5023	V4035	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	F5023
A5024	V4035	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	A5024
G5025	V4035	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	G5025
D5026	V4035	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	D5026
C5027	V4035	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	C5027
F5028	V4035	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	F5028
R5029	V4035	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	R5029
K5030	V4035	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	K5030
Q5031	V4035	R4161	GLY	LEU	VAL	VAL	GLY	L4711	D4775	M4880	R4944	Q5031

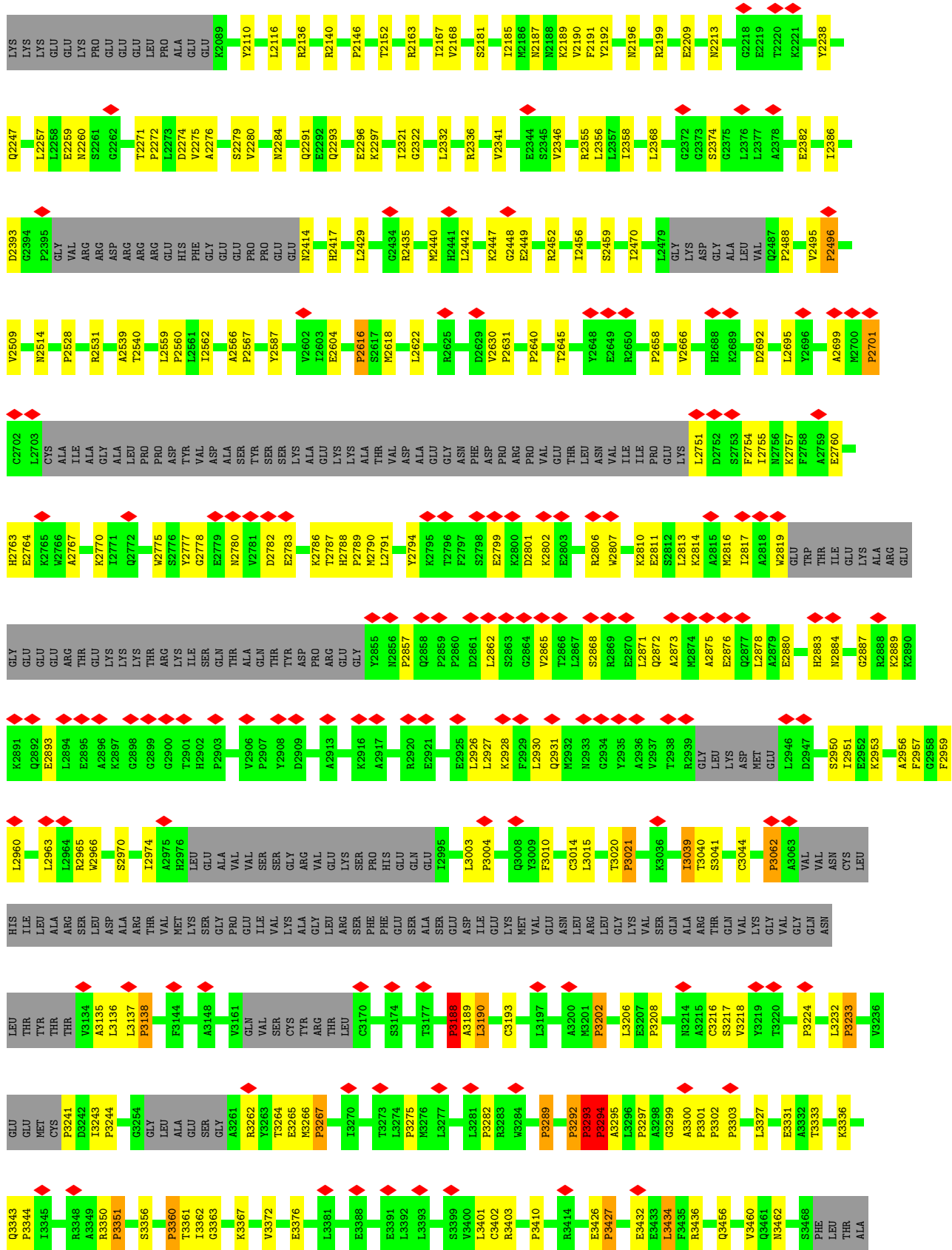
















G4834	G4898	I4963	K5030
K4835	D4899	G4964	Q5031
Q4836	E4900	S4965	Y5032
L4837	I4901	D4966	F5033
W4838	E4902	Y4967	D5034
W4839	D4903	F4968	Q5035
T4840	P4904		L5036
	A4905	T4971	S5037
L4843	G4906	F4972	
L4844	D4907	H4973	
	E4908	G4974	
V4847	Y4909	F4975	
V4848	E4910	E4976	
Y4849	L4911	T4977	
L4850	Y4912	H4978	
Y4851	R4913	T4979	
T4852	V4914	L4980	
V4853	V4915	E4981	
V4854	F4916	E4882	
A4855	D4917	H4983	
F4856	I4918	M4984	
M4857	T4919	L4985	
F4858	F4920	A4986	
F4859	F4921	M4987	
R4860	F4922	Y4988	
K4861	F4923	M4989	
F4862	V4924	F4990	
Y4863	I4925	F4991	
M4864	V4926	L4992	
K4865	I4927	M4993	
S4866	L4928	Y4994	
E4867		L4995	
D4868	Q4933	T4996	
E4869		M4997	
D4870	I4936	K4998	
D4871	I4937	D4999	
P4872	D4938	E5000	
D4873	M4939	T5001	
Y4874	F4940	E5002	
K4875	G4941	H5003	
C4876	E4942		
D4877	L4943	E5007	
D4878	R4944	S5008	
	D4945		
T4881	Q4946	K5012	
C4882	Q4947	M5013	
Y4883			
L4884	V4950	R5017	
F4885	K4951	C5018	
H4886	E4952	W5019	
M4887	D4953	D5020	
Y4888	M4954	F5021	
Y4889	M4955	F5022	
G4890	T4956	P5023	
V4891	G4890	A5024	
R4892	K4957	G5025	
	C4958		
G4895	F4889	D5026	
G4896	I4960	C5027	
I4897	G4961	F5028	
	G4962	R5029	

## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	68897	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	50	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2400	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.459	Depositor
Minimum map value	-0.261	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.012	Depositor
Recommended contour level	0.03	Depositor
Map size (Å)	547.84, 547.84, 547.84	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.07, 1.07, 1.07	Depositor

## 5 Model quality i

### 5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: ATP, CA, CFF, ZN, FOU

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	E	0.34	0/820	0.74	4/1105 (0.4%)
1	F	0.34	0/820	0.74	4/1105 (0.4%)
1	G	0.34	0/820	0.74	4/1105 (0.4%)
1	H	0.34	0/820	0.74	4/1105 (0.4%)
2	I	0.39	0/1032	0.82	3/1392 (0.2%)
2	J	0.39	0/1032	0.83	3/1392 (0.2%)
2	K	0.39	0/1032	0.83	3/1392 (0.2%)
2	L	0.39	0/1032	0.83	3/1392 (0.2%)
3	A	0.41	9/29618 (0.0%)	0.61	62/40398 (0.2%)
3	B	0.41	9/29621 (0.0%)	0.61	61/40402 (0.2%)
3	C	0.41	8/29621 (0.0%)	0.61	60/40402 (0.1%)
3	D	0.41	8/29617 (0.0%)	0.61	60/40397 (0.1%)
All	All	0.40	34/125885 (0.0%)	0.62	271/171587 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
3	A	0	5
3	B	0	6
3	C	0	5
3	D	0	5
All	All	0	21

All (34) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	3932	ASP	CB-CG	-11.85	1.26	1.51
3	D	3932	ASP	CB-CG	-11.84	1.26	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	B	3932	ASP	CB-CG	-11.83	1.26	1.51
3	C	3932	ASP	CB-CG	-11.83	1.26	1.51
3	D	3932	ASP	CA-CB	-8.63	1.34	1.53
3	A	3932	ASP	CA-CB	-8.62	1.34	1.53
3	B	3932	ASP	CA-CB	-8.61	1.35	1.53
3	C	3932	ASP	CA-CB	-8.60	1.35	1.53
3	B	855	PRO	CG-CD	-8.19	1.23	1.50
3	A	855	PRO	CG-CD	-8.18	1.23	1.50
3	C	855	PRO	CG-CD	-8.17	1.23	1.50
3	D	855	PRO	CG-CD	-8.16	1.23	1.50
3	D	76	ARG	CA-C	-7.70	1.32	1.52
3	B	76	ARG	CA-C	-7.69	1.32	1.52
3	A	76	ARG	CA-C	-7.67	1.32	1.52
3	C	76	ARG	CA-C	-7.67	1.33	1.52
3	A	3932	ASP	C-O	-7.17	1.09	1.23
3	B	3932	ASP	C-O	-7.16	1.09	1.23
3	C	3932	ASP	C-O	-7.16	1.09	1.23
3	D	3932	ASP	C-O	-7.16	1.09	1.23
3	A	76	ARG	CA-CB	-6.87	1.38	1.53
3	B	76	ARG	CA-CB	-6.86	1.38	1.53
3	C	76	ARG	CA-CB	-6.86	1.38	1.53
3	D	76	ARG	CA-CB	-6.85	1.38	1.53
3	C	3932	ASP	CA-C	-5.71	1.38	1.52
3	A	3932	ASP	CA-C	-5.70	1.38	1.52
3	B	3932	ASP	CA-C	-5.70	1.38	1.52
3	D	3932	ASP	CA-C	-5.68	1.38	1.52
3	B	1433	TYR	CE2-CZ	-5.07	1.31	1.38
3	C	1580	PHE	CG-CD1	-5.06	1.31	1.38
3	B	1580	PHE	CG-CD1	-5.04	1.31	1.38
3	A	1580	PHE	CG-CD1	-5.04	1.31	1.38
3	D	1580	PHE	CG-CD1	-5.04	1.31	1.38
3	A	1433	TYR	CE2-CZ	-5.04	1.32	1.38

All (271) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	J	91	ARG	NE-CZ-NH1	10.89	125.75	120.30
3	B	1575	LEU	CA-CB-CG	-10.86	90.32	115.30
3	A	1575	LEU	CA-CB-CG	-10.85	90.34	115.30
3	D	1575	LEU	CA-CB-CG	-10.85	90.35	115.30
3	C	1575	LEU	CA-CB-CG	-10.84	90.38	115.30
2	K	91	ARG	NE-CZ-NH1	10.76	125.68	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	I	91	ARG	NE-CZ-NH1	10.73	125.67	120.30
2	L	91	ARG	NE-CZ-NH1	10.73	125.67	120.30
3	B	855	PRO	N-CD-CG	-10.02	88.17	103.20
3	C	855	PRO	N-CD-CG	-10.01	88.18	103.20
3	A	855	PRO	N-CD-CG	-9.99	88.21	103.20
3	D	855	PRO	N-CD-CG	-9.98	88.24	103.20
1	G	49	ARG	NE-CZ-NH1	9.53	125.06	120.30
1	F	49	ARG	NE-CZ-NH1	9.47	125.04	120.30
1	E	49	ARG	NE-CZ-NH1	9.46	125.03	120.30
1	H	49	ARG	NE-CZ-NH1	9.43	125.02	120.30
3	C	1296	GLN	N-CA-C	8.96	135.18	111.00
3	A	1296	GLN	N-CA-C	8.95	135.16	111.00
3	B	1296	GLN	N-CA-C	8.94	135.13	111.00
3	D	1296	GLN	N-CA-C	8.94	135.13	111.00
3	D	3633	VAL	CB-CA-C	-8.33	95.58	111.40
3	C	3633	VAL	CB-CA-C	-8.33	95.58	111.40
3	B	3633	VAL	CB-CA-C	-8.32	95.59	111.40
3	A	3633	VAL	CB-CA-C	-8.31	95.60	111.40
3	D	76	ARG	CG-CD-NE	-7.79	95.44	111.80
3	A	76	ARG	CG-CD-NE	-7.78	95.47	111.80
3	B	76	ARG	CG-CD-NE	-7.78	95.47	111.80
3	C	76	ARG	CG-CD-NE	-7.77	95.47	111.80
3	B	1270	LEU	CB-CG-CD1	-7.77	97.80	111.00
3	A	1270	LEU	CB-CG-CD1	-7.73	97.85	111.00
3	C	1270	LEU	CB-CG-CD1	-7.73	97.86	111.00
3	D	1270	LEU	CB-CG-CD1	-7.71	97.89	111.00
3	B	1549	PHE	CB-CA-C	-7.47	95.46	110.40
3	A	1549	PHE	CB-CA-C	-7.44	95.52	110.40
3	D	1549	PHE	CB-CA-C	-7.43	95.54	110.40
3	C	1549	PHE	CB-CA-C	-7.42	95.55	110.40
3	D	3932	ASP	CB-CG-OD1	-7.23	111.80	118.30
3	A	3932	ASP	CB-CG-OD1	-7.16	111.86	118.30
3	B	3932	ASP	CB-CG-OD1	-7.14	111.87	118.30
3	C	3932	ASP	CB-CG-OD1	-7.14	111.87	118.30
3	C	1581	LEU	N-CA-C	7.13	130.26	111.00
3	D	1581	LEU	N-CA-C	7.13	130.25	111.00
3	A	1581	LEU	N-CA-C	7.13	130.25	111.00
3	B	1581	LEU	N-CA-C	7.12	130.23	111.00
3	C	2616	PRO	N-CA-CB	6.50	111.11	103.30
3	B	3275	PRO	N-CA-CB	6.48	111.08	103.30
3	D	2616	PRO	N-CA-CB	6.47	111.07	103.30
3	D	3293	PRO	N-CA-CB	6.47	111.06	103.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	B	2616	PRO	N-CA-CB	6.46	111.05	103.30
3	D	3275	PRO	N-CA-CB	6.46	111.05	103.30
3	A	2616	PRO	N-CA-CB	6.46	111.05	103.30
3	A	3275	PRO	N-CA-CB	6.45	111.04	103.30
3	B	3293	PRO	N-CA-CB	6.45	111.04	103.30
3	C	3293	PRO	N-CA-CB	6.45	111.04	103.30
3	C	3275	PRO	N-CA-CB	6.44	111.03	103.30
3	A	3293	PRO	N-CA-CB	6.43	111.02	103.30
3	C	3282	PRO	N-CA-CB	6.37	110.94	103.30
3	A	3282	PRO	N-CA-CB	6.35	110.92	103.30
3	A	3624	LEU	N-CA-C	-6.34	93.87	111.00
3	B	3624	LEU	N-CA-C	-6.34	93.87	111.00
3	D	3624	LEU	N-CA-C	-6.34	93.87	111.00
3	B	3282	PRO	N-CA-CB	6.34	110.91	103.30
3	D	3282	PRO	N-CA-CB	6.33	110.90	103.30
3	C	3624	LEU	N-CA-C	-6.33	93.91	111.00
3	B	3301	PRO	N-CA-CB	6.29	110.85	103.30
3	C	3301	PRO	N-CA-CB	6.29	110.84	103.30
3	D	3301	PRO	N-CA-CB	6.29	110.84	103.30
3	A	3301	PRO	N-CA-CB	6.27	110.82	103.30
3	D	3589	PRO	N-CA-CB	6.24	110.79	103.30
3	A	3589	PRO	N-CA-CB	6.24	110.78	103.30
3	C	2528	PRO	N-CA-CB	6.22	110.77	103.30
3	B	3410	PRO	N-CA-CB	6.22	110.76	103.30
3	D	2528	PRO	N-CA-CB	6.22	110.76	103.30
3	B	2528	PRO	N-CA-CB	6.21	110.76	103.30
3	B	3224	PRO	N-CA-CB	6.21	110.76	103.30
3	C	3589	PRO	N-CA-CB	6.21	110.76	103.30
3	D	3351	PRO	N-CA-CB	6.21	110.76	103.30
3	B	3589	PRO	N-CA-CB	6.21	110.76	103.30
3	A	2528	PRO	N-CA-CB	6.21	110.75	103.30
3	C	3224	PRO	N-CA-CB	6.21	110.75	103.30
3	C	3208	PRO	N-CA-CB	6.21	110.75	103.30
3	B	3208	PRO	N-CA-CB	6.21	110.75	103.30
3	D	3410	PRO	N-CA-CB	6.21	110.75	103.30
3	D	3224	PRO	N-CA-CB	6.20	110.74	103.30
3	D	3360	PRO	N-CA-CB	6.20	110.74	103.30
3	A	3351	PRO	N-CA-CB	6.20	110.74	103.30
3	C	3351	PRO	N-CA-CB	6.20	110.73	103.30
3	A	3224	PRO	N-CA-CB	6.19	110.73	103.30
3	B	2658	PRO	N-CA-CB	6.19	110.73	103.30
3	A	3062	PRO	N-CA-CB	6.19	110.73	103.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	B	3267	PRO	N-CA-CB	6.19	110.73	103.30
3	A	3208	PRO	N-CA-CB	6.19	110.73	103.30
3	A	2658	PRO	N-CA-CB	6.19	110.72	103.30
3	B	3062	PRO	N-CA-CB	6.19	110.72	103.30
3	C	2560	PRO	N-CA-CB	6.19	110.72	103.30
3	B	3351	PRO	N-CA-CB	6.19	110.72	103.30
3	C	2658	PRO	N-CA-CB	6.18	110.72	103.30
3	C	3062	PRO	N-CA-CB	6.18	110.72	103.30
3	A	3410	PRO	N-CA-CB	6.18	110.72	103.30
3	B	3202	PRO	N-CA-CB	6.18	110.72	103.30
3	B	3360	PRO	N-CA-CB	6.18	110.72	103.30
3	C	3360	PRO	N-CA-CB	6.18	110.72	103.30
3	D	3208	PRO	N-CA-CB	6.18	110.72	103.30
3	D	3267	PRO	N-CA-CB	6.18	110.71	103.30
3	D	3062	PRO	N-CA-CB	6.17	110.70	103.30
3	D	3527	PRO	N-CA-CB	6.17	110.70	103.30
3	A	2560	PRO	N-CA-CB	6.17	110.70	103.30
3	B	3188	PRO	N-CA-CB	6.17	110.70	103.30
3	C	3202	PRO	N-CA-CB	6.17	110.70	103.30
3	D	2658	PRO	N-CA-CB	6.17	110.70	103.30
3	A	3267	PRO	N-CA-CB	6.17	110.70	103.30
3	C	3527	PRO	N-CA-CB	6.17	110.70	103.30
3	D	3202	PRO	N-CA-CB	6.17	110.70	103.30
3	A	3360	PRO	N-CA-CB	6.16	110.70	103.30
3	C	3410	PRO	N-CA-CB	6.16	110.69	103.30
3	D	2560	PRO	N-CA-CB	6.16	110.70	103.30
3	D	4548	ARG	NE-CZ-NH2	6.16	123.38	120.30
3	D	3188	PRO	N-CA-CB	6.16	110.69	103.30
3	A	3202	PRO	N-CA-CB	6.16	110.69	103.30
3	C	3267	PRO	N-CA-CB	6.16	110.69	103.30
3	B	2560	PRO	N-CA-CB	6.16	110.69	103.30
3	A	3188	PRO	N-CA-CB	6.15	110.68	103.30
3	B	3527	PRO	N-CA-CB	6.15	110.68	103.30
3	A	3292	PRO	N-CA-CB	6.15	110.68	103.30
3	D	3297	PRO	N-CA-CB	6.15	110.67	103.30
3	B	3303	PRO	N-CA-CB	6.14	110.67	103.30
3	C	3292	PRO	N-CA-CB	6.14	110.67	103.30
3	A	3527	PRO	N-CA-CB	6.14	110.67	103.30
3	B	3292	PRO	N-CA-CB	6.14	110.66	103.30
2	J	91	ARG	NE-CZ-NH2	-6.13	117.23	120.30
3	B	3233	PRO	N-CA-CB	6.13	110.65	103.30
3	B	3297	PRO	N-CA-CB	6.12	110.65	103.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	3297	PRO	N-CA-CB	6.12	110.65	103.30
3	D	3292	PRO	N-CA-CB	6.12	110.65	103.30
3	A	3297	PRO	N-CA-CB	6.12	110.65	103.30
3	A	3294	PRO	N-CA-CB	6.12	110.65	103.30
3	C	3303	PRO	N-CA-CB	6.12	110.64	103.30
3	D	3344	PRO	N-CA-CB	6.12	110.64	103.30
3	C	3233	PRO	N-CA-CB	6.12	110.64	103.30
3	C	3302	PRO	N-CA-CB	6.12	110.64	103.30
3	C	3188	PRO	N-CA-CB	6.12	110.64	103.30
2	L	91	ARG	NE-CZ-NH2	-6.11	117.24	120.30
2	K	91	ARG	NE-CZ-NH2	-6.11	117.24	120.30
3	C	3294	PRO	N-CA-CB	6.11	110.64	103.30
3	A	3303	PRO	N-CA-CB	6.11	110.63	103.30
3	A	3302	PRO	N-CA-CB	6.11	110.63	103.30
3	D	3302	PRO	N-CA-CB	6.11	110.63	103.30
3	B	3302	PRO	N-CA-CB	6.10	110.62	103.30
3	D	3303	PRO	N-CA-CB	6.10	110.62	103.30
3	A	2567	PRO	N-CA-CB	6.09	110.61	103.30
3	A	3233	PRO	N-CA-CB	6.09	110.61	103.30
3	C	3344	PRO	N-CA-CB	6.09	110.61	103.30
3	D	2567	PRO	N-CA-CB	6.09	110.61	103.30
3	D	3294	PRO	N-CA-CB	6.09	110.61	103.30
3	B	3294	PRO	N-CA-CB	6.09	110.60	103.30
3	D	3233	PRO	N-CA-CB	6.09	110.60	103.30
3	B	2567	PRO	N-CA-CB	6.08	110.60	103.30
3	C	2567	PRO	N-CA-CB	6.08	110.60	103.30
2	I	91	ARG	NE-CZ-NH2	-6.08	117.26	120.30
3	A	3344	PRO	N-CA-CB	6.07	110.59	103.30
3	A	3567	PRO	N-CA-CB	6.07	110.58	103.30
3	C	3567	PRO	N-CA-CB	6.07	110.58	103.30
3	D	3004	PRO	N-CA-CB	6.07	110.58	103.30
3	A	4548	ARG	NE-CZ-NH2	6.06	123.33	120.30
3	C	3138	PRO	N-CA-CB	6.06	110.58	103.30
3	A	2496	PRO	N-CA-CB	6.06	110.57	103.30
3	B	2496	PRO	N-CA-CB	6.06	110.57	103.30
3	D	3567	PRO	N-CA-CB	6.06	110.57	103.30
3	D	855	PRO	CA-N-CD	-6.06	103.02	111.50
3	B	3138	PRO	N-CA-CB	6.05	110.56	103.30
3	A	3004	PRO	N-CA-CB	6.05	110.56	103.30
3	B	3580	PRO	N-CA-CB	6.05	110.56	103.30
3	C	2496	PRO	N-CA-CB	6.05	110.56	103.30
3	B	3004	PRO	N-CA-CB	6.05	110.56	103.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	D	2496	PRO	N-CA-CB	6.05	110.56	103.30
3	D	3580	PRO	N-CA-CB	6.05	110.56	103.30
3	B	3427	PRO	N-CA-CB	6.04	110.56	103.30
3	B	3567	PRO	N-CA-CB	6.04	110.55	103.30
3	C	3612	PRO	N-CA-CB	6.04	110.55	103.30
3	D	3138	PRO	N-CA-CB	6.04	110.55	103.30
3	A	3138	PRO	N-CA-CB	6.04	110.55	103.30
3	A	3241	PRO	N-CA-CB	6.04	110.55	103.30
3	C	3004	PRO	N-CA-CB	6.04	110.54	103.30
3	A	855	PRO	CA-N-CD	-6.04	103.05	111.50
3	B	3344	PRO	N-CA-CB	6.04	110.54	103.30
3	C	3427	PRO	N-CA-CB	6.04	110.54	103.30
3	B	4548	ARG	NE-CZ-NH2	6.03	123.32	120.30
3	C	855	PRO	CA-N-CD	-6.03	103.06	111.50
3	D	3241	PRO	N-CA-CB	6.03	110.54	103.30
3	C	4548	ARG	NE-CZ-NH2	6.03	123.31	120.30
3	A	3580	PRO	N-CA-CB	6.03	110.53	103.30
3	B	855	PRO	CA-N-CD	-6.03	103.06	111.50
3	A	3612	PRO	N-CA-CB	6.02	110.53	103.30
3	C	3580	PRO	N-CA-CB	6.02	110.53	103.30
3	A	3427	PRO	N-CA-CB	6.02	110.52	103.30
3	B	3241	PRO	N-CA-CB	6.02	110.52	103.30
3	B	3612	PRO	N-CA-CB	6.02	110.52	103.30
3	C	3241	PRO	N-CA-CB	6.02	110.52	103.30
3	D	3427	PRO	N-CA-CB	6.02	110.52	103.30
3	C	3519	PRO	N-CA-CB	6.01	110.51	103.30
3	D	3612	PRO	N-CA-CB	6.01	110.51	103.30
3	A	3519	PRO	N-CA-CB	6.00	110.50	103.30
3	D	3519	PRO	N-CA-CB	6.00	110.50	103.30
3	B	3519	PRO	N-CA-CB	5.99	110.48	103.30
3	D	3289	PRO	N-CA-CB	5.97	110.47	103.30
3	C	3244	PRO	N-CA-CB	5.97	110.46	103.30
3	A	3244	PRO	N-CA-CB	5.97	110.46	103.30
3	B	2640	PRO	N-CA-CB	5.96	110.46	103.30
3	B	3244	PRO	N-CA-CB	5.96	110.45	103.30
3	B	2701	PRO	N-CA-CB	5.96	110.45	103.30
3	A	3289	PRO	N-CA-CB	5.95	110.44	103.30
3	B	3289	PRO	N-CA-CB	5.95	110.44	103.30
3	C	3289	PRO	N-CA-CB	5.95	110.44	103.30
3	D	3244	PRO	N-CA-CB	5.95	110.44	103.30
3	A	2640	PRO	N-CA-CB	5.94	110.43	103.30
3	C	2488	PRO	N-CA-CB	5.94	110.43	103.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	2701	PRO	N-CA-CB	5.94	110.43	103.30
3	D	2488	PRO	N-CA-CB	5.94	110.42	103.30
3	C	2640	PRO	N-CA-CB	5.93	110.42	103.30
3	A	2488	PRO	N-CA-CB	5.93	110.42	103.30
3	B	2488	PRO	N-CA-CB	5.93	110.42	103.30
3	D	2640	PRO	N-CA-CB	5.93	110.42	103.30
3	A	2701	PRO	N-CA-CB	5.92	110.41	103.30
3	B	2631	PRO	N-CA-CB	5.92	110.40	103.30
3	D	2701	PRO	N-CA-CB	5.91	110.39	103.30
3	C	2631	PRO	N-CA-CB	5.91	110.39	103.30
3	D	2631	PRO	N-CA-CB	5.91	110.39	103.30
3	A	2631	PRO	N-CA-CB	5.90	110.39	103.30
3	B	3021	PRO	N-CA-CB	5.89	110.37	103.30
3	C	3021	PRO	N-CA-CB	5.88	110.35	103.30
3	A	3021	PRO	N-CA-CB	5.87	110.35	103.30
3	D	3021	PRO	N-CA-CB	5.82	110.28	103.30
3	B	76	ARG	CA-CB-CG	-5.81	100.63	113.40
3	A	76	ARG	CA-CB-CG	-5.79	100.67	113.40
3	C	76	ARG	CA-CB-CG	-5.78	100.68	113.40
3	D	76	ARG	CA-CB-CG	-5.77	100.70	113.40
3	C	1294	PRO	N-CA-CB	5.73	110.18	103.30
3	A	1294	PRO	N-CA-CB	5.70	110.14	103.30
3	B	1294	PRO	N-CA-CB	5.69	110.13	103.30
3	D	1294	PRO	N-CA-CB	5.66	110.10	103.30
3	C	1440	PHE	CB-CA-C	-5.66	99.08	110.40
2	I	91	ARG	CD-NE-CZ	5.66	131.52	123.60
2	K	91	ARG	CD-NE-CZ	5.65	131.51	123.60
2	L	91	ARG	CD-NE-CZ	5.65	131.51	123.60
3	B	1440	PHE	CB-CA-C	-5.65	99.11	110.40
3	A	1440	PHE	CB-CA-C	-5.64	99.12	110.40
3	D	1440	PHE	CB-CA-C	-5.64	99.12	110.40
1	G	49	ARG	NE-CZ-NH2	-5.63	117.48	120.30
2	J	91	ARG	CD-NE-CZ	5.62	131.47	123.60
1	E	49	ARG	NE-CZ-NH2	-5.55	117.53	120.30
1	H	49	ARG	NE-CZ-NH2	-5.55	117.53	120.30
1	F	49	ARG	NE-CZ-NH2	-5.50	117.55	120.30
3	A	3635	CYS	N-CA-C	5.43	125.65	111.00
3	D	3635	CYS	N-CA-C	5.43	125.65	111.00
3	C	3635	CYS	N-CA-C	5.42	125.64	111.00
3	B	3635	CYS	N-CA-C	5.41	125.60	111.00
3	B	4824	ARG	NE-CZ-NH2	5.40	123.00	120.30
1	H	49	ARG	CG-CD-NE	5.39	123.12	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	G	49	ARG	CG-CD-NE	5.39	123.11	111.80
1	F	49	ARG	CG-CD-NE	5.38	123.09	111.80
1	E	49	ARG	CG-CD-NE	5.38	123.09	111.80
1	E	49	ARG	CD-NE-CZ	5.37	131.12	123.60
3	C	855	PRO	CA-CB-CG	-5.37	93.80	104.00
1	F	49	ARG	CD-NE-CZ	5.36	131.10	123.60
3	B	855	PRO	CA-CB-CG	-5.35	93.83	104.00
1	H	49	ARG	CD-NE-CZ	5.35	131.09	123.60
3	A	855	PRO	CA-CB-CG	-5.34	93.84	104.00
3	A	4824	ARG	NE-CZ-NH2	5.34	122.97	120.30
1	G	49	ARG	CD-NE-CZ	5.34	131.07	123.60
3	D	855	PRO	CA-CB-CG	-5.33	93.87	104.00
3	A	4832	HIS	N-CA-C	-5.08	97.29	111.00

There are no chirality outliers.

All (21) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	A	1292	SER	Mainchain
3	A	139	GLU	Peptide
3	A	1796	ALA	Peptide
3	A	4795	TYR	Sidechain
3	A	752	VAL	Peptide
3	B	1292	SER	Mainchain
3	B	139	GLU	Peptide
3	B	1796	ALA	Peptide
3	B	4795	TYR	Sidechain
3	B	4876	CYS	Mainchain
3	B	752	VAL	Peptide
3	C	1292	SER	Mainchain
3	C	139	GLU	Peptide
3	C	1796	ALA	Peptide
3	C	4795	TYR	Sidechain
3	C	752	VAL	Peptide
3	D	1292	SER	Mainchain
3	D	139	GLU	Peptide
3	D	1796	ALA	Peptide
3	D	4795	TYR	Sidechain
3	D	752	VAL	Peptide

## 5.2 Too-close contacts

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	E	804	0	812	10	0
1	F	804	0	812	10	0
1	G	804	0	812	11	0
1	H	804	0	812	9	0
2	I	1023	0	941	19	0
2	J	1023	0	941	19	0
2	K	1023	0	941	18	0
2	L	1023	0	941	19	0
3	A	29056	0	25582	807	0
3	B	29059	0	25591	821	0
3	C	29059	0	25591	852	0
3	D	29055	0	25587	804	0
4	A	28	0	0	0	0
4	B	28	0	0	0	0
4	C	28	0	0	2	0
4	D	28	0	0	0	0
5	A	1	0	0	0	0
5	B	1	0	0	0	0
5	C	1	0	0	0	0
5	D	1	0	0	0	0
6	A	1	0	0	0	0
6	B	1	0	0	0	0
6	C	1	0	0	0	0
6	D	1	0	0	0	0
7	A	31	12	12	3	0
7	B	31	12	12	3	0
7	C	31	12	12	4	0
7	D	31	12	12	2	0
8	A	14	10	10	2	0
8	B	14	10	10	4	0
8	C	14	10	10	0	0
8	D	14	10	10	0	0
All	All	123837	88	109451	3249	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 14.

All (3249) 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)
3:C:4820:VAL:HB	4:C:5101:F0U:BR	1.67	1.49
3:B:1271:ARG:HB2	3:B:1271:ARG:HH11	1.22	1.03
3:A:1271:ARG:HB2	3:A:1271:ARG:HH11	1.22	1.02
3:C:4820:VAL:CB	4:C:5101:F0U:BR	2.63	1.01
3:C:1271:ARG:HH11	3:C:1271:ARG:HB2	1.22	1.01
3:D:1271:ARG:HB2	3:D:1271:ARG:HH11	1.22	1.00
3:A:3935:TRP:HB3	3:B:80:GLU:HG2	1.44	0.97
3:B:3935:TRP:HB3	3:C:80:GLU:HG2	1.47	0.92
3:C:3935:TRP:HB3	3:D:80:GLU:HG2	1.53	0.89
3:C:1484:HIS:ND1	3:C:1484:HIS:O	2.08	0.87
3:A:1484:HIS:ND1	3:A:1484:HIS:O	2.08	0.87
3:D:1484:HIS:ND1	3:D:1484:HIS:O	2.08	0.86
3:B:1484:HIS:ND1	3:B:1484:HIS:O	2.08	0.86
3:C:4708:THR:HG23	3:C:4710:SER:H	1.41	0.86
3:D:4708:THR:HG23	3:D:4710:SER:H	1.41	0.85
3:A:4846:VAL:HG21	3:D:4816:ILE:HG21	1.58	0.84
3:B:4708:THR:HG23	3:B:4710:SER:H	1.41	0.84
3:A:80:GLU:HG2	3:D:3935:TRP:HB3	1.58	0.84
3:A:4708:THR:HG23	3:A:4710:SER:H	1.41	0.82
3:B:1703:LEU:HD21	3:B:1709:ALA:HB2	1.61	0.82
2:I:50:GLN:NE2	2:I:50:GLN:HA	1.95	0.82
3:C:1271:ARG:HH11	3:C:1271:ARG:CB	1.93	0.81
3:B:1271:ARG:HH11	3:B:1271:ARG:CB	1.93	0.81
3:D:1271:ARG:HH11	3:D:1271:ARG:CB	1.93	0.81
3:A:1271:ARG:HH11	3:A:1271:ARG:CB	1.93	0.81
3:C:1703:LEU:HD21	3:C:1709:ALA:HB2	1.61	0.81
3:D:1703:LEU:HD21	3:D:1709:ALA:HB2	1.61	0.81
3:B:1680:ARG:HB2	3:B:1796:ALA:HB1	1.63	0.81
3:D:1680:ARG:HB2	3:D:1796:ALA:HB1	1.63	0.81
3:C:1680:ARG:HB2	3:C:1796:ALA:HB1	1.63	0.81
3:A:1703:LEU:HD21	3:A:1709:ALA:HB2	1.61	0.80
3:D:4182:GLU:HB3	3:D:4983:HIS:CE1	2.16	0.80
3:A:1680:ARG:HB2	3:A:1796:ALA:HB1	1.63	0.80
2:L:50:GLN:HA	2:L:50:GLN:NE2	1.95	0.80
2:J:50:GLN:HA	2:J:50:GLN:NE2	1.95	0.80
3:D:2802:LYS:HG3	3:D:2806:ARG:HG3	1.64	0.79
2:K:50:GLN:NE2	2:K:50:GLN:HA	1.95	0.78
3:A:4892:ARG:NH2	3:B:4899:ASP:OD1	2.16	0.78
3:D:4182:GLU:HB3	3:D:4983:HIS:HE1	1.48	0.78
3:B:2802:LYS:HG3	3:B:2806:ARG:HG3	1.64	0.78
3:C:2452:ARG:HH11	3:D:175:SER:HA	1.48	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:2802:LYS:HG3	3:C:2806:ARG:HG3	1.64	0.78
3:A:2802:LYS:HG3	3:A:2806:ARG:HG3	1.64	0.78
3:B:4985:LEU:HD23	7:B:5104:ATP:N7	2.00	0.77
3:C:4138:ASP:O	3:C:4140:GLY:N	2.18	0.77
3:B:1271:ARG:HB2	3:B:1271:ARG:NH1	2.00	0.77
3:B:3870:ASN:O	3:B:3873:LYS:NZ	2.18	0.77
3:C:3870:ASN:O	3:C:3873:LYS:NZ	2.18	0.76
3:B:4138:ASP:O	3:B:4140:GLY:N	2.18	0.76
3:B:4892:ARG:NH2	3:C:4899:ASP:OD1	2.19	0.76
3:C:1271:ARG:HB2	3:C:1271:ARG:NH1	2.00	0.76
3:C:4807:PHE:HB3	3:D:4853:VAL:HG13	1.65	0.76
3:C:2813:LEU:HD21	3:C:2926:LEU:HD11	1.68	0.76
3:D:4138:ASP:O	3:D:4140:GLY:N	2.18	0.76
3:A:4138:ASP:O	3:A:4140:GLY:N	2.18	0.76
3:A:1271:ARG:HB2	3:A:1271:ARG:NH1	2.00	0.76
3:D:2813:LEU:HD21	3:D:2926:LEU:HD11	1.68	0.76
3:D:1271:ARG:HB2	3:D:1271:ARG:NH1	2.00	0.76
3:A:2813:LEU:HD21	3:A:2926:LEU:HD11	1.68	0.76
3:C:2456:ILE:HD11	3:D:176:SER:HA	1.68	0.76
3:C:4978:HIS:HA	3:C:4982:GLU:HG3	1.68	0.76
3:D:1639:LEU:HD21	3:D:1650:ILE:HD13	1.67	0.75
3:A:578:ILE:HG23	3:A:582:HIS:HB2	1.69	0.75
3:B:4978:HIS:HA	3:B:4982:GLU:HG3	1.68	0.75
3:D:578:ILE:HG23	3:D:582:HIS:HB2	1.69	0.75
3:B:1639:LEU:HD21	3:B:1650:ILE:HD13	1.67	0.75
2:L:67:PRO:HG3	3:B:2192:TYR:OH	1.87	0.75
3:C:1639:LEU:HD21	3:C:1650:ILE:HD13	1.67	0.75
3:A:3870:ASN:O	3:A:3873:LYS:NZ	2.18	0.75
3:B:712:TYR:HE1	3:B:1470:ARG:HD2	1.52	0.75
3:A:4104:THR:HG22	3:A:4106:PRO:HD2	1.69	0.75
3:B:894:GLY:HA3	3:B:903:LEU:HB3	1.69	0.75
3:B:4104:THR:HG22	3:B:4106:PRO:HD2	1.69	0.75
3:C:894:GLY:HA3	3:C:903:LEU:HB3	1.69	0.74
3:D:4978:HIS:HA	3:D:4982:GLU:HG3	1.68	0.74
2:K:67:PRO:HG3	3:C:2192:TYR:OH	1.87	0.74
3:B:578:ILE:HG23	3:B:582:HIS:HB2	1.69	0.74
3:B:2813:LEU:HD21	3:B:2926:LEU:HD11	1.68	0.74
3:C:712:TYR:HE1	3:C:1470:ARG:HD2	1.52	0.74
3:A:4189:ARG:HB3	3:A:5031:GLN:HE22	1.51	0.74
3:B:4189:ARG:HB3	3:B:5031:GLN:HE22	1.51	0.74
3:C:578:ILE:HG23	3:C:582:HIS:HB2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4975:PHE:CZ	3:C:4979:THR:HG21	2.23	0.74
3:A:4103:PHE:HB3	3:A:4108:ILE:HD11	1.70	0.74
3:D:3870:ASN:O	3:D:3873:LYS:NZ	2.18	0.74
2:I:67:PRO:HG3	3:A:2192:TYR:OH	1.87	0.73
3:A:4668:LEU:HG	3:A:4672:LYS:HD2	1.70	0.73
3:B:4103:PHE:HB3	3:B:4108:ILE:HD11	1.70	0.73
3:D:894:GLY:HA3	3:D:903:LEU:HB3	1.69	0.73
3:A:1707:LEU:HG	3:A:1708:ARG:H	1.54	0.73
3:A:1639:LEU:HD21	3:A:1650:ILE:HD13	1.67	0.73
3:C:4104:THR:HG22	3:C:4106:PRO:HD2	1.69	0.73
3:A:712:TYR:HE1	3:A:1470:ARG:HD2	1.52	0.73
3:C:4189:ARG:HB3	3:C:5031:GLN:HE22	1.51	0.73
3:A:894:GLY:HA3	3:A:903:LEU:HB3	1.69	0.73
3:D:1707:LEU:HG	3:D:1708:ARG:H	1.54	0.73
3:C:1707:LEU:HG	3:C:1708:ARG:H	1.53	0.73
3:D:712:TYR:HE1	3:D:1470:ARG:HD2	1.52	0.73
3:D:4103:PHE:HB3	3:D:4108:ILE:HD11	1.70	0.73
2:J:67:PRO:HG3	3:D:2192:TYR:OH	1.87	0.73
3:A:2452:ARG:HH11	3:B:175:SER:HA	1.54	0.73
3:D:4104:THR:HG22	3:D:4106:PRO:HD2	1.69	0.73
3:B:973:SER:O	3:B:976:ARG:NH2	2.22	0.73
1:G:90:VAL:HG21	3:C:1782:PHE:CD2	2.24	0.72
3:A:1770:SER:OG	3:A:1772:ARG:NH1	2.23	0.72
3:C:973:SER:O	3:C:976:ARG:NH2	2.22	0.72
3:B:4668:LEU:HG	3:B:4672:LYS:HD2	1.70	0.72
3:B:1707:LEU:HG	3:B:1708:ARG:H	1.54	0.72
3:D:4668:LEU:HG	3:D:4672:LYS:HD2	1.70	0.72
3:C:4668:LEU:HG	3:C:4672:LYS:HD2	1.70	0.72
3:A:973:SER:O	3:A:976:ARG:NH2	2.22	0.72
3:C:1770:SER:OG	3:C:1772:ARG:NH1	2.23	0.72
3:C:883:ALA:HB3	3:C:967:PRO:HG3	1.72	0.72
3:D:4189:ARG:HB3	3:D:5031:GLN:HE22	1.51	0.72
1:F:90:VAL:HG21	3:D:1782:PHE:CD2	2.24	0.72
3:D:973:SER:O	3:D:976:ARG:NH2	2.22	0.72
1:H:90:VAL:HG21	3:B:1782:PHE:CD2	2.24	0.72
3:C:1232:ARG:HH22	3:C:1830:VAL:HG22	1.55	0.72
3:C:4103:PHE:HB3	3:C:4108:ILE:HD11	1.70	0.72
3:B:1232:ARG:HH22	3:B:1830:VAL:HG22	1.55	0.72
3:B:2452:ARG:HH11	3:C:175:SER:HA	1.55	0.72
3:D:1770:SER:OG	3:D:1772:ARG:NH1	2.23	0.72
3:A:898:ASP:HB2	3:A:903:LEU:HB2	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4045:VAL:HG13	3:B:4159:ARG:HH21	1.54	0.72
1:E:90:VAL:HG21	3:A:1782:PHE:CD2	2.24	0.71
3:C:898:ASP:HB2	3:C:903:LEU:HB2	1.71	0.71
3:D:4045:VAL:HG13	3:D:4159:ARG:HH21	1.54	0.71
3:B:1770:SER:OG	3:B:1772:ARG:NH1	2.23	0.71
3:D:883:ALA:HB3	3:D:967:PRO:HG3	1.72	0.71
3:B:898:ASP:HB2	3:B:903:LEU:HB2	1.71	0.71
3:D:2336:ARG:HE	3:D:2435:ARG:HD3	1.56	0.71
3:A:1232:ARG:HH22	3:A:1830:VAL:HG22	1.55	0.71
3:A:4045:VAL:HG13	3:A:4159:ARG:HH21	1.54	0.71
3:A:883:ALA:HB3	3:A:967:PRO:HG3	1.72	0.71
3:D:898:ASP:HB2	3:D:903:LEU:HB2	1.71	0.71
3:D:1232:ARG:HH22	3:D:1830:VAL:HG22	1.55	0.71
3:D:4975:PHE:CE1	3:D:4979:THR:HG21	2.26	0.71
3:A:4977:THR:HG23	3:A:4981:GLU:HG3	1.73	0.70
3:C:1229:ASN:H	3:C:1827:ARG:HH21	1.39	0.70
3:C:4045:VAL:HG13	3:C:4159:ARG:HH21	1.54	0.70
3:D:1229:ASN:H	3:D:1827:ARG:HH21	1.39	0.70
3:B:2336:ARG:HE	3:B:2435:ARG:HD3	1.56	0.70
3:D:4138:ASP:O	3:D:4141:PHE:N	2.22	0.70
3:A:1833:SER:O	3:A:1835:GLU:N	2.25	0.70
3:B:607:CYS:SG	3:B:618:GLN:NE2	2.61	0.70
3:B:883:ALA:HB3	3:B:967:PRO:HG3	1.72	0.70
3:B:1833:SER:O	3:B:1835:GLU:N	2.25	0.70
3:A:2799:GLU:HA	3:A:2802:LYS:HD3	1.73	0.70
3:C:1833:SER:O	3:C:1835:GLU:N	2.25	0.70
3:C:2209:GLU:O	3:C:2213:ASN:ND2	2.25	0.70
3:C:2336:ARG:HE	3:C:2435:ARG:HD3	1.56	0.70
3:A:2336:ARG:HE	3:A:2435:ARG:HD3	1.56	0.70
3:B:2799:GLU:HA	3:B:2802:LYS:HD3	1.73	0.70
3:A:4017:LEU:HD12	3:A:4139:ILE:HG13	1.74	0.70
3:D:607:CYS:SG	3:D:618:GLN:NE2	2.61	0.70
3:A:1229:ASN:H	3:A:1827:ARG:HH21	1.39	0.69
3:B:1229:ASN:H	3:B:1827:ARG:HH21	1.39	0.69
3:D:1833:SER:O	3:D:1835:GLU:N	2.25	0.69
3:B:2209:GLU:O	3:B:2213:ASN:ND2	2.25	0.69
3:C:4138:ASP:O	3:C:4141:PHE:N	2.22	0.69
3:A:175:SER:HA	3:D:2452:ARG:HH11	1.57	0.69
3:C:2799:GLU:HA	3:C:2802:LYS:HD3	1.73	0.69
3:C:4721:LYS:HD2	3:C:4741:LEU:HG	1.74	0.69
3:D:745:SER:HB2	3:D:758:ARG:HB3	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:4721:LYS:HD2	3:D:4741:LEU:HG	1.74	0.69
3:A:138:GLN:OE1	3:A:138:GLN:N	2.26	0.69
3:A:3932:ASP:OD1	3:B:76:ARG:HG3	1.93	0.69
3:B:4242:ILE:HG21	8:B:5105:CFF:H121	1.74	0.69
3:D:2209:GLU:O	3:D:2213:ASN:ND2	2.25	0.69
3:A:1704:PRO:HG2	3:A:1707:LEU:HD23	1.74	0.68
3:C:745:SER:HB2	3:C:758:ARG:HB3	1.75	0.68
3:D:1704:PRO:HG2	3:D:1707:LEU:HD23	1.74	0.68
3:A:745:SER:HB2	3:A:758:ARG:HB3	1.75	0.68
3:B:4017:LEU:HD12	3:B:4139:ILE:HG13	1.74	0.68
3:C:2770:LYS:HB3	3:C:2775:TRP:HB2	1.75	0.68
3:C:4017:LEU:HD12	3:C:4139:ILE:HG13	1.74	0.68
3:D:4017:LEU:HD12	3:D:4139:ILE:HG13	1.74	0.68
3:C:1704:PRO:HG2	3:C:1707:LEU:HD23	1.74	0.68
3:D:2799:GLU:HA	3:D:2802:LYS:HD3	1.73	0.68
3:B:138:GLN:OE1	3:B:138:GLN:N	2.26	0.68
3:C:4892:ARG:NH2	3:D:4899:ASP:OD1	2.27	0.68
3:A:4721:LYS:HD2	3:A:4741:LEU:HG	1.74	0.68
1:H:21:THR:HG22	1:H:49:ARG:HD3	1.76	0.68
3:B:745:SER:HB2	3:B:758:ARG:HB3	1.75	0.68
3:B:1704:PRO:HG2	3:B:1707:LEU:HD23	1.74	0.68
3:D:2770:LYS:HB3	3:D:2775:TRP:HB2	1.75	0.68
3:A:4175:ARG:H	3:A:4176:PRO:HD2	1.59	0.68
3:A:4177:TYR:HA	3:A:4197:ILE:HG13	1.75	0.68
3:A:4885:PHE:HE2	3:A:4901:ILE:HD11	1.59	0.68
3:B:4175:ARG:H	3:B:4176:PRO:HD2	1.59	0.68
3:B:4885:PHE:HE2	3:B:4901:ILE:HD11	1.59	0.68
3:A:2209:GLU:O	3:A:2213:ASN:ND2	2.25	0.68
3:B:4721:LYS:HD2	3:B:4741:LEU:HG	1.74	0.68
3:A:607:CYS:SG	3:A:618:GLN:NE2	2.61	0.68
3:A:2770:LYS:HB3	3:A:2775:TRP:HB2	1.75	0.68
3:B:4177:TYR:HA	3:B:4197:ILE:HG13	1.75	0.68
3:D:1433:TYR:HB3	3:D:1573:MET:O	1.94	0.68
3:C:4177:TYR:HA	3:C:4197:ILE:HG13	1.75	0.67
3:D:4175:ARG:H	3:D:4176:PRO:HD2	1.59	0.67
3:D:4177:TYR:HA	3:D:4197:ILE:HG13	1.75	0.67
1:F:21:THR:HG22	1:F:49:ARG:HD3	1.75	0.67
3:C:1433:TYR:HB3	3:C:1573:MET:O	1.94	0.67
1:G:21:THR:HG22	1:G:49:ARG:HD3	1.76	0.67
3:D:138:GLN:OE1	3:D:138:GLN:N	2.26	0.67
3:A:1433:TYR:HB3	3:A:1573:MET:O	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4138:ASP:O	3:A:4141:PHE:N	2.22	0.67
1:E:21:THR:HG22	1:E:49:ARG:HD3	1.76	0.67
3:B:2770:LYS:HB3	3:B:2775:TRP:HB2	1.75	0.67
3:A:4190:ILE:HG21	3:A:5028:PHE:N	2.10	0.67
3:C:138:GLN:N	3:C:138:GLN:OE1	2.26	0.67
3:C:4854:VAL:O	3:C:4855:ALA:C	2.34	0.67
3:C:4885:PHE:HE2	3:C:4901:ILE:HD11	1.59	0.67
3:D:4837:LEU:HD11	3:D:4936:ILE:HD11	1.76	0.67
3:D:4190:ILE:HG21	3:D:5028:PHE:N	2.10	0.66
3:D:4885:PHE:HE2	3:D:4901:ILE:HD11	1.59	0.66
3:C:4973:HIS:HE1	3:D:4228:ALA:HB1	1.60	0.66
3:D:4190:ILE:HG22	3:D:5028:PHE:HD1	1.61	0.66
3:A:2321:ILE:HG13	3:A:2322:GLY:H	1.60	0.66
3:C:4190:ILE:HG21	3:C:5028:PHE:N	2.10	0.66
3:A:4721:LYS:HA	3:A:4741:LEU:HD21	1.77	0.66
3:B:4138:ASP:O	3:B:4141:PHE:N	2.22	0.66
3:B:4854:VAL:O	3:B:4855:ALA:C	2.34	0.66
3:C:4721:LYS:HA	3:C:4741:LEU:HD21	1.77	0.66
3:D:1698:LEU:HD12	3:D:1814:MET:HE1	1.77	0.66
3:B:3932:ASP:OD1	3:C:76:ARG:HG3	1.94	0.66
3:B:4190:ILE:HG21	3:B:5028:PHE:N	2.10	0.66
3:C:4807:PHE:HB3	3:D:4853:VAL:CG1	2.24	0.66
3:B:810:PRO:HB2	3:B:812:HIS:CD2	2.31	0.66
3:C:4175:ARG:H	3:C:4176:PRO:HD2	1.59	0.66
1:H:54:GLU:O	3:B:1785:ALA:N	2.29	0.66
3:A:587:ILE:HG23	3:A:625:LEU:HD12	1.78	0.66
3:D:4854:VAL:O	3:D:4855:ALA:C	2.34	0.66
1:E:54:GLU:O	3:A:1785:ALA:N	2.29	0.66
3:A:810:PRO:HB2	3:A:812:HIS:CD2	2.31	0.66
3:B:1433:TYR:HB3	3:B:1573:MET:O	1.94	0.66
3:C:2321:ILE:HG13	3:C:2322:GLY:H	1.60	0.66
3:A:4978:HIS:HA	3:A:4982:GLU:HG3	1.79	0.66
3:B:495:ASN:OD1	3:B:553:ARG:NH1	2.29	0.66
3:B:2321:ILE:HG13	3:B:2322:GLY:H	1.60	0.66
3:C:4190:ILE:HG22	3:C:5028:PHE:HD1	1.61	0.66
3:D:2321:ILE:HG13	3:D:2322:GLY:H	1.60	0.66
3:D:810:PRO:HB2	3:D:812:HIS:CD2	2.31	0.65
3:D:587:ILE:HG23	3:D:625:LEU:HD12	1.78	0.65
3:B:587:ILE:HG23	3:B:625:LEU:HD12	1.78	0.65
3:B:4721:LYS:HA	3:B:4741:LEU:HD21	1.77	0.65
3:B:4190:ILE:HG22	3:B:5028:PHE:HD1	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:495:ASN:OD1	3:A:553:ARG:NH1	2.29	0.65
3:A:882:TRP:HA	3:A:886:ARG:HH21	1.61	0.65
3:D:495:ASN:OD1	3:D:553:ARG:NH1	2.29	0.65
3:A:176:SER:HA	3:D:2456:ILE:HD11	1.79	0.65
3:D:4181:ILE:HD11	3:D:4987:ASN:HB3	1.79	0.65
3:D:882:TRP:HA	3:D:886:ARG:HH21	1.61	0.65
3:A:795:GLY:H	3:A:812:HIS:CD2	2.15	0.65
3:A:4854:VAL:O	3:A:4855:ALA:C	2.34	0.65
3:B:795:GLY:H	3:B:812:HIS:CD2	2.15	0.65
3:B:882:TRP:HA	3:B:886:ARG:HH21	1.61	0.65
3:D:1693:GLN:HA	3:D:1696:HIS:HB3	1.79	0.65
3:C:495:ASN:OD1	3:C:553:ARG:NH1	2.29	0.65
3:C:607:CYS:SG	3:C:618:GLN:NE2	2.61	0.65
3:D:4721:LYS:HA	3:D:4741:LEU:HD21	1.77	0.65
2:I:6:THR:OG1	2:I:7:GLU:N	2.30	0.64
2:J:6:THR:OG1	2:J:7:GLU:N	2.30	0.64
3:A:1698:LEU:HD12	3:A:1814:MET:HE1	1.77	0.64
3:C:958:THR:HG23	3:C:959:TYR:H	1.63	0.64
3:C:3524:MET:O	3:D:1220:GLN:HG2	1.97	0.64
3:D:795:GLY:H	3:D:812:HIS:CD2	2.15	0.64
2:L:6:THR:OG1	2:L:7:GLU:N	2.30	0.64
3:A:4816:ILE:HG21	3:B:4846:VAL:HG21	1.77	0.64
3:A:4998:LYS:HD3	3:A:5003:HIS:HA	1.79	0.64
3:A:1693:GLN:HA	3:A:1696:HIS:HB3	1.79	0.64
3:A:4190:ILE:HG22	3:A:5028:PHE:HD1	1.61	0.64
3:C:795:GLY:H	3:C:812:HIS:CD2	2.15	0.64
3:C:810:PRO:HB2	3:C:812:HIS:CD2	2.31	0.64
3:B:958:THR:HG23	3:B:959:TYR:H	1.63	0.64
3:B:4181:ILE:HD11	3:B:4987:ASN:HB3	1.79	0.64
1:F:54:GLU:O	3:D:1785:ALA:N	2.29	0.64
3:B:2780:ASN:HA	3:B:2789:PRO:HB3	1.79	0.64
3:C:587:ILE:HG23	3:C:625:LEU:HD12	1.78	0.64
3:C:4878:ASP:C	3:C:4880:MET:H	2.00	0.64
1:G:82:TYR:HB3	1:G:86:GLY:HA2	1.80	0.64
1:F:82:TYR:HB3	1:F:86:GLY:HA2	1.80	0.64
3:C:882:TRP:HA	3:C:886:ARG:HH21	1.61	0.64
3:A:2780:ASN:HA	3:A:2789:PRO:HB3	1.79	0.63
3:D:958:THR:HG23	3:D:959:TYR:H	1.62	0.63
3:C:4998:LYS:HD3	3:C:5003:HIS:HA	1.79	0.63
1:G:54:GLU:O	3:C:1785:ALA:N	2.29	0.63
3:C:1693:GLN:HA	3:C:1696:HIS:HB3	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:132:ALA:HA	3:D:194:SER:HB2	1.81	0.63
3:D:2780:ASN:O	3:D:2787:THR:OG1	2.17	0.63
3:D:3702:VAL:HG11	3:D:3775:ALA:HA	1.79	0.63
1:E:82:TYR:HB3	1:E:86:GLY:HA2	1.80	0.63
3:A:2780:ASN:O	3:A:2787:THR:OG1	2.17	0.63
3:A:4900:GLU:C	3:A:4901:ILE:HG12	2.19	0.63
3:B:1738:LEU:HB3	3:B:2146:PRO:HD3	1.80	0.63
3:C:132:ALA:HA	3:C:194:SER:HB2	1.81	0.63
3:C:3702:VAL:HG11	3:C:3775:ALA:HA	1.79	0.63
3:C:4900:GLU:C	3:C:4901:ILE:HG12	2.19	0.63
3:C:4969:ASP:C	3:C:4971:THR:N	2.52	0.63
3:A:958:THR:HG23	3:A:959:TYR:H	1.63	0.63
3:A:3524:MET:O	3:B:1220:GLN:HG2	1.99	0.63
3:A:3702:VAL:HG11	3:A:3775:ALA:HA	1.79	0.63
3:C:2764:GLU:HG2	3:C:2857:PRO:HB2	1.81	0.63
3:A:910:PHE:HA	3:A:913:LEU:HD12	1.80	0.63
3:B:1693:GLN:HA	3:B:1696:HIS:HB3	1.79	0.63
3:D:4998:LYS:HD3	3:D:5003:HIS:HA	1.79	0.63
3:A:2764:GLU:HG2	3:A:2857:PRO:HB2	1.81	0.62
3:B:4900:GLU:C	3:B:4901:ILE:HG12	2.19	0.62
3:C:2780:ASN:HA	3:C:2789:PRO:HB3	1.79	0.62
3:D:671:VAL:HG12	3:D:740:PRO:HG3	1.81	0.62
3:C:2780:ASN:O	3:C:2787:THR:OG1	2.17	0.62
3:C:4739:GLU:C	3:C:4741:LEU:H	2.03	0.62
3:D:256:ALA:HB2	3:D:477:LEU:HD11	1.81	0.62
2:K:6:THR:OG1	2:K:7:GLU:N	2.30	0.62
3:A:671:VAL:HG12	3:A:740:PRO:HG3	1.81	0.62
3:D:2764:GLU:HG2	3:D:2857:PRO:HB2	1.81	0.62
3:D:2780:ASN:HA	3:D:2789:PRO:HB3	1.79	0.62
3:A:132:ALA:HA	3:A:194:SER:HB2	1.81	0.62
3:B:671:VAL:HG12	3:B:740:PRO:HG3	1.81	0.62
3:C:256:ALA:HB2	3:C:477:LEU:HD11	1.81	0.62
3:C:4721:LYS:O	3:C:4722:ARG:HB2	1.99	0.62
3:B:4739:GLU:C	3:B:4741:LEU:H	2.03	0.62
3:C:1738:LEU:HB3	3:C:2146:PRO:HD3	1.80	0.62
3:D:910:PHE:HA	3:D:913:LEU:HD12	1.81	0.62
3:A:4729:GLY:HA2	3:A:4737:ILE:HD12	1.81	0.62
3:B:4998:LYS:HD3	3:B:5003:HIS:HA	1.79	0.62
3:C:671:VAL:HG12	3:C:740:PRO:HG3	1.80	0.62
3:B:3702:VAL:HG11	3:B:3775:ALA:HA	1.79	0.62
3:B:4998:LYS:HD2	3:B:5003:HIS:CD2	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:50:GLN:HA	2:I:50:GLN:HE21	1.64	0.62
1:H:82:TYR:HB3	1:H:86:GLY:HA2	1.80	0.62
3:B:132:ALA:HA	3:B:194:SER:HB2	1.81	0.62
3:B:551:LEU:HD12	3:B:589:LEU:HD22	1.81	0.62
3:B:2764:GLU:HG2	3:B:2857:PRO:HB2	1.81	0.62
3:C:4729:GLY:HA2	3:C:4737:ILE:HD12	1.81	0.62
3:C:4998:LYS:HD2	3:C:5003:HIS:CD2	2.35	0.62
3:D:4729:GLY:HA2	3:D:4737:ILE:HD12	1.81	0.62
3:D:5000:GLU:HA	3:D:5003:HIS:ND1	2.15	0.62
3:A:1738:LEU:HB3	3:A:2146:PRO:HD3	1.80	0.62
3:B:4729:GLY:HA2	3:B:4737:ILE:HD12	1.81	0.62
3:C:4820:VAL:CG1	3:C:4823:LEU:HB2	2.30	0.62
3:D:551:LEU:HD12	3:D:589:LEU:HD22	1.81	0.62
3:D:647:ASN:OD1	3:D:822:ARG:N	2.33	0.62
3:D:4721:LYS:O	3:D:4722:ARG:HB2	1.99	0.62
3:D:4900:GLU:C	3:D:4901:ILE:HG12	2.19	0.62
1:E:90:VAL:HG21	3:A:1782:PHE:CE2	2.35	0.62
3:D:662:TRP:HD1	3:D:748:LEU:HD22	1.65	0.62
3:D:3826:VAL:O	3:D:3828:PHE:N	2.33	0.62
3:C:647:ASN:OD1	3:C:822:ARG:N	2.33	0.61
3:C:5000:GLU:HA	3:C:5003:HIS:ND1	2.15	0.61
2:L:50:GLN:HA	2:L:50:GLN:HE21	1.64	0.61
3:A:4852:THR:HG23	3:A:4882:CYS:HB3	1.82	0.61
3:B:256:ALA:HB2	3:B:477:LEU:HD11	1.81	0.61
3:B:712:TYR:CE1	3:B:1470:ARG:HD2	2.35	0.61
3:B:790:ARG:HG2	3:B:1627:ALA:HB2	1.82	0.61
3:C:662:TRP:HD1	3:C:748:LEU:HD22	1.65	0.61
1:H:90:VAL:HG21	3:B:1782:PHE:CE2	2.35	0.61
2:K:50:GLN:HA	2:K:50:GLN:HE21	1.64	0.61
2:K:124:GLU:HG3	3:C:3623:LEU:N	2.15	0.61
2:J:124:GLU:HG3	3:D:3623:LEU:N	2.16	0.61
3:A:256:ALA:HB2	3:A:477:LEU:HD11	1.81	0.61
3:A:749:ASP:O	3:A:753:PRO:HA	2.01	0.61
3:B:910:PHE:HA	3:B:913:LEU:HD12	1.80	0.61
3:C:1455:PRO:HG3	3:C:1549:PHE:CE1	2.36	0.61
3:C:4975:PHE:HE2	7:C:5104:ATP:HO2'	1.46	0.61
3:D:4852:THR:HG23	3:D:4882:CYS:HB3	1.82	0.61
3:A:551:LEU:HD12	3:A:589:LEU:HD22	1.81	0.61
1:F:90:VAL:HG21	3:D:1782:PHE:CE2	2.35	0.61
3:A:3984:ARG:NH1	3:B:160:GLY:O	2.33	0.61
3:B:609:CYS:SG	3:B:610:ASN:N	2.73	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:662:TRP:HD1	3:B:748:LEU:HD22	1.65	0.61
3:C:4835:LYS:HA	3:C:4838:VAL:HG13	1.81	0.61
3:D:790:ARG:HG2	3:D:1627:ALA:HB2	1.82	0.61
3:A:4998:LYS:HD2	3:A:5003:HIS:CD2	2.35	0.61
3:B:3984:ARG:NH1	3:C:160:GLY:O	2.34	0.61
3:C:609:CYS:SG	3:C:610:ASN:N	2.73	0.61
3:C:4983:HIS:CE1	3:C:5023:PRO:HG3	2.36	0.61
2:L:124:GLU:HG3	3:B:3623:LEU:N	2.15	0.61
1:G:90:VAL:HG21	3:C:1782:PHE:CE2	2.35	0.61
3:A:1455:PRO:HG3	3:A:1549:PHE:CE1	2.36	0.61
3:B:3826:VAL:O	3:B:3828:PHE:N	2.33	0.61
3:C:2452:ARG:NH1	3:D:175:SER:HA	2.14	0.61
3:C:4969:ASP:C	3:C:4971:THR:H	2.02	0.61
3:B:4721:LYS:O	3:B:4722:ARG:HB2	1.99	0.61
3:C:551:LEU:HD12	3:C:589:LEU:HD22	1.81	0.61
3:C:675:LEU:HD23	3:C:676:THR:HG23	1.82	0.61
3:C:4975:PHE:CE2	3:C:4979:THR:HG21	2.34	0.61
3:D:749:ASP:O	3:D:753:PRO:HA	2.01	0.61
3:D:1455:PRO:HG3	3:D:1549:PHE:CE1	2.36	0.61
3:D:4739:GLU:C	3:D:4741:LEU:H	2.03	0.61
3:A:790:ARG:HG2	3:A:1627:ALA:HB2	1.82	0.61
3:C:3826:VAL:O	3:C:3828:PHE:N	2.33	0.61
3:D:1738:LEU:HB3	3:D:2146:PRO:HD3	1.80	0.61
3:D:4998:LYS:HD2	3:D:5003:HIS:CD2	2.35	0.61
2:I:124:GLU:HG3	3:A:3623:LEU:N	2.16	0.61
2:J:117:LEU:HD11	3:D:3632:VAL:HG11	1.83	0.61
3:A:675:LEU:HD23	3:A:676:THR:HG23	1.82	0.61
3:A:4092:ASP:HA	3:A:4095:LYS:HD3	1.83	0.61
3:B:2780:ASN:O	3:B:2787:THR:OG1	2.17	0.61
3:C:910:PHE:HA	3:C:913:LEU:HD12	1.81	0.61
3:C:4092:ASP:HA	3:C:4095:LYS:HD3	1.83	0.61
3:A:4739:GLU:C	3:A:4741:LEU:H	2.03	0.60
3:B:749:ASP:O	3:B:753:PRO:HA	2.01	0.60
3:C:749:ASP:O	3:C:753:PRO:HA	2.01	0.60
3:C:4852:THR:HG23	3:C:4882:CYS:HB3	1.82	0.60
3:A:219:VAL:HG12	3:A:259:LEU:HD12	1.83	0.60
3:A:647:ASN:OD1	3:A:822:ARG:N	2.33	0.60
3:A:4721:LYS:O	3:A:4722:ARG:HB2	1.99	0.60
3:B:675:LEU:HD23	3:B:676:THR:HG23	1.82	0.60
3:A:2456:ILE:HD11	3:B:176:SER:HA	1.82	0.60
3:A:5000:GLU:HA	3:A:5003:HIS:ND1	2.15	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1455:PRO:HG3	3:B:1549:PHE:CE1	2.36	0.60
3:D:4780:PHE:HA	3:D:4783:ILE:HD13	1.83	0.60
3:A:1703:LEU:HD11	3:A:1709:ALA:H	1.66	0.60
3:B:219:VAL:HG12	3:B:259:LEU:HD12	1.83	0.60
3:B:913:LEU:HD13	3:B:917:GLU:HB3	1.84	0.60
3:C:1128:ARG:HB2	3:C:1130:GLN:HE21	1.67	0.60
3:D:4092:ASP:HA	3:D:4095:LYS:HD3	1.83	0.60
3:A:609:CYS:SG	3:A:610:ASN:N	2.73	0.60
3:A:662:TRP:HD1	3:A:748:LEU:HD22	1.65	0.60
3:A:2452:ARG:NH1	3:B:175:SER:HA	2.17	0.60
3:C:1987:SER:O	3:C:1989:ALA:N	2.35	0.60
3:D:712:TYR:CE1	3:D:1470:ARG:HD2	2.35	0.60
2:K:117:LEU:HD11	3:C:3632:VAL:HG11	1.83	0.60
3:B:4092:ASP:HA	3:B:4095:LYS:HD3	1.83	0.60
3:D:913:LEU:HD13	3:D:917:GLU:HB3	1.84	0.60
3:D:1703:LEU:HD11	3:D:1709:ALA:H	1.66	0.60
3:D:1987:SER:O	3:D:1989:ALA:N	2.35	0.60
3:D:2276:ALA:O	3:D:2279:SER:OG	2.19	0.60
3:B:1128:ARG:HB2	3:B:1130:GLN:HE21	1.67	0.60
3:C:913:LEU:HD13	3:C:917:GLU:HB3	1.84	0.60
3:D:675:LEU:HD23	3:D:676:THR:HG23	1.82	0.60
3:D:975:VAL:O	3:D:1044:ARG:NH2	2.35	0.60
3:D:4729:GLY:HA2	3:D:4737:ILE:CD1	2.32	0.60
3:A:712:TYR:CE1	3:A:1470:ARG:HD2	2.35	0.60
3:A:975:VAL:O	3:A:1044:ARG:NH2	2.35	0.60
3:A:4899:ASP:OD1	3:D:4892:ARG:NH2	2.35	0.60
3:A:4985:LEU:HD23	3:A:4985:LEU:H	1.67	0.60
3:B:746:CYS:SG	3:B:747:CYS:N	2.75	0.60
3:B:4729:GLY:HA2	3:B:4737:ILE:CD1	2.32	0.60
3:A:1128:ARG:HB2	3:A:1130:GLN:HE21	1.67	0.60
3:A:2291:GLN:O	3:A:2293:GLN:N	2.35	0.60
3:B:975:VAL:O	3:B:1044:ARG:NH2	2.35	0.60
3:B:1987:SER:O	3:B:1989:ALA:N	2.35	0.60
3:B:2291:GLN:O	3:B:2293:GLN:N	2.35	0.60
3:B:3678:SER:OG	3:B:3679:LYS:N	2.35	0.60
3:B:5000:GLU:HA	3:B:5003:HIS:ND1	2.15	0.60
3:A:1099:GLU:O	3:A:1100:MET:HE2	2.02	0.59
3:A:4048:LEU:HD22	3:A:4055:VAL:HG21	1.84	0.59
3:C:746:CYS:SG	3:C:747:CYS:N	2.75	0.59
3:C:790:ARG:HG2	3:C:1627:ALA:HB2	1.82	0.59
3:C:1703:LEU:HD11	3:C:1709:ALA:H	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:2332:LEU:HD11	3:C:2429:LEU:HA	1.84	0.59
3:C:4729:GLY:HA2	3:C:4737:ILE:CD1	2.32	0.59
3:D:2291:GLN:O	3:D:2293:GLN:N	2.35	0.59
3:A:913:LEU:HD13	3:A:917:GLU:HB3	1.84	0.59
3:A:3826:VAL:O	3:A:3828:PHE:N	2.33	0.59
3:B:4671:PHE:C	3:B:4673:ARG:H	2.06	0.59
3:C:712:TYR:CE1	3:C:1470:ARG:HD2	2.35	0.59
3:A:1220:GLN:HG2	3:D:3524:MET:O	2.02	0.59
3:B:4048:LEU:HD22	3:B:4055:VAL:HG21	1.84	0.59
3:C:219:VAL:HG12	3:C:259:LEU:HD12	1.83	0.59
3:D:219:VAL:HG12	3:D:259:LEU:HD12	1.83	0.59
3:A:2276:ALA:O	3:A:2279:SER:OG	2.20	0.59
3:D:609:CYS:SG	3:D:610:ASN:N	2.73	0.59
2:I:117:LEU:HD11	3:A:3632:VAL:HG11	1.83	0.59
3:A:760:ASN:OD1	3:A:761:GLY:N	2.36	0.59
3:A:4671:PHE:C	3:A:4673:ARG:H	2.06	0.59
3:B:1698:LEU:HD12	3:B:1814:MET:HE1	1.82	0.59
3:B:2332:LEU:HD11	3:B:2429:LEU:HA	1.84	0.59
3:D:4048:LEU:HD22	3:D:4055:VAL:HG21	1.84	0.59
2:J:50:GLN:HA	2:J:50:GLN:HE21	1.64	0.59
3:A:919:ASN:HB2	3:A:923:GLN:HB2	1.85	0.59
3:A:4729:GLY:HA2	3:A:4737:ILE:CD1	2.32	0.59
3:B:919:ASN:HB2	3:B:923:GLN:HB2	1.85	0.59
3:B:2456:ILE:HD11	3:C:176:SER:HA	1.83	0.59
3:C:975:VAL:O	3:C:1044:ARG:NH2	2.35	0.59
3:C:3678:SER:OG	3:C:3679:LYS:N	2.35	0.59
3:D:746:CYS:SG	3:D:747:CYS:N	2.75	0.59
3:D:760:ASN:OD1	3:D:761:GLY:N	2.36	0.59
3:D:1128:ARG:HB2	3:D:1130:GLN:HE21	1.67	0.59
3:D:2332:LEU:HD11	3:D:2429:LEU:HA	1.84	0.59
3:D:3973:CYS:O	3:D:3976:ASN:N	2.34	0.59
3:A:746:CYS:SG	3:A:747:CYS:N	2.75	0.59
3:A:1987:SER:O	3:A:1989:ALA:N	2.35	0.59
3:A:4692:PRO:HG2	3:A:4703:ARG:NH2	2.18	0.59
3:B:760:ASN:OD1	3:B:761:GLY:N	2.36	0.59
3:B:2452:ARG:NH1	3:C:175:SER:HA	2.17	0.59
3:C:919:ASN:HB2	3:C:923:GLN:HB2	1.85	0.59
3:C:4692:PRO:HG2	3:C:4703:ARG:NH2	2.18	0.59
2:L:117:LEU:HD11	3:B:3632:VAL:HG11	1.83	0.59
3:B:647:ASN:OD1	3:B:822:ARG:N	2.33	0.59
3:A:4937:ILE:O	3:A:4940:PHE:HB2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1703:LEU:HD11	3:B:1709:ALA:H	1.66	0.59
3:B:2023:LEU:O	3:B:2028:ARG:NH1	2.35	0.59
3:B:4692:PRO:HG2	3:B:4703:ARG:NH2	2.18	0.59
3:D:131:LEU:HG	3:D:194:SER:OG	2.02	0.59
3:D:3678:SER:OG	3:D:3679:LYS:N	2.35	0.59
3:D:4671:PHE:C	3:D:4673:ARG:H	2.06	0.59
3:A:340:LYS:N	3:A:344:SER:OG	2.35	0.59
3:B:4978:HIS:HE1	3:B:4983:HIS:CD2	2.21	0.59
3:C:340:LYS:N	3:C:344:SER:OG	2.35	0.59
3:B:340:LYS:N	3:B:344:SER:OG	2.35	0.58
3:C:4780:PHE:HA	3:C:4783:ILE:HD13	1.84	0.58
3:C:138:GLN:HG2	3:C:139:GLU:H	1.68	0.58
3:C:2291:GLN:O	3:C:2293:GLN:N	2.35	0.58
3:A:1242:LEU:HD12	3:A:1243:PRO:HD2	1.86	0.58
3:A:2332:LEU:HD11	3:A:2429:LEU:HA	1.84	0.58
3:B:3524:MET:O	3:C:1220:GLN:HG2	2.03	0.58
3:B:3696:ASP:OD2	3:B:3773:ARG:NE	2.36	0.58
3:C:760:ASN:OD1	3:C:761:GLY:N	2.36	0.58
3:D:206:CYS:SG	3:D:207:SER:N	2.76	0.58
3:A:76:ARG:HG3	3:D:3932:ASP:OD1	2.03	0.58
3:B:2276:ALA:O	3:B:2279:SER:OG	2.19	0.58
3:C:4832:HIS:O	3:C:4833:ASN:HB2	2.03	0.58
3:D:138:GLN:HG2	3:D:139:GLU:H	1.68	0.58
3:D:340:LYS:N	3:D:344:SER:OG	2.35	0.58
3:D:919:ASN:HB2	3:D:923:GLN:HB2	1.85	0.58
3:D:2868:SER:O	3:D:2872:GLN:N	2.32	0.58
3:D:4954:MET:O	3:D:4955:GLU:C	2.40	0.58
3:A:4837:LEU:HD11	3:A:4936:ILE:HD11	1.85	0.58
3:B:1099:GLU:O	3:B:1100:MET:HE2	2.03	0.58
3:C:4671:PHE:C	3:C:4673:ARG:H	2.06	0.58
3:D:1683:HIS:HB2	3:D:1797:ARG:HH12	1.69	0.58
3:D:4118:ASP:HB2	3:D:4122:MET:CB	2.33	0.58
3:D:4692:PRO:HG2	3:D:4703:ARG:NH2	2.18	0.58
3:A:138:GLN:HG2	3:A:139:GLU:H	1.68	0.58
3:B:2868:SER:O	3:B:2872:GLN:N	2.32	0.58
3:C:3932:ASP:OD1	3:D:76:ARG:HG3	2.03	0.58
3:C:4118:ASP:HB2	3:C:4122:MET:CB	2.33	0.58
2:L:87:ARG:NH2	2:L:97:GLY:O	2.37	0.58
3:A:1683:HIS:HB2	3:A:1797:ARG:HH12	1.69	0.58
3:A:4062:PHE:CB	3:A:4170:ILE:HD11	2.34	0.58
3:B:1683:HIS:HB2	3:B:1797:ARG:HH12	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1683:HIS:HB2	3:C:1797:ARG:HH12	1.69	0.58
3:C:3401:LEU:O	3:C:3403:ARG:N	2.37	0.58
3:D:1563:GLN:HG2	3:D:1563:GLN:O	2.04	0.58
3:A:972:LEU:HD13	3:A:1044:ARG:HB2	1.86	0.58
3:A:4826:ILE:HG23	3:B:4931:ILE:HG21	1.86	0.58
3:C:1099:GLU:O	3:C:1100:MET:HE2	2.03	0.58
3:C:2760:GLU:HG2	3:C:2794:TYR:HB3	1.86	0.58
3:C:5000:GLU:O	3:C:5002:GLU:N	2.37	0.58
3:D:1099:GLU:O	3:D:1100:MET:HE2	2.04	0.58
3:D:4062:PHE:CB	3:D:4170:ILE:HD11	2.34	0.58
3:A:4118:ASP:HB2	3:A:4122:MET:CB	2.33	0.58
3:B:4118:ASP:HB2	3:B:4122:MET:CB	2.33	0.58
3:C:972:LEU:HD13	3:C:1044:ARG:HB2	1.86	0.58
3:D:5000:GLU:O	3:D:5002:GLU:N	2.37	0.58
2:J:87:ARG:NH2	2:J:97:GLY:O	2.37	0.58
3:B:2806:ARG:O	3:B:2810:LYS:N	2.35	0.58
3:B:4062:PHE:CB	3:B:4170:ILE:HD11	2.34	0.58
3:A:633:LEU:HG	3:A:1641:ILE:HG22	1.86	0.57
3:B:2760:GLU:HG2	3:B:2794:TYR:HB3	1.86	0.57
3:D:972:LEU:HD13	3:D:1044:ARG:HB2	1.86	0.57
3:A:2868:SER:O	3:A:2872:GLN:N	2.32	0.57
3:B:206:CYS:SG	3:B:207:SER:N	2.76	0.57
3:B:972:LEU:HD13	3:B:1044:ARG:HB2	1.86	0.57
3:B:1242:LEU:HD12	3:B:1243:PRO:HD2	1.85	0.57
3:C:3973:CYS:O	3:C:3976:ASN:N	2.34	0.57
3:C:4062:PHE:CB	3:C:4170:ILE:HD11	2.34	0.57
3:D:1575:LEU:O	3:D:1575:LEU:HD23	2.04	0.57
3:B:1563:GLN:O	3:B:1563:GLN:HG2	2.04	0.57
3:B:1575:LEU:HD23	3:B:1575:LEU:O	2.04	0.57
3:B:3401:LEU:O	3:B:3403:ARG:N	2.37	0.57
3:B:4837:LEU:HD11	3:B:4936:ILE:HD11	1.85	0.57
3:C:1152:MET:HB2	3:C:1161:ILE:HB	1.87	0.57
3:C:2025:GLU:HA	3:C:2028:ARG:HG2	1.87	0.57
3:C:4048:LEU:HD22	3:C:4055:VAL:HG21	1.84	0.57
3:D:633:LEU:HG	3:D:1641:ILE:HG22	1.86	0.57
3:D:1214:PHE:O	3:D:1216:ILE:N	2.37	0.57
3:D:4937:ILE:O	3:D:4940:PHE:HB2	2.02	0.57
3:A:1433:TYR:N	3:A:1433:TYR:CD1	2.73	0.57
3:A:5000:GLU:O	3:A:5002:GLU:N	2.37	0.57
3:B:1433:TYR:CD1	3:B:1433:TYR:N	2.73	0.57
3:B:5000:GLU:O	3:B:5002:GLU:N	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:87:ARG:NH2	2:I:97:GLY:O	2.37	0.57
3:A:4976:GLU:O	3:A:4980:LEU:HB2	2.05	0.57
3:D:1242:LEU:HD12	3:D:1243:PRO:HD2	1.85	0.57
3:D:2760:GLU:HG2	3:D:2794:TYR:HB3	1.86	0.57
3:B:138:GLN:HG2	3:B:139:GLU:H	1.68	0.57
3:C:206:CYS:SG	3:C:207:SER:N	2.76	0.57
3:C:1563:GLN:O	3:C:1563:GLN:HG2	2.04	0.57
3:C:1739:THR:HG1	3:C:1742:THR:HG1	1.52	0.57
3:D:1776:HIS:HB3	3:D:1798:LEU:HD21	1.86	0.57
3:D:3842:LEU:O	3:D:3929:SER:OG	2.23	0.57
2:K:87:ARG:NH2	2:K:97:GLY:O	2.37	0.57
3:A:206:CYS:SG	3:A:207:SER:N	2.76	0.57
3:B:908:VAL:HA	3:B:963:ASN:HD22	1.70	0.57
3:B:1152:MET:HB2	3:B:1161:ILE:HB	1.86	0.57
3:B:4826:ILE:HG23	3:C:4931:ILE:HG21	1.87	0.57
3:B:4998:LYS:HE3	3:B:5007:GLU:OE2	2.05	0.57
3:C:3842:LEU:O	3:C:3929:SER:OG	2.23	0.57
3:D:2440:MET:HG2	3:D:2442:LEU:H	1.70	0.57
3:D:3669:PHE:O	3:D:3670:GLU:HG2	2.05	0.57
3:D:3835:LEU:HD21	3:D:3880:PHE:HZ	1.69	0.57
3:A:4029:SER:O	3:A:4032:GLU:HG2	2.05	0.57
3:B:4176:PRO:CA	3:B:4202:ARG:HH21	2.18	0.57
3:C:908:VAL:HA	3:C:963:ASN:HD22	1.70	0.57
3:C:4851:TYR:CD2	3:C:4920:PHE:HD1	2.23	0.57
3:D:1152:MET:HB2	3:D:1161:ILE:HB	1.86	0.57
3:D:3696:ASP:OD2	3:D:3773:ARG:NE	2.36	0.57
3:A:908:VAL:HA	3:A:963:ASN:HD22	1.70	0.57
3:A:3835:LEU:HD21	3:A:3880:PHE:HZ	1.69	0.57
3:A:4176:PRO:CA	3:A:4202:ARG:HH21	2.18	0.57
3:A:4980:LEU:C	3:A:4981:GLU:HG2	2.25	0.57
3:A:4998:LYS:HE3	3:A:5007:GLU:OE2	2.05	0.57
3:B:3669:PHE:O	3:B:3670:GLU:HG2	2.05	0.57
3:C:1214:PHE:O	3:C:1216:ILE:N	2.38	0.57
3:C:2276:ALA:O	3:C:2279:SER:OG	2.20	0.57
3:C:4029:SER:O	3:C:4032:GLU:HG2	2.05	0.57
3:D:4176:PRO:CA	3:D:4202:ARG:HH21	2.18	0.57
3:A:2023:LEU:O	3:A:2028:ARG:NH1	2.35	0.57
3:A:3973:CYS:O	3:A:3976:ASN:N	2.34	0.57
3:A:4954:MET:O	3:A:4955:GLU:C	2.40	0.57
3:B:195:PHE:HB3	3:B:196:MET:SD	2.45	0.57
3:B:3835:LEU:HD21	3:B:3880:PHE:HZ	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:908:VAL:HA	3:D:963:ASN:HD22	1.70	0.57
3:A:195:PHE:HB3	3:A:196:MET:SD	2.45	0.56
3:A:1776:HIS:HB3	3:A:1798:LEU:HD21	1.86	0.56
3:A:2806:ARG:O	3:A:2810:LYS:N	2.35	0.56
3:A:3571:TRP:O	3:A:3575:LEU:N	2.38	0.56
3:B:1214:PHE:O	3:B:1216:ILE:N	2.37	0.56
3:C:1242:LEU:HD12	3:C:1243:PRO:HD2	1.86	0.56
3:C:3669:PHE:O	3:C:3670:GLU:HG2	2.05	0.56
3:D:2023:LEU:O	3:D:2028:ARG:NH1	2.35	0.56
3:D:4029:SER:O	3:D:4032:GLU:HG2	2.05	0.56
3:A:2025:GLU:HA	3:A:2028:ARG:HG2	1.86	0.56
3:A:3878:ASP:OD1	3:A:3879:GLU:N	2.38	0.56
3:B:4851:TYR:HD1	3:B:4916:PHE:CE1	2.23	0.56
3:C:1575:LEU:O	3:C:1575:LEU:HD23	2.04	0.56
3:C:4890:GLY:O	3:C:4891:VAL:C	2.44	0.56
3:A:2760:GLU:HG2	3:A:2794:TYR:HB3	1.86	0.56
3:B:615:ARG:NH2	3:B:1677:GLY:O	2.39	0.56
3:B:2865:VAL:HG11	3:B:2931:GLN:HE22	1.71	0.56
3:B:3571:TRP:O	3:B:3575:LEU:N	2.38	0.56
3:B:4175:ARG:N	3:B:4176:PRO:HD2	2.20	0.56
3:C:195:PHE:HB3	3:C:196:MET:SD	2.45	0.56
3:C:1580:PHE:O	3:C:1580:PHE:HD1	1.88	0.56
3:C:1776:HIS:HB3	3:C:1798:LEU:HD21	1.86	0.56
3:C:3835:LEU:HD21	3:C:3880:PHE:HZ	1.70	0.56
3:C:3878:ASP:OD1	3:C:3879:GLU:N	2.38	0.56
3:C:4175:ARG:N	3:C:4176:PRO:HD2	2.20	0.56
3:C:4226:GLY:O	3:C:4227:GLU:HG3	2.06	0.56
3:C:4960:ILE:CG2	3:C:5023:PRO:HG2	2.34	0.56
3:C:4998:LYS:HE3	3:C:5007:GLU:OE2	2.05	0.56
3:D:2025:GLU:HA	3:D:2028:ARG:HG2	1.87	0.56
3:A:882:TRP:HA	3:A:886:ARG:NH2	2.20	0.56
3:A:1575:LEU:O	3:A:1575:LEU:HD23	2.04	0.56
3:A:2440:MET:HG2	3:A:2442:LEU:H	1.70	0.56
3:A:4226:GLY:O	3:A:4227:GLU:HG3	2.06	0.56
3:B:1110:ARG:HD3	3:B:1111:PRO:HD2	1.88	0.56
3:C:131:LEU:O	3:C:133:PHE:N	2.38	0.56
3:C:633:LEU:HG	3:C:1641:ILE:HG22	1.86	0.56
3:C:4698:LYS:C	3:C:4700:GLN:H	2.09	0.56
3:D:195:PHE:HB3	3:D:196:MET:SD	2.45	0.56
3:D:4226:GLY:O	3:D:4227:GLU:HG3	2.06	0.56
3:D:4998:LYS:HE3	3:D:5007:GLU:OE2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1689:VAL:HG23	3:A:1690:ASP:H	1.70	0.56
3:B:1776:HIS:HB3	3:B:1798:LEU:HD21	1.86	0.56
3:B:2025:GLU:HA	3:B:2028:ARG:HG2	1.87	0.56
3:B:3973:CYS:O	3:B:3976:ASN:N	2.34	0.56
3:C:4176:PRO:CA	3:C:4202:ARG:HH21	2.18	0.56
3:C:4954:MET:O	3:C:4955:GLU:C	2.40	0.56
3:A:1214:PHE:O	3:A:1216:ILE:N	2.37	0.56
3:A:3842:LEU:O	3:A:3929:SER:OG	2.23	0.56
3:B:533:ASN:ND2	3:B:536:ASN:HD22	2.03	0.56
3:B:4029:SER:O	3:B:4032:GLU:HG2	2.05	0.56
3:C:2440:MET:HG2	3:C:2442:LEU:H	1.70	0.56
3:C:3696:ASP:OD2	3:C:3773:ARG:NE	2.37	0.56
3:A:533:ASN:ND2	3:A:536:ASN:HD22	2.03	0.56
3:A:1110:ARG:HD3	3:A:1111:PRO:HD2	1.88	0.56
3:A:4977:THR:C	3:A:4979:THR:H	2.08	0.56
3:B:359:TYR:OH	3:B:385:ASP:OD2	2.21	0.56
3:C:4581:LYS:N	3:C:4630:TYR:O	2.39	0.56
3:D:1689:VAL:HG23	3:D:1690:ASP:H	1.70	0.56
3:D:3878:ASP:OD1	3:D:3879:GLU:N	2.38	0.56
3:D:4890:GLY:O	3:D:4891:VAL:C	2.44	0.56
3:A:891:TRP:HE1	3:A:902:ARG:HE	1.54	0.56
3:A:3401:LEU:O	3:A:3403:ARG:N	2.37	0.56
3:A:3669:PHE:O	3:A:3670:GLU:HG2	2.05	0.56
3:A:4927:ILE:H	3:A:4927:ILE:HD12	1.71	0.56
3:A:4961:CYS:SG	3:A:4983:HIS:HD2	2.28	0.56
3:B:633:LEU:HG	3:B:1641:ILE:HG22	1.86	0.56
3:B:1580:PHE:O	3:B:1580:PHE:HD1	1.88	0.56
3:C:2023:LEU:O	3:C:2028:ARG:NH1	2.35	0.56
3:D:882:TRP:HA	3:D:886:ARG:NH2	2.20	0.56
3:D:3571:TRP:O	3:D:3575:LEU:N	2.38	0.56
3:A:1152:MET:HB2	3:A:1161:ILE:HB	1.86	0.56
3:A:4698:LYS:C	3:A:4700:GLN:H	2.09	0.56
3:A:4851:TYR:CD2	3:A:4920:PHE:HD1	2.23	0.56
3:B:3188:PRO:O	3:B:3190:LEU:N	2.39	0.56
3:B:3878:ASP:OD1	3:B:3879:GLU:N	2.38	0.56
3:B:4832:HIS:O	3:B:4833:ASN:HB2	2.06	0.56
3:B:4855:ALA:HA	3:B:4859:PHE:HD2	1.71	0.56
3:C:4878:ASP:C	3:C:4880:MET:N	2.57	0.56
3:C:4921:PHE:HD1	3:C:4925:ILE:HG13	1.70	0.56
3:D:2271:THR:OG1	3:D:2272:PRO:HD2	2.06	0.56
3:D:4175:ARG:N	3:D:4176:PRO:HD2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4855:ALA:O	3:A:4856:PHE:C	2.44	0.56
3:B:4698:LYS:C	3:B:4700:GLN:H	2.09	0.56
3:C:533:ASN:ND2	3:C:536:ASN:HD22	2.03	0.56
3:C:1689:VAL:HG23	3:C:1690:ASP:H	1.70	0.56
3:D:1580:PHE:HD1	3:D:1580:PHE:O	1.88	0.56
3:A:175:SER:HA	3:D:2452:ARG:NH1	2.21	0.55
3:A:1563:GLN:HG2	3:A:1563:GLN:O	2.04	0.55
3:A:3188:PRO:O	3:A:3190:LEU:N	2.39	0.55
3:C:2181:SER:O	3:C:2185:ILE:HG12	2.06	0.55
3:C:2865:VAL:HG11	3:C:2931:GLN:HE22	1.71	0.55
3:D:615:ARG:NH2	3:D:1677:GLY:O	2.38	0.55
3:D:1433:TYR:N	3:D:1433:TYR:CD1	2.72	0.55
3:D:4815:ASP:C	3:D:4817:ALA:H	2.10	0.55
3:A:4890:GLY:O	3:A:4891:VAL:C	2.44	0.55
3:C:615:ARG:NH2	3:C:1677:GLY:O	2.38	0.55
3:C:3535:LEU:O	3:C:3537:LYS:N	2.40	0.55
3:A:2271:THR:OG1	3:A:2272:PRO:HD2	2.06	0.55
3:B:4927:ILE:H	3:B:4927:ILE:HD12	1.71	0.55
3:C:4815:ASP:C	3:C:4817:ALA:H	2.10	0.55
3:C:4837:LEU:HD11	3:C:4936:ILE:HD11	1.88	0.55
3:C:4855:ALA:O	3:C:4856:PHE:C	2.45	0.55
3:D:3188:PRO:O	3:D:3190:LEU:N	2.39	0.55
3:B:1731:LEU:HD23	3:B:1772:ARG:HH21	1.72	0.55
3:C:359:TYR:OH	3:C:385:ASP:OD2	2.21	0.55
3:C:4921:PHE:CD1	3:C:4925:ILE:HG13	2.41	0.55
3:D:4698:LYS:C	3:D:4700:GLN:H	2.09	0.55
3:A:1074:ILE:HG22	3:A:1193:SER:HB2	1.88	0.55
3:A:4872:PRO:O	3:A:4873:ASP:C	2.45	0.55
3:B:1689:VAL:HG23	3:B:1690:ASP:H	1.70	0.55
3:B:2440:MET:HG2	3:B:2442:LEU:H	1.70	0.55
3:B:3842:LEU:O	3:B:3929:SER:OG	2.23	0.55
3:C:479:GLN:HA	3:C:484:LEU:HD23	1.88	0.55
3:C:882:TRP:HA	3:C:886:ARG:NH2	2.20	0.55
3:A:2181:SER:O	3:A:2185:ILE:HG12	2.06	0.55
3:A:2865:VAL:HG11	3:A:2931:GLN:HE22	1.71	0.55
3:A:4837:LEU:HD22	3:A:4932:ILE:HD13	1.89	0.55
3:B:4855:ALA:O	3:B:4856:PHE:C	2.44	0.55
3:B:4890:GLY:O	3:B:4891:VAL:C	2.44	0.55
3:B:4914:VAL:O	3:B:4918:ILE:HG12	2.07	0.55
3:C:891:TRP:HE1	3:C:902:ARG:HE	1.54	0.55
3:C:1110:ARG:HD3	3:C:1111:PRO:HD2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1433:TYR:N	3:C:1433:TYR:CD1	2.73	0.55
3:C:2271:THR:OG1	3:C:2272:PRO:HD2	2.06	0.55
3:C:4872:PRO:O	3:C:4873:ASP:C	2.45	0.55
3:A:1580:PHE:HD1	3:A:1580:PHE:O	1.88	0.55
3:A:1731:LEU:HD23	3:A:1772:ARG:HH21	1.72	0.55
3:A:3696:ASP:OD2	3:A:3773:ARG:NE	2.36	0.55
3:A:4123:ILE:H	3:A:4123:ILE:HD12	1.72	0.55
3:A:4855:ALA:HA	3:A:4859:PHE:HD2	1.72	0.55
3:B:1721:GLU:HA	3:B:1724:CYS:HB2	1.89	0.55
3:B:2271:THR:OG1	3:B:2272:PRO:HD2	2.06	0.55
3:B:4226:GLY:O	3:B:4227:GLU:HG3	2.06	0.55
3:C:2806:ARG:O	3:C:2810:LYS:N	2.35	0.55
3:D:1074:ILE:HG22	3:D:1193:SER:HB2	1.88	0.55
3:D:4863:TYR:HA	3:D:4901:ILE:HG23	1.89	0.55
3:A:615:ARG:NH2	3:A:1677:GLY:O	2.38	0.55
3:A:4815:ASP:C	3:A:4817:ALA:H	2.10	0.55
3:A:4924:VAL:HG23	3:A:4925:ILE:HG12	1.89	0.55
3:B:4815:ASP:C	3:B:4817:ALA:H	2.10	0.55
3:C:1074:ILE:HG22	3:C:1193:SER:HB2	1.88	0.55
3:C:1266:THR:OG1	3:C:1267:PRO:HD2	2.07	0.55
3:C:1731:LEU:HD23	3:C:1772:ARG:HH21	1.72	0.55
3:D:1731:LEU:HD23	3:D:1772:ARG:HH21	1.72	0.55
3:D:2181:SER:O	3:D:2185:ILE:HG12	2.06	0.55
3:A:2810:LYS:O	3:A:2814:LYS:N	2.40	0.55
3:A:4863:TYR:HA	3:A:4901:ILE:HG23	1.89	0.55
3:B:882:TRP:HA	3:B:886:ARG:NH2	2.20	0.55
3:B:891:TRP:HE1	3:B:902:ARG:HE	1.54	0.55
3:C:4914:VAL:O	3:C:4918:ILE:HG12	2.07	0.55
3:C:4924:VAL:HG23	3:C:4925:ILE:HG12	1.89	0.55
3:D:1110:ARG:HD3	3:D:1111:PRO:HD2	1.88	0.55
3:D:4855:ALA:O	3:D:4856:PHE:C	2.44	0.55
3:D:4872:PRO:O	3:D:4873:ASP:C	2.45	0.55
3:D:4914:VAL:O	3:D:4918:ILE:HG12	2.07	0.55
3:B:479:GLN:HA	3:B:484:LEU:HD23	1.88	0.55
3:B:2181:SER:O	3:B:2185:ILE:HG12	2.06	0.55
3:B:4924:VAL:HG23	3:B:4925:ILE:HG12	1.89	0.55
3:C:1266:THR:O	3:C:1266:THR:HG23	2.07	0.55
3:C:1698:LEU:HD12	3:C:1814:MET:HE1	1.89	0.55
3:C:4123:ILE:HD12	3:C:4123:ILE:H	1.72	0.55
3:A:4826:ILE:HD11	3:B:4836:GLN:HB3	1.89	0.54
3:B:4954:MET:O	3:B:4955:GLU:C	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:3188:PRO:O	3:C:3190:LEU:N	2.39	0.54
3:C:4927:ILE:HD12	3:C:4927:ILE:H	1.71	0.54
3:D:4924:VAL:HG23	3:D:4925:ILE:HG12	1.89	0.54
3:A:4783:ILE:C	3:A:4785:THR:H	2.11	0.54
3:B:1716:ILE:HD13	3:B:1844:LEU:HD12	1.90	0.54
3:B:2810:LYS:O	3:B:2814:LYS:N	2.40	0.54
3:B:4123:ILE:H	3:B:4123:ILE:HD12	1.72	0.54
3:B:4872:PRO:O	3:B:4873:ASP:C	2.45	0.54
3:C:4855:ALA:HA	3:C:4859:PHE:HD2	1.71	0.54
3:C:4878:ASP:O	3:C:4880:MET:N	2.40	0.54
3:D:533:ASN:ND2	3:D:536:ASN:HD22	2.03	0.54
3:D:891:TRP:HE1	3:D:902:ARG:HE	1.54	0.54
3:D:2810:LYS:O	3:D:2814:LYS:N	2.40	0.54
3:A:1716:ILE:HD13	3:A:1844:LEU:HD12	1.90	0.54
3:D:139:GLU:O	3:D:141:ALA:N	2.41	0.54
3:D:1266:THR:OG1	3:D:1267:PRO:HD2	2.07	0.54
3:D:1721:GLU:HA	3:D:1724:CYS:HB2	1.89	0.54
3:D:2865:VAL:HG11	3:D:2931:GLN:HE22	1.71	0.54
3:D:4855:ALA:HA	3:D:4859:PHE:HD2	1.71	0.54
3:C:139:GLU:O	3:C:141:ALA:N	2.41	0.54
3:C:1716:ILE:HD13	3:C:1844:LEU:HD12	1.90	0.54
3:D:479:GLN:HA	3:D:484:LEU:HD23	1.88	0.54
3:A:479:GLN:HA	3:A:484:LEU:HD23	1.88	0.54
3:A:567:VAL:HG23	3:A:568:LEU:HD12	1.89	0.54
3:B:914:PRO:HD2	3:B:917:GLU:HG3	1.89	0.54
3:B:1074:ILE:HG22	3:B:1193:SER:HB2	1.88	0.54
3:B:4222:VAL:HG21	3:B:4950:VAL:HG13	1.90	0.54
3:C:2810:LYS:O	3:C:2814:LYS:N	2.40	0.54
3:A:4090:LYS:HG3	3:A:4112:LEU:HD13	1.90	0.54
3:A:4175:ARG:N	3:A:4176:PRO:HD2	2.20	0.54
3:C:1716:ILE:HD12	3:C:1720:LEU:HD12	1.90	0.54
3:C:4222:VAL:HG21	3:C:4950:VAL:HG13	1.90	0.54
3:D:1716:ILE:HD13	3:D:1844:LEU:HD12	1.90	0.54
3:D:2806:ARG:O	3:D:2810:LYS:N	2.35	0.54
3:D:3401:LEU:O	3:D:3403:ARG:N	2.37	0.54
3:D:4927:ILE:H	3:D:4927:ILE:HD12	1.71	0.54
3:A:1716:ILE:HD12	3:A:1720:LEU:HD12	1.90	0.54
3:A:4914:VAL:O	3:A:4918:ILE:HG12	2.07	0.54
3:B:1266:THR:OG1	3:B:1267:PRO:HD2	2.07	0.54
3:B:4090:LYS:HG3	3:B:4112:LEU:HD13	1.90	0.54
3:B:4780:PHE:HA	3:B:4783:ILE:HD13	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1581:LEU:HD23	3:C:1581:LEU:C	2.28	0.54
3:D:181:HIS:N	3:D:192:ASP:O	2.40	0.54
3:D:567:VAL:HG23	3:D:568:LEU:HD12	1.89	0.54
3:A:4176:PRO:HA	3:A:4202:ARG:HH21	1.73	0.54
3:A:4985:LEU:HD22	7:A:5104:ATP:N7	2.22	0.54
3:B:567:VAL:HG23	3:B:568:LEU:HD12	1.89	0.54
3:B:3535:LEU:O	3:B:3537:LYS:N	2.40	0.54
3:B:3921:ASP:OD1	3:B:3922:TYR:N	2.41	0.54
3:B:4851:TYR:HD1	3:B:4916:PHE:HE1	1.56	0.54
3:C:567:VAL:HG23	3:C:568:LEU:HD12	1.89	0.54
3:C:1721:GLU:HA	3:C:1724:CYS:HB2	1.89	0.54
3:C:4863:TYR:HA	3:C:4901:ILE:HG23	1.89	0.54
3:D:914:PRO:HD2	3:D:917:GLU:HG3	1.89	0.54
3:D:1716:ILE:HD12	3:D:1720:LEU:HD12	1.90	0.54
3:D:3535:LEU:O	3:D:3537:LYS:N	2.40	0.54
3:A:805:PRO:HB2	3:A:808:TYR:HE2	1.73	0.54
3:A:3528:THR:HA	3:B:1220:GLN:HE21	1.72	0.54
3:A:3535:LEU:O	3:A:3537:LYS:N	2.40	0.54
3:B:1581:LEU:C	3:B:1581:LEU:HD23	2.29	0.54
3:C:3921:ASP:OD1	3:C:3922:TYR:N	2.41	0.54
3:D:4222:VAL:HG21	3:D:4950:VAL:HG13	1.90	0.54
3:A:181:HIS:N	3:A:192:ASP:O	2.40	0.54
3:A:4766:THR:O	3:A:4767:TRP:C	2.46	0.54
3:B:1716:ILE:HD12	3:B:1720:LEU:HD12	1.90	0.54
3:B:2355:ARG:NH1	3:B:2355:ARG:HB2	2.23	0.54
3:D:1266:THR:HG23	3:D:1266:THR:O	2.07	0.54
3:D:4123:ILE:H	3:D:4123:ILE:HD12	1.72	0.54
3:D:4870:ASP:O	3:D:4872:PRO:HD3	2.08	0.54
3:A:2355:ARG:HB2	3:A:2355:ARG:NH1	2.24	0.53
3:B:4176:PRO:HA	3:B:4202:ARG:HH21	1.73	0.53
3:C:3571:TRP:O	3:C:3575:LEU:N	2.38	0.53
3:C:4958:CYS:HG	3:C:4975:PHE:HE1	1.55	0.53
3:A:1721:GLU:HA	3:A:1724:CYS:HB2	1.89	0.53
3:A:3758:MET:HB3	3:A:3762:ARG:HH12	1.74	0.53
3:B:1087:ARG:HD2	3:B:1223:PHE:CZ	2.43	0.53
3:B:4691:GLN:NE2	3:B:4692:PRO:HD2	2.24	0.53
3:B:4863:TYR:HA	3:B:4901:ILE:HG23	1.89	0.53
3:C:1087:ARG:HD2	3:C:1223:PHE:CZ	2.43	0.53
3:D:1802:ILE:HD12	3:D:1803:PRO:HD2	1.90	0.53
3:A:914:PRO:HD2	3:A:917:GLU:HG3	1.89	0.53
3:B:805:PRO:HB2	3:B:808:TYR:HE2	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4733:GLY:O	3:B:4737:ILE:HD13	2.09	0.53
3:C:914:PRO:HD2	3:C:917:GLU:HG3	1.89	0.53
3:C:2355:ARG:NH1	3:C:2355:ARG:HB2	2.24	0.53
3:D:2259:GLU:HA	3:D:2297:LYS:HZ2	1.73	0.53
3:D:3921:ASP:OD1	3:D:3922:TYR:N	2.41	0.53
3:A:345:LEU:HD22	3:A:387:ALA:HB1	1.91	0.53
3:A:3921:ASP:OD1	3:A:3922:TYR:N	2.41	0.53
3:A:4870:ASP:O	3:A:4872:PRO:HD3	2.08	0.53
3:B:139:GLU:O	3:B:141:ALA:N	2.41	0.53
3:B:345:LEU:HD22	3:B:387:ALA:HB1	1.91	0.53
3:B:4870:ASP:O	3:B:4872:PRO:HD3	2.08	0.53
3:B:4978:HIS:CE1	3:B:4983:HIS:CD2	2.95	0.53
3:C:229:GLU:OE1	3:C:247:TYR:HB3	2.09	0.53
3:C:1802:ILE:HD12	3:C:1803:PRO:HD2	1.90	0.53
3:D:110:ARG:HH12	3:D:115:ARG:HH11	1.56	0.53
3:D:229:GLU:OE1	3:D:247:TYR:HB3	2.09	0.53
3:A:139:GLU:O	3:A:141:ALA:N	2.41	0.53
3:A:694:PRO:HG3	3:A:826:ILE:HG23	1.91	0.53
3:A:977:LEU:HB3	3:A:1044:ARG:HH22	1.73	0.53
3:A:1948:ASP:N	3:A:1948:ASP:OD1	2.42	0.53
3:A:2259:GLU:HA	3:A:2297:LYS:HZ2	1.74	0.53
3:A:4892:ARG:HE	3:B:4895:GLY:CA	2.22	0.53
3:C:1581:LEU:CD2	3:C:1581:LEU:N	2.72	0.53
3:C:2368:LEU:HA	3:C:2374:SER:HA	1.91	0.53
3:C:4090:LYS:HG3	3:C:4112:LEU:HD13	1.90	0.53
3:C:4892:ARG:HH21	3:D:4895:GLY:HA3	1.73	0.53
3:D:2355:ARG:NH1	3:D:2355:ARG:HB2	2.24	0.53
3:D:4176:PRO:HA	3:D:4202:ARG:HH21	1.73	0.53
3:D:4739:GLU:O	3:D:4741:LEU:N	2.41	0.53
3:A:4222:VAL:HG21	3:A:4950:VAL:HG13	1.90	0.53
3:B:3758:MET:HB3	3:B:3762:ARG:HH12	1.73	0.53
3:C:219:VAL:HG22	3:C:261:ARG:HG3	1.91	0.53
3:C:712:TYR:HE1	3:C:1470:ARG:HH11	1.57	0.53
3:C:2760:GLU:O	3:C:2764:GLU:N	2.38	0.53
3:C:3758:MET:HB3	3:C:3762:ARG:HH12	1.73	0.53
3:C:4176:PRO:HA	3:C:4202:ARG:HH21	1.73	0.53
3:C:4885:PHE:CE2	3:C:4901:ILE:HD11	2.42	0.53
3:D:977:LEU:HB3	3:D:1044:ARG:HH22	1.73	0.53
3:D:4766:THR:O	3:D:4767:TRP:C	2.46	0.53
3:A:168:ASP:OD1	3:A:168:ASP:N	2.42	0.53
3:A:1266:THR:HG23	3:A:1266:THR:O	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4182:GLU:HB3	3:A:4983:HIS:CE1	2.44	0.53
3:B:2368:LEU:HA	3:B:2374:SER:HA	1.91	0.53
3:C:4733:GLY:O	3:C:4737:ILE:HD13	2.09	0.53
3:C:4848:VAL:HG11	3:C:4887:MET:HG2	1.89	0.53
3:D:219:VAL:HG22	3:D:261:ARG:HG3	1.91	0.53
3:D:3570:ARG:O	3:D:3572:GLN:N	2.42	0.53
3:D:4885:PHE:CE2	3:D:4901:ILE:HD11	2.42	0.53
3:A:1266:THR:OG1	3:A:1267:PRO:HD2	2.07	0.53
3:A:1947:CYS:SG	3:A:1948:ASP:N	2.82	0.53
3:B:1733:GLU:OE1	3:B:1733:GLU:N	2.42	0.53
3:B:4691:GLN:O	3:B:4692:PRO:C	2.47	0.53
3:C:4176:PRO:O	3:C:4202:ARG:NH2	2.41	0.53
3:C:4691:GLN:NE2	3:C:4692:PRO:HD2	2.24	0.53
3:D:694:PRO:HG3	3:D:826:ILE:HG23	1.91	0.53
3:A:110:ARG:HH12	3:A:115:ARG:HH11	1.56	0.53
3:A:2358:ILE:HD11	3:B:178:ARG:HE	1.73	0.53
3:A:3570:ARG:O	3:A:3572:GLN:N	2.42	0.53
3:A:3592:ILE:O	3:A:3594:ARG:N	2.42	0.53
3:A:4890:GLY:O	3:A:4892:ARG:N	2.42	0.53
3:A:4968:PHE:O	3:A:4974:GLY:HA3	2.09	0.53
3:B:229:GLU:OE1	3:B:247:TYR:HB3	2.09	0.53
3:B:1581:LEU:N	3:B:1581:LEU:CD2	2.72	0.53
3:B:4766:THR:O	3:B:4767:TRP:C	2.46	0.53
3:B:4904:PRO:HG3	3:B:4913:ARG:HB3	1.91	0.53
3:C:2459:SER:HB2	3:D:133:PHE:HZ	1.74	0.53
3:C:3592:ILE:O	3:C:3594:ARG:N	2.42	0.53
3:C:4691:GLN:O	3:C:4692:PRO:C	2.47	0.53
3:D:872:GLU:HA	3:D:875:ALA:HB3	1.91	0.53
3:A:160:GLY:O	3:D:3984:ARG:NH1	2.41	0.53
3:A:219:VAL:HG22	3:A:261:ARG:HG3	1.91	0.53
3:A:4739:GLU:O	3:A:4741:LEU:N	2.41	0.53
3:B:872:GLU:HA	3:B:875:ALA:HB3	1.91	0.53
3:B:977:LEU:HB3	3:B:1044:ARG:HH22	1.73	0.53
3:B:1266:THR:HG23	3:B:1266:THR:O	2.07	0.53
3:B:1947:CYS:SG	3:B:1948:ASP:N	2.82	0.53
3:B:3901:ASN:OD1	3:B:3904:ARG:NH2	2.29	0.53
3:C:694:PRO:HG3	3:C:826:ILE:HG23	1.91	0.53
3:C:3570:ARG:O	3:C:3572:GLN:N	2.42	0.53
3:D:3592:ILE:O	3:D:3594:ARG:N	2.42	0.53
3:D:3758:MET:HB3	3:D:3762:ARG:HH12	1.74	0.53
3:D:4090:LYS:HG3	3:D:4112:LEU:HD13	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:3678:SER:OG	3:A:3679:LYS:N	2.35	0.52
3:B:3570:ARG:O	3:B:3572:GLN:N	2.42	0.52
3:B:3592:ILE:O	3:B:3594:ARG:N	2.42	0.52
3:B:4890:GLY:O	3:B:4892:ARG:N	2.42	0.52
3:C:4807:PHE:HD1	3:D:4853:VAL:HG22	1.74	0.52
3:C:4890:GLY:O	3:C:4892:ARG:N	2.42	0.52
3:D:1947:CYS:SG	3:D:1948:ASP:N	2.82	0.52
3:D:4721:LYS:HA	3:D:4741:LEU:CD2	2.38	0.52
3:D:4780:PHE:HB3	3:D:4784:PHE:CE2	2.44	0.52
3:A:2889:LYS:O	3:A:2893:GLU:N	2.42	0.52
3:B:3528:THR:HA	3:C:1220:GLN:HE21	1.75	0.52
3:D:345:LEU:HD22	3:D:387:ALA:HB1	1.91	0.52
3:D:712:TYR:HE1	3:D:1470:ARG:HH11	1.57	0.52
3:D:805:PRO:HB2	3:D:808:TYR:HE2	1.73	0.52
3:A:4062:PHE:CG	3:A:4170:ILE:HD11	2.44	0.52
3:A:4127:GLU:O	3:A:4128:PHE:C	2.48	0.52
3:A:4691:GLN:NE2	3:A:4692:PRO:HD2	2.24	0.52
3:B:168:ASP:OD1	3:B:168:ASP:N	2.42	0.52
3:B:219:VAL:HG22	3:B:261:ARG:HG3	1.91	0.52
3:B:4062:PHE:CG	3:B:4170:ILE:HD11	2.44	0.52
3:C:345:LEU:HD22	3:C:387:ALA:HB1	1.91	0.52
3:C:977:LEU:HB3	3:C:1044:ARG:HH22	1.73	0.52
3:C:4744:ASP:C	3:C:4746:ALA:H	2.13	0.52
3:D:1087:ARG:HD2	3:D:1223:PHE:CZ	2.43	0.52
3:D:1733:GLU:N	3:D:1733:GLU:OE1	2.42	0.52
3:D:1948:ASP:N	3:D:1948:ASP:OD1	2.42	0.52
3:D:2760:GLU:O	3:D:2764:GLU:N	2.38	0.52
3:D:4744:ASP:C	3:D:4746:ALA:H	2.13	0.52
3:A:872:GLU:HA	3:A:875:ALA:HB3	1.91	0.52
3:A:4176:PRO:O	3:A:4202:ARG:NH2	2.41	0.52
3:A:4721:LYS:HA	3:A:4741:LEU:CD2	2.38	0.52
3:A:4733:GLY:O	3:A:4737:ILE:HD13	2.09	0.52
3:A:4744:ASP:C	3:A:4746:ALA:H	2.13	0.52
3:A:4992:LEU:HD21	8:A:5105:CFF:H81	1.91	0.52
3:B:1724:CYS:HB3	3:B:1728:ARG:HH22	1.74	0.52
3:C:110:ARG:HH12	3:C:115:ARG:HH11	1.56	0.52
3:C:129:ASP:O	3:C:130:LYS:C	2.45	0.52
3:C:872:GLU:HA	3:C:875:ALA:HB3	1.91	0.52
3:C:3293:PRO:O	3:C:3295:ALA:N	2.43	0.52
3:C:4766:THR:O	3:C:4767:TRP:C	2.46	0.52
3:C:4870:ASP:O	3:C:4872:PRO:HD3	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4977:THR:C	3:C:4979:THR:H	2.13	0.52
3:D:4127:GLU:O	3:D:4128:PHE:C	2.48	0.52
3:D:4189:ARG:CB	3:D:5031:GLN:HE22	2.22	0.52
3:A:3293:PRO:O	3:A:3295:ALA:N	2.43	0.52
3:B:110:ARG:HH12	3:B:115:ARG:HH11	1.56	0.52
3:B:1802:ILE:HD12	3:B:1803:PRO:HD2	1.90	0.52
3:B:4744:ASP:C	3:B:4746:ALA:H	2.13	0.52
3:C:1733:GLU:OE1	3:C:1733:GLU:N	2.42	0.52
3:D:4691:GLN:O	3:D:4692:PRO:C	2.47	0.52
3:B:1676:LEU:HB3	3:B:2167:ILE:HD12	1.91	0.52
3:B:4176:PRO:O	3:B:4202:ARG:NH2	2.41	0.52
3:B:4721:LYS:HA	3:B:4741:LEU:CD2	2.38	0.52
3:B:5032:TYR:HB2	3:B:5037:SER:C	2.30	0.52
3:C:1676:LEU:HB3	3:C:2167:ILE:HD12	1.91	0.52
3:C:3901:ASN:OD1	3:C:3904:ARG:NH2	2.29	0.52
3:C:5032:TYR:HB2	3:C:5037:SER:C	2.30	0.52
3:D:168:ASP:OD1	3:D:168:ASP:N	2.42	0.52
3:D:4890:GLY:O	3:D:4892:ARG:N	2.42	0.52
3:A:1087:ARG:HD2	3:A:1223:PHE:CZ	2.43	0.52
3:A:3935:TRP:NE1	3:B:77:ALA:HB2	2.24	0.52
3:B:694:PRO:HG3	3:B:826:ILE:HG23	1.91	0.52
3:B:4996:ILE:HD11	8:B:5105:CFF:C8	2.40	0.52
3:C:2889:LYS:O	3:C:2893:GLU:N	2.43	0.52
3:D:3756:LYS:HG3	3:D:3757:GLU:OE1	2.10	0.52
3:D:5032:TYR:HB2	3:D:5037:SER:C	2.30	0.52
3:A:359:TYR:OH	3:A:385:ASP:OD2	2.21	0.52
3:A:1802:ILE:HD12	3:A:1803:PRO:HD2	1.90	0.52
3:A:4973:HIS:NE2	3:B:4228:ALA:HB1	2.25	0.52
3:C:1724:CYS:HB3	3:C:1728:ARG:HH22	1.74	0.52
3:D:1581:LEU:CD2	3:D:1581:LEU:N	2.72	0.52
3:A:1581:LEU:HD23	3:A:1581:LEU:C	2.28	0.52
3:A:1969:LEU:HD21	3:A:2009:LEU:HD13	1.92	0.52
3:C:1947:CYS:SG	3:C:1948:ASP:N	2.82	0.52
3:C:1969:LEU:HD21	3:C:2009:LEU:HD13	1.92	0.52
3:D:359:TYR:OH	3:D:385:ASP:OD2	2.21	0.52
3:D:2889:LYS:O	3:D:2893:GLU:N	2.42	0.52
1:E:7:ILE:HD11	1:E:73:LYS:HB2	1.92	0.52
3:A:123:THR:OG1	3:A:134:ASP:OD1	2.28	0.52
3:A:907:LEU:O	3:A:963:ASN:ND2	2.43	0.52
3:A:2368:LEU:HA	3:A:2374:SER:HA	1.91	0.52
3:B:340:LYS:N	3:B:344:SER:HG	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1100:MET:HB2	3:B:1143:TRP:CH2	2.46	0.52
3:B:4885:PHE:CE2	3:B:4901:ILE:HD11	2.42	0.52
3:B:4977:THR:C	3:B:4979:THR:H	2.13	0.52
3:C:315:CYS:SG	3:C:316:PHE:N	2.83	0.52
3:C:4045:VAL:HG13	3:C:4159:ARG:NH2	2.25	0.52
3:D:1271:ARG:NH1	3:D:1271:ARG:CG	2.72	0.52
3:D:3817:LEU:HB2	3:D:3899:PHE:CE1	2.45	0.52
3:D:4062:PHE:CG	3:D:4170:ILE:HD11	2.44	0.52
3:D:4977:THR:C	3:D:4979:THR:H	2.13	0.52
1:F:7:ILE:HD11	1:F:73:LYS:HB2	1.92	0.51
3:A:229:GLU:OE1	3:A:247:TYR:HB3	2.09	0.51
3:B:961:MET:HB2	3:B:963:ASN:OD1	2.11	0.51
3:B:1969:LEU:HD21	3:B:2009:LEU:HD13	1.92	0.51
3:B:3039:ILE:O	3:B:3041:SER:N	2.44	0.51
3:B:4952:GLU:O	3:B:4953:ASP:C	2.49	0.51
3:C:123:THR:OG1	3:C:134:ASP:OD1	2.28	0.51
3:C:4062:PHE:CG	3:C:4170:ILE:HD11	2.44	0.51
3:C:4141:PHE:HD1	3:C:4174:PHE:CD1	2.28	0.51
3:C:4721:LYS:HA	3:C:4741:LEU:CD2	2.38	0.51
3:D:40:GLU:OE2	3:D:44:ASN:N	2.44	0.51
3:D:315:CYS:SG	3:D:316:PHE:N	2.84	0.51
3:D:1724:CYS:HB3	3:D:1728:ARG:HH22	1.74	0.51
3:D:3293:PRO:O	3:D:3295:ALA:N	2.43	0.51
3:D:4176:PRO:O	3:D:4202:ARG:NH2	2.41	0.51
3:D:4733:GLY:O	3:D:4737:ILE:HD13	2.09	0.51
1:H:7:ILE:HD11	1:H:73:LYS:HB2	1.92	0.51
3:A:40:GLU:OE2	3:A:44:ASN:N	2.44	0.51
3:A:243:ARG:HB3	3:A:300:VAL:HG13	1.93	0.51
3:B:712:TYR:HE1	3:B:1470:ARG:HH11	1.57	0.51
3:B:3293:PRO:O	3:B:3295:ALA:N	2.43	0.51
3:B:3935:TRP:NE1	3:C:77:ALA:HB2	2.25	0.51
3:B:4127:GLU:O	3:B:4128:PHE:C	2.48	0.51
3:D:952:LYS:HG2	3:D:970:LEU:HG	1.92	0.51
3:D:1100:MET:HB2	3:D:1143:TRP:CH2	2.45	0.51
3:D:3039:ILE:O	3:D:3041:SER:N	2.44	0.51
3:D:4238:CYS:SG	3:D:4989:MET:HG3	2.51	0.51
3:A:683:ARG:NH1	3:A:707:VAL:O	2.44	0.51
3:A:4189:ARG:CB	3:A:5031:GLN:HE22	2.22	0.51
3:B:181:HIS:N	3:B:192:ASP:O	2.40	0.51
3:B:243:ARG:HB3	3:B:300:VAL:HG13	1.93	0.51
3:B:315:CYS:SG	3:B:316:PHE:N	2.84	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1948:ASP:N	3:B:1948:ASP:OD1	2.42	0.51
3:B:2296:GLU:HG2	3:B:2356:LEU:HD21	1.93	0.51
3:C:470:SER:O	3:C:474:ARG:NH1	2.43	0.51
3:C:787:VAL:HG13	3:C:789:VAL:HG23	1.93	0.51
3:C:952:LYS:HG2	3:C:970:LEU:HG	1.92	0.51
3:C:3756:LYS:HG3	3:C:3757:GLU:OE1	2.10	0.51
3:D:907:LEU:O	3:D:963:ASN:ND2	2.43	0.51
3:D:1969:LEU:HD21	3:D:2009:LEU:HD13	1.92	0.51
3:D:2296:GLU:HG2	3:D:2356:LEU:HD21	1.93	0.51
3:D:4848:VAL:HG23	3:D:4883:TYR:HE1	1.76	0.51
3:D:4904:PRO:HG3	3:D:4913:ARG:HB3	1.91	0.51
3:A:315:CYS:SG	3:A:316:PHE:N	2.83	0.51
3:A:470:SER:O	3:A:474:ARG:NH1	2.43	0.51
3:A:3997:ALA:HB1	3:A:4057:MET:SD	2.51	0.51
3:A:4691:GLN:O	3:A:4692:PRO:C	2.47	0.51
3:A:4904:PRO:HG3	3:A:4913:ARG:HB3	1.91	0.51
3:A:5032:TYR:HB2	3:A:5037:SER:C	2.30	0.51
3:B:787:VAL:HG13	3:B:789:VAL:HG23	1.93	0.51
3:B:2470:ILE:O	3:B:2470:ILE:HG13	2.11	0.51
3:C:243:ARG:HB3	3:C:300:VAL:HG13	1.93	0.51
3:C:1100:MET:HB2	3:C:1143:TRP:CH2	2.45	0.51
3:C:3648:ARG:HH11	3:C:3648:ARG:HG3	1.76	0.51
3:C:4820:VAL:HG12	3:C:4823:LEU:HB2	1.91	0.51
3:D:1581:LEU:HD23	3:D:1581:LEU:C	2.29	0.51
3:D:2368:LEU:HA	3:D:2374:SER:HA	1.91	0.51
3:D:3997:ALA:HB1	3:D:4057:MET:SD	2.51	0.51
2:L:142:PHE:HA	2:L:145:MET:HG2	1.93	0.51
1:G:7:ILE:HD11	1:G:73:LYS:HB2	1.92	0.51
3:A:1676:LEU:HB3	3:A:2167:ILE:HD12	1.91	0.51
3:A:3756:LYS:HG3	3:A:3757:GLU:OE1	2.10	0.51
3:A:4892:ARG:HE	3:B:4895:GLY:HA3	1.76	0.51
3:B:3648:ARG:HH11	3:B:3648:ARG:HG3	1.76	0.51
3:B:3817:LEU:HB2	3:B:3899:PHE:CE1	2.45	0.51
3:B:4985:LEU:HG	3:B:4986:ALA:H	1.75	0.51
3:C:689:THR:HG22	3:C:778:PHE:CE2	2.46	0.51
3:C:4960:ILE:HG22	3:C:5023:PRO:HG2	1.91	0.51
3:D:961:MET:HB2	3:D:963:ASN:OD1	2.11	0.51
3:D:3648:ARG:HG3	3:D:3648:ARG:HH11	1.76	0.51
3:A:952:LYS:HG2	3:A:970:LEU:HG	1.92	0.51
3:A:1724:CYS:HB3	3:A:1728:ARG:HH22	1.74	0.51
3:A:1733:GLU:OE1	3:A:1733:GLU:N	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4069:LYS:HD3	3:A:4129:ALA:HB1	1.93	0.51
3:A:4141:PHE:HD1	3:A:4174:PHE:CD1	2.28	0.51
3:B:131:LEU:HD23	3:B:131:LEU:H	1.75	0.51
3:B:3756:LYS:HG3	3:B:3757:GLU:OE1	2.10	0.51
3:C:4904:PRO:HG3	3:C:4913:ARG:HB3	1.91	0.51
3:D:4141:PHE:CZ	3:D:4178:LEU:HD12	2.46	0.51
3:D:4999:ASP:HB3	3:D:5002:GLU:CD	2.31	0.51
2:I:142:PHE:HA	2:I:145:MET:HG2	1.93	0.51
3:A:3648:ARG:HG3	3:A:3648:ARG:HH11	1.76	0.51
3:A:3817:LEU:HB2	3:A:3899:PHE:CE1	2.45	0.51
3:B:123:THR:OG1	3:B:134:ASP:OD1	2.28	0.51
3:B:4126:GLU:O	3:B:4127:GLU:C	2.49	0.51
3:B:4141:PHE:CZ	3:B:4178:LEU:HD12	2.46	0.51
3:B:4141:PHE:HD1	3:B:4174:PHE:CD1	2.28	0.51
3:C:907:LEU:O	3:C:963:ASN:ND2	2.43	0.51
3:C:4701:TRP:CZ2	3:C:4781:GLY:HA3	2.46	0.51
3:D:2953:LYS:O	3:D:2957:PHE:N	2.43	0.51
3:D:4701:TRP:CZ2	3:D:4781:GLY:HA3	2.46	0.51
3:A:712:TYR:HE1	3:A:1470:ARG:HH11	1.57	0.51
3:A:2296:GLU:HG2	3:A:2356:LEU:HD21	1.93	0.51
3:A:4238:CYS:SG	3:A:4989:MET:HG3	2.51	0.51
3:A:4671:PHE:C	3:A:4673:ARG:N	2.63	0.51
3:B:3997:ALA:HB1	3:B:4057:MET:SD	2.51	0.51
3:B:4701:TRP:CZ2	3:B:4781:GLY:HA3	2.46	0.51
3:C:600:LEU:HD21	3:C:1666:THR:HA	1.93	0.51
3:C:683:ARG:NH1	3:C:707:VAL:O	2.44	0.51
3:C:805:PRO:HB2	3:C:808:TYR:HE2	1.73	0.51
3:C:2296:GLU:HG2	3:C:2356:LEU:HD21	1.93	0.51
3:D:787:VAL:HG13	3:D:789:VAL:HG23	1.93	0.51
3:D:4952:GLU:O	3:D:4953:ASP:C	2.49	0.51
3:A:787:VAL:HG13	3:A:789:VAL:HG23	1.93	0.51
3:A:4141:PHE:CZ	3:A:4178:LEU:HD12	2.46	0.51
3:A:4701:TRP:CZ2	3:A:4781:GLY:HA3	2.46	0.51
3:A:4905:ALA:O	3:A:4907:ASP:N	2.44	0.51
3:B:4222:VAL:HG21	3:B:4950:VAL:HA	1.93	0.51
3:C:110:ARG:HH12	3:C:115:ARG:NH1	2.09	0.51
3:C:961:MET:HB2	3:C:963:ASN:OD1	2.11	0.51
3:C:2470:ILE:HG13	3:C:2470:ILE:O	2.11	0.51
3:C:2956:ALA:O	3:C:2960:LEU:N	2.44	0.51
3:C:4238:CYS:SG	3:C:4989:MET:HG3	2.51	0.51
3:C:4582:VAL:HA	3:C:4629:TYR:HA	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:243:ARG:HB3	3:D:300:VAL:HG13	1.93	0.51
3:D:1676:LEU:HB3	3:D:2167:ILE:HD12	1.91	0.51
3:D:4691:GLN:NE2	3:D:4692:PRO:HD2	2.24	0.51
3:A:1100:MET:HB2	3:A:1143:TRP:CH2	2.45	0.51
3:A:3039:ILE:O	3:A:3041:SER:N	2.43	0.51
3:A:4999:ASP:HB3	3:A:5002:GLU:CD	2.31	0.51
3:B:648:ILE:HD11	3:B:779:PRO:HG2	1.93	0.51
3:B:2618:MET:O	3:B:2622:LEU:N	2.43	0.51
3:B:4111:LEU:C	3:B:4113:SER:H	2.15	0.51
3:B:4671:PHE:C	3:B:4673:ARG:N	2.63	0.51
3:C:3039:ILE:O	3:C:3041:SER:N	2.43	0.51
3:C:3725:TYR:HA	3:C:3728:ILE:HG12	1.93	0.51
3:C:4999:ASP:HB3	3:C:5002:GLU:CD	2.31	0.51
3:D:1101:ARG:HB3	3:D:1123:VAL:HG21	1.93	0.51
3:D:4905:ALA:O	3:D:4907:ASP:N	2.44	0.51
3:A:1581:LEU:N	3:A:1581:LEU:CD2	2.72	0.50
3:A:2470:ILE:HG13	3:A:2470:ILE:O	2.11	0.50
3:A:2956:ALA:O	3:A:2960:LEU:N	2.44	0.50
3:A:4906:GLY:O	3:A:4907:ASP:C	2.50	0.50
3:A:4941:GLY:HA2	3:A:4944:ARG:HH12	1.76	0.50
3:B:4182:GLU:HB2	3:B:4983:HIS:CE1	2.47	0.50
3:B:4739:GLU:O	3:B:4741:LEU:N	2.41	0.50
3:B:4941:GLY:HA2	3:B:4944:ARG:HH12	1.76	0.50
3:C:181:HIS:N	3:C:192:ASP:O	2.40	0.50
3:C:648:ILE:HD11	3:C:779:PRO:HG2	1.93	0.50
3:C:4671:PHE:C	3:C:4673:ARG:N	2.63	0.50
3:C:4905:ALA:O	3:C:4907:ASP:N	2.44	0.50
3:D:600:LEU:HD21	3:D:1666:THR:HA	1.93	0.50
3:D:4141:PHE:HD1	3:D:4174:PHE:CD1	2.28	0.50
3:D:4968:PHE:O	3:D:4974:GLY:HA3	2.11	0.50
3:A:961:MET:HB2	3:A:963:ASN:OD1	2.11	0.50
3:A:4222:VAL:HG21	3:A:4950:VAL:HA	1.93	0.50
3:B:40:GLU:OE2	3:B:44:ASN:N	2.44	0.50
3:B:470:SER:O	3:B:474:ARG:NH1	2.43	0.50
3:B:1196:PRO:O	3:B:1198:GLN:NE2	2.44	0.50
3:B:2889:LYS:O	3:B:2893:GLU:N	2.42	0.50
3:B:4238:CYS:SG	3:B:4989:MET:HG3	2.51	0.50
3:C:3817:LEU:HB2	3:C:3899:PHE:CE1	2.45	0.50
3:C:3997:ALA:HB1	3:C:4057:MET:SD	2.51	0.50
3:C:4126:GLU:O	3:C:4127:GLU:C	2.49	0.50
3:C:4952:GLU:O	3:C:4953:ASP:C	2.49	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:4671:PHE:C	3:D:4673:ARG:N	2.63	0.50
3:A:2760:GLU:O	3:A:2764:GLU:N	2.38	0.50
3:A:4904:PRO:O	3:A:4905:ALA:C	2.50	0.50
3:B:952:LYS:HG2	3:B:970:LEU:HG	1.92	0.50
3:B:1762:LEU:HD12	3:B:1863:LEU:HD13	1.94	0.50
3:B:4816:ILE:HG21	3:C:4846:VAL:HG21	1.93	0.50
3:B:4835:LYS:HA	3:B:4838:VAL:HG22	1.93	0.50
3:B:4906:GLY:O	3:B:4907:ASP:C	2.50	0.50
3:C:1689:VAL:HG23	3:C:1690:ASP:N	2.27	0.50
3:C:2459:SER:CB	3:D:133:PHE:HZ	2.24	0.50
3:C:4069:LYS:HD3	3:C:4129:ALA:HB1	1.93	0.50
3:C:4141:PHE:CZ	3:C:4178:LEU:HD12	2.46	0.50
3:D:470:SER:O	3:D:474:ARG:NH1	2.43	0.50
3:D:645:ARG:HG3	3:D:778:PHE:CD1	2.46	0.50
3:D:683:ARG:NH1	3:D:707:VAL:O	2.44	0.50
3:D:1976:ARG:NH2	3:D:2022:PRO:O	2.44	0.50
3:D:4941:GLY:HA2	3:D:4944:ARG:NH1	2.27	0.50
3:A:689:THR:HG22	3:A:778:PHE:CE2	2.46	0.50
3:A:4111:LEU:C	3:A:4113:SER:H	2.15	0.50
3:A:4176:PRO:C	3:A:4202:ARG:HH21	2.15	0.50
3:B:645:ARG:HG3	3:B:778:PHE:CD1	2.46	0.50
3:B:683:ARG:NH1	3:B:707:VAL:O	2.44	0.50
3:B:907:LEU:O	3:B:963:ASN:ND2	2.43	0.50
3:B:1101:ARG:HB3	3:B:1123:VAL:HG21	1.93	0.50
3:B:1649:ASP:OD1	3:B:1650:ILE:N	2.45	0.50
3:B:1689:VAL:HG23	3:B:1690:ASP:N	2.27	0.50
3:B:1976:ARG:NH2	3:B:2022:PRO:O	2.44	0.50
3:B:3725:TYR:HA	3:B:3728:ILE:HG12	1.93	0.50
3:C:4127:GLU:O	3:C:4128:PHE:C	2.48	0.50
3:C:4222:VAL:HG21	3:C:4950:VAL:HA	1.93	0.50
3:C:4976:GLU:HA	3:C:4976:GLU:OE2	2.12	0.50
3:D:4069:LYS:HD3	3:D:4129:ALA:HB1	1.93	0.50
3:D:4160:LEU:O	3:D:4161:ARG:C	2.50	0.50
3:D:4176:PRO:C	3:D:4202:ARG:HH21	2.15	0.50
3:D:4913:ARG:NH1	3:D:4917:ASP:OD2	2.43	0.50
3:D:4920:PHE:O	3:D:4924:VAL:HG22	2.10	0.50
3:A:110:ARG:HH12	3:A:115:ARG:NH1	2.09	0.50
3:A:645:ARG:HG3	3:A:778:PHE:CD1	2.46	0.50
3:A:4941:GLY:HA2	3:A:4944:ARG:NH1	2.27	0.50
3:B:110:ARG:HH12	3:B:115:ARG:NH1	2.09	0.50
3:B:4826:ILE:HD11	3:C:4836:GLN:HB3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4905:ALA:O	3:B:4907:ASP:N	2.44	0.50
3:C:1101:ARG:HB3	3:C:1123:VAL:HG21	1.93	0.50
3:C:1976:ARG:NH2	3:C:2022:PRO:O	2.44	0.50
3:C:4234:PHE:HB2	3:C:4959:PHE:HZ	1.76	0.50
3:C:4816:ILE:O	3:C:4823:LEU:HG	2.11	0.50
3:D:1649:ASP:OD1	3:D:1650:ILE:N	2.45	0.50
3:A:822:ARG:HG2	3:A:822:ARG:HH11	1.77	0.50
3:A:4123:ILE:O	3:A:4125:PHE:N	2.45	0.50
3:B:1707:LEU:O	3:B:1709:ALA:N	2.45	0.50
3:B:2321:ILE:HG13	3:B:2322:GLY:N	2.26	0.50
3:C:4904:PRO:O	3:C:4905:ALA:C	2.50	0.50
3:C:4941:GLY:HA2	3:C:4944:ARG:HH12	1.76	0.50
3:D:123:THR:OG1	3:D:134:ASP:OD1	2.28	0.50
3:D:292:ALA:HB1	3:D:311:ALA:HB1	1.94	0.50
3:D:689:THR:HG22	3:D:778:PHE:CE2	2.46	0.50
3:D:2927:LEU:HD23	3:D:2930:LEU:HD12	1.94	0.50
3:D:4123:ILE:O	3:D:4125:PHE:N	2.45	0.50
3:A:533:ASN:OD1	3:A:534:ARG:N	2.45	0.50
3:A:1689:VAL:HG23	3:A:1690:ASP:N	2.27	0.50
3:B:1451:GLY:HA3	3:B:1494:MET:HA	1.94	0.50
3:B:2956:ALA:O	3:B:2960:LEU:N	2.44	0.50
3:C:4176:PRO:C	3:C:4202:ARG:HH21	2.15	0.50
3:C:4831:THR:O	3:C:4832:HIS:C	2.50	0.50
3:C:4941:GLY:HA2	3:C:4944:ARG:NH1	2.27	0.50
3:D:2470:ILE:O	3:D:2470:ILE:HG13	2.11	0.50
3:D:4126:GLU:O	3:D:4127:GLU:C	2.49	0.50
2:K:142:PHE:HA	2:K:145:MET:HG2	1.93	0.50
2:J:142:PHE:HA	2:J:145:MET:HG2	1.93	0.50
3:A:501:ALA:HB1	3:A:512:ALA:HB1	1.94	0.50
3:A:1976:ARG:NH2	3:A:2022:PRO:O	2.44	0.50
3:A:4952:GLU:O	3:A:4953:ASP:C	2.49	0.50
3:A:5027:CYS:O	3:A:5028:PHE:C	2.50	0.50
3:B:1477:GLY:HA2	3:B:1484:HIS:HB2	1.94	0.50
3:B:2358:ILE:HD11	3:C:178:ARG:HE	1.76	0.50
3:C:40:GLU:OE2	3:C:44:ASN:N	2.44	0.50
3:C:1707:LEU:O	3:C:1709:ALA:N	2.45	0.50
3:D:1707:LEU:O	3:D:1709:ALA:N	2.45	0.50
3:D:2956:ALA:O	3:D:2960:LEU:N	2.44	0.50
3:D:3901:ASN:OD1	3:D:3904:ARG:NH2	2.29	0.50
3:D:4671:PHE:O	3:D:4673:ARG:N	2.45	0.50
3:D:4941:GLY:HA2	3:D:4944:ARG:HH12	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:4966:ASP:C	3:D:4968:PHE:H	2.15	0.50
3:A:233:ILE:HG22	3:A:234:SER:H	1.77	0.50
3:A:1451:GLY:HA3	3:A:1494:MET:HA	1.94	0.50
3:A:3327:LEU:O	3:A:3331:GLU:N	2.44	0.50
3:A:4126:GLU:O	3:A:4127:GLU:C	2.49	0.50
3:A:4719:PHE:O	3:A:4720:VAL:C	2.50	0.50
3:A:4885:PHE:CE2	3:A:4901:ILE:HD11	2.42	0.50
3:B:501:ALA:HB1	3:B:512:ALA:HB1	1.94	0.50
3:B:4160:LEU:O	3:B:4161:ARG:C	2.50	0.50
3:B:4242:ILE:CG2	8:B:5105:CFF:H121	2.41	0.50
3:B:4963:ILE:HD11	3:B:5030:LYS:HE3	1.94	0.50
3:C:533:ASN:OD1	3:C:534:ARG:N	2.45	0.50
3:C:1649:ASP:OD1	3:C:1650:ILE:N	2.45	0.50
3:C:3327:LEU:O	3:C:3331:GLU:N	2.44	0.50
3:C:4123:ILE:O	3:C:4125:PHE:N	2.45	0.50
3:C:4671:PHE:O	3:C:4673:ARG:N	2.45	0.50
3:D:4904:PRO:O	3:D:4905:ALA:C	2.50	0.50
3:D:4906:GLY:O	3:D:4907:ASP:C	2.50	0.50
3:A:600:LEU:HD21	3:A:1666:THR:HA	1.93	0.49
3:B:4123:ILE:O	3:B:4125:PHE:N	2.45	0.49
3:C:1451:GLY:HA3	3:C:1494:MET:HA	1.94	0.49
3:D:110:ARG:HH12	3:D:115:ARG:NH1	2.09	0.49
3:D:648:ILE:HD11	3:D:779:PRO:HG2	1.93	0.49
3:D:2321:ILE:HG13	3:D:2322:GLY:N	2.26	0.49
3:A:2927:LEU:HD23	3:A:2930:LEU:HD12	1.94	0.49
3:A:4913:ARG:NH1	3:A:4917:ASP:OD2	2.43	0.49
3:A:4966:ASP:O	3:A:4967:TYR:C	2.49	0.49
3:B:822:ARG:HG2	3:B:822:ARG:HH11	1.77	0.49
3:B:4069:LYS:HD3	3:B:4129:ALA:HB1	1.93	0.49
3:B:4882:CYS:O	3:B:4883:TYR:C	2.46	0.49
3:B:4999:ASP:HB3	3:B:5002:GLU:CD	2.31	0.49
3:C:233:ILE:HG22	3:C:234:SER:N	2.28	0.49
3:C:292:ALA:HB1	3:C:311:ALA:HB1	1.94	0.49
3:C:501:ALA:HB1	3:C:512:ALA:HB1	1.94	0.49
3:C:645:ARG:HG3	3:C:778:PHE:CD1	2.46	0.49
3:C:883:ALA:O	3:C:887:ILE:N	2.45	0.49
3:C:2868:SER:O	3:C:2872:GLN:N	2.32	0.49
3:D:1689:VAL:HG23	3:D:1690:ASP:N	2.27	0.49
3:D:4222:VAL:HG21	3:D:4950:VAL:HA	1.93	0.49
3:A:1649:ASP:OD1	3:A:1650:ILE:N	2.45	0.49
3:A:1948:ASP:HA	3:A:1951:LEU:HB2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4222:VAL:HG23	3:A:4950:VAL:HG22	1.95	0.49
3:A:4671:PHE:O	3:A:4673:ARG:N	2.45	0.49
3:A:4826:ILE:HD11	3:B:4836:GLN:CB	2.42	0.49
3:B:689:THR:HG22	3:B:778:PHE:CE2	2.46	0.49
3:B:4671:PHE:O	3:B:4673:ARG:N	2.45	0.49
3:B:4719:PHE:O	3:B:4720:VAL:C	2.50	0.49
3:C:223:PHE:CE2	3:C:391:THR:HG21	2.48	0.49
3:C:1271:ARG:NH1	3:C:1271:ARG:CG	2.73	0.49
3:C:1477:GLY:HA2	3:C:1484:HIS:HB2	1.94	0.49
3:C:1948:ASP:N	3:C:1948:ASP:OD1	2.42	0.49
3:C:1948:ASP:HA	3:C:1951:LEU:HB2	1.93	0.49
3:C:2259:GLU:HA	3:C:2297:LYS:HZ2	1.76	0.49
3:C:2953:LYS:O	3:C:2957:PHE:N	2.43	0.49
3:C:4158:PRO:O	3:C:4159:ARG:C	2.51	0.49
3:C:4160:LEU:O	3:C:4161:ARG:C	2.50	0.49
3:C:4906:GLY:O	3:C:4907:ASP:C	2.50	0.49
3:C:4963:ILE:HD11	3:C:5030:LYS:HE3	1.94	0.49
3:D:883:ALA:O	3:D:887:ILE:N	2.45	0.49
3:D:1948:ASP:HA	3:D:1951:LEU:HB2	1.93	0.49
3:D:1977:TYR:HA	3:D:1997:GLU:OE2	2.13	0.49
3:D:3725:TYR:HA	3:D:3728:ILE:HG12	1.93	0.49
3:D:4045:VAL:HG13	3:D:4159:ARG:NH2	2.25	0.49
3:A:1675:ALA:O	3:A:1677:GLY:N	2.43	0.49
3:A:1762:LEU:HD12	3:A:1863:LEU:HD13	1.94	0.49
3:A:4160:LEU:O	3:A:4161:ARG:C	2.50	0.49
3:B:2862:LEU:HB3	3:B:2928:LYS:HB3	1.94	0.49
3:C:2927:LEU:HD23	3:C:2930:LEU:HD12	1.94	0.49
3:C:4111:LEU:C	3:C:4113:SER:H	2.15	0.49
3:D:233:ILE:HG22	3:D:234:SER:H	1.76	0.49
3:D:2777:TYR:HB2	3:D:2791:LEU:HD22	1.95	0.49
3:A:2321:ILE:HG13	3:A:2322:GLY:N	2.26	0.49
3:A:2862:LEU:HB3	3:A:2928:LYS:HB3	1.95	0.49
3:B:292:ALA:HB1	3:B:311:ALA:HB1	1.93	0.49
3:B:1452:TRP:N	3:B:1493:TYR:O	2.42	0.49
3:B:1977:TYR:HA	3:B:1997:GLU:OE2	2.13	0.49
3:B:2777:TYR:HB2	3:B:2791:LEU:HD22	1.95	0.49
3:C:1762:LEU:HD12	3:C:1863:LEU:HD13	1.94	0.49
3:C:4878:ASP:CB	3:C:4881:THR:HG23	2.43	0.49
3:D:233:ILE:HG22	3:D:234:SER:N	2.28	0.49
3:D:501:ALA:HB1	3:D:512:ALA:HB1	1.94	0.49
3:D:4158:PRO:O	3:D:4159:ARG:C	2.51	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:4222:VAL:HG23	3:D:4950:VAL:HG22	1.95	0.49
2:L:50:GLN:NE2	2:L:50:GLN:CA	2.73	0.49
3:A:1252:HIS:O	3:A:1253:PRO:C	2.51	0.49
3:B:233:ILE:HG22	3:B:234:SER:H	1.77	0.49
3:B:4941:GLY:HA2	3:B:4944:ARG:NH1	2.27	0.49
3:C:233:ILE:HG22	3:C:234:SER:H	1.76	0.49
3:C:1252:HIS:O	3:C:1253:PRO:C	2.51	0.49
3:C:4739:GLU:O	3:C:4741:LEU:N	2.41	0.49
3:C:4975:PHE:C	3:C:4977:THR:N	2.66	0.49
3:D:822:ARG:HG2	3:D:822:ARG:HH11	1.77	0.49
3:D:5034:ASP:O	3:D:5035:GLN:C	2.51	0.49
3:A:648:ILE:HD11	3:A:779:PRO:HG2	1.93	0.49
3:A:1101:ARG:HB3	3:A:1123:VAL:HG21	1.93	0.49
3:B:600:LEU:HD21	3:B:1666:THR:HA	1.93	0.49
3:B:4904:PRO:O	3:B:4905:ALA:C	2.50	0.49
3:B:5027:CYS:O	3:B:5028:PHE:C	2.50	0.49
3:C:2777:TYR:HB2	3:C:2791:LEU:HD22	1.95	0.49
3:D:2196:ASN:OD1	3:D:2199:ARG:NH2	2.46	0.49
3:D:3327:LEU:O	3:D:3331:GLU:N	2.44	0.49
3:D:4052:SER:O	3:D:4056:GLU:HG2	2.13	0.49
3:D:4719:PHE:O	3:D:4720:VAL:C	2.50	0.49
3:A:1977:TYR:HA	3:A:1997:GLU:OE2	2.13	0.49
3:A:3725:TYR:HA	3:A:3728:ILE:HG12	1.93	0.49
3:A:4708:THR:OG1	3:A:4775:TYR:HB2	2.13	0.49
3:B:233:ILE:HG22	3:B:234:SER:N	2.28	0.49
3:C:4089:SER:HA	3:C:4121:GLU:HA	1.94	0.49
3:C:4849:TYR:O	3:C:4852:THR:HB	2.13	0.49
3:D:4134:GLU:HB3	3:D:4135:PRO:HD3	1.95	0.49
3:D:5027:CYS:O	3:D:5028:PHE:C	2.50	0.49
1:H:90:VAL:HG21	3:B:1782:PHE:HD2	1.76	0.49
3:B:533:ASN:OD1	3:B:534:ARG:N	2.45	0.49
3:B:1948:ASP:HA	3:B:1951:LEU:HB2	1.93	0.49
3:B:4052:SER:O	3:B:4056:GLU:HG2	2.13	0.49
3:B:4158:PRO:O	3:B:4159:ARG:C	2.51	0.49
3:B:5034:ASP:O	3:B:5035:GLN:C	2.51	0.49
3:D:1451:GLY:HA3	3:D:1494:MET:HA	1.94	0.49
3:D:1716:ILE:HD11	3:D:1847:THR:HG21	1.95	0.49
3:D:4952:GLU:C	3:D:4954:MET:N	2.64	0.49
3:A:292:ALA:HB1	3:A:311:ALA:HB1	1.94	0.49
3:A:883:ALA:O	3:A:887:ILE:N	2.45	0.49
3:A:1698:LEU:HD12	3:A:1814:MET:CE	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1716:ILE:HD11	3:A:1847:THR:HG21	1.95	0.49
3:A:2695:LEU:O	3:A:2951:ILE:N	2.39	0.49
3:A:4134:GLU:HB3	3:A:4135:PRO:HD3	1.95	0.49
3:B:2927:LEU:HD23	3:B:2930:LEU:HD12	1.94	0.49
3:B:4089:SER:HA	3:B:4121:GLU:HA	1.95	0.49
3:B:4176:PRO:C	3:B:4202:ARG:HH21	2.15	0.49
3:B:4222:VAL:HG23	3:B:4950:VAL:HG22	1.95	0.49
3:C:1675:ALA:O	3:C:1677:GLY:N	2.43	0.49
3:C:2695:LEU:O	3:C:2951:ILE:N	2.39	0.49
3:C:4959:PHE:CD1	3:C:4985:LEU:HD12	2.48	0.49
3:C:5027:CYS:O	3:C:5028:PHE:C	2.50	0.49
3:D:1762:LEU:HD12	3:D:1863:LEU:HD13	1.94	0.49
3:D:3844:LEU:HD11	3:D:3933:PHE:HA	1.95	0.49
3:D:4111:LEU:C	3:D:4113:SER:H	2.15	0.49
2:I:53:ILE:HA	2:I:56:VAL:HG22	1.95	0.48
3:A:1271:ARG:NH1	3:A:1271:ARG:CG	2.72	0.48
3:A:4052:SER:O	3:A:4056:GLU:HG2	2.13	0.48
3:A:4078:GLN:HA	3:A:4081:VAL:CG1	2.43	0.48
3:A:4089:SER:HA	3:A:4121:GLU:HA	1.94	0.48
3:B:2259:GLU:HA	3:B:2297:LYS:HZ2	1.78	0.48
3:B:4078:GLN:HA	3:B:4081:VAL:CG1	2.43	0.48
3:B:4708:THR:OG1	3:B:4775:TYR:HB2	2.13	0.48
3:C:1271:ARG:CB	3:C:1271:ARG:NH1	2.69	0.48
3:D:128:THR:O	3:D:129:ASP:C	2.51	0.48
3:D:223:PHE:CE2	3:D:391:THR:HG21	2.47	0.48
3:A:233:ILE:HG22	3:A:234:SER:N	2.28	0.48
3:A:1477:GLY:HA2	3:A:1484:HIS:HB2	1.94	0.48
3:A:1707:LEU:O	3:A:1709:ALA:N	2.45	0.48
3:A:4158:PRO:O	3:A:4159:ARG:C	2.51	0.48
3:A:4963:ILE:HD11	3:A:5030:LYS:HE3	1.94	0.48
3:B:223:PHE:CE2	3:B:391:THR:HG21	2.47	0.48
3:B:952:LYS:HA	3:B:970:LEU:HA	1.96	0.48
3:B:1087:ARG:HH21	3:B:1222:GLY:HA3	1.78	0.48
3:B:4134:GLU:HB3	3:B:4135:PRO:HD3	1.95	0.48
3:B:4189:ARG:CB	3:B:5031:GLN:HE22	2.22	0.48
3:D:533:ASN:OD1	3:D:534:ARG:N	2.45	0.48
3:D:1698:LEU:HD12	3:D:1814:MET:CE	2.43	0.48
3:D:4089:SER:HA	3:D:4121:GLU:HA	1.94	0.48
3:D:4177:TYR:CE1	3:D:4199:GLU:HG3	2.48	0.48
3:D:4966:ASP:O	3:D:4968:PHE:N	2.46	0.48
3:A:1581:LEU:HG	3:A:1581:LEU:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4177:TYR:CE1	3:A:4199:GLU:HG3	2.48	0.48
3:A:5034:ASP:O	3:A:5035:GLN:C	2.51	0.48
3:B:555:GLU:O	3:B:555:GLU:HG2	2.14	0.48
3:B:1703:LEU:HA	3:B:1708:ARG:HH12	1.78	0.48
3:B:4843:LEU:C	3:B:4845:ALA:H	2.16	0.48
3:C:555:GLU:HG2	3:C:555:GLU:O	2.13	0.48
3:C:1703:LEU:HA	3:C:1708:ARG:HH12	1.78	0.48
3:C:2196:ASN:OD1	3:C:2199:ARG:NH2	2.46	0.48
3:C:4222:VAL:HG23	3:C:4950:VAL:HG22	1.95	0.48
3:C:4708:THR:OG1	3:C:4775:TYR:HB2	2.13	0.48
3:D:555:GLU:HG2	3:D:555:GLU:O	2.13	0.48
3:D:625:LEU:O	3:D:626:LEU:HB2	2.13	0.48
3:D:1477:GLY:HA2	3:D:1484:HIS:HB2	1.94	0.48
3:D:1698:LEU:HD13	3:D:1712:TYR:CZ	2.48	0.48
3:D:4078:GLN:HA	3:D:4081:VAL:CG1	2.43	0.48
3:A:223:PHE:CE2	3:A:391:THR:HG21	2.48	0.48
3:A:625:LEU:O	3:A:626:LEU:HB2	2.13	0.48
3:A:2777:TYR:HB2	3:A:2791:LEU:HD22	1.95	0.48
3:A:4826:ILE:HD11	3:B:4836:GLN:CA	2.43	0.48
3:B:625:LEU:O	3:B:626:LEU:HB2	2.13	0.48
3:B:1079:LYS:HE3	3:B:1107:PRO:HB2	1.96	0.48
3:B:1698:LEU:HD12	3:B:1814:MET:CE	2.43	0.48
3:B:1952:GLN:O	3:B:1956:GLU:HG2	2.14	0.48
3:B:2770:LYS:HD2	3:B:2788:HIS:CG	2.49	0.48
3:B:4686:LEU:O	3:B:4690:GLU:HG2	2.14	0.48
3:C:1977:TYR:HA	3:C:1997:GLU:OE2	2.13	0.48
3:C:4078:GLN:HA	3:C:4081:VAL:CG1	2.43	0.48
3:C:4134:GLU:HB3	3:C:4135:PRO:HD3	1.95	0.48
3:C:4923:PHE:HA	3:C:4927:ILE:HD13	1.95	0.48
3:D:220:LEU:HB2	3:D:391:THR:O	2.13	0.48
3:D:4708:THR:OG1	3:D:4775:TYR:HB2	2.12	0.48
3:D:4963:ILE:HD11	3:D:5030:LYS:HE3	1.94	0.48
1:E:90:VAL:HG21	3:A:1782:PHE:HD2	1.76	0.48
3:A:4045:VAL:HG13	3:A:4159:ARG:NH2	2.25	0.48
3:B:883:ALA:O	3:B:887:ILE:HG12	2.14	0.48
3:B:1252:HIS:O	3:B:1253:PRO:C	2.51	0.48
3:C:168:ASP:OD1	3:C:168:ASP:N	2.42	0.48
3:C:1581:LEU:O	3:C:1581:LEU:HG	2.13	0.48
3:C:1698:LEU:HD12	3:C:1814:MET:CE	2.43	0.48
3:C:2770:LYS:HD2	3:C:2788:HIS:CG	2.49	0.48
3:C:4177:TYR:CE1	3:C:4199:GLU:HG3	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:516:LYS:HG3	3:D:555:GLU:HG3	1.95	0.48
3:D:1087:ARG:HH21	3:D:1222:GLY:HA3	1.78	0.48
3:D:1581:LEU:HG	3:D:1581:LEU:O	2.13	0.48
3:D:1952:GLN:O	3:D:1956:GLU:HG2	2.14	0.48
3:A:220:LEU:HB2	3:A:391:THR:O	2.14	0.48
3:B:2760:GLU:O	3:B:2764:GLU:N	2.38	0.48
3:C:1087:ARG:HH21	3:C:1222:GLY:HA3	1.78	0.48
3:C:1099:GLU:HG2	3:C:1195:GLY:HA3	1.95	0.48
3:C:2110:TYR:HD1	3:C:3700:GLN:HE21	1.62	0.48
3:C:4052:SER:O	3:C:4056:GLU:HG2	2.13	0.48
3:D:883:ALA:O	3:D:887:ILE:HG12	2.14	0.48
3:D:1079:LYS:HE3	3:D:1107:PRO:HB2	1.96	0.48
3:D:1252:HIS:O	3:D:1253:PRO:C	2.51	0.48
2:K:50:GLN:NE2	2:K:50:GLN:CA	2.73	0.48
3:A:129:ASP:O	3:A:131:LEU:N	2.44	0.48
3:A:863:LEU:HD11	3:A:867:LEU:HD22	1.96	0.48
3:A:1079:LYS:HE3	3:A:1107:PRO:HB2	1.96	0.48
3:A:2763:HIS:O	3:A:2767:ALA:N	2.38	0.48
3:A:4138:ASP:O	3:A:4139:ILE:C	2.51	0.48
3:A:4686:LEU:O	3:A:4690:GLU:HG2	2.14	0.48
3:A:4780:PHE:HB3	3:A:4784:PHE:CE2	2.48	0.48
3:A:4920:PHE:O	3:A:4924:VAL:HG22	2.14	0.48
3:B:1698:LEU:HD13	3:B:1712:TYR:CZ	2.48	0.48
3:B:1716:ILE:HD11	3:B:1847:THR:HG21	1.95	0.48
3:B:3718:GLU:O	3:B:3793:MET:HE1	2.13	0.48
3:B:4138:ASP:O	3:B:4139:ILE:C	2.51	0.48
3:C:822:ARG:HG2	3:C:822:ARG:HH11	1.77	0.48
3:C:1952:GLN:O	3:C:1956:GLU:HG2	2.14	0.48
3:C:4050:GLU:H	3:C:4050:GLU:HG3	1.45	0.48
3:C:4952:GLU:C	3:C:4954:MET:N	2.64	0.48
3:D:1452:TRP:N	3:D:1493:TYR:O	2.42	0.48
3:D:1549:PHE:N	3:D:1549:PHE:CD1	2.81	0.48
3:D:4926:VAL:O	3:D:4927:ILE:C	2.52	0.48
3:A:470:SER:O	3:A:474:ARG:HG3	2.14	0.48
3:A:1099:GLU:HG2	3:A:1195:GLY:HA3	1.95	0.48
3:A:1698:LEU:HD13	3:A:1712:TYR:CZ	2.48	0.48
3:A:1703:LEU:HA	3:A:1708:ARG:HH12	1.78	0.48
3:A:2953:LYS:O	3:A:2957:PHE:N	2.43	0.48
3:A:4145:VAL:HG22	3:A:4178:LEU:HD11	1.96	0.48
3:B:220:LEU:HB2	3:B:391:THR:O	2.14	0.48
3:B:759:ILE:HG13	3:B:760:ASN:H	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1581:LEU:HG	3:B:1581:LEU:O	2.13	0.48
3:B:2271:THR:HG22	3:B:2274:ASP:OD2	2.14	0.48
3:B:4177:TYR:CE1	3:B:4199:GLU:HG3	2.48	0.48
3:C:516:LYS:HG3	3:C:555:GLU:HG3	1.95	0.48
3:C:625:LEU:O	3:C:626:LEU:HB2	2.13	0.48
3:C:2321:ILE:HG13	3:C:2322:GLY:N	2.27	0.48
3:C:2763:HIS:O	3:C:2767:ALA:N	2.38	0.48
3:C:2862:LEU:HB3	3:C:2928:LYS:HB3	1.95	0.48
3:D:686:TRP:HD1	3:D:755:ILE:HD13	1.79	0.48
3:D:863:LEU:HD11	3:D:867:LEU:HD22	1.96	0.48
3:D:1267:PRO:CB	3:D:1268:PRO:HD2	2.42	0.48
3:D:5028:PHE:O	3:D:5029:ARG:C	2.52	0.48
3:A:340:LYS:N	3:A:344:SER:HG	2.11	0.48
3:A:883:ALA:O	3:A:887:ILE:HG12	2.14	0.48
3:A:1087:ARG:HH21	3:A:1222:GLY:HA3	1.78	0.48
3:A:2271:THR:HG22	3:A:2274:ASP:OD2	2.14	0.48
3:A:4063:ASP:HA	3:A:4066:LEU:HD22	1.96	0.48
3:B:3327:LEU:O	3:B:3331:GLU:N	2.44	0.48
3:C:759:ILE:HG13	3:C:760:ASN:H	1.79	0.48
3:C:1079:LYS:HE3	3:C:1107:PRO:HB2	1.96	0.48
3:C:1196:PRO:O	3:C:1198:GLN:NE2	2.44	0.48
3:C:2618:MET:O	3:C:2622:LEU:N	2.43	0.48
3:C:3718:GLU:O	3:C:3793:MET:HE1	2.14	0.48
3:D:1099:GLU:HG2	3:D:1195:GLY:HA3	1.95	0.48
3:D:1703:LEU:HA	3:D:1708:ARG:HH12	1.78	0.48
3:D:4694:ASP:O	3:D:4695:ASP:C	2.52	0.48
3:D:4848:VAL:HG21	3:D:4887:MET:SD	2.54	0.48
3:A:894:GLY:N	3:A:904:HIS:O	2.47	0.48
3:A:2770:LYS:HD2	3:A:2788:HIS:CG	2.49	0.48
3:A:4003:LEU:HD21	3:A:4012:LEU:HD22	1.95	0.48
3:A:4216:GLN:NE2	3:A:4220:ASP:OD2	2.47	0.48
3:A:4892:ARG:HH21	3:B:4895:GLY:HA3	1.78	0.48
3:B:1730:MET:HA	3:B:1730:MET:HE3	1.96	0.48
3:B:2953:LYS:O	3:B:2957:PHE:N	2.43	0.48
3:C:667:MET:O	3:C:789:VAL:HG13	2.14	0.48
3:C:1698:LEU:HD13	3:C:1712:TYR:CZ	2.48	0.48
3:C:2459:SER:HB2	3:D:133:PHE:CZ	2.48	0.48
3:C:4070:ASP:O	3:C:4071:ILE:C	2.53	0.48
3:D:1730:MET:HA	3:D:1730:MET:HE3	1.95	0.48
3:D:2110:TYR:HD1	3:D:3700:GLN:HE21	1.62	0.48
3:D:4091:LYS:HE3	3:D:4091:LYS:HB3	1.53	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:4138:ASP:O	3:D:4139:ILE:C	2.51	0.48
3:D:4843:LEU:O	3:D:4847:VAL:HG12	2.14	0.48
3:A:908:VAL:HG12	3:A:963:ASN:HB3	1.96	0.47
3:A:3718:GLU:O	3:A:3793:MET:HE1	2.13	0.47
3:B:470:SER:O	3:B:474:ARG:HG3	2.14	0.47
3:B:2110:TYR:HD1	3:B:3700:GLN:HE21	1.62	0.47
3:B:2695:LEU:O	3:B:2951:ILE:N	2.39	0.47
3:B:4145:VAL:HG22	3:B:4178:LEU:HD11	1.96	0.47
3:C:2760:GLU:OE2	3:C:2794:TYR:N	2.48	0.47
3:C:4088:ILE:HG12	3:C:4092:ASP:HB2	1.96	0.47
3:D:1271:ARG:CB	3:D:1271:ARG:NH1	2.69	0.47
3:D:3718:GLU:O	3:D:3793:MET:HE1	2.14	0.47
3:D:4003:LEU:HD21	3:D:4012:LEU:HD22	1.95	0.47
3:D:5030:LYS:HE2	3:D:5030:LYS:HB2	1.51	0.47
2:K:53:ILE:HA	2:K:56:VAL:HG22	1.95	0.47
3:A:1549:PHE:N	3:A:1549:PHE:CD1	2.81	0.47
3:A:1952:GLN:O	3:A:1956:GLU:HG2	2.14	0.47
3:A:3901:ASN:OD1	3:A:3904:ARG:NH2	2.29	0.47
3:A:4739:GLU:C	3:A:4741:LEU:N	2.68	0.47
3:A:4773:VAL:O	3:A:4777:ILE:HD12	2.14	0.47
3:A:4926:VAL:O	3:A:4927:ILE:C	2.52	0.47
3:B:894:GLY:N	3:B:904:HIS:O	2.47	0.47
3:B:3292:PRO:O	3:B:3294:PRO:N	2.47	0.47
3:C:686:TRP:HD1	3:C:755:ILE:HD13	1.79	0.47
3:C:1716:ILE:HD11	3:C:1847:THR:HG21	1.95	0.47
3:C:2871:LEU:HD22	3:C:2927:LEU:HD22	1.96	0.47
3:C:4145:VAL:HG22	3:C:4178:LEU:HD11	1.96	0.47
3:C:4686:LEU:O	3:C:4690:GLU:HG2	2.14	0.47
3:C:4926:VAL:O	3:C:4927:ILE:C	2.52	0.47
3:D:667:MET:O	3:D:789:VAL:HG13	2.14	0.47
3:D:4063:ASP:O	3:D:4064:MET:C	2.53	0.47
3:D:4739:GLU:C	3:D:4741:LEU:N	2.68	0.47
2:I:46:GLU:O	2:I:50:GLN:HB2	2.14	0.47
2:I:50:GLN:NE2	2:I:50:GLN:CA	2.73	0.47
3:A:667:MET:O	3:A:789:VAL:HG13	2.14	0.47
3:A:952:LYS:HA	3:A:970:LEU:HA	1.96	0.47
3:B:426:ARG:HD2	3:B:431:PRO:HA	1.97	0.47
3:B:863:LEU:HD11	3:B:867:LEU:HD22	1.96	0.47
3:B:4088:ILE:HG12	3:B:4092:ASP:HB2	1.96	0.47
3:B:4926:VAL:O	3:B:4927:ILE:C	2.52	0.47
3:C:340:LYS:N	3:C:344:SER:HG	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1855:GLY:O	3:C:1857:GLU:N	2.47	0.47
3:C:4216:GLN:NE2	3:C:4220:ASP:OD2	2.47	0.47
3:C:4863:TYR:O	3:C:4864:ASN:HB3	2.15	0.47
3:C:5028:PHE:O	3:C:5029:ARG:C	2.52	0.47
3:D:2770:LYS:HD2	3:D:2788:HIS:CG	2.49	0.47
3:D:2862:LEU:HB3	3:D:2928:LYS:HB3	1.95	0.47
2:L:53:ILE:HA	2:L:56:VAL:HG22	1.95	0.47
3:A:795:GLY:H	3:A:812:HIS:HD2	1.62	0.47
3:A:1835:GLU:O	3:A:1839:VAL:HG12	2.15	0.47
3:A:1855:GLY:O	3:A:1857:GLU:N	2.47	0.47
3:B:516:LYS:HG3	3:B:555:GLU:HG3	1.95	0.47
3:B:795:GLY:H	3:B:812:HIS:HD2	1.62	0.47
3:B:1835:GLU:O	3:B:1839:VAL:HG12	2.15	0.47
3:B:4216:GLN:NE2	3:B:4220:ASP:OD2	2.47	0.47
3:B:4892:ARG:HE	3:C:4895:GLY:CA	2.26	0.47
3:B:4923:PHE:HA	3:B:4927:ILE:HD13	1.95	0.47
3:C:220:LEU:HB2	3:C:391:THR:O	2.14	0.47
3:C:932:LEU:HA	3:C:935:LEU:HD13	1.96	0.47
3:C:952:LYS:HA	3:C:970:LEU:HA	1.95	0.47
3:C:4138:ASP:O	3:C:4139:ILE:C	2.51	0.47
3:D:470:SER:O	3:D:474:ARG:HG3	2.14	0.47
3:D:952:LYS:HA	3:D:970:LEU:HA	1.95	0.47
3:D:1158:ASN:HB3	3:D:1182:ILE:H	1.79	0.47
3:D:4145:VAL:HG22	3:D:4178:LEU:HD11	1.96	0.47
3:D:4175:ARG:N	3:D:4176:PRO:CD	2.78	0.47
3:D:4773:VAL:O	3:D:4777:ILE:HD12	2.14	0.47
1:G:90:VAL:HG21	3:C:1782:PHE:HD2	1.76	0.47
3:A:717:ASP:OD1	3:A:720:HIS:N	2.44	0.47
3:A:4088:ILE:HG12	3:A:4092:ASP:HB2	1.96	0.47
3:A:4958:CYS:SG	3:A:4968:PHE:HE2	2.38	0.47
3:A:4985:LEU:H	3:A:4985:LEU:CD2	2.27	0.47
3:B:129:ASP:O	3:B:132:ALA:N	2.47	0.47
3:B:1855:GLY:O	3:B:1857:GLU:N	2.47	0.47
3:B:1977:TYR:O	3:B:1981:MET:N	2.47	0.47
3:B:2196:ASN:OD1	3:B:2199:ARG:NH2	2.46	0.47
3:B:2760:GLU:OE2	3:B:2794:TYR:N	2.48	0.47
3:B:4003:LEU:HD21	3:B:4012:LEU:HD22	1.95	0.47
3:B:4070:ASP:O	3:B:4071:ILE:C	2.52	0.47
3:B:4904:PRO:O	3:B:4906:GLY:N	2.48	0.47
3:C:863:LEU:HD11	3:C:867:LEU:HD22	1.96	0.47
3:C:883:ALA:O	3:C:887:ILE:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:2257:LEU:HD11	3:C:2275:VAL:HG13	1.96	0.47
3:C:4063:ASP:HA	3:C:4066:LEU:HD22	1.96	0.47
3:C:4719:PHE:O	3:C:4720:VAL:C	2.50	0.47
3:D:2271:THR:HG22	3:D:2274:ASP:OD2	2.14	0.47
3:D:3292:PRO:O	3:D:3294:PRO:N	2.48	0.47
3:D:4070:ASP:O	3:D:4071:ILE:C	2.52	0.47
3:D:4863:TYR:HH	3:D:4886:HIS:CE1	2.33	0.47
3:D:4904:PRO:O	3:D:4906:GLY:N	2.48	0.47
1:F:90:VAL:HG21	3:D:1782:PHE:HD2	1.76	0.47
2:J:46:GLU:O	2:J:50:GLN:HB2	2.14	0.47
3:A:1158:ASN:HB3	3:A:1182:ILE:H	1.79	0.47
3:A:4052:SER:O	3:A:4053:SER:C	2.53	0.47
3:A:4985:LEU:HD23	3:A:4986:ALA:H	1.80	0.47
3:B:932:LEU:HA	3:B:935:LEU:HD13	1.96	0.47
3:B:4063:ASP:O	3:B:4064:MET:C	2.53	0.47
3:B:4772:ASP:O	3:B:4773:VAL:C	2.53	0.47
3:B:4773:VAL:O	3:B:4777:ILE:HD12	2.14	0.47
3:B:4784:PHE:O	3:B:4790:LEU:HD21	2.14	0.47
3:B:4807:PHE:HB3	3:C:4853:VAL:HG13	1.95	0.47
3:C:1835:GLU:O	3:C:1839:VAL:HG12	2.14	0.47
3:C:2271:THR:HG22	3:C:2274:ASP:OD2	2.14	0.47
3:C:3935:TRP:NE1	3:D:77:ALA:HB2	2.29	0.47
3:C:4234:PHE:CZ	3:C:4985:LEU:HG	2.49	0.47
3:C:4629:TYR:HE2	3:D:4856:PHE:CE2	2.32	0.47
3:D:894:GLY:N	3:D:904:HIS:O	2.47	0.47
3:D:3696:ASP:OD1	3:D:3699:HIS:HB2	2.15	0.47
3:D:4216:GLN:NE2	3:D:4220:ASP:OD2	2.47	0.47
2:L:46:GLU:O	2:L:50:GLN:HB2	2.14	0.47
3:A:516:LYS:HG3	3:A:555:GLU:HG3	1.95	0.47
3:A:555:GLU:HG2	3:A:555:GLU:O	2.14	0.47
3:A:1977:TYR:O	3:A:1981:MET:N	2.47	0.47
3:A:2196:ASN:OD1	3:A:2199:ARG:NH2	2.46	0.47
3:A:2257:LEU:HD11	3:A:2275:VAL:HG13	1.96	0.47
3:A:4687:TYR:CE1	3:A:4706:LEU:HD21	2.50	0.47
3:A:4832:HIS:O	3:A:4833:ASN:HB2	2.15	0.47
3:A:4863:TYR:O	3:A:4864:ASN:HB3	2.14	0.47
3:A:4904:PRO:O	3:A:4906:GLY:N	2.48	0.47
3:B:686:TRP:HD1	3:B:755:ILE:HD13	1.79	0.47
3:B:1099:GLU:HG2	3:B:1195:GLY:HA3	1.95	0.47
3:B:1549:PHE:N	3:B:1549:PHE:HD1	2.13	0.47
3:B:3696:ASP:OD1	3:B:3699:HIS:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4176:PRO:HA	3:B:4202:ARG:NH2	2.30	0.47
3:B:4687:TYR:CE1	3:B:4706:LEU:HD21	2.50	0.47
3:B:4694:ASP:O	3:B:4695:ASP:C	2.52	0.47
3:C:426:ARG:HD2	3:C:431:PRO:HA	1.97	0.47
3:C:795:GLY:H	3:C:812:HIS:HD2	1.62	0.47
3:C:894:GLY:N	3:C:904:HIS:O	2.47	0.47
3:C:908:VAL:HG12	3:C:963:ASN:HB3	1.96	0.47
3:C:1158:ASN:HB3	3:C:1182:ILE:H	1.79	0.47
3:C:1977:TYR:O	3:C:1981:MET:N	2.47	0.47
3:C:3292:PRO:O	3:C:3294:PRO:N	2.48	0.47
3:C:3524:MET:HA	3:D:1220:GLN:HB3	1.97	0.47
3:C:4823:LEU:HD13	3:C:4823:LEU:HA	1.58	0.47
3:C:5034:ASP:O	3:C:5035:GLN:C	2.51	0.47
3:D:108:LEU:HD12	3:D:147:TRP:CZ2	2.49	0.47
3:D:2257:LEU:HD11	3:D:2275:VAL:HG13	1.96	0.47
3:D:2871:LEU:HD22	3:D:2927:LEU:HD22	1.96	0.47
3:D:4182:GLU:CD	3:D:5028:PHE:HB2	2.35	0.47
3:A:350:HIS:HE1	3:A:352:ALA:HB3	1.80	0.47
3:A:1075:PHE:HE2	3:A:1194:LEU:HD12	1.80	0.47
3:A:3292:PRO:O	3:A:3294:PRO:N	2.48	0.47
3:A:4063:ASP:O	3:A:4064:MET:C	2.53	0.47
3:A:4815:ASP:C	3:A:4817:ALA:N	2.68	0.47
3:A:4952:GLU:C	3:A:4954:MET:N	2.64	0.47
3:B:1075:PHE:HE2	3:B:1194:LEU:HD12	1.80	0.47
3:B:2871:LEU:HD22	3:B:2927:LEU:HD22	1.96	0.47
3:B:4815:ASP:C	3:B:4817:ALA:N	2.68	0.47
3:B:4863:TYR:O	3:B:4864:ASN:HB3	2.14	0.47
3:B:4892:ARG:HE	3:C:4895:GLY:HA3	1.80	0.47
3:C:470:SER:O	3:C:474:ARG:HG3	2.14	0.47
3:C:4074:SER:O	3:C:4075:GLU:C	2.54	0.47
3:C:4773:VAL:O	3:C:4777:ILE:HD12	2.14	0.47
3:C:4920:PHE:O	3:C:4924:VAL:HG22	2.14	0.47
3:D:4063:ASP:HA	3:D:4066:LEU:HD22	1.96	0.47
3:D:4897:ILE:HD12	3:D:4897:ILE:HA	1.71	0.47
2:J:53:ILE:HA	2:J:56:VAL:HG22	1.95	0.47
3:A:108:LEU:HD12	3:A:147:TRP:CZ2	2.49	0.47
3:A:426:ARG:HD2	3:A:431:PRO:HA	1.97	0.47
3:A:932:LEU:HA	3:A:935:LEU:HD13	1.96	0.47
3:A:4190:ILE:HG21	3:A:5028:PHE:H	1.79	0.47
3:A:4190:ILE:H	3:A:5031:GLN:CD	2.19	0.47
3:B:908:VAL:HG12	3:B:963:ASN:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4074:SER:O	3:B:4075:GLU:C	2.54	0.47
3:B:4700:GLN:C	3:B:4702:ASP:N	2.68	0.47
3:C:1580:PHE:O	3:C:1580:PHE:CD1	2.68	0.47
3:C:4003:LEU:HD21	3:C:4012:LEU:HD22	1.95	0.47
3:D:4686:LEU:O	3:D:4690:GLU:HG2	2.14	0.47
3:D:5000:GLU:O	3:D:5003:HIS:N	2.48	0.47
2:K:46:GLU:O	2:K:50:GLN:HB2	2.14	0.47
3:A:3135:ALA:O	3:A:3137:LEU:N	2.48	0.47
3:A:4705:VAL:O	3:A:4706:LEU:C	2.54	0.47
3:B:667:MET:O	3:B:789:VAL:HG13	2.14	0.47
3:B:4175:ARG:N	3:B:4176:PRO:CD	2.78	0.47
3:C:108:LEU:HD12	3:C:147:TRP:CZ2	2.49	0.47
3:C:4175:ARG:N	3:C:4176:PRO:CD	2.78	0.47
3:D:2760:GLU:OE2	3:D:2794:TYR:N	2.48	0.47
3:D:3135:ALA:O	3:D:3137:LEU:N	2.48	0.47
3:A:887:ILE:HG13	3:A:959:TYR:CE1	2.51	0.46
3:A:4903:ASP:O	3:A:4904:PRO:C	2.54	0.46
3:A:4978:HIS:HE1	3:A:4983:HIS:CD2	2.33	0.46
3:A:5028:PHE:O	3:A:5029:ARG:C	2.52	0.46
3:B:108:LEU:HD12	3:B:147:TRP:CZ2	2.49	0.46
3:B:350:HIS:HE1	3:B:352:ALA:HB3	1.80	0.46
3:B:4052:SER:O	3:B:4053:SER:C	2.53	0.46
3:C:101:LEU:HB2	3:C:163:VAL:HG11	1.98	0.46
3:C:3696:ASP:OD1	3:C:3699:HIS:HB2	2.15	0.46
3:C:4863:TYR:HH	3:C:4886:HIS:CE1	2.33	0.46
3:C:4904:PRO:O	3:C:4906:GLY:N	2.48	0.46
3:D:1443:GLN:OE1	3:D:1557:THR:N	2.47	0.46
3:D:2152:THR:HG22	3:D:2190:VAL:HG11	1.97	0.46
3:D:2959:PHE:O	3:D:2963:LEU:N	2.48	0.46
3:D:4772:ASP:O	3:D:4773:VAL:C	2.53	0.46
3:D:4850:LEU:O	3:D:4854:VAL:HG23	2.15	0.46
3:D:4863:TYR:O	3:D:4864:ASN:HB3	2.14	0.46
3:A:759:ILE:HG13	3:A:760:ASN:H	1.79	0.46
3:A:775:GLY:C	3:A:776:LEU:HD12	2.35	0.46
3:A:1549:PHE:N	3:A:1549:PHE:HD1	2.13	0.46
3:A:4694:ASP:O	3:A:4695:ASP:C	2.52	0.46
3:A:4993:MET:HE3	3:A:4993:MET:HB3	1.81	0.46
3:B:3844:LEU:HD23	3:B:3844:LEU:HA	1.70	0.46
3:B:4063:ASP:HA	3:B:4066:LEU:HD22	1.96	0.46
3:B:4739:GLU:C	3:B:4741:LEU:N	2.68	0.46
3:B:4979:THR:O	3:B:4980:LEU:HD22	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:128:THR:O	3:C:129:ASP:C	2.54	0.46
3:C:649:PHE:HB3	3:C:776:LEU:HD23	1.98	0.46
3:C:830:ARG:HD3	3:C:1612:PHE:CE2	2.51	0.46
3:C:977:LEU:HB3	3:C:1044:ARG:HH12	1.80	0.46
3:C:3135:ALA:O	3:C:3137:LEU:N	2.48	0.46
3:C:4176:PRO:HA	3:C:4202:ARG:NH2	2.30	0.46
3:C:4694:ASP:O	3:C:4695:ASP:C	2.52	0.46
3:D:908:VAL:HG12	3:D:963:ASN:HB3	1.96	0.46
3:D:4052:SER:O	3:D:4053:SER:C	2.53	0.46
3:D:4088:ILE:HG12	3:D:4092:ASP:HB2	1.97	0.46
3:A:686:TRP:HD1	3:A:755:ILE:HD13	1.79	0.46
3:A:3648:ARG:HG3	3:A:3648:ARG:NH1	2.31	0.46
3:A:5030:LYS:HE2	3:A:5030:LYS:HB2	1.51	0.46
3:B:1267:PRO:CB	3:B:1268:PRO:HD2	2.42	0.46
3:B:4190:ILE:H	3:B:5031:GLN:CD	2.19	0.46
3:B:4903:ASP:O	3:B:4904:PRO:C	2.53	0.46
3:B:4954:MET:O	3:B:4956:THR:N	2.48	0.46
3:B:4974:GLY:C	3:B:4976:GLU:H	2.19	0.46
3:C:775:GLY:C	3:C:776:LEU:HD12	2.35	0.46
3:C:1271:ARG:HH11	3:C:1271:ARG:CG	2.29	0.46
3:C:3935:TRP:CD1	3:D:77:ALA:HB2	2.51	0.46
3:C:4190:ILE:HG21	3:C:5028:PHE:H	1.79	0.46
3:C:4772:ASP:O	3:C:4773:VAL:C	2.53	0.46
3:C:4827:LEU:HD21	3:D:4843:LEU:HD12	1.96	0.46
3:D:350:HIS:HE1	3:D:352:ALA:HB3	1.80	0.46
3:D:821:LEU:HD23	3:D:821:LEU:H	1.80	0.46
3:D:932:LEU:HA	3:D:935:LEU:HD13	1.96	0.46
3:D:4176:PRO:HA	3:D:4202:ARG:NH2	2.30	0.46
3:D:4190:ILE:H	3:D:5031:GLN:CD	2.19	0.46
3:D:4954:MET:O	3:D:4956:THR:N	2.48	0.46
3:A:101:LEU:HB2	3:A:163:VAL:HG11	1.97	0.46
3:A:2760:GLU:OE2	3:A:2794:TYR:N	2.48	0.46
3:A:3671:ASP:OD1	3:A:3672:ARG:N	2.49	0.46
3:A:4074:SER:O	3:A:4075:GLU:C	2.54	0.46
3:A:4743:MET:HB2	3:A:4746:ALA:HB3	1.98	0.46
3:B:977:LEU:HB3	3:B:1044:ARG:HH12	1.80	0.46
3:B:1158:ASN:HB3	3:B:1182:ILE:H	1.79	0.46
3:B:2257:LEU:HD11	3:B:2275:VAL:HG13	1.96	0.46
3:B:3648:ARG:HG3	3:B:3648:ARG:NH1	2.31	0.46
3:B:4045:VAL:HG13	3:B:4159:ARG:NH2	2.25	0.46
3:B:4897:ILE:HD12	3:B:4897:ILE:HA	1.71	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:350:HIS:HE1	3:C:352:ALA:HB3	1.80	0.46
3:C:3264:THR:O	3:C:3266:MET:N	2.47	0.46
3:C:4687:TYR:CE1	3:C:4706:LEU:HD21	2.50	0.46
3:C:4815:ASP:C	3:C:4817:ALA:N	2.68	0.46
3:D:426:ARG:HD2	3:D:431:PRO:HA	1.97	0.46
3:D:1433:TYR:CD2	3:D:1573:MET:HG3	2.51	0.46
3:D:1835:GLU:O	3:D:1839:VAL:HG12	2.15	0.46
3:D:4050:GLU:H	3:D:4050:GLU:HG3	1.45	0.46
3:D:4177:TYR:CZ	3:D:4199:GLU:HG3	2.51	0.46
3:D:4816:ILE:O	3:D:4816:ILE:HG23	2.16	0.46
3:D:4979:THR:O	3:D:4980:LEU:HD22	2.15	0.46
3:A:821:LEU:H	3:A:821:LEU:HD23	1.80	0.46
3:A:834:PRO:HB2	3:A:835:ARG:NH2	2.31	0.46
3:A:2110:TYR:HD1	3:A:3700:GLN:HE21	1.62	0.46
3:A:4070:ASP:O	3:A:4071:ILE:C	2.53	0.46
3:A:4772:ASP:O	3:A:4773:VAL:C	2.53	0.46
3:A:4954:MET:O	3:A:4956:THR:N	2.48	0.46
3:B:775:GLY:C	3:B:776:LEU:HD12	2.35	0.46
3:B:1193:SER:OG	3:B:1194:LEU:N	2.49	0.46
3:B:1271:ARG:NH1	3:B:1271:ARG:CG	2.73	0.46
3:B:4122:MET:O	3:B:4124:ASN:N	2.49	0.46
3:B:4666:VAL:N	3:B:4667:PRO:CD	2.78	0.46
3:B:4705:VAL:O	3:B:4706:LEU:C	2.54	0.46
3:C:4190:ILE:H	3:C:5031:GLN:CD	2.19	0.46
3:C:4742:GLY:O	3:C:4743:MET:C	2.53	0.46
3:D:759:ILE:HG13	3:D:760:ASN:H	1.79	0.46
3:D:830:ARG:HD3	3:D:1612:PHE:CE2	2.51	0.46
3:D:1075:PHE:HE2	3:D:1194:LEU:HD12	1.80	0.46
3:D:1227:ALA:HA	3:D:1827:ARG:HH22	1.81	0.46
3:D:1855:GLY:O	3:D:1857:GLU:N	2.47	0.46
3:D:1977:TYR:O	3:D:1981:MET:N	2.47	0.46
3:D:4162:ASN:HA	3:D:4165:GLU:OE2	2.16	0.46
3:D:4903:ASP:O	3:D:4904:PRO:C	2.54	0.46
2:J:79:ASP:OD1	2:J:79:ASP:N	2.48	0.46
3:A:1227:ALA:HA	3:A:1827:ARG:HH22	1.81	0.46
3:A:4021:LYS:HG3	3:A:4022:ASP:N	2.30	0.46
3:A:4823:LEU:HD12	3:A:4827:LEU:HD23	1.98	0.46
3:B:876:GLU:O	3:B:880:GLU:HG2	2.16	0.46
3:B:1130:GLN:OE1	3:B:1136:SER:OG	2.24	0.46
3:B:3135:ALA:O	3:B:3137:LEU:N	2.48	0.46
3:B:4090:LYS:HE2	3:B:4123:ILE:HD11	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4743:MET:HB2	3:B:4746:ALA:HB3	1.98	0.46
3:B:4880:MET:O	3:B:4881:THR:C	2.52	0.46
3:C:1549:PHE:N	3:C:1549:PHE:CD1	2.81	0.46
3:C:1730:MET:HE3	3:C:1730:MET:HA	1.96	0.46
3:C:4063:ASP:O	3:C:4064:MET:C	2.53	0.46
3:C:4189:ARG:CB	3:C:5031:GLN:HE22	2.22	0.46
3:C:4743:MET:HB2	3:C:4746:ALA:HB3	1.98	0.46
3:D:775:GLY:C	3:D:776:LEU:HD12	2.35	0.46
3:D:1196:PRO:O	3:D:1198:GLN:NE2	2.44	0.46
3:D:3648:ARG:HG3	3:D:3648:ARG:NH1	2.31	0.46
3:D:4122:MET:O	3:D:4124:ASN:N	2.49	0.46
3:D:4705:VAL:O	3:D:4706:LEU:C	2.54	0.46
3:D:4815:ASP:C	3:D:4817:ALA:N	2.68	0.46
3:A:745:SER:O	3:A:758:ARG:N	2.49	0.46
3:A:830:ARG:HD3	3:A:1612:PHE:CE2	2.51	0.46
3:A:1433:TYR:CD2	3:A:1573:MET:HG3	2.51	0.46
3:A:1863:LEU:HD21	3:A:1946:PHE:HE2	1.81	0.46
3:A:4177:TYR:CZ	3:A:4199:GLU:HG3	2.51	0.46
3:A:4228:ALA:HB1	3:D:4973:HIS:NE2	2.31	0.46
3:A:4666:VAL:N	3:A:4667:PRO:CD	2.78	0.46
3:A:4851:TYR:CD1	3:A:4916:PHE:HE1	2.34	0.46
3:B:4177:TYR:CZ	3:B:4199:GLU:HG3	2.51	0.46
3:B:4976:GLU:O	3:B:4976:GLU:HG3	2.16	0.46
3:C:876:GLU:O	3:C:880:GLU:HG2	2.16	0.46
3:C:1075:PHE:HE2	3:C:1194:LEU:HD12	1.80	0.46
3:C:1863:LEU:HD21	3:C:1946:PHE:HE2	1.81	0.46
3:C:4181:ILE:HD11	3:C:4987:ASN:O	2.15	0.46
3:C:4903:ASP:O	3:C:4904:PRO:C	2.53	0.46
3:D:483:MET:HA	3:D:486:LEU:HB2	1.98	0.46
3:D:649:PHE:HB3	3:D:776:LEU:HD23	1.98	0.46
3:D:958:THR:HG23	3:D:959:TYR:N	2.29	0.46
3:D:2695:LEU:O	3:D:2951:ILE:N	2.39	0.46
3:A:129:ASP:HA	3:A:132:ALA:HB2	1.98	0.46
3:A:3696:ASP:OD1	3:A:3699:HIS:HB2	2.15	0.46
3:A:3768:SER:HA	3:A:3771:HIS:CD2	2.51	0.46
3:A:3850:GLN:CD	3:A:3873:LYS:HD2	2.36	0.46
3:A:4698:LYS:HB2	3:A:4698:LYS:HE2	1.43	0.46
3:B:821:LEU:HD23	3:B:821:LEU:H	1.80	0.46
3:B:3829:PHE:HB3	3:B:3913:ILE:HG13	1.98	0.46
3:C:1549:PHE:N	3:C:1549:PHE:HD1	2.13	0.46
3:C:2191:PHE:CG	3:C:2191:PHE:O	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4827:LEU:HD21	3:D:4843:LEU:CD1	2.46	0.46
3:C:4954:MET:O	3:C:4956:THR:N	2.48	0.46
3:C:4978:HIS:HE1	3:C:4983:HIS:CD2	2.34	0.46
3:D:834:PRO:HB2	3:D:835:ARG:NH2	2.31	0.46
3:D:977:LEU:HB3	3:D:1044:ARG:HH12	1.80	0.46
3:D:1549:PHE:N	3:D:1549:PHE:HD1	2.13	0.46
3:D:2618:MET:O	3:D:2622:LEU:N	2.43	0.46
3:D:3639:THR:CB	3:D:3640:PRO:HD2	2.46	0.46
3:D:4666:VAL:N	3:D:4667:PRO:CD	2.78	0.46
3:D:4698:LYS:HB2	3:D:4698:LYS:HE2	1.43	0.46
3:D:4740:LEU:H	3:D:4740:LEU:HG	1.58	0.46
3:D:4743:MET:HB2	3:D:4746:ALA:HB3	1.98	0.46
3:D:4876:CYS:HG	3:D:4882:CYS:HG	1.63	0.46
3:A:876:GLU:O	3:A:880:GLU:HG2	2.16	0.46
3:A:1452:TRP:N	3:A:1493:TYR:O	2.42	0.46
3:A:4068:LEU:HD23	3:A:4129:ALA:HA	1.97	0.46
3:A:4069:LYS:HD2	3:A:4069:LYS:HA	1.67	0.46
3:B:2152:THR:HG22	3:B:2190:VAL:HG11	1.97	0.46
3:B:4884:LEU:HD22	3:B:4884:LEU:HA	1.79	0.46
3:C:910:PHE:O	3:C:913:LEU:HB2	2.16	0.46
3:C:1193:SER:OG	3:C:1194:LEU:N	2.49	0.46
3:C:1227:ALA:HA	3:C:1827:ARG:HH22	1.81	0.46
3:C:2807:TRP:HA	3:C:2810:LYS:HB2	1.98	0.46
3:C:4918:ILE:O	3:C:4922:PHE:HB2	2.16	0.46
3:D:4742:GLY:O	3:D:4743:MET:C	2.53	0.46
3:A:2871:LEU:HD22	3:A:2927:LEU:HD22	1.96	0.46
3:A:3829:PHE:HB3	3:A:3913:ILE:HG13	1.98	0.46
3:A:3990:VAL:HG23	3:A:4051:SER:CB	2.46	0.46
3:A:4122:MET:O	3:A:4124:ASN:N	2.49	0.46
3:B:649:PHE:HB3	3:B:776:LEU:HD23	1.98	0.46
3:B:875:ALA:O	3:B:879:HIS:N	2.47	0.46
3:B:883:ALA:O	3:B:887:ILE:N	2.45	0.46
3:C:2811:GLU:HA	3:C:2814:LYS:HB2	1.98	0.46
3:C:3671:ASP:OD1	3:C:3672:ARG:N	2.49	0.46
3:C:3829:PHE:HB3	3:C:3913:ILE:HG13	1.98	0.46
3:C:3990:VAL:HG23	3:C:4051:SER:CB	2.46	0.46
3:C:4067:LYS:HB2	3:C:4067:LYS:HE3	1.72	0.46
3:C:4069:LYS:HA	3:C:4069:LYS:HD2	1.67	0.46
3:C:4780:PHE:HB3	3:C:4784:PHE:CE2	2.51	0.46
3:D:887:ILE:HG13	3:D:959:TYR:CE1	2.51	0.46
3:D:2775:TRP:CZ3	3:D:2786:LYS:HA	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:4234:PHE:CZ	3:D:4985:LEU:HG	2.51	0.46
3:A:3639:THR:CB	3:A:3640:PRO:HD2	2.46	0.45
3:A:4162:ASN:HA	3:A:4165:GLU:OE2	2.16	0.45
3:A:4176:PRO:HA	3:A:4202:ARG:NH2	2.30	0.45
3:A:4214:LYS:HD2	7:A:5104:ATP:O2B	2.17	0.45
3:B:1443:GLN:OE1	3:B:1557:THR:N	2.47	0.45
3:B:1575:LEU:HD23	3:B:1575:LEU:HA	1.65	0.45
3:B:1580:PHE:O	3:B:1580:PHE:CD1	2.68	0.45
3:B:3514:LEU:O	3:B:3516:LYS:N	2.50	0.45
3:B:3990:VAL:HG23	3:B:4051:SER:CB	2.46	0.45
3:B:4057:MET:HE2	3:B:4057:MET:HB2	1.82	0.45
3:B:5030:LYS:HB2	3:B:5030:LYS:HE2	1.51	0.45
3:C:1267:PRO:CB	3:C:1268:PRO:HD2	2.42	0.45
3:C:2959:PHE:O	3:C:2963:LEU:N	2.48	0.45
3:C:3372:VAL:O	3:C:3376:GLU:N	2.46	0.45
3:C:4122:MET:O	3:C:4124:ASN:N	2.49	0.45
3:C:4705:VAL:O	3:C:4706:LEU:C	2.54	0.45
3:C:4816:ILE:O	3:C:4816:ILE:HG23	2.16	0.45
3:D:101:LEU:HB2	3:D:163:VAL:HG11	1.97	0.45
3:D:418:LEU:HD12	3:D:421:PHE:CZ	2.51	0.45
3:D:717:ASP:OD1	3:D:720:HIS:N	2.44	0.45
3:D:1675:ALA:O	3:D:1677:GLY:N	2.43	0.45
3:D:4090:LYS:HE2	3:D:4123:ILE:HD11	1.98	0.45
3:D:4960:ILE:HG22	3:D:5023:PRO:HG2	1.98	0.45
2:I:79:ASP:N	2:I:79:ASP:OD1	2.48	0.45
3:A:910:PHE:O	3:A:913:LEU:HB2	2.16	0.45
3:A:977:LEU:HB3	3:A:1044:ARG:HH12	1.80	0.45
3:A:1580:PHE:O	3:A:1580:PHE:CD1	2.68	0.45
3:A:2152:THR:HG22	3:A:2190:VAL:HG11	1.97	0.45
3:A:4856:PHE:O	3:A:4857:ASN:C	2.54	0.45
3:A:4875:LYS:H	3:A:4875:LYS:HG2	1.41	0.45
3:A:4976:GLU:O	3:A:4976:GLU:HG3	2.16	0.45
3:B:834:PRO:HB2	3:B:835:ARG:NH2	2.31	0.45
3:B:1227:ALA:HA	3:B:1827:ARG:HH22	1.81	0.45
3:B:1271:ARG:C	3:B:1272:LEU:HD12	2.37	0.45
3:B:3671:ASP:OD1	3:B:3672:ARG:N	2.49	0.45
3:B:4162:ASN:HA	3:B:4165:GLU:OE2	2.16	0.45
3:B:5028:PHE:O	3:B:5029:ARG:C	2.52	0.45
3:C:2358:ILE:HD11	3:D:178:ARG:HE	1.80	0.45
3:C:3850:GLN:CD	3:C:3873:LYS:HD2	2.36	0.45
3:C:4666:VAL:N	3:C:4667:PRO:CD	2.78	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:876:GLU:O	3:D:880:GLU:HG2	2.16	0.45
3:D:1193:SER:OG	3:D:1194:LEU:N	2.49	0.45
3:D:1863:LEU:HD21	3:D:1946:PHE:HE2	1.81	0.45
3:D:2811:GLU:HA	3:D:2814:LYS:HB2	1.98	0.45
3:D:3514:LEU:O	3:D:3516:LYS:N	2.50	0.45
3:A:133:PHE:HZ	3:D:2459:SER:HB2	1.81	0.45
3:A:649:PHE:HB3	3:A:776:LEU:HD23	1.98	0.45
3:A:1575:LEU:HD23	3:A:1575:LEU:HA	1.65	0.45
3:A:1829:PRO:HG2	3:A:1834:VAL:H	1.82	0.45
3:A:2618:MET:O	3:A:2622:LEU:N	2.43	0.45
3:A:3514:LEU:O	3:A:3516:LYS:N	2.50	0.45
3:B:483:MET:HA	3:B:486:LEU:HB2	1.98	0.45
3:B:2811:GLU:HA	3:B:2814:LYS:HB2	1.98	0.45
3:B:3264:THR:O	3:B:3266:MET:N	2.47	0.45
3:B:4938:ASP:O	3:B:4939:ALA:C	2.55	0.45
3:C:2152:THR:HG22	3:C:2190:VAL:HG11	1.97	0.45
3:C:4068:LEU:HD23	3:C:4129:ALA:HA	1.97	0.45
3:C:4090:LYS:HE2	3:C:4123:ILE:HD11	1.98	0.45
3:C:4177:TYR:CZ	3:C:4199:GLU:HG3	2.51	0.45
3:C:4979:THR:O	3:C:4980:LEU:HD22	2.15	0.45
3:C:5013:MET:HG2	3:C:5018:CYS:O	2.17	0.45
3:D:1641:ILE:HA	3:D:1642:PRO:HD3	1.80	0.45
3:D:1829:PRO:HG2	3:D:1834:VAL:H	1.82	0.45
3:D:3768:SER:HA	3:D:3771:HIS:CD2	2.51	0.45
3:D:3850:GLN:CD	3:D:3873:LYS:HD2	2.36	0.45
3:D:4687:TYR:CE1	3:D:4706:LEU:HD21	2.50	0.45
2:L:79:ASP:N	2:L:79:ASP:OD1	2.48	0.45
2:J:52:MET:O	2:J:55:GLU:HB3	2.16	0.45
3:A:2807:TRP:HA	3:A:2810:LYS:HB2	1.98	0.45
3:A:2811:GLU:HA	3:A:2814:LYS:HB2	1.98	0.45
3:A:4938:ASP:O	3:A:4939:ALA:C	2.55	0.45
3:A:5000:GLU:O	3:A:5003:HIS:N	2.48	0.45
3:B:1549:PHE:N	3:B:1549:PHE:CD1	2.81	0.45
3:B:3202:PRO:O	3:B:3206:LEU:N	2.39	0.45
3:B:3768:SER:HA	3:B:3771:HIS:CD2	2.51	0.45
3:B:4780:PHE:HB3	3:B:4784:PHE:HE2	1.82	0.45
3:B:4952:GLU:C	3:B:4954:MET:N	2.64	0.45
3:C:418:LEU:HD12	3:C:421:PHE:CZ	2.51	0.45
3:C:821:LEU:HD23	3:C:821:LEU:H	1.80	0.45
3:C:958:THR:HG23	3:C:959:TYR:N	2.29	0.45
3:C:1433:TYR:CD2	3:C:1573:MET:HG3	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:3648:ARG:HG3	3:C:3648:ARG:NH1	2.31	0.45
3:C:4739:GLU:C	3:C:4741:LEU:N	2.68	0.45
3:D:3829:PHE:HB3	3:D:3913:ILE:HG13	1.98	0.45
3:D:3990:VAL:HG23	3:D:4051:SER:CB	2.46	0.45
3:D:4190:ILE:HG21	3:D:5028:PHE:H	1.80	0.45
3:D:4214:LYS:HD2	7:D:5104:ATP:O2B	2.17	0.45
3:D:4993:MET:HE3	3:D:4993:MET:HB3	1.88	0.45
2:K:52:MET:O	2:K:55:GLU:HB3	2.17	0.45
3:A:418:LEU:HD12	3:A:421:PHE:CZ	2.51	0.45
3:A:483:MET:HA	3:A:486:LEU:HB2	1.98	0.45
3:A:1443:GLN:OE1	3:A:1557:THR:N	2.47	0.45
3:A:4816:ILE:HG23	3:A:4816:ILE:O	2.16	0.45
3:A:5013:MET:HG2	3:A:5018:CYS:O	2.17	0.45
3:A:5032:TYR:HB2	3:A:5037:SER:O	2.17	0.45
3:B:101:LEU:HB2	3:B:163:VAL:HG11	1.97	0.45
3:B:2807:TRP:HA	3:B:2810:LYS:HB2	1.98	0.45
3:B:3909:ASN:HB3	3:B:3910:THR:H	1.63	0.45
3:B:4068:LEU:HD23	3:B:4129:ALA:HA	1.97	0.45
3:B:5000:GLU:O	3:B:5003:HIS:N	2.48	0.45
3:C:127:MET:C	3:C:129:ASP:H	2.20	0.45
3:C:3768:SER:HA	3:C:3771:HIS:CD2	2.51	0.45
3:D:3671:ASP:OD1	3:D:3672:ARG:N	2.49	0.45
3:D:4856:PHE:O	3:D:4857:ASN:C	2.54	0.45
2:K:11:ALA:CB	3:C:2189:LYS:HE2	2.47	0.45
3:A:958:THR:HG23	3:A:959:TYR:N	2.29	0.45
3:A:4090:LYS:HE2	3:A:4123:ILE:HD11	1.98	0.45
3:A:4175:ARG:N	3:A:4176:PRO:CD	2.78	0.45
3:B:415:ILE:HD11	3:B:490:CYS:SG	2.57	0.45
3:B:887:ILE:HG13	3:B:959:TYR:CE1	2.51	0.45
3:B:910:PHE:O	3:B:913:LEU:HB2	2.16	0.45
3:B:4578:LEU:HD21	3:C:4849:TYR:CE2	2.52	0.45
3:B:4675:LYS:HG3	3:B:4715:TYR:HE1	1.82	0.45
3:B:4837:LEU:HD22	3:B:4932:ILE:HD13	1.98	0.45
3:C:138:GLN:HG2	3:C:139:GLU:N	2.31	0.45
3:C:546:TRP:O	3:C:550:LYS:NZ	2.47	0.45
3:C:560:ILE:HA	3:C:563:VAL:HG12	1.99	0.45
3:C:717:ASP:OD1	3:C:720:HIS:N	2.44	0.45
3:C:887:ILE:HG13	3:C:959:TYR:CE1	2.51	0.45
3:C:1452:TRP:N	3:C:1493:TYR:O	2.42	0.45
3:C:4162:ASN:HA	3:C:4165:GLU:OE2	2.16	0.45
3:C:4675:LYS:HG3	3:C:4715:TYR:HE1	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4837:LEU:O	3:C:4841:VAL:HG23	2.16	0.45
3:C:4991:PHE:O	3:C:4994:TYR:HB3	2.17	0.45
3:D:745:SER:O	3:D:758:ARG:N	2.49	0.45
3:D:1040:CYS:O	3:D:1044:ARG:N	2.49	0.45
3:D:1271:ARG:C	3:D:1272:LEU:HD12	2.37	0.45
3:D:4766:THR:HA	3:D:4769:MET:SD	2.57	0.45
3:D:4832:HIS:O	3:D:4833:ASN:HB2	2.16	0.45
3:D:4966:ASP:C	3:D:4968:PHE:N	2.70	0.45
3:D:4991:PHE:O	3:D:4994:TYR:HB3	2.16	0.45
3:A:1193:SER:OG	3:A:1194:LEU:N	2.49	0.45
3:A:4766:THR:HA	3:A:4769:MET:SD	2.57	0.45
3:A:4826:ILE:CG2	3:B:4931:ILE:HG21	2.47	0.45
3:B:418:LEU:HD12	3:B:421:PHE:CZ	2.51	0.45
3:B:745:SER:O	3:B:758:ARG:N	2.49	0.45
3:B:830:ARG:HD3	3:B:1612:PHE:CE2	2.51	0.45
3:B:3850:GLN:CD	3:B:3873:LYS:HD2	2.37	0.45
3:C:834:PRO:HB2	3:C:835:ARG:NH2	2.31	0.45
3:C:3514:LEU:O	3:C:3516:LYS:N	2.50	0.45
3:C:4052:SER:O	3:C:4053:SER:C	2.53	0.45
3:C:4975:PHE:C	3:C:4977:THR:H	2.19	0.45
3:D:910:PHE:O	3:D:913:LEU:HB2	2.16	0.45
3:D:4068:LEU:HD23	3:D:4129:ALA:HA	1.97	0.45
3:D:4976:GLU:HG3	3:D:4976:GLU:O	2.16	0.45
3:A:1196:PRO:O	3:A:1198:GLN:NE2	2.44	0.45
3:A:4134:GLU:O	3:A:4135:PRO:C	2.55	0.45
3:A:4181:ILE:HG22	3:A:4988:TYR:CZ	2.52	0.45
3:A:4677:LEU:HB3	3:A:4711:PHE:HZ	1.82	0.45
3:A:4772:ASP:OD1	3:A:4772:ASP:N	2.50	0.45
3:B:955:LEU:N	3:B:956:PRO:HD3	2.32	0.45
3:B:4742:GLY:O	3:B:4743:MET:C	2.53	0.45
3:B:4960:ILE:HG13	3:B:4983:HIS:HB3	1.99	0.45
3:B:4991:PHE:O	3:B:4994:TYR:HB3	2.16	0.45
3:C:2369:ARG:HA	3:D:130:LYS:CB	2.47	0.45
3:C:4938:ASP:O	3:C:4939:ALA:C	2.55	0.45
2:I:52:MET:O	2:I:55:GLU:HB3	2.16	0.45
2:K:79:ASP:N	2:K:79:ASP:OD1	2.48	0.45
3:A:955:LEU:N	3:A:956:PRO:HD3	2.32	0.45
3:A:1237:TRP:CZ2	3:A:1655:GLU:HG3	2.52	0.45
3:A:2959:PHE:O	3:A:2963:LEU:N	2.48	0.45
3:A:4978:HIS:CD2	3:A:5029:ARG:HD3	2.52	0.45
3:B:138:GLN:HG2	3:B:139:GLU:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:560:ILE:HA	3:B:563:VAL:HG12	1.99	0.45
3:B:1237:TRP:CZ2	3:B:1655:GLU:HG3	2.52	0.45
3:B:1240:LYS:O	3:B:1241:SER:OG	2.29	0.45
3:B:1433:TYR:CD2	3:B:1573:MET:HG3	2.51	0.45
3:B:1675:ALA:O	3:B:1677:GLY:N	2.43	0.45
3:B:2191:PHE:CG	3:B:2191:PHE:O	2.69	0.45
3:B:4214:LYS:HD2	7:B:5104:ATP:O2B	2.16	0.45
3:C:1271:ARG:C	3:C:1272:LEU:HD12	2.37	0.45
3:C:3639:THR:CB	3:C:3640:PRO:HD2	2.46	0.45
3:C:3889:GLN:HG3	3:C:3967:GLU:HG3	1.99	0.45
3:C:4688:ILE:H	3:C:4688:ILE:HG12	1.57	0.45
3:C:4851:TYR:CD1	3:C:4916:PHE:HE1	2.34	0.45
3:D:705:ASN:OD1	3:D:709:ASP:HB2	2.17	0.45
3:D:1580:PHE:O	3:D:1580:PHE:CD1	2.68	0.45
3:D:3363:GLY:O	3:D:3367:LYS:N	2.49	0.45
3:D:3652:MET:O	3:D:3656:SER:OG	2.24	0.45
3:D:4851:TYR:CD1	3:D:4916:PHE:HE1	2.34	0.45
2:K:113:LEU:HD11	3:C:3632:VAL:HG13	1.99	0.45
3:A:1267:PRO:CB	3:A:1268:PRO:HD2	2.42	0.45
3:A:1271:ARG:C	3:A:1272:LEU:HD12	2.37	0.45
3:A:4875:LYS:HB3	3:A:4875:LYS:HE3	1.30	0.45
3:B:4831:THR:O	3:B:4832:HIS:C	2.54	0.45
3:B:5032:TYR:HB2	3:B:5037:SER:O	2.17	0.45
3:C:5032:TYR:HB2	3:C:5037:SER:O	2.17	0.45
3:D:955:LEU:N	3:D:956:PRO:HD3	2.32	0.45
3:D:1440:PHE:HD1	3:D:1561:VAL:O	2.00	0.45
3:D:2191:PHE:CG	3:D:2191:PHE:O	2.69	0.45
3:D:3216:CYS:O	3:D:3218:VAL:N	2.50	0.45
3:D:3889:GLN:HG3	3:D:3967:GLU:HG3	1.99	0.45
2:L:11:ALA:CB	3:B:2189:LYS:HE2	2.47	0.44
2:L:113:LEU:HD11	3:B:3632:VAL:HG13	1.99	0.44
3:A:415:ILE:HD11	3:A:490:CYS:SG	2.57	0.44
3:A:443:LEU:HD23	3:A:443:LEU:HA	1.87	0.44
3:A:3889:GLN:HG3	3:A:3967:GLU:HG3	1.99	0.44
3:A:4050:GLU:H	3:A:4050:GLU:HG3	1.45	0.44
3:A:4680:LYS:HB2	3:A:4680:LYS:HE3	1.21	0.44
3:B:705:ASN:OD1	3:B:709:ASP:HB2	2.17	0.44
3:B:1863:LEU:HD21	3:B:1946:PHE:HE2	1.81	0.44
3:B:4677:LEU:HB3	3:B:4711:PHE:HZ	1.82	0.44
3:B:4816:ILE:HG23	3:B:4816:ILE:O	2.16	0.44
3:B:4856:PHE:O	3:B:4857:ASN:C	2.54	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1440:PHE:HD1	3:C:1561:VAL:O	2.00	0.44
3:C:3897:ASN:OD1	3:C:3901:ASN:ND2	2.51	0.44
3:C:3984:ARG:NH1	3:D:160:GLY:O	2.48	0.44
3:C:4020:GLN:HB2	3:C:4139:ILE:HD12	1.99	0.44
3:D:2447:LYS:HG2	3:D:2449:GLU:H	1.83	0.44
3:A:3456:GLN:O	3:A:3460:VAL:N	2.51	0.44
3:A:3873:LYS:HG3	3:A:3874:VAL:H	1.83	0.44
3:A:4675:LYS:HG3	3:A:4715:TYR:HE1	1.82	0.44
3:A:4681:LEU:HD11	3:A:4706:LEU:HD11	2.00	0.44
3:A:4742:GLY:O	3:A:4743:MET:C	2.53	0.44
3:B:958:THR:HG23	3:B:959:TYR:N	2.29	0.44
3:B:1552:VAL:HG11	3:B:1562:ILE:HD13	2.00	0.44
3:B:2775:TRP:CZ3	3:B:2786:LYS:HA	2.51	0.44
3:B:3889:GLN:HG3	3:B:3967:GLU:HG3	1.99	0.44
3:B:4688:ILE:H	3:B:4688:ILE:HG12	1.57	0.44
3:C:705:ASN:OD1	3:C:709:ASP:HB2	2.17	0.44
3:C:2880:GLU:HG2	3:C:2884:ASN:OD1	2.18	0.44
3:C:3456:GLN:O	3:C:3460:VAL:N	2.51	0.44
3:C:4165:GLU:O	3:C:4168:GLU:HG2	2.18	0.44
3:C:5013:MET:HE1	3:C:5021:PHE:HB3	2.00	0.44
3:D:1100:MET:H	3:D:1143:TRP:HH2	1.65	0.44
3:D:4020:GLN:HB2	3:D:4139:ILE:HD12	1.99	0.44
2:I:11:ALA:CB	3:A:2189:LYS:HE2	2.47	0.44
2:J:50:GLN:NE2	2:J:50:GLN:CA	2.73	0.44
3:A:178:ARG:HE	3:D:2358:ILE:HD11	1.82	0.44
3:A:1552:VAL:HG11	3:A:1562:ILE:HD13	2.00	0.44
3:A:2447:LYS:HG2	3:A:2449:GLU:H	1.82	0.44
3:A:4854:VAL:HG13	3:A:4858:PHE:HE2	1.82	0.44
3:A:4991:PHE:O	3:A:4994:TYR:HB3	2.16	0.44
3:B:1079:LYS:HG2	3:B:1655:GLU:OE1	2.18	0.44
3:B:3456:GLN:O	3:B:3460:VAL:N	2.51	0.44
3:B:3639:THR:CB	3:B:3640:PRO:HD2	2.46	0.44
3:B:4681:LEU:HD11	3:B:4706:LEU:HD11	1.99	0.44
3:B:4698:LYS:O	3:B:4700:GLN:N	2.50	0.44
3:B:4766:THR:HA	3:B:4769:MET:SD	2.57	0.44
3:B:4920:PHE:CZ	3:B:4924:VAL:HG21	2.52	0.44
3:B:5013:MET:HG2	3:B:5018:CYS:O	2.17	0.44
3:C:415:ILE:HD11	3:C:490:CYS:SG	2.57	0.44
3:C:483:MET:HA	3:C:486:LEU:HB2	1.98	0.44
3:C:1237:TRP:CZ2	3:C:1655:GLU:HG3	2.52	0.44
3:C:2775:TRP:CZ3	3:C:2786:LYS:HA	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:5000:GLU:O	3:C:5003:HIS:N	2.48	0.44
3:D:2247:GLN:HE21	3:D:2280:VAL:HA	1.82	0.44
3:D:4687:TYR:CD1	3:D:4706:LEU:HD21	2.52	0.44
3:D:5013:MET:HG2	3:D:5018:CYS:O	2.17	0.44
2:L:14:LYS:HE3	3:B:2187:ASN:OD1	2.18	0.44
3:A:540:PHE:HD2	3:A:567:VAL:HG11	1.83	0.44
3:A:560:ILE:HA	3:A:563:VAL:HG12	1.99	0.44
3:A:2459:SER:HB2	3:B:133:PHE:HZ	1.83	0.44
3:A:2880:GLU:HG2	3:A:2884:ASN:OD1	2.17	0.44
3:A:4698:LYS:O	3:A:4700:GLN:N	2.50	0.44
3:A:4960:ILE:HG22	3:A:5023:PRO:HG2	1.98	0.44
3:A:5013:MET:HE1	3:A:5021:PHE:HB3	1.98	0.44
3:B:1829:PRO:HG2	3:B:1834:VAL:H	1.82	0.44
3:B:3372:VAL:O	3:B:3376:GLU:N	2.46	0.44
3:C:4766:THR:HA	3:C:4769:MET:SD	2.57	0.44
3:C:4856:PHE:O	3:C:4857:ASN:C	2.54	0.44
3:D:415:ILE:HD11	3:D:490:CYS:SG	2.57	0.44
3:D:1093:GLU:HB3	3:D:1201:HIS:HB3	2.00	0.44
3:D:4680:LYS:HB2	3:D:4680:LYS:HE3	1.21	0.44
3:D:4854:VAL:HG13	3:D:4858:PHE:HE2	1.82	0.44
3:D:4938:ASP:O	3:D:4939:ALA:C	2.55	0.44
2:I:14:LYS:HE3	3:A:2187:ASN:OD1	2.18	0.44
2:L:52:MET:O	2:L:55:GLU:HB3	2.17	0.44
3:A:705:ASN:OD1	3:A:709:ASP:HB2	2.17	0.44
3:A:1581:LEU:HD23	3:A:1581:LEU:N	2.32	0.44
3:A:2775:TRP:CZ3	3:A:2786:LYS:HA	2.51	0.44
3:A:4580:TYR:O	3:B:4879:MET:HA	2.18	0.44
3:B:2447:LYS:HG2	3:B:2449:GLU:H	1.82	0.44
3:B:4772:ASP:N	3:B:4772:ASP:OD1	2.50	0.44
3:B:4826:ILE:HD11	3:C:4836:GLN:CA	2.46	0.44
3:B:4892:ARG:HH21	3:C:4895:GLY:HA3	1.83	0.44
3:C:316:PHE:CE1	3:C:348:VAL:HG12	2.53	0.44
3:C:1573:MET:H	3:C:1573:MET:HG2	1.55	0.44
3:C:1829:PRO:HG2	3:C:1834:VAL:H	1.82	0.44
3:C:4892:ARG:HE	3:D:4895:GLY:HA3	1.82	0.44
3:D:1224:GLU:HG3	3:D:1225:PRO:HD2	2.00	0.44
3:D:2880:GLU:HG2	3:D:2884:ASN:OD1	2.18	0.44
3:D:4067:LYS:HB2	3:D:4067:LYS:HE3	1.72	0.44
3:D:4128:PHE:HA	3:D:4131:ARG:HH21	1.83	0.44
3:D:4675:LYS:HG3	3:D:4715:TYR:HE1	1.81	0.44
3:D:4696:ASP:O	3:D:4700:GLN:HG2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:14:LYS:HE3	3:C:2187:ASN:OD1	2.18	0.44
3:A:1079:LYS:HG2	3:A:1655:GLU:OE1	2.18	0.44
3:A:1440:PHE:HD1	3:A:1561:VAL:O	2.00	0.44
3:A:2191:PHE:O	3:A:2191:PHE:CG	2.69	0.44
3:A:3216:CYS:O	3:A:3218:VAL:N	2.50	0.44
3:A:4020:GLN:HB2	3:A:4139:ILE:HD12	1.99	0.44
3:A:4687:TYR:CD1	3:A:4706:LEU:HD21	2.52	0.44
3:A:4884:LEU:HD22	3:A:4884:LEU:HA	1.79	0.44
3:B:445:LEU:O	3:B:449:ILE:HG13	2.17	0.44
3:B:750:LEU:HA	3:B:753:PRO:HB3	2.00	0.44
3:B:1040:CYS:O	3:B:1044:ARG:N	2.49	0.44
3:B:1440:PHE:HD1	3:B:1561:VAL:O	2.00	0.44
3:B:4165:GLU:O	3:B:4168:GLU:HG2	2.18	0.44
3:B:4701:TRP:CE2	3:B:4781:GLY:HA3	2.53	0.44
3:C:445:LEU:O	3:C:449:ILE:HG13	2.17	0.44
3:C:1243:PRO:HB2	3:C:1600:LEU:HG	2.00	0.44
3:C:3202:PRO:O	3:C:3206:LEU:N	2.39	0.44
3:C:4700:GLN:C	3:C:4702:ASP:N	2.68	0.44
3:D:560:ILE:HA	3:D:563:VAL:HG12	1.99	0.44
3:D:645:ARG:HD2	3:D:826:ILE:HB	2.00	0.44
3:D:1243:PRO:HB2	3:D:1600:LEU:HG	2.00	0.44
3:D:1731:LEU:HA	3:D:1772:ARG:HH21	1.82	0.44
3:D:3372:VAL:O	3:D:3376:GLU:N	2.46	0.44
3:D:3668:SER:HB2	3:D:3672:ARG:HH12	1.83	0.44
3:D:4772:ASP:OD1	3:D:4772:ASP:N	2.50	0.44
2:J:11:ALA:CB	3:D:2189:LYS:HE2	2.47	0.44
3:A:3668:SER:HB2	3:A:3672:ARG:HH12	1.83	0.44
3:A:3909:ASN:HB3	3:A:3910:THR:H	1.62	0.44
3:A:4843:LEU:HD23	3:A:4843:LEU:HA	1.70	0.44
3:B:3897:ASN:OD1	3:B:3901:ASN:ND2	2.51	0.44
3:C:540:PHE:HD2	3:C:567:VAL:HG11	1.83	0.44
3:C:955:LEU:N	3:C:956:PRO:HD3	2.32	0.44
3:C:2456:ILE:CD1	3:D:176:SER:HA	2.43	0.44
3:C:4089:SER:OG	3:C:4091:LYS:HG2	2.18	0.44
3:C:4214:LYS:HD2	7:C:5104:ATP:O2B	2.17	0.44
3:C:4687:TYR:CD1	3:C:4706:LEU:HD21	2.52	0.44
3:D:875:ALA:O	3:D:879:HIS:N	2.47	0.44
3:D:4961:CYS:SG	3:D:4983:HIS:HD2	2.41	0.44
3:A:1040:CYS:O	3:A:1044:ARG:N	2.49	0.44
3:A:3010:PHE:O	3:A:3014:CYS:N	2.51	0.44
3:A:3670:GLU:OE1	3:A:3731:LYS:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4978:HIS:HD2	3:A:5029:ARG:CD	2.31	0.44
3:B:3216:CYS:O	3:B:3218:VAL:N	2.50	0.44
3:B:3668:SER:HB2	3:B:3672:ARG:HH12	1.83	0.44
3:B:4020:GLN:HB2	3:B:4139:ILE:HD12	1.99	0.44
3:B:4190:ILE:HG21	3:B:5028:PHE:H	1.80	0.44
3:C:1093:GLU:HB3	3:C:1201:HIS:HB3	2.00	0.44
3:C:1552:VAL:HG11	3:C:1562:ILE:HD13	2.00	0.44
3:C:2447:LYS:HG2	3:C:2449:GLU:H	1.83	0.44
3:C:3216:CYS:O	3:C:3218:VAL:N	2.50	0.44
3:C:3363:GLY:O	3:C:3367:LYS:N	2.48	0.44
3:C:4097:MET:HB3	3:C:4103:PHE:HD2	1.83	0.44
3:C:4698:LYS:HB2	3:C:4698:LYS:HE2	1.43	0.44
3:C:4821:LYS:O	3:C:4822:THR:C	2.56	0.44
3:D:316:PHE:CE1	3:D:348:VAL:HG12	2.53	0.44
3:D:3456:GLN:O	3:D:3460:VAL:N	2.51	0.44
3:D:3670:GLU:OE1	3:D:3731:LYS:HB2	2.18	0.44
3:D:3873:LYS:HG3	3:D:3874:VAL:H	1.82	0.44
3:D:4074:SER:O	3:D:4075:GLU:C	2.54	0.44
3:D:4094:GLN:O	3:D:4098:ASP:HB3	2.18	0.44
3:D:4134:GLU:O	3:D:4135:PRO:C	2.55	0.44
3:D:4835:LYS:HA	3:D:4838:VAL:CG1	2.48	0.44
2:I:113:LEU:HD11	3:A:3632:VAL:HG13	1.99	0.44
3:A:3524:MET:HA	3:B:1220:GLN:HB3	1.98	0.44
3:A:4089:SER:OG	3:A:4091:LYS:HG2	2.18	0.44
3:A:4094:GLN:O	3:A:4098:ASP:HB3	2.18	0.44
3:A:4165:GLU:O	3:A:4168:GLU:HG2	2.18	0.44
3:B:1573:MET:HB2	3:B:1574:PRO:HD2	2.00	0.44
3:B:2816:MET:SD	3:B:2878:LEU:HD21	2.58	0.44
3:B:4134:GLU:O	3:B:4135:PRO:C	2.55	0.44
3:B:4687:TYR:CD1	3:B:4706:LEU:HD21	2.53	0.44
3:C:1641:ILE:HA	3:C:1642:PRO:HD3	1.80	0.44
3:C:2777:TYR:C	3:C:2787:THR:HB	2.39	0.44
3:D:144:GLU:O	3:D:175:SER:HB3	2.18	0.44
3:D:331:VAL:HG12	3:D:333:GLY:H	1.83	0.44
3:D:697:GLY:O	3:D:704:GLY:N	2.50	0.44
3:D:1001:VAL:HA	3:D:1005:TRP:HA	2.00	0.44
3:D:2807:TRP:HA	3:D:2810:LYS:HB2	1.98	0.44
3:D:3264:THR:O	3:D:3266:MET:N	2.47	0.44
3:D:4165:GLU:O	3:D:4168:GLU:HG2	2.18	0.44
3:D:4698:LYS:O	3:D:4700:GLN:N	2.50	0.44
3:D:5013:MET:HE1	3:D:5021:PHE:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1224:GLU:HG3	3:A:1225:PRO:HD2	2.00	0.43
3:A:1573:MET:HB2	3:A:1574:PRO:HD2	2.00	0.43
3:A:1834:VAL:HG13	3:A:1835:GLU:N	2.33	0.43
3:B:1001:VAL:HA	3:B:1005:TRP:HA	2.00	0.43
3:B:2777:TYR:C	3:B:2787:THR:HB	2.39	0.43
3:B:3363:GLY:O	3:B:3367:LYS:N	2.49	0.43
3:B:4996:ILE:HD11	8:B:5105:CFF:N7	2.32	0.43
3:C:331:VAL:HG12	3:C:333:GLY:H	1.83	0.43
3:C:830:ARG:HD3	3:C:1612:PHE:CZ	2.53	0.43
3:C:3668:SER:HB2	3:C:3672:ARG:HH12	1.83	0.43
3:C:4718:LYS:HE3	3:C:4718:LYS:HB3	1.24	0.43
3:D:445:LEU:O	3:D:449:ILE:HG13	2.17	0.43
3:D:1552:VAL:HG11	3:D:1562:ILE:HD13	2.00	0.43
3:D:1573:MET:H	3:D:1573:MET:HG2	1.55	0.43
3:D:4222:VAL:CG2	3:D:4950:VAL:HG22	2.48	0.43
3:D:4701:TRP:CE2	3:D:4781:GLY:HA3	2.53	0.43
2:J:113:LEU:HD11	3:D:3632:VAL:HG13	1.99	0.43
3:A:750:LEU:HA	3:A:753:PRO:HB3	2.00	0.43
3:A:1240:LYS:O	3:A:1241:SER:OG	2.29	0.43
3:A:3372:VAL:O	3:A:3376:GLU:N	2.46	0.43
3:B:168:ASP:HB2	3:B:199:LEU:HD12	2.01	0.43
3:B:830:ARG:HD3	3:B:1612:PHE:CZ	2.53	0.43
3:B:1569:GLN:HB2	3:B:1572:ILE:HD11	2.00	0.43
3:B:1731:LEU:HA	3:B:1772:ARG:HH21	1.82	0.43
3:B:2189:LYS:HG2	3:B:2189:LYS:O	2.18	0.43
3:B:4128:PHE:HA	3:B:4131:ARG:HH21	1.83	0.43
3:B:4987:ASN:C	3:B:4989:MET:N	2.72	0.43
3:C:144:GLU:O	3:C:175:SER:HB3	2.18	0.43
3:C:686:TRP:HZ3	3:C:779:PRO:HG3	1.84	0.43
3:C:750:LEU:HA	3:C:753:PRO:HB3	2.00	0.43
3:C:1100:MET:H	3:C:1143:TRP:HH2	1.65	0.43
3:C:1569:GLN:HB2	3:C:1572:ILE:HD11	2.00	0.43
3:C:4007:SER:HB2	3:C:4116:GLU:OE1	2.19	0.43
3:C:4727:LYS:C	3:C:4729:GLY:H	2.22	0.43
3:D:1079:LYS:HG2	3:D:1655:GLU:OE1	2.17	0.43
3:D:1237:TRP:CZ2	3:D:1655:GLU:HG3	2.52	0.43
3:D:2755:ILE:HG13	3:D:2813:LEU:HD12	2.01	0.43
3:D:3897:ASN:OD1	3:D:3901:ASN:ND2	2.51	0.43
3:D:4718:LYS:HE3	3:D:4718:LYS:HB3	1.24	0.43
3:D:5032:TYR:HB2	3:D:5037:SER:O	2.17	0.43
3:A:445:LEU:O	3:A:449:ILE:HG13	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1731:LEU:HA	3:A:1772:ARG:HH21	1.82	0.43
3:A:2247:GLN:HE21	3:A:2280:VAL:HA	1.83	0.43
3:A:4823:LEU:HD13	3:A:4823:LEU:HA	1.64	0.43
3:B:316:PHE:CE1	3:B:348:VAL:HG12	2.53	0.43
3:B:1834:VAL:HG13	3:B:1835:GLU:N	2.33	0.43
3:B:4633:GLU:O	3:B:4634:GLU:C	2.54	0.43
3:C:620:LEU:HA	3:C:623:GLU:HG3	2.01	0.43
3:C:645:ARG:HD2	3:C:826:ILE:HB	2.00	0.43
3:C:2189:LYS:O	3:C:2189:LYS:HG2	2.18	0.43
3:C:2816:MET:SD	3:C:2878:LEU:HD21	2.58	0.43
3:C:3010:PHE:O	3:C:3014:CYS:N	2.51	0.43
3:C:4698:LYS:O	3:C:4700:GLN:N	2.50	0.43
3:D:453:GLU:HA	3:D:454:PRO:HD3	1.91	0.43
3:D:2777:TYR:C	3:D:2787:THR:HB	2.39	0.43
3:D:4097:MET:HB3	3:D:4103:PHE:HD2	1.83	0.43
3:D:4175:ARG:H	3:D:4176:PRO:CD	2.30	0.43
3:D:4978:HIS:HE1	3:D:4983:HIS:CD2	2.36	0.43
3:A:273:HIS:HD1	3:A:334:MET:HG3	1.83	0.43
3:A:316:PHE:CE1	3:A:348:VAL:HG12	2.53	0.43
3:A:620:LEU:HA	3:A:623:GLU:HG3	2.01	0.43
3:A:1001:VAL:HA	3:A:1005:TRP:HA	2.00	0.43
3:A:1130:GLN:OE1	3:A:1136:SER:OG	2.24	0.43
3:A:1433:TYR:HD2	3:A:1573:MET:HG3	1.84	0.43
3:A:2755:ILE:HG13	3:A:2813:LEU:HD12	2.01	0.43
3:A:3897:ASN:OD1	3:A:3901:ASN:ND2	2.51	0.43
3:A:4091:LYS:HE3	3:A:4091:LYS:HB3	1.53	0.43
3:A:4097:MET:HB3	3:A:4103:PHE:HD2	1.83	0.43
3:A:4222:VAL:CG2	3:A:4950:VAL:HG22	2.48	0.43
3:A:4701:TRP:CE2	3:A:4781:GLY:HA3	2.53	0.43
3:B:331:VAL:HG12	3:B:333:GLY:H	1.83	0.43
3:B:1561:VAL:HG12	3:B:1562:ILE:HG23	2.01	0.43
3:B:3873:LYS:HG3	3:B:3874:VAL:H	1.83	0.43
3:B:4696:ASP:O	3:B:4700:GLN:HG2	2.18	0.43
3:B:4826:ILE:CG2	3:C:4931:ILE:HG21	2.48	0.43
3:B:4975:PHE:CE1	3:B:4979:THR:HG21	2.53	0.43
3:C:168:ASP:HB2	3:C:199:LEU:HD12	2.00	0.43
3:C:485:SER:O	3:C:489:ASN:N	2.48	0.43
3:C:548:VAL:O	3:C:551:LEU:HD23	2.19	0.43
3:C:1001:VAL:HA	3:C:1005:TRP:HA	2.01	0.43
3:C:1079:LYS:HG2	3:C:1655:GLU:OE1	2.18	0.43
3:C:1130:GLN:OE1	3:C:1136:SER:OG	2.24	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:2032:GLN:OE1	3:C:2032:GLN:N	2.52	0.43
3:C:2382:GLU:O	3:C:2386:ILE:HG12	2.18	0.43
3:C:4222:VAL:CG2	3:C:4950:VAL:HG22	2.48	0.43
3:C:4574:ASN:O	3:C:4577:LEU:HB2	2.17	0.43
3:C:4913:ARG:NH1	3:C:4917:ASP:OD2	2.43	0.43
3:C:4990:PHE:HA	3:C:4993:MET:HG3	2.01	0.43
3:D:168:ASP:HB2	3:D:199:LEU:HD12	2.00	0.43
3:D:556:ALA:HB1	3:D:560:ILE:HG12	2.01	0.43
3:D:686:TRP:HZ3	3:D:779:PRO:HG3	1.84	0.43
3:D:2751:LEU:HD22	3:D:2813:LEU:HB3	2.01	0.43
2:J:14:LYS:HE3	3:D:2187:ASN:OD1	2.18	0.43
2:J:70:LEU:HD12	2:J:70:LEU:HA	1.89	0.43
3:A:144:GLU:O	3:A:175:SER:HB3	2.18	0.43
3:A:556:ALA:HB1	3:A:560:ILE:HG12	2.01	0.43
3:A:649:PHE:HB3	3:A:776:LEU:CD2	2.49	0.43
3:A:3935:TRP:CD1	3:B:77:ALA:HB2	2.54	0.43
3:A:4062:PHE:HZ	3:A:4139:ILE:HG22	1.84	0.43
3:A:4128:PHE:HA	3:A:4131:ARG:HH21	1.83	0.43
3:B:76:ARG:HD3	3:B:76:ARG:HA	1.64	0.43
3:B:649:PHE:HB3	3:B:776:LEU:CD2	2.49	0.43
3:B:2032:GLN:OE1	3:B:2032:GLN:N	2.52	0.43
3:B:2880:GLU:HG2	3:B:2884:ASN:OD1	2.17	0.43
3:B:4007:SER:HB2	3:B:4116:GLU:OE1	2.19	0.43
3:B:4050:GLU:H	3:B:4050:GLU:HG3	1.45	0.43
3:B:4727:LYS:C	3:B:4729:GLY:H	2.22	0.43
3:B:5013:MET:HE1	3:B:5021:PHE:HB3	2.01	0.43
3:C:359:TYR:HD2	3:C:361:ALA:HB2	1.84	0.43
3:C:697:GLY:O	3:C:704:GLY:N	2.50	0.43
3:C:1863:LEU:HD21	3:C:1946:PHE:CE2	2.54	0.43
3:C:2751:LEU:HD22	3:C:2813:LEU:HB3	2.01	0.43
3:C:4077:PHE:C	3:C:4079:ASP:H	2.22	0.43
3:C:4128:PHE:HA	3:C:4131:ARG:HH21	1.83	0.43
3:C:4975:PHE:HE2	7:C:5104:ATP:O2'	2.01	0.43
3:D:359:TYR:HD2	3:D:361:ALA:HB2	1.84	0.43
3:D:540:PHE:HD2	3:D:567:VAL:HG11	1.83	0.43
3:D:2816:MET:SD	3:D:2878:LEU:HD21	2.58	0.43
3:D:4062:PHE:HZ	3:D:4139:ILE:HG22	1.84	0.43
3:D:4089:SER:OG	3:D:4091:LYS:HG2	2.18	0.43
3:D:4677:LEU:HB3	3:D:4711:PHE:HZ	1.82	0.43
3:A:138:GLN:HG2	3:A:139:GLU:N	2.31	0.43
3:A:1100:MET:H	3:A:1143:TRP:HH2	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1569:GLN:HB2	3:A:1572:ILE:HD11	2.00	0.43
3:A:2189:LYS:O	3:A:2189:LYS:HG2	2.18	0.43
3:A:2284:ASN:H	3:A:2341:VAL:HG21	1.84	0.43
3:A:3434:LEU:O	3:A:3436:ARG:N	2.45	0.43
3:A:4946:GLN:O	3:A:4950:VAL:HG23	2.19	0.43
3:B:144:GLU:O	3:B:175:SER:HB3	2.18	0.43
3:B:686:TRP:HZ3	3:B:779:PRO:HG3	1.84	0.43
3:B:2247:GLN:HE21	3:B:2280:VAL:HA	1.82	0.43
3:C:745:SER:O	3:C:758:ARG:N	2.49	0.43
3:C:1253:PRO:HB2	3:C:1254:HIS:H	1.48	0.43
3:C:2755:ILE:HG13	3:C:2813:LEU:HD12	2.01	0.43
3:C:3434:LEU:O	3:C:3436:ARG:N	2.45	0.43
3:C:3670:GLU:OE1	3:C:3731:LYS:HB2	2.18	0.43
3:C:4094:GLN:O	3:C:4098:ASP:HB3	2.18	0.43
3:C:4701:TRP:CE2	3:C:4781:GLY:HA3	2.53	0.43
3:D:795:GLY:H	3:D:812:HIS:HD2	1.62	0.43
3:D:1561:VAL:HG12	3:D:1562:ILE:HG23	2.01	0.43
3:D:1569:GLN:HB2	3:D:1572:ILE:HD11	2.00	0.43
3:D:2189:LYS:O	3:D:2189:LYS:HG2	2.18	0.43
3:D:3757:GLU:HA	3:D:3760:LYS:HG2	2.01	0.43
3:D:4021:LYS:HG3	3:D:4022:ASP:N	2.30	0.43
3:D:4920:PHE:CZ	3:D:4924:VAL:HG21	2.53	0.43
3:D:4990:PHE:HA	3:D:4993:MET:HG3	2.01	0.43
2:L:70:LEU:HD12	2:L:70:LEU:HA	1.89	0.43
3:A:168:ASP:HB2	3:A:199:LEU:HD12	2.00	0.43
3:A:894:GLY:HA2	3:A:903:LEU:HD13	2.01	0.43
3:A:2382:GLU:O	3:A:2386:ILE:HG12	2.18	0.43
3:A:2816:MET:SD	3:A:2878:LEU:HD21	2.58	0.43
3:A:4242:ILE:HG21	8:A:5105:CFF:H121	2.00	0.43
3:A:4863:TYR:HB3	3:A:4864:ASN:H	1.48	0.43
3:A:4914:VAL:O	3:A:4915:VAL:C	2.56	0.43
3:B:540:PHE:HD2	3:B:567:VAL:HG11	1.83	0.43
3:B:645:ARG:HD2	3:B:826:ILE:HB	2.00	0.43
3:B:662:TRP:CD1	3:B:748:LEU:HD22	2.51	0.43
3:B:1100:MET:H	3:B:1143:TRP:HH2	1.65	0.43
3:B:1863:LEU:HD21	3:B:1946:PHE:CE2	2.54	0.43
3:B:2751:LEU:HD22	3:B:2813:LEU:HB3	2.01	0.43
3:B:4089:SER:OG	3:B:4091:LYS:HG2	2.18	0.43
3:B:4094:GLN:O	3:B:4098:ASP:HB3	2.18	0.43
3:B:4826:ILE:HD11	3:C:4836:GLN:CB	2.47	0.43
3:B:4966:ASP:C	3:B:4968:PHE:H	2.22	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:2284:ASN:H	3:C:2341:VAL:HG21	1.84	0.43
3:C:2951:ILE:O	3:C:2955:PHE:N	2.46	0.43
3:C:4987:ASN:C	3:C:4989:MET:N	2.72	0.43
3:D:830:ARG:HD3	3:D:1612:PHE:CZ	2.53	0.43
3:D:2382:GLU:O	3:D:2386:ILE:HG12	2.18	0.43
3:D:4681:LEU:HD11	3:D:4706:LEU:HD11	1.99	0.43
3:D:4727:LYS:C	3:D:4729:GLY:H	2.22	0.43
3:A:830:ARG:HD3	3:A:1612:PHE:CZ	2.53	0.43
3:A:1863:LEU:HD21	3:A:1946:PHE:CE2	2.54	0.43
3:A:2777:TYR:C	3:A:2787:THR:HB	2.38	0.43
3:A:4990:PHE:HA	3:A:4993:MET:HG3	2.01	0.43
3:B:359:TYR:HD2	3:B:361:ALA:HB2	1.84	0.43
3:B:1224:GLU:HG3	3:B:1225:PRO:HD2	2.00	0.43
3:B:2260:ASN:OD1	3:B:2260:ASN:N	2.52	0.43
3:B:2382:GLU:O	3:B:2386:ILE:HG12	2.18	0.43
3:B:2755:ILE:HG13	3:B:2813:LEU:HD12	2.01	0.43
3:B:4854:VAL:HG13	3:B:4858:PHE:HE2	1.82	0.43
3:C:273:HIS:HD1	3:C:334:MET:HG3	1.83	0.43
3:C:453:GLU:HA	3:C:454:PRO:HD3	1.91	0.43
3:C:875:ALA:O	3:C:879:HIS:N	2.47	0.43
3:C:4696:ASP:O	3:C:4700:GLN:HG2	2.18	0.43
3:D:1078:GLU:CD	3:D:1080:SER:HG	2.21	0.43
3:D:4946:GLN:O	3:D:4950:VAL:HG23	2.19	0.43
3:A:331:VAL:HG12	3:A:333:GLY:H	1.83	0.43
3:A:645:ARG:HD2	3:A:826:ILE:HB	2.00	0.43
3:A:1561:VAL:HG12	3:A:1562:ILE:HG23	2.01	0.43
3:A:2751:LEU:HD22	3:A:2813:LEU:HB3	2.01	0.43
3:A:4696:ASP:O	3:A:4700:GLN:HG2	2.18	0.43
3:B:548:VAL:O	3:B:551:LEU:HD23	2.19	0.43
3:B:620:LEU:HA	3:B:623:GLU:HG3	2.01	0.43
3:B:1093:GLU:HB3	3:B:1201:HIS:HB3	2.00	0.43
3:B:4718:LYS:HE3	3:B:4718:LYS:HB3	1.24	0.43
3:B:4913:ARG:NH1	3:B:4917:ASP:OD2	2.43	0.43
3:B:4914:VAL:O	3:B:4915:VAL:C	2.56	0.43
3:C:1561:VAL:HG12	3:C:1562:ILE:HG23	2.01	0.43
3:C:2754:PHE:HA	3:C:2757:LYS:HE2	2.01	0.43
3:C:3873:LYS:HG3	3:C:3874:VAL:H	1.83	0.43
3:C:4677:LEU:HB3	3:C:4711:PHE:HZ	1.82	0.43
3:C:4928:LEU:HD13	3:C:4928:LEU:HA	1.83	0.43
3:D:1452:TRP:HB3	3:D:1548:LEU:HD22	2.01	0.43
3:D:1573:MET:HB2	3:D:1574:PRO:HD2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:4823:LEU:O	3:D:4827:LEU:HD22	2.19	0.43
3:D:4940:PHE:O	3:D:4941:GLY:C	2.57	0.43
3:D:4987:ASN:C	3:D:4989:MET:N	2.72	0.43
1:E:25:HIS:CE1	1:E:40:ARG:HG2	2.54	0.43
3:A:546:TRP:O	3:A:550:LYS:NZ	2.47	0.43
3:A:686:TRP:HZ3	3:A:779:PRO:HG3	1.84	0.43
3:A:1220:GLN:HE21	3:D:3528:THR:HA	1.83	0.43
3:A:2032:GLN:OE1	3:A:2032:GLN:N	2.52	0.43
3:A:2873:ALA:O	3:A:2876:GLU:HB3	2.19	0.43
3:A:4718:LYS:HE3	3:A:4718:LYS:HB3	1.24	0.43
3:A:4727:LYS:C	3:A:4729:GLY:H	2.22	0.43
3:B:717:ASP:OD1	3:B:720:HIS:N	2.44	0.43
3:B:2284:ASN:H	3:B:2341:VAL:HG21	1.84	0.43
3:B:2447:LYS:HG2	3:B:2448:GLY:H	1.84	0.43
3:B:3010:PHE:O	3:B:3014:CYS:N	2.51	0.43
3:B:3670:GLU:OE1	3:B:3731:LYS:HB2	2.18	0.43
3:B:3757:GLU:HA	3:B:3760:LYS:HG2	2.00	0.43
3:B:4184:MET:HB2	3:B:4190:ILE:HD13	2.01	0.43
3:C:1224:GLU:HG3	3:C:1225:PRO:HD2	2.00	0.43
3:C:1452:TRP:HB3	3:C:1548:LEU:HD22	2.01	0.43
3:C:4681:LEU:HD11	3:C:4706:LEU:HD11	1.99	0.43
3:C:4854:VAL:HG13	3:C:4858:PHE:HE2	1.82	0.43
3:D:1083:VAL:HG21	3:D:1088:TRP:NE1	2.34	0.43
3:D:2414:ASN:N	3:D:2417:HIS:O	2.52	0.43
3:D:4914:VAL:O	3:D:4915:VAL:C	2.56	0.43
3:A:548:VAL:O	3:A:551:LEU:HD23	2.19	0.42
3:B:548:VAL:HG11	3:B:582:HIS:ND1	2.34	0.42
3:B:3639:THR:HB	3:B:3640:PRO:HD2	2.01	0.42
3:B:4990:PHE:HA	3:B:4993:MET:HG3	2.01	0.42
3:C:1087:ARG:HB3	3:C:1223:PHE:CD1	2.54	0.42
3:C:1573:MET:HB2	3:C:1574:PRO:HD2	2.00	0.42
3:C:4012:LEU:HA	3:C:4015:GLU:OE2	2.19	0.42
3:C:4154:VAL:HG13	3:C:4154:VAL:O	2.19	0.42
3:C:4583:SER:N	3:C:4628:VAL:O	2.52	0.42
3:C:4843:LEU:C	3:C:4845:ALA:H	2.22	0.42
3:D:1703:LEU:HD12	3:D:1704:PRO:HD2	2.01	0.42
3:D:4190:ILE:HG21	3:D:5028:PHE:CA	2.49	0.42
3:D:4856:PHE:HD1	3:D:4876:CYS:SG	2.42	0.42
3:A:1243:PRO:HB2	3:A:1600:LEU:HG	2.00	0.42
3:A:2883:HIS:O	3:A:2887:GLY:HA3	2.19	0.42
3:A:3804:ILE:O	3:A:3809:ASN:ND2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4978:HIS:CE1	3:A:4983:HIS:CD2	3.06	0.42
3:B:247:TYR:HE1	3:B:376:ALA:HB2	1.85	0.42
3:B:894:GLY:HA2	3:B:903:LEU:HD13	2.01	0.42
3:B:1243:PRO:HB2	3:B:1600:LEU:HG	2.00	0.42
3:B:2459:SER:HB2	3:C:133:PHE:HZ	1.85	0.42
3:B:2959:PHE:O	3:B:2963:LEU:N	2.48	0.42
3:B:3804:ILE:O	3:B:3809:ASN:ND2	2.53	0.42
3:B:3849:ARG:H	3:B:3849:ARG:HG2	1.66	0.42
3:B:4038:GLY:O	3:B:4042:ARG:HG3	2.19	0.42
3:B:4062:PHE:HZ	3:B:4139:ILE:HG22	1.84	0.42
3:B:4097:MET:HB3	3:B:4103:PHE:HD2	1.83	0.42
3:B:4946:GLN:O	3:B:4950:VAL:HG23	2.19	0.42
3:C:548:VAL:HG11	3:C:582:HIS:ND1	2.34	0.42
3:C:1040:CYS:O	3:C:1044:ARG:N	2.49	0.42
3:C:1607:ARG:HD3	3:C:1652:GLU:HB3	2.01	0.42
3:C:1731:LEU:HA	3:C:1772:ARG:HH21	1.82	0.42
3:C:3757:GLU:HA	3:C:3760:LYS:HG2	2.01	0.42
3:C:4038:GLY:O	3:C:4042:ARG:HG3	2.19	0.42
3:C:4190:ILE:H	3:C:5031:GLN:NE2	2.18	0.42
3:C:4875:LYS:H	3:C:4875:LYS:HG2	1.41	0.42
3:C:4914:VAL:O	3:C:4915:VAL:C	2.56	0.42
3:D:750:LEU:HA	3:D:753:PRO:HB3	2.00	0.42
3:D:1581:LEU:O	3:D:1581:LEU:CG	2.67	0.42
3:D:3361:THR:O	3:D:3363:GLY:N	2.53	0.42
3:D:4154:VAL:O	3:D:4154:VAL:HG13	2.20	0.42
2:K:70:LEU:HD12	2:K:70:LEU:HA	1.89	0.42
3:A:1093:GLU:HB3	3:A:1201:HIS:HB3	2.00	0.42
3:A:2284:ASN:HA	3:A:2341:VAL:HG11	2.02	0.42
3:A:2754:PHE:HA	3:A:2757:LYS:HE2	2.01	0.42
3:A:4149:ASN:O	3:A:4150:LEU:C	2.58	0.42
3:A:4700:GLN:C	3:A:4702:ASP:N	2.68	0.42
3:B:2378:ALA:O	3:B:2382:GLU:N	2.40	0.42
3:B:2873:ALA:O	3:B:2876:GLU:HB3	2.19	0.42
3:B:2875:ALA:HA	3:B:2878:LEU:HB2	2.02	0.42
3:B:3696:ASP:OD1	3:B:3696:ASP:N	2.52	0.42
3:B:4077:PHE:C	3:B:4079:ASP:H	2.22	0.42
3:C:1834:VAL:HG13	3:C:1835:GLU:N	2.33	0.42
3:C:5000:GLU:C	3:C:5002:GLU:N	2.73	0.42
3:D:620:LEU:HA	3:D:623:GLU:HG3	2.01	0.42
3:D:1253:PRO:HB2	3:D:1254:HIS:H	1.48	0.42
3:D:3434:LEU:O	3:D:3436:ARG:N	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:4007:SER:HB2	3:D:4116:GLU:OE1	2.19	0.42
3:D:4038:GLY:O	3:D:4042:ARG:HG3	2.19	0.42
1:G:25:HIS:CE1	1:G:40:ARG:HG2	2.54	0.42
1:F:25:HIS:CE1	1:F:40:ARG:HG2	2.54	0.42
3:A:133:PHE:HZ	3:D:2459:SER:CB	2.32	0.42
3:A:459:LEU:HD23	3:A:459:LEU:HA	1.92	0.42
3:A:1119:GLU:HA	3:A:1133:HIS:CE1	2.55	0.42
3:A:1220:GLN:HB3	3:D:3524:MET:HA	2.02	0.42
3:A:1253:PRO:HB2	3:A:1254:HIS:H	1.48	0.42
3:A:3639:THR:HB	3:A:3640:PRO:HD2	2.01	0.42
3:A:4007:SER:HB2	3:A:4116:GLU:OE1	2.19	0.42
3:A:4154:VAL:O	3:A:4154:VAL:HG13	2.20	0.42
3:B:1087:ARG:HB3	3:B:1223:PHE:CD1	2.55	0.42
3:B:3699:HIS:O	3:B:3703:LEU:HD23	2.19	0.42
3:B:4222:VAL:CG2	3:B:4950:VAL:HG22	2.48	0.42
3:B:4843:LEU:HD23	3:B:4843:LEU:HA	1.75	0.42
3:B:4856:PHE:HD1	3:B:4876:CYS:SG	2.42	0.42
3:B:4958:CYS:HA	7:B:5104:ATP:C2	2.54	0.42
3:C:76:ARG:HD3	3:C:76:ARG:HA	1.64	0.42
3:C:770:ALA:HB3	3:C:1473:THR:HB	2.01	0.42
3:C:2447:LYS:HG2	3:C:2448:GLY:H	1.84	0.42
3:C:3361:THR:O	3:C:3363:GLY:N	2.53	0.42
3:C:4021:LYS:HG3	3:C:4022:ASP:N	2.30	0.42
3:C:4978:HIS:CE1	3:C:4983:HIS:CD2	3.08	0.42
3:D:138:GLN:HG2	3:D:139:GLU:N	2.31	0.42
3:D:548:VAL:HG11	3:D:582:HIS:ND1	2.34	0.42
3:D:2032:GLN:N	3:D:2032:GLN:OE1	2.52	0.42
3:D:3699:HIS:O	3:D:3703:LEU:HD23	2.19	0.42
3:D:3909:ASN:HB3	3:D:3910:THR:H	1.62	0.42
3:D:4088:ILE:HG12	3:D:4089:SER:H	1.85	0.42
3:D:4823:LEU:O	3:D:4824:ARG:C	2.57	0.42
3:D:4875:LYS:H	3:D:4875:LYS:HG2	1.41	0.42
3:D:4998:LYS:HE2	3:D:4998:LYS:HB2	1.73	0.42
1:G:71:ARG:CZ	3:C:674:PHE:CZ	3.02	0.42
3:A:247:TYR:HE1	3:A:376:ALA:HB2	1.85	0.42
3:A:359:TYR:HD2	3:A:361:ALA:HB2	1.84	0.42
3:A:1703:LEU:HD12	3:A:1704:PRO:HD2	2.01	0.42
3:A:1937:LEU:HB2	3:A:2116:LEU:HD13	2.02	0.42
3:A:2777:TYR:CG	3:A:2778:GLY:N	2.88	0.42
3:A:4092:ASP:O	3:A:4093:PHE:C	2.57	0.42
3:A:4190:ILE:HG21	3:A:5028:PHE:CA	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:556:ALA:HB1	3:B:560:ILE:HG12	2.00	0.42
3:B:1581:LEU:HD23	3:B:1581:LEU:N	2.31	0.42
3:B:2284:ASN:N	3:B:2341:VAL:HG21	2.35	0.42
3:B:3667:HIS:HB3	3:B:3668:SER:H	1.67	0.42
3:C:649:PHE:HB3	3:C:776:LEU:CD2	2.49	0.42
3:C:688:LEU:HD12	3:C:690:GLU:H	1.85	0.42
3:C:894:GLY:HA2	3:C:903:LEU:HD13	2.01	0.42
3:C:956:PRO:HG2	3:C:959:TYR:CG	2.54	0.42
3:C:1703:LEU:HD12	3:C:1704:PRO:HD2	2.00	0.42
3:C:2247:GLN:HE21	3:C:2280:VAL:HA	1.82	0.42
3:C:2414:ASN:N	3:C:2417:HIS:O	2.52	0.42
3:C:3696:ASP:OD1	3:C:3696:ASP:N	2.52	0.42
3:C:3804:ILE:O	3:C:3809:ASN:ND2	2.53	0.42
3:C:4740:LEU:H	3:C:4740:LEU:HG	1.58	0.42
3:C:4966:ASP:C	3:C:4968:PHE:H	2.22	0.42
3:D:956:PRO:HG2	3:D:959:TYR:CG	2.55	0.42
3:D:1087:ARG:HB3	3:D:1223:PHE:CD1	2.54	0.42
3:D:2873:ALA:O	3:D:2876:GLU:HB3	2.19	0.42
3:D:2970:SER:O	3:D:2974:ILE:N	2.44	0.42
3:D:3010:PHE:O	3:D:3014:CYS:N	2.51	0.42
3:D:3202:PRO:O	3:D:3206:LEU:N	2.39	0.42
3:D:4077:PHE:C	3:D:4079:ASP:H	2.22	0.42
3:A:759:ILE:HG22	3:A:762:CYS:O	2.20	0.42
3:A:956:PRO:HG2	3:A:959:TYR:CG	2.55	0.42
3:A:2414:ASN:N	3:A:2417:HIS:O	2.52	0.42
3:A:2782:ASP:OD1	3:A:2783:GLU:N	2.51	0.42
3:A:4685:GLY:O	3:A:4686:LEU:C	2.58	0.42
3:A:4691:GLN:NE2	3:A:4703:ARG:HH21	2.18	0.42
3:A:4856:PHE:HD1	3:A:4876:CYS:SG	2.42	0.42
3:A:4958:CYS:HA	7:A:5104:ATP:C2	2.55	0.42
3:A:4977:THR:C	3:A:4979:THR:N	2.73	0.42
3:B:285:VAL:HG23	3:B:286:THR:N	2.35	0.42
3:B:721:LEU:HD13	3:B:768:PHE:CE1	2.55	0.42
3:B:1607:ARG:HD3	3:B:1652:GLU:HB3	2.01	0.42
3:B:2760:GLU:OE2	3:B:2795:LYS:N	2.52	0.42
3:B:4691:GLN:NE2	3:B:4703:ARG:HH21	2.18	0.42
3:B:4698:LYS:C	3:B:4700:GLN:N	2.73	0.42
3:B:4847:VAL:O	3:B:4851:TYR:HD2	2.03	0.42
3:B:4954:MET:C	3:B:4956:THR:N	2.73	0.42
3:C:285:VAL:HG23	3:C:286:THR:N	2.35	0.42
3:C:1581:LEU:HD23	3:C:1581:LEU:N	2.31	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4088:ILE:HG12	3:C:4089:SER:H	1.85	0.42
3:C:4134:GLU:O	3:C:4135:PRO:C	2.55	0.42
3:C:4184:MET:HB2	3:C:4190:ILE:HD13	2.01	0.42
3:C:4706:LEU:HA	3:C:4706:LEU:HD12	1.74	0.42
3:C:4807:PHE:CD1	3:D:4853:VAL:HG22	2.53	0.42
3:C:4958:CYS:HA	7:C:5104:ATP:C2	2.54	0.42
3:D:548:VAL:O	3:D:551:LEU:HD23	2.19	0.42
3:D:759:ILE:HG22	3:D:762:CYS:O	2.20	0.42
3:D:894:GLY:HA2	3:D:903:LEU:HD13	2.01	0.42
3:D:1937:LEU:HB2	3:D:2116:LEU:HD13	2.02	0.42
3:D:2875:ALA:HA	3:D:2878:LEU:HB2	2.02	0.42
3:D:4012:LEU:HA	3:D:4015:GLU:OE2	2.19	0.42
3:D:4078:GLN:HA	3:D:4081:VAL:HG12	2.02	0.42
3:D:4691:GLN:NE2	3:D:4703:ARG:HH21	2.18	0.42
3:D:4700:GLN:C	3:D:4702:ASP:N	2.68	0.42
3:A:76:ARG:HD3	3:A:76:ARG:HA	1.64	0.42
3:A:875:ALA:O	3:A:879:HIS:N	2.47	0.42
3:A:3264:THR:O	3:A:3266:MET:N	2.47	0.42
3:A:4038:GLY:O	3:A:4042:ARG:HG3	2.19	0.42
3:A:4861:LYS:H	3:A:4861:LYS:HG3	1.53	0.42
3:A:4954:MET:C	3:A:4956:THR:N	2.73	0.42
3:A:4987:ASN:C	3:A:4989:MET:N	2.72	0.42
3:B:1119:GLU:HA	3:B:1133:HIS:CE1	2.55	0.42
3:B:1452:TRP:HB3	3:B:1548:LEU:HD22	2.01	0.42
3:B:1767:VAL:HG13	3:B:1767:VAL:O	2.20	0.42
3:B:2816:MET:HG2	3:B:2819:TRP:CZ2	2.55	0.42
3:B:4078:GLN:HA	3:B:4081:VAL:HG12	2.02	0.42
3:B:4190:ILE:HG21	3:B:5028:PHE:CA	2.49	0.42
3:B:5000:GLU:C	3:B:5002:GLU:N	2.73	0.42
3:C:289:ARG:HG2	3:C:303:ASP:HA	2.01	0.42
3:C:347:PHE:HB3	3:C:356:TRP:HZ3	1.84	0.42
3:C:2883:HIS:O	3:C:2887:GLY:HA3	2.19	0.42
3:C:4092:ASP:O	3:C:4093:PHE:C	2.57	0.42
3:C:4772:ASP:OD1	3:C:4772:ASP:N	2.50	0.42
3:C:4856:PHE:HD1	3:C:4876:CYS:SG	2.42	0.42
3:C:4892:ARG:HE	3:D:4895:GLY:CA	2.32	0.42
3:C:4897:ILE:HD12	3:C:4897:ILE:HA	1.71	0.42
3:D:196:MET:HB3	3:D:197:GLN:H	1.73	0.42
3:D:721:LEU:HD13	3:D:768:PHE:CE1	2.55	0.42
3:D:1087:ARG:HB3	3:D:1223:PHE:CE1	2.55	0.42
3:D:2782:ASP:OD1	3:D:2783:GLU:N	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:127:MET:O	3:A:128:THR:C	2.58	0.42
3:A:347:PHE:HB3	3:A:356:TRP:HZ3	1.84	0.42
3:A:548:VAL:HG11	3:A:582:HIS:ND1	2.34	0.42
3:A:561:LEU:HD21	3:A:589:LEU:HD21	2.02	0.42
3:A:1703:LEU:HD13	3:A:1708:ARG:HB3	2.02	0.42
3:A:2920:ARG:O	3:A:2924:GLN:N	2.38	0.42
3:A:4184:MET:HB2	3:A:4190:ILE:HD13	2.01	0.42
3:A:4923:PHE:HA	3:A:4927:ILE:HD13	2.01	0.42
3:B:561:LEU:HD21	3:B:589:LEU:HD21	2.02	0.42
3:B:956:PRO:HG2	3:B:959:TYR:CG	2.55	0.42
3:B:1703:LEU:HD12	3:B:1704:PRO:HD2	2.01	0.42
3:B:2883:HIS:O	3:B:2887:GLY:HA3	2.19	0.42
3:B:4012:LEU:HA	3:B:4015:GLU:OE2	2.19	0.42
3:B:4092:ASP:O	3:B:4093:PHE:C	2.57	0.42
3:B:4154:VAL:O	3:B:4154:VAL:HG13	2.20	0.42
3:B:4705:VAL:O	3:B:4708:THR:N	2.53	0.42
3:B:4844:LEU:HA	3:B:4847:VAL:HG12	2.02	0.42
3:C:319:SER:OG	3:C:320:LYS:N	2.53	0.42
3:C:1083:VAL:HG21	3:C:1088:TRP:NE1	2.34	0.42
3:C:1443:GLN:OE1	3:C:1557:THR:N	2.47	0.42
3:C:2777:TYR:CG	3:C:2778:GLY:N	2.88	0.42
3:C:3699:HIS:O	3:C:3703:LEU:HD23	2.19	0.42
3:C:3718:GLU:OE1	3:C:3718:GLU:HA	2.20	0.42
3:C:4078:GLN:HA	3:C:4081:VAL:HG12	2.02	0.42
3:C:4575:PHE:CG	3:C:4576:ILE:N	2.88	0.42
3:C:4940:PHE:O	3:C:4941:GLY:C	2.57	0.42
3:C:4946:GLN:O	3:C:4950:VAL:HG23	2.19	0.42
3:D:688:LEU:HD12	3:D:690:GLU:H	1.85	0.42
3:D:1607:ARG:HD3	3:D:1652:GLU:HB3	2.01	0.42
3:D:1653:LEU:HD23	3:D:1653:LEU:HA	1.86	0.42
3:D:1703:LEU:HD13	3:D:1708:ARG:HB3	2.02	0.42
3:D:2284:ASN:H	3:D:2341:VAL:HG21	1.84	0.42
3:D:2284:ASN:N	3:D:2341:VAL:HG21	2.35	0.42
3:D:2883:HIS:O	3:D:2887:GLY:HA3	2.19	0.42
3:D:4863:TYR:HB3	3:D:4864:ASN:H	1.48	0.42
1:H:25:HIS:CE1	1:H:40:ARG:HG2	2.54	0.42
3:A:1083:VAL:HG21	3:A:1088:TRP:NE1	2.34	0.42
3:A:1087:ARG:HB3	3:A:1223:PHE:CE1	2.55	0.42
3:A:3699:HIS:O	3:A:3703:LEU:HD23	2.19	0.42
3:A:3718:GLU:HA	3:A:3718:GLU:OE1	2.20	0.42
3:A:3757:GLU:HA	3:A:3760:LYS:HG2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:891:TRP:HE3	3:B:904:HIS:HB2	1.85	0.42
3:B:1229:ASN:OD1	3:B:1827:ARG:NE	2.49	0.42
3:B:1859:VAL:HA	3:B:1862:ILE:HG22	2.02	0.42
3:B:2568:LEU:O	3:B:2572:THR:N	2.52	0.42
3:B:4740:LEU:H	3:B:4740:LEU:HG	1.58	0.42
3:B:4982:GLU:HB2	3:B:4983:HIS:H	1.66	0.42
3:C:131:LEU:H	3:C:131:LEU:HD22	1.83	0.42
3:C:759:ILE:HG22	3:C:762:CYS:O	2.20	0.42
3:C:1581:LEU:O	3:C:1581:LEU:CG	2.67	0.42
3:C:4685:GLY:O	3:C:4686:LEU:C	2.58	0.42
3:D:1455:PRO:HG3	3:D:1549:PHE:CZ	2.55	0.42
3:D:1834:VAL:HG13	3:D:1835:GLU:N	2.33	0.42
3:D:3804:ILE:O	3:D:3809:ASN:ND2	2.53	0.42
3:D:5000:GLU:C	3:D:5002:GLU:N	2.73	0.42
3:A:285:VAL:HG23	3:A:286:THR:N	2.35	0.42
3:A:770:ALA:HB3	3:A:1473:THR:HB	2.01	0.42
3:A:3935:TRP:CB	3:B:80:GLU:HG2	2.32	0.42
3:B:759:ILE:HG22	3:B:762:CYS:O	2.20	0.42
3:B:1433:TYR:HD2	3:B:1573:MET:HG3	1.83	0.42
3:B:3718:GLU:OE1	3:B:3718:GLU:HA	2.20	0.42
3:B:4190:ILE:H	3:B:5031:GLN:NE2	2.18	0.42
3:C:556:ALA:HB1	3:C:560:ILE:HG12	2.01	0.42
3:C:608:VAL:HG23	3:C:613:ALA:HB2	2.02	0.42
3:C:662:TRP:CD1	3:C:748:LEU:HD22	2.51	0.42
3:C:1641:ILE:HG13	3:C:1641:ILE:O	2.20	0.42
3:C:1767:VAL:O	3:C:1767:VAL:HG13	2.20	0.42
3:C:2284:ASN:N	3:C:2341:VAL:HG21	2.35	0.42
3:C:2816:MET:HG2	3:C:2819:TRP:CZ2	2.55	0.42
3:C:2873:ALA:O	3:C:2876:GLU:HB3	2.19	0.42
3:C:4995:LEU:HD21	3:C:5007:GLU:HG2	2.02	0.42
3:D:289:ARG:HG2	3:D:303:ASP:HA	2.01	0.42
3:D:608:VAL:HG23	3:D:613:ALA:HB2	2.02	0.42
3:D:649:PHE:HB3	3:D:776:LEU:CD2	2.49	0.42
3:D:689:THR:HA	3:D:778:PHE:HE2	1.85	0.42
3:D:2447:LYS:HG2	3:D:2448:GLY:H	1.84	0.42
3:D:2777:TYR:CG	3:D:2778:GLY:N	2.88	0.42
3:D:4958:CYS:HA	7:D:5104:ATP:C2	2.55	0.42
1:H:71:ARG:CZ	3:B:674:PHE:CZ	3.03	0.41
3:A:117:TYR:HB3	3:A:146:CYS:SG	2.60	0.41
3:A:721:LEU:HD13	3:A:768:PHE:CE1	2.55	0.41
3:A:1452:TRP:HB3	3:A:1548:LEU:HD22	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:3669:PHE:O	3:A:3669:PHE:CG	2.73	0.41
3:A:4190:ILE:H	3:A:5031:GLN:NE2	2.18	0.41
3:A:4718:LYS:H	3:A:4718:LYS:HG2	1.39	0.41
3:A:4850:LEU:O	3:A:4854:VAL:HG23	2.19	0.41
3:A:4995:LEU:HD21	3:A:5007:GLU:HG2	2.02	0.41
3:B:118:LEU:HA	3:B:137:LEU:HB3	2.02	0.41
3:B:1271:ARG:CB	3:B:1271:ARG:NH1	2.69	0.41
3:B:1703:LEU:HD13	3:B:1708:ARG:HB3	2.02	0.41
3:B:2414:ASN:N	3:B:2417:HIS:O	2.52	0.41
3:B:4698:LYS:HE2	3:B:4698:LYS:HB2	1.43	0.41
3:B:4968:PHE:O	3:B:4974:GLY:HA3	2.20	0.41
3:C:1087:ARG:HB3	3:C:1223:PHE:CE1	2.55	0.41
3:C:3639:THR:HB	3:C:3640:PRO:HD2	2.01	0.41
3:C:4062:PHE:HZ	3:C:4139:ILE:HG22	1.84	0.41
3:C:4575:PHE:O	3:C:4577:LEU:N	2.53	0.41
3:C:4819:GLU:HA	3:C:4824:ARG:HB2	2.01	0.41
3:D:1767:VAL:HG13	3:D:1767:VAL:O	2.20	0.41
3:D:1863:LEU:HD21	3:D:1946:PHE:CE2	2.54	0.41
3:D:3775:ALA:O	3:D:3778:MET:N	2.53	0.41
3:D:4062:PHE:O	3:D:4063:ASP:C	2.58	0.41
3:D:4190:ILE:H	3:D:5031:GLN:NE2	2.17	0.41
3:A:77:ALA:HB2	3:D:3935:TRP:NE1	2.34	0.41
3:A:118:LEU:HA	3:A:137:LEU:HB3	2.02	0.41
3:A:374:LYS:HE2	3:A:374:LYS:HB2	1.87	0.41
3:A:1087:ARG:HB3	3:A:1223:PHE:CD1	2.55	0.41
3:A:1455:PRO:HG3	3:A:1549:PHE:CZ	2.55	0.41
3:A:1767:VAL:O	3:A:1767:VAL:HG13	2.20	0.41
3:A:1859:VAL:HA	3:A:1862:ILE:HG22	2.02	0.41
3:A:2023:LEU:H	3:A:2028:ARG:HH22	1.68	0.41
3:A:4078:GLN:HA	3:A:4081:VAL:HG12	2.02	0.41
3:A:4100:GLN:O	3:A:4101:LYS:O	2.39	0.41
3:B:374:LYS:HE2	3:B:374:LYS:HB2	1.87	0.41
3:B:1083:VAL:HG21	3:B:1088:TRP:NE1	2.34	0.41
3:B:1641:ILE:O	3:B:1641:ILE:HG13	2.20	0.41
3:B:2777:TYR:CG	3:B:2778:GLY:N	2.88	0.41
3:B:4088:ILE:HG12	3:B:4089:SER:H	1.85	0.41
3:B:4175:ARG:H	3:B:4176:PRO:CD	2.30	0.41
3:B:4995:LEU:HD21	3:B:5007:GLU:HG2	2.02	0.41
3:C:721:LEU:HD13	3:C:768:PHE:CE1	2.55	0.41
3:C:1455:PRO:HG3	3:C:1549:PHE:CZ	2.55	0.41
3:C:2875:ALA:HA	3:C:2878:LEU:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4818:MET:O	3:C:4824:ARG:HB2	2.21	0.41
3:C:4876:CYS:HG	3:C:4882:CYS:HG	1.61	0.41
3:D:117:TYR:HB3	3:D:146:CYS:SG	2.60	0.41
3:D:247:TYR:HE1	3:D:376:ALA:HB2	1.85	0.41
3:D:770:ALA:HB3	3:D:1473:THR:HB	2.01	0.41
3:D:2754:PHE:HA	3:D:2757:LYS:HE2	2.01	0.41
3:A:284:HIS:CE1	3:A:287:THR:HG1	2.38	0.41
3:A:669:ASP:OD1	3:A:669:ASP:N	2.53	0.41
3:A:891:TRP:HE3	3:A:904:HIS:HB2	1.85	0.41
3:A:3363:GLY:O	3:A:3367:LYS:N	2.48	0.41
3:A:4034:ASN:OD1	3:A:4035:VAL:O	2.39	0.41
3:A:4700:GLN:O	3:A:4701:TRP:C	2.58	0.41
3:A:4740:LEU:H	3:A:4740:LEU:HG	1.58	0.41
3:B:289:ARG:HG2	3:B:303:ASP:HA	2.01	0.41
3:B:347:PHE:HB3	3:B:356:TRP:HZ3	1.85	0.41
3:B:1969:LEU:HD21	3:B:2009:LEU:CD1	2.50	0.41
3:B:3923:LEU:HD22	3:B:3961:VAL:HG12	2.02	0.41
3:B:4700:GLN:O	3:B:4701:TRP:C	2.58	0.41
3:B:4880:MET:O	3:B:4883:TYR:N	2.53	0.41
3:B:4998:LYS:HE2	3:B:4998:LYS:HB2	1.73	0.41
3:C:1433:TYR:HD2	3:C:1573:MET:HG3	1.84	0.41
3:C:1703:LEU:HD13	3:C:1708:ARG:HB3	2.02	0.41
3:C:1937:LEU:HB2	3:C:2116:LEU:HD13	2.02	0.41
3:C:4190:ILE:HG21	3:C:5028:PHE:CA	2.49	0.41
3:C:4743:MET:HE3	3:C:4743:MET:HB3	1.96	0.41
3:D:224:HIS:O	3:D:229:GLU:HB3	2.20	0.41
3:D:316:PHE:HE1	3:D:348:VAL:HG12	1.85	0.41
3:D:618:GLN:HG3	3:D:618:GLN:O	2.20	0.41
3:D:805:PRO:HB2	3:D:808:TYR:CE2	2.55	0.41
3:D:1119:GLU:HA	3:D:1133:HIS:CE1	2.55	0.41
3:D:4835:LYS:HA	3:D:4838:VAL:HG13	2.02	0.41
3:D:4920:PHE:O	3:D:4921:PHE:C	2.58	0.41
1:F:71:ARG:CZ	3:D:674:PHE:CZ	3.03	0.41
3:A:689:THR:HA	3:A:778:PHE:HE2	1.85	0.41
3:A:707:VAL:HG23	3:A:713:SER:HB2	2.03	0.41
3:A:1731:LEU:HA	3:A:1772:ARG:NH2	2.36	0.41
3:A:2033:ASP:O	3:A:2037:ASP:N	2.47	0.41
3:A:2284:ASN:N	3:A:2341:VAL:HG21	2.35	0.41
3:B:618:GLN:OE1	3:B:1673:VAL:HA	2.21	0.41
3:B:877:ASN:HD21	3:B:970:LEU:HB2	1.86	0.41
3:B:1033:ARG:HE	3:B:1036:ARG:HH21	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:2911:LEU:HD23	3:B:2911:LEU:HA	1.90	0.41
3:B:4725:LEU:HD12	3:B:4737:ILE:HG12	2.03	0.41
3:B:4972:PRO:O	3:B:4973:HIS:C	2.58	0.41
3:B:4987:ASN:C	3:B:4989:MET:H	2.23	0.41
3:C:1731:LEU:HA	3:C:1772:ARG:NH2	2.36	0.41
3:C:2260:ASN:OD1	3:C:2260:ASN:N	2.52	0.41
3:C:2284:ASN:HA	3:C:2341:VAL:HG11	2.02	0.41
3:C:4987:ASN:C	3:C:4989:MET:H	2.23	0.41
3:D:129:ASP:O	3:D:131:LEU:N	2.53	0.41
3:D:1097:THR:HG23	3:D:1143:TRP:HB2	2.03	0.41
3:D:1641:ILE:HG13	3:D:1641:ILE:O	2.20	0.41
3:D:3639:THR:HB	3:D:3640:PRO:HD2	2.02	0.41
3:D:4100:GLN:O	3:D:4101:LYS:O	2.39	0.41
3:D:4166:LEU:H	3:D:4166:LEU:HG	1.68	0.41
3:D:4685:GLY:O	3:D:4686:LEU:C	2.58	0.41
3:D:4706:LEU:HD12	3:D:4706:LEU:HA	1.74	0.41
3:D:4725:LEU:HD12	3:D:4737:ILE:HG12	2.03	0.41
3:D:4995:LEU:HD21	3:D:5007:GLU:HG2	2.02	0.41
2:K:67:PRO:HB2	3:C:2238:TYR:CE2	2.56	0.41
3:A:316:PHE:HE1	3:A:348:VAL:HG12	1.85	0.41
3:A:1581:LEU:O	3:A:1581:LEU:CG	2.67	0.41
3:A:2447:LYS:HG2	3:A:2448:GLY:H	1.84	0.41
3:A:3361:THR:O	3:A:3363:GLY:N	2.53	0.41
3:A:3941:ASP:OD1	3:A:3942:VAL:N	2.54	0.41
3:A:4698:LYS:C	3:A:4700:GLN:N	2.73	0.41
3:A:4940:PHE:O	3:A:4941:GLY:C	2.58	0.41
3:B:319:SER:OG	3:B:320:LYS:N	2.53	0.41
3:B:618:GLN:HG3	3:B:618:GLN:O	2.20	0.41
3:B:2023:LEU:H	3:B:2028:ARG:HH22	1.68	0.41
3:B:3669:PHE:O	3:B:3669:PHE:CG	2.73	0.41
3:B:3941:ASP:OD1	3:B:3942:VAL:N	2.54	0.41
3:B:4837:LEU:HD23	3:B:4837:LEU:HA	1.87	0.41
3:B:4846:VAL:O	3:B:4850:LEU:HG	2.20	0.41
3:C:117:TYR:HB3	3:C:146:CYS:SG	2.60	0.41
3:C:3396:ASP:O	3:C:3400:VAL:N	2.48	0.41
3:D:2284:ASN:HA	3:D:2341:VAL:HG11	2.01	0.41
3:D:2790:MET:HE2	3:D:2801:ASP:OD2	2.20	0.41
3:D:3696:ASP:OD1	3:D:3696:ASP:N	2.52	0.41
3:D:4184:MET:HB2	3:D:4190:ILE:HD13	2.01	0.41
3:A:133:PHE:CZ	3:D:2459:SER:HB2	2.56	0.41
3:A:224:HIS:NE2	3:A:385:ASP:O	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1256:GLU:HB2	3:A:1273:ALA:HB3	2.02	0.41
3:A:1607:ARG:HD3	3:A:1652:GLU:HB3	2.01	0.41
3:A:4012:LEU:HA	3:A:4015:GLU:OE2	2.19	0.41
3:B:608:VAL:HG23	3:B:613:ALA:HB2	2.02	0.41
3:B:669:ASP:N	3:B:669:ASP:OD1	2.53	0.41
3:B:1455:PRO:HG3	3:B:1549:PHE:CZ	2.55	0.41
3:B:1484:HIS:ND1	3:B:1484:HIS:C	2.73	0.41
3:B:4100:GLN:O	3:B:4101:LYS:O	2.39	0.41
3:B:4974:GLY:C	3:B:4976:GLU:N	2.73	0.41
3:C:805:PRO:HB2	3:C:808:TYR:CE2	2.55	0.41
3:C:1119:GLU:HA	3:C:1133:HIS:CE1	2.55	0.41
3:C:1653:LEU:HD23	3:C:1653:LEU:HA	1.86	0.41
3:C:3628:ARG:O	3:C:3628:ARG:CG	2.69	0.41
3:C:4034:ASN:OD1	3:C:4035:VAL:O	2.39	0.41
3:C:4056:GLU:HG2	3:C:4056:GLU:H	1.64	0.41
3:C:4057:MET:HE2	3:C:4057:MET:HB2	1.78	0.41
3:C:4680:LYS:HB2	3:C:4680:LYS:HE3	1.21	0.41
3:C:4691:GLN:NE2	3:C:4703:ARG:HH21	2.18	0.41
3:C:4698:LYS:C	3:C:4700:GLN:N	2.73	0.41
3:C:4725:LEU:O	3:C:4729:GLY:HA3	2.21	0.41
3:C:4954:MET:C	3:C:4956:THR:N	2.73	0.41
3:D:347:PHE:HB3	3:D:356:TRP:HZ3	1.84	0.41
3:D:891:TRP:HE3	3:D:904:HIS:HB2	1.85	0.41
3:D:1859:VAL:HA	3:D:1862:ILE:HG22	2.02	0.41
3:D:1928:GLN:OE1	3:D:1928:GLN:HA	2.21	0.41
3:D:2163:ARG:H	3:D:2163:ARG:HG2	1.69	0.41
3:D:2260:ASN:OD1	3:D:2260:ASN:N	2.52	0.41
3:D:2280:VAL:O	3:D:2280:VAL:HG13	2.21	0.41
3:D:2816:MET:HG2	3:D:2819:TRP:CZ2	2.55	0.41
3:D:4094:GLN:HB2	3:D:4112:LEU:HD11	2.02	0.41
3:D:4688:ILE:H	3:D:4688:ILE:HG12	1.57	0.41
3:D:4698:LYS:C	3:D:4700:GLN:N	2.73	0.41
3:D:4868:ASP:O	3:D:4869:GLU:C	2.59	0.41
3:D:4954:MET:C	3:D:4956:THR:N	2.73	0.41
3:A:196:MET:HB3	3:A:197:GLN:H	1.73	0.41
3:A:289:ARG:HG2	3:A:303:ASP:HA	2.02	0.41
3:A:618:GLN:O	3:A:618:GLN:HG3	2.20	0.41
3:A:688:LEU:HD12	3:A:690:GLU:H	1.85	0.41
3:A:3202:PRO:O	3:A:3206:LEU:N	2.39	0.41
3:A:4077:PHE:C	3:A:4079:ASP:H	2.22	0.41
3:A:4088:ILE:HG12	3:A:4089:SER:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4843:LEU:HG	3:D:4823:LEU:HD22	2.02	0.41
3:A:4863:TYR:HH	3:A:4886:HIS:CE1	2.38	0.41
3:A:5000:GLU:C	3:A:5002:GLU:N	2.73	0.41
3:B:546:TRP:O	3:B:550:LYS:NZ	2.47	0.41
3:B:689:THR:HA	3:B:778:PHE:HE2	1.85	0.41
3:B:697:GLY:O	3:B:704:GLY:N	2.50	0.41
3:B:1087:ARG:HB3	3:B:1223:PHE:CE1	2.55	0.41
3:B:1937:LEU:HB2	3:B:2116:LEU:HD13	2.01	0.41
3:B:3361:THR:O	3:B:3363:GLY:N	2.53	0.41
3:B:3713:LYS:HD3	3:B:3713:LYS:HA	1.85	0.41
3:B:4021:LYS:HG3	3:B:4022:ASP:N	2.30	0.41
3:B:4849:TYR:HA	3:B:4883:TYR:CE1	2.54	0.41
3:C:224:HIS:O	3:C:229:GLU:HB3	2.20	0.41
3:C:247:TYR:HE1	3:C:376:ALA:HB2	1.85	0.41
3:C:618:GLN:OE1	3:C:1673:VAL:HA	2.21	0.41
3:C:618:GLN:HG3	3:C:618:GLN:O	2.20	0.41
3:C:1639:LEU:O	3:C:1647:CYS:HA	2.21	0.41
3:C:1859:VAL:HA	3:C:1862:ILE:HG22	2.02	0.41
3:C:2163:ARG:H	3:C:2163:ARG:HG2	1.69	0.41
3:C:2790:MET:HE2	3:C:2801:ASP:OD2	2.20	0.41
3:C:2814:LYS:O	3:C:2817:ILE:HG22	2.21	0.41
3:C:3528:THR:HA	3:D:1220:GLN:HE21	1.84	0.41
3:C:3652:MET:O	3:C:3656:SER:OG	2.24	0.41
3:C:3669:PHE:O	3:C:3669:PHE:CG	2.73	0.41
3:C:4973:HIS:CE1	3:D:4228:ALA:HB1	2.47	0.41
3:D:118:LEU:HA	3:D:137:LEU:HB3	2.02	0.41
3:D:546:TRP:O	3:D:550:LYS:NZ	2.47	0.41
3:D:1808:ARG:HD2	3:D:1858:ASP:OD2	2.21	0.41
3:D:2023:LEU:H	3:D:2028:ARG:HH22	1.68	0.41
2:L:43:ASN:OD1	2:L:43:ASN:N	2.54	0.41
3:A:224:HIS:O	3:A:229:GLU:HB3	2.20	0.41
3:A:608:VAL:HG23	3:A:613:ALA:HB2	2.02	0.41
3:A:1573:MET:HE3	3:A:1573:MET:HB3	1.66	0.41
3:A:1641:ILE:HG13	3:A:1641:ILE:O	2.20	0.41
3:A:3775:ALA:O	3:A:3778:MET:N	2.53	0.41
3:A:4705:VAL:O	3:A:4708:THR:N	2.53	0.41
3:A:4725:LEU:HD12	3:A:4737:ILE:HG12	2.03	0.41
3:A:4998:LYS:HG2	3:A:5003:HIS:CE1	2.56	0.41
3:B:4062:PHE:CZ	3:B:4139:ILE:HG22	2.56	0.41
3:B:4149:ASN:O	3:B:4150:LEU:C	2.58	0.41
3:B:4940:PHE:O	3:B:4941:GLY:C	2.58	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4993:MET:HE3	3:B:4993:MET:HB3	1.85	0.41
3:C:1097:THR:HG23	3:C:1143:TRP:HB2	2.03	0.41
3:C:3775:ALA:O	3:C:3778:MET:N	2.53	0.41
3:C:3941:ASP:OD1	3:C:3942:VAL:N	2.54	0.41
3:C:4582:VAL:HA	3:C:4628:VAL:O	2.20	0.41
3:C:5030:LYS:HE2	3:C:5030:LYS:HB2	1.51	0.41
3:D:618:GLN:OE1	3:D:1673:VAL:HA	2.21	0.41
3:D:877:ASN:HD21	3:D:970:LEU:HB2	1.86	0.41
3:D:903:LEU:HD23	3:D:903:LEU:HA	1.94	0.41
3:D:1433:TYR:HD2	3:D:1573:MET:HG3	1.83	0.41
3:D:2814:LYS:O	3:D:2817:ILE:HG22	2.21	0.41
3:D:3628:ARG:O	3:D:3628:ARG:CG	2.69	0.41
3:D:3669:PHE:O	3:D:3669:PHE:CG	2.73	0.41
3:D:4998:LYS:HG2	3:D:5003:HIS:CE1	2.56	0.41
1:E:71:ARG:CZ	3:A:674:PHE:CZ	3.03	0.41
2:I:43:ASN:OD1	2:I:43:ASN:N	2.54	0.41
2:L:67:PRO:HB2	3:B:2238:TYR:CE2	2.56	0.41
2:J:43:ASN:OD1	2:J:43:ASN:N	2.54	0.41
2:J:67:PRO:HB2	3:D:2238:TYR:CE2	2.56	0.41
3:A:320:LYS:NZ	3:A:383:HIS:O	2.52	0.41
3:A:662:TRP:CD1	3:A:748:LEU:HD22	2.51	0.41
3:A:1099:GLU:N	3:A:1099:GLU:OE2	2.54	0.41
3:A:1639:LEU:O	3:A:1647:CYS:HA	2.21	0.41
3:A:2260:ASN:OD1	3:A:2260:ASN:N	2.52	0.41
3:A:2790:MET:HE2	3:A:2801:ASP:OD2	2.20	0.41
3:A:2816:MET:HG2	3:A:2819:TRP:CZ2	2.55	0.41
3:A:3598:GLU:HA	3:A:3601:ALA:HB3	2.03	0.41
3:A:3923:LEU:HD22	3:A:3961:VAL:HG12	2.02	0.41
3:A:4062:PHE:CZ	3:A:4139:ILE:HG22	2.56	0.41
3:A:4675:LYS:HB2	3:A:4675:LYS:HE3	1.87	0.41
3:A:4868:ASP:O	3:A:4869:GLU:C	2.59	0.41
3:B:224:HIS:O	3:B:229:GLU:HB3	2.20	0.41
3:B:284:HIS:CE1	3:B:287:THR:HG1	2.38	0.41
3:B:688:LEU:HD12	3:B:690:GLU:H	1.85	0.41
3:B:707:VAL:HG23	3:B:713:SER:HB2	2.03	0.41
3:B:950:LEU:HD23	3:B:971:ASP:HB3	2.03	0.41
3:B:1808:ARG:HD2	3:B:1858:ASP:OD2	2.21	0.41
3:B:2030:ASP:N	3:B:2030:ASP:OD1	2.54	0.41
3:B:2156:LEU:HD23	3:B:2156:LEU:HA	1.95	0.41
3:B:2763:HIS:O	3:B:2767:ALA:N	2.38	0.41
3:B:4034:ASN:OD1	3:B:4035:VAL:O	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4055:VAL:O	3:B:4056:GLU:C	2.60	0.41
3:B:4067:LYS:HB2	3:B:4067:LYS:HE3	1.72	0.41
3:B:4725:LEU:O	3:B:4729:GLY:HA3	2.21	0.41
3:B:4766:THR:HA	3:B:4769:MET:HG2	2.03	0.41
3:B:4863:TYR:HH	3:B:4886:HIS:CE1	2.38	0.41
3:B:4868:ASP:O	3:B:4869:GLU:C	2.59	0.41
3:C:622:THR:HA	3:C:626:LEU:HD13	2.03	0.41
3:C:877:ASN:HD21	3:C:970:LEU:HB2	1.86	0.41
3:C:1099:GLU:N	3:C:1099:GLU:OE2	2.54	0.41
3:C:1779:PRO:HA	3:C:1780:PRO:HD3	1.91	0.41
3:C:1928:GLN:OE1	3:C:1928:GLN:HA	2.21	0.41
3:C:2280:VAL:O	3:C:2280:VAL:HG13	2.21	0.41
3:C:2347:GLU:OE1	3:C:2347:GLU:N	2.53	0.41
3:C:2370:GLY:O	3:D:195:PHE:CZ	2.74	0.41
3:C:2794:TYR:HA	3:C:2797:PHE:HB2	2.03	0.41
3:C:3923:LEU:HD22	3:C:3961:VAL:HG12	2.02	0.41
3:C:4062:PHE:CZ	3:C:4139:ILE:HG22	2.56	0.41
3:C:4149:ASN:O	3:C:4150:LEU:C	2.58	0.41
3:C:4182:GLU:HB2	3:C:4983:HIS:CE1	2.56	0.41
3:C:4675:LYS:O	3:C:4676:GLU:C	2.60	0.41
3:C:4725:LEU:HD12	3:C:4737:ILE:HG12	2.03	0.41
3:C:4823:LEU:O	3:C:4824:ARG:C	2.59	0.41
3:C:4843:LEU:HA	3:C:4843:LEU:HD23	1.85	0.41
3:D:111:HIS:CE1	3:D:114:SER:H	2.39	0.41
3:D:285:VAL:HG23	3:D:286:THR:N	2.35	0.41
3:D:297:GLN:HG3	3:D:300:VAL:HG21	2.03	0.41
3:D:374:LYS:HB2	3:D:374:LYS:HE2	1.87	0.41
3:D:1573:MET:HE3	3:D:1573:MET:HB3	1.76	0.41
3:D:1731:LEU:HA	3:D:1772:ARG:NH2	2.36	0.41
3:D:1752:ARG:O	3:D:1754:GLY:N	2.54	0.41
3:D:2763:HIS:O	3:D:2767:ALA:N	2.38	0.41
3:D:3598:GLU:HA	3:D:3601:ALA:HB3	2.03	0.41
3:D:3718:GLU:HA	3:D:3718:GLU:OE1	2.20	0.41
3:D:4766:THR:HA	3:D:4769:MET:HG2	2.03	0.41
3:D:4861:LYS:H	3:D:4861:LYS:HG3	1.53	0.41
1:E:47:LYS:HE2	1:E:47:LYS:HB3	1.90	0.41
1:F:47:LYS:HE2	1:F:47:LYS:HB3	1.90	0.41
3:A:1097:THR:HG23	3:A:1143:TRP:HB2	2.03	0.41
3:A:1126:GLY:O	3:A:1142:PRO:HA	2.21	0.41
3:A:2030:ASP:N	3:A:2030:ASP:OD1	2.54	0.41
3:A:2456:ILE:O	3:A:2459:SER:OG	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2875:ALA:HA	3:A:2878:LEU:HB2	2.02	0.41
3:A:4067:LYS:HB2	3:A:4067:LYS:HE3	1.72	0.41
3:A:4097:MET:H	3:A:4097:MET:HG2	1.71	0.41
3:B:320:LYS:NZ	3:B:383:HIS:O	2.52	0.41
3:B:770:ALA:HB3	3:B:1473:THR:HB	2.01	0.41
3:B:1639:LEU:O	3:B:1647:CYS:HA	2.21	0.41
3:B:2347:GLU:OE1	3:B:2347:GLU:N	2.53	0.41
3:B:2754:PHE:HA	3:B:2757:LYS:HE2	2.01	0.41
3:B:2794:TYR:HA	3:B:2797:PHE:HB2	2.03	0.41
3:B:2814:LYS:O	3:B:2817:ILE:HG22	2.21	0.41
3:B:3826:VAL:C	3:B:3828:PHE:H	2.25	0.41
3:B:4077:PHE:O	3:B:4079:ASP:N	2.54	0.41
3:B:4094:GLN:HB2	3:B:4112:LEU:HD11	2.02	0.41
3:B:4998:LYS:HG2	3:B:5003:HIS:CE1	2.56	0.41
3:C:320:LYS:NZ	3:C:383:HIS:O	2.52	0.41
3:C:374:LYS:HE2	3:C:374:LYS:HB2	1.87	0.41
3:C:1033:ARG:HE	3:C:1036:ARG:HH21	1.68	0.41
3:C:1240:LYS:O	3:C:1241:SER:OG	2.29	0.41
3:C:2927:LEU:HA	3:C:2930:LEU:HD12	2.03	0.41
3:C:4092:ASP:OD1	3:C:4092:ASP:N	2.54	0.41
3:C:4100:GLN:O	3:C:4101:LYS:O	2.39	0.41
3:C:4705:VAL:O	3:C:4708:THR:N	2.53	0.41
3:C:4829:SER:HB3	3:C:4940:PHE:CE1	2.56	0.41
3:C:4884:LEU:HD22	3:C:4884:LEU:HA	1.79	0.41
3:D:319:SER:OG	3:D:320:LYS:N	2.53	0.41
3:D:485:SER:O	3:D:489:ASN:N	2.48	0.41
3:D:561:LEU:HD21	3:D:589:LEU:HD21	2.02	0.41
3:D:950:LEU:HD23	3:D:971:ASP:HB3	2.03	0.41
3:D:2767:ALA:HA	3:D:2770:LYS:HZ2	1.86	0.41
3:D:3923:LEU:HD22	3:D:3961:VAL:HG12	2.02	0.41
3:D:3941:ASP:OD1	3:D:3942:VAL:N	2.54	0.41
3:D:4092:ASP:O	3:D:4093:PHE:C	2.57	0.41
3:D:4725:LEU:O	3:D:4729:GLY:HA3	2.21	0.41
3:D:4878:ASP:CB	3:D:4881:THR:HG23	2.51	0.41
2:I:7:GLU:H	2:I:7:GLU:HG2	1.64	0.40
3:A:102:LEU:HB2	3:A:105:HIS:CE1	2.57	0.40
3:A:622:THR:O	3:A:627:PRO:HD3	2.21	0.40
3:A:886:ARG:HA	3:A:889:GLN:HB2	2.04	0.40
3:A:1033:ARG:HE	3:A:1036:ARG:NH2	2.20	0.40
3:A:1641:ILE:HA	3:A:1642:PRO:HD3	1.80	0.40
3:A:1969:LEU:HD21	3:A:2009:LEU:CD1	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2459:SER:CB	3:B:133:PHE:HZ	2.34	0.40
3:A:2805:TYR:O	3:A:2808:PRO:HD2	2.22	0.40
3:B:316:PHE:HE1	3:B:348:VAL:HG12	1.85	0.40
3:B:443:LEU:HD23	3:B:443:LEU:HA	1.87	0.40
3:B:2284:ASN:HA	3:B:2341:VAL:HG11	2.02	0.40
3:B:2790:MET:HE2	3:B:2801:ASP:OD2	2.21	0.40
3:B:3935:TRP:CD1	3:C:77:ALA:HB2	2.56	0.40
3:C:102:LEU:HB2	3:C:105:HIS:CE1	2.56	0.40
3:C:669:ASP:N	3:C:669:ASP:OD1	2.53	0.40
3:C:2167:ILE:HG13	3:C:2168:VAL:N	2.37	0.40
3:C:2920:ARG:O	3:C:2924:GLN:N	2.38	0.40
3:D:1639:LEU:O	3:D:1647:CYS:HA	2.21	0.40
3:D:1969:LEU:HD21	3:D:2009:LEU:CD1	2.50	0.40
3:D:3974:THR:O	3:D:3978:GLN:HG2	2.21	0.40
3:D:4034:ASN:OD1	3:D:4035:VAL:O	2.39	0.40
3:D:4062:PHE:CZ	3:D:4139:ILE:HG22	2.56	0.40
1:G:40:ARG:NH1	3:C:674:PHE:CE1	2.90	0.40
3:A:419:ASP:O	3:A:422:SER:OG	2.30	0.40
3:A:1928:GLN:OE1	3:A:1928:GLN:HA	2.21	0.40
3:A:2167:ILE:HG13	3:A:2168:VAL:N	2.37	0.40
3:A:2280:VAL:O	3:A:2280:VAL:HG13	2.21	0.40
3:A:2794:TYR:HA	3:A:2797:PHE:HB2	2.03	0.40
3:A:2927:LEU:HA	3:A:2930:LEU:HD12	2.03	0.40
3:A:4909:TYR:O	3:A:4910:GLU:C	2.59	0.40
3:B:222:LEU:HD23	3:B:222:LEU:HA	1.96	0.40
3:B:297:GLN:HG3	3:B:300:VAL:HG21	2.03	0.40
3:B:419:ASP:O	3:B:422:SER:OG	2.30	0.40
3:B:622:THR:HA	3:B:626:LEU:HD13	2.03	0.40
3:B:1211:LEU:HG	3:B:1214:PHE:HB2	2.03	0.40
3:B:3628:ARG:O	3:B:3628:ARG:CG	2.69	0.40
3:B:4062:PHE:O	3:B:4063:ASP:C	2.58	0.40
3:B:4675:LYS:O	3:B:4676:GLU:C	2.60	0.40
3:C:111:HIS:CE1	3:C:114:SER:H	2.39	0.40
3:C:224:HIS:NE2	3:C:385:ASP:O	2.54	0.40
3:C:297:GLN:HG3	3:C:300:VAL:HG21	2.03	0.40
3:C:561:LEU:HD21	3:C:589:LEU:HD21	2.02	0.40
3:C:689:THR:HA	3:C:778:PHE:HE2	1.85	0.40
3:C:1152:MET:CB	3:C:1161:ILE:HB	2.51	0.40
3:C:1166:GLY:HA3	3:C:1216:ILE:HD11	2.04	0.40
3:C:1808:ARG:HD2	3:C:1858:ASP:OD2	2.21	0.40
3:C:2378:ALA:O	3:C:2382:GLU:N	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4147:LEU:HD11	3:C:4163:PHE:HB3	2.03	0.40
3:C:4581:LYS:O	3:C:4630:TYR:N	2.45	0.40
3:C:4700:GLN:O	3:C:4701:TRP:C	2.58	0.40
3:D:224:HIS:NE2	3:D:385:ASP:O	2.54	0.40
3:D:887:ILE:HD11	3:D:961:MET:HE3	2.02	0.40
3:D:4909:TYR:O	3:D:4910:GLU:C	2.59	0.40
3:A:319:SER:OG	3:A:320:LYS:N	2.53	0.40
3:A:877:ASN:HD21	3:A:970:LEU:HB2	1.85	0.40
3:A:950:LEU:HD23	3:A:971:ASP:HB3	2.03	0.40
3:A:1278:GLY:O	3:A:1280:GLN:N	2.55	0.40
3:A:2311:PRO:HA	3:A:2314:LEU:HB3	2.03	0.40
3:A:3183:VAL:O	3:A:3187:ARG:N	2.55	0.40
3:A:3628:ARG:O	3:A:3628:ARG:CG	2.69	0.40
3:A:4094:GLN:HB2	3:A:4112:LEU:HD11	2.02	0.40
3:B:102:LEU:HB2	3:B:105:HIS:CE1	2.57	0.40
3:B:117:TYR:HB3	3:B:146:CYS:SG	2.60	0.40
3:B:759:ILE:HD12	3:B:759:ILE:HA	1.94	0.40
3:B:1126:GLY:O	3:B:1142:PRO:HA	2.21	0.40
3:B:2951:ILE:O	3:B:2955:PHE:N	2.46	0.40
3:B:3775:ALA:O	3:B:3778:MET:N	2.53	0.40
3:B:4242:ILE:HD13	3:B:4242:ILE:HA	1.96	0.40
3:B:4949:GLN:HE21	3:B:4953:ASP:HB2	1.86	0.40
3:C:284:HIS:CE1	3:C:287:THR:HG1	2.38	0.40
3:C:316:PHE:HE1	3:C:348:VAL:HG12	1.85	0.40
3:C:3598:GLU:HA	3:C:3601:ALA:HB3	2.03	0.40
3:C:4166:LEU:H	3:C:4166:LEU:HG	1.68	0.40
3:C:4968:PHE:HD1	3:C:4968:PHE:HA	1.73	0.40
3:D:622:THR:HA	3:D:626:LEU:HD13	2.03	0.40
3:D:707:VAL:HG23	3:D:713:SER:HB2	2.02	0.40
3:D:2167:ILE:HG13	3:D:2168:VAL:N	2.37	0.40
3:D:2927:LEU:HA	3:D:2930:LEU:HD12	2.03	0.40
3:D:4056:GLU:HG2	3:D:4056:GLU:H	1.64	0.40
2:I:67:PRO:HB2	3:A:2238:TYR:CE2	2.56	0.40
1:G:35:LYS:HB3	1:G:35:LYS:HE3	1.91	0.40
3:A:954:LYS:HB3	3:A:968:ALA:HB2	2.04	0.40
3:A:1267:PRO:O	3:A:1267:PRO:CG	2.70	0.40
3:A:3974:THR:O	3:A:3978:GLN:HG2	2.21	0.40
3:A:4766:THR:HA	3:A:4769:MET:HG2	2.03	0.40
3:A:4920:PHE:CE2	3:A:4924:VAL:HG21	2.57	0.40
3:B:223:PHE:HE2	3:B:391:THR:HG21	1.87	0.40
3:B:1267:PRO:O	3:B:1267:PRO:CG	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:2782:ASP:OD1	3:B:2783:GLU:N	2.51	0.40
3:B:3764:LEU:O	3:B:3768:SER:HB3	2.22	0.40
3:B:4743:MET:HE3	3:B:4743:MET:HB3	1.94	0.40
3:C:118:LEU:HA	3:C:137:LEU:HB3	2.02	0.40
3:C:207:SER:OG	3:C:208:CYS:N	2.54	0.40
3:C:662:TRP:HB3	3:C:811:CYS:SG	2.62	0.40
3:C:809:ALA:HA	3:C:810:PRO:HD3	1.97	0.40
3:C:1256:GLU:HB2	3:C:1273:ALA:HB3	2.02	0.40
3:C:1969:LEU:HD21	3:C:2009:LEU:CD1	2.50	0.40
3:C:3909:ASN:HB3	3:C:3910:THR:H	1.63	0.40
3:C:4766:THR:HA	3:C:4769:MET:HG2	2.03	0.40
3:C:4817:ALA:HA	3:C:4823:LEU:HB3	2.03	0.40
3:C:4863:TYR:HB3	3:C:4864:ASN:H	1.48	0.40
3:C:4909:TYR:O	3:C:4910:GLU:C	2.59	0.40
3:C:4998:LYS:HG2	3:C:5003:HIS:CE1	2.56	0.40
3:D:207:SER:OG	3:D:208:CYS:N	2.54	0.40
3:D:284:HIS:CE1	3:D:287:THR:HG1	2.38	0.40
3:D:669:ASP:OD1	3:D:669:ASP:N	2.53	0.40
3:D:1033:ARG:HE	3:D:1036:ARG:HH21	1.68	0.40
3:D:4851:TYR:CD2	3:D:4920:PHE:HD1	2.39	0.40
3:D:4922:PHE:HA	3:D:4926:VAL:HG23	2.03	0.40
3:D:5013:MET:CG	3:D:5018:CYS:HB3	2.52	0.40
3:A:111:HIS:CE1	3:A:114:SER:H	2.39	0.40
3:A:257:ARG:O	3:A:284:HIS:NE2	2.55	0.40
3:A:618:GLN:OE1	3:A:1673:VAL:HA	2.21	0.40
3:A:1730:MET:HE3	3:A:1730:MET:HA	2.03	0.40
3:A:2771:ILE:H	3:A:2771:ILE:HD12	1.87	0.40
3:A:4077:PHE:O	3:A:4079:ASP:N	2.54	0.40
3:A:4688:ILE:H	3:A:4688:ILE:HG12	1.57	0.40
3:A:4830:VAL:HG21	3:B:4931:ILE:HD11	2.04	0.40
3:A:4949:GLN:HE21	3:A:4953:ASP:HB2	1.86	0.40
3:B:207:SER:OG	3:B:208:CYS:N	2.54	0.40
3:B:224:HIS:NE2	3:B:385:ASP:O	2.54	0.40
3:B:257:ARG:O	3:B:284:HIS:NE2	2.55	0.40
3:B:622:THR:O	3:B:627:PRO:HD3	2.21	0.40
3:B:886:ARG:HA	3:B:889:GLN:HB2	2.03	0.40
3:B:1033:ARG:HE	3:B:1036:ARG:NH2	2.20	0.40
3:B:1752:ARG:O	3:B:1754:GLY:N	2.54	0.40
3:B:2280:VAL:HG13	3:B:2280:VAL:O	2.21	0.40
3:B:2763:HIS:NE2	3:B:2767:ALA:HB2	2.36	0.40
3:B:4718:LYS:H	3:B:4718:LYS:HG2	1.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:5013:MET:CG	3:B:5018:CYS:HB3	2.52	0.40
3:C:1278:GLY:O	3:C:1280:GLN:N	2.55	0.40
3:C:2023:LEU:H	3:C:2028:ARG:HH22	1.68	0.40
3:C:2751:LEU:N	3:C:2755:ILE:HD12	2.37	0.40
3:D:320:LYS:NZ	3:D:383:HIS:O	2.52	0.40
3:D:1099:GLU:OE2	3:D:1099:GLU:N	2.54	0.40
3:D:1166:GLY:HA3	3:D:1216:ILE:HD11	2.04	0.40
3:D:2136:ARG:O	3:D:2140:ARG:NH2	2.55	0.40
3:D:2763:HIS:NE2	3:D:2767:ALA:HB2	2.36	0.40
3:D:3667:HIS:HB3	3:D:3668:SER:H	1.67	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	E	105/107 (98%)	98 (93%)	7 (7%)	0	100	100
1	F	105/107 (98%)	98 (93%)	7 (7%)	0	100	100
1	G	105/107 (98%)	98 (93%)	7 (7%)	0	100	100
1	H	105/107 (98%)	98 (93%)	7 (7%)	0	100	100
2	I	133/149 (89%)	133 (100%)	0	0	100	100
2	J	133/149 (89%)	133 (100%)	0	0	100	100
2	K	133/149 (89%)	133 (100%)	0	0	100	100
2	L	133/149 (89%)	133 (100%)	0	0	100	100
3	A	4065/5037 (81%)	3275 (81%)	637 (16%)	153 (4%)	2	22
3	B	4065/5037 (81%)	3273 (80%)	636 (16%)	156 (4%)	2	22
3	C	4065/5037 (81%)	3259 (80%)	647 (16%)	159 (4%)	2	21
3	D	4065/5037 (81%)	3277 (81%)	637 (16%)	151 (4%)	2	22

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
All	All	17212/21172 (81%)	14008 (81%)	2585 (15%)	619 (4%)	<b>4</b> <b>23</b>

All (619) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	A	626	LEU
3	A	1215	ALA
3	A	1241	SER
3	A	1296	GLN
3	A	1581	LEU
3	A	1767	VAL
3	A	1834	VAL
3	A	1856	ASP
3	A	2393	ASP
3	A	2496	PRO
3	A	2701	PRO
3	A	3020	THR
3	A	3021	PRO
3	A	3039	ILE
3	A	3138	PRO
3	A	3232	LEU
3	A	3233	PRO
3	A	3267	PRO
3	A	3289	PRO
3	A	3293	PRO
3	A	3294	PRO
3	A	3343	GLN
3	A	3351	PRO
3	A	3533	ILE
3	A	3567	PRO
3	A	3580	PRO
3	A	3592	ILE
3	A	4101	LYS
3	A	4139	ILE
3	A	4155	PRO
3	A	4722	ARG
3	A	4872	PRO
3	A	4891	VAL
3	A	4905	ALA
3	A	4927	ILE
3	A	4982	GLU
3	B	626	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	B	1215	ALA
3	B	1241	SER
3	B	1296	GLN
3	B	1581	LEU
3	B	1767	VAL
3	B	1834	VAL
3	B	1856	ASP
3	B	2393	ASP
3	B	2496	PRO
3	B	2701	PRO
3	B	3020	THR
3	B	3021	PRO
3	B	3039	ILE
3	B	3138	PRO
3	B	3232	LEU
3	B	3233	PRO
3	B	3267	PRO
3	B	3289	PRO
3	B	3293	PRO
3	B	3294	PRO
3	B	3343	GLN
3	B	3351	PRO
3	B	3533	ILE
3	B	3567	PRO
3	B	3580	PRO
3	B	3592	ILE
3	B	4101	LYS
3	B	4139	ILE
3	B	4155	PRO
3	B	4722	ARG
3	B	4854	VAL
3	B	4872	PRO
3	B	4879	MET
3	B	4891	VAL
3	B	4905	ALA
3	B	4927	ILE
3	B	4982	GLU
3	C	626	LEU
3	C	1215	ALA
3	C	1241	SER
3	C	1296	GLN
3	C	1581	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	C	1767	VAL
3	C	1834	VAL
3	C	1856	ASP
3	C	2393	ASP
3	C	2496	PRO
3	C	2701	PRO
3	C	3020	THR
3	C	3021	PRO
3	C	3039	ILE
3	C	3138	PRO
3	C	3232	LEU
3	C	3233	PRO
3	C	3267	PRO
3	C	3289	PRO
3	C	3293	PRO
3	C	3294	PRO
3	C	3343	GLN
3	C	3351	PRO
3	C	3533	ILE
3	C	3567	PRO
3	C	3580	PRO
3	C	3592	ILE
3	C	4101	LYS
3	C	4139	ILE
3	C	4155	PRO
3	C	4722	ARG
3	C	4872	PRO
3	C	4891	VAL
3	C	4905	ALA
3	C	4927	ILE
3	C	4982	GLU
3	D	626	LEU
3	D	1215	ALA
3	D	1241	SER
3	D	1296	GLN
3	D	1581	LEU
3	D	1767	VAL
3	D	1834	VAL
3	D	1856	ASP
3	D	2393	ASP
3	D	2496	PRO
3	D	2701	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	D	3020	THR
3	D	3021	PRO
3	D	3039	ILE
3	D	3138	PRO
3	D	3232	LEU
3	D	3233	PRO
3	D	3267	PRO
3	D	3289	PRO
3	D	3293	PRO
3	D	3294	PRO
3	D	3343	GLN
3	D	3351	PRO
3	D	3533	ILE
3	D	3567	PRO
3	D	3580	PRO
3	D	3592	ILE
3	D	4101	LYS
3	D	4139	ILE
3	D	4155	PRO
3	D	4722	ARG
3	D	4872	PRO
3	D	4891	VAL
3	D	4905	ALA
3	D	4927	ILE
3	D	4982	GLU
3	A	129	ASP
3	A	1279	SER
3	A	1708	ARG
3	A	2346	VAL
3	A	2509	VAL
3	A	2514	ASN
3	A	2692	ASP
3	A	2965	ARG
3	A	3003	LEU
3	A	3040	THR
3	A	3062	PRO
3	A	3136	LEU
3	A	3188	PRO
3	A	3189	ALA
3	A	3217	SER
3	A	3243	ILE
3	A	3336	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	A	3350	ARG
3	A	3362	ILE
3	A	3432	GLU
3	A	3515	LYS
3	A	3571	TRP
3	A	3593	VAL
3	A	3635	CYS
3	A	3670	GLU
3	A	3873	LYS
3	A	4124	ASN
3	A	4126	GLU
3	A	4767	TRP
3	A	4835	LYS
3	A	4855	ALA
3	A	4856	PHE
3	A	4890	GLY
3	A	4902	GLU
3	A	4906	GLY
3	A	4907	ASP
3	A	5000	GLU
3	A	5001	THR
3	A	5036	LEU
3	B	1279	SER
3	B	1708	ARG
3	B	2346	VAL
3	B	2509	VAL
3	B	2514	ASN
3	B	2692	ASP
3	B	2965	ARG
3	B	3003	LEU
3	B	3040	THR
3	B	3062	PRO
3	B	3136	LEU
3	B	3188	PRO
3	B	3189	ALA
3	B	3217	SER
3	B	3243	ILE
3	B	3336	LYS
3	B	3350	ARG
3	B	3362	ILE
3	B	3432	GLU
3	B	3515	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	B	3571	TRP
3	B	3593	VAL
3	B	3635	CYS
3	B	3670	GLU
3	B	3873	LYS
3	B	4124	ASN
3	B	4126	GLU
3	B	4767	TRP
3	B	4855	ALA
3	B	4856	PHE
3	B	4890	GLY
3	B	4902	GLU
3	B	4906	GLY
3	B	4907	ASP
3	B	4920	PHE
3	B	5000	GLU
3	B	5001	THR
3	B	5036	LEU
3	C	1279	SER
3	C	1708	ARG
3	C	2346	VAL
3	C	2509	VAL
3	C	2514	ASN
3	C	2692	ASP
3	C	2965	ARG
3	C	3003	LEU
3	C	3040	THR
3	C	3062	PRO
3	C	3136	LEU
3	C	3188	PRO
3	C	3189	ALA
3	C	3217	SER
3	C	3243	ILE
3	C	3336	LYS
3	C	3350	ARG
3	C	3362	ILE
3	C	3432	GLU
3	C	3515	LYS
3	C	3571	TRP
3	C	3593	VAL
3	C	3635	CYS
3	C	3670	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	C	3873	LYS
3	C	4124	ASN
3	C	4126	GLU
3	C	4576	ILE
3	C	4580	TYR
3	C	4767	TRP
3	C	4833	ASN
3	C	4855	ALA
3	C	4856	PHE
3	C	4890	GLY
3	C	4902	GLU
3	C	4906	GLY
3	C	4907	ASP
3	C	5000	GLU
3	C	5001	THR
3	C	5036	LEU
3	D	1279	SER
3	D	1708	ARG
3	D	2346	VAL
3	D	2509	VAL
3	D	2514	ASN
3	D	2692	ASP
3	D	2965	ARG
3	D	3003	LEU
3	D	3040	THR
3	D	3062	PRO
3	D	3136	LEU
3	D	3188	PRO
3	D	3189	ALA
3	D	3217	SER
3	D	3243	ILE
3	D	3336	LYS
3	D	3350	ARG
3	D	3362	ILE
3	D	3432	GLU
3	D	3515	LYS
3	D	3571	TRP
3	D	3593	VAL
3	D	3635	CYS
3	D	3670	GLU
3	D	3873	LYS
3	D	4124	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	D	4126	GLU
3	D	4767	TRP
3	D	4855	ALA
3	D	4856	PHE
3	D	4890	GLY
3	D	4902	GLU
3	D	4906	GLY
3	D	4907	ASP
3	D	5000	GLU
3	D	5001	THR
3	D	5036	LEU
3	A	1253	PRO
3	A	1753	LYS
3	A	1985	THR
3	A	2540	THR
3	A	2587	TYR
3	A	2616	PRO
3	A	2966	TRP
3	A	3190	LEU
3	A	3193	CYS
3	A	3333	THR
3	A	3427	PRO
3	A	3434	LEU
3	A	3462	ASN
3	A	3530	GLN
3	A	3610	GLU
3	A	4117	ALA
3	A	4156	HIS
3	A	4686	LEU
3	A	4694	ASP
3	A	4743	MET
3	A	4766	THR
3	A	4873	ASP
3	A	4966	ASP
3	A	5024	ALA
3	B	1253	PRO
3	B	1753	LYS
3	B	1985	THR
3	B	2540	THR
3	B	2587	TYR
3	B	2616	PRO
3	B	2966	TRP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	B	3190	LEU
3	B	3193	CYS
3	B	3333	THR
3	B	3427	PRO
3	B	3434	LEU
3	B	3462	ASN
3	B	3530	GLN
3	B	3610	GLU
3	B	4117	ALA
3	B	4156	HIS
3	B	4686	LEU
3	B	4694	ASP
3	B	4743	MET
3	B	4766	THR
3	B	4873	ASP
3	B	5024	ALA
3	C	127	MET
3	C	132	ALA
3	C	1253	PRO
3	C	1753	LYS
3	C	1985	THR
3	C	2540	THR
3	C	2587	TYR
3	C	2616	PRO
3	C	2966	TRP
3	C	3190	LEU
3	C	3193	CYS
3	C	3333	THR
3	C	3427	PRO
3	C	3434	LEU
3	C	3462	ASN
3	C	3530	GLN
3	C	3610	GLU
3	C	4117	ALA
3	C	4156	HIS
3	C	4686	LEU
3	C	4694	ASP
3	C	4743	MET
3	C	4766	THR
3	C	4829	SER
3	C	4873	ASP
3	C	4920	PHE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	C	4923	PHE
3	C	5023	PRO
3	C	5024	ALA
3	D	130	LYS
3	D	1253	PRO
3	D	1753	LYS
3	D	1985	THR
3	D	2540	THR
3	D	2587	TYR
3	D	2616	PRO
3	D	2966	TRP
3	D	3190	LEU
3	D	3193	CYS
3	D	3333	THR
3	D	3427	PRO
3	D	3434	LEU
3	D	3462	ASN
3	D	3530	GLN
3	D	3610	GLU
3	D	4117	ALA
3	D	4156	HIS
3	D	4686	LEU
3	D	4694	ASP
3	D	4743	MET
3	D	4766	THR
3	D	4873	ASP
3	D	5024	ALA
3	A	1988	ALA
3	A	2539	ALA
3	A	2604	GLU
3	A	2645	THR
3	A	2666	VAL
3	A	2699	ALA
3	A	2950	SER
3	A	3262	ARG
3	A	3265	GLU
3	A	3299	GLY
3	A	3360	PRO
3	A	3402	CYS
3	A	3536	ALA
3	A	3568	SER
3	A	3827	GLY

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	A	4102	GLN
3	A	4118	ASP
3	A	4636	THR
3	A	4672	LYS
3	A	4695	ASP
3	A	4916	PHE
3	A	4926	VAL
3	A	4999	ASP
3	B	1988	ALA
3	B	2539	ALA
3	B	2604	GLU
3	B	2645	THR
3	B	2666	VAL
3	B	2699	ALA
3	B	2950	SER
3	B	3262	ARG
3	B	3265	GLU
3	B	3299	GLY
3	B	3360	PRO
3	B	3402	CYS
3	B	3536	ALA
3	B	3568	SER
3	B	3827	GLY
3	B	4102	GLN
3	B	4118	ASP
3	B	4636	THR
3	B	4672	LYS
3	B	4695	ASP
3	B	4833	ASN
3	B	4844	LEU
3	B	4916	PHE
3	B	4926	VAL
3	B	4978	HIS
3	B	4999	ASP
3	C	128	THR
3	C	1988	ALA
3	C	2539	ALA
3	C	2604	GLU
3	C	2645	THR
3	C	2666	VAL
3	C	2699	ALA
3	C	2950	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	C	3262	ARG
3	C	3265	GLU
3	C	3299	GLY
3	C	3360	PRO
3	C	3402	CYS
3	C	3536	ALA
3	C	3568	SER
3	C	3827	GLY
3	C	4102	GLN
3	C	4118	ASP
3	C	4636	THR
3	C	4672	LYS
3	C	4695	ASP
3	C	4916	PHE
3	C	4926	VAL
3	C	4978	HIS
3	C	4999	ASP
3	D	132	ALA
3	D	1988	ALA
3	D	2539	ALA
3	D	2604	GLU
3	D	2645	THR
3	D	2666	VAL
3	D	2699	ALA
3	D	2950	SER
3	D	3262	ARG
3	D	3265	GLU
3	D	3299	GLY
3	D	3360	PRO
3	D	3402	CYS
3	D	3536	ALA
3	D	3568	SER
3	D	3827	GLY
3	D	4102	GLN
3	D	4118	ASP
3	D	4636	THR
3	D	4672	LYS
3	D	4695	ASP
3	D	4916	PHE
3	D	4926	VAL
3	D	4967	TYR
3	D	4978	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	D	4999	ASP
3	A	2495	VAL
3	A	2531	ARG
3	A	2562	ILE
3	A	2566	ALA
3	A	2630	VAL
3	A	3015	LEU
3	A	3426	GLU
3	A	3579	LEU
3	A	4152	GLU
3	A	4740	LEU
3	A	4816	ILE
3	A	4854	VAL
3	A	4864	ASN
3	A	4950	VAL
3	A	4955	GLU
3	B	2495	VAL
3	B	2531	ARG
3	B	2562	ILE
3	B	2566	ALA
3	B	2630	VAL
3	B	3426	GLU
3	B	3579	LEU
3	B	4152	GLU
3	B	4740	LEU
3	B	4816	ILE
3	B	4864	ASN
3	B	4923	PHE
3	B	4950	VAL
3	B	4955	GLU
3	C	2495	VAL
3	C	2531	ARG
3	C	2562	ILE
3	C	2566	ALA
3	C	2630	VAL
3	C	3015	LEU
3	C	3426	GLU
3	C	3579	LEU
3	C	4152	GLU
3	C	4740	LEU
3	C	4816	ILE
3	C	4854	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	C	4864	ASN
3	C	4879	MET
3	C	4950	VAL
3	C	4955	GLU
3	D	2495	VAL
3	D	2531	ARG
3	D	2562	ILE
3	D	2566	ALA
3	D	2630	VAL
3	D	3015	LEU
3	D	3426	GLU
3	D	3579	LEU
3	D	4152	GLU
3	D	4740	LEU
3	D	4816	ILE
3	D	4854	VAL
3	D	4864	ASN
3	D	4950	VAL
3	D	4955	GLU
3	A	677	ALA
3	A	1214	PHE
3	A	1707	LEU
3	A	2559	LEU
3	A	3044	CYS
3	A	3356	SER
3	A	4071	ILE
3	A	4123	ILE
3	A	4784	PHE
3	A	4960	ILE
3	A	5023	PRO
3	B	126	SER
3	B	677	ALA
3	B	1214	PHE
3	B	2559	LEU
3	B	3015	LEU
3	B	3044	CYS
3	B	3356	SER
3	B	4071	ILE
3	B	4123	ILE
3	B	4960	ILE
3	B	5023	PRO
3	C	677	ALA

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Mol	Chain	Res	Type
3	C	1214	PHE
3	C	2559	LEU
3	C	3044	CYS
3	C	3356	SER
3	C	4071	ILE
3	C	4123	ILE
3	D	677	ALA
3	D	1214	PHE
3	D	2559	LEU
3	D	3044	CYS
3	D	3356	SER
3	D	4071	ILE
3	D	4123	ILE
3	D	5023	PRO
3	A	3588	ASP
3	A	4699	GLY
3	B	3588	ASP
3	B	4699	GLY
3	C	3588	ASP
3	C	4699	GLY
3	D	3588	ASP
3	D	4699	GLY
3	A	1294	PRO
3	B	1294	PRO
3	C	1294	PRO
3	D	1294	PRO
3	A	753	PRO
3	A	3300	ALA
3	B	753	PRO
3	B	3300	ALA
3	B	4853	VAL
3	C	753	PRO
3	C	3300	ALA
3	C	4820	VAL
3	D	753	PRO
3	D	3300	ALA

### 5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	E	84/88 (96%)	78 (93%)	6 (7%)	12	39
1	F	84/88 (96%)	78 (93%)	6 (7%)	12	39
1	G	84/88 (96%)	78 (93%)	6 (7%)	12	39
1	H	84/88 (96%)	78 (93%)	6 (7%)	12	39
2	I	99/123 (80%)	78 (79%)	21 (21%)	1	6
2	J	99/123 (80%)	78 (79%)	21 (21%)	1	6
2	K	99/123 (80%)	78 (79%)	21 (21%)	1	6
2	L	99/123 (80%)	78 (79%)	21 (21%)	1	6
3	A	2499/4277 (58%)	2367 (95%)	132 (5%)	19	48
3	B	2500/4277 (58%)	2372 (95%)	128 (5%)	20	49
3	C	2500/4277 (58%)	2358 (94%)	142 (6%)	17	46
3	D	2499/4277 (58%)	2366 (95%)	133 (5%)	19	48
All	All	10730/17952 (60%)	10087 (94%)	643 (6%)	18	44

All (643) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	E	49	ARG
1	E	50	ILE
1	E	66	MET
1	E	74	LEU
1	E	103	LEU
1	E	106	LEU
2	I	4	GLN
2	I	6	THR
2	I	7	GLU
2	I	8	GLU
2	I	19	LEU
2	I	27	THR
2	I	31	LYS
2	I	45	THR
2	I	48	GLU
2	I	50	GLN
2	I	54	ASN
2	I	55	GLU
2	I	75	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	I	77	MET
2	I	88	GLU
2	I	91	ARG
2	I	106	LEU
2	I	109	VAL
2	I	125	MET
2	I	127	ARG
2	I	143	VAL
1	H	49	ARG
1	H	50	ILE
1	H	66	MET
1	H	74	LEU
1	H	103	LEU
1	H	106	LEU
2	L	4	GLN
2	L	6	THR
2	L	7	GLU
2	L	8	GLU
2	L	19	LEU
2	L	27	THR
2	L	31	LYS
2	L	45	THR
2	L	48	GLU
2	L	50	GLN
2	L	54	ASN
2	L	55	GLU
2	L	75	ARG
2	L	77	MET
2	L	88	GLU
2	L	91	ARG
2	L	106	LEU
2	L	109	VAL
2	L	125	MET
2	L	127	ARG
2	L	143	VAL
1	G	49	ARG
1	G	50	ILE
1	G	66	MET
1	G	74	LEU
1	G	103	LEU
1	G	106	LEU
2	K	4	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	K	6	THR
2	K	7	GLU
2	K	8	GLU
2	K	19	LEU
2	K	27	THR
2	K	31	LYS
2	K	45	THR
2	K	48	GLU
2	K	50	GLN
2	K	54	ASN
2	K	55	GLU
2	K	75	ARG
2	K	77	MET
2	K	88	GLU
2	K	91	ARG
2	K	106	LEU
2	K	109	VAL
2	K	125	MET
2	K	127	ARG
2	K	143	VAL
1	F	49	ARG
1	F	50	ILE
1	F	66	MET
1	F	74	LEU
1	F	103	LEU
1	F	106	LEU
2	J	4	GLN
2	J	6	THR
2	J	7	GLU
2	J	8	GLU
2	J	19	LEU
2	J	27	THR
2	J	31	LYS
2	J	45	THR
2	J	48	GLU
2	J	50	GLN
2	J	54	ASN
2	J	55	GLU
2	J	75	ARG
2	J	77	MET
2	J	88	GLU
2	J	91	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	J	106	LEU
2	J	109	VAL
2	J	125	MET
2	J	127	ARG
2	J	143	VAL
3	A	645	ARG
3	A	1252	HIS
3	A	1253	PRO
3	A	1266	THR
3	A	1271	ARG
3	A	1433	TYR
3	A	1573	MET
3	A	1575	LEU
3	A	1579	MET
3	A	1580	PHE
3	A	1581	LEU
3	A	1929	MET
3	A	3632	VAL
3	A	3635	CYS
3	A	3639	THR
3	A	3844	LEU
3	A	4021	LYS
3	A	4050	GLU
3	A	4052	SER
3	A	4053	SER
3	A	4056	GLU
3	A	4057	MET
3	A	4058	ILE
3	A	4064	MET
3	A	4066	LEU
3	A	4067	LYS
3	A	4069	LYS
3	A	4078	GLN
3	A	4081	VAL
3	A	4082	THR
3	A	4083	ASP
3	A	4087	LEU
3	A	4089	SER
3	A	4090	LYS
3	A	4091	LYS
3	A	4092	ASP
3	A	4098	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	A	4113	SER
3	A	4114	CYS
3	A	4115	SER
3	A	4116	GLU
3	A	4118	ASP
3	A	4119	GLU
3	A	4125	PHE
3	A	4130	ASN
3	A	4132	PHE
3	A	4159	ARG
3	A	4164	LEU
3	A	4166	LEU
3	A	4178	LEU
3	A	4181	ILE
3	A	4548	ARG
3	A	4666	VAL
3	A	4677	LEU
3	A	4680	LYS
3	A	4688	ILE
3	A	4697	VAL
3	A	4698	LYS
3	A	4703	ARG
3	A	4706	LEU
3	A	4707	ASN
3	A	4708	THR
3	A	4710	SER
3	A	4714	ASN
3	A	4718	LYS
3	A	4720	VAL
3	A	4721	LYS
3	A	4722	ARG
3	A	4723	LYS
3	A	4726	ASP
3	A	4727	LYS
3	A	4734	ARG
3	A	4735	GLU
3	A	4737	ILE
3	A	4739	GLU
3	A	4740	LEU
3	A	4743	MET
3	A	4747	SER
3	A	4768	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	A	4773	VAL
3	A	4774	LYS
3	A	4779	LYS
3	A	4783	ILE
3	A	4815	ASP
3	A	4816	ILE
3	A	4823	LEU
3	A	4838	VAL
3	A	4843	LEU
3	A	4844	LEU
3	A	4857	ASN
3	A	4858	PHE
3	A	4860	ARG
3	A	4861	LYS
3	A	4866	SER
3	A	4875	LYS
3	A	4881	THR
3	A	4882	CYS
3	A	4884	LEU
3	A	4887	MET
3	A	4888	TYR
3	A	4892	ARG
3	A	4897	ILE
3	A	4900	GLU
3	A	4911	LEU
3	A	4913	ARG
3	A	4922	PHE
3	A	4925	ILE
3	A	4928	LEU
3	A	4933	GLN
3	A	4938	ASP
3	A	4942	GLU
3	A	4943	LEU
3	A	4947	GLN
3	A	4957	LYS
3	A	4965	SER
3	A	4966	ASP
3	A	4971	THR
3	A	4973	HIS
3	A	4980	LEU
3	A	4981	GLU
3	A	4982	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	A	4989	MET
3	A	4993	MET
3	A	4997	ASN
3	A	4998	LYS
3	A	5008	SER
3	A	5012	LYS
3	A	5013	MET
3	A	5017	ARG
3	A	5020	ASP
3	A	5026	ASP
3	A	5030	LYS
3	B	645	ARG
3	B	1252	HIS
3	B	1253	PRO
3	B	1266	THR
3	B	1271	ARG
3	B	1433	TYR
3	B	1573	MET
3	B	1575	LEU
3	B	1579	MET
3	B	1580	PHE
3	B	1581	LEU
3	B	1929	MET
3	B	3632	VAL
3	B	3635	CYS
3	B	3639	THR
3	B	3844	LEU
3	B	4021	LYS
3	B	4050	GLU
3	B	4052	SER
3	B	4053	SER
3	B	4056	GLU
3	B	4057	MET
3	B	4058	ILE
3	B	4064	MET
3	B	4066	LEU
3	B	4067	LYS
3	B	4069	LYS
3	B	4078	GLN
3	B	4081	VAL
3	B	4082	THR
3	B	4083	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	B	4087	LEU
3	B	4089	SER
3	B	4090	LYS
3	B	4091	LYS
3	B	4092	ASP
3	B	4098	ASP
3	B	4113	SER
3	B	4114	CYS
3	B	4115	SER
3	B	4116	GLU
3	B	4118	ASP
3	B	4119	GLU
3	B	4125	PHE
3	B	4130	ASN
3	B	4132	PHE
3	B	4159	ARG
3	B	4164	LEU
3	B	4166	LEU
3	B	4178	LEU
3	B	4548	ARG
3	B	4666	VAL
3	B	4677	LEU
3	B	4680	LYS
3	B	4688	ILE
3	B	4697	VAL
3	B	4698	LYS
3	B	4703	ARG
3	B	4706	LEU
3	B	4707	ASN
3	B	4708	THR
3	B	4710	SER
3	B	4714	ASN
3	B	4718	LYS
3	B	4720	VAL
3	B	4721	LYS
3	B	4722	ARG
3	B	4723	LYS
3	B	4726	ASP
3	B	4727	LYS
3	B	4734	ARG
3	B	4735	GLU
3	B	4737	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	B	4739	GLU
3	B	4740	LEU
3	B	4743	MET
3	B	4747	SER
3	B	4768	LEU
3	B	4773	VAL
3	B	4774	LYS
3	B	4779	LYS
3	B	4783	ILE
3	B	4815	ASP
3	B	4816	ILE
3	B	4843	LEU
3	B	4844	LEU
3	B	4846	VAL
3	B	4857	ASN
3	B	4858	PHE
3	B	4860	ARG
3	B	4861	LYS
3	B	4866	SER
3	B	4875	LYS
3	B	4882	CYS
3	B	4884	LEU
3	B	4887	MET
3	B	4888	TYR
3	B	4892	ARG
3	B	4897	ILE
3	B	4900	GLU
3	B	4911	LEU
3	B	4913	ARG
3	B	4922	PHE
3	B	4925	ILE
3	B	4928	LEU
3	B	4933	GLN
3	B	4938	ASP
3	B	4940	PHE
3	B	4942	GLU
3	B	4943	LEU
3	B	4947	GLN
3	B	4957	LYS
3	B	4965	SER
3	B	4966	ASP
3	B	4971	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	B	4980	LEU
3	B	4982	GLU
3	B	4989	MET
3	B	4993	MET
3	B	4997	ASN
3	B	4998	LYS
3	B	5008	SER
3	B	5012	LYS
3	B	5013	MET
3	B	5017	ARG
3	B	5020	ASP
3	B	5026	ASP
3	B	5030	LYS
3	C	131	LEU
3	C	645	ARG
3	C	1252	HIS
3	C	1253	PRO
3	C	1266	THR
3	C	1271	ARG
3	C	1433	TYR
3	C	1573	MET
3	C	1575	LEU
3	C	1579	MET
3	C	1580	PHE
3	C	1581	LEU
3	C	1929	MET
3	C	3632	VAL
3	C	3635	CYS
3	C	3639	THR
3	C	3844	LEU
3	C	4021	LYS
3	C	4050	GLU
3	C	4052	SER
3	C	4053	SER
3	C	4056	GLU
3	C	4057	MET
3	C	4058	ILE
3	C	4064	MET
3	C	4066	LEU
3	C	4067	LYS
3	C	4069	LYS
3	C	4078	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	C	4081	VAL
3	C	4082	THR
3	C	4083	ASP
3	C	4087	LEU
3	C	4089	SER
3	C	4090	LYS
3	C	4091	LYS
3	C	4092	ASP
3	C	4098	ASP
3	C	4113	SER
3	C	4114	CYS
3	C	4115	SER
3	C	4116	GLU
3	C	4118	ASP
3	C	4119	GLU
3	C	4125	PHE
3	C	4130	ASN
3	C	4132	PHE
3	C	4159	ARG
3	C	4164	LEU
3	C	4166	LEU
3	C	4178	LEU
3	C	4182	GLU
3	C	4183	ILE
3	C	4548	ARG
3	C	4580	TYR
3	C	4666	VAL
3	C	4677	LEU
3	C	4680	LYS
3	C	4688	ILE
3	C	4697	VAL
3	C	4698	LYS
3	C	4703	ARG
3	C	4706	LEU
3	C	4707	ASN
3	C	4708	THR
3	C	4710	SER
3	C	4714	ASN
3	C	4718	LYS
3	C	4720	VAL
3	C	4721	LYS
3	C	4722	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	C	4723	LYS
3	C	4726	ASP
3	C	4727	LYS
3	C	4734	ARG
3	C	4735	GLU
3	C	4737	ILE
3	C	4739	GLU
3	C	4740	LEU
3	C	4743	MET
3	C	4747	SER
3	C	4768	LEU
3	C	4773	VAL
3	C	4774	LYS
3	C	4779	LYS
3	C	4783	ILE
3	C	4815	ASP
3	C	4816	ILE
3	C	4822	THR
3	C	4823	LEU
3	C	4824	ARG
3	C	4827	LEU
3	C	4832	HIS
3	C	4838	VAL
3	C	4843	LEU
3	C	4844	LEU
3	C	4847	VAL
3	C	4857	ASN
3	C	4858	PHE
3	C	4860	ARG
3	C	4861	LYS
3	C	4866	SER
3	C	4875	LYS
3	C	4881	THR
3	C	4882	CYS
3	C	4884	LEU
3	C	4887	MET
3	C	4888	TYR
3	C	4892	ARG
3	C	4897	ILE
3	C	4900	GLU
3	C	4911	LEU
3	C	4913	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	C	4921	PHE
3	C	4925	ILE
3	C	4928	LEU
3	C	4933	GLN
3	C	4938	ASP
3	C	4940	PHE
3	C	4942	GLU
3	C	4943	LEU
3	C	4947	GLN
3	C	4957	LYS
3	C	4965	SER
3	C	4966	ASP
3	C	4970	THR
3	C	4971	THR
3	C	4973	HIS
3	C	4976	GLU
3	C	4980	LEU
3	C	4982	GLU
3	C	4989	MET
3	C	4993	MET
3	C	4997	ASN
3	C	4998	LYS
3	C	5008	SER
3	C	5012	LYS
3	C	5013	MET
3	C	5017	ARG
3	C	5020	ASP
3	C	5026	ASP
3	C	5030	LYS
3	D	645	ARG
3	D	1252	HIS
3	D	1253	PRO
3	D	1266	THR
3	D	1271	ARG
3	D	1433	TYR
3	D	1573	MET
3	D	1575	LEU
3	D	1579	MET
3	D	1580	PHE
3	D	1581	LEU
3	D	1929	MET
3	D	3632	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	D	3635	CYS
3	D	3639	THR
3	D	3844	LEU
3	D	4021	LYS
3	D	4050	GLU
3	D	4052	SER
3	D	4053	SER
3	D	4056	GLU
3	D	4057	MET
3	D	4058	ILE
3	D	4064	MET
3	D	4066	LEU
3	D	4067	LYS
3	D	4069	LYS
3	D	4078	GLN
3	D	4081	VAL
3	D	4082	THR
3	D	4083	ASP
3	D	4087	LEU
3	D	4089	SER
3	D	4090	LYS
3	D	4091	LYS
3	D	4092	ASP
3	D	4098	ASP
3	D	4113	SER
3	D	4114	CYS
3	D	4115	SER
3	D	4116	GLU
3	D	4118	ASP
3	D	4119	GLU
3	D	4125	PHE
3	D	4130	ASN
3	D	4132	PHE
3	D	4159	ARG
3	D	4164	LEU
3	D	4166	LEU
3	D	4178	LEU
3	D	4548	ARG
3	D	4580	TYR
3	D	4666	VAL
3	D	4677	LEU
3	D	4680	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	D	4688	ILE
3	D	4697	VAL
3	D	4698	LYS
3	D	4703	ARG
3	D	4706	LEU
3	D	4707	ASN
3	D	4708	THR
3	D	4710	SER
3	D	4714	ASN
3	D	4718	LYS
3	D	4720	VAL
3	D	4721	LYS
3	D	4722	ARG
3	D	4723	LYS
3	D	4726	ASP
3	D	4727	LYS
3	D	4734	ARG
3	D	4735	GLU
3	D	4737	ILE
3	D	4739	GLU
3	D	4740	LEU
3	D	4743	MET
3	D	4747	SER
3	D	4768	LEU
3	D	4773	VAL
3	D	4774	LYS
3	D	4779	LYS
3	D	4783	ILE
3	D	4815	ASP
3	D	4816	ILE
3	D	4823	LEU
3	D	4824	ARG
3	D	4827	LEU
3	D	4838	VAL
3	D	4840	THR
3	D	4843	LEU
3	D	4844	LEU
3	D	4857	ASN
3	D	4858	PHE
3	D	4860	ARG
3	D	4861	LYS
3	D	4866	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	D	4875	LYS
3	D	4881	THR
3	D	4882	CYS
3	D	4884	LEU
3	D	4887	MET
3	D	4888	TYR
3	D	4892	ARG
3	D	4897	ILE
3	D	4900	GLU
3	D	4911	LEU
3	D	4913	ARG
3	D	4925	ILE
3	D	4928	LEU
3	D	4933	GLN
3	D	4938	ASP
3	D	4942	GLU
3	D	4943	LEU
3	D	4947	GLN
3	D	4957	LYS
3	D	4965	SER
3	D	4966	ASP
3	D	4971	THR
3	D	4973	HIS
3	D	4980	LEU
3	D	4982	GLU
3	D	4989	MET
3	D	4993	MET
3	D	4997	ASN
3	D	4998	LYS
3	D	5008	SER
3	D	5012	LYS
3	D	5013	MET
3	D	5017	ARG
3	D	5020	ASP
3	D	5026	ASP
3	D	5030	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (104) such sidechains are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	E	20	GLN
1	E	43	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	E	53	GLN
1	E	87	HIS
1	E	94	ASN
2	I	50	GLN
1	H	20	GLN
1	H	43	ASN
1	H	53	GLN
1	H	87	HIS
1	H	94	ASN
2	L	50	GLN
1	G	20	GLN
1	G	43	ASN
1	G	53	GLN
1	G	87	HIS
1	G	94	ASN
2	K	50	GLN
1	F	20	GLN
1	F	43	ASN
1	F	53	GLN
1	F	87	HIS
1	F	94	ASN
2	J	50	GLN
3	A	536	ASN
3	A	812	HIS
3	A	1429	ASN
3	A	1460	HIS
3	A	1560	ASN
3	A	1563	GLN
3	A	2213	ASN
3	A	2931	GLN
3	A	4054	ASN
3	A	4130	ASN
3	A	4250	GLN
3	A	4574	ASN
3	A	4691	GLN
3	A	4787	ASN
3	A	4832	HIS
3	A	4833	ASN
3	A	4946	GLN
3	A	4947	GLN
3	A	4949	GLN
3	A	4978	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	A	4983	HIS
3	B	536	ASN
3	B	618	GLN
3	B	812	HIS
3	B	1429	ASN
3	B	1460	HIS
3	B	1560	ASN
3	B	1563	GLN
3	B	2213	ASN
3	B	2931	GLN
3	B	4054	ASN
3	B	4130	ASN
3	B	4691	GLN
3	B	4787	ASN
3	B	4832	HIS
3	B	4833	ASN
3	B	4946	GLN
3	B	4947	GLN
3	B	4949	GLN
3	B	4978	HIS
3	B	4983	HIS
3	C	536	ASN
3	C	618	GLN
3	C	812	HIS
3	C	1429	ASN
3	C	1460	HIS
3	C	1560	ASN
3	C	1563	GLN
3	C	2213	ASN
3	C	4054	ASN
3	C	4130	ASN
3	C	4250	GLN
3	C	4574	ASN
3	C	4691	GLN
3	C	4946	GLN
3	C	4947	GLN
3	C	4949	GLN
3	C	4973	HIS
3	C	4978	HIS
3	C	4983	HIS
3	D	536	ASN
3	D	618	GLN

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Mol	Chain	Res	Type
3	D	812	HIS
3	D	1429	ASN
3	D	1460	HIS
3	D	1560	ASN
3	D	1563	GLN
3	D	2213	ASN
3	D	2931	GLN
3	D	4054	ASN
3	D	4130	ASN
3	D	4574	ASN
3	D	4691	GLN
3	D	4832	HIS
3	D	4833	ASN
3	D	4946	GLN
3	D	4947	GLN
3	D	4949	GLN
3	D	4978	HIS
3	D	4983	HIS

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 20 ligands modelled in this entry, 8 are monoatomic - leaving 12 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$
4	F0U	D	5101	-	29,30,30	1.43	6 (20%)	31,43,43	1.11	2 (6%)
8	CFF	D	5105	-	8,15,15	2.29	3 (37%)	8,23,23	1.33	1 (12%)
4	F0U	B	5101	-	29,30,30	1.42	6 (20%)	31,43,43	1.11	2 (6%)
7	ATP	B	5104	-	26,33,33	0.90	1 (3%)	31,52,52	1.69	5 (16%)
7	ATP	D	5104	-	26,33,33	0.90	1 (3%)	31,52,52	1.68	5 (16%)
8	CFF	A	5105	-	8,15,15	2.32	3 (37%)	8,23,23	1.32	1 (12%)
8	CFF	C	5105	-	8,15,15	2.28	3 (37%)	8,23,23	1.48	1 (12%)
7	ATP	C	5104	-	26,33,33	0.90	1 (3%)	31,52,52	1.69	5 (16%)
8	CFF	B	5105	-	8,15,15	2.30	3 (37%)	8,23,23	1.31	1 (12%)
7	ATP	A	5104	-	26,33,33	0.90	1 (3%)	31,52,52	1.69	5 (16%)
4	F0U	C	5101	-	29,30,30	1.43	6 (20%)	31,43,43	1.12	2 (6%)
4	F0U	A	5101	-	29,30,30	1.43	6 (20%)	31,43,43	1.12	2 (6%)

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
4	F0U	D	5101	-	-	0/11/18/18	0/3/3/3
8	CFF	D	5105	-	-	-	0/2/2/2
4	F0U	B	5101	-	-	0/11/18/18	0/3/3/3
7	ATP	B	5104	-	-	2/18/38/38	0/3/3/3
7	ATP	D	5104	-	-	2/18/38/38	0/3/3/3
8	CFF	A	5105	-	-	-	0/2/2/2
8	CFF	C	5105	-	-	-	0/2/2/2
7	ATP	C	5104	-	-	2/18/38/38	0/3/3/3
8	CFF	B	5105	-	-	-	0/2/2/2
7	ATP	A	5104	-	-	2/18/38/38	0/3/3/3
4	F0U	C	5101	-	-	0/11/18/18	0/3/3/3
4	F0U	A	5101	-	-	0/11/18/18	0/3/3/3

All (40) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	A	5105	CFF	C5-C4	4.22	1.45	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	A	5105	CFF	C5-C6	4.20	1.48	1.41
8	B	5105	CFF	C5-C4	4.19	1.45	1.39
8	D	5105	CFF	C5-C4	4.18	1.45	1.39
8	D	5105	CFF	C5-C6	4.14	1.47	1.41
8	C	5105	CFF	C5-C4	4.13	1.45	1.39
8	C	5105	CFF	C5-C6	4.10	1.47	1.41
8	B	5105	CFF	C5-C6	4.07	1.47	1.41
4	C	5101	F0U	CAQ-NAS	-3.07	1.29	1.34
4	A	5101	F0U	CAQ-NAS	-3.04	1.29	1.34
4	B	5101	F0U	CAH-NAI	2.98	1.37	1.33
4	D	5101	F0U	CAQ-NAS	-2.97	1.29	1.34
4	B	5101	F0U	CAQ-NAS	-2.97	1.29	1.34
4	A	5101	F0U	CAH-NAI	2.96	1.37	1.33
4	D	5101	F0U	BR-CAQ	-2.95	1.86	1.90
4	D	5101	F0U	CAH-NAI	2.94	1.37	1.33
4	C	5101	F0U	CAH-NAI	2.93	1.37	1.33
4	B	5101	F0U	BR-CAQ	-2.92	1.86	1.90
4	A	5101	F0U	BR-CAQ	-2.91	1.86	1.90
4	C	5101	F0U	BR-CAQ	-2.89	1.86	1.90
4	D	5101	F0U	CAU-NAT	-2.70	1.39	1.44
4	A	5101	F0U	CAU-NAT	-2.66	1.39	1.44
4	C	5101	F0U	CAU-NAT	-2.64	1.39	1.44
4	B	5101	F0U	CAU-NAT	-2.61	1.39	1.44
4	C	5101	F0U	CAP-CAO	2.45	1.42	1.39
4	A	5101	F0U	CAP-CAO	2.43	1.42	1.39
8	B	5105	CFF	C6-N1	2.42	1.41	1.38
4	B	5101	F0U	CAP-CAO	2.39	1.42	1.39
8	A	5105	CFF	C6-N1	2.39	1.41	1.38
4	D	5101	F0U	CAP-CAO	2.38	1.42	1.39
8	C	5105	CFF	C6-N1	2.35	1.41	1.38
8	D	5105	CFF	C6-N1	2.34	1.41	1.38
7	C	5104	ATP	C5-C4	2.21	1.46	1.40
7	A	5104	ATP	C5-C4	2.20	1.46	1.40
7	B	5104	ATP	C5-C4	2.20	1.46	1.40
7	D	5104	ATP	C5-C4	2.18	1.46	1.40
4	A	5101	F0U	CAV-CAU	2.13	1.42	1.39
4	B	5101	F0U	CAV-CAU	2.11	1.42	1.39
4	C	5101	F0U	CAV-CAU	2.11	1.42	1.39
4	D	5101	F0U	CAV-CAU	2.09	1.42	1.39

All (32) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	C	5104	ATP	PA-O3A-PB	-3.94	119.32	132.83
7	D	5104	ATP	PB-O3B-PG	-3.93	119.33	132.83
7	A	5104	ATP	PB-O3B-PG	-3.93	119.34	132.83
7	B	5104	ATP	PB-O3B-PG	-3.92	119.36	132.83
7	C	5104	ATP	PB-O3B-PG	-3.92	119.37	132.83
7	D	5104	ATP	PA-O3A-PB	-3.92	119.37	132.83
7	A	5104	ATP	PA-O3A-PB	-3.92	119.37	132.83
7	B	5104	ATP	PA-O3A-PB	-3.92	119.39	132.83
4	C	5101	F0U	CAP-CAQ-NAS	3.69	116.62	111.42
4	A	5101	F0U	CAP-CAQ-NAS	3.66	116.59	111.42
4	B	5101	F0U	CAP-CAQ-NAS	3.66	116.59	111.42
4	D	5101	F0U	CAP-CAQ-NAS	3.66	116.58	111.42
7	B	5104	ATP	N3-C2-N1	-3.59	123.07	128.68
7	C	5104	ATP	N3-C2-N1	-3.57	123.10	128.68
7	D	5104	ATP	N3-C2-N1	-3.56	123.12	128.68
7	A	5104	ATP	N3-C2-N1	-3.55	123.12	128.68
7	B	5104	ATP	C3'-C2'-C1'	3.26	105.88	100.98
7	A	5104	ATP	C3'-C2'-C1'	3.24	105.85	100.98
7	D	5104	ATP	C3'-C2'-C1'	3.23	105.83	100.98
7	C	5104	ATP	C3'-C2'-C1'	3.22	105.83	100.98
4	C	5101	F0U	CAZ-NBA-CAU	2.89	119.25	115.98
4	A	5101	F0U	CAZ-NBA-CAU	2.88	119.23	115.98
4	B	5101	F0U	CAZ-NBA-CAU	2.87	119.22	115.98
4	D	5101	F0U	CAZ-NBA-CAU	2.85	119.20	115.98
8	C	5105	CFF	C5-C6-N1	-2.67	115.35	118.20
7	C	5104	ATP	C4-C5-N7	-2.48	106.82	109.40
7	A	5104	ATP	C4-C5-N7	-2.47	106.83	109.40
7	D	5104	ATP	C4-C5-N7	-2.46	106.83	109.40
7	B	5104	ATP	C4-C5-N7	-2.45	106.85	109.40
8	A	5105	CFF	C5-C6-N1	-2.33	115.71	118.20
8	D	5105	CFF	C5-C6-N1	-2.33	115.72	118.20
8	B	5105	CFF	C5-C6-N1	-2.30	115.75	118.20

There are no chirality outliers.

All (8) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
7	A	5104	ATP	C5'-O5'-PA-O1A
7	B	5104	ATP	C5'-O5'-PA-O1A
7	C	5104	ATP	C5'-O5'-PA-O1A
7	D	5104	ATP	C5'-O5'-PA-O1A
7	A	5104	ATP	C5'-O5'-PA-O3A
7	B	5104	ATP	C5'-O5'-PA-O3A

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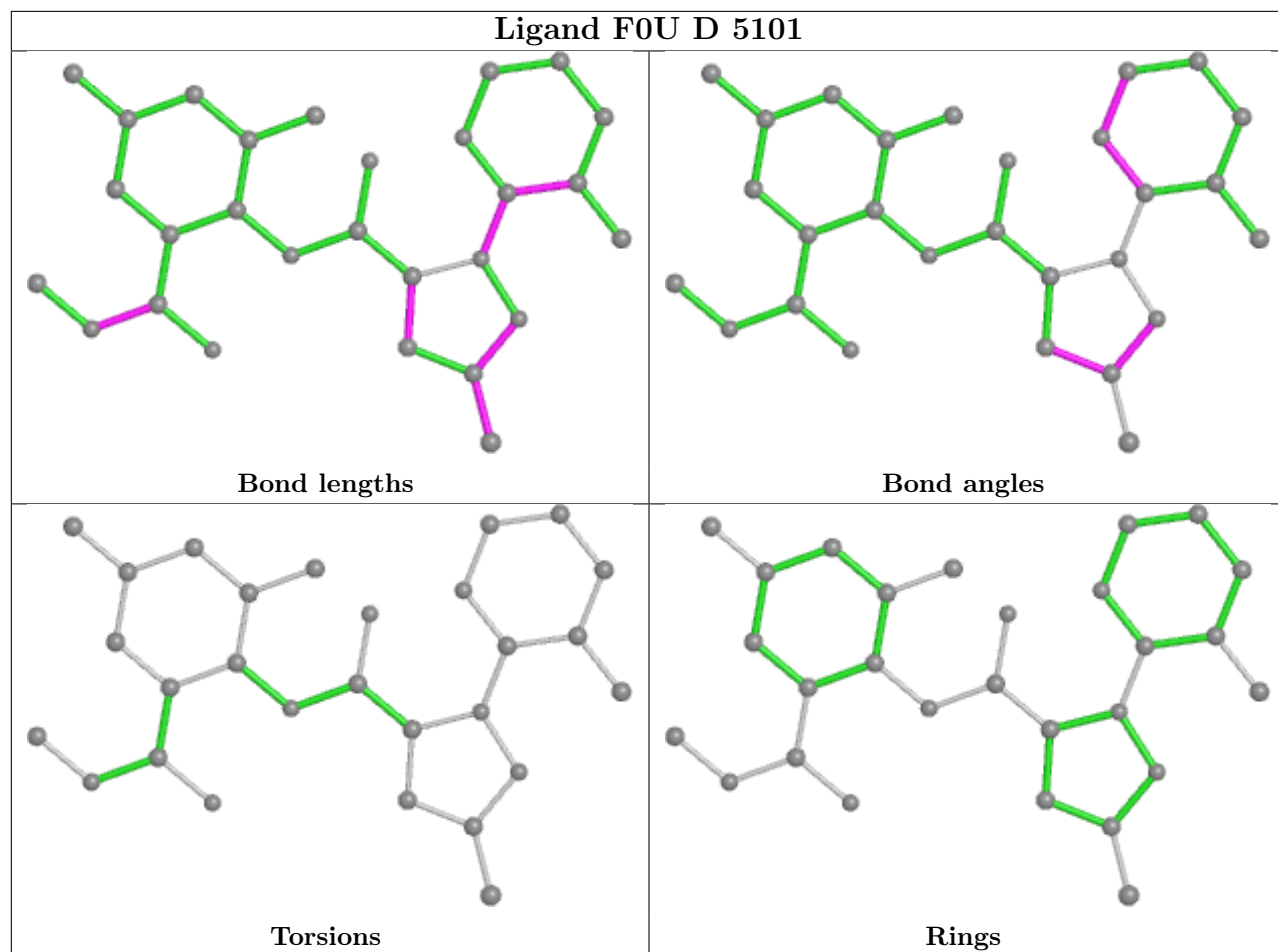
Mol	Chain	Res	Type	Atoms
7	C	5104	ATP	C5'-O5'-PA-O3A
7	D	5104	ATP	C5'-O5'-PA-O3A

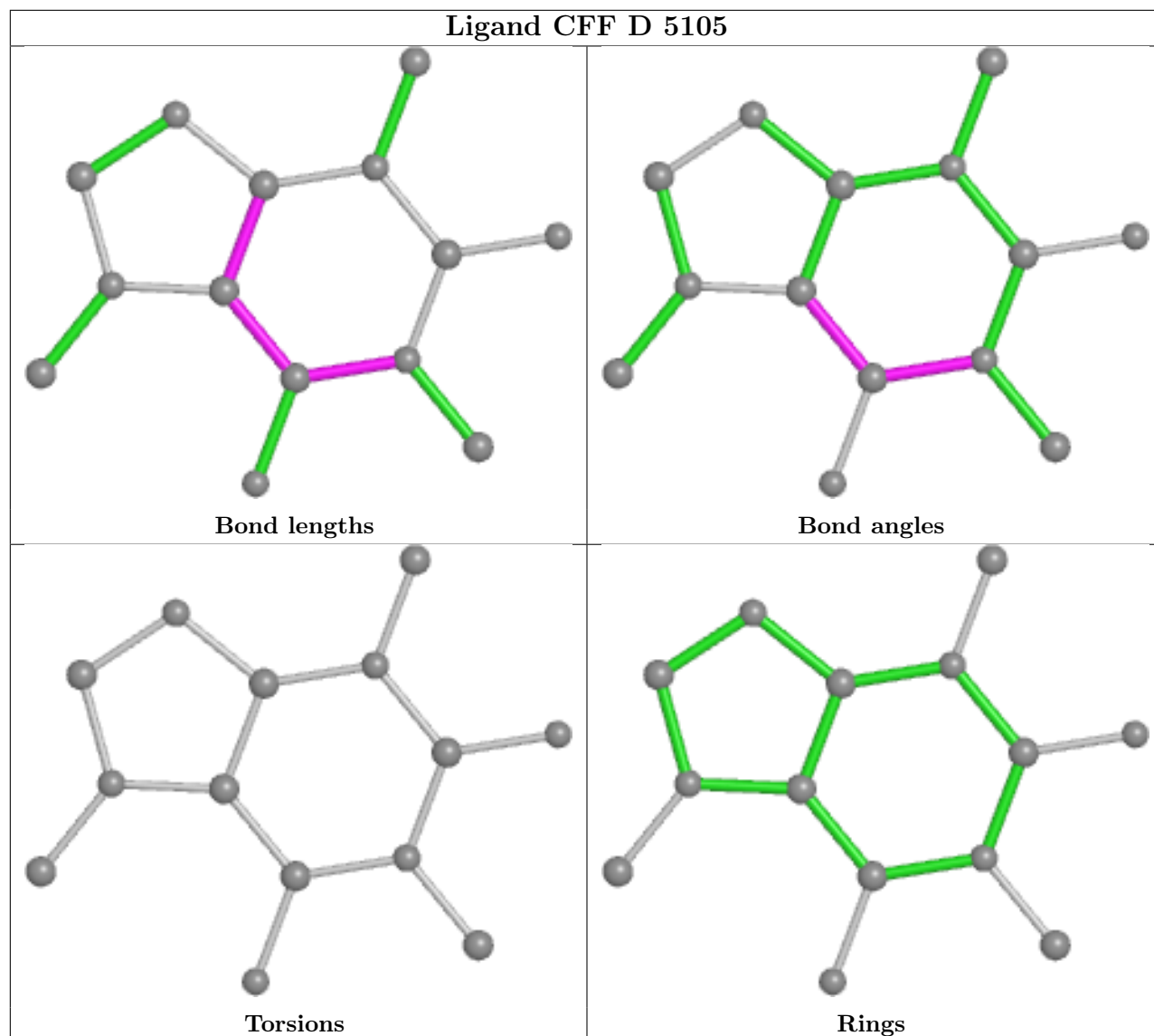
There are no ring outliers.

7 monomers are involved in 20 short contacts:

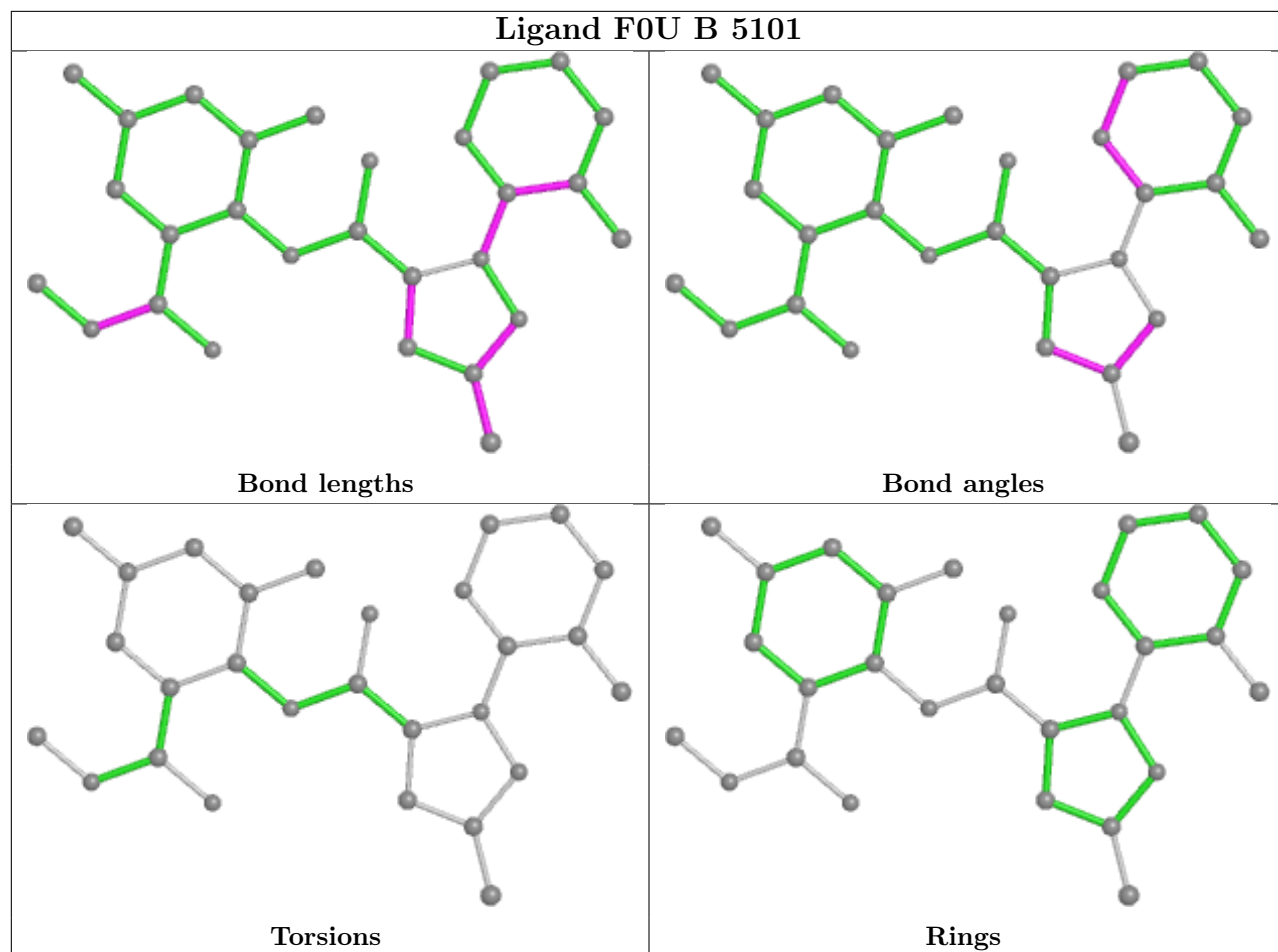
Mol	Chain	Res	Type	Clashes	Symm-Clashes
7	B	5104	ATP	3	0
7	D	5104	ATP	2	0
8	A	5105	CFF	2	0
7	C	5104	ATP	4	0
8	B	5105	CFF	4	0
7	A	5104	ATP	3	0
4	C	5101	F0U	2	0

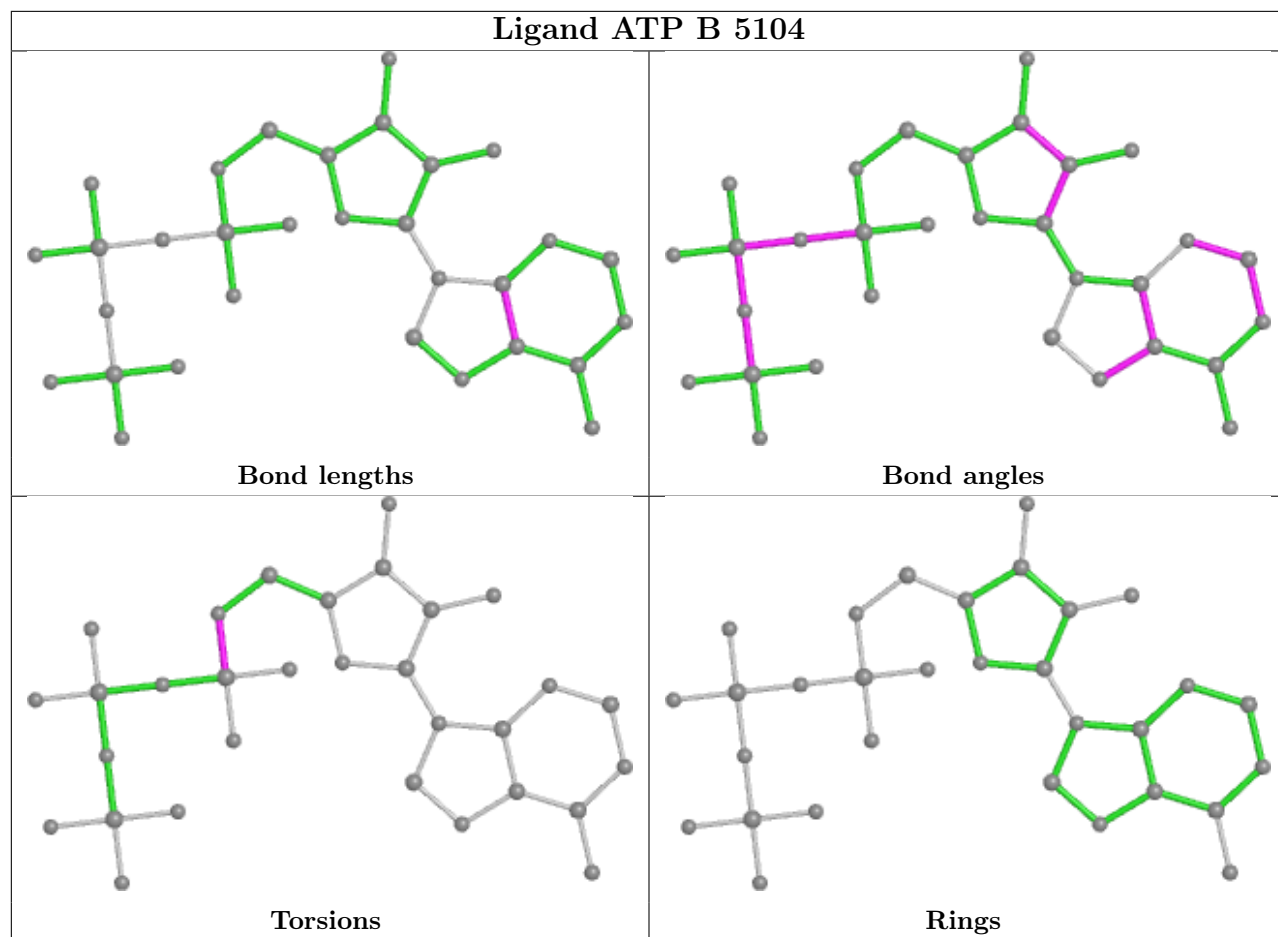
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 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.

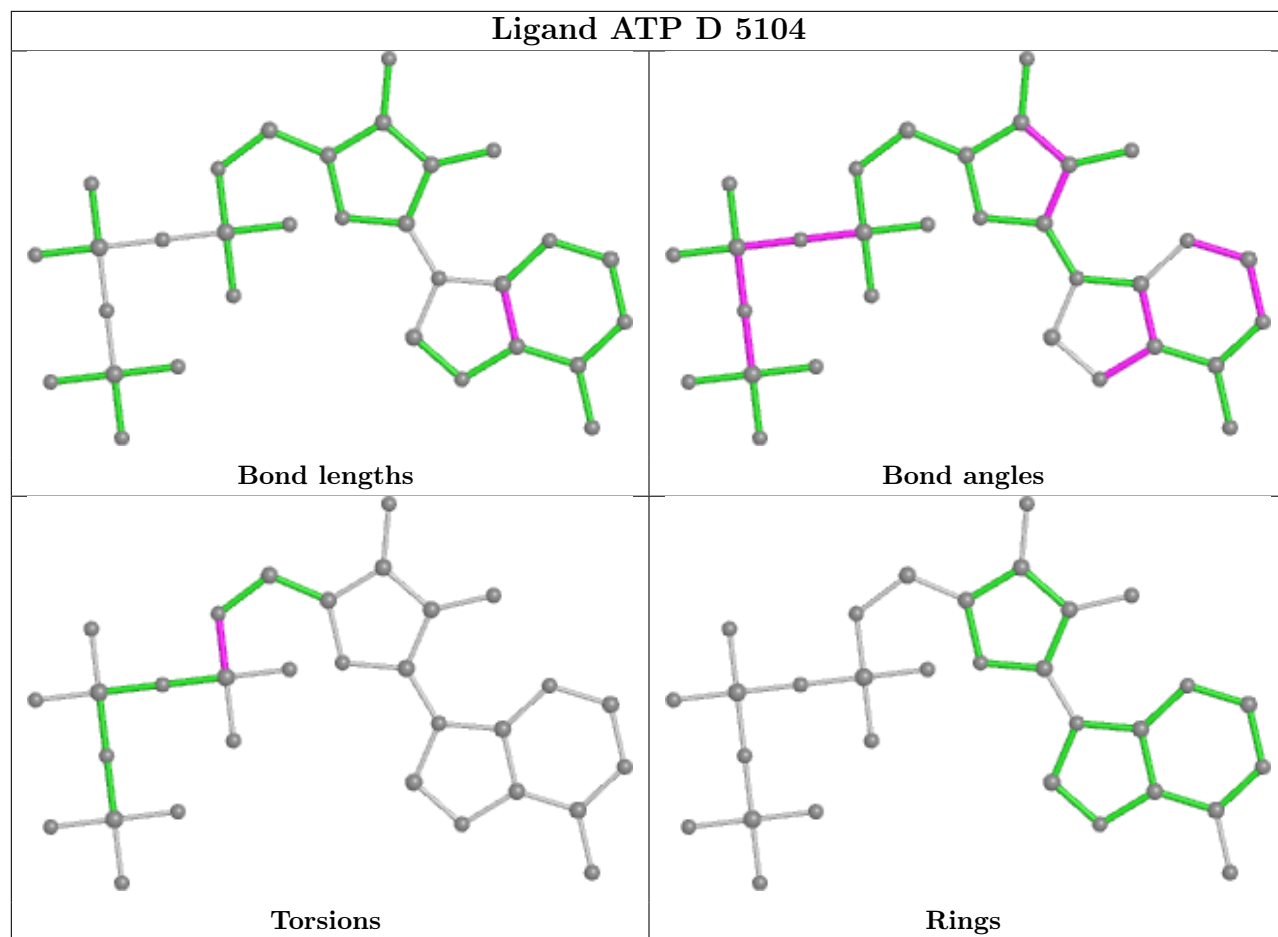


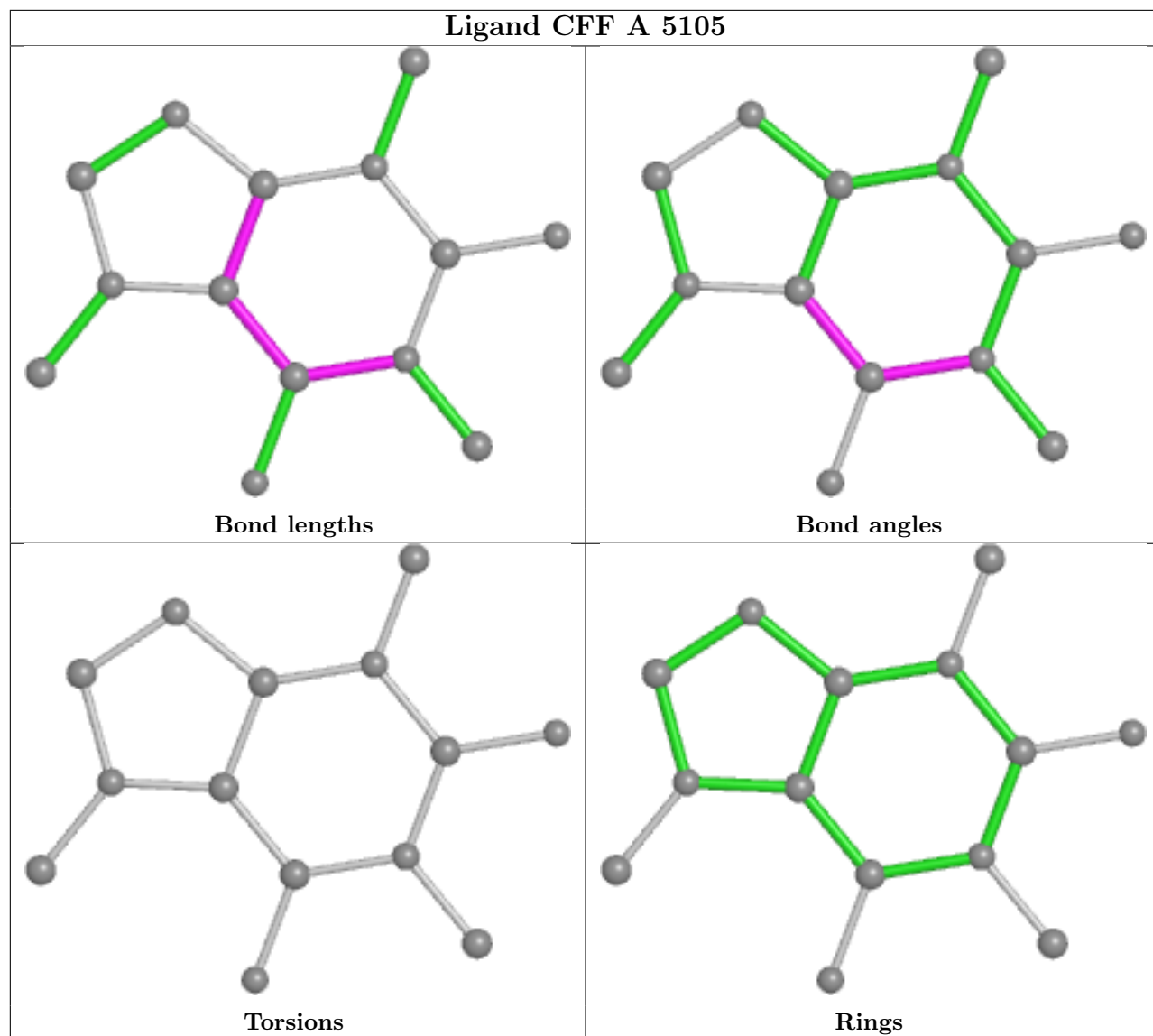


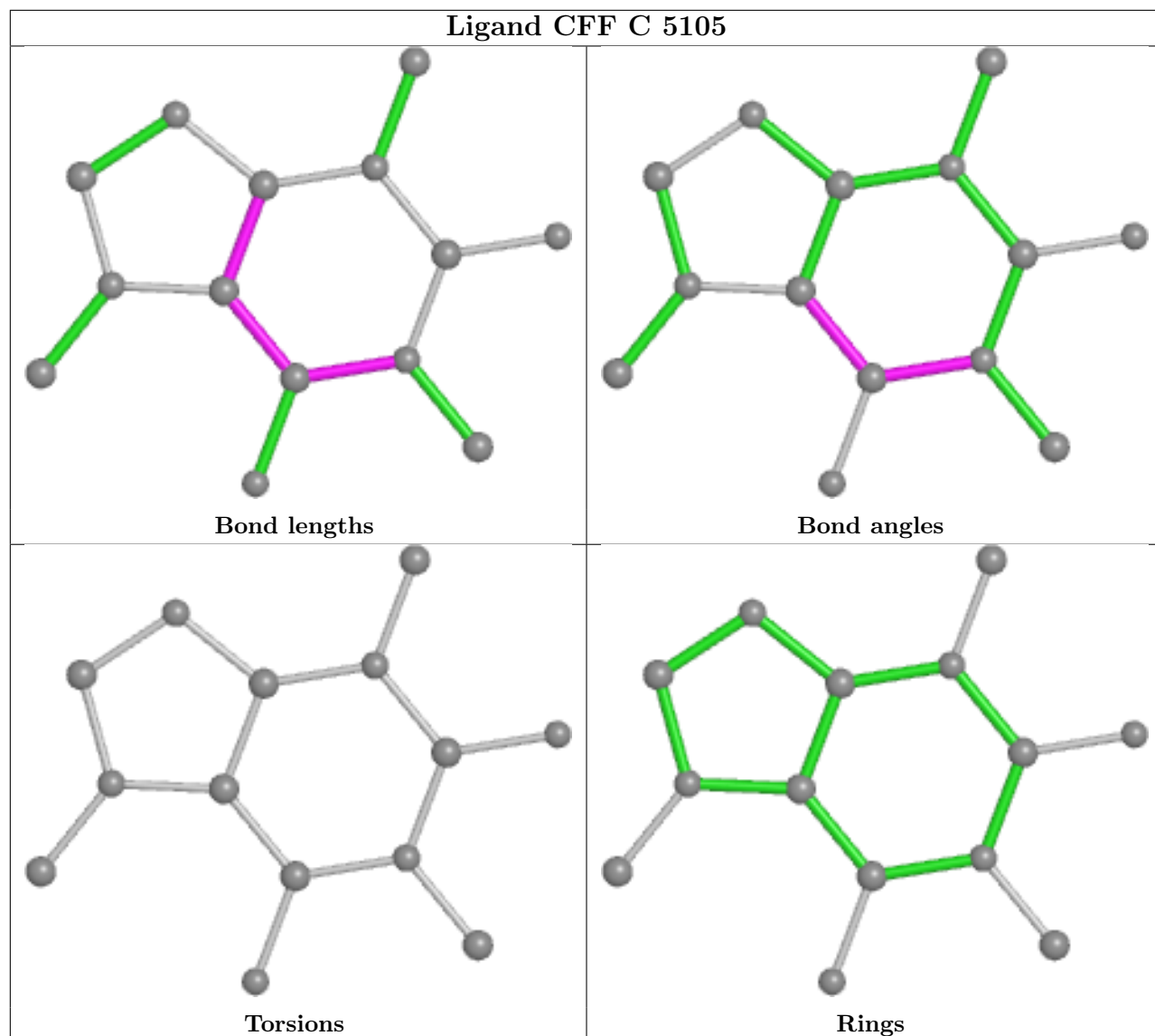


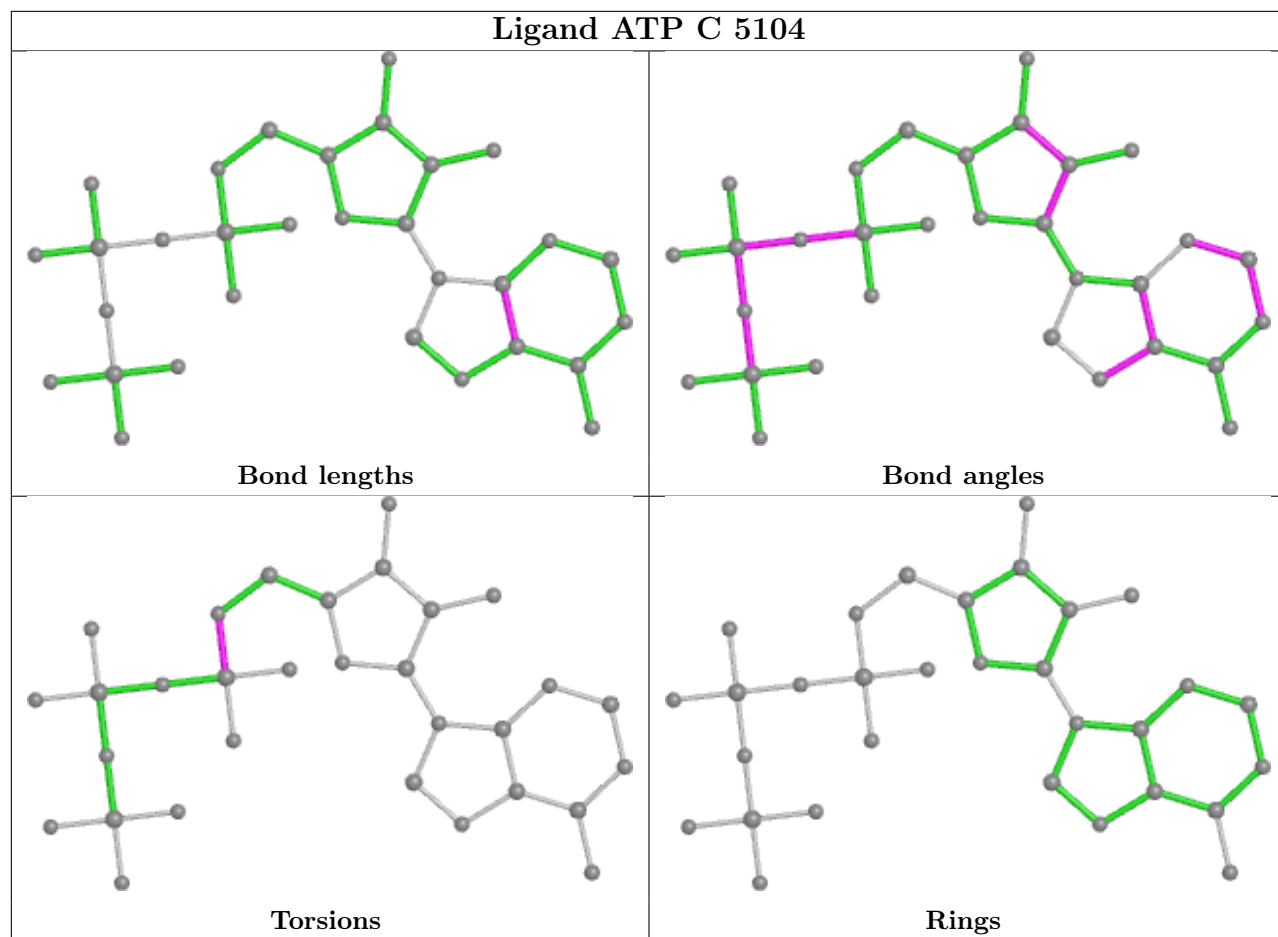


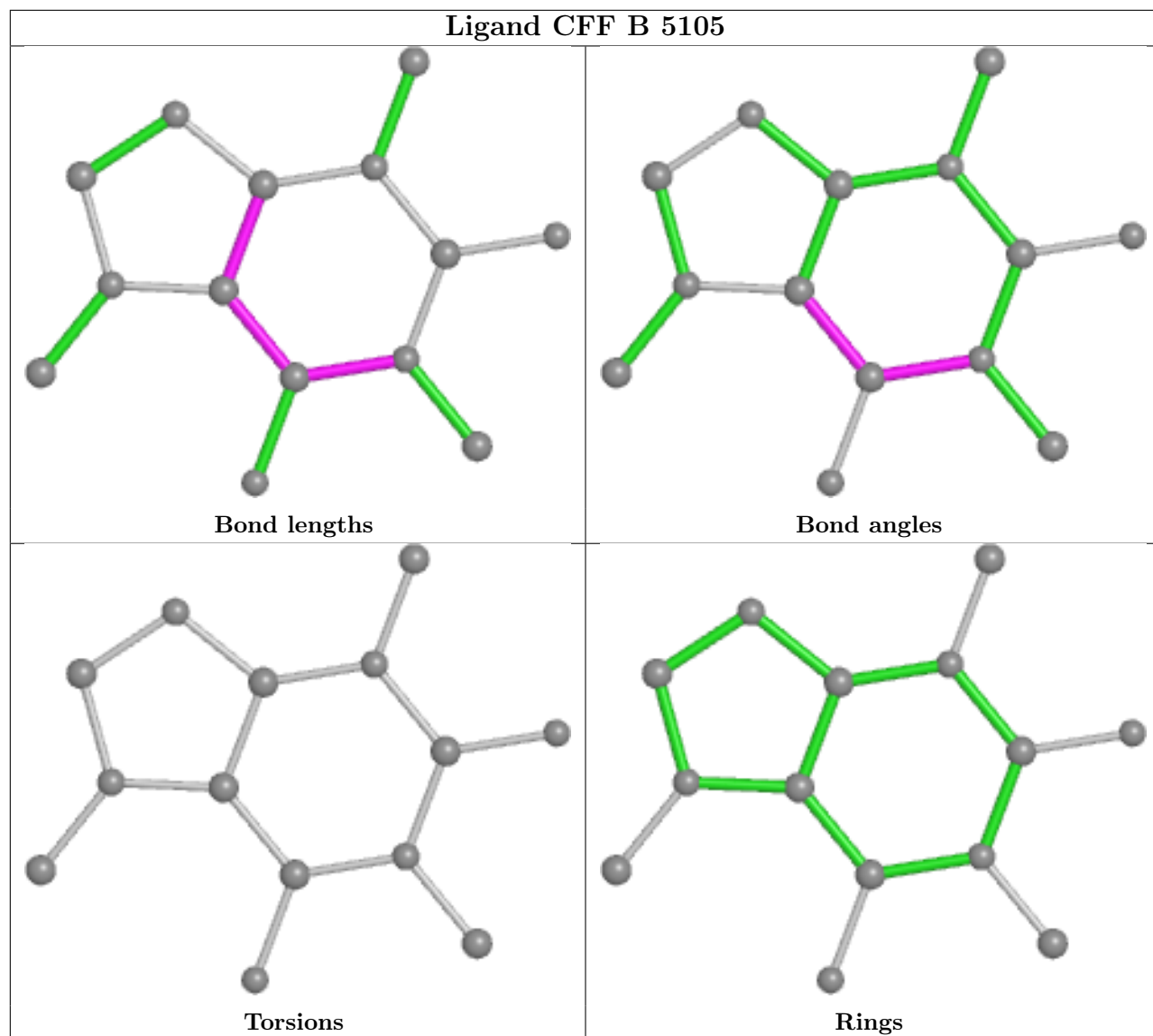


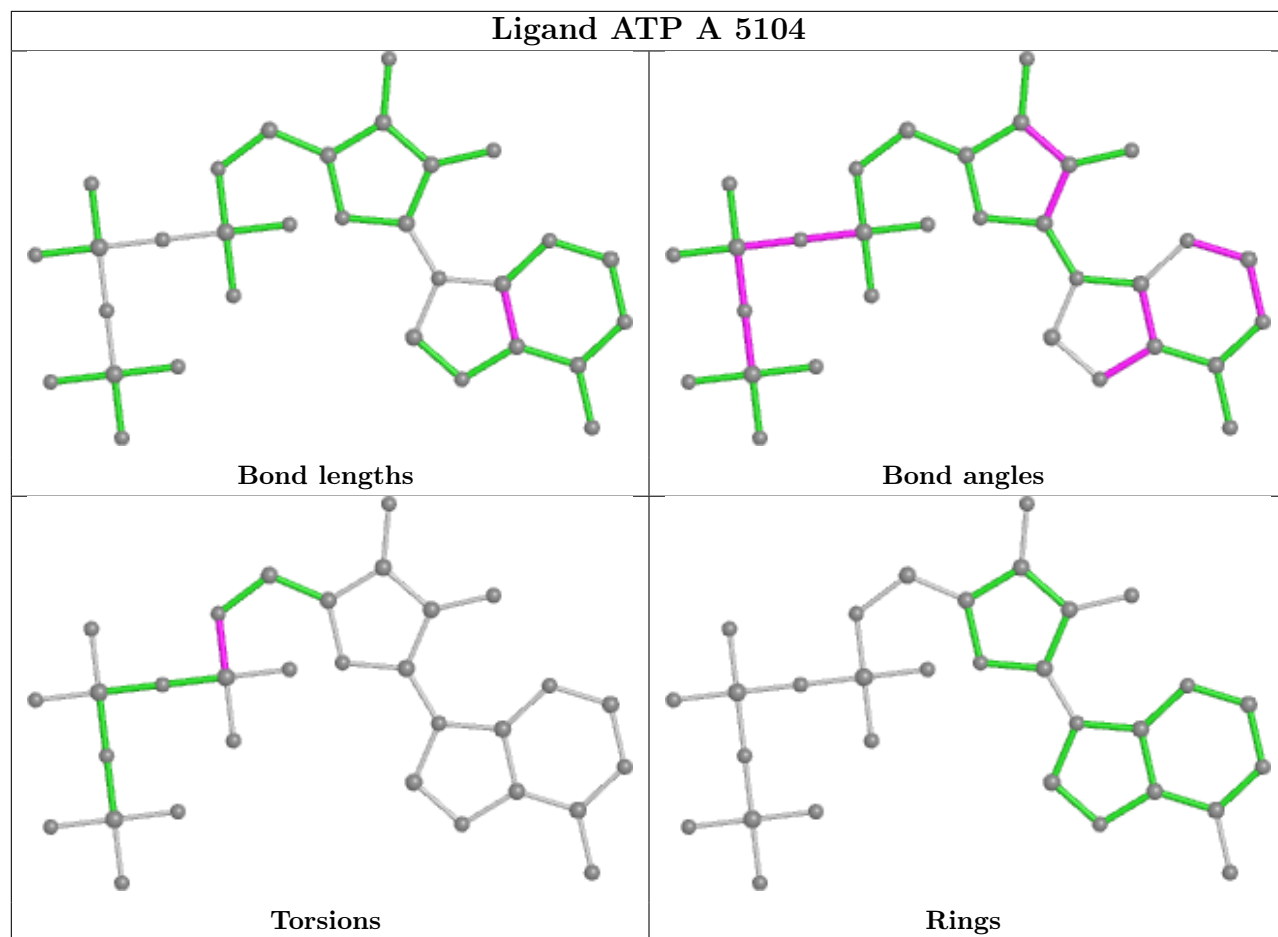




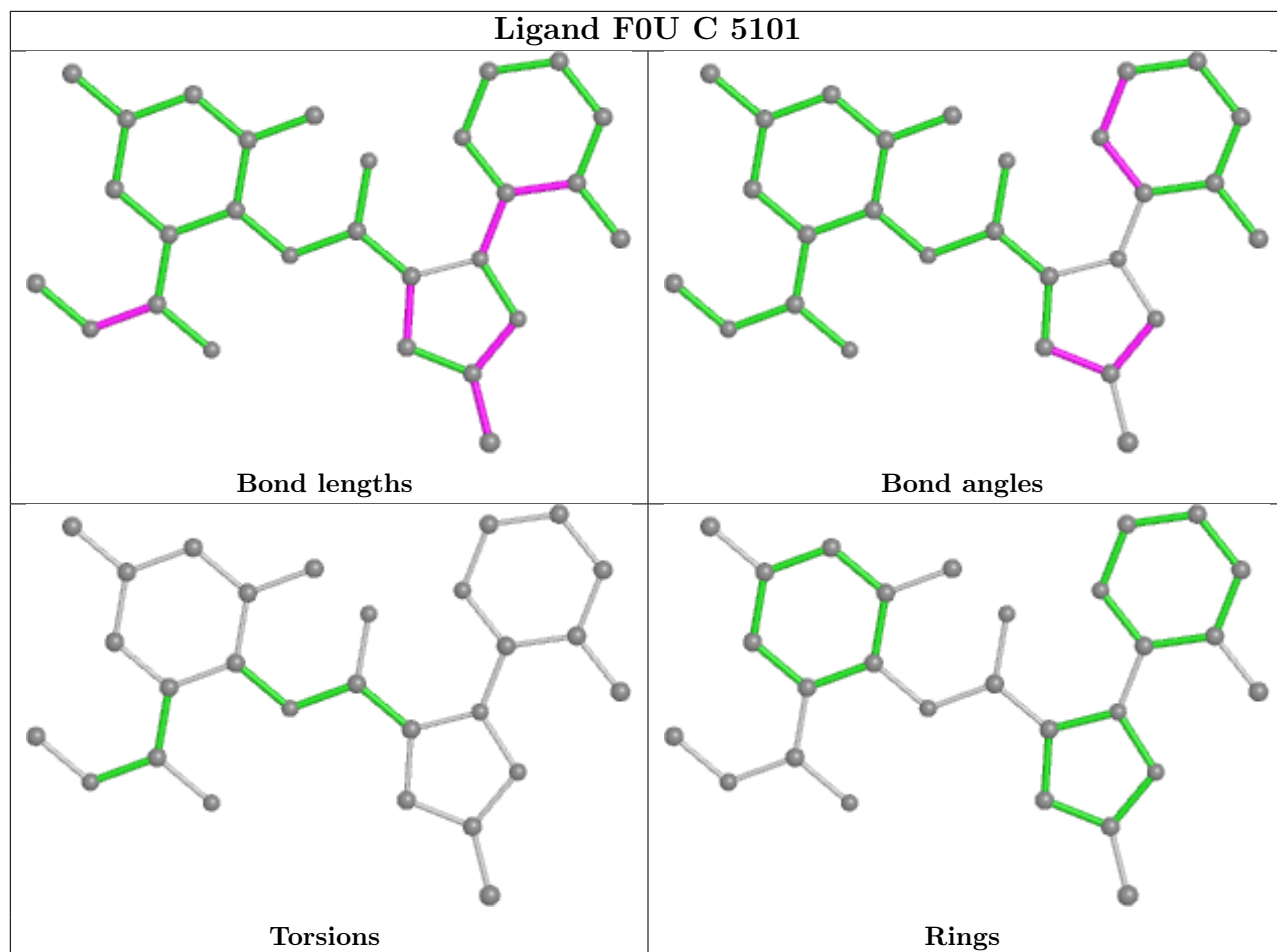


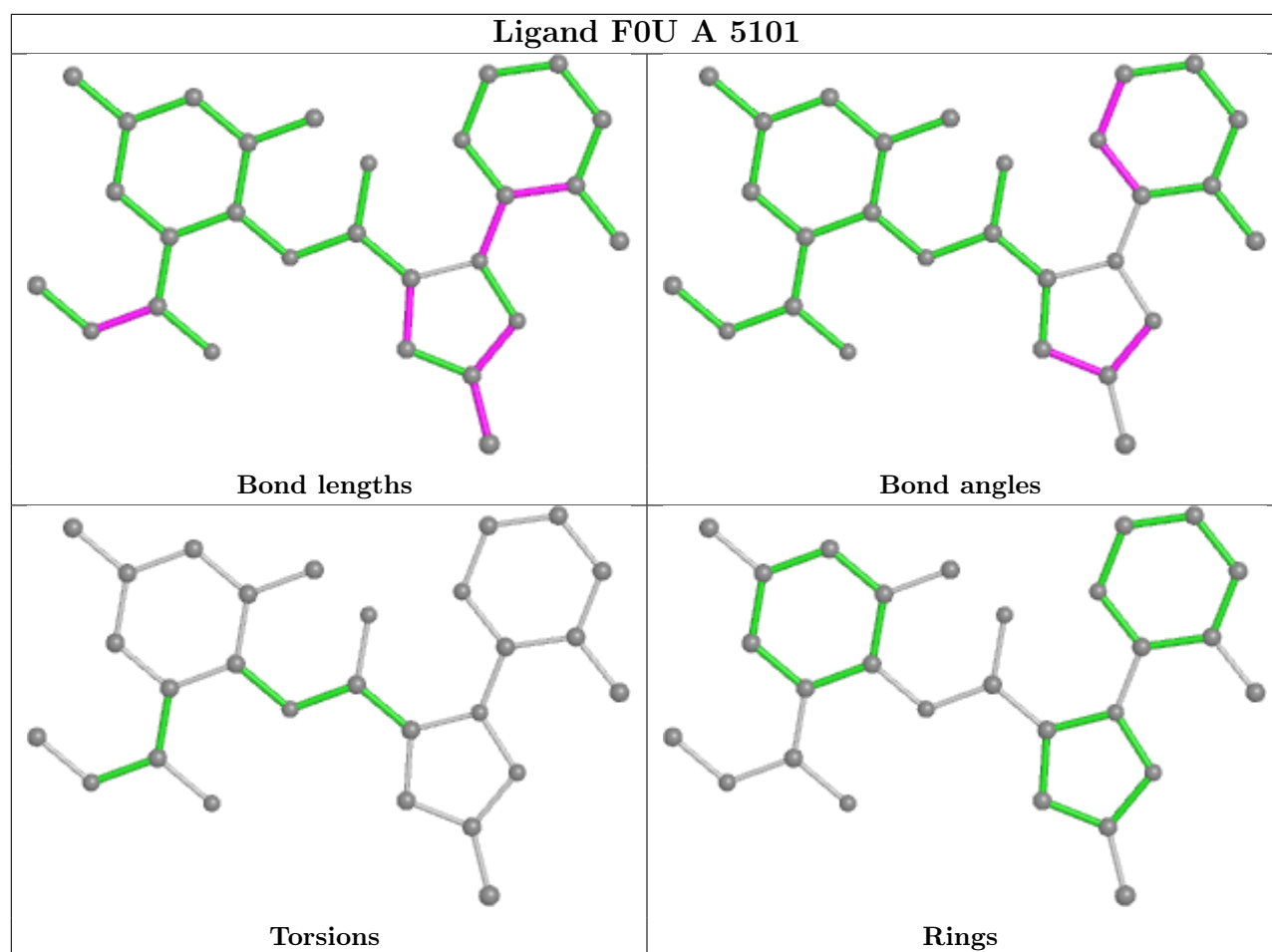












## 5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [\(i\)](#)

There are no chain breaks in this entry.

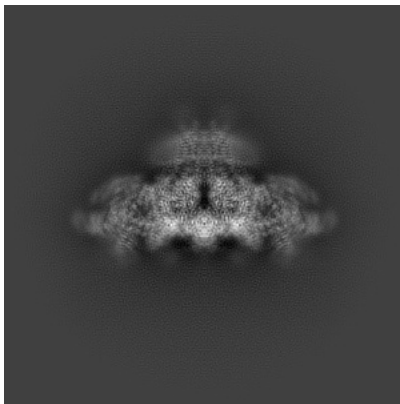
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-38908. These allow visual inspection of the internal detail of the map and identification of artifacts.

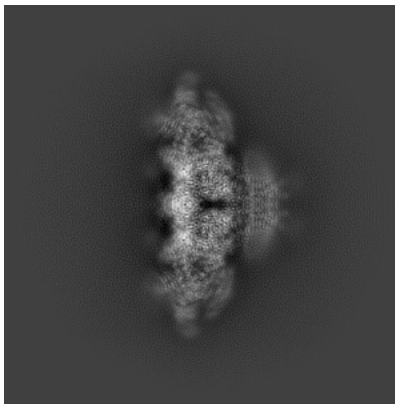
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

### 6.1 Orthogonal projections [i](#)

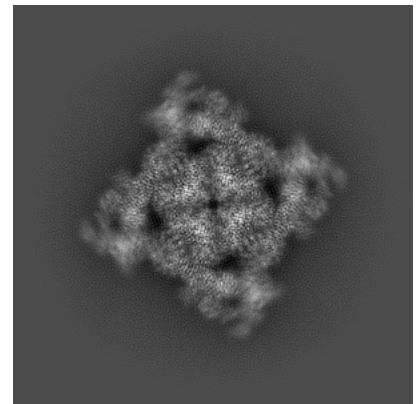
#### 6.1.1 Primary map



X

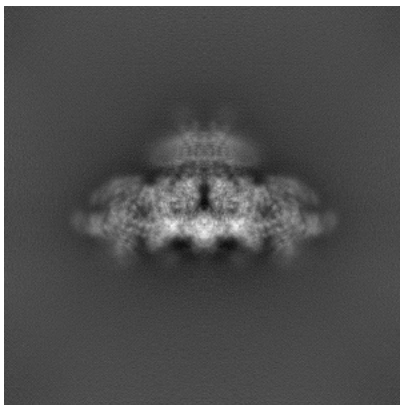


Y

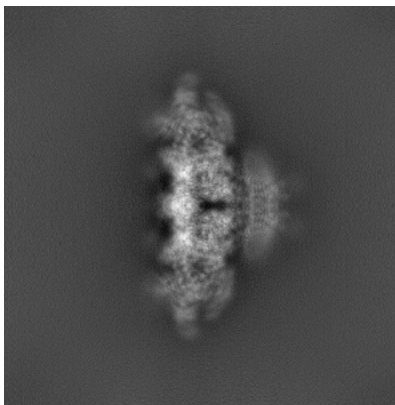


Z

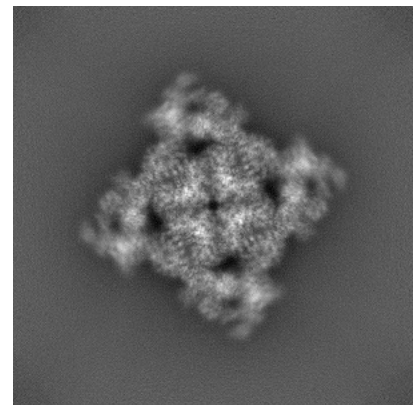
#### 6.1.2 Raw map



X



Y

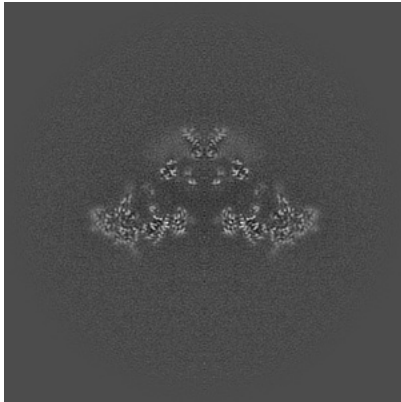


Z

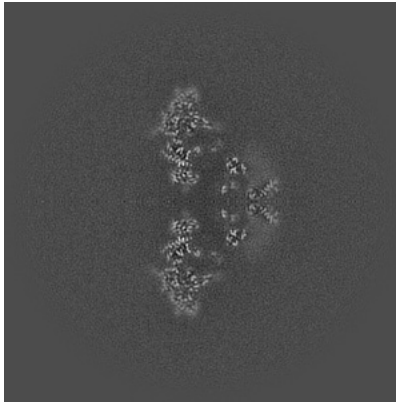
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices [i](#)

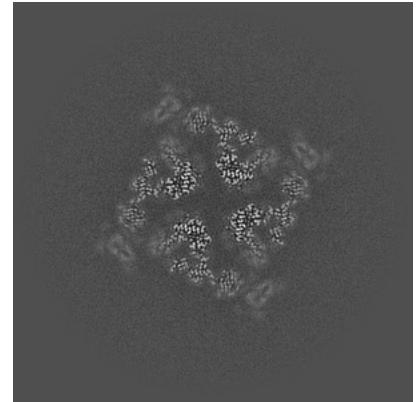
### 6.2.1 Primary map



X Index: 256

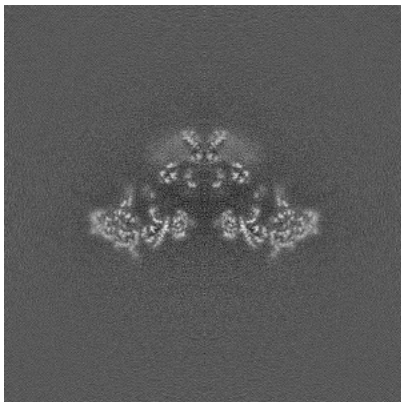


Y Index: 256

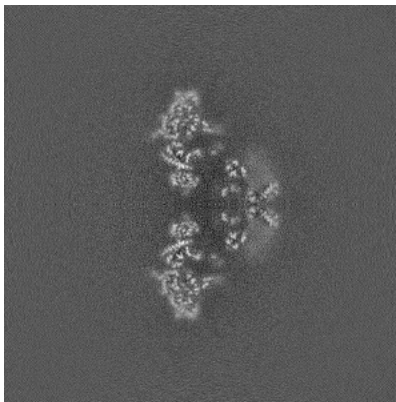


Z Index: 256

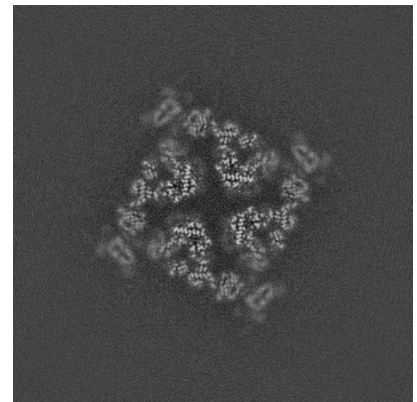
### 6.2.2 Raw map



X Index: 256



Y Index: 256

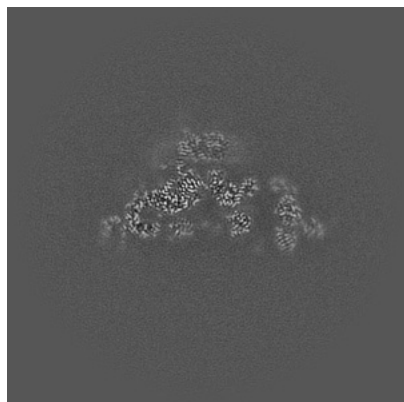


Z Index: 256

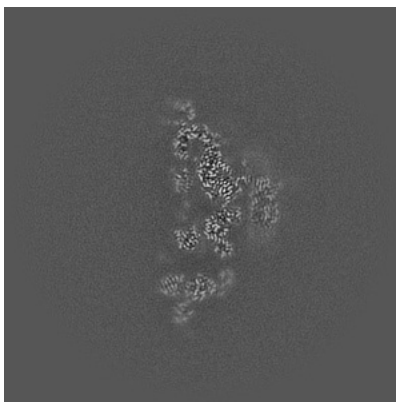
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

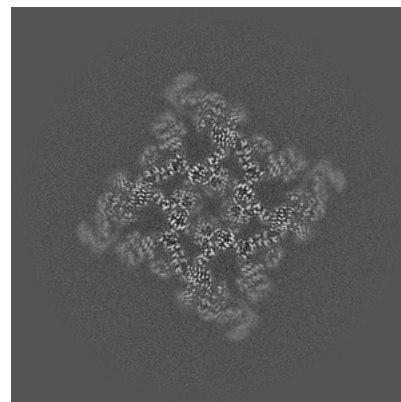
### 6.3.1 Primary map



X Index: 239

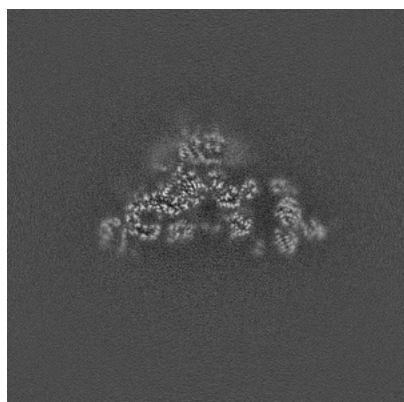


Y Index: 239

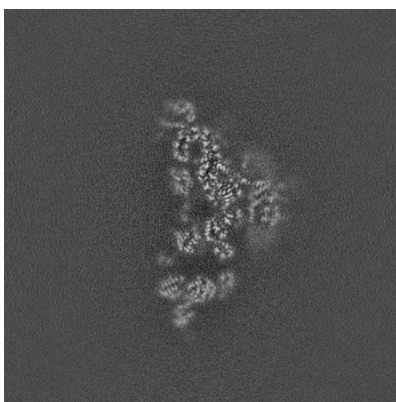


Z Index: 234

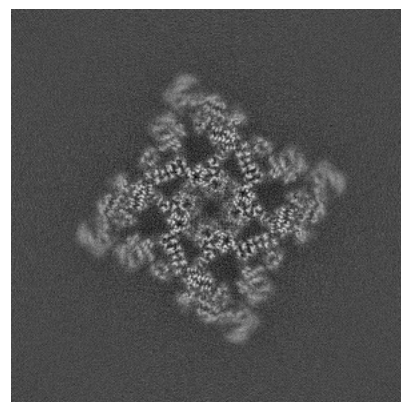
### 6.3.2 Raw map



X Index: 240



Y Index: 240



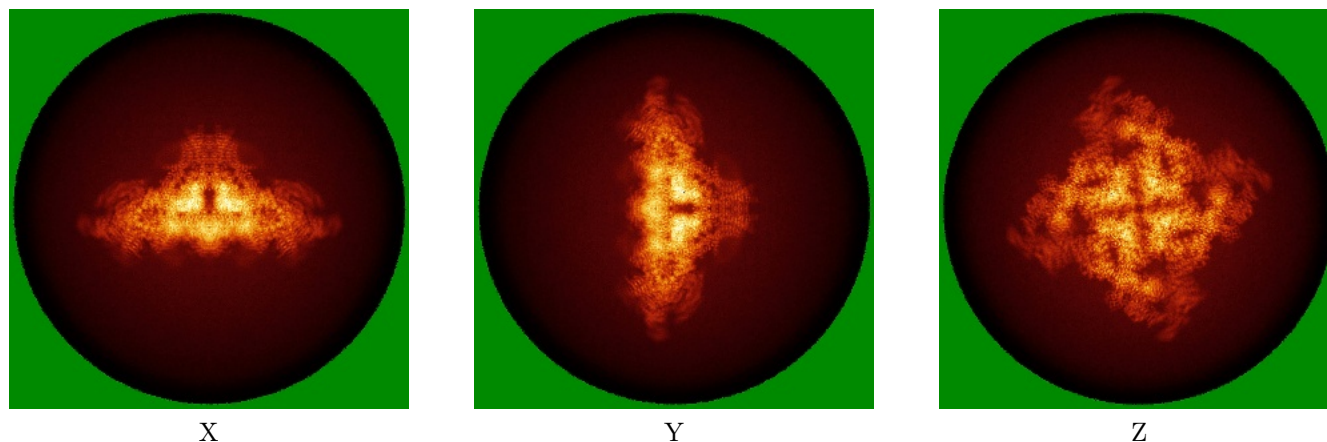
Z Index: 235

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

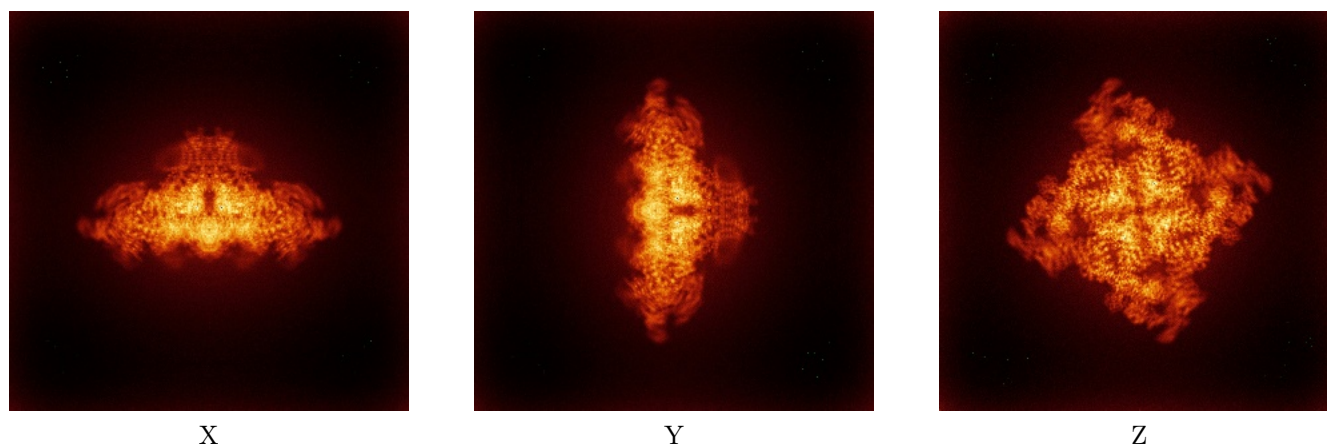


## 6.4 Orthogonal standard-deviation projections (False-color) [i](#)

### 6.4.1 Primary map



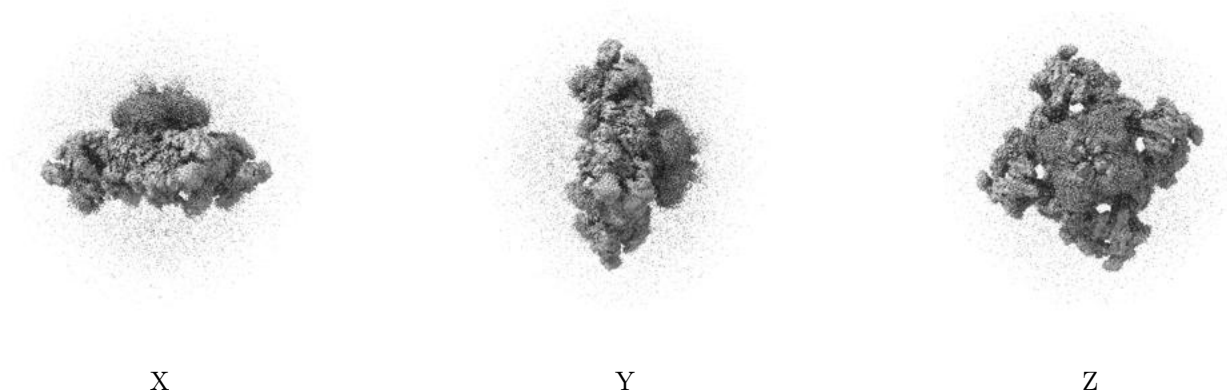
### 6.4.2 Raw map



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

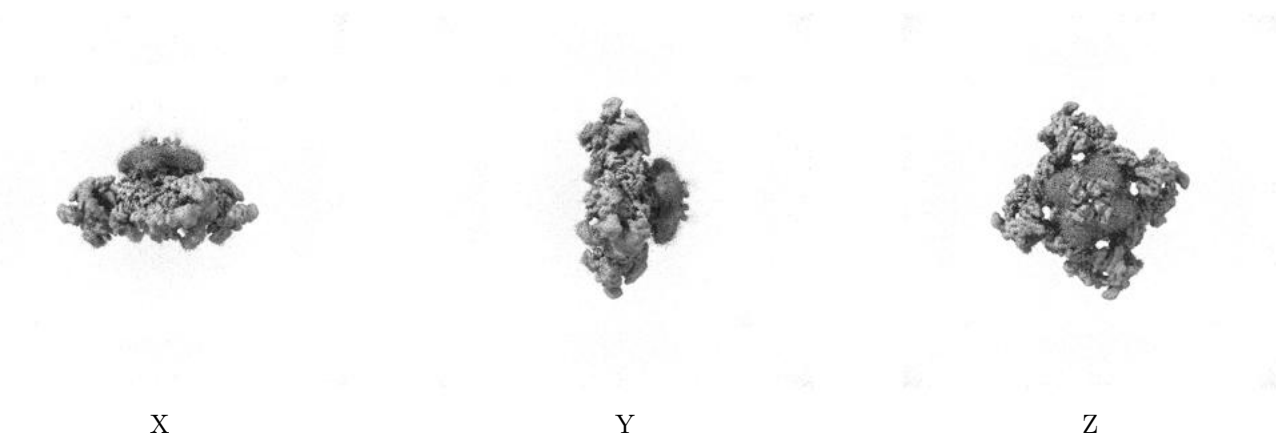
## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.03. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

### 6.5.2 Raw map



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

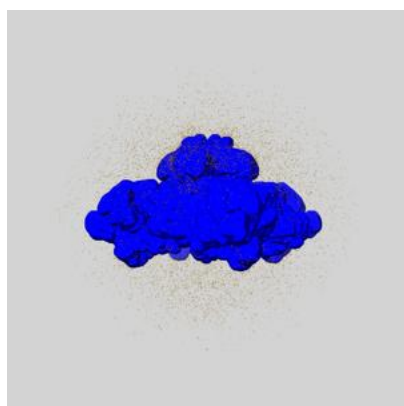
## 6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

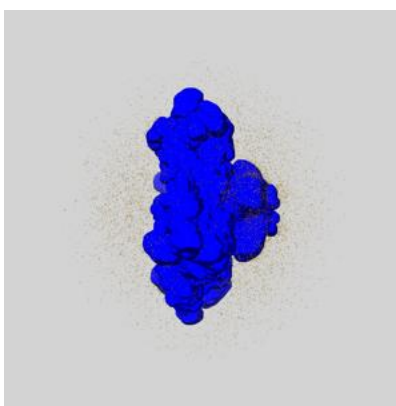
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

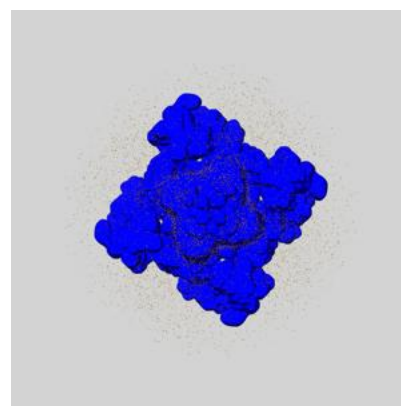
### 6.6.1 emd\_38908\_msk\_1.map [i](#)



X



Y



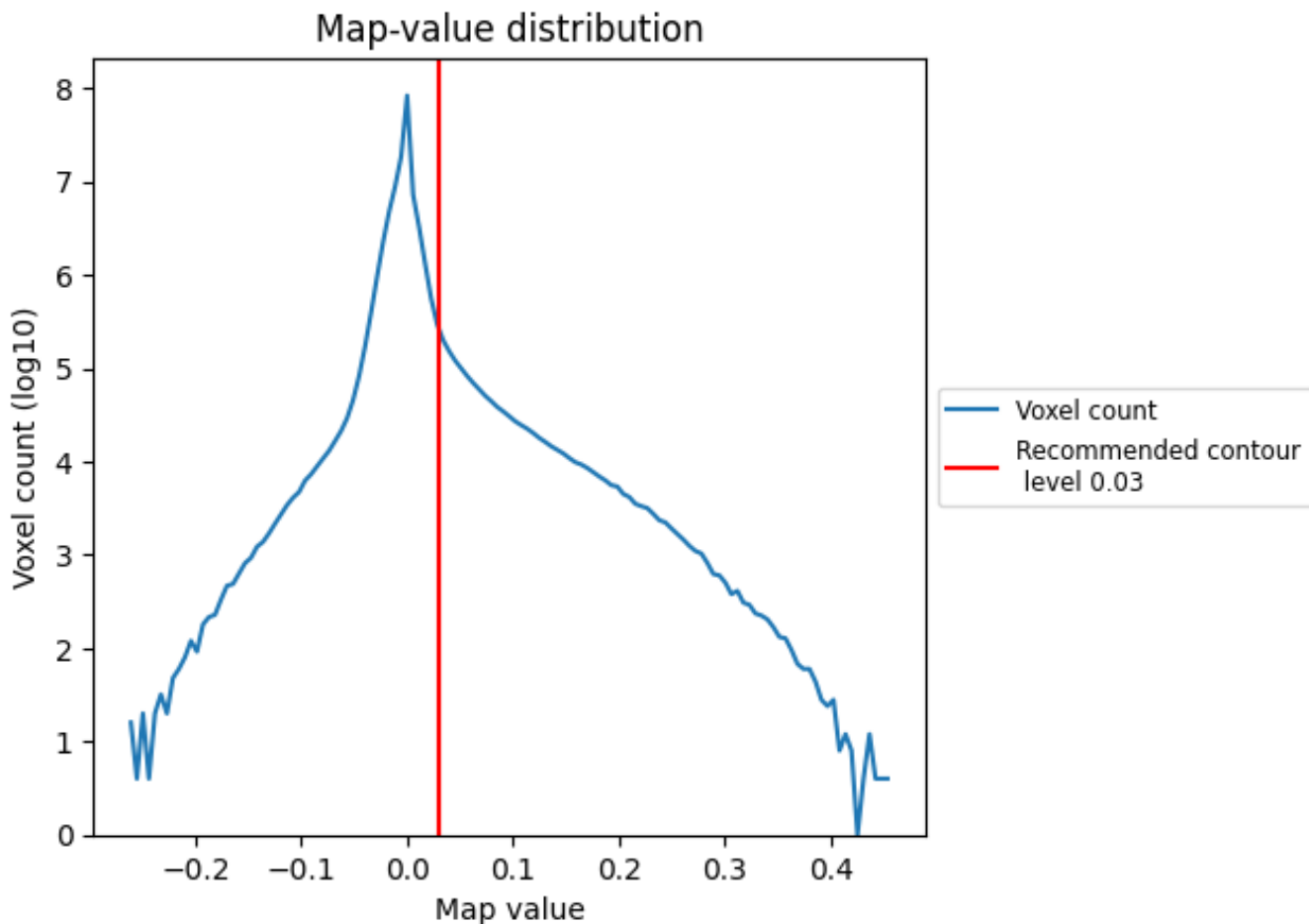
Z



## 7 Map analysis [i](#)

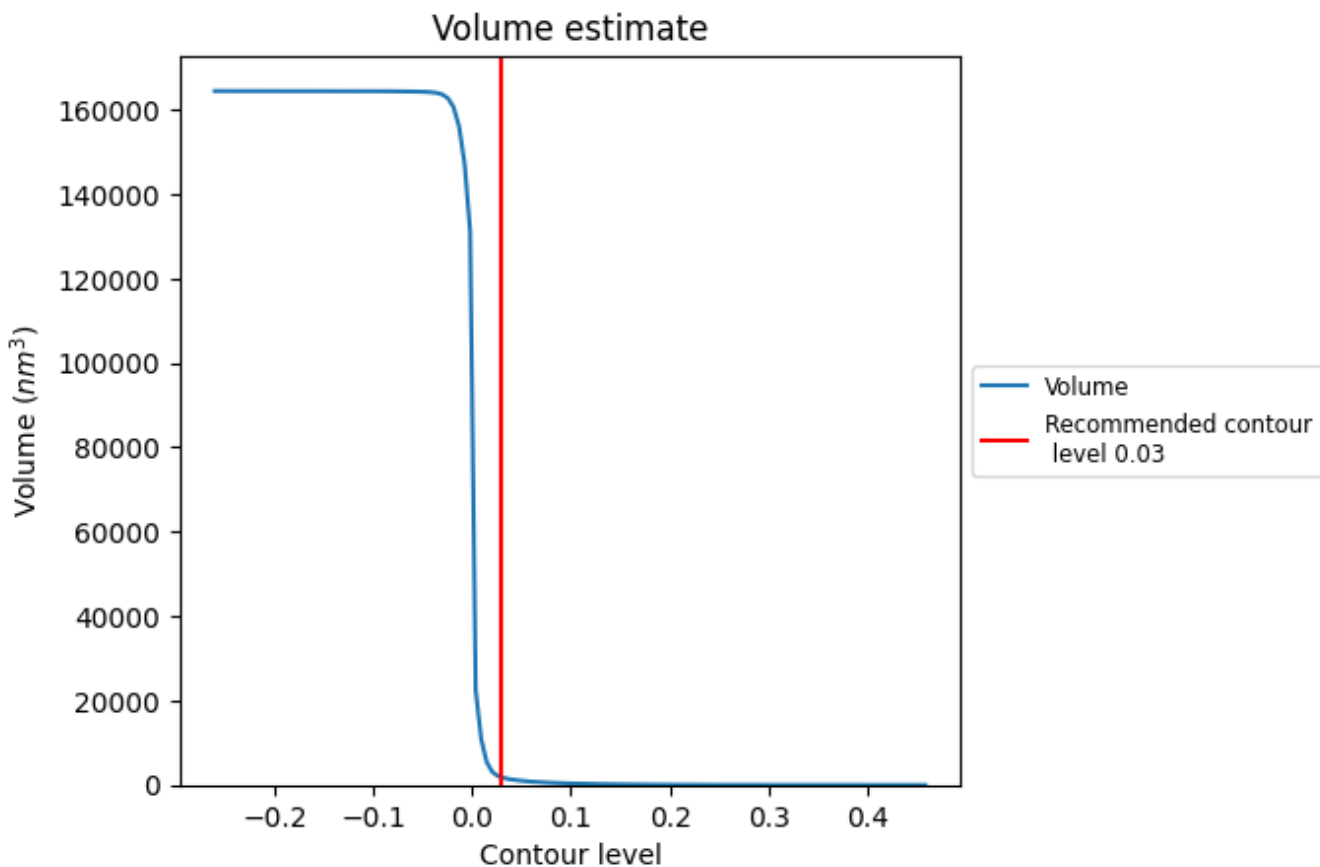
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

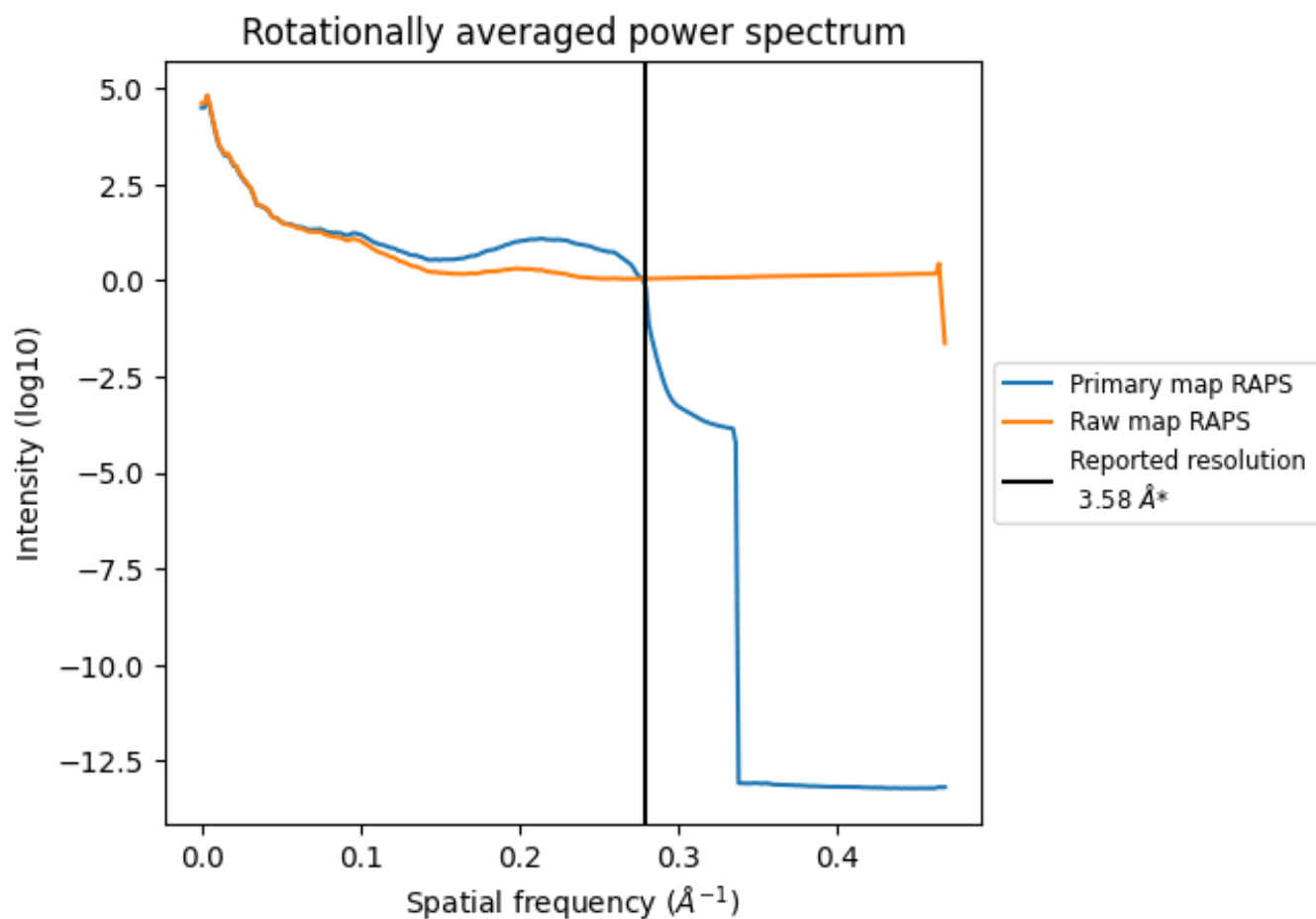
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is  $1805 \text{ nm}^3$ ; this corresponds to an approximate mass of 1630 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

### 7.3 Rotationally averaged power spectrum i

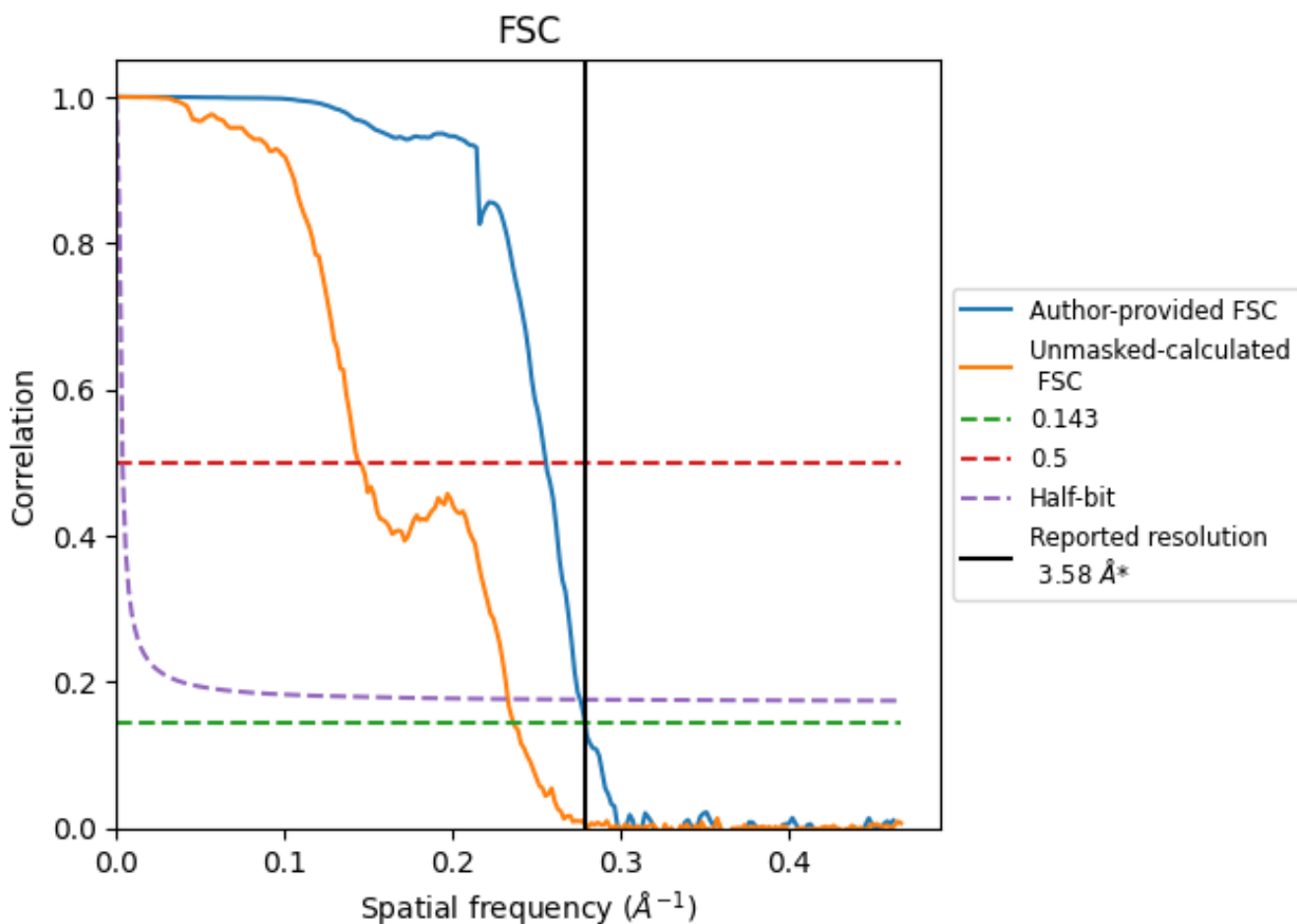


\*Reported resolution corresponds to spatial frequency of 0.279 Å<sup>-1</sup>

## 8 Fourier-Shell correlation [i](#)

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

### 8.1 FSC [i](#)



\*Reported resolution corresponds to spatial frequency of 0.279 Å<sup>-1</sup>

## 8.2 Resolution estimates [i](#)

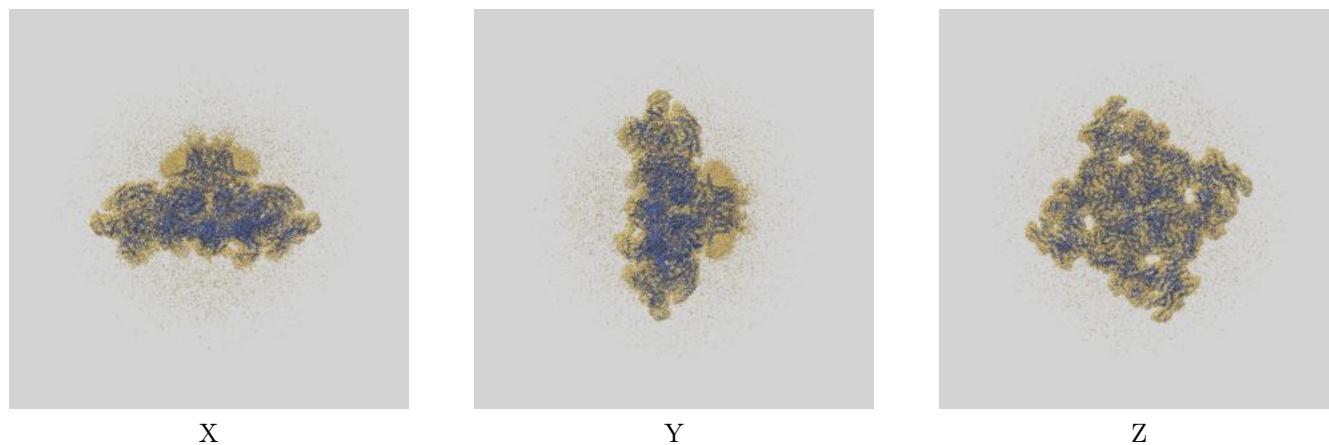
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.58	-	-
Author-provided FSC curve	3.58	3.91	3.62
Unmasked-calculated*	4.23	6.93	4.29

\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.23 differs from the reported value 3.58 by more than 10 %

## 9 Map-model fit [i](#)

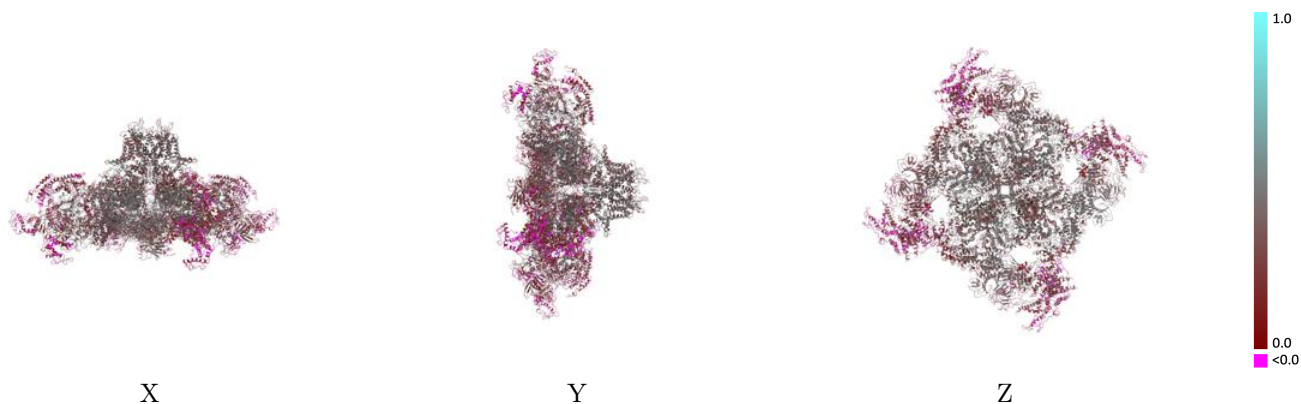
This section contains information regarding the fit between EMDB map EMD-38908 and PDB model 8Y40. Per-residue inclusion information can be found in section 3 on page 9.

### 9.1 Map-model overlay [i](#)



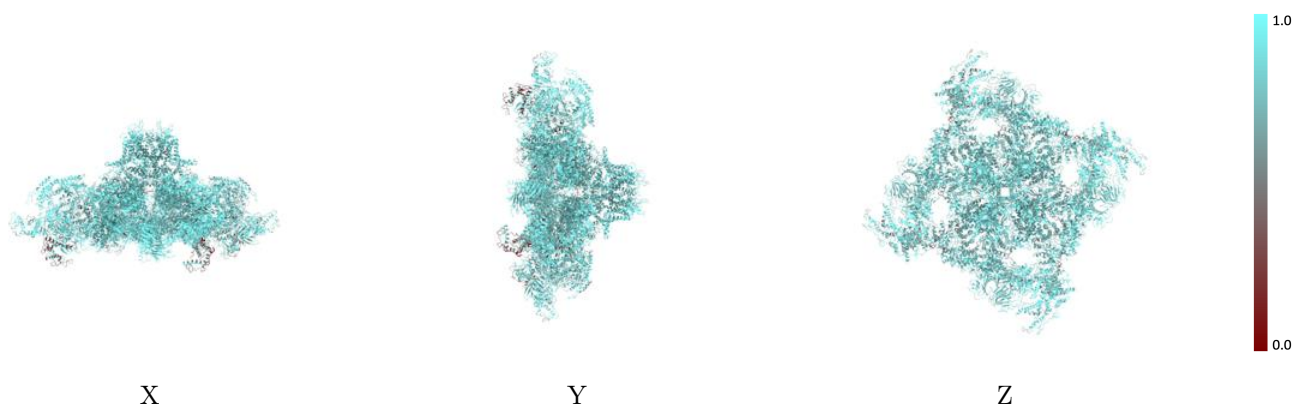
The images above show the 3D surface view of the map at the recommended contour level 0.03 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

## 9.2 Q-score mapped to coordinate model [i](#)



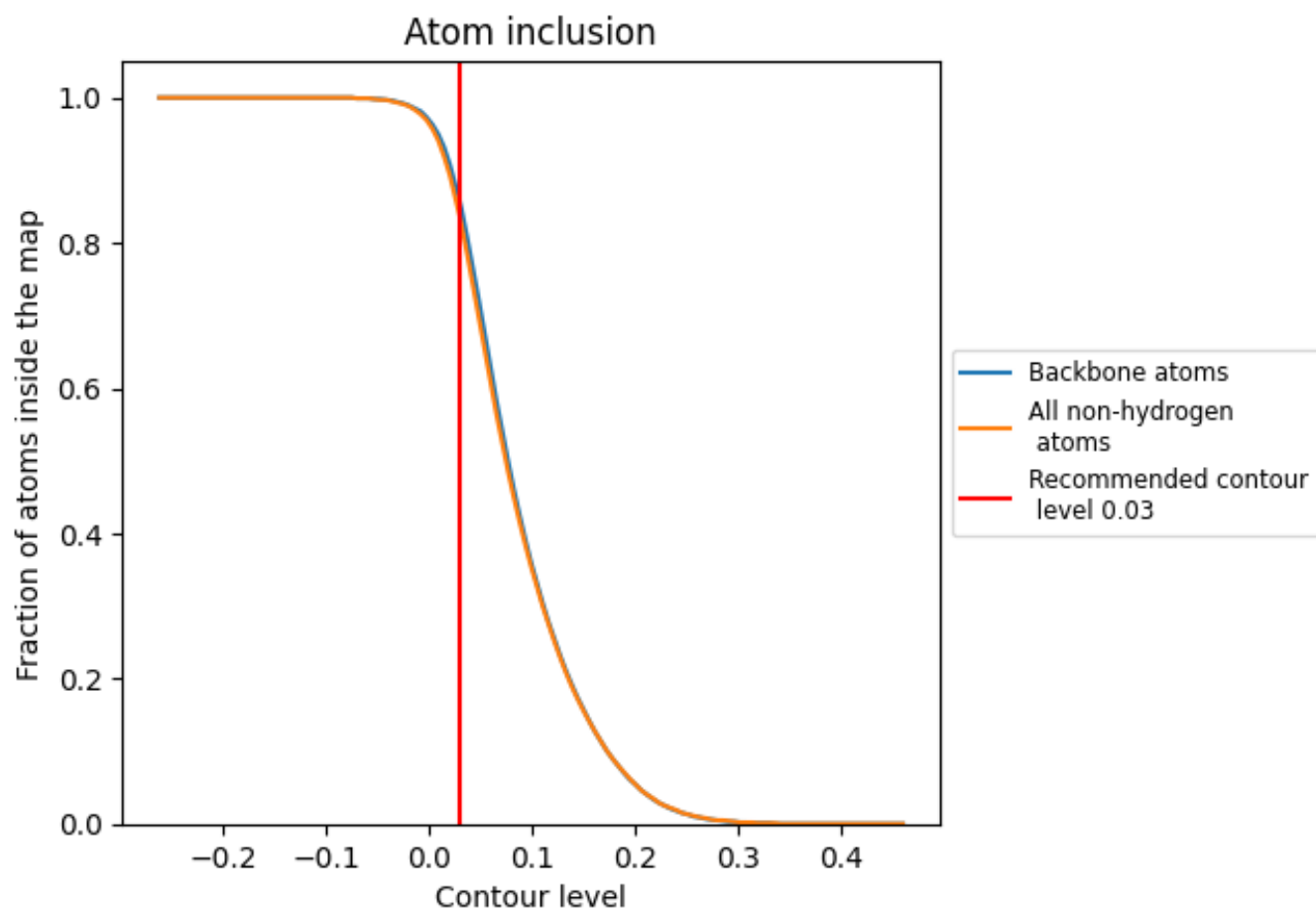
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

## 9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.03).

## 9.4 Atom inclusion [i](#)





























At the recommended contour level, 86% of all backbone atoms, 84% of all non-hydrogen atoms, are inside the map.



## 9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.03) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8360	 0.3060
A	 0.8410	 0.3060
B	 0.8390	 0.3020
C	 0.8420	 0.3140
D	 0.8400	 0.3120
E	 0.8270	 0.2460
F	 0.8610	 0.3230
G	 0.9170	 0.4220
H	 0.8590	 0.3010
I	 0.7300	 0.1900
J	 0.7150	 0.1800
K	 0.7770	 0.2500
L	 0.7780	 0.2510

