



## Full wwPDB EM Validation Report ⓘ

Dec 10, 2022 – 10:18 am GMT

PDB ID : 5FTM  
EMDB ID : EMD-3298  
Title : Cryo-EM structure of human p97 bound to ATPgS (Conformation II)  
Authors : Banerjee, S.; Bartesaghi, A.; Merk, A.; Rao, P.; Bulfer, S.L.; Yan, Y.; Green, N.; Mroczkowski, B.; Neitz, R.J.; Wipf, P.; Falconieri, V.; Deshaies, R.J.; Milne, J.L.S.; Huryn, D.; Arkin, M.; Subramaniam, S.  
Deposited on : 2016-01-14  
Resolution : 3.20 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.dev43  
Mogul : 1.8.4, CSD as541be (2020)  
MolProbity : 4.02b-467  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
MapQ : 1.9.9  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.31.3

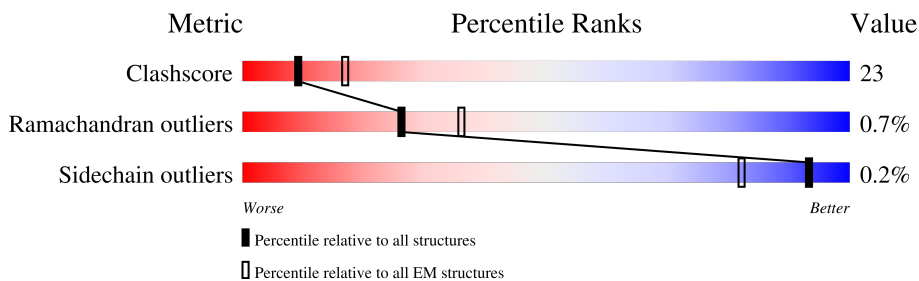
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 3.20 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	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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	A	806	47% (Poor fit) 52% (0 outliers)   37% (1 outlier)   10% (2+ outliers)
1	B	806	47% (Poor fit) 53% (0 outliers)   37% (1 outlier)   10% (2+ outliers)
1	C	806	47% (Poor fit) 52% (0 outliers)   37% (1 outlier)   10% (2+ outliers)
1	D	806	47% (Poor fit) 53% (0 outliers)   37% (1 outlier)   10% (2+ outliers)
1	E	806	47% (Poor fit) 53% (0 outliers)   36% (1 outlier)   10% (2+ outliers)
1	F	806	47% (Poor fit) 53% (0 outliers)   36% (1 outlier)   10% (2+ outliers)

## 2 Entry composition [i](#)

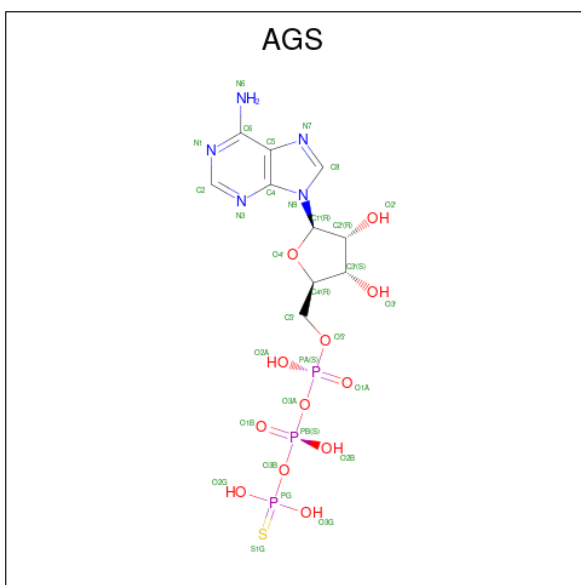
There are 4 unique types of molecules in this entry. The entry contains 34554 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called TRANSITIONAL ENDOPLASMIC RETICULUM ATPASE.

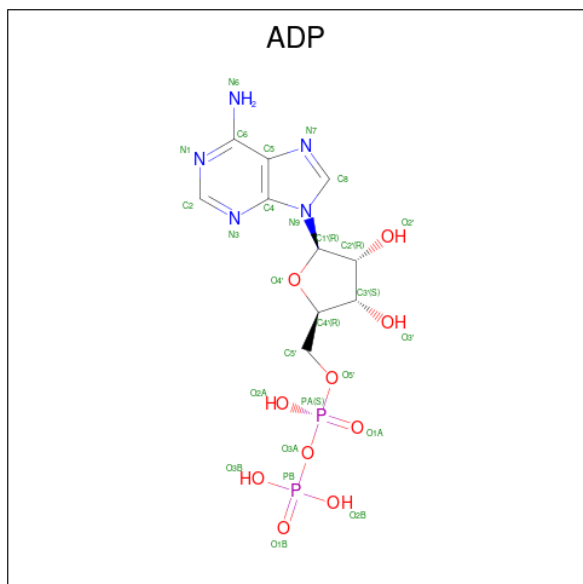
Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	728	Total	C	N	O	S	0	0
			5700	3586	1005	1079	30		
1	B	728	Total	C	N	O	S	0	0
			5700	3586	1005	1079	30		
1	C	728	Total	C	N	O	S	0	0
			5700	3586	1005	1079	30		
1	D	728	Total	C	N	O	S	0	0
			5700	3586	1005	1079	30		
1	E	728	Total	C	N	O	S	0	0
			5700	3586	1005	1079	30		
1	F	728	Total	C	N	O	S	0	0
			5700	3586	1005	1079	30		

- Molecule 2 is PHOSPHOTHIOPHOSPHORIC ACID-ADENYLATE ESTER (three-letter code: AGS) (formula: C<sub>10</sub>H<sub>16</sub>N<sub>5</sub>O<sub>12</sub>P<sub>3</sub>S).



Mol	Chain	Residues	Atoms					AltConf	
2	A	1	Total	C	N	O	P	S	0
			31	10	5	12	3	1	
2	B	1	Total	C	N	O	P	S	0
			31	10	5	12	3	1	
2	C	1	Total	C	N	O	P	S	0
			31	10	5	12	3	1	
2	D	1	Total	C	N	O	P	S	0
			31	10	5	12	3	1	
2	E	1	Total	C	N	O	P	S	0
			31	10	5	12	3	1	
2	F	1	Total	C	N	O	P	S	0
			31	10	5	12	3	1	

- Molecule 3 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula:  $C_{10}H_{15}N_5O_{10}P_2$ ).



Mol	Chain	Residues	Atoms					AltConf	
3	A	1	Total	C	N	O	P		0
			27	10	5	10	2		
3	B	1	Total	C	N	O	P		0
			27	10	5	10	2		
3	C	1	Total	C	N	O	P		0
			27	10	5	10	2		
3	D	1	Total	C	N	O	P		0
			27	10	5	10	2		
3	E	1	Total	C	N	O	P		0
			27	10	5	10	2		

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

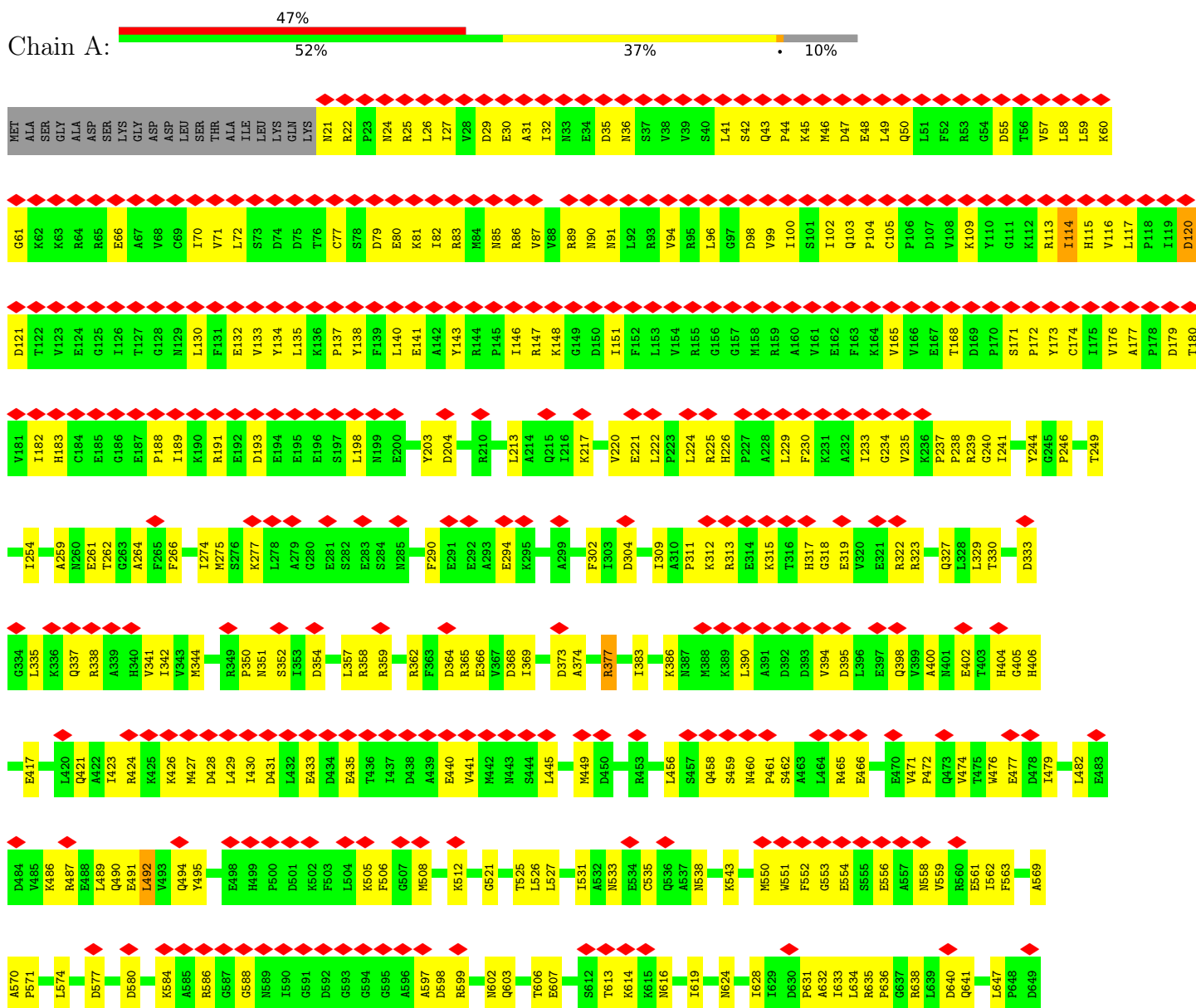
- Molecule 4 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

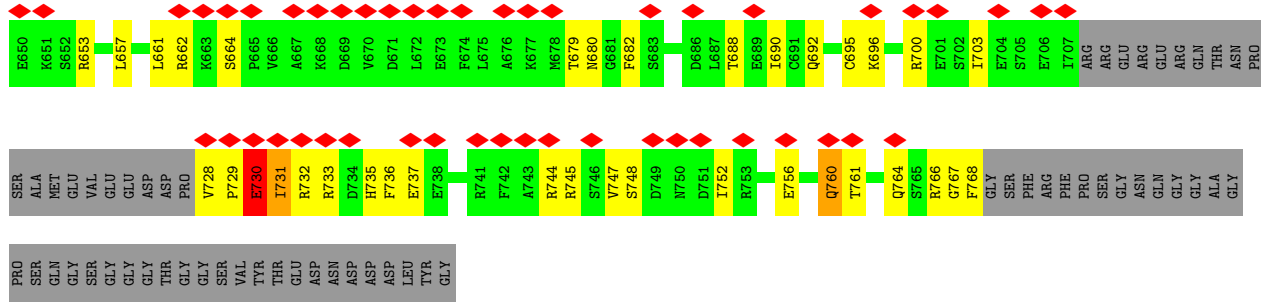
Mol	Chain	Residues	Atoms		AltConf
4	A	1	Total 1	Mg 1	0
4	B	1	Total 1	Mg 1	0
4	C	1	Total 1	Mg 1	0
4	D	1	Total 1	Mg 1	0
4	E	1	Total 1	Mg 1	0
4	F	1	Total 1	Mg 1	0

### 3 Residue-property plots

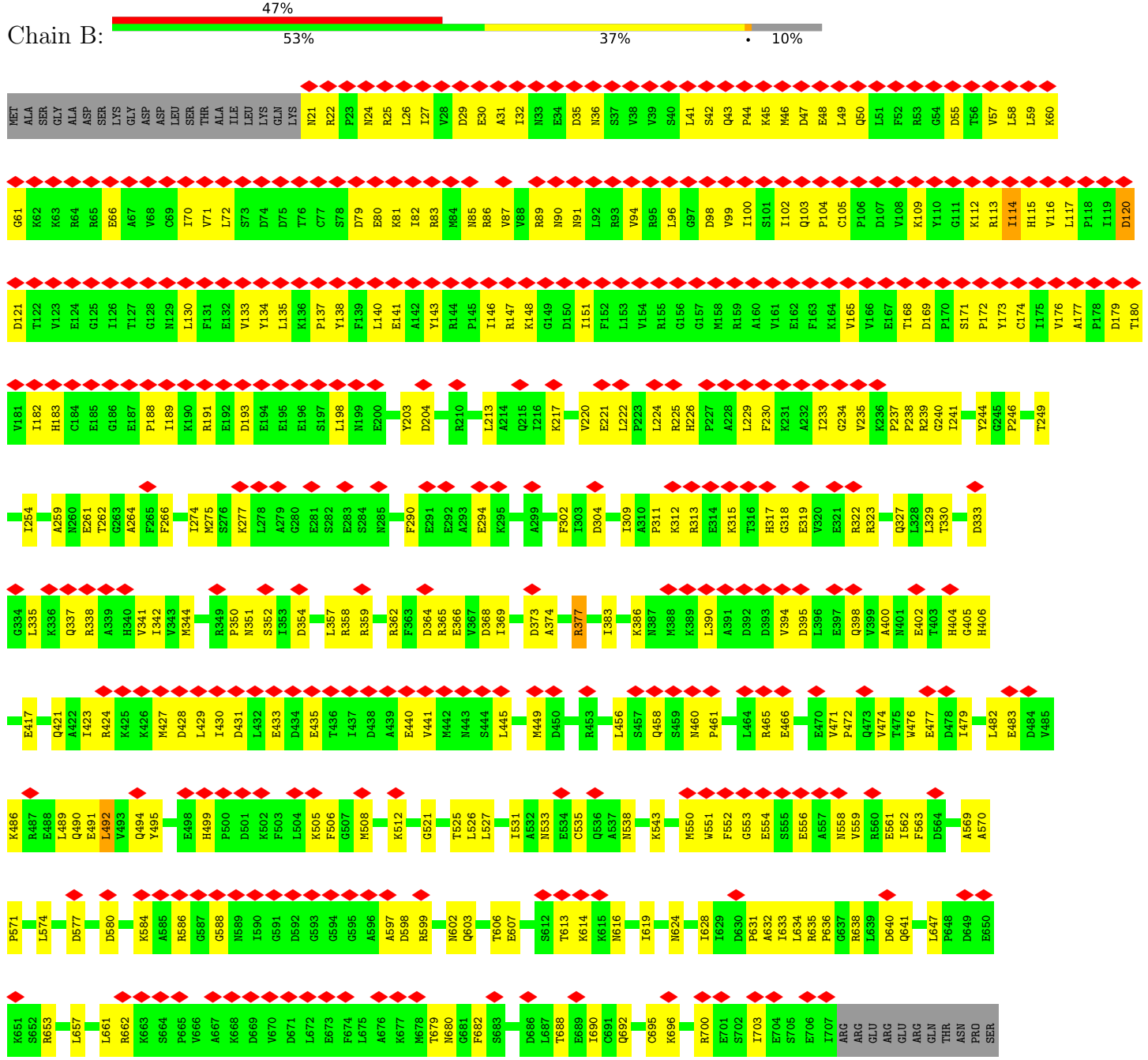
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

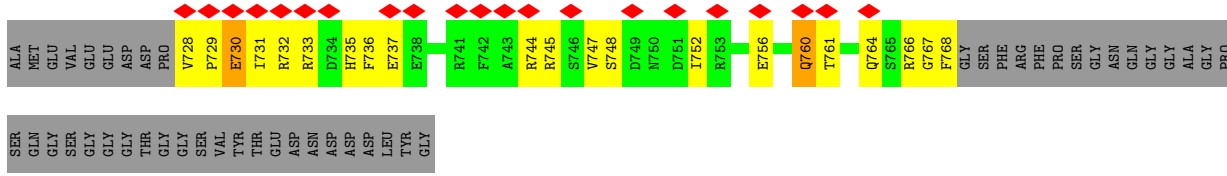
- Molecule 1: TRANSITIONAL ENDOPLASMIC RETICULUM ATPASE



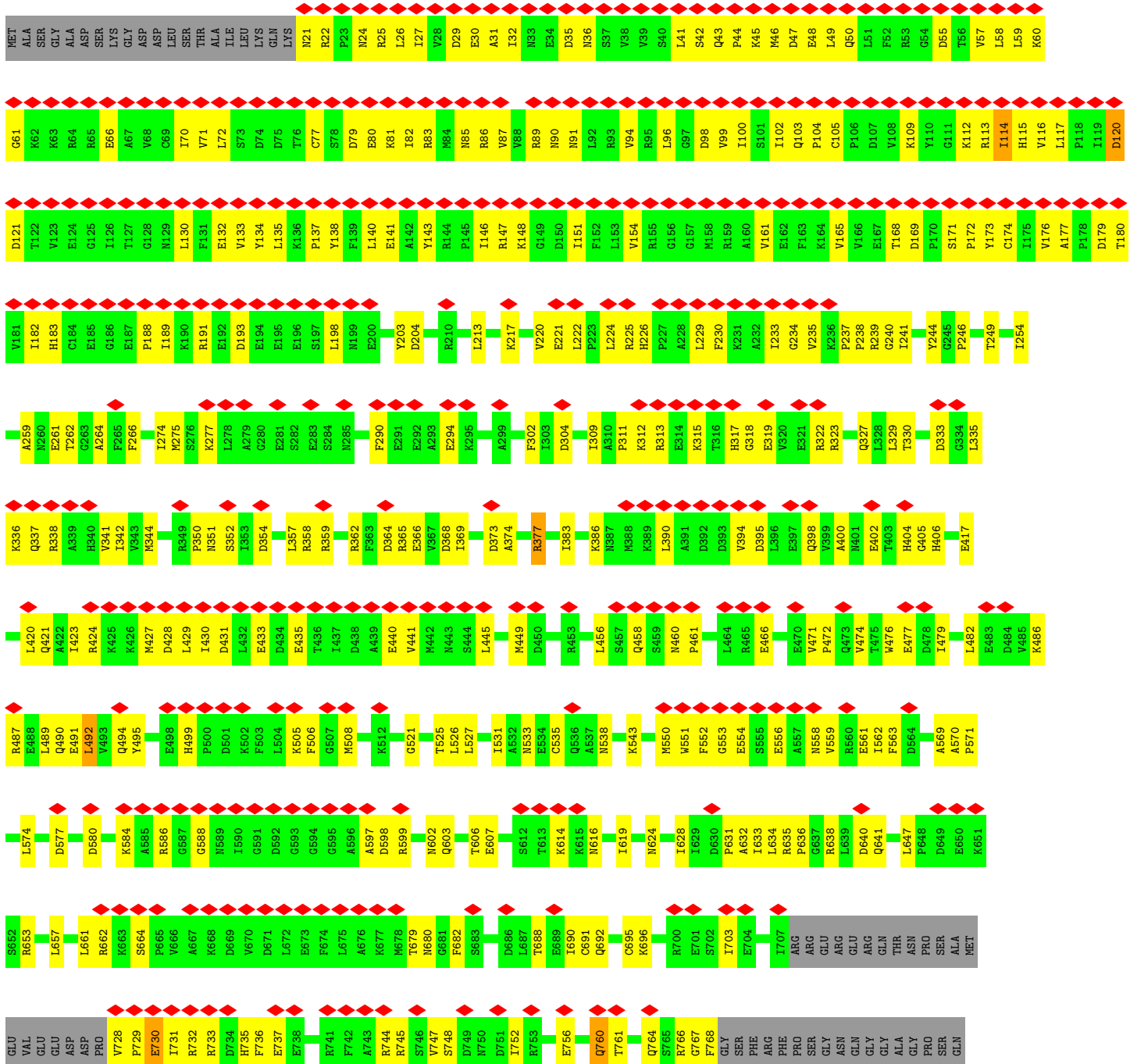


• Molecule 1: TRANSITIONAL ENDOPLASMIC RETICULUM ATPASE





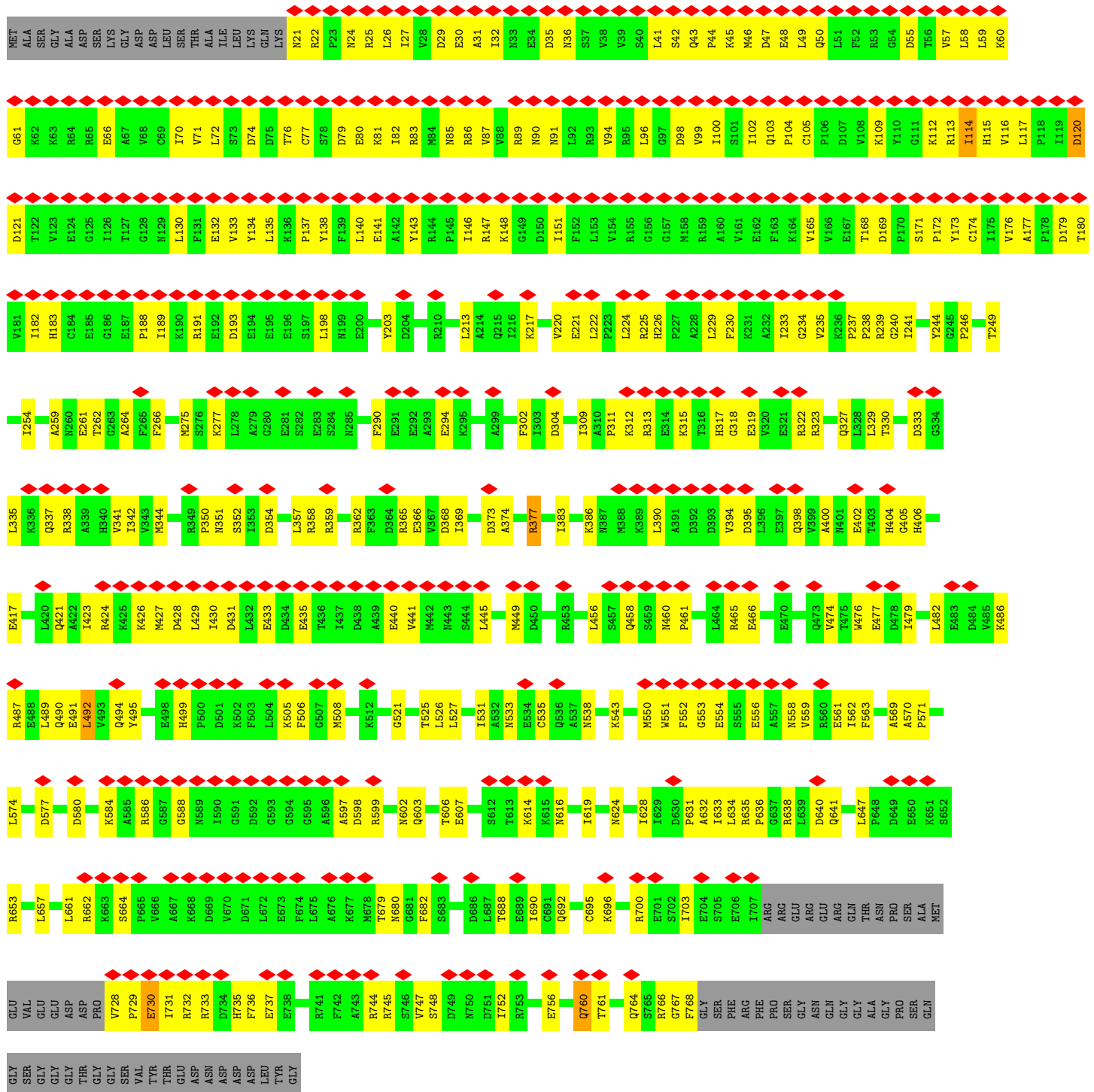
● Molecule 1: TRANSITIONAL ENDOPLASMIC RETICULUM ATPASE



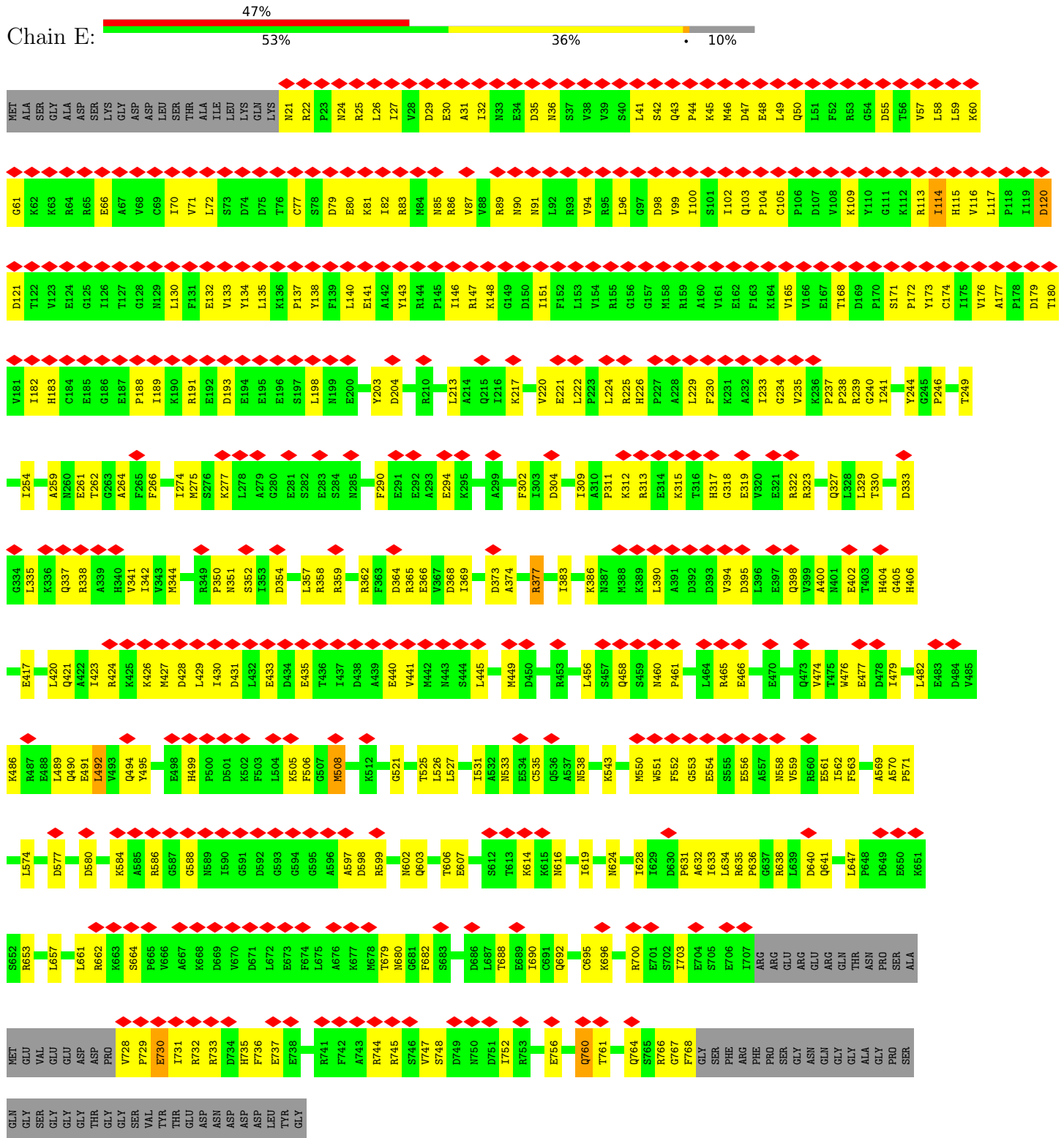


GLY  
SER  
GLY  
GLY  
GLY  
THR  
THR  
GLY  
GLY  
SER  
VAL  
VAL  
THR  
THR  
GLU  
ASP  
ASN  
ASP  
ASP  
ASP  
LEU  
LEU  
TYR  
GLY

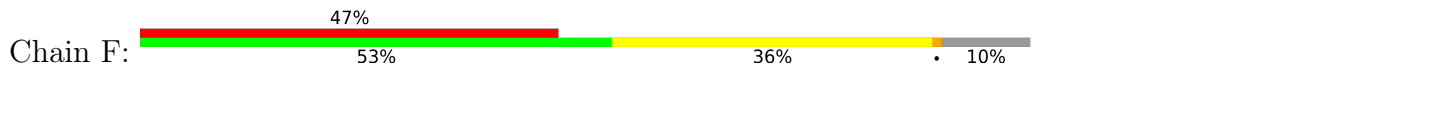
● Molecule 1: TRANSITIONAL ENDOPLASMIC RETICULUM ATPASE



● Molecule 1: TRANSITIONAL ENDOPLASMIC RETICULUM ATPASE



• Molecule 1: TRANSITIONAL ENDOPLASMIC RETICULUM ATPASE



MET	ALA	SER	GLY	ALA	ASP	SER	LYS	GLY	ASP	ASP	LEU	SER	THR	ALA	ILE	LEU	LYS	GLN	LYS	N21	R22	P23	N24	R25	L26	L27	V28	D29	E30	A31	I32	N33	E34	D35	N36	S37	V38	V39	S40	L41	S42	Q43	P44	K45	M46	D47	E48	L49	Q50	L51	F52	R53	G54	D55	F56	V57	L58	L59	K60									
661	K62	R63	R64	R65	E66	A67	V68	C69	I70	V71	L72	S73	D74	D75	T76	C77	S78	D79	E80	R81	L82	R83	M84	R85	R86	W87	V88	R89	I90	I91	L92	R93	V94	R95	L96	G97	D98	V99	I100	S101	I102	Q103	P104	C105	P106	D107	V108	D109	K109	V110	G111	K112	L113	I114	H115	V116	L117	P118	I119	D120								
D121	T122	E123	E124	E125	I126	T127	G128	M129	L130	F131	E132	V133	Y134	L135	K136	P137	Y138	F139	L140	E141	A142	Y143	R144	P145	L146	R147	K148	G149	D150	I151	F152	L153	V154	R155	G156	G157	L222	L223	L224	R225	R226	P227	A228	L229	R159	A160	V161	E162	F163	K164	V165	I166	E167	T168	D169	K169	C240	I241	S171	P172	Y173	C174	I175	V176	A177	P178	D179	T180
V181	I182	H183	C184	E185	G186	E187	P188	I189	K190	R191	E192	D193	L194	E195	E196	S197	L198	M199	E200	Y203	D204	R210	L213	A214	O215	I216	K217	V220	E221	L222	P223	L224	R225	R226	P227	A228	L229	R230	K231	A232	L233	G234	V235	R236	P237	P238	R239	C240	I241	Y244	G245	P246	T249															
I254	A259	H260	E261	T262	G263	A264	F265	F266	I274	M275	S276	K277	L278	A279	G280	E281	S282	M199	E283	S284	M285	F290	E291	E292	A293	E294	K295	A299	F302	I303	D304	I309	P311	K312	K313	E314	K315	T316	H317	G318	E319	V320	E321	R322	G234	V235	R323	Q327	L328	L329	T330	D333																
G334	L335	K336	Q337	R338	A339	H340	V341	I342	M344	R349	P350	N351	S352	I353	D354	L357	R358	R359	R362	F363	D364	R365	E366	P367	D368	I369	D373	A374	R377	I383	K386	N387	M388	K389	L390	A391	D392	D393	V394	D395	E397	V399	A400	M401	E402	L403	H404	G405	H406																			
E417	L420	Q421	A422	I423	R424	K425	V341	I342	M344	D428	L429	I430	D431	L432	E433	E435	T436	I437	A439	E440	V441	M442	M443	S444	L445	M449	D450	R453	L456	S457	Q458	S459	N460	P461	L464	R465	E466	E470	Q473	V474	I475	W476	E477	D478	L482	E483	V485																					
K486	R487	E488	L489	Q490	E491	V493	Q494	Y495	E498	H499	P500	D501	K502	F503	L504	K505	F506	G507	M508	K512	G521	T525	L526	L527	I531	A532	M533	F534	C535	Q536	A537	M538	K543	M550	W551	F552	G553	E554	S555	E556	A557	N558	V559	R560	E561	I562	F563	D564	A569	A570																		
P571	L574	D577	D580	K584	A585	R586	G587	G588	N589	I590	G591	D592	G593	G594	G595	A596	A597	D598	R599	M602	Q603	F607	T606	E607	S612	T613	K614	K615	N616	I619	N624	I628	E629	D630	P631	A632	I633	L634	R635	P636	G637	R638	L639	D640	Q641	L647	P648	D649	E650																			
K651	S652	R653	L657	L661	R662	G663	S664	P665	V666	A667	K668	D669	V670	D671	L672	E673	F674	L675	A676	K677	M678	T679	M680	G681	F682	S683	D686	L687	R688	E689	I690	C691	Q692	C695	K696	R700	E701	S702	I703	E704	I707	ARG	ARG	PRO	SER	GLY	ARG	GLU	ASN	GLN	GLY	THR	ALA	PRO	SER	ALA												
MET	GLU	VAL	GLU	GLY	ASP	ASP	PRO	V728	P729	E730	I731	R732	R733	H734	D735	F736	E737	E738	R741	F742	A743	R744	R745	S746	V747	S748	D749	N750	D751	I752	R753	E756	Q760	T761	S765	R766	G767	F768	GLY	SER	PHE	ARG	PHE	PRO	SER	GLY	ASN	GLN	GLY	GLY	ALA	PRO	SER	ALA														
GLN	GLY	SER	GLY	GLY	GLY	THR	GLY	GLY	SER	VAL	TYR	THR	GLU	ASP	ASN	ASP	ASP	LEU	TYR	GLY	R741	F742	A743	R744	R745	S746	V747	S748	D749	N750	D751	I752	R753	E756	Q760	T761	S765	R766	G767	F768	GLY	SER	PHE	ARG	PHE	PRO	SER	GLY	ASN	GLN	GLY	GLY	ALA	PRO	SER	ALA												

## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C6	Depositor
Number of particles used	32406	Depositor
Resolution determination method	Not provided	
CTF correction method	EACH PARTICLE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	40	Depositor
Minimum defocus (nm)	950	Depositor
Maximum defocus (nm)	2700	Depositor
Magnification	36980	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.071	Depositor
Minimum map value	-0.025	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.005	Depositor
Recommended contour level	0.0183	Depositor
Map size ( $\text{\AA}$ )	186.576, 186.576, 186.576	wwPDB
Map dimensions	276, 276, 276	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	0.676, 0.676, 0.676	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: MG, AGS, ADP

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	A	0.59	0/5793	0.69	3/7822 (0.0%)
1	B	0.59	0/5793	0.68	1/7822 (0.0%)
1	C	0.59	0/5793	0.68	1/7822 (0.0%)
1	D	0.59	0/5793	0.68	1/7822 (0.0%)
1	E	0.59	0/5793	0.68	1/7822 (0.0%)
1	F	0.59	0/5793	0.68	1/7822 (0.0%)
All	All	0.59	0/34758	0.68	8/46932 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2
1	B	0	2
1	C	0	2
1	D	0	2
1	E	0	2
1	F	0	2
All	All	0	12

There are no bond length outliers.

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	730	GLU	CB-CA-C	7.15	124.70	110.40
1	A	731	ILE	N-CA-C	-6.49	93.49	111.00
1	C	104	PRO	C-N-CA	-5.82	107.14	121.70
1	B	104	PRO	C-N-CA	-5.82	107.15	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	104	PRO	C-N-CA	-5.82	107.16	121.70
1	A	104	PRO	C-N-CA	-5.81	107.17	121.70
1	F	104	PRO	C-N-CA	-5.81	107.18	121.70
1	E	104	PRO	C-N-CA	-5.80	107.20	121.70

There are no chirality outliers.

All (12) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	359	ARG	Sidechain
1	A	377	ARG	Sidechain
1	B	359	ARG	Sidechain
1	B	377	ARG	Sidechain
1	C	359	ARG	Sidechain
1	C	377	ARG	Sidechain
1	D	359	ARG	Sidechain
1	D	377	ARG	Sidechain
1	E	359	ARG	Sidechain
1	E	377	ARG	Sidechain
1	F	359	ARG	Sidechain
1	F	377	ARG	Sidechain

## 5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5700	0	5769	285	0
1	B	5700	0	5769	285	0
1	C	5700	0	5769	287	0
1	D	5700	0	5769	285	0
1	E	5700	0	5769	288	0
1	F	5700	0	5769	288	0
2	A	31	0	12	6	0
2	B	31	0	12	6	0
2	C	31	0	12	6	0
2	D	31	0	12	6	0
2	E	31	0	12	6	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	F	31	0	12	6	0
3	A	27	0	12	0	0
3	B	27	0	12	0	0
3	C	27	0	12	0	0
3	D	27	0	12	0	0
3	E	27	0	12	0	0
3	F	27	0	12	0	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
4	D	1	0	0	0	0
4	E	1	0	0	0	0
4	F	1	0	0	0	0
All	All	34554	0	34758	1584	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 23.

All (1584) 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)
1:E:312:LYS:HD3	1:E:315:LYS:HD3	1.29	1.15
1:F:312:LYS:HD3	1:F:315:LYS:HD3	1.29	1.15
1:D:312:LYS:HD3	1:D:315:LYS:HD3	1.29	1.12
1:A:312:LYS:HD3	1:A:315:LYS:HD3	1.29	1.12
1:C:312:LYS:HD2	1:C:315:LYS:HB2	1.32	1.11
1:D:312:LYS:HD2	1:D:315:LYS:HB2	1.32	1.11
1:B:312:LYS:HD3	1:B:315:LYS:HD3	1.29	1.08
1:C:312:LYS:HD3	1:C:315:LYS:HD3	1.29	1.08
1:A:312:LYS:HD2	1:A:315:LYS:HB2	1.32	1.06
1:E:312:LYS:HD2	1:E:315:LYS:HB2	1.32	1.05
1:F:312:LYS:HD2	1:F:315:LYS:HB2	1.32	1.05
1:B:312:LYS:HD2	1:B:315:LYS:HB2	1.32	1.05
1:A:731:ILE:HG21	1:A:736:PHE:CE1	1.99	0.98
1:F:731:ILE:HG21	1:F:736:PHE:HE1	1.28	0.98
1:E:731:ILE:HG21	1:E:736:PHE:HE1	1.29	0.97
1:F:731:ILE:HG21	1:F:736:PHE:CE1	1.99	0.97
1:E:731:ILE:HG21	1:E:736:PHE:CE1	1.99	0.97
1:F:312:LYS:CD	1:F:315:LYS:HB2	1.94	0.97
1:C:312:LYS:CD	1:C:315:LYS:HB2	1.94	0.97
1:D:312:LYS:CD	1:D:315:LYS:HB2	1.94	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:312:LYS:CD	1:E:315:LYS:HB2	1.94	0.97
1:B:312:LYS:CD	1:B:315:LYS:HB2	1.94	0.96
1:A:312:LYS:CD	1:A:315:LYS:HB2	1.94	0.96
1:A:731:ILE:HG21	1:A:736:PHE:HE1	1.28	0.96
1:D:731:ILE:HG21	1:D:736:PHE:CE1	1.99	0.96
1:B:731:ILE:HG21	1:B:736:PHE:CE1	1.99	0.96
1:C:731:ILE:HG21	1:C:736:PHE:CE1	1.99	0.96
1:D:731:ILE:HG21	1:D:736:PHE:HE1	1.28	0.95
1:B:731:ILE:HG21	1:B:736:PHE:HE1	1.28	0.94
1:C:731:ILE:HG21	1:C:736:PHE:HE1	1.28	0.94
1:E:731:ILE:CG2	1:E:736:PHE:HE1	1.82	0.93
1:A:731:ILE:CG2	1:A:736:PHE:HE1	1.82	0.93
1:B:731:ILE:CG2	1:B:736:PHE:HE1	1.81	0.92
1:C:731:ILE:CG2	1:C:736:PHE:HE1	1.81	0.92
1:F:731:ILE:CG2	1:F:736:PHE:HE1	1.82	0.92
1:B:312:LYS:HD3	1:B:315:LYS:CD	2.00	0.92
1:C:312:LYS:HD3	1:C:315:LYS:CD	2.00	0.91
1:D:731:ILE:CG2	1:D:736:PHE:HE1	1.82	0.91
1:A:312:LYS:HD3	1:A:315:LYS:CD	2.00	0.91
1:D:312:LYS:HD3	1:D:315:LYS:CD	2.00	0.91
1:E:312:LYS:HD3	1:E:315:LYS:CD	2.00	0.91
1:A:146:ILE:HD11	1:A:165:VAL:HG11	1.53	0.90
1:B:146:ILE:HD11	1:B:165:VAL:HG11	1.53	0.90
1:F:312:LYS:HD3	1:F:315:LYS:CD	2.00	0.90
1:C:146:ILE:HD11	1:C:165:VAL:HG11	1.53	0.89
1:D:146:ILE:HD11	1:D:165:VAL:HG11	1.53	0.89
1:F:146:ILE:HD11	1:F:165:VAL:HG11	1.53	0.89
1:C:315:LYS:HE3	1:C:322:ARG:HG2	1.56	0.88
1:D:315:LYS:HE3	1:D:322:ARG:HG2	1.56	0.88
1:E:315:LYS:HE3	1:E:322:ARG:HG2	1.56	0.88
1:E:146:ILE:HD11	1:E:165:VAL:HG11	1.53	0.88
1:B:315:LYS:HE3	1:B:322:ARG:HG2	1.56	0.87
1:A:315:LYS:HE3	1:A:322:ARG:HG2	1.56	0.87
1:F:315:LYS:HE3	1:F:322:ARG:HG2	1.56	0.87
1:B:550:MET:HG3	1:B:556:GLU:HG3	1.62	0.81
1:C:550:MET:HG3	1:C:556:GLU:HG3	1.62	0.81
1:D:550:MET:HG3	1:D:556:GLU:HG3	1.62	0.80
1:F:550:MET:HG3	1:F:556:GLU:HG3	1.62	0.80
1:A:731:ILE:CG2	1:A:736:PHE:CE1	2.62	0.80
1:B:492:LEU:HD11	1:B:641:GLN:HG3	1.63	0.80
1:C:731:ILE:CG2	1:C:736:PHE:CE1	2.62	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:492:LEU:HD11	1:F:641:GLN:HG3	1.62	0.80
1:A:551:TRP:HE1	1:A:599:ARG:HH11	1.29	0.80
1:C:492:LEU:HD11	1:C:641:GLN:HG3	1.62	0.80
1:E:492:LEU:HD11	1:E:641:GLN:HG3	1.63	0.80
1:B:551:TRP:HE1	1:B:599:ARG:HH11	1.29	0.80
1:A:492:LEU:HD11	1:A:641:GLN:HG3	1.63	0.79
1:C:317:HIS:CE1	1:D:317:HIS:CE1	2.70	0.79
1:C:551:TRP:HE1	1:C:599:ARG:HH11	1.29	0.79
1:F:551:TRP:HE1	1:F:599:ARG:HH11	1.29	0.79
1:D:731:ILE:CG2	1:D:736:PHE:CE1	2.62	0.79
1:A:550:MET:HG3	1:A:556:GLU:HG3	1.62	0.79
1:D:492:LEU:HD11	1:D:641:GLN:HG3	1.63	0.79
1:B:731:ILE:CG2	1:B:736:PHE:CE1	2.62	0.79
1:A:317:HIS:CE1	1:F:317:HIS:CE1	2.71	0.79
1:E:373:ASP:OD1	1:E:374:ALA:N	2.16	0.79
1:D:551:TRP:HE1	1:D:599:ARG:HH11	1.29	0.78
1:E:550:MET:HG3	1:E:556:GLU:HG3	1.62	0.78
1:F:373:ASP:OD1	1:F:374:ALA:N	2.16	0.78
1:E:551:TRP:HE1	1:E:599:ARG:HH11	1.29	0.78
1:F:731:ILE:CG2	1:F:736:PHE:CE1	2.62	0.78
1:B:317:HIS:CE1	1:C:317:HIS:CE1	2.72	0.78
1:E:731:ILE:CG2	1:E:736:PHE:CE1	2.62	0.77
1:A:317:HIS:CE1	1:B:317:HIS:CE1	2.72	0.77
1:E:317:HIS:CE1	1:F:317:HIS:CE1	2.73	0.77
1:C:390:LEU:HD23	1:C:394:VAL:HG21	1.67	0.77
1:F:460:ASN:OD1	1:F:461:PRO:HD3	1.86	0.76
1:A:373:ASP:OD1	1:A:374:ALA:N	2.16	0.76
1:E:390:LEU:HD23	1:E:394:VAL:HG21	1.67	0.76
1:D:317:HIS:CE1	1:E:317:HIS:CE1	2.73	0.76
1:A:390:LEU:HD23	1:A:394:VAL:HG21	1.67	0.76
1:B:427:MET:HG2	1:B:430:ILE:HD12	1.68	0.76
1:C:427:MET:HG2	1:C:430:ILE:HD12	1.67	0.76
1:E:460:ASN:OD1	1:E:461:PRO:HD3	1.86	0.76
1:F:390:LEU:HD23	1:F:394:VAL:HG21	1.67	0.76
1:C:373:ASP:OD1	1:C:374:ALA:N	2.16	0.75
1:C:460:ASN:OD1	1:C:461:PRO:HD3	1.86	0.75
1:D:373:ASP:OD1	1:D:374:ALA:N	2.16	0.75
1:B:460:ASN:OD1	1:B:461:PRO:HD3	1.86	0.75
1:D:460:ASN:OD1	1:D:461:PRO:HD3	1.85	0.75
1:B:373:ASP:OD1	1:B:374:ALA:N	2.16	0.75
1:B:390:LEU:HD23	1:B:394:VAL:HG21	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:390:LEU:HD23	1:D:394:VAL:HG21	1.67	0.75
1:A:427:MET:HG2	1:A:430:ILE:HD12	1.67	0.75
1:D:427:MET:HG2	1:D:430:ILE:HD12	1.67	0.75
1:F:98:ASP:OD1	1:F:225:ARG:NH2	2.20	0.75
1:A:460:ASN:OD1	1:A:461:PRO:HD3	1.86	0.75
1:C:98:ASP:OD1	1:C:225:ARG:NH2	2.20	0.75
1:F:117:LEU:HD11	1:F:189:ILE:HD13	1.68	0.75
1:D:98:ASP:OD1	1:D:225:ARG:NH2	2.20	0.75
1:C:117:LEU:HD11	1:C:189:ILE:HD13	1.68	0.74
1:A:98:ASP:OD1	1:A:225:ARG:NH2	2.20	0.74
1:A:117:LEU:HD11	1:A:189:ILE:HD13	1.68	0.74
1:B:98:ASP:OD1	1:B:225:ARG:NH2	2.20	0.74
1:E:117:LEU:HD11	1:E:189:ILE:HD13	1.68	0.74
1:E:427:MET:HG2	1:E:430:ILE:HD12	1.67	0.74
1:E:115:HIS:ND1	1:E:183:HIS:O	2.21	0.74
1:D:115:HIS:ND1	1:D:183:HIS:O	2.21	0.74
1:F:427:MET:HG2	1:F:430:ILE:HD12	1.68	0.74
1:E:98:ASP:OD1	1:E:225:ARG:NH2	2.20	0.73
1:F:115:HIS:ND1	1:F:183:HIS:O	2.21	0.73
1:C:115:HIS:ND1	1:C:183:HIS:O	2.21	0.73
1:D:117:LEU:HD11	1:D:189:ILE:HD13	1.68	0.73
1:F:761:THR:HB	1:F:764:GLN:HG2	1.70	0.73
1:B:117:LEU:HD11	1:B:189:ILE:HD13	1.68	0.73
1:A:115:HIS:ND1	1:A:183:HIS:O	2.21	0.73
1:B:115:HIS:ND1	1:B:183:HIS:O	2.21	0.72
1:E:761:THR:HB	1:E:764:GLN:HG2	1.70	0.72
1:A:761:THR:HB	1:A:764:GLN:HG2	1.70	0.72
1:E:45:LYS:HD3	1:E:80:GLU:HA	1.72	0.72
1:F:45:LYS:HD3	1:F:80:GLU:HA	1.72	0.72
1:B:761:THR:HB	1:B:764:GLN:HG2	1.70	0.72
1:A:45:LYS:HD3	1:A:80:GLU:HA	1.72	0.72
1:D:761:THR:HB	1:D:764:GLN:HG2	1.70	0.72
1:D:441:VAL:O	1:D:445:LEU:N	2.23	0.71
1:E:441:VAL:O	1:E:445:LEU:N	2.23	0.71
1:E:760:GLN:O	1:F:744:ARG:NH2	2.22	0.71
1:C:760:GLN:O	1:D:744:ARG:NH2	2.24	0.71
1:F:458:GLN:HB2	1:F:460:ASN:OD1	1.90	0.71
1:C:761:THR:HB	1:C:764:GLN:HG2	1.70	0.71
1:D:45:LYS:HD3	1:D:80:GLU:HA	1.72	0.71
1:B:45:LYS:HD3	1:B:80:GLU:HA	1.72	0.71
1:B:760:GLN:HG3	1:B:761:THR:HG23	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:441:VAL:O	1:C:445:LEU:N	2.23	0.71
1:F:441:VAL:O	1:F:445:LEU:N	2.23	0.71
1:A:614:LYS:HE2	1:B:402:GLU:HG2	1.73	0.71
1:A:744:ARG:NH2	1:F:760:GLN:O	2.23	0.71
1:D:458:GLN:HB2	1:D:460:ASN:OD1	1.91	0.71
1:D:760:GLN:O	1:E:744:ARG:NH2	2.23	0.71
1:B:491:GLU:HA	1:B:495:TYR:HD2	1.56	0.70
1:C:45:LYS:HD3	1:C:80:GLU:HA	1.72	0.70
1:C:335:LEU:HD23	1:C:337:GLN:H	1.56	0.70
1:A:217:LYS:O	1:A:221:GLU:HB2	1.92	0.70
1:A:458:GLN:HB2	1:A:460:ASN:OD1	1.90	0.70
1:B:217:LYS:O	1:B:221:GLU:HB2	1.92	0.70
1:C:350:PRO:O	1:C:358:ARG:NH2	2.25	0.70
1:E:217:LYS:O	1:E:221:GLU:HB2	1.92	0.70
1:A:760:GLN:O	1:B:744:ARG:NH2	2.23	0.70
1:B:458:GLN:HB2	1:B:460:ASN:OD1	1.91	0.70
1:E:760:GLN:HG3	1:E:761:THR:HG23	1.73	0.70
1:B:80:GLU:O	1:B:81:LYS:HG3	1.92	0.70
1:B:441:VAL:O	1:B:445:LEU:N	2.23	0.70
1:C:458:GLN:HB2	1:C:460:ASN:OD1	1.91	0.70
1:E:491:GLU:HA	1:E:495:TYR:HD2	1.56	0.70
1:A:402:GLU:HG2	1:F:614:LYS:HE2	1.74	0.70
1:A:441:VAL:O	1:A:445:LEU:N	2.23	0.70
1:C:217:LYS:O	1:C:221:GLU:HB2	1.91	0.70
1:A:80:GLU:O	1:A:81:LYS:HG3	1.92	0.70
1:E:335:LEU:HD23	1:E:337:GLN:H	1.56	0.70
1:F:760:GLN:HG3	1:F:761:THR:HG23	1.73	0.70
1:B:350:PRO:O	1:B:358:ARG:NH2	2.25	0.70
1:C:491:GLU:HA	1:C:495:TYR:HD2	1.56	0.70
1:D:394:VAL:HA	1:D:449:MET:HE2	1.73	0.70
1:F:217:LYS:O	1:F:221:GLU:HB2	1.92	0.70
1:F:335:LEU:HD23	1:F:337:GLN:H	1.56	0.70
1:A:491:GLU:HA	1:A:495:TYR:HD2	1.56	0.70
1:D:335:LEU:HD23	1:D:337:GLN:H	1.56	0.69
1:E:458:GLN:HB2	1:E:460:ASN:OD1	1.90	0.69
1:A:335:LEU:HD23	1:A:337:GLN:H	1.56	0.69
1:B:760:GLN:O	1:C:744:ARG:NH2	2.24	0.69
1:D:350:PRO:O	1:D:358:ARG:NH2	2.25	0.69
1:D:217:LYS:O	1:D:221:GLU:HB2	1.91	0.69
1:D:614:LYS:HE2	1:E:402:GLU:HG2	1.72	0.69
1:F:80:GLU:O	1:F:81:LYS:HG3	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:760:GLN:HG3	1:D:761:THR:HG23	1.73	0.69
1:E:350:PRO:O	1:E:358:ARG:NH2	2.25	0.69
1:C:614:LYS:HE2	1:D:402:GLU:HG2	1.73	0.69
1:C:760:GLN:HG3	1:C:761:THR:HG23	1.73	0.69
1:E:109:LYS:HB3	1:E:173:TYR:HE2	1.58	0.69
1:B:335:LEU:HD23	1:B:337:GLN:H	1.56	0.69
1:D:491:GLU:HA	1:D:495:TYR:HD2	1.56	0.69
1:A:350:PRO:O	1:A:358:ARG:NH2	2.25	0.69
1:F:350:PRO:O	1:F:358:ARG:NH2	2.25	0.69
1:A:394:VAL:HA	1:A:449:MET:HE2	1.74	0.69
1:C:203:TYR:CE2	1:C:261:GLU:HG2	2.28	0.69
1:B:203:TYR:CE2	1:B:261:GLU:HG2	2.28	0.69
1:B:323:ARG:NH1	1:C:277:LYS:O	2.26	0.68
1:B:614:LYS:HE2	1:C:402:GLU:HG2	1.75	0.68
1:E:203:TYR:CE2	1:E:261:GLU:HG2	2.28	0.68
1:F:394:VAL:HA	1:F:449:MET:HE2	1.75	0.68
1:D:172:PRO:HG2	1:D:173:TYR:HD1	1.59	0.68
1:D:244:TYR:CZ	1:D:350:PRO:HB3	2.29	0.68
1:E:80:GLU:O	1:E:81:LYS:HG3	1.92	0.68
1:A:203:TYR:CE2	1:A:261:GLU:HG2	2.28	0.68
1:F:109:LYS:HB3	1:F:173:TYR:HE2	1.58	0.68
1:E:172:PRO:HG2	1:E:173:TYR:HD1	1.59	0.68
1:F:172:PRO:HG2	1:F:173:TYR:HD1	1.59	0.68
1:C:80:GLU:O	1:C:81:LYS:HG3	1.92	0.68
1:A:172:PRO:HG2	1:A:173:TYR:HD1	1.59	0.68
1:D:80:GLU:O	1:D:81:LYS:HG3	1.92	0.68
1:D:203:TYR:CE2	1:D:261:GLU:HG2	2.28	0.68
1:F:244:TYR:CZ	1:F:350:PRO:HB3	2.29	0.68
1:C:394:VAL:HA	1:C:449:MET:HE2	1.73	0.68
1:D:323:ARG:NH1	1:E:277:LYS:O	2.27	0.68
1:E:244:TYR:CZ	1:E:350:PRO:HB3	2.29	0.68
1:F:491:GLU:HA	1:F:495:TYR:HD2	1.56	0.68
1:A:277:LYS:O	1:F:323:ARG:NH1	2.26	0.67
1:C:423:ILE:HG22	1:C:445:LEU:HD21	1.77	0.67
1:B:109:LYS:HB3	1:B:173:TYR:HE2	1.58	0.67
1:E:614:LYS:HE2	1:F:402:GLU:HG2	1.73	0.67
1:F:491:GLU:HA	1:F:495:TYR:CD2	2.30	0.67
1:A:114:ILE:HA	1:A:168:THR:HG22	1.77	0.67
1:F:423:ILE:HG22	1:F:445:LEU:HD21	1.77	0.67
1:D:109:LYS:HB3	1:D:173:TYR:HE2	1.58	0.67
1:E:491:GLU:HA	1:E:495:TYR:CD2	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:203:TYR:CE2	1:F:261:GLU:HG2	2.28	0.67
1:A:244:TYR:CZ	1:A:350:PRO:HB3	2.29	0.67
1:B:114:ILE:HA	1:B:168:THR:HG22	1.77	0.67
1:D:114:ILE:HA	1:D:168:THR:HG22	1.77	0.67
1:A:323:ARG:NH1	1:B:277:LYS:O	2.27	0.67
1:C:172:PRO:HG2	1:C:173:TYR:HD1	1.59	0.67
1:C:323:ARG:NH1	1:D:277:LYS:O	2.28	0.67
1:D:491:GLU:HA	1:D:495:TYR:CD2	2.30	0.67
1:E:114:ILE:HA	1:E:168:THR:HG22	1.77	0.67
1:C:244:TYR:CZ	1:C:350:PRO:HB3	2.29	0.67
1:C:491:GLU:HA	1:C:495:TYR:CD2	2.30	0.67
1:D:440:GLU:OE1	1:D:440:GLU:N	2.28	0.67
1:B:423:ILE:HG22	1:B:445:LEU:HD21	1.77	0.67
1:C:114:ILE:HA	1:C:168:THR:HG22	1.77	0.67
1:E:323:ARG:NH1	1:F:277:LYS:O	2.28	0.67
1:A:109:LYS:HB3	1:A:173:TYR:HE2	1.58	0.66
1:A:491:GLU:HA	1:A:495:TYR:CD2	2.30	0.66
1:C:109:LYS:HB3	1:C:173:TYR:HE2	1.58	0.66
1:C:440:GLU:N	1:C:440:GLU:OE1	2.28	0.66
1:F:43:GLN:HA	1:F:46:MET:HB3	1.78	0.66
1:B:171:SER:HB3	1:B:172:PRO:HA	1.78	0.66
1:B:383:ILE:O	1:B:386:LYS:NZ	2.29	0.66
1:C:25:ARG:NH1	1:D:431:ASP:OD2	2.28	0.66
1:F:114:ILE:HA	1:F:168:THR:HG22	1.77	0.66
1:B:172:PRO:HG2	1:B:173:TYR:HD1	1.59	0.66
1:D:43:GLN:HA	1:D:46:MET:HB3	1.78	0.66
1:E:423:ILE:HG22	1:E:445:LEU:HD21	1.77	0.66
1:A:171:SER:HB3	1:A:172:PRO:HA	1.78	0.66
1:B:244:TYR:CZ	1:B:350:PRO:HB3	2.29	0.66
1:C:89:ARG:HG3	1:C:94:VAL:HG23	1.77	0.66
1:C:171:SER:HB3	1:C:172:PRO:HA	1.78	0.66
1:E:440:GLU:N	1:E:440:GLU:OE1	2.28	0.66
1:E:394:VAL:HA	1:E:449:MET:HE2	1.78	0.66
1:F:46:MET:HA	1:F:49:LEU:HB3	1.77	0.66
1:A:423:ILE:HG22	1:A:445:LEU:HD21	1.77	0.66
1:D:423:ILE:HG22	1:D:445:LEU:HD21	1.77	0.66
1:F:383:ILE:O	1:F:386:LYS:NZ	2.29	0.66
1:B:394:VAL:HA	1:B:449:MET:HE2	1.75	0.66
1:E:45:LYS:NZ	1:E:79:ASP:O	2.29	0.66
1:A:120:ASP:HA	1:A:188:PRO:HB3	1.78	0.66
1:C:43:GLN:HA	1:C:46:MET:HB3	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:120:ASP:HA	1:E:188:PRO:HB3	1.78	0.66
1:F:171:SER:HB3	1:F:172:PRO:HA	1.78	0.66
1:B:491:GLU:HA	1:B:495:TYR:CD2	2.30	0.66
1:D:89:ARG:HG3	1:D:94:VAL:HG23	1.78	0.66
1:F:120:ASP:HA	1:F:188:PRO:HB3	1.78	0.66
1:B:120:ASP:HA	1:B:188:PRO:HB3	1.78	0.65
1:D:171:SER:HB3	1:D:172:PRO:HA	1.78	0.65
1:E:46:MET:HA	1:E:49:LEU:HB3	1.77	0.65
1:C:120:ASP:HA	1:C:188:PRO:HB3	1.78	0.65
1:E:171:SER:HB3	1:E:172:PRO:HA	1.78	0.65
1:D:46:MET:HA	1:D:49:LEU:HB3	1.77	0.65
1:B:440:GLU:OE1	1:B:440:GLU:N	2.28	0.65
1:C:46:MET:HA	1:C:49:LEU:HB3	1.77	0.65
1:D:383:ILE:O	1:D:386:LYS:NZ	2.29	0.65
1:E:89:ARG:HG3	1:E:94:VAL:HG23	1.78	0.65
1:A:46:MET:HA	1:A:49:LEU:HB3	1.77	0.65
1:C:477:GLU:O	1:C:662:ARG:NH2	2.30	0.65
1:D:120:ASP:HA	1:D:188:PRO:HB3	1.78	0.65
1:A:43:GLN:HA	1:A:46:MET:HB3	1.78	0.65
1:E:43:GLN:HA	1:E:46:MET:HB3	1.78	0.65
1:E:383:ILE:O	1:E:386:LYS:NZ	2.29	0.65
1:B:477:GLU:O	1:B:662:ARG:NH2	2.30	0.65
1:D:586:ARG:HG2	1:D:597:ALA:H	1.62	0.65
1:F:440:GLU:N	1:F:440:GLU:OE1	2.28	0.65
1:F:586:ARG:HG2	1:F:597:ALA:H	1.62	0.64
1:A:89:ARG:HG3	1:A:94:VAL:HG23	1.78	0.64
1:A:586:ARG:HG2	1:A:597:ALA:H	1.62	0.64
1:B:30:GLU:HB2	1:B:96:LEU:HD21	1.79	0.64
1:D:477:GLU:O	1:D:662:ARG:NH2	2.30	0.64
1:F:89:ARG:HG3	1:F:94:VAL:HG23	1.77	0.64
1:B:302:PHE:HE2	1:B:304:ASP:OD1	1.81	0.64
1:A:383:ILE:O	1:A:386:LYS:NZ	2.29	0.64
1:C:383:ILE:O	1:C:386:LYS:NZ	2.28	0.64
1:E:30:GLU:HB2	1:E:96:LEU:HD21	1.79	0.64
1:A:47:ASP:O	1:A:50:GLN:NE2	2.31	0.64
1:B:89:ARG:HG3	1:B:94:VAL:HG23	1.78	0.64
1:B:586:ARG:HG2	1:B:597:ALA:H	1.62	0.64
1:E:477:GLU:O	1:E:662:ARG:NH2	2.30	0.64
1:F:30:GLU:HB2	1:F:96:LEU:HD21	1.79	0.64
1:F:477:GLU:O	1:F:662:ARG:NH2	2.30	0.64
1:C:586:ARG:HG2	1:C:597:ALA:H	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:47:ASP:O	1:C:50:GLN:NE2	2.31	0.64
2:C:901:AGS:H2'	2:C:901:AGS:N3	2.13	0.64
1:D:47:ASP:O	1:D:50:GLN:NE2	2.31	0.64
1:E:586:ARG:HG2	1:E:597:ALA:H	1.62	0.64
1:A:477:GLU:O	1:A:662:ARG:NH2	2.30	0.64
1:A:30:GLU:HB2	1:A:96:LEU:HD21	1.79	0.64
1:A:302:PHE:HE2	1:A:304:ASP:OD1	1.81	0.64
1:D:30:GLU:HB2	1:D:96:LEU:HD21	1.79	0.64
1:F:302:PHE:HE2	1:F:304:ASP:OD1	1.81	0.64
2:F:901:AGS:N3	2:F:901:AGS:H2'	2.13	0.64
1:B:43:GLN:HA	1:B:46:MET:HB3	1.78	0.64
1:B:46:MET:HA	1:B:49:LEU:HB3	1.77	0.64
1:A:635:ARG:HG3	1:A:766:ARG:HH22	1.63	0.63
1:C:22:ARG:HG3	1:C:24:ASN:H	1.64	0.63
1:C:30:GLU:HB2	1:C:96:LEU:HD21	1.79	0.63
2:D:901:AGS:N3	2:D:901:AGS:H2'	2.13	0.63
1:B:47:ASP:O	1:B:50:GLN:NE2	2.31	0.63
1:E:26:LEU:O	1:E:100:ILE:N	2.25	0.63
1:E:47:ASP:O	1:E:50:GLN:NE2	2.31	0.63
1:E:635:ARG:HG3	1:E:766:ARG:HH22	1.63	0.63
2:E:901:AGS:N3	2:E:901:AGS:H2'	2.13	0.63
1:F:47:ASP:O	1:F:50:GLN:NE2	2.31	0.63
1:A:22:ARG:HG3	1:A:24:ASN:H	1.63	0.63
1:B:22:ARG:HG3	1:B:24:ASN:H	1.64	0.63
1:B:635:ARG:HG3	1:B:766:ARG:HH22	1.63	0.63
1:F:22:ARG:HG3	1:F:24:ASN:H	1.64	0.63
1:E:302:PHE:HE2	1:E:304:ASP:OD1	1.81	0.63
1:A:440:GLU:N	1:A:440:GLU:OE1	2.28	0.63
1:D:22:ARG:HG3	1:D:24:ASN:H	1.64	0.63
1:D:302:PHE:HE2	1:D:304:ASP:OD1	1.81	0.63
1:C:635:ARG:HG3	1:C:766:ARG:HH22	1.63	0.63
1:D:635:ARG:HG3	1:D:766:ARG:HH22	1.63	0.62
1:F:635:ARG:HG3	1:F:766:ARG:HH22	1.63	0.62
1:B:26:LEU:O	1:B:100:ILE:N	2.25	0.62
1:C:238:PRO:HB3	1:C:365:ARG:HH21	1.64	0.62
1:D:521:GLY:HA2	2:D:901:AGS:O2G	1.99	0.62
1:E:521:GLY:HA2	2:E:901:AGS:O2G	2.00	0.62
1:A:45:LYS:NZ	1:A:79:ASP:O	2.29	0.62
1:A:521:GLY:HA2	2:A:901:AGS:O2G	1.99	0.62
1:C:521:GLY:HA2	2:C:901:AGS:O2G	2.00	0.62
1:F:521:GLY:HA2	2:F:901:AGS:O2G	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:901:AGS:N3	2:A:901:AGS:H2'	2.13	0.62
1:C:302:PHE:HE2	1:C:304:ASP:OD1	1.81	0.62
1:E:22:ARG:HG3	1:E:24:ASN:H	1.64	0.62
1:E:238:PRO:HB3	1:E:365:ARG:HH21	1.63	0.62
1:E:490:GLN:O	1:E:494:GLN:HB2	2.00	0.62
1:D:121:ASP:OD1	1:D:191:ARG:NH2	2.33	0.62
1:D:239:ARG:HB2	1:D:239:ARG:CZ	2.30	0.62
1:F:238:PRO:HB3	1:F:365:ARG:HH21	1.64	0.62
2:B:901:AGS:H2'	2:B:901:AGS:N3	2.13	0.62
1:C:121:ASP:OD1	1:C:191:ARG:NH2	2.33	0.62
1:D:238:PRO:HB3	1:D:365:ARG:HH21	1.64	0.62
1:F:31:ALA:HA	1:F:83:ARG:HD2	1.82	0.62
1:B:238:PRO:HB3	1:B:365:ARG:HH21	1.64	0.62
1:E:121:ASP:OD1	1:E:191:ARG:NH2	2.33	0.62
1:A:238:PRO:HB3	1:A:365:ARG:HH21	1.64	0.62
1:D:146:ILE:HG23	1:D:174:CYS:HB2	1.82	0.62
1:D:490:GLN:O	1:D:494:GLN:HB2	2.00	0.62
1:B:239:ARG:CZ	1:B:239:ARG:HB2	2.30	0.61
1:C:322:ARG:HH12	1:D:317:HIS:H	1.46	0.61
1:D:764:GLN:NE2	1:E:745:ARG:O	2.33	0.61
1:F:584:LYS:HG3	1:F:588:GLY:HA3	1.82	0.61
1:B:25:ARG:HG3	1:B:99:VAL:HG23	1.82	0.61
1:D:584:LYS:HG3	1:D:588:GLY:HA3	1.82	0.61
1:E:146:ILE:HG23	1:E:174:CYS:HB2	1.82	0.61
1:E:584:LYS:HG3	1:E:588:GLY:HA3	1.82	0.61
1:F:121:ASP:OD1	1:F:191:ARG:NH2	2.33	0.61
1:A:584:LYS:HG3	1:A:588:GLY:HA3	1.82	0.61
1:D:25:ARG:HG3	1:D:99:VAL:HG23	1.82	0.61
1:F:25:ARG:HG3	1:F:99:VAL:HG23	1.82	0.61
1:F:490:GLN:O	1:F:494:GLN:HB2	2.00	0.61
1:A:431:ASP:OD2	1:F:25:ARG:NH1	2.33	0.61
1:A:764:GLN:NE2	1:B:745:ARG:O	2.34	0.61
1:C:79:ASP:OD1	1:C:80:GLU:N	2.33	0.61
1:C:239:ARG:HB2	1:C:239:ARG:CZ	2.30	0.61
1:E:764:GLN:NE2	1:F:745:ARG:O	2.33	0.61
1:A:25:ARG:HG3	1:A:99:VAL:HG23	1.82	0.61
1:A:25:ARG:NH1	1:B:431:ASP:OD2	2.33	0.61
1:A:146:ILE:HG23	1:A:174:CYS:HB2	1.82	0.61
1:B:31:ALA:HA	1:B:83:ARG:HD2	1.82	0.61
1:B:42:SER:HB3	1:B:45:LYS:HZ3	1.65	0.61
1:D:21:ASN:HB3	1:D:25:ARG:HE	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:79:ASP:OD1	1:F:80:GLU:N	2.33	0.61
1:A:490:GLN:O	1:A:494:GLN:HB2	2.00	0.61
1:B:121:ASP:OD1	1:B:191:ARG:NH2	2.33	0.61
1:B:521:GLY:HA2	2:B:901:AGS:O2G	1.99	0.61
1:A:121:ASP:OD1	1:A:191:ARG:NH2	2.33	0.61
1:A:239:ARG:HB2	1:A:239:ARG:CZ	2.30	0.61
1:C:490:GLN:O	1:C:494:GLN:HB2	2.00	0.61
1:E:213:LEU:O	1:E:217:LYS:N	2.33	0.61
1:A:79:ASP:OD1	1:A:80:GLU:N	2.33	0.61
1:A:312:LYS:CD	1:A:315:LYS:HD3	2.20	0.61
1:B:490:GLN:O	1:B:494:GLN:HB2	2.00	0.61
1:C:25:ARG:HG3	1:C:99:VAL:HG23	1.82	0.61
1:D:558:ASN:OD1	1:D:561:GLU:HB2	2.01	0.61
1:E:79:ASP:OD1	1:E:80:GLU:N	2.33	0.61
1:F:26:LEU:O	1:F:100:ILE:N	2.25	0.61
1:A:31:ALA:HA	1:A:83:ARG:HD2	1.82	0.60
1:B:21:ASN:HB3	1:B:25:ARG:HE	1.65	0.60
1:B:146:ILE:HG23	1:B:174:CYS:HB2	1.82	0.60
1:B:508:MET:HB2	1:C:692:GLN:HE22	1.66	0.60
1:D:25:ARG:NH1	1:E:431:ASP:OD2	2.33	0.60
1:F:146:ILE:HG23	1:F:174:CYS:HB2	1.82	0.60
1:F:351:ASN:O	1:F:352:SER:OG	2.19	0.60
1:F:558:ASN:OD1	1:F:561:GLU:HB2	2.01	0.60
1:A:21:ASN:HB3	1:A:25:ARG:HE	1.65	0.60
1:A:745:ARG:O	1:F:764:GLN:NE2	2.34	0.60
1:B:558:ASN:OD1	1:B:561:GLU:HB2	2.01	0.60
1:C:558:ASN:OD1	1:C:561:GLU:HB2	2.01	0.60
1:C:764:GLN:NE2	1:D:745:ARG:O	2.33	0.60
1:E:25:ARG:HG3	1:E:99:VAL:HG23	1.81	0.60
1:E:558:ASN:OD1	1:E:561:GLU:HB2	2.01	0.60
1:C:31:ALA:HA	1:C:83:ARG:HD2	1.82	0.60
1:E:31:ALA:HA	1:E:83:ARG:HD2	1.82	0.60
1:F:239:ARG:HB2	1:F:239:ARG:CZ	2.30	0.60
1:A:26:LEU:O	1:A:100:ILE:N	2.25	0.60
1:B:351:ASN:O	1:B:352:SER:OG	2.19	0.60
1:D:31:ALA:HA	1:D:83:ARG:HD2	1.82	0.60
1:D:42:SER:HB3	1:D:45:LYS:HZ3	1.66	0.60
1:E:21:ASN:HB3	1:E:25:ARG:HE	1.65	0.60
1:C:42:SER:HB3	1:C:45:LYS:HZ3	1.66	0.60
1:D:79:ASP:OD1	1:D:80:GLU:N	2.33	0.60
1:D:213:LEU:O	1:D:217:LYS:N	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:239:ARG:HB2	1:E:239:ARG:CZ	2.30	0.60
1:C:21:ASN:HB3	1:C:25:ARG:HE	1.65	0.60
1:C:146:ILE:HG23	1:C:174:CYS:HB2	1.82	0.60
1:F:21:ASN:HB3	1:F:25:ARG:HE	1.65	0.60
1:F:45:LYS:NZ	1:F:79:ASP:O	2.29	0.60
1:B:79:ASP:OD1	1:B:80:GLU:N	2.33	0.60
1:C:494:GLN:OE1	1:C:535:CYS:HB3	2.02	0.60
1:C:116:VAL:HG22	1:C:165:VAL:HG12	1.84	0.59
1:C:584:LYS:HG3	1:C:588:GLY:HA3	1.82	0.59
1:D:494:GLN:OE1	1:D:535:CYS:HB3	2.02	0.59
1:E:116:VAL:HG22	1:E:165:VAL:HG12	1.84	0.59
1:A:322:ARG:HH12	1:B:317:HIS:H	1.49	0.59
1:B:140:LEU:O	1:B:141:GLU:HB2	2.02	0.59
1:E:25:ARG:NH1	1:F:431:ASP:OD2	2.34	0.59
1:A:558:ASN:OD1	1:A:561:GLU:HB2	2.01	0.59
1:B:584:LYS:HG3	1:B:588:GLY:HA3	1.82	0.59
1:C:213:LEU:O	1:C:217:LYS:N	2.33	0.59
1:B:116:VAL:HG22	1:B:165:VAL:HG12	1.84	0.59
1:B:494:GLN:OE1	1:B:535:CYS:HB3	2.02	0.59
1:B:764:GLN:NE2	1:C:745:ARG:O	2.35	0.59
1:E:494:GLN:OE1	1:E:535:CYS:HB3	2.02	0.59
1:A:113:ARG:O	1:A:114:ILE:HG13	2.03	0.59
1:A:494:GLN:OE1	1:A:535:CYS:HB3	2.02	0.59
1:B:60:LYS:HE3	1:B:103:GLN:OE1	2.03	0.59
1:E:322:ARG:HH12	1:F:317:HIS:H	1.50	0.59
1:F:494:GLN:OE1	1:F:535:CYS:HB3	2.02	0.59
1:A:317:HIS:H	1:F:322:ARG:HH12	1.49	0.59
1:B:213:LEU:O	1:B:217:LYS:N	2.33	0.59
1:D:312:LYS:HD3	1:D:315:LYS:HB2	1.83	0.59
1:D:377:ARG:NH2	1:D:400:ALA:O	2.36	0.59
1:E:351:ASN:O	1:E:352:SER:OG	2.19	0.59
1:F:60:LYS:HE3	1:F:103:GLN:OE1	2.03	0.59
1:A:42:SER:HB3	1:A:45:LYS:HZ3	1.68	0.58
1:A:140:LEU:O	1:A:141:GLU:HB2	2.02	0.58
1:B:45:LYS:NZ	1:B:79:ASP:O	2.29	0.58
1:D:312:LYS:CD	1:D:315:LYS:HD3	2.20	0.58
1:F:113:ARG:O	1:F:114:ILE:HG13	2.03	0.58
1:F:116:VAL:HG22	1:F:165:VAL:HG12	1.84	0.58
1:A:377:ARG:NH2	1:A:400:ALA:O	2.36	0.58
1:E:60:LYS:HE3	1:E:103:GLN:OE1	2.03	0.58
1:B:551:TRP:HA	1:B:556:GLU:HB2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:116:VAL:HG22	1:D:165:VAL:HG12	1.84	0.58
1:E:113:ARG:O	1:E:114:ILE:HG13	2.03	0.58
1:E:551:TRP:HA	1:E:556:GLU:HB2	1.86	0.58
1:A:60:LYS:HE3	1:A:103:GLN:OE1	2.03	0.58
1:B:113:ARG:O	1:B:114:ILE:HG13	2.03	0.58
1:E:508:MET:HB2	1:F:692:GLN:HE22	1.68	0.58
1:A:508:MET:HB2	1:B:692:GLN:HE22	1.69	0.58
1:A:692:GLN:HE22	1:F:508:MET:HB2	1.69	0.58
1:D:30:GLU:OE1	1:D:89:ARG:NH1	2.37	0.58
1:D:322:ARG:HH12	1:E:317:HIS:H	1.50	0.58
1:D:351:ASN:O	1:D:352:SER:OG	2.19	0.58
1:C:30:GLU:OE1	1:C:89:ARG:NH1	2.37	0.58
1:D:45:LYS:NZ	1:D:79:ASP:O	2.29	0.58
1:D:60:LYS:HE3	1:D:103:GLN:OE1	2.03	0.58
1:C:551:TRP:HA	1:C:556:GLU:HB2	1.86	0.58
1:E:140:LEU:O	1:E:141:GLU:HB2	2.02	0.58
1:A:116:VAL:HG22	1:A:165:VAL:HG12	1.84	0.58
1:F:90:ASN:OD1	1:F:91:ASN:N	2.37	0.58
1:C:60:LYS:HE3	1:C:103:GLN:OE1	2.03	0.58
1:F:551:TRP:HA	1:F:556:GLU:HB2	1.85	0.58
1:B:322:ARG:HH12	1:C:317:HIS:H	1.51	0.57
1:C:113:ARG:O	1:C:114:ILE:HG13	2.03	0.57
1:F:42:SER:HB3	1:F:45:LYS:HZ3	1.67	0.57
1:F:312:LYS:CD	1:F:315:LYS:HD3	2.20	0.57
1:B:90:ASN:OD1	1:B:91:ASN:N	2.37	0.57
1:D:113:ARG:O	1:D:114:ILE:HG13	2.03	0.57
1:D:140:LEU:O	1:D:141:GLU:HB2	2.02	0.57
1:E:30:GLU:OE1	1:E:89:ARG:NH1	2.37	0.57
1:C:45:LYS:NZ	1:C:79:ASP:O	2.29	0.57
1:C:140:LEU:O	1:C:141:GLU:HB2	2.02	0.57
1:B:30:GLU:OE1	1:B:89:ARG:NH1	2.37	0.57
1:C:351:ASN:O	1:C:352:SER:OG	2.19	0.57
1:C:26:LEU:O	1:C:100:ILE:N	2.25	0.57
1:D:508:MET:HB2	1:E:692:GLN:HE22	1.69	0.57
1:F:140:LEU:O	1:F:141:GLU:HB2	2.02	0.57
1:A:551:TRP:HA	1:A:556:GLU:HB2	1.86	0.57
1:D:551:TRP:HA	1:D:556:GLU:HB2	1.86	0.57
1:E:377:ARG:NH2	1:E:400:ALA:O	2.36	0.57
1:F:30:GLU:OE1	1:F:89:ARG:NH1	2.37	0.57
1:F:319:GLU:OE1	1:F:319:GLU:N	2.35	0.57
1:A:319:GLU:OE1	1:A:319:GLU:N	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:30:GLU:OE1	1:A:89:ARG:NH1	2.37	0.57
1:E:60:LYS:HA	1:E:66:GLU:HG2	1.86	0.57
1:D:60:LYS:HA	1:D:66:GLU:HG2	1.86	0.57
1:E:312:LYS:CD	1:E:315:LYS:HD3	2.20	0.56
1:A:90:ASN:OD1	1:A:91:ASN:N	2.37	0.56
1:A:312:LYS:HD3	1:A:315:LYS:HB2	1.83	0.56
1:B:319:GLU:OE1	1:B:319:GLU:N	2.35	0.56
1:C:90:ASN:OD1	1:C:91:ASN:N	2.37	0.56
1:D:90:ASN:OD1	1:D:91:ASN:N	2.37	0.56
1:E:90:ASN:OD1	1:E:91:ASN:N	2.37	0.56
1:A:60:LYS:HA	1:A:66:GLU:HG2	1.86	0.56
1:D:61:GLY:H	1:D:66:GLU:HG3	1.71	0.56
1:E:61:GLY:H	1:E:66:GLU:HG3	1.70	0.56
1:F:312:LYS:HD3	1:F:315:LYS:HB2	1.83	0.56
1:C:312:LYS:CD	1:C:315:LYS:HD3	2.20	0.56
1:C:508:MET:HB2	1:D:692:GLN:HE22	1.71	0.56
1:C:25:ARG:HD2	1:D:431:ASP:OD2	2.05	0.56
1:C:491:GLU:OE2	1:D:696:LYS:HG2	2.06	0.56
1:A:193:ASP:OD1	1:A:193:ASP:N	2.38	0.56
1:B:377:ARG:NH2	1:B:400:ALA:O	2.36	0.56
1:D:491:GLU:OE2	1:E:696:LYS:HG2	2.06	0.56
1:B:25:ARG:NH1	1:C:431:ASP:OD2	2.36	0.56
1:B:60:LYS:HA	1:B:66:GLU:HG2	1.86	0.56
1:C:61:GLY:H	1:C:66:GLU:HG3	1.71	0.56
1:A:61:GLY:H	1:A:66:GLU:HG3	1.70	0.55
1:B:61:GLY:H	1:B:66:GLU:HG3	1.71	0.55
1:B:312:LYS:CD	1:B:315:LYS:HD3	2.20	0.55
1:C:60:LYS:HA	1:C:66:GLU:HG2	1.86	0.55
1:E:42:SER:HB3	1:E:45:LYS:HZ3	1.71	0.55
1:E:193:ASP:N	1:E:193:ASP:OD1	2.38	0.55
1:E:647:LEU:HD21	1:E:747:VAL:HG21	1.88	0.55
1:F:60:LYS:HA	1:F:66:GLU:HG2	1.86	0.55
1:F:477:GLU:HB3	1:F:662:ARG:HH22	1.72	0.55
1:A:29:ASP:OD1	1:A:30:GLU:N	2.38	0.55
1:D:26:LEU:O	1:D:100:ILE:N	2.25	0.55
1:A:220:VAL:HG13	1:A:342:ILE:HD13	1.89	0.55
1:C:733:ARG:O	1:C:737:GLU:HG2	2.07	0.55
1:E:319:GLU:OE1	1:E:319:GLU:N	2.35	0.55
1:E:477:GLU:HB3	1:E:662:ARG:HH22	1.72	0.55
1:C:220:VAL:HG13	1:C:342:ILE:HD13	1.89	0.55
1:F:61:GLY:H	1:F:66:GLU:HG3	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:624:ASN:ND2	2:F:901:AGS:S1G	2.76	0.55
1:A:477:GLU:HB3	1:A:662:ARG:HH22	1.72	0.55
1:B:733:ARG:O	1:B:737:GLU:HG2	2.07	0.55
1:A:491:GLU:OE2	1:B:696:LYS:HG2	2.07	0.55
1:C:476:TRP:CZ3	1:C:486:LYS:HG2	2.42	0.55
1:D:29:ASP:OD1	1:D:30:GLU:N	2.38	0.55
1:B:220:VAL:HG13	1:B:342:ILE:HD13	1.89	0.55
1:B:731:ILE:HG22	1:B:736:PHE:HE1	1.71	0.55
1:D:624:ASN:ND2	2:D:901:AGS:S1G	2.76	0.55
1:F:21:ASN:HB3	1:F:25:ARG:NE	2.22	0.55
1:A:21:ASN:HB3	1:A:25:ARG:NE	2.22	0.55
1:A:317:HIS:CE1	1:F:317:HIS:HE1	2.21	0.55
1:A:731:ILE:HG22	1:A:736:PHE:HE1	1.71	0.55
1:C:259:ALA:HB1	1:C:266:PHE:HB2	1.89	0.55
1:C:731:ILE:HG22	1:C:736:PHE:HE1	1.71	0.55
1:D:733:ARG:O	1:D:737:GLU:HG2	2.07	0.55
1:A:25:ARG:HD2	1:B:431:ASP:OD2	2.07	0.55
1:A:143:TYR:HB2	1:A:176:VAL:O	2.07	0.55
1:A:647:LEU:HD21	1:A:747:VAL:HG21	1.88	0.55
1:B:647:LEU:HD21	1:B:747:VAL:HG21	1.88	0.55
1:D:143:TYR:HB2	1:D:176:VAL:O	2.07	0.55
1:D:244:TYR:HB2	1:D:368:ASP:HA	1.89	0.55
1:D:259:ALA:HB1	1:D:266:PHE:HB2	1.89	0.55
1:E:476:TRP:CZ3	1:E:486:LYS:HG2	2.42	0.55
1:A:431:ASP:OD2	1:F:25:ARG:HD2	2.06	0.54
1:A:733:ARG:O	1:A:737:GLU:HG2	2.07	0.54
1:B:25:ARG:HD2	1:C:431:ASP:OD2	2.07	0.54
1:B:477:GLU:HB3	1:B:662:ARG:HH22	1.72	0.54
1:E:25:ARG:HD2	1:F:431:ASP:OD2	2.07	0.54
1:E:491:GLU:OE2	1:F:696:LYS:HG2	2.07	0.54
1:F:220:VAL:HG13	1:F:342:ILE:HD13	1.89	0.54
1:A:259:ALA:HB1	1:A:266:PHE:HB2	1.89	0.54
1:B:193:ASP:N	1:B:193:ASP:OD1	2.38	0.54
1:D:220:VAL:HG13	1:D:342:ILE:HD13	1.89	0.54
1:E:21:ASN:HB3	1:E:25:ARG:NE	2.22	0.54
1:A:476:TRP:CZ3	1:A:486:LYS:HG2	2.42	0.54
1:B:21:ASN:HB3	1:B:25:ARG:NE	2.22	0.54
1:D:477:GLU:HB3	1:D:662:ARG:HH22	1.72	0.54
1:E:624:ASN:ND2	2:E:901:AGS:S1G	2.76	0.54
1:F:647:LEU:HD21	1:F:747:VAL:HG21	1.88	0.54
1:A:244:TYR:HB2	1:A:368:ASP:HA	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:143:TYR:HB2	1:B:176:VAL:O	2.07	0.54
1:B:244:TYR:HB2	1:B:368:ASP:HA	1.89	0.54
1:C:317:HIS:HE1	1:D:317:HIS:CE1	2.21	0.54
1:D:476:TRP:CZ3	1:D:486:LYS:HG2	2.42	0.54
1:D:647:LEU:HD21	1:D:747:VAL:HG21	1.88	0.54
1:E:733:ARG:O	1:E:737:GLU:HG2	2.07	0.54
1:E:143:TYR:HB2	1:E:176:VAL:O	2.07	0.54
1:E:259:ALA:HB1	1:E:266:PHE:HB2	1.89	0.54
1:F:476:TRP:CZ3	1:F:486:LYS:HG2	2.42	0.54
1:F:733:ARG:O	1:F:737:GLU:HG2	2.07	0.54
1:F:143:TYR:HB2	1:F:176:VAL:O	2.07	0.54
1:B:538:ASN:HD22	1:B:569:ALA:HB1	1.73	0.54
1:C:647:LEU:HD21	1:C:747:VAL:HG21	1.88	0.54
1:F:213:LEU:O	1:F:217:LYS:N	2.33	0.54
1:B:476:TRP:CZ3	1:B:486:LYS:HG2	2.42	0.54
1:C:193:ASP:OD1	1:C:193:ASP:N	2.38	0.54
1:F:193:ASP:OD1	1:F:193:ASP:N	2.38	0.54
1:C:477:GLU:HB3	1:C:662:ARG:HH22	1.71	0.54
1:D:25:ARG:HD2	1:E:431:ASP:OD2	2.08	0.54
1:F:377:ARG:NH2	1:F:400:ALA:O	2.35	0.54
1:A:317:HIS:HE1	1:B:317:HIS:CE1	2.22	0.54
1:C:538:ASN:HD22	1:C:569:ALA:HB1	1.73	0.54
1:E:244:TYR:HB2	1:E:368:ASP:HA	1.89	0.54
1:E:317:HIS:HE1	1:F:317:HIS:CE1	2.22	0.54
1:F:179:ASP:OD1	1:F:180:THR:N	2.41	0.54
1:F:259:ALA:HB1	1:F:266:PHE:HB2	1.89	0.54
1:A:696:LYS:HG2	1:F:491:GLU:OE2	2.07	0.53
1:B:317:HIS:HE1	1:C:317:HIS:CE1	2.21	0.53
1:B:491:GLU:OE2	1:C:696:LYS:HG2	2.09	0.53
1:C:179:ASP:OD1	1:C:180:THR:N	2.41	0.53
1:E:220:VAL:HG13	1:E:342:ILE:HD13	1.89	0.53
1:A:688:THR:O	1:A:692:GLN:HB2	2.08	0.53
1:B:312:LYS:HD3	1:B:315:LYS:HB2	1.83	0.53
1:C:244:TYR:HB2	1:C:368:ASP:HA	1.89	0.53
1:C:688:THR:O	1:C:692:GLN:HB2	2.09	0.53
1:E:561:GLU:OE1	1:E:561:GLU:N	2.42	0.53
1:F:29:ASP:OD1	1:F:30:GLU:N	2.38	0.53
1:A:561:GLU:N	1:A:561:GLU:OE1	2.42	0.53
1:B:561:GLU:N	1:B:561:GLU:OE1	2.42	0.53
1:C:143:TYR:HB2	1:C:176:VAL:O	2.07	0.53
1:D:21:ASN:HB3	1:D:25:ARG:NE	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:688:THR:O	1:F:692:GLN:HB2	2.08	0.53
1:B:179:ASP:OD1	1:B:180:THR:N	2.41	0.53
1:C:21:ASN:HB3	1:C:25:ARG:NE	2.22	0.53
1:D:193:ASP:OD1	1:D:193:ASP:N	2.38	0.53
1:D:561:GLU:N	1:D:561:GLU:OE1	2.42	0.53
1:D:688:THR:O	1:D:692:GLN:HB2	2.09	0.53
1:E:179:ASP:OD1	1:E:180:THR:N	2.41	0.53
1:A:538:ASN:HD22	1:A:569:ALA:HB1	1.73	0.53
1:A:624:ASN:ND2	2:A:901:AGS:S1G	2.76	0.53
1:B:505:LYS:HD3	1:C:729:PRO:HB3	1.90	0.53
1:D:45:LYS:HG3	1:D:79:ASP:O	2.09	0.53
1:B:29:ASP:OD1	1:B:30:GLU:N	2.38	0.53
1:D:538:ASN:HD22	1:D:569:ALA:HB1	1.73	0.53
1:E:312:LYS:HD3	1:E:315:LYS:HB2	1.83	0.53
1:E:538:ASN:HD22	1:E:569:ALA:HB1	1.73	0.53
1:F:45:LYS:HG3	1:F:79:ASP:O	2.09	0.53
1:C:377:ARG:NH2	1:C:400:ALA:O	2.36	0.53
1:F:244:TYR:HB2	1:F:368:ASP:HA	1.89	0.53
1:B:45:LYS:HG3	1:B:79:ASP:O	2.09	0.53
1:B:259:ALA:HB1	1:B:266:PHE:HB2	1.89	0.53
1:C:561:GLU:N	1:C:561:GLU:OE1	2.42	0.53
1:C:45:LYS:HG3	1:C:79:ASP:O	2.09	0.53
1:B:688:THR:O	1:B:692:GLN:HB2	2.09	0.53
1:F:561:GLU:N	1:F:561:GLU:OE1	2.42	0.53
1:A:45:LYS:HG3	1:A:79:ASP:O	2.09	0.52
1:A:213:LEU:O	1:A:217:LYS:N	2.33	0.52
1:D:179:ASP:OD1	1:D:180:THR:N	2.41	0.52
1:E:688:THR:O	1:E:692:GLN:HB2	2.08	0.52
1:E:731:ILE:HG22	1:E:736:PHE:HE1	1.71	0.52
1:F:538:ASN:HD22	1:F:569:ALA:HB1	1.73	0.52
1:B:624:ASN:ND2	2:B:901:AGS:S1G	2.76	0.52
1:E:29:ASP:OD1	1:E:30:GLU:N	2.38	0.52
1:A:179:ASP:OD1	1:A:180:THR:N	2.41	0.52
1:D:317:HIS:HE1	1:E:317:HIS:CE1	2.22	0.52
1:C:239:ARG:HB2	1:C:239:ARG:NH1	2.25	0.52
1:D:319:GLU:OE1	1:D:319:GLU:N	2.35	0.52
1:C:130:LEU:HD22	1:C:134:TYR:HD2	1.75	0.52
1:E:602:ASN:O	1:E:606:THR:HG23	2.10	0.52
1:F:602:ASN:O	1:F:606:THR:HG23	2.10	0.52
1:F:130:LEU:HD22	1:F:134:TYR:HD2	1.75	0.52
1:A:130:LEU:HD22	1:A:134:TYR:HD2	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:130:LEU:HD22	1:B:134:TYR:HD2	1.75	0.52
1:B:239:ARG:HB2	1:B:239:ARG:NH1	2.25	0.52
1:B:752:ILE:O	1:B:756:GLU:HG2	2.10	0.52
1:C:329:LEU:HD21	1:C:357:LEU:HD12	1.91	0.52
1:E:45:LYS:HG3	1:E:79:ASP:O	2.09	0.52
1:E:329:LEU:HD21	1:E:357:LEU:HD12	1.91	0.52
1:A:329:LEU:HD21	1:A:357:LEU:HD12	1.91	0.52
1:A:351:ASN:O	1:A:352:SER:OG	2.19	0.52
1:D:752:ILE:O	1:D:756:GLU:HG2	2.10	0.52
1:E:505:LYS:HD3	1:F:729:PRO:HB3	1.92	0.52
1:F:574:LEU:HD23	1:F:619:ILE:HD12	1.92	0.52
1:F:752:ILE:O	1:F:756:GLU:HG2	2.10	0.52
1:A:239:ARG:HB2	1:A:239:ARG:NH1	2.25	0.51
1:D:130:LEU:HD22	1:D:134:TYR:HD2	1.75	0.51
1:D:329:LEU:HD21	1:D:357:LEU:HD12	1.91	0.51
1:E:130:LEU:HD22	1:E:134:TYR:HD2	1.75	0.51
1:B:482:LEU:HD23	1:B:527:LEU:HD22	1.93	0.51
1:B:574:LEU:HD23	1:B:619:ILE:HD12	1.92	0.51
1:C:482:LEU:HD23	1:C:527:LEU:HD22	1.92	0.51
1:C:752:ILE:O	1:C:756:GLU:HG2	2.10	0.51
1:F:435:GLU:OE1	1:F:435:GLU:N	2.42	0.51
1:B:329:LEU:HD21	1:B:357:LEU:HD12	1.91	0.51
1:A:574:LEU:HD23	1:A:619:ILE:HD12	1.92	0.51
1:A:602:ASN:O	1:A:606:THR:HG23	2.10	0.51
1:A:752:ILE:O	1:A:756:GLU:HG2	2.10	0.51
1:B:21:ASN:O	1:B:22:ARG:HG2	2.11	0.51
1:B:602:ASN:O	1:B:606:THR:HG23	2.10	0.51
1:C:114:ILE:O	1:C:182:ILE:HG13	2.11	0.51
1:C:602:ASN:O	1:C:606:THR:HG23	2.10	0.51
1:D:602:ASN:O	1:D:606:THR:HG23	2.10	0.51
1:F:329:LEU:HD21	1:F:357:LEU:HD12	1.91	0.51
1:D:114:ILE:O	1:D:182:ILE:HG13	2.11	0.51
1:D:275:MET:HG2	1:D:309:ILE:HG22	1.93	0.51
1:E:21:ASN:O	1:E:22:ARG:HG2	2.11	0.51
1:A:21:ASN:O	1:A:22:ARG:HG2	2.11	0.51
1:B:354:ASP:HB3	1:B:357:LEU:HD13	1.93	0.51
1:C:574:LEU:HD23	1:C:619:ILE:HD12	1.92	0.51
1:E:752:ILE:O	1:E:756:GLU:HG2	2.10	0.51
1:F:222:LEU:HD21	1:F:229:LEU:HD23	1.93	0.51
1:F:428:ASP:OD1	1:F:429:LEU:N	2.44	0.51
1:A:222:LEU:HD21	1:A:229:LEU:HD23	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:482:LEU:HD23	1:D:527:LEU:HD22	1.92	0.51
1:E:114:ILE:O	1:E:182:ILE:HG13	2.11	0.51
1:F:239:ARG:HB2	1:F:239:ARG:NH1	2.25	0.51
1:A:354:ASP:HB3	1:A:357:LEU:HD13	1.93	0.51
1:A:482:LEU:HD23	1:A:527:LEU:HD22	1.92	0.51
1:B:114:ILE:O	1:B:182:ILE:HG13	2.11	0.51
1:B:428:ASP:OD1	1:B:429:LEU:N	2.44	0.51
1:C:21:ASN:O	1:C:22:ARG:HG2	2.11	0.51
1:D:505:LYS:HD3	1:E:729:PRO:HB3	1.93	0.51
1:E:239:ARG:HB2	1:E:239:ARG:NH1	2.25	0.51
1:F:521:GLY:N	2:F:901:AGS:O2B	2.43	0.51
1:C:275:MET:HG2	1:C:309:ILE:HG22	1.93	0.51
1:C:428:ASP:OD1	1:C:429:LEU:N	2.44	0.51
1:D:428:ASP:OD1	1:D:429:LEU:N	2.44	0.51
1:E:275:MET:HG2	1:E:309:ILE:HG22	1.93	0.51
1:F:114:ILE:O	1:F:182:ILE:HG13	2.11	0.51
1:F:275:MET:HG2	1:F:309:ILE:HG22	1.93	0.51
1:B:761:THR:HB	1:B:764:GLN:CG	2.41	0.50
1:D:21:ASN:O	1:D:22:ARG:HG2	2.11	0.50
1:D:239:ARG:HB2	1:D:239:ARG:NH1	2.25	0.50
1:E:222:LEU:HD21	1:E:229:LEU:HD23	1.93	0.50
1:E:312:LYS:CD	1:E:315:LYS:CB	2.81	0.50
1:A:729:PRO:HB3	1:F:505:LYS:HD3	1.93	0.50
1:C:588:GLY:HA2	1:C:628:ILE:HD11	1.94	0.50
1:D:574:LEU:HD23	1:D:619:ILE:HD12	1.92	0.50
1:B:222:LEU:HD21	1:B:229:LEU:HD23	1.93	0.50
1:E:302:PHE:CE2	1:E:304:ASP:OD1	2.64	0.50
1:E:588:GLY:HA2	1:E:628:ILE:HD11	1.94	0.50
1:A:761:THR:HB	1:A:764:GLN:CG	2.41	0.50
1:B:177:ALA:O	1:B:179:ASP:N	2.41	0.50
1:B:275:MET:HG2	1:B:309:ILE:HG22	1.93	0.50
1:C:222:LEU:HD21	1:C:229:LEU:HD23	1.93	0.50
1:E:428:ASP:OD1	1:E:429:LEU:N	2.44	0.50
1:A:114:ILE:O	1:A:182:ILE:HG13	2.11	0.50
1:A:428:ASP:OD1	1:A:429:LEU:N	2.44	0.50
1:A:588:GLY:HA2	1:A:628:ILE:HD11	1.94	0.50
1:D:222:LEU:HD21	1:D:229:LEU:HD23	1.93	0.50
1:D:525:THR:HB	2:D:901:AGS:O1A	2.12	0.50
1:E:574:LEU:HD23	1:E:619:ILE:HD12	1.92	0.50
1:F:729:PRO:O	1:F:730:GLU:HG3	2.12	0.50
1:A:275:MET:HG2	1:A:309:ILE:HG22	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:71:VAL:O	1:C:72:LEU:HD12	2.12	0.50
1:D:588:GLY:HA2	1:D:628:ILE:HD11	1.94	0.50
1:E:244:TYR:OH	1:E:366:GLU:OE1	2.30	0.50
1:E:354:ASP:HB3	1:E:357:LEU:HD13	1.93	0.50
1:E:482:LEU:HD23	1:E:527:LEU:HD22	1.92	0.50
1:F:588:GLY:HA2	1:F:628:ILE:HD11	1.94	0.50
1:A:505:LYS:HD3	1:B:729:PRO:HB3	1.93	0.50
1:B:312:LYS:CD	1:B:315:LYS:CB	2.81	0.50
1:C:521:GLY:N	2:C:901:AGS:O2B	2.43	0.50
1:C:761:THR:HB	1:C:764:GLN:CG	2.41	0.50
1:D:731:ILE:HG22	1:D:736:PHE:HE1	1.71	0.50
1:A:435:GLU:OE1	1:A:435:GLU:N	2.42	0.50
1:B:588:GLY:HA2	1:B:628:ILE:HD11	1.94	0.50
1:B:729:PRO:O	1:B:730:GLU:HG3	2.12	0.50
1:C:29:ASP:OD1	1:C:30:GLU:N	2.38	0.50
1:C:312:LYS:HD3	1:C:315:LYS:HB2	1.83	0.50
1:C:624:ASN:ND2	2:C:901:AGS:S1G	2.76	0.50
1:C:729:PRO:O	1:C:730:GLU:HG3	2.12	0.50
1:E:71:VAL:O	1:E:72:LEU:HD12	2.12	0.50
1:A:85:ASN:ND2	1:A:87:VAL:HG22	2.27	0.50
1:E:521:GLY:N	2:E:901:AGS:O2B	2.43	0.50
1:A:172:PRO:HG2	1:A:173:TYR:CD1	2.45	0.49
1:A:466:GLU:OE1	1:A:466:GLU:N	2.45	0.49
1:C:354:ASP:HB3	1:C:357:LEU:HD13	1.93	0.49
1:D:354:ASP:HB3	1:D:357:LEU:HD13	1.93	0.49
1:E:466:GLU:N	1:E:466:GLU:OE1	2.45	0.49
1:E:580:ASP:N	1:E:580:ASP:OD1	2.44	0.49
1:F:71:VAL:O	1:F:72:LEU:HD12	2.12	0.49
1:F:85:ASN:ND2	1:F:87:VAL:HG22	2.27	0.49
1:F:466:GLU:OE1	1:F:466:GLU:N	2.45	0.49
1:F:761:THR:HB	1:F:764:GLN:CG	2.41	0.49
1:D:74:ASP:OD2	1:D:76:THR:OG1	2.27	0.49
1:E:525:THR:HB	2:E:901:AGS:O1A	2.12	0.49
1:E:761:THR:HB	1:E:764:GLN:CG	2.41	0.49
1:F:21:ASN:O	1:F:22:ARG:HG2	2.11	0.49
1:F:482:LEU:HD23	1:F:527:LEU:HD22	1.93	0.49
1:D:466:GLU:N	1:D:466:GLU:OE1	2.45	0.49
1:E:729:PRO:O	1:E:730:GLU:HG3	2.12	0.49
1:F:525:THR:HB	2:F:901:AGS:O1A	2.12	0.49
1:A:71:VAL:O	1:A:72:LEU:HD12	2.12	0.49
1:A:525:THR:HB	2:A:901:AGS:O1A	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:729:PRO:O	1:A:730:GLU:HG3	2.12	0.49
1:B:302:PHE:CE2	1:B:304:ASP:OD1	2.64	0.49
1:C:525:THR:HB	2:C:901:AGS:O1A	2.12	0.49
1:D:458:GLN:O	1:D:461:PRO:HD2	2.13	0.49
1:D:479:ILE:HG22	1:D:526:LEU:HD13	1.95	0.49
1:D:521:GLY:N	2:D:901:AGS:O2B	2.43	0.49
1:B:466:GLU:N	1:B:466:GLU:OE1	2.45	0.49
1:B:525:THR:HB	2:B:901:AGS:O1A	2.12	0.49
1:C:458:GLN:O	1:C:461:PRO:HD2	2.13	0.49
1:C:466:GLU:N	1:C:466:GLU:OE1	2.45	0.49
1:D:172:PRO:HG2	1:D:173:TYR:CD1	2.45	0.49
1:D:435:GLU:N	1:D:435:GLU:OE1	2.42	0.49
1:B:85:ASN:ND2	1:B:87:VAL:HG22	2.27	0.49
1:C:172:PRO:HG2	1:C:173:TYR:CD1	2.45	0.49
1:C:302:PHE:CE2	1:C:304:ASP:OD1	2.64	0.49
1:D:312:LYS:HB3	1:D:354:ASP:HA	1.95	0.49
1:E:85:ASN:ND2	1:E:87:VAL:HG22	2.27	0.49
1:E:312:LYS:HB3	1:E:354:ASP:HA	1.95	0.49
1:F:354:ASP:HB3	1:F:357:LEU:HD13	1.93	0.49
1:A:302:PHE:CE2	1:A:304:ASP:OD1	2.64	0.49
1:B:405:GLY:O	1:B:406:HIS:ND1	2.46	0.49
1:C:319:GLU:OE1	1:C:319:GLU:N	2.35	0.49
1:E:479:ILE:HG22	1:E:526:LEU:HD13	1.95	0.49
1:F:373:ASP:O	1:F:377:ARG:N	2.43	0.49
1:B:71:VAL:O	1:B:72:LEU:HD12	2.12	0.49
1:C:405:GLY:O	1:C:406:HIS:ND1	2.46	0.49
1:D:729:PRO:O	1:D:730:GLU:HG3	2.12	0.49
1:E:435:GLU:OE1	1:E:435:GLU:N	2.42	0.49
1:F:319:GLU:O	1:F:323:ARG:N	2.46	0.49
1:B:172:PRO:HG2	1:B:173:TYR:CD1	2.45	0.49
1:C:319:GLU:O	1:C:323:ARG:N	2.46	0.49
1:D:71:VAL:O	1:D:72:LEU:HD12	2.12	0.49
1:D:633:ILE:HG13	1:D:634:LEU:HD12	1.95	0.49
1:E:373:ASP:O	1:E:377:ARG:N	2.43	0.49
1:E:405:GLY:O	1:E:406:HIS:ND1	2.46	0.49
1:A:458:GLN:O	1:A:461:PRO:HD2	2.13	0.48
1:A:633:ILE:HG13	1:A:634:LEU:HD12	1.95	0.48
1:B:458:GLN:O	1:B:461:PRO:HD2	2.13	0.48
1:C:85:ASN:ND2	1:C:87:VAL:HG22	2.27	0.48
1:E:458:GLN:O	1:E:461:PRO:HD2	2.13	0.48
1:F:172:PRO:HG2	1:F:173:TYR:CD1	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:405:GLY:O	1:F:406:HIS:ND1	2.46	0.48
1:A:695:CYS:SG	1:F:506:PHE:HB3	2.53	0.48
1:B:506:PHE:HB3	1:C:695:CYS:SG	2.53	0.48
1:B:633:ILE:HG13	1:B:634:LEU:HD12	1.95	0.48
1:D:761:THR:HB	1:D:764:GLN:CG	2.41	0.48
1:E:633:ILE:HG13	1:E:634:LEU:HD12	1.95	0.48
1:D:85:ASN:ND2	1:D:87:VAL:HG22	2.27	0.48
1:A:312:LYS:CD	1:A:315:LYS:CB	2.81	0.48
1:A:319:GLU:O	1:A:323:ARG:N	2.46	0.48
1:C:479:ILE:HG22	1:C:526:LEU:HD13	1.95	0.48
1:E:559:VAL:O	1:E:562:ILE:HG12	2.14	0.48
1:F:177:ALA:O	1:F:179:ASP:N	2.41	0.48
1:A:559:VAL:O	1:A:562:ILE:HG12	2.14	0.48
1:C:312:LYS:HB3	1:C:354:ASP:HA	1.94	0.48
1:C:435:GLU:OE1	1:C:435:GLU:N	2.42	0.48
1:E:172:PRO:HG2	1:E:173:TYR:CD1	2.45	0.48
1:F:312:LYS:HB3	1:F:354:ASP:HA	1.94	0.48
1:A:405:GLY:O	1:A:406:HIS:ND1	2.46	0.48
1:A:479:ILE:HG22	1:A:526:LEU:HD13	1.95	0.48
1:B:312:LYS:HB3	1:B:354:ASP:HA	1.94	0.48
1:D:32:ILE:HG23	1:D:83:ARG:NH1	2.29	0.48
1:D:405:GLY:O	1:D:406:HIS:ND1	2.46	0.48
1:F:458:GLN:O	1:F:461:PRO:HD2	2.13	0.48
1:A:543:LYS:HG2	1:A:577:ASP:HB3	1.95	0.48
1:C:318:GLY:HA2	1:D:317:HIS:HD2	1.76	0.48
1:A:312:LYS:HB3	1:A:354:ASP:HA	1.95	0.48
1:C:505:LYS:HD3	1:D:729:PRO:HB3	1.96	0.48
1:D:319:GLU:O	1:D:323:ARG:N	2.46	0.48
1:E:32:ILE:HG23	1:E:83:ARG:NH1	2.29	0.48
1:C:374:ALA:HA	1:C:377:ARG:HE	1.79	0.48
1:C:633:ILE:HG13	1:C:634:LEU:HD12	1.95	0.48
1:B:479:ILE:HG22	1:B:526:LEU:HD13	1.95	0.48
1:C:543:LYS:HG2	1:C:577:ASP:HB3	1.95	0.48
1:C:559:VAL:O	1:C:562:ILE:HG12	2.14	0.48
1:F:559:VAL:O	1:F:562:ILE:HG12	2.14	0.48
1:A:177:ALA:O	1:A:179:ASP:N	2.41	0.47
1:A:506:PHE:HB3	1:B:695:CYS:SG	2.54	0.47
1:B:32:ILE:HG23	1:B:83:ARG:NH1	2.29	0.47
1:B:103:GLN:O	1:B:105:CYS:N	2.47	0.47
1:B:374:ALA:HA	1:B:377:ARG:HE	1.79	0.47
1:B:559:VAL:O	1:B:562:ILE:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:302:PHE:CE2	1:F:304:ASP:OD1	2.64	0.47
1:F:543:LYS:HG2	1:F:577:ASP:HB3	1.95	0.47
1:A:317:HIS:HD2	1:F:318:GLY:HA2	1.79	0.47
1:B:57:VAL:HG11	1:B:102:ILE:HG12	1.97	0.47
1:C:103:GLN:O	1:C:105:CYS:N	2.47	0.47
1:C:226:HIS:HD2	1:D:433:GLU:OE1	1.97	0.47
1:F:312:LYS:CD	1:F:315:LYS:CB	2.81	0.47
1:F:479:ILE:HG22	1:F:526:LEU:HD13	1.95	0.47
1:A:374:ALA:HA	1:A:377:ARG:HE	1.79	0.47
1:D:177:ALA:O	1:D:179:ASP:N	2.41	0.47
1:D:374:ALA:HA	1:D:377:ARG:HE	1.79	0.47
1:F:633:ILE:HG13	1:F:634:LEU:HD12	1.95	0.47
1:A:32:ILE:HG23	1:A:83:ARG:NH1	2.29	0.47
1:A:103:GLN:O	1:A:105:CYS:N	2.48	0.47
1:A:262:THR:HG23	1:A:264:ALA:H	1.79	0.47
1:B:435:GLU:OE1	1:B:435:GLU:N	2.42	0.47
1:D:103:GLN:O	1:D:105:CYS:N	2.47	0.47
1:E:350:PRO:HB2	1:E:358:ARG:NH2	2.29	0.47
1:F:682:PHE:HE1	1:F:745:ARG:HG3	1.80	0.47
1:B:543:LYS:HG2	1:B:577:ASP:HB3	1.95	0.47
1:B:631:PRO:HB3	1:B:766:ARG:HB3	1.96	0.47
1:C:373:ASP:O	1:C:377:ARG:N	2.43	0.47
1:D:262:THR:HG23	1:D:264:ALA:H	1.79	0.47
1:D:312:LYS:HD3	1:D:315:LYS:CE	2.45	0.47
1:D:559:VAL:O	1:D:562:ILE:HG12	2.14	0.47
1:E:91:ASN:HD21	1:E:151:ILE:H	1.63	0.47
1:F:374:ALA:HA	1:F:377:ARG:HE	1.79	0.47
1:C:32:ILE:HG23	1:C:83:ARG:NH1	2.29	0.47
1:C:350:PRO:HB2	1:C:358:ARG:NH2	2.29	0.47
1:D:506:PHE:HB3	1:E:695:CYS:SG	2.55	0.47
1:E:318:GLY:HA2	1:F:317:HIS:HD2	1.80	0.47
1:F:32:ILE:HG23	1:F:83:ARG:NH1	2.29	0.47
1:F:45:LYS:HA	1:F:48:GLU:OE1	2.14	0.47
1:F:103:GLN:O	1:F:105:CYS:N	2.48	0.47
1:F:350:PRO:HB2	1:F:358:ARG:NH2	2.29	0.47
1:A:313:ARG:H	1:A:315:LYS:H	1.63	0.47
1:A:631:PRO:HB3	1:A:766:ARG:HB3	1.96	0.47
1:B:335:LEU:HG	1:B:338:ARG:HG2	1.97	0.47
1:B:350:PRO:HB2	1:B:358:ARG:NH2	2.29	0.47
1:C:91:ASN:HD21	1:C:151:ILE:H	1.63	0.47
1:C:114:ILE:HA	1:C:168:THR:CG2	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:506:PHE:HB3	1:D:695:CYS:SG	2.54	0.47
1:D:91:ASN:HD21	1:D:151:ILE:H	1.63	0.47
1:D:226:HIS:HD2	1:E:433:GLU:OE1	1.98	0.47
1:D:543:LYS:HG2	1:D:577:ASP:HB3	1.95	0.47
1:D:682:PHE:HE1	1:D:745:ARG:HG3	1.80	0.47
1:E:57:VAL:HG11	1:E:102:ILE:HG12	1.97	0.47
1:E:262:THR:HG23	1:E:264:ALA:H	1.79	0.47
1:E:312:LYS:HD3	1:E:315:LYS:CE	2.45	0.47
1:E:374:ALA:HA	1:E:377:ARG:HE	1.79	0.47
1:E:543:LYS:HG2	1:E:577:ASP:HB3	1.95	0.47
1:F:335:LEU:HG	1:F:338:ARG:HG2	1.97	0.47
1:A:45:LYS:HA	1:A:48:GLU:OE1	2.14	0.47
1:A:335:LEU:HG	1:A:338:ARG:HG2	1.97	0.47
1:B:91:ASN:HD21	1:B:151:ILE:H	1.63	0.47
1:B:319:GLU:O	1:B:323:ARG:N	2.46	0.47
1:C:312:LYS:HD3	1:C:315:LYS:CE	2.45	0.47
1:E:46:MET:O	1:E:50:GLN:N	2.45	0.47
1:F:91:ASN:HD21	1:F:151:ILE:H	1.63	0.47
1:F:552:PHE:CG	1:F:553:GLY:N	2.83	0.47
1:B:45:LYS:HA	1:B:48:GLU:OE1	2.14	0.47
1:B:313:ARG:H	1:B:315:LYS:H	1.63	0.47
1:D:302:PHE:CE2	1:D:304:ASP:OD1	2.64	0.47
1:D:552:PHE:CG	1:D:553:GLY:N	2.83	0.47
1:E:45:LYS:HA	1:E:48:GLU:OE1	2.14	0.47
1:E:229:LEU:O	1:E:233:ILE:HG12	2.15	0.47
1:E:319:GLU:O	1:E:323:ARG:N	2.46	0.47
1:E:335:LEU:HG	1:E:338:ARG:HG2	1.97	0.47
1:F:246:PRO:O	1:F:249:THR:OG1	2.22	0.47
1:F:631:PRO:HB3	1:F:766:ARG:HB3	1.96	0.47
1:A:91:ASN:HD21	1:A:151:ILE:H	1.63	0.47
1:B:364:ASP:OD1	1:B:364:ASP:N	2.48	0.47
1:C:45:LYS:HA	1:C:48:GLU:OE1	2.15	0.47
1:C:57:VAL:HG11	1:C:102:ILE:HG12	1.97	0.47
1:C:313:ARG:H	1:C:315:LYS:H	1.63	0.47
1:C:335:LEU:HG	1:C:338:ARG:HG2	1.97	0.47
1:D:25:ARG:HG3	1:D:99:VAL:CG2	2.45	0.47
1:D:57:VAL:HG11	1:D:102:ILE:HG12	1.97	0.47
1:D:135:LEU:O	1:D:138:TYR:HB3	2.16	0.47
1:D:229:LEU:O	1:D:233:ILE:HG12	2.15	0.47
1:D:350:PRO:HB2	1:D:358:ARG:NH2	2.29	0.47
1:F:313:ARG:H	1:F:315:LYS:H	1.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:57:VAL:HG11	1:A:102:ILE:HG12	1.97	0.46
1:A:229:LEU:O	1:A:233:ILE:HG12	2.15	0.46
1:A:552:PHE:CG	1:A:553:GLY:N	2.83	0.46
1:B:36:ASN:ND2	1:B:138:TYR:OH	2.49	0.46
1:B:262:THR:HG23	1:B:264:ALA:H	1.79	0.46
1:C:262:THR:HG23	1:C:264:ALA:H	1.79	0.46
1:D:335:LEU:HG	1:D:338:ARG:HG2	1.97	0.46
1:D:373:ASP:O	1:D:377:ARG:N	2.43	0.46
1:D:495:TYR:CE1	1:E:703:ILE:HG21	2.50	0.46
1:E:631:PRO:HB3	1:E:766:ARG:HB3	1.96	0.46
1:E:632:ALA:O	1:E:638:ARG:NH1	2.48	0.46
1:F:632:ALA:O	1:F:638:ARG:NH1	2.48	0.46
1:A:318:GLY:HA2	1:B:317:HIS:HD2	1.79	0.46
1:A:580:ASP:OD1	1:A:580:ASP:N	2.45	0.46
1:B:143:TYR:CB	1:B:176:VAL:O	2.64	0.46
1:C:25:ARG:HG3	1:C:99:VAL:CG2	2.46	0.46
1:C:36:ASN:ND2	1:C:138:TYR:OH	2.49	0.46
1:C:229:LEU:O	1:C:233:ILE:HG12	2.15	0.46
1:E:25:ARG:HG3	1:E:99:VAL:CG2	2.45	0.46
1:E:506:PHE:HB3	1:F:695:CYS:SG	2.55	0.46
1:F:262:THR:HG23	1:F:264:ALA:H	1.79	0.46
1:F:312:LYS:HD3	1:F:315:LYS:CE	2.45	0.46
1:A:36:ASN:ND2	1:A:138:TYR:OH	2.49	0.46
1:A:114:ILE:HA	1:A:168:THR:CG2	2.45	0.46
1:A:350:PRO:HB2	1:A:358:ARG:NH2	2.29	0.46
1:A:632:ALA:O	1:A:638:ARG:NH1	2.48	0.46
1:C:143:TYR:CB	1:C:176:VAL:O	2.63	0.46
1:D:45:LYS:HA	1:D:48:GLU:OE1	2.14	0.46
1:D:244:TYR:OH	1:D:366:GLU:OE1	2.30	0.46
1:D:631:PRO:HB3	1:D:766:ARG:HB3	1.96	0.46
1:E:103:GLN:O	1:E:105:CYS:N	2.48	0.46
1:B:35:ASP:N	1:B:35:ASP:OD1	2.48	0.46
1:B:41:LEU:HD11	1:B:82:ILE:HD12	1.98	0.46
1:B:244:TYR:OH	1:B:366:GLU:OE1	2.30	0.46
1:B:552:PHE:CG	1:B:553:GLY:N	2.83	0.46
1:C:682:PHE:HE1	1:C:745:ARG:HG3	1.80	0.46
1:E:552:PHE:CG	1:E:553:GLY:N	2.83	0.46
1:B:312:LYS:HD3	1:B:315:LYS:CE	2.45	0.46
1:B:632:ALA:O	1:B:638:ARG:NH1	2.48	0.46
1:C:552:PHE:CG	1:C:553:GLY:N	2.83	0.46
1:D:55:ASP:O	1:D:70:ILE:HB	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:135:LEU:O	1:E:138:TYR:HB3	2.16	0.46
1:E:495:TYR:CE1	1:F:703:ILE:HG21	2.51	0.46
1:F:229:LEU:O	1:F:233:ILE:HG12	2.15	0.46
1:F:580:ASP:OD1	1:F:580:ASP:N	2.45	0.46
1:A:35:ASP:OD1	1:A:35:ASP:N	2.48	0.46
1:A:244:TYR:OH	1:A:366:GLU:OE1	2.30	0.46
1:A:682:PHE:HE1	1:A:745:ARG:HG3	1.79	0.46
1:C:41:LEU:HD11	1:C:82:ILE:HD12	1.98	0.46
1:C:55:ASP:O	1:C:70:ILE:HB	2.16	0.46
1:C:135:LEU:O	1:C:138:TYR:HB3	2.16	0.46
1:D:36:ASN:ND2	1:D:138:TYR:OH	2.49	0.46
1:A:25:ARG:HG3	1:A:99:VAL:CG2	2.45	0.46
1:A:312:LYS:HD3	1:A:315:LYS:CE	2.45	0.46
1:C:632:ALA:O	1:C:638:ARG:NH1	2.48	0.46
1:C:760:GLN:NE2	1:D:744:ARG:HH12	2.13	0.46
1:D:635:ARG:HG3	1:D:766:ARG:NH2	2.30	0.46
1:E:55:ASP:O	1:E:70:ILE:HB	2.16	0.46
1:E:682:PHE:HE1	1:E:745:ARG:HG3	1.80	0.46
1:A:143:TYR:CB	1:A:176:VAL:O	2.63	0.46
1:A:433:GLU:OE1	1:F:226:HIS:HD2	1.99	0.46
2:A:901:AGS:S1G	1:F:766:ARG:NH2	2.89	0.46
1:D:246:PRO:O	1:D:249:THR:OG1	2.22	0.46
1:D:632:ALA:O	1:D:638:ARG:NH1	2.48	0.46
1:E:147:ARG:HG3	1:E:172:PRO:O	2.16	0.46
1:E:177:ALA:O	1:E:179:ASP:N	2.41	0.46
1:F:55:ASP:O	1:F:70:ILE:HB	2.16	0.46
1:F:177:ALA:C	1:F:179:ASP:H	2.19	0.46
1:A:135:LEU:O	1:A:138:TYR:HB3	2.16	0.46
1:A:177:ALA:C	1:A:179:ASP:H	2.19	0.46
1:A:226:HIS:HD2	1:B:433:GLU:OE1	1.98	0.46
1:A:246:PRO:O	1:A:249:THR:OG1	2.22	0.46
1:B:229:LEU:O	1:B:233:ILE:HG12	2.15	0.46
1:B:682:PHE:HE1	1:B:745:ARG:HG3	1.79	0.46
1:D:313:ARG:H	1:D:315:LYS:H	1.63	0.46
1:F:57:VAL:HG11	1:F:102:ILE:HG12	1.97	0.46
1:D:143:TYR:CB	1:D:176:VAL:O	2.63	0.45
1:E:226:HIS:HD2	1:F:433:GLU:OE1	1.99	0.45
1:F:114:ILE:HA	1:F:168:THR:CG2	2.45	0.45
1:F:135:LEU:O	1:F:138:TYR:HB3	2.16	0.45
1:F:731:ILE:HG22	1:F:736:PHE:HE1	1.71	0.45
1:A:373:ASP:O	1:A:377:ARG:N	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:59:LEU:HG	1:C:102:ILE:HA	1.99	0.45
1:C:766:ARG:NH2	2:D:901:AGS:S1G	2.90	0.45
1:D:147:ARG:HG3	1:D:172:PRO:O	2.16	0.45
1:D:177:ALA:C	1:D:179:ASP:H	2.19	0.45
1:D:635:ARG:HE	1:D:638:ARG:NH1	2.15	0.45
1:E:244:TYR:CE1	1:E:350:PRO:HB3	2.52	0.45
1:E:313:ARG:H	1:E:315:LYS:H	1.63	0.45
1:F:41:LEU:HD11	1:F:82:ILE:HD12	1.98	0.45
1:B:373:ASP:O	1:B:377:ARG:N	2.43	0.45
1:C:246:PRO:O	1:C:249:THR:OG1	2.22	0.45
1:C:631:PRO:HB3	1:C:766:ARG:HB3	1.96	0.45
1:E:143:TYR:CB	1:E:176:VAL:O	2.63	0.45
1:F:36:ASN:ND2	1:F:138:TYR:OH	2.49	0.45
1:B:177:ALA:C	1:B:179:ASP:H	2.19	0.45
1:C:635:ARG:HG3	1:C:766:ARG:NH2	2.31	0.45
1:C:657:LEU:O	1:C:661:LEU:HG	2.17	0.45
1:E:36:ASN:ND2	1:E:138:TYR:OH	2.49	0.45
1:E:41:LEU:HD11	1:E:82:ILE:HD12	1.98	0.45
1:F:598:ASP:OD1	1:F:599:ARG:N	2.49	0.45
1:A:350:PRO:HB2	1:A:358:ARG:HH22	1.82	0.45
1:B:114:ILE:HA	1:B:168:THR:CG2	2.45	0.45
1:B:135:LEU:O	1:B:138:TYR:HB3	2.16	0.45
1:C:350:PRO:HB2	1:C:358:ARG:HH22	1.82	0.45
1:D:116:VAL:HG22	1:D:165:VAL:CG1	2.46	0.45
1:E:635:ARG:HE	1:E:638:ARG:NH1	2.15	0.45
1:F:25:ARG:HG3	1:F:99:VAL:CG2	2.46	0.45
1:F:35:ASP:OD1	1:F:35:ASP:N	2.48	0.45
1:F:147:ARG:HG3	1:F:172:PRO:O	2.16	0.45
1:F:350:PRO:HB2	1:F:358:ARG:HH22	1.82	0.45
1:F:456:LEU:HD23	1:F:456:LEU:O	2.17	0.45
1:B:55:ASP:O	1:B:70:ILE:HB	2.16	0.45
1:D:318:GLY:HA2	1:E:317:HIS:HD2	1.81	0.45
1:E:114:ILE:HA	1:E:168:THR:CG2	2.45	0.45
1:E:350:PRO:HB2	1:E:358:ARG:HH22	1.82	0.45
1:E:766:ARG:NH2	2:F:901:AGS:S1G	2.90	0.45
1:A:41:LEU:HD11	1:A:82:ILE:HD12	1.98	0.45
1:A:55:ASP:O	1:A:70:ILE:HB	2.16	0.45
1:B:25:ARG:HG3	1:B:99:VAL:CG2	2.46	0.45
1:B:26:LEU:N	1:B:100:ILE:O	2.38	0.45
1:B:495:TYR:CE1	1:C:703:ILE:HG21	2.52	0.45
1:C:116:VAL:HG22	1:C:165:VAL:CG1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:456:LEU:O	1:C:456:LEU:HD23	2.17	0.45
1:C:495:TYR:CE1	1:D:703:ILE:HG21	2.52	0.45
1:D:41:LEU:HD11	1:D:82:ILE:HD12	1.98	0.45
1:D:657:LEU:O	1:D:661:LEU:HG	2.17	0.45
1:D:732:ARG:O	1:D:735:HIS:HB2	2.17	0.45
1:E:177:ALA:C	1:E:179:ASP:H	2.19	0.45
1:F:244:TYR:CE1	1:F:350:PRO:HB3	2.52	0.45
1:F:732:ARG:O	1:F:735:HIS:HB2	2.17	0.45
1:A:147:ARG:HG3	1:A:172:PRO:O	2.16	0.45
1:A:233:ILE:HG22	1:A:235:VAL:H	1.82	0.45
1:A:732:ARG:O	1:A:735:HIS:HB2	2.17	0.45
1:B:318:GLY:HA2	1:C:317:HIS:HD2	1.81	0.45
1:B:456:LEU:HD23	1:B:456:LEU:O	2.17	0.45
1:C:244:TYR:CE1	1:C:350:PRO:HB3	2.52	0.45
1:C:732:ARG:O	1:C:735:HIS:HB2	2.17	0.45
1:D:35:ASP:N	1:D:35:ASP:OD1	2.48	0.45
1:D:350:PRO:HB2	1:D:358:ARG:HH22	1.82	0.45
1:E:679:THR:HG23	1:E:682:PHE:CG	2.52	0.45
1:F:143:TYR:CB	1:F:176:VAL:O	2.64	0.45
1:F:657:LEU:O	1:F:661:LEU:HG	2.17	0.45
1:A:635:ARG:HG3	1:A:766:ARG:NH2	2.31	0.45
1:B:635:ARG:HE	1:B:638:ARG:NH1	2.15	0.45
1:B:732:ARG:O	1:B:735:HIS:HB2	2.17	0.45
1:C:635:ARG:HE	1:C:638:ARG:NH1	2.15	0.45
1:D:456:LEU:HD23	1:D:456:LEU:O	2.17	0.45
1:F:59:LEU:HG	1:F:102:ILE:HA	1.99	0.45
1:A:521:GLY:N	2:A:901:AGS:O2B	2.43	0.45
1:B:59:LEU:HG	1:B:102:ILE:HA	1.99	0.45
1:B:233:ILE:HG22	1:B:235:VAL:H	1.82	0.45
1:B:350:PRO:HB2	1:B:358:ARG:HH22	1.82	0.45
1:B:635:ARG:HG3	1:B:766:ARG:NH2	2.30	0.45
1:C:147:ARG:HG3	1:C:172:PRO:O	2.16	0.45
1:C:233:ILE:HG22	1:C:235:VAL:H	1.82	0.45
1:C:341:VAL:HG12	1:C:342:ILE:N	2.32	0.45
1:D:244:TYR:CE1	1:D:350:PRO:HB3	2.52	0.45
1:E:732:ARG:O	1:E:735:HIS:HB2	2.17	0.45
1:F:58:LEU:HD11	1:F:172:PRO:HB2	1.99	0.45
1:F:233:ILE:HG22	1:F:235:VAL:H	1.82	0.45
1:A:341:VAL:HG12	1:A:342:ILE:N	2.32	0.44
1:A:495:TYR:CE1	1:B:703:ILE:HG21	2.51	0.44
1:B:147:ARG:HG3	1:B:172:PRO:O	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:333:ASP:HB2	1:B:362:ARG:HE	1.82	0.44
1:B:341:VAL:HG12	1:B:342:ILE:N	2.32	0.44
1:B:456:LEU:O	1:B:461:PRO:HG2	2.18	0.44
1:D:59:LEU:HG	1:D:102:ILE:HA	1.99	0.44
1:E:333:ASP:HB2	1:E:362:ARG:HE	1.82	0.44
1:E:421:GLN:HA	1:E:424:ARG:HH21	1.82	0.44
1:A:244:TYR:CE1	1:A:350:PRO:HB3	2.52	0.44
1:A:456:LEU:O	1:A:456:LEU:HD23	2.17	0.44
1:B:244:TYR:CE1	1:B:350:PRO:HB3	2.52	0.44
1:C:421:GLN:HA	1:C:424:ARG:HH21	1.82	0.44
1:D:333:ASP:HB2	1:D:362:ARG:HE	1.82	0.44
1:D:421:GLN:HA	1:D:424:ARG:HH21	1.83	0.44
1:D:766:ARG:NH2	2:E:901:AGS:S1G	2.90	0.44
1:E:456:LEU:O	1:E:456:LEU:HD23	2.17	0.44
1:F:319:GLU:O	1:F:322:ARG:N	2.51	0.44
1:F:341:VAL:HG12	1:F:342:ILE:N	2.32	0.44
1:F:456:LEU:O	1:F:461:PRO:HG2	2.18	0.44
1:A:636:PRO:CD	1:A:766:ARG:HH12	2.31	0.44
1:A:766:ARG:NH2	2:B:901:AGS:S1G	2.90	0.44
1:B:489:LEU:HB3	1:B:531:ILE:HG21	1.99	0.44
1:B:580:ASP:OD1	1:B:580:ASP:N	2.45	0.44
1:D:365:ARG:NH2	1:E:417:GLU:OE2	2.51	0.44
1:E:59:LEU:HG	1:E:102:ILE:HA	1.99	0.44
1:E:290:PHE:O	1:E:294:GLU:N	2.49	0.44
1:E:341:VAL:HG12	1:E:342:ILE:N	2.32	0.44
1:A:635:ARG:HE	1:A:638:ARG:NH1	2.15	0.44
1:A:744:ARG:HH12	1:F:760:GLN:NE2	2.15	0.44
1:B:116:VAL:HG22	1:B:165:VAL:CG1	2.46	0.44
1:B:319:GLU:O	1:B:322:ARG:N	2.51	0.44
1:B:421:GLN:HA	1:B:424:ARG:HH21	1.82	0.44
1:B:521:GLY:N	2:B:901:AGS:O2B	2.43	0.44
1:B:657:LEU:O	1:B:661:LEU:HG	2.17	0.44
1:C:653:ARG:NH1	1:C:680:ASN:O	2.51	0.44
1:E:635:ARG:HG3	1:E:766:ARG:NH2	2.31	0.44
1:A:653:ARG:NH1	1:A:680:ASN:O	2.51	0.44
1:D:341:VAL:HG12	1:D:342:ILE:N	2.32	0.44
1:F:635:ARG:HE	1:F:638:ARG:NH1	2.15	0.44
1:F:636:PRO:HA	1:F:640:ASP:OD1	2.18	0.44
1:A:319:GLU:O	1:A:322:ARG:N	2.51	0.44
1:B:317:HIS:CE1	1:C:317:HIS:NE2	2.86	0.44
1:B:636:PRO:CD	1:B:766:ARG:HH12	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:653:ARG:NH1	1:B:680:ASN:O	2.51	0.44
1:C:244:TYR:OH	1:C:366:GLU:OE1	2.30	0.44
1:D:456:LEU:O	1:D:461:PRO:HG2	2.17	0.44
1:D:636:PRO:CD	1:D:766:ARG:HH12	2.31	0.44
1:D:679:THR:HG23	1:D:682:PHE:CG	2.52	0.44
1:D:760:GLN:NE2	1:E:744:ARG:HH12	2.14	0.44
1:E:319:GLU:O	1:E:322:ARG:N	2.51	0.44
1:E:456:LEU:O	1:E:461:PRO:HG2	2.18	0.44
1:F:421:GLN:HA	1:F:424:ARG:HH21	1.83	0.44
1:A:116:VAL:HG22	1:A:165:VAL:CG1	2.46	0.44
1:A:459:SER:O	1:A:462:SER:OG	2.29	0.44
1:B:58:LEU:HD11	1:B:172:PRO:HB2	1.99	0.44
1:B:87:VAL:HG12	1:B:198:LEU:HD13	1.99	0.44
1:C:35:ASP:OD1	1:C:35:ASP:N	2.48	0.44
1:C:489:LEU:HB3	1:C:531:ILE:HG21	1.99	0.44
1:C:636:PRO:CD	1:C:766:ARG:HH12	2.31	0.44
1:E:636:PRO:CD	1:E:766:ARG:HH12	2.31	0.44
1:E:760:GLN:NE2	1:F:744:ARG:HH12	2.15	0.44
1:A:333:ASP:HB2	1:A:362:ARG:HE	1.82	0.44
1:A:421:GLN:HA	1:A:424:ARG:HH21	1.83	0.44
1:A:456:LEU:O	1:A:461:PRO:HG2	2.18	0.44
1:A:703:ILE:HG21	1:F:495:TYR:CE1	2.52	0.44
1:B:679:THR:HG23	1:B:682:PHE:CG	2.52	0.44
1:B:766:ARG:NH2	2:C:901:AGS:S1G	2.91	0.44
1:C:177:ALA:C	1:C:179:ASP:H	2.19	0.44
1:C:364:ASP:OD1	1:C:364:ASP:N	2.48	0.44
1:C:456:LEU:O	1:C:461:PRO:HG2	2.18	0.44
1:D:290:PHE:O	1:D:294:GLU:N	2.49	0.44
1:E:571:PRO:HG3	1:E:616:ASN:ND2	2.33	0.44
1:E:657:LEU:O	1:E:661:LEU:HG	2.17	0.44
1:F:46:MET:O	1:F:50:GLN:N	2.45	0.44
1:F:244:TYR:OH	1:F:366:GLU:OE1	2.30	0.44
1:B:365:ARG:NH2	1:C:417:GLU:OE2	2.51	0.44
1:C:317:HIS:CE1	1:D:317:HIS:NE2	2.85	0.44
1:C:333:ASP:HB2	1:C:362:ARG:HE	1.82	0.44
1:D:580:ASP:OD1	1:D:580:ASP:N	2.45	0.44
1:E:26:LEU:N	1:E:100:ILE:O	2.38	0.44
1:E:598:ASP:OD1	1:E:599:ARG:N	2.49	0.44
1:F:87:VAL:HG12	1:F:198:LEU:HD13	1.99	0.44
1:A:59:LEU:HG	1:A:102:ILE:HA	1.99	0.43
1:C:636:PRO:HA	1:C:640:ASP:OD1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:679:THR:HG23	1:C:682:PHE:CG	2.52	0.43
1:D:87:VAL:HG12	1:D:198:LEU:HD13	1.99	0.43
1:D:114:ILE:HA	1:D:168:THR:CG2	2.45	0.43
1:D:233:ILE:HG22	1:D:235:VAL:H	1.82	0.43
1:D:653:ARG:NH1	1:D:680:ASN:O	2.51	0.43
1:F:333:ASP:HB2	1:F:362:ARG:HE	1.82	0.43
1:F:636:PRO:CD	1:F:766:ARG:HH12	2.31	0.43
1:F:679:THR:HG23	1:F:682:PHE:CG	2.52	0.43
1:A:489:LEU:HB3	1:A:531:ILE:HG21	1.99	0.43
1:A:636:PRO:HA	1:A:640:ASP:OD1	2.18	0.43
1:A:679:THR:HG23	1:A:682:PHE:CG	2.52	0.43
1:B:598:ASP:OD1	1:B:599:ARG:N	2.49	0.43
1:D:26:LEU:HD23	1:D:82:ILE:HD11	2.01	0.43
1:D:319:GLU:O	1:D:322:ARG:N	2.51	0.43
1:E:58:LEU:HD11	1:E:172:PRO:HB2	1.99	0.43
1:E:365:ARG:NH2	1:F:417:GLU:OE2	2.51	0.43
1:F:571:PRO:HG3	1:F:616:ASN:ND2	2.33	0.43
1:A:365:ARG:NH2	1:B:417:GLU:OE2	2.51	0.43
1:B:27:ILE:O	1:B:82:ILE:HB	2.19	0.43
1:D:27:ILE:O	1:D:82:ILE:HB	2.19	0.43
1:D:317:HIS:CE1	1:E:317:HIS:NE2	2.87	0.43
1:E:233:ILE:HG22	1:E:235:VAL:H	1.82	0.43
1:E:636:PRO:HA	1:E:640:ASP:OD1	2.18	0.43
1:E:653:ARG:NH1	1:E:680:ASN:O	2.51	0.43
1:A:87:VAL:HG12	1:A:198:LEU:HD13	1.99	0.43
1:A:657:LEU:O	1:A:661:LEU:HG	2.17	0.43
1:F:116:VAL:HG22	1:F:165:VAL:CG1	2.46	0.43
1:A:58:LEU:HD11	1:A:172:PRO:HB2	1.99	0.43
1:C:26:LEU:HD23	1:C:82:ILE:HD11	2.00	0.43
1:E:26:LEU:HD23	1:E:82:ILE:HD11	2.00	0.43
1:E:27:ILE:O	1:E:82:ILE:HB	2.19	0.43
1:E:116:VAL:HG22	1:E:165:VAL:CG1	2.46	0.43
1:A:317:HIS:CE1	1:B:317:HIS:NE2	2.86	0.43
1:B:760:GLN:NE2	1:C:744:ARG:HH12	2.17	0.43
1:C:46:MET:O	1:C:50:GLN:N	2.45	0.43
1:C:319:GLU:O	1:C:322:ARG:N	2.51	0.43
1:D:58:LEU:HD11	1:D:172:PRO:HB2	1.99	0.43
1:E:87:VAL:HG12	1:E:198:LEU:HD13	1.99	0.43
1:E:246:PRO:O	1:E:249:THR:OG1	2.22	0.43
1:F:489:LEU:HB3	1:F:531:ILE:HG21	1.99	0.43
1:F:653:ARG:NH1	1:F:680:ASN:O	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:27:ILE:O	1:A:82:ILE:HB	2.19	0.43
1:A:364:ASP:OD1	1:A:364:ASP:N	2.48	0.43
1:A:417:GLU:OE2	1:F:365:ARG:NH2	2.52	0.43
1:B:148:LYS:HE3	1:B:171:SER:OG	2.19	0.43
1:B:440:GLU:HG2	1:B:441:VAL:N	2.34	0.43
1:C:87:VAL:HG12	1:C:198:LEU:HD13	1.99	0.43
1:D:134:TYR:O	1:D:137:PRO:HD2	2.19	0.43
1:F:377:ARG:NH1	1:F:404:HIS:O	2.52	0.43
1:F:440:GLU:HG2	1:F:441:VAL:N	2.34	0.43
1:A:43:GLN:N	1:A:44:PRO:HD2	2.34	0.43
1:B:505:LYS:HD2	1:B:506:PHE:CE1	2.54	0.43
1:C:58:LEU:HD11	1:C:172:PRO:HB2	2.00	0.43
1:C:233:ILE:HG22	1:C:234:GLY:N	2.34	0.43
1:C:312:LYS:CD	1:C:315:LYS:CB	2.81	0.43
1:C:377:ARG:NH1	1:C:404:HIS:O	2.52	0.43
1:C:571:PRO:HG3	1:C:616:ASN:ND2	2.33	0.43
1:D:43:GLN:N	1:D:44:PRO:HD2	2.34	0.43
1:D:489:LEU:HB3	1:D:531:ILE:HG21	1.99	0.43
1:D:682:PHE:CE2	1:D:690:ILE:HD11	2.54	0.43
1:E:134:TYR:O	1:E:137:PRO:HD2	2.19	0.43
1:E:148:LYS:HE3	1:E:171:SER:OG	2.19	0.43
1:E:728:VAL:N	1:E:729:PRO:CD	2.82	0.43
1:A:134:TYR:O	1:A:137:PRO:HD2	2.19	0.43
1:A:317:HIS:NE2	1:F:317:HIS:CE1	2.85	0.43
1:A:682:PHE:CE2	1:A:690:ILE:HD11	2.54	0.43
1:A:748:SER:N	1:F:764:GLN:OE1	2.52	0.43
1:B:134:TYR:O	1:B:137:PRO:HD2	2.19	0.43
1:B:226:HIS:HD2	1:C:433:GLU:OE1	2.00	0.43
1:B:230:PHE:CE2	1:B:237:PRO:HB3	2.54	0.43
1:B:233:ILE:HG22	1:B:234:GLY:N	2.34	0.43
1:B:571:PRO:HG3	1:B:616:ASN:ND2	2.33	0.43
1:C:134:TYR:O	1:C:137:PRO:HD2	2.19	0.43
1:D:505:LYS:HD2	1:D:506:PHE:CE1	2.54	0.43
1:D:571:PRO:HG3	1:D:616:ASN:ND2	2.33	0.43
1:E:35:ASP:N	1:E:35:ASP:OD1	2.48	0.43
1:E:440:GLU:HG2	1:E:441:VAL:N	2.34	0.43
1:F:134:TYR:O	1:F:137:PRO:HD2	2.19	0.43
1:A:230:PHE:CE2	1:A:237:PRO:HB3	2.54	0.43
1:A:571:PRO:HG3	1:A:616:ASN:ND2	2.33	0.43
1:B:682:PHE:CE2	1:B:690:ILE:HD11	2.54	0.43
1:B:764:GLN:OE1	1:C:748:SER:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:27:ILE:O	1:C:82:ILE:HB	2.19	0.43
1:C:395:ASP:HB3	1:C:398:GLN:HG2	2.01	0.43
1:C:580:ASP:N	1:C:580:ASP:OD1	2.45	0.43
1:D:148:LYS:HE3	1:D:171:SER:OG	2.19	0.43
1:E:224:LEU:HD13	1:E:262:THR:HG21	2.01	0.43
1:E:489:LEU:HB3	1:E:531:ILE:HG21	1.99	0.43
1:F:224:LEU:HD13	1:F:262:THR:HG21	2.01	0.43
1:F:474:VAL:O	1:F:533:ASN:ND2	2.52	0.43
1:F:682:PHE:CE2	1:F:690:ILE:HD11	2.54	0.43
1:A:311:PRO:O	1:A:315:LYS:HA	2.19	0.42
1:B:395:ASP:HB3	1:B:398:GLN:HG2	2.01	0.42
1:C:682:PHE:CE2	1:C:690:ILE:HD11	2.54	0.42
1:D:230:PHE:CE2	1:D:237:PRO:HB3	2.54	0.42
1:E:474:VAL:O	1:E:533:ASN:ND2	2.52	0.42
1:E:505:LYS:HD2	1:E:506:PHE:CE1	2.54	0.42
1:F:728:VAL:N	1:F:729:PRO:CD	2.82	0.42
1:A:233:ILE:HG22	1:A:234:GLY:N	2.34	0.42
1:A:377:ARG:NH1	1:A:404:HIS:O	2.52	0.42
1:A:505:LYS:HD2	1:A:506:PHE:CE1	2.54	0.42
1:C:148:LYS:HE3	1:C:171:SER:OG	2.19	0.42
1:C:177:ALA:O	1:C:179:ASP:N	2.41	0.42
1:C:230:PHE:CE2	1:C:237:PRO:HB3	2.54	0.42
1:C:563:PHE:CD2	1:C:607:GLU:HG2	2.55	0.42
1:D:312:LYS:HD3	1:D:315:LYS:CB	2.49	0.42
1:E:302:PHE:HA	1:E:344:MET:O	2.19	0.42
1:E:682:PHE:CE2	1:E:690:ILE:HD11	2.54	0.42
1:F:43:GLN:N	1:F:44:PRO:HD2	2.34	0.42
1:F:395:ASP:HB3	1:F:398:GLN:HG2	2.01	0.42
1:A:148:LYS:HE3	1:A:171:SER:OG	2.19	0.42
1:A:395:ASP:HB3	1:A:398:GLN:HG2	2.01	0.42
1:B:311:PRO:O	1:B:315:LYS:HA	2.20	0.42
1:B:728:VAL:N	1:B:729:PRO:CD	2.82	0.42
1:C:43:GLN:N	1:C:44:PRO:HD2	2.34	0.42
1:C:474:VAL:O	1:C:533:ASN:ND2	2.53	0.42
1:D:233:ILE:HG22	1:D:234:GLY:N	2.34	0.42
1:D:474:VAL:O	1:D:533:ASN:ND2	2.52	0.42
1:D:728:VAL:N	1:D:729:PRO:CD	2.82	0.42
1:E:233:ILE:HG22	1:E:234:GLY:N	2.34	0.42
1:E:364:ASP:OD1	1:E:364:ASP:N	2.48	0.42
1:E:377:ARG:NH1	1:E:404:HIS:O	2.52	0.42
1:F:233:ILE:HG22	1:F:234:GLY:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:728:VAL:N	1:A:729:PRO:CD	2.82	0.42
1:B:46:MET:O	1:B:50:GLN:N	2.45	0.42
1:B:563:PHE:CD2	1:B:607:GLU:HG2	2.55	0.42
1:B:636:PRO:HA	1:B:640:ASP:OD1	2.18	0.42
1:C:365:ARG:NH2	1:D:417:GLU:OE2	2.53	0.42
1:C:728:VAL:N	1:C:729:PRO:CD	2.82	0.42
1:D:312:LYS:CD	1:D:315:LYS:CB	2.81	0.42
1:D:598:ASP:OD1	1:D:599:ARG:N	2.49	0.42
1:E:43:GLN:N	1:E:44:PRO:HD2	2.34	0.42
1:E:230:PHE:CE2	1:E:237:PRO:HB3	2.54	0.42
1:E:254:ILE:HD12	1:E:369:ILE:HD13	2.02	0.42
1:F:290:PHE:O	1:F:294:GLU:N	2.49	0.42
1:A:224:LEU:HD13	1:A:262:THR:HG21	2.01	0.42
1:A:563:PHE:CD2	1:A:607:GLU:HG2	2.55	0.42
1:C:487:ARG:HH21	1:D:700:ARG:HE	1.65	0.42
1:C:505:LYS:HD2	1:C:506:PHE:CE1	2.54	0.42
1:E:563:PHE:CD2	1:E:607:GLU:HG2	2.55	0.42
1:F:26:LEU:HD23	1:F:82:ILE:HD11	2.01	0.42
1:F:148:LYS:HE3	1:F:171:SER:OG	2.19	0.42
1:A:132:GLU:OE1	1:A:132:GLU:N	2.52	0.42
1:A:220:VAL:HG12	1:A:224:LEU:CD1	2.50	0.42
1:A:440:GLU:HG2	1:A:441:VAL:N	2.34	0.42
1:B:26:LEU:HD23	1:B:82:ILE:HD11	2.01	0.42
1:B:471:VAL:HA	1:B:472:PRO:HD3	1.90	0.42
1:B:599:ARG:O	1:B:603:GLN:HG2	2.20	0.42
1:C:311:PRO:O	1:C:315:LYS:HA	2.19	0.42
1:C:312:LYS:HD3	1:C:315:LYS:CB	2.49	0.42
1:C:318:GLY:HA2	1:D:317:HIS:CD2	2.53	0.42
1:C:440:GLU:HG2	1:C:441:VAL:N	2.34	0.42
1:D:311:PRO:O	1:D:315:LYS:HA	2.19	0.42
1:D:377:ARG:NH1	1:D:404:HIS:O	2.52	0.42
1:D:395:ASP:HB3	1:D:398:GLN:HG2	2.01	0.42
1:F:230:PHE:CE2	1:F:237:PRO:HB3	2.54	0.42
1:F:254:ILE:HD12	1:F:369:ILE:HD13	2.02	0.42
1:A:636:PRO:HD3	1:A:766:ARG:HH12	1.85	0.42
1:B:302:PHE:HA	1:B:344:MET:O	2.19	0.42
1:B:377:ARG:NH1	1:B:404:HIS:O	2.52	0.42
1:C:764:GLN:OE1	1:D:748:SER:N	2.53	0.42
1:D:254:ILE:HD12	1:D:369:ILE:HD13	2.02	0.42
1:D:365:ARG:HH22	1:E:417:GLU:CD	2.23	0.42
1:D:440:GLU:HG2	1:D:441:VAL:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:563:PHE:CD2	1:D:607:GLU:HG2	2.55	0.42
1:F:27:ILE:O	1:F:82:ILE:HB	2.19	0.42
1:F:327:GLN:O	1:F:330:THR:HG22	2.20	0.42
1:F:599:ARG:O	1:F:603:GLN:HG2	2.20	0.42
1:A:302:PHE:HA	1:A:344:MET:O	2.19	0.42
1:A:474:VAL:O	1:A:533:ASN:ND2	2.52	0.42
1:A:495:TYR:HE1	1:B:703:ILE:HG21	1.85	0.42
1:B:220:VAL:HG12	1:B:224:LEU:CD1	2.50	0.42
1:B:290:PHE:O	1:B:294:GLU:N	2.49	0.42
1:B:570:ALA:HB1	1:B:616:ASN:OD1	2.20	0.42
1:C:302:PHE:HA	1:C:344:MET:O	2.20	0.42
1:C:599:ARG:O	1:C:603:GLN:HG2	2.20	0.42
1:D:302:PHE:HA	1:D:344:MET:O	2.19	0.42
1:D:636:PRO:HA	1:D:640:ASP:OD1	2.18	0.42
1:E:327:GLN:O	1:E:330:THR:HG22	2.20	0.42
1:E:395:ASP:HB3	1:E:398:GLN:HG2	2.00	0.42
1:A:46:MET:O	1:A:50:GLN:N	2.45	0.42
1:A:599:ARG:O	1:A:603:GLN:HG2	2.20	0.42
1:B:43:GLN:N	1:B:44:PRO:HD2	2.34	0.42
1:B:636:PRO:HD3	1:B:766:ARG:HH12	1.85	0.42
1:C:636:PRO:HD3	1:C:766:ARG:HH12	1.85	0.42
1:F:220:VAL:HG12	1:F:224:LEU:CD1	2.50	0.42
1:F:311:PRO:O	1:F:315:LYS:HA	2.20	0.42
1:F:505:LYS:HD2	1:F:506:PHE:CE1	2.54	0.42
1:A:26:LEU:HD23	1:A:82:ILE:HD11	2.01	0.42
1:A:570:ALA:HB1	1:A:616:ASN:OD1	2.20	0.42
1:A:692:GLN:NE2	1:F:508:MET:SD	2.93	0.42
1:B:133:VAL:HG23	1:B:134:TYR:N	2.35	0.42
1:B:327:GLN:O	1:B:330:THR:HG22	2.20	0.42
1:C:132:GLU:OE1	1:C:132:GLU:N	2.53	0.42
1:D:21:ASN:HB3	1:D:25:ARG:HH21	1.85	0.42
1:D:132:GLU:OE1	1:D:132:GLU:N	2.53	0.42
1:D:224:LEU:HD13	1:D:262:THR:HG21	2.01	0.42
1:D:636:PRO:HD3	1:D:766:ARG:HH12	1.85	0.42
1:E:495:TYR:HE1	1:F:703:ILE:HG21	1.84	0.42
1:F:767:GLY:O	1:F:768:PHE:CG	2.73	0.42
1:A:57:VAL:HG11	1:A:102:ILE:CG1	2.50	0.41
1:B:86:ARG:NH2	1:B:204:ASP:OD2	2.53	0.41
1:B:224:LEU:HD13	1:B:262:THR:HG21	2.01	0.41
1:B:423:ILE:CG2	1:B:445:LEU:HD21	2.49	0.41
1:B:474:VAL:O	1:B:533:ASN:ND2	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:471:VAL:HA	1:C:472:PRO:HD3	1.90	0.41
1:C:570:ALA:HB1	1:C:616:ASN:OD1	2.20	0.41
1:E:21:ASN:HB3	1:E:25:ARG:HH21	1.85	0.41
1:E:26:LEU:HD23	1:E:82:ILE:CD1	2.50	0.41
1:E:132:GLU:OE1	1:E:132:GLU:N	2.52	0.41
1:F:21:ASN:HB3	1:F:25:ARG:HH21	1.85	0.41
1:F:635:ARG:HG3	1:F:766:ARG:NH2	2.31	0.41
1:A:26:LEU:HD23	1:A:82:ILE:CD1	2.50	0.41
1:A:26:LEU:N	1:A:100:ILE:O	2.38	0.41
1:A:327:GLN:O	1:A:330:THR:HG22	2.20	0.41
1:B:365:ARG:HH22	1:C:417:GLU:CD	2.23	0.41
1:C:26:LEU:HD23	1:C:82:ILE:CD1	2.50	0.41
1:C:57:VAL:HG11	1:C:102:ILE:CG1	2.50	0.41
1:C:598:ASP:OD1	1:C:599:ARG:N	2.49	0.41
1:D:460:ASN:OD1	1:D:460:ASN:N	2.53	0.41
1:E:465:ARG:CZ	1:E:465:ARG:HB2	2.50	0.41
1:E:599:ARG:O	1:E:603:GLN:HG2	2.20	0.41
1:E:764:GLN:OE1	1:F:748:SER:N	2.52	0.41
1:F:460:ASN:OD1	1:F:460:ASN:N	2.53	0.41
1:F:465:ARG:CZ	1:F:465:ARG:HB2	2.50	0.41
1:F:570:ALA:HB1	1:F:616:ASN:OD1	2.20	0.41
1:A:21:ASN:HB3	1:A:25:ARG:HH21	1.85	0.41
1:A:86:ARG:NH2	1:A:204:ASP:OD2	2.53	0.41
1:A:335:LEU:HG	1:A:338:ARG:CG	2.51	0.41
1:A:460:ASN:OD1	1:A:460:ASN:N	2.53	0.41
1:A:764:GLN:OE1	1:B:748:SER:N	2.53	0.41
1:A:767:GLY:O	1:A:768:PHE:CG	2.73	0.41
1:C:59:LEU:O	1:C:66:GLU:HB3	2.20	0.41
1:C:220:VAL:HG12	1:C:224:LEU:CD1	2.50	0.41
1:C:240:GLY:O	1:C:241:ILE:HD13	2.21	0.41
1:C:327:GLN:O	1:C:330:THR:HG22	2.20	0.41
1:C:460:ASN:OD1	1:C:460:ASN:N	2.53	0.41
1:C:767:GLY:O	1:C:768:PHE:CG	2.73	0.41
1:D:26:LEU:HD23	1:D:82:ILE:CD1	2.50	0.41
1:D:57:VAL:HG11	1:D:102:ILE:CG1	2.50	0.41
1:D:767:GLY:O	1:D:768:PHE:CG	2.73	0.41
1:E:220:VAL:HG12	1:E:224:LEU:CD1	2.50	0.41
1:E:312:LYS:HD3	1:E:315:LYS:CB	2.49	0.41
1:E:335:LEU:HG	1:E:338:ARG:CG	2.51	0.41
1:F:302:PHE:HA	1:F:344:MET:O	2.19	0.41
1:F:563:PHE:CD2	1:F:607:GLU:HG2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:254:ILE:HD12	1:A:369:ILE:HD13	2.02	0.41
1:A:661:LEU:HB2	1:A:664:SER:HB3	2.03	0.41
1:A:703:ILE:HG21	1:F:495:TYR:HE1	1.86	0.41
1:B:508:MET:SD	1:C:692:GLN:NE2	2.94	0.41
1:C:21:ASN:HB3	1:C:25:ARG:HH21	1.85	0.41
1:C:133:VAL:HG23	1:C:134:TYR:N	2.35	0.41
1:D:220:VAL:HG12	1:D:224:LEU:CD1	2.50	0.41
1:D:327:GLN:O	1:D:330:THR:HG22	2.20	0.41
1:D:599:ARG:O	1:D:603:GLN:HG2	2.20	0.41
1:E:57:VAL:HG11	1:E:102:ILE:CG1	2.50	0.41
1:E:636:PRO:HD3	1:E:766:ARG:HH12	1.85	0.41
1:F:26:LEU:HD23	1:F:82:ILE:CD1	2.50	0.41
1:F:133:VAL:HG23	1:F:134:TYR:N	2.35	0.41
1:A:423:ILE:CG2	1:A:445:LEU:HD21	2.49	0.41
1:A:465:ARG:HB2	1:A:465:ARG:CZ	2.50	0.41
1:B:21:ASN:HB3	1:B:25:ARG:HH21	1.85	0.41
1:B:26:LEU:HD23	1:B:82:ILE:CD1	2.50	0.41
1:B:59:LEU:O	1:B:66:GLU:HB3	2.20	0.41
1:D:46:MET:O	1:D:49:LEU:N	2.54	0.41
1:D:487:ARG:HH21	1:E:700:ARG:HE	1.67	0.41
1:D:661:LEU:HB2	1:D:664:SER:HB3	2.03	0.41
1:D:764:GLN:OE1	1:E:748:SER:N	2.53	0.41
1:A:240:GLY:O	1:A:241:ILE:HD13	2.21	0.41
1:A:290:PHE:O	1:A:294:GLU:N	2.49	0.41
1:B:274:ILE:HD11	1:B:309:ILE:HG21	2.02	0.41
1:C:224:LEU:HD13	1:C:262:THR:HG21	2.01	0.41
1:C:508:MET:SD	1:D:692:GLN:NE2	2.94	0.41
1:D:59:LEU:O	1:D:66:GLU:HB3	2.20	0.41
1:D:495:TYR:HD1	1:D:499:HIS:HD2	1.69	0.41
1:E:240:GLY:O	1:E:241:ILE:HD13	2.21	0.41
1:E:661:LEU:HB2	1:E:664:SER:HB3	2.03	0.41
1:F:636:PRO:HD3	1:F:766:ARG:HH12	1.85	0.41
1:A:42:SER:HB2	1:A:77:CYS:SG	2.61	0.41
1:A:487:ARG:HH21	1:B:700:ARG:HE	1.68	0.41
1:C:290:PHE:O	1:C:294:GLU:N	2.49	0.41
1:C:495:TYR:HD1	1:C:499:HIS:HD2	1.69	0.41
1:D:335:LEU:HG	1:D:338:ARG:CG	2.51	0.41
1:E:767:GLY:O	1:E:768:PHE:CG	2.73	0.41
1:F:26:LEU:N	1:F:100:ILE:O	2.38	0.41
1:F:57:VAL:HG11	1:F:102:ILE:CG1	2.50	0.41
1:F:661:LEU:HB2	1:F:664:SER:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:240:GLY:O	1:B:241:ILE:HD13	2.21	0.41
1:B:312:LYS:HD3	1:B:315:LYS:CB	2.49	0.41
1:B:495:TYR:HE1	1:C:703:ILE:HG21	1.85	0.41
1:B:767:GLY:O	1:B:768:PHE:CG	2.73	0.41
1:C:46:MET:O	1:C:49:LEU:N	2.54	0.41
1:C:112:LYS:H	1:C:169:ASP:HB2	1.86	0.41
1:D:42:SER:HB2	1:D:77:CYS:SG	2.61	0.41
1:D:46:MET:O	1:D:50:GLN:N	2.45	0.41
1:D:133:VAL:HG23	1:D:134:TYR:N	2.35	0.41
1:E:46:MET:O	1:E:49:LEU:N	2.54	0.41
1:E:133:VAL:HG23	1:E:134:TYR:N	2.35	0.41
1:F:335:LEU:HG	1:F:338:ARG:CG	2.51	0.41
1:A:21:ASN:HB3	1:A:25:ARG:NH2	2.36	0.41
1:A:133:VAL:HG23	1:A:134:TYR:N	2.35	0.41
1:A:274:ILE:HD11	1:A:309:ILE:HG21	2.02	0.41
1:A:426:LYS:O	1:A:429:LEU:HG	2.21	0.41
1:A:508:MET:SD	1:B:692:GLN:NE2	2.94	0.41
1:B:46:MET:O	1:B:49:LEU:N	2.54	0.41
1:B:112:LYS:H	1:B:169:ASP:HB2	1.86	0.41
1:B:246:PRO:O	1:B:249:THR:OG1	2.22	0.41
1:B:254:ILE:HD12	1:B:369:ILE:HD13	2.02	0.41
1:B:465:ARG:CZ	1:B:465:ARG:HB2	2.50	0.41
1:C:86:ARG:NH2	1:C:204:ASP:OD2	2.53	0.41
1:C:336:LYS:HE2	1:C:336:LYS:HB2	1.92	0.41
1:D:85:ASN:OD1	1:D:86:ARG:N	2.52	0.41
1:D:240:GLY:O	1:D:241:ILE:HD13	2.21	0.41
1:D:495:TYR:HE1	1:E:703:ILE:HG21	1.84	0.41
1:D:570:ALA:HB1	1:D:616:ASN:OD1	2.20	0.41
1:E:86:ARG:NH2	1:E:204:ASP:OD2	2.53	0.41
1:E:274:ILE:HD11	1:E:309:ILE:HG21	2.02	0.41
1:E:311:PRO:O	1:E:315:LYS:HA	2.20	0.41
1:E:365:ARG:HH22	1:F:417:GLU:CD	2.24	0.41
1:E:495:TYR:HD1	1:E:499:HIS:HD2	1.69	0.41
1:E:570:ALA:HB1	1:E:616:ASN:OD1	2.20	0.41
1:F:240:GLY:O	1:F:241:ILE:HD13	2.21	0.41
1:F:274:ILE:HD11	1:F:309:ILE:HG21	2.02	0.41
1:F:426:LYS:O	1:F:429:LEU:HG	2.21	0.41
1:B:21:ASN:HB3	1:B:25:ARG:NH2	2.36	0.41
1:B:57:VAL:HG11	1:B:102:ILE:CG1	2.50	0.41
1:C:254:ILE:HD12	1:C:369:ILE:HD13	2.02	0.41
1:E:429:LEU:HD12	1:E:430:ILE:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:495:TYR:CD1	1:F:703:ILE:HD13	2.56	0.41
1:F:46:MET:O	1:F:49:LEU:N	2.54	0.41
1:F:59:LEU:O	1:F:66:GLU:HB3	2.20	0.41
1:F:423:ILE:CG2	1:F:445:LEU:HD21	2.49	0.41
1:A:46:MET:O	1:A:49:LEU:N	2.54	0.40
1:B:512:LYS:NZ	1:B:613:THR:HB	2.37	0.40
1:C:42:SER:HB2	1:C:77:CYS:SG	2.61	0.40
1:D:628:ILE:HG21	1:D:628:ILE:HD13	1.89	0.40
1:E:317:HIS:CE1	1:F:317:HIS:NE2	2.87	0.40
1:F:86:ARG:NH2	1:F:204:ASP:OD2	2.53	0.40
1:F:373:ASP:CG	1:F:374:ALA:N	2.75	0.40
1:A:238:PRO:CB	1:A:365:ARG:HE	2.35	0.40
1:A:512:LYS:NZ	1:A:613:THR:HB	2.37	0.40
1:B:483:GLU:HA	1:B:486:LYS:HD3	2.04	0.40
1:C:274:ILE:HD11	1:C:309:ILE:HG21	2.02	0.40
1:C:661:LEU:HB2	1:C:664:SER:HB3	2.03	0.40
1:D:112:LYS:H	1:D:169:ASP:HB2	1.86	0.40
1:E:42:SER:HB2	1:E:77:CYS:SG	2.61	0.40
1:F:238:PRO:CB	1:F:365:ARG:HE	2.35	0.40
1:F:336:LYS:HE2	1:F:336:LYS:HB2	1.91	0.40
1:A:59:LEU:O	1:A:66:GLU:HB3	2.20	0.40
1:B:238:PRO:CB	1:B:365:ARG:HE	2.35	0.40
1:C:335:LEU:HG	1:C:338:ARG:CG	2.51	0.40
1:E:460:ASN:OD1	1:E:460:ASN:N	2.53	0.40
1:E:508:MET:SD	1:F:692:GLN:NE2	2.94	0.40
1:F:483:GLU:HA	1:F:486:LYS:HD3	2.04	0.40
1:A:598:ASP:OD1	1:A:599:ARG:N	2.49	0.40
1:B:460:ASN:OD1	1:B:460:ASN:N	2.53	0.40
1:C:420:LEU:HD23	1:C:423:ILE:HD11	2.03	0.40
1:C:661:LEU:HD23	1:C:691:CYS:SG	2.62	0.40
1:C:729:PRO:O	1:C:730:GLU:CB	2.70	0.40
1:D:426:LYS:O	1:D:429:LEU:HG	2.21	0.40
1:D:465:ARG:CZ	1:D:465:ARG:HB2	2.50	0.40
1:D:495:TYR:CD1	1:E:703:ILE:HD13	2.56	0.40
1:E:426:LYS:O	1:E:429:LEU:HG	2.21	0.40
1:F:21:ASN:HB3	1:F:25:ARG:NH2	2.36	0.40
1:F:42:SER:HB2	1:F:77:CYS:SG	2.61	0.40
1:F:429:LEU:HD12	1:F:430:ILE:N	2.36	0.40
1:F:661:LEU:HD23	1:F:691:CYS:SG	2.62	0.40
1:A:471:VAL:HA	1:A:472:PRO:HD3	1.90	0.40
1:A:700:ARG:HE	1:F:487:ARG:HH21	1.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:495:TYR:HD1	1:B:499:HIS:HD2	1.69	0.40
1:B:556:GLU:HG2	1:B:558:ASN:H	1.86	0.40
1:C:154:VAL:O	1:C:161:VAL:HG22	2.22	0.40
1:D:508:MET:SD	1:E:692:GLN:NE2	2.95	0.40
1:E:59:LEU:O	1:E:66:GLU:HB3	2.20	0.40
1:E:420:LEU:HD23	1:E:423:ILE:HD11	2.03	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

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

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	724/806 (90%)	664 (92%)	55 (8%)	5 (1%)	22	61
1	B	724/806 (90%)	664 (92%)	55 (8%)	5 (1%)	22	61
1	C	724/806 (90%)	664 (92%)	55 (8%)	5 (1%)	22	61
1	D	724/806 (90%)	664 (92%)	55 (8%)	5 (1%)	22	61
1	E	724/806 (90%)	664 (92%)	54 (8%)	6 (1%)	19	58
1	F	724/806 (90%)	664 (92%)	55 (8%)	5 (1%)	22	61
All	All	4344/4836 (90%)	3984 (92%)	329 (8%)	31 (1%)	26	61

All (31) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	730	GLU
1	C	730	GLU
1	D	730	GLU
1	E	730	GLU
1	F	730	GLU
1	A	554	GLU

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Mol	Chain	Res	Type
1	B	554	GLU
1	C	554	GLU
1	D	554	GLU
1	E	554	GLU
1	F	554	GLU
1	A	730	GLU
1	A	760	GLN
1	B	760	GLN
1	C	760	GLN
1	D	760	GLN
1	E	760	GLN
1	F	760	GLN
1	A	120	ASP
1	B	120	ASP
1	C	120	ASP
1	D	120	ASP
1	E	120	ASP
1	E	508	MET
1	F	120	ASP
1	A	114	ILE
1	B	114	ILE
1	C	114	ILE
1	D	114	ILE
1	E	114	ILE
1	F	114	ILE

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

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	619/678 (91%)	618 (100%)	1 (0%)	93 98
1	B	619/678 (91%)	618 (100%)	1 (0%)	93 98
1	C	619/678 (91%)	618 (100%)	1 (0%)	93 98
1	D	619/678 (91%)	618 (100%)	1 (0%)	93 98
1	E	619/678 (91%)	618 (100%)	1 (0%)	93 98

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	F	619/678 (91%)	618 (100%)	1 (0%)	93	98
All	All	3714/4068 (91%)	3708 (100%)	6 (0%)	93	98

All (6) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	492	LEU
1	B	492	LEU
1	C	492	LEU
1	D	492	LEU
1	E	492	LEU
1	F	492	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (49) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	36	ASN
1	A	43	GLN
1	A	317	HIS
1	A	499	HIS
1	A	533	ASN
1	A	538	ASN
1	A	692	GLN
1	B	36	ASN
1	B	43	GLN
1	B	317	HIS
1	B	499	HIS
1	B	533	ASN
1	B	538	ASN
1	B	692	GLN
1	B	760	GLN
1	C	36	ASN
1	C	43	GLN
1	C	317	HIS
1	C	398	GLN
1	C	499	HIS
1	C	533	ASN
1	C	538	ASN
1	C	692	GLN
1	C	760	GLN
1	D	36	ASN

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Mol	Chain	Res	Type
1	D	43	GLN
1	D	317	HIS
1	D	499	HIS
1	D	533	ASN
1	D	538	ASN
1	D	692	GLN
1	D	760	GLN
1	E	36	ASN
1	E	43	GLN
1	E	317	HIS
1	E	499	HIS
1	E	533	ASN
1	E	538	ASN
1	E	692	GLN
1	E	760	GLN
1	F	36	ASN
1	F	43	GLN
1	F	317	HIS
1	F	398	GLN
1	F	499	HIS
1	F	533	ASN
1	F	538	ASN
1	F	692	GLN
1	F	760	GLN

### 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 monosaccharides in this entry.

### 5.6 Ligand geometry [i](#)

Of 18 ligands modelled in this entry, 6 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
3	ADP	A	902	-	24,29,29	1.09	1 (4%)	29,45,45	1.54	5 (17%)
2	AGS	C	901	4	26,33,33	1.87	3 (11%)	26,52,52	1.58	4 (15%)
2	AGS	D	901	4	26,33,33	1.87	3 (11%)	26,52,52	1.59	4 (15%)
3	ADP	C	902	-	24,29,29	1.09	1 (4%)	29,45,45	1.55	5 (17%)
3	ADP	F	902	-	24,29,29	1.08	1 (4%)	29,45,45	1.54	5 (17%)
2	AGS	E	901	4	26,33,33	1.87	3 (11%)	26,52,52	1.59	4 (15%)
3	ADP	D	902	-	24,29,29	1.09	1 (4%)	29,45,45	1.54	5 (17%)
2	AGS	B	901	4	26,33,33	1.87	3 (11%)	26,52,52	1.58	4 (15%)
2	AGS	A	901	4	26,33,33	1.87	3 (11%)	26,52,52	1.59	4 (15%)
2	AGS	F	901	4	26,33,33	1.87	3 (11%)	26,52,52	1.58	4 (15%)
3	ADP	B	902	-	24,29,29	1.09	1 (4%)	29,45,45	1.54	5 (17%)
3	ADP	E	902	-	24,29,29	1.09	1 (4%)	29,45,45	1.54	5 (17%)

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
3	ADP	A	902	-	-	4/12/32/32	0/3/3/3
2	AGS	C	901	4	-	6/17/38/38	0/3/3/3
2	AGS	D	901	4	-	6/17/38/38	0/3/3/3
3	ADP	C	902	-	-	4/12/32/32	0/3/3/3
3	ADP	F	902	-	-	4/12/32/32	0/3/3/3
2	AGS	E	901	4	-	6/17/38/38	0/3/3/3
3	ADP	D	902	-	-	4/12/32/32	0/3/3/3
2	AGS	B	901	4	-	6/17/38/38	0/3/3/3
2	AGS	A	901	4	-	6/17/38/38	0/3/3/3
2	AGS	F	901	4	-	6/17/38/38	0/3/3/3
3	ADP	B	902	-	-	4/12/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ADP	E	902	-	-	4/12/32/32	0/3/3/3

All (24) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	901	AGS	PG-S1G	7.86	2.07	1.90
2	A	901	AGS	PG-S1G	7.86	2.07	1.90
2	D	901	AGS	PG-S1G	7.86	2.07	1.90
2	B	901	AGS	PG-S1G	7.85	2.07	1.90
2	E	901	AGS	PG-S1G	7.85	2.07	1.90
2	C	901	AGS	PG-S1G	7.85	2.07	1.90
3	B	902	ADP	C2'-C1'	-2.55	1.49	1.53
3	C	902	ADP	C2'-C1'	-2.54	1.49	1.53
3	A	902	ADP	C2'-C1'	-2.54	1.49	1.53
3	E	902	ADP	C2'-C1'	-2.52	1.49	1.53
3	D	902	ADP	C2'-C1'	-2.52	1.49	1.53
3	F	902	ADP	C2'-C1'	-2.52	1.49	1.53
2	A	901	AGS	C5-C4	2.43	1.47	1.40
2	D	901	AGS	C5-C4	2.43	1.47	1.40
2	B	901	AGS	C5-C4	2.42	1.47	1.40
2	E	901	AGS	C5-C4	2.42	1.47	1.40
2	C	901	AGS	C5-C4	2.41	1.47	1.40
2	F	901	AGS	C5-C4	2.41	1.47	1.40
2	E	901	AGS	PG-O3G	-2.10	1.48	1.54
2	F	901	AGS	PG-O3G	-2.10	1.48	1.54
2	A	901	AGS	PG-O3G	-2.09	1.48	1.54
2	D	901	AGS	PG-O3G	-2.09	1.48	1.54
2	C	901	AGS	PG-O3G	-2.08	1.48	1.54
2	B	901	AGS	PG-O3G	-2.08	1.48	1.54

All (54) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	901	AGS	PA-O3A-PB	-3.57	120.57	132.83
2	F	901	AGS	PA-O3A-PB	-3.57	120.57	132.83
2	A	901	AGS	PA-O3A-PB	-3.56	120.60	132.83
2	B	901	AGS	PA-O3A-PB	-3.56	120.62	132.83
2	E	901	AGS	PA-O3A-PB	-3.56	120.62	132.83
2	C	901	AGS	PA-O3A-PB	-3.56	120.63	132.83
2	B	901	AGS	C3'-C2'-C1'	3.53	106.29	100.98
2	A	901	AGS	C3'-C2'-C1'	3.52	106.28	100.98
2	D	901	AGS	C3'-C2'-C1'	3.52	106.28	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	901	AGS	C3'-C2'-C1'	3.52	106.28	100.98
2	E	901	AGS	C3'-C2'-C1'	3.51	106.26	100.98
2	F	901	AGS	C3'-C2'-C1'	3.48	106.22	100.98
2	D	901	AGS	N3-C2-N1	-3.20	123.68	128.68
2	E	901	AGS	N3-C2-N1	-3.19	123.70	128.68
2	F	901	AGS	N3-C2-N1	-3.18	123.71	128.68
2	A	901	AGS	N3-C2-N1	-3.18	123.71	128.68
2	B	901	AGS	N3-C2-N1	-3.16	123.75	128.68
2	C	901	AGS	N3-C2-N1	-3.14	123.77	128.68
3	D	902	ADP	PA-O3A-PB	-3.08	122.25	132.83
3	C	902	ADP	PA-O3A-PB	-3.07	122.28	132.83
3	C	902	ADP	N3-C2-N1	-3.07	123.88	128.68
3	F	902	ADP	PA-O3A-PB	-3.07	122.28	132.83
3	A	902	ADP	PA-O3A-PB	-3.07	122.29	132.83
3	B	902	ADP	PA-O3A-PB	-3.06	122.31	132.83
3	E	902	ADP	PA-O3A-PB	-3.06	122.31	132.83
3	F	902	ADP	N3-C2-N1	-3.06	123.90	128.68
3	A	902	ADP	N3-C2-N1	-3.05	123.91	128.68
3	E	902	ADP	N3-C2-N1	-3.05	123.91	128.68
3	B	902	ADP	N3-C2-N1	-3.04	123.93	128.68
3	D	902	ADP	N3-C2-N1	-3.03	123.94	128.68
3	B	902	ADP	C3'-C2'-C1'	2.76	105.13	100.98
3	A	902	ADP	C3'-C2'-C1'	2.74	105.11	100.98
3	C	902	ADP	C3'-C2'-C1'	2.74	105.11	100.98
2	F	901	AGS	C4-C5-N7	-2.74	106.55	109.40
2	A	901	AGS	C4-C5-N7	-2.73	106.55	109.40
2	D	901	AGS	C4-C5-N7	-2.73	106.55	109.40
3	D	902	ADP	C3'-C2'-C1'	2.72	105.08	100.98
2	E	901	AGS	C4-C5-N7	-2.72	106.56	109.40
3	E	902	ADP	C3'-C2'-C1'	2.72	105.08	100.98
3	F	902	ADP	C3'-C2'-C1'	2.72	105.07	100.98
2	B	901	AGS	C4-C5-N7	-2.70	106.59	109.40
2	C	901	AGS	C4-C5-N7	-2.69	106.59	109.40
3	C	902	ADP	C4-C5-N7	-2.65	106.64	109.40
3	E	902	ADP	C4-C5-N7	-2.62	106.67	109.40
3	B	902	ADP	C4-C5-N7	-2.61	106.68	109.40
3	A	902	ADP	C4-C5-N7	-2.60	106.69	109.40
3	D	902	ADP	C4-C5-N7	-2.60	106.69	109.40
3	F	902	ADP	C4-C5-N7	-2.57	106.72	109.40
3	E	902	ADP	O3'-C3'-C2'	-2.15	104.88	111.82
3	A	902	ADP	O3'-C3'-C2'	-2.14	104.88	111.82
3	D	902	ADP	O3'-C3'-C2'	-2.14	104.88	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	902	ADP	O3'-C3'-C2'	-2.14	104.90	111.82
3	F	902	ADP	O3'-C3'-C2'	-2.14	104.90	111.82
3	B	902	ADP	O3'-C3'-C2'	-2.14	104.90	111.82

There are no chirality outliers.

All (60) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	901	AGS	O4'-C4'-C5'-O5'
2	A	901	AGS	C3'-C4'-C5'-O5'
2	B	901	AGS	O4'-C4'-C5'-O5'
2	B	901	AGS	C3'-C4'-C5'-O5'
2	C	901	AGS	O4'-C4'-C5'-O5'
2	C	901	AGS	C3'-C4'-C5'-O5'
2	D	901	AGS	O4'-C4'-C5'-O5'
2	D	901	AGS	C3'-C4'-C5'-O5'
2	E	901	AGS	O4'-C4'-C5'-O5'
2	E	901	AGS	C3'-C4'-C5'-O5'
2	F	901	AGS	O4'-C4'-C5'-O5'
2	F	901	AGS	C3'-C4'-C5'-O5'
3	A	902	ADP	C5'-O5'-PA-O1A
3	A	902	ADP	C5'-O5'-PA-O3A
3	A	902	ADP	O4'-C4'-C5'-O5'
3	B	902	ADP	C5'-O5'-PA-O1A
3	B	902	ADP	C5'-O5'-PA-O3A
3	B	902	ADP	O4'-C4'-C5'-O5'
3	C	902	ADP	C5'-O5'-PA-O1A
3	C	902	ADP	C5'-O5'-PA-O3A
3	C	902	ADP	O4'-C4'-C5'-O5'
3	D	902	ADP	C5'-O5'-PA-O1A
3	D	902	ADP	C5'-O5'-PA-O3A
3	D	902	ADP	O4'-C4'-C5'-O5'
3	E	902	ADP	C5'-O5'-PA-O1A
3	E	902	ADP	C5'-O5'-PA-O3A
3	E	902	ADP	O4'-C4'-C5'-O5'
3	F	902	ADP	C5'-O5'-PA-O1A
3	F	902	ADP	C5'-O5'-PA-O3A
3	F	902	ADP	O4'-C4'-C5'-O5'
3	A	902	ADP	C3'-C4'-C5'-O5'
3	B	902	ADP	C3'-C4'-C5'-O5'
3	C	902	ADP	C3'-C4'-C5'-O5'
3	D	902	ADP	C3'-C4'-C5'-O5'

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms
3	E	902	ADP	C3'-C4'-C5'-O5'
3	F	902	ADP	C3'-C4'-C5'-O5'
2	A	901	AGS	PG-O3B-PB-O1B
2	B	901	AGS	PG-O3B-PB-O1B
2	C	901	AGS	PG-O3B-PB-O1B
2	D	901	AGS	PG-O3B-PB-O1B
2	E	901	AGS	PG-O3B-PB-O1B
2	F	901	AGS	PG-O3B-PB-O1B
2	A	901	AGS	PB-O3A-PA-O1A
2	B	901	AGS	PB-O3A-PA-O1A
2	C	901	AGS	PB-O3A-PA-O1A
2	D	901	AGS	PB-O3A-PA-O1A
2	E	901	AGS	PB-O3A-PA-O1A
2	F	901	AGS	PB-O3A-PA-O1A
2	A	901	AGS	PG-O3B-PB-O2B
2	B	901	AGS	PG-O3B-PB-O2B
2	C	901	AGS	PG-O3B-PB-O2B
2	D	901	AGS	PG-O3B-PB-O2B
2	E	901	AGS	PG-O3B-PB-O2B
2	F	901	AGS	PG-O3B-PB-O2B
2	A	901	AGS	PB-O3A-PA-O2A
2	B	901	AGS	PB-O3A-PA-O2A
2	C	901	AGS	PB-O3A-PA-O2A
2	D	901	AGS	PB-O3A-PA-O2A
2	E	901	AGS	PB-O3A-PA-O2A
2	F	901	AGS	PB-O3A-PA-O2A

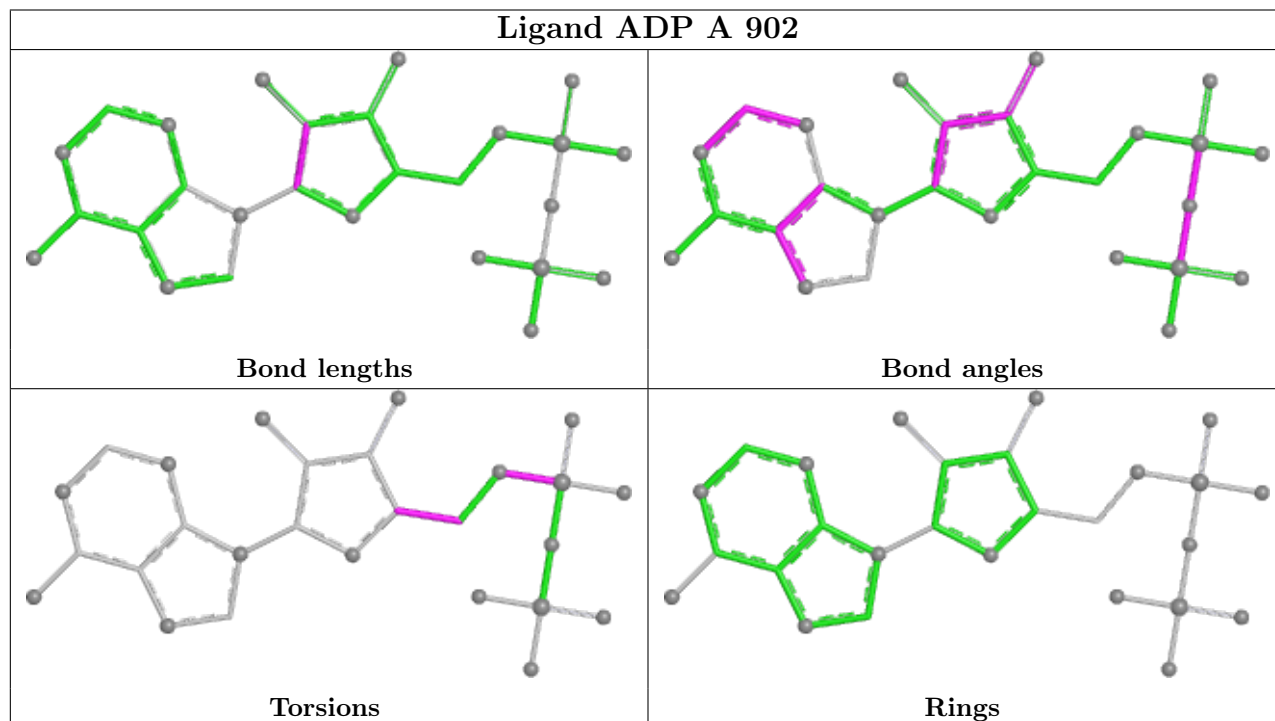
There are no ring outliers.

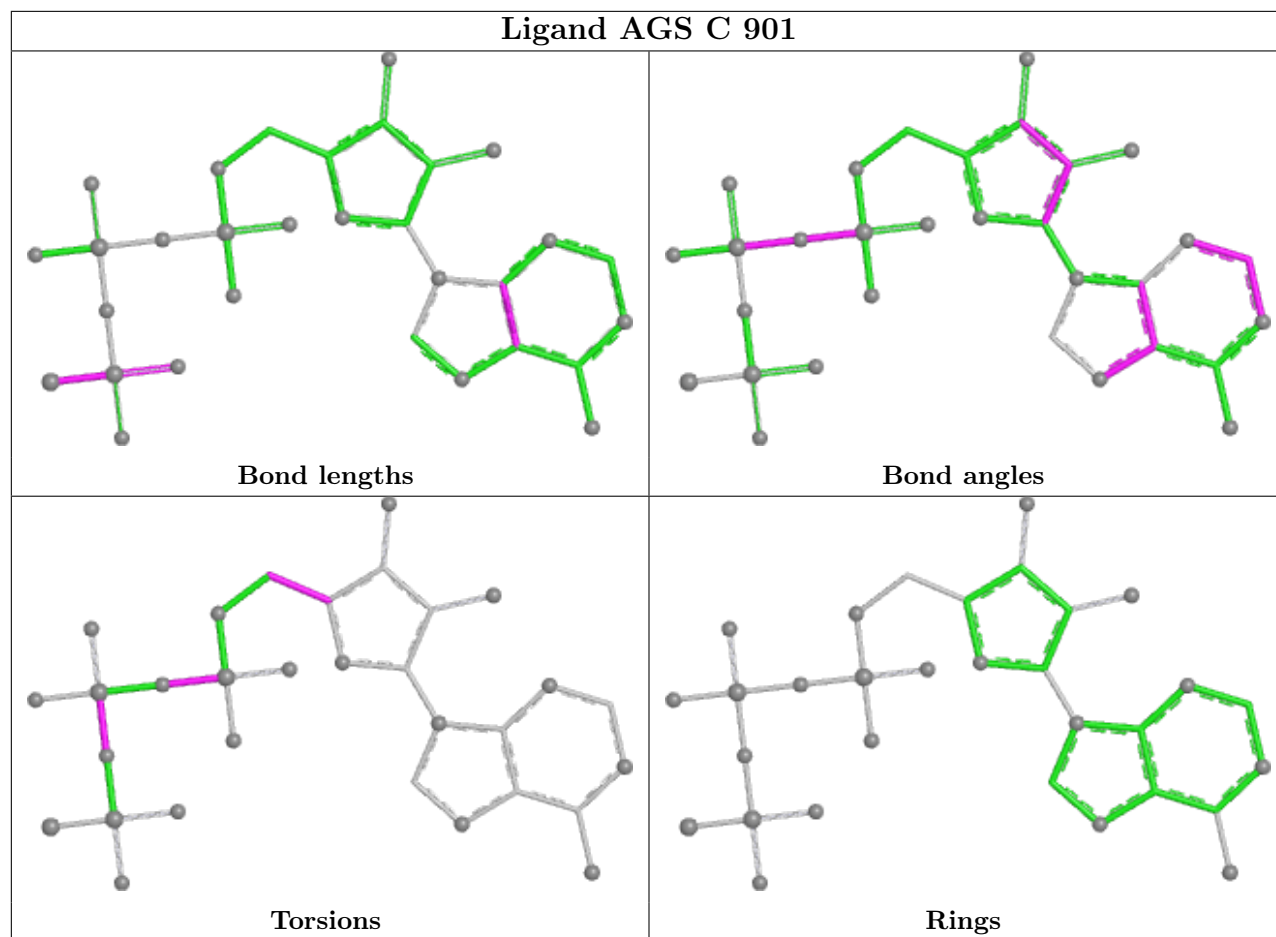
6 monomers are involved in 36 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	C	901	AGS	6	0
2	D	901	AGS	6	0
2	E	901	AGS	6	0
2	B	901	AGS	6	0
2	A	901	AGS	6	0
2	F	901	AGS	6	0

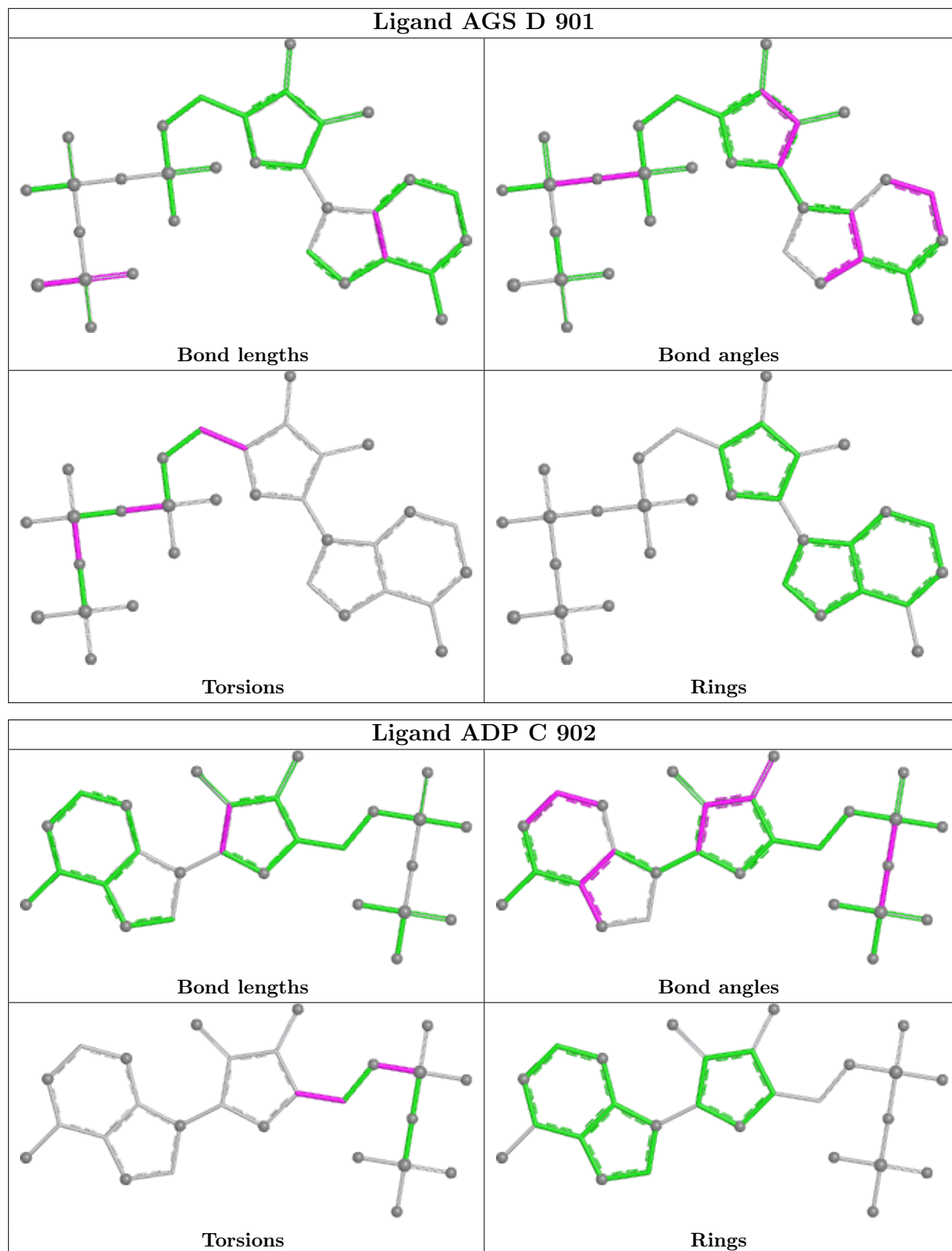
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is

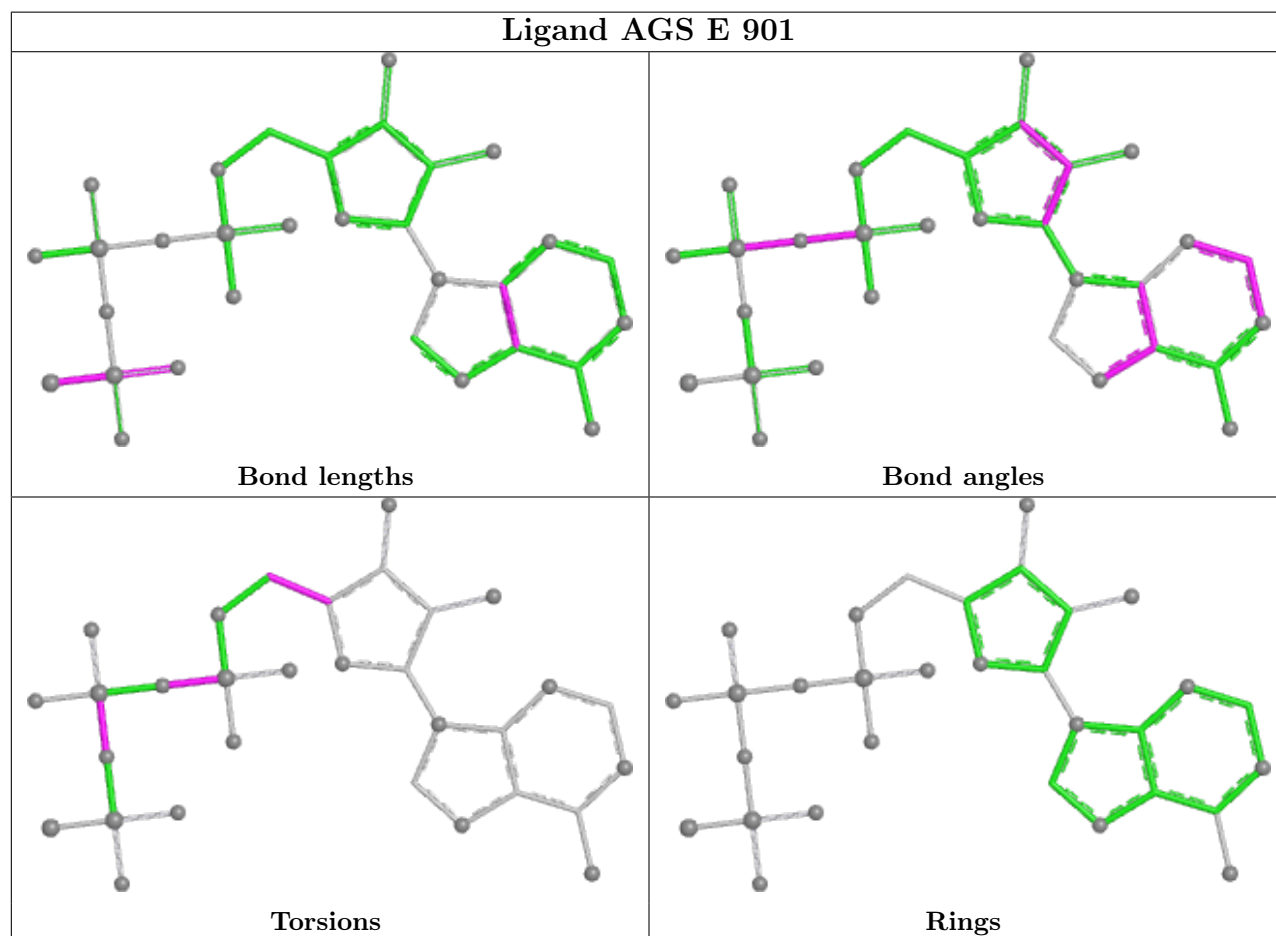
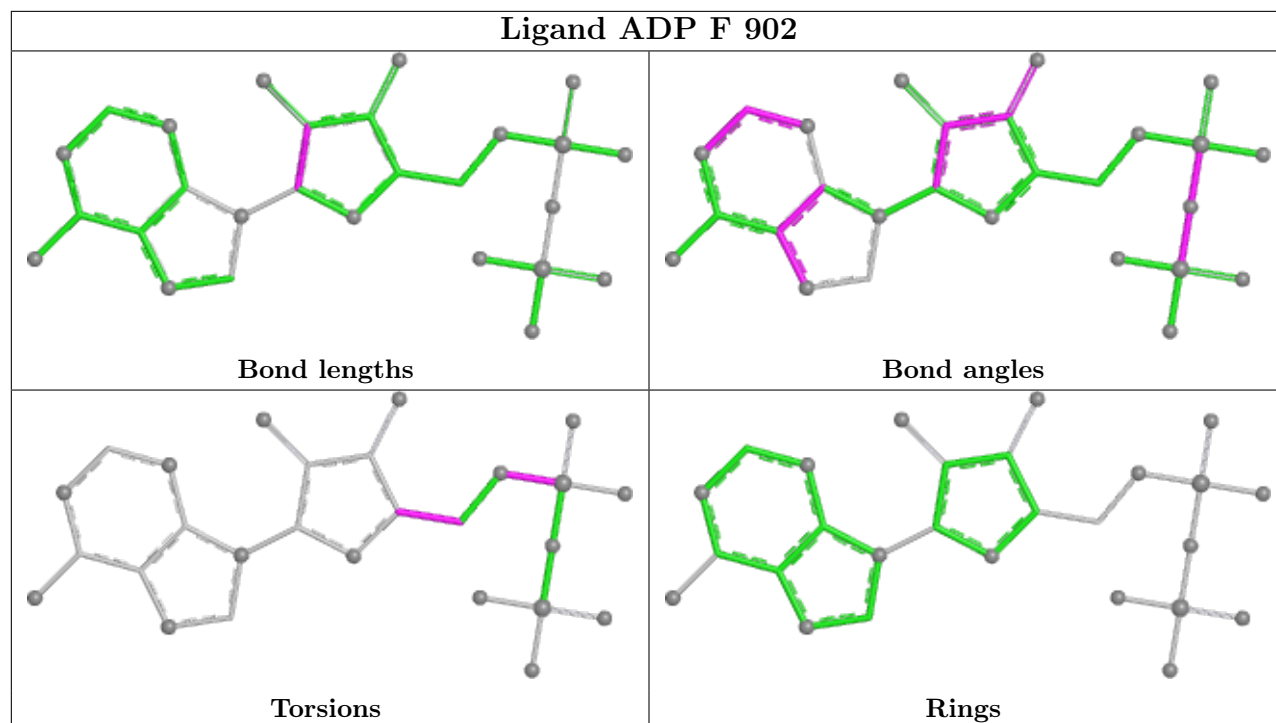
within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question 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.

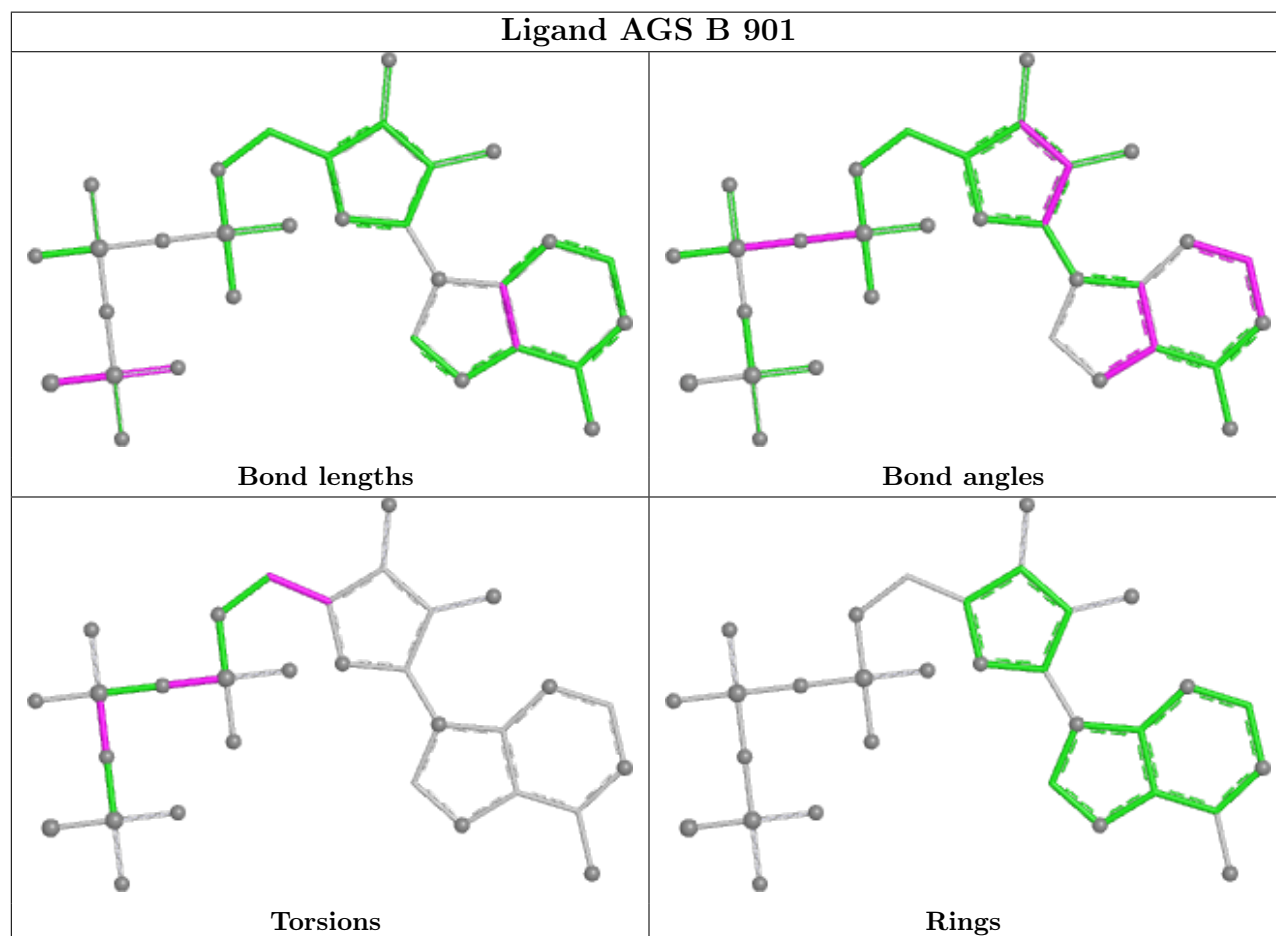
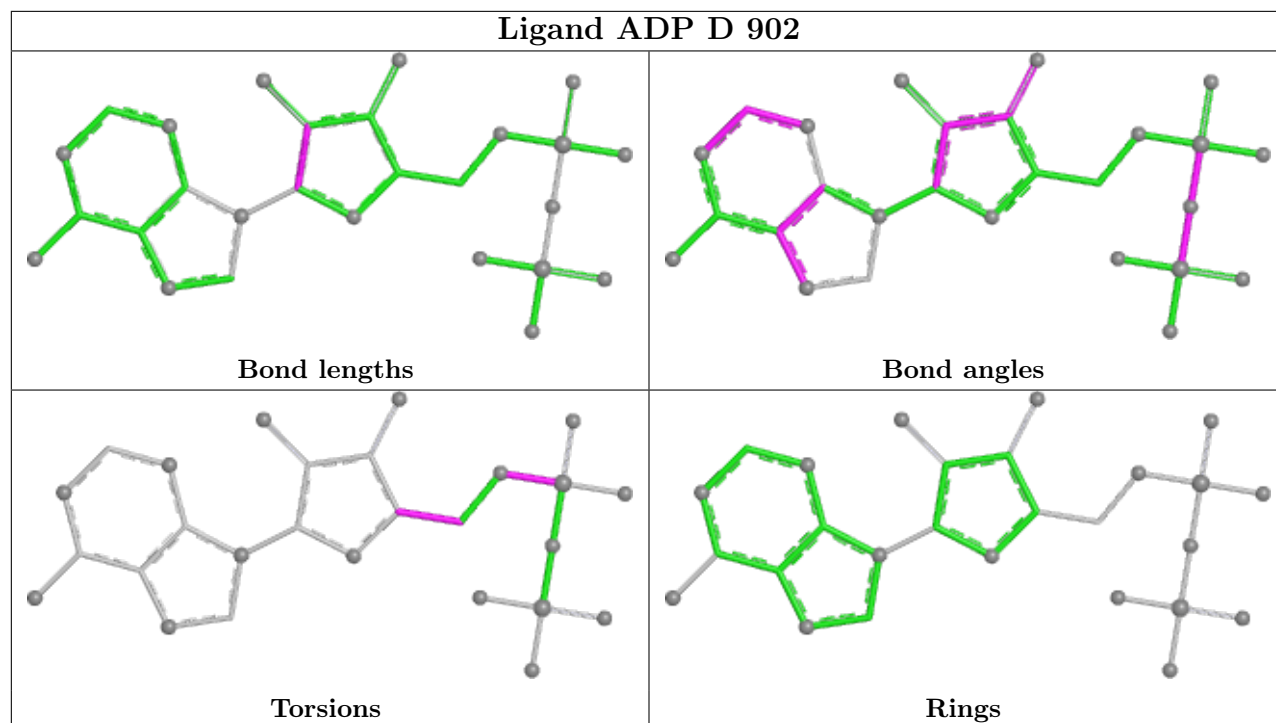


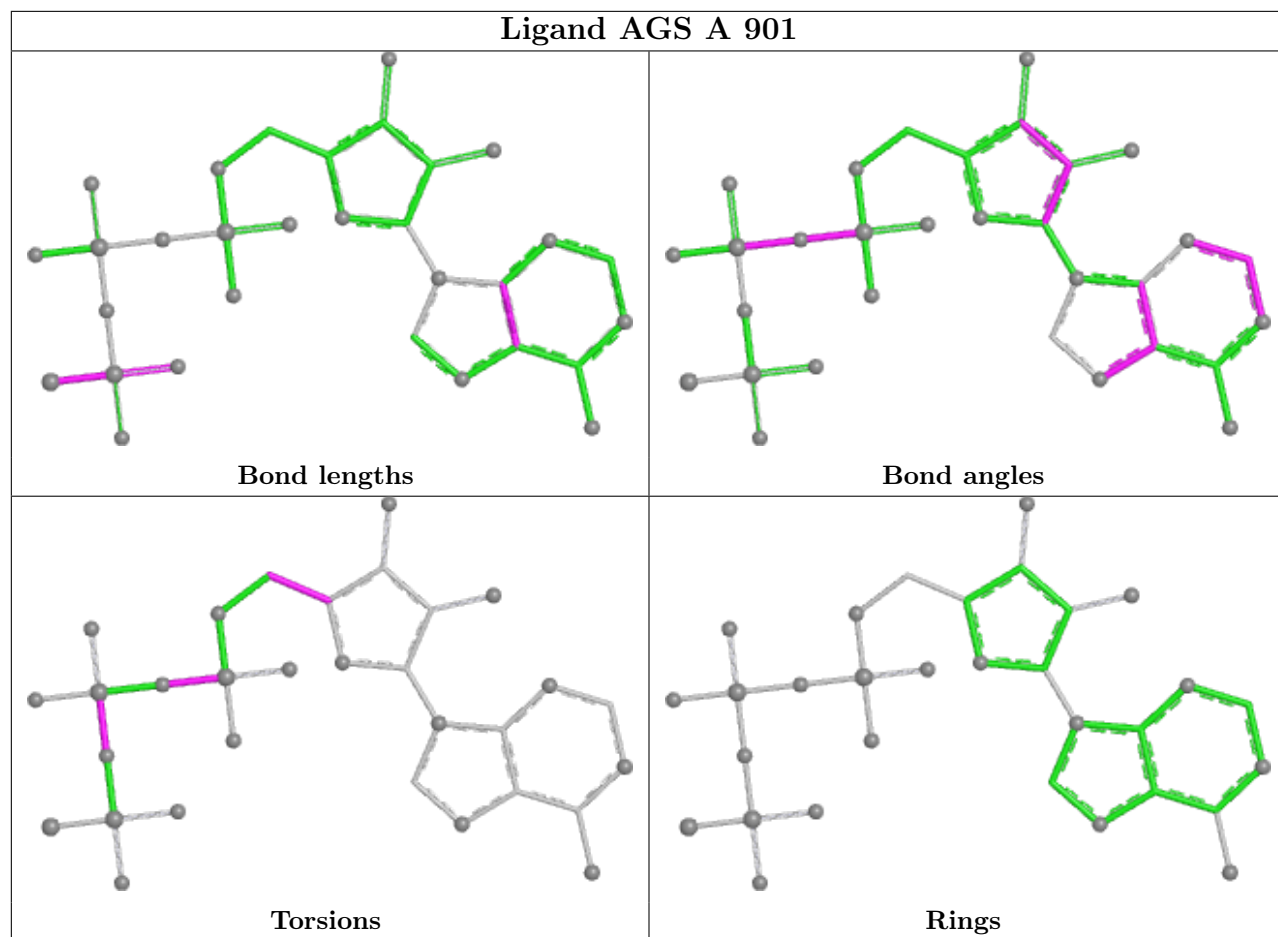


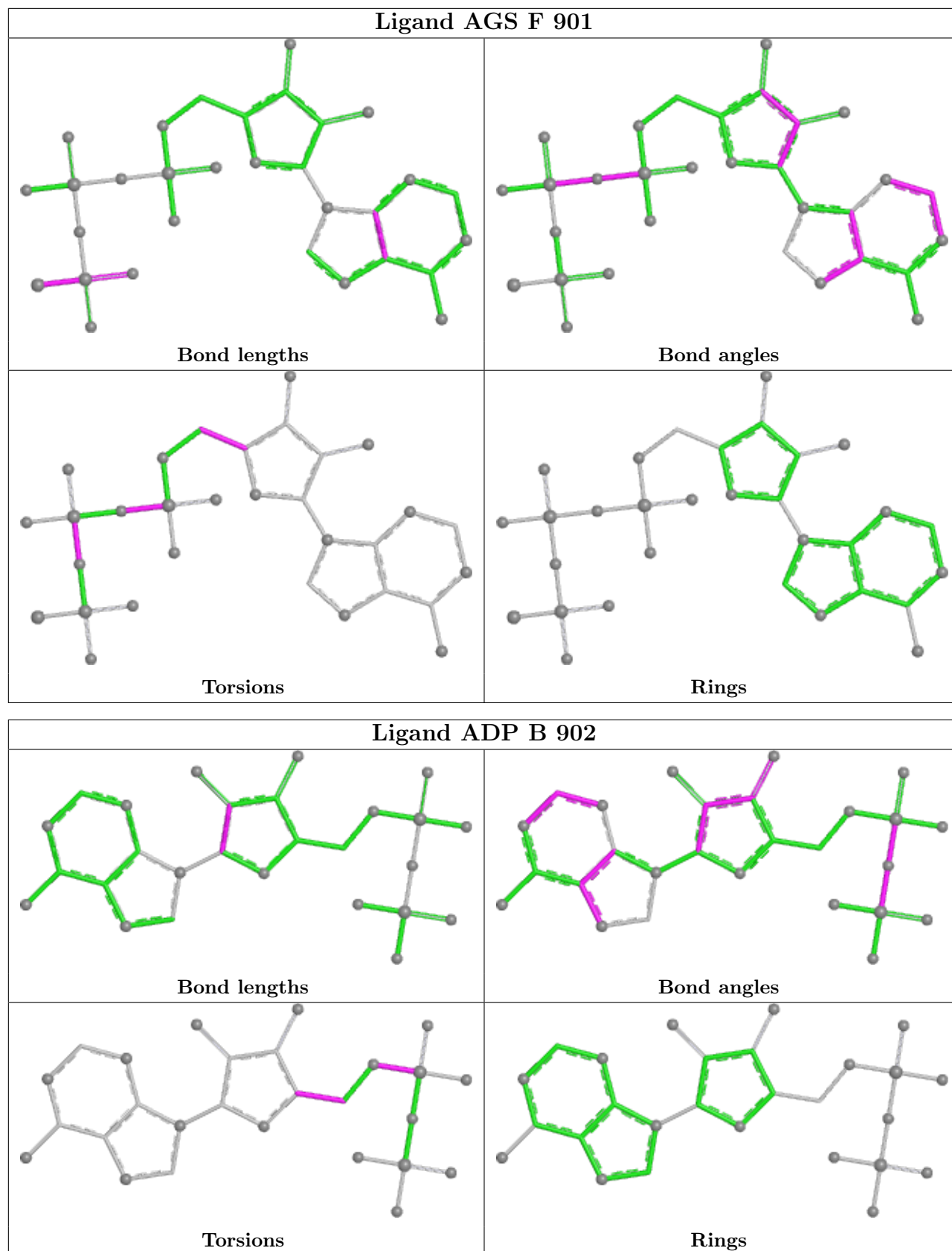


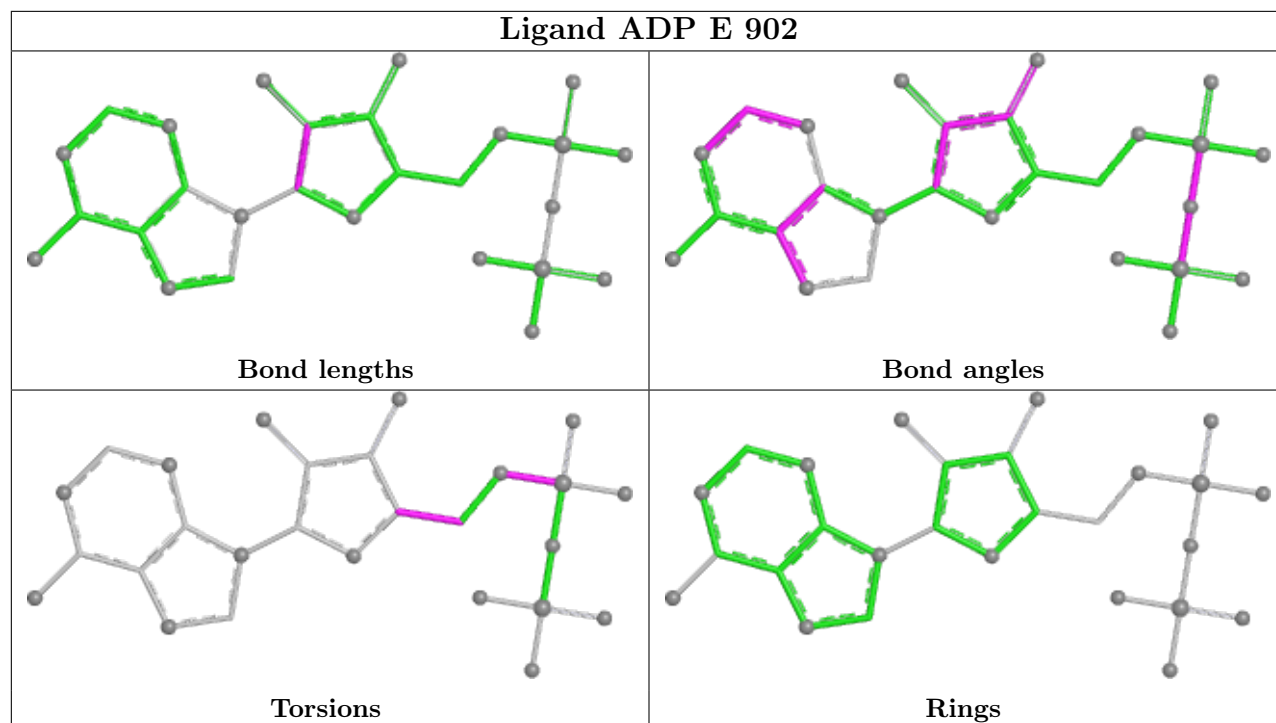












## 5.7 Other polymers [i](#)

There are no such residues in this entry.

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

There are no chain breaks in this entry.

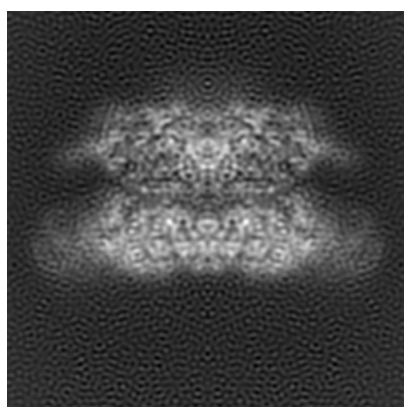
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-3298. These allow visual inspection of the internal detail of the map and identification of artifacts.

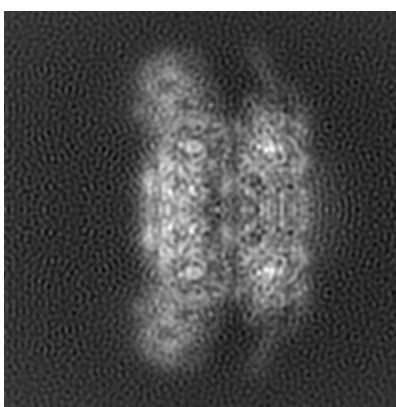
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

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

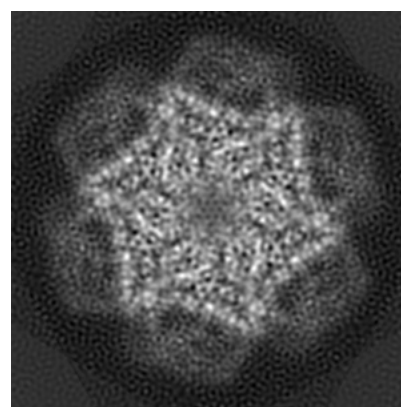
#### 6.1.1 Primary map



X



Y

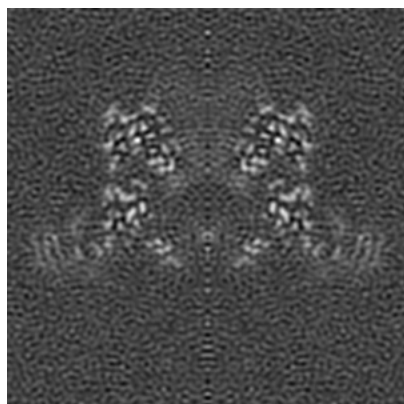


Z

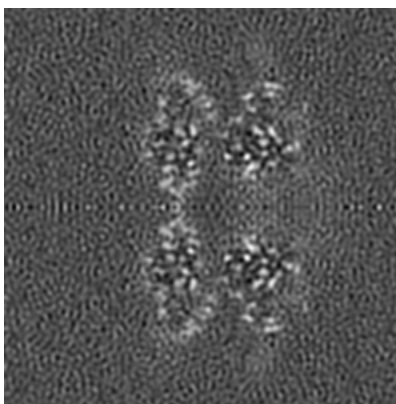
The images above show the map projected in three orthogonal directions.

### 6.2 Central slices [i](#)

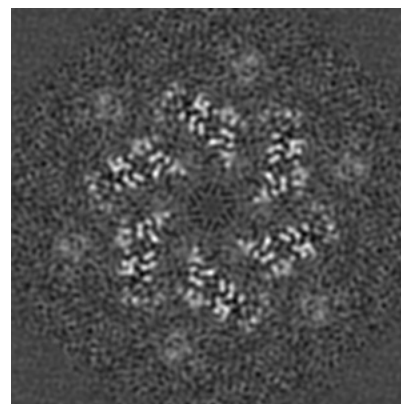
#### 6.2.1 Primary map



X Index: 138



Y Index: 138

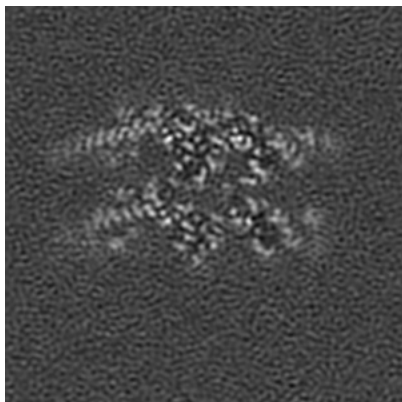


Z Index: 138

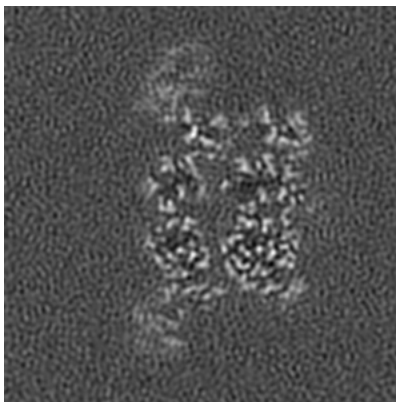
The images above show central slices of the map in three orthogonal directions.

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

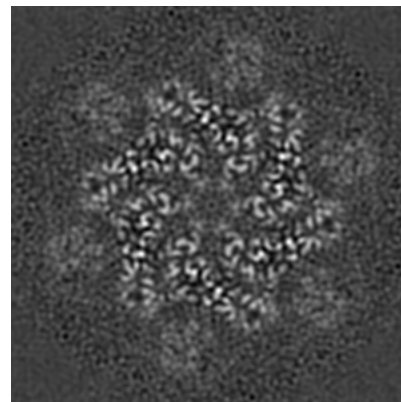
### 6.3.1 Primary map



X Index: 96



Y Index: 172

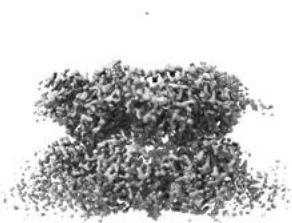


Z Index: 130

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

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

### 6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0183. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.



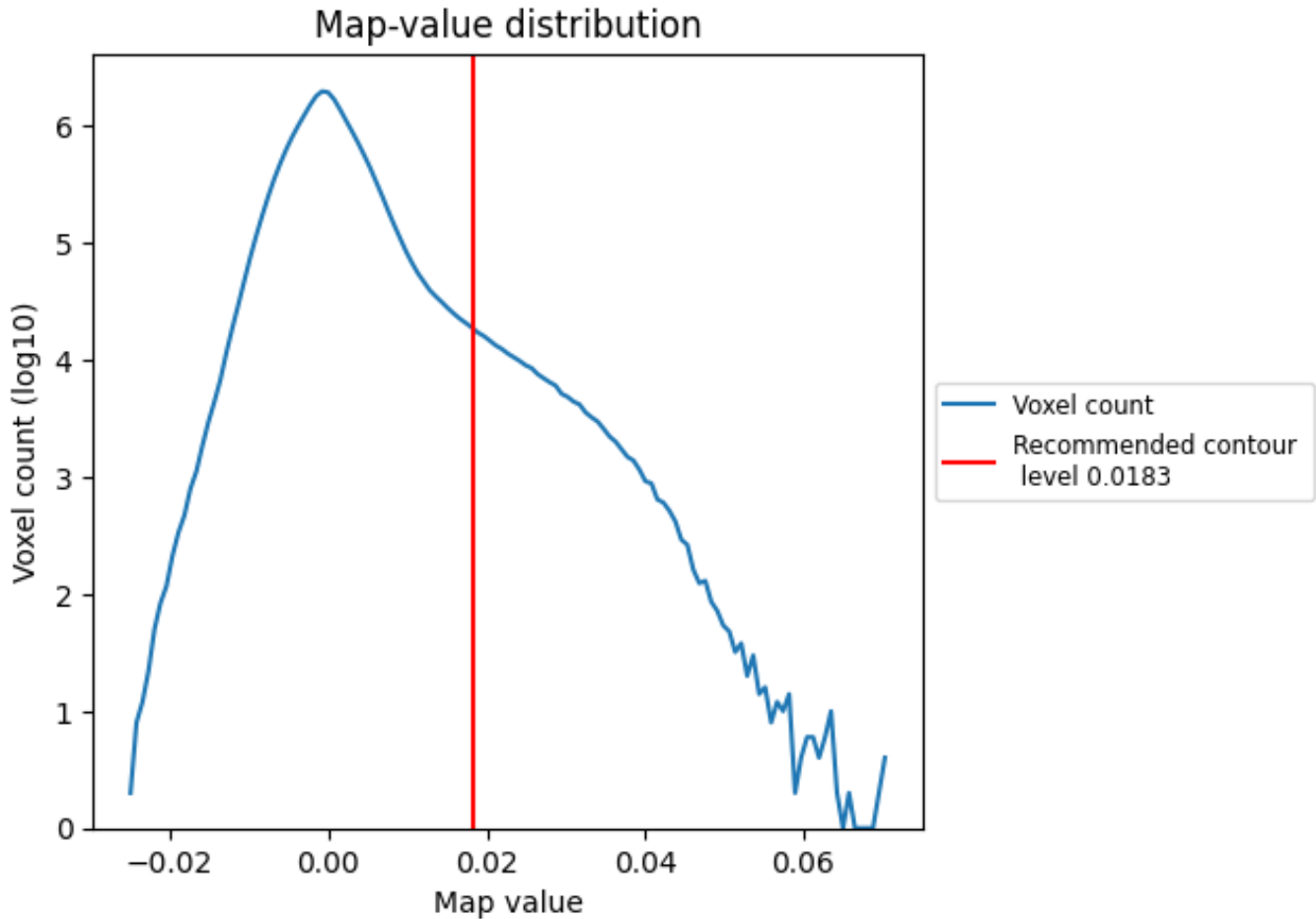
## 6.5 Mask visualisation

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

## 7 Map analysis [i](#)

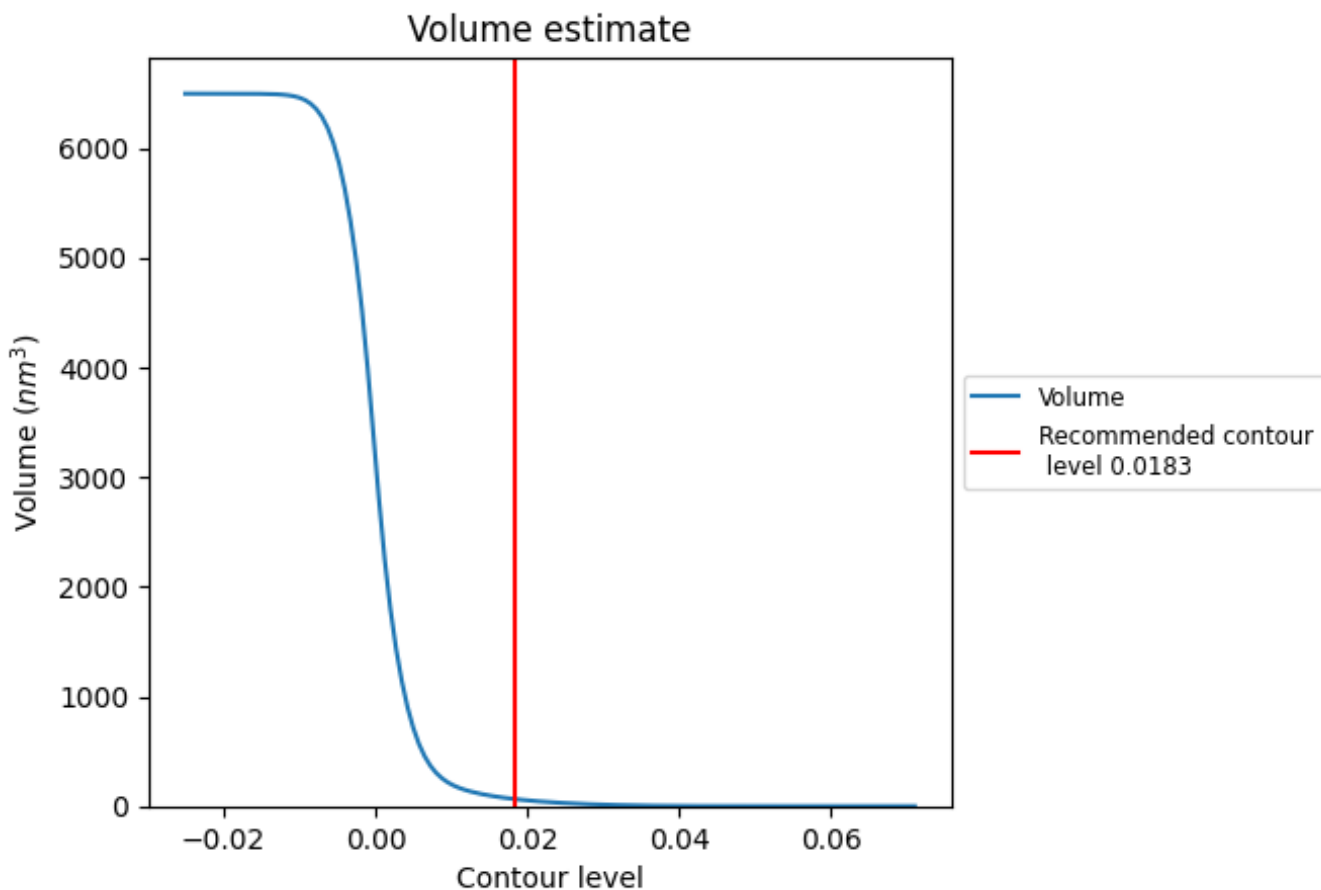
This section contains the results of statistical analysis of the map.

### 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.

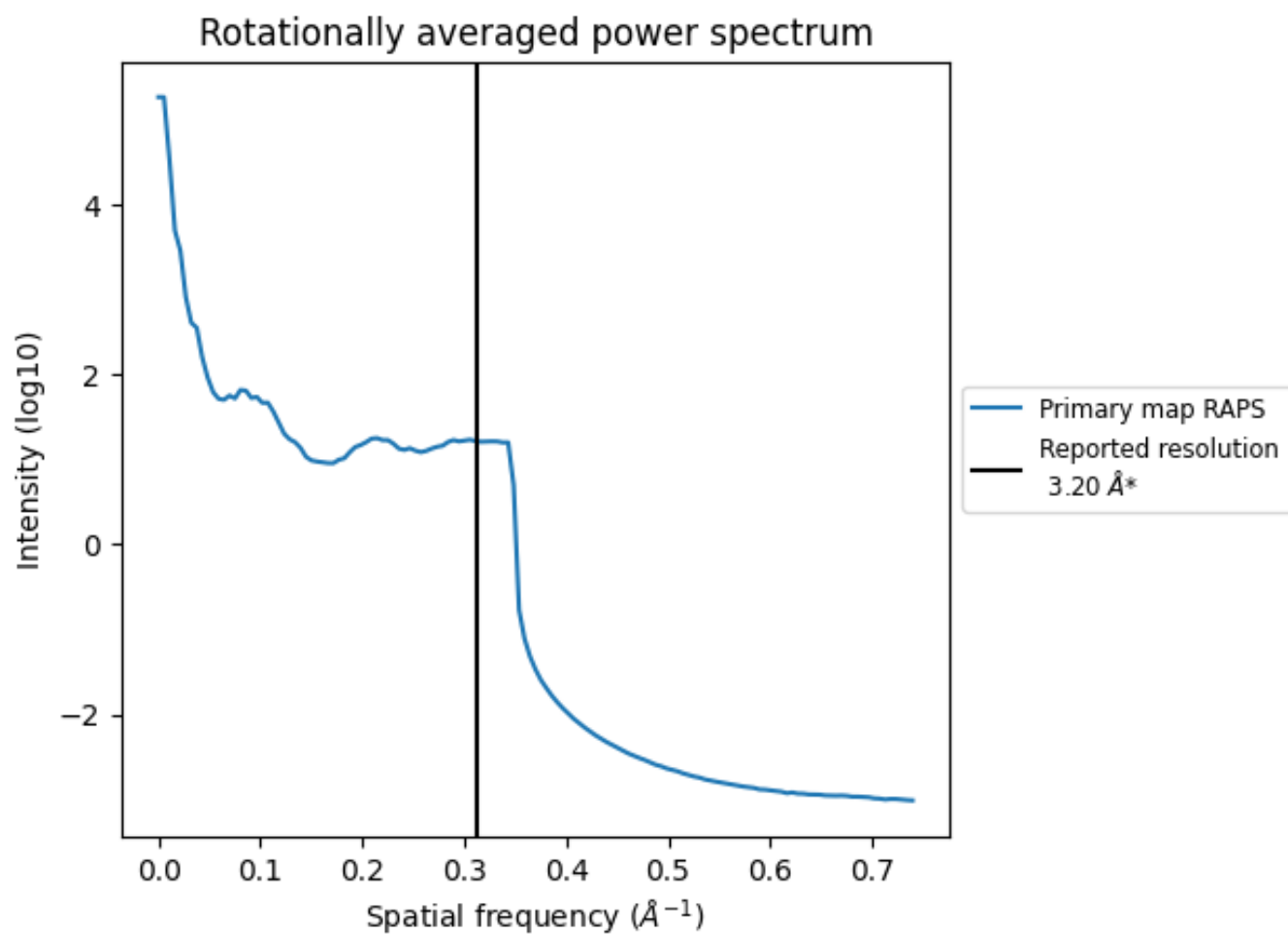
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 65 nm<sup>3</sup>; this corresponds to an approximate mass of 59 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  $0.312 \text{\AA}^{-1}$

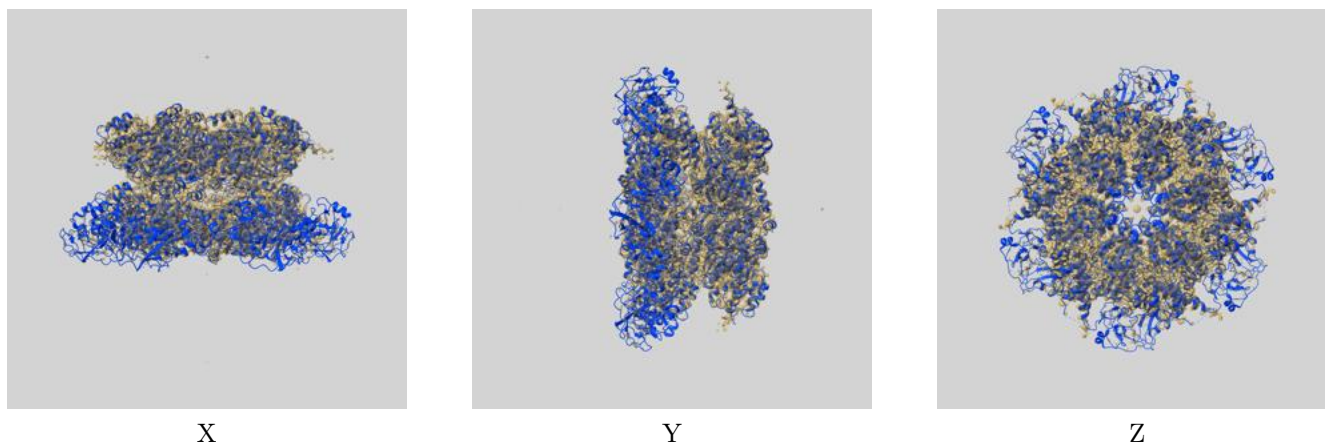
## 8 Fourier-Shell correlation

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

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

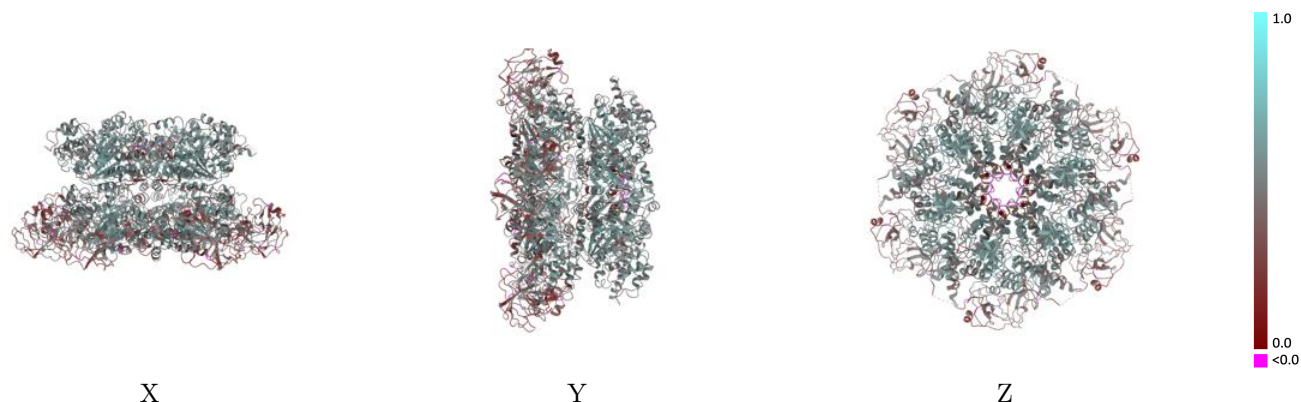
This section contains information regarding the fit between EMDB map EMD-3298 and PDB model 5FTM. Per-residue inclusion information can be found in section [3](#) on page [6](#).

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



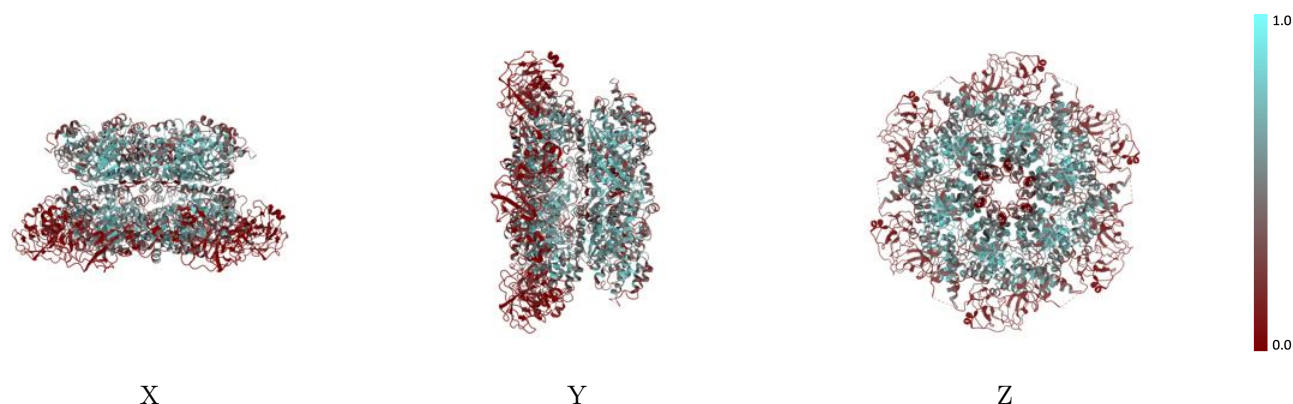
The images above show the 3D surface view of the map at the recommended contour level 0.0183 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



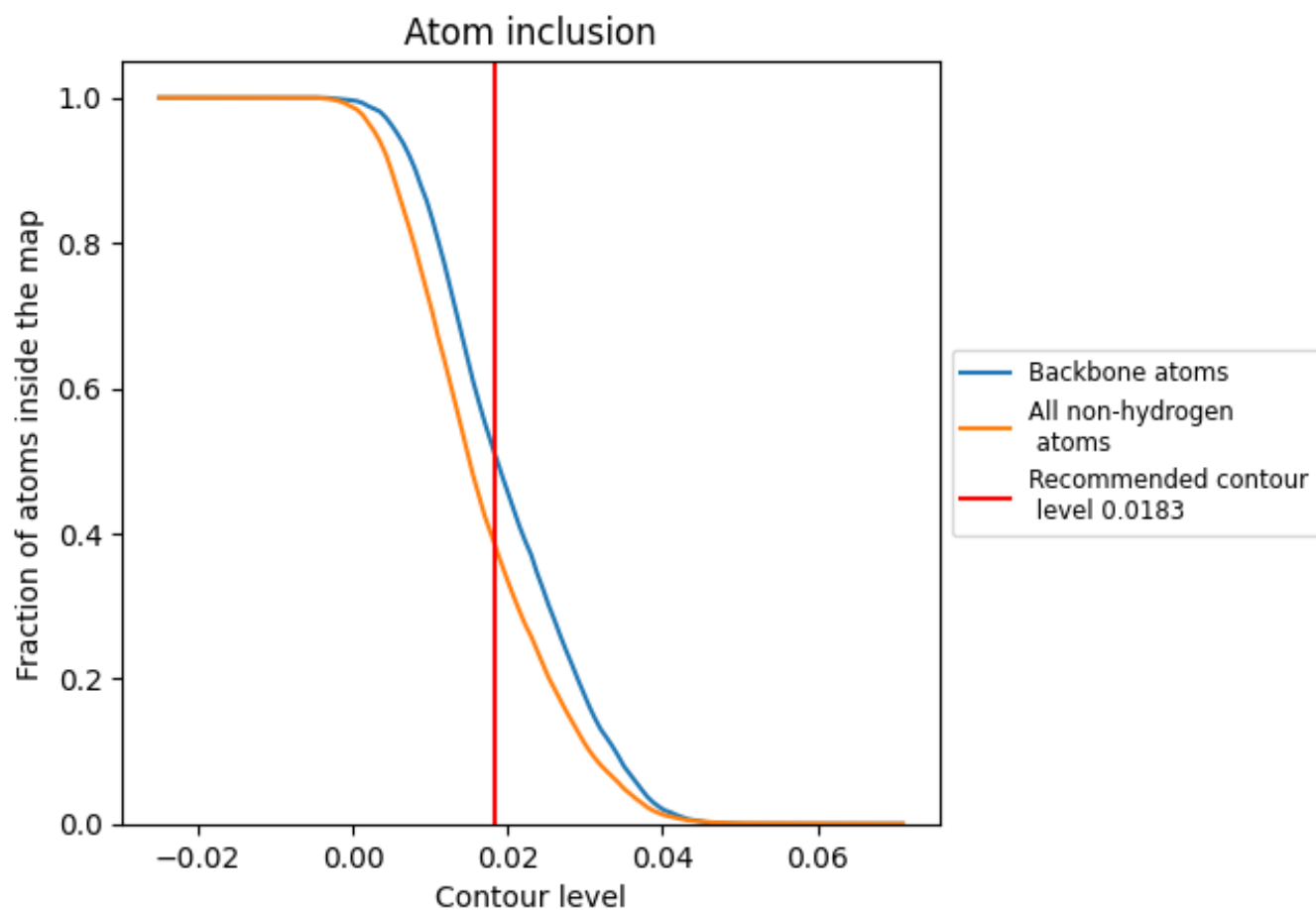
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.0183).

## 9.4 Atom inclusion [i](#)

















At the recommended contour level, 51% of all backbone atoms, 38% of all non-hydrogen atoms, are inside the map.



## 9.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (0.0183) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.3849	 0.4570
A	 0.3838	 0.4570
B	 0.3855	 0.4570
C	 0.3857	 0.4560
D	 0.3838	 0.4560
E	 0.3852	 0.4570
F	 0.3857	 0.4580

