



Full wwPDB EM Validation Report ⓘ

Sep 10, 2026 – 04:16 PM EDT

PDB ID : 9ZNA / pdb_00009zna
EMDB ID : EMD-74441
Title : Structure of rabbit RyR1 complexed with FKBP12.6, calmodulin, ADP, 4-chloro-m-cresol, caffeine, and Mg²⁺
Authors : Kim, K.; Clarke, O.B.
Deposited on : 2025-12-12
Resolution : 2.37 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

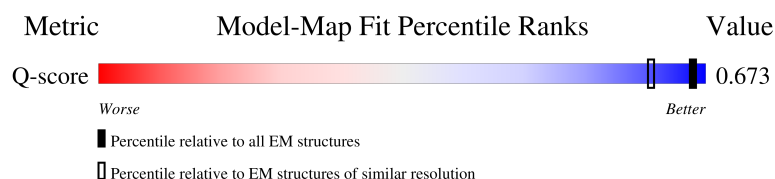
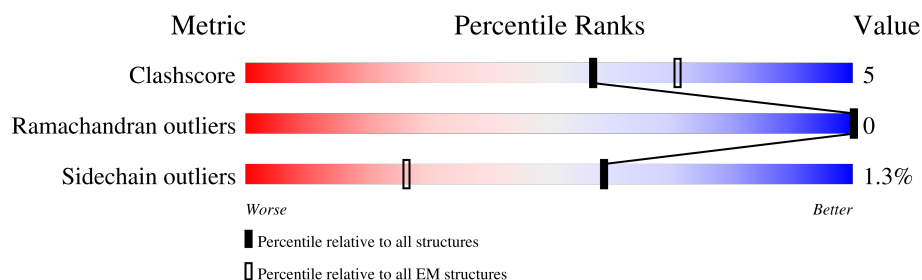
EMDB validation analysis : 0.0.1.dev133
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.50

1 Overall quality at a glance

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

The reported resolution of this entry is 2.37 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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	4742 (1.87 - 2.87)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	E	107	 78% 22%
1	F	107	 79% 21%
1	G	107	 78% 22%
1	H	107	 78% 22%

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Mol	Chain	Length	Quality of chain
2	I	148	35% 93% 7%
2	J	148	35% 92% 8%
2	K	148	36% 89% 11%
2	L	148	35% 90% 10%
3	A	5037	7% 73% 11% 16%
3	B	5037	7% 73% 11% 16%
3	C	5037	7% 73% 11% 16%
3	D	5037	6% 73% 11% 16%

2 Entry composition

There are 10 unique types of molecules in this entry. The entry contains 148682 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 Peptidyl-prolyl cis-trans isomerase FKBP1B.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	E	107	Total	C	N	O	S	0	0
			819	516	144	155	4		
1	F	107	Total	C	N	O	S	0	0
			819	516	144	155	4		
1	G	107	Total	C	N	O	S	0	0
			819	516	144	155	4		
1	H	107	Total	C	N	O	S	0	0
			819	516	144	155	4		

- Molecule 2 is a protein called Calmodulin-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	I	148	Total	C	N	O	S	0	0
			1017	624	174	213	6		
2	J	148	Total	C	N	O	S	0	0
			1017	624	174	213	6		
2	K	148	Total	C	N	O	S	0	0
			1017	624	174	213	6		
2	L	148	Total	C	N	O	S	0	0
			1017	624	174	213	6		

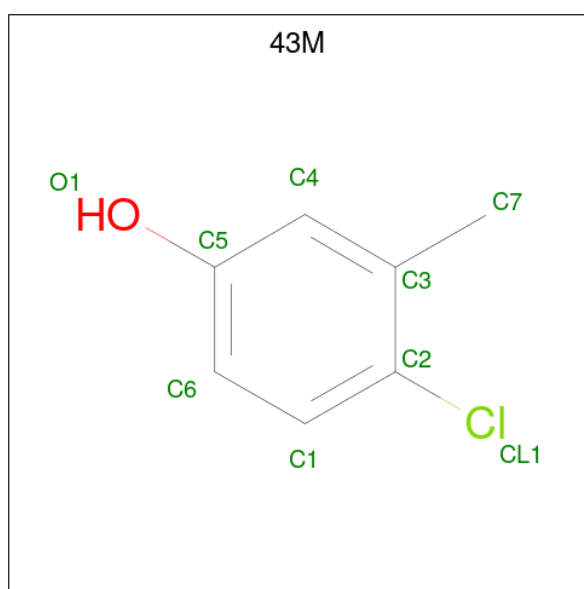
There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
I	-1	HIS	-	expression tag	UNP P0DP23
J	-1	HIS	-	expression tag	UNP P0DP23
K	-1	HIS	-	expression tag	UNP P0DP23
L	-1	HIS	-	expression tag	UNP P0DP23

- Molecule 3 is a protein called Ryanodine receptor 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	A	4249	Total	C	N	O	S	2	0
			33891	21593	5830	6234	234		
3	B	4249	Total	C	N	O	S	2	0
			33891	21593	5830	6234	234		
3	C	4249	Total	C	N	O	S	2	0
			33891	21593	5830	6234	234		
3	D	4249	Total	C	N	O	S	2	0
			33891	21593	5830	6234	234		

- Molecule 4 is 4-CHLORO-3-METHYLPHENOL (CCD ID: 43M) (formula: C_7H_7ClO) (labeled as "Ligand of Interest" by depositor).



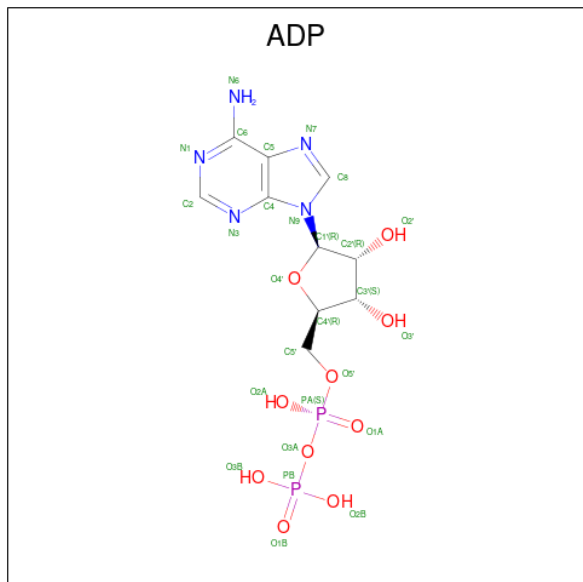
Mol	Chain	Residues	Atoms				AltConf
4	A	1	Total	C	Cl	O	0
			9	7	1	1	
4	A	1	Total	C	Cl	O	0
			9	7	1	1	
4	A	1	Total	C	Cl	O	0
			9	7	1	1	
4	B	1	Total	C	Cl	O	0
			9	7	1	1	
4	B	1	Total	C	Cl	O	0
			9	7	1	1	
4	B	1	Total	C	Cl	O	0
			9	7	1	1	
4	C	1	Total	C	Cl	O	0
			9	7	1	1	

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Mol	Chain	Residues	Atoms				AltConf
4	C	1	Total	C	Cl	O	0
			9	7	1	1	
4	C	1	Total	C	Cl	O	0
			9	7	1	1	
4	D	1	Total	C	Cl	O	0
			9	7	1	1	
4	D	1	Total	C	Cl	O	0
			9	7	1	1	
4	D	1	Total	C	Cl	O	0
			9	7	1	1	

- Molecule 5 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$) (labeled as "Ligand of Interest" by depositor).



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

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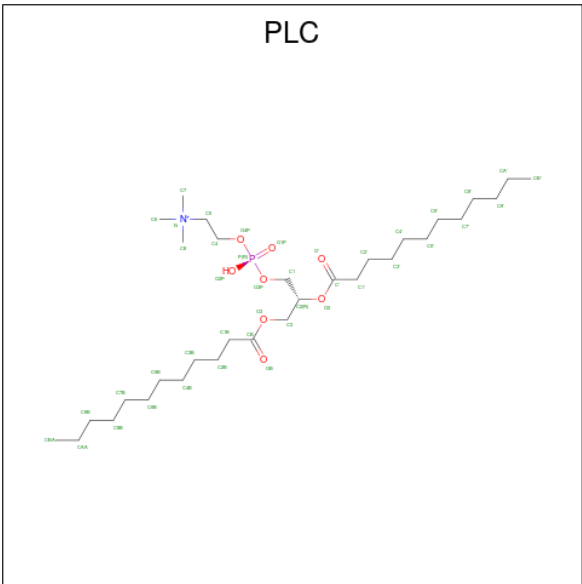
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Mol	Chain	Residues	Atoms					AltConf
5	C	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	C	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	C	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	D	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	D	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	D	1	Total	C	N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

- Molecule 6 is ZINC ION (CCD ID: ZN) (formula: Zn).

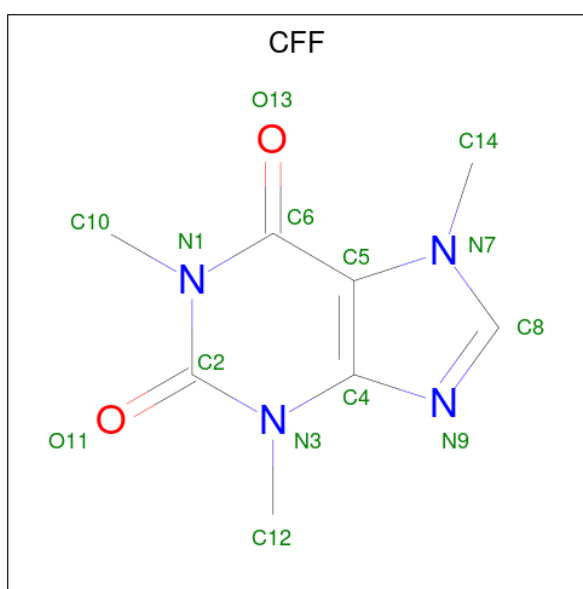
Mol	Chain	Residues	Atoms		AltConf
6	A	1	Total	Zn	0
			1	1	
6	B	1	Total	Zn	0
			1	1	
6	C	1	Total	Zn	0
			1	1	
6	D	1	Total	Zn	0
			1	1	

- Molecule 7 is DIUNDECYL PHOSPHATIDYL CHOLINE (CCD ID: PLC) (formula: C₃₂H₆₅NO₈P).



Mol	Chain	Residues	Atoms					AltConf
7	A	1	Total	C	N	O	P	0
			42	32	1	8	1	
7	B	1	Total	C	N	O	P	0
			42	32	1	8	1	
7	C	1	Total	C	N	O	P	0
			42	32	1	8	1	
7	D	1	Total	C	N	O	P	0
			42	32	1	8	1	

- Molecule 8 is CAFFEINE (CCD ID: CFF) (formula: $C_8H_{10}N_4O_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
8	A	1	Total	C	N	O	0
			14	8	4	2	
8	B	1	Total	C	N	O	0
			14	8	4	2	
8	C	1	Total	C	N	O	0
			14	8	4	2	
8	D	1	Total	C	N	O	0
			14	8	4	2	

- Molecule 9 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

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

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Mol	Chain	Residues	Atoms		AltConf
9	B	1	Total 1	Mg 1	0
9	C	1	Total 1	Mg 1	0
9	D	1	Total 1	Mg 1	0

- Molecule 10 is water.

Mol	Chain	Residues	Atoms		AltConf
10	E	25	Total 25	O 25	0
10	I	62	Total 62	O 62	0
10	J	71	Total 71	O 71	0
10	K	64	Total 64	O 64	0
10	L	72	Total 72	O 72	0
10	F	24	Total 24	O 24	0
10	G	24	Total 24	O 24	0
10	H	24	Total 24	O 24	0
10	A	1182	Total 1182	O 1182	0
10	B	1192	Total 1192	O 1192	0
10	C	1183	Total 1183	O 1183	0
10	D	1187	Total 1187	O 1187	0

3 Residue-property plots [i](#)

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

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

Chain E:  78% 22%



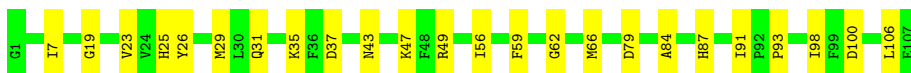
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

Chain F:  79% 21%



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

Chain G:  78% 22%



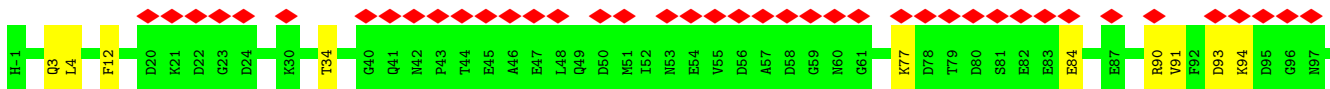
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

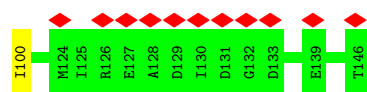
Chain H:  78% 22%



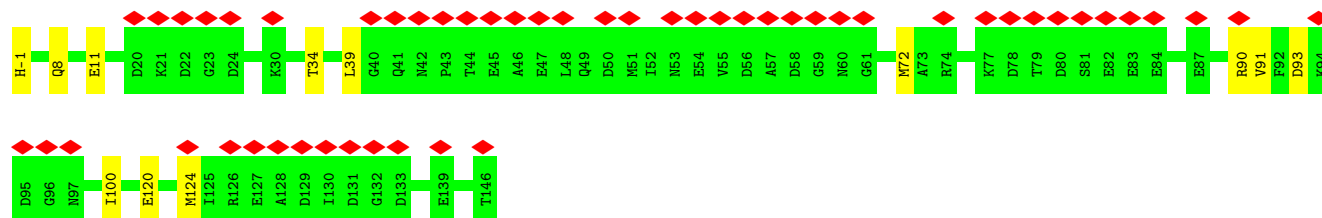
- Molecule 2: Calmodulin-1

Chain I:  35% 93% 7%

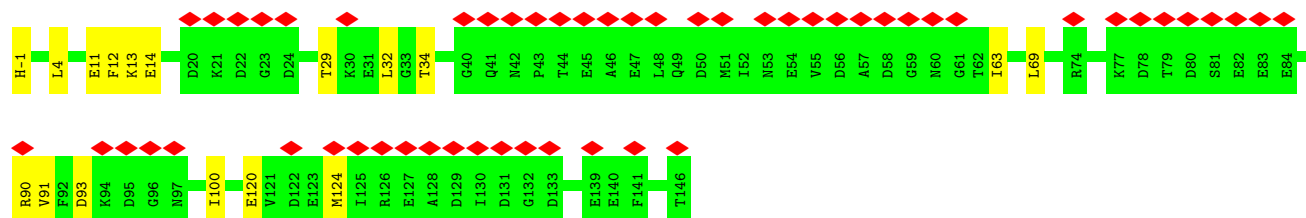
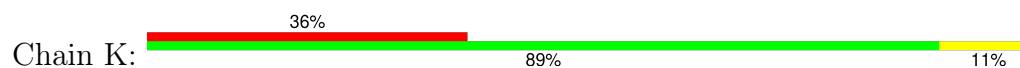




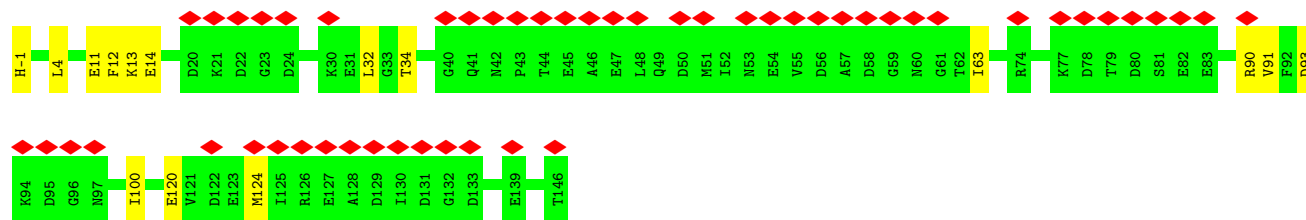
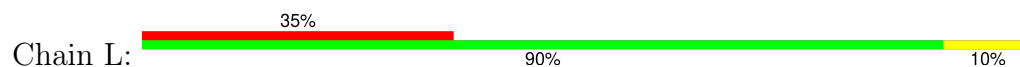
• Molecule 2: Calmodulin-1



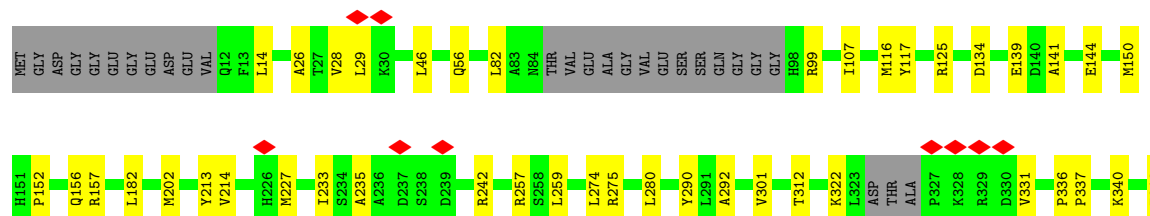
• Molecule 2: Calmodulin-1



• Molecule 2: Calmodulin-1



• Molecule 3: Ryanodine receptor 1





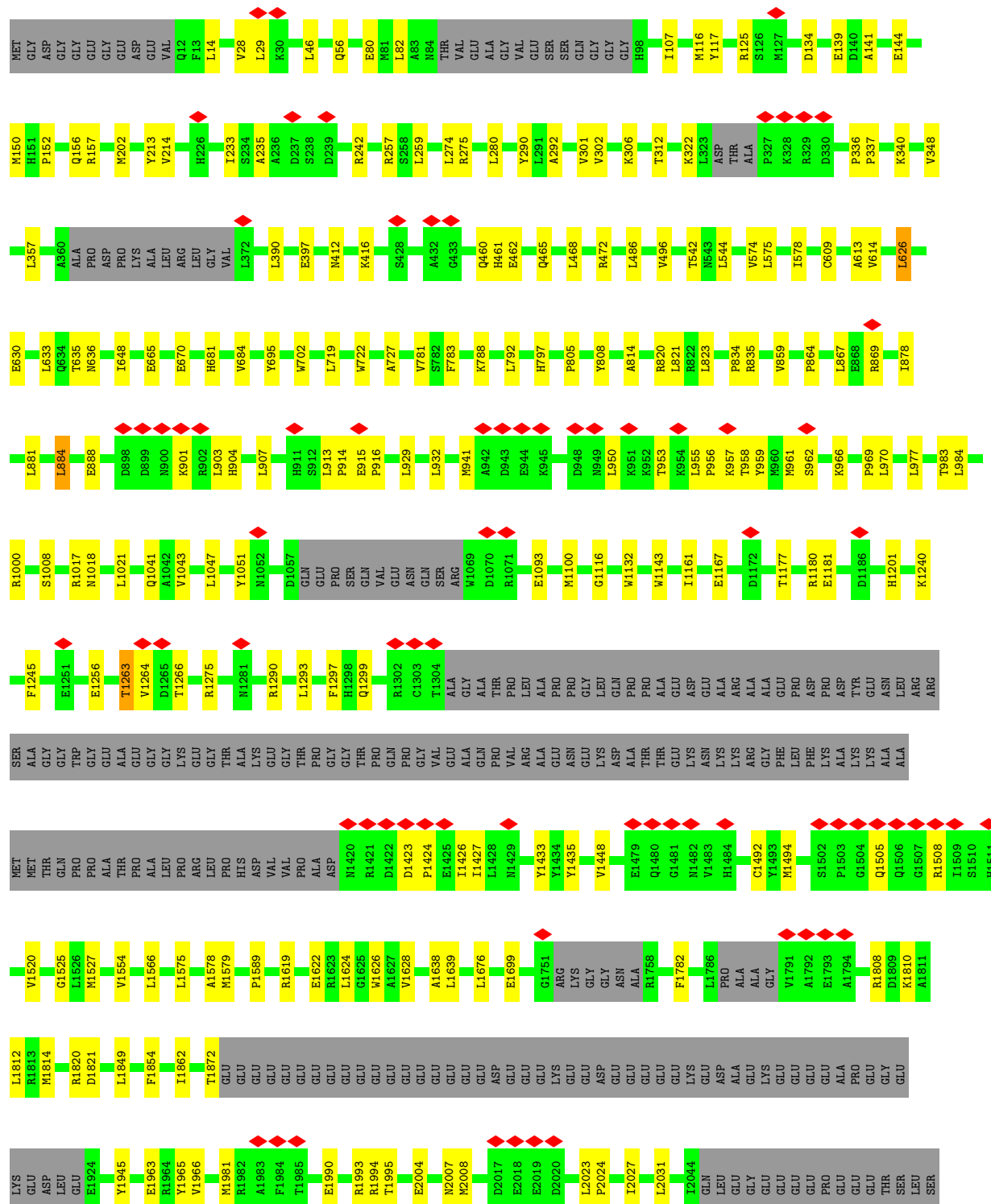




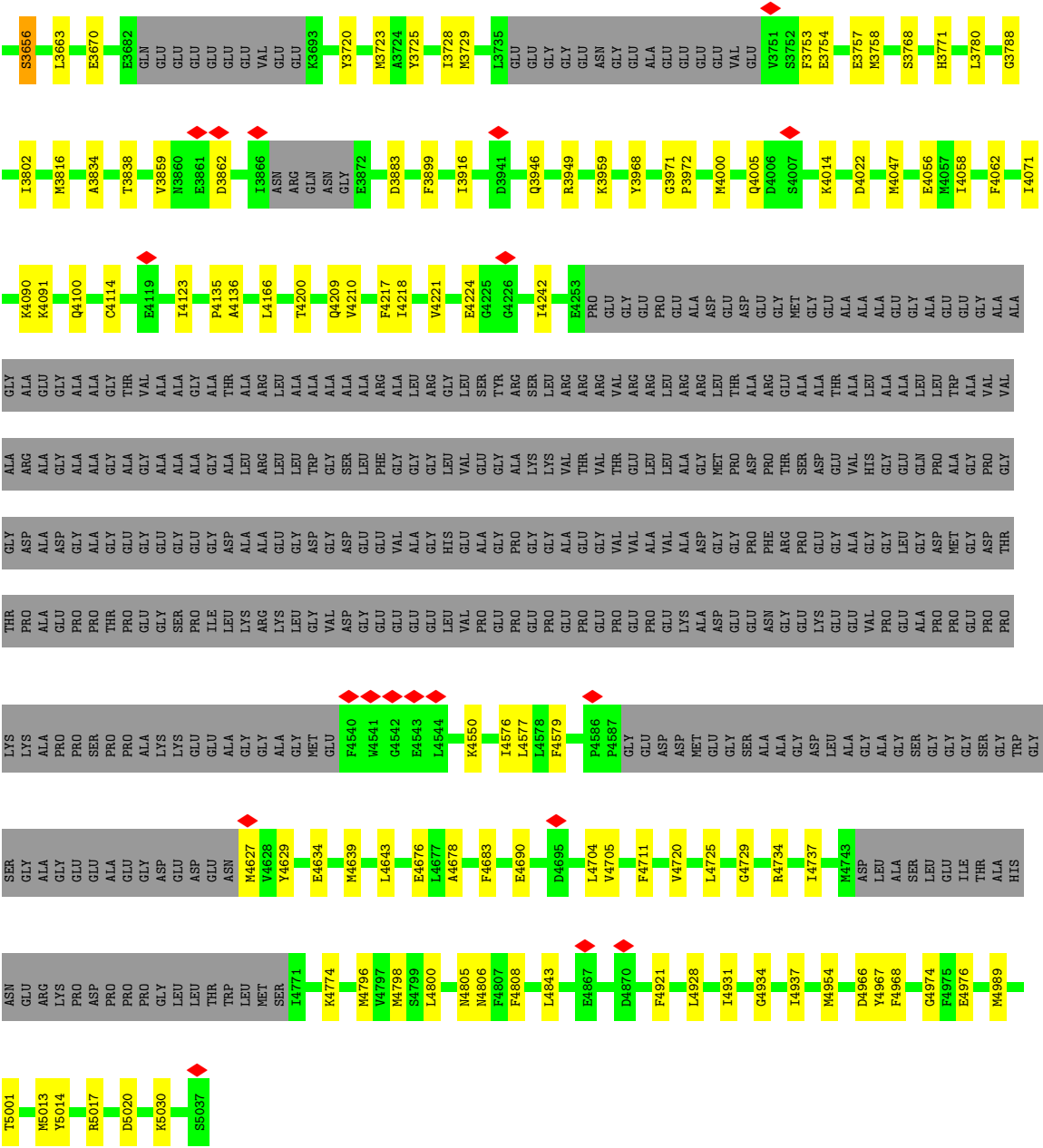




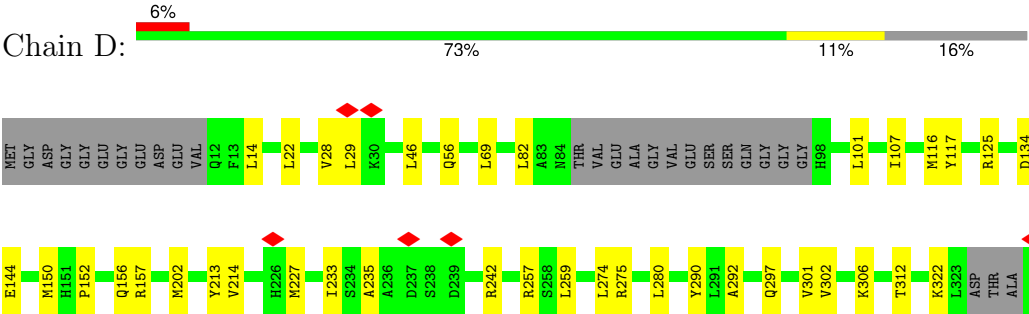
• Molecule 3: Ryanodine receptor 1



Y3540	F3435	L3316	V3125	F2973	K2887	LYS	Y2777	F2526	I2380	R2199	SER
K3543	R3436	L3327	T3132	V2980	G2888	THR	G2778	L2527	P2395	T2206	ARG
L3553	M3437	G3328	L3136	V2981	G2889	ARG	E2779	D2537	GLY	V2207	LEU
Q3554	R3453	I3329	L3137	S2982	G2900	LYS	N2780	M2546	VAL	M2208	SER
L3557	E3463	A3332	D3155	S2983	T2901	ILE	V2781	A2566	ARG	E2209	LEU
K3562	E3464	T3333	D3160	G2984	H2902	SER	D2782	A2566	ASP	V2210	LEU
V3563	M3465	W3334	D3160	G2985	P2903	GLN	E2783	F2569	ARG	G2216	THR
E3564	M3466	M3335	T3168	V2986	L2904	THR	E2784	H2574	ARG	GLY	VAL
S3568	S3467	A3342	L3175	E2987	L2905	TYR	K2786	R2575	ARG	GLY	ARG
K3571	T3471	F3341	L3175	K2988	V2906	ASP	T2787	M2578	GLY	THR	LEU
Q3572	ALA	I3345	L3190	I2986	D2909	PRO	VAL	H2578	GLY	LYS	LYS
K3572	ASP	T3346	V3203	L3003	P2907	ARG	ASP	M2582	GLY	I2223	LYS
M3573	SER	S3347	V3203	P3004	T2910	GLU	ALA	L2583	GLU	M2228	GLU
R3577	SER	R3348	Q3209	K3023	L2911	GLY	GLY	H2584	PRO	R2244	LYS
R3582	LYS	L3354	L3210	V3024	T2912	THR	H2734	R2588	GLU	S2249	GLU
GLU	NET	L3365	N3214	V3024	L2913	LYS	D2735	G2592	M2423	H2253	LEU
ASP	ALA	L3368	R3225	K3034	A2913	THR	P2737	K2597	M2440	Y2256	ALA
ALA	LYS	R3371	T3229	E3035	E2915	ASP	R2738	A2598	Q2444	S2261	ALA
D3587	GLY	K3371	L3246	K3036	K2916	GLY	P2739	Q2599	L2466	GLY	LYS
D3588	GLN	E3377	R3247	E3037	R2918	THR	E2741	I2603	L2466	ILE	LYS
P3589	SER	Q3378	R3248	M3038	D2919	LYS	T2742	E2604	L2470	GLY	LYS
L3603	GLY	L3379	R3248	I3039	R2920	THR	L2743	M2608	Q2475	LEU	LYS
Y3604	GLY	E3379	E3265	L3056	E2921	LYS	H2744	L2626	Q2268	GLY	LYS
E3607	GLY	R3380	E3270	I3070	K2922	THR	V2745	L2627	Q2268	GLY	LYS
Q3608	GLY	L3381	L3274	M3081	A2923	LYS	I2746	I2632	L2273	L2116	LYS
R3611	THR	E3382	L3274	K3089	Q2924	LYS	P2748	F2636	C2310	L2135	LYS
P3612	LYS	A3383	L3277	L3092	E2925	LYS	E2749	M2639	L2313	E2150	LYS
TTR	LYS	K3384	L3277	L3092	L2926	LYS	K2750	L2642	L2313	Q2161	LYS
LYS	LYS	A3385	L3281	L3092	L2927	LYS	L2751	L2642	D2320	L2165	LYS
SER	ARG	E3386	L3281	L3092	L2927	LYS	D2752	L2643	R2330	L2166	LYS
LYS	ARG	A3387	L3281	L3092	L2927	LYS	S2753	L2644	D2333	Q2169	LYS
LYS	ARG	E3388	L3281	L3092	L2927	LYS	L2755	L2678	R2336	E2175	LYS
LYS	ARG	E3389	L3281	L3092	L2927	LYS	M2756	F2679	R2369	E2176	LYS
ALA	ARG	G3390	L3281	L3092	L2927	LYS	F2758	K2690	R2369	L2177	LYS
VAL	ARG	E3391	L3281	L3092	L2927	LYS	A2759	Y2691	F2364	M2178	LYS
TRP	ARG	L3392	L3281	L3092	L2927	LYS	E2760	D2692	A2367	L2182	LYS
HIS	ARG	L3392	L3281	L3092	L2927	LYS	L2761	L2695	L2368	M2186	LYS
LYS	ARG	L3401	L3281	L3092	L2927	LYS	T2762	M2698	L2376	K2189	LYS
LEU	ARG	L3401	L3281	L3092	L2927	LYS	H2763	A2699	A2379		
L3624	ARG	L3405	L3281	L3092	L2927	LYS	E2764	M2700			
A3631	ARG	Y3406	L3281	L3092	L2927	LYS	K2765	D2523			
M3638	ARG	A3407	L3281	L3092	L2927	LYS	W2766	V2524			
L3412	ARG	L3412	L3281	L3092	L2927	LYS	F2768	G2525			
R3648	ARG	L3413	L3281	L3092	L2927	LYS	D2769				
A3649	ARG	L3414	L3281	L3092	L2927	LYS	K2770				
C3650	ARG	Y3415	L3281	L3092	L2927	LYS	Q2772				
N3651	ARG	V3416	L3281	L3092	L2927	LYS	N2773				
N3652	ARG	R3420	L3281	L3092	L2927	LYS	N2774				
		L3434	L3281	L3092	L2927	LYS	W2775				
			L3281	L3092	L2927	LYS	S2776				



● Molecule 3: Ryanodine receptor 1









4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C4	Depositor
Number of particles used	294178	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	58	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	6.049	Depositor
Minimum map value	0.000	Depositor
Average map value	0.014	Depositor
Map value standard deviation	0.117	Depositor
Recommended contour level	0.6	Depositor
Map size (Å)	498.0, 498.0, 498.0	wwPDB
Map dimensions	600, 600, 600	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.83, 0.83, 0.83	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: PLC, CFF, 43M, MG, ADP, ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	E	0.19	0/835	0.34	0/1123
1	F	0.19	0/835	0.34	0/1123
1	G	0.19	0/835	0.34	0/1123
1	H	0.19	0/835	0.34	0/1123
2	I	0.13	0/1026	0.30	0/1386
2	J	0.13	0/1026	0.27	0/1386
2	K	0.13	0/1026	0.29	0/1386
2	L	0.13	0/1026	0.30	0/1386
3	A	0.19	0/34653	0.33	3/46920 (0.0%)
3	B	0.19	0/34653	0.33	2/46920 (0.0%)
3	C	0.20	0/34653	0.36	6/46920 (0.0%)
3	D	0.19	0/34653	0.32	0/46920
All	All	0.19	0/146056	0.33	11/197716 (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
3	A	0	1
3	B	0	1
All	All	0	2

There are no bond length outliers.

All (11) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	4690	GLU	CG-CD-OE2	-18.53	75.78	118.40
3	C	4690	GLU	CG-CD-OE1	17.23	158.03	118.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	4690	GLU	OE1-CD-OE2	-15.40	85.95	122.90
3	C	3608	GLN	CB-CG-CD	-7.65	99.59	112.60
3	A	3607	GLU	CA-C-N	-7.03	109.62	120.31
3	A	3607	GLU	C-N-CA	-7.03	109.62	120.31
3	B	3607	GLU	CA-C-N	-7.02	109.64	120.31
3	B	3607	GLU	C-N-CA	-7.02	109.64	120.31
3	C	3607	GLU	CA-C-N	-7.00	109.68	120.31
3	C	3607	GLU	C-N-CA	-7.00	109.68	120.31
3	A	961	MET	CB-CG-SD	-6.76	92.43	112.70

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	A	3608	GLN	Sidechain
3	B	3608	GLN	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	E	819	0	824	13	0
1	F	819	0	824	11	0
1	G	819	0	824	13	0
1	H	819	0	824	13	0
2	I	1017	0	841	7	0
2	J	1017	0	841	7	0
2	K	1017	0	841	11	0
2	L	1017	0	841	9	0
3	A	33891	0	33518	324	0
3	B	33891	0	33518	332	0
3	C	33891	0	33518	338	0
3	D	33891	0	33518	324	0
4	A	27	0	18	2	0
4	B	27	0	18	1	0
4	C	27	0	18	2	0
4	D	27	0	18	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	A	81	0	36	0	0
5	B	81	0	36	0	0
5	C	81	0	36	0	0
5	D	81	0	36	0	0
6	A	1	0	0	0	0
6	B	1	0	0	0	0
6	C	1	0	0	0	0
6	D	1	0	0	0	0
7	A	42	0	64	2	0
7	B	42	0	64	1	0
7	C	42	0	64	3	0
7	D	42	0	64	1	0
8	A	14	0	8	0	0
8	B	14	0	8	0	0
8	C	14	0	8	1	0
8	D	14	0	8	0	0
9	A	1	0	0	0	0
9	B	1	0	0	0	0
9	C	1	0	0	0	0
9	D	1	0	0	0	0
10	A	1182	0	0	2	0
10	B	1192	0	0	1	0
10	C	1183	0	0	1	0
10	D	1187	0	0	2	0
10	E	25	0	0	0	0
10	F	24	0	0	0	0
10	G	24	0	0	0	0
10	H	24	0	0	0	0
10	I	62	0	0	0	0
10	J	71	0	0	0	0
10	K	64	0	0	0	0
10	L	72	0	0	0	0
All	All	148682	0	141236	1368	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 5.

All (1368) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:2782:ASP:HB3	3:B:2785:LEU:HD22	1.40	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2782:ASP:HB3	3:A:2785:LEU:HD22	1.40	1.00
3:B:907:LEU:HB3	3:B:961:MET:HE1	1.52	0.92
3:D:907:LEU:HB3	3:D:961:MET:HE1	1.56	0.88
3:A:4091:LYS:H	3:A:4091:LYS:HE2	1.39	0.87
3:C:2178:MET:HE3	3:C:2210:VAL:HG11	1.56	0.86
3:D:4091:LYS:HE2	3:D:4091:LYS:H	1.39	0.85
3:B:4005:GLN:HA	3:B:4114:CYS:HA	1.58	0.84
3:A:4005:GLN:HA	3:A:4114:CYS:HA	1.59	0.84
3:C:4005:GLN:HA	3:C:4114:CYS:HA	1.60	0.83
3:D:4005:GLN:HA	3:D:4114:CYS:HA	1.60	0.82
3:D:2175:GLU:HG3	3:D:2228:MET:HB2	1.64	0.79
3:B:4091:LYS:HE2	3:B:4091:LYS:H	1.47	0.78
3:A:2175:GLU:HG3	3:A:2228:MET:HB2	1.65	0.78
3:B:2175:GLU:HG3	3:B:2228:MET:HB2	1.65	0.78
3:C:2175:GLU:HG3	3:C:2228:MET:HB2	1.65	0.78
3:A:915:GLU:HG2	3:A:916:PRO:HD3	1.66	0.78
3:B:915:GLU:HG2	3:B:916:PRO:HD3	1.66	0.78
3:A:887:ILE:HD11	3:A:961:MET:HE2	1.67	0.77
3:C:915:GLU:HG2	3:C:916:PRO:HD3	1.66	0.76
3:D:3329:ILE:HD11	3:D:3332:ALA:HB2	1.67	0.76
3:D:2178:MET:HE3	3:D:2210:VAL:HG11	1.69	0.75
3:B:2178:MET:HE3	3:B:2210:VAL:HG11	1.69	0.74
3:B:3329:ILE:HD11	3:B:3332:ALA:HB2	1.71	0.73
3:D:4821:LYS:HE2	3:D:4824:ARG:HH12	1.54	0.72
3:A:633:LEU:HD13	3:A:1639:LEU:HD21	1.72	0.71
3:D:633:LEU:HD13	3:D:1639:LEU:HD21	1.72	0.71
3:C:633:LEU:HD13	3:C:1639:LEU:HD21	1.72	0.71
3:C:3081:MET:HE3	3:C:3092:LEU:HD23	1.72	0.71
3:B:4242:ILE:HG13	3:B:4989:MET:HE1	1.71	0.70
3:C:3329:ILE:HD11	3:C:3332:ALA:HB2	1.72	0.70
3:C:4242:ILE:HG13	3:C:4989:MET:HE1	1.72	0.70
3:A:3329:ILE:HD11	3:A:3332:ALA:HB2	1.71	0.70
3:B:633:LEU:HD13	3:B:1639:LEU:HD21	1.72	0.70
3:B:2902:HIS:HB3	3:B:2905:LEU:HB2	1.73	0.70
3:B:2904:LEU:HD21	3:B:2915:GLU:HG3	1.74	0.69
3:C:2519:LEU:HD22	3:C:2578:MET:HE1	1.74	0.69
3:C:2165:LEU:HD12	3:C:2178:MET:HE2	1.75	0.69
3:C:3638:MET:HE1	3:C:3862:ASP:HA	1.74	0.69
3:B:3081:MET:HE3	3:B:3092:LEU:HD23	1.75	0.69
3:D:3379:LEU:HD11	3:D:3390:GLY:HA3	1.75	0.68
3:B:4648:LEU:HD23	3:B:4803:HIS:HE1	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2904:LEU:HD21	3:A:2915:GLU:HG3	1.75	0.67
3:B:3638:MET:HE1	3:B:3862:ASP:HA	1.75	0.67
3:A:2208:MET:HE1	3:A:2253:HIS:CG	2.30	0.67
3:A:2116:LEU:O	3:A:2120:MET:HG3	1.95	0.67
3:C:4071:ILE:HG12	3:C:4100:GLN:HG2	1.77	0.67
3:D:2116:LEU:O	3:D:2120:MET:HG3	1.95	0.67
3:A:3081:MET:HE3	3:A:3092:LEU:HD23	1.77	0.66
3:D:2890:LYS:O	3:D:2894:LEU:HD22	1.95	0.66
3:A:3638:MET:HE1	3:A:3862:ASP:HA	1.78	0.66
2:L:91:VAL:HG22	3:D:1981:MET:HE1	1.77	0.66
3:B:2597:LYS:HA	3:B:2597:LYS:HE2	1.78	0.66
3:C:3312:LEU:HD22	3:C:3348:ARG:HG3	1.76	0.66
3:B:322:LYS:HA	3:B:322:LYS:HE2	1.76	0.66
3:C:2902:HIS:HB3	3:C:2905:LEU:HB2	1.77	0.66
3:B:275:ARG:HG2	3:B:275:ARG:HH11	1.61	0.65
3:D:2904:LEU:HD21	3:D:2915:GLU:HG3	1.79	0.65
3:D:3312:LEU:HD22	3:D:3348:ARG:HG3	1.78	0.65
3:D:3638:MET:HE1	3:D:3862:ASP:HA	1.78	0.65
3:C:2208:MET:HE1	3:C:2253:HIS:CG	2.32	0.65
3:A:322:LYS:HE2	3:A:322:LYS:HA	1.76	0.65
3:C:275:ARG:HG2	3:C:275:ARG:HH11	1.62	0.65
3:B:2208:MET:HE1	3:B:2253:HIS:CG	2.32	0.65
3:C:322:LYS:HE2	3:C:322:LYS:HA	1.77	0.65
3:B:2116:LEU:O	3:B:2120:MET:HG3	1.97	0.65
3:A:275:ARG:HH11	3:A:275:ARG:HG2	1.62	0.65
3:A:4071:ILE:HG12	3:A:4100:GLN:HG2	1.78	0.65
3:B:2604:GLU:O	3:B:2608:MET:HG2	1.97	0.65
3:C:2116:LEU:O	3:C:2120:MET:HG3	1.97	0.65
3:B:670:GLU:HG3	3:B:788:LYS:HD2	1.78	0.65
3:D:275:ARG:HG2	3:D:275:ARG:HH11	1.62	0.65
3:D:2208:MET:HE1	3:D:2253:HIS:CG	2.32	0.65
2:J:91:VAL:HG22	3:B:1981:MET:HE1	1.79	0.64
2:I:91:VAL:HG22	3:A:1981:MET:HE1	1.80	0.64
3:B:4071:ILE:HG12	3:B:4100:GLN:HG2	1.80	0.64
3:D:322:LYS:HA	3:D:322:LYS:HE2	1.80	0.64
3:A:3379:LEU:HD11	3:A:3390:GLY:HA3	1.80	0.64
3:B:235:ALA:HA	3:B:257:ARG:HD3	1.80	0.64
3:C:4000:MET:HE1	3:C:4058:ILE:HG23	1.79	0.64
3:C:4091:LYS:HE2	3:C:4091:LYS:H	1.63	0.64
3:A:1180:ARG:HG3	3:A:1181:GLU:OE1	1.98	0.63
3:D:2165:LEU:HD12	3:D:2178:MET:HE2	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:2165:LEU:HD12	3:B:2178:MET:HE2	1.78	0.63
3:B:823:LEU:HD11	3:B:1626:TRP:HB3	1.81	0.63
3:B:1423:ASP:HB3	3:B:1426:ILE:HD13	1.80	0.63
3:B:1426:ILE:HD12	3:B:1426:ILE:H	1.62	0.63
3:A:2604:GLU:O	3:A:2608:MET:HG2	1.99	0.63
3:C:1426:ILE:H	3:C:1426:ILE:HD12	1.63	0.63
3:D:1505:GLN:HG3	3:D:1508:ARG:HH21	1.64	0.63
3:A:3312:LEU:HD22	3:A:3348:ARG:HG3	1.79	0.63
3:C:235:ALA:HA	3:C:257:ARG:HD3	1.80	0.62
3:C:1699:GLU:HG3	3:C:1810:LYS:HE3	1.81	0.62
3:D:235:ALA:HA	3:D:257:ARG:HD3	1.80	0.62
3:D:4704:LEU:HD23	3:D:4774:LYS:HE2	1.81	0.62
3:A:823:LEU:HD11	3:A:1626:TRP:HB3	1.80	0.62
3:B:2208:MET:HE3	3:B:2256:TYR:CD2	2.34	0.62
3:C:1423:ASP:HB3	3:C:1426:ILE:HD13	1.80	0.62
3:C:4805:ASN:HD22	7:C:5108:PLC:H12	1.62	0.62
3:B:3312:LEU:HD22	3:B:3348:ARG:HG3	1.80	0.62
3:D:4071:ILE:HG12	3:D:4100:GLN:HG2	1.82	0.62
3:A:1505:GLN:HG3	3:A:1508:ARG:HH21	1.64	0.62
3:D:823:LEU:HD11	3:D:1626:TRP:HB3	1.81	0.62
3:C:884:LEU:O	3:C:888:GLU:HG2	2.00	0.62
3:A:893:TYR:HB2	3:A:961:MET:SD	2.40	0.62
3:A:233:ILE:HD12	3:A:242:ARG:HB3	1.82	0.62
3:B:1505:GLN:HG3	3:B:1508:ARG:HH21	1.64	0.62
3:C:823:LEU:HD11	3:C:1626:TRP:HB3	1.82	0.62
3:B:3379:LEU:HD11	3:B:3390:GLY:HA3	1.82	0.61
3:A:235:ALA:HA	3:A:257:ARG:HD3	1.80	0.61
3:A:1426:ILE:HD12	3:A:1426:ILE:H	1.64	0.61
3:A:1810:LYS:HG2	3:A:1814:MET:HE2	1.82	0.61
3:C:1810:LYS:HG2	3:C:1814:MET:HE2	1.82	0.61
3:D:1699:GLU:HG3	3:D:1810:LYS:HE3	1.82	0.61
3:D:4000:MET:HE1	3:D:4058:ILE:HG23	1.82	0.61
3:A:2519:LEU:HD22	3:A:2578:MET:HE1	1.82	0.61
3:B:1699:GLU:HG3	3:B:1810:LYS:HE3	1.81	0.61
3:A:1423:ASP:HB3	3:A:1426:ILE:HD13	1.81	0.61
3:C:1505:GLN:HG3	3:C:1508:ARG:HH21	1.65	0.61
3:D:1810:LYS:HG2	3:D:1814:MET:HE2	1.83	0.61
3:A:82:LEU:HD13	3:A:144:GLU:HG2	1.82	0.61
3:C:869:ARG:HH21	3:C:941:MET:HE1	1.64	0.61
3:C:3034:LYS:O	3:C:3038:MET:HG3	2.01	0.61
3:A:1699:GLU:HG3	3:A:1810:LYS:HE3	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:233:ILE:HD12	3:D:242:ARG:HB3	1.82	0.60
3:D:1170:MET:HE3	3:D:1174:GLY:HA2	1.83	0.60
2:K:11:GLU:HA	2:K:14:GLU:HG2	1.83	0.60
3:A:4648:LEU:HD22	3:A:4803:HIS:HE1	1.65	0.60
3:A:2004:GLU:O	3:A:2008:MET:HG3	2.02	0.60
3:A:2879:ALA:HB1	3:A:2919:ASP:HB3	1.82	0.60
3:C:2690:LYS:HD3	3:C:2691:TYR:N	2.17	0.60
3:C:1619:ARG:HH12	3:C:1622:GLU:HG2	1.67	0.60
3:D:82:LEU:HD13	3:D:144:GLU:HG2	1.81	0.60
2:K:91:VAL:HG22	3:C:1981:MET:HE1	1.84	0.60
3:B:82:LEU:HD13	3:B:144:GLU:HG2	1.83	0.60
3:B:1810:LYS:HG2	3:B:1814:MET:HE2	1.83	0.60
3:B:2879:ALA:HB1	3:B:2919:ASP:HB3	1.83	0.60
3:B:233:ILE:HD12	3:B:242:ARG:HB3	1.82	0.59
3:D:2879:ALA:HB1	3:D:2919:ASP:HB3	1.84	0.59
1:H:23:VAL:HG22	1:H:47:LYS:HG2	1.85	0.59
3:C:2765:LYS:HZ1	3:C:2860:PRO:HD2	1.67	0.59
3:B:3081:MET:HE1	3:B:3089:LYS:HA	1.85	0.59
3:C:233:ILE:HD12	3:C:242:ARG:HB3	1.83	0.59
3:C:4704:LEU:HD23	3:C:4774:LYS:HE2	1.85	0.59
3:B:56:GLN:CD	3:B:56:GLN:H	2.11	0.59
3:C:56:GLN:H	3:C:56:GLN:CD	2.11	0.59
3:C:2692:ASP:HB3	3:C:2695:LEU:HB3	1.85	0.59
3:B:2690:LYS:HE2	3:B:2690:LYS:HA	1.84	0.59
3:C:82:LEU:HD13	3:C:144:GLU:HG2	1.82	0.59
3:D:2884:ASN:O	3:D:2888:ARG:HG2	2.03	0.59
3:C:2004:GLU:O	3:C:2008:MET:HG3	2.02	0.59
3:C:3534:MET:HE3	3:C:3534:MET:HA	1.85	0.59
1:E:23:VAL:HG22	1:E:47:LYS:HG2	1.85	0.58
1:F:23:VAL:HG22	1:F:47:LYS:HG2	1.85	0.58
3:D:3433:GLU:O	3:D:3437:MET:HG3	2.03	0.58
1:G:23:VAL:HG22	1:G:47:LYS:HG2	1.85	0.58
3:A:4704:LEU:HD23	3:A:4774:LYS:HE2	1.86	0.58
3:B:4704:LEU:HD23	3:B:4774:LYS:HE2	1.85	0.58
3:A:56:GLN:CD	3:A:56:GLN:H	2.12	0.58
3:B:2642:LYS:HB2	3:B:2698:MET:HE1	1.86	0.58
3:B:2816:MET:HA	3:B:2816:MET:HE3	1.85	0.58
3:B:2004:GLU:O	3:B:2008:MET:HG3	2.03	0.58
3:C:2135:LEU:HD21	3:C:3663:LEU:HD13	1.86	0.58
3:C:2208:MET:HE3	3:C:2256:TYR:CD2	2.39	0.58
3:D:56:GLN:CD	3:D:56:GLN:H	2.12	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2902:HIS:HB3	3:A:2905:LEU:HB2	1.86	0.57
3:B:4627:MET:HE1	3:B:4629:TYR:CE2	2.39	0.57
3:C:5013:MET:HE1	3:C:5020:ASP:HB2	1.84	0.57
2:I:84:GLU:OE2	3:A:3637:ARG:HD2	2.04	0.57
3:C:3754:GLU:O	3:C:3758:MET:HG2	2.04	0.57
3:B:2884:ASN:O	3:B:2888:ARG:HG2	2.04	0.57
2:L:91:VAL:HG11	3:D:1995:THR:HG21	1.86	0.57
3:A:2608:MET:HE1	3:A:2642:LYS:HG3	1.86	0.57
3:C:2333:ASP:HA	3:C:2336:ARG:HD3	1.86	0.57
3:A:3081:MET:HE1	3:A:3089:LYS:HA	1.86	0.57
3:A:2642:LYS:HB2	3:A:2698:MET:HE1	1.87	0.57
3:D:1990:GLU:O	3:D:1994:ARG:HG2	2.05	0.57
3:C:2886:TRP:HH2	3:C:2904:LEU:HB3	1.69	0.57
3:C:3603:LEU:O	3:C:3607:GLU:HG3	2.05	0.57
3:D:14:LEU:HD13	3:D:202:MET:HE2	1.87	0.57
3:D:2644:LEU:HD13	3:D:2678:LEU:HD21	1.86	0.57
3:D:2870:GLU:O	3:D:2874:MET:HG2	2.05	0.57
3:D:4805:ASN:HD22	7:D:5108:PLC:H12	1.69	0.57
3:A:4976:GLU:H	3:A:4976:GLU:CD	2.12	0.57
2:I:3:GLN:HG2	2:I:77:LYS:HD2	1.87	0.57
3:B:292:ALA:HB2	3:B:312:THR:HG22	1.87	0.57
3:C:1990:GLU:O	3:C:1994:ARG:HG2	2.03	0.57
3:B:2870:GLU:O	3:B:2874:MET:HG2	2.05	0.56
3:C:4976:GLU:CD	3:C:4976:GLU:H	2.12	0.56
3:C:2879:ALA:HB1	3:C:2919:ASP:HB3	1.86	0.56
3:D:2692:ASP:HB3	3:D:2695:LEU:HB3	1.88	0.56
3:A:46:LEU:HD11	3:A:134:ASP:HB3	1.87	0.56
3:A:292:ALA:HB2	3:A:312:THR:HG22	1.87	0.56
3:B:4976:GLU:CD	3:B:4976:GLU:H	2.12	0.56
3:C:292:ALA:HB2	3:C:312:THR:HG22	1.87	0.56
2:K:32:LEU:HD13	2:K:63:ILE:HD13	1.87	0.56
3:C:3959:LYS:HG3	3:C:4022:ASP:OD2	2.06	0.56
3:A:4805:ASN:HD22	7:A:5108:PLC:H12	1.71	0.56
3:D:2788:HIS:CE1	3:D:2791:LEU:HB2	2.41	0.56
3:A:2870:GLU:O	3:A:2874:MET:HG2	2.05	0.56
3:C:2870:GLU:O	3:C:2874:MET:HG2	2.06	0.56
3:C:2597:LYS:HE2	3:C:2597:LYS:HA	1.88	0.56
3:D:292:ALA:HB2	3:D:312:THR:HG22	1.87	0.56
3:D:3087:ILE:HD12	3:D:3088:VAL:HG23	1.87	0.56
1:E:31:GLN:HG2	3:A:1299:GLN:NE2	2.20	0.56
3:B:46:LEU:HD11	3:B:134:ASP:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:3132:THR:HA	3:C:3136:LEU:HB3	1.87	0.56
3:D:2166:LEU:HD11	3:D:2206:THR:HG23	1.88	0.56
3:D:3132:THR:HA	3:D:3136:LEU:HB3	1.87	0.56
2:L:32:LEU:HD13	2:L:63:ILE:HD13	1.88	0.56
3:D:2367:ALA:HB2	3:D:2379:ALA:HB2	1.88	0.56
3:D:3107:VAL:HG22	3:D:3175:LEU:HD11	1.87	0.56
3:C:1180:ARG:HG3	3:C:1181:GLU:OE1	2.06	0.56
3:D:4093:PHE:CZ	3:D:4097:MET:HE3	2.40	0.56
3:B:2608:MET:HE1	3:B:2642:LYS:HG3	1.88	0.55
3:B:3951:PHE:O	3:B:3955:MET:HG3	2.06	0.55
3:C:3081:MET:HE1	3:C:3089:LYS:HA	1.88	0.55
3:A:2884:ASN:O	3:A:2888:ARG:HG2	2.06	0.55
3:A:3132:THR:HA	3:A:3136:LEU:HB3	1.88	0.55
3:D:950:LEU:HD22	3:D:970:LEU:HD22	1.87	0.55
3:D:4976:GLU:H	3:D:4976:GLU:CD	2.13	0.55
3:B:950:LEU:HD22	3:B:970:LEU:HD22	1.88	0.55
3:C:2642:LYS:HB2	3:C:2698:MET:HE1	1.89	0.55
3:A:2440:MET:O	3:A:2444:GLN:HG2	2.07	0.55
3:B:3132:THR:HA	3:B:3136:LEU:HB3	1.88	0.55
3:B:2440:MET:O	3:B:2444:GLN:HG2	2.07	0.55
3:B:3053:ARG:HB3	3:B:3056:LEU:HB3	1.89	0.55
3:A:575:LEU:HD22	3:A:609:CYS:HB2	1.89	0.55
3:A:1990:GLU:O	3:A:1994:ARG:HG2	2.07	0.55
3:C:950:LEU:HD22	3:C:970:LEU:HD22	1.88	0.55
3:C:2166:LEU:HD11	3:C:2206:THR:HG23	1.89	0.55
3:B:2166:LEU:HD11	3:B:2206:THR:HG23	1.89	0.55
3:B:2367:ALA:HB2	3:B:2379:ALA:HB2	1.89	0.55
3:D:4184:MET:HG3	3:D:4188:ARG:HH22	1.71	0.55
3:D:4241:THR:O	3:D:4245:MET:HG3	2.07	0.55
3:B:2891:LYS:HG2	3:B:2905:LEU:HD11	1.89	0.55
3:B:4218:ILE:HD13	3:B:4954:MET:HE2	1.87	0.55
3:C:460:GLN:NE2	3:C:462:GLU:H	2.05	0.55
3:A:469:ARG:HD3	3:A:3712:GLU:CD	2.32	0.55
3:C:2776:SER:HA	3:C:2791:LEU:HD22	1.89	0.55
3:D:575:LEU:HD22	3:D:609:CYS:HB2	1.89	0.55
3:A:4184:MET:HG3	3:A:4188:ARG:HH22	1.72	0.54
2:J:120:GLU:O	2:J:124:MET:HG2	2.08	0.54
3:B:1520:VAL:HG12	3:B:1527:MET:HG2	1.89	0.54
3:D:4577:LEU:HD21	3:D:4806:ASN:HB3	1.89	0.54
3:A:2367:ALA:HB2	3:A:2379:ALA:HB2	1.90	0.54
3:B:2519:LEU:HD22	3:B:2578:MET:HE1	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:3053:ARG:HB3	3:C:3056:LEU:HB3	1.89	0.54
3:B:460:GLN:NE2	3:B:462:GLU:H	2.06	0.54
3:C:46:LEU:HD11	3:C:134:ASP:HB3	1.88	0.54
3:D:2519:LEU:HD13	3:D:2575:ARG:HG3	1.90	0.54
3:A:2135:LEU:HD21	3:A:3663:LEU:HD23	1.89	0.54
3:C:1520:VAL:HG12	3:C:1527:MET:HG2	1.90	0.54
3:B:2519:LEU:HD13	3:B:2575:ARG:HG3	1.89	0.54
3:C:2644:LEU:HD13	3:C:2678:LEU:HD21	1.89	0.54
3:A:1520:VAL:HG12	3:A:1527:MET:HG2	1.90	0.54
3:C:575:LEU:HD22	3:C:609:CYS:HB2	1.89	0.54
3:C:2440:MET:O	3:C:2444:GLN:HG2	2.07	0.54
3:C:2519:LEU:HD13	3:C:2575:ARG:HG3	1.90	0.54
3:D:46:LEU:HD11	3:D:134:ASP:HB3	1.88	0.54
3:D:3365:LEU:HD13	3:D:3405:LEU:HD23	1.89	0.54
3:A:2519:LEU:HD13	3:A:2575:ARG:HG3	1.89	0.54
3:C:2367:ALA:HB2	3:C:2379:ALA:HB2	1.89	0.54
3:B:575:LEU:HD22	3:B:609:CYS:HB2	1.89	0.54
3:C:3768:SER:HA	3:C:3771:HIS:CD2	2.43	0.54
3:D:275:ARG:HG2	3:D:275:ARG:NH1	2.23	0.54
3:D:3536:ALA:HB2	3:D:3553:LEU:HD21	1.89	0.54
3:A:2166:LEU:HD11	3:A:2206:THR:HG23	1.90	0.53
3:A:2644:LEU:HD13	3:A:2678:LEU:HD21	1.90	0.53
3:D:2865:VAL:HB	3:D:2928:LYS:HE3	1.90	0.53
3:C:3107:VAL:HG22	3:C:3175:LEU:HD11	1.89	0.53
3:C:3123:LYS:HG2	3:C:3125:VAL:HG22	1.89	0.53
3:B:2644:LEU:HD13	3:B:2678:LEU:HD21	1.89	0.53
3:C:956:PRO:HB2	3:C:958:THR:HG22	1.90	0.53
3:D:3754:GLU:O	3:D:3758:MET:HG2	2.07	0.53
3:D:4092:ASP:HA	3:D:4095:LYS:HZ2	1.74	0.53
2:L:120:GLU:O	2:L:124:MET:HG2	2.09	0.53
3:A:2626:LEU:HD22	3:A:2640:PRO:HB3	1.90	0.53
3:B:5013:MET:HE1	3:B:5020:ASP:HB2	1.91	0.53
3:C:670:GLU:HG3	3:C:788:LYS:HD2	1.89	0.53
3:C:3573:MET:O	3:C:3577:ARG:HG2	2.08	0.53
3:C:3725:TYR:O	3:C:3729:MET:HG3	2.09	0.53
3:A:907:LEU:HB3	3:A:961:MET:SD	2.47	0.53
3:B:4805:ASN:HD22	7:B:5108:PLC:H12	1.74	0.53
3:C:3379:LEU:HD11	3:C:3390:GLY:HA3	1.91	0.53
3:D:1008:SER:HB3	3:D:1017:ARG:HB3	1.90	0.53
3:D:2208:MET:HE3	3:D:2256:TYR:CD2	2.44	0.53
3:D:3270:ILE:HA	3:D:3274:LEU:HD12	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:3532:LEU:HA	3:D:3535:LEU:HD12	1.91	0.53
3:A:950:LEU:HD22	3:A:970:LEU:HD22	1.89	0.53
2:I:91:VAL:HG11	3:A:1995:THR:HG21	1.91	0.53
3:C:3270:ILE:HA	3:C:3274:LEU:HD12	1.91	0.53
3:D:1520:VAL:HG12	3:D:1527:MET:HG2	1.91	0.53
3:D:2495:VAL:HG22	3:D:2498:HIS:CE1	2.44	0.53
2:L:11:GLU:HA	2:L:14:GLU:HG2	1.90	0.53
3:B:881:LEU:HD13	3:B:1041:GLN:HB3	1.91	0.53
3:C:881:LEU:HD13	3:C:1041:GLN:HB3	1.91	0.53
3:C:2970:SER:HA	3:C:2973:PHE:CE2	2.43	0.53
3:B:2971:GLN:HA	3:B:3049:LEU:HD21	1.91	0.52
3:D:3768:SER:HA	3:D:3771:HIS:CD2	2.44	0.52
3:A:1008:SER:HB3	3:A:1017:ARG:HB3	1.90	0.52
3:C:2604:GLU:O	3:C:2608:MET:HG2	2.10	0.52
3:C:4218:ILE:HD13	3:C:4954:MET:HE2	1.90	0.52
3:D:2902:HIS:HB3	3:D:2905:LEU:HB2	1.92	0.52
3:D:2526:PHE:O	3:D:2530:MET:HG3	2.09	0.52
1:H:56:ILE:HG13	1:H:59:PHE:HB2	1.91	0.52
3:B:3540:TYR:HB3	3:B:3604:TYR:CD2	2.45	0.52
3:B:3603:LEU:O	3:B:3607:GLU:HG3	2.10	0.52
3:C:1008:SER:HB3	3:C:1017:ARG:HB3	1.90	0.52
3:C:2766:TRP:HB3	3:C:2790:MET:HE1	1.92	0.52
2:J:91:VAL:HG11	3:B:1995:THR:HG21	1.92	0.52
1:G:56:ILE:HG13	1:G:59:PHE:HB2	1.90	0.52
3:A:3768:SER:HA	3:A:3771:HIS:CD2	2.45	0.52
3:B:3768:SER:HA	3:B:3771:HIS:CD2	2.44	0.52
3:C:275:ARG:HG2	3:C:275:ARG:NH1	2.23	0.52
3:A:275:ARG:HG2	3:A:275:ARG:NH1	2.23	0.52
3:C:14:LEU:HD13	3:C:202:MET:HE2	1.92	0.52
3:D:4056:GLU:HG2	3:D:4166:LEU:HD13	1.91	0.52
3:B:259:LEU:HD11	3:B:397:GLU:HG2	1.92	0.52
3:C:259:LEU:HD11	3:C:397:GLU:HG2	1.92	0.52
3:D:2440:MET:O	3:D:2444:GLN:HG2	2.10	0.52
3:B:14:LEU:HD13	3:B:202:MET:HE2	1.92	0.52
3:B:1993:ARG:NH2	3:B:1994:ARG:HD3	2.25	0.52
3:B:2495:VAL:HG22	3:B:2498:HIS:CE1	2.45	0.52
3:D:626:LEU:HD23	10:D:6035:HOH:O	2.09	0.52
3:D:1263:THR:HG22	3:D:1264:VAL:H	1.75	0.52
3:B:1008:SER:HB3	3:B:1017:ARG:HB3	1.90	0.51
3:B:4062:PHE:HE1	3:B:4136:ALA:HB1	1.75	0.51
3:C:2865:VAL:HG21	3:C:2928:LYS:HG3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:2608:MET:HE2	3:D:2639:MET:HG2	1.92	0.51
3:A:2495:VAL:HG22	3:A:2498:HIS:CE1	2.45	0.51
3:A:3343:GLN:HG3	3:A:3414:ARG:HG3	1.93	0.51
3:D:3053:ARG:HB3	3:D:3056:LEU:HB3	1.92	0.51
1:F:56:ILE:HG13	1:F:59:PHE:HB2	1.90	0.51
3:B:636:ASN:HB2	3:B:702:TRP:CZ3	2.46	0.51
3:C:626:LEU:HD23	10:C:6037:HOH:O	2.09	0.51
3:C:2466:LEU:HD11	3:C:2505:PHE:CD1	2.45	0.51
3:D:881:LEU:HD13	3:D:1041:GLN:HB3	1.91	0.51
3:A:259:LEU:HD11	3:A:397:GLU:HG2	1.92	0.51
3:A:636:ASN:HB2	3:A:702:TRP:CZ3	2.46	0.51
3:A:3327:LEU:HD21	3:A:3408:LEU:HD11	1.93	0.51
3:C:152:PRO:HB3	3:C:157:ARG:HB2	1.92	0.51
3:A:14:LEU:HD13	3:A:202:MET:HE2	1.93	0.51
3:A:2466:LEU:HD11	3:A:2505:PHE:CD1	2.46	0.51
3:C:2763:HIS:HD2	3:C:2790:MET:HE2	1.75	0.51
3:C:3416:VAL:O	3:C:3420:ARG:HB2	2.11	0.51
1:G:31:GLN:HA	1:G:98:ILE:HD13	1.93	0.51
3:A:881:LEU:HD13	3:A:1041:GLN:HB3	1.91	0.51
3:A:3053:ARG:HB3	3:A:3056:LEU:HB3	1.92	0.51
3:B:2626:LEU:HD22	3:B:2640:PRO:HB3	1.91	0.51
3:C:4577:LEU:HD21	3:C:4806:ASN:HB3	1.92	0.51
3:D:5013:MET:HE1	3:D:5020:ASP:HB2	1.91	0.51
1:E:56:ILE:HG13	1:E:59:PHE:HB2	1.91	0.51
3:A:2333:ASP:HA	3:A:2336:ARG:HD3	1.93	0.51
3:B:152:PRO:HB3	3:B:157:ARG:HB2	1.92	0.51
3:B:3327:LEU:HD21	3:B:3408:LEU:HD11	1.92	0.51
3:A:2753:SER:HA	3:A:2756:ASN:HD21	1.76	0.51
3:B:2466:LEU:HD11	3:B:2505:PHE:CD1	2.46	0.51
3:D:259:LEU:HD11	3:D:397:GLU:HG2	1.91	0.51
3:B:2692:ASP:HB3	3:B:2695:LEU:HB3	1.93	0.51
3:C:636:ASN:HB2	3:C:702:TRP:CZ3	2.46	0.51
3:C:2310:CYS:HB3	3:C:2313:LEU:HB2	1.93	0.51
3:C:2891:LYS:HG2	3:C:2905:LEU:HD11	1.93	0.51
3:D:3603:LEU:O	3:D:3607:GLU:HG3	2.11	0.51
1:F:31:GLN:HG2	3:B:1299:GLN:NE2	2.26	0.51
3:A:2970:SER:HA	3:A:2973:PHE:CE2	2.45	0.51
3:B:4184:MET:HG3	3:B:4188:ARG:HH22	1.74	0.51
3:C:2626:LEU:HD22	3:C:2640:PRO:HB3	1.93	0.51
2:K:91:VAL:HG11	3:C:1995:THR:HG21	1.93	0.50
3:B:3248:ARG:HD2	3:B:3252:ASP:OD1	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:116:MET:HG2	3:C:139:GLU:HA	1.93	0.50
3:C:2865:VAL:HG11	3:C:2928:LYS:HG3	1.93	0.50
3:A:823:LEU:HD13	3:A:1628:VAL:HG22	1.94	0.50
3:C:2495:VAL:HG22	3:C:2498:HIS:CE1	2.46	0.50
3:D:956:PRO:HB2	3:D:958:THR:HG22	1.92	0.50
3:D:2932:MET:HE2	3:D:2933:ASN:ND2	2.26	0.50
3:D:3847:PHE:HE1	3:D:3946:GLN:HG3	1.76	0.50
3:A:626:LEU:HD23	10:A:6032:HOH:O	2.09	0.50
3:B:4093:PHE:CZ	3:B:4097:MET:HE3	2.46	0.50
3:B:4648:LEU:HD23	3:B:4803:HIS:CE1	2.43	0.50
3:C:2753:SER:HA	3:C:2756:ASN:HD21	1.76	0.50
3:D:636:ASN:HB2	3:D:702:TRP:CZ3	2.46	0.50
3:D:2758:PHE:HD2	3:D:2809:ILE:HG12	1.75	0.50
1:F:31:GLN:HA	1:F:98:ILE:HD13	1.93	0.50
3:C:2753:SER:HA	3:C:2756:ASN:ND2	2.26	0.50
1:E:31:GLN:HA	1:E:98:ILE:HD13	1.94	0.50
1:H:31:GLN:HG2	3:D:1299:GLN:NE2	2.26	0.50
1:H:31:GLN:HA	1:H:98:ILE:HD13	1.93	0.50
3:A:152:PRO:HB3	3:A:157:ARG:HB2	1.92	0.50
3:A:2971:GLN:HA	3:A:3049:LEU:HD21	1.92	0.50
3:B:1180:ARG:HG3	3:B:1181:GLU:OE1	2.12	0.50
3:A:684:VAL:HG22	3:A:781:VAL:HG12	1.94	0.50
3:A:3248:ARG:HD2	3:A:3252:ASP:OD1	2.11	0.50
3:C:684:VAL:HG22	3:C:781:VAL:HG12	1.94	0.50
3:D:684:VAL:HG22	3:D:781:VAL:HG12	1.94	0.50
3:A:2912:THR:HG21	3:A:2914:LYS:HE3	1.94	0.50
3:A:5013:MET:HE1	3:A:5020:ASP:HB2	1.93	0.50
3:B:116:MET:HG2	3:B:139:GLU:HA	1.93	0.50
3:C:3365:LEU:HD13	3:C:3405:LEU:HD23	1.93	0.50
3:C:4062:PHE:HE1	3:C:4136:ALA:HB1	1.77	0.50
3:D:1990:GLU:OE2	3:D:1994:ARG:HD3	2.11	0.50
3:D:3604:TYR:O	3:D:3608:GLN:HG2	2.12	0.50
3:A:4579:PHE:CE1	3:A:4639:MET:HE1	2.47	0.50
3:B:1619:ARG:HH12	3:B:1622:GLU:HG2	1.77	0.50
3:C:2639:MET:HE3	3:C:2640:PRO:HD3	1.94	0.50
3:D:152:PRO:HB3	3:D:157:ARG:HB2	1.92	0.50
3:D:1180:ARG:HG3	3:D:1181:GLU:OE2	2.10	0.50
3:D:2442:LEU:HD22	3:D:2447:LYS:HD3	1.92	0.50
1:E:57:LYS:HE3	1:E:80:VAL:HG12	1.93	0.50
3:D:2753:SER:HA	3:D:2756:ASN:HD21	1.77	0.50
3:D:4242:ILE:O	3:D:4246:GLN:HG3	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2208:MET:SD	3:A:2250:MET:HE1	2.52	0.49
3:B:684:VAL:HG22	3:B:781:VAL:HG12	1.94	0.49
3:B:2753:SER:HA	3:B:2756:ASN:HD21	1.77	0.49
3:B:3104:GLU:O	3:B:3108:GLU:HG3	2.12	0.49
3:D:116:MET:HG2	3:D:139:GLU:HA	1.93	0.49
3:A:3536:ALA:HB2	3:A:3553:LEU:HD21	1.93	0.49
3:A:3670:GLU:HG2	3:A:3728:ILE:HA	1.94	0.49
3:B:823:LEU:HD13	3:B:1628:VAL:HG22	1.94	0.49
3:C:869:ARG:HH21	3:C:941:MET:CE	2.25	0.49
3:C:3248:ARG:HD2	3:C:3248:ARG:O	2.13	0.49
3:D:2788:HIS:HE1	3:D:2791:LEU:HD13	1.75	0.49
3:D:3465:ASN:HB3	3:D:3468:SER:HB2	1.94	0.49
3:A:116:MET:HG2	3:A:139:GLU:HA	1.93	0.49
3:A:956:PRO:HB2	3:A:958:THR:HG22	1.94	0.49
3:A:1619:ARG:HH12	3:A:1622:GLU:HG2	1.78	0.49
3:C:1263:THR:HG22	3:C:1264:VAL:H	1.77	0.49
3:D:2912:THR:HG21	3:D:2914:LYS:HE3	1.94	0.49
3:D:4242:ILE:HG13	3:D:4989:MET:HE1	1.93	0.49
3:C:2912:THR:HG21	3:C:2914:LYS:HE3	1.95	0.49
3:C:3532:LEU:HA	3:C:3535:LEU:HD12	1.95	0.49
3:D:2626:LEU:HD22	3:D:2640:PRO:HB3	1.92	0.49
3:A:1435:TYR:HB3	3:A:1575:LEU:HG	1.94	0.49
3:B:275:ARG:HG2	3:B:275:ARG:NH1	2.23	0.49
3:B:956:PRO:HB2	3:B:958:THR:HG22	1.95	0.49
3:C:2599:GLN:O	3:C:2603:ILE:HG13	2.13	0.49
3:C:3343:GLN:HG3	3:C:3414:ARG:HG3	1.94	0.49
1:G:31:GLN:HG2	3:C:1299:GLN:NE2	2.27	0.49
3:A:2364:PHE:HB3	3:A:2368:LEU:HB2	1.95	0.49
3:A:4062:PHE:HE1	3:A:4136:ALA:HB1	1.77	0.49
3:A:4921:PHE:CD2	4:D:5103:43M:H4	2.48	0.49
3:D:823:LEU:HD13	3:D:1628:VAL:HG22	1.94	0.49
3:D:2970:SER:HA	3:D:2973:PHE:CE2	2.47	0.49
1:E:19:GLY:HA2	1:E:49:ARG:HH21	1.77	0.49
1:G:19:GLY:HA2	1:G:49:ARG:HH21	1.77	0.49
3:A:3123:LYS:HG2	3:A:3125:VAL:HG22	1.95	0.49
3:A:4242:ILE:HG13	3:A:4989:MET:HE1	1.93	0.49
3:C:2740:VAL:HG11	3:C:2819:TRP:HE1	1.77	0.49
3:A:574:VAL:O	3:A:578:ILE:HG12	2.13	0.49
3:A:670:GLU:HG3	3:A:788:LYS:HD2	1.93	0.49
3:B:2182:ILE:O	3:B:2186:MET:HG3	2.13	0.49
3:B:2364:PHE:HB3	3:B:2368:LEU:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1018:ASN:HB3	3:C:1021:LEU:HB2	1.95	0.49
3:C:1435:TYR:HB3	3:C:1575:LEU:HG	1.94	0.49
3:D:2537:ASP:OD2	3:D:2592:GLY:HA2	2.13	0.49
3:A:932:LEU:HD21	3:A:984:LEU:HD21	1.95	0.49
3:A:1018:ASN:HB3	3:A:1021:LEU:HB2	1.95	0.49
3:A:4092:ASP:HA	3:A:4095:LYS:HZ2	1.76	0.49
3:B:1018:ASN:HB3	3:B:1021:LEU:HB2	1.95	0.49
3:B:2970:SER:HA	3:B:2973:PHE:CE2	2.48	0.49
3:B:3416:VAL:O	3:B:3420:ARG:HB2	2.13	0.49
3:A:2692:ASP:HB3	3:A:2695:LEU:HB3	1.94	0.49
3:B:2333:ASP:HA	3:B:2336:ARG:HD3	1.95	0.49
3:B:4683:PHE:CZ	3:B:5017:ARG:HG3	2.48	0.49
3:C:648:ILE:HG23	3:C:814:ALA:HB3	1.95	0.49
3:C:2466:LEU:HD11	3:C:2505:PHE:HD1	1.76	0.49
3:C:2737:PRO:HB2	3:C:2888:ARG:CZ	2.42	0.49
3:D:574:VAL:O	3:D:578:ILE:HG12	2.13	0.49
1:F:19:GLY:HA2	1:F:49:ARG:HH21	1.78	0.48
3:A:613:ALA:HB2	3:A:1676:LEU:HD12	1.95	0.48
3:A:3256:LEU:HD22	3:A:3266:MET:HE3	1.95	0.48
3:A:4934:GLY:HA2	3:D:4937:ILE:HG12	1.95	0.48
3:B:3536:ALA:HB2	3:B:3553:LEU:HD21	1.95	0.48
3:C:4967:TYR:CZ	3:C:5030:LYS:HG3	2.48	0.48
3:D:4093:PHE:O	3:D:4097:MET:HG2	2.13	0.48
3:D:4579:PHE:CE1	3:D:4639:MET:HE1	2.48	0.48
3:A:1163:THR:HG22	3:A:1168:VAL:HA	1.94	0.48
3:A:1263:THR:HG22	3:A:1264:VAL:H	1.77	0.48
3:A:4683:PHE:CZ	3:A:5017:ARG:HG3	2.48	0.48
3:B:695:TYR:CD1	3:B:1240:LYS:HD2	2.49	0.48
3:B:3256:LEU:HD22	3:B:3266:MET:HE3	1.95	0.48
3:B:3379:LEU:HD21	3:B:3391:GLU:N	2.28	0.48
3:C:3316:LEU:HD22	3:C:3346:VAL:HA	1.95	0.48
3:A:2921:GLU:O	3:A:2925:GLU:HG2	2.13	0.48
3:B:2888:ARG:N	3:B:2888:ARG:HE	2.12	0.48
3:B:3670:GLU:HG2	3:B:3728:ILE:HA	1.95	0.48
3:C:3577:ARG:HG3	3:C:3577:ARG:HH11	1.78	0.48
3:D:1018:ASN:HB3	3:D:1021:LEU:HB2	1.95	0.48
1:H:19:GLY:HA2	1:H:49:ARG:HH21	1.79	0.48
3:A:2753:SER:HA	3:A:2756:ASN:ND2	2.28	0.48
3:B:613:ALA:HB2	3:B:1676:LEU:HD12	1.96	0.48
3:B:4579:PHE:CE1	3:B:4639:MET:HE1	2.47	0.48
3:C:4683:PHE:CZ	3:C:5017:ARG:HG3	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4796:MET:HE3	3:C:4800:LEU:HG	1.95	0.48
3:D:2135:LEU:HD21	3:D:3663:LEU:HD23	1.95	0.48
3:D:2437:ALA:HB2	3:D:2509:VAL:HG22	1.95	0.48
3:D:4683:PHE:CZ	3:D:5017:ARG:HG3	2.48	0.48
3:B:1435:TYR:HB3	3:B:1575:LEU:HG	1.94	0.48
3:B:2912:THR:HG21	3:B:2914:LYS:HE3	1.95	0.48
2:L:90:ARG:HA	2:L:93:ASP:OD1	2.13	0.48
3:A:2182:ILE:O	3:A:2186:MET:HG3	2.13	0.48
3:A:2599:GLN:O	3:A:2603:ILE:HG13	2.14	0.48
3:B:1263:THR:HG22	3:B:1264:VAL:H	1.77	0.48
3:B:2782:ASP:O	3:B:2785:LEU:HD23	2.14	0.48
3:C:834:PRO:O	3:C:835:ARG:HG2	2.14	0.48
3:D:834:PRO:O	3:D:835:ARG:HG2	2.14	0.48
3:D:1093:GLU:HB3	3:D:1201:HIS:HB3	1.96	0.48
3:D:2470:ILE:HG22	3:D:2525:GLY:HA3	1.96	0.48
3:D:4062:PHE:HE1	3:D:4136:ALA:HB1	1.78	0.48
3:A:901:LYS:HB3	3:A:903:LEU:HD13	1.96	0.48
3:A:1152:MET:HE1	3:A:1163:THR:HG23	1.96	0.48
3:A:2466:LEU:HD11	3:A:2505:PHE:HD1	1.78	0.48
3:A:3379:LEU:HD21	3:A:3391:GLU:N	2.28	0.48
3:B:2753:SER:HA	3:B:2756:ASN:ND2	2.29	0.48
3:C:613:ALA:HB2	3:C:1676:LEU:HD12	1.96	0.48
3:C:823:LEU:HD13	3:C:1628:VAL:HG22	1.95	0.48
3:C:2987:GLU:CD	3:C:2988:LYS:H	2.22	0.48
3:D:2627:VAL:HG22	3:D:2678:LEU:HB2	1.95	0.48
3:D:2921:GLU:O	3:D:2925:GLU:HG2	2.14	0.48
3:D:3281:LEU:HD12	3:D:3315:LEU:HD22	1.96	0.48
3:A:884:LEU:O	3:A:888:GLU:HG2	2.12	0.48
3:B:834:PRO:O	3:B:835:ARG:HG2	2.14	0.48
3:C:2515:GLN:O	3:C:2519:LEU:HG	2.14	0.48
3:B:2599:GLN:O	3:B:2603:ILE:HG13	2.14	0.48
3:C:1492:CYS:SG	3:C:1494:MET:HG3	2.54	0.48
3:C:2537:ASP:OD2	3:C:2592:GLY:HA2	2.14	0.48
3:C:4937:ILE:HG12	3:D:4934:GLY:HA2	1.96	0.48
3:D:613:ALA:HB2	3:D:1676:LEU:HD12	1.96	0.48
3:D:1435:TYR:HB3	3:D:1575:LEU:HG	1.94	0.48
3:D:4014:LYS:HG2	3:D:4135:PRO:HB3	1.95	0.48
3:A:2888:ARG:HE	3:A:2888:ARG:N	2.12	0.48
3:B:2466:LEU:HD11	3:B:2505:PHE:HD1	1.79	0.48
3:C:2364:PHE:HB3	3:C:2368:LEU:HB2	1.95	0.48
3:C:3536:ALA:HB2	3:C:3553:LEU:HD21	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:28:VAL:HG12	3:D:29:LEU:HG	1.96	0.48
3:B:3553:LEU:HB2	3:B:3593:VAL:HG13	1.96	0.47
3:B:4091:LYS:H	3:B:4091:LYS:CE	2.22	0.47
3:C:3631:ALA:HB1	3:C:3859:VAL:HB	1.94	0.47
3:B:1170:MET:HE2	3:B:1176:GLU:HG2	1.94	0.47
3:B:2135:LEU:HD21	3:B:3663:LEU:HD23	1.95	0.47
3:B:2639:MET:HE3	3:B:2640:PRO:HD3	1.95	0.47
3:B:2765:LYS:HA	3:B:2765:LYS:HD3	1.65	0.47
3:B:2921:GLU:O	3:B:2925:GLU:HG2	2.14	0.47
3:B:3316:LEU:HD22	3:B:3346:VAL:HA	1.95	0.47
3:C:2182:ILE:O	3:C:2186:MET:HG3	2.14	0.47
3:C:3379:LEU:HD21	3:C:3391:GLU:N	2.30	0.47
3:D:2024:PRO:HD2	3:D:2027:ILE:HD12	1.96	0.47
3:D:2333:ASP:HA	3:D:2336:ARG:HD3	1.96	0.47
3:D:3631:ALA:HB1	3:D:3859:VAL:HB	1.96	0.47
2:I:90:ARG:HA	2:I:93:ASP:OD1	2.14	0.47
2:J:8:GLN:O	2:J:11:GLU:HG3	2.14	0.47
3:A:834:PRO:O	3:A:835:ARG:HG2	2.13	0.47
3:B:648:ILE:HG23	3:B:814:ALA:HB3	1.96	0.47
3:B:3631:ALA:HB1	3:B:3859:VAL:HB	1.95	0.47
3:C:4579:PHE:CE1	3:C:4639:MET:HE1	2.49	0.47
3:D:648:ILE:HG23	3:D:814:ALA:HB3	1.95	0.47
3:D:3670:GLU:HG2	3:D:3728:ILE:HA	1.95	0.47
3:B:2574:HIS:H	3:B:2574:HIS:CD2	2.33	0.47
3:B:3465:ASN:HB3	3:B:3468:SER:HB2	1.96	0.47
3:C:2627:VAL:HG22	3:C:2678:LEU:HB2	1.96	0.47
3:A:1492:CYS:SG	3:A:1494:MET:HG3	2.55	0.47
3:A:2024:PRO:HD2	3:A:2027:ILE:HD12	1.96	0.47
3:B:2758:PHE:HD2	3:B:2809:ILE:HG12	1.79	0.47
3:B:3532:LEU:HA	3:B:3535:LEU:HD12	1.96	0.47
3:C:574:VAL:O	3:C:578:ILE:HG12	2.13	0.47
3:C:2208:MET:HE3	3:C:2256:TYR:CE2	2.50	0.47
3:C:3281:LEU:HD12	3:C:3315:LEU:HD22	1.96	0.47
3:D:3175:LEU:HD13	3:D:3190:LEU:HD13	1.95	0.47
3:A:1116:GLY:HA3	3:A:1132:TRP:HB3	1.96	0.47
3:A:4729:GLY:O	3:A:4734:ARG:HG2	2.15	0.47
3:A:4937:ILE:HG12	3:B:4934:GLY:HA2	1.95	0.47
3:B:915:GLU:H	3:B:915:GLU:CD	2.22	0.47
4:C:5103:43M:H4	3:D:4921:PHE:CD2	2.49	0.47
3:D:2740:VAL:HG11	3:D:2819:TRP:HE1	1.80	0.47
3:D:4729:GLY:O	3:D:4734:ARG:HG2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2782:ASP:O	3:A:2785:LEU:HD23	2.15	0.47
3:A:3316:LEU:HD22	3:A:3346:VAL:HA	1.96	0.47
3:A:3465:ASN:HB3	3:A:3468:SER:HB2	1.97	0.47
3:A:3532:LEU:HA	3:A:3535:LEU:HD12	1.96	0.47
3:B:275:ARG:NH1	3:B:336:PRO:HG2	2.29	0.47
3:B:901:LYS:HB3	3:B:903:LEU:HD13	1.97	0.47
3:B:4047:MET:HE3	3:B:4047:MET:HB3	1.78	0.47
3:C:1093:GLU:HB3	3:C:1201:HIS:HB3	1.97	0.47
3:C:1116:GLY:HA3	3:C:1132:TRP:HB3	1.96	0.47
3:C:3720:TYR:HA	3:C:3723:MET:HE3	1.96	0.47
3:D:275:ARG:NH1	3:D:336:PRO:HG2	2.30	0.47
3:D:1492:CYS:SG	3:D:1494:MET:HG3	2.55	0.47
3:D:4967:TYR:CZ	3:D:5030:LYS:HG3	2.50	0.47
2:K:120:GLU:O	2:K:124:MET:HG2	2.14	0.47
3:A:907:LEU:HD13	3:A:961:MET:SD	2.54	0.47
3:A:2574:HIS:CD2	3:A:2574:HIS:H	2.33	0.47
3:A:2758:PHE:HD2	3:A:2809:ILE:HG12	1.79	0.47
3:B:1990:GLU:O	3:B:1994:ARG:HG2	2.14	0.47
3:B:2522:LEU:HA	3:B:2526:PHE:HB2	1.97	0.47
3:C:904:HIS:HB3	3:C:907:LEU:HG	1.95	0.47
3:C:3540:TYR:HB3	3:C:3604:TYR:CD2	2.50	0.47
3:C:3568:SER:HA	3:C:3571:TRP:NE1	2.30	0.47
1:G:84:ALA:O	1:G:93:PRO:HB3	2.15	0.47
3:A:3365:LEU:HD13	3:A:3405:LEU:HD23	1.97	0.47
3:A:3416:VAL:O	3:A:3420:ARG:HB2	2.15	0.47
4:A:5103:43M:H4	3:B:4921:PHE:CD2	2.49	0.47
3:B:3720:TYR:HA	3:B:3723:MET:HE3	1.97	0.47
3:C:2758:PHE:HD2	3:C:2809:ILE:HG12	1.80	0.47
3:C:3946:GLN:HE22	3:C:3949:ARG:HH12	1.62	0.47
3:D:3316:LEU:HD22	3:D:3346:VAL:HA	1.97	0.47
2:J:90:ARG:HA	2:J:93:ASP:OD1	2.15	0.47
3:A:915:GLU:CD	3:A:915:GLU:H	2.22	0.47
3:A:3213:TYR:CD1	3:A:3302:PRO:HG2	2.50	0.47
3:A:3648:ARG:O	3:A:3652:MET:HG3	2.15	0.47
3:B:1492:CYS:SG	3:B:1494:MET:HG3	2.54	0.47
3:C:28:VAL:HG12	3:C:29:LEU:HG	1.97	0.47
3:C:275:ARG:NH1	3:C:336:PRO:HG2	2.30	0.47
3:C:2921:GLU:O	3:C:2925:GLU:HG2	2.14	0.47
3:C:3670:GLU:HG2	3:C:3728:ILE:HA	1.96	0.47
3:D:412:ASN:O	3:D:416:LYS:HE2	2.15	0.47
3:D:3248:ARG:HD2	3:D:3248:ARG:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:275:ARG:NH1	3:A:336:PRO:HG2	2.30	0.46
3:A:412:ASN:O	3:A:416:LYS:HE2	2.15	0.46
3:A:2537:ASP:OD2	3:A:2592:GLY:HA2	2.15	0.46
3:B:1093:GLU:HB3	3:B:1201:HIS:HB3	1.97	0.46
3:C:2758:PHE:CD2	3:C:2809:ILE:HG12	2.50	0.46
3:D:2182:ILE:O	3:D:2186:MET:HG3	2.15	0.46
3:D:2768:PHE:O	3:D:2771:ILE:HG13	2.15	0.46
1:H:84:ALA:O	1:H:93:PRO:HB3	2.15	0.46
3:A:1426:ILE:HD12	3:A:1426:ILE:N	2.30	0.46
3:A:2639:MET:HE3	3:A:2640:PRO:HD3	1.96	0.46
3:A:4209:GLN:HG2	3:A:4210:VAL:N	2.30	0.46
3:A:4967:TYR:CZ	3:A:5030:LYS:HG3	2.50	0.46
3:B:574:VAL:O	3:B:578:ILE:HG12	2.13	0.46
3:B:3788:GLY:HA3	3:B:3834:ALA:HB3	1.97	0.46
3:C:907:LEU:HB3	3:C:961:MET:HE1	1.97	0.46
3:D:670:GLU:HG3	3:D:788:LYS:HD2	1.97	0.46
3:D:2763:HIS:HE1	3:D:2792:ARG:HH21	1.61	0.46
3:D:3720:TYR:HA	3:D:3723:MET:HE3	1.96	0.46
1:H:87:HIS:H	1:H:91:ILE:HB	1.81	0.46
3:A:2522:LEU:HA	3:A:2526:PHE:HB2	1.97	0.46
3:B:4937:ILE:HG12	3:C:4934:GLY:HA2	1.96	0.46
3:C:412:ASN:O	3:C:416:LYS:HE2	2.15	0.46
3:C:2739:PRO:HD3	3:C:2888:ARG:HG2	1.96	0.46
3:D:302:VAL:HB	3:D:306:LYS:HE2	1.98	0.46
3:D:2519:LEU:HD22	3:D:2578:MET:HE1	1.97	0.46
1:E:87:HIS:H	1:E:91:ILE:HB	1.81	0.46
3:A:648:ILE:HG23	3:A:814:ALA:HB3	1.96	0.46
3:A:1448:VAL:HG22	3:A:1554:VAL:HG23	1.97	0.46
3:A:2904:LEU:HD13	3:A:2904:LEU:O	2.16	0.46
3:B:1116:GLY:HA3	3:B:1132:TRP:HB3	1.96	0.46
3:C:2679:PHE:HB2	3:C:2706:ILE:HG21	1.98	0.46
3:C:3465:ASN:HB3	3:C:3468:SER:HB2	1.97	0.46
3:D:1000:ARG:HA	3:D:1000:ARG:HD3	1.67	0.46
3:D:3788:GLY:HA3	3:D:3834:ALA:HB3	1.97	0.46
3:B:2024:PRO:HD2	3:B:2027:ILE:HD12	1.96	0.46
3:B:3289:PRO:HG2	3:B:3308:THR:HG22	1.97	0.46
3:B:4967:TYR:CZ	3:B:5030:LYS:HG3	2.51	0.46
3:C:302:VAL:HB	3:C:306:LYS:HE2	1.98	0.46
3:C:1297:PHE:CE2	3:C:1525:GLY:HA2	2.51	0.46
3:C:2768:PHE:O	3:C:2771:ILE:HG13	2.15	0.46
3:C:3368:ARG:HG2	3:C:3401:LEU:HD13	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:4090:LYS:HG2	3:D:4123:ILE:HD11	1.98	0.46
3:A:2627:VAL:HG22	3:A:2678:LEU:HB2	1.98	0.46
3:C:2024:PRO:HD2	3:C:2027:ILE:HD12	1.96	0.46
3:D:3379:LEU:HD21	3:D:3391:GLU:N	2.30	0.46
3:D:4218:ILE:HD13	3:D:4954:MET:HE2	1.97	0.46
3:A:3631:ALA:HB1	3:A:3859:VAL:HB	1.97	0.46
4:B:5103:43M:H4	3:C:4921:PHE:CD2	2.51	0.46
3:C:1849:LEU:HD22	3:C:1945:TYR:CE2	2.50	0.46
3:C:2957:PHE:CE2	3:C:3034:LYS:HD2	2.50	0.46
3:C:4729:GLY:O	3:C:4734:ARG:HG2	2.15	0.46
3:D:1426:ILE:HD12	3:D:1426:ILE:H	1.79	0.46
2:K:90:ARG:HA	2:K:93:ASP:OD1	2.16	0.46
3:A:1093:GLU:HB3	3:A:1201:HIS:HB3	1.97	0.46
3:C:915:GLU:CD	3:C:915:GLU:H	2.23	0.46
3:D:1116:GLY:HA3	3:D:1132:TRP:HB3	1.96	0.46
3:D:1297:PHE:CE2	3:D:1525:GLY:HA2	2.51	0.46
3:D:1993:ARG:NH2	3:D:1994:ARG:HD3	2.30	0.46
3:D:2608:MET:HE1	3:D:2642:LYS:HG2	1.98	0.46
3:D:2679:PHE:HB2	3:D:2706:ILE:HG21	1.98	0.46
3:D:3310:ASP:CG	3:D:3350:ARG:HH12	2.23	0.46
2:L:4:LEU:HD22	2:L:12:PHE:HE2	1.80	0.46
3:A:99:ARG:H	3:A:99:ARG:HG2	1.61	0.46
3:A:3406:TYR:CD2	3:A:3509:LEU:HD22	2.51	0.46
3:A:3720:TYR:HA	3:A:3723:MET:HE3	1.97	0.46
3:B:2537:ASP:OD2	3:B:2592:GLY:HA2	2.15	0.46
3:B:3834:ALA:O	3:B:3838:THR:HG23	2.16	0.46
3:C:867:LEU:HD13	3:C:929:LEU:HB3	1.97	0.46
3:D:2161:GLN:HG2	3:D:2177:LEU:HD11	1.98	0.46
3:D:2753:SER:HA	3:D:2756:ASN:ND2	2.30	0.46
3:D:2890:LYS:HA	3:D:2890:LYS:HD3	1.74	0.46
3:D:2932:MET:HE2	3:D:2933:ASN:HD22	1.81	0.46
3:A:2608:MET:HE3	3:A:2608:MET:HB3	1.83	0.46
3:B:3123:LYS:HG2	3:B:3125:VAL:HG22	1.97	0.46
3:C:884:LEU:HD11	3:C:955:LEU:HD21	1.98	0.46
3:C:913:LEU:HG	3:C:914:PRO:HD2	1.97	0.46
3:C:4090:LYS:HG2	3:C:4123:ILE:HD11	1.99	0.46
3:D:1849:LEU:HD22	3:D:1945:TYR:CE2	2.50	0.46
3:A:2161:GLN:HG2	3:A:2177:LEU:HD11	1.98	0.45
3:B:1448:VAL:HG22	3:B:1554:VAL:HG23	1.97	0.45
3:B:2768:PHE:O	3:B:2771:ILE:HG13	2.16	0.45
3:C:3209:GLN:HG2	3:C:3210:LEU:HG	1.96	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:213:TYR:CE1	3:D:340:LYS:HG3	2.51	0.45
3:D:2888:ARG:HE	3:D:2888:ARG:N	2.14	0.45
3:D:2904:LEU:HD13	3:D:2904:LEU:O	2.16	0.45
3:D:3412:LEU:HD11	3:D:3434:LEU:HD21	1.98	0.45
3:A:2208:MET:HE3	3:A:2256:TYR:CD2	2.51	0.45
3:B:412:ASN:O	3:B:416:LYS:HE2	2.15	0.45
3:B:2949:SER:O	3:B:2953:LYS:HG3	2.16	0.45
3:B:3105:LYS:HB2	3:B:3105:LYS:HE3	1.72	0.45
3:B:4823:LEU:HD11	3:C:4843:LEU:HD22	1.99	0.45
3:C:2765:LYS:HD3	3:C:2765:LYS:HA	1.60	0.45
3:C:2871:LEU:HD12	3:C:2927:LEU:HD12	1.98	0.45
3:D:3277:LEU:HD23	3:D:3277:LEU:HA	1.85	0.45
1:F:7:ILE:HA	3:B:719:LEU:HD11	1.99	0.45
1:F:84:ALA:O	1:F:93:PRO:HB3	2.15	0.45
3:B:1297:PHE:CE2	3:B:1525:GLY:HA2	2.51	0.45
3:C:3334:TRP:CD1	3:C:3334:TRP:H	2.34	0.45
3:D:2792:ARG:H	3:D:2792:ARG:HG3	1.58	0.45
3:A:2988:LYS:HD3	3:A:2988:LYS:HA	1.78	0.45
3:B:1426:ILE:HD12	3:B:1426:ILE:N	2.31	0.45
3:B:2208:MET:HE3	3:B:2256:TYR:CE2	2.52	0.45
3:B:2520:HIS:O	3:B:2524:VAL:HG22	2.17	0.45
3:B:4634:GLU:CD	3:B:4639:MET:HB2	2.41	0.45
1:G:7:ILE:HA	3:C:719:LEU:HD11	1.98	0.45
3:A:2679:PHE:HB2	3:A:2706:ILE:HG21	1.99	0.45
3:B:3557:LEU:CD2	3:B:3589:PRO:HB3	2.47	0.45
3:C:901:LYS:HB3	3:C:903:LEU:HD13	1.98	0.45
3:C:1812:LEU:HD23	3:C:1812:LEU:HA	1.78	0.45
3:D:1448:VAL:HG22	3:D:1554:VAL:HG23	1.97	0.45
1:E:7:ILE:HA	3:A:719:LEU:HD11	1.99	0.45
2:L:13:LYS:HG2	3:D:2189:LYS:HB3	1.98	0.45
3:A:2886:TRP:CH2	3:A:2904:LEU:HD12	2.52	0.45
3:A:3209:GLN:HG2	3:A:3210:LEU:HG	1.99	0.45
3:A:4808:PHE:HZ	7:A:5108:PLC:H1A2	1.80	0.45
3:B:1849:LEU:HD22	3:B:1945:TYR:CE2	2.51	0.45
3:B:3568:SER:HA	3:B:3571:TRP:NE1	2.32	0.45
3:C:2498:HIS:O	3:C:2502:MET:HG2	2.16	0.45
3:C:3971:GLY:N	3:C:3972:PRO:HA	2.32	0.45
3:D:1426:ILE:HD12	3:D:1426:ILE:N	2.32	0.45
3:D:2599:GLN:O	3:D:2603:ILE:HG13	2.17	0.45
3:D:2788:HIS:HE1	3:D:2791:LEU:HB2	1.80	0.45
3:A:2520:HIS:O	3:A:2524:VAL:HG22	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:3289:PRO:HG2	3:A:3308:THR:HG22	1.97	0.45
3:B:3213:TYR:CD1	3:B:3302:PRO:HG2	2.51	0.45
3:C:3834:ALA:O	3:C:3838:THR:HG23	2.17	0.45
3:D:901:LYS:HB3	3:D:903:LEU:HD13	1.98	0.45
3:D:913:LEU:HG	3:D:914:PRO:HD2	1.98	0.45
1:E:26:TYR:HA	1:E:100:ASP:O	2.17	0.45
1:E:84:ALA:O	1:E:93:PRO:HB3	2.15	0.45
2:K:4:LEU:HD22	2:K:12:PHE:HE2	1.81	0.45
3:A:1849:LEU:HD22	3:A:1945:TYR:CE2	2.50	0.45
3:A:2788:HIS:NE2	3:A:2791:LEU:HB2	2.31	0.45
3:A:4090:LYS:HG2	3:A:4123:ILE:HD11	1.99	0.45
3:B:274:LEU:HD11	3:B:280:LEU:HD22	1.99	0.45
3:B:2788:HIS:NE2	3:B:2791:LEU:HB2	2.31	0.45
3:B:3066:ASN:O	3:B:3070:ILE:HG12	2.17	0.45
3:B:4209:GLN:HG2	3:B:4210:VAL:N	2.32	0.45
3:C:2359:ARG:HD3	3:C:2359:ARG:HA	1.68	0.45
3:C:2574:HIS:H	3:C:2574:HIS:CD2	2.34	0.45
3:C:3277:LEU:HD23	3:C:3277:LEU:HA	1.86	0.45
3:D:3368:ARG:HG2	3:D:3401:LEU:HD13	1.98	0.45
2:L:-1:HIS:CD2	3:D:2244:ARG:HG3	2.51	0.45
3:A:1256:GLU:HB2	3:A:1275:ARG:CZ	2.47	0.45
3:A:2768:PHE:O	3:A:2771:ILE:HG13	2.16	0.45
3:A:3105:LYS:HB2	3:A:3105:LYS:HE3	1.72	0.45
3:A:4705:VAL:HG22	3:A:4711:PHE:HB2	1.98	0.45
3:B:2161:GLN:HG2	3:B:2177:LEU:HD11	1.99	0.45
3:B:2679:PHE:HB2	3:B:2706:ILE:HG21	1.99	0.45
3:C:1043:VAL:O	3:C:1047:LEU:HD12	2.16	0.45
3:C:4705:VAL:HG22	3:C:4711:PHE:HB2	1.98	0.45
3:D:1423:ASP:HB3	3:D:1426:ILE:HD13	1.98	0.45
3:D:2527:LEU:HD21	3:D:2582:MET:HA	1.99	0.45
1:H:7:ILE:HA	3:D:719:LEU:HD11	1.99	0.45
3:A:2813:LEU:HA	3:A:2813:LEU:HD12	1.85	0.45
3:A:2949:SER:O	3:A:2953:LYS:HG3	2.17	0.45
3:A:3335:MET:HB3	3:A:3407:ALA:HB2	1.99	0.45
3:B:213:TYR:CD1	3:B:337:PRO:HB2	2.52	0.45
3:B:3725:TYR:O	3:B:3729:MET:HG3	2.17	0.45
3:D:953:THR:HG23	3:D:969:PRO:O	2.17	0.45
3:D:1619:ARG:HH12	3:D:1622:GLU:HG2	1.81	0.45
3:D:3534:MET:HE3	3:D:3534:MET:HA	1.99	0.45
3:D:3725:TYR:O	3:D:3729:MET:HG3	2.16	0.45
3:A:3254:GLY:O	3:A:3258:GLU:HG2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:3553:LEU:HB2	3:A:3593:VAL:HG13	1.99	0.44
3:B:722:TRP:CZ2	3:B:727:ALA:HB2	2.52	0.44
3:B:864:PRO:HD2	3:B:867:LEU:HB2	2.00	0.44
3:B:3223:SER:OG	3:B:3226:GLU:HG3	2.17	0.44
3:B:3648:ARG:O	3:B:3652:MET:HG3	2.17	0.44
3:B:4089:SER:OG	3:B:4091:LYS:HE2	2.16	0.44
3:C:1448:VAL:HG22	3:C:1554:VAL:HG23	1.97	0.44
3:C:1812:LEU:HD21	3:C:1862:ILE:HG13	1.99	0.44
3:C:1820:ARG:HH11	3:C:1821:ASP:HB3	1.82	0.44
3:D:722:TRP:CZ2	3:D:727:ALA:HB2	2.52	0.44
3:D:3648:ARG:O	3:D:3652:MET:HG3	2.17	0.44
3:D:4796:MET:HE3	3:D:4800:LEU:HG	1.99	0.44
1:G:87:HIS:H	1:G:91:ILE:HB	1.82	0.44
1:H:26:TYR:HA	1:H:100:ASP:O	2.17	0.44
3:A:2800:LYS:HD2	3:A:2801:ASP:N	2.31	0.44
3:A:2987:GLU:CD	3:A:2988:LYS:H	2.25	0.44
3:B:4217:PHE:O	3:B:4221:VAL:HG22	2.18	0.44
3:C:1426:ILE:HD12	3:C:1426:ILE:N	2.31	0.44
3:D:1812:LEU:HD21	3:D:1862:ILE:HG13	2.00	0.44
3:D:2971:GLN:HA	3:D:3049:LEU:HD21	1.98	0.44
1:F:87:HIS:H	1:F:91:ILE:HB	1.82	0.44
3:A:227:MET:HE3	3:A:391:THR:OG1	2.18	0.44
3:A:1297:PHE:CE2	3:A:1525:GLY:HA2	2.52	0.44
3:B:1981:MET:HA	3:B:1981:MET:HE2	1.98	0.44
3:B:2485:LEU:HD23	3:B:2485:LEU:HA	1.83	0.44
3:C:3203:VAL:HA	3:C:3214:ASN:ND2	2.32	0.44
3:C:3335:MET:HB3	3:C:3407:ALA:HB2	2.00	0.44
3:D:1011:GLN:HB2	3:D:1019:PRO:HD3	1.98	0.44
3:D:2150:GLU:H	3:D:2150:GLU:CD	2.26	0.44
3:A:1000:ARG:HA	3:A:1000:ARG:HD3	1.67	0.44
3:A:2527:LEU:HD21	3:A:2582:MET:HA	1.99	0.44
3:A:3106:MET:HE2	3:A:3106:MET:HB3	1.82	0.44
3:A:3971:GLY:N	3:A:3972:PRO:HA	2.32	0.44
3:B:869:ARG:HH21	3:B:941:MET:HE1	1.83	0.44
3:B:3106:MET:HE2	3:B:3106:MET:HB3	1.82	0.44
3:C:1993:ARG:NH2	3:C:1994:ARG:HD3	2.32	0.44
3:C:4014:LYS:HG2	3:C:4135:PRO:HB3	1.98	0.44
3:D:4678:ALA:HB1	3:D:4720:VAL:HG21	2.00	0.44
1:F:26:TYR:HA	1:F:100:ASP:O	2.17	0.44
3:A:722:TRP:CZ2	3:A:727:ALA:HB2	2.52	0.44
3:A:910:PHE:HE1	3:A:921:ASN:HD22	1.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4014:LYS:HG2	3:A:4135:PRO:HB3	1.99	0.44
3:B:1256:GLU:HB2	3:B:1275:ARG:CZ	2.48	0.44
3:B:2597:LYS:HZ3	3:B:2600:ARG:HD2	1.83	0.44
3:B:2904:LEU:HD13	3:B:2904:LEU:O	2.18	0.44
3:B:4090:LYS:HG2	3:B:4123:ILE:HD11	1.98	0.44
3:B:4729:GLY:O	3:B:4734:ARG:HG2	2.16	0.44
3:C:722:TRP:CZ2	3:C:727:ALA:HB2	2.52	0.44
3:C:932:LEU:HD21	3:C:984:LEU:HD21	1.99	0.44
3:C:2522:LEU:HA	3:C:2526:PHE:HB2	2.00	0.44
3:C:2763:HIS:CD2	3:C:2790:MET:HE2	2.53	0.44
3:C:3354:LEU:HB2	3:C:3415:TYR:HE2	1.82	0.44
3:C:3543:LYS:HD3	3:C:3543:LYS:HA	1.89	0.44
3:C:3648:ARG:O	3:C:3652:MET:HG3	2.17	0.44
3:C:4627:MET:HE1	3:C:4629:TYR:CE2	2.52	0.44
1:H:37:ASP:CG	3:D:1782:PHE:HD2	2.26	0.44
3:A:961:MET:HB2	3:A:961:MET:HE3	1.39	0.44
3:A:3557:LEU:CD2	3:A:3589:PRO:HB3	2.47	0.44
3:B:2751:LEU:HD13	3:B:2813:LEU:HD23	1.99	0.44
3:B:3254:GLY:O	3:B:3258:GLU:HG2	2.18	0.44
3:C:2161:GLN:HG2	3:C:2177:LEU:HD11	2.00	0.44
3:C:3788:GLY:HA3	3:C:3834:ALA:HB3	1.99	0.44
3:D:2359:ARG:HA	3:D:2359:ARG:HD3	1.69	0.44
3:D:3951:PHE:O	3:D:3955:MET:HG3	2.17	0.44
3:A:665:GLU:HB2	3:A:792:LEU:HB2	2.00	0.44
3:A:878:ILE:HD13	3:A:878:ILE:HA	1.83	0.44
3:A:2908:TYR:CE2	3:A:2916:LYS:HD3	2.53	0.44
3:B:2527:LEU:HD21	3:B:2582:MET:HA	1.99	0.44
3:B:3935:TRP:O	3:C:80:GLU:HG2	2.17	0.44
3:D:2466:LEU:HD11	3:D:2505:PHE:CD1	2.53	0.44
1:E:37:ASP:CG	3:A:1782:PHE:HD2	2.26	0.44
3:A:274:LEU:HD11	3:A:280:LEU:HD22	1.99	0.44
3:A:3568:SER:HA	3:A:3571:TRP:NE1	2.33	0.44
3:A:3788:GLY:HA3	3:A:3834:ALA:HB3	2.00	0.44
3:B:3559:LEU:HD23	3:B:3559:LEU:HA	1.85	0.44
3:C:867:LEU:HD22	3:C:929:LEU:HD22	2.00	0.44
3:C:1256:GLU:HB2	3:C:1275:ARG:CZ	2.48	0.44
3:C:3557:LEU:HD12	3:C:3557:LEU:HA	1.85	0.44
3:C:4576:ILE:HG21	3:C:4643:LEU:HB2	2.00	0.44
3:D:214:VAL:HG21	3:D:390:LEU:HD12	2.00	0.44
3:D:938:HIS:ND1	3:D:938:HIS:N	2.65	0.44
3:D:2747:ILE:HB	3:D:2814:LYS:HZ1	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:91:VAL:HG13	3:C:1981:MET:HE1	2.00	0.44
3:A:117:TYR:CZ	3:A:141:ALA:HB2	2.53	0.44
3:A:125:ARG:HG3	3:A:134:ASP:OD1	2.18	0.44
3:A:1820:ARG:HH11	3:A:1821:ASP:HB3	1.82	0.44
3:A:2485:LEU:HA	3:A:2485:LEU:HD23	1.83	0.44
3:A:3066:ASN:O	3:A:3070:ILE:HG12	2.17	0.44
3:B:2908:TYR:CE2	3:B:2916:LYS:HD3	2.53	0.44
3:C:3137:LEU:HD23	3:C:3137:LEU:HA	1.89	0.44
3:C:4217:PHE:O	3:C:4221:VAL:HG22	2.18	0.44
3:D:2102:VAL:HG13	3:D:2120:MET:HB3	2.00	0.44
3:D:2520:HIS:O	3:D:2524:VAL:HG22	2.18	0.44
3:D:3557:LEU:HD12	3:D:3557:LEU:HA	1.86	0.44
1:G:37:ASP:CG	3:C:1782:PHE:HD2	2.26	0.43
3:A:904:HIS:HB3	3:A:907:LEU:HG	1.99	0.43
3:A:1812:LEU:HD21	3:A:1862:ILE:HG13	2.00	0.43
3:A:2527:LEU:HD23	3:A:2527:LEU:HA	1.87	0.43
3:A:2890:LYS:HA	3:A:2890:LYS:HD3	1.75	0.43
3:B:3281:LEU:HD12	3:B:3315:LEU:HD22	2.00	0.43
3:B:4014:LYS:HG2	3:B:4135:PRO:HB3	1.99	0.43
3:D:2949:SER:O	3:D:2953:LYS:HG3	2.18	0.43
3:A:3412:LEU:HD11	3:A:3434:LEU:HD21	2.00	0.43
3:A:4217:PHE:O	3:A:4221:VAL:HG22	2.17	0.43
3:B:125:ARG:HG3	3:B:134:ASP:OD1	2.18	0.43
3:B:2639:MET:HE3	3:B:2639:MET:HB3	1.80	0.43
3:C:213:TYR:CE1	3:C:340:LYS:HG3	2.53	0.43
3:C:2273:LEU:HD23	3:C:2330:ARG:HB3	2.00	0.43
3:C:2470:ILE:HG22	3:C:2525:GLY:HA3	2.00	0.43
3:D:306:LYS:HE2	3:D:306:LYS:HB2	1.56	0.43
3:D:2485:LEU:HD23	3:D:2485:LEU:HA	1.82	0.43
3:A:2737:PRO:HB2	3:A:2888:ARG:NH1	2.33	0.43
3:B:117:TYR:CZ	3:B:141:ALA:HB2	2.53	0.43
3:B:953:THR:HG23	3:B:969:PRO:O	2.18	0.43
3:B:2625:ARG:HA	3:B:2625:ARG:HD2	1.86	0.43
3:C:213:TYR:CD1	3:C:337:PRO:HB2	2.53	0.43
3:C:306:LYS:HE2	3:C:306:LYS:HB2	1.56	0.43
3:C:2376:LEU:O	3:C:2380:ILE:HG12	2.18	0.43
3:C:2527:LEU:HD21	3:C:2582:MET:HA	1.99	0.43
3:C:2908:TYR:CE2	3:C:2916:LYS:HD3	2.53	0.43
3:C:5014[A]:TYR:HE2	8:C:5109:CFF:N9	2.16	0.43
3:D:340:LYS:HD3	3:D:343:GLU:OE2	2.18	0.43
3:D:665:GLU:HB2	3:D:792:LEU:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:797:HIS:CE1	3:D:1619:ARG:HH21	2.36	0.43
3:A:2359:ARG:HA	3:A:2359:ARG:HD3	1.69	0.43
3:A:3557:LEU:HD21	3:A:3589:PRO:HB3	2.01	0.43
3:B:107:ILE:HG23	3:B:150:MET:HE2	2.01	0.43
3:B:2475:GLN:O	3:B:2546:MET:HG2	2.19	0.43
3:B:2813:LEU:HD12	3:B:2813:LEU:HA	1.85	0.43
3:B:3384:LYS:H	3:B:3387:ALA:HB3	1.83	0.43
3:C:156:GLN:HG2	3:C:157:ARG:HG2	2.01	0.43
3:C:348:VAL:HB	3:C:357:LEU:HB3	2.01	0.43
3:C:2520:HIS:O	3:C:2524:VAL:HG22	2.18	0.43
3:C:3175:LEU:HD13	3:C:3190:LEU:HD13	2.00	0.43
3:C:3384:LYS:H	3:C:3387:ALA:HB3	1.83	0.43
3:C:4928:LEU:HD23	3:C:4931:ILE:HD12	2.01	0.43
3:D:805:PRO:HG2	3:D:808:TYR:CD1	2.54	0.43
3:D:1815:LEU:HG	3:D:1865:MET:HE3	2.01	0.43
3:D:1820:ARG:HH11	3:D:1821:ASP:HB3	1.83	0.43
3:D:3223:SER:OG	3:D:3226:GLU:HG3	2.18	0.43
2:K:-1:HIS:CD2	3:C:2244:ARG:HG3	2.53	0.43
1:F:37:ASP:CG	3:B:1782:PHE:HD2	2.26	0.43
3:A:28:VAL:HG12	3:A:29:LEU:HG	2.01	0.43
3:A:913:LEU:HG	3:A:914:PRO:HD2	2.01	0.43
3:A:975:VAL:C	3:A:976:ARG:HD2	2.43	0.43
3:A:1161:ILE:HD11	3:A:1177:THR:HG22	2.01	0.43
3:A:2475:GLN:O	3:A:2546:MET:HG2	2.19	0.43
3:A:2496:PRO:HD3	3:A:2546:MET:HE1	1.99	0.43
3:A:4634:GLU:CD	3:A:4639:MET:HB2	2.43	0.43
3:B:214:VAL:HG21	3:B:390:LEU:HD12	2.00	0.43
3:B:1820:ARG:HH11	3:B:1821:ASP:HB3	1.83	0.43
3:C:117:TYR:CZ	3:C:141:ALA:HB2	2.53	0.43
3:C:2423:MET:HB3	3:C:2498:HIS:CE1	2.53	0.43
3:C:2890:LYS:HA	3:C:2890:LYS:HD3	1.83	0.43
3:D:213:TYR:CD1	3:D:337:PRO:HB2	2.53	0.43
3:D:227:MET:HE3	3:D:391:THR:OG1	2.19	0.43
3:D:2007:ASN:OD1	3:D:3656:SER:HB2	2.19	0.43
3:D:2737:PRO:HB2	3:D:2888:ARG:NH1	2.34	0.43
3:D:4217:PHE:O	3:D:4221:VAL:HG22	2.17	0.43
1:G:26:TYR:HA	1:G:100:ASP:O	2.17	0.43
3:A:214:VAL:HG21	3:A:390:LEU:HD12	2.00	0.43
3:A:3996:PHE:O	3:A:4000:MET:HG3	2.19	0.43
3:A:4218:ILE:HD13	3:A:4954:MET:HE2	1.99	0.43
3:B:913:LEU:HG	3:B:914:PRO:HD2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:2987:GLU:CD	3:B:2988:LYS:H	2.25	0.43
3:B:3324:VAL:HA	3:B:3327:LEU:HG	1.99	0.43
3:D:1256:GLU:HB2	3:D:1275:ARG:CZ	2.49	0.43
2:J:39:LEU:HD13	2:J:72:MET:HE2	2.00	0.43
3:A:3186:LEU:HD23	3:A:3186:LEU:HA	1.83	0.43
3:A:3203:VAL:HA	3:A:3214:ASN:ND2	2.33	0.43
3:A:3834:ALA:O	3:A:3838:THR:HG23	2.18	0.43
3:B:156:GLN:HG2	3:B:157:ARG:HG2	2.01	0.43
3:B:1812:LEU:HD21	3:B:1862:ILE:HG13	1.99	0.43
3:B:3368:ARG:HG2	3:B:3401:LEU:HD13	2.01	0.43
3:D:2199:ARG:HD3	3:D:2249:SER:HB3	2.00	0.43
3:D:2776:SER:HA	3:D:2791:LEU:HD22	2.00	0.43
3:D:2973:PHE:CD1	3:D:2973:PHE:C	2.97	0.43
2:K:13:LYS:HG2	3:C:2189:LYS:HB3	1.99	0.43
3:A:2102:VAL:HG13	3:A:2120:MET:HB3	1.99	0.43
3:A:3185:LYS:HB3	3:A:3185:LYS:HE2	1.81	0.43
3:A:3248:ARG:HD2	3:A:3248:ARG:O	2.18	0.43
3:A:4241:THR:O	3:A:4245:MET:HG3	2.18	0.43
3:B:3778:MET:HE2	3:B:3778:MET:HB3	1.79	0.43
3:C:274:LEU:HD11	3:C:280:LEU:HD22	2.00	0.43
3:C:805:PRO:HG2	3:C:808:TYR:CD1	2.54	0.43
3:C:953:THR:HG23	3:C:969:PRO:O	2.17	0.43
3:C:1161:ILE:HD11	3:C:1177:THR:HG22	2.01	0.43
3:C:2949:SER:O	3:C:2953:LYS:HG3	2.19	0.43
3:A:2690:LYS:HD3	3:A:2691:TYR:N	2.34	0.43
3:A:2891:LYS:HB3	3:A:2891:LYS:HE3	1.86	0.43
3:A:3157:ILE:HB	3:A:3202:PRO:HD3	2.01	0.43
3:A:4056:GLU:HG2	3:A:4166:LEU:HD13	2.00	0.43
3:A:4678:ALA:HB1	3:A:4720:VAL:HG21	2.01	0.43
3:B:28:VAL:HG12	3:B:29:LEU:HG	2.00	0.43
3:B:665:GLU:HB2	3:B:792:LEU:HB2	2.00	0.43
3:B:3365:LEU:HD13	3:B:3405:LEU:HD23	2.01	0.43
3:C:125:ARG:HG3	3:C:134:ASP:OD1	2.19	0.43
3:C:2150:GLU:H	3:C:2150:GLU:CD	2.27	0.43
3:C:2874:MET:HE2	3:C:2874:MET:HB3	1.84	0.43
3:D:1293:LEU:O	3:D:1579:MET:HE2	2.19	0.43
3:D:2522:LEU:O	3:D:2527:LEU:HB2	2.18	0.43
3:D:2604:GLU:HB3	3:D:2639:MET:HG3	2.00	0.43
3:A:864:PRO:HD2	3:A:867:LEU:HB2	2.01	0.43
3:A:2376:LEU:O	3:A:2380:ILE:HG12	2.19	0.43
3:A:3107:VAL:HG22	3:A:3175:LEU:HD11	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1161:ILE:HD11	3:B:1177:THR:HG22	2.00	0.43
3:C:107:ILE:HG23	3:C:150:MET:HE2	2.01	0.43
3:C:1808:ARG:HG2	3:C:1854:PHE:CE1	2.54	0.43
3:C:1981:MET:HE2	3:C:1981:MET:HA	2.01	0.43
3:C:3368:ARG:HD3	3:C:3371:LYS:NZ	2.34	0.43
3:C:3434:LEU:HA	3:C:3437:MET:HE2	2.00	0.43
3:D:1808:ARG:HG2	3:D:1854:PHE:CE1	2.54	0.43
3:D:2638:LYS:HD2	3:D:2638:LYS:HA	1.83	0.43
3:D:3568:SER:HA	3:D:3571:TRP:NE1	2.33	0.43
3:D:3916:ILE:HG13	3:D:3968:TYR:CD2	2.54	0.43
3:A:3368:ARG:HG2	3:A:3401:LEU:HD13	2.01	0.42
3:B:2376:LEU:O	3:B:2380:ILE:HG12	2.19	0.42
3:C:907:LEU:HD23	3:C:907:LEU:HA	1.85	0.42
3:C:4808:PHE:HZ	7:C:5108:PLC:H1A2	1.83	0.42
3:D:125:ARG:HG3	3:D:134:ASP:OD1	2.18	0.42
3:D:1161:ILE:HD11	3:D:1177:THR:HG22	2.01	0.42
3:D:4957:LYS:HE2	3:D:4962:GLY:O	2.19	0.42
3:A:107:ILE:HG23	3:A:150:MET:HE2	2.01	0.42
3:A:156:GLN:HG2	3:A:157:ARG:HG2	2.01	0.42
3:A:805:PRO:HG2	3:A:808:TYR:CD1	2.54	0.42
3:A:2515:GLN:O	3:A:2519:LEU:HG	2.19	0.42
3:A:3603:LEU:O	3:A:3607:GLU:HG3	2.19	0.42
3:B:805:PRO:HG2	3:B:808:TYR:CD1	2.54	0.42
3:B:1808:ARG:HG2	3:B:1854:PHE:CE1	2.54	0.42
3:B:3003:LEU:HB2	3:B:3004:PRO:HD3	2.02	0.42
3:B:3248:ARG:HD2	3:B:3248:ARG:O	2.19	0.42
3:B:3335:MET:HB3	3:B:3407:ALA:HB2	2.01	0.42
3:B:3543:LYS:HD3	3:B:3543:LYS:HA	1.91	0.42
3:C:214:VAL:HG21	3:C:390:LEU:HD12	2.01	0.42
3:C:614:VAL:HG22	3:C:2169:GLN:HG3	2.02	0.42
3:C:3053:ARG:HG2	3:C:3056:LEU:HD13	2.00	0.42
3:D:2208:MET:HE3	3:D:2256:TYR:CE2	2.55	0.42
3:A:340:LYS:HB3	3:A:340:LYS:HE3	1.72	0.42
3:A:348:VAL:HB	3:A:357:LEU:HB3	2.01	0.42
3:A:870:ILE:HD12	3:A:870:ILE:HA	1.90	0.42
3:B:2522:LEU:O	3:B:2527:LEU:HB2	2.19	0.42
3:B:2918:ARG:O	3:B:2921:GLU:HG3	2.20	0.42
3:B:3456:GLN:HB2	3:B:3503:TYR:CE2	2.54	0.42
3:C:797:HIS:CE1	3:C:1619:ARG:HH21	2.38	0.42
3:C:2522:LEU:O	3:C:2527:LEU:HB2	2.19	0.42
3:C:3916:ILE:HG13	3:C:3968:TYR:CD2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:274:LEU:HD11	3:D:280:LEU:HD22	2.00	0.42
3:D:2784:GLU:H	3:D:2784:GLU:HG2	1.68	0.42
3:D:4634:GLU:CD	3:D:4639:MET:HB2	2.43	0.42
1:E:106:LEU:HD23	1:E:106:LEU:HA	1.85	0.42
3:A:2470:ILE:HG22	3:A:2525:GLY:HA3	2.01	0.42
3:A:3003:LEU:HB2	3:A:3004:PRO:HD3	2.02	0.42
3:A:3384:LYS:H	3:A:3387:ALA:HB3	1.84	0.42
3:A:3540:TYR:HB3	3:A:3604:TYR:CD2	2.54	0.42
3:B:2470:ILE:HG22	3:B:2525:GLY:HA3	2.02	0.42
3:B:4678:ALA:HB1	3:B:4720:VAL:HG21	2.01	0.42
3:C:665:GLU:HB2	3:C:792:LEU:HB2	2.00	0.42
3:C:1000:ARG:HA	3:C:1000:ARG:HD3	1.67	0.42
3:C:4678:ALA:HB1	3:C:4720:VAL:HG21	2.01	0.42
1:F:29:MET:HG2	1:F:35:LYS:HA	2.01	0.42
1:G:29:MET:HG2	1:G:35:LYS:HA	2.01	0.42
3:A:3270:ILE:HA	3:A:3274:LEU:HD12	2.01	0.42
3:A:4202:ARG:O	3:A:4206:GLU:HG2	2.20	0.42
3:B:870:ILE:HD12	3:B:870:ILE:HA	1.89	0.42
3:B:2792:ARG:HH22	3:B:2801:ASP:CG	2.27	0.42
3:B:3203:VAL:HA	3:B:3214:ASN:ND2	2.34	0.42
3:B:4976:GLU:CD	3:B:4976:GLU:N	2.78	0.42
3:C:3289:PRO:HG2	3:C:3308:THR:HG22	2.02	0.42
3:D:2700:MET:HB3	3:D:2701:PRO:HD3	2.01	0.42
3:D:3416:VAL:O	3:D:3420:ARG:HB2	2.19	0.42
3:D:3834:ALA:O	3:D:3838:THR:HG23	2.19	0.42
3:A:2740:VAL:HG11	3:A:2819:TRP:HE1	1.85	0.42
3:A:3368:ARG:HD3	3:A:3371:LYS:NZ	2.35	0.42
3:A:4093:PHE:CZ	3:A:4097:MET:HE3	2.55	0.42
3:B:1815:LEU:HG	3:B:1865:MET:HE3	2.01	0.42
3:C:461:HIS:O	3:C:465:GLN:HG2	2.20	0.42
3:C:486:LEU:HD12	3:C:486:LEU:HA	1.88	0.42
3:C:864:PRO:HD2	3:C:867:LEU:HB2	2.02	0.42
3:C:2911:LEU:HD23	3:C:2916:LYS:HG2	2.01	0.42
3:D:156:GLN:HG2	3:D:157:ARG:HG2	2.01	0.42
3:D:2803:GLU:HA	3:D:2806:ARG:NH1	2.35	0.42
3:D:3049:LEU:HD23	3:D:3049:LEU:HA	1.94	0.42
3:A:3802:ILE:HD11	3:A:3883:ASP:O	2.19	0.42
3:B:1293:LEU:O	3:B:1579:MET:HE2	2.20	0.42
3:B:2737:PRO:HB2	3:B:2888:ARG:NH1	2.33	0.42
3:B:3246:LEU:HD11	3:B:3281:LEU:HD21	2.01	0.42
3:B:4725:LEU:HA	3:B:4737:ILE:HG21	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:695:TYR:CD2	3:C:1240:LYS:HD2	2.55	0.42
3:C:820:ARG:HD2	3:C:820:ARG:HA	1.77	0.42
3:C:1293:LEU:O	3:C:1579:MET:HE2	2.20	0.42
3:C:4798:MET:HE2	7:C:5108:PLC:HTA2	2.01	0.42
3:D:107:ILE:HG23	3:D:150:MET:HE2	2.01	0.42
3:D:461:HIS:O	3:D:465:GLN:HG2	2.20	0.42
3:D:796:ARG:HG2	10:D:6172:HOH:O	2.19	0.42
3:D:872:GLU:OE1	3:D:922:LEU:HD21	2.20	0.42
3:D:2004:GLU:O	3:D:2008:MET:HG3	2.20	0.42
3:D:2578:MET:HE2	3:D:2578:MET:HB3	1.85	0.42
3:D:3384:LYS:H	3:D:3387:ALA:HB3	1.84	0.42
1:E:29:MET:HG2	1:E:35:LYS:HA	2.01	0.42
3:A:2783:GLU:CD	3:A:2783:GLU:H	2.28	0.42
3:A:2874:MET:HE2	3:A:2874:MET:HB3	1.91	0.42
3:A:3334:TRP:CD1	3:A:3334:TRP:H	2.38	0.42
3:B:820:ARG:CZ	3:B:821:LEU:H	2.33	0.42
3:B:4991:PHE:HE2	3:B:5010:VAL:HG11	1.85	0.42
3:C:941:MET:HE1	3:C:1051:TYR:CZ	2.55	0.42
3:C:3753:PHE:O	3:C:3757:GLU:HG2	2.19	0.42
3:D:348:VAL:HB	3:D:357:LEU:HB3	2.01	0.42
3:D:2527:LEU:HD23	3:D:2527:LEU:HA	1.87	0.42
3:D:2690:LYS:HD3	3:D:2691:TYR:N	2.35	0.42
3:A:486:LEU:HD12	3:A:486:LEU:HA	1.88	0.42
3:A:796:ARG:HG2	10:A:6175:HOH:O	2.19	0.42
3:A:2639:MET:HE3	3:A:2639:MET:HB3	1.82	0.42
3:A:2704:CYS:HB3	3:A:3008:GLN:HG2	2.02	0.42
3:A:2792:ARG:HH22	3:A:2801:ASP:CG	2.28	0.42
3:A:3324:VAL:HA	3:A:3327:LEU:HG	2.02	0.42
3:B:1433:TYR:CD2	3:B:1578:ALA:HB2	2.55	0.42
3:B:1963:GLU:HA	3:B:3650:CYS:SG	2.60	0.42
3:B:2212:VAL:HG21	3:B:2256:TYR:CZ	2.55	0.42
3:B:2886:TRP:CH2	3:B:2904:LEU:HD12	2.54	0.42
3:B:4796:MET:HE3	3:B:4800:LEU:HG	2.01	0.42
3:C:820:ARG:CZ	3:C:821:LEU:H	2.33	0.42
3:C:957:LYS:NZ	3:C:966:LYS:HE2	2.35	0.42
3:C:1821:ASP:OD2	3:C:1821:ASP:C	2.63	0.42
3:C:3066:ASN:O	3:C:3070:ILE:HD12	2.20	0.42
3:D:3003:LEU:HB2	3:D:3004:PRO:HD3	2.01	0.42
3:D:4047:MET:HE3	3:D:4047:MET:HB3	1.72	0.42
3:A:1466:LEU:HD23	3:A:1466:LEU:HA	1.92	0.42
3:A:1808:ARG:HG2	3:A:1854:PHE:CE1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2522:LEU:O	3:A:2527:LEU:HB2	2.19	0.42
3:A:4047:MET:HB3	3:A:4047:MET:HE3	1.72	0.42
3:B:681:HIS:O	3:B:783:PHE:HA	2.20	0.42
3:B:2102:VAL:HG13	3:B:2120:MET:HB3	2.02	0.42
3:B:2150:GLU:CD	3:B:2150:GLU:H	2.27	0.42
3:B:2199:ARG:HD3	3:B:2249:SER:HB3	2.01	0.42
3:B:2874:MET:HE2	3:B:2874:MET:HB3	1.95	0.42
3:B:3412:LEU:HD11	3:B:3434:LEU:HD21	2.02	0.42
3:C:681:HIS:O	3:C:783:PHE:HA	2.20	0.42
3:C:2199:ARG:HD3	3:C:2249:SER:HB3	2.00	0.42
3:C:2918:ARG:O	3:C:2921:GLU:HG3	2.20	0.42
3:C:4976:GLU:CD	3:C:4976:GLU:N	2.78	0.42
3:D:1433:TYR:CD2	3:D:1578:ALA:HB2	2.55	0.42
3:D:1466:LEU:HD23	3:D:1466:LEU:HA	1.91	0.42
3:D:2759:ALA:HB1	3:D:2805:TYR:CD1	2.55	0.42
3:D:3036:LYS:O	3:D:3039:ILE:HG22	2.20	0.42
1:G:62:GLY:O	1:G:66:MET:HG3	2.20	0.41
3:A:681:HIS:O	3:A:783:PHE:HA	2.20	0.41
3:A:1293:LEU:O	3:A:1579:MET:HE2	2.20	0.41
3:A:1424:PRO:HA	3:A:1427:ILE:HG22	2.02	0.41
3:A:2700:MET:HB3	3:A:2701:PRO:HD3	2.02	0.41
3:A:2952:GLU:HG2	3:A:2957:PHE:CZ	2.55	0.41
3:A:3246:LEU:HD11	3:A:3281:LEU:HD21	2.02	0.41
3:A:4968:PHE:O	3:A:4974:GLY:HA3	2.20	0.41
3:B:469:ARG:HD3	3:B:3712:GLU:OE1	2.19	0.41
3:B:614:VAL:HG22	3:B:2169:GLN:HG3	2.01	0.41
3:B:1000:ARG:HD3	3:B:1000:ARG:HA	1.67	0.41
3:B:2627:VAL:HG22	3:B:2678:LEU:HB2	2.01	0.41
3:B:3169:LEU:HD12	3:B:3194:LEU:HD11	2.01	0.41
3:B:3368:ARG:HD3	3:B:3371:LYS:NZ	2.35	0.41
3:C:1433:TYR:CD2	3:C:1578:ALA:HB2	2.55	0.41
3:C:4056:GLU:HG2	3:C:4166:LEU:HD13	2.02	0.41
3:D:3289:PRO:HG2	3:D:3308:THR:HG22	2.02	0.41
3:D:4821:LYS:HE3	3:D:4821:LYS:HB2	1.85	0.41
2:J:-1:HIS:CD2	3:B:2244:ARG:HG3	2.55	0.41
3:A:695:TYR:CD2	3:A:1240:LYS:HD2	2.55	0.41
3:A:1433:TYR:CD2	3:A:1578:ALA:HB2	2.55	0.41
3:A:3281:LEU:HD12	3:A:3315:LEU:HD22	2.01	0.41
3:A:3341:PHE:O	3:A:3344:PRO:HD2	2.20	0.41
3:B:544:LEU:HD21	3:B:578:ILE:HD13	2.02	0.41
3:B:2704:CYS:HB3	3:B:3008:GLN:HG2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:2783:GLU:H	3:B:2783:GLU:CD	2.28	0.41
3:B:3277:LEU:HD23	3:B:3277:LEU:HA	1.85	0.41
3:B:3971:GLY:N	3:B:3972:PRO:HA	2.35	0.41
3:C:2485:LEU:HD23	3:C:2485:LEU:HA	1.83	0.41
3:C:3802:ILE:HD11	3:C:3883:ASP:O	2.20	0.41
3:D:614:VAL:HG22	3:D:2169:GLN:HG3	2.02	0.41
3:A:213:TYR:CD1	3:A:337:PRO:HB2	2.55	0.41
3:A:872:GLU:OE1	3:A:922:LEU:HD21	2.20	0.41
3:A:1815:LEU:HG	3:A:1865:MET:HE3	2.01	0.41
3:B:932:LEU:HD21	3:B:984:LEU:HD21	2.01	0.41
3:B:2162:ILE:HG23	3:B:2178:MET:HE1	2.03	0.41
3:B:2608:MET:HE3	3:B:2608:MET:HB3	1.88	0.41
3:B:2973:PHE:CD1	3:B:2973:PHE:C	2.98	0.41
3:B:3780:LEU:HD11	3:B:3816:MET:HG2	2.02	0.41
3:B:3916:ILE:HG13	3:B:3968:TYR:CD2	2.55	0.41
3:C:2007:ASN:OD1	3:C:3656:SER:HB2	2.20	0.41
3:C:2527:LEU:HD23	3:C:2527:LEU:HA	1.88	0.41
3:C:3557:LEU:CD2	3:C:3589:PRO:HB3	2.51	0.41
3:D:907:LEU:HD23	3:D:907:LEU:HA	1.87	0.41
3:D:2227:LYS:HB2	3:D:2227:LYS:HE2	1.83	0.41
3:D:2908:TYR:CE2	3:D:2916:LYS:HD3	2.55	0.41
3:D:3266:MET:HG3	3:D:3270:ILE:HD12	2.02	0.41
2:I:4:LEU:HD22	2:I:12:PHE:HE2	1.84	0.41
3:A:2566:ALA:HA	3:A:2569:PHE:HD2	1.85	0.41
3:B:99:ARG:H	3:B:99:ARG:HG2	1.62	0.41
3:B:1245:PHE:CD1	3:B:1290:ARG:HG2	2.56	0.41
3:C:1245:PHE:CD1	3:C:1290:ARG:HG2	2.55	0.41
3:C:1424:PRO:HA	3:C:1427:ILE:HG22	2.02	0.41
3:C:3246:LEU:HD11	3:C:3281:LEU:HD21	2.03	0.41
3:C:3265:GLU:H	3:C:3265:GLU:HG2	1.73	0.41
3:C:3435:PHE:HB2	3:C:3517:MET:HE3	2.02	0.41
3:D:957:LYS:HA	3:D:957:LYS:HD3	1.76	0.41
3:D:1245:PHE:CD1	3:D:1290:ARG:HG2	2.55	0.41
3:D:1821:ASP:C	3:D:1821:ASP:OD2	2.63	0.41
3:D:2384:ILE:HG13	3:D:2423:MET:HE2	2.02	0.41
3:D:2758:PHE:CD2	3:D:2809:ILE:HG12	2.55	0.41
3:D:3334:TRP:CD1	3:D:3334:TRP:H	2.38	0.41
3:D:3343:GLN:NE2	3:D:3414:ARG:HG3	2.34	0.41
3:D:3971:GLY:N	3:D:3972:PRO:HA	2.35	0.41
3:A:820:ARG:CZ	3:A:821:LEU:H	2.33	0.41
3:B:348:VAL:HB	3:B:357:LEU:HB3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1424:PRO:HA	3:B:1427:ILE:HG22	2.03	0.41
3:B:2803:GLU:HA	3:B:2806:ARG:NH1	2.36	0.41
3:B:4090:LYS:HE2	3:B:4112:LEU:HD22	2.01	0.41
3:C:2475:GLN:O	3:C:2546:MET:HG2	2.20	0.41
3:D:907:LEU:HD13	3:D:961:MET:SD	2.60	0.41
3:D:2608:MET:CE	3:D:2642:LYS:HG2	2.51	0.41
3:D:2637:ALA:C	3:D:2640:PRO:HD2	2.46	0.41
3:D:4705:VAL:HG22	3:D:4711:PHE:HB2	2.03	0.41
3:D:4889:VAL:HG12	3:D:4900:GLU:HG3	2.03	0.41
3:D:4968:PHE:O	3:D:4974:GLY:HA3	2.21	0.41
3:A:290:TYR:O	3:A:301:VAL:HA	2.21	0.41
3:A:1963:GLU:HA	3:A:3650:CYS:SG	2.61	0.41
3:A:3540:TYR:CZ	3:A:3601:ALA:HB2	2.55	0.41
3:A:4889:VAL:HG12	3:A:4900:GLU:HG3	2.03	0.41
3:B:461:HIS:O	3:B:465:GLN:HG2	2.19	0.41
3:B:872:GLU:OE1	3:B:922:LEU:HD21	2.21	0.41
3:B:2566:ALA:HA	3:B:2569:PHE:HD2	1.85	0.41
3:B:3157:ILE:HB	3:B:3202:PRO:HD3	2.02	0.41
3:C:544:LEU:HD21	3:C:578:ILE:HD13	2.02	0.41
3:C:2566:ALA:HA	3:C:2569:PHE:HD2	1.85	0.41
3:D:681:HIS:O	3:D:783:PHE:HA	2.20	0.41
3:D:1021:LEU:HD12	3:D:1021:LEU:HA	1.88	0.41
3:D:3327:LEU:HD21	3:D:3408:LEU:HD11	2.03	0.41
2:I:94:LYS:HD3	3:A:1984:PHE:HE1	1.86	0.41
2:K:69:LEU:HD23	2:K:69:LEU:HA	1.86	0.41
3:A:1821:ASP:OD2	3:A:1821:ASP:C	2.63	0.41
3:A:4976:GLU:CD	3:A:4976:GLU:N	2.78	0.41
3:B:626:LEU:HD23	10:B:6064:HOH:O	2.21	0.41
3:B:3334:TRP:CD1	3:B:3334:TRP:H	2.38	0.41
3:B:4202:ARG:O	3:B:4206:GLU:HG2	2.20	0.41
3:C:2891:LYS:HB3	3:C:2891:LYS:HE3	1.86	0.41
3:D:820:ARG:CZ	3:D:821:LEU:H	2.33	0.41
3:D:937:CYS:SG	3:D:1053:ILE:HG23	2.61	0.41
1:H:29:MET:HG2	1:H:35:LYS:HA	2.02	0.41
3:B:233:ILE:O	3:B:257:ARG:HD2	2.21	0.41
3:B:290:TYR:O	3:B:301:VAL:HA	2.21	0.41
3:B:1566:LEU:O	3:B:1589:PRO:HB3	2.21	0.41
3:B:2178:MET:HE2	3:B:2178:MET:HB2	1.82	0.41
3:B:2988:LYS:HD3	3:B:2988:LYS:HA	1.78	0.41
3:C:1575:LEU:HD23	3:C:1575:LEU:HA	1.93	0.41
3:D:468:LEU:O	3:D:472:ARG:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1963:GLU:HA	3:D:3650:CYS:SG	2.61	0.41
3:D:2891:LYS:HE3	3:D:2891:LYS:HB3	1.86	0.41
3:D:4696:ASP:O	3:D:4700:GLN:HG2	2.20	0.41
3:D:4976:GLU:CD	3:D:4976:GLU:N	2.78	0.41
1:G:106:LEU:HD23	1:G:106:LEU:HA	1.85	0.41
3:A:2023:LEU:HD23	3:A:2023:LEU:HA	1.93	0.41
3:A:3302:PRO:HA	3:A:3303:PRO:HD3	1.96	0.41
3:A:3456:GLN:HB2	3:A:3503:TYR:CE2	2.56	0.41
4:A:5103:43M:H4	3:B:4921:PHE:HD2	1.86	0.41
3:B:1286:MET:HE3	3:B:1286:MET:HB3	1.93	0.41
3:B:2515:GLN:O	3:B:2519:LEU:HG	2.21	0.41
3:B:2700:MET:HB3	3:B:2701:PRO:HD3	2.02	0.41
3:B:2911:LEU:HD23	3:B:2916:LYS:HG2	2.02	0.41
3:B:2991:HIS:O	3:B:2995:ILE:HG13	2.21	0.41
3:B:3201:MET:HE3	3:B:3203:VAL:CG2	2.51	0.41
3:B:3270:ILE:HA	3:B:3274:LEU:HD12	2.03	0.41
3:B:3540:TYR:CZ	3:B:3601:ALA:HB2	2.55	0.41
3:B:3663:LEU:HD23	3:B:3663:LEU:HA	1.91	0.41
3:C:956:PRO:HD2	3:C:959:TYR:CE2	2.56	0.41
3:C:1566:LEU:O	3:C:1589:PRO:HB3	2.21	0.41
3:C:1963:GLU:HA	3:C:3650:CYS:SG	2.61	0.41
3:C:2700:MET:HB3	3:C:2701:PRO:HD3	2.03	0.41
3:C:2929:PHE:CD1	3:C:2932:MET:HE3	2.56	0.41
3:C:2973:PHE:CE1	3:C:2995:ILE:HG12	2.56	0.41
3:C:4796:MET:CE	3:C:4800:LEU:HG	2.51	0.41
3:D:544:LEU:HD21	3:D:578:ILE:HD13	2.02	0.41
3:D:569:ILE:HD13	3:D:569:ILE:HA	1.91	0.41
3:D:695:TYR:CD2	3:D:1240:LYS:HD2	2.56	0.41
3:D:2212:VAL:HG21	3:D:2256:TYR:CZ	2.55	0.41
3:D:2874:MET:HE2	3:D:2874:MET:HB3	1.85	0.41
3:D:3258:GLU:OE1	3:D:3321:ARG:HD3	2.21	0.41
3:D:3969:ILE:HG21	3:D:3980:LEU:HD12	2.03	0.41
3:D:4209:GLN:HG2	3:D:4210:VAL:N	2.36	0.41
3:D:4725:LEU:HA	3:D:4737:ILE:HG21	2.02	0.41
3:A:461:HIS:O	3:A:465:GLN:HG2	2.20	0.41
3:A:2007:ASN:OD1	3:A:3656:SER:HB2	2.21	0.41
3:A:2911:LEU:HD23	3:A:2916:LYS:HG2	2.03	0.41
3:A:4928:LEU:HD23	3:A:4931:ILE:HD12	2.02	0.41
3:B:878:ILE:HD13	3:B:878:ILE:HA	1.83	0.41
3:B:3405:LEU:O	3:B:3409:TYR:HB2	2.21	0.41
3:C:233:ILE:O	3:C:257:ARG:HD2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1965:TYR:CZ	3:C:2031:LEU:HB2	2.56	0.41
3:C:2023:LEU:HD23	3:C:2023:LEU:HA	1.93	0.41
3:C:2102:VAL:HG13	3:C:2120:MET:HB3	2.02	0.41
3:C:2745:VAL:HG13	3:C:2814:LYS:HD3	2.03	0.41
3:C:3036:LYS:O	3:C:3039:ILE:HG22	2.21	0.41
4:C:5103:43M:H4	3:D:4921:PHE:HD2	1.86	0.41
3:D:117:TYR:CZ	3:D:141:ALA:HB2	2.56	0.41
3:D:589:LEU:HD23	3:D:589:LEU:HA	1.95	0.41
3:D:1424:PRO:HA	3:D:1427:ILE:HG22	2.03	0.41
3:D:3203:VAL:HA	3:D:3214:ASN:ND2	2.35	0.41
3:D:3367:LYS:HE3	3:D:3367:LYS:HB3	1.90	0.41
3:A:1245:PHE:CD1	3:A:1290:ARG:HG2	2.56	0.40
3:A:2776:SER:HA	3:A:2791:LEU:HD22	2.03	0.40
3:A:4091:LYS:HE2	3:A:4091:LYS:N	2.21	0.40
3:B:1821:ASP:OD2	3:B:1821:ASP:C	2.63	0.40
3:B:1965:TYR:CZ	3:B:2031:LEU:HB2	2.56	0.40
3:B:2007:ASN:OD1	3:B:3656:SER:HB2	2.21	0.40
3:C:290:TYR:O	3:C:301:VAL:HA	2.21	0.40
3:C:468:LEU:O	3:C:472:ARG:HG2	2.21	0.40
3:C:4209:GLN:HG2	3:C:4210:VAL:N	2.36	0.40
3:C:4968:PHE:O	3:C:4974:GLY:HA3	2.22	0.40
3:D:3359:ILE:HD13	3:D:3359:ILE:HA	1.88	0.40
1:H:106:LEU:HD23	1:H:106:LEU:HA	1.85	0.40
3:A:614:VAL:HG22	3:A:2169:GLN:HG3	2.02	0.40
3:A:2690:LYS:HE2	3:A:2690:LYS:HA	2.03	0.40
3:A:2803:GLU:HA	3:A:2806:ARG:NH1	2.36	0.40
3:A:4010:ILE:O	3:A:4014:LYS:HG3	2.21	0.40
3:B:69:LEU:HD22	3:B:101:LEU:HD21	2.03	0.40
3:B:884:LEU:HG	3:B:888:GLU:OE1	2.21	0.40
3:B:2759:ALA:HB1	3:B:2805:TYR:CD1	2.57	0.40
3:C:3105:LYS:HE3	3:C:3105:LYS:HB2	1.73	0.40
3:C:3780:LEU:HD11	3:C:3816:MET:HG2	2.04	0.40
3:D:290:TYR:O	3:D:301:VAL:HA	2.21	0.40
3:D:1163:THR:HG22	3:D:1168:VAL:HA	2.03	0.40
3:D:2662:ALA:O	3:D:2663:ASN:OD1	2.40	0.40
3:D:2918:ARG:O	3:D:2921:GLU:HG3	2.21	0.40
3:D:3123:LYS:HG2	3:D:3125:VAL:HG22	2.04	0.40
3:D:3802:ILE:HD11	3:D:3883:ASP:O	2.21	0.40
3:A:2150:GLU:CD	3:A:2150:GLU:H	2.27	0.40
3:A:2867:LEU:HD11	3:A:2928:LYS:HG2	2.03	0.40
3:A:2935:TYR:HB2	3:A:2939:ARG:HH12	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:3969:ILE:HG21	3:A:3980:LEU:HD12	2.03	0.40
3:A:4954:MET:HE1	3:A:4959:PHE:HB2	2.02	0.40
3:B:956:PRO:HD2	3:B:959:TYR:HD2	1.87	0.40
3:B:2597:LYS:HE2	3:B:2597:LYS:CA	2.45	0.40
3:B:3802:ILE:HD11	3:B:3883:ASP:O	2.21	0.40
3:C:878:ILE:HD13	3:C:878:ILE:HA	1.83	0.40
3:C:1624:LEU:HD23	3:C:1624:LEU:HA	1.94	0.40
3:C:3103:ILE:HD13	3:C:3168:THR:HG23	2.03	0.40
3:C:4634:GLU:CD	3:C:4639:MET:HB2	2.47	0.40
3:D:1027:LEU:HG	3:D:1031:THR:HB	2.04	0.40
3:D:2911:LEU:HD23	3:D:2916:LYS:HG2	2.03	0.40
3:D:3405:LEU:O	3:D:3409:TYR:HB2	2.22	0.40
3:A:2758:PHE:CD2	3:A:2809:ILE:HG12	2.56	0.40
3:A:3137:LEU:HD23	3:A:3137:LEU:HA	1.90	0.40
3:A:3559:LEU:HD23	3:A:3559:LEU:HA	1.87	0.40
3:B:1249:PRO:HA	3:B:1250:PRO:HD3	1.96	0.40
3:B:2359:ARG:HD3	3:B:2359:ARG:HA	1.69	0.40
3:B:2637:ALA:C	3:B:2640:PRO:HD2	2.46	0.40
3:B:2902:HIS:CG	3:B:2903:PRO:HD2	2.56	0.40
3:B:3110:LEU:HD11	3:B:3186:LEU:HD12	2.04	0.40
3:B:3256:LEU:HB3	3:B:3266:MET:CE	2.51	0.40
3:B:3433:GLU:O	3:B:3437:MET:HG3	2.21	0.40
3:B:3969:ILE:HG21	3:B:3980:LEU:HD12	2.03	0.40
3:C:2423:MET:HE2	3:C:2494:PHE:HB2	2.02	0.40
3:C:2584:HIS:O	3:C:2588:ARG:HG3	2.22	0.40
3:C:3003:LEU:HB2	3:C:3004:PRO:HD3	2.03	0.40
3:C:3023:LYS:HE2	3:C:3023:LYS:HB2	1.79	0.40
3:C:3341:PHE:O	3:C:3344:PRO:HD2	2.21	0.40
3:C:3412:LEU:HD11	3:C:3434:LEU:HD21	2.03	0.40
3:C:3946:GLN:NE2	3:C:3949:ARG:HH12	2.20	0.40
3:C:4725:LEU:HA	3:C:4737:ILE:HG21	2.03	0.40
3:D:69:LEU:HD22	3:D:101:LEU:HD21	2.03	0.40
3:D:1100:MET:HB2	3:D:1143:TRP:HZ2	1.87	0.40
3:D:2865:VAL:HG11	3:D:2928:LYS:HB3	2.04	0.40
3:D:3137:LEU:HD23	3:D:3137:LEU:HA	1.90	0.40
3:D:4091:LYS:H	3:D:4091:LYS:CE	2.22	0.40
3:D:4576:ILE:HG21	3:D:4643:LEU:HB2	2.04	0.40
1:H:62:GLY:O	1:H:66:MET:HG3	2.22	0.40
3:A:26:ALA:HB2	3:A:182:LEU:HD21	2.03	0.40
3:A:233:ILE:O	3:A:257:ARG:HD2	2.21	0.40
3:A:544:LEU:HD21	3:A:578:ILE:HD13	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1044:ARG:HE	3:A:1044:ARG:HB3	1.80	0.40
3:A:2902:HIS:CG	3:A:2903:PRO:HD2	2.56	0.40
3:A:4725:LEU:HA	3:A:4737:ILE:HG21	2.03	0.40
3:A:4796:MET:HE3	3:A:4800:LEU:HG	2.04	0.40
3:B:468:LEU:O	3:B:472:ARG:HG2	2.21	0.40
3:B:2023:LEU:HD23	3:B:2023:LEU:HA	1.93	0.40
3:B:2323:TRP:CD1	3:B:2323:TRP:N	2.90	0.40
3:B:2608:MET:CE	3:B:2642:LYS:HG3	2.50	0.40
3:C:635:THR:HA	3:C:1638:ALA:O	2.22	0.40
3:C:1100:MET:HB2	3:C:1143:TRP:HZ2	1.86	0.40
3:C:4047:MET:HE3	3:C:4047:MET:HB3	1.82	0.40
3:D:22:LEU:HD12	3:D:202:MET:HG3	2.04	0.40
3:D:1566:LEU:O	3:D:1589:PRO:HB3	2.21	0.40
3:D:2318:TYR:OH	3:D:2414:ASN:HB2	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	E	105/107 (98%)	103 (98%)	2 (2%)	0	100	100
1	F	105/107 (98%)	103 (98%)	2 (2%)	0	100	100
1	G	105/107 (98%)	103 (98%)	2 (2%)	0	100	100
1	H	105/107 (98%)	103 (98%)	2 (2%)	0	100	100
2	I	146/148 (99%)	140 (96%)	6 (4%)	0	100	100
2	J	146/148 (99%)	140 (96%)	6 (4%)	0	100	100
2	K	146/148 (99%)	140 (96%)	6 (4%)	0	100	100
2	L	146/148 (99%)	141 (97%)	5 (3%)	0	100	100
3	A	4199/5037 (83%)	4119 (98%)	80 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	B	4199/5037 (83%)	4120 (98%)	79 (2%)	0	100	100
3	C	4199/5037 (83%)	4120 (98%)	79 (2%)	0	100	100
3	D	4199/5037 (83%)	4121 (98%)	78 (2%)	0	100	100
All	All	17800/21168 (84%)	17453 (98%)	347 (2%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	E	88/88 (100%)	85 (97%)	3 (3%)	32	51
1	F	88/88 (100%)	84 (96%)	4 (4%)	24	39
1	G	88/88 (100%)	85 (97%)	3 (3%)	32	51
1	H	88/88 (100%)	85 (97%)	3 (3%)	32	51
2	I	82/127 (65%)	80 (98%)	2 (2%)	43	63
2	J	82/127 (65%)	80 (98%)	2 (2%)	43	63
2	K	82/127 (65%)	79 (96%)	3 (4%)	30	47
2	L	82/127 (65%)	80 (98%)	2 (2%)	43	63
3	A	3697/4276 (86%)	3652 (99%)	45 (1%)	63	79
3	B	3697/4276 (86%)	3653 (99%)	44 (1%)	63	79
3	C	3697/4276 (86%)	3656 (99%)	41 (1%)	65	81
3	D	3697/4276 (86%)	3650 (99%)	47 (1%)	61	78
All	All	15468/17964 (86%)	15269 (99%)	199 (1%)	59	78

All (199) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	E	43	ASN
1	E	79	ASP

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Mol	Chain	Res	Type
1	E	85	THR
2	I	34	THR
2	I	100	ILE
2	J	34	THR
2	J	100	ILE
2	K	29	THR
2	K	34	THR
2	K	100	ILE
2	L	34	THR
2	L	100	ILE
1	F	25	HIS
1	F	43	ASN
1	F	79	ASP
1	F	85	THR
1	G	25	HIS
1	G	43	ASN
1	G	79	ASP
1	H	43	ASN
1	H	79	ASP
1	H	85	THR
3	A	331	VAL
3	A	343	GLU
3	A	380	GLN
3	A	496	VAL
3	A	509	GLU
3	A	542	THR
3	A	626	LEU
3	A	630	GLU
3	A	820	ARG
3	A	983	THR
3	A	1167	GLU
3	A	1263	THR
3	A	1266	THR
3	A	1872	THR
3	A	1966	VAL
3	A	2623	LEU
3	A	2632	ILE
3	A	2636	PHE
3	A	2738	ARG
3	A	2785	LEU
3	A	2806	ARG
3	A	2865	VAL

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Mol	Chain	Res	Type
3	A	2894	LEU
3	A	2905	LEU
3	A	2987	GLU
3	A	3024	VAL
3	A	3108	GLU
3	A	3160	ASP
3	A	3169	LEU
3	A	3505	VAL
3	A	3528	THR
3	A	3608	GLN
3	A	3858	MET
3	A	3899	PHE
3	A	3910	THR
3	A	4051	SER
3	A	4094	GLN
3	A	4200	THR
3	A	4224	GLU
3	A	4550	LYS
3	A	4676	GLU
3	A	4743	MET
3	A	4933	GLN
3	A	4966	ASP
3	A	5001	THR
3	B	380	GLN
3	B	496	VAL
3	B	509	GLU
3	B	542	THR
3	B	626	LEU
3	B	630	GLU
3	B	820	ARG
3	B	884	LEU
3	B	958	THR
3	B	977	LEU
3	B	983	THR
3	B	1034	SER
3	B	1054	GLU
3	B	1263	THR
3	B	1872	THR
3	B	1966	VAL
3	B	2347	GLU
3	B	2623	LEU
3	B	2632	ILE

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Mol	Chain	Res	Type
3	B	2738	ARG
3	B	2806	ARG
3	B	2865	VAL
3	B	2888	ARG
3	B	2922	LYS
3	B	2952	GLU
3	B	2987	GLU
3	B	3059	THR
3	B	3160	ASP
3	B	3169	LEU
3	B	3279	SER
3	B	3392	LEU
3	B	3455	GLU
3	B	3528	THR
3	B	3608	GLN
3	B	3637	ARG
3	B	3663	LEU
3	B	3899	PHE
3	B	4094	GLN
3	B	4200	THR
3	B	4224	GLU
3	B	4676	GLU
3	B	4743	MET
3	B	4966	ASP
3	B	5001	THR
3	C	496	VAL
3	C	542	THR
3	C	626	LEU
3	C	630	GLU
3	C	859	VAL
3	C	884	LEU
3	C	962	SER
3	C	977	LEU
3	C	983	THR
3	C	1167	GLU
3	C	1263	THR
3	C	1266	THR
3	C	1872	THR
3	C	1966	VAL
3	C	2223	ILE
3	C	2632	ILE
3	C	2636	PHE

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Mol	Chain	Res	Type
3	C	2738	ARG
3	C	2806	ARG
3	C	2816	MET
3	C	2865	VAL
3	C	2888	ARG
3	C	2929	PHE
3	C	2986	VAL
3	C	2987	GLU
3	C	3023	LYS
3	C	3024	VAL
3	C	3155	ASP
3	C	3160	ASP
3	C	3327	LEU
3	C	3467	MET
3	C	3505	VAL
3	C	3528	THR
3	C	3656	SER
3	C	3899	PHE
3	C	4200	THR
3	C	4224	GLU
3	C	4550	LYS
3	C	4676	GLU
3	C	4966	ASP
3	C	5001	THR
3	D	297	GLN
3	D	496	VAL
3	D	542	THR
3	D	626	LEU
3	D	630	GLU
3	D	820	ARG
3	D	859	VAL
3	D	884	LEU
3	D	938	HIS
3	D	948	ASP
3	D	962	SER
3	D	977	LEU
3	D	983	THR
3	D	1034	SER
3	D	1167	GLU
3	D	1263	THR
3	D	1872	THR
3	D	1966	VAL

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Mol	Chain	Res	Type
3	D	2211	MET
3	D	2312	MET
3	D	2368	LEU
3	D	2659	THR
3	D	2738	ARG
3	D	2785	LEU
3	D	2792	ARG
3	D	2806	ARG
3	D	2865	VAL
3	D	2888	ARG
3	D	2905	LEU
3	D	2967	MET
3	D	2986	VAL
3	D	2987	GLU
3	D	3087	ILE
3	D	3155	ASP
3	D	3160	ASP
3	D	3184	GLU
3	D	3258	GLU
3	D	3279	SER
3	D	3505	VAL
3	D	3663	LEU
3	D	3899	PHE
3	D	4094	GLN
3	D	4180	ARG
3	D	4200	THR
3	D	4224	GLU
3	D	4676	GLU
3	D	4966	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (145) such sidechains are listed below:

Mol	Chain	Res	Type
1	E	43	ASN
2	L	-1	HIS
1	F	43	ASN
1	G	43	ASN
1	H	43	ASN
3	A	57	ASN
3	A	197	GLN
3	A	636	ASN
3	A	765	GLN

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Mol	Chain	Res	Type
3	A	797	HIS
3	A	1052	ASN
3	A	1084	GLN
3	A	1133	HIS
3	A	1220	GLN
3	A	1640	HIS
3	A	1679	ASN
3	A	1691	GLN
3	A	1696	HIS
3	A	2036	GLN
3	A	2095	GLN
3	A	2245	GLN
3	A	2260	ASN
3	A	2283	ASN
3	A	2284	ASN
3	A	2931	GLN
3	A	2962	GLN
3	A	3211	ASN
3	A	3313	ASN
3	A	3343	GLN
3	A	3355	HIS
3	A	3457	ASN
3	A	3523	ASN
3	A	3611	HIS
3	A	3627	GLN
3	A	3699	HIS
3	A	3761	GLN
3	A	3897	ASN
3	A	3970	GLN
3	A	3998	HIS
3	A	4054	ASN
3	A	4142	ASN
3	A	4558	ASN
3	A	4947	GLN
3	B	197	GLN
3	B	461	HIS
3	B	765	GLN
3	B	797	HIS
3	B	1084	GLN
3	B	1133	HIS
3	B	1220	GLN
3	B	1640	HIS

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Mol	Chain	Res	Type
3	B	1679	ASN
3	B	1691	GLN
3	B	1696	HIS
3	B	1702	HIS
3	B	2036	GLN
3	B	2095	GLN
3	B	2245	GLN
3	B	2260	ASN
3	B	2284	ASN
3	B	2931	GLN
3	B	3211	ASN
3	B	3355	HIS
3	B	3457	ASN
3	B	3523	ASN
3	B	3627	GLN
3	B	3699	HIS
3	B	3761	GLN
3	B	3814	GLN
3	B	3897	ASN
3	B	3970	GLN
3	B	3998	HIS
3	B	4054	ASN
3	B	4094	GLN
3	B	4109	GLN
3	B	4201	ASN
3	B	4947	GLN
3	C	197	GLN
3	C	241	GLN
3	C	636	ASN
3	C	765	GLN
3	C	1084	GLN
3	C	1133	HIS
3	C	1220	GLN
3	C	1679	ASN
3	C	1691	GLN
3	C	1696	HIS
3	C	1702	HIS
3	C	2036	GLN
3	C	2095	GLN
3	C	2245	GLN
3	C	2283	ASN
3	C	2284	ASN

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Mol	Chain	Res	Type
3	C	2498	HIS
3	C	2520	HIS
3	C	2599	GLN
3	C	2780	ASN
3	C	2931	GLN
3	C	2962	GLN
3	C	3151	GLN
3	C	3343	GLN
3	C	3523	ASN
3	C	3556	ASN
3	C	3627	GLN
3	C	3699	HIS
3	C	3897	ASN
3	C	3970	GLN
3	C	3998	HIS
3	C	4054	ASN
3	C	4201	ASN
3	C	4947	GLN
3	D	197	GLN
3	D	241	GLN
3	D	461	HIS
3	D	765	GLN
3	D	797	HIS
3	D	1084	GLN
3	D	1133	HIS
3	D	1220	GLN
3	D	1506	GLN
3	D	1679	ASN
3	D	1691	GLN
3	D	1696	HIS
3	D	2036	GLN
3	D	2095	GLN
3	D	2245	GLN
3	D	2283	ASN
3	D	2284	ASN
3	D	2780	ASN
3	D	2788	HIS
3	D	2931	GLN
3	D	3128	ASN
3	D	3151	GLN
3	D	3211	ASN
3	D	3523	ASN

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Mol	Chain	Res	Type
3	D	3560	GLN
3	D	3611	HIS
3	D	3627	GLN
3	D	3897	ASN
3	D	3970	GLN
3	D	3998	HIS
3	D	4054	ASN
3	D	4558	ASN
3	D	4947	GLN
3	D	4949	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 oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 40 ligands modelled in this entry, 8 are monoatomic - leaving 32 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$
5	ADP	D	5106	9	28,29,29	1.39	4 (14%)	43,45,45	1.83	8 (18%)
4	43M	B	5103	-	9,9,9	0.39	0	12,12,12	0.49	0
5	ADP	A	5107	9	28,29,29	1.40	4 (14%)	43,45,45	1.81	8 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
5	ADP	B	5106	9	28,29,29	1.39	5 (17%)	43,45,45	1.84	8 (18%)
8	CFF	A	5109	-	15,15,15	0.61	0	23,23,23	0.80	2 (8%)
4	43M	A	5103	-	9,9,9	0.39	0	12,12,12	0.49	0
4	43M	D	5101	-	9,9,9	0.40	0	12,12,12	0.50	0
5	ADP	B	5107	9	28,29,29	1.39	4 (14%)	43,45,45	1.80	8 (18%)
8	CFF	D	5109	-	15,15,15	0.62	0	23,23,23	0.79	1 (4%)
7	PLC	D	5108	-	41,41,41	0.52	0	47,49,49	0.53	0
4	43M	B	5102	-	9,9,9	0.42	0	12,12,12	0.48	0
5	ADP	D	5104	-	28,29,29	1.36	3 (10%)	43,45,45	1.94	9 (20%)
5	ADP	C	5106	9	28,29,29	1.38	4 (14%)	43,45,45	1.84	8 (18%)
4	43M	A	5102	-	9,9,9	0.42	0	12,12,12	0.49	0
4	43M	A	5101	-	9,9,9	0.39	0	12,12,12	0.49	0
8	CFF	C	5109	-	15,15,15	0.62	0	23,23,23	0.78	1 (4%)
4	43M	C	5101	-	9,9,9	0.41	0	12,12,12	0.50	0
5	ADP	C	5104	-	28,29,29	1.35	3 (10%)	43,45,45	1.94	9 (20%)
7	PLC	A	5108	-	41,41,41	0.52	0	47,49,49	0.54	0
5	ADP	A	5104	-	28,29,29	1.36	3 (10%)	43,45,45	1.94	9 (20%)
4	43M	C	5103	-	9,9,9	0.42	0	12,12,12	0.49	0
7	PLC	B	5108	-	41,41,41	0.52	0	47,49,49	0.53	0
4	43M	B	5101	-	9,9,9	0.41	0	12,12,12	0.49	0
5	ADP	B	5104	-	28,29,29	1.36	3 (10%)	43,45,45	1.94	9 (20%)
5	ADP	D	5107	9	28,29,29	1.40	4 (14%)	43,45,45	1.81	8 (18%)
4	43M	D	5103	-	9,9,9	0.39	0	12,12,12	0.50	0
5	ADP	C	5107	9	28,29,29	1.40	4 (14%)	43,45,45	1.81	8 (18%)
8	CFF	B	5109	-	15,15,15	0.62	0	23,23,23	0.78	1 (4%)
4	43M	D	5102	-	9,9,9	0.44	0	12,12,12	0.49	0
7	PLC	C	5108	-	41,41,41	0.51	0	47,49,49	0.53	0
4	43M	C	5102	-	9,9,9	0.43	0	12,12,12	0.50	0
5	ADP	A	5106	9	28,29,29	1.39	5 (17%)	43,45,45	1.84	8 (18%)

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
5	ADP	D	5106	9	-	2/16/32/32	0/3/3/3
4	43M	B	5103	-	-	-	0/1/1/1
5	ADP	A	5107	9	-	5/16/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
5	ADP	B	5106	9	-	2/16/32/32	0/3/3/3
8	CFF	A	5109	-	-	-	0/2/2/2
4	43M	A	5103	-	-	-	0/1/1/1
4	43M	D	5101	-	-	-	0/1/1/1
5	ADP	B	5107	9	-	5/16/32/32	0/3/3/3
8	CFF	D	5109	-	-	-	0/2/2/2
7	PLC	D	5108	-	-	16/45/45/45	-
4	43M	B	5102	-	-	-	0/1/1/1
5	ADP	D	5104	-	-	5/16/32/32	0/3/3/3
5	ADP	C	5106	9	-	1/16/32/32	0/3/3/3
4	43M	A	5102	-	-	-	0/1/1/1
4	43M	A	5101	-	-	-	0/1/1/1
8	CFF	C	5109	-	-	-	0/2/2/2
4	43M	C	5101	-	-	-	0/1/1/1
5	ADP	C	5104	-	-	5/16/32/32	0/3/3/3
7	PLC	A	5108	-	-	18/45/45/45	-
5	ADP	A	5104	-	-	5/16/32/32	0/3/3/3
4	43M	C	5103	-	-	-	0/1/1/1
7	PLC	B	5108	-	-	15/45/45/45	-
4	43M	B	5101	-	-	-	0/1/1/1
5	ADP	B	5104	-	-	5/16/32/32	0/3/3/3
5	ADP	D	5107	9	-	5/16/32/32	0/3/3/3
5	ADP	C	5107	9	-	5/16/32/32	0/3/3/3
4	43M	D	5103	-	-	-	0/1/1/1
8	CFF	B	5109	-	-	-	0/2/2/2
4	43M	D	5102	-	-	-	0/1/1/1
7	PLC	C	5108	-	-	16/45/45/45	-
4	43M	C	5102	-	-	-	0/1/1/1
5	ADP	A	5106	9	-	2/16/32/32	0/3/3/3

All (46) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	A	5106	ADP	C5-C4	4.58	1.47	1.39
5	C	5107	ADP	C5-C4	4.57	1.47	1.39
5	A	5107	ADP	C5-C4	4.57	1.47	1.39
5	B	5106	ADP	C5-C4	4.55	1.47	1.39
5	B	5107	ADP	C5-C4	4.55	1.47	1.39
5	C	5106	ADP	C5-C4	4.55	1.47	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	D	5107	ADP	C5-C4	4.55	1.47	1.39
5	D	5106	ADP	C5-C4	4.54	1.47	1.39
5	A	5104	ADP	C5-C4	4.41	1.47	1.39
5	D	5104	ADP	C5-C4	4.41	1.47	1.39
5	B	5104	ADP	C5-C4	4.40	1.46	1.39
5	C	5104	ADP	C5-C4	4.40	1.46	1.39
5	B	5107	ADP	C5-C6	2.70	1.48	1.41
5	D	5107	ADP	C5-C6	2.70	1.48	1.41
5	A	5107	ADP	C5-C6	2.68	1.48	1.41
5	C	5107	ADP	C5-C6	2.68	1.48	1.41
5	B	5104	ADP	C5-C6	2.60	1.48	1.41
5	A	5104	ADP	C5-C6	2.60	1.48	1.41
5	C	5104	ADP	C5-C6	2.60	1.48	1.41
5	D	5104	ADP	C5-C6	2.59	1.48	1.41
5	A	5106	ADP	C5-C6	2.57	1.48	1.41
5	B	5106	ADP	C5-C6	2.57	1.48	1.41
5	D	5104	ADP	C5-N7	-2.55	1.34	1.39
5	D	5106	ADP	C5-C6	2.55	1.48	1.41
5	C	5106	ADP	C5-C6	2.54	1.48	1.41
5	B	5104	ADP	C5-N7	-2.51	1.34	1.39
5	A	5104	ADP	C5-N7	-2.51	1.34	1.39
5	C	5104	ADP	C5-N7	-2.50	1.34	1.39
5	A	5106	ADP	C5-N7	-2.44	1.34	1.39
5	B	5106	ADP	C5-N7	-2.43	1.34	1.39
5	C	5106	ADP	C5-N7	-2.38	1.34	1.39
5	D	5106	ADP	C5-N7	-2.38	1.34	1.39
5	B	5107	ADP	C5-N7	-2.33	1.34	1.39
5	C	5107	ADP	C5-N7	-2.33	1.34	1.39
5	A	5107	ADP	C5-N7	-2.32	1.34	1.39
5	A	5107	ADP	C8-N7	2.30	1.36	1.31
5	B	5107	ADP	C8-N7	2.30	1.36	1.31
5	D	5107	ADP	C5-N7	-2.30	1.34	1.39
5	C	5107	ADP	C8-N7	2.30	1.36	1.31
5	D	5107	ADP	C8-N7	2.30	1.36	1.31
5	D	5106	ADP	C8-N7	2.09	1.35	1.31
5	C	5106	ADP	C8-N7	2.07	1.35	1.31
5	A	5106	ADP	C8-N7	2.06	1.35	1.31
5	A	5106	ADP	C4-N9	-2.05	1.33	1.37
5	B	5106	ADP	C8-N7	2.05	1.35	1.31
5	B	5106	ADP	C4-N9	-2.05	1.33	1.37

All (105) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	A	5104	ADP	C5-C4-N3	-6.25	118.11	126.72
5	C	5104	ADP	C5-C4-N3	-6.23	118.13	126.72
5	D	5104	ADP	C5-C4-N3	-6.22	118.15	126.72
5	B	5104	ADP	C5-C4-N3	-6.20	118.19	126.72
5	C	5107	ADP	C5-C4-N3	-5.88	118.63	126.72
5	D	5107	ADP	C5-C4-N3	-5.87	118.63	126.72
5	A	5107	ADP	C5-C4-N3	-5.86	118.64	126.72
5	B	5107	ADP	C5-C4-N3	-5.84	118.68	126.72
5	B	5106	ADP	C5-C4-N3	-5.77	118.78	126.72
5	A	5106	ADP	C5-C4-N3	-5.77	118.78	126.72
5	C	5106	ADP	C5-C4-N3	-5.76	118.78	126.72
5	D	5106	ADP	C5-C4-N3	-5.74	118.81	126.72
5	C	5104	ADP	N3-C4-N9	5.29	136.16	127.17
5	A	5104	ADP	N3-C4-N9	5.28	136.14	127.17
5	D	5104	ADP	N3-C4-N9	5.27	136.14	127.17
5	B	5104	ADP	N3-C4-N9	5.26	136.12	127.17
5	A	5106	ADP	N3-C4-N9	4.65	135.08	127.17
5	B	5106	ADP	N3-C4-N9	4.64	135.06	127.17
5	C	5106	ADP	N3-C4-N9	4.64	135.05	127.17
5	D	5106	ADP	N3-C4-N9	4.64	135.05	127.17
5	D	5107	ADP	N3-C4-N9	4.59	134.97	127.17
5	C	5107	ADP	N3-C4-N9	4.57	134.94	127.17
5	A	5107	ADP	N3-C4-N9	4.57	134.93	127.17
5	B	5107	ADP	N3-C4-N9	4.54	134.89	127.17
5	C	5104	ADP	C2-N3-C4	3.89	121.33	111.83
5	A	5104	ADP	C2-N3-C4	3.89	121.32	111.83
5	D	5104	ADP	C2-N3-C4	3.88	121.30	111.83
5	B	5104	ADP	C2-N3-C4	3.85	121.24	111.83
5	C	5107	ADP	C2-N3-C4	3.71	120.90	111.83
5	D	5107	ADP	C2-N3-C4	3.71	120.90	111.83
5	A	5107	ADP	C2-N3-C4	3.70	120.86	111.83
5	B	5107	ADP	C2-N3-C4	3.69	120.84	111.83
5	B	5106	ADP	C2-N3-C4	3.62	120.67	111.83
5	A	5106	ADP	C2-N3-C4	3.62	120.67	111.83
5	C	5106	ADP	C2-N3-C4	3.62	120.67	111.83
5	D	5106	ADP	C2-N3-C4	3.61	120.64	111.83
5	C	5107	ADP	C4-C5-N7	-3.53	106.55	110.58
5	A	5107	ADP	C4-C5-N7	-3.52	106.56	110.58
5	B	5107	ADP	C4-C5-N7	-3.51	106.57	110.58
5	D	5107	ADP	C4-C5-N7	-3.50	106.58	110.58
5	A	5106	ADP	C4-C5-N7	-3.35	106.75	110.58
5	C	5106	ADP	C4-C5-N7	-3.35	106.75	110.58
5	B	5106	ADP	C4-C5-N7	-3.34	106.77	110.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	C	5104	ADP	N3-C2-N1	-3.33	123.54	128.58
5	D	5106	ADP	C4-C5-N7	-3.32	106.78	110.58
5	A	5104	ADP	N3-C2-N1	-3.32	123.56	128.58
5	D	5104	ADP	N3-C2-N1	-3.31	123.56	128.58
5	A	5104	ADP	C4-C5-N7	-3.31	106.80	110.58
5	D	5104	ADP	C4-C5-N7	-3.30	106.81	110.58
5	B	5104	ADP	N3-C2-N1	-3.29	123.60	128.58
5	C	5104	ADP	C4-C5-N7	-3.27	106.84	110.58
5	B	5104	ADP	C4-C5-N7	-3.26	106.85	110.58
5	B	5106	ADP	N3-C2-N1	-3.20	123.74	128.58
5	C	5106	ADP	N3-C2-N1	-3.20	123.74	128.58
5	D	5106	ADP	N3-C2-N1	-3.19	123.75	128.58
5	C	5107	ADP	N3-C2-N1	-3.18	123.76	128.58
5	D	5107	ADP	N3-C2-N1	-3.17	123.78	128.58
5	A	5106	ADP	N3-C2-N1	-3.17	123.79	128.58
5	A	5107	ADP	N3-C2-N1	-3.15	123.82	128.58
5	B	5107	ADP	N3-C2-N1	-3.14	123.83	128.58
5	B	5104	ADP	C4-N9-C8	3.06	108.95	105.74
5	C	5104	ADP	C4-N9-C8	3.04	108.93	105.74
5	D	5104	ADP	C4-N9-C8	3.03	108.92	105.74
5	A	5104	ADP	C4-N9-C8	3.00	108.89	105.74
5	A	5104	ADP	C5-N7-C8	2.77	107.81	103.45
5	D	5104	ADP	C5-N7-C8	2.76	107.79	103.45
5	B	5104	ADP	C5-N7-C8	2.75	107.77	103.45
5	C	5104	ADP	C5-N7-C8	2.73	107.75	103.45
5	A	5106	ADP	C4-N9-C8	2.68	108.55	105.74
5	C	5106	ADP	C3'-C2'-C1'	2.65	106.47	101.46
5	D	5106	ADP	C3'-C2'-C1'	2.65	106.47	101.46
5	D	5106	ADP	C4-N9-C8	2.64	108.51	105.74
5	A	5106	ADP	C3'-C2'-C1'	2.64	106.46	101.46
5	B	5106	ADP	C4-N9-C8	2.64	108.51	105.74
5	B	5106	ADP	C3'-C2'-C1'	2.63	106.44	101.46
5	D	5107	ADP	C4-N9-C8	2.61	108.48	105.74
5	C	5106	ADP	C4-N9-C8	2.61	108.48	105.74
5	A	5107	ADP	C4-N9-C8	2.58	108.44	105.74
5	B	5107	ADP	C4-N9-C8	2.56	108.43	105.74
5	C	5107	ADP	C4-N9-C8	2.56	108.42	105.74
8	C	5109	CFF	C12-N3-C2	2.54	121.75	117.33
8	A	5109	CFF	C12-N3-C2	2.53	121.73	117.33
5	C	5107	ADP	C5-N7-C8	2.52	107.41	103.45
8	D	5109	CFF	C12-N3-C2	2.52	121.72	117.33
5	B	5107	ADP	C5-N7-C8	2.50	107.38	103.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	A	5107	ADP	C5-N7-C8	2.50	107.37	103.45
5	D	5107	ADP	C5-N7-C8	2.48	107.34	103.45
8	B	5109	CFF	C12-N3-C2	2.47	121.64	117.33
5	A	5106	ADP	C5-N7-C8	2.43	107.28	103.45
5	B	5106	ADP	C5-N7-C8	2.41	107.24	103.45
5	C	5106	ADP	C5-N7-C8	2.40	107.22	103.45
5	D	5106	ADP	C5-N7-C8	2.38	107.19	103.45
5	B	5104	ADP	N9-C8-N7	-2.26	110.73	113.94
5	A	5104	ADP	N9-C8-N7	-2.24	110.76	113.94
5	C	5104	ADP	N9-C8-N7	-2.23	110.77	113.94
5	D	5104	ADP	N9-C8-N7	-2.23	110.77	113.94
5	C	5107	ADP	C6-C5-N7	2.10	136.13	132.09
5	B	5107	ADP	C6-C5-N7	2.10	136.13	132.09
5	A	5107	ADP	C6-C5-N7	2.09	136.12	132.09
5	D	5107	ADP	C6-C5-N7	2.08	136.10	132.09
5	C	5104	ADP	C3'-C2'-C1'	2.05	105.34	101.46
5	A	5104	ADP	C3'-C2'-C1'	2.03	105.31	101.46
5	B	5104	ADP	C3'-C2'-C1'	2.03	105.29	101.46
8	A	5109	CFF	C10-N1-C6	-2.01	114.53	117.64
5	D	5104	ADP	C3'-C2'-C1'	2.01	105.27	101.46

There are no chirality outliers.

All (112) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	A	5104	ADP	C5'-O5'-PA-O1A
5	A	5104	ADP	C5'-O5'-PA-O2A
5	A	5104	ADP	C5'-O5'-PA-O3A
5	A	5107	ADP	C5'-O5'-PA-O1A
5	A	5107	ADP	C5'-O5'-PA-O3A
5	A	5107	ADP	O4'-C4'-C5'-O5'
5	A	5107	ADP	C3'-C4'-C5'-O5'
5	B	5104	ADP	C5'-O5'-PA-O1A
5	B	5104	ADP	C5'-O5'-PA-O2A
5	B	5104	ADP	C5'-O5'-PA-O3A
5	B	5107	ADP	C5'-O5'-PA-O1A
5	B	5107	ADP	C5'-O5'-PA-O3A
5	B	5107	ADP	O4'-C4'-C5'-O5'
5	B	5107	ADP	C3'-C4'-C5'-O5'
5	C	5104	ADP	C5'-O5'-PA-O1A
5	C	5104	ADP	C5'-O5'-PA-O2A
5	C	5104	ADP	C5'-O5'-PA-O3A

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Mol	Chain	Res	Type	Atoms
5	C	5107	ADP	C5'-O5'-PA-O1A
5	C	5107	ADP	C5'-O5'-PA-O3A
5	C	5107	ADP	O4'-C4'-C5'-O5'
5	C	5107	ADP	C3'-C4'-C5'-O5'
5	D	5104	ADP	C5'-O5'-PA-O1A
5	D	5104	ADP	C5'-O5'-PA-O2A
5	D	5104	ADP	C5'-O5'-PA-O3A
5	D	5107	ADP	C5'-O5'-PA-O1A
5	D	5107	ADP	C5'-O5'-PA-O3A
5	D	5107	ADP	O4'-C4'-C5'-O5'
5	D	5107	ADP	C3'-C4'-C5'-O5'
7	A	5108	PLC	C4-O4P-P-O1P
7	A	5108	PLC	C4-O4P-P-O3P
7	B	5108	PLC	O4P-C4-C5-N
7	B	5108	PLC	C4-O4P-P-O3P
7	C	5108	PLC	O4P-C4-C5-N
7	C	5108	PLC	C4-O4P-P-O3P
7	D	5108	PLC	O4P-C4-C5-N
7	D	5108	PLC	C4-O4P-P-O3P
7	B	5108	PLC	O2-C2-C3-O3
7	D	5108	PLC	O2-C2-C3-O3
7	A	5108	PLC	C1B-CB-O3-C3
5	B	5104	ADP	C3'-C4'-C5'-O5'
5	D	5104	ADP	C3'-C4'-C5'-O5'
7	C	5108	PLC	C1B-CB-O3-C3
7	A	5108	PLC	OB-CB-O3-C3
7	A	5108	PLC	C1B-C2B-C3B-C4B
7	C	5108	PLC	C5B-C6B-C7B-C8B
7	B	5108	PLC	C5B-C6B-C7B-C8B
5	A	5104	ADP	O4'-C4'-C5'-O5'
5	A	5104	ADP	C3'-C4'-C5'-O5'
5	B	5104	ADP	O4'-C4'-C5'-O5'
5	C	5104	ADP	O4'-C4'-C5'-O5'
5	D	5104	ADP	O4'-C4'-C5'-O5'
7	C	5108	PLC	OB-CB-O3-C3
7	D	5108	PLC	C5B-C6B-C7B-C8B
7	A	5108	PLC	C3'-C4'-C5'-C6'
7	B	5108	PLC	C3'-C4'-C5'-C6'
7	A	5108	PLC	C5B-C6B-C7B-C8B
5	C	5104	ADP	C3'-C4'-C5'-O5'
7	A	5108	PLC	C2B-C3B-C4B-C5B
7	D	5108	PLC	C3'-C4'-C5'-C6'

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Mol	Chain	Res	Type	Atoms
7	B	5108	PLC	C1-C2-C3-O3
7	D	5108	PLC	C1-C2-C3-O3
7	D	5108	PLC	C1B-C2B-C3B-C4B
7	A	5108	PLC	C3B-C4B-C5B-C6B
7	B	5108	PLC	C1B-CB-O3-C3
7	C	5108	PLC	C3'-C4'-C5'-C6'
7	C	5108	PLC	O2-C2-C3-O3
7	D	5108	PLC	C1B-CB-O3-C3
7	A	5108	PLC	C2'-C3'-C4'-C5'
7	B	5108	PLC	C2'-C3'-C4'-C5'
7	D	5108	PLC	C2'-C3'-C4'-C5'
7	C	5108	PLC	C1-C2-C3-O3
7	C	5108	PLC	C1B-C2B-C3B-C4B
7	A	5108	PLC	O2-C2-C3-O3
7	B	5108	PLC	OB-CB-O3-C3
7	B	5108	PLC	C1B-C2B-C3B-C4B
7	D	5108	PLC	OB-CB-O3-C3
7	C	5108	PLC	C2'-C3'-C4'-C5'
7	A	5108	PLC	O4P-C4-C5-N
7	A	5108	PLC	C4-C5-N-C7
7	D	5108	PLC	C3B-C4B-C5B-C6B
7	C	5108	PLC	C4'-C5'-C6'-C7'
7	A	5108	PLC	C4-C5-N-C8
7	C	5108	PLC	C3B-C4B-C5B-C6B
7	D	5108	PLC	C2B-C3B-C4B-C5B
5	A	5107	ADP	C5'-O5'-PA-O2A
5	B	5107	ADP	C5'-O5'-PA-O2A
5	C	5107	ADP	C5'-O5'-PA-O2A
5	D	5107	ADP	C5'-O5'-PA-O2A
7	B	5108	PLC	C1-O3P-P-O1P
7	B	5108	PLC	C4-O4P-P-O1P
7	C	5108	PLC	C1-O3P-P-O1P
7	C	5108	PLC	C4-O4P-P-O1P
7	D	5108	PLC	C1-O3P-P-O1P
7	D	5108	PLC	C4-O4P-P-O1P
7	B	5108	PLC	C3B-C4B-C5B-C6B
7	A	5108	PLC	C1-C2-C3-O3
7	C	5108	PLC	C2B-C3B-C4B-C5B
7	A	5108	PLC	C4-C5-N-C6
7	A	5108	PLC	C4'-C5'-C6'-C7'
7	A	5108	PLC	C1'-C2'-C3'-C4'
7	D	5108	PLC	C4'-C5'-C6'-C7'

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Mol	Chain	Res	Type	Atoms
7	C	5108	PLC	CB-C1B-C2B-C3B
7	B	5108	PLC	C2B-C3B-C4B-C5B
7	B	5108	PLC	C4'-C5'-C6'-C7'
5	B	5106	ADP	PB-O3A-PA-O2A
5	C	5106	ADP	PB-O3A-PA-O2A
5	D	5106	ADP	PB-O3A-PA-O2A
7	D	5108	PLC	C6B-C7B-C8B-C9B
5	A	5106	ADP	PB-O3A-PA-O1A
5	A	5106	ADP	PB-O3A-PA-O2A
5	B	5106	ADP	PB-O3A-PA-O1A
5	D	5106	ADP	PB-O3A-PA-O1A

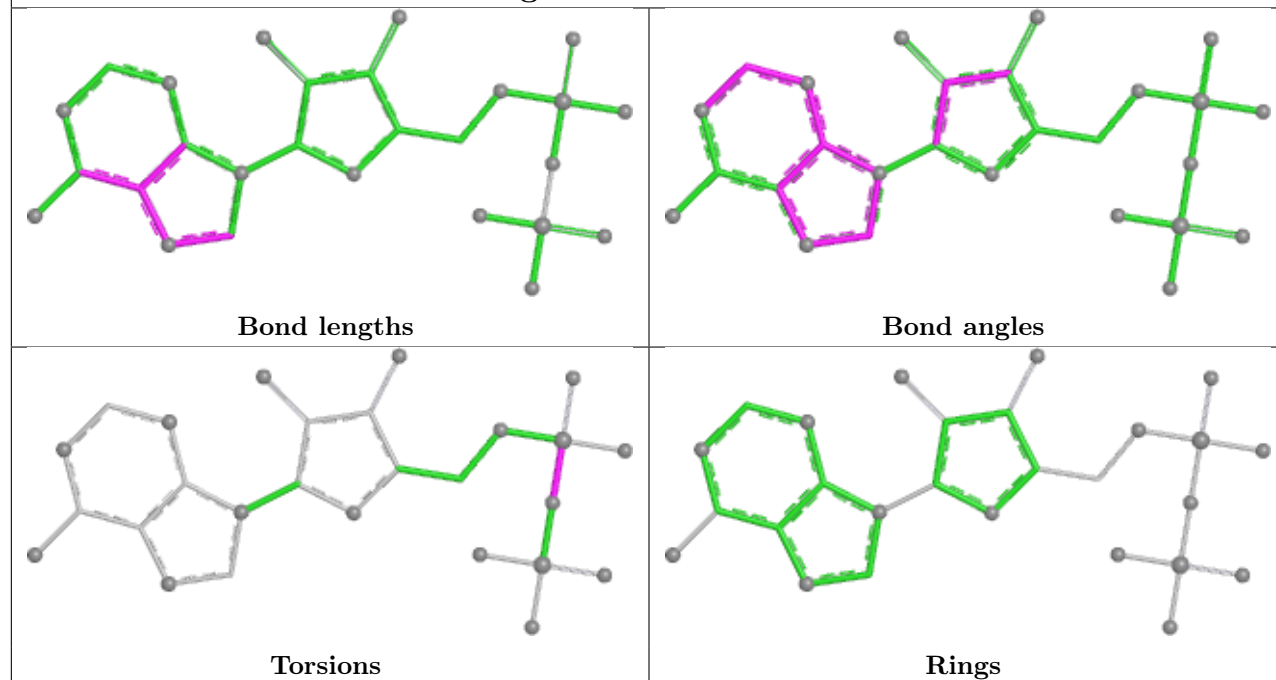
There are no ring outliers.

9 monomers are involved in 14 short contacts:

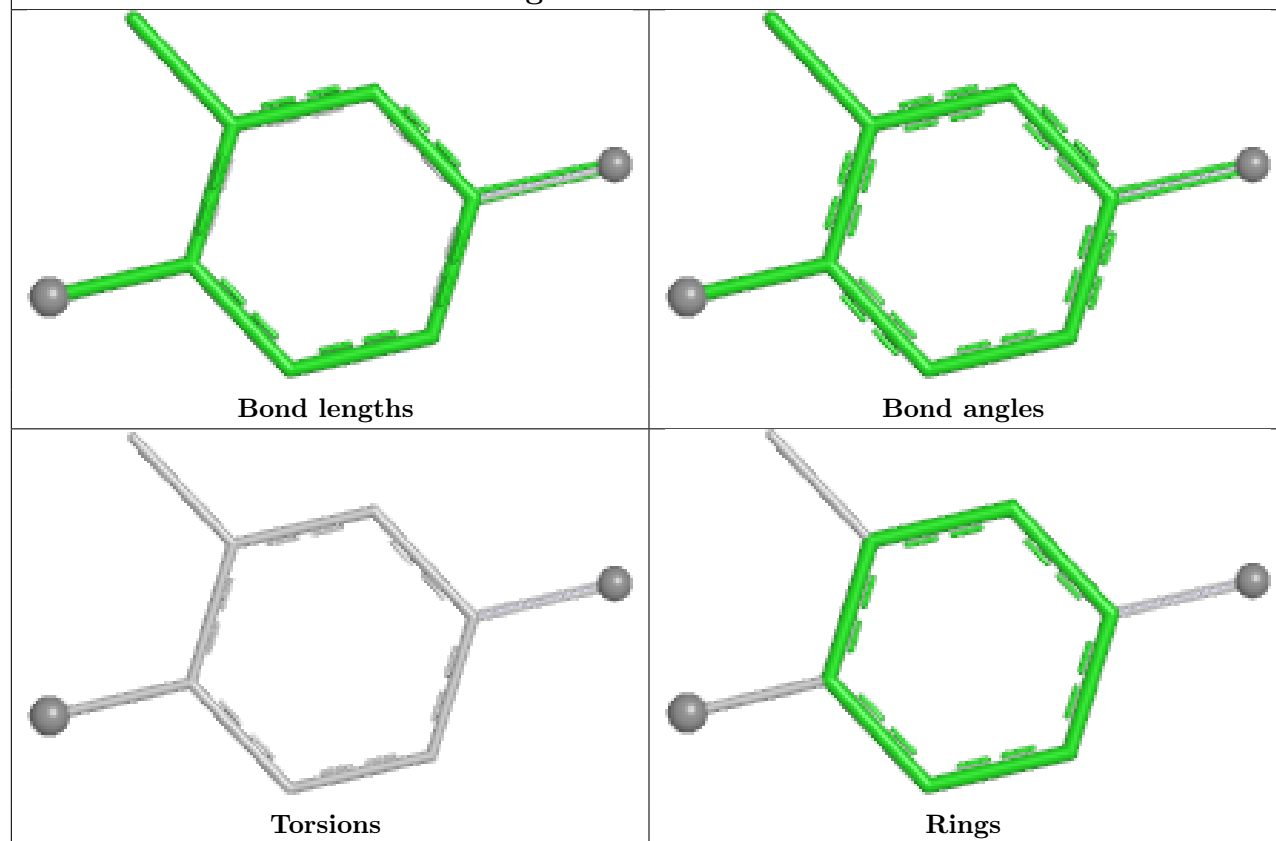
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	B	5103	43M	1	0
4	A	5103	43M	2	0
7	D	5108	PLC	1	0
8	C	5109	CFF	1	0
7	A	5108	PLC	2	0
4	C	5103	43M	2	0
7	B	5108	PLC	1	0
4	D	5103	43M	1	0
7	C	5108	PLC	3	0

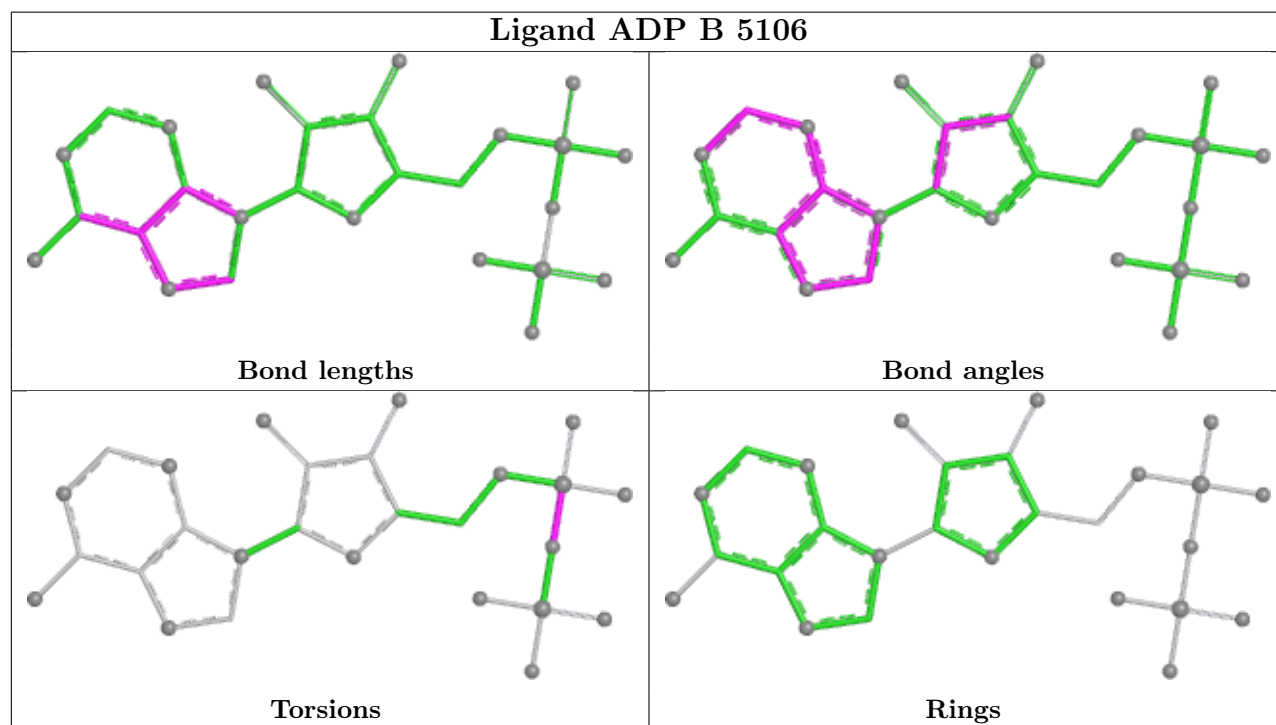
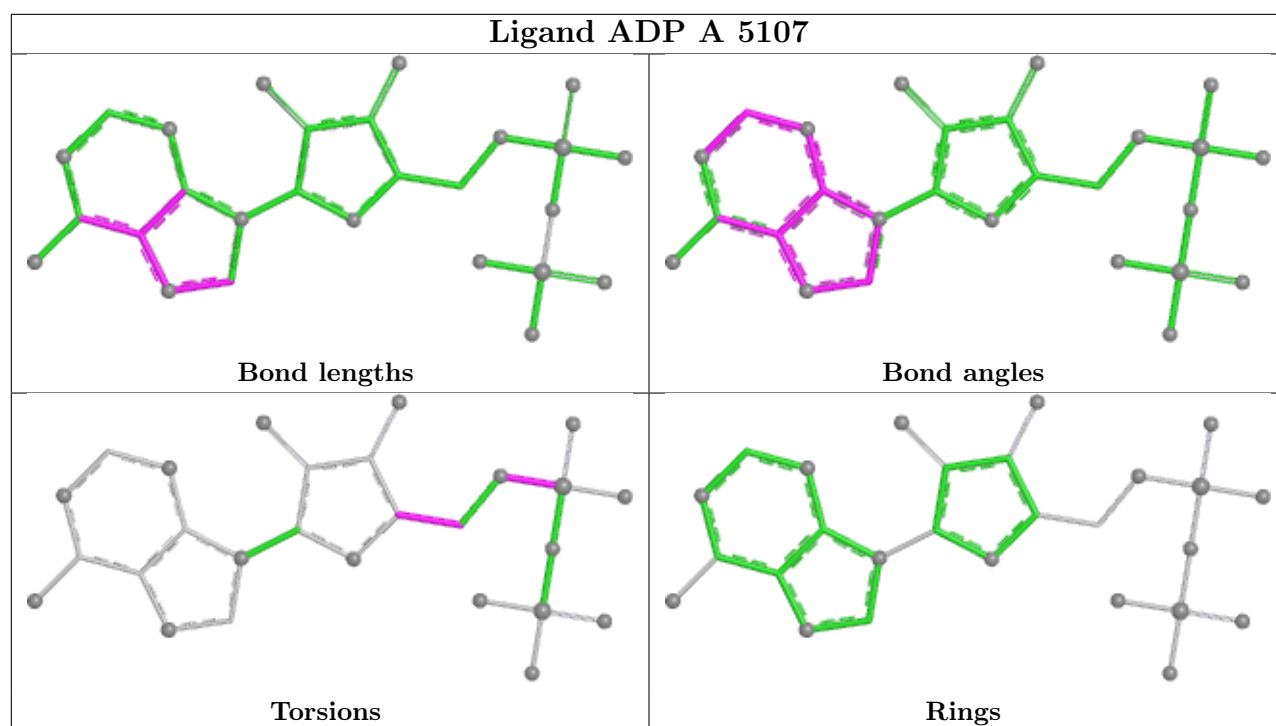
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

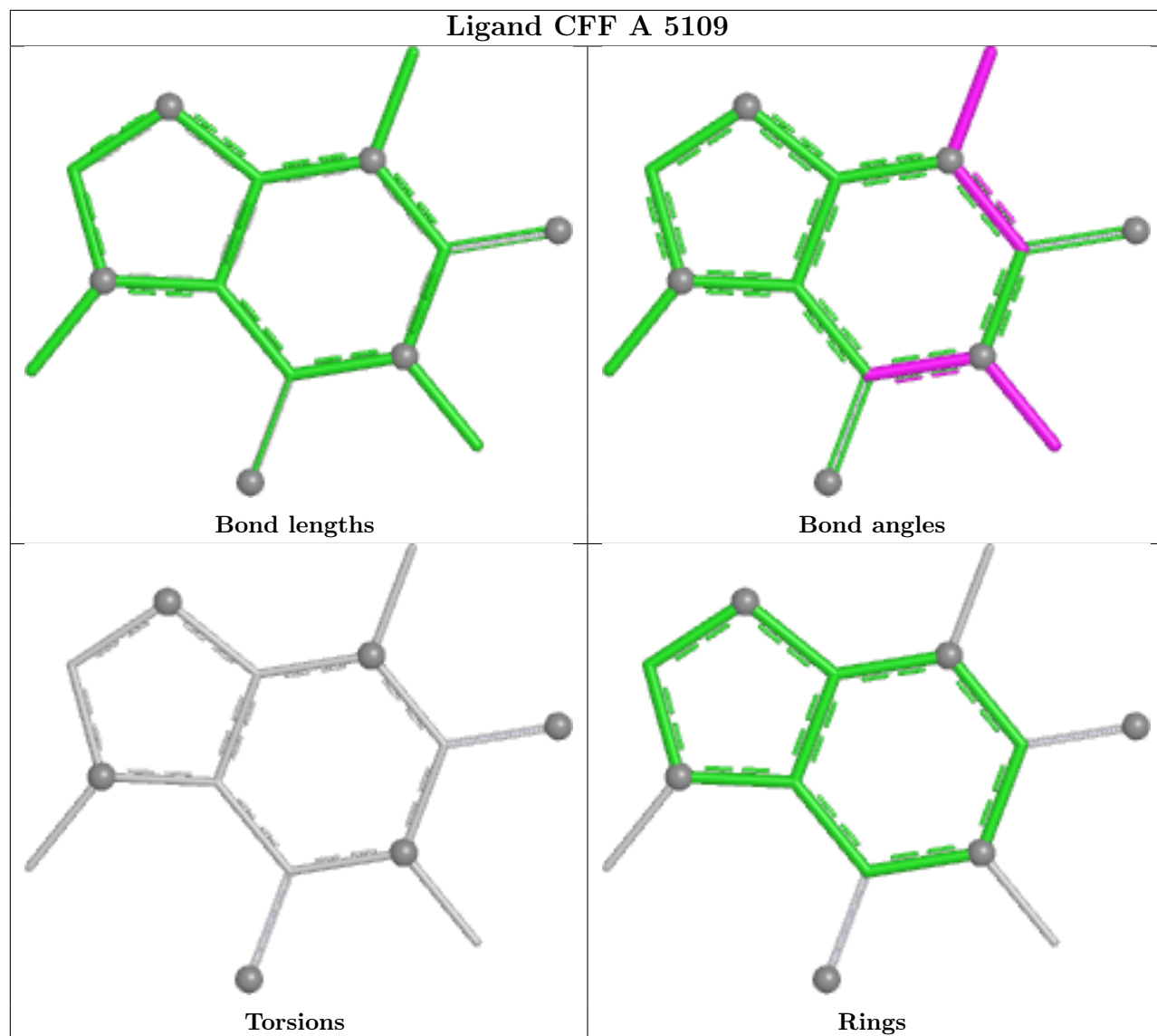
Ligand ADP D 5106



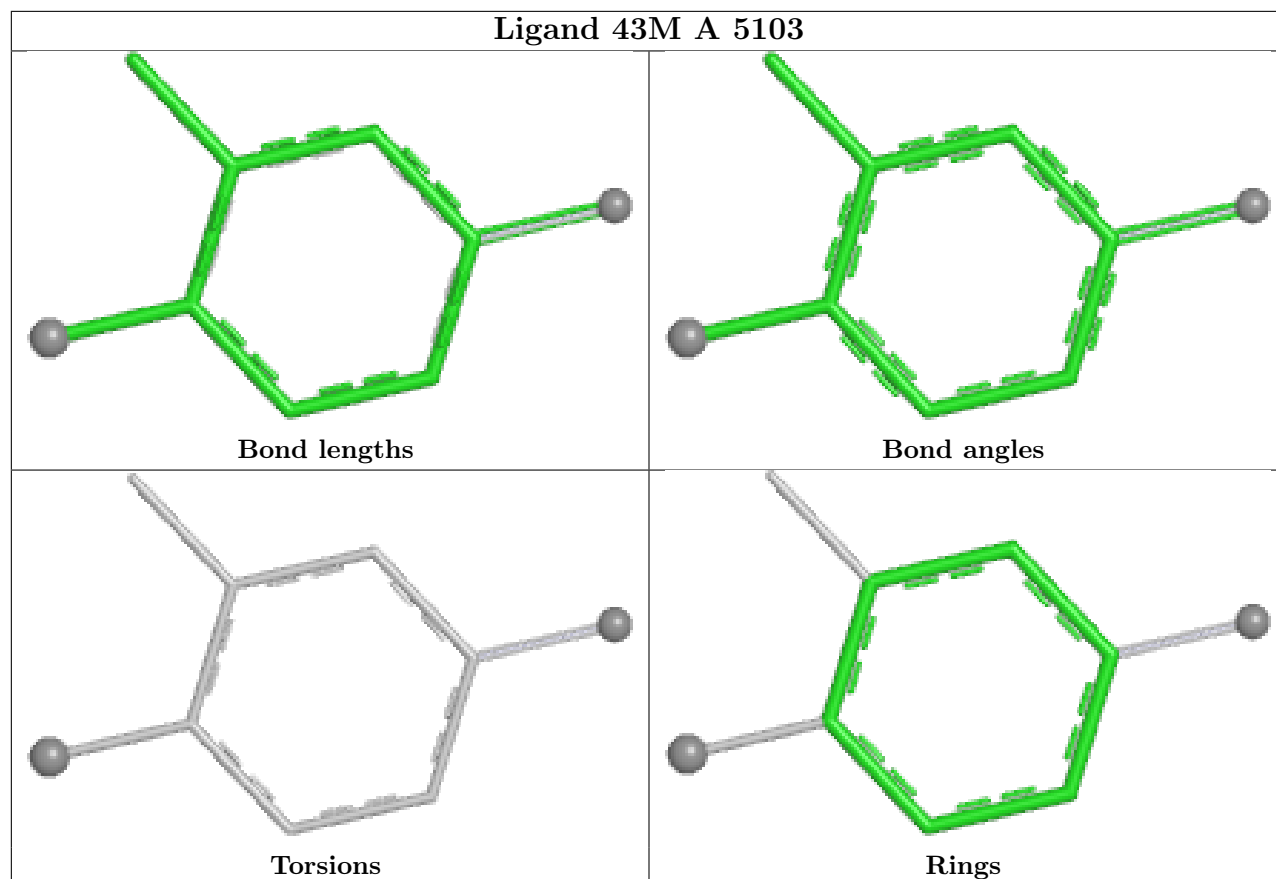
Ligand 43M B 5103



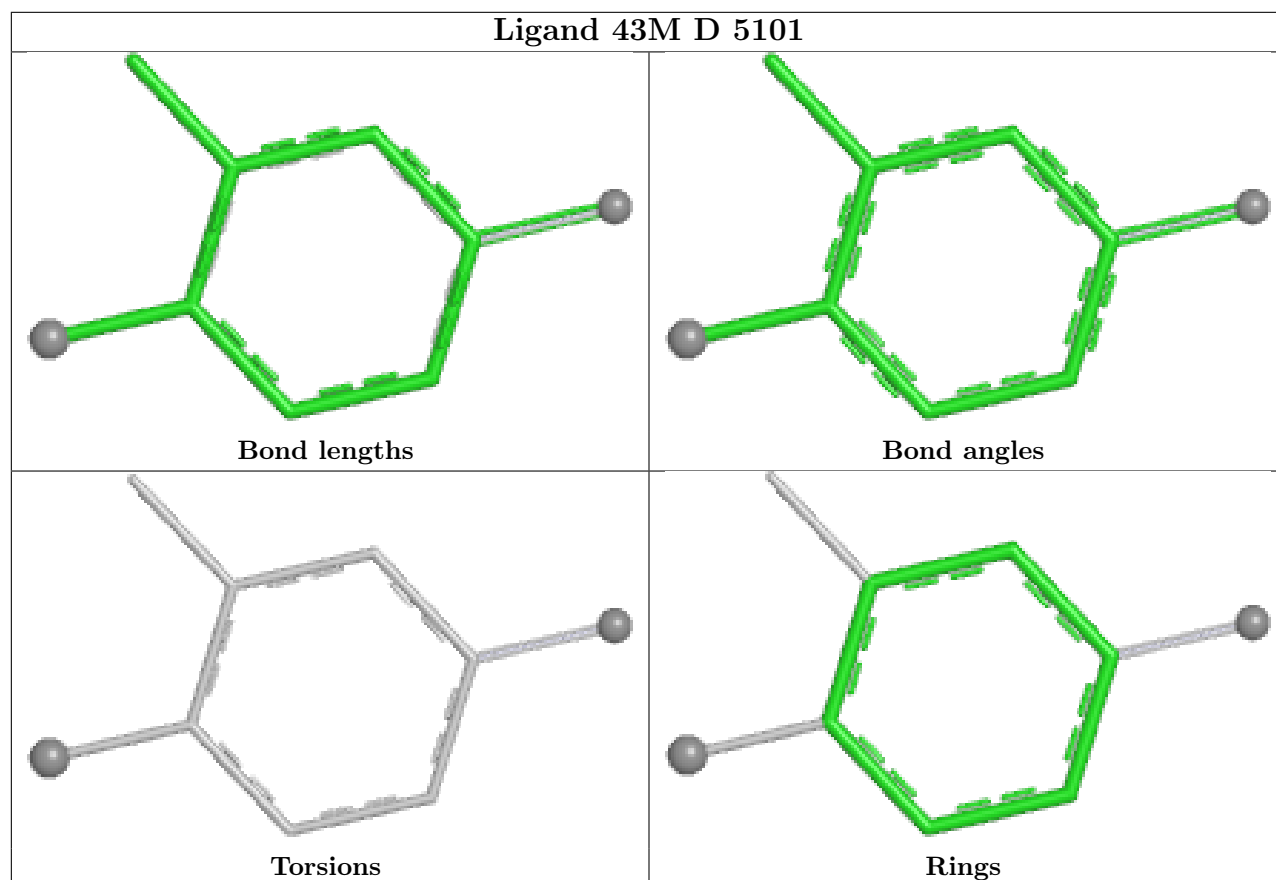


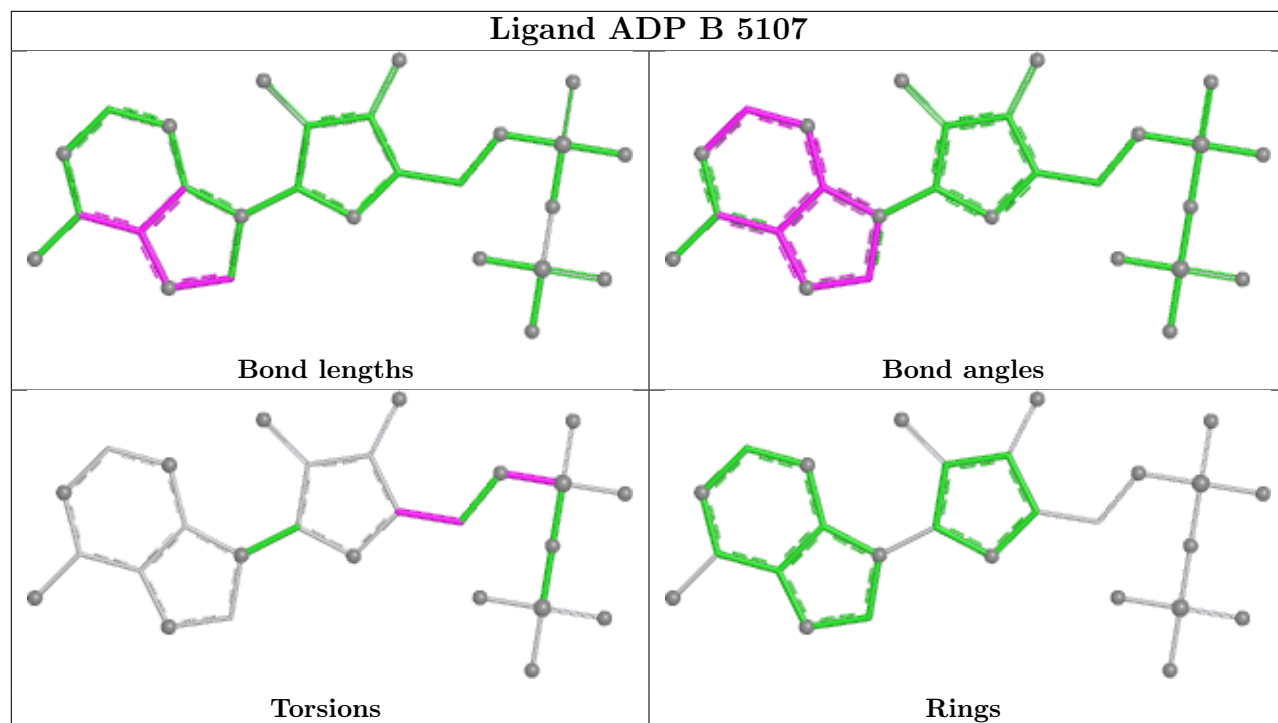


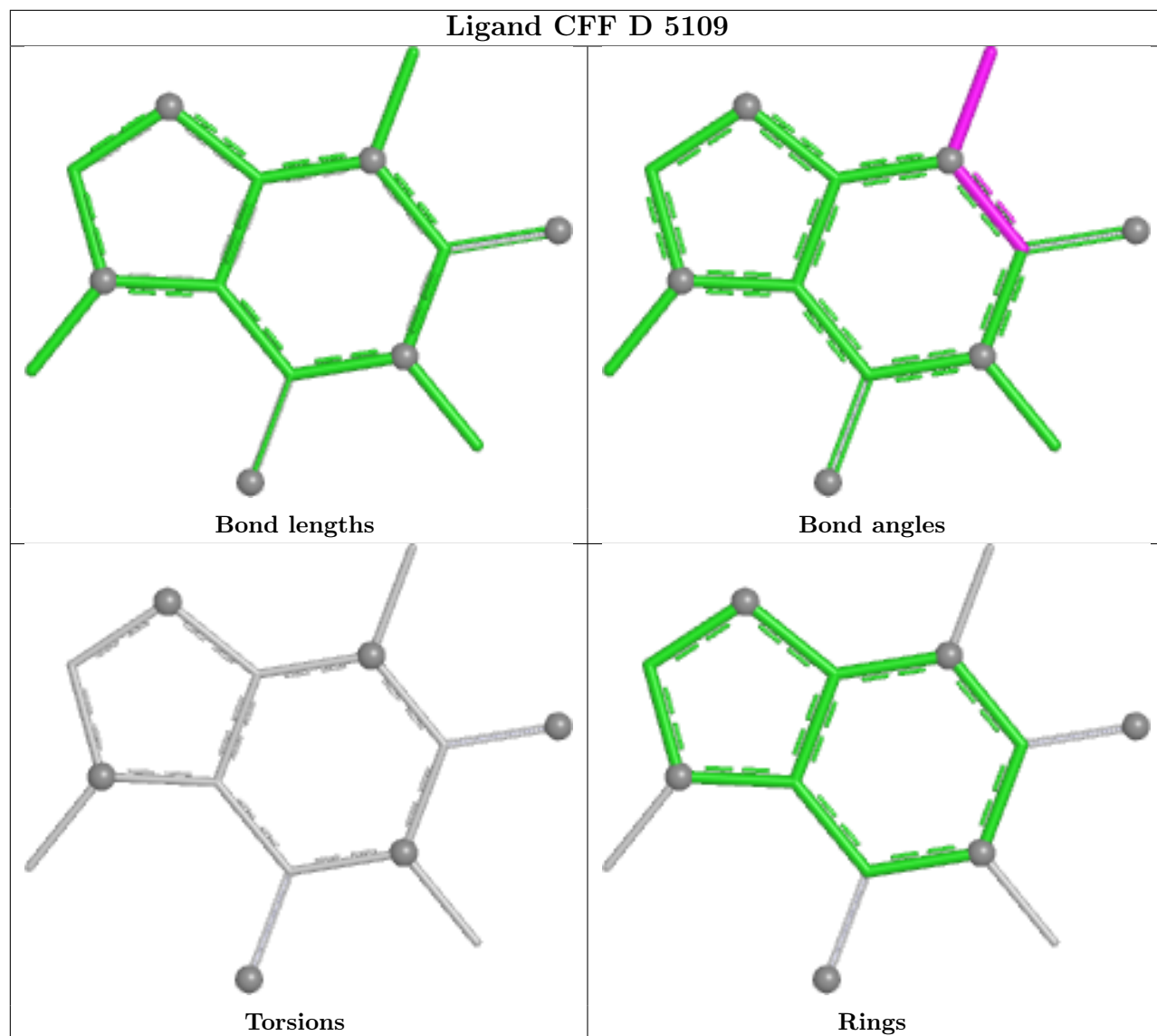
Ligand 43M A 5103

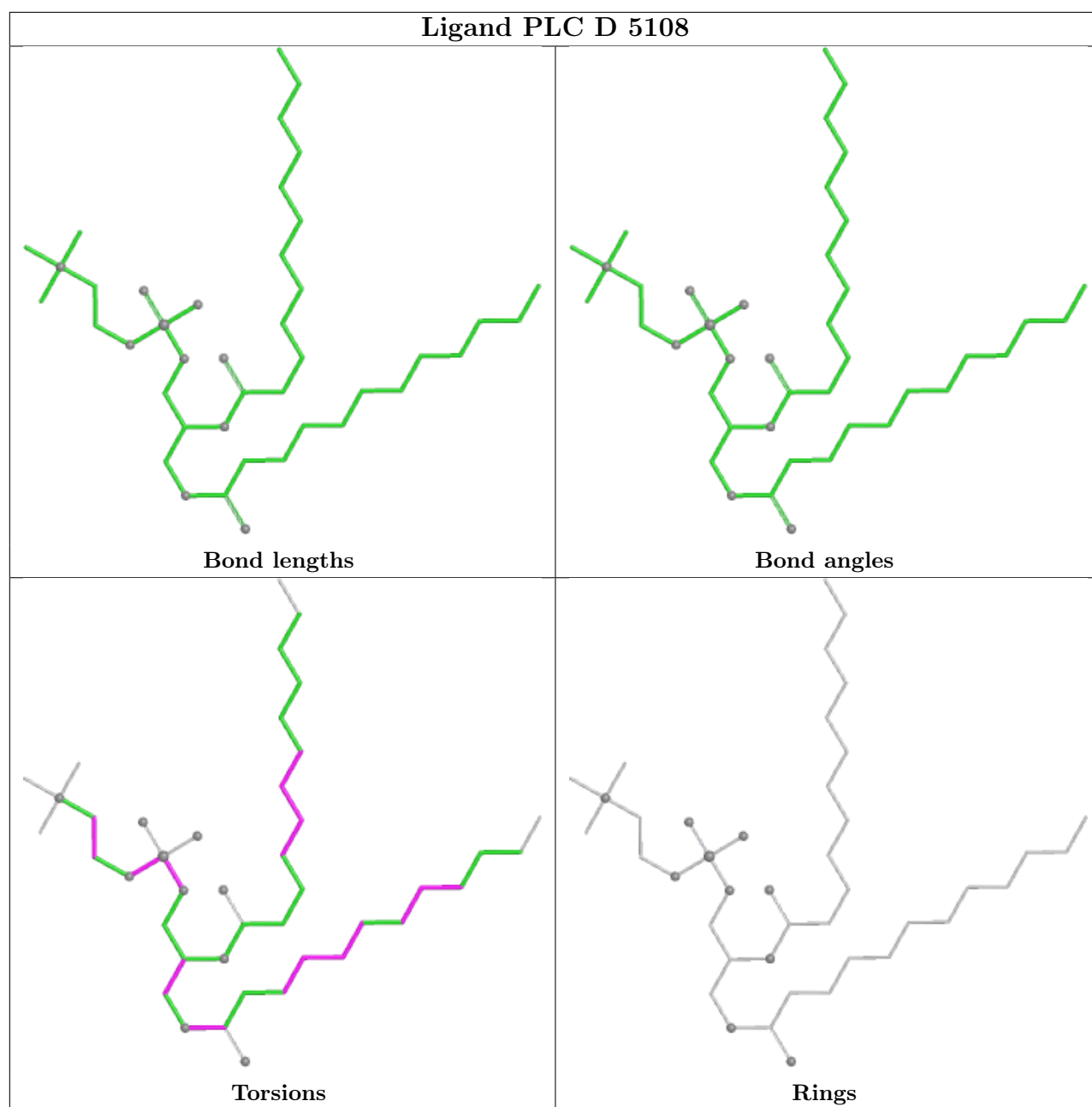


Ligand 43M D 5101

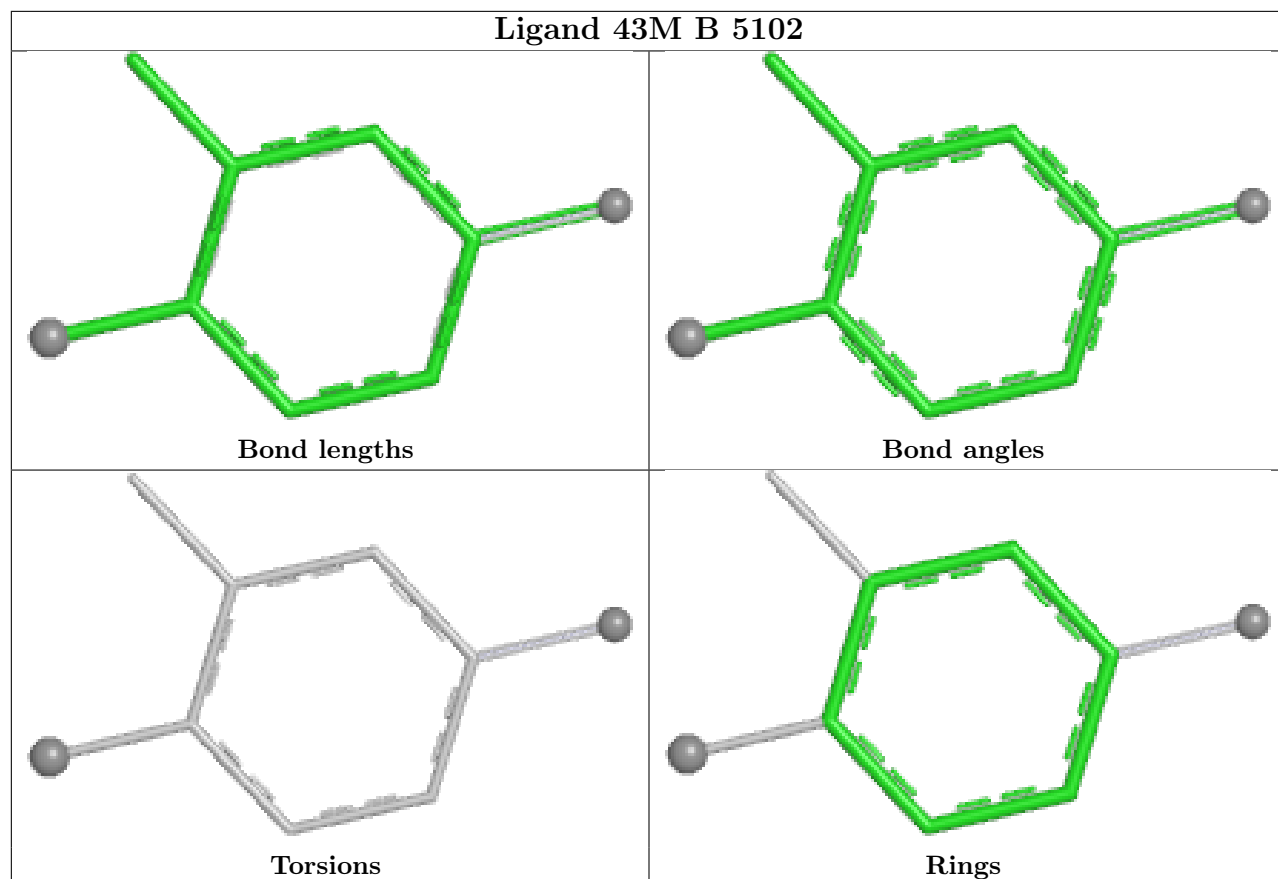




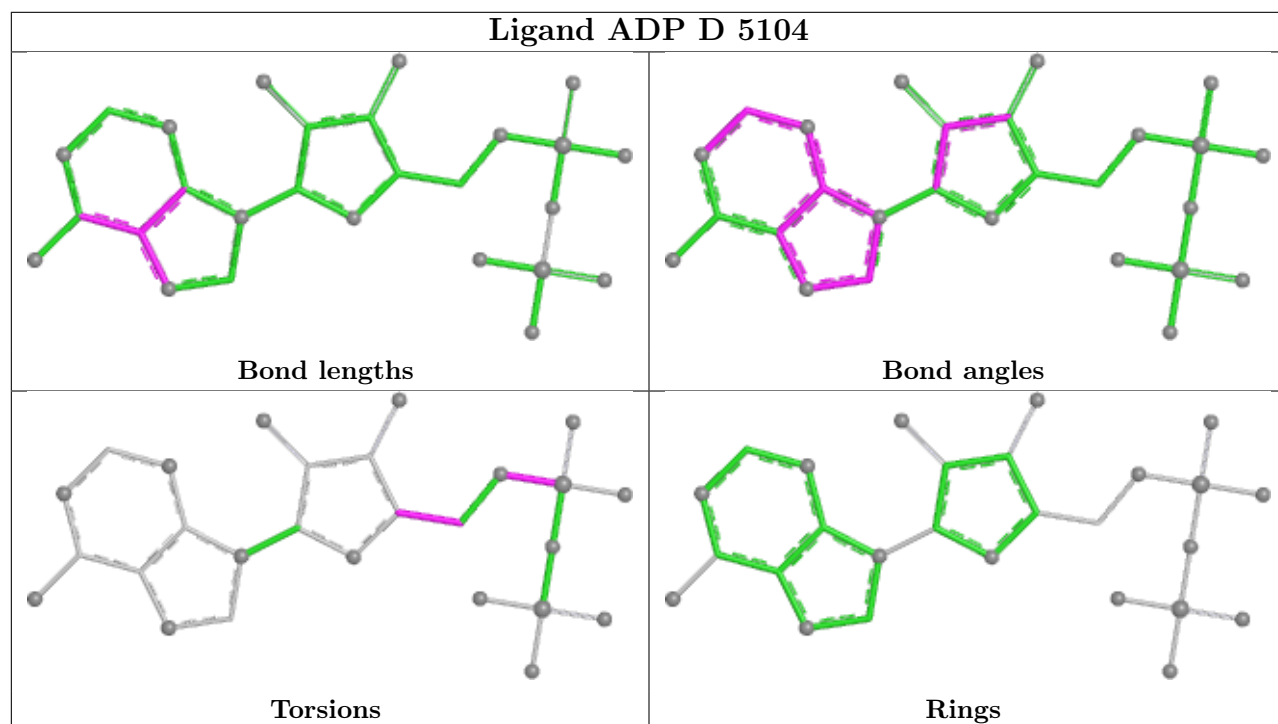




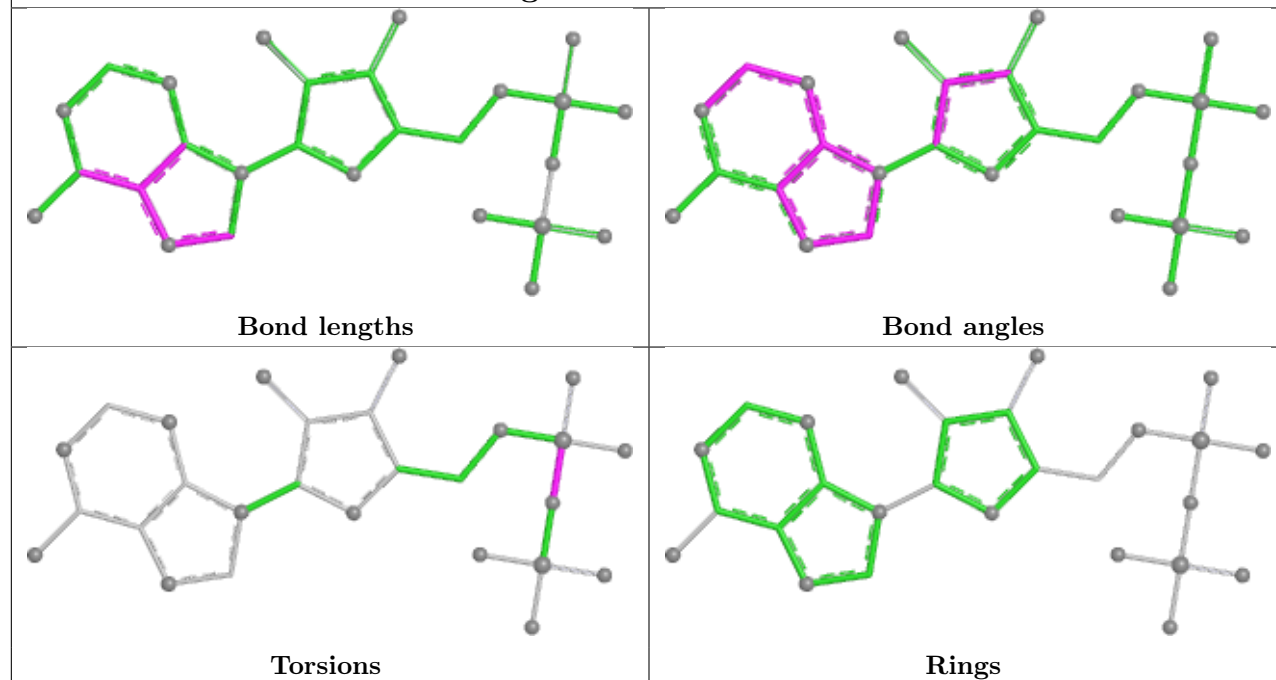
Ligand 43M B 5102



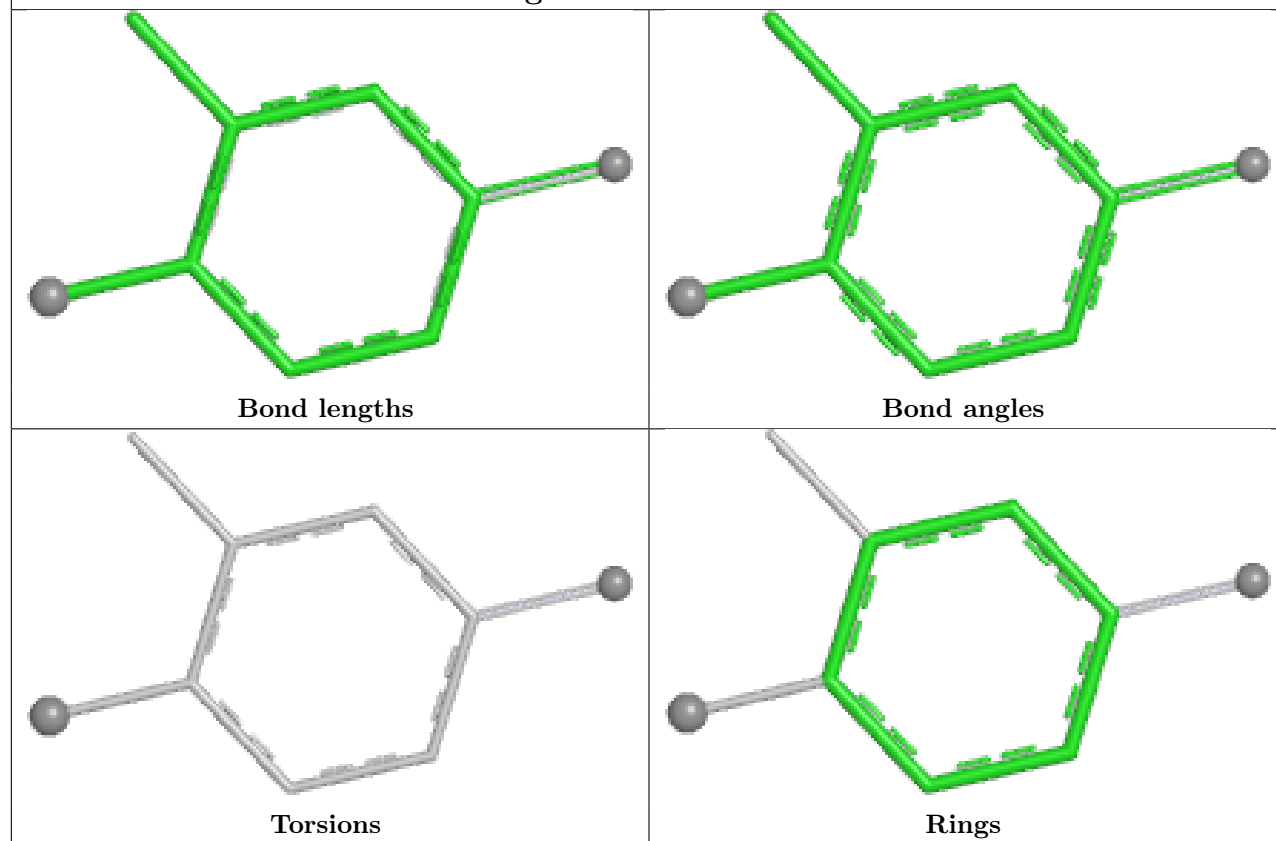
Ligand ADP D 5104

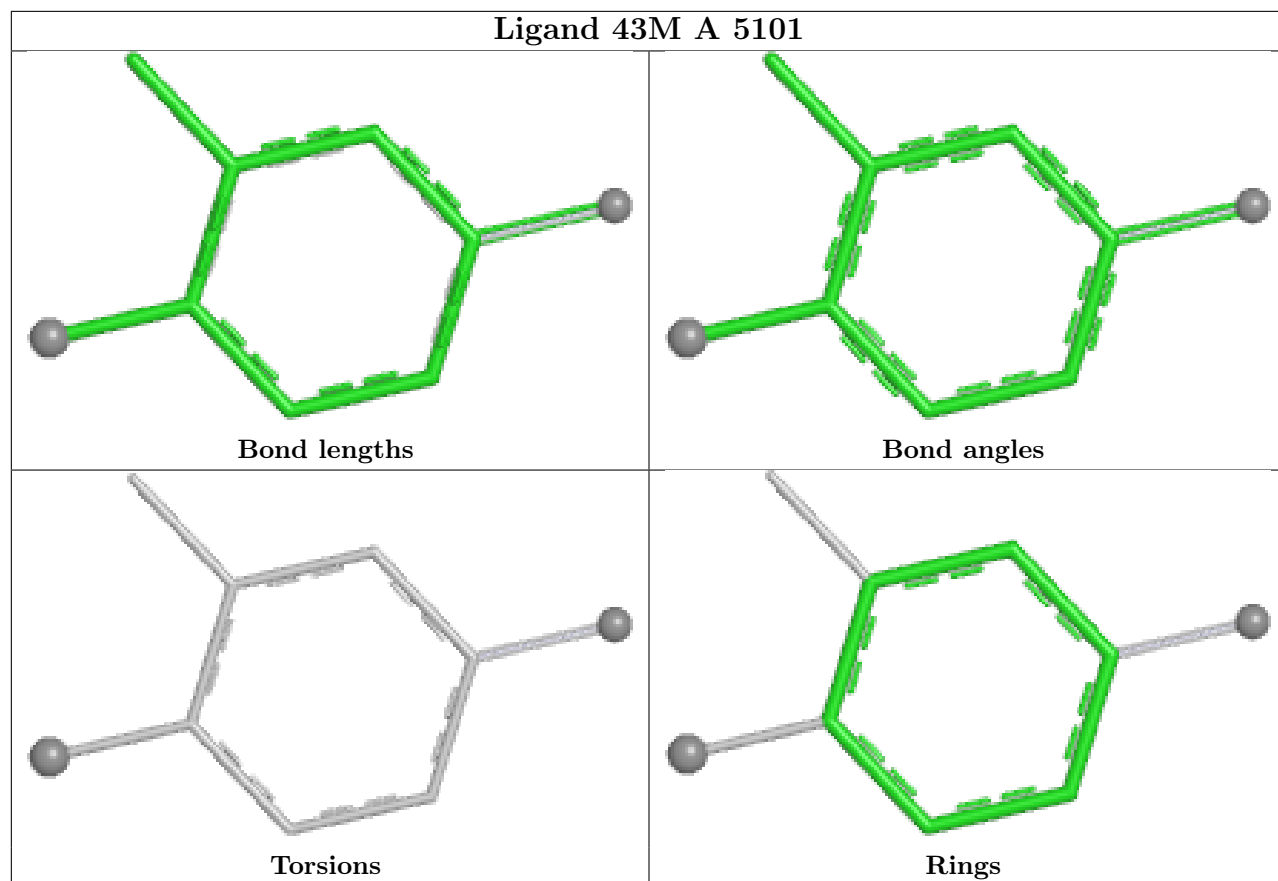


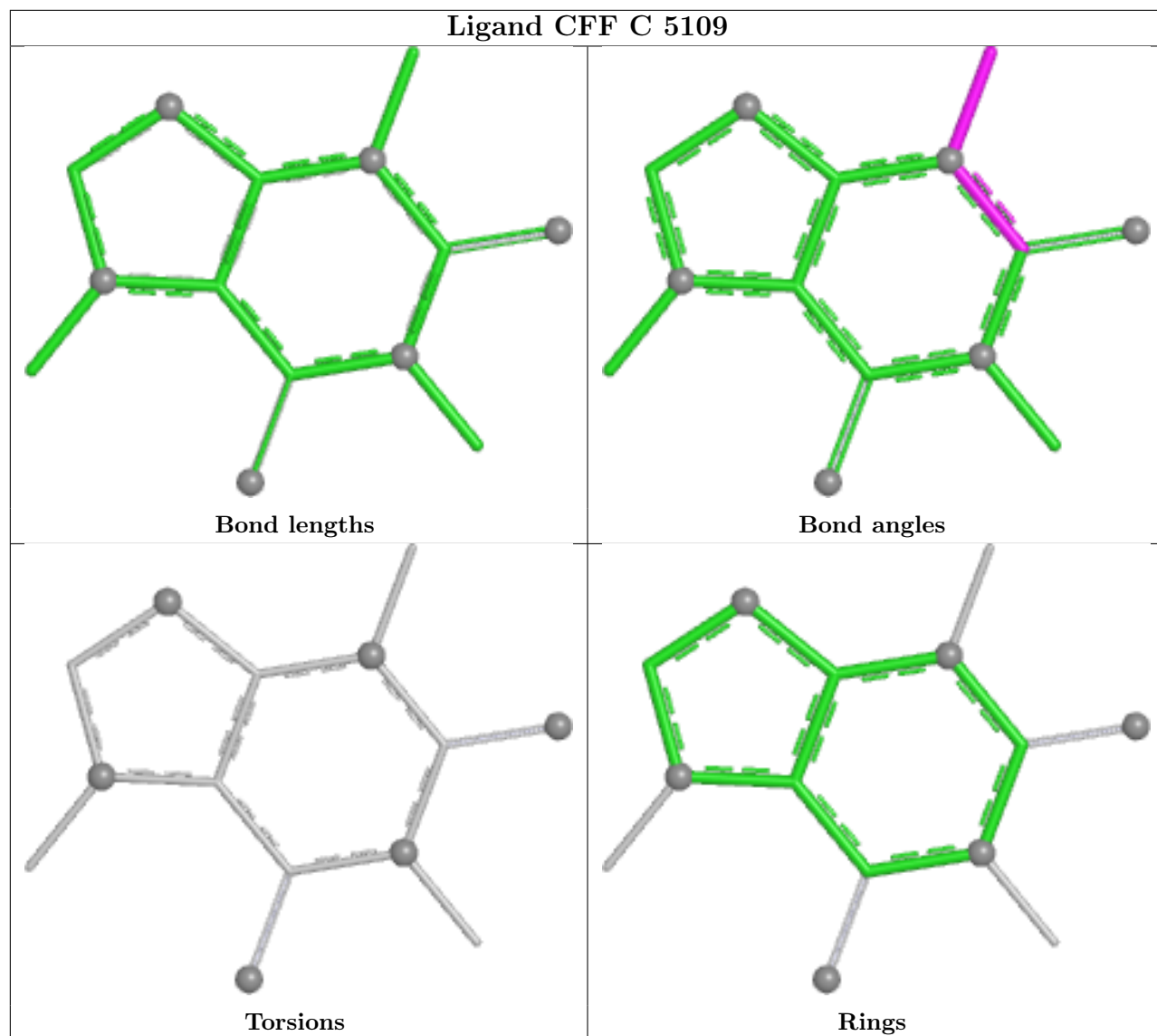
Ligand ADP C 5106

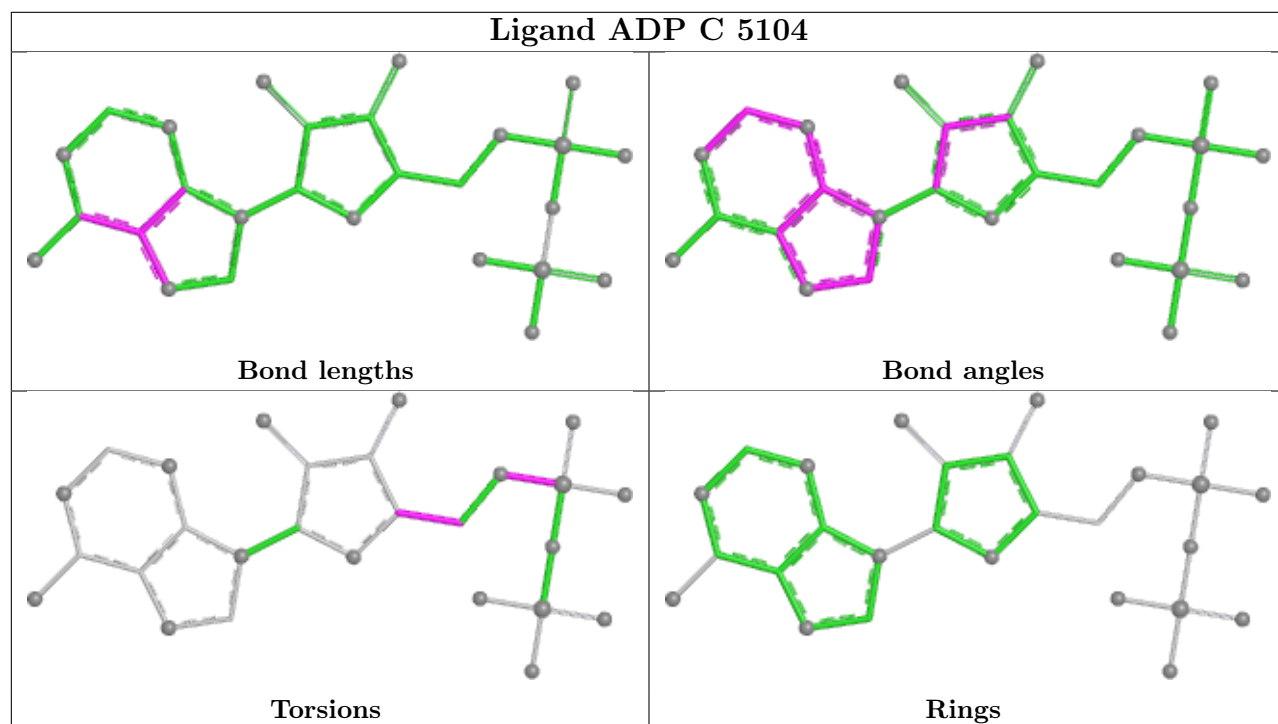
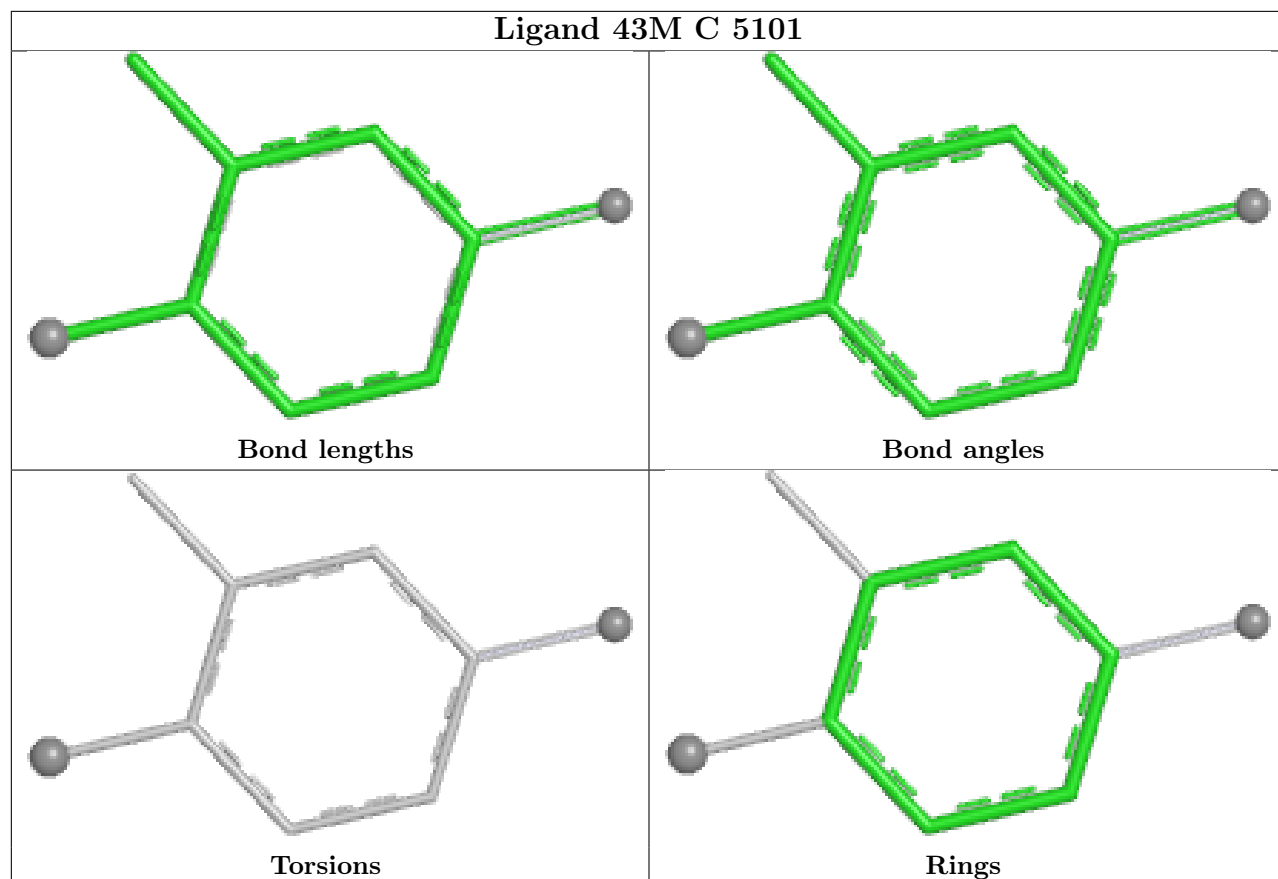


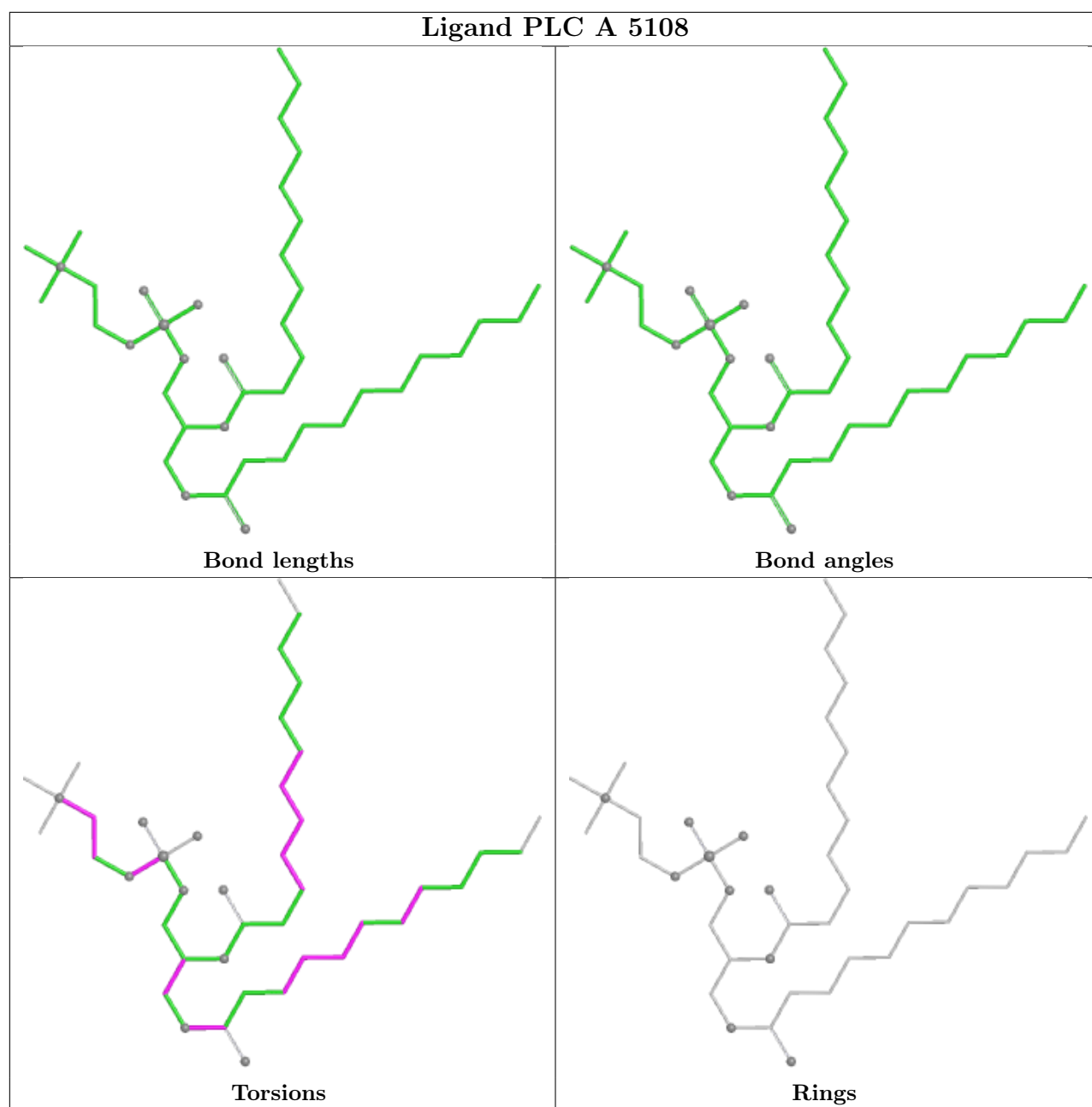
Ligand 43M A 5102

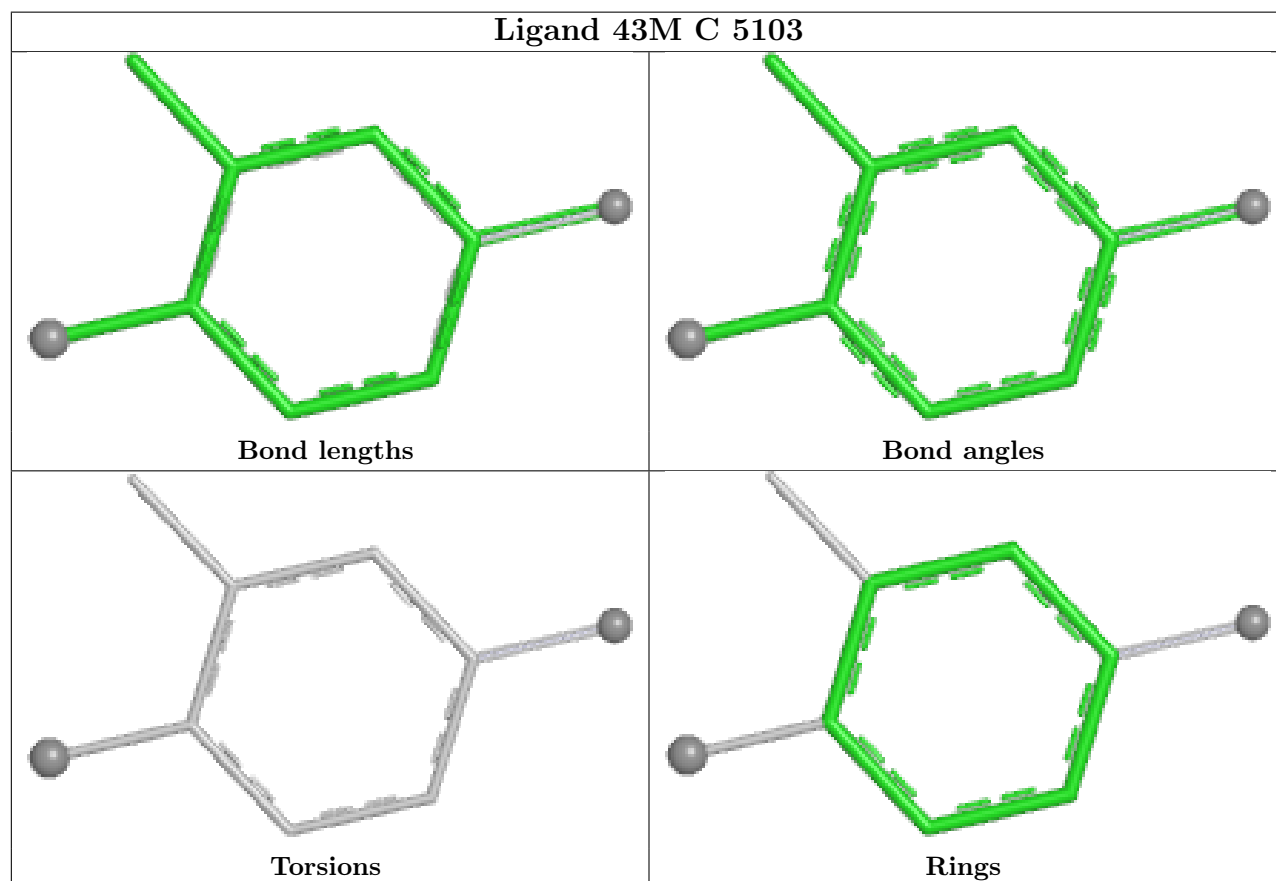
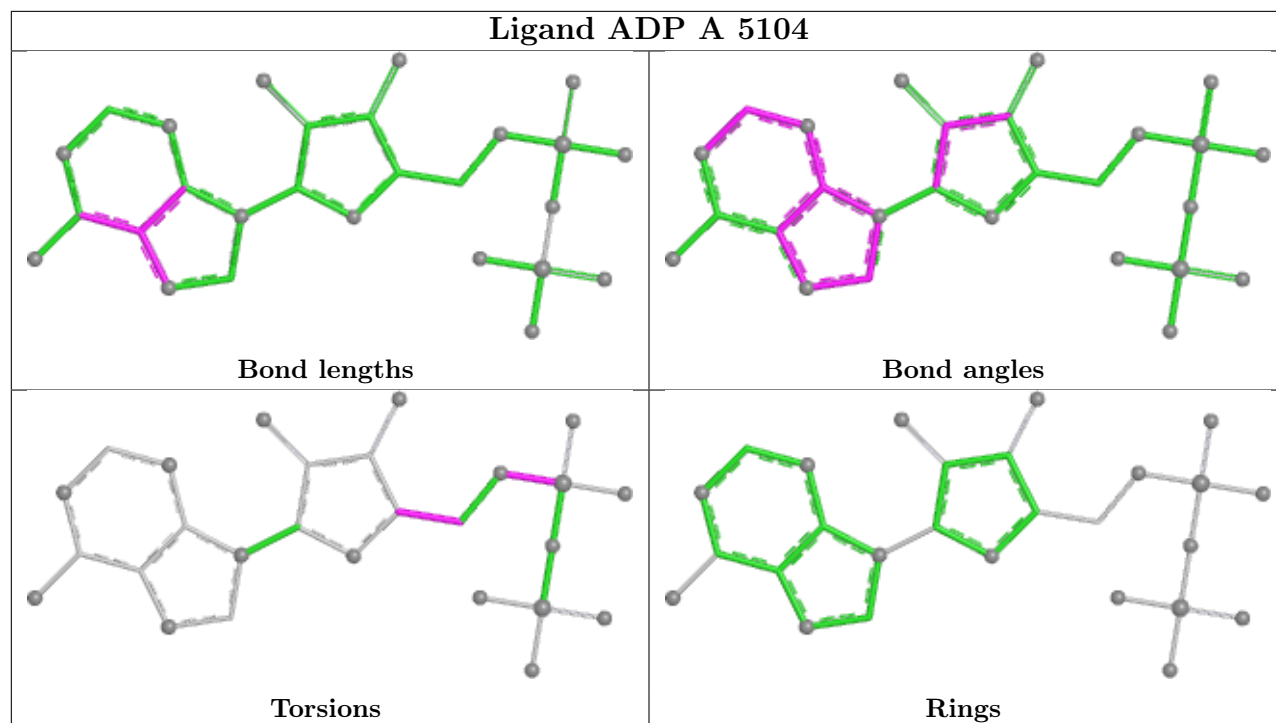


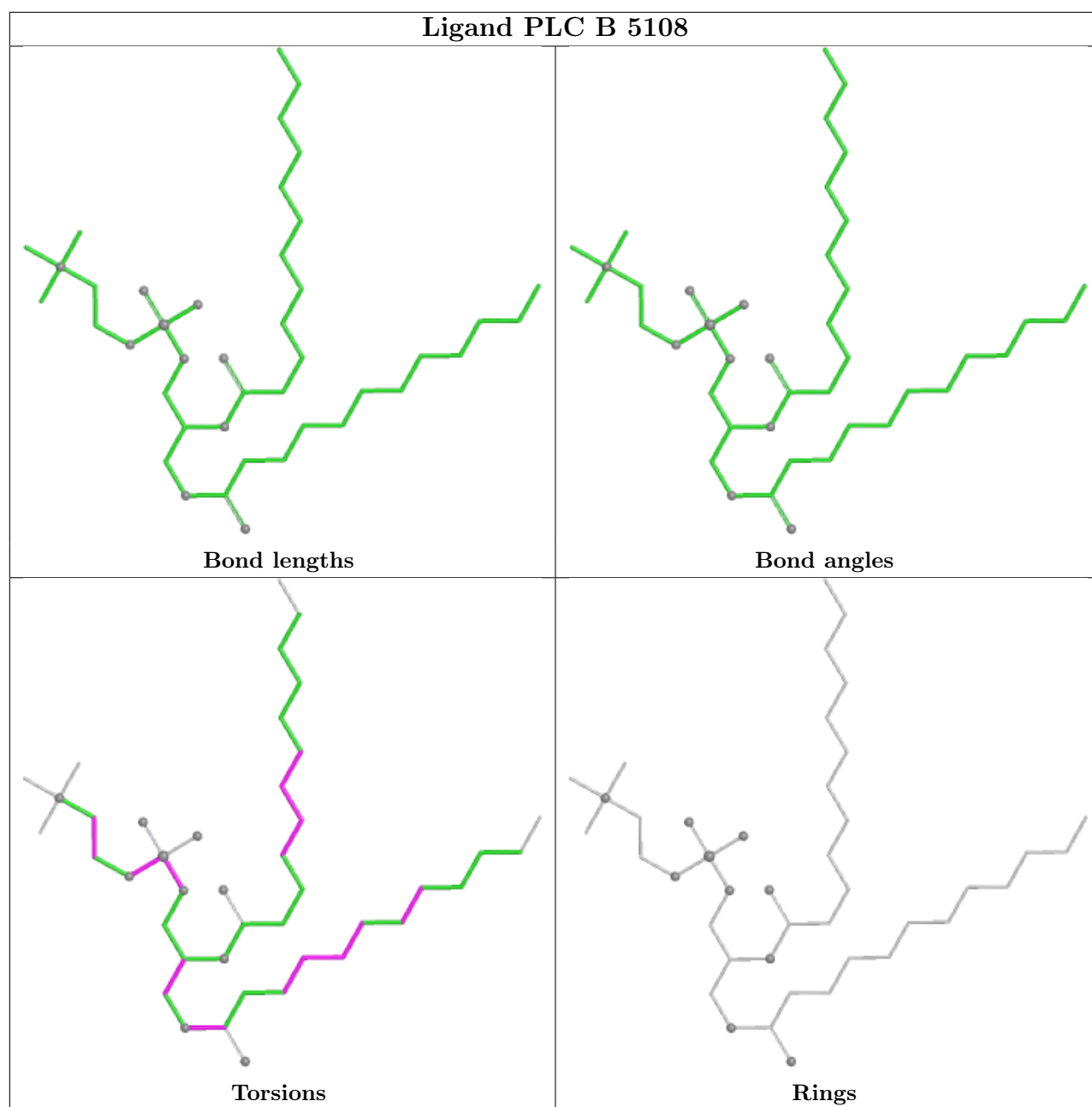


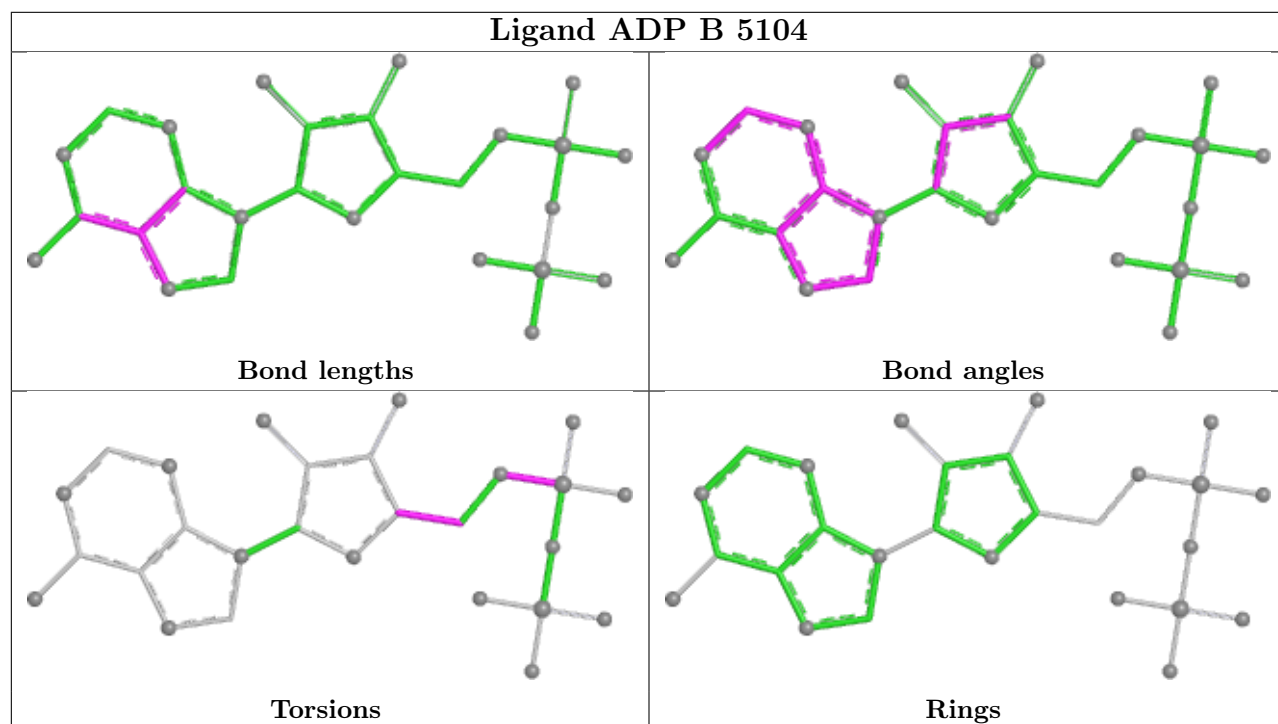
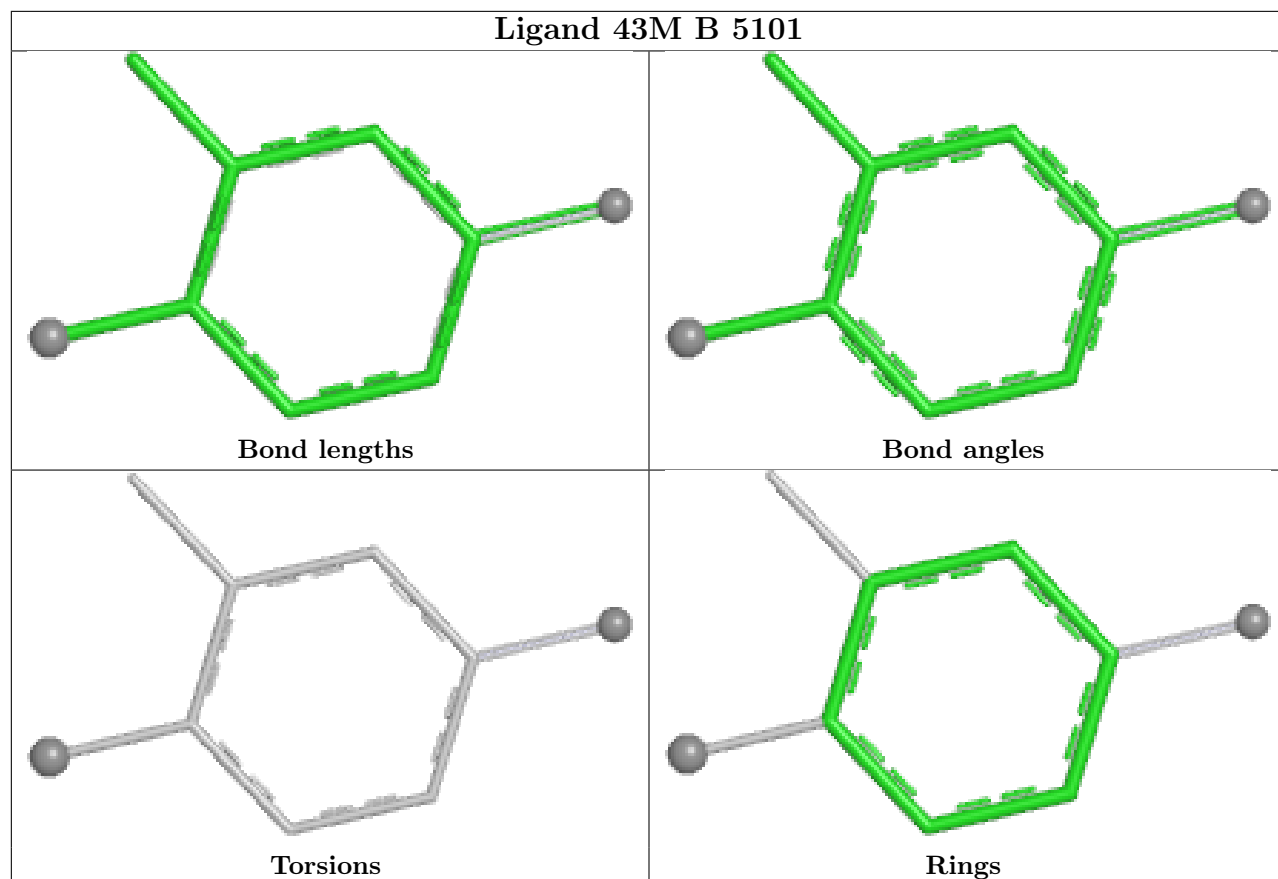




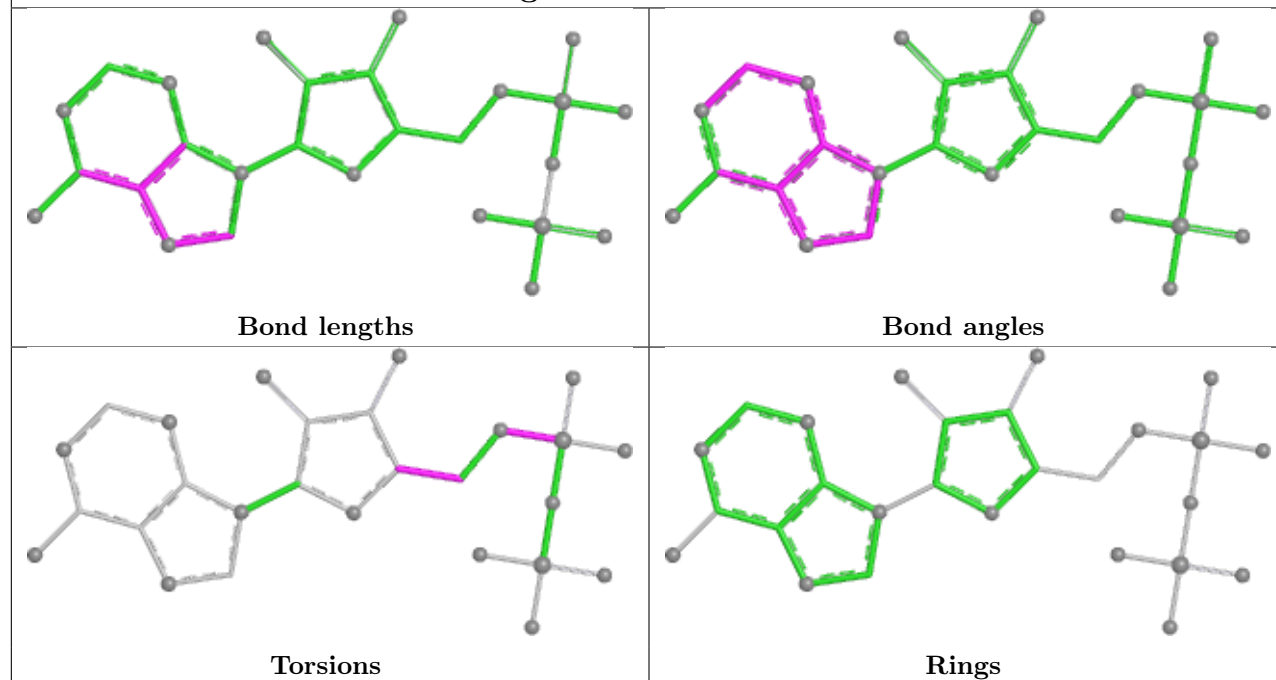




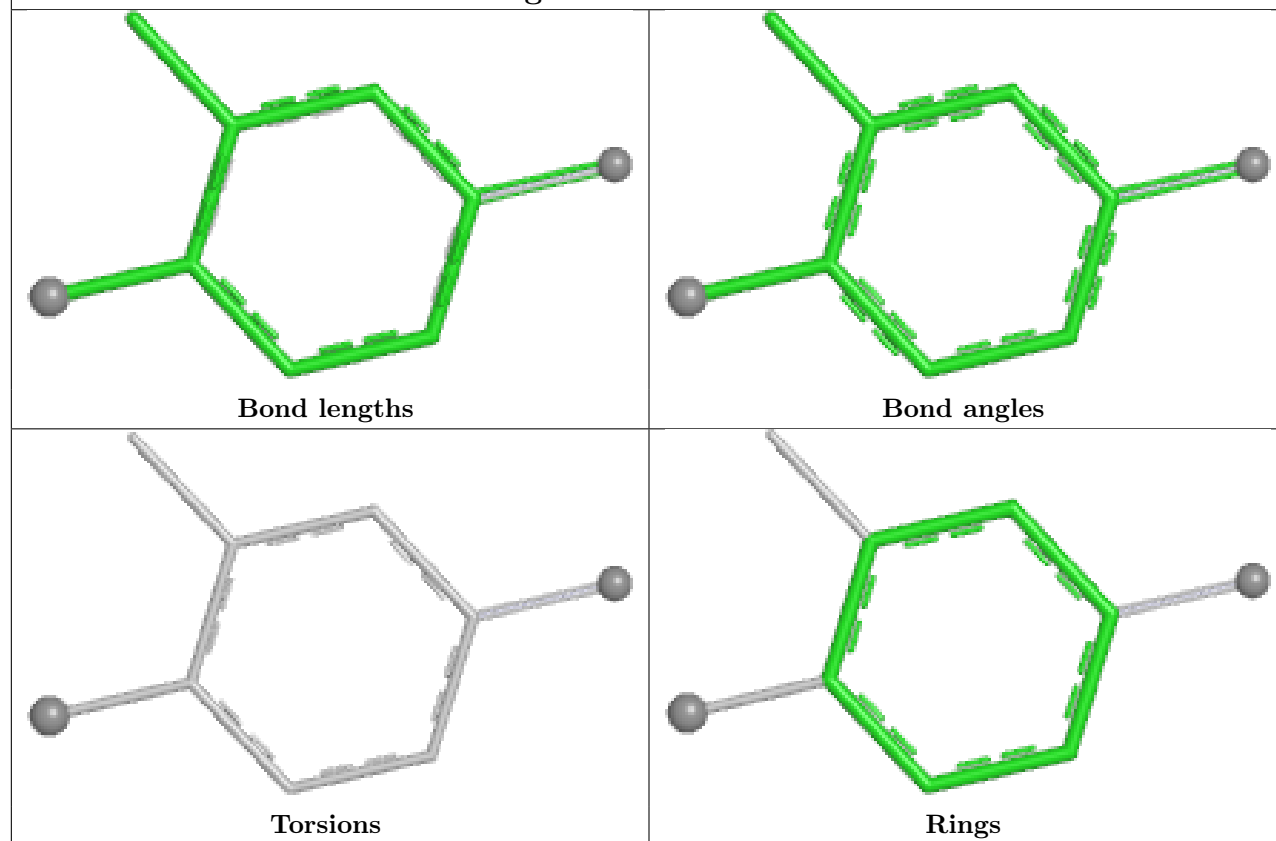


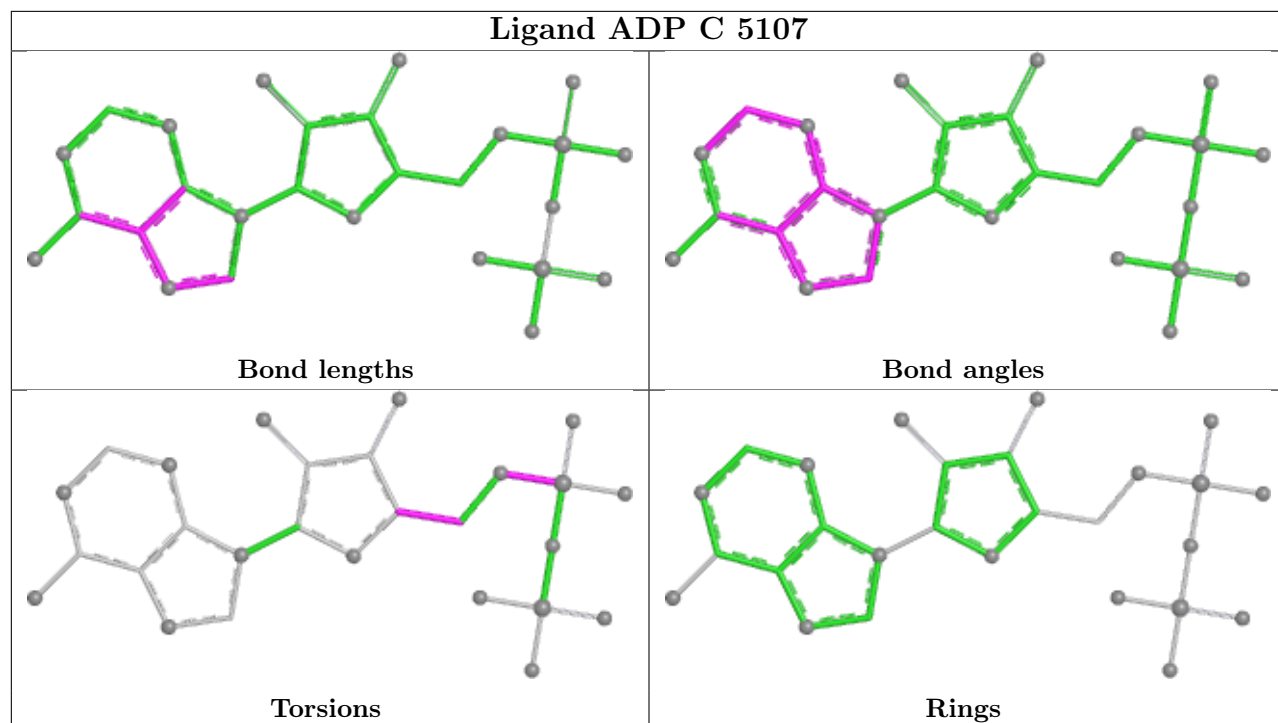


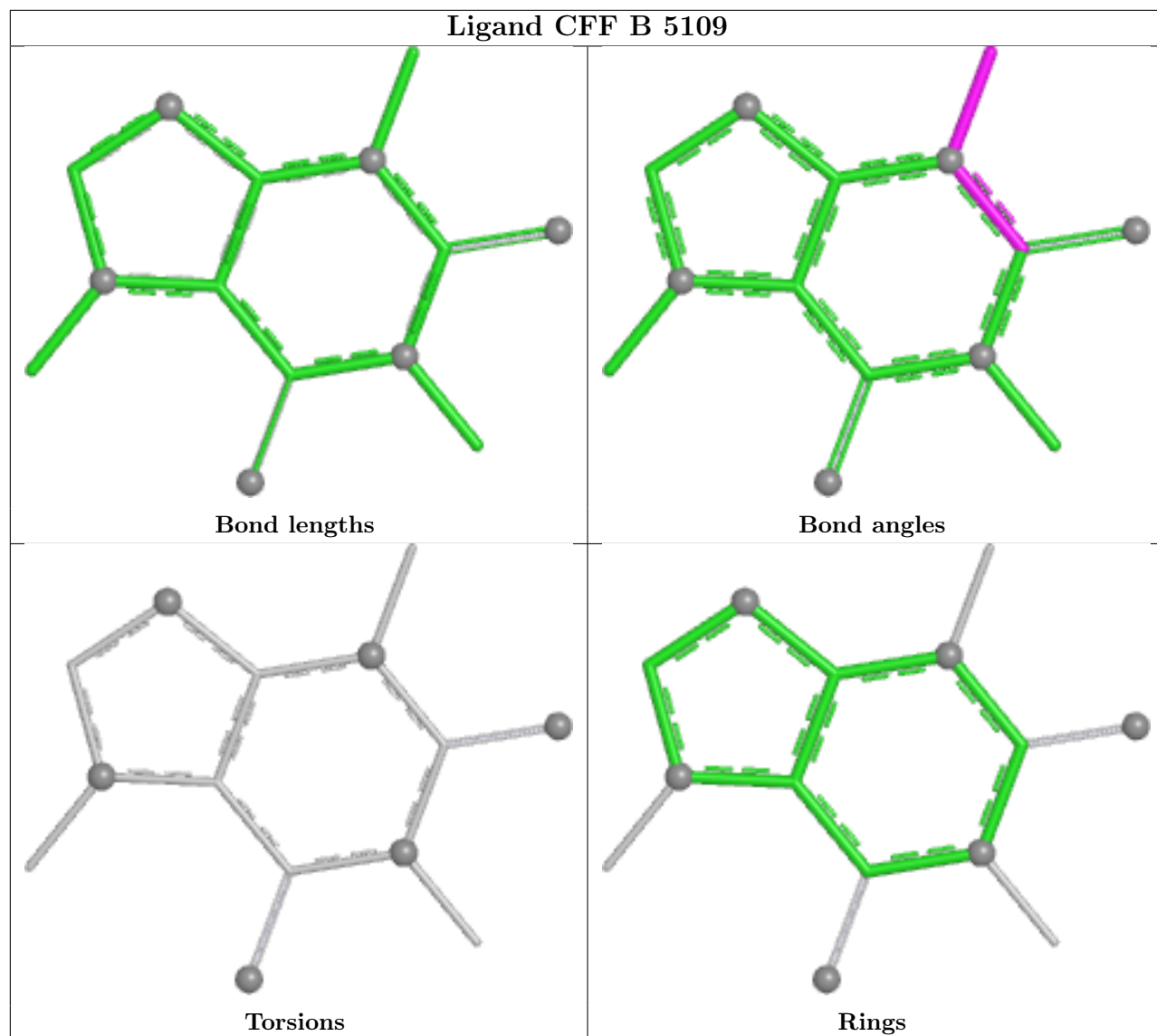
Ligand ADP D 5107

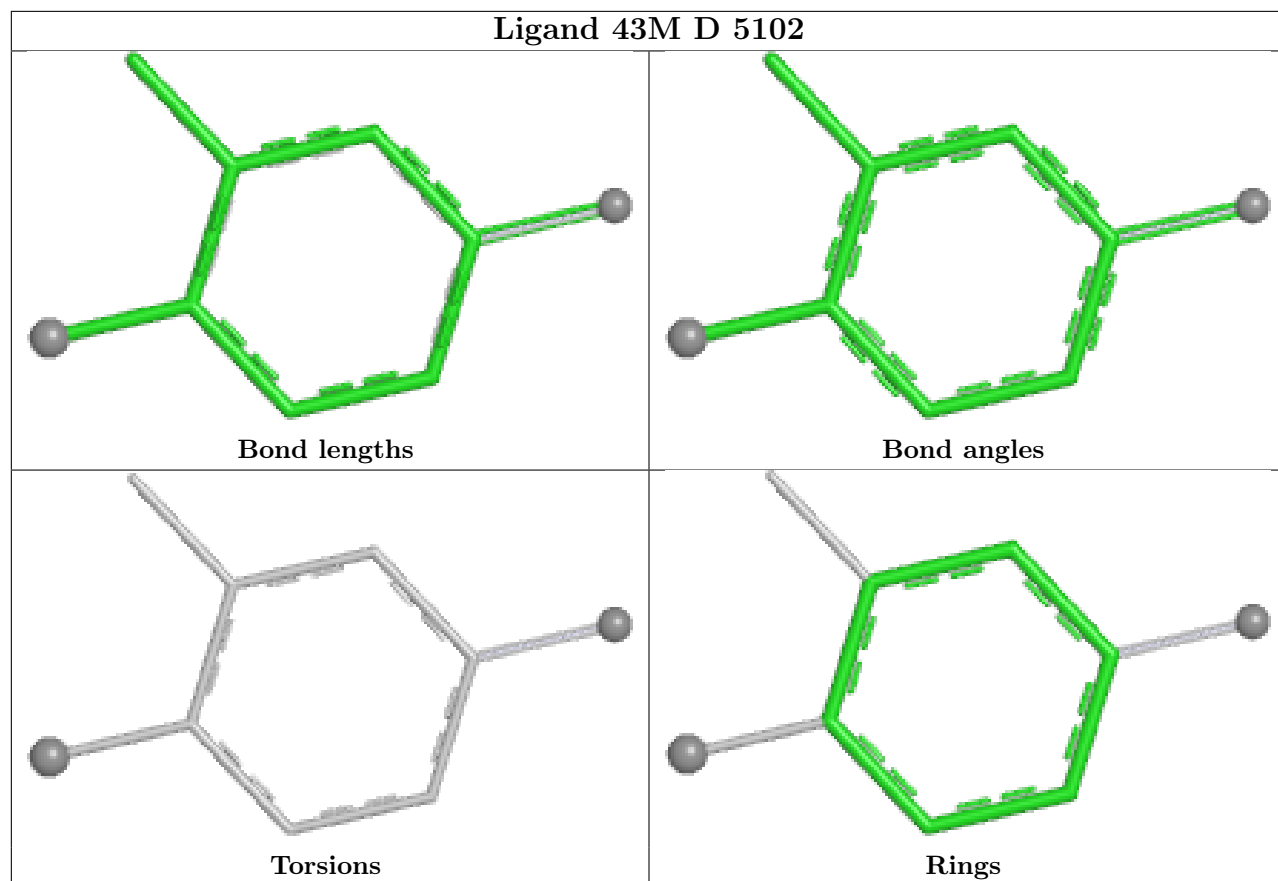


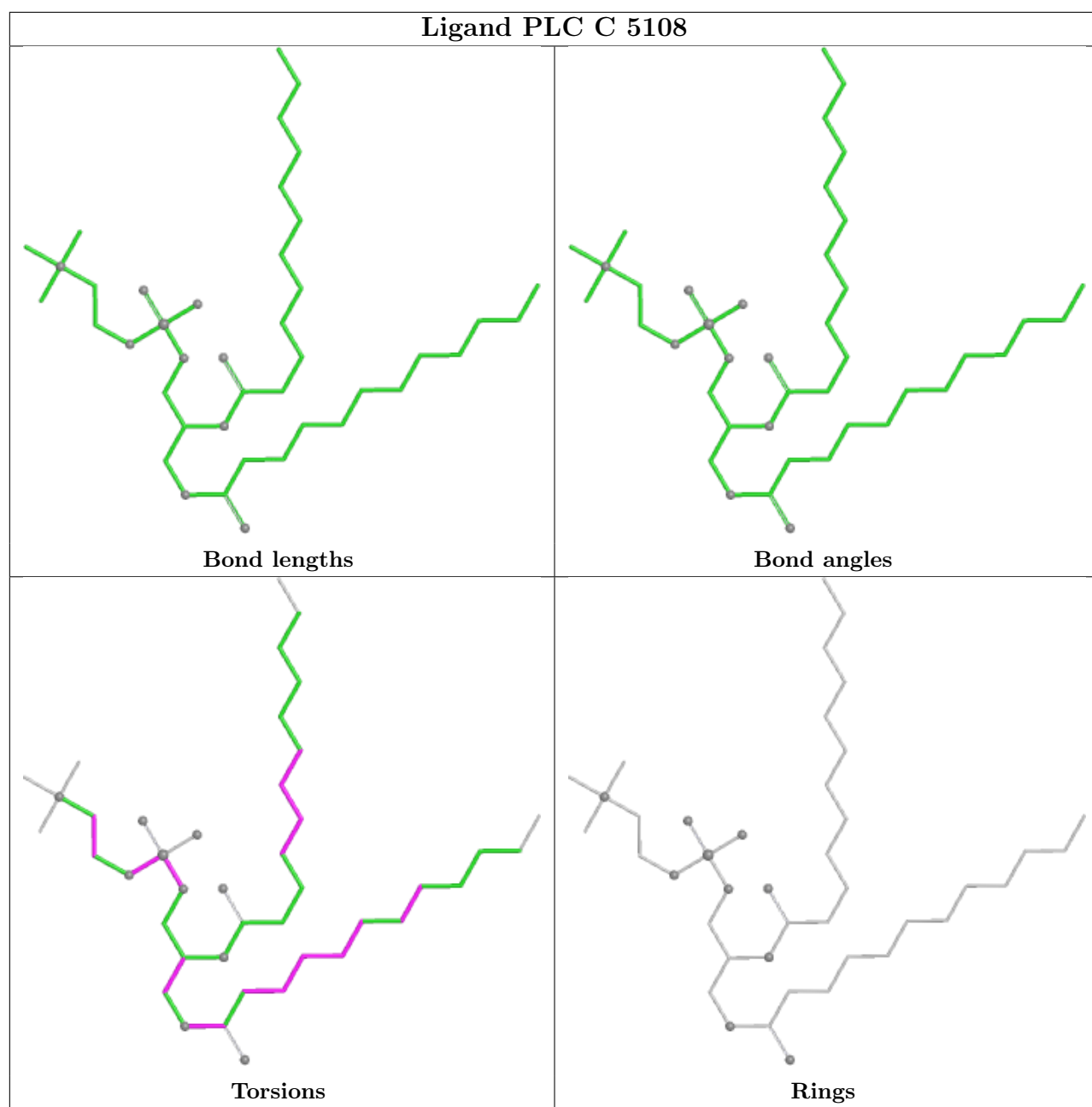
Ligand 43M D 5103

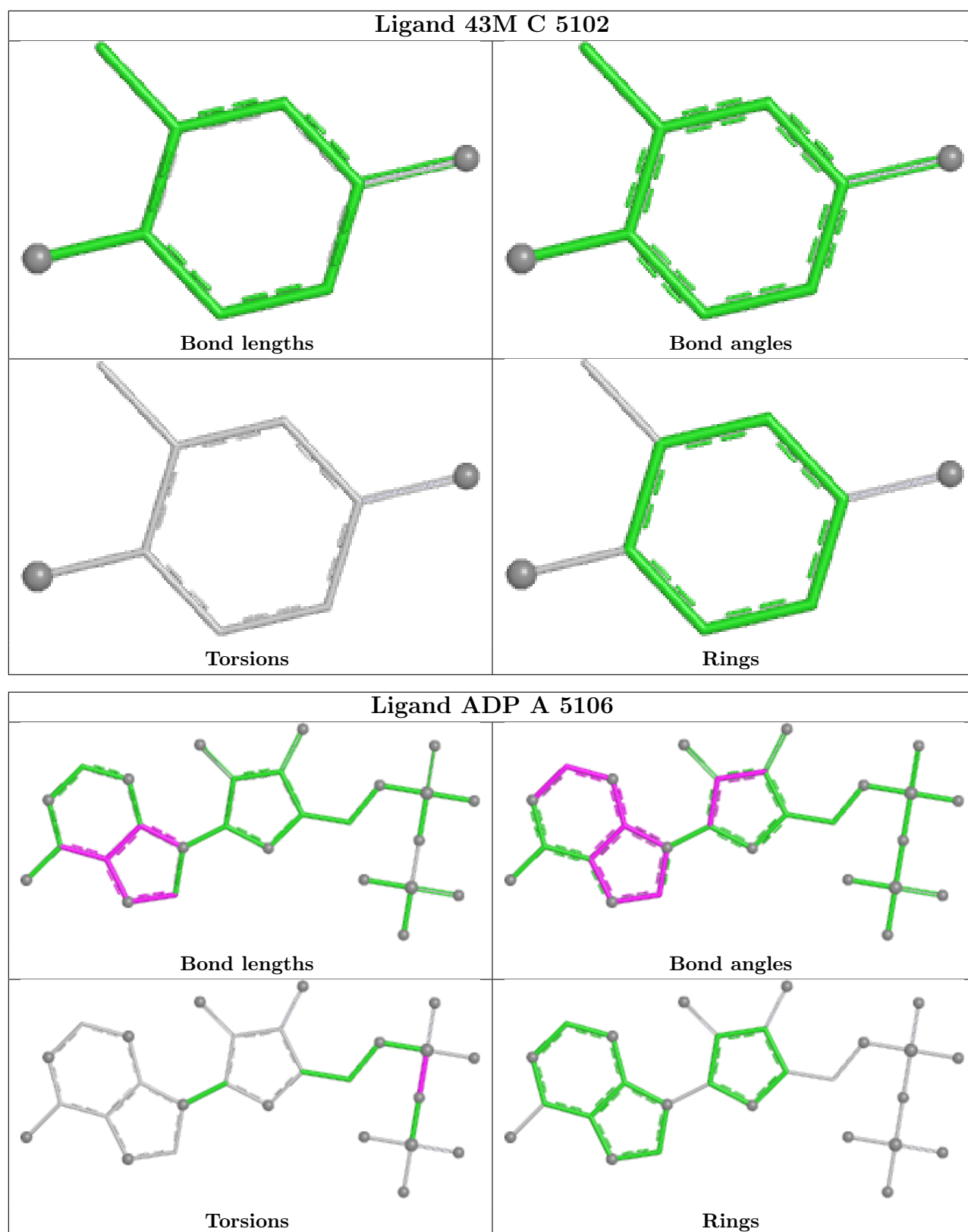












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

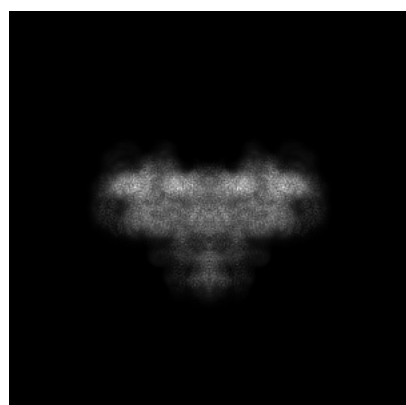
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-74441. These allow visual inspection of the internal detail of the map and identification of artifacts.

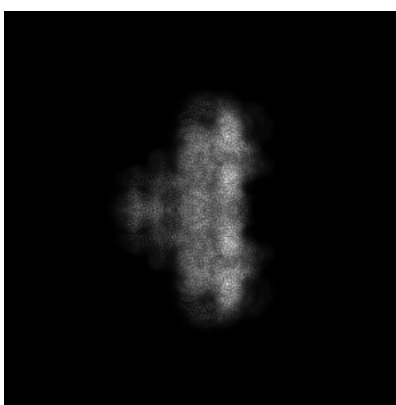
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

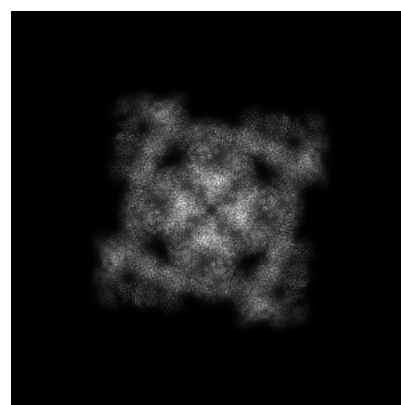
6.1.1 Primary map



X



Y

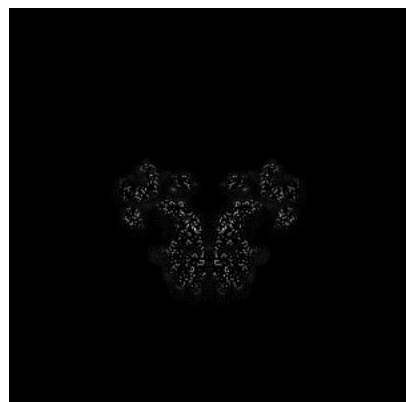


Z

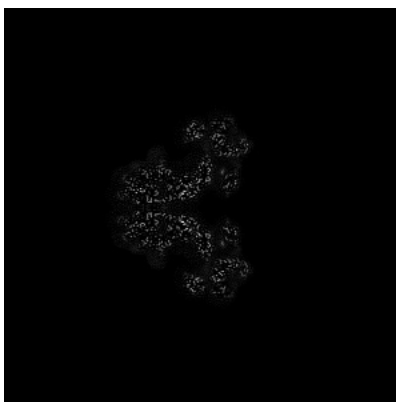
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

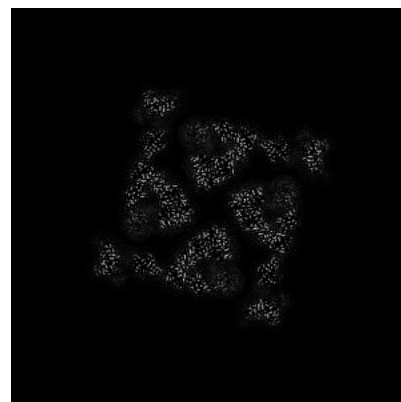
6.2.1 Primary map



X Index: 300



Y Index: 300

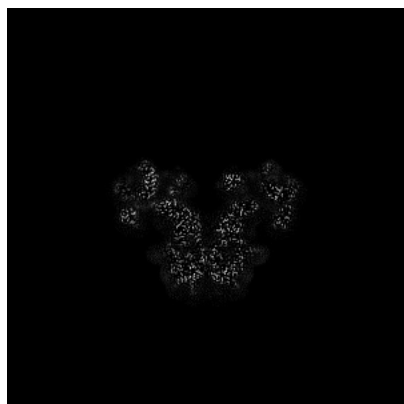


Z Index: 300

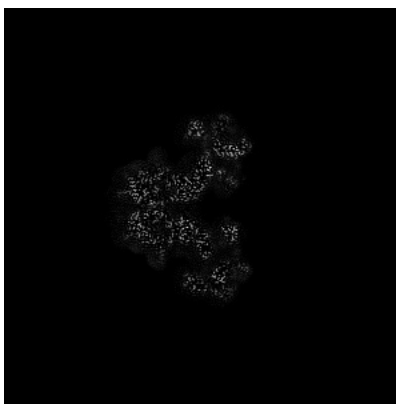
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

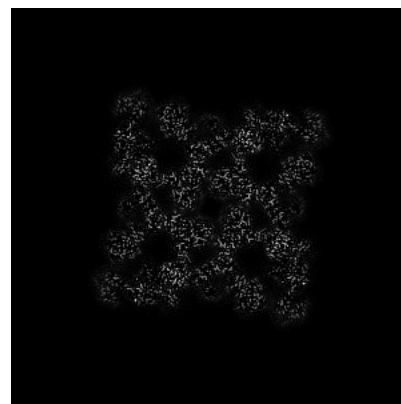
6.3.1 Primary map



X Index: 304



Y Index: 304

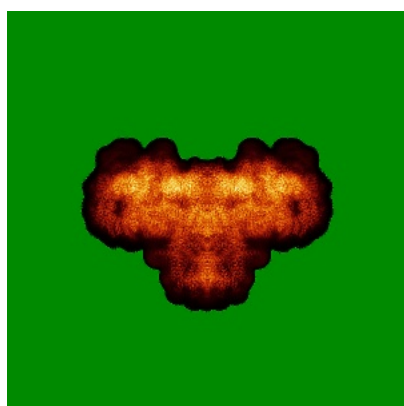


Z Index: 332

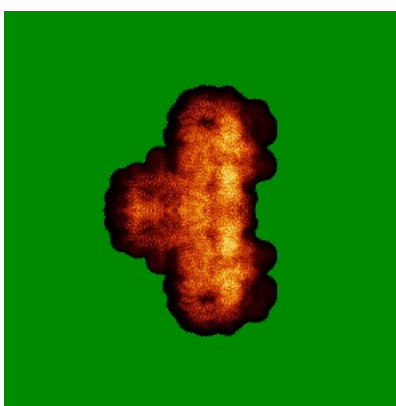
The images above show the largest variance slices of the map in three orthogonal directions.

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

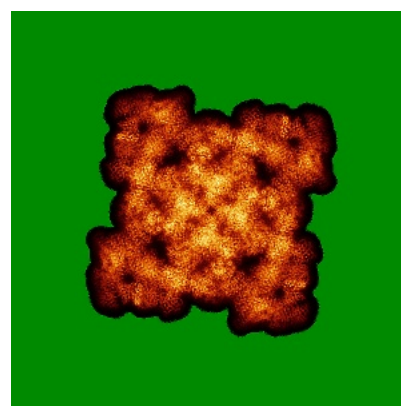
6.4.1 Primary map



X



Y

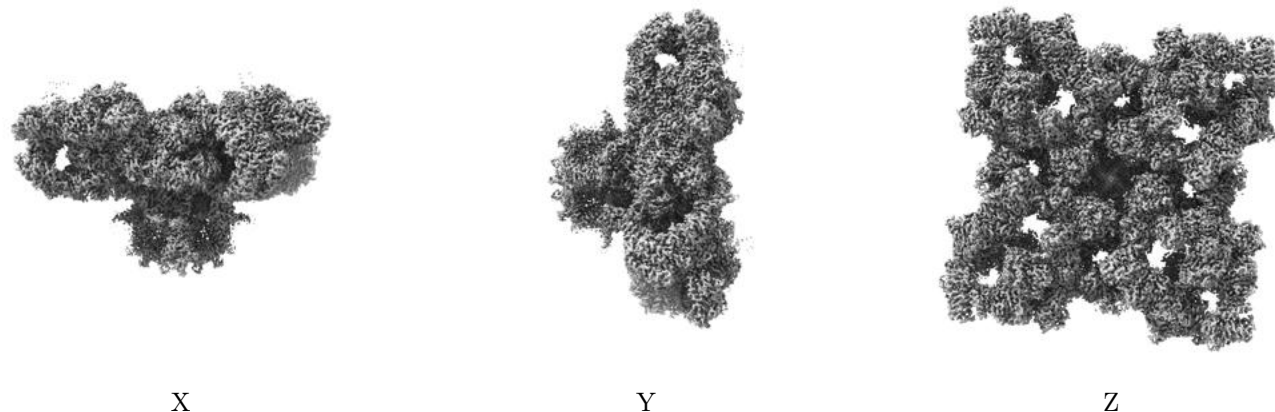


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.6. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

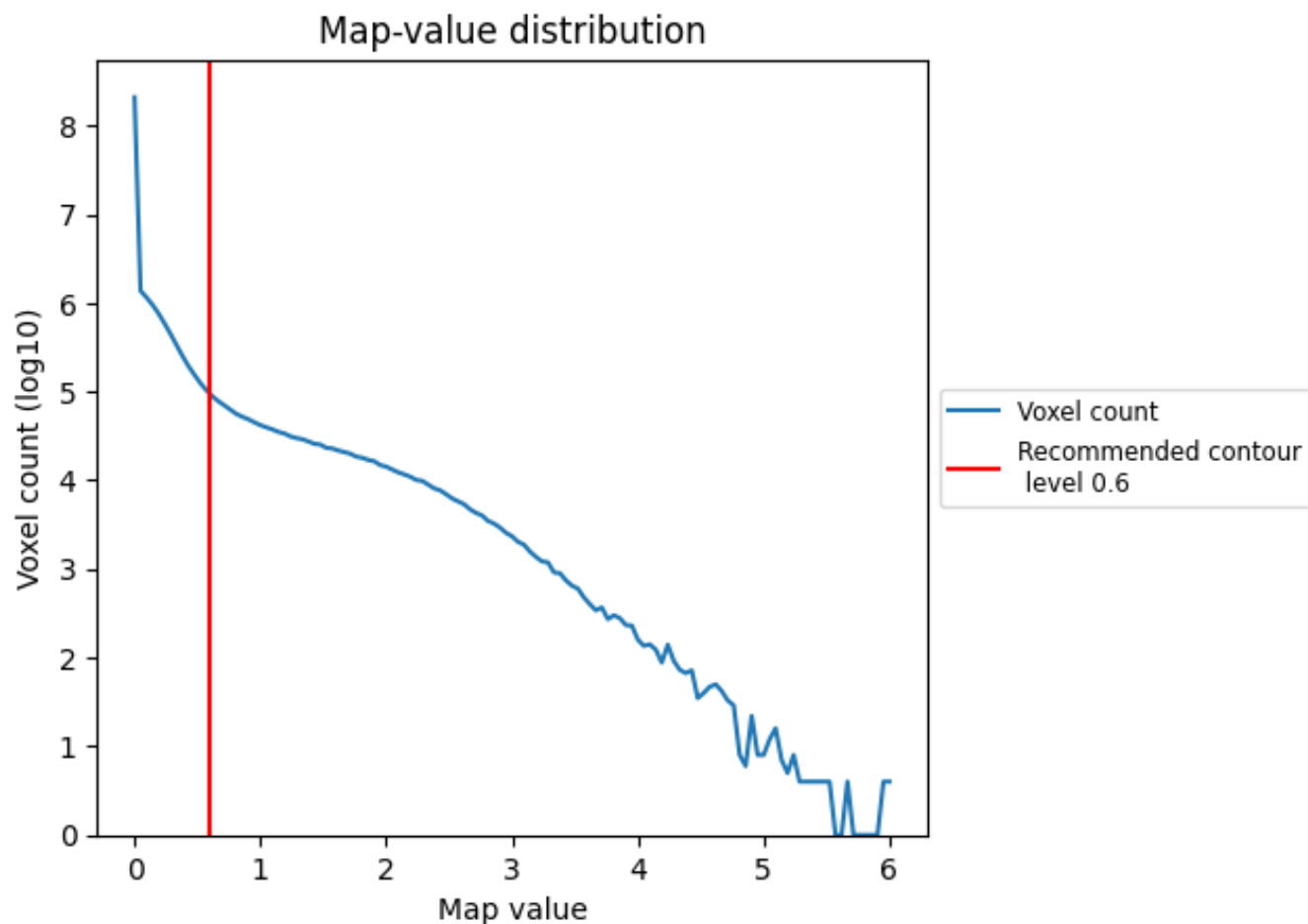
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

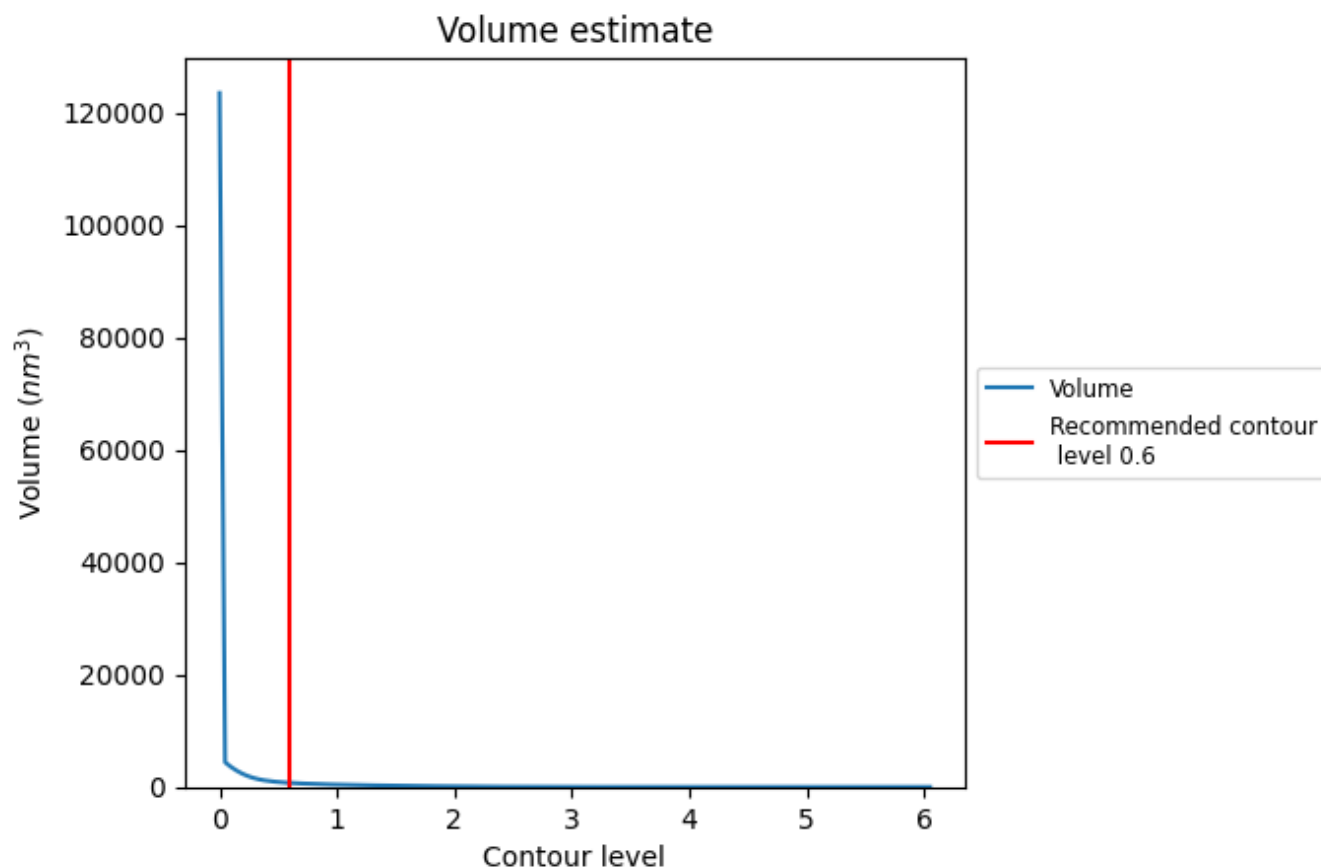
This section contains the results of statistical analysis of the map.

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.

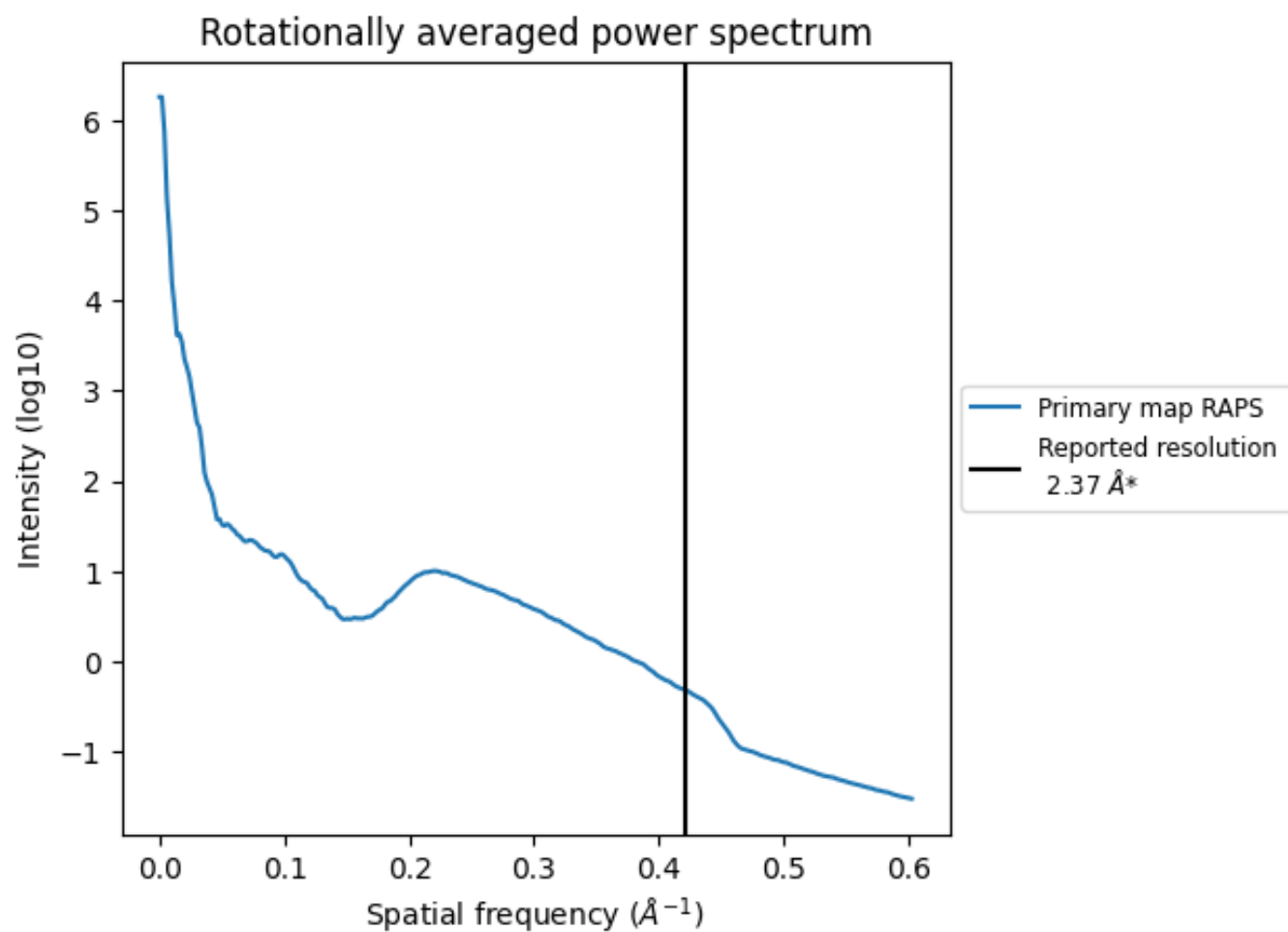
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 725 nm^3 ; this corresponds to an approximate mass of 655 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 ⓘ



*Reported resolution corresponds to spatial frequency of 0.422 Å⁻¹

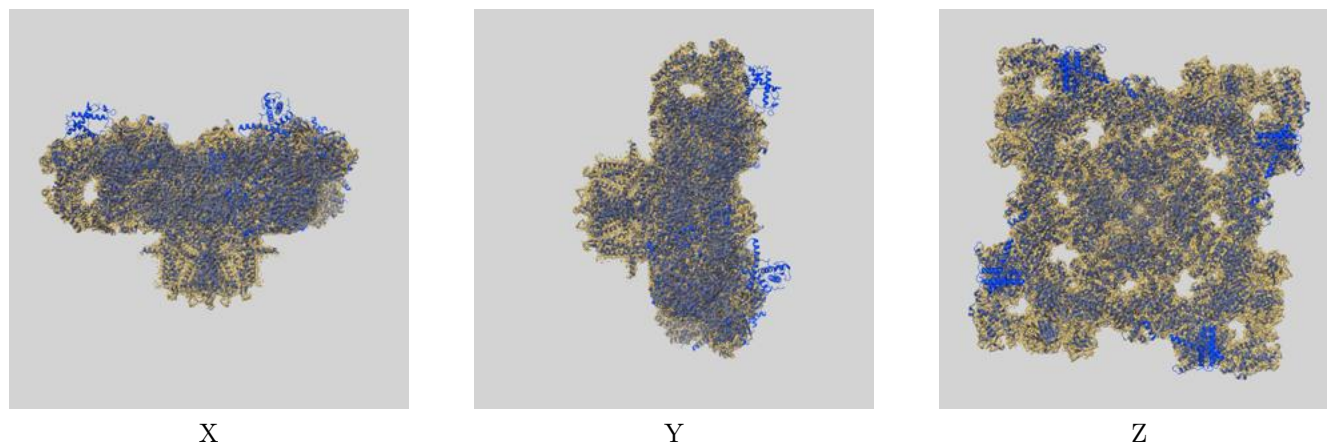
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

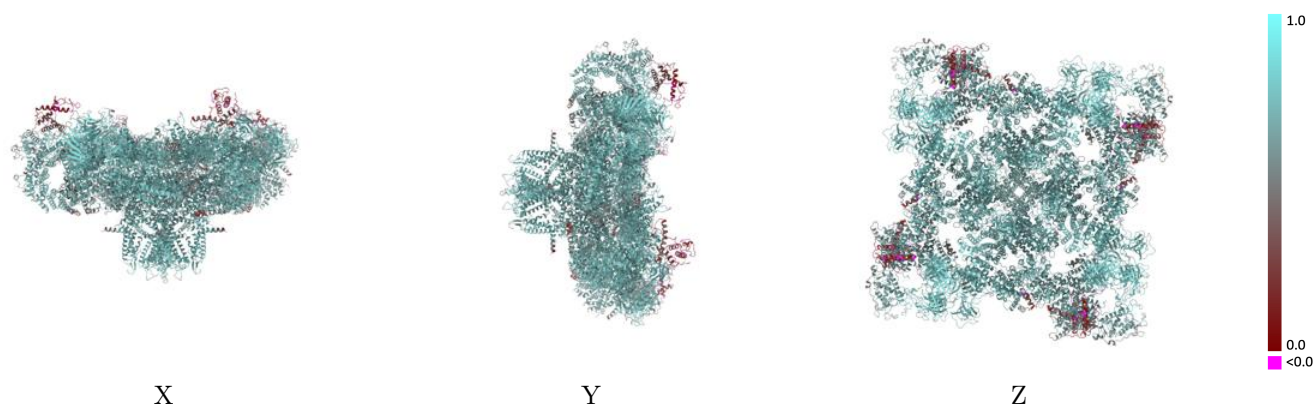
This section contains information regarding the fit between EMDB map EMD-74441 and PDB model 9ZNA. Per-residue inclusion information can be found in section 3 on page 10.

9.1 Map-model overlay [i](#)



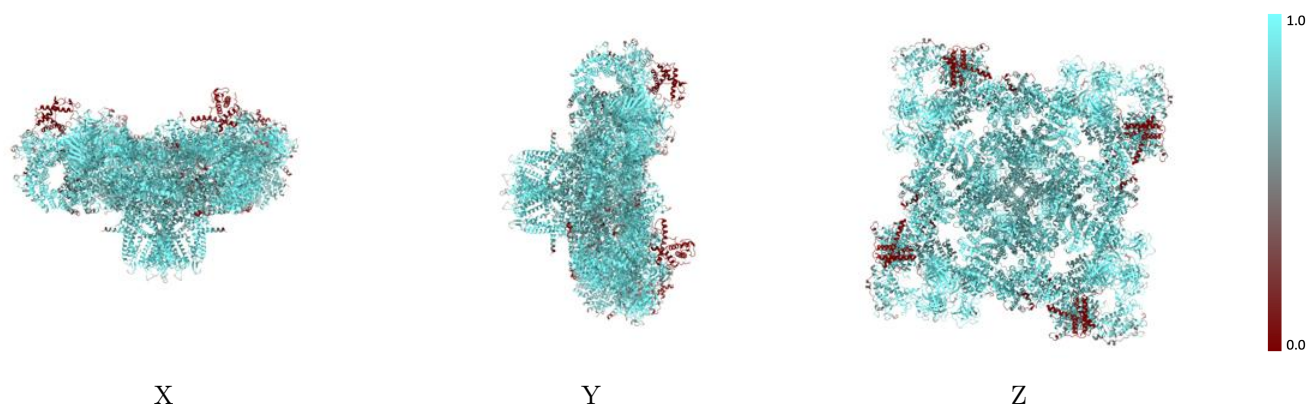
The images above show the 3D surface view of the map at the recommended contour level 0.6 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



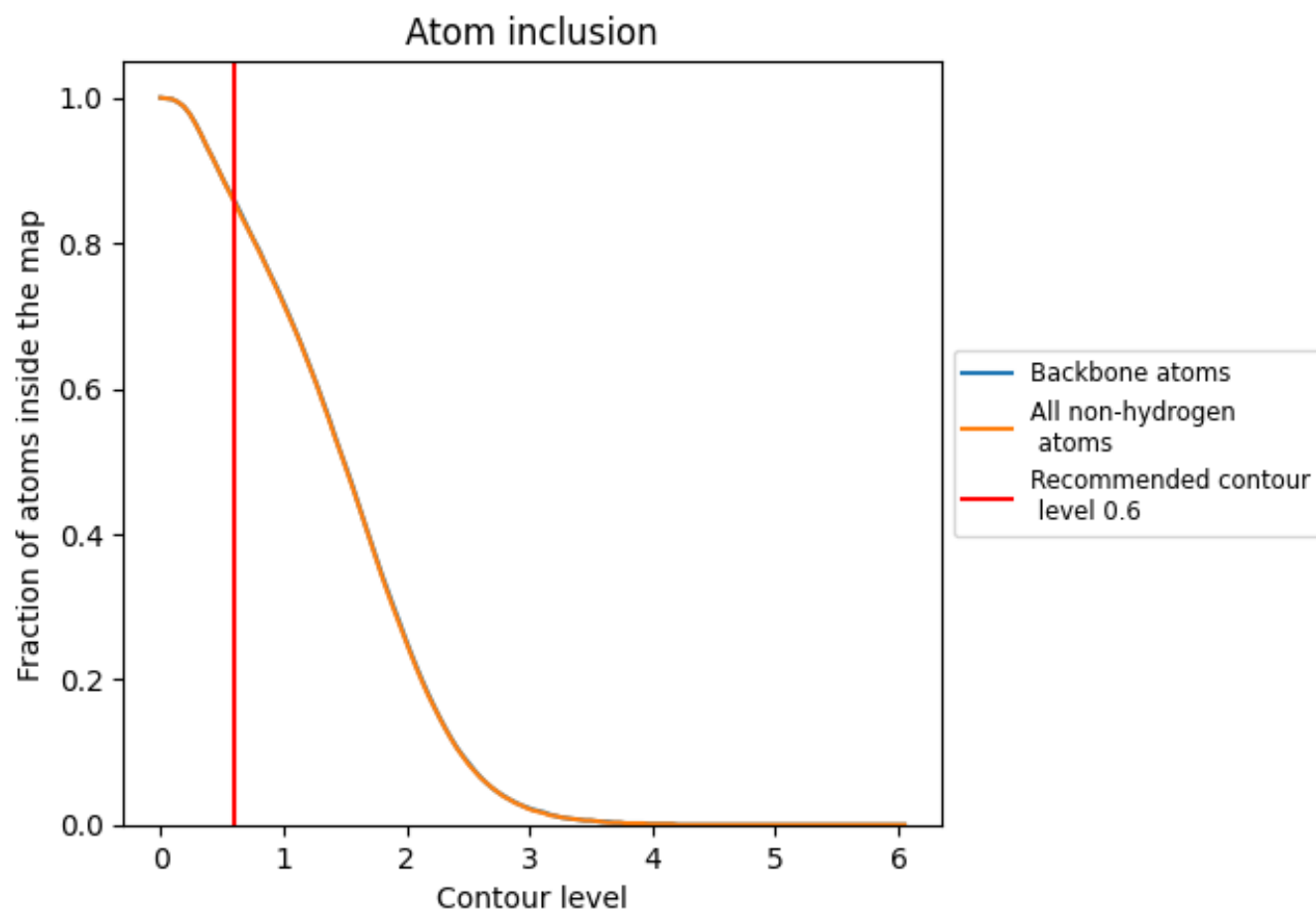
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.6).

9.4 Atom inclusion [i](#)



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

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.6) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8570	0.6730
A	0.8680	0.6780
B	0.8680	0.6770
C	0.8680	0.6770
D	0.8680	0.6780
E	0.9190	0.6950
F	0.9210	0.6950
G	0.9220	0.6960
H	0.9220	0.6960
I	0.5460	0.5150
J	0.5440	0.5130
K	0.5490	0.5190
L	0.5480	0.5190

