



Full wwPDB EM Validation Report ⓘ

Sep 10, 2026 – 04:38 PM EDT

PDB ID : 9ZN6 / pdb_00009zn6
EMDB ID : EMD-74436
Title : Structure of rabbit RyR1 complexed with FKBP12.6 and calmodulin in the presence of dantrolene, ADP, 4-chloro-m-cresol, caffeine, and Mg2+
Authors : Kim, K.; Clarke, O.B.
Deposited on : 2025-12-12
Resolution : 2.58 Å(reported)

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

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

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:

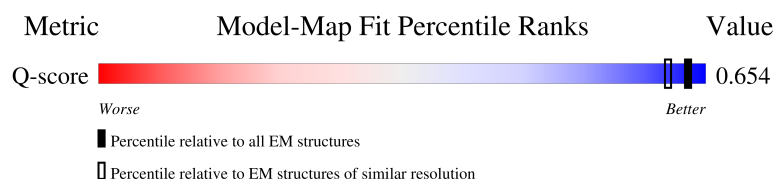
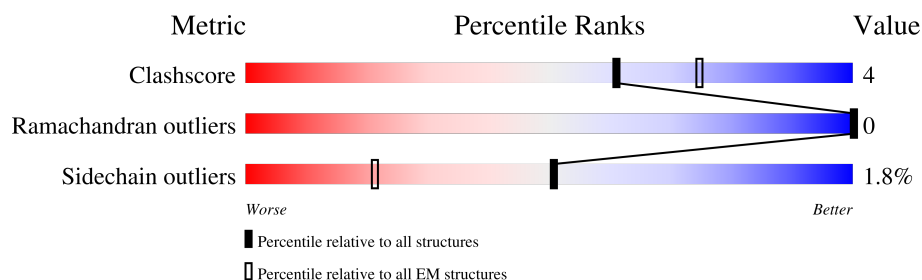
EMDB validation analysis : 0.0.1.dev133
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data 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 2.58 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	7675 (2.08 - 3.08)

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	 88% 12%
1	F	107	 87% 13%
1	G	107	 88% 12%
1	H	107	 84% 16%

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Mol	Chain	Length	Quality of chain
2	I	148	55% 92% 7%
2	J	148	55% 91% 7%
2	K	148	55% 89% 9%
2	L	148	55% 91% 9%
3	A	5037	9% 74% 10% 16%
3	B	5037	9% 74% 10% 16%
3	C	5037	9% 74% 10% 16%
3	D	5037	9% 74% 10% 16%

2 Entry composition [i](#)

There are 10 unique types of molecules in this entry. The entry contains 144280 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
			818	516	144	154	4		
1	F	107	Total	C	N	O	S	0	0
			818	516	144	154	4		
1	G	107	Total	C	N	O	S	0	0
			818	516	144	154	4		
1	H	107	Total	C	N	O	S	0	0
			818	516	144	154	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
			990	606	169	211	4		
2	J	148	Total	C	N	O	S	0	0
			990	606	169	211	4		
2	K	148	Total	C	N	O	S	0	0
			990	606	169	211	4		
2	L	148	Total	C	N	O	S	0	0
			990	606	169	211	4		

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

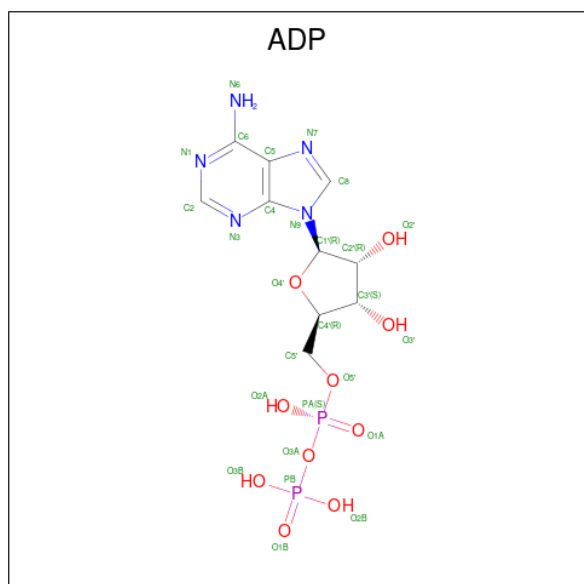
- Molecule 3 is a protein called Ryanodine receptor 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	A	4240	Total	C	N	O	S	2	0
			33207	21124	5739	6114	230		
3	D	4240	Total	C	N	O	S	2	0
			33207	21124	5739	6114	230		
3	B	4240	Total	C	N	O	S	2	0
			33207	21124	5739	6114	230		
3	C	4240	Total	C	N	O	S	2	0
			33207	21124	5739	6114	230		

- Molecule 4 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

- Molecule 5 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: C₁₀H₁₅N₅O₁₀P₂) (labeled as "Ligand of Interest" by depositor).



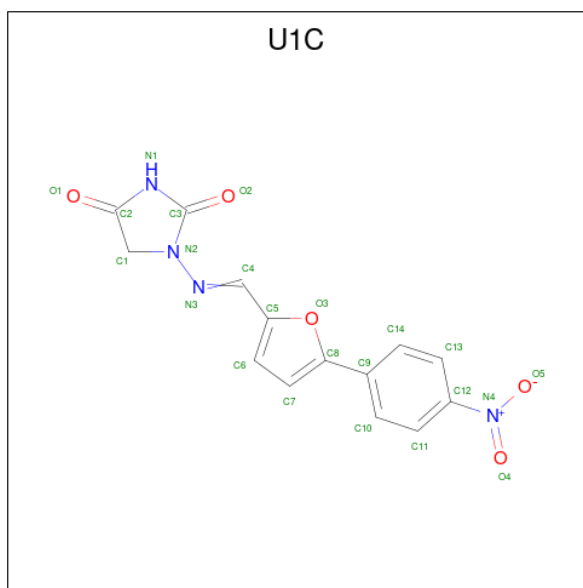
Mol	Chain	Residues	Atoms					AltConf
5	A	1	Total	C	N	O	P	0
			27	10	5	10	2	

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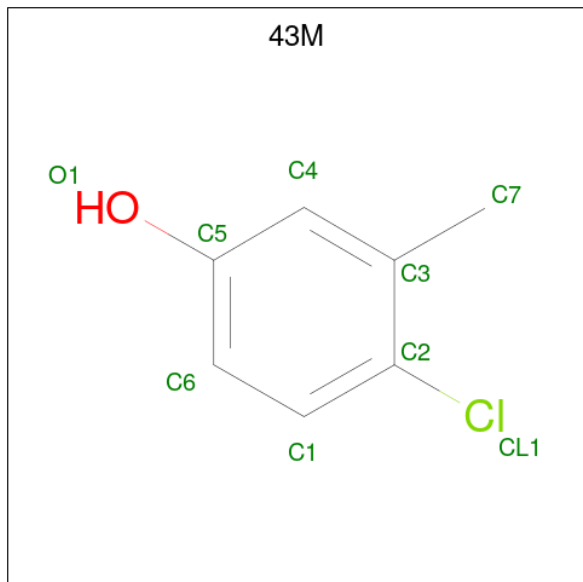
Mol	Chain	Residues	Atoms					AltConf
5	A	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	D	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	D	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	B	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	B	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	C	1	Total	C	N	O	P	0
			27	10	5	10	2	
5	C	1	Total	C	N	O	P	0
			27	10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

- Molecule 6 is Dantrolene (CCD ID: U1C) (formula: $C_{14}H_{10}N_4O_5$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
6	A	1	Total	C	N	O	0
			23	14	4	5	
6	D	1	Total	C	N	O	0
			23	14	4	5	
6	B	1	Total	C	N	O	0
			23	14	4	5	
6	C	1	Total	C	N	O	0
			23	14	4	5	

- Molecule 7 is 4-CHLORO-3-METHYLPHENOL (CCD ID: 43M) (formula: C_7H_7ClO) (labeled as "Ligand of Interest" by depositor).

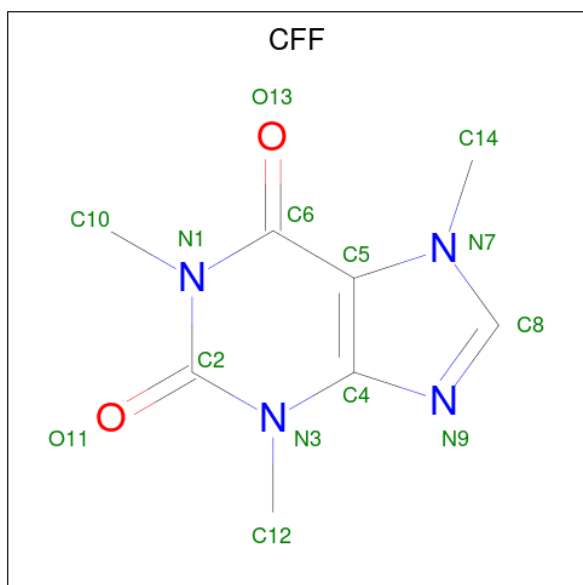


Mol	Chain	Residues	Atoms				AltConf
7	A	1	Total	C	Cl	O	0
			9	7	1	1	
7	A	1	Total	C	Cl	O	0
			9	7	1	1	
7	A	1	Total	C	Cl	O	0
			9	7	1	1	
7	D	1	Total	C	Cl	O	0
			9	7	1	1	
7	D	1	Total	C	Cl	O	0
			9	7	1	1	
7	D	1	Total	C	Cl	O	0
			9	7	1	1	
7	B	1	Total	C	Cl	O	0
			9	7	1	1	
7	B	1	Total	C	Cl	O	0
			9	7	1	1	
7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

- Molecule 8 is CALCIUM ION (CCD ID: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).

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

- Molecule 9 is CAFFEINE (CCD ID: CFF) (formula: C₈H₁₀N₄O₂) (labeled as "Ligand of Interest" by depositor).



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

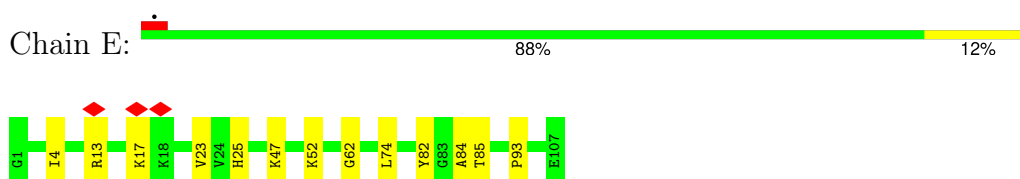
- Molecule 10 is water.

Mol	Chain	Residues	Atoms		AltConf
10	E	13	Total 13	O 13	0
10	F	13	Total 13	O 13	0
10	G	14	Total 14	O 14	0
10	H	12	Total 12	O 12	0
10	I	56	Total 56	O 56	0
10	J	61	Total 61	O 61	0
10	K	63	Total 63	O 63	0
10	L	61	Total 61	O 61	0
10	A	870	Total 870	O 870	0
10	D	855	Total 855	O 855	0
10	B	864	Total 864	O 864	0
10	C	858	Total 858	O 858	0

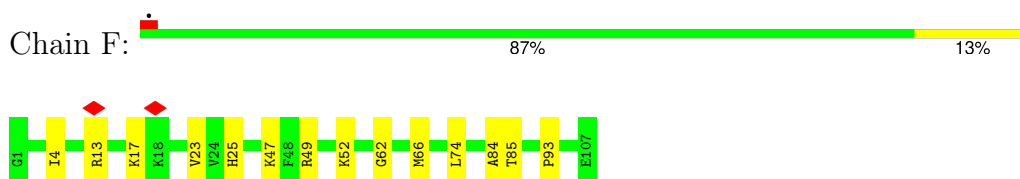
3 Residue-property plots

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

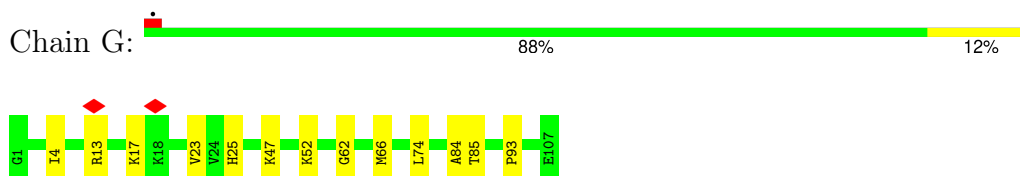
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B



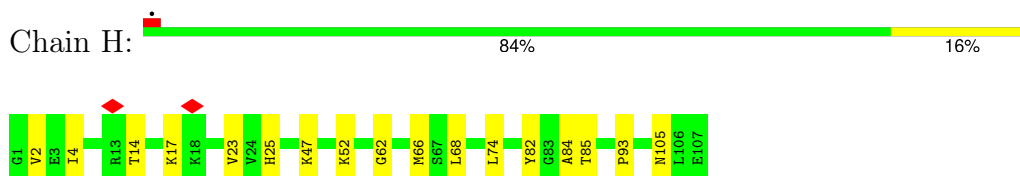
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B



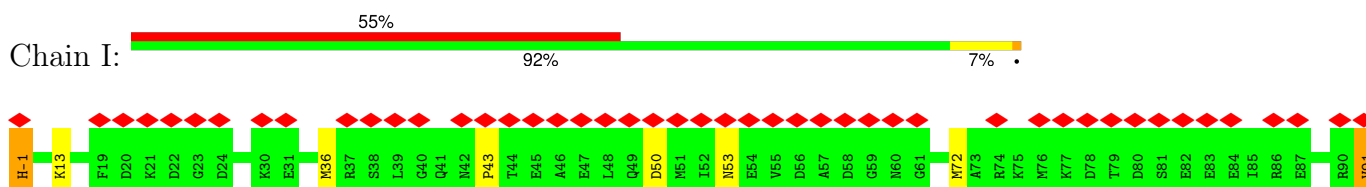
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

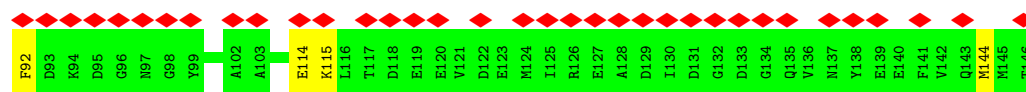


- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

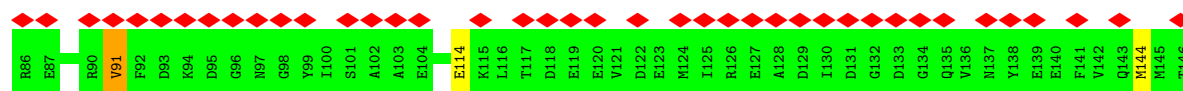
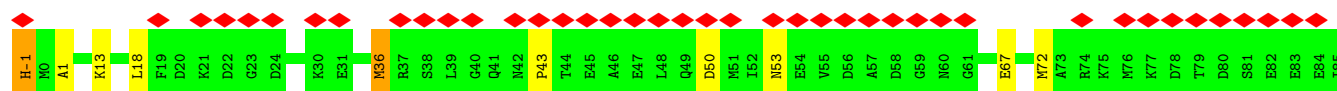
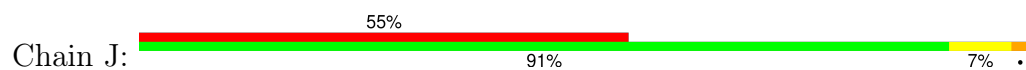


- Molecule 2: Calmodulin-1

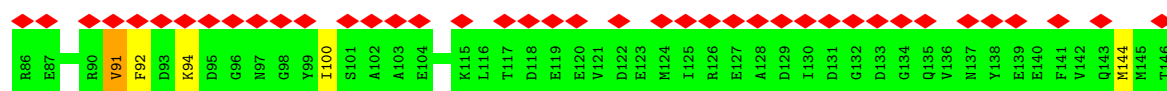
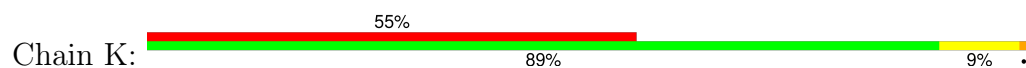




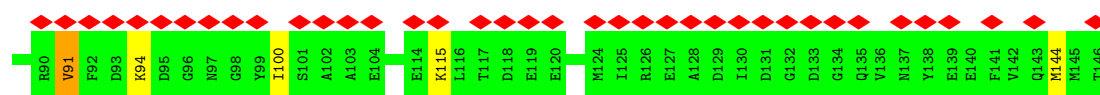
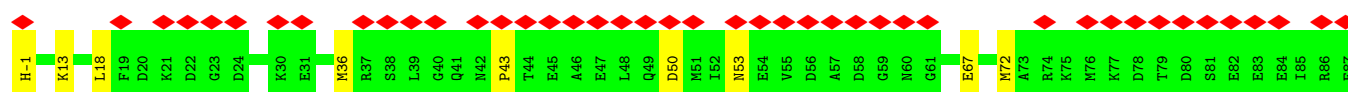
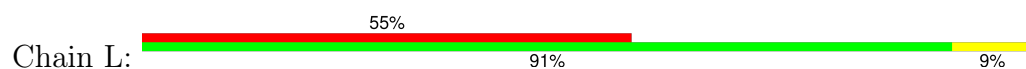
• Molecule 2: Calmodulin-1



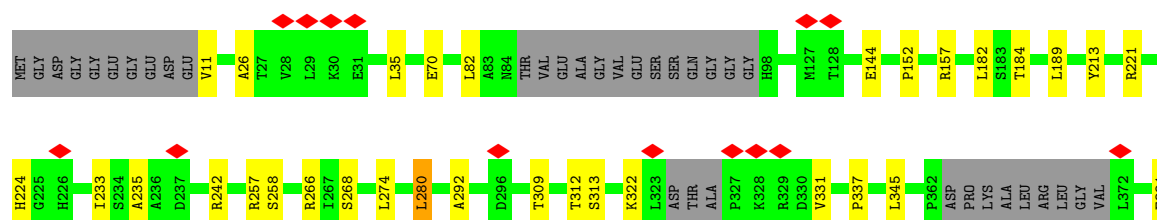
• Molecule 2: Calmodulin-1



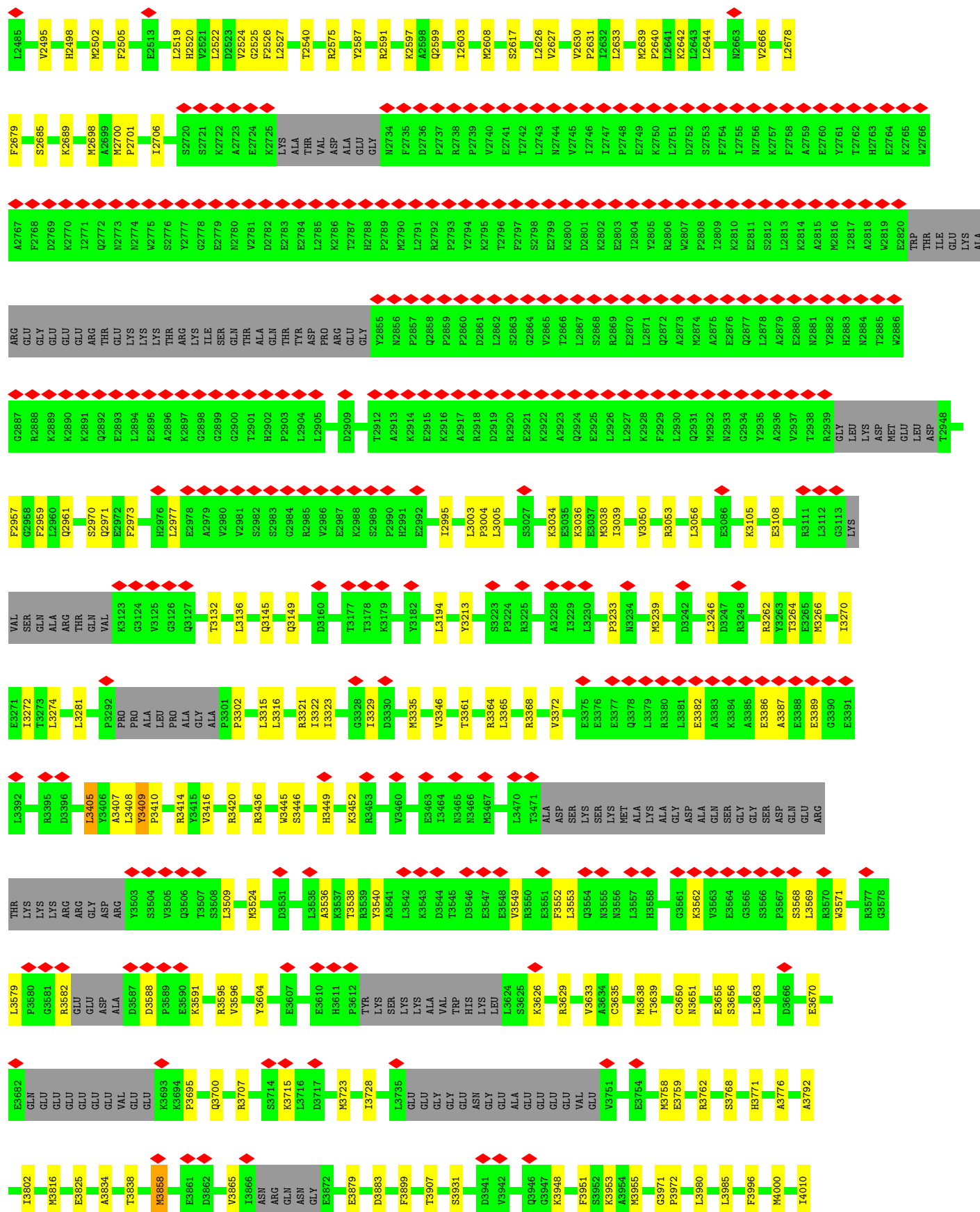
• Molecule 2: Calmodulin-1



• Molecule 3: Ryanodine receptor 1

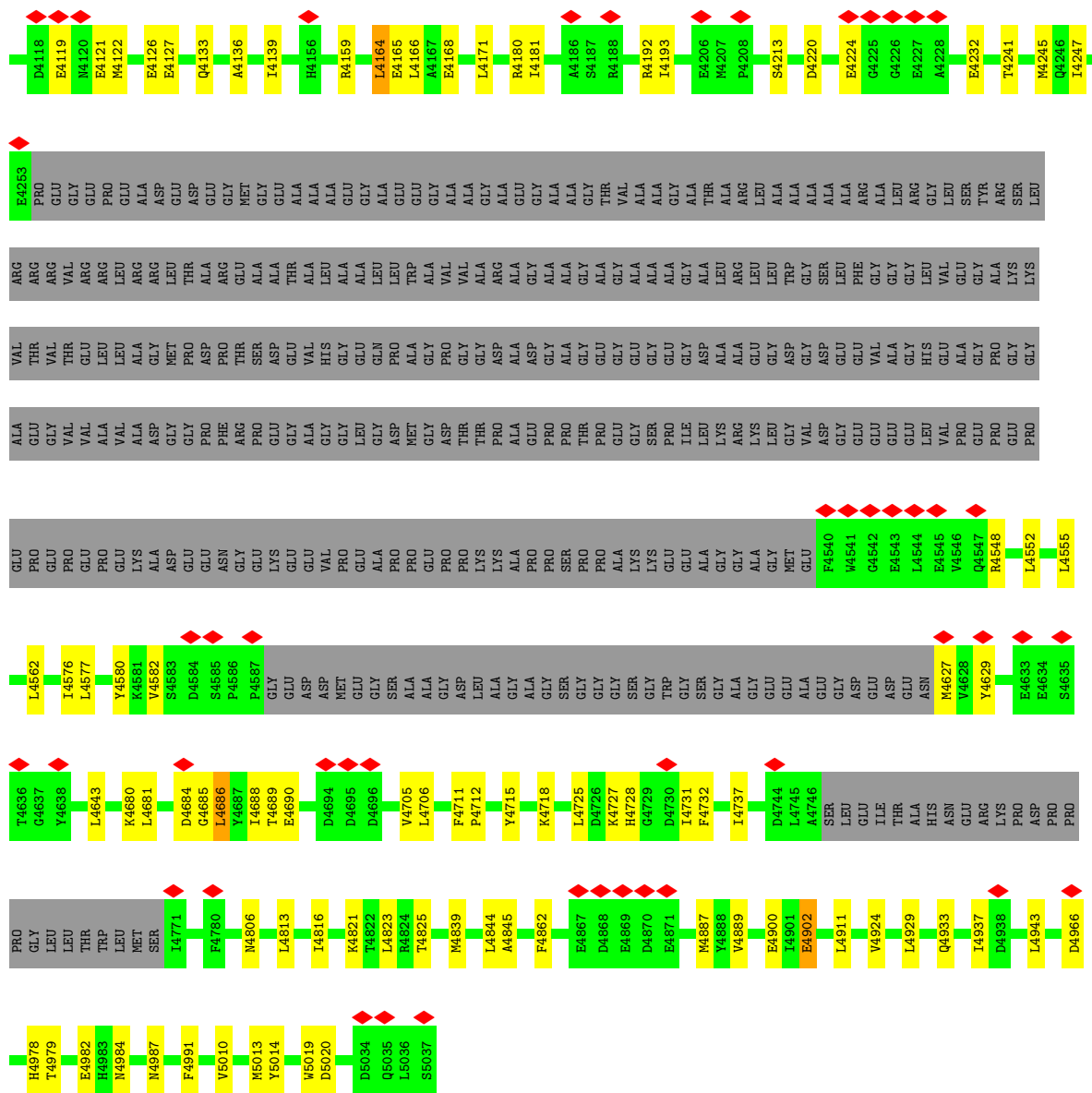




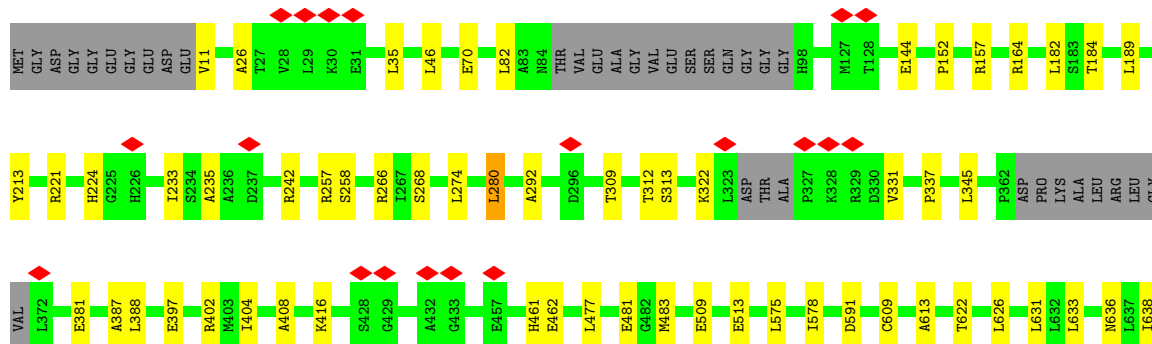
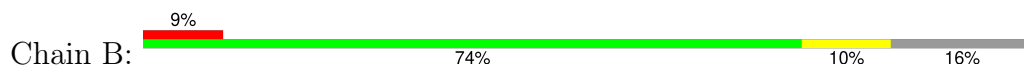




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S3952	E3759	C3650	E3564	ASP	L3381	M3239	K3105	GLY	Q2877	I2817	K2757	K2642
A3954	S3768	N3651	G3565	ALA	E3382	D3242	K3106	LEU	L2878	A2818	F2768	L2643
M3955	S3771	E3655	S3566	SER	A3383	D3242	K3107	ASP	A2879	W2819	E2769	L2644
G3971	A3776	S3656	F3567	GLY	K3384	V3245	N3109	MET	E2880	E2820	E2760	N2663
F3972	F3777	S3656	S3568	SER	K3384	L3246	N3110	LEU	N2881	THR	Y2761	V2666
L3980	F3777	L3663	L3569	ASP	D3247	D3247	K3111	ASP	Y2882	ILE	T2762	K2677
L3985	M3778	D3666	R3570	GLN	R3248	R3248	K3112	ASP	H2883	GLU	H2763	L2678
F3996	A3792	E3670	L3575	ARG	R3262	R3262	L3112	F2957	N2884	ALA	E2764	F2679
M4000	M3793	F3682	Y3576	LYS	Y3263	Y3263	G3113	G2958	T2885	ARG	K2765	S2685
L4010	L3802	G3682	R3577	LYS	T3264	T3264	VAL	F2959	W2886	GLU	W2766	K2689
E4011	I3825	G3682	G3578	LYS	E3265	E3265	SER	Q2961	Q2887	GLY	A2767	K2689
L4012	E3825	L3579	L3579	ARG	M3266	M3266	GLN	S2970	K2888	GLU	D2768	K2689
L4013	A3834	F3580	F3580	ARG	I3270	I3270	ALA	Q2971	R2889	GLU	D2769	K2698
L4014	A3834	G3581	G3581	GLY	F3272	F3272	ARG	E2972	K2890	ARG	K2770	A2699
L4017	T3838	R3582	R3582	ASP	L3281	L3281	THR	F2973	K2891	THR	I2771	M2700
D4018	M3858	K3591	K3591	ARG	P3292	P3292	VAL	E2973	E2892	LYS	Q2772	P2701
V4049	E3861	M3524	M3524	ALA	K3123	K3123	K3123	H2976	E2893	LYS	N2773	I2706
S4053	D3862	T3528	T3528	ALA	G3124	G3124	G3124	L2977	L2894	LYS	N2774	S2720
E4056	V3865	R3595	R3595	ALA	P3292	P3292	P3292	E2978	E2895	THR	W2775	S2721
M4057	I3866	Y3804	Y3804	ALA	PRU	PRU	PRU	E2978	A2896	ARG	S2776	K2722
K4060	ASN	K3714	K3714	ALA	PRU	PRU	PRU	A2979	A2896	LYS	S2777	A2723
F4061	ARG	K3715	K3715	ALA	ALA	ALA	ALA	V2980	K2897	ILE	I2777	E2724
F4062	GLN	L3716	L3716	ALA	PRU	PRU	PRU	V2981	G2898	SER	G2778	K2725
M4063	ASN	D3717	D3717	ALA	ALA	ALA	ALA	S2982	G2899	THR	E2779	K2725
M4064	GLY	E3718	E3718	ALA	GLY	GLY	GLY	S2983	G2900	ALA	N2780	LYS
G4073	E3872	E3610	E3610	ALA	R3321	R3321	R3321	S2984	T2901	GLN	V2781	ALA
S4074	D3877	H3611	H3611	ALA	I3322	I3322	I3322	S2985	H2902	THR	D2782	THR
E4075	D3883	P3612	P3612	ALA	I3323	I3323	I3323	S2986	P2903	TYR	E2783	VAL
D4083	L3882	TYR	TYR	ALA	G3328	G3328	G3328	V2986	L2904	ASP	E2784	ASP
P4084	F3685	LYS	LYS	ALA	D3330	D3330	D3330	E2987	L2905	PRO	L2785	ALA
B4085	F3885	SER	SER	ALA	W3334	W3334	W3334	K2988	K2905	ARG	K2786	GLY
G4086	F3889	LYS	LYS	ALA	M3335	M3335	M3335	S2989	D2909	GLY	T2787	N2734
L4087	T3907	TRP	TRP	ALA	V3346	V3346	V3346	P2990	H2909	N2856	H2788	F2735
K4090	T3919	HIS	HIS	ALA	T3361	T3361	T3361	H2991	A2913	P2857	P2789	D2736
K4091	S3931	LYS	LYS	ALA	L3365	L3365	L3365	E2992	K2914	Q2858	M2790	F2737
D4092	D3941	L3624	L3624	ALA	S3223	S3223	S3223	L2995	E2915	P2859	L2791	R2738
K4095	V3942	S3625	S3625	ALA	P3224	P3224	P3224	L3003	K2916	P2860	R2792	F2739
D4098	G3946	K3626	K3626	ALA	R3225	R3225	R3225	L3004	A2917	D2861	L2794	V2740
S4099	V3947	R3629	R3629	ALA	E3376	E3376	E3376	L3005	K2918	L2862	K2795	E2741
E4107	K3948	V3633	V3633	ALA	E3377	E3377	E3377	S3027	D2919	Q2863	T2796	T2742
		C3635	C3635	ALA	Q3378	Q3378	Q3378	K3034	K2920	Q2864	L2743	L2743
		V3751	V3751	ALA	L3379	L3379	L3379	K3035	K2921	V2865	V2745	V2745
				ALA	L3379	L3379	L3379	F3037	A2922	T2866	I2746	I2746
				ALA	L3379	L3379	L3379	M3038	Q2924	L2867	I2747	I2747
				ALA	L3379	L3379	L3379	L3039	K2925	S2868	K2800	K2800
				ALA	L3379	L3379	L3379	V3050	E2925	S2869	D2801	D2801
				ALA	L3379	L3379	L3379	L3056	L2926	E2749	K2802	K2802
				ALA	L3379	L3379	L3379	L3056	L2927	E2870	E2803	E2803
				ALA	L3379	L3379	L3379	L3056	L2928	L2871	I2804	I2804
				ALA	L3379	L3379	L3379	L3056	L2929	Q2872	D2751	D2751
				ALA	L3379	L3379	L3379	L3056	L2930	A2873	D2752	D2752
				ALA	L3379	L3379	L3379	L3056	L2931	M2874	S2753	S2753
				ALA	L3379	L3379	L3379	L3056	L2932	A2875	F2754	F2754
				ALA	L3379	L3379	L3379	L3056	L2933			
				ALA	L3379	L3379	L3379	L3056	L2934			
				ALA	L3379	L3379	L3379	L3056	L2935			
				ALA	L3379	L3379	L3379	L3056	L2936			
				ALA	L3379	L3379	L3379	L3056	L2937			
				ALA	L3379	L3379	L3379	L3056	L2938			
				ALA	L3379	L3379	L3379	L3056	L2939			
				ALA	L3379	L3379	L3379	L3056	L2940			
				ALA	L3379	L3379	L3379	L3056	L2941			
				ALA	L3379	L3379	L3379	L3056	L2942			
				ALA	L3379	L3379	L3379	L3056	L2943			
				ALA	L3379	L3379	L3379	L3056	L2944			
				ALA	L3379	L3379	L3379	L3056	L2945			
				ALA	L3379	L3379	L3379	L3056	L2946			
				ALA	L3379	L3379	L3379	L3056	L2947			
				ALA	L3379	L3379	L3379	L3056	L2948			
				ALA	L3379	L3379	L3379	L3056	L2949			
				ALA	L3379	L3379	L3379	L3056	L2950			
				ALA	L3379	L3379	L3379	L3056	L2951			
				ALA	L3379	L3379	L3379	L3056	L2952			
				ALA	L3379	L3379	L3379	L3056	L2953			
				ALA	L3379	L3379	L3379	L3056	L2954			
				ALA	L3379	L3379	L3379	L3056	L2955			
				ALA	L3379	L3379	L3379	L3056	L2956			
				ALA	L3379	L3379	L3379	L3056	L2957			
				ALA	L3379	L3379	L3379	L3056	L2958			
				ALA	L3379	L3379	L3379	L3056	L2959			
				ALA	L3379	L3379	L3379	L3056	L2960			
				ALA	L3379	L3379	L3379	L3056	L2961			
				ALA	L3379	L3379	L3379	L3056	L2962			
				ALA	L3379	L3379	L3379	L3056	L2963			
				ALA	L3379	L3379	L3379	L3056	L2964			
				ALA	L3379	L3379	L3379	L3056	L2965			
				ALA	L3379	L3379	L3379	L3056	L2966			
				ALA	L3379	L3379	L3379	L3056	L2967			
				ALA	L3379	L3379	L3379	L3056	L2968			
				ALA	L3379	L3379	L3379	L3056	L2969			
				ALA	L3379	L3379	L3379	L3056	L2970			
				ALA	L3379	L3379	L3379	L3056	L2971			
				ALA	L3379	L3379	L3379	L3056	L2972			
				ALA	L3379	L3379	L3379	L3056	L2973			
				ALA	L3379	L3379	L3379	L3056	L2974			
				ALA	L3379	L3379	L3379	L3056	L2975			
				ALA	L3379	L3379	L3379	L3056	L2976			
				ALA	L3379	L3379	L3379	L3056	L2977			
				ALA	L3379	L3379	L3379	L3056	L2978			
				ALA	L3379	L3379	L3379	L3056	L2979			
				ALA	L3379	L3379	L3379	L3056	L2980			
				ALA	L3379	L3379	L3379	L3056	L2981			
				ALA	L3379	L3379	L3379	L3056	L2982			
				ALA	L3379	L3379	L3379	L3056	L2983			
				ALA	L3379	L3379	L3379	L3056	L2984			
				ALA	L3379	L3379	L3379	L3056	L2985			
				ALA	L3379	L3379	L3379	L3056	L2986			
				ALA	L3379	L3379	L3379	L3056	L2987			
				ALA	L3379	L3379	L3379	L3056	L2988			
				ALA	L3379	L3379	L3379	L3056	L2989			
				ALA	L3379	L3379	L3379	L3056	L2990			
				ALA	L3379	L3379	L3379	L3056	L2991			
				ALA	L3379	L3379	L3379	L3056	L2992			
				ALA	L3379	L3379	L3379	L3056	L2993			
				ALA	L3379	L3379	L3379	L3056	L2994			
				ALA	L3379	L3379	L3379	L3056	L2995			
				ALA	L3379	L3379	L3379	L3056	L2996			
				ALA	L3379	L3379	L3379	L3056	L2997			
				ALA	L3379	L3379	L3379	L3056	L2998			
				ALA	L3379	L3379	L3379	L3056	L2999			
				ALA	L3379	L3379	L3379	L3056	L3000			
				ALA	L3379	L3379	L3379	L3056	L3001			
				ALA	L3379	L3379	L3379	L3056	L3002			
				ALA	L3379	L3379	L3379	L3056	L3003			
				ALA	L3379	L3379	L3379	L3056	L3004			
				ALA	L3379	L3379	L3379	L3056	L3005			
				ALA	L3379	L3379	L3379	L3056	L3006			
				ALA	L3379	L3379	L3379	L3056	L3007			
				ALA	L3379	L3379	L3379	L3056	L3008	</		

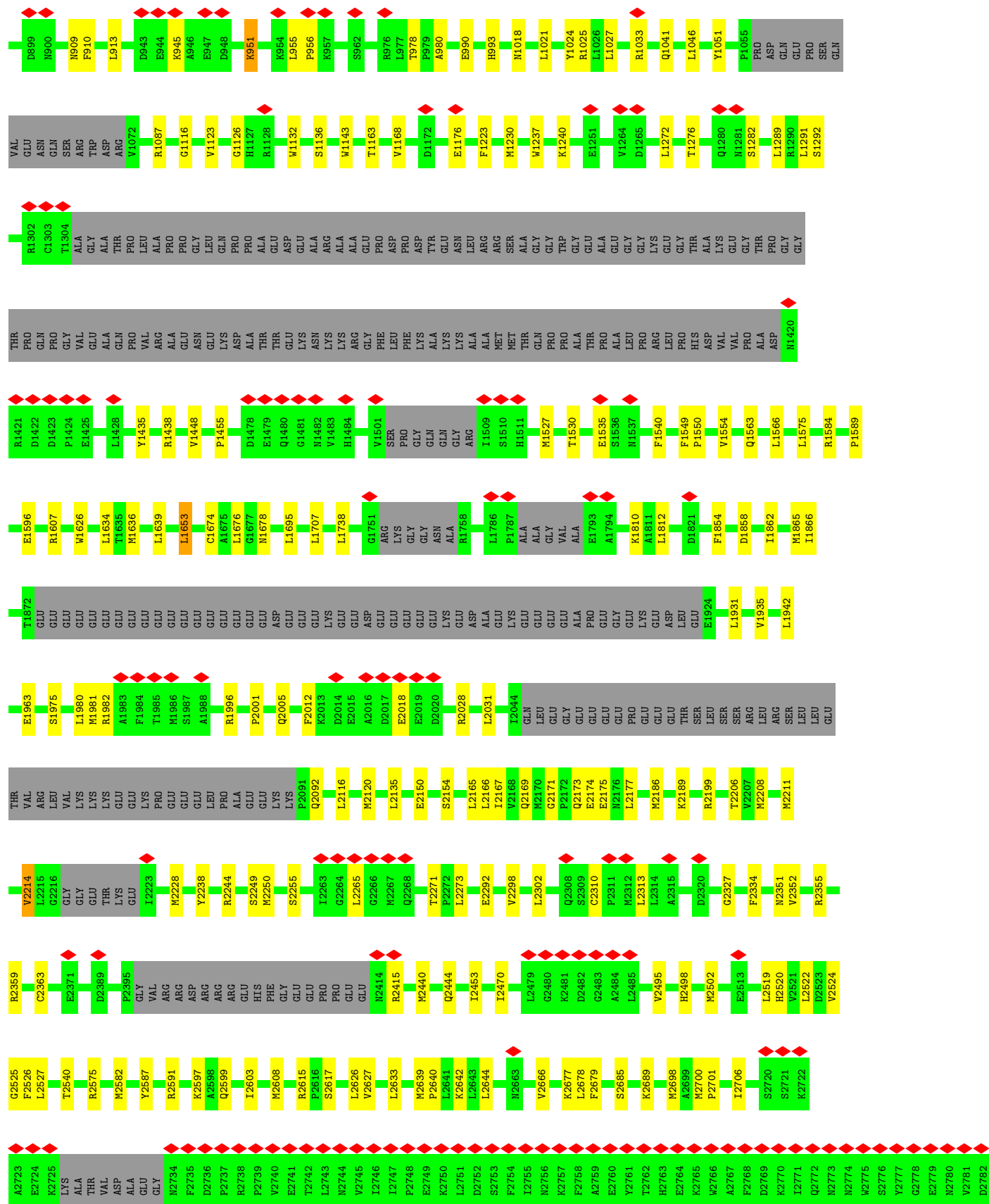


• Molecule 3: Ryanodine receptor 1













4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C4	Depositor
Number of particles used	66232	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	5.533	Depositor
Minimum map value	0.000	Depositor
Average map value	0.012	Depositor
Map value standard deviation	0.108	Depositor
Recommended contour level	0.7	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 [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: ADP, U1C, CA, 43M, ZN, CFF

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	0.12	0/834	0.29	0/1123
1	F	0.12	0/834	0.31	0/1123
1	G	0.12	0/834	0.30	0/1123
1	H	0.13	0/834	0.32	0/1123
2	I	0.10	0/999	0.27	0/1355
2	J	0.10	0/999	0.27	0/1355
2	K	0.10	0/999	0.27	0/1355
2	L	0.11	0/999	0.30	0/1355
3	A	0.13	0/33927	0.28	0/45977
3	B	0.13	0/33927	0.29	0/45977
3	C	0.13	0/33927	0.28	0/45977
3	D	0.13	0/33927	0.28	0/45977
All	All	0.13	0/143040	0.28	0/193820

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

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	818	0	824	7	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	F	818	0	824	8	0
1	G	818	0	824	8	0
1	H	818	0	824	11	0
2	I	990	0	775	11	0
2	J	990	0	775	10	0
2	K	990	0	775	11	0
2	L	990	0	775	11	0
3	A	33207	0	32374	284	0
3	B	33207	0	32374	294	0
3	C	33207	0	32374	281	0
3	D	33207	0	32374	300	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
4	D	1	0	0	0	0
5	A	54	0	24	1	0
5	B	54	0	24	1	0
5	C	54	0	24	1	0
5	D	54	0	24	1	0
6	A	23	0	0	0	0
6	B	23	0	0	0	0
6	C	23	0	0	0	0
6	D	23	0	0	0	0
7	A	27	0	18	0	0
7	B	27	0	18	0	0
7	C	27	0	18	0	0
7	D	27	0	18	0	0
8	A	1	0	0	0	0
8	B	1	0	0	0	0
8	C	1	0	0	0	0
8	D	1	0	0	0	0
9	A	14	0	10	2	0
9	B	14	0	10	2	0
9	C	14	0	10	2	0
9	D	14	0	10	2	0
10	A	870	0	0	1	0
10	B	864	0	0	1	0
10	C	858	0	0	1	0
10	D	855	0	0	1	0
10	E	13	0	0	0	0
10	F	13	0	0	0	0
10	G	14	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	H	12	0	0	0	0
10	I	56	0	0	0	0
10	J	61	0	0	0	0
10	K	63	0	0	0	0
10	L	61	0	0	0	0
All	All	144280	0	136100	1206	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 4.

All (1206) 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:A:4232:GLU:HG2	3:A:5019:TRP:HE1	1.50	0.77
3:B:4232:GLU:HG2	3:B:5019:TRP:HE1	1.50	0.76
3:B:3996:PHE:O	3:B:4000:MET:HG3	1.86	0.76
3:A:3996:PHE:O	3:A:4000:MET:HG3	1.86	0.76
3:C:3996:PHE:O	3:C:4000:MET:HG3	1.86	0.75
3:C:4232:GLU:HG2	3:C:5019:TRP:HE1	1.50	0.75
3:D:4232:GLU:HG2	3:D:5019:TRP:HE1	1.51	0.75
2:I:36:MET:HG2	2:I:43:PRO:HG3	1.69	0.74
3:D:3996:PHE:O	3:D:4000:MET:HG3	1.86	0.74
2:I:115:LYS:H	3:A:3858:MET:HE1	1.54	0.73
3:D:2271:THR:HG22	3:D:2273:LEU:H	1.53	0.73
3:D:2116:LEU:O	3:D:2120:MET:HG3	1.88	0.73
3:A:2116:LEU:O	3:A:2120:MET:HG3	1.88	0.73
3:D:3365:LEU:HD11	3:D:3408:LEU:HD23	1.71	0.73
3:A:2271:THR:HG22	3:A:2273:LEU:H	1.53	0.72
3:A:3365:LEU:HD11	3:A:3408:LEU:HD23	1.71	0.72
3:C:3365:LEU:HD11	3:C:3408:LEU:HD23	1.71	0.72
3:B:2271:THR:HG22	3:B:2273:LEU:H	1.53	0.72
3:D:2175:GLU:HG3	3:D:2228:MET:HB2	1.71	0.72
3:C:2175:GLU:HG3	3:C:2228:MET:HB2	1.72	0.72
3:C:2271:THR:HG22	3:C:2273:LEU:H	1.53	0.71
2:L:36:MET:HE3	2:L:43:PRO:HG3	1.73	0.71
3:B:3365:LEU:HD11	3:B:3408:LEU:HD23	1.71	0.71
3:C:2116:LEU:O	3:C:2120:MET:HG3	1.90	0.70
2:K:36:MET:HG2	2:K:43:PRO:HG3	1.73	0.70
3:A:4823:LEU:HG	3:B:4839:MET:HE2	1.73	0.70
2:L:115:LYS:H	3:D:3858:MET:HE1	1.56	0.70
3:B:2116:LEU:O	3:B:2120:MET:HG3	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:2175:GLU:HG3	3:B:2228:MET:HB2	1.73	0.69
3:A:2175:GLU:HG3	3:A:2228:MET:HB2	1.73	0.69
2:J:36:MET:HG2	2:J:43:PRO:HG3	1.73	0.69
3:B:4060:LYS:O	3:B:4064:MET:HG3	1.93	0.68
1:H:23:VAL:HG22	1:H:47:LYS:HG2	1.75	0.68
3:C:2627:VAL:HG22	3:C:2678:LEU:HB2	1.76	0.68
2:L:72:MET:HA	2:L:72:MET:HE2	1.75	0.68
3:A:2627:VAL:HG22	3:A:2678:LEU:HB2	1.76	0.67
3:B:2627:VAL:HG22	3:B:2678:LEU:HB2	1.75	0.67
3:A:4180:ARG:HD3	3:A:4192:ARG:HD3	1.77	0.67
3:D:2627:VAL:HG22	3:D:2678:LEU:HB2	1.75	0.67
3:B:3266:MET:HE1	3:B:3322:ILE:HG12	1.76	0.67
3:C:3588:ASP:HB2	3:C:3591:LYS:HG3	1.76	0.67
3:A:1996:ARG:HB3	3:A:1996:ARG:HH11	1.60	0.66
3:B:1996:ARG:HH11	3:B:1996:ARG:HB3	1.60	0.66
3:C:3266:MET:HE1	3:C:3322:ILE:HG12	1.76	0.66
3:A:2440:MET:O	3:A:2444:GLN:HG2	1.95	0.66
3:D:3266:MET:HE1	3:D:3322:ILE:HG12	1.76	0.66
3:B:2440:MET:O	3:B:2444:GLN:HG2	1.95	0.66
3:D:3588:ASP:HB2	3:D:3591:LYS:HG3	1.76	0.66
3:B:3588:ASP:HB2	3:B:3591:LYS:HG3	1.76	0.66
3:B:4180:ARG:HD3	3:B:4192:ARG:HD3	1.78	0.66
3:D:1996:ARG:HH11	3:D:1996:ARG:HB3	1.60	0.66
3:C:4180:ARG:HD3	3:C:4192:ARG:HD3	1.78	0.65
3:A:3266:MET:HE1	3:A:3322:ILE:HG12	1.77	0.65
3:C:1996:ARG:HH11	3:C:1996:ARG:HB3	1.60	0.65
3:A:3588:ASP:HB2	3:A:3591:LYS:HG3	1.76	0.65
3:C:2440:MET:O	3:C:2444:GLN:HG2	1.95	0.65
3:D:4180:ARG:HD3	3:D:4192:ARG:HD3	1.78	0.65
3:D:2440:MET:O	3:D:2444:GLN:HG2	1.95	0.65
3:A:823:LEU:HD11	3:A:1626:TRP:HB3	1.80	0.64
3:A:3132:THR:HG23	3:A:3136:LEU:HD23	1.79	0.64
3:A:3416:VAL:O	3:A:3420:ARG:HB2	1.98	0.64
3:C:3416:VAL:O	3:C:3420:ARG:HB2	1.98	0.64
3:A:4839:MET:HE2	3:D:4823:LEU:HG	1.78	0.64
3:D:4839:MET:HE2	3:C:4823:LEU:HG	1.79	0.64
3:D:3416:VAL:O	3:D:3420:ARG:HB2	1.98	0.64
3:D:823:LEU:HD11	3:D:1626:TRP:HB3	1.80	0.64
3:B:3382:GLU:HB2	3:B:3387:ALA:HB2	1.80	0.64
3:B:4823:LEU:HG	3:C:4839:MET:HE2	1.79	0.64
3:A:4978:HIS:HA	3:A:4982:GLU:HG3	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:3132:THR:HG23	3:C:3136:LEU:HD23	1.79	0.63
3:A:3635:CYS:HA	3:A:3638:MET:HE2	1.81	0.63
3:B:4978:HIS:HA	3:B:4982:GLU:HG3	1.80	0.63
3:C:823:LEU:HD11	3:C:1626:TRP:HB3	1.80	0.63
3:C:4978:HIS:HA	3:C:4982:GLU:HG3	1.80	0.63
3:A:3382:GLU:HB2	3:A:3387:ALA:HB2	1.80	0.63
1:F:23:VAL:HG22	1:F:47:LYS:HG2	1.81	0.63
3:D:3382:GLU:HB2	3:D:3387:ALA:HB2	1.79	0.63
3:B:823:LEU:HD11	3:B:1626:TRP:HB3	1.80	0.63
3:B:3132:THR:HG23	3:B:3136:LEU:HD23	1.80	0.63
3:C:3382:GLU:HB2	3:C:3387:ALA:HB2	1.80	0.63
1:E:23:VAL:HG22	1:E:47:LYS:HG2	1.81	0.63
3:D:3132:THR:HG23	3:D:3136:LEU:HD23	1.79	0.63
3:A:233:ILE:HD12	3:A:242:ARG:HB3	1.81	0.62
3:B:3635:CYS:HA	3:B:3638:MET:HE2	1.81	0.62
3:C:2135:LEU:HD21	3:C:3663:LEU:HD13	1.81	0.62
3:C:3635:CYS:HA	3:C:3638:MET:HE2	1.82	0.62
3:A:2135:LEU:HD21	3:A:3663:LEU:HD13	1.81	0.62
1:G:23:VAL:HG22	1:G:47:LYS:HG2	1.82	0.62
3:B:3416:VAL:O	3:B:3420:ARG:HB2	1.98	0.62
3:C:233:ILE:HD12	3:C:242:ARG:HB3	1.81	0.62
3:B:3757:GLU:O	3:B:3761:GLN:HG2	2.00	0.61
3:D:233:ILE:HD12	3:D:242:ARG:HB3	1.81	0.61
3:D:2135:LEU:HD21	3:D:3663:LEU:HD13	1.81	0.61
3:C:4984:ASN:HB3	3:C:4987:ASN:HB2	1.83	0.61
3:D:4978:HIS:HA	3:D:4982:GLU:HG3	1.80	0.61
3:B:2135:LEU:HD21	3:B:3663:LEU:HD13	1.81	0.61
3:B:233:ILE:HD12	3:B:242:ARG:HB3	1.81	0.60
3:C:3834:ALA:O	3:C:3838:THR:HG23	2.02	0.60
3:D:4576:ILE:HG21	3:D:4643:LEU:HB2	1.84	0.59
3:D:3266:MET:HE3	3:D:3270:ILE:HD11	1.85	0.59
3:A:4576:ILE:HG21	3:A:4643:LEU:HB2	1.84	0.59
3:C:1168:VAL:HG11	3:C:1176:GLU:HG3	1.84	0.59
3:D:3834:ALA:O	3:D:3838:THR:HG23	2.02	0.59
3:B:1168:VAL:HG11	3:B:1176:GLU:HG3	1.84	0.59
3:A:3323:ILE:HG21	3:A:3408:LEU:HD13	1.85	0.58
3:C:3266:MET:HE3	3:C:3270:ILE:HD11	1.85	0.58
1:E:62:GLY:HA3	1:E:74:LEU:HD13	1.85	0.58
3:D:3635:CYS:HA	3:D:3638:MET:HE2	1.85	0.58
3:B:3266:MET:HE3	3:B:3270:ILE:HD11	1.85	0.58
3:A:1168:VAL:HG11	3:A:1176:GLU:HG3	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1438:ARG:HB3	3:B:1563:GLN:HG2	1.85	0.58
3:D:1168:VAL:HG11	3:D:1176:GLU:HG3	1.85	0.58
3:D:3323:ILE:HG21	3:D:3408:LEU:HD13	1.86	0.58
3:B:2351:ASN:HB3	3:B:2355:ARG:HH21	1.68	0.58
3:C:2351:ASN:HB3	3:C:2355:ARG:HH21	1.68	0.58
3:A:462:GLU:CD	3:A:462:GLU:H	2.12	0.57
3:B:4712:PRO:HB2	3:B:4715:TYR:HB3	1.86	0.57
3:C:4712:PRO:HB2	3:C:4715:TYR:HB3	1.86	0.57
3:C:1438:ARG:HB3	3:C:1563:GLN:HG2	1.86	0.57
3:C:4576:ILE:HG21	3:C:4643:LEU:HB2	1.85	0.57
3:A:3266:MET:HE3	3:A:3270:ILE:HD11	1.85	0.57
1:F:62:GLY:HA3	1:F:74:LEU:HD13	1.87	0.57
2:I:72:MET:HE2	2:I:72:MET:HA	1.87	0.57
3:C:182:LEU:HD11	3:C:189:LEU:HD22	1.86	0.57
3:C:684:VAL:HG22	3:C:781:VAL:HG12	1.87	0.57
3:A:182:LEU:HD11	3:A:189:LEU:HD22	1.86	0.57
3:B:4576:ILE:HG21	3:B:4643:LEU:HB2	1.85	0.57
3:C:758:ARG:HG2	3:C:763:PRO:HA	1.87	0.57
1:H:4:ILE:HG12	1:H:74:LEU:HD22	1.86	0.57
2:L:94:LYS:HE3	2:L:100:ILE:HD11	1.87	0.57
3:C:3323:ILE:HG21	3:C:3408:LEU:HD13	1.86	0.57
3:D:2351:ASN:HB3	3:D:2355:ARG:HH21	1.68	0.56
2:J:91:VAL:HB	3:B:1981:MET:HE2	1.87	0.56
3:B:182:LEU:HD11	3:B:189:LEU:HD22	1.86	0.56
3:B:2639:MET:HE3	3:B:2640:PRO:HD3	1.88	0.56
3:B:3323:ILE:HG21	3:B:3408:LEU:HD13	1.85	0.56
1:E:4:ILE:HD11	1:E:62:GLY:HA2	1.87	0.56
3:A:3145:GLN:HE21	3:A:3149:GLN:HE22	1.54	0.56
3:A:4862:PHE:HD1	3:A:4902:GLU:HG2	1.70	0.56
3:D:978:THR:HG22	3:D:980:ALA:H	1.70	0.56
3:B:2310:CYS:HB3	3:B:2313:LEU:HB2	1.88	0.56
3:C:4232:GLU:HG2	3:C:5019:TRP:NE1	2.21	0.56
3:A:1438:ARG:HB3	3:A:1563:GLN:HG2	1.86	0.56
3:A:4712:PRO:HB2	3:A:4715:TYR:HB3	1.87	0.56
3:D:684:VAL:HG22	3:D:781:VAL:HG12	1.88	0.56
3:D:3145:GLN:HE21	3:D:3149:GLN:HE22	1.54	0.56
3:D:4862:PHE:HD1	3:D:4902:GLU:HG2	1.71	0.56
3:B:3132:THR:HA	3:B:3136:LEU:HB3	1.88	0.56
3:C:978:THR:HG22	3:C:980:ALA:H	1.71	0.56
3:C:2310:CYS:HB3	3:C:2313:LEU:HB2	1.88	0.56
3:C:3132:THR:HA	3:C:3136:LEU:HB3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4862:PHE:HD1	3:C:4902:GLU:HG2	1.71	0.56
2:K:72:MET:HE2	2:K:72:MET:HA	1.88	0.56
3:A:2970:SER:HA	3:A:2973:PHE:CE2	2.41	0.56
3:A:3951:PHE:O	3:A:3955:MET:HG3	2.06	0.56
3:D:182:LEU:HD11	3:D:189:LEU:HD22	1.86	0.56
3:A:2351:ASN:HB3	3:A:2355:ARG:HH21	1.68	0.56
3:D:1438:ARG:HB3	3:D:1563:GLN:HG2	1.86	0.56
3:C:3718:GLU:CD	3:C:3723:MET:HE1	2.31	0.56
3:B:3145:GLN:HE21	3:B:3149:GLN:HE22	1.54	0.56
3:B:4627:MET:HE1	3:B:4629:TYR:CE1	2.41	0.56
3:D:1931:LEU:HD22	3:D:1935:VAL:HG11	1.88	0.56
3:D:2310:CYS:HB3	3:D:2313:LEU:HB2	1.88	0.56
3:B:1163:THR:HG22	3:B:1168:VAL:HA	1.87	0.56
3:C:4627:MET:HE1	3:C:4629:TYR:CZ	2.41	0.56
1:G:62:GLY:HA3	1:G:74:LEU:HD13	1.87	0.55
1:H:62:GLY:HA3	1:H:74:LEU:HD13	1.87	0.55
3:A:684:VAL:HG22	3:A:781:VAL:HG12	1.87	0.55
3:A:1931:LEU:HD22	3:A:1935:VAL:HG11	1.88	0.55
3:D:3132:THR:HA	3:D:3136:LEU:HB3	1.88	0.55
3:C:2639:MET:HE3	3:C:2640:PRO:HD3	1.88	0.55
3:A:2310:CYS:HB3	3:A:2313:LEU:HB2	1.88	0.55
3:A:2639:MET:HE3	3:A:2640:PRO:HD3	1.88	0.55
3:B:978:THR:HG22	3:B:980:ALA:H	1.71	0.55
3:A:3132:THR:HA	3:A:3136:LEU:HB3	1.88	0.55
3:D:4712:PRO:HB2	3:D:4715:TYR:HB3	1.87	0.55
1:F:4:ILE:HG12	1:F:74:LEU:HD22	1.87	0.55
3:B:1931:LEU:HD22	3:B:1935:VAL:HG11	1.88	0.55
3:B:3834:ALA:O	3:B:3838:THR:HG23	2.06	0.55
3:C:3145:GLN:HE21	3:C:3149:GLN:HE22	1.54	0.55
3:A:758:ARG:HG2	3:A:763:PRO:HA	1.87	0.55
3:A:5013:MET:HE1	3:A:5020:ASP:HB2	1.89	0.55
3:D:462:GLU:CD	3:D:462:GLU:H	2.15	0.55
3:D:758:ARG:HG2	3:D:763:PRO:HA	1.88	0.55
3:D:2970:SER:HA	3:D:2973:PHE:CE2	2.41	0.55
3:B:1996:ARG:HB3	3:B:1996:ARG:NH1	2.22	0.55
3:A:803:LEU:HD12	3:A:804:PRO:HD2	1.89	0.55
3:D:3436:ARG:HH12	3:D:3524:MET:HE1	1.72	0.55
3:B:3436:ARG:HH12	3:B:3524:MET:HE1	1.72	0.55
3:B:684:VAL:HG22	3:B:781:VAL:HG12	1.88	0.55
3:B:758:ARG:HG2	3:B:763:PRO:HA	1.87	0.55
2:L:36:MET:SD	2:L:72:MET:HE1	2.47	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1996:ARG:HB3	3:A:1996:ARG:NH1	2.22	0.54
3:B:2970:SER:HA	3:B:2973:PHE:CE2	2.41	0.54
3:C:803:LEU:HD12	3:C:804:PRO:HD2	1.89	0.54
3:C:2970:SER:HA	3:C:2973:PHE:CE2	2.41	0.54
3:D:2639:MET:HE3	3:D:2640:PRO:HD3	1.88	0.54
3:C:1931:LEU:HD22	3:C:1935:VAL:HG11	1.88	0.54
3:C:1163:THR:HG22	3:C:1168:VAL:HA	1.89	0.54
1:G:4:ILE:HG12	1:G:74:LEU:HD22	1.88	0.54
2:K:-1:HIS:CD2	3:C:2244:ARG:HG3	2.42	0.54
3:C:783:PHE:HB2	3:C:787:VAL:HG21	1.90	0.54
3:A:3436:ARG:HH12	3:A:3524:MET:HE1	1.73	0.54
3:B:4862:PHE:HD1	3:B:4902:GLU:HG2	1.73	0.54
3:C:1996:ARG:HB3	3:C:1996:ARG:NH1	2.22	0.54
3:A:910:PHE:HA	3:A:913:LEU:HD23	1.90	0.54
3:D:1163:THR:HG22	3:D:1168:VAL:HA	1.89	0.54
3:C:1527:MET:HB2	3:C:1540:PHE:HB2	1.90	0.54
3:C:3436:ARG:HH12	3:C:3524:MET:HE1	1.72	0.54
3:A:978:THR:HG22	3:A:980:ALA:H	1.70	0.54
3:A:1163:THR:HG22	3:A:1168:VAL:HA	1.89	0.54
1:H:4:ILE:HD11	1:H:62:GLY:HA2	1.90	0.54
3:A:783:PHE:HB2	3:A:787:VAL:HG21	1.90	0.53
3:B:1527:MET:HB2	3:B:1540:PHE:HB2	1.90	0.53
3:B:2018:GLU:HG2	3:B:2028:ARG:NH1	2.23	0.53
3:B:5013:MET:HE1	3:B:5020:ASP:HB2	1.90	0.53
1:F:4:ILE:HD11	1:F:62:GLY:HA2	1.90	0.53
1:G:4:ILE:HD11	1:G:62:GLY:HA2	1.90	0.53
3:B:3951:PHE:O	3:B:3955:MET:HG3	2.08	0.53
3:A:1527:MET:HB2	3:A:1540:PHE:HB2	1.90	0.53
3:D:26:ALA:HB2	3:D:182:LEU:HD21	1.91	0.53
3:D:4627:MET:HE1	3:D:4629:TYR:CE1	2.44	0.53
3:B:783:PHE:HB2	3:B:787:VAL:HG21	1.90	0.53
3:D:4165:GLU:HA	3:D:4168:GLU:HG2	1.91	0.53
3:C:5013:MET:HE1	3:C:5020:ASP:HB2	1.90	0.53
3:D:2018:GLU:HG2	3:D:2028:ARG:NH1	2.24	0.53
3:B:4984:ASN:HB3	3:B:4987:ASN:HB2	1.90	0.53
3:B:5014[A]:TYR:OH	9:B:5609:CFF:H81	2.08	0.53
3:A:4984:ASN:HB3	3:A:4987:ASN:HB2	1.90	0.53
3:D:910:PHE:HA	3:D:913:LEU:HD23	1.90	0.53
3:D:1527:MET:HB2	3:D:1540:PHE:HB2	1.91	0.53
3:B:910:PHE:HA	3:B:913:LEU:HD23	1.91	0.53
3:A:2961:GLN:HG3	3:A:3038:MET:HE1	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:5014[A]:TYR:OH	9:A:5609:CFF:H81	2.09	0.53
3:B:26:ALA:HB2	3:B:182:LEU:HD21	1.91	0.53
3:C:26:ALA:HB2	3:C:182:LEU:HD21	1.91	0.53
3:C:910:PHE:HA	3:C:913:LEU:HD23	1.90	0.53
3:A:26:ALA:HB2	3:A:182:LEU:HD21	1.91	0.52
3:D:2519:LEU:HD13	3:D:2575:ARG:HG3	1.91	0.52
3:A:670:GLU:HG2	3:A:788:LYS:HB3	1.91	0.52
3:D:5013:MET:HE1	3:D:5020:ASP:HB2	1.90	0.52
3:A:4232:GLU:HG2	3:A:5019:TRP:NE1	2.21	0.52
3:D:1996:ARG:HB3	3:D:1996:ARG:NH1	2.22	0.52
2:I:36:MET:SD	2:I:72:MET:HE1	2.49	0.52
3:A:4165:GLU:HA	3:A:4168:GLU:HG2	1.92	0.52
3:B:670:GLU:HG2	3:B:788:LYS:HB3	1.92	0.52
3:C:2519:LEU:HD13	3:C:2575:ARG:HG3	1.91	0.52
3:C:3723:MET:HE2	3:C:3792:ALA:HB3	1.90	0.52
3:D:638:ILE:HD11	3:D:1636:MET:HE2	1.92	0.52
3:C:3768:SER:HA	3:C:3771:HIS:CD2	2.45	0.52
3:A:3768:SER:HA	3:A:3771:HIS:CD2	2.45	0.52
3:D:783:PHE:HB2	3:D:787:VAL:HG21	1.90	0.52
3:D:4232:GLU:HG2	3:D:5019:TRP:NE1	2.21	0.52
3:C:5014[A]:TYR:OH	9:C:5609:CFF:H81	2.09	0.52
3:A:3651:ASN:O	3:A:3655:GLU:HG2	2.10	0.52
3:D:5014[A]:TYR:OH	9:D:5609:CFF:H81	2.10	0.52
3:B:3723:MET:HE2	3:B:3792:ALA:HB3	1.91	0.52
3:C:2018:GLU:HG2	3:C:2028:ARG:NH1	2.24	0.52
3:C:3651:ASN:O	3:C:3655:GLU:HG2	2.10	0.52
3:D:591:ASP:HA	3:D:631:LEU:HD21	1.92	0.52
3:D:670:GLU:HG2	3:D:788:LYS:HB3	1.92	0.52
3:B:3651:ASN:O	3:B:3655:GLU:HG2	2.10	0.52
3:C:2171:GLY:H	3:C:2174:GLU:HB2	1.75	0.52
3:A:2018:GLU:HG2	3:A:2028:ARG:NH1	2.24	0.51
3:D:3718:GLU:CD	3:D:3723:MET:HE1	2.35	0.51
2:L:13:LYS:HG2	3:D:2189:LYS:HB3	1.92	0.51
3:D:2470:ILE:HG22	3:D:2525:GLY:HA3	1.93	0.51
3:D:3768:SER:HA	3:D:3771:HIS:CD2	2.45	0.51
3:D:4984:ASN:HB3	3:D:4987:ASN:HB2	1.91	0.51
3:B:4232:GLU:HG2	3:B:5019:TRP:NE1	2.21	0.51
3:B:4685:GLY:O	3:B:4690:GLU:HG3	2.10	0.51
3:A:4685:GLY:O	3:A:4690:GLU:HG3	2.10	0.51
3:D:3651:ASN:O	3:D:3655:GLU:HG2	2.10	0.51
3:D:3951:PHE:O	3:D:3955:MET:HG3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:3768:SER:HA	3:B:3771:HIS:CD2	2.45	0.51
3:C:670:GLU:HG2	3:C:788:LYS:HB3	1.91	0.51
3:A:2171:GLY:H	3:A:2174:GLU:HB2	1.75	0.51
3:A:2519:LEU:HD13	3:A:2575:ARG:HG3	1.91	0.51
3:D:2271:THR:HG22	3:D:2273:LEU:N	2.24	0.51
3:C:2470:ILE:HG22	3:C:2525:GLY:HA3	1.93	0.51
3:A:638:ILE:HD11	3:A:1636:MET:HE2	1.93	0.51
3:C:4845:ALA:HA	3:C:4887:MET:HE1	1.93	0.51
3:A:2265:LEU:HD23	3:A:2327:GLY:HA2	1.93	0.51
3:A:2470:ILE:HG22	3:A:2525:GLY:HA3	1.93	0.51
3:B:2171:GLY:H	3:B:2174:GLU:HB2	1.75	0.51
3:C:4165:GLU:HA	3:C:4168:GLU:HG2	1.92	0.51
2:I:13:LYS:HG2	3:A:2189:LYS:HB3	1.92	0.51
3:A:591:ASP:HA	3:A:631:LEU:HD21	1.93	0.51
3:A:633:LEU:HD13	3:A:1639:LEU:HD21	1.93	0.51
3:D:633:LEU:HD13	3:D:1639:LEU:HD21	1.93	0.51
3:B:2470:ILE:HG22	3:B:2525:GLY:HA3	1.93	0.51
3:A:3723:MET:HE2	3:A:3792:ALA:HB3	1.93	0.50
3:D:4845:ALA:HA	3:D:4887:MET:HE1	1.93	0.50
3:B:2519:LEU:HD13	3:B:2575:ARG:HG3	1.92	0.50
2:J:13:LYS:HG2	3:B:2189:LYS:HB3	1.92	0.50
3:D:2265:LEU:HD23	3:D:2327:GLY:HA2	1.93	0.50
3:D:4889:VAL:HG12	3:D:4900:GLU:HG3	1.92	0.50
3:D:152:PRO:HB3	3:D:157:ARG:HB2	1.94	0.50
3:D:2171:GLY:H	3:D:2174:GLU:HB2	1.75	0.50
2:I:144:MET:HA	3:A:3629:ARG:HH21	1.76	0.50
3:A:3194:LEU:HD23	3:A:3272:ILE:HG23	1.93	0.50
3:A:4056:GLU:HG2	3:A:4166:LEU:HD13	1.94	0.50
3:D:2961:GLN:HG3	3:D:3038:MET:HE1	1.94	0.50
3:B:633:LEU:HD13	3:B:1639:LEU:HD21	1.94	0.50
3:B:2166:LEU:HD11	3:B:2206:THR:HG23	1.94	0.50
3:C:4056:GLU:HG2	3:C:4166:LEU:HD13	1.94	0.50
3:A:1866:ILE:HD11	3:A:1942:LEU:HD23	1.94	0.50
3:B:4056:GLU:HG2	3:B:4166:LEU:HD13	1.94	0.50
3:C:591:ASP:HA	3:C:631:LEU:HD21	1.93	0.50
3:C:2265:LEU:HD23	3:C:2327:GLY:HA2	1.93	0.50
2:K:36:MET:SD	2:K:72:MET:HE1	2.51	0.50
3:A:2166:LEU:HD11	3:A:2206:THR:HG23	1.94	0.50
3:B:1530:THR:HG22	3:B:1535:GLU:HA	1.94	0.50
3:C:2961:GLN:HG3	3:C:3038:MET:HE1	1.94	0.50
3:C:3262:ARG:HH21	3:C:3329:ILE:HG23	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:152:PRO:HB3	3:A:157:ARG:HB2	1.94	0.50
3:B:1132:TRP:CE2	3:B:1136:SER:HB2	2.47	0.50
3:C:638:ILE:HD11	3:C:1636:MET:HE2	1.93	0.50
2:L:115:LYS:HG2	3:D:3858:MET:HE1	1.92	0.50
3:A:1018:ASN:HB3	3:A:1021:LEU:HB2	1.94	0.50
3:D:4164:LEU:HD13	3:D:4171:LEU:HD11	1.94	0.50
3:B:152:PRO:HB3	3:B:157:ARG:HB2	1.94	0.50
3:C:152:PRO:HB3	3:C:157:ARG:HB2	1.94	0.50
3:C:1530:THR:HG22	3:C:1535:GLU:HA	1.94	0.50
3:A:4164:LEU:HD13	3:A:4171:LEU:HD11	1.93	0.49
3:D:1132:TRP:CE2	3:D:1136:SER:HB2	2.47	0.49
3:B:638:ILE:HD11	3:B:1636:MET:HE2	1.93	0.49
3:B:1866:ILE:HD11	3:B:1942:LEU:HD23	1.94	0.49
3:B:3718:GLU:CD	3:B:3723:MET:HE1	2.37	0.49
3:B:4091:LYS:H	3:B:4091:LYS:HD3	1.76	0.49
3:B:4705:VAL:HG22	3:B:4711:PHE:HB2	1.93	0.49
3:C:1132:TRP:CE2	3:C:1136:SER:HB2	2.47	0.49
3:C:4813:LEU:O	3:C:4816:ILE:HG12	2.12	0.49
3:A:1132:TRP:CE2	3:A:1136:SER:HB2	2.47	0.49
3:A:2271:THR:HG22	3:A:2273:LEU:N	2.24	0.49
3:A:4241:THR:O	3:A:4245:MET:HG3	2.13	0.49
3:A:4705:VAL:HG22	3:A:4711:PHE:HB2	1.93	0.49
3:B:2265:LEU:HD23	3:B:2327:GLY:HA2	1.93	0.49
3:B:3194:LEU:HD23	3:B:3272:ILE:HG23	1.93	0.49
3:B:4064:MET:HE1	3:B:4110:PHE:CD2	2.47	0.49
3:C:2166:LEU:HD11	3:C:2206:THR:HG23	1.94	0.49
3:D:1530:THR:HG22	3:D:1535:GLU:HA	1.94	0.49
3:C:4705:VAL:HG22	3:C:4711:PHE:HB2	1.94	0.49
2:K:13:LYS:HG2	3:C:2189:LYS:HB3	1.93	0.49
3:A:3670:GLU:HG2	3:A:3728:ILE:HA	1.95	0.49
3:D:3262:ARG:HH21	3:D:3329:ILE:HG23	1.78	0.49
3:D:4056:GLU:HG2	3:D:4166:LEU:HD13	1.94	0.49
3:B:591:ASP:HA	3:B:631:LEU:HD21	1.93	0.49
3:B:883:ALA:O	3:B:887:ILE:HG12	2.12	0.49
3:C:883:ALA:O	3:C:887:ILE:HG12	2.12	0.49
3:D:1018:ASN:HB3	3:D:1021:LEU:HB2	1.94	0.49
3:D:3670:GLU:HG2	3:D:3728:ILE:HA	1.94	0.49
3:D:2166:LEU:HD11	3:D:2206:THR:HG23	1.94	0.49
3:D:3194:LEU:HD23	3:D:3272:ILE:HG23	1.94	0.49
3:B:3262:ARG:HH21	3:B:3329:ILE:HG23	1.78	0.49
3:B:3670:GLU:HG2	3:B:3728:ILE:HA	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4164:LEU:HD13	3:B:4171:LEU:HD11	1.95	0.49
3:C:3194:LEU:HD23	3:C:3272:ILE:HG23	1.94	0.49
3:C:3670:GLU:HG2	3:C:3728:ILE:HA	1.95	0.49
3:A:1530:THR:HG22	3:A:1535:GLU:HA	1.94	0.49
3:D:1866:ILE:HD11	3:D:1942:LEU:HD23	1.94	0.49
3:B:4241:THR:O	3:B:4245:MET:HG3	2.13	0.49
3:B:4845:ALA:HA	3:B:4887:MET:HE1	1.93	0.49
2:L:91:VAL:HB	3:D:1981:MET:HE2	1.95	0.49
3:D:883:ALA:O	3:D:887:ILE:HG12	2.12	0.49
3:B:4689:THR:HG22	3:B:4732:PHE:CE2	2.48	0.49
3:C:3213:TYR:CD1	3:C:3302:PRO:HG2	2.47	0.49
1:F:49:ARG:HH22	1:F:52:LYS:NZ	2.11	0.49
3:D:695:TYR:CD1	3:D:1240:LYS:HD2	2.48	0.49
3:B:1695:LEU:HD22	3:B:1810:LYS:HE3	1.95	0.49
3:C:1676:LEU:HD22	3:C:2167:ILE:HD12	1.95	0.49
3:C:1866:ILE:HD11	3:C:1942:LEU:HD23	1.94	0.49
3:A:3262:ARG:HH21	3:A:3329:ILE:HG23	1.78	0.49
3:B:4889:VAL:HG12	3:B:4900:GLU:HG3	1.95	0.49
3:C:2642:LYS:HE2	3:C:2698:MET:HE1	1.95	0.49
3:A:695:TYR:CD1	3:A:1240:LYS:HD2	2.48	0.48
3:D:1676:LEU:HD22	3:D:2167:ILE:HD12	1.95	0.48
3:D:3536:ALA:HB2	3:D:3553:LEU:HD11	1.95	0.48
3:B:397:GLU:HG2	3:B:477:LEU:HD11	1.95	0.48
3:B:4064:MET:SD	3:B:4107:GLU:HG2	2.52	0.48
3:C:633:LEU:HD13	3:C:1639:LEU:HD21	1.95	0.48
3:C:1018:ASN:HB3	3:C:1021:LEU:HB2	1.94	0.48
3:C:3540:TYR:HB3	3:C:3604:TYR:CD2	2.48	0.48
2:L:-1:HIS:CD2	3:D:2244:ARG:HG3	2.48	0.48
3:A:292:ALA:HB2	3:A:312:THR:HG22	1.95	0.48
3:A:2644:LEU:HD13	3:A:2678:LEU:HD21	1.95	0.48
3:A:4889:VAL:HG12	3:A:4900:GLU:HG3	1.95	0.48
3:B:292:ALA:HB2	3:B:312:THR:HG22	1.95	0.48
3:B:1018:ASN:HB3	3:B:1021:LEU:HB2	1.94	0.48
3:B:3536:ALA:HB2	3:B:3553:LEU:HD11	1.95	0.48
1:H:17:LYS:HA	1:H:17:LYS:HD3	1.56	0.48
3:D:2642:LYS:HE2	3:D:2698:MET:HE1	1.95	0.48
3:B:2642:LYS:HE2	3:B:2698:MET:HE1	1.95	0.48
3:A:274:LEU:HD11	3:A:280:LEU:HD22	1.95	0.48
3:A:883:ALA:O	3:A:887:ILE:HG12	2.12	0.48
3:A:1653:LEU:HD23	3:A:1707:LEU:HD11	1.96	0.48
3:A:1695:LEU:HD22	3:A:1810:LYS:HE3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2642:LYS:HE2	3:A:2698:MET:HE1	1.95	0.48
3:B:274:LEU:HD11	3:B:280:LEU:HD22	1.95	0.48
3:B:1653:LEU:HD23	3:B:1707:LEU:HD11	1.96	0.48
3:A:636:ASN:HB2	3:A:702:TRP:CZ3	2.49	0.48
3:A:1676:LEU:HD22	3:A:2167:ILE:HD12	1.95	0.48
3:A:4181:ILE:HG13	3:A:4193:ILE:HB	1.95	0.48
3:A:4929:LEU:O	3:A:4933:GLN:HG2	2.14	0.48
3:B:3980:LEU:HD13	3:B:3985:LEU:HD22	1.96	0.48
3:C:397:GLU:HG2	3:C:477:LEU:HD11	1.95	0.48
3:C:4181:ILE:HG13	3:C:4193:ILE:HB	1.95	0.48
3:C:4241:THR:O	3:C:4245:MET:HG3	2.13	0.48
3:D:1963:GLU:HA	3:D:3650:CYS:SG	2.54	0.48
3:D:3316:LEU:HD22	3:D:3346:VAL:HA	1.95	0.48
3:C:4889:VAL:HG12	3:C:4900:GLU:HG3	1.96	0.48
3:A:3540:TYR:HB3	3:A:3604:TYR:CD2	2.49	0.48
3:D:3980:LEU:HD13	3:D:3985:LEU:HD22	1.96	0.48
3:A:1963:GLU:HA	3:A:3650:CYS:SG	2.54	0.48
3:D:4689:THR:HG22	3:D:4732:PHE:CE2	2.49	0.48
3:B:636:ASN:HB2	3:B:702:TRP:CZ3	2.49	0.48
3:B:2271:THR:HG22	3:B:2273:LEU:N	2.24	0.48
3:C:1963:GLU:HA	3:C:3650:CYS:SG	2.54	0.48
2:K:144:MET:HA	3:C:3629:ARG:HH21	1.79	0.48
3:A:3980:LEU:HD13	3:A:3985:LEU:HD22	1.96	0.48
3:D:1653:LEU:HD23	3:D:1707:LEU:HD11	1.96	0.48
3:B:2644:LEU:HD13	3:B:2678:LEU:HD21	1.96	0.48
3:B:3213:TYR:CD1	3:B:3302:PRO:HG2	2.49	0.48
3:C:636:ASN:HB2	3:C:702:TRP:CZ3	2.49	0.48
3:A:3213:TYR:CD1	3:A:3302:PRO:HG2	2.48	0.48
3:D:4241:THR:O	3:D:4245:MET:HG3	2.13	0.48
3:B:2639:MET:HE3	3:B:2639:MET:HB3	1.80	0.48
3:B:3316:LEU:HD22	3:B:3346:VAL:HA	1.95	0.48
3:B:4181:ILE:HG13	3:B:4193:ILE:HB	1.96	0.48
3:C:292:ALA:HB2	3:C:312:THR:HG22	1.95	0.48
3:C:1653:LEU:HD23	3:C:1707:LEU:HD11	1.96	0.48
2:I:-1:HIS:CD2	3:A:2244:ARG:HG3	2.48	0.47
3:A:3281:LEU:HD12	3:A:3315:LEU:HD22	1.95	0.47
3:A:3316:LEU:HD22	3:A:3346:VAL:HA	1.95	0.47
3:A:4689:THR:HG22	3:A:4732:PHE:CE2	2.49	0.47
3:D:636:ASN:HB2	3:D:702:TRP:CZ3	2.49	0.47
3:C:1695:LEU:HD22	3:C:1810:LYS:HE3	1.95	0.47
3:C:4164:LEU:HD13	3:C:4171:LEU:HD11	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:144:MET:HA	3:B:3629:ARG:HH21	1.79	0.47
3:D:397:GLU:HG2	3:D:477:LEU:HD11	1.95	0.47
3:B:3364:ARG:HE	3:B:3364:ARG:HB3	1.53	0.47
3:C:951:LYS:HB3	3:C:951:LYS:HE3	1.63	0.47
3:A:2689:LYS:HB3	3:A:2689:LYS:HE3	1.64	0.47
3:D:613:ALA:HB2	3:D:1676:LEU:HD12	1.96	0.47
3:D:1695:LEU:HD22	3:D:1810:LYS:HE3	1.95	0.47
3:B:695:TYR:CD1	3:B:1240:LYS:HD2	2.49	0.47
3:B:1676:LEU:HD22	3:B:2167:ILE:HD12	1.95	0.47
3:C:2498:HIS:O	3:C:2502:MET:HG2	2.15	0.47
3:C:3951:PHE:O	3:C:3955:MET:HG3	2.13	0.47
2:L:144:MET:HA	3:D:3629:ARG:HH21	1.79	0.47
3:A:2498:HIS:O	3:A:2502:MET:HG2	2.15	0.47
3:A:4062:PHE:HE1	3:A:4136:ALA:HB1	1.79	0.47
3:D:235:ALA:HA	3:D:257:ARG:HD3	1.96	0.47
3:D:2359:ARG:HA	3:D:2359:ARG:HD3	1.59	0.47
3:D:2644:LEU:HD13	3:D:2678:LEU:HD21	1.96	0.47
3:D:4181:ILE:HG13	3:D:4193:ILE:HB	1.95	0.47
3:D:4705:VAL:HG22	3:D:4711:PHE:HB2	1.96	0.47
3:B:613:ALA:HB2	3:B:1676:LEU:HD12	1.96	0.47
3:B:1963:GLU:HA	3:B:3650:CYS:SG	2.54	0.47
3:B:3695:PRO:HB2	3:B:3700:GLN:HG3	1.97	0.47
3:C:274:LEU:HD11	3:C:280:LEU:HD22	1.95	0.47
3:C:3281:LEU:HD12	3:C:3315:LEU:HD22	1.95	0.47
3:A:397:GLU:HG2	3:A:477:LEU:HD11	1.95	0.47
3:D:274:LEU:HD11	3:D:280:LEU:HD22	1.95	0.47
3:D:292:ALA:HB2	3:D:312:THR:HG22	1.95	0.47
3:D:2626:LEU:HD22	3:D:2640:PRO:HB3	1.97	0.47
3:D:3213:TYR:CD1	3:D:3302:PRO:HG2	2.49	0.47
3:D:3281:LEU:HD12	3:D:3315:LEU:HD22	1.95	0.47
3:B:622:THR:HG23	3:B:626:LEU:HD12	1.97	0.47
3:B:4091:LYS:HD3	3:B:4091:LYS:N	2.29	0.47
3:C:2150:GLU:H	3:C:2150:GLU:CD	2.23	0.47
3:C:2271:THR:HG22	3:C:2273:LEU:N	2.24	0.47
3:C:3536:ALA:HB2	3:C:3553:LEU:HD11	1.95	0.47
3:A:665:GLU:HB2	3:A:792:LEU:HB2	1.97	0.47
3:A:3536:ALA:HB2	3:A:3553:LEU:HD11	1.95	0.47
3:D:4548:ARG:O	3:D:4552:LEU:HG	2.14	0.47
2:K:91:VAL:HB	3:C:1981:MET:HE2	1.96	0.47
3:D:622:THR:HG23	3:D:626:LEU:HD12	1.97	0.47
3:D:4979:THR:HG21	5:D:5607:ADP:H2'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1123:VAL:HG23	3:B:1132:TRP:HB2	1.97	0.47
3:B:2498:HIS:O	3:B:2502:MET:HG2	2.15	0.47
3:B:4062:PHE:HE1	3:B:4136:ALA:HB1	1.80	0.47
3:B:4937:ILE:HD13	3:C:4937:ILE:HD12	1.97	0.47
3:C:235:ALA:HA	3:C:257:ARG:HD3	1.96	0.47
3:C:622:THR:HG23	3:C:626:LEU:HD12	1.97	0.47
3:C:2644:LEU:HD13	3:C:2678:LEU:HD21	1.95	0.47
3:C:3715:LYS:HE2	3:C:3715:LYS:HB3	1.62	0.47
3:C:4680:LYS:HA	3:C:4684:ASP:HB3	1.96	0.47
3:C:4689:THR:HG22	3:C:4732:PHE:CE1	2.50	0.47
3:A:235:ALA:HA	3:A:257:ARG:HD3	1.96	0.47
3:A:461:HIS:CD2	3:A:3707:ARG:HG3	2.50	0.47
3:D:1123:VAL:HG23	3:D:1132:TRP:HB2	1.96	0.47
3:D:4090:LYS:HD2	3:D:4121:GLU:HB3	1.95	0.47
3:B:4727:LYS:HG2	3:B:4728:HIS:CE1	2.50	0.47
3:C:797:HIS:CE1	3:C:821:LEU:HD23	2.50	0.47
2:J:50:ASP:HA	2:J:53:ASN:ND2	2.30	0.47
3:A:2359:ARG:HA	3:A:2359:ARG:HD3	1.59	0.47
3:D:2498:HIS:O	3:D:2502:MET:HG2	2.15	0.47
3:D:4813:LEU:O	3:D:4816:ILE:HG12	2.15	0.47
3:B:4813:LEU:O	3:B:4816:ILE:HG12	2.15	0.47
3:C:695:TYR:CD1	3:C:1240:LYS:HD2	2.49	0.47
3:C:3695:PRO:HB2	3:C:3700:GLN:HG3	1.97	0.47
2:I:91:VAL:HB	3:A:1981:MET:HE2	1.96	0.47
3:A:955:LEU:HD22	3:A:956:PRO:HD2	1.97	0.47
3:A:2208:MET:SD	3:A:2250:MET:HE1	2.55	0.47
3:A:2626:LEU:HD22	3:A:2640:PRO:HB3	1.97	0.47
3:D:665:GLU:HB2	3:D:792:LEU:HB2	1.97	0.47
3:D:955:LEU:HD22	3:D:956:PRO:HD2	1.97	0.47
3:D:2150:GLU:CD	3:D:2150:GLU:H	2.23	0.47
3:D:4087:LEU:HB3	3:D:4122:MET:HB3	1.97	0.47
3:B:461:HIS:CD2	3:B:3707:ARG:HG3	2.50	0.47
3:C:613:ALA:HB2	3:C:1676:LEU:HD12	1.96	0.47
3:C:3980:LEU:HD13	3:C:3985:LEU:HD22	1.97	0.47
1:G:52:LYS:HD2	1:G:52:LYS:HA	1.63	0.46
3:A:622:THR:HG23	3:A:626:LEU:HD12	1.97	0.46
3:A:4548:ARG:O	3:A:4552:LEU:HG	2.15	0.46
3:A:4937:ILE:HD12	3:D:4937:ILE:HD13	1.97	0.46
3:D:4064:MET:SD	3:D:4107:GLU:HG2	2.55	0.46
3:B:2165:LEU:HD21	3:B:2177:LEU:HD23	1.97	0.46
3:B:3281:LEU:HD12	3:B:3315:LEU:HD22	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:3626:LYS:HB2	3:B:3626:LYS:HE2	1.71	0.46
3:B:4090:LYS:HD2	3:B:4121:GLU:HB3	1.96	0.46
3:C:461:HIS:CD2	3:C:3707:ARG:HG3	2.50	0.46
3:A:613:ALA:HB2	3:A:1676:LEU:HD12	1.96	0.46
3:A:3364:ARG:HE	3:A:3364:ARG:HB3	1.54	0.46
3:D:945:LYS:HB2	3:D:945:LYS:HE3	1.74	0.46
3:B:797:HIS:CE1	3:B:821:LEU:HD23	2.50	0.46
3:C:4929:LEU:O	3:C:4933:GLN:HG2	2.15	0.46
3:A:1123:VAL:HG23	3:A:1132:TRP:HB2	1.97	0.46
3:A:4680:LYS:HA	3:A:4684:ASP:HB3	1.97	0.46
3:A:4937:ILE:HD13	3:B:4937:ILE:HD12	1.97	0.46
3:D:3948:LYS:HG2	3:D:4012:LEU:HD22	1.97	0.46
3:B:1272:LEU:HD22	3:B:1289:LEU:HD11	1.98	0.46
3:C:945:LYS:HB2	3:C:945:LYS:HE3	1.74	0.46
3:C:4979:THR:HG21	5:C:5607:ADP:H2'	1.97	0.46
3:A:2001:PRO:O	3:A:2005:GLN:HG3	2.16	0.46
3:A:3695:PRO:HB2	3:A:3700:GLN:HG3	1.97	0.46
3:B:2359:ARG:HD3	3:B:2359:ARG:HA	1.59	0.46
3:C:3316:LEU:HD22	3:C:3346:VAL:HA	1.95	0.46
3:C:3626:LYS:H	3:C:3626:LYS:HD3	1.80	0.46
3:A:4090:LYS:HD2	3:A:4121:GLU:HB3	1.96	0.46
3:A:4813:LEU:O	3:A:4816:ILE:HG12	2.16	0.46
3:A:4979:THR:HG21	5:A:5607:ADP:H2'	1.97	0.46
3:D:2208:MET:SD	3:D:2250:MET:HE1	2.55	0.46
3:D:3053:ARG:HD3	3:D:3056:LEU:HD22	1.98	0.46
3:B:2150:GLU:CD	3:B:2150:GLU:H	2.23	0.46
3:B:2522:LEU:O	3:B:2527:LEU:HB2	2.16	0.46
3:B:2626:LEU:HD22	3:B:2640:PRO:HB3	1.97	0.46
3:B:3036:LYS:O	3:B:3039:ILE:HG22	2.16	0.46
3:B:4929:LEU:O	3:B:4933:GLN:HG2	2.15	0.46
3:C:4000:MET:HE3	3:C:4017:LEU:HD21	1.98	0.46
3:A:1812:LEU:HD23	3:A:1812:LEU:HA	1.83	0.46
3:A:4686:LEU:HD23	3:A:4686:LEU:HA	1.72	0.46
3:D:2959:PHE:HZ	3:D:3005:LEU:HG	1.81	0.46
3:B:3540:TYR:HB3	3:B:3604:TYR:CD2	2.50	0.46
3:C:1123:VAL:HG23	3:C:1132:TRP:HB2	1.97	0.46
3:C:2959:PHE:HZ	3:C:3005:LEU:HG	1.81	0.46
1:H:84:ALA:O	1:H:93:PRO:HB3	2.15	0.46
2:J:-1:HIS:CE1	2:J:1:ALA:HB3	2.51	0.46
3:A:797:HIS:CE1	3:A:821:LEU:HD23	2.50	0.46
3:D:797:HIS:CE1	3:D:821:LEU:HD23	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:951:LYS:HB3	3:D:951:LYS:HE3	1.63	0.46
3:D:3540:TYR:HB3	3:D:3604:TYR:CD2	2.50	0.46
3:D:4685:GLY:O	3:D:4690:GLU:HG2	2.15	0.46
3:B:747:CYS:HB3	3:B:808:TYR:CE2	2.51	0.46
3:B:2001:PRO:O	3:B:2005:GLN:HG3	2.16	0.46
3:B:4979:THR:HG21	5:B:5607:ADP:H2'	1.98	0.46
3:C:2001:PRO:O	3:C:2005:GLN:HG3	2.16	0.46
3:C:2626:LEU:HD22	3:C:2640:PRO:HB3	1.97	0.46
2:I:50:ASP:HA	2:I:53:ASN:ND2	2.31	0.46
2:L:50:ASP:HA	2:L:53:ASN:ND2	2.30	0.46
3:A:2495:VAL:HG22	3:A:2498:HIS:CE1	2.51	0.46
3:D:461:HIS:CD2	3:D:3707:ARG:HG3	2.50	0.46
3:D:2165:LEU:HD21	3:D:2177:LEU:HD23	1.97	0.46
3:D:4937:ILE:HD12	3:C:4937:ILE:HD13	1.97	0.46
3:B:322:LYS:HD3	3:B:322:LYS:N	2.31	0.46
3:B:665:GLU:HB2	3:B:792:LEU:HB2	1.97	0.46
3:B:864:PRO:HD2	3:B:867:LEU:HD12	1.98	0.46
3:B:2208:MET:SD	3:B:2250:MET:HE1	2.55	0.46
3:B:4000:MET:HE3	3:B:4017:LEU:HD21	1.98	0.46
3:A:747:CYS:HB3	3:A:808:TYR:CE2	2.51	0.46
3:B:235:ALA:HA	3:B:257:ARG:HD3	1.96	0.46
3:C:663:TYR:CE1	3:C:745:SER:HB3	2.51	0.46
3:C:2522:LEU:O	3:C:2527:LEU:HB2	2.16	0.46
3:A:2522:LEU:O	3:A:2527:LEU:HB2	2.16	0.46
3:D:2001:PRO:O	3:D:2005:GLN:HG3	2.16	0.46
3:B:1292:SER:HB3	3:B:1596:GLU:HG2	1.98	0.46
3:B:2522:LEU:HA	3:B:2526:PHE:HB2	1.99	0.46
3:B:2633:LEU:HD12	3:B:2685:SER:HB3	1.98	0.46
3:C:2522:LEU:HA	3:C:2526:PHE:HB2	1.98	0.46
3:C:3053:ARG:HD3	3:C:3056:LEU:HD22	1.98	0.46
3:C:4722:ARG:HD2	3:C:4722:ARG:HA	1.81	0.46
3:A:2150:GLU:CD	3:A:2150:GLU:H	2.23	0.45
3:A:4727:LYS:HG2	3:A:4728:HIS:CE1	2.52	0.45
3:D:954:LYS:HD2	3:D:954:LYS:HA	1.79	0.45
3:D:2495:VAL:HG22	3:D:2498:HIS:CE1	2.51	0.45
3:D:3695:PRO:HB2	3:D:3700:GLN:HG3	1.98	0.45
3:B:2973:PHE:CD1	3:B:2973:PHE:C	2.95	0.45
3:C:665:GLU:HB2	3:C:792:LEU:HB2	1.97	0.45
3:A:2973:PHE:CD1	3:A:2973:PHE:C	2.95	0.45
3:A:3834:ALA:O	3:A:3838:THR:HG23	2.16	0.45
3:D:803:LEU:HD12	3:D:804:PRO:HD2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:2522:LEU:HA	3:D:2526:PHE:HB2	1.99	0.45
3:D:3723:MET:HE2	3:D:3792:ALA:HB3	1.98	0.45
3:B:663:TYR:CE1	3:B:745:SER:HB3	2.51	0.45
3:B:955:LEU:HD22	3:B:956:PRO:HD2	1.97	0.45
3:B:2959:PHE:HZ	3:B:3005:LEU:HG	1.81	0.45
3:C:2208:MET:SD	3:C:2250:MET:HE1	2.56	0.45
3:A:1272:LEU:HD22	3:A:1289:LEU:HD11	1.98	0.45
3:A:2165:LEU:HD21	3:A:2177:LEU:HD23	1.97	0.45
3:D:881:LEU:HD13	3:D:1041:GLN:HB3	1.98	0.45
3:B:266:ARG:HD2	3:B:268:SER:O	2.17	0.45
3:B:2415:ARG:HA	3:B:2415:ARG:HD3	1.72	0.45
3:B:2495:VAL:HG22	3:B:2498:HIS:CE1	2.51	0.45
3:C:955:LEU:HD22	3:C:956:PRO:HD2	1.97	0.45
3:C:1272:LEU:HD22	3:C:1289:LEU:HD11	1.97	0.45
3:C:1674:CYS:HA	3:C:1678:ASN:HB3	1.99	0.45
3:C:3321:ARG:HA	3:C:3321:ARG:HD2	1.72	0.45
1:H:62:GLY:O	1:H:66:MET:HB2	2.17	0.45
3:A:322:LYS:HD3	3:A:322:LYS:N	2.31	0.45
3:D:747:CYS:HB3	3:D:808:TYR:CE2	2.51	0.45
3:D:2186:MET:HE1	3:D:2238:TYR:HB2	1.99	0.45
3:D:5014[A]:TYR:CE2	9:D:5609:CFF:H81	2.51	0.45
3:B:462:GLU:H	3:B:462:GLU:CD	2.25	0.45
3:B:3106:MET:HE1	3:B:3190:LEU:HD21	1.99	0.45
3:C:3776:ALA:HB1	3:C:3816:MET:HG3	1.98	0.45
2:K:50:ASP:HA	2:K:53:ASN:ND2	2.30	0.45
3:A:663:TYR:CE1	3:A:745:SER:HB3	2.51	0.45
3:A:2522:LEU:HA	3:A:2526:PHE:HB2	1.98	0.45
3:D:663:TYR:CE1	3:D:745:SER:HB3	2.51	0.45
3:D:1674:CYS:HA	3:D:1678:ASN:HB3	1.99	0.45
3:D:2415:ARG:HA	3:D:2415:ARG:HD3	1.72	0.45
3:D:3778:MET:HE2	3:D:3778:MET:HB3	1.91	0.45
3:C:2165:LEU:HD21	3:C:2177:LEU:HD23	1.97	0.45
3:C:2495:VAL:HG22	3:C:2498:HIS:CE1	2.51	0.45
3:C:4010:ILE:HG13	3:C:4014:LYS:HE2	1.99	0.45
3:D:266:ARG:HD2	3:D:268:SER:O	2.17	0.45
3:D:2522:LEU:O	3:D:2527:LEU:HB2	2.16	0.45
3:B:1291:LEU:HD12	3:B:1550:PRO:HG2	1.98	0.45
3:B:1674:CYS:HA	3:B:1678:ASN:HB3	1.99	0.45
3:B:3053:ARG:HD3	3:B:3056:LEU:HD22	1.99	0.45
3:B:3233:PRO:HD2	3:B:3239:MET:HE3	1.99	0.45
3:B:4680:LYS:HA	3:B:4684:ASP:HB3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:462:GLU:CD	3:C:462:GLU:H	2.25	0.45
3:C:2608:MET:HB3	3:C:2608:MET:HE3	1.74	0.45
2:I:115:LYS:HG2	3:A:3858:MET:HE1	1.98	0.45
3:A:2599:GLN:O	3:A:2603:ILE:HG13	2.17	0.45
3:D:509:GLU:O	3:D:513:GLU:HG3	2.17	0.45
3:D:820:ARG:HD2	3:D:820:ARG:HA	1.80	0.45
3:D:2608:MET:HE3	3:D:2608:MET:HB3	1.74	0.45
3:D:3759:GLU:OE2	3:D:3759:GLU:HA	2.17	0.45
3:B:945:LYS:HB2	3:B:945:LYS:HE3	1.74	0.45
3:C:266:ARG:HD2	3:C:268:SER:O	2.17	0.45
3:C:747:CYS:HB3	3:C:808:TYR:CE2	2.51	0.45
3:C:1292:SER:HB3	3:C:1596:GLU:HG2	1.98	0.45
3:C:1812:LEU:HD21	3:C:1862:ILE:HG13	1.99	0.45
3:C:1812:LEU:HD22	3:C:1865:MET:HE1	1.99	0.45
3:C:2633:LEU:HD12	3:C:2685:SER:HB3	1.98	0.45
3:A:647:ASN:HB3	3:A:824:GLU:OE1	2.17	0.45
3:A:1674:CYS:HA	3:A:1678:ASN:HB3	1.99	0.45
3:A:2415:ARG:HD3	3:A:2415:ARG:HA	1.73	0.45
3:D:345:LEU:HB3	3:D:387:ALA:HB1	1.99	0.45
3:D:1272:LEU:HD22	3:D:1289:LEU:HD11	1.98	0.45
3:D:2633:LEU:HD12	3:D:2685:SER:HB3	1.98	0.45
3:D:4821:LYS:HA	3:D:4821:LYS:HD2	1.77	0.45
3:D:4823:LEU:HD23	3:D:4823:LEU:HA	1.78	0.45
3:B:2186:MET:HE1	3:B:2238:TYR:HB2	1.99	0.45
3:B:3759:GLU:OE2	3:B:3759:GLU:HA	2.17	0.45
3:A:881:LEU:HD13	3:A:1041:GLN:HB3	1.98	0.45
3:A:1292:SER:HB3	3:A:1596:GLU:HG2	1.98	0.45
3:D:2677:LYS:HE3	3:D:2677:LYS:HB3	1.77	0.45
3:D:2973:PHE:CD1	3:D:2973:PHE:C	2.95	0.45
3:D:3626:LYS:HB2	3:D:3626:LYS:HE2	1.70	0.45
3:B:2689:LYS:HB3	3:B:2689:LYS:HE3	1.63	0.45
3:B:3930:ILE:HG23	3:B:3951:PHE:HE1	1.82	0.45
3:C:2689:LYS:HB3	3:C:2689:LYS:HE3	1.63	0.45
3:C:2973:PHE:CD1	3:C:2973:PHE:C	2.95	0.45
3:C:5014[A]:TYR:CE2	9:C:5609:CFF:H81	2.52	0.45
3:A:864:PRO:HD2	3:A:867:LEU:HD12	1.98	0.45
3:A:1087:ARG:HB3	3:A:1223:PHE:CD2	2.52	0.45
3:A:4000:MET:HE3	3:A:4017:LEU:HD21	1.98	0.45
3:D:322:LYS:HD3	3:D:322:LYS:N	2.31	0.45
3:D:647:ASN:HB3	3:D:824:GLU:OE1	2.17	0.45
3:D:3321:ARG:HD2	3:D:3321:ARG:HA	1.72	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:3776:ALA:HB1	3:D:3816:MET:HG3	1.99	0.45
3:B:2599:GLN:O	3:B:2603:ILE:HG13	2.17	0.45
3:C:4062:PHE:HE1	3:C:4136:ALA:HB1	1.82	0.45
3:C:4577:LEU:HD21	3:C:4806:ASN:HB3	1.99	0.45
3:C:4727:LYS:HG2	3:C:4728:HIS:CE1	2.52	0.45
3:A:266:ARG:HD2	3:A:268:SER:O	2.17	0.44
3:A:3053:ARG:HD3	3:A:3056:LEU:HD22	1.98	0.44
3:A:3715:LYS:HB3	3:A:3715:LYS:HE2	1.62	0.44
3:A:4060:LYS:HB2	3:A:4060:LYS:HE2	1.65	0.44
3:A:5014[A]:TYR:CE2	9:A:5609:CFF:H81	2.53	0.44
3:D:1087:ARG:HB3	3:D:1223:PHE:CD2	2.52	0.44
3:D:4000:MET:HE3	3:D:4017:LEU:HD21	1.97	0.44
3:B:1584:ARG:HE	3:B:1584:ARG:HB2	1.61	0.44
3:B:4010:ILE:HG13	3:B:4014:LYS:HE2	1.98	0.44
3:A:345:LEU:HB3	3:A:387:ALA:HB1	1.99	0.44
3:A:509:GLU:O	3:A:513:GLU:HG3	2.17	0.44
3:A:1812:LEU:HD22	3:A:1865:MET:HE1	1.99	0.44
3:A:2633:LEU:HD12	3:A:2685:SER:HB3	1.98	0.44
3:A:2959:PHE:HZ	3:A:3005:LEU:HG	1.81	0.44
3:A:3036:LYS:O	3:A:3039:ILE:HG22	2.18	0.44
3:A:3233:PRO:HD2	3:A:3239:MET:HE3	1.99	0.44
3:A:3562:LYS:HA	3:A:3562:LYS:HD3	1.68	0.44
3:A:4064:MET:SD	3:A:4107:GLU:HG2	2.57	0.44
3:D:1292:SER:HB3	3:D:1596:GLU:HG2	1.98	0.44
3:D:4017:LEU:HD22	3:D:4139:ILE:HG21	1.99	0.44
3:D:4062:PHE:HE1	3:D:4136:ALA:HB1	1.81	0.44
3:D:4680:LYS:HA	3:D:4684:ASP:HB3	1.99	0.44
3:B:509:GLU:O	3:B:513:GLU:HG3	2.17	0.44
3:B:1812:LEU:HD21	3:B:1862:ILE:HG13	1.99	0.44
3:C:322:LYS:HD3	3:C:322:LYS:N	2.31	0.44
3:C:881:LEU:HD13	3:C:1041:GLN:HB3	1.98	0.44
3:C:2520:HIS:O	3:C:2524:VAL:HG22	2.17	0.44
3:C:2599:GLN:O	3:C:2603:ILE:HG13	2.17	0.44
3:C:3110:LEU:HD11	3:C:3186:LEU:HD12	1.98	0.44
3:A:1812:LEU:HD21	3:A:1862:ILE:HG13	1.98	0.44
3:A:4241:THR:HG22	3:A:4245:MET:HE3	2.00	0.44
3:D:1291:LEU:HD12	3:D:1550:PRO:HG2	1.99	0.44
3:D:4010:ILE:HG13	3:D:4014:LYS:HE2	1.99	0.44
3:C:647:ASN:HB3	3:C:824:GLU:OE1	2.17	0.44
3:C:1812:LEU:HD23	3:C:1812:LEU:HA	1.84	0.44
3:C:4017:LEU:HD22	3:C:4139:ILE:HG21	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:3036:LYS:O	3:D:3039:ILE:HG22	2.18	0.44
3:D:3579:LEU:HB2	3:D:3582:ARG:HG3	2.00	0.44
3:C:3036:LYS:O	3:C:3039:ILE:HG22	2.18	0.44
3:A:3335:MET:HB3	3:A:3407:ALA:HB2	2.00	0.44
3:D:864:PRO:HD2	3:D:867:LEU:HD12	1.98	0.44
3:B:3335:MET:HB3	3:B:3407:ALA:HB2	2.00	0.44
3:B:4060:LYS:HE2	3:B:4060:LYS:HB2	1.65	0.44
3:C:3335:MET:HB3	3:C:3407:ALA:HB2	2.00	0.44
3:C:4817:ALA:O	3:C:4824:ARG:HG3	2.18	0.44
3:A:945:LYS:HB2	3:A:945:LYS:HE3	1.74	0.44
3:A:2520:HIS:O	3:A:2524:VAL:HG22	2.17	0.44
3:A:3552:PHE:CD1	3:A:3552:PHE:C	2.96	0.44
3:A:3776:ALA:HB1	3:A:3816:MET:HG3	1.99	0.44
3:D:2599:GLN:O	3:D:2603:ILE:HG13	2.17	0.44
3:D:3552:PHE:CD1	3:D:3552:PHE:C	2.96	0.44
3:B:647:ASN:HB3	3:B:824:GLU:OE1	2.17	0.44
3:B:2520:HIS:O	3:B:2524:VAL:HG22	2.17	0.44
3:C:3552:PHE:CD1	3:C:3552:PHE:C	2.96	0.44
3:C:4991:PHE:HE2	3:C:5010:VAL:HG11	1.82	0.44
3:A:1291:LEU:HD12	3:A:1550:PRO:HG2	1.99	0.44
3:D:3110:LEU:HD11	3:D:3186:LEU:HD12	1.99	0.44
3:B:4794:TRP:O	3:B:4798:MET:HG2	2.18	0.44
3:C:509:GLU:O	3:C:513:GLU:HG3	2.17	0.44
3:C:2415:ARG:HA	3:C:2415:ARG:HD3	1.72	0.44
3:C:3626:LYS:HB2	3:C:3626:LYS:HE2	1.64	0.44
3:A:4087:LEU:HB3	3:A:4122:MET:HB3	1.99	0.44
3:D:3233:PRO:HD2	3:D:3239:MET:HE3	1.99	0.44
3:D:4718:LYS:HE3	3:D:4718:LYS:HB3	1.74	0.44
3:B:345:LEU:HB3	3:B:387:ALA:HB1	1.98	0.44
3:B:881:LEU:HD13	3:B:1041:GLN:HB3	1.98	0.44
3:B:1455:PRO:HG3	3:B:1549:PHE:HE1	1.83	0.44
3:C:1584:ARG:HE	3:C:1584:ARG:HB2	1.61	0.44
3:D:408:ALA:HB2	3:D:483:MET:HE1	2.00	0.44
3:D:1812:LEU:HD22	3:D:1865:MET:HE1	1.99	0.44
3:D:2957:PHE:HE2	3:D:3034:LYS:HB3	1.83	0.44
3:D:3971:GLY:N	3:D:3972:PRO:HA	2.33	0.44
3:B:1087:ARG:HB3	3:B:1223:PHE:CD2	2.53	0.44
3:B:4241:THR:HG22	3:B:4245:MET:HE3	2.00	0.44
3:B:5014[A]:TYR:CE2	9:B:5609:CFF:H81	2.52	0.44
3:C:1087:ARG:HB3	3:C:1223:PHE:CD2	2.53	0.44
3:C:3948:LYS:HG2	3:C:4012:LEU:HD22	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:4685:GLY:O	3:C:4690:GLU:HG2	2.17	0.44
3:A:408:ALA:HB2	3:A:483:MET:HE1	2.00	0.43
3:A:2608:MET:HE3	3:A:2608:MET:HB3	1.74	0.43
3:D:1812:LEU:HD21	3:D:1862:ILE:HG13	1.99	0.43
3:D:2520:HIS:O	3:D:2524:VAL:HG22	2.17	0.43
3:C:2639:MET:HE3	3:C:2639:MET:HB3	1.80	0.43
3:C:3579:LEU:HB2	3:C:3582:ARG:HG3	1.99	0.43
1:F:62:GLY:O	1:F:66:MET:HB2	2.18	0.43
1:G:62:GLY:O	1:G:66:MET:HB2	2.18	0.43
2:J:36:MET:HE2	2:J:36:MET:HB2	1.94	0.43
3:A:951:LYS:HB3	3:A:951:LYS:HE3	1.62	0.43
3:A:2453:ILE:HD13	3:A:2453:ILE:HA	1.88	0.43
3:A:3759:GLU:HA	3:A:3759:GLU:OE2	2.18	0.43
3:A:3948:LYS:HG2	3:A:4012:LEU:HD22	2.00	0.43
3:C:864:PRO:HD2	3:C:867:LEU:HD12	1.98	0.43
3:C:3386:GLU:HA	3:C:3389:GLU:OE1	2.18	0.43
3:C:4686:LEU:HD23	3:C:4686:LEU:HA	1.74	0.43
3:C:4821:LYS:HA	3:C:4821:LYS:HD2	1.76	0.43
3:A:990:GLU:HG3	3:A:1024:TYR:CD2	2.54	0.43
3:A:3579:LEU:HB2	3:A:3582:ARG:HG3	1.99	0.43
3:B:575:LEU:HD22	3:B:609:CYS:HB2	2.00	0.43
3:B:1812:LEU:HD22	3:B:1865:MET:HE1	1.99	0.43
3:B:4991:PHE:HE2	3:B:5010:VAL:HG11	1.83	0.43
3:C:408:ALA:HB2	3:C:483:MET:HE1	2.00	0.43
3:C:2359:ARG:HD3	3:C:2359:ARG:HA	1.59	0.43
3:A:1024:TYR:O	3:A:1027:LEU:HB2	2.19	0.43
3:A:4577:LEU:HD21	3:A:4806:ASN:HB3	2.00	0.43
3:D:82:LEU:HD13	3:D:144:GLU:HG2	2.00	0.43
3:D:3386:GLU:HA	3:D:3389:GLU:OE1	2.19	0.43
3:C:3233:PRO:HD2	3:C:3239:MET:HE3	1.99	0.43
3:B:224:HIS:HA	3:B:388:LEU:HD23	2.00	0.43
3:B:1046:LEU:O	3:B:1051:TYR:HB2	2.18	0.43
3:B:3971:GLY:N	3:B:3972:PRO:HA	2.33	0.43
3:C:2957:PHE:HE2	3:C:3034:LYS:HB3	1.83	0.43
2:J:72:MET:HA	2:J:72:MET:HE2	2.00	0.43
3:A:4049:VAL:HG21	3:A:4159:ARG:HD2	2.01	0.43
3:A:4991:PHE:HE2	3:A:5010:VAL:HG11	1.83	0.43
3:D:213:TYR:CD1	3:D:337:PRO:HB2	2.54	0.43
3:D:3629:ARG:O	3:D:3633:VAL:HG13	2.19	0.43
3:D:4241:THR:HG22	3:D:4245:MET:HE3	2.00	0.43
3:B:213:TYR:CD1	3:B:337:PRO:HB2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:951:LYS:HE3	3:B:951:LYS:HB3	1.62	0.43
3:B:3386:GLU:HA	3:B:3389:GLU:OE1	2.18	0.43
3:B:4821:LYS:HA	3:B:4821:LYS:HD2	1.76	0.43
3:B:4933:GLN:O	3:B:4937:ILE:HG13	2.19	0.43
3:C:345:LEU:HB3	3:C:387:ALA:HB1	1.99	0.43
3:C:1291:LEU:HD12	3:C:1550:PRO:HG2	1.99	0.43
3:C:3509:LEU:HD12	3:C:3509:LEU:HA	1.90	0.43
3:C:4725:LEU:HA	3:C:4737:ILE:HG21	2.00	0.43
1:G:17:LYS:HD3	1:G:17:LYS:HA	1.64	0.43
3:A:2957:PHE:HE2	3:A:3034:LYS:HB3	1.84	0.43
3:D:4577:LEU:HD21	3:D:4806:ASN:HB3	2.00	0.43
3:B:3110:LEU:HD11	3:B:3186:LEU:HD12	1.99	0.43
3:B:3552:PHE:CD1	3:B:3552:PHE:C	2.96	0.43
3:C:213:TYR:CD1	3:C:337:PRO:HB2	2.54	0.43
3:C:2685:SER:O	3:C:2689:LYS:HG3	2.19	0.43
3:C:3778:MET:HE2	3:C:3778:MET:HB3	1.91	0.43
2:J:36:MET:SD	2:J:72:MET:HE1	2.59	0.43
3:A:224:HIS:HA	3:A:388:LEU:HD23	2.00	0.43
3:A:932:LEU:HD23	3:A:932:LEU:HA	1.91	0.43
3:A:2214:VAL:HG21	3:A:2228:MET:SD	2.58	0.43
3:A:3274:LEU:HD23	3:A:3274:LEU:HA	1.90	0.43
3:A:4017:LEU:HD22	3:A:4139:ILE:HG21	1.99	0.43
3:D:664:PHE:CE1	3:D:779:PRO:HB3	2.54	0.43
3:D:3239:MET:HE2	3:D:3239:MET:HA	2.00	0.43
3:D:3335:MET:HB3	3:D:3407:ALA:HB2	2.00	0.43
3:B:2608:MET:HE3	3:B:2608:MET:HB3	1.74	0.43
3:B:3715:LYS:HE2	3:B:3715:LYS:HB3	1.62	0.43
3:B:3776:ALA:HB1	3:B:3816:MET:HG3	2.00	0.43
3:B:4091:LYS:H	3:B:4091:LYS:CD	2.32	0.43
3:B:4092:ASP:HA	3:B:4095:LYS:HG2	2.01	0.43
3:C:4234:PHE:CE1	3:C:4985:LEU:HG	2.54	0.43
3:A:82:LEU:HD13	3:A:144:GLU:HG2	2.00	0.43
3:A:213:TYR:CD1	3:A:337:PRO:HB2	2.54	0.43
3:A:1046:LEU:O	3:A:1051:TYR:HB2	2.19	0.43
3:D:4929:LEU:O	3:D:4933:GLN:HG2	2.18	0.43
3:B:1024:TYR:O	3:B:1027:LEU:HB2	2.19	0.43
3:B:2302:LEU:HG	3:B:2363:CYS:HB3	2.01	0.43
3:B:3579:LEU:HB2	3:B:3582:ARG:HG3	1.99	0.43
3:B:4548:ARG:O	3:B:4552:LEU:HG	2.19	0.43
3:C:4064:MET:SD	3:C:4107:GLU:HG2	2.57	0.43
3:C:4933:GLN:O	3:C:4937:ILE:HG13	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:105:ASN:OD1	1:H:105:ASN:C	2.61	0.43
3:A:1455:PRO:HG3	3:A:1549:PHE:HE1	1.83	0.43
3:A:3386:GLU:HA	3:A:3389:GLU:OE1	2.18	0.43
3:D:224:HIS:HA	3:D:388:LEU:HD23	2.00	0.43
3:B:990:GLU:HG3	3:B:1024:TYR:CD2	2.54	0.43
3:B:1237:TRP:CE2	3:B:1607:ARG:HB2	2.54	0.43
3:B:1738:LEU:HD22	3:B:1963:GLU:HG3	2.01	0.43
3:B:3105:LYS:O	3:B:3108:GLU:HG3	2.19	0.43
3:B:4087:LEU:HB3	3:B:4122:MET:HB3	2.00	0.43
3:C:575:LEU:HD22	3:C:609:CYS:HB2	2.01	0.43
3:C:2302:LEU:HG	3:C:2363:CYS:HB3	2.01	0.43
3:C:3239:MET:HA	3:C:3239:MET:HE2	2.00	0.43
3:C:3629:ARG:O	3:C:3633:VAL:HG13	2.19	0.43
1:F:84:ALA:O	1:F:93:PRO:HB3	2.19	0.42
3:A:664:PHE:CE1	3:A:779:PRO:HB3	2.54	0.42
3:A:1575:LEU:HD23	3:A:1575:LEU:HA	1.88	0.42
3:A:1738:LEU:HD22	3:A:1963:GLU:HG3	2.01	0.42
3:A:3361:THR:CG2	3:A:3408:LEU:HD21	2.49	0.42
3:A:3446:SER:HA	3:A:3452:LYS:HE3	2.01	0.42
3:A:3629:ARG:O	3:A:3633:VAL:HG13	2.18	0.42
3:A:4010:ILE:HG13	3:A:4014:LYS:HE2	2.00	0.42
3:D:404:ILE:HG21	3:D:481:GLU:HG3	2.01	0.42
3:D:2679:PHE:HB2	3:D:2706:ILE:HG21	2.01	0.42
3:D:2685:SER:O	3:D:2689:LYS:HG3	2.18	0.42
3:B:2679:PHE:HB2	3:B:2706:ILE:HG21	2.01	0.42
3:B:2685:SER:O	3:B:2689:LYS:HG3	2.18	0.42
3:B:3948:LYS:HG2	3:B:4012:LEU:HD22	2.01	0.42
3:B:4017:LEU:HD22	3:B:4139:ILE:HG21	2.00	0.42
3:B:4577:LEU:HD21	3:B:4806:ASN:HB3	2.01	0.42
3:B:4711:PHE:HA	3:B:4712:PRO:HA	1.90	0.42
3:B:4725:LEU:HA	3:B:4737:ILE:HG21	2.01	0.42
3:B:4817:ALA:O	3:B:4824:ARG:HG3	2.19	0.42
3:C:82:LEU:HD13	3:C:144:GLU:HG2	2.00	0.42
3:C:990:GLU:HG3	3:C:1024:TYR:CD2	2.54	0.42
3:C:1455:PRO:HG3	3:C:1549:PHE:HE1	1.83	0.42
3:C:3446:SER:HA	3:C:3452:LYS:HE3	2.00	0.42
2:I:92:PHE:H	2:I:92:PHE:HD1	1.65	0.42
3:A:3971:GLY:N	3:A:3972:PRO:HA	2.33	0.42
3:A:4821:LYS:HD2	3:A:4821:LYS:HA	1.76	0.42
3:D:3361:THR:CG2	3:D:3408:LEU:HD21	2.49	0.42
3:B:3239:MET:HE2	3:B:3239:MET:HA	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4844:LEU:HD11	3:B:4924:VAL:HG13	2.01	0.42
3:C:978:THR:HG22	3:C:980:ALA:N	2.33	0.42
3:C:2211:MET:HE2	3:C:2211:MET:HB3	1.81	0.42
3:C:3971:GLY:N	3:C:3972:PRO:HA	2.33	0.42
3:A:575:LEU:HD22	3:A:609:CYS:HB2	2.00	0.42
3:A:670:GLU:HA	3:A:740:PRO:HG3	2.01	0.42
3:D:2689:LYS:HB3	3:D:2689:LYS:HE3	1.63	0.42
3:D:3723:MET:HE3	3:D:3793:MET:SD	2.60	0.42
3:D:4727:LYS:HG2	3:D:4728:HIS:CE1	2.54	0.42
3:B:82:LEU:HD13	3:B:144:GLU:HG2	2.00	0.42
3:B:416:LYS:HD2	3:B:416:LYS:N	2.35	0.42
3:B:653:ALA:HB3	3:B:656:SER:HB2	2.01	0.42
3:B:1448:VAL:HG22	3:B:1554:VAL:HG23	2.01	0.42
3:C:1046:LEU:O	3:C:1051:TYR:HB2	2.19	0.42
3:C:4241:THR:HG22	3:C:4245:MET:HE3	2.00	0.42
3:A:1237:TRP:CE2	3:A:1607:ARG:HB2	2.55	0.42
3:A:2302:LEU:HG	3:A:2363:CYS:HB3	2.01	0.42
3:A:2679:PHE:HB2	3:A:2706:ILE:HG21	2.01	0.42
3:A:4220:ASP:O	3:A:4224:GLU:HG2	2.20	0.42
3:A:4933:GLN:O	3:A:4937:ILE:HG13	2.19	0.42
3:D:416:LYS:HD2	3:D:416:LYS:N	2.35	0.42
3:D:653:ALA:HB3	3:D:656:SER:HB2	2.01	0.42
3:D:907:LEU:HD23	3:D:907:LEU:HA	1.89	0.42
3:D:4991:PHE:HE2	3:D:5010:VAL:HG11	1.83	0.42
3:B:3980:LEU:HD23	3:B:3980:LEU:HA	1.86	0.42
3:C:309:THR:O	3:C:313:SER:HB2	2.19	0.42
3:C:3361:THR:CG2	3:C:3408:LEU:HD21	2.49	0.42
3:A:416:LYS:N	3:A:416:LYS:HD2	2.35	0.42
3:A:1448:VAL:HG22	3:A:1554:VAL:HG23	2.01	0.42
3:A:2685:SER:O	3:A:2689:LYS:HG3	2.19	0.42
3:D:575:LEU:HD22	3:D:609:CYS:HB2	2.00	0.42
3:D:1046:LEU:O	3:D:1051:TYR:HB2	2.19	0.42
3:D:2292:GLU:HG2	3:D:2352:VAL:HG11	2.01	0.42
3:D:2302:LEU:HG	3:D:2363:CYS:HB3	2.01	0.42
3:D:3105:LYS:O	3:D:3108:GLU:HG3	2.19	0.42
3:D:3446:SER:HA	3:D:3452:LYS:HE3	2.01	0.42
3:D:4126:GLU:HG2	3:D:4127:GLU:N	2.35	0.42
3:B:670:GLU:HA	3:B:740:PRO:HG3	2.01	0.42
3:B:4686:LEU:HD23	3:B:4686:LEU:HA	1.71	0.42
3:C:224:HIS:HA	3:C:388:LEU:HD23	2.00	0.42
3:C:664:PHE:CE1	3:C:779:PRO:HB3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:670:GLU:HA	3:C:740:PRO:HG3	2.02	0.42
3:C:1854:PHE:HD1	3:C:1858:ASP:HB3	1.84	0.42
3:C:2679:PHE:HB2	3:C:2706:ILE:HG21	2.02	0.42
3:C:4220:ASP:O	3:C:4224:GLU:HG2	2.20	0.42
3:C:4995:LEU:HD23	3:C:4995:LEU:HA	1.92	0.42
1:E:84:ALA:O	1:E:93:PRO:HB3	2.20	0.42
3:A:2970:SER:HA	3:A:2973:PHE:CD2	2.55	0.42
3:A:3239:MET:HE2	3:A:3239:MET:HA	2.00	0.42
3:D:2012:PHE:CZ	3:D:2031:LEU:HD23	2.54	0.42
3:C:3410:PRO:HG3	3:C:3509:LEU:HD21	2.00	0.42
1:G:84:ALA:O	1:G:93:PRO:HB3	2.19	0.42
3:A:3953:LYS:HB3	3:A:3953:LYS:HE3	1.80	0.42
3:D:670:GLU:HA	3:D:740:PRO:HG3	2.02	0.42
3:D:990:GLU:HG3	3:D:1024:TYR:CD2	2.54	0.42
3:D:1237:TRP:CE2	3:D:1607:ARG:HB2	2.55	0.42
3:D:1455:PRO:HG3	3:D:1549:PHE:HE1	1.83	0.42
3:D:3410:PRO:HG3	3:D:3509:LEU:HD21	2.01	0.42
3:D:3953:LYS:HE3	3:D:3953:LYS:HB3	1.80	0.42
3:B:664:PHE:CE1	3:B:779:PRO:HB3	2.54	0.42
3:B:844:ARG:H	3:B:844:ARG:HG3	1.65	0.42
3:B:2211:MET:HE2	3:B:2211:MET:HB3	1.81	0.42
3:B:3629:ARG:O	3:B:3633:VAL:HG13	2.19	0.42
3:C:1116:GLY:HA3	3:C:1132:TRP:HB3	2.02	0.42
3:C:1237:TRP:CE2	3:C:1607:ARG:HB2	2.54	0.42
1:E:17:LYS:HD3	1:E:17:LYS:HA	1.62	0.42
3:A:404:ILE:HG21	3:A:481:GLU:HG3	2.01	0.42
3:A:844:ARG:H	3:A:844:ARG:HG3	1.64	0.42
3:A:4681:LEU:HD11	3:A:4706:LEU:HD22	2.02	0.42
3:D:1116:GLY:HA3	3:D:1132:TRP:HB3	2.02	0.42
3:D:4060:LYS:HB2	3:D:4060:LYS:HE2	1.65	0.42
3:D:4725:LEU:HA	3:D:4737:ILE:HG21	2.02	0.42
3:B:408:ALA:HB2	3:B:483:MET:HE1	2.00	0.42
3:B:3361:THR:CG2	3:B:3408:LEU:HD21	2.49	0.42
3:B:4064:MET:HE1	3:B:4110:PHE:HD2	1.85	0.42
3:C:1024:TYR:O	3:C:1027:LEU:HB2	2.20	0.42
3:C:2292:GLU:HG2	3:C:2352:VAL:HG11	2.01	0.42
3:C:3885:PHE:CE1	3:C:3919:THR:HG23	2.55	0.42
3:C:4060:LYS:HE2	3:C:4060:LYS:HB2	1.65	0.42
3:A:993:HIS:CE1	3:A:1027:LEU:HD11	2.55	0.42
3:A:3003:LEU:HB2	3:A:3004:PRO:HD3	2.02	0.42
3:A:3758:MET:HB3	3:A:3762:ARG:HH22	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4150:LEU:HB3	3:A:4160:LEU:HD21	2.02	0.42
3:D:978:THR:HG22	3:D:980:ALA:N	2.33	0.42
3:D:2199:ARG:HD3	3:D:2249:SER:HB3	2.02	0.42
3:D:2211:MET:HE2	3:D:2211:MET:HB3	1.81	0.42
3:D:3405:LEU:HD12	3:D:3405:LEU:HA	1.91	0.42
3:D:4681:LEU:HD11	3:D:4706:LEU:HD22	2.01	0.42
3:B:1126:GLY:HA3	3:B:1143:TRP:CD2	2.55	0.42
3:B:2012:PHE:CZ	3:B:2031:LEU:HD23	2.54	0.42
3:B:3003:LEU:HB2	3:B:3004:PRO:HD3	2.02	0.42
3:B:3885:PHE:CE1	3:B:3919:THR:HG23	2.55	0.42
3:C:404:ILE:HG21	3:C:481:GLU:HG3	2.01	0.42
3:C:416:LYS:HD2	3:C:416:LYS:N	2.35	0.42
3:C:1126:GLY:HA3	3:C:1143:TRP:CD2	2.55	0.42
3:C:1448:VAL:HG22	3:C:1554:VAL:HG23	2.01	0.42
3:C:2012:PHE:CZ	3:C:2031:LEU:HD23	2.55	0.42
3:C:3445:TRP:CE2	3:C:3452:LYS:HG2	2.55	0.42
3:C:3575:LEU:HD23	3:C:3575:LEU:HA	1.92	0.42
3:C:4092:ASP:HA	3:C:4095:LYS:HG2	2.01	0.42
1:H:52:LYS:HD2	1:H:52:LYS:HA	1.63	0.42
3:A:653:ALA:HB3	3:A:656:SER:HB2	2.02	0.42
3:D:309:THR:O	3:D:313:SER:HB2	2.20	0.42
3:D:486:LEU:HD12	3:D:486:LEU:HA	1.90	0.42
3:D:1126:GLY:HA3	3:D:1143:TRP:CD2	2.55	0.42
3:D:2970:SER:HA	3:D:2973:PHE:CD2	2.55	0.42
3:D:4220:ASP:O	3:D:4224:GLU:HG2	2.20	0.42
3:B:2298:VAL:HG21	3:B:2334:PHE:CE2	2.55	0.42
3:B:2970:SER:HA	3:B:2973:PHE:CD2	2.55	0.42
3:B:4049:VAL:HG21	3:B:4159:ARG:HD2	2.01	0.42
3:C:2677:LYS:HE3	3:C:2677:LYS:HB3	1.76	0.42
3:C:3246:LEU:HD11	3:C:3281:LEU:HD21	2.02	0.42
3:A:2630:VAL:N	3:A:2631:PRO:HD2	2.35	0.41
3:A:3105:LYS:O	3:A:3108:GLU:HG3	2.19	0.41
3:A:4844:LEU:HD11	3:A:4924:VAL:HG13	2.02	0.41
3:D:993:HIS:CE1	3:D:1027:LEU:HD11	2.55	0.41
3:D:4933:GLN:O	3:D:4937:ILE:HG13	2.20	0.41
3:C:2587:TYR:CZ	3:C:2591:ARG:HD2	2.55	0.41
3:A:1126:GLY:HA3	3:A:1143:TRP:CD2	2.55	0.41
3:A:1854:PHE:HD1	3:A:1858:ASP:HB3	1.84	0.41
3:A:4095:LYS:HE3	3:A:4095:LYS:HB3	1.82	0.41
3:D:955:LEU:HD23	3:D:955:LEU:HA	1.95	0.41
3:D:3980:LEU:HD23	3:D:3980:LEU:HA	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:2973:PHE:CE1	3:B:2995:ILE:HG12	2.55	0.41
3:B:3445:TRP:CE2	3:B:3452:LYS:HG2	2.55	0.41
3:B:3446:SER:HA	3:B:3452:LYS:HE3	2.01	0.41
3:C:1634:LEU:HD23	3:C:1634:LEU:HA	1.92	0.41
3:C:1738:LEU:HD22	3:C:1963:GLU:HG3	2.01	0.41
3:C:2214:VAL:HG21	3:C:2228:MET:SD	2.60	0.41
3:A:2012:PHE:CZ	3:A:2031:LEU:HD23	2.55	0.41
3:A:2186:MET:HE1	3:A:2238:TYR:HB2	2.02	0.41
3:A:2211:MET:HE2	3:A:2211:MET:HB3	1.80	0.41
3:D:2973:PHE:CE1	3:D:2995:ILE:HG12	2.55	0.41
3:D:3626:LYS:HD3	3:D:3626:LYS:H	1.85	0.41
3:B:404:ILE:HG21	3:B:481:GLU:HG3	2.02	0.41
3:B:978:THR:HG22	3:B:980:ALA:N	2.33	0.41
3:B:1575:LEU:HD23	3:B:1575:LEU:HA	1.87	0.41
3:B:1634:LEU:HD23	3:B:1634:LEU:HA	1.92	0.41
3:C:4049:VAL:HG21	3:C:4159:ARG:HD2	2.01	0.41
3:A:1435:TYR:HB3	3:A:1575:LEU:HG	2.02	0.41
3:A:2700:MET:HE3	3:A:2700:MET:HB3	1.77	0.41
3:A:2973:PHE:CE1	3:A:2995:ILE:HG12	2.55	0.41
3:A:3802:ILE:HD11	3:A:3883:ASP:O	2.20	0.41
3:D:577:ILE:H	3:D:577:ILE:HG13	1.77	0.41
3:D:1448:VAL:HG22	3:D:1554:VAL:HG23	2.01	0.41
3:D:1854:PHE:HD1	3:D:1858:ASP:HB3	1.84	0.41
3:D:3445:TRP:CE2	3:D:3452:LYS:HG2	2.55	0.41
3:D:3885:PHE:CE1	3:D:3919:THR:HG23	2.55	0.41
3:B:1854:PHE:HD1	3:B:1858:ASP:HB3	1.84	0.41
3:B:3410:PRO:HG3	3:B:3509:LEU:HD21	2.02	0.41
3:C:486:LEU:HD12	3:C:486:LEU:HA	1.90	0.41
3:C:653:ALA:HB3	3:C:656:SER:HB2	2.02	0.41
3:C:2970:SER:HA	3:C:2973:PHE:CD2	2.55	0.41
3:C:3759:GLU:OE1	3:C:3759:GLU:HA	2.21	0.41
1:H:82:TYR:HE1	3:D:1786:LEU:HD13	1.86	0.41
3:A:309:THR:O	3:A:313:SER:HB2	2.19	0.41
3:A:2199:ARG:HD3	3:A:2249:SER:HB3	2.02	0.41
3:A:3568:SER:HA	3:A:3571:TRP:NE1	2.36	0.41
3:D:1021:LEU:HD12	3:D:1021:LEU:HA	1.88	0.41
3:D:3106:MET:HE1	3:D:3190:LEU:HD21	2.01	0.41
3:B:993:HIS:CE1	3:B:1027:LEU:HD11	2.55	0.41
3:B:1116:GLY:HA3	3:B:1132:TRP:HB3	2.02	0.41
3:B:1237:TRP:CZ2	3:B:1607:ARG:HB2	2.56	0.41
3:B:1435:TYR:HB3	3:B:1575:LEU:HG	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:2587:TYR:CZ	3:B:2591:ARG:HD2	2.56	0.41
3:B:3405:LEU:O	3:B:3409:TYR:HB2	2.21	0.41
3:B:3562:LYS:HA	3:B:3562:LYS:HD3	1.68	0.41
3:B:4555:LEU:HD22	3:B:4562:LEU:HD11	2.02	0.41
3:C:2700:MET:HB3	3:C:2701:PRO:HD3	2.03	0.41
3:C:3003:LEU:HB2	3:C:3004:PRO:HD3	2.02	0.41
1:E:52:LYS:HA	1:E:52:LYS:HD2	1.86	0.41
2:J:-1:HIS:CD2	3:B:2244:ARG:HG3	2.56	0.41
3:A:2292:GLU:HG2	3:A:2352:VAL:HG11	2.03	0.41
3:D:2587:TYR:CZ	3:D:2591:ARG:HD2	2.55	0.41
3:B:792:LEU:HA	3:B:798:GLY:HA3	2.02	0.41
3:B:3626:LYS:HD3	3:B:3626:LYS:H	1.86	0.41
3:C:1276:THR:O	3:C:1282:SER:HB2	2.21	0.41
3:C:2453:ILE:HD13	3:C:2453:ILE:HA	1.88	0.41
3:C:3802:ILE:HD11	3:C:3883:ASP:O	2.20	0.41
3:C:4087:LEU:HB3	3:C:4122:MET:HB3	2.01	0.41
3:C:4844:LEU:HD11	3:C:4924:VAL:HG13	2.02	0.41
1:E:82:TYR:HE1	3:A:1786:LEU:HD13	1.86	0.41
2:K:94:LYS:HE3	2:K:100:ILE:HD11	2.03	0.41
3:A:792:LEU:HA	3:A:798:GLY:HA3	2.02	0.41
3:A:978:THR:HG22	3:A:980:ALA:N	2.33	0.41
3:A:3445:TRP:CE2	3:A:3452:LYS:HG2	2.55	0.41
3:D:792:LEU:HA	3:D:798:GLY:HA3	2.02	0.41
3:D:3405:LEU:O	3:D:3409:TYR:HB2	2.21	0.41
3:D:3802:ILE:HD11	3:D:3883:ASP:O	2.20	0.41
3:D:4092:ASP:HA	3:D:4095:LYS:HG2	2.02	0.41
3:D:4119:GLU:CD	3:D:4119:GLU:H	2.29	0.41
3:B:1276:THR:O	3:B:1282:SER:HB2	2.21	0.41
3:B:2700:MET:HE3	3:B:2700:MET:HB3	1.77	0.41
3:B:4722:ARG:HD2	3:B:4722:ARG:HA	1.80	0.41
3:C:993:HIS:CE1	3:C:1027:LEU:HD11	2.55	0.41
3:C:3105:LYS:O	3:C:3108:GLU:HG3	2.21	0.41
3:C:3568:SER:HA	3:C:3571:TRP:NE1	2.36	0.41
3:C:3595:ARG:HG3	3:C:3596:VAL:N	2.36	0.41
1:F:17:LYS:HD3	1:F:17:LYS:HA	1.64	0.41
3:A:2298:VAL:HG21	3:A:2334:PHE:CE2	2.55	0.41
3:A:2466:LEU:HD11	3:A:2505:PHE:HD1	1.86	0.41
3:D:2010:LEU:HD22	3:D:3656:SER:OG	2.21	0.41
3:D:2700:MET:HB3	3:D:2701:PRO:HD3	2.03	0.41
3:B:1812:LEU:HD23	3:B:1812:LEU:HA	1.83	0.41
3:B:2630:VAL:N	3:B:2631:PRO:HD2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:3321:ARG:HA	3:B:3321:ARG:HD2	1.72	0.41
3:C:4119:GLU:CD	3:C:4119:GLU:H	2.29	0.41
3:A:221:ARG:HG2	3:A:258:SER:O	2.21	0.41
3:A:820:ARG:HD2	3:A:820:ARG:HA	1.80	0.41
3:A:1249:PRO:HA	3:A:1250:PRO:HD3	1.98	0.41
3:A:1260:MET:HE3	3:A:1260:MET:HB3	2.00	0.41
3:A:1566:LEU:O	3:A:1589:PRO:HB3	2.21	0.41
3:A:1680:ARG:HD2	10:A:6467:HOH:O	2.21	0.41
3:A:2587:TYR:CZ	3:A:2591:ARG:HD2	2.56	0.41
3:A:3246:LEU:HD11	3:A:3281:LEU:HD21	2.03	0.41
3:A:3595:ARG:HG3	3:A:3596:VAL:N	2.36	0.41
3:A:4092:ASP:HA	3:A:4095:LYS:HG2	2.02	0.41
3:A:4119:GLU:CD	3:A:4119:GLU:H	2.29	0.41
3:D:844:ARG:H	3:D:844:ARG:HG3	1.65	0.41
3:D:1276:THR:O	3:D:1282:SER:HB2	2.21	0.41
3:B:164:ARG:HH11	3:B:164:ARG:HG3	1.86	0.41
3:B:309:THR:O	3:B:313:SER:HB2	2.19	0.41
3:B:402:ARG:HA	3:B:402:ARG:HD2	1.92	0.41
3:B:820:ARG:HD2	3:B:820:ARG:HA	1.80	0.41
3:B:2214:VAL:HG21	3:B:2228:MET:SD	2.60	0.41
3:B:3246:LEU:HD11	3:B:3281:LEU:HD21	2.03	0.41
3:B:3802:ILE:HD11	3:B:3883:ASP:O	2.21	0.41
3:C:792:LEU:HA	3:C:798:GLY:HA3	2.02	0.41
3:C:2298:VAL:HG21	3:C:2334:PHE:CE2	2.56	0.41
3:C:2973:PHE:CE1	3:C:2995:ILE:HG12	2.55	0.41
3:C:3625:SER:O	3:C:3629:ARG:HG3	2.20	0.41
3:A:3410:PRO:HG3	3:A:3509:LEU:HD21	2.02	0.41
3:A:4555:LEU:HD22	3:A:4562:LEU:HD11	2.03	0.41
3:D:164:ARG:HG3	3:D:164:ARG:HH11	1.85	0.41
3:D:932:LEU:HD23	3:D:932:LEU:HA	1.91	0.41
3:D:2347:GLU:OE1	3:D:2347:GLU:HA	2.21	0.41
3:B:2527:LEU:HD21	3:B:2582:MET:HA	2.03	0.41
3:B:3405:LEU:HD12	3:B:3405:LEU:HA	1.90	0.41
3:B:3576:TYR:CE1	3:B:3582:ARG:HD2	2.56	0.41
3:C:1566:LEU:O	3:C:1589:PRO:HB3	2.21	0.41
3:C:3412:LEU:HD11	3:C:3434:LEU:HD21	2.03	0.41
3:C:4150:LEU:HB3	3:C:4160:LEU:HD21	2.02	0.41
2:K:92:PHE:H	2:K:92:PHE:HD2	1.68	0.40
3:A:2700:MET:HB3	3:A:2701:PRO:HD3	2.03	0.40
3:A:4995:LEU:HD23	3:A:4995:LEU:HA	1.92	0.40
3:D:1566:LEU:O	3:D:1589:PRO:HB3	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:2182:ILE:O	3:D:2186:MET:HG3	2.21	0.40
3:D:2630:VAL:N	3:D:2631:PRO:HD2	2.36	0.40
3:D:3246:LEU:HD11	3:D:3281:LEU:HD21	2.03	0.40
3:D:4731:ILE:HG22	3:D:4732:PHE:CD2	2.56	0.40
3:B:46:LEU:HD23	3:B:46:LEU:HA	1.93	0.40
3:B:3412:LEU:HD11	3:B:3434:LEU:HD21	2.04	0.40
3:C:1435:TYR:HB3	3:C:1575:LEU:HG	2.02	0.40
3:C:2186:MET:HE1	3:C:2238:TYR:HB2	2.02	0.40
3:C:2199:ARG:HD3	3:C:2249:SER:HB3	2.03	0.40
3:C:2615:ARG:HG3	10:C:5742:HOH:O	2.21	0.40
3:C:3405:LEU:O	3:C:3409:TYR:HB2	2.21	0.40
3:A:3405:LEU:O	3:A:3409:TYR:HB2	2.21	0.40
3:A:3626:LYS:H	3:A:3626:LYS:HD3	1.86	0.40
3:D:1024:TYR:O	3:D:1027:LEU:HB2	2.21	0.40
3:D:2312:MET:HE2	3:D:2313:LEU:HD23	2.04	0.40
3:D:2527:LEU:HD21	3:D:2582:MET:HA	2.03	0.40
3:D:3334:TRP:CD1	3:D:3334:TRP:H	2.39	0.40
3:D:3568:SER:HA	3:D:3571:TRP:NE1	2.36	0.40
3:D:3595:ARG:HG3	3:D:3596:VAL:N	2.35	0.40
3:D:4247:ILE:HD13	3:D:4247:ILE:HA	1.93	0.40
3:D:4555:LEU:HD22	3:D:4562:LEU:HD11	2.03	0.40
3:B:221:ARG:HG2	3:B:258:SER:O	2.21	0.40
3:B:2199:ARG:HD3	3:B:2249:SER:HB3	2.02	0.40
3:B:2466:LEU:HD11	3:B:2505:PHE:HD1	1.86	0.40
3:B:3847:PHE:HE1	3:B:3946:GLN:HG3	1.86	0.40
3:C:3334:TRP:CD1	3:C:3334:TRP:H	2.39	0.40
3:A:1116:GLY:HA3	3:A:1132:TRP:HB3	2.02	0.40
3:A:2010:LEU:HD22	3:A:3656:SER:OG	2.21	0.40
3:A:3758:MET:HB3	3:A:3762:ARG:NH2	2.36	0.40
3:D:801:LYS:HB3	3:D:801:LYS:HE2	1.85	0.40
3:D:1435:TYR:HB3	3:D:1575:LEU:HG	2.02	0.40
3:D:1738:LEU:HD22	3:D:1963:GLU:HG3	2.01	0.40
3:D:2700:MET:HB3	3:D:2700:MET:HE3	1.82	0.40
3:B:2292:GLU:HG2	3:B:2352:VAL:HG11	2.04	0.40
3:B:3595:ARG:HG3	3:B:3596:VAL:N	2.35	0.40
3:B:4119:GLU:H	3:B:4119:GLU:CD	2.29	0.40
3:C:3106:MET:HE1	3:C:3190:LEU:HD21	2.03	0.40
3:C:3674:ILE:HG13	3:C:3732:SER:HB3	2.03	0.40
3:C:4247:ILE:HD13	3:C:4247:ILE:HA	1.92	0.40
1:H:14:THR:HB	1:H:68:LEU:HB3	2.03	0.40
3:A:402:ARG:HA	3:A:402:ARG:HD2	1.92	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:907:LEU:HD23	3:A:907:LEU:HA	1.89	0.40
3:A:2466:LEU:HD11	3:A:2505:PHE:CD1	2.56	0.40
3:A:3368:ARG:O	3:A:3372:VAL:HG23	2.21	0.40
3:A:4680:LYS:O	3:A:4686:LEU:HB2	2.21	0.40
3:A:4725:LEU:HA	3:A:4737:ILE:HG21	2.03	0.40
3:D:2131:LEU:HD12	3:D:2131:LEU:HA	1.92	0.40
3:D:2298:VAL:HG21	3:D:2334:PHE:CE2	2.55	0.40
3:D:2466:LEU:HD11	3:D:2505:PHE:HD1	1.86	0.40
3:D:3575:LEU:HD23	3:D:3575:LEU:HA	1.92	0.40
3:D:4057:MET:HE3	3:D:4057:MET:HB2	1.90	0.40
3:D:4686:LEU:HA	3:D:4686:LEU:HD23	1.74	0.40
3:D:4844:LEU:HD11	3:D:4924:VAL:HG13	2.02	0.40
3:B:1566:LEU:O	3:B:1589:PRO:HB3	2.21	0.40
3:B:2615:ARG:HG3	10:B:5743:HOH:O	2.21	0.40
3:B:3334:TRP:CD1	3:B:3334:TRP:H	2.39	0.40
3:B:3568:SER:HA	3:B:3571:TRP:NE1	2.36	0.40
3:C:2527:LEU:HD21	3:C:2582:MET:HA	2.03	0.40
3:C:3368:ARG:O	3:C:3372:VAL:HG23	2.21	0.40
2:K:3:GLN:HG3	2:K:77:LYS:HG3	2.03	0.40
3:A:4779:LYS:HB3	3:A:4779:LYS:HE3	1.96	0.40
3:D:1089:TYR:HD2	3:D:1152:MET:HG3	1.86	0.40
3:D:2466:LEU:HD11	3:D:2505:PHE:CD1	2.56	0.40
3:D:2615:ARG:HG3	10:D:5743:HOH:O	2.21	0.40
3:D:3003:LEU:HB2	3:D:3004:PRO:HD3	2.02	0.40
3:D:3528:THR:HG22	3:D:3569:LEU:HD21	2.03	0.40
3:D:4049:VAL:HG21	3:D:4159:ARG:HD2	2.03	0.40
3:B:2010:LEU:HD22	3:B:3656:SER:OG	2.21	0.40
3:B:3969:ILE:HG21	3:B:3980:LEU:HD12	2.04	0.40
3:B:4932:ILE:HG22	3:B:4933:GLN:OE1	2.20	0.40
3:C:3528:THR:HG22	3:C:3569:LEU:HD21	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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%)	101 (96%)	4 (4%)	0	100	100
1	F	105/107 (98%)	101 (96%)	4 (4%)	0	100	100
1	G	105/107 (98%)	100 (95%)	5 (5%)	0	100	100
1	H	105/107 (98%)	101 (96%)	4 (4%)	0	100	100
2	I	146/148 (99%)	142 (97%)	4 (3%)	0	100	100
2	J	146/148 (99%)	141 (97%)	5 (3%)	0	100	100
2	K	146/148 (99%)	143 (98%)	3 (2%)	0	100	100
2	L	146/148 (99%)	142 (97%)	4 (3%)	0	100	100
3	A	4188/5037 (83%)	4121 (98%)	67 (2%)	0	100	100
3	B	4188/5037 (83%)	4119 (98%)	69 (2%)	0	100	100
3	C	4188/5037 (83%)	4121 (98%)	67 (2%)	0	100	100
3	D	4188/5037 (83%)	4122 (98%)	66 (2%)	0	100	100
All	All	17756/21168 (84%)	17454 (98%)	302 (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	58
1	F	88/88 (100%)	85 (97%)	3 (3%)	32	58
1	G	88/88 (100%)	85 (97%)	3 (3%)	32	58
1	H	88/88 (100%)	85 (97%)	3 (3%)	32	58
2	I	74/127 (58%)	71 (96%)	3 (4%)	27	51
2	J	74/127 (58%)	68 (92%)	6 (8%)	11	23
2	K	74/127 (58%)	70 (95%)	4 (5%)	20	40

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	L	74/127 (58%)	71 (96%)	3 (4%)	27	51
3	A	3528/4276 (82%)	3465 (98%)	63 (2%)	51	74
3	B	3528/4276 (82%)	3471 (98%)	57 (2%)	55	77
3	C	3528/4276 (82%)	3471 (98%)	57 (2%)	55	77
3	D	3528/4276 (82%)	3465 (98%)	63 (2%)	51	74
All	All	14760/17964 (82%)	14492 (98%)	268 (2%)	51	74

All (268) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	E	13	ARG
1	E	25	HIS
1	E	85	THR
1	F	13	ARG
1	F	25	HIS
1	F	85	THR
1	G	13	ARG
1	G	25	HIS
1	G	85	THR
1	H	2	VAL
1	H	25	HIS
1	H	85	THR
2	I	-1	HIS
2	I	91	VAL
2	I	114	GLU
2	J	-1	HIS
2	J	18	LEU
2	J	36	MET
2	J	67	GLU
2	J	91	VAL
2	J	114	GLU
2	K	-1	HIS
2	K	18	LEU
2	K	67	GLU
2	K	91	VAL
2	L	18	LEU
2	L	67	GLU
2	L	91	VAL
3	A	11	VAL
3	A	35	LEU

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Mol	Chain	Res	Type
3	A	70	GLU
3	A	184	THR
3	A	280	LEU
3	A	331	VAL
3	A	381	GLU
3	A	578	ILE
3	A	832	GLU
3	A	909	ASN
3	A	951	LYS
3	A	1033	ARG
3	A	1230	MET
3	A	1489	CYS
3	A	1975	SER
3	A	1980	LEU
3	A	1982	ARG
3	A	2092	GLN
3	A	2154	SER
3	A	2169	GLN
3	A	2173	GLN
3	A	2255	SER
3	A	2479	LEU
3	A	2540	THR
3	A	2597	LYS
3	A	2617	SER
3	A	2666	VAL
3	A	2971	GLN
3	A	2977	LEU
3	A	3050	VAL
3	A	3264	THR
3	A	3321	ARG
3	A	3405	LEU
3	A	3409	TYR
3	A	3414	ARG
3	A	3449	HIS
3	A	3538	THR
3	A	3549	VAL
3	A	3569	LEU
3	A	3639	THR
3	A	3825	GLU
3	A	3858	MET
3	A	3865	VAL
3	A	3879	GLU

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Mol	Chain	Res	Type
3	A	3899	PHE
3	A	3907	THR
3	A	3931	SER
3	A	4053	SER
3	A	4098	ASP
3	A	4099	SER
3	A	4164	LEU
3	A	4236	SER
3	A	4580	TYR
3	A	4581	LYS
3	A	4582	VAL
3	A	4686	LEU
3	A	4688	ILE
3	A	4887	MET
3	A	4902	GLU
3	A	4910	GLU
3	A	4911	LEU
3	A	4943	LEU
3	A	4966	ASP
3	D	11	VAL
3	D	35	LEU
3	D	70	GLU
3	D	184	THR
3	D	280	LEU
3	D	331	VAL
3	D	578	ILE
3	D	832	GLU
3	D	909	ASN
3	D	951	LYS
3	D	1025	ARG
3	D	1033	ARG
3	D	1230	MET
3	D	1489	CYS
3	D	1653	LEU
3	D	1975	SER
3	D	1980	LEU
3	D	1982	ARG
3	D	2092	GLN
3	D	2154	SER
3	D	2169	GLN
3	D	2173	GLN
3	D	2214	VAL

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Mol	Chain	Res	Type
3	D	2255	SER
3	D	2479	LEU
3	D	2540	THR
3	D	2597	LYS
3	D	2617	SER
3	D	2666	VAL
3	D	2971	GLN
3	D	2977	LEU
3	D	3050	VAL
3	D	3245	VAL
3	D	3264	THR
3	D	3321	ARG
3	D	3405	LEU
3	D	3409	TYR
3	D	3414	ARG
3	D	3449	HIS
3	D	3549	VAL
3	D	3569	LEU
3	D	3639	THR
3	D	3825	GLU
3	D	3865	VAL
3	D	3899	PHE
3	D	3907	THR
3	D	3931	SER
3	D	4018	ASP
3	D	4053	SER
3	D	4098	ASP
3	D	4099	SER
3	D	4133	GLN
3	D	4164	LEU
3	D	4213	SER
3	D	4580	TYR
3	D	4582	VAL
3	D	4686	LEU
3	D	4688	ILE
3	D	4825	THR
3	D	4902	GLU
3	D	4911	LEU
3	D	4943	LEU
3	D	4966	ASP
3	B	11	VAL
3	B	35	LEU

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Mol	Chain	Res	Type
3	B	70	GLU
3	B	184	THR
3	B	280	LEU
3	B	331	VAL
3	B	381	GLU
3	B	578	ILE
3	B	909	ASN
3	B	1033	ARG
3	B	1230	MET
3	B	1489	CYS
3	B	1975	SER
3	B	1980	LEU
3	B	2092	GLN
3	B	2154	SER
3	B	2169	GLN
3	B	2173	GLN
3	B	2255	SER
3	B	2479	LEU
3	B	2540	THR
3	B	2597	LYS
3	B	2617	SER
3	B	2666	VAL
3	B	2971	GLN
3	B	2977	LEU
3	B	3050	VAL
3	B	3264	THR
3	B	3321	ARG
3	B	3396	ASP
3	B	3405	LEU
3	B	3409	TYR
3	B	3414	ARG
3	B	3443	ILE
3	B	3449	HIS
3	B	3538	THR
3	B	3549	VAL
3	B	3569	LEU
3	B	3639	THR
3	B	3825	GLU
3	B	3865	VAL
3	B	3899	PHE
3	B	3907	THR
3	B	3931	SER

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Mol	Chain	Res	Type
3	B	4018	ASP
3	B	4099	SER
3	B	4224	GLU
3	B	4229	GLU
3	B	4580	TYR
3	B	4582	VAL
3	B	4658	ILE
3	B	4686	LEU
3	B	4688	ILE
3	B	4743	MET
3	B	4902	GLU
3	B	4911	LEU
3	B	4966	ASP
3	C	11	VAL
3	C	35	LEU
3	C	70	GLU
3	C	184	THR
3	C	280	LEU
3	C	331	VAL
3	C	578	ILE
3	C	832	GLU
3	C	909	ASN
3	C	951	LYS
3	C	1025	ARG
3	C	1033	ARG
3	C	1230	MET
3	C	1653	LEU
3	C	1975	SER
3	C	1980	LEU
3	C	1982	ARG
3	C	2092	GLN
3	C	2154	SER
3	C	2169	GLN
3	C	2173	GLN
3	C	2214	VAL
3	C	2255	SER
3	C	2540	THR
3	C	2597	LYS
3	C	2617	SER
3	C	2666	VAL
3	C	2971	GLN
3	C	2977	LEU

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Mol	Chain	Res	Type
3	C	3008	GLN
3	C	3050	VAL
3	C	3264	THR
3	C	3321	ARG
3	C	3396	ASP
3	C	3405	LEU
3	C	3409	TYR
3	C	3449	HIS
3	C	3549	VAL
3	C	3559	LEU
3	C	3569	LEU
3	C	3639	THR
3	C	3825	GLU
3	C	3865	VAL
3	C	3899	PHE
3	C	3907	THR
3	C	3931	SER
3	C	4018	ASP
3	C	4099	SER
3	C	4133	GLN
3	C	4580	TYR
3	C	4582	VAL
3	C	4686	LEU
3	C	4743	MET
3	C	4902	GLU
3	C	4911	LEU
3	C	4966	ASP
3	C	4985	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (152) such sidechains are listed below:

Mol	Chain	Res	Type
1	F	20	GLN
1	G	20	GLN
1	H	20	GLN
2	I	-1	HIS
2	I	8	GLN
2	J	8	GLN
2	J	60	ASN
2	K	-1	HIS
2	K	60	ASN
2	L	-1	HIS

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Mol	Chain	Res	Type
2	L	8	GLN
2	L	60	ASN
3	A	32	GLN
3	A	181	HIS
3	A	241	GLN
3	A	308	HIS
3	A	461	HIS
3	A	479	GLN
3	A	610	ASN
3	A	765	GLN
3	A	812	HIS
3	A	1011	GLN
3	A	1084	GLN
3	A	1165	ASN
3	A	1298	HIS
3	A	1660	GLN
3	A	1702	HIS
3	A	1938	GLN
3	A	2095	GLN
3	A	2441	HIS
3	A	2520	HIS
3	A	2584	HIS
3	A	2688	HIS
3	A	3030	HIS
3	A	3128	ASN
3	A	3145	GLN
3	A	3422	HIS
3	A	3523	ASN
3	A	3554	GLN
3	A	3558	HIS
3	A	4005	GLN
3	A	4078	GLN
3	A	4162	ASN
3	A	4216	GLN
3	A	4246	GLN
3	A	4805	ASN
3	A	4857	ASN
3	A	5031	GLN
3	D	32	GLN
3	D	181	HIS
3	D	241	GLN
3	D	461	HIS

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Mol	Chain	Res	Type
3	D	479	GLN
3	D	593	HIS
3	D	610	ASN
3	D	765	GLN
3	D	812	HIS
3	D	963	ASN
3	D	1011	GLN
3	D	1084	GLN
3	D	1165	ASN
3	D	1298	HIS
3	D	1660	GLN
3	D	1702	HIS
3	D	1938	GLN
3	D	2441	HIS
3	D	2520	HIS
3	D	2584	HIS
3	D	3030	HIS
3	D	3128	ASN
3	D	3145	GLN
3	D	3422	HIS
3	D	3523	ASN
3	D	3554	GLN
3	D	3558	HIS
3	D	4005	GLN
3	D	4109	GLN
3	D	4133	GLN
3	D	4162	ASN
3	D	4216	GLN
3	D	4558	ASN
3	D	4728	HIS
3	D	4857	ASN
3	B	181	HIS
3	B	241	GLN
3	B	461	HIS
3	B	479	GLN
3	B	610	ASN
3	B	765	GLN
3	B	1011	GLN
3	B	1084	GLN
3	B	1165	ASN
3	B	1220	GLN
3	B	1298	HIS

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Mol	Chain	Res	Type
3	B	1299	GLN
3	B	1545	ASN
3	B	1660	GLN
3	B	1702	HIS
3	B	1938	GLN
3	B	2095	GLN
3	B	2441	HIS
3	B	2520	HIS
3	B	2584	HIS
3	B	3013	HIS
3	B	3030	HIS
3	B	3128	ASN
3	B	3145	GLN
3	B	3422	HIS
3	B	3523	ASN
3	B	3554	GLN
3	B	3558	HIS
3	B	3994	HIS
3	B	4005	GLN
3	B	4109	GLN
3	B	4162	ASN
3	B	4216	GLN
3	B	4857	ASN
3	B	5031	GLN
3	C	32	GLN
3	C	181	HIS
3	C	241	GLN
3	C	479	GLN
3	C	610	ASN
3	C	765	GLN
3	C	812	HIS
3	C	909	ASN
3	C	1011	GLN
3	C	1084	GLN
3	C	1660	GLN
3	C	1702	HIS
3	C	1938	GLN
3	C	2173	GLN
3	C	2441	HIS
3	C	2520	HIS
3	C	2584	HIS
3	C	3030	HIS

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Mol	Chain	Res	Type
3	C	3128	ASN
3	C	3145	GLN
3	C	3422	HIS
3	C	3523	ASN
3	C	3554	GLN
3	C	3558	HIS
3	C	3897	ASN
3	C	4005	GLN
3	C	4109	GLN
3	C	4133	GLN
3	C	4162	ASN
3	C	4216	GLN
3	C	4246	GLN
3	C	4558	ASN
3	C	4805	ASN
3	C	4857	ASN

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 36 ligands modelled in this entry, 8 are monoatomic - leaving 28 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	C	5607	-	28,29,29	1.41	4 (14%)	43,45,45	1.84	8 (18%)
7	43M	C	5606	-	9,9,9	0.39	0	12,12,12	0.50	0
5	ADP	B	5607	-	28,29,29	1.42	5 (17%)	43,45,45	1.85	8 (18%)
7	43M	B	5604	-	9,9,9	0.39	0	12,12,12	0.53	0
6	U1C	D	5603	-	25,25,25	0.61	0	33,35,35	0.51	0
7	43M	B	5605	-	9,9,9	0.40	0	12,12,12	0.53	0
5	ADP	A	5602	-	28,29,29	1.41	4 (14%)	43,45,45	1.84	8 (18%)
5	ADP	B	5602	-	28,29,29	1.41	4 (14%)	43,45,45	1.84	8 (18%)
9	CFF	B	5609	-	15,15,15	0.59	0	23,23,23	0.76	1 (4%)
9	CFF	A	5609	-	15,15,15	0.59	0	23,23,23	0.75	1 (4%)
7	43M	D	5604	-	9,9,9	0.40	0	12,12,12	0.52	0
6	U1C	C	5603	-	25,25,25	0.61	0	33,35,35	0.50	0
7	43M	A	5605	-	9,9,9	0.40	0	12,12,12	0.52	0
5	ADP	D	5607	-	28,29,29	1.41	4 (14%)	43,45,45	1.85	8 (18%)
5	ADP	C	5602	-	28,29,29	1.41	4 (14%)	43,45,45	1.84	8 (18%)
9	CFF	C	5609	-	15,15,15	0.59	0	23,23,23	0.75	1 (4%)
7	43M	D	5605	-	9,9,9	0.39	0	12,12,12	0.53	0
7	43M	C	5605	-	9,9,9	0.39	0	12,12,12	0.51	0
7	43M	B	5606	-	9,9,9	0.38	0	12,12,12	0.50	0
9	CFF	D	5609	-	15,15,15	0.59	0	23,23,23	0.75	1 (4%)
7	43M	C	5604	-	9,9,9	0.38	0	12,12,12	0.52	0
7	43M	A	5606	-	9,9,9	0.40	0	12,12,12	0.50	0
5	ADP	A	5607	-	28,29,29	1.42	4 (14%)	43,45,45	1.85	8 (18%)
5	ADP	D	5602	-	28,29,29	1.40	4 (14%)	43,45,45	1.84	8 (18%)
7	43M	A	5604	-	9,9,9	0.38	0	12,12,12	0.52	0
7	43M	D	5606	-	9,9,9	0.39	0	12,12,12	0.51	0
6	U1C	B	5603	-	25,25,25	0.62	0	33,35,35	0.50	0
6	U1C	A	5603	-	25,25,25	0.61	0	33,35,35	0.49	0

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	C	5607	-	-	2/16/32/32	0/3/3/3
7	43M	C	5606	-	-	-	0/1/1/1
5	ADP	B	5607	-	-	2/16/32/32	0/3/3/3
7	43M	B	5604	-	-	-	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	U1C	D	5603	-	-	0/11/25/25	0/3/3/3
7	43M	B	5605	-	-	-	0/1/1/1
5	ADP	A	5602	-	-	2/16/32/32	0/3/3/3
5	ADP	B	5602	-	-	2/16/32/32	0/3/3/3
9	CFF	B	5609	-	-	-	0/2/2/2
9	CFF	A	5609	-	-	-	0/2/2/2
7	43M	D	5604	-	-	-	0/1/1/1
6	U1C	C	5603	-	-	0/11/25/25	0/3/3/3
7	43M	A	5605	-	-	-	0/1/1/1
5	ADP	D	5607	-	-	2/16/32/32	0/3/3/3
5	ADP	C	5602	-	-	2/16/32/32	0/3/3/3
9	CFF	C	5609	-	-	-	0/2/2/2
7	43M	D	5605	-	-	-	0/1/1/1
7	43M	C	5605	-	-	-	0/1/1/1
7	43M	B	5606	-	-	-	0/1/1/1
9	CFF	D	5609	-	-	-	0/2/2/2
7	43M	C	5604	-	-	-	0/1/1/1
7	43M	A	5606	-	-	-	0/1/1/1
5	ADP	A	5607	-	-	2/16/32/32	0/3/3/3
5	ADP	D	5602	-	-	2/16/32/32	0/3/3/3
7	43M	A	5604	-	-	-	0/1/1/1
7	43M	D	5606	-	-	-	0/1/1/1
6	U1C	B	5603	-	-	0/11/25/25	0/3/3/3
6	U1C	A	5603	-	-	0/11/25/25	0/3/3/3

All (33) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	A	5607	ADP	C5-C4	4.72	1.47	1.39
5	C	5602	ADP	C5-C4	4.70	1.47	1.39
5	A	5602	ADP	C5-C4	4.70	1.47	1.39
5	B	5607	ADP	C5-C4	4.69	1.47	1.39
5	C	5607	ADP	C5-C4	4.68	1.47	1.39
5	D	5607	ADP	C5-C4	4.67	1.47	1.39
5	B	5602	ADP	C5-C4	4.67	1.47	1.39
5	D	5602	ADP	C5-C4	4.65	1.47	1.39
5	D	5607	ADP	C5-C6	2.70	1.48	1.41
5	A	5607	ADP	C5-C6	2.69	1.48	1.41
5	B	5607	ADP	C5-C6	2.69	1.48	1.41
5	C	5607	ADP	C5-C6	2.68	1.48	1.41
5	B	5602	ADP	C5-C6	2.67	1.48	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	C	5602	ADP	C5-C6	2.67	1.48	1.41
5	A	5602	ADP	C5-C6	2.64	1.48	1.41
5	D	5602	ADP	C5-C6	2.63	1.48	1.41
5	B	5602	ADP	C5-N7	-2.42	1.34	1.39
5	C	5602	ADP	C5-N7	-2.42	1.34	1.39
5	B	5607	ADP	C5-N7	-2.40	1.34	1.39
5	A	5602	ADP	C5-N7	-2.39	1.34	1.39
5	D	5602	ADP	C5-N7	-2.37	1.34	1.39
5	A	5607	ADP	C5-N7	-2.35	1.34	1.39
5	D	5607	ADP	C5-N7	-2.34	1.34	1.39
5	C	5607	ADP	C5-N7	-2.33	1.34	1.39
5	D	5607	ADP	C8-N7	2.24	1.36	1.31
5	C	5607	ADP	C8-N7	2.22	1.35	1.31
5	B	5607	ADP	C8-N7	2.22	1.35	1.31
5	A	5607	ADP	C8-N7	2.21	1.35	1.31
5	B	5602	ADP	C8-N7	2.15	1.35	1.31
5	D	5602	ADP	C8-N7	2.15	1.35	1.31
5	C	5602	ADP	C8-N7	2.12	1.35	1.31
5	A	5602	ADP	C8-N7	2.09	1.35	1.31
5	B	5607	ADP	PA-O3A	2.00	1.61	1.59

All (68) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	D	5607	ADP	C5-C4-N3	-6.02	118.42	126.72
5	B	5607	ADP	C5-C4-N3	-6.00	118.46	126.72
5	D	5602	ADP	C5-C4-N3	-5.99	118.47	126.72
5	A	5607	ADP	C5-C4-N3	-5.98	118.48	126.72
5	C	5607	ADP	C5-C4-N3	-5.98	118.48	126.72
5	C	5602	ADP	C5-C4-N3	-5.97	118.50	126.72
5	B	5602	ADP	C5-C4-N3	-5.96	118.51	126.72
5	A	5602	ADP	C5-C4-N3	-5.94	118.53	126.72
5	D	5607	ADP	N3-C4-N9	4.82	135.36	127.17
5	C	5602	ADP	N3-C4-N9	4.81	135.34	127.17
5	A	5607	ADP	N3-C4-N9	4.80	135.33	127.17
5	A	5602	ADP	N3-C4-N9	4.79	135.31	127.17
5	B	5602	ADP	N3-C4-N9	4.78	135.30	127.17
5	B	5607	ADP	N3-C4-N9	4.78	135.30	127.17
5	D	5602	ADP	N3-C4-N9	4.77	135.29	127.17
5	C	5607	ADP	N3-C4-N9	4.75	135.25	127.17
5	B	5607	ADP	C2-N3-C4	3.77	121.05	111.83
5	D	5607	ADP	C2-N3-C4	3.77	121.03	111.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	A	5607	ADP	C2-N3-C4	3.75	120.99	111.83
5	C	5607	ADP	C2-N3-C4	3.73	120.95	111.83
5	B	5602	ADP	C2-N3-C4	3.71	120.89	111.83
5	C	5602	ADP	C2-N3-C4	3.71	120.89	111.83
5	A	5602	ADP	C2-N3-C4	3.70	120.86	111.83
5	D	5602	ADP	C2-N3-C4	3.69	120.85	111.83
5	C	5607	ADP	C4-C5-N7	-3.44	106.65	110.58
5	D	5602	ADP	C4-C5-N7	-3.41	106.69	110.58
5	B	5607	ADP	C4-C5-N7	-3.40	106.70	110.58
5	A	5602	ADP	C4-C5-N7	-3.40	106.70	110.58
5	C	5602	ADP	C4-C5-N7	-3.39	106.70	110.58
5	A	5607	ADP	C4-C5-N7	-3.39	106.71	110.58
5	D	5607	ADP	C4-C5-N7	-3.38	106.72	110.58
5	B	5602	ADP	C4-C5-N7	-3.38	106.72	110.58
5	B	5607	ADP	N3-C2-N1	-3.25	123.66	128.58
5	A	5607	ADP	N3-C2-N1	-3.24	123.68	128.58
5	C	5607	ADP	N3-C2-N1	-3.23	123.69	128.58
5	D	5607	ADP	N3-C2-N1	-3.21	123.72	128.58
5	B	5602	ADP	N3-C2-N1	-3.14	123.82	128.58
5	C	5602	ADP	N3-C2-N1	-3.14	123.83	128.58
5	A	5602	ADP	N3-C2-N1	-3.13	123.84	128.58
5	D	5602	ADP	N3-C2-N1	-3.12	123.86	128.58
5	A	5602	ADP	C3'-C2'-C1'	2.58	106.34	101.46
5	C	5602	ADP	C3'-C2'-C1'	2.57	106.33	101.46
5	D	5607	ADP	C4-N9-C8	2.56	108.42	105.74
5	D	5602	ADP	C3'-C2'-C1'	2.55	106.29	101.46
5	B	5602	ADP	C3'-C2'-C1'	2.55	106.29	101.46
5	B	5607	ADP	C5-N7-C8	2.54	107.45	103.45
5	C	5607	ADP	C5-N7-C8	2.53	107.43	103.45
5	A	5607	ADP	C4-N9-C8	2.53	108.39	105.74
5	A	5607	ADP	C5-N7-C8	2.53	107.42	103.45
5	C	5607	ADP	C4-N9-C8	2.51	108.37	105.74
5	D	5607	ADP	C5-N7-C8	2.50	107.38	103.45
5	C	5602	ADP	C4-N9-C8	2.49	108.36	105.74
5	A	5602	ADP	C4-N9-C8	2.49	108.35	105.74
5	B	5602	ADP	C4-N9-C8	2.48	108.35	105.74
5	B	5607	ADP	C4-N9-C8	2.48	108.34	105.74
5	C	5602	ADP	C5-N7-C8	2.46	107.32	103.45
5	A	5602	ADP	C5-N7-C8	2.46	107.32	103.45
5	D	5602	ADP	C4-N9-C8	2.45	108.31	105.74
5	B	5602	ADP	C5-N7-C8	2.44	107.29	103.45
5	D	5602	ADP	C5-N7-C8	2.44	107.29	103.45

Continued on next page...

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	B	5609	CFF	C12-N3-C2	2.41	121.53	117.33
9	C	5609	CFF	C12-N3-C2	2.39	121.50	117.33
9	A	5609	CFF	C12-N3-C2	2.38	121.49	117.33
9	D	5609	CFF	C12-N3-C2	2.38	121.48	117.33
5	C	5607	ADP	C3'-C2'-C1'	2.17	105.56	101.46
5	A	5607	ADP	C3'-C2'-C1'	2.17	105.56	101.46
5	B	5607	ADP	C3'-C2'-C1'	2.16	105.55	101.46
5	D	5607	ADP	C3'-C2'-C1'	2.14	105.51	101.46

There are no chirality outliers.

All (16) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	A	5602	ADP	O4'-C4'-C5'-O5'
5	D	5602	ADP	O4'-C4'-C5'-O5'
5	B	5602	ADP	O4'-C4'-C5'-O5'
5	C	5602	ADP	O4'-C4'-C5'-O5'
5	A	5607	ADP	O4'-C1'-N9-C8
5	B	5607	ADP	O4'-C1'-N9-C8
5	A	5607	ADP	O4'-C1'-N9-C4
5	D	5607	ADP	O4'-C1'-N9-C4
5	B	5607	ADP	O4'-C1'-N9-C4
5	C	5607	ADP	O4'-C1'-N9-C4
5	D	5607	ADP	O4'-C1'-N9-C8
5	A	5602	ADP	C3'-C4'-C5'-O5'
5	D	5602	ADP	C3'-C4'-C5'-O5'
5	B	5602	ADP	C3'-C4'-C5'-O5'
5	C	5602	ADP	C3'-C4'-C5'-O5'
5	C	5607	ADP	O4'-C1'-N9-C8

There are no ring outliers.

8 monomers are involved in 12 short contacts:

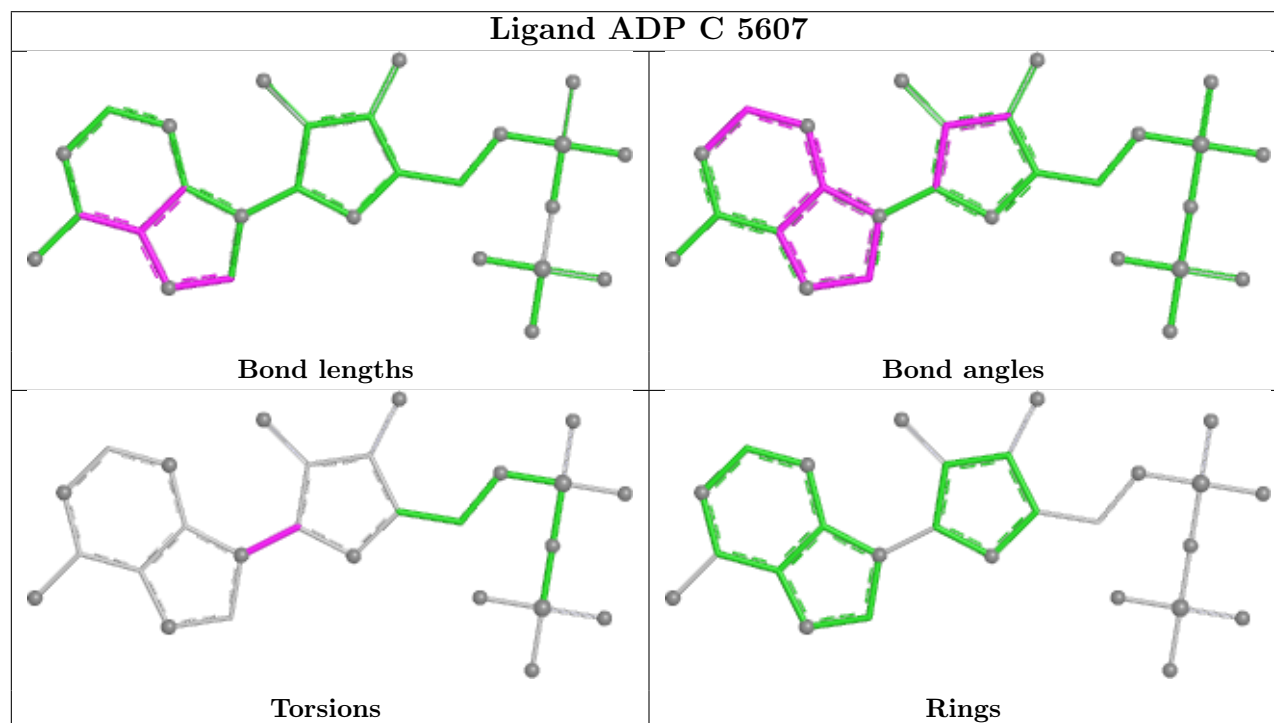
Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	C	5607	ADP	1	0
5	B	5607	ADP	1	0
9	B	5609	CFF	2	0
9	A	5609	CFF	2	0
5	D	5607	ADP	1	0
9	C	5609	CFF	2	0
9	D	5609	CFF	2	0

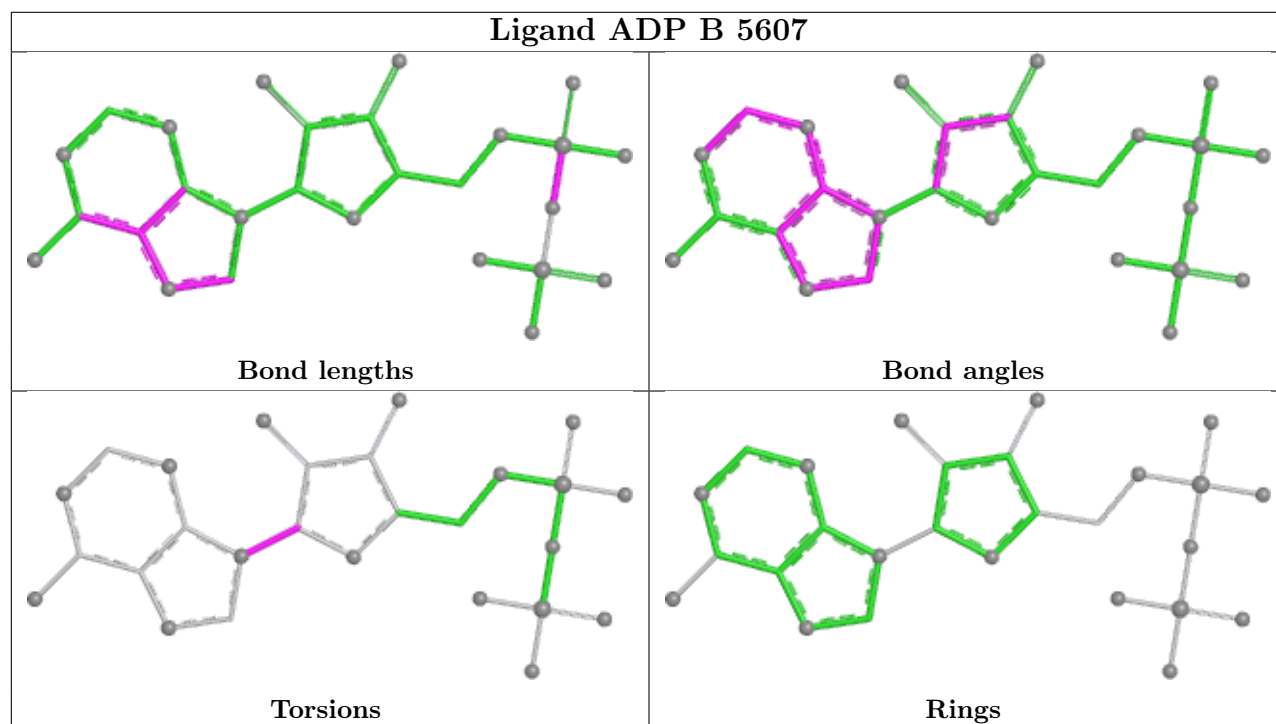
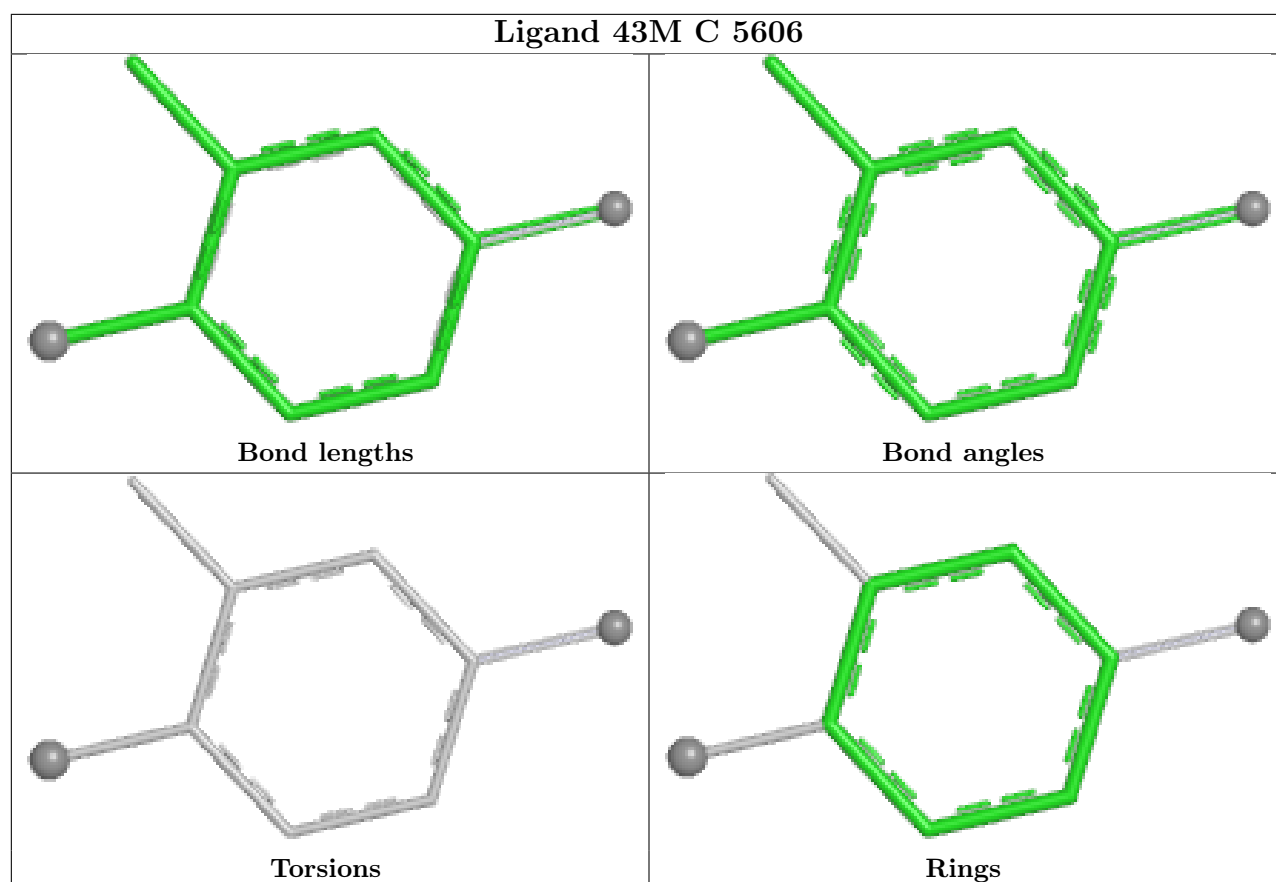
Continued on next page...

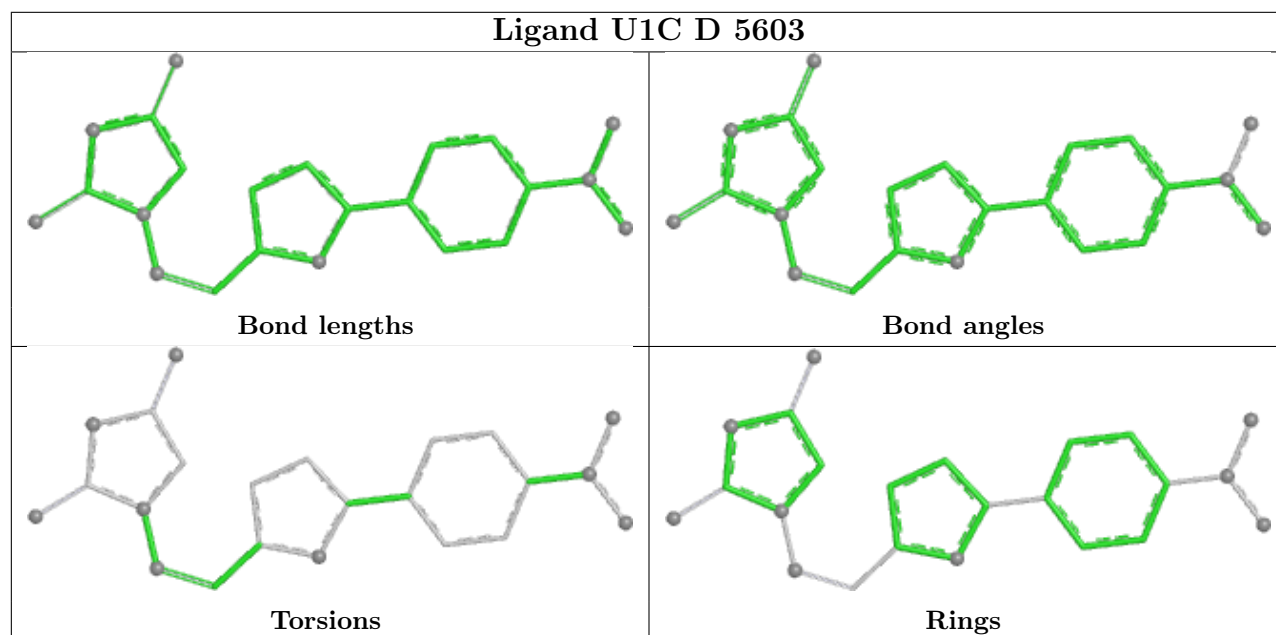
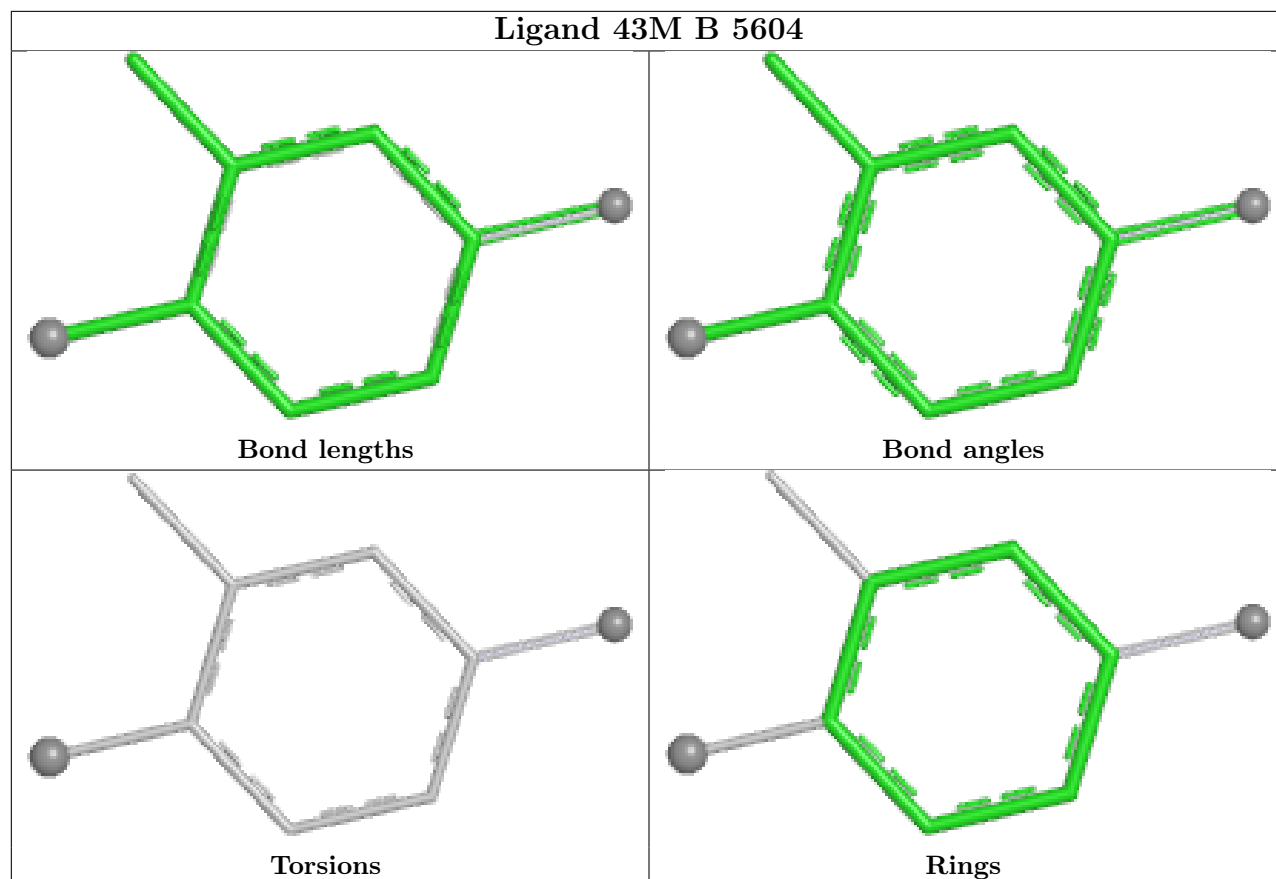
Continued from previous page...

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	A	5607	ADP	1	0

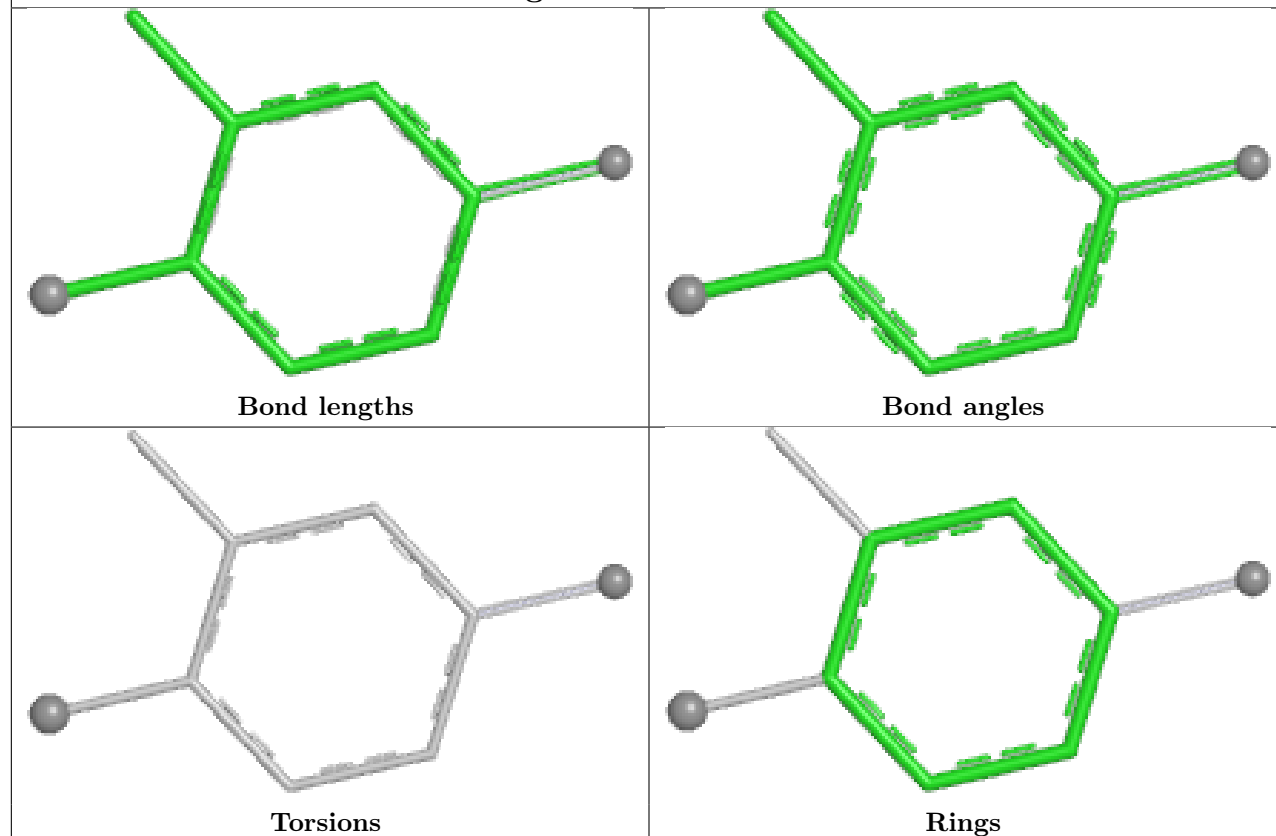
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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



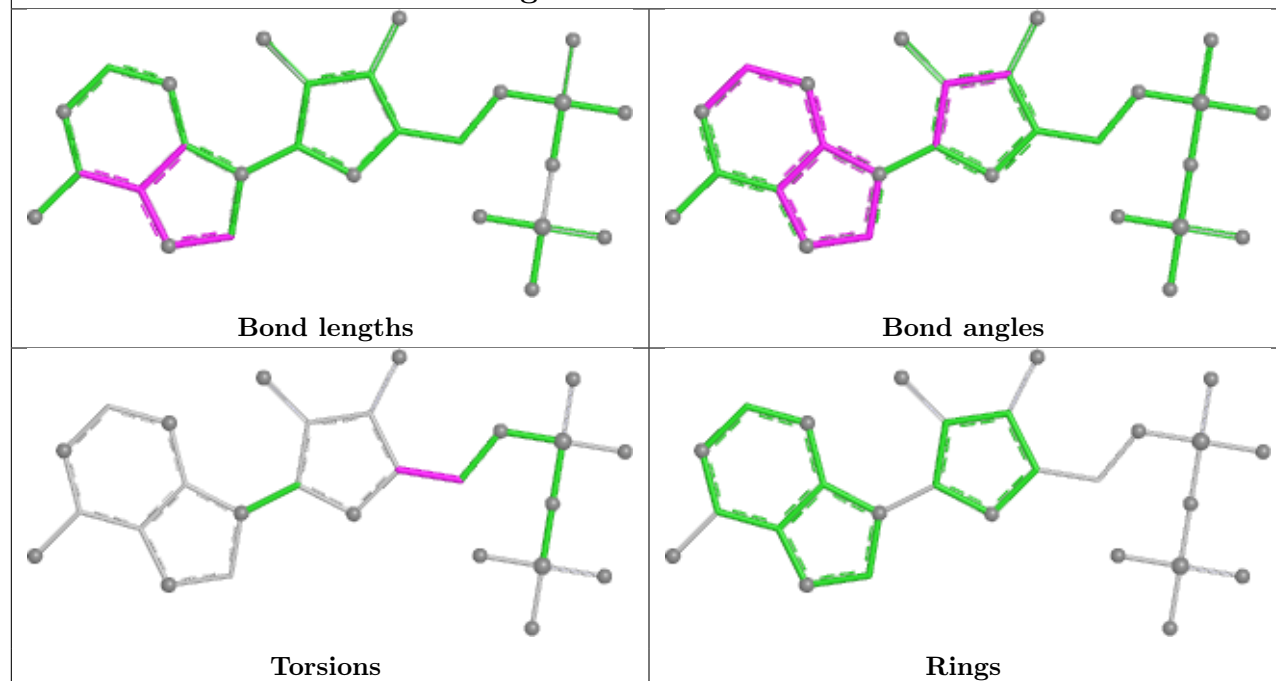


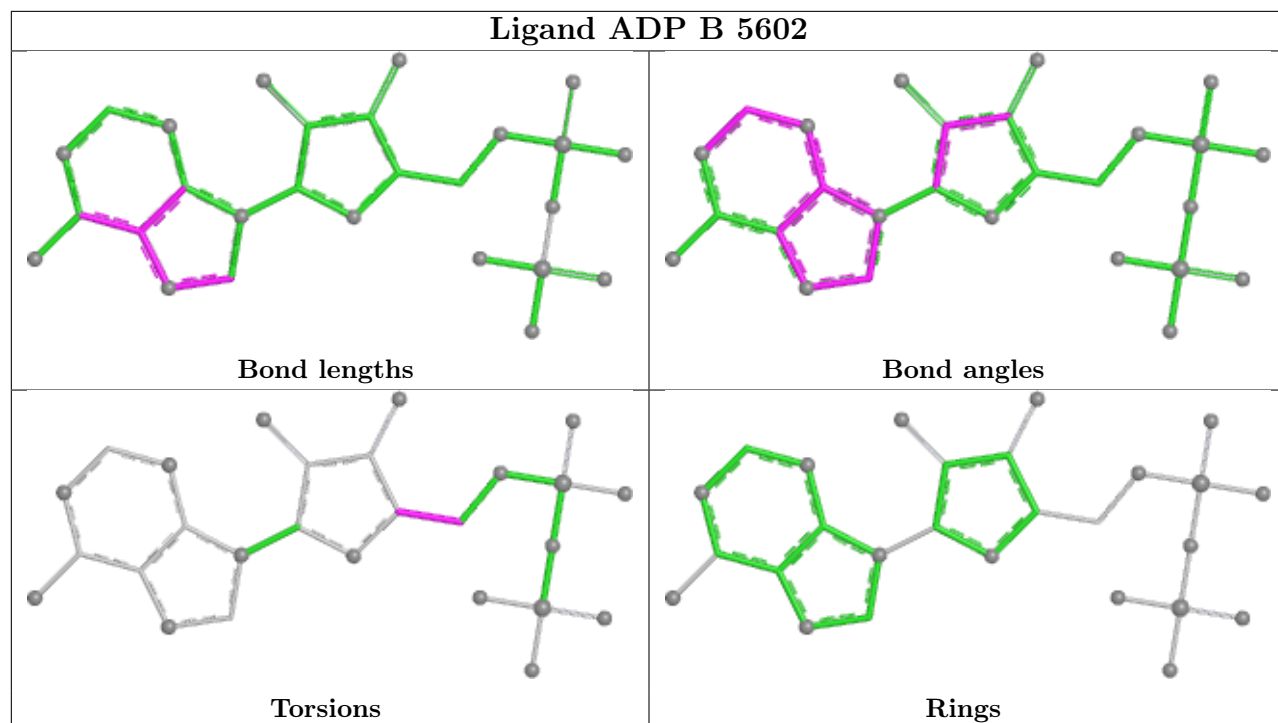


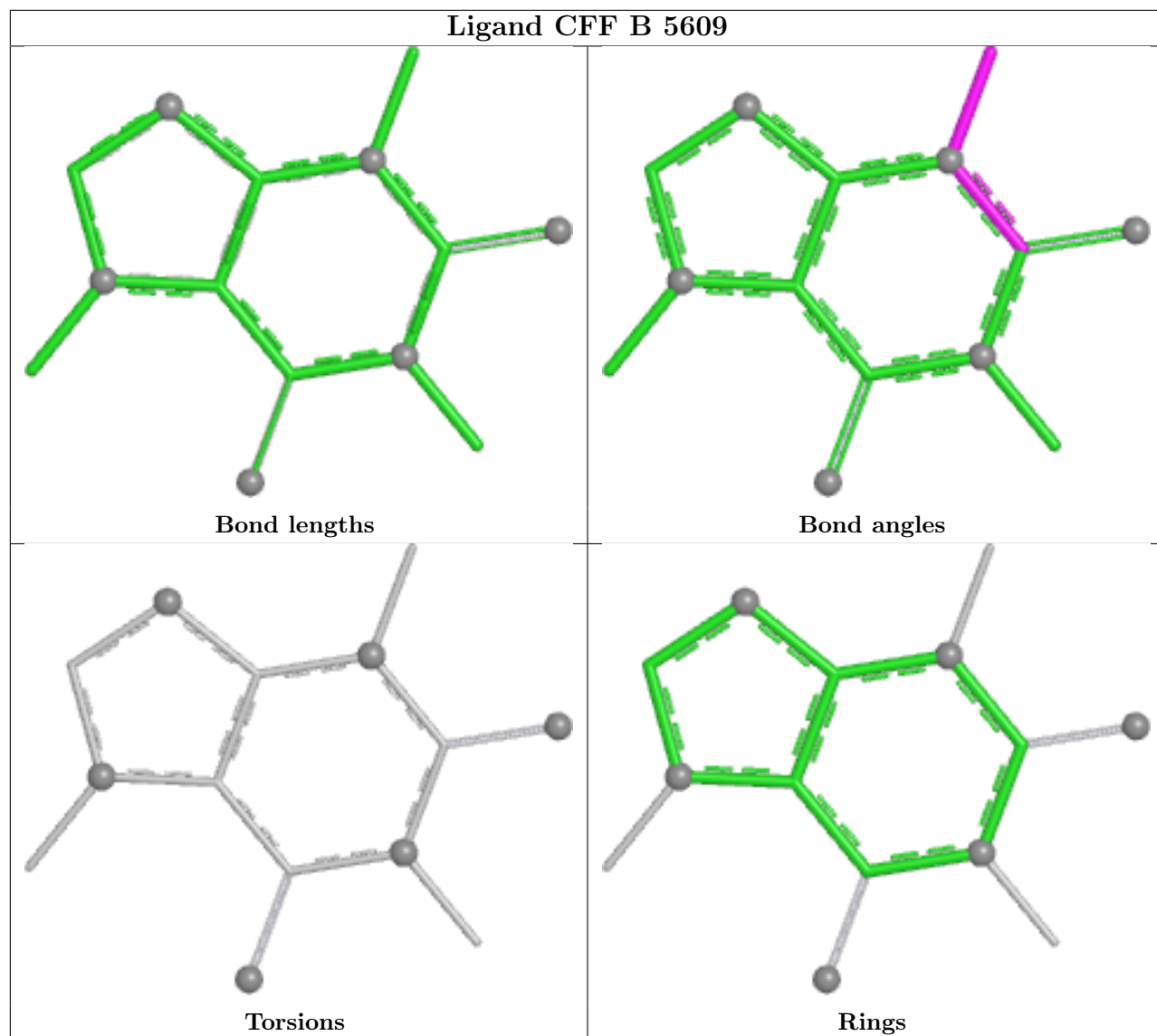
Ligand 43M B 5605

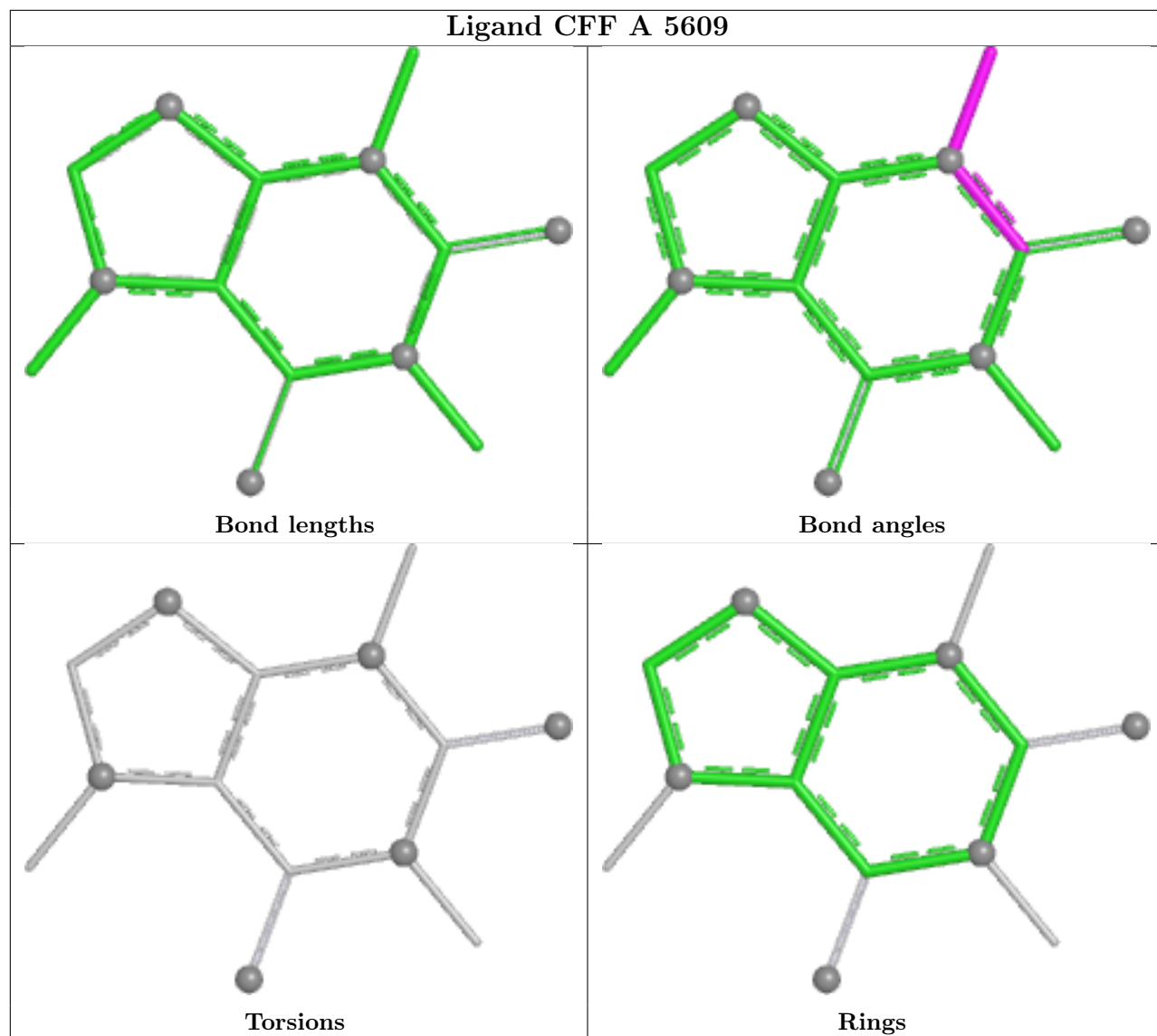


Ligand ADP A 5602

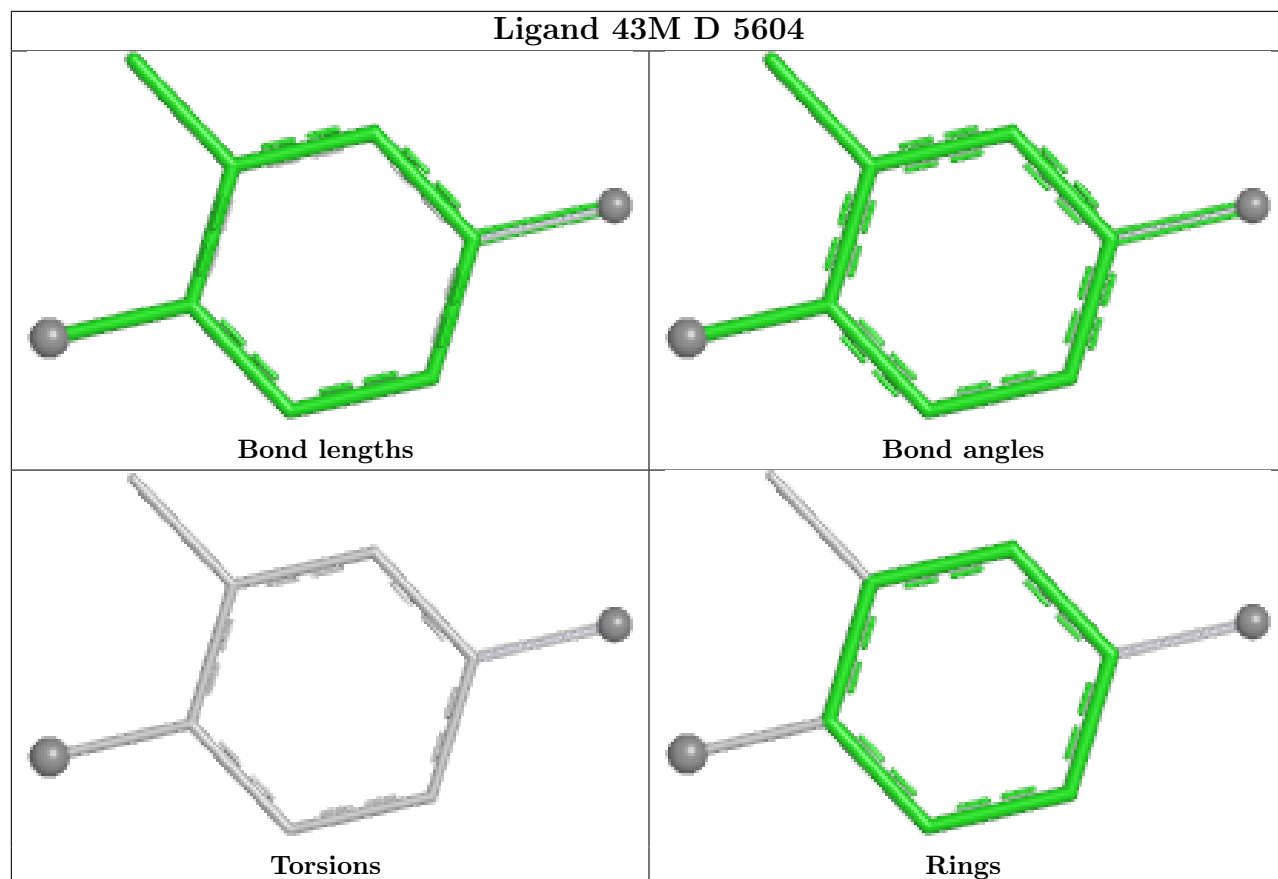




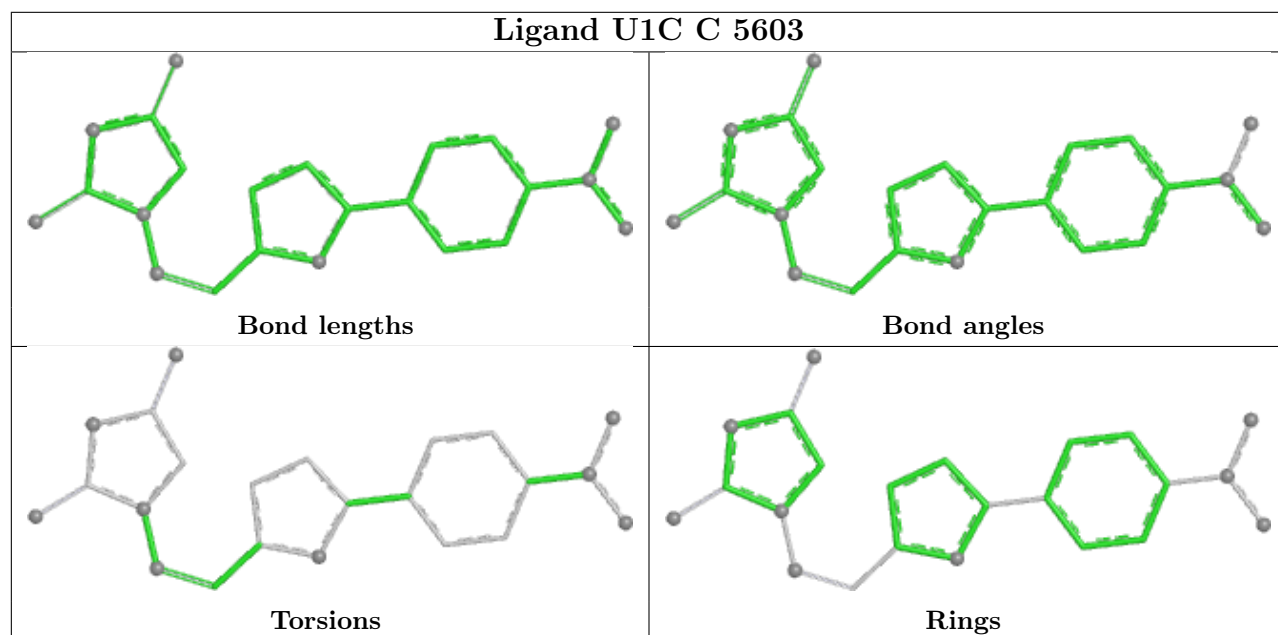




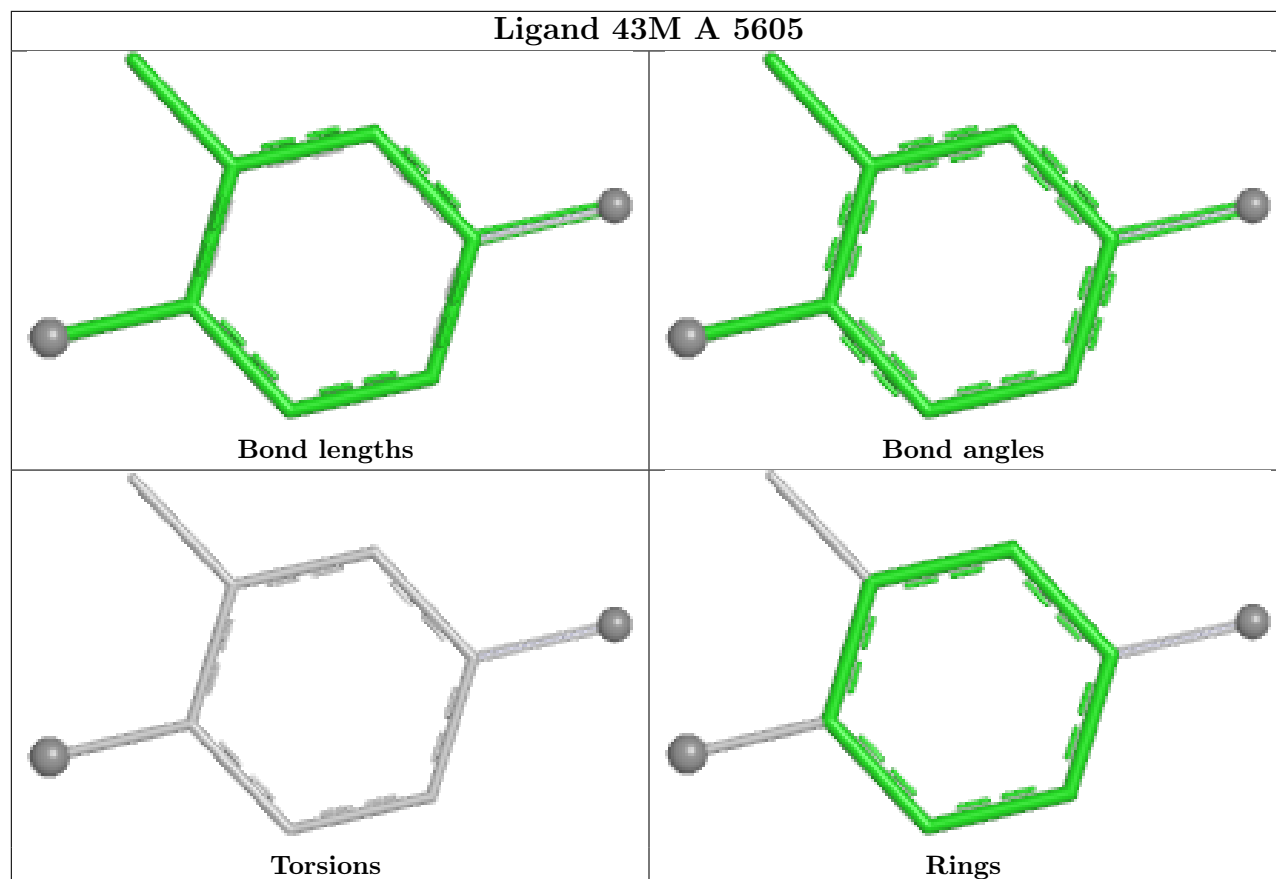
Ligand 43M D 5604



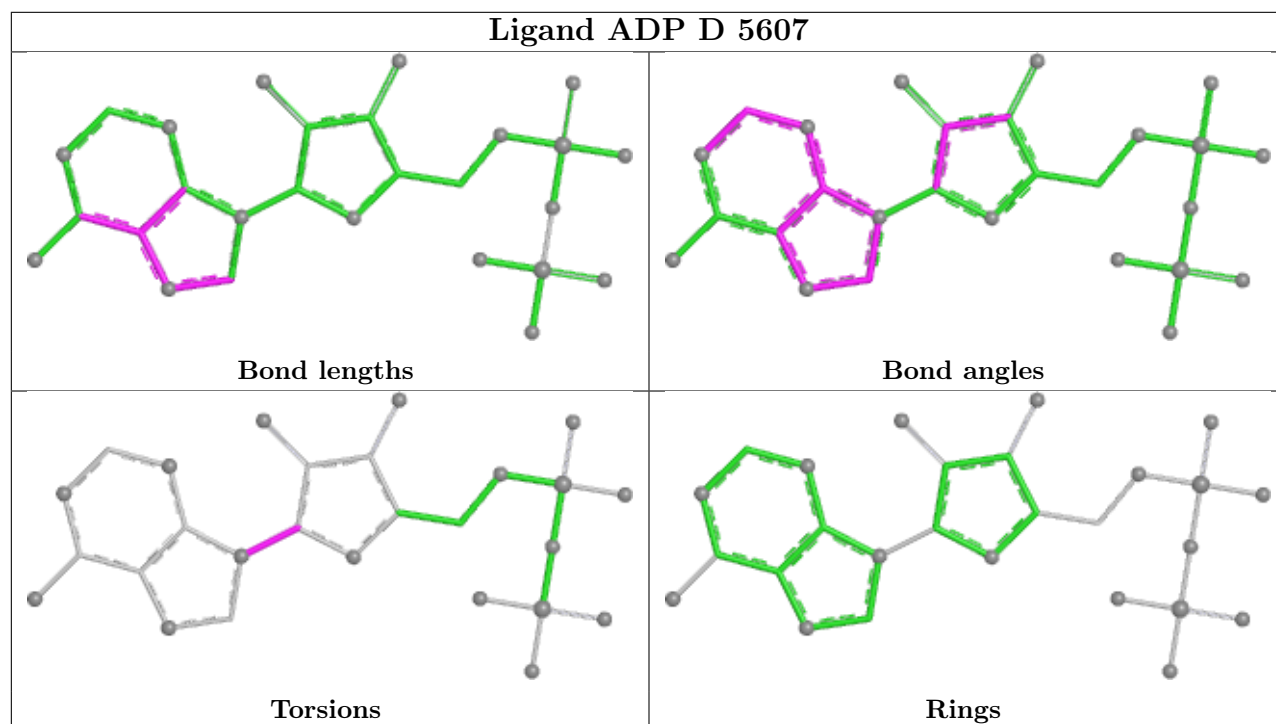
Ligand U1C C 5603

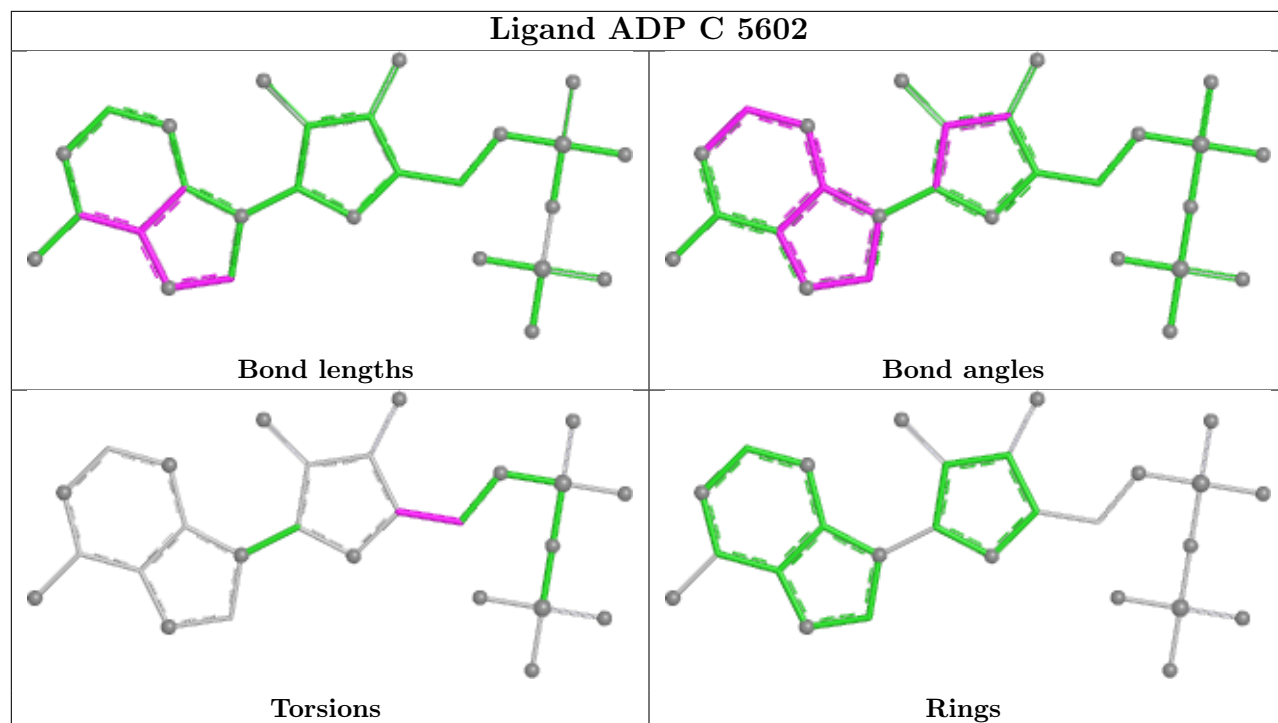


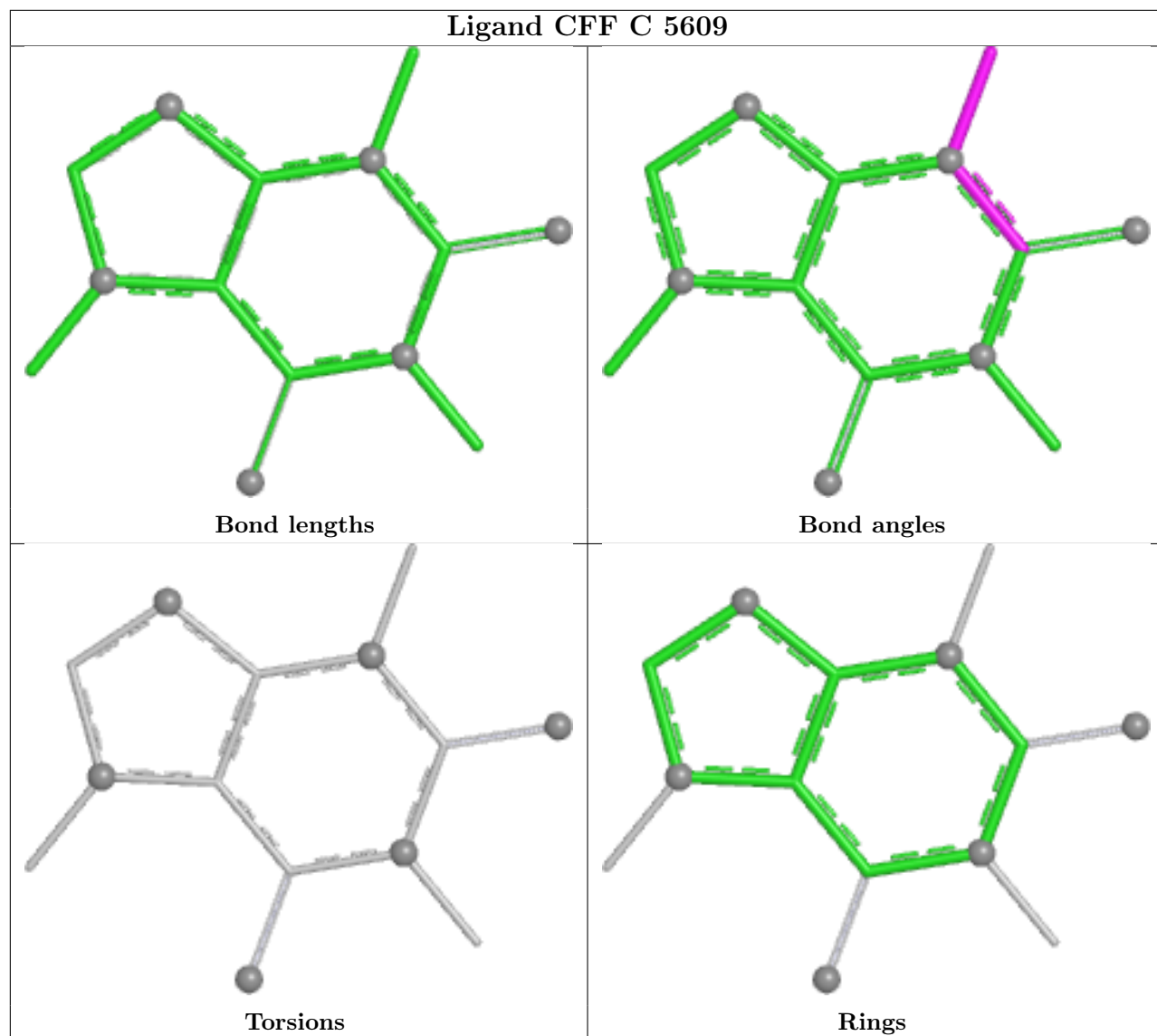
Ligand 43M A 5605



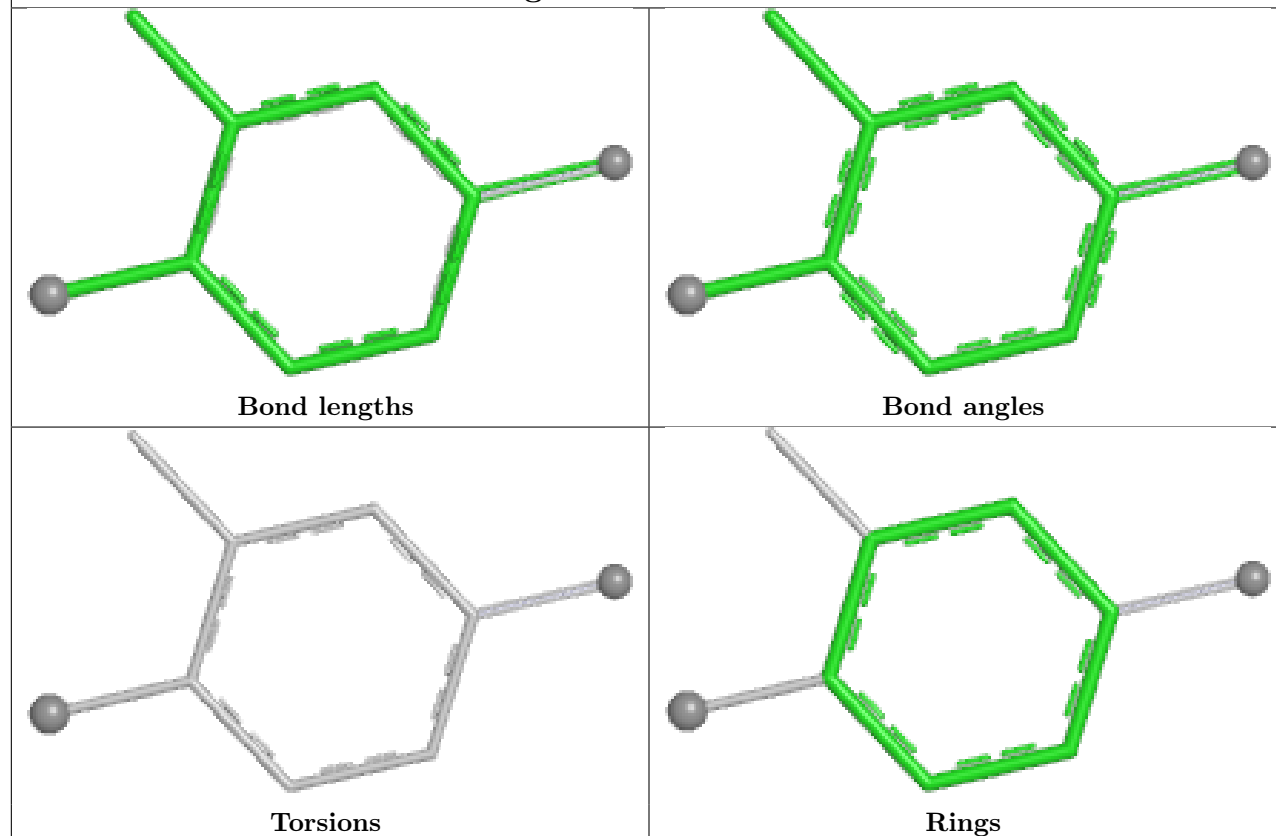
Ligand ADP D 5607



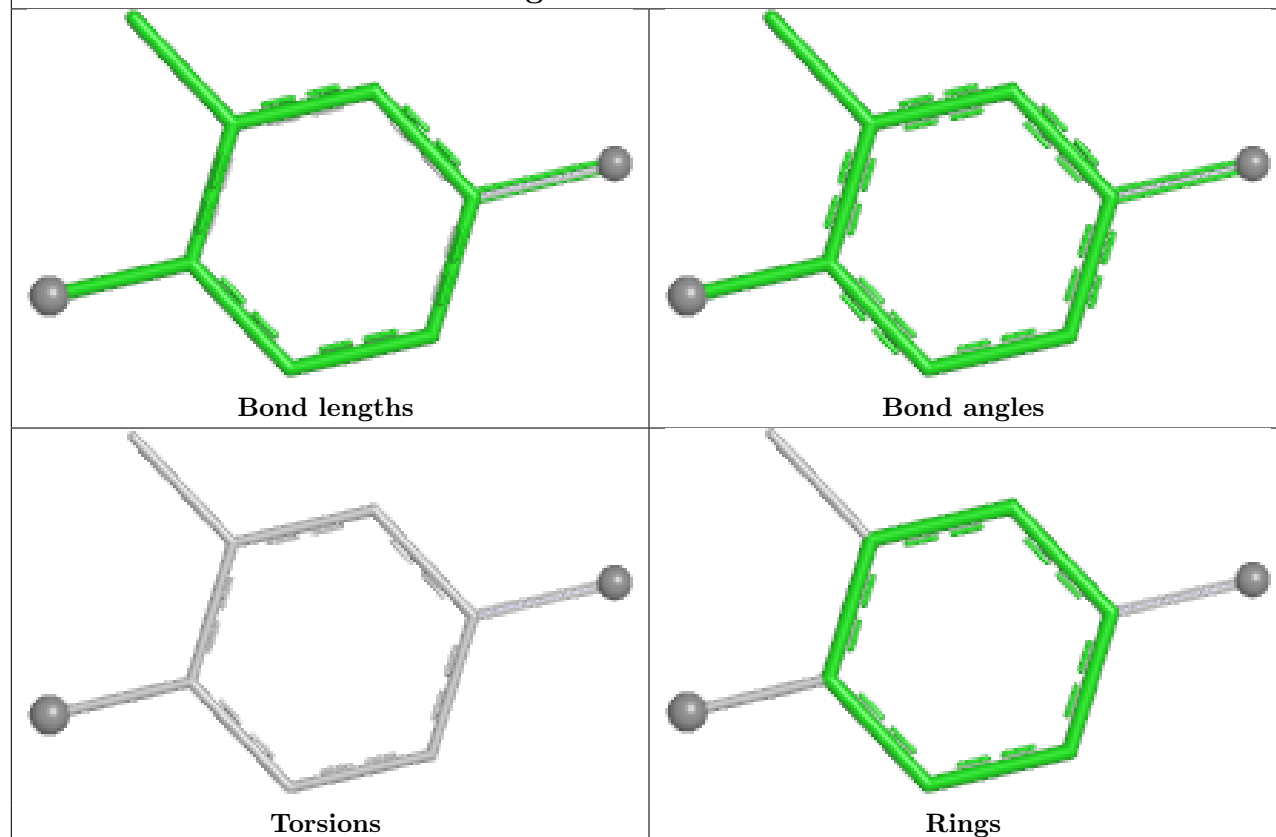


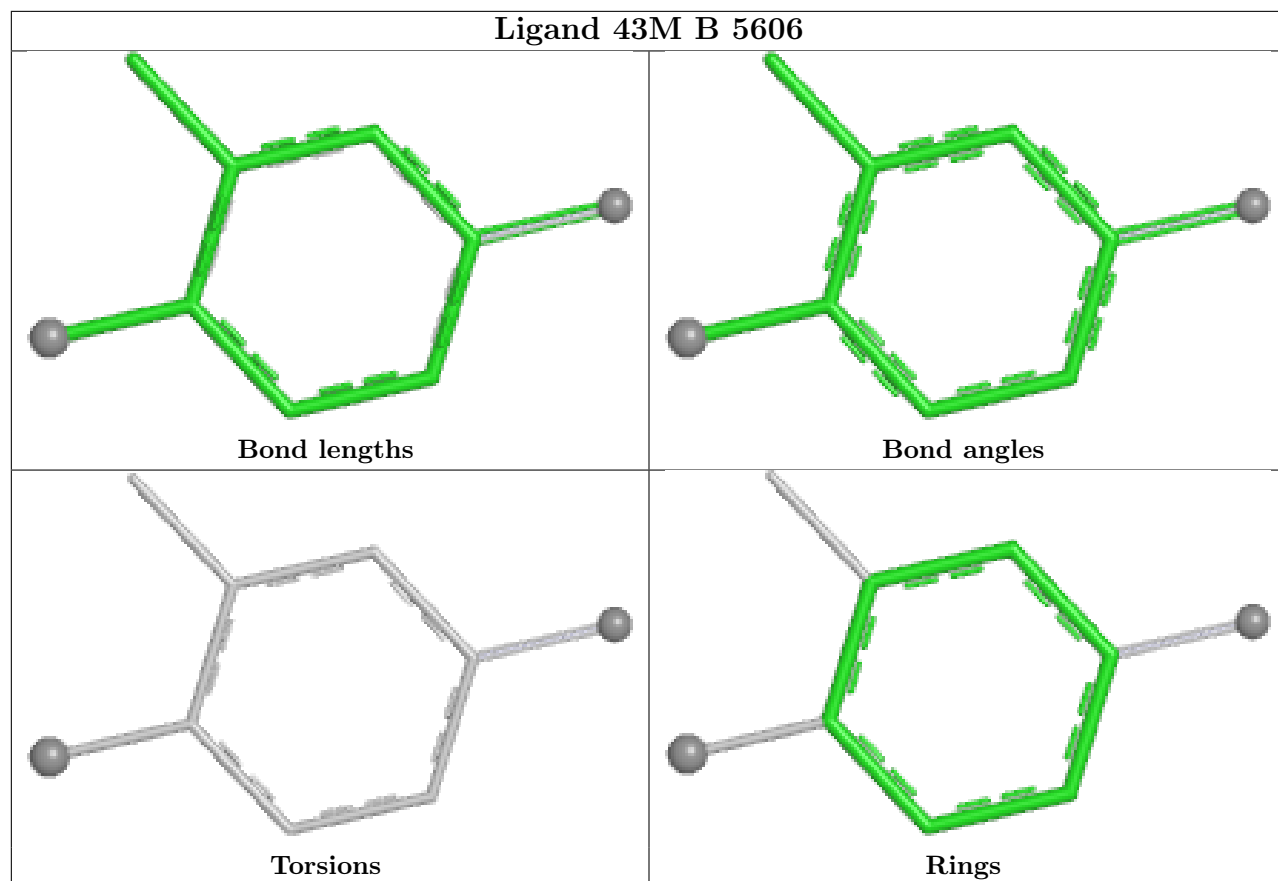


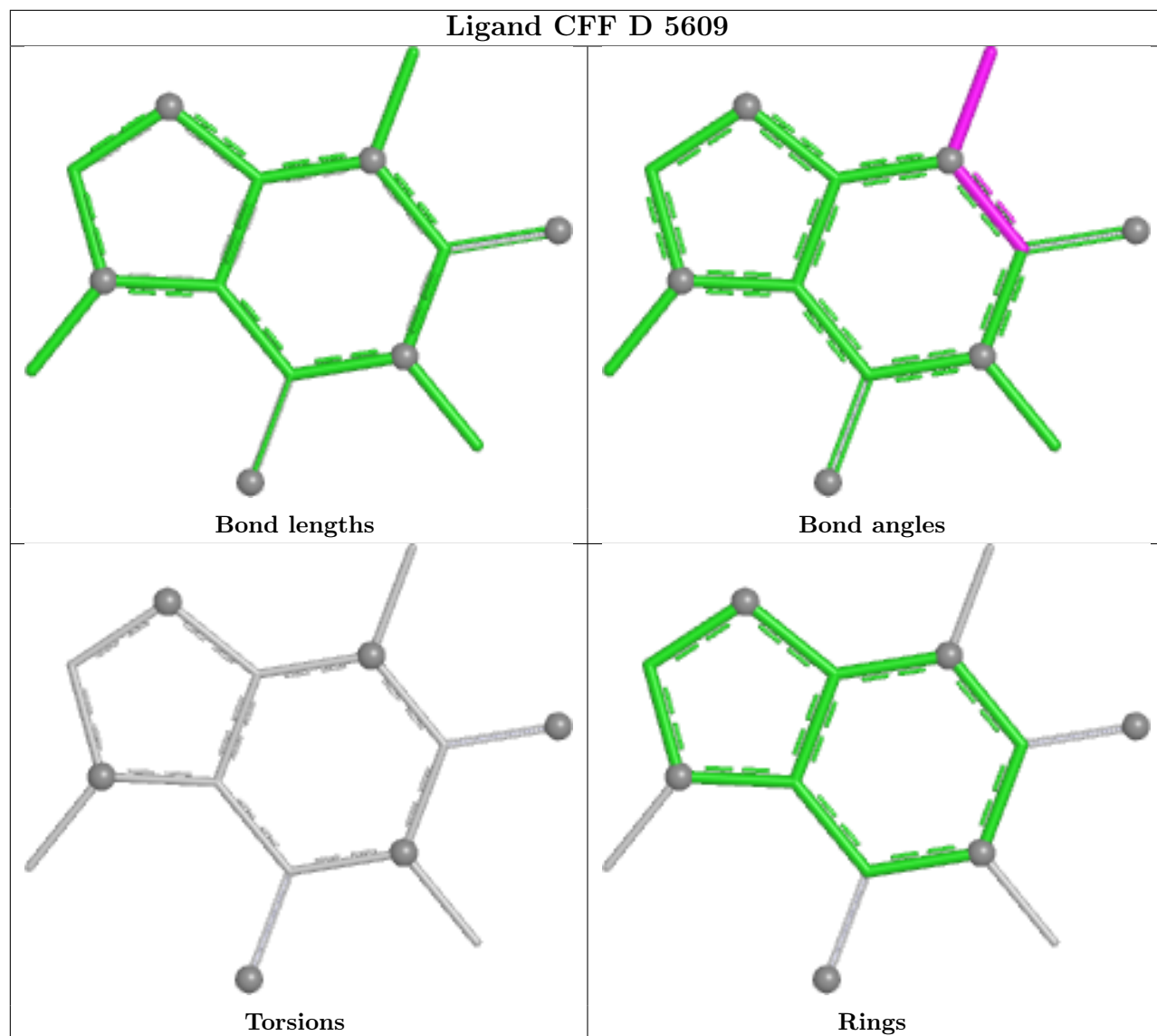
Ligand 43M D 5605



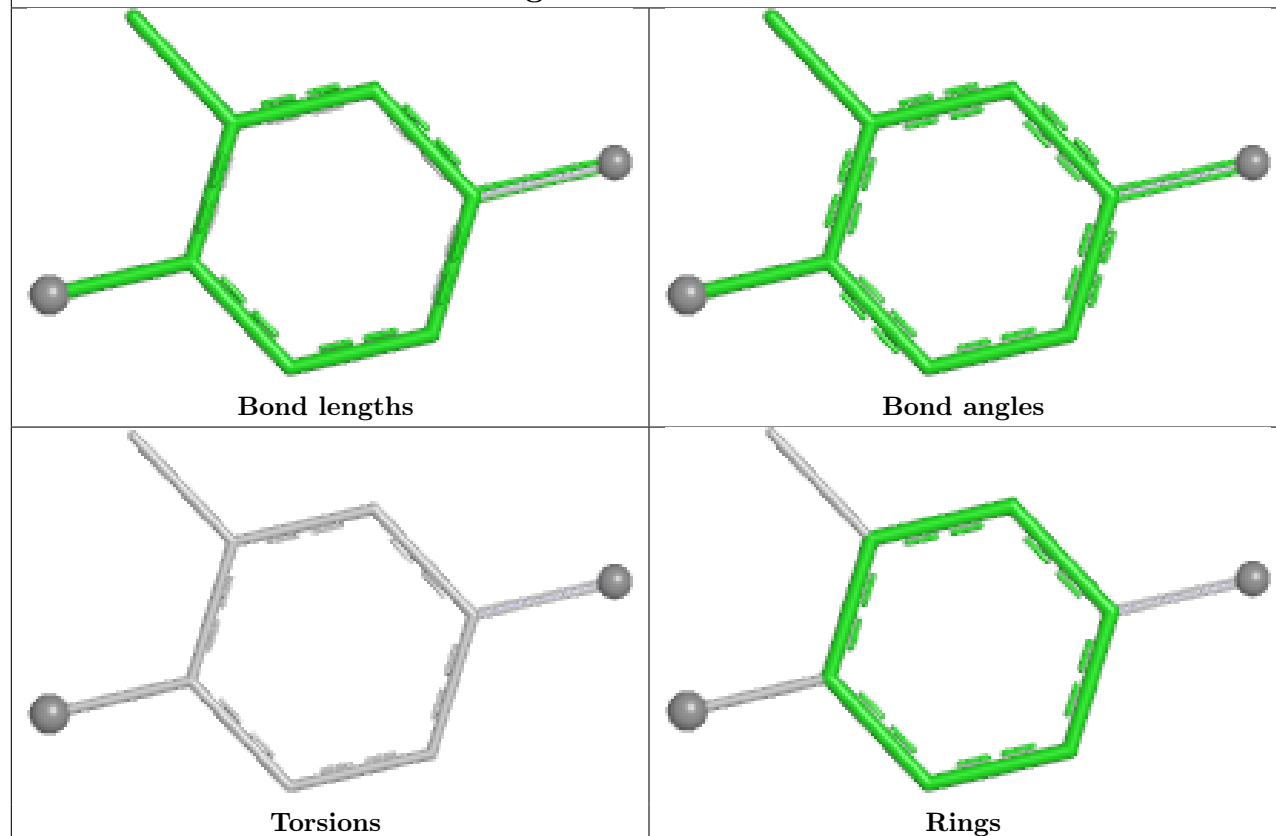
Ligand 43M C 5605



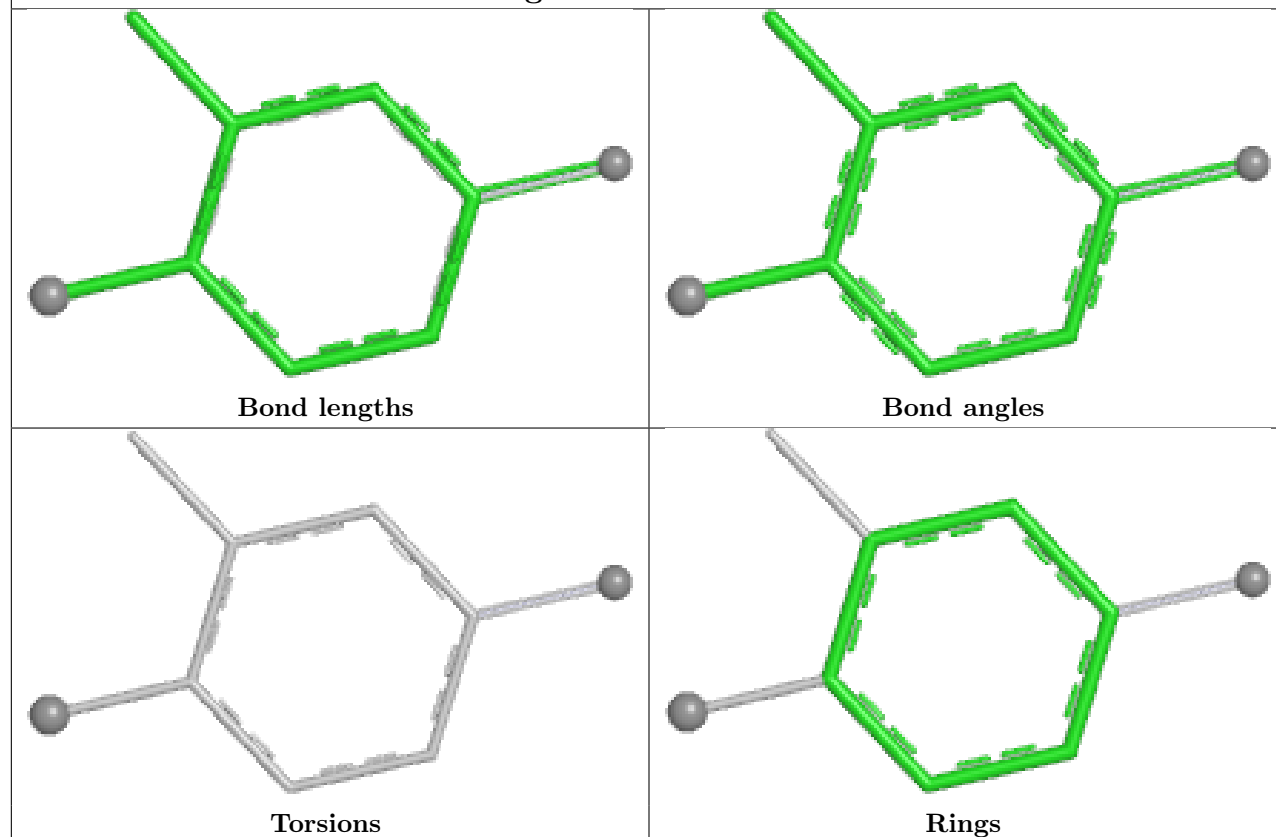




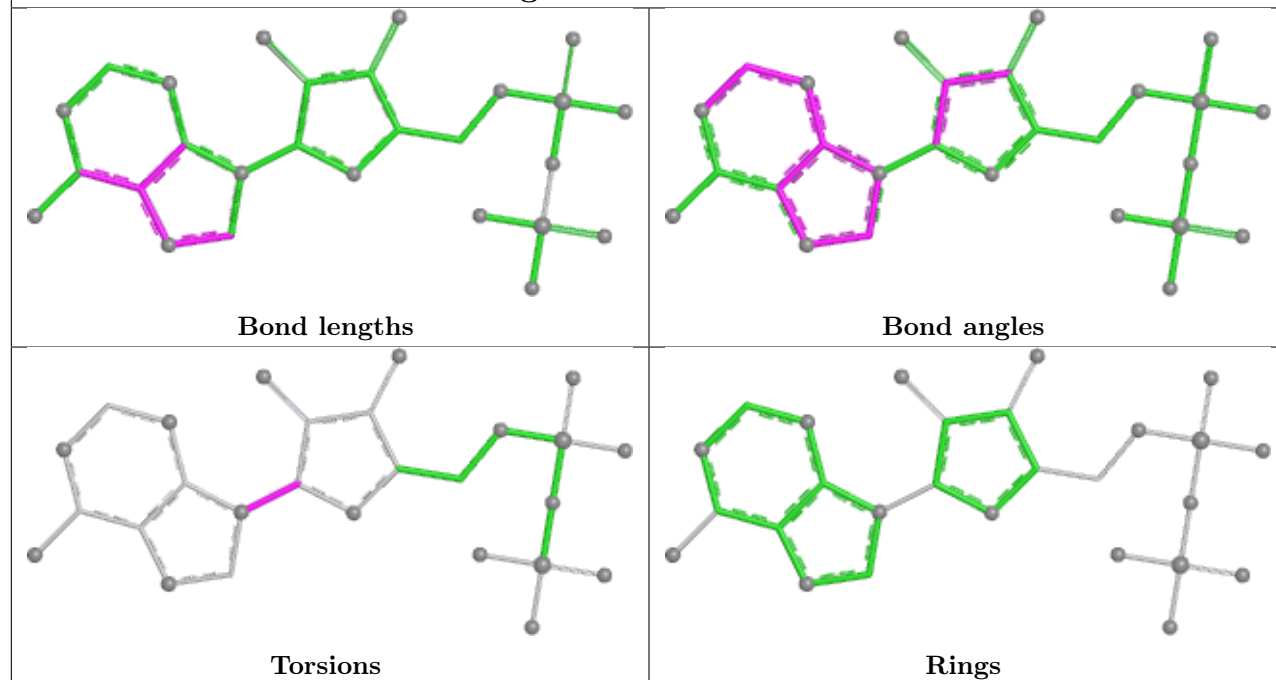
Ligand 43M C 5604



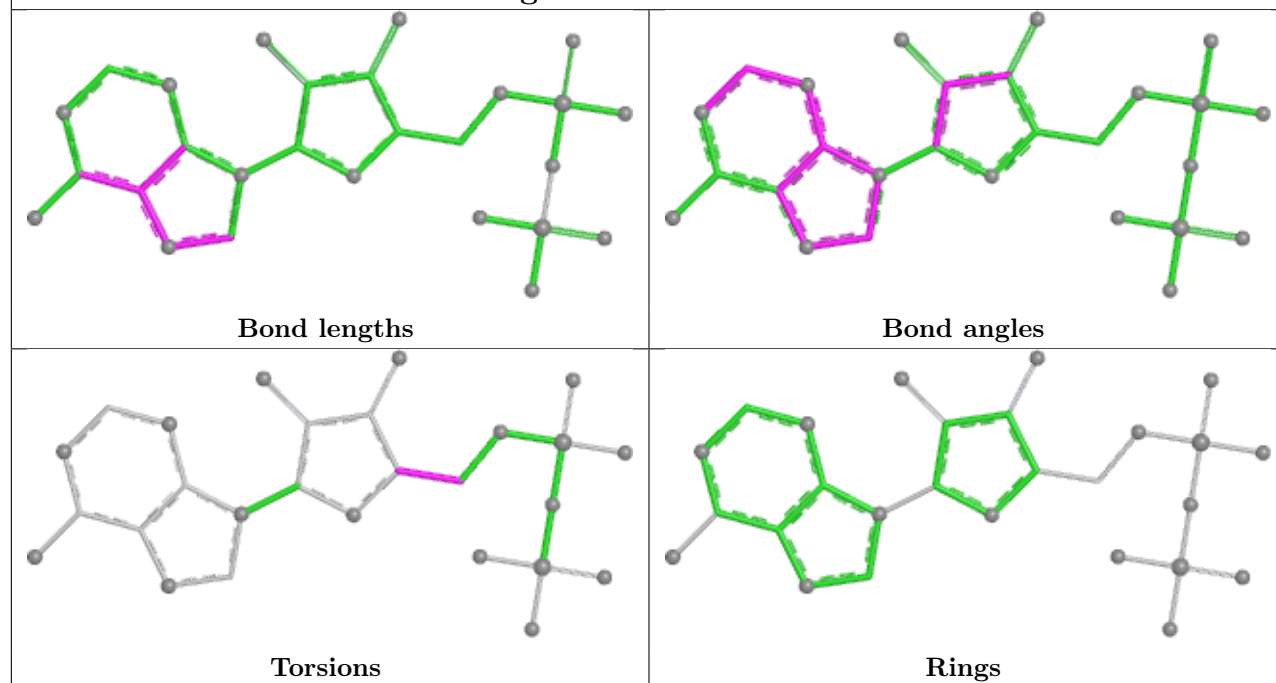
Ligand 43M A 5606



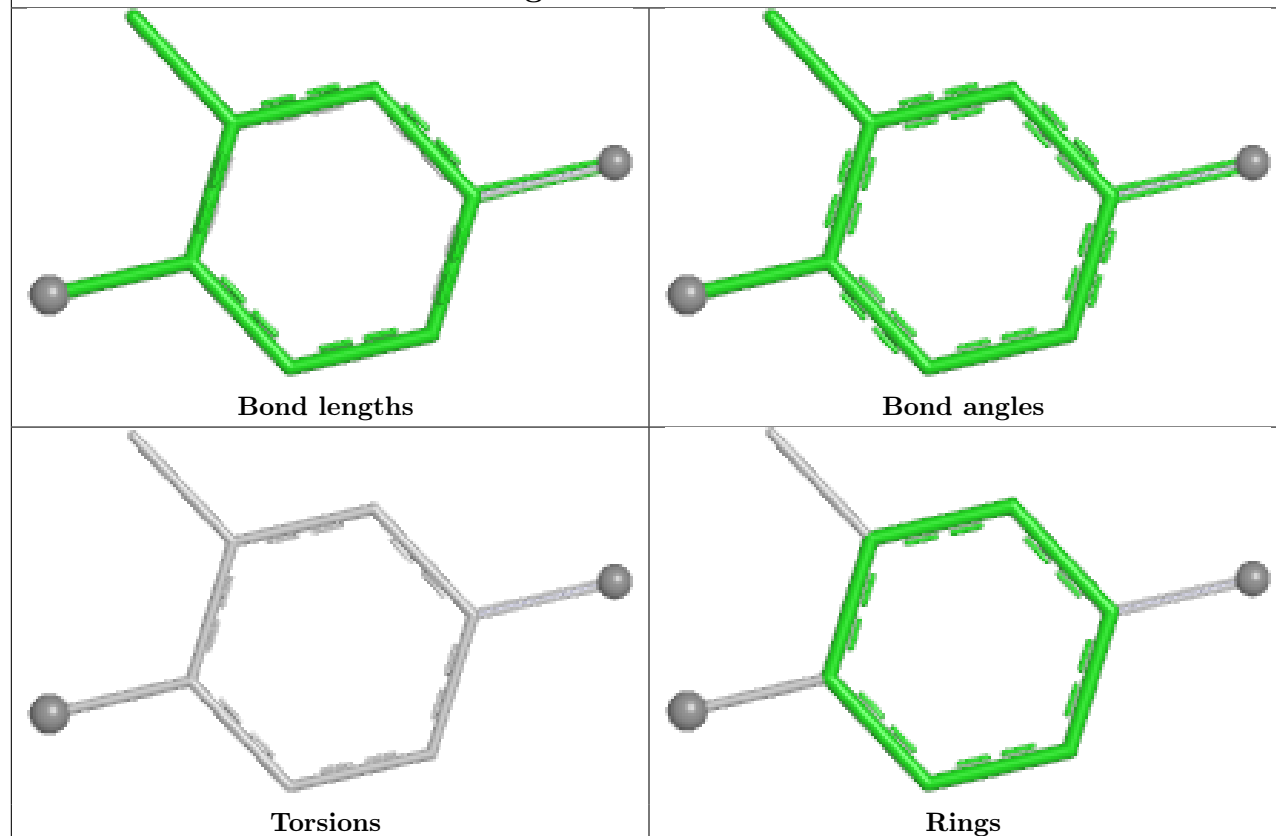
Ligand ADP A 5607



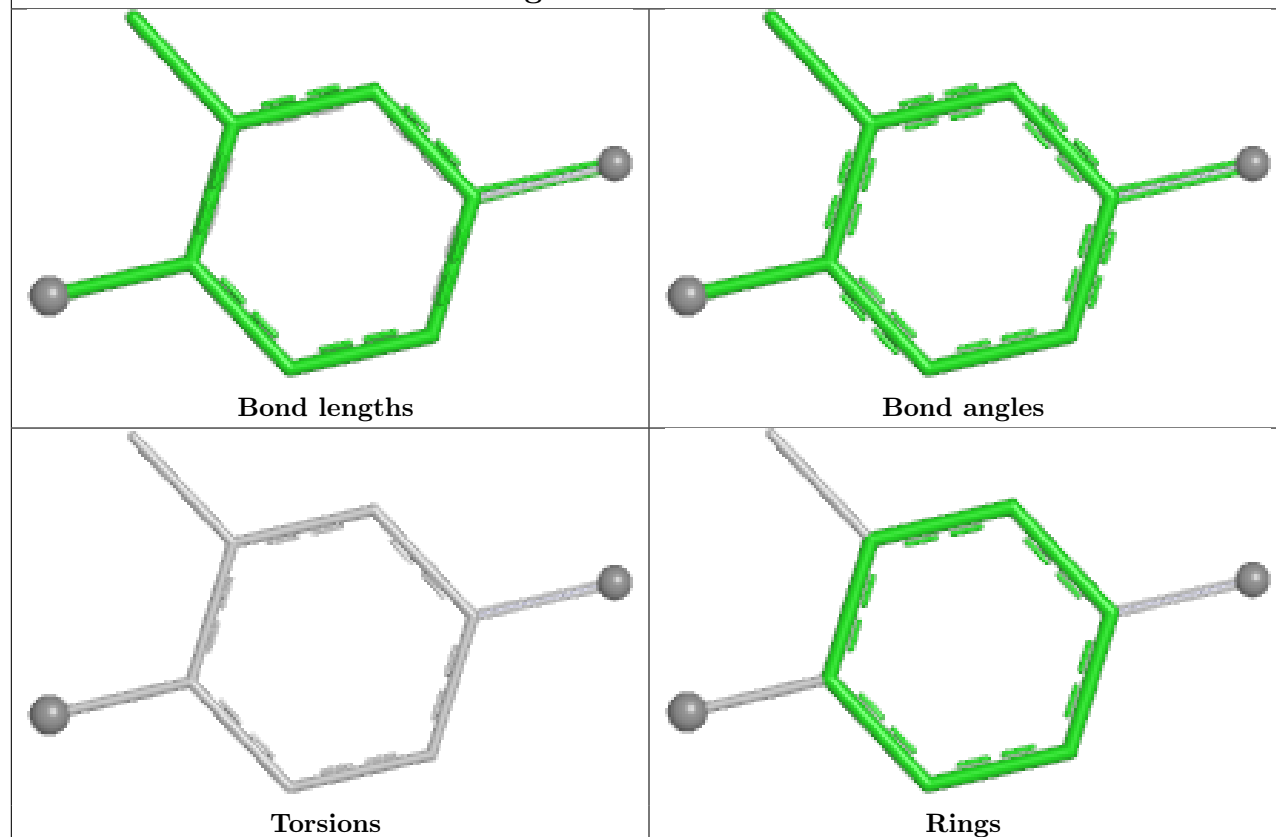
Ligand ADP D 5602

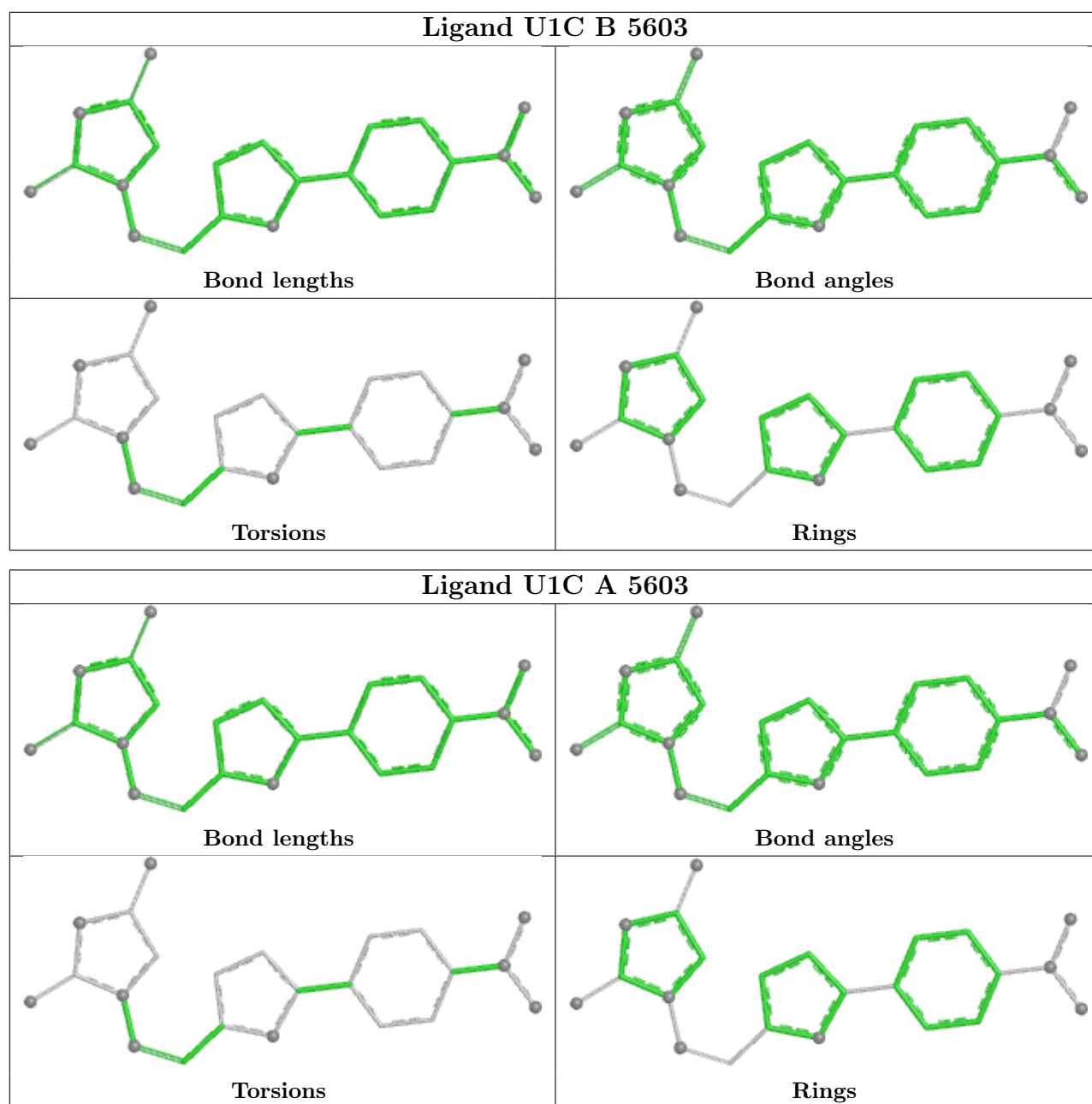


Ligand 43M A 5604



Ligand 43M D 5606





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

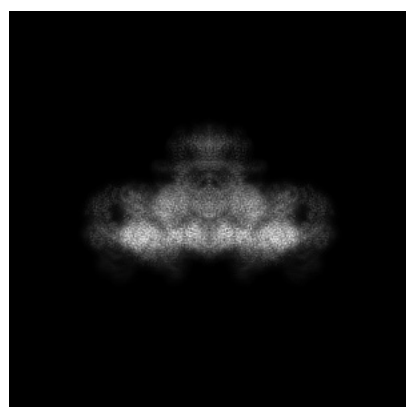
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-74436. These allow visual inspection of the internal detail of the map and identification of artifacts.

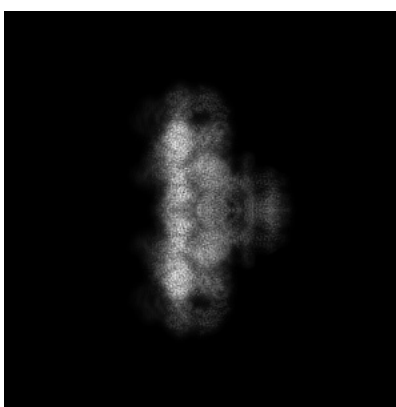
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

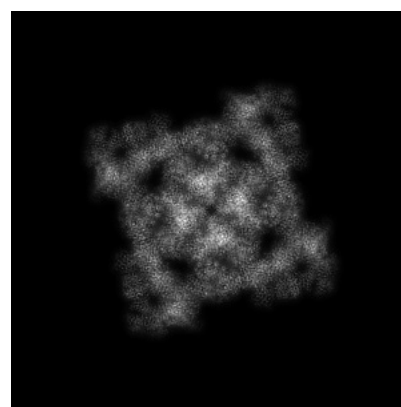
6.1.1 Primary map



X



Y

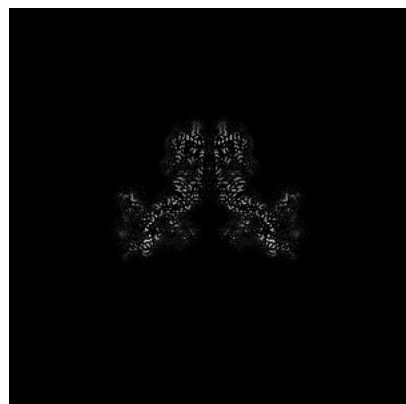


Z

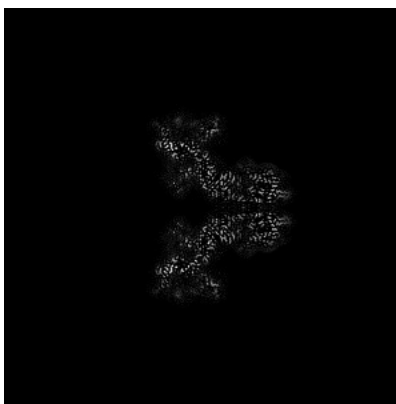
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

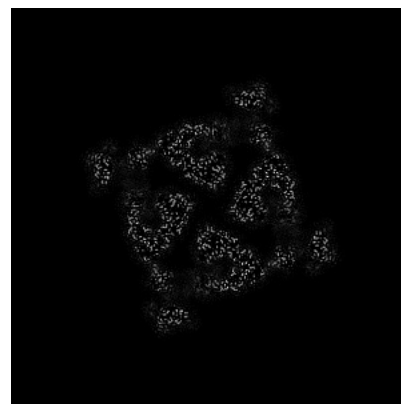
6.2.1 Primary map



X Index: 300



Y Index: 300

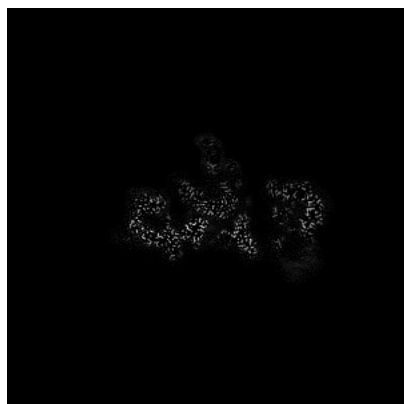


Z Index: 300

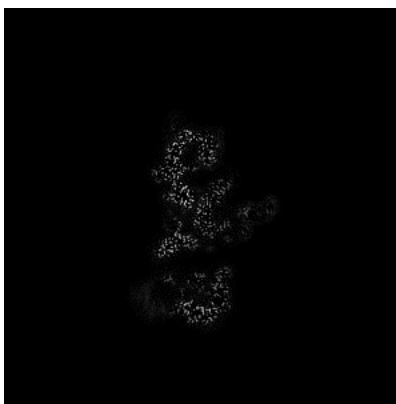
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

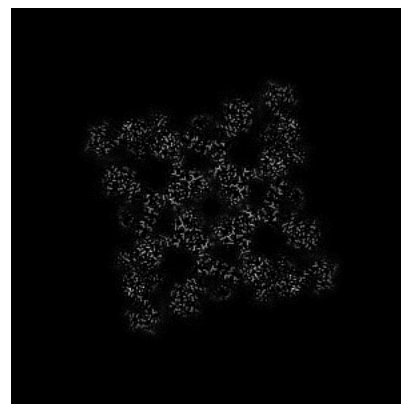
6.3.1 Primary map



X Index: 358



Y Index: 358

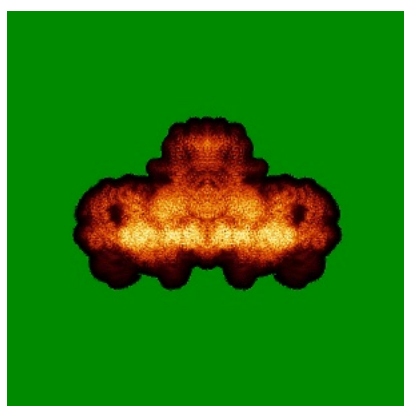


Z Index: 266

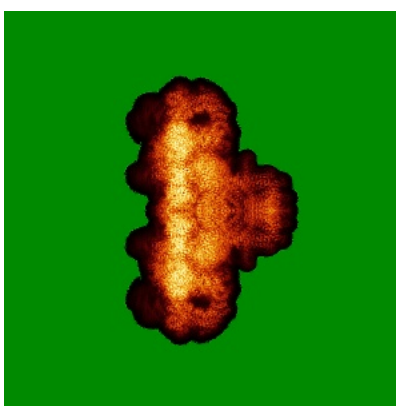
The images above show the largest variance slices of the map in three orthogonal directions.

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

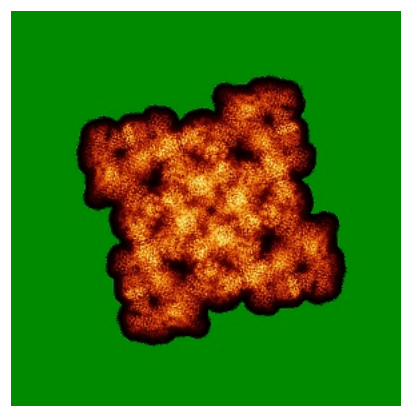
6.4.1 Primary map



X



Y

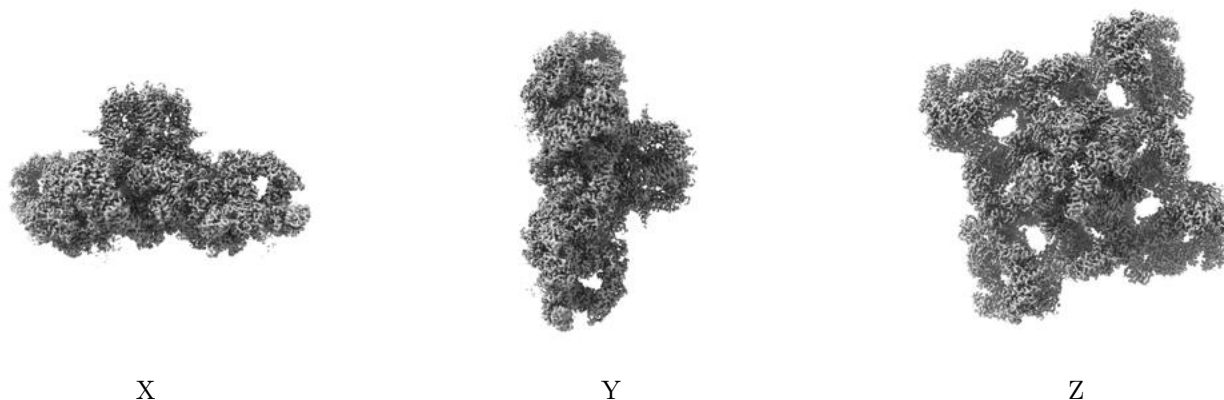


Z

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 0.7. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

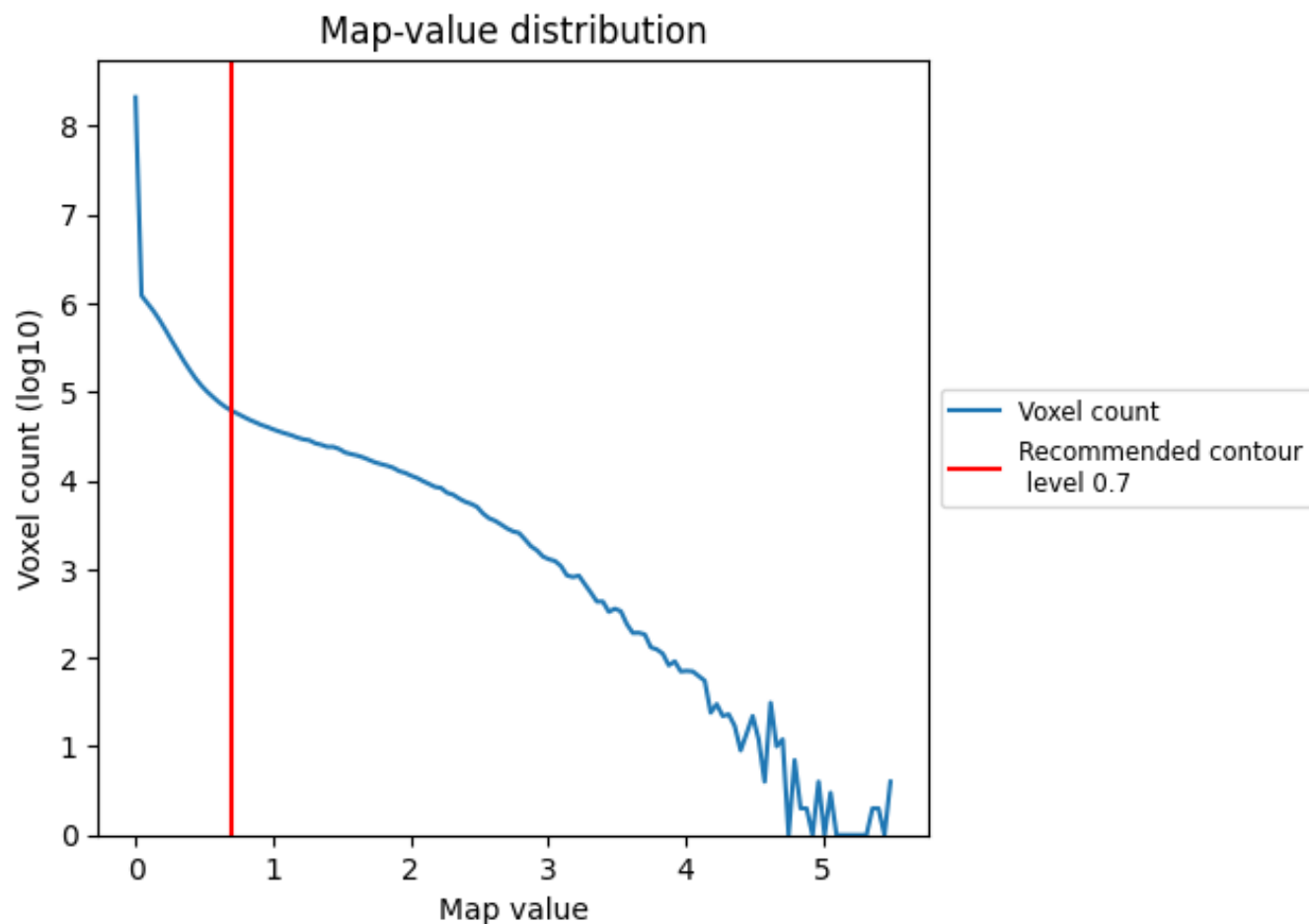
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

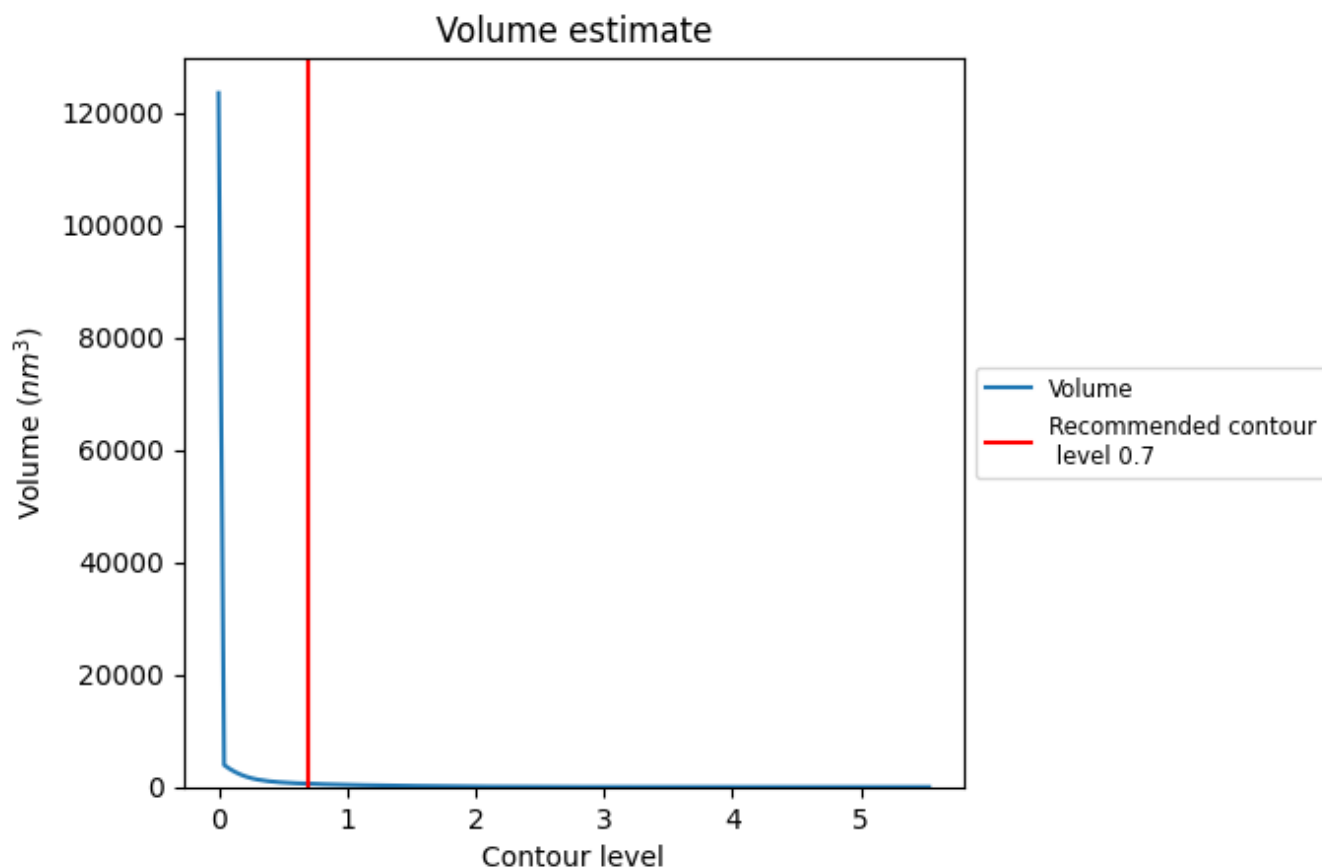
This section contains the results of statistical analysis of the map.

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.

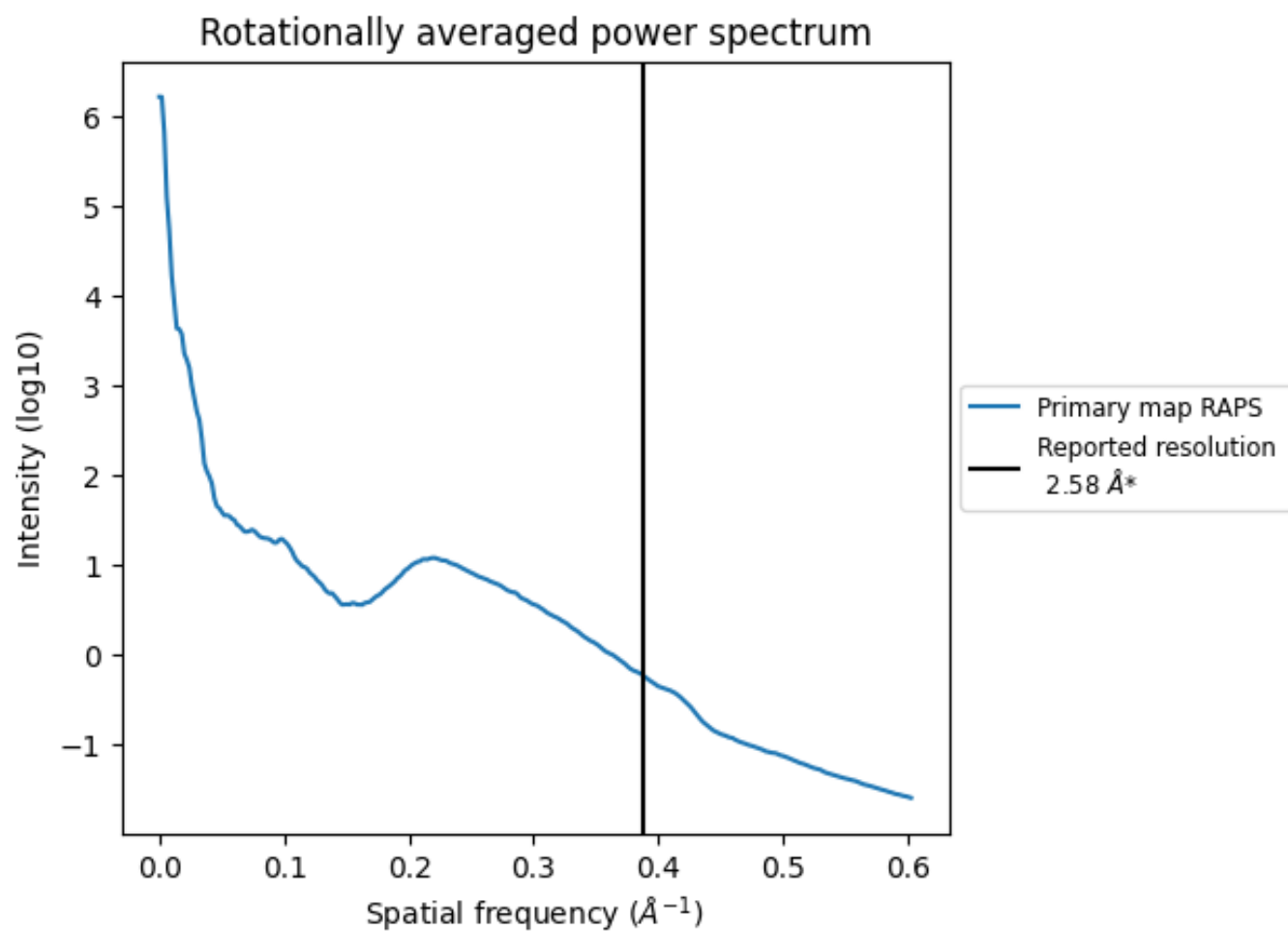
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 574 nm^3 ; this corresponds to an approximate mass of 519 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 0.388 Å⁻¹

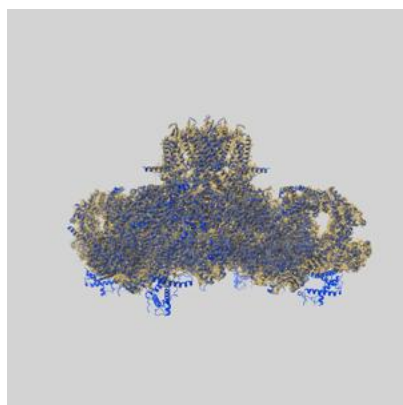
8 Fourier-Shell correlation

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

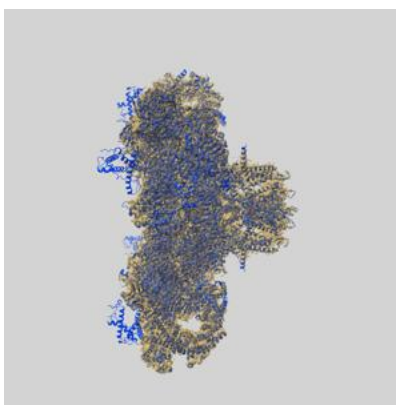
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-74436 and PDB model 9ZN6. Per-residue inclusion information can be found in section [3](#) on page [10](#).

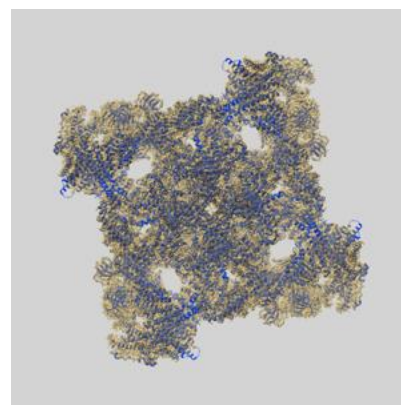
9.1 Map-model overlay [i](#)



X



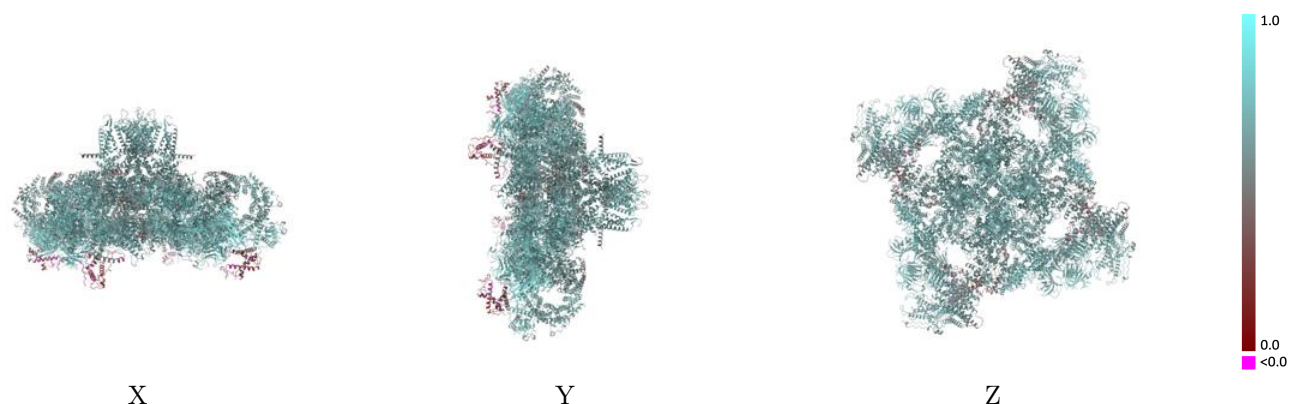
Y



Z

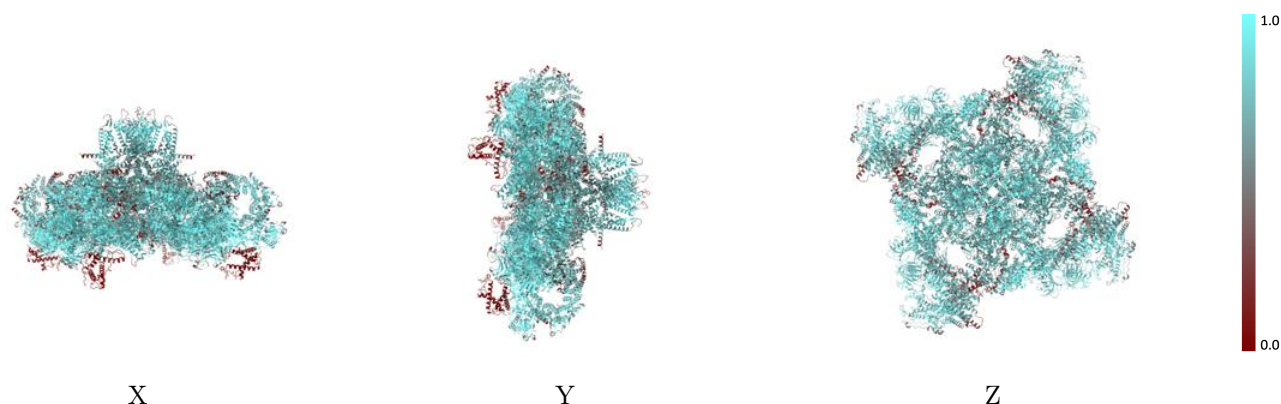
The images above show the 3D surface view of the map at the recommended contour level 0.7 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



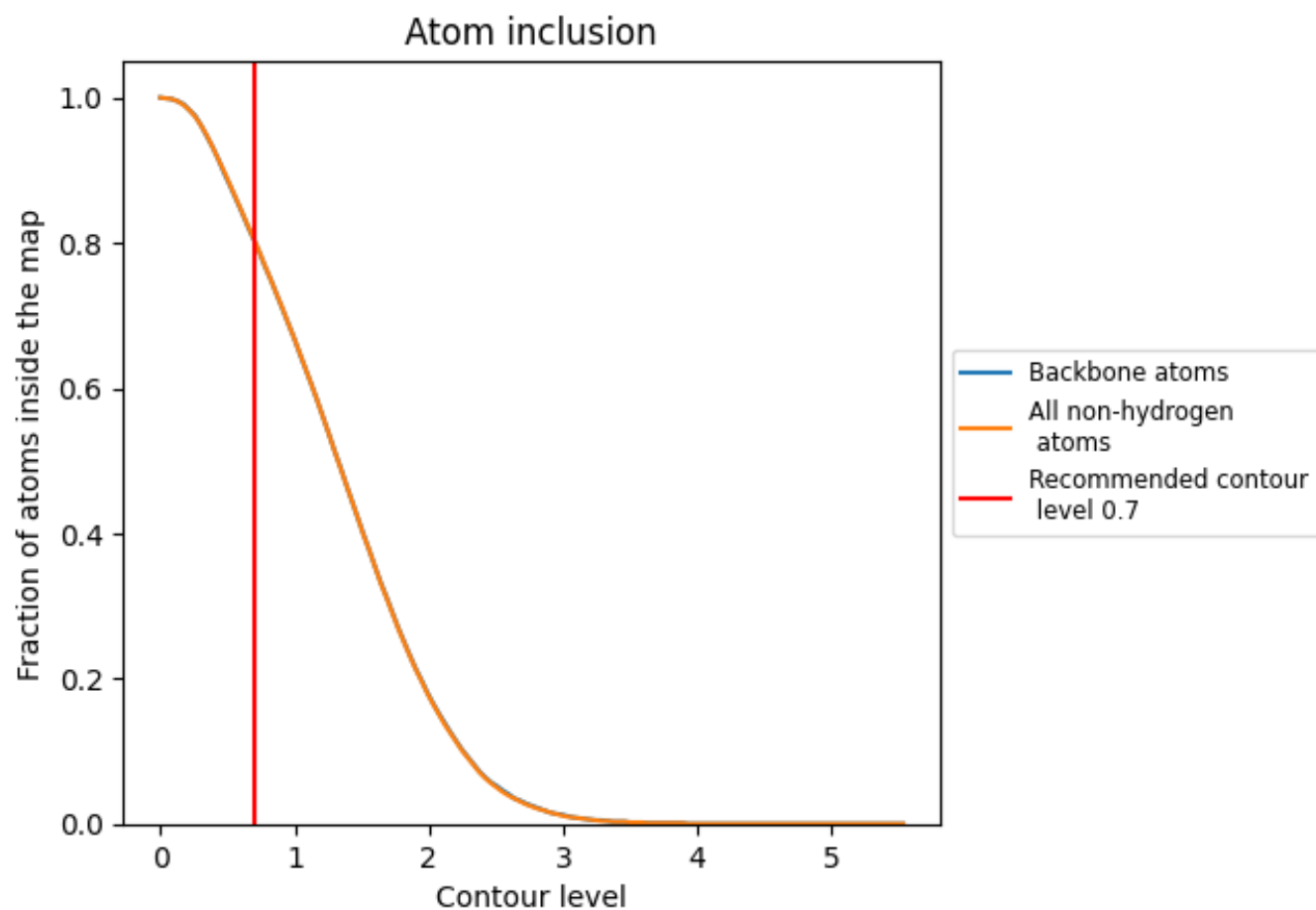
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.7).

9.4 Atom inclusion [i](#)



At the recommended contour level, 80% of all backbone atoms, 80% 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 (0.7) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8040	0.6540
A	0.8180	0.6590
B	0.8180	0.6590
C	0.8180	0.6590
D	0.8180	0.6590
E	0.8470	0.6720
F	0.8520	0.6710
G	0.8540	0.6720
H	0.8520	0.6720
I	0.4250	0.4780
J	0.4380	0.4840
K	0.4350	0.4850
L	0.4310	0.4850

