



## Full wwPDB EM Validation Report ⓘ

Oct 19, 2024 – 10:59 AM EDT

PDB ID : 5TAS  
EMDB ID : EMD-8383  
Title : Structure of rabbit RyR1 (Caffeine/ATP/EGTA dataset, class 1)  
Authors : Clarke, O.B.; des Georges, A.; Zalk, R.; Marks, A.R.; Hendrickson, W.A.;  
Frank, J.  
Deposited on : 2016-09-10  
Resolution : 6.20 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev113  
Mogul : 2022.3.0, CSD as543be (2022)  
MolProbity : 4.02b-467  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.39

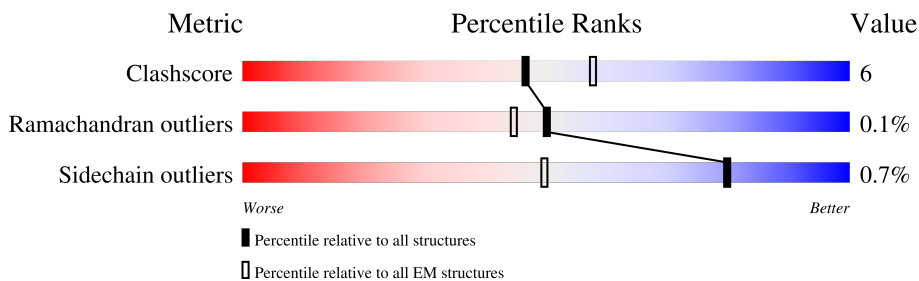
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 6.20 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	108	
1	F	108	
1	H	108	
1	J	108	
2	B	4416	
2	E	4416	
2	G	4416	
2	I	4416	

## 2 Entry composition [i](#)

There are 5 unique types of molecules in this entry. The entry contains 121452 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
			Total	C	N	O	S		
1	F	107	818	516	144	154	4	0	0
1	A	107	818	516	144	154	4	0	0
1	H	107	818	516	144	154	4	0	0
1	J	107	818	516	144	154	4	0	0

- Molecule 2 is a protein called Ryanodine receptor 1.

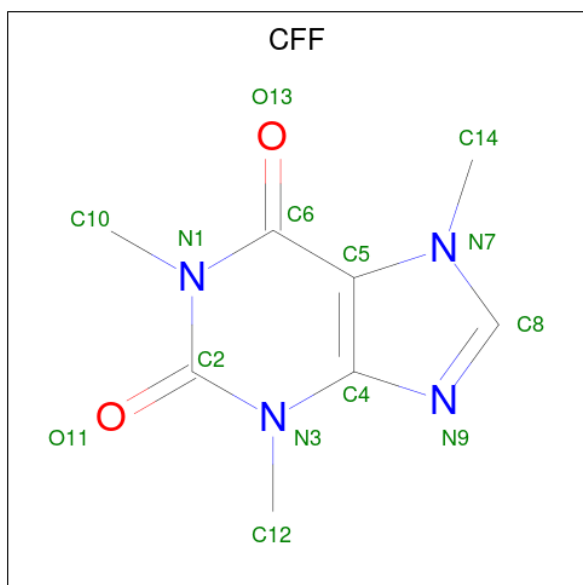
Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	4194	29499	18686	5228	5428	157	0	0
2	I	4194	29499	18686	5228	5428	157	0	0
2	E	4194	29499	18686	5228	5428	157	0	0
2	G	4194	29499	18686	5228	5428	157	0	0

- Molecule 3 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula:  $C_{10}H_{16}N_5O_{13}P_3$ ).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
3	B	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	I	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	E	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	G	1	Total	C	N	O	P	0
			31	10	5	13	3	

- Molecule 4 is CAFFEINE (three-letter code: CFF) (formula:  $C_8H_{10}N_4O_2$ ).



Mol	Chain	Residues	Atoms				AltConf
4	B	1	Total	C	N	O	0
			14	8	4	2	
4	I	1	Total	C	N	O	0
			14	8	4	2	
4	E	1	Total	C	N	O	0
			14	8	4	2	
4	G	1	Total	C	N	O	0
			14	8	4	2	

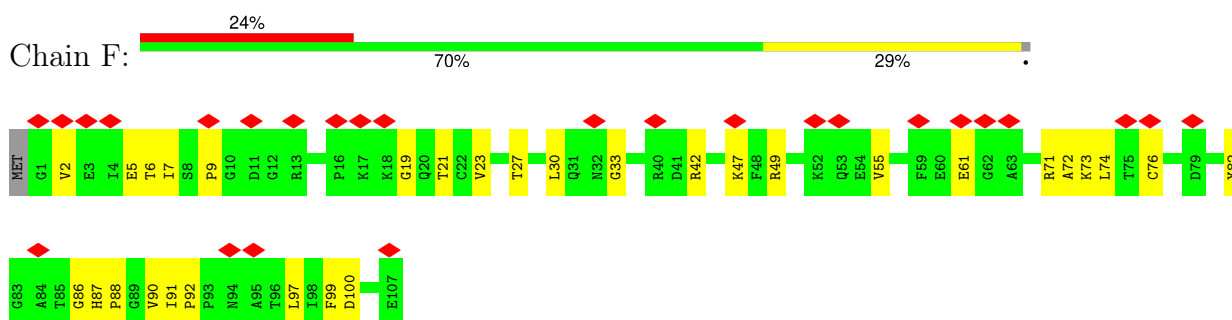
- Molecule 5 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
5	B	1	Total	Zn	0
			1	1	
5	I	1	Total	Zn	0
			1	1	
5	E	1	Total	Zn	0
			1	1	
5	G	1	Total	Zn	0
			1	1	

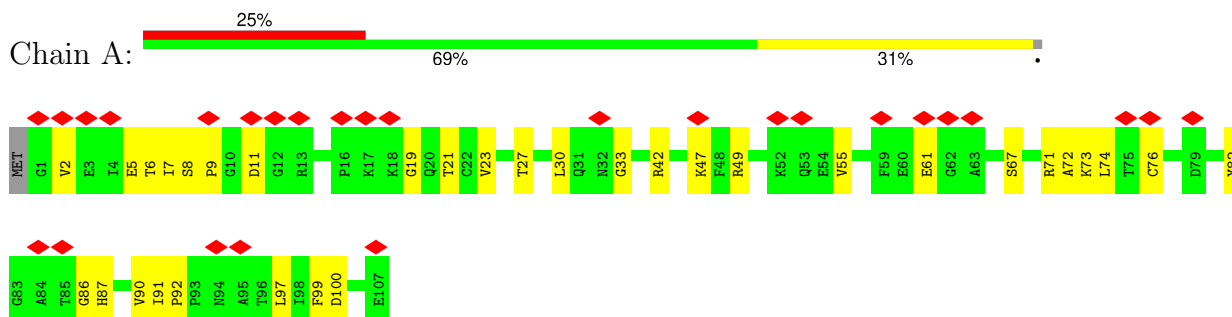
### 3 Residue-property plots [i](#)

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

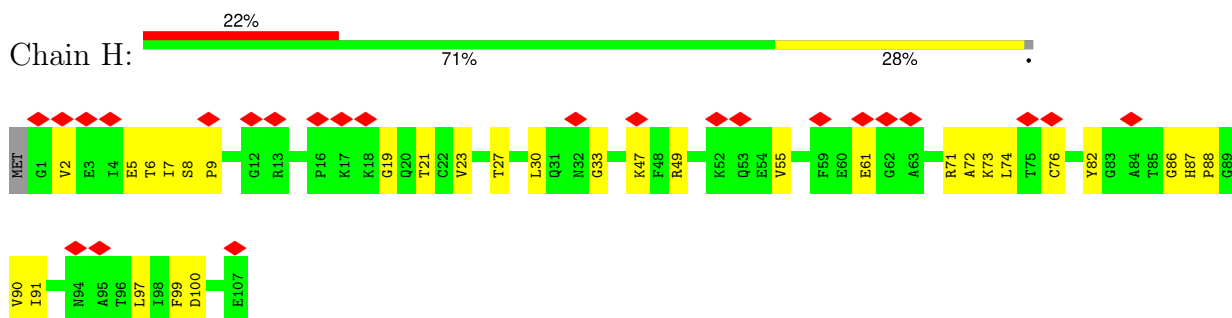
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B



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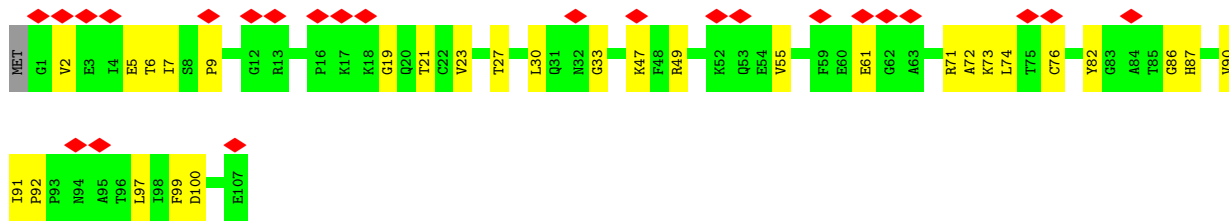


- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

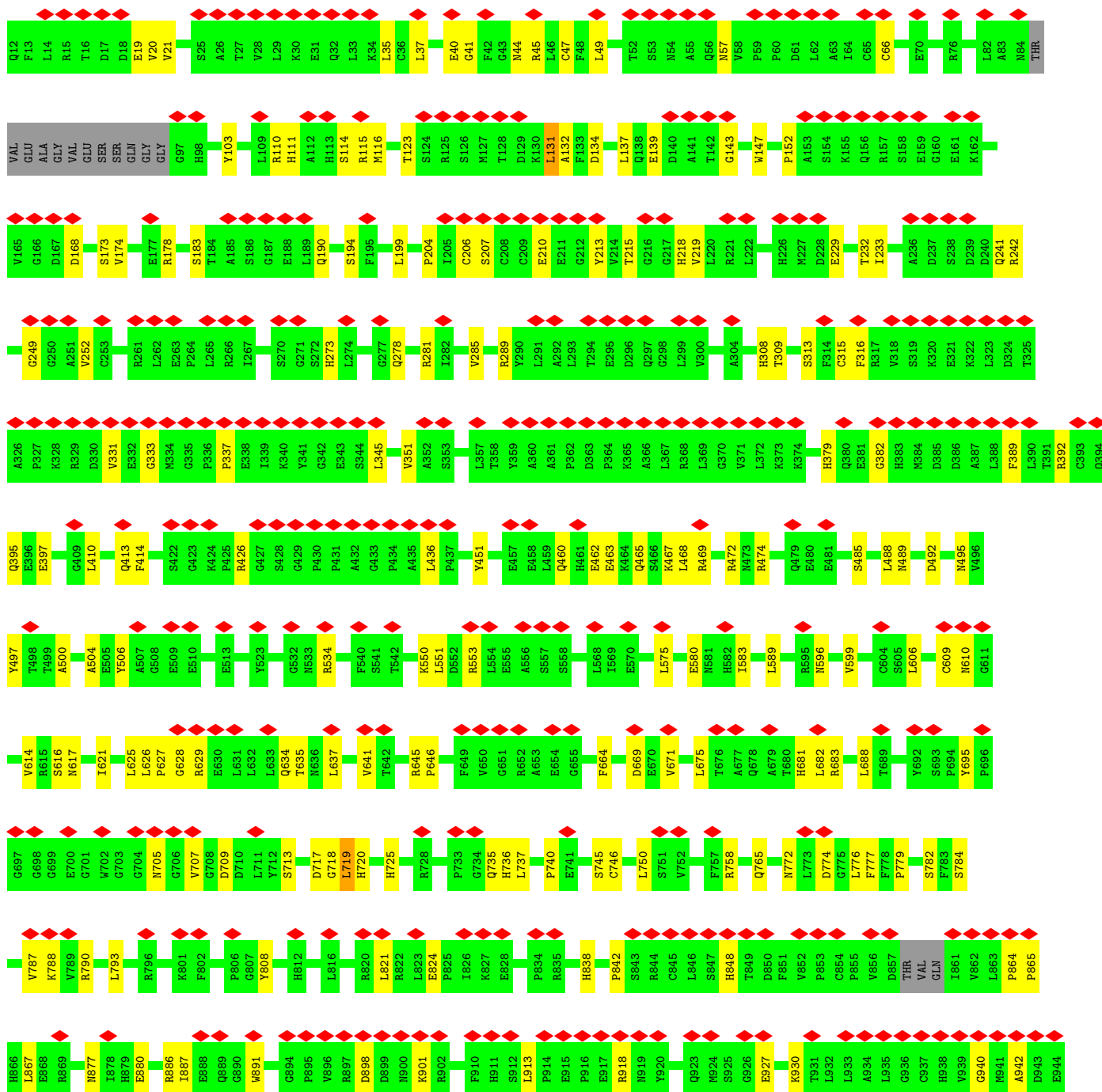
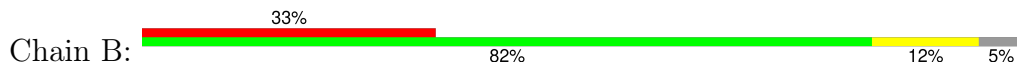


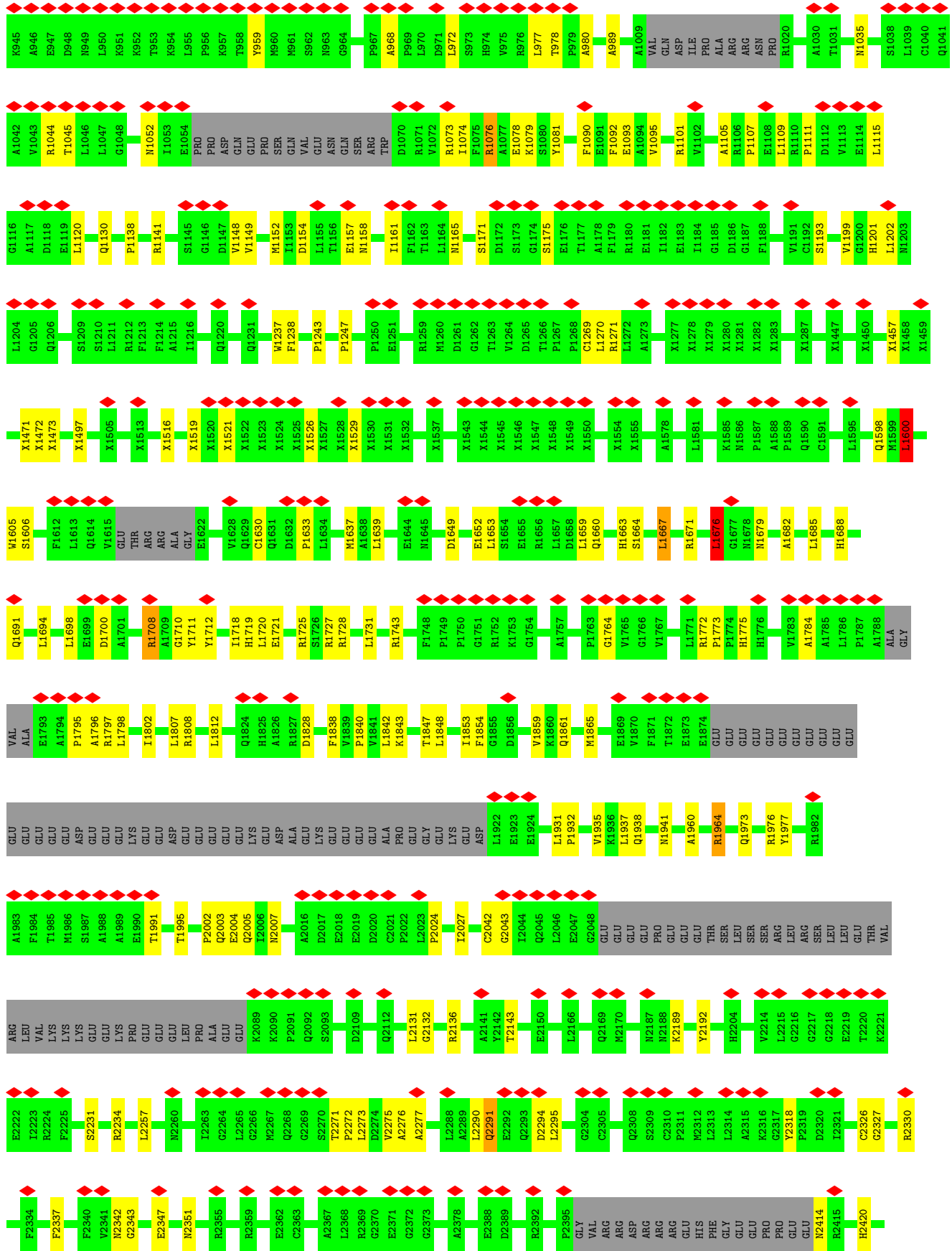
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B





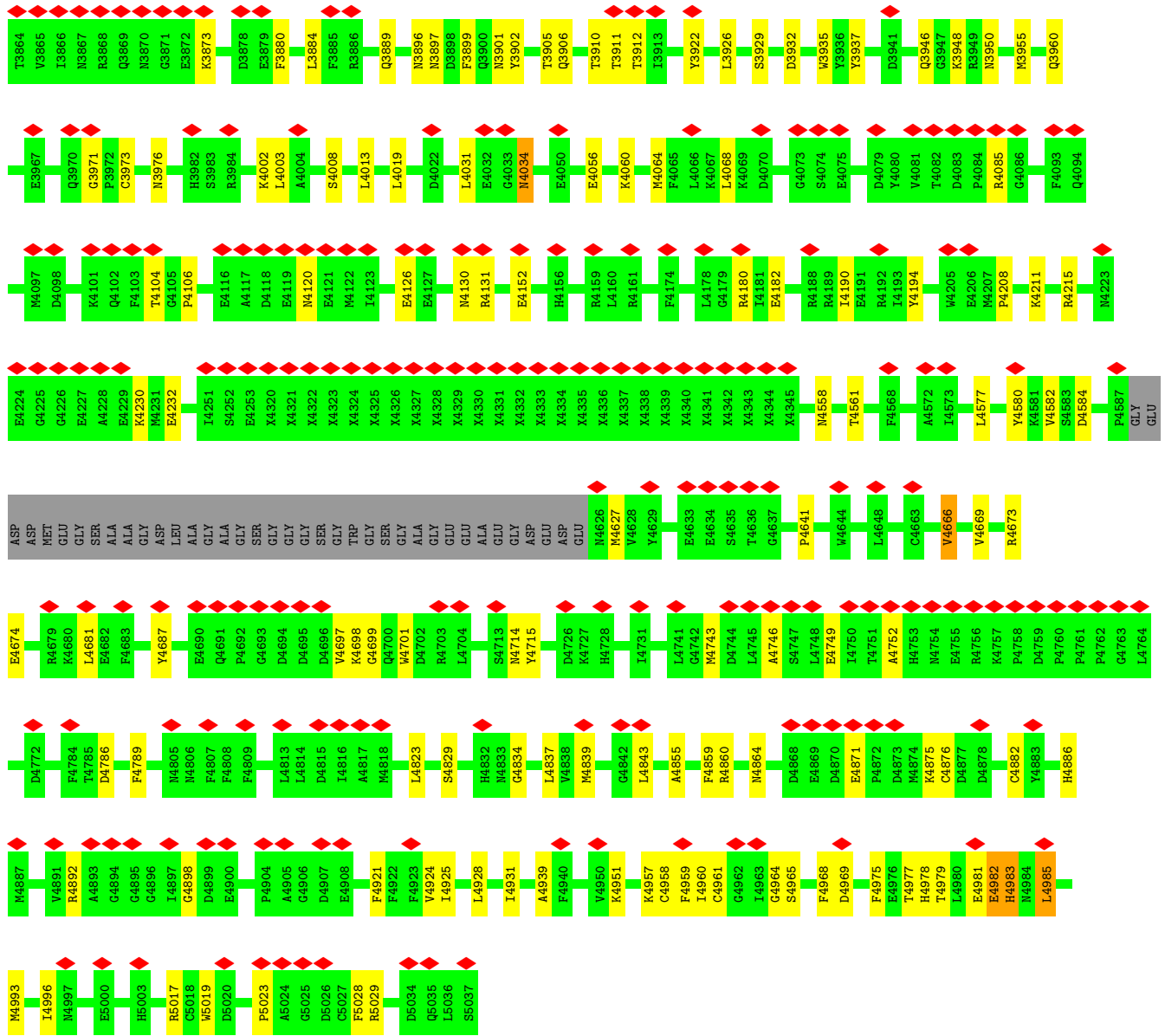
• Molecule 2: Ryanodine receptor 1



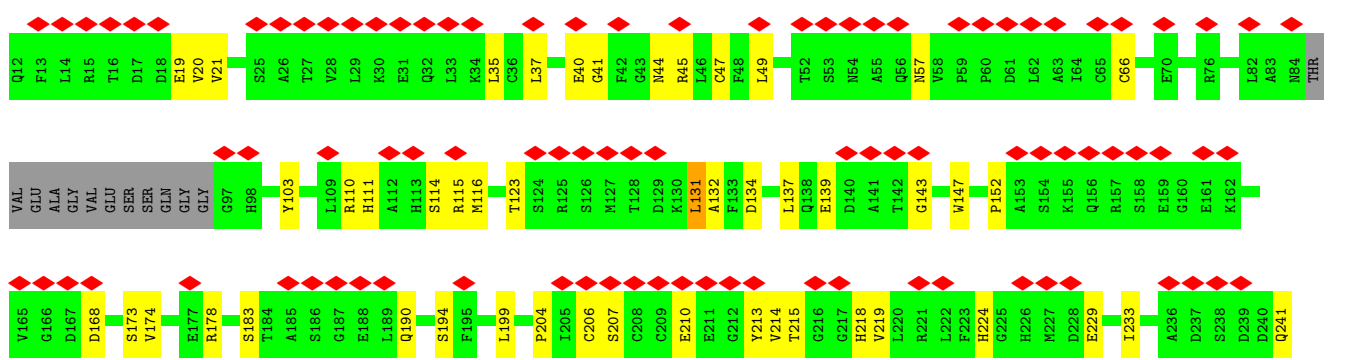
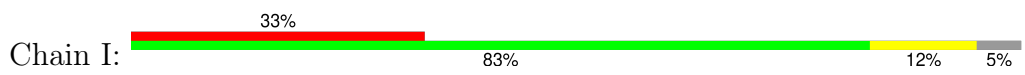




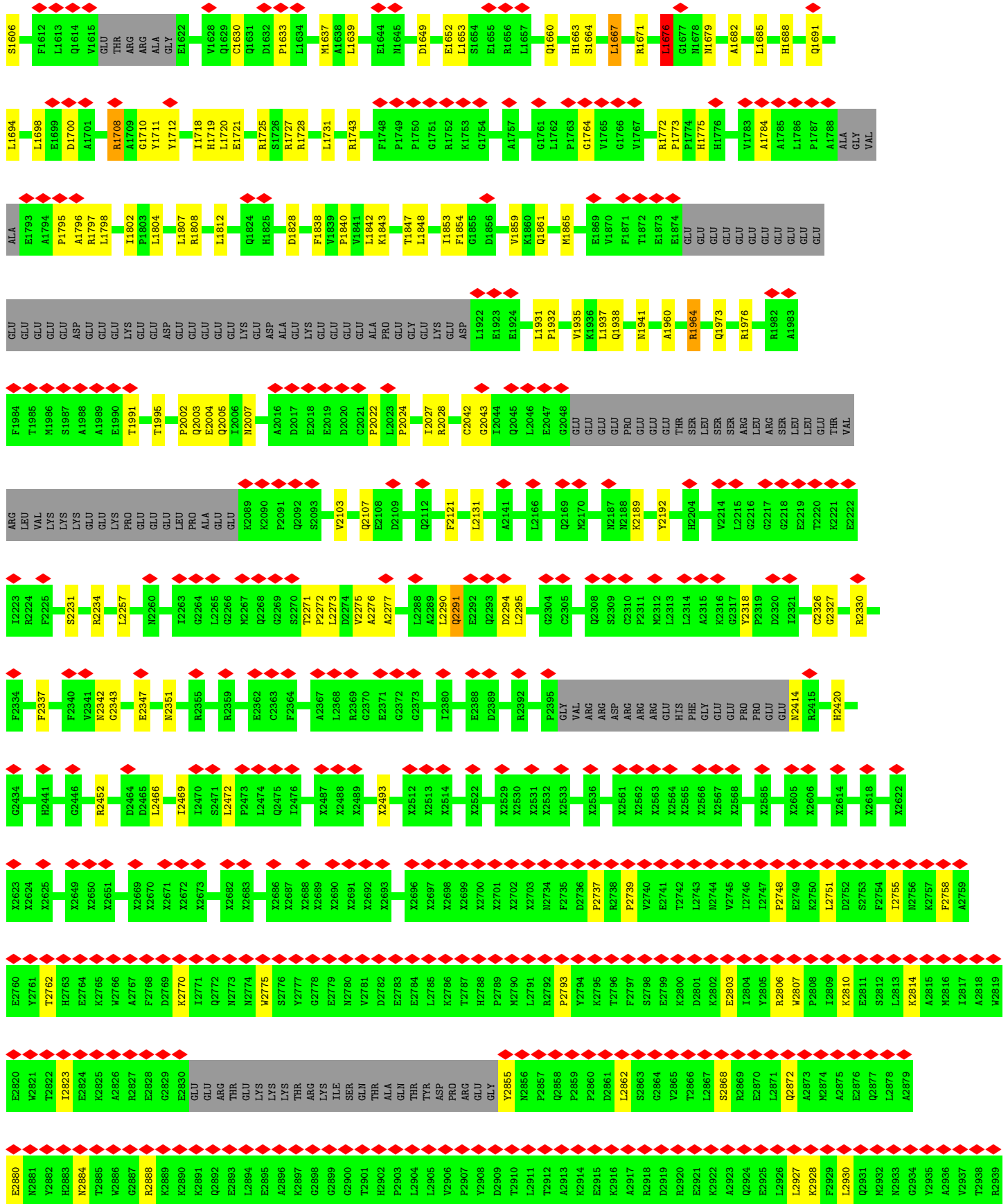
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X2622	X2623	X2624	X2625	X2649	X2650	X2651	X2669	X2670	X2671	X2672	X2673	X2682	X2683	X2686	X2687	X2688	X2689	X2690	X2691	X2692	X2693	X2696	X2697	X2698	X2699	X2700	X2701	X2702	X2703	X2734	F2735	P2736	P2737	R2738	P2739	V2740	E2741	T2742	L2743	N2744	V2745	L2746	L2747	P2748	E2749	K2750	L2751	D2752	S2753	F2754	L2755	N2756	K2757																																												
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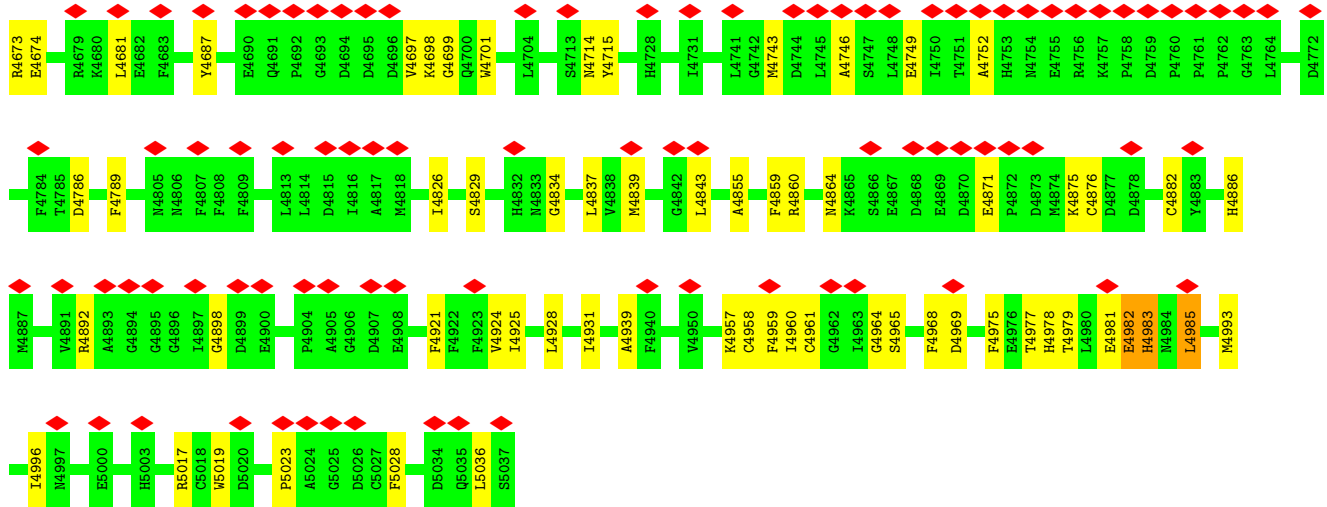
• Molecule 2: Ryanodine receptor 1



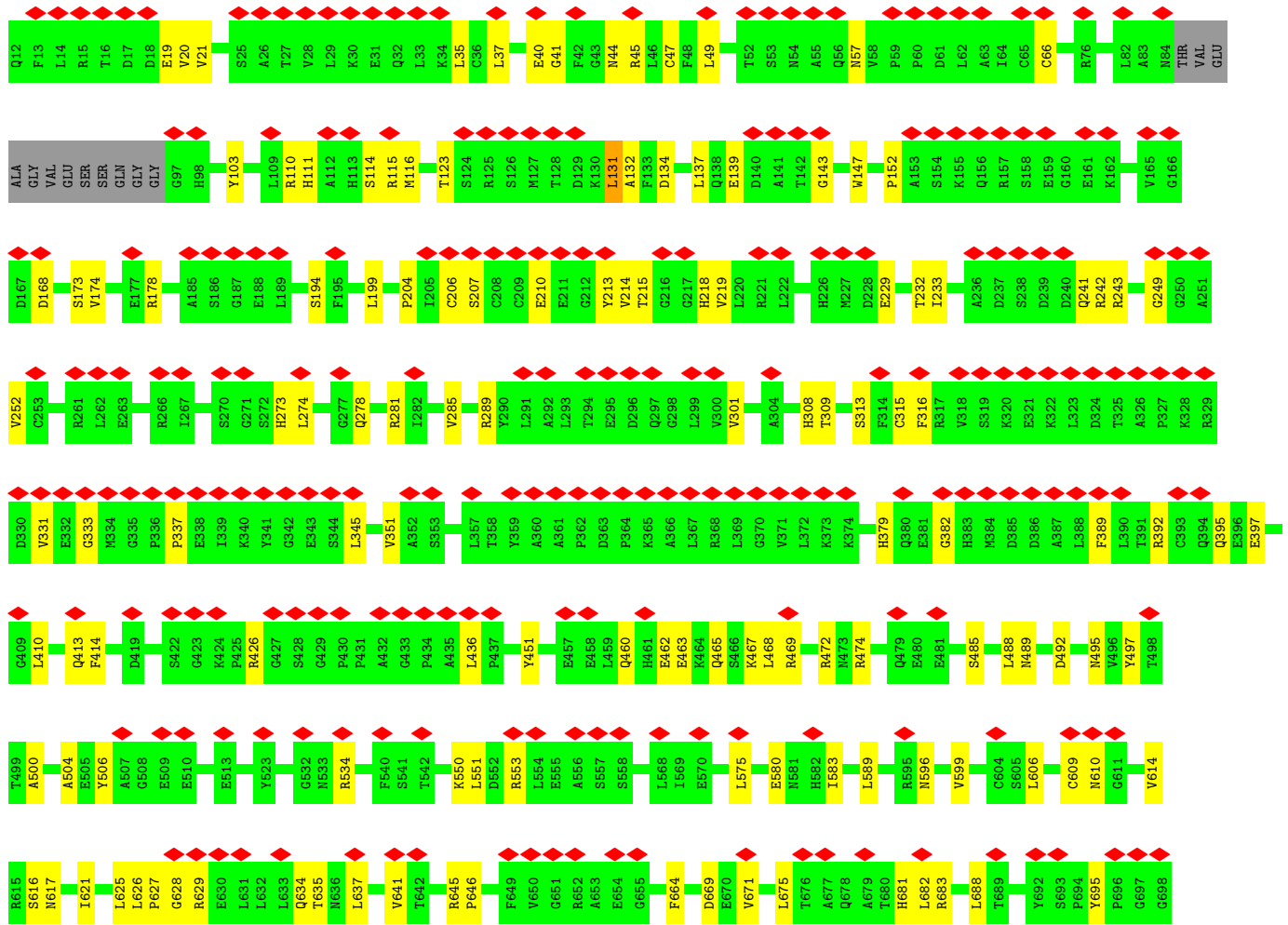
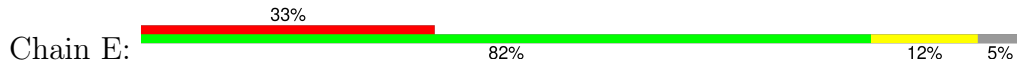


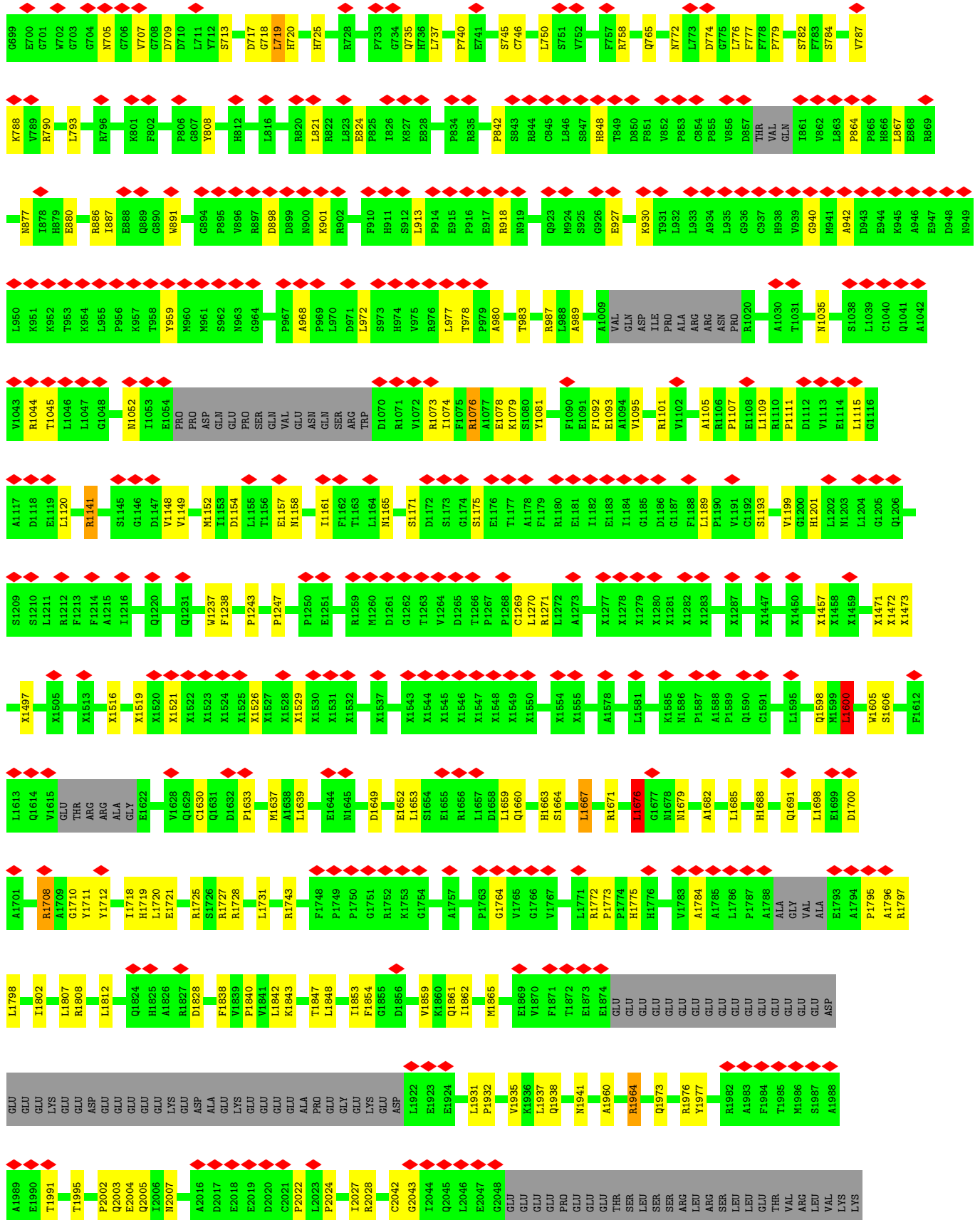


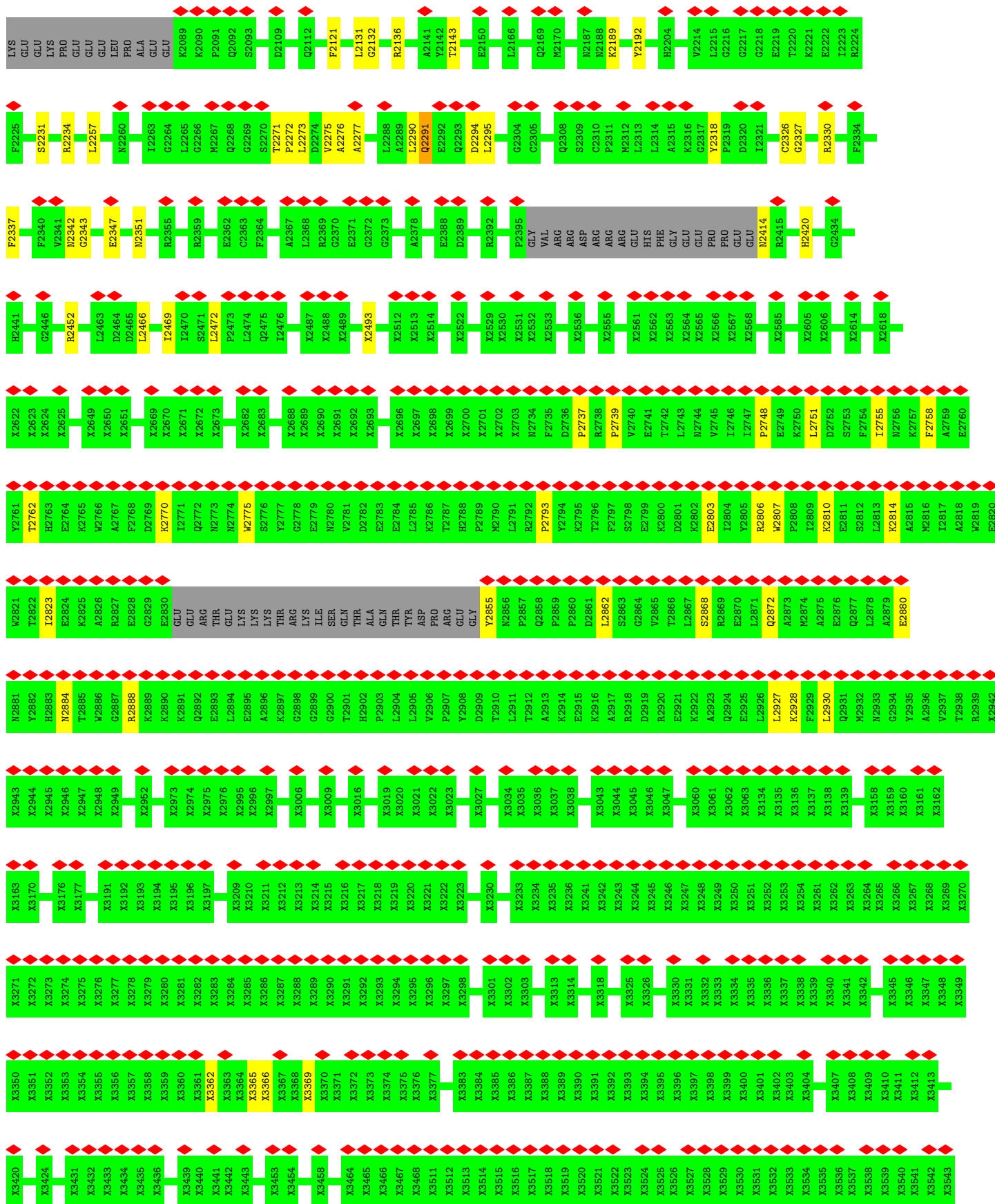
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X3410	X3411	X3412	X3413	X3423	X3431	X3432	X3433	X3434	X3435	X3436	X3439	X3440	X3441	X3442	X3443	X3463	X3464	X3465	X3466	X3467	X3468	X3511	X3512	X3513	X3514	X3515	X3516	X3517	X3518	X3519	X3520	X3521	X3522	X3525	X3526	X3527	X3528	X3529	X3530	X3531	X3532	X3533	X3534	X3535	X3536	X3537	X3538	X3539	X3540	X3541							
X3542	X3543	X3544	X3545	X3546	X3547	X3548	X3549	X3550	X3551	X3552	X3553	X3554	X3555	X3556	X3557	X3558	X3559	X3560	X3561	X3562	X3563	X3564	X3565	X3566	X3567	X3568	X3569	X3572	X3576	X3577	X3578	X3579	X3580	X3581	X3582	X3583	X3584	X3585	X3586	X3587	X3588	X3589	X3590	X3591	X3592	X3595	X3596	X3597	X3601	X3606	X3607	X3608	X3609	X3610			
X3611	X3612	X3613	X3662	X3663	X3664	X3665	X3666	X3667	X3668	X3669	X3676	X3677	X3678	X3679	X3680	X3681	X3682	X3683	X3684	X3685	X3686	X3687	X3688	X3689	X3690	X3691	X3692	X3707	X3710	X3711	X3712	X3713	X3714	X3715	X3716	X3717	X3718	X3719	X3720	X3725	X3736	X3737	X3738	X3739	X3740	N3741	GLY	GLU	ALA	GLU	E3747	E3748	V3749	E3750			
V3751	S3752	F3753	E3754	Q3767	S3768	R3769	L3770	H3771	T3772	R3773	G3774	L3780	Q3781	S3784	K3787	G3788	E3789	T3790	L3805	N3806	N3809	K3815	M3816	L3817	D3822	G3827	Q3830	Q3833	S3840	V3841	L3842	D3843	R3849	Q3850	A3853	E3854	G3855	L3856	G3857	M3858	V3859	N3860	E3861	D3862	G3863												
T3864	V3865	I3866	N3867	R3868	Q3869	N3870	G3871	E3872	K3873	D3878	E3879	F3880	L3884	F3885	R3886	Q3889	N3896	D3897	F3898	Q3900	N3901	T3902	T3905	Q3906	T3910	T3911	T3912	I3913	Y3922	L3926	S3929	D3932	W3935	Y3936	Y3937	D3941	Q3946	G3947	K3948	R3949	N3950	M3955	R4085	G4086	F4093												
E3967	G3970	G3971	F3972	C3973	N3976	H3982	S3983	R3984	K4002	L4003	A4004	S4008	L4013	L4019	D4022	L4031	E4032	G4033	N4034	E4050	E4056	K4060	M4064	F4066	F4067	L4068	K4069	D4070	G4073	S4074	E4075	Q4078	D4079	F4080	V4081	T4082	D4083	R4084	R4085	G4086	F4093																
Q4094	M4097	D4098	K4101	Q4102	F4103	T4104	G4105	P4106	E4116	A4117	D4118	E4119	N4120	E4121	M4122	I4123	E4126	E4127	M4130	R4131	E4152	P4155	H4156	L4159	L4160	R4161	F4174	L4178	G4179	R4180	I4181	E4182	R4188	R4189	L4190	E4191	R4192	T4193	Y4194	M4205	E4206	M4207	P4208	K4211	R4215												
M4223	E4224	G4225	G4226	E4227	M4228	E4229	K4230	M4231	E4232	I4251	S4252	E4253	X4320	X4321	X4322	X4323	X4324	X4325	X4326	X4327	X4328	X4329	X4330	X4331	X4332	X4333	X4334	X4335	X4336	X4337	X4338	X4339	X4340	X4341	X4342	X4343	X4344	X4345	R4548	M4558	T4561	F4566	I4573	L4577	Y4580	K4581	V4582	S4583	D4584								
P4657	GLY	ASP	ASP	MET	GLU	GLY	SER	ALA	ALA	GLY	ASP	LEU	ALA	ALA	GLY	GLY	GLY	GLY	GLY	TRP	GLY	SER	GLY	ALA	GLY	GLU	GLU	ALA	ALA	GLY	GLY	ASP	GLU	ASP	GLU	ASP	M4626	M4627	V4628	V4629	E4633	E4634	S4635	T4636	G4637	P4641	M4644	L4646	V4666	V4669							



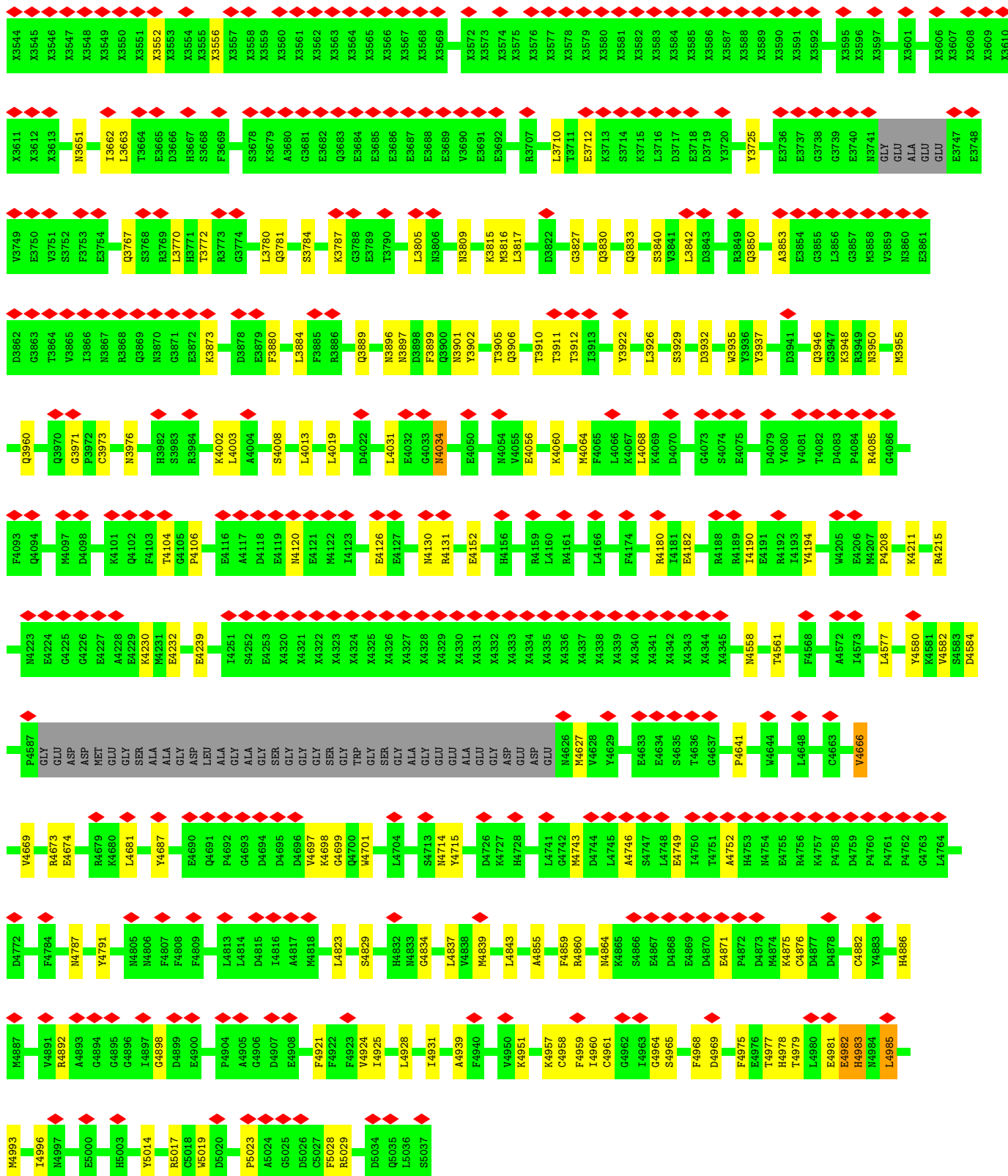
• Molecule 2: Ryanodine receptor 1



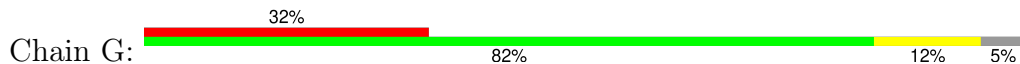


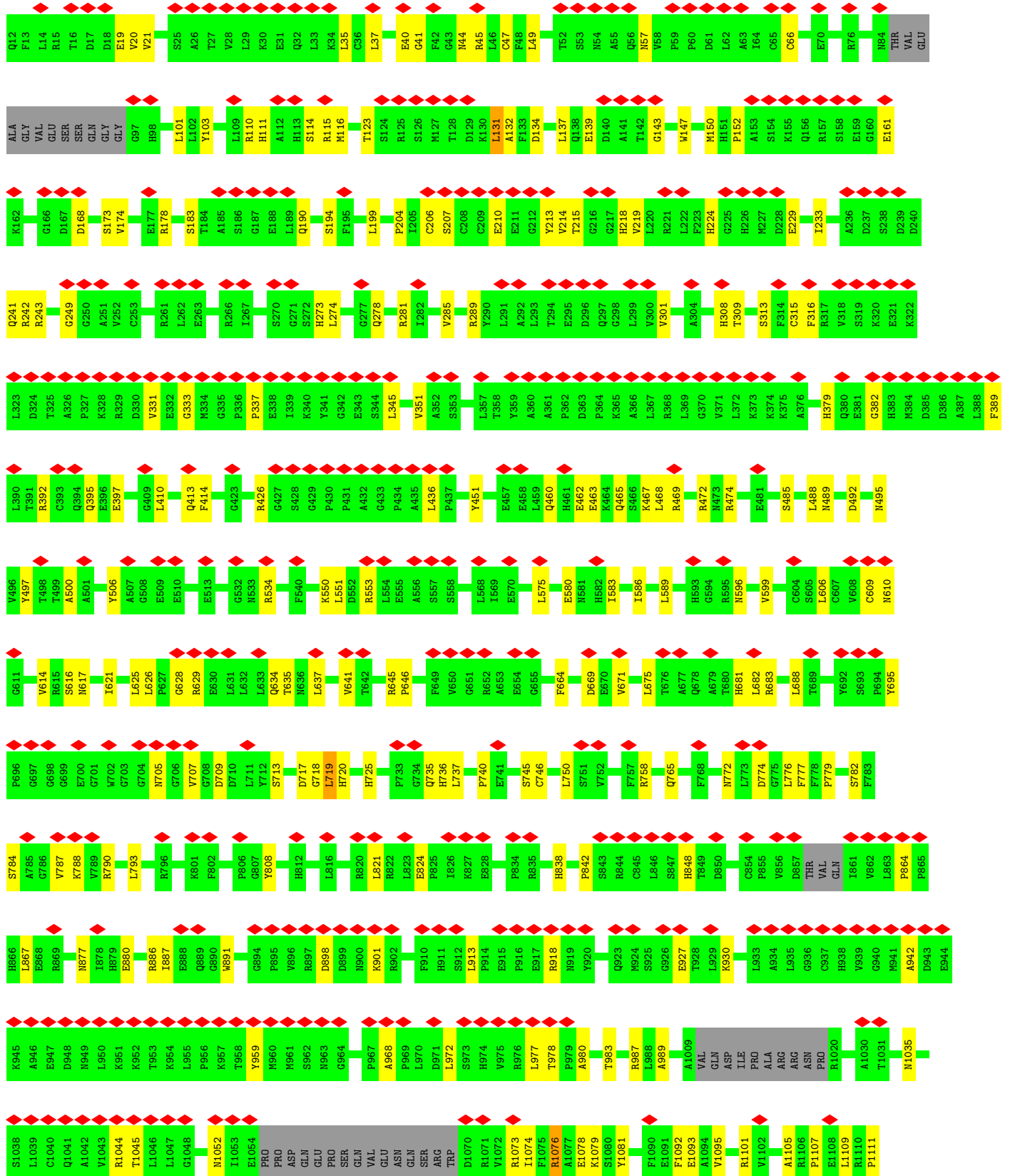


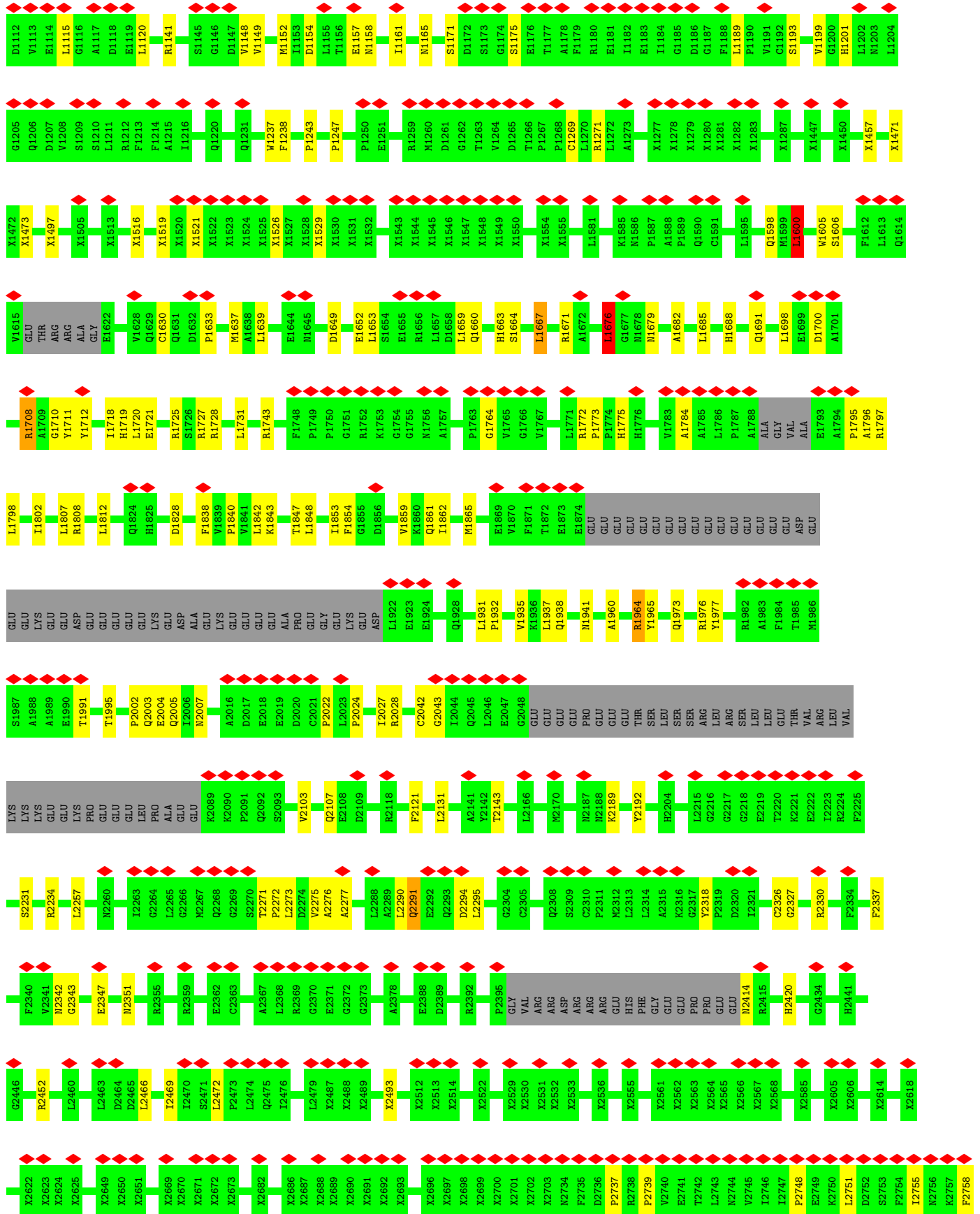




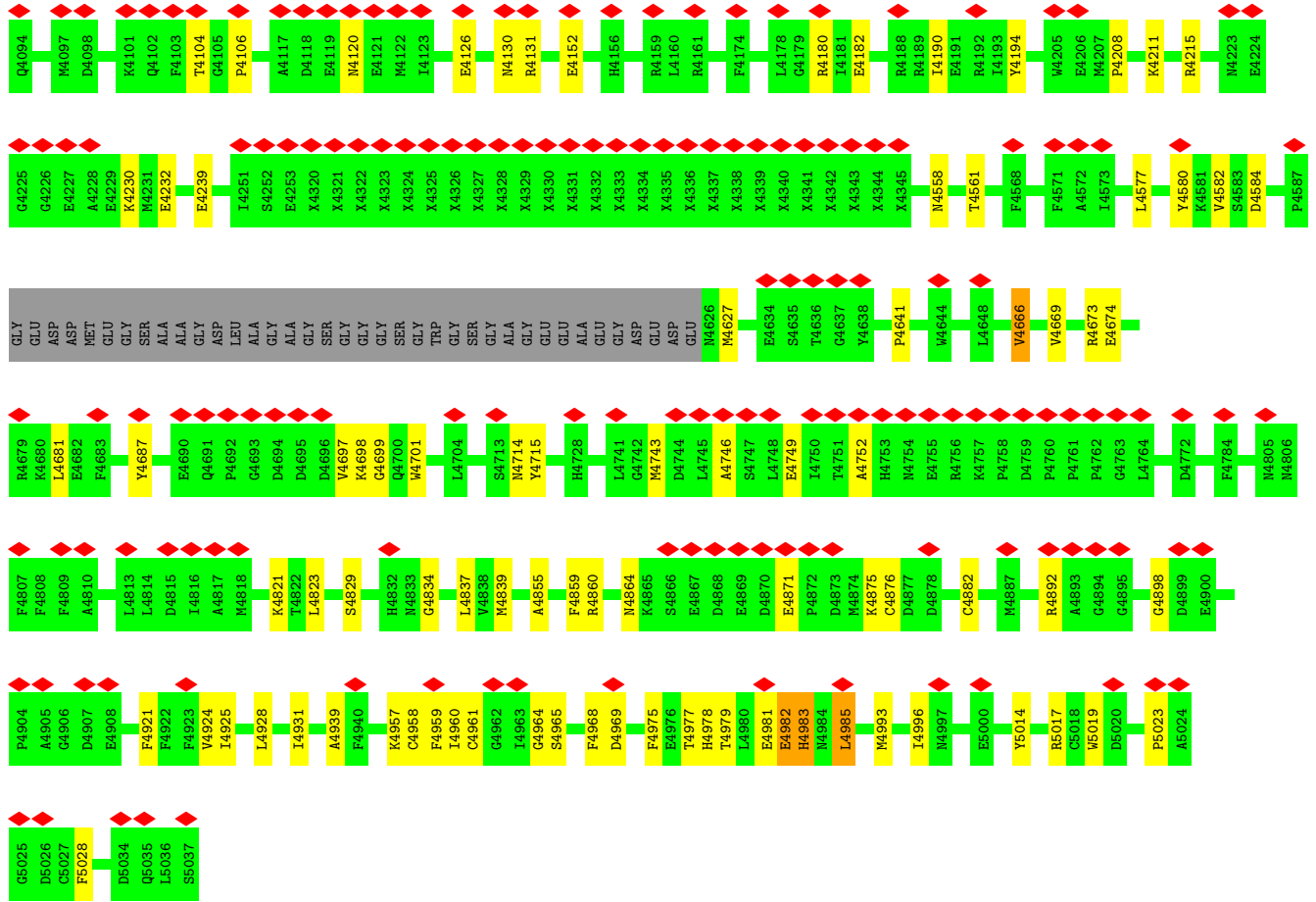
- Molecule 2: Ryanodine receptor 1







A2759	A2760	A2761	T2762	H2763	E2764	K2765	W2766	A2767	F2768	D2769	K2770	I2771	Q2772	H2773	H2774	W2775	S2776	V2777	G2778	E2779	H2780	V2781	D2782	E2783	E2784	L2785	K2786	V2787	H2788	F2789	H2790	L2791	R2792	P2793	V2794	K2795	T2796	F2797	S2798	E2799	K2800	D2801	K2802	E2803	I2804	R2805	R2806	W2807	K2808	L2809	K2810	E2811	S2812	L2813	K2814	A2815	H2816	L2817	A2818
W2819	E2820	W2821	T2822	I2823	E2824	K2825	A2826	R2827	E2828	G2829	E2830	GLU	GLU	ARG	THR	GLU	LYS	LYS	THR	ARG	LYS	ILE	SER	GLN	THR	ALA	GLN	THR	TVR	ASP	PRU	ARG	GLU	GLY	Y2855	N2856	P2857	Q2858	P2859	P2860	D2861	L2862	S2863	G2864	V2865	T2866	L2867	S2868	R2869	E2870	L2871	E2872	Q2873	A2874	M2874	A2875	E2876	Q2877	L2878
A2879	E2880	N2881	Y2882	H2883	H2884	T2885	W2886	G2887	K2888	R2889	K2890	K2891	Q2892	E2893	L2894	E2895	A2896	K2897	G2898	D2899	G2900	T2901	H2902	P2903	L2904	L2905	V2906	P2907	V2908	D2909	T2910	T2912	A2913	K2914	E2915	K2916	A2917	R2918	D2919	R2920	E2921	K2922	A2923	Q2924	E2925	L2926	L2927	K2928	F2929	L2930	Q2931	M2931	N2933	G2934	Y2935	W2937	T2938		
R2939	X2942	X2943	X2944	X2945	X2946	X2947	X2948	X2949	X2950	X2951	X2952	X2973	X2974	X2975	X2976	X2995	X3009	X3014	X3015	X3016	X3017	X3018	X3019	X3020	X3021	X3022	X3023	X3027	X3034	X3037	X3038	X3043	X3044	X3045	X3046	X3047	X3058	X3059	X3060	X3061	X3062	X3063	X3134	X3135	X3136	X3137	X3138	X3139	X3149										
X3158	X3161	X3162	X3163	X3170	X3176	X3177	X3190	X3191	X3192	X3193	X3194	X3195	X3196	X3197	X3209	X3210	X3211	X3212	X3213	X3214	X3215	X3216	X3217	X3218	X3219	X3220	X3221	X3222	X3223	X3230	X3233	X3234	X3235	X3236	X3241	X3242	X3243	X3244	X3245	X3246	X3247	X3248	X3249	X3250	X3251	X3252	X3253	X3254	X3261	X3262	X3263	X3265							
X3266	X3267	X3268	X3269	X3270	X3271	X3272	X3273	X3274	X3275	X3276	X3277	X3278	X3279	X3280	X3281	X3282	X3283	X3284	X3285	X3286	X3287	X3288	X3289	X3290	X3291	X3292	X3293	X3294	X3295	X3296	X3297	X3298	X3301	X3302	X3303	X3304	X3313	X3314	X3315	X3316	X3320	X3327	X3330	X3331	X3334	X3335	X3336	X3337	X3338	X3339	X3340	X3341	X3342						
X3346	X3347	X3348	X3349	X3350	X3351	X3352	X3353	X3354	X3355	X3356	X3357	X3358	X3359	X3360	X3361	X3362	X3365	X3366	X3369	X3370	X3371	X3372	X3373	X3374	X3375	X3376	X3377	X3380	X3383	X3384	X3385	X3386	X3387	X3388	X3389	X3390	X3391	X3392	X3393	X3394	X3395	X3396	X3397	X3398	X3399	X3400	X3401	X3403	X3404	X3407	X3408	X3409							
X3410	X3411	X3412	X3413	X3420	X3424	X3430	X3431	X3432	X3433	X3434	X3435	X3436	X3441	X3452	X3453	X3454	X3455	X3458	X3465	X3466	X3467	X3468	X3511	X3512	X3513	X3514	X3515	X3516	X3517	X3520	X3521	X3524	X3525	X3526	X3527	X3529	X3530	X3531	X3532	X3533	X3534	X3535	X3536	X3537	X3538	X3539	X3540	X3541	X3542										
X3543	X3544	X3545	X3546	X3547	X3548	X3549	X3550	X3551	X3552	X3553	X3554	X3555	X3556	X3557	X3558	X3559	X3560	X3561	X3562	X3563	X3564	X3565	X3566	X3567	X3568	X3569	X3572	X3576	X3577	X3578	X3579	X3580	X3581	X3582	X3583	X3584	X3585	X3586	X3587	X3588	X3589	X3590	X3591	X3592	X3595	X3596	X3597	X3601	X3602	X3606	X3607	X3608	X3609	X3610					
X3611	X3612	X3613	N3651	I3662	L3663	T3664	E3665	D3666	H3667	S3668	F3669	S3678	K3679	A3680	G3681	E3682	Q3683	E3684	E3685	E3686	E3687	E3688	E3689	V3690	E3691	E3692	L3710	T3711	E3712	K3713	S3714	K3715	L3716	D3717	E3718	D3719	Y3720	Y3725	A3726	D3727	E3736	E3737	G3738	G3739	E3740	N3741	GLU	GLU	ALA	GLU	GLU	E3747	E3748						
V3749	E3750	V3751	S3752	F3753	E3754	Q3767	S3768	R3769	L3770	H3771	T3772	R3773	G3774	L3780	Q3781	S3784	K3787	G3788	E3789	T3790	L3805	N3806	N3809	K3815	K3816	L3817	D3822	G3827	Q3830	Q3833	S3840	V3841	L3842	D3843	Q3850	A3853	E3854	G3855	L3856	G3857	M3858	V3859	N3860	E3861	L3862														
G3863	T3864	V3865	I3866	R3867	R3868	Q3869	N3870	G3871	E3872	K3873	D3878	E3879	F3880	L3884	F3885	R3886	Q3889	N3896	D3898	F3899	Q3900	N3901	Y3902	T3905	Q3906	T3910	T3911	T3912	I3913	Y3922	L3926	S3929	D3932	V3935	Y3936	Y3937	D3941	Q3946	G3947	K3948	R3949	N3950	M3955																
Q3960	E3967	I3970	G3971	F3972	C3973	N3976	H3982	S3983	R3984	K4002	L4003	L4004	S4008	L4013	L4019	D4022	L4031	F4032	G4033	N4034	E4050	E4056	K4060	M4064	F4065	L4066	K4067	L4069	D4070	G4073	S4074	E4075	D4079	Y4080	V4081	T4082	D4083	F4084	N3950	G4086	F4093																		



## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	55564	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI POLARA 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	50	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.077	Depositor
Minimum map value	-0.024	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.004	Depositor
Recommended contour level	0.028	Depositor
Map size (Å)	502.0, 502.0, 502.0	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.255, 1.255, 1.255	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: CFF, ATP, ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	A	0.31	0/834	0.53	0/1123
1	F	0.31	0/834	0.53	0/1123
1	H	0.31	0/834	0.53	0/1123
1	J	0.31	0/834	0.53	0/1123
2	B	0.29	0/25428	0.53	9/34534 (0.0%)
2	E	0.29	0/25428	0.53	9/34534 (0.0%)
2	G	0.29	0/25428	0.53	9/34534 (0.0%)
2	I	0.29	0/25428	0.53	9/34534 (0.0%)
All	All	0.29	0/105048	0.53	36/142628 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	B	0	11
2	E	0	11
2	G	0	11
2	I	0	11
All	All	0	44

There are no bond length outliers.

All (36) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	G	131	LEU	CA-CB-CG	8.04	133.78	115.30
2	B	131	LEU	CA-CB-CG	8.02	133.75	115.30
2	I	131	LEU	CA-CB-CG	8.01	133.73	115.30
2	E	131	LEU	CA-CB-CG	8.00	133.69	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	G	1600	LEU	CA-CB-CG	7.20	131.87	115.30
2	E	1600	LEU	CA-CB-CG	7.20	131.86	115.30
2	B	1600	LEU	CA-CB-CG	7.19	131.83	115.30
2	I	1600	LEU	CA-CB-CG	7.18	131.81	115.30
2	B	1676	LEU	CA-CB-CG	6.80	130.94	115.30
2	I	1676	LEU	CA-CB-CG	6.79	130.93	115.30
2	G	1676	LEU	CA-CB-CG	6.79	130.92	115.30
2	E	1676	LEU	CA-CB-CG	6.78	130.90	115.30
2	E	4985	LEU	CA-CB-CG	6.70	130.72	115.30
2	B	4985	LEU	CA-CB-CG	6.70	130.70	115.30
2	G	4985	LEU	CA-CB-CG	6.69	130.69	115.30
2	I	4985	LEU	CA-CB-CG	6.69	130.69	115.30
2	I	1667	LEU	CA-CB-CG	5.54	128.04	115.30
2	E	1667	LEU	CA-CB-CG	5.53	128.02	115.30
2	B	1667	LEU	CA-CB-CG	5.53	128.02	115.30
2	G	1667	LEU	CA-CB-CG	5.52	127.99	115.30
2	I	977	LEU	CA-CB-CG	5.52	127.99	115.30
2	B	977	LEU	CA-CB-CG	5.51	127.97	115.30
2	G	977	LEU	CA-CB-CG	5.50	127.95	115.30
2	E	977	LEU	CA-CB-CG	5.49	127.93	115.30
2	E	2290	LEU	CA-CB-CG	5.34	127.59	115.30
2	I	2290	LEU	CA-CB-CG	5.34	127.58	115.30
2	B	2290	LEU	CA-CB-CG	5.33	127.57	115.30
2	G	2290	LEU	CA-CB-CG	5.33	127.57	115.30
2	G	719	LEU	CA-CB-CG	5.32	127.54	115.30
2	E	719	LEU	CA-CB-CG	5.32	127.53	115.30
2	B	719	LEU	CA-CB-CG	5.30	127.50	115.30
2	I	719	LEU	CA-CB-CG	5.28	127.44	115.30
2	G	688	LEU	CA-CB-CG	5.10	127.04	115.30
2	B	688	LEU	CA-CB-CG	5.09	127.00	115.30
2	I	688	LEU	CA-CB-CG	5.09	127.00	115.30
2	E	688	LEU	CA-CB-CG	5.06	126.94	115.30

There are no chirality outliers.

All (44) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	B	139	GLU	Peptide
2	B	1676	LEU	Peptide
2	B	1795	PRO	Peptide
2	B	1828	ASP	Peptide
2	B	2291	GLN	Peptide

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
2	B	2343	GLY	Peptide
2	B	2472	LEU	Peptide
2	B	2807	TRP	Peptide
2	B	3971	GLY	Peptide
2	B	4666	VAL	Peptide
2	B	808	TYR	Peptide
2	E	139	GLU	Peptide
2	E	1676	LEU	Peptide
2	E	1795	PRO	Peptide
2	E	1828	ASP	Peptide
2	E	2291	GLN	Peptide
2	E	2343	GLY	Peptide
2	E	2472	LEU	Peptide
2	E	2807	TRP	Peptide
2	E	3971	GLY	Peptide
2	E	4666	VAL	Peptide
2	E	808	TYR	Peptide
2	G	139	GLU	Peptide
2	G	1676	LEU	Peptide
2	G	1795	PRO	Peptide
2	G	1828	ASP	Peptide
2	G	2291	GLN	Peptide
2	G	2343	GLY	Peptide
2	G	2472	LEU	Peptide
2	G	2807	TRP	Peptide
2	G	3971	GLY	Peptide
2	G	4666	VAL	Peptide
2	G	808	TYR	Peptide
2	I	139	GLU	Peptide
2	I	1676	LEU	Peptide
2	I	1795	PRO	Peptide
2	I	1828	ASP	Peptide
2	I	2291	GLN	Peptide
2	I	2343	GLY	Peptide
2	I	2472	LEU	Peptide
2	I	2807	TRP	Peptide
2	I	3971	GLY	Peptide
2	I	4666	VAL	Peptide
2	I	808	TYR	Peptide

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

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	818	0	824	21	0
1	F	818	0	824	20	0
1	H	818	0	824	18	0
1	J	818	0	824	18	0
2	B	29499	0	24746	316	0
2	E	29499	0	24746	322	0
2	G	29499	0	24746	319	0
2	I	29499	0	24746	317	0
3	B	31	0	12	2	0
3	E	31	0	12	2	0
3	G	31	0	12	2	0
3	I	31	0	12	2	0
4	B	14	0	10	1	0
4	E	14	0	10	1	0
4	G	14	0	10	1	0
4	I	14	0	10	1	0
5	B	1	0	0	0	0
5	E	1	0	0	0	0
5	G	1	0	0	0	0
5	I	1	0	0	0	0
All	All	121452	0	102368	1324	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 6.

All (1324) 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)
2:G:4230:LYS:HD2	2:G:4959:PHE:CE2	1.25	1.69
2:E:4230:LYS:HD2	2:E:4959:PHE:CE2	1.25	1.64
2:I:4230:LYS:HD2	2:I:4959:PHE:CE2	1.25	1.60
2:B:4230:LYS:HD2	2:B:4959:PHE:CE2	1.25	1.58
2:B:4230:LYS:HD2	2:B:4959:PHE:CZ	1.55	1.42
2:E:4230:LYS:HD2	2:E:4959:PHE:CZ	1.55	1.42
2:E:4230:LYS:CD	2:E:4959:PHE:CZ	2.04	1.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4230:LYS:CD	2:B:4959:PHE:CZ	2.04	1.41
2:I:4230:LYS:HD2	2:I:4959:PHE:CZ	1.55	1.40
2:G:4230:LYS:HD2	2:G:4959:PHE:CZ	1.55	1.40
2:I:4230:LYS:CD	2:I:4959:PHE:CZ	2.04	1.40
2:G:4230:LYS:CD	2:G:4959:PHE:CZ	2.04	1.39
2:I:4230:LYS:CD	2:I:4959:PHE:CE2	2.15	1.29
2:B:4230:LYS:CD	2:B:4959:PHE:CE2	2.15	1.27
2:E:4230:LYS:CD	2:E:4959:PHE:CE2	2.15	1.25
2:G:4230:LYS:CD	2:G:4959:PHE:CE2	2.15	1.20
2:I:4230:LYS:HD3	2:I:4959:PHE:CZ	1.76	1.19
2:G:4230:LYS:HD3	2:G:4959:PHE:CZ	1.76	1.13
2:B:4230:LYS:HD3	2:B:4959:PHE:HZ	1.07	1.12
2:E:4230:LYS:HD3	2:E:4959:PHE:CZ	1.76	1.12
2:B:4230:LYS:HD3	2:B:4959:PHE:CZ	1.76	1.09
2:E:4230:LYS:HD3	2:E:4959:PHE:HZ	1.07	1.09
2:I:4230:LYS:HD3	2:I:4959:PHE:HZ	1.07	1.07
2:E:4957:LYS:HG2	2:E:4964:GLY:HA2	1.37	1.06
2:B:4957:LYS:HG2	2:B:4964:GLY:HA2	1.37	1.06
2:I:4957:LYS:HG2	2:I:4964:GLY:HA2	1.37	1.06
2:G:4957:LYS:HG2	2:G:4964:GLY:HA2	1.37	1.06
2:G:4230:LYS:HD3	2:G:4959:PHE:HZ	1.07	1.04
2:I:4230:LYS:HD2	2:I:4959:PHE:HE2	1.25	0.96
2:B:4230:LYS:HD2	2:B:4959:PHE:HE2	1.26	0.96
2:E:4230:LYS:HD2	2:E:4959:PHE:HE2	1.26	0.92
2:G:4230:LYS:HD2	2:G:4959:PHE:HE2	1.26	0.90
2:B:788:LYS:HG2	2:B:1630:CYS:H	1.51	0.75
2:E:788:LYS:HG2	2:E:1630:CYS:H	1.51	0.75
2:I:788:LYS:HG2	2:I:1630:CYS:H	1.51	0.74
2:G:788:LYS:HG2	2:G:1630:CYS:H	1.51	0.73
2:B:2318:TYR:HH	2:B:2414:ASN:N	1.89	0.70
2:B:1667:LEU:HD23	2:B:1671:ARG:HH12	1.57	0.69
2:E:1667:LEU:HD23	2:E:1671:ARG:HH12	1.57	0.69
2:G:1667:LEU:HD23	2:G:1671:ARG:HH12	1.57	0.69
2:I:2318:TYR:HH	2:I:2414:ASN:N	1.89	0.69
2:I:1667:LEU:HD23	2:I:1671:ARG:HH12	1.57	0.68
2:G:2318:TYR:HH	2:G:2414:ASN:N	1.89	0.68
2:E:2318:TYR:HH	2:E:2414:ASN:N	1.91	0.67
2:G:379:HIS:HD2	2:G:382:GLY:H	1.42	0.67
2:I:379:HIS:HD2	2:I:382:GLY:H	1.42	0.66
2:E:379:HIS:HD2	2:E:382:GLY:H	1.42	0.66
2:E:4957:LYS:CG	2:E:4964:GLY:HA2	2.23	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:379:HIS:HD2	2:B:382:GLY:H	1.42	0.65
2:I:4957:LYS:CG	2:I:4964:GLY:HA2	2.22	0.64
2:B:426:ARG:HB2	2:B:506:TYR:HA	1.79	0.64
2:I:745:SER:HB2	2:I:758:ARG:HB3	1.80	0.64
2:G:426:ARG:HB2	2:G:506:TYR:HA	1.79	0.64
2:B:4983:HIS:CD2	2:B:4983:HIS:H	2.16	0.64
2:B:745:SER:HB2	2:B:758:ARG:HB3	1.80	0.64
2:I:426:ARG:HB2	2:I:506:TYR:HA	1.79	0.63
2:I:1685:LEU:HA	2:I:1688:HIS:HD2	1.64	0.63
2:I:4983:HIS:H	2:I:4983:HIS:CD2	2.16	0.63
2:G:745:SER:HB2	2:G:758:ARG:HB3	1.80	0.63
2:B:1092:PHE:HB3	2:B:1149:VAL:HB	1.81	0.63
2:E:426:ARG:HB2	2:E:506:TYR:HA	1.79	0.63
2:E:745:SER:HB2	2:E:758:ARG:HB3	1.80	0.63
2:G:4983:HIS:CD2	2:G:4983:HIS:H	2.16	0.63
2:I:1092:PHE:HB3	2:I:1149:VAL:HB	1.81	0.62
2:G:1685:LEU:HA	2:G:1688:HIS:HD2	1.64	0.62
2:E:4674:GLU:HG3	2:E:4714:ASN:HB3	1.81	0.62
2:G:1092:PHE:HB3	2:G:1149:VAL:HB	1.81	0.62
2:B:4957:LYS:CG	2:B:4964:GLY:HA2	2.22	0.62
2:E:1685:LEU:HA	2:E:1688:HIS:HD2	1.64	0.62
2:B:1685:LEU:HA	2:B:1688:HIS:HD2	1.64	0.62
2:E:1092:PHE:HB3	2:E:1149:VAL:HB	1.81	0.62
2:E:1152:MET:HB2	2:E:1161:ILE:HB	1.82	0.62
2:E:1671:ARG:NH2	2:E:1710:GLY:O	2.33	0.62
2:B:1671:ARG:NH2	2:B:1710:GLY:O	2.33	0.62
2:I:1671:ARG:NH2	2:I:1710:GLY:O	2.33	0.62
2:E:174:VAL:O	2:G:2452:ARG:NH1	2.33	0.62
2:E:313:SER:HB3	2:E:351:VAL:HB	1.82	0.61
2:E:4983:HIS:CD2	2:E:4983:HIS:H	2.16	0.61
2:B:4582:VAL:HG11	2:I:4860:ARG:HD2	1.82	0.61
2:B:313:SER:HB3	2:B:351:VAL:HB	1.82	0.61
2:I:1152:MET:HB2	2:I:1161:ILE:HB	1.82	0.61
2:I:4674:GLU:HG3	2:I:4714:ASN:HB3	1.81	0.61
2:G:4674:GLU:HG3	2:G:4714:ASN:HB3	1.81	0.61
2:I:3889:GLN:OE1	2:I:3960:GLN:NE2	2.34	0.61
2:I:4180:ARG:NH1	2:I:4981:GLU:OE1	2.34	0.61
2:G:281:ARG:NH2	2:G:309:THR:OG1	2.33	0.61
2:G:1671:ARG:NH2	2:G:1710:GLY:O	2.33	0.61
2:B:2748:PRO:HD2	2:B:2751:LEU:HD12	1.82	0.61
2:B:4674:GLU:HG3	2:B:4714:ASN:HB3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4180:ARG:NH1	2:B:4981:GLU:OE1	2.33	0.61
2:B:111:HIS:HD2	2:B:114:SER:H	1.49	0.61
2:G:3889:GLN:OE1	2:G:3960:GLN:NE2	2.34	0.61
2:G:4180:ARG:NH1	2:G:4981:GLU:OE1	2.33	0.61
2:G:313:SER:HB3	2:G:351:VAL:HB	1.82	0.61
2:E:4180:ARG:NH1	2:E:4981:GLU:OE1	2.34	0.61
2:I:683:ARG:HB2	2:I:782:SER:HB3	1.83	0.60
2:E:111:HIS:HD2	2:E:114:SER:H	1.49	0.60
2:G:111:HIS:HD2	2:G:114:SER:H	1.49	0.60
2:G:2748:PRO:HD2	2:G:2751:LEU:HD12	1.82	0.60
2:B:4860:ARG:HD2	2:E:4582:VAL:HG11	1.83	0.60
2:G:1152:MET:HB2	2:G:1161:ILE:HB	1.82	0.60
2:B:1152:MET:HB2	2:B:1161:ILE:HB	1.82	0.60
2:E:3889:GLN:OE1	2:E:3960:GLN:NE2	2.34	0.60
2:G:683:ARG:HB2	2:G:782:SER:HB3	1.84	0.60
2:I:313:SER:HB3	2:I:351:VAL:HB	1.83	0.60
2:E:580:GLU:HG2	2:E:583:ILE:HD11	1.83	0.60
2:I:281:ARG:NH2	2:I:309:THR:OG1	2.33	0.60
2:B:580:GLU:HG2	2:B:583:ILE:HD11	1.83	0.60
2:B:683:ARG:HB2	2:B:782:SER:HB3	1.83	0.60
2:B:3889:GLN:OE1	2:B:3960:GLN:NE2	2.34	0.60
2:B:4978:HIS:HA	2:B:4982:GLU:HB2	1.84	0.60
2:I:4978:HIS:HA	2:I:4982:GLU:HB2	1.84	0.60
2:E:4978:HIS:HA	2:E:4982:GLU:HB2	1.84	0.60
2:I:111:HIS:HD2	2:I:114:SER:H	1.49	0.60
2:I:580:GLU:HG2	2:I:583:ILE:HD11	1.83	0.60
2:E:2748:PRO:HD2	2:E:2751:LEU:HD12	1.82	0.60
2:G:664:PHE:HB2	2:G:746:CYS:HB2	1.85	0.59
1:J:74:LEU:HB2	1:J:99:PHE:HB2	1.84	0.59
2:I:2748:PRO:HD2	2:I:2751:LEU:HD12	1.82	0.59
2:E:2755:ILE:HD13	2:E:2810:LYS:HG2	1.84	0.59
2:G:580:GLU:HG2	2:G:583:ILE:HD11	1.83	0.59
2:G:4978:HIS:HA	2:G:4982:GLU:HB2	1.84	0.59
2:E:683:ARG:HB2	2:E:782:SER:HB3	1.84	0.59
1:F:74:LEU:HB2	1:F:99:PHE:HB2	1.84	0.59
1:A:74:LEU:HB2	1:A:99:PHE:HB2	1.84	0.59
2:I:2755:ILE:HD13	2:I:2810:LYS:HG2	1.84	0.59
2:E:1079:LYS:NZ	2:E:1107:PRO:O	2.36	0.59
1:H:74:LEU:HB2	1:H:99:PHE:HB2	1.84	0.59
2:G:2755:ILE:HD13	2:G:2810:LYS:HG2	1.84	0.59
2:B:2755:ILE:HD13	2:B:2810:LYS:HG2	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:2420:HIS:ND1	2:I:2493:UNK:O	2.36	0.58
2:E:281:ARG:NH2	2:E:309:THR:OG1	2.33	0.58
2:G:1079:LYS:NZ	2:G:1107:PRO:O	2.36	0.58
1:H:6:THR:HA	1:H:72:ALA:HA	1.85	0.58
2:B:281:ARG:NH2	2:B:309:THR:OG1	2.33	0.58
2:B:1743:ARG:O	2:B:1964:ARG:NH2	2.36	0.58
2:E:463:GLU:OE2	2:E:467:LYS:NZ	2.37	0.58
2:E:3937:TYR:O	2:E:4002:LYS:NZ	2.37	0.58
2:G:3937:TYR:O	2:G:4002:LYS:NZ	2.37	0.58
2:B:2291:GLN:HB2	2:B:2295:LEU:HG	1.86	0.58
2:E:331:VAL:HG12	2:E:333:GLY:H	1.68	0.58
2:I:1743:ARG:O	2:I:1964:ARG:NH2	2.36	0.58
2:E:2420:HIS:ND1	2:E:2493:UNK:O	2.36	0.58
1:F:55:VAL:HA	2:E:1784:ALA:HA	1.85	0.58
2:E:1743:ARG:O	2:E:1964:ARG:NH2	2.36	0.58
2:G:463:GLU:OE2	2:G:467:LYS:NZ	2.37	0.58
2:G:2420:HIS:ND1	2:G:2493:UNK:O	2.36	0.58
2:B:1079:LYS:NZ	2:B:1107:PRO:O	2.36	0.58
2:I:664:PHE:HB2	2:I:746:CYS:HB2	1.85	0.58
2:I:4104:THR:HG22	2:I:4106:PRO:HD2	1.85	0.58
2:E:664:PHE:HB2	2:E:746:CYS:HB2	1.85	0.58
2:G:1743:ARG:O	2:G:1964:ARG:NH2	2.36	0.58
2:B:2420:HIS:ND1	2:B:2493:UNK:O	2.36	0.58
2:I:463:GLU:OE2	2:I:467:LYS:NZ	2.37	0.58
2:E:2770:LYS:HB3	2:E:2775:TRP:HB2	1.86	0.58
2:G:331:VAL:HG12	2:G:333:GLY:H	1.68	0.58
1:A:6:THR:HA	1:A:72:ALA:HA	1.85	0.57
2:B:664:PHE:HB2	2:B:746:CYS:HB2	1.85	0.57
2:I:331:VAL:HG12	2:I:333:GLY:H	1.68	0.57
2:E:1731:LEU:HA	2:E:1772:ARG:HH12	1.69	0.57
2:G:4957:LYS:CG	2:G:4964:GLY:HA2	2.22	0.57
1:J:6:THR:HA	1:J:72:ALA:HA	1.85	0.57
2:B:331:VAL:HG12	2:B:333:GLY:H	1.68	0.57
2:I:1653:LEU:HB3	2:I:1660:GLN:HB2	1.87	0.57
2:I:2291:GLN:HB2	2:I:2295:LEU:HG	1.85	0.57
2:I:2770:LYS:HB3	2:I:2775:TRP:HB2	1.86	0.57
2:E:4898:GLY:O	2:G:4892:ARG:NH2	2.37	0.57
2:G:1653:LEU:HB3	2:G:1660:GLN:HB2	1.86	0.57
1:F:6:THR:HA	1:F:72:ALA:HA	1.85	0.57
1:H:87:HIS:H	1:H:91:ILE:HB	1.69	0.57
2:E:1653:LEU:HB3	2:E:1660:GLN:HB2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1700:ASP:OD2	2:E:1708:ARG:NH2	2.38	0.57
1:F:87:HIS:H	1:F:91:ILE:HB	1.69	0.57
2:B:1731:LEU:HA	2:B:1772:ARG:HH12	1.69	0.57
2:I:4829:SER:HB2	2:I:4939:ALA:HB1	1.86	0.57
2:E:2291:GLN:HB2	2:E:2295:LEU:HG	1.86	0.57
2:B:463:GLU:OE2	2:B:467:LYS:NZ	2.37	0.57
2:B:469:ARG:HH21	2:B:3712:GLU:HB3	1.70	0.57
2:B:4960:ILE:HG22	2:B:4960:ILE:O	2.05	0.57
2:I:2189:LYS:HA	2:I:2192:TYR:HD2	1.70	0.57
2:I:4996:ILE:HG12	4:I:5102:CFF:H123	1.87	0.57
2:E:4983:HIS:CD2	2:E:4983:HIS:N	2.73	0.57
2:G:4104:THR:HG22	2:G:4106:PRO:HD2	1.85	0.57
2:B:110:ARG:HH21	2:B:115:ARG:HB3	1.69	0.57
2:B:1653:LEU:HB3	2:B:1660:GLN:HB2	1.87	0.57
2:B:1700:ASP:OD2	2:B:1708:ARG:NH2	2.38	0.57
2:B:2189:LYS:HA	2:B:2192:TYR:HD2	1.70	0.57
2:E:4104:THR:HG22	2:E:4106:PRO:HD2	1.85	0.57
2:B:3937:TYR:O	2:B:4002:LYS:NZ	2.37	0.57
2:I:1079:LYS:NZ	2:I:1107:PRO:O	2.36	0.57
2:I:3937:TYR:O	2:I:4002:LYS:NZ	2.37	0.57
2:E:469:ARG:HH21	2:E:3712:GLU:HB3	1.70	0.57
2:E:1271:ARG:HA	2:E:1471:UNK:HA	1.86	0.57
2:E:4996:ILE:HG12	4:E:5102:CFF:H123	1.87	0.57
2:G:2189:LYS:HA	2:G:2192:TYR:HD2	1.70	0.57
2:G:2770:LYS:HB3	2:G:2775:TRP:HB2	1.86	0.57
2:B:1271:ARG:HA	2:B:1471:UNK:HA	1.86	0.57
2:B:2770:LYS:HB3	2:B:2775:TRP:HB2	1.86	0.57
2:E:2189:LYS:HA	2:E:2192:TYR:HD2	1.70	0.57
2:B:4996:ILE:HG12	4:B:5102:CFF:H123	1.87	0.57
2:E:4829:SER:HB2	2:E:4939:ALA:HB1	1.86	0.57
2:G:1700:ASP:OD2	2:G:1708:ARG:NH2	2.38	0.57
2:B:4983:HIS:CD2	2:B:4983:HIS:N	2.73	0.56
2:E:972:LEU:O	2:E:1044:ARG:NH2	2.38	0.56
2:G:110:ARG:HH21	2:G:115:ARG:HB3	1.69	0.56
2:G:641:VAL:HG21	2:G:705:ASN:HA	1.86	0.56
2:G:1271:ARG:HA	2:G:1471:UNK:HA	1.86	0.56
2:G:4829:SER:HB2	2:G:4939:ALA:HB1	1.86	0.56
2:I:110:ARG:HH21	2:I:115:ARG:HB3	1.69	0.56
2:I:4957:LYS:HG2	2:I:4964:GLY:CA	2.25	0.56
2:I:4983:HIS:CD2	2:I:4983:HIS:N	2.73	0.56
2:E:641:VAL:HG21	2:E:705:ASN:HA	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:4960:ILE:HG22	2:E:4960:ILE:O	2.05	0.56
2:G:1109:LEU:HA	2:G:1120:LEU:HD21	1.88	0.56
2:G:1731:LEU:HA	2:G:1772:ARG:HH12	1.69	0.56
2:B:1109:LEU:HA	2:B:1120:LEU:HD21	1.87	0.56
2:I:1109:LEU:HA	2:I:1120:LEU:HD21	1.87	0.56
2:I:1271:ARG:HA	2:I:1471:UNK:HA	1.86	0.56
2:I:1731:LEU:HA	2:I:1772:ARG:HH12	1.69	0.56
2:E:1109:LEU:HA	2:E:1120:LEU:HD21	1.87	0.56
2:G:2291:GLN:HB2	2:G:2295:LEU:HG	1.86	0.56
2:I:641:VAL:HG21	2:I:705:ASN:HA	1.86	0.56
2:I:1700:ASP:OD2	2:I:1708:ARG:NH2	2.38	0.56
1:A:87:HIS:H	1:A:91:ILE:HB	1.69	0.56
2:B:4104:THR:HG22	2:B:4106:PRO:HD2	1.85	0.56
2:B:972:LEU:O	2:B:1044:ARG:NH2	2.38	0.56
2:I:972:LEU:O	2:I:1044:ARG:NH2	2.38	0.56
2:E:110:ARG:HH21	2:E:115:ARG:HB3	1.69	0.56
2:G:469:ARG:HH21	2:G:3712:GLU:HB3	1.70	0.56
2:G:4983:HIS:CD2	2:G:4983:HIS:N	2.73	0.56
2:I:669:ASP:OD2	2:I:790:ARG:NH2	2.39	0.56
2:I:4960:ILE:O	2:I:4960:ILE:HG22	2.05	0.56
2:E:1721:GLU:OE2	2:E:1725:ARG:NH2	2.34	0.56
2:B:4829:SER:HB2	2:B:4939:ALA:HB1	1.86	0.56
2:G:683:ARG:NH1	2:G:707:VAL:O	2.37	0.56
2:G:4957:LYS:HG2	2:G:4964:GLY:CA	2.25	0.56
2:G:4996:ILE:HG12	4:G:5102:CFF:H123	1.87	0.56
1:J:87:HIS:H	1:J:91:ILE:HB	1.69	0.55
2:I:469:ARG:HH21	2:I:3712:GLU:HB3	1.70	0.55
2:E:4230:LYS:CD	2:E:4959:PHE:HE2	1.94	0.55
2:G:4230:LYS:CD	2:G:4959:PHE:HE2	1.94	0.55
2:G:972:LEU:O	2:G:1044:ARG:NH2	2.39	0.55
2:G:4960:ILE:HG22	2:G:4960:ILE:O	2.05	0.55
2:B:641:VAL:HG21	2:B:705:ASN:HA	1.86	0.55
2:B:669:ASP:OD2	2:B:790:ARG:NH2	2.39	0.55
2:I:683:ARG:NH1	2:I:707:VAL:O	2.38	0.55
2:G:4230:LYS:CG	2:G:4959:PHE:CE2	2.88	0.55
2:I:1721:GLU:OE2	2:I:1725:ARG:NH2	2.34	0.55
2:B:4957:LYS:HG2	2:B:4964:GLY:CA	2.25	0.55
2:E:683:ARG:NH1	2:E:707:VAL:O	2.37	0.55
2:G:41:GLY:O	2:G:45:ARG:NH1	2.40	0.55
2:G:609:CYS:SG	2:G:610:ASN:N	2.80	0.55
2:G:4230:LYS:CG	2:G:4959:PHE:HE2	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4230:LYS:CG	2:B:4959:PHE:HE2	2.19	0.55
2:E:717:ASP:OD1	2:E:720:HIS:ND1	2.40	0.55
2:I:4230:LYS:CG	2:I:4959:PHE:HE2	2.19	0.55
2:B:41:GLY:O	2:B:45:ARG:NH1	2.40	0.55
2:B:717:ASP:OD1	2:B:720:HIS:ND1	2.40	0.55
2:E:718:GLY:HA3	2:E:737:LEU:HA	1.89	0.55
2:G:669:ASP:OD2	2:G:790:ARG:NH2	2.39	0.55
2:I:717:ASP:OD1	2:I:720:HIS:ND1	2.40	0.54
2:E:497:TYR:HB3	2:E:500:ALA:HB2	1.89	0.54
2:I:41:GLY:O	2:I:45:ARG:NH1	2.40	0.54
2:I:609:CYS:SG	2:I:610:ASN:N	2.80	0.54
2:E:609:CYS:SG	2:E:610:ASN:N	2.80	0.54
2:E:4190:ILE:HD13	2:E:5028:PHE:H	1.73	0.54
2:B:4232:GLU:OE1	2:B:5019:TRP:NE1	2.40	0.54
2:E:103:TYR:HB3	2:E:152:PRO:HD3	1.89	0.54
2:E:4230:LYS:CG	2:E:4959:PHE:HE2	2.19	0.54
2:E:4232:GLU:OE1	2:E:5019:TRP:NE1	2.40	0.54
2:I:103:TYR:HB3	2:I:152:PRO:HD3	1.89	0.54
2:B:229:GLU:HA	2:B:249:GLY:HA2	1.90	0.54
2:I:1519:UNK:HA	2:I:1526:UNK:HA	1.89	0.54
2:E:41:GLY:O	2:E:45:ARG:NH1	2.40	0.54
2:G:718:GLY:HA3	2:G:737:LEU:HA	1.89	0.54
2:G:103:TYR:HB3	2:G:152:PRO:HD3	1.89	0.54
2:G:497:TYR:HB3	2:G:500:ALA:HB2	1.89	0.54
2:B:1727:ARG:HH12	2:B:1772:ARG:HB3	1.73	0.54
2:E:465:GLN:HG3	2:E:3710:LEU:HB3	1.90	0.54
2:G:717:ASP:OD1	2:G:720:HIS:ND1	2.40	0.54
2:B:4190:ILE:HD13	2:B:5028:PHE:H	1.73	0.54
2:I:4232:GLU:OE1	2:I:5019:TRP:NE1	2.40	0.54
1:F:5:GLU:HB2	1:F:73:LYS:HB3	1.90	0.54
1:A:5:GLU:HB2	1:A:73:LYS:HB3	1.90	0.54
2:B:609:CYS:SG	2:B:610:ASN:N	2.80	0.54
2:I:4968:PHE:CE2	2:I:4978:HIS:ND1	2.76	0.54
2:E:229:GLU:HA	2:E:249:GLY:HA2	1.90	0.54
2:E:451:TYR:O	2:E:474:ARG:NH1	2.41	0.53
2:E:669:ASP:OD2	2:E:790:ARG:NH2	2.39	0.53
2:E:1105:ALA:HB1	2:E:1109:LEU:HD21	1.90	0.53
2:E:4968:PHE:CE2	2:E:4978:HIS:ND1	2.76	0.53
2:G:4190:ILE:HD13	2:G:5028:PHE:H	1.73	0.53
2:B:4968:PHE:CE2	2:B:4978:HIS:ND1	2.76	0.53
2:I:497:TYR:HB3	2:I:500:ALA:HB2	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1105:ALA:HB1	2:I:1109:LEU:HD21	1.90	0.53
2:E:671:VAL:HG22	2:E:740:PRO:HG3	1.91	0.53
2:B:1105:ALA:HB1	2:B:1109:LEU:HD21	1.90	0.53
2:I:671:VAL:HG22	2:I:740:PRO:HG3	1.91	0.53
2:E:1727:ARG:HH12	2:E:1772:ARG:HB3	1.73	0.53
2:G:1721:GLU:OE2	2:G:1725:ARG:NH2	2.34	0.53
2:B:1519:UNK:HA	2:B:1526:UNK:HA	1.89	0.53
2:I:4582:VAL:HG11	2:G:4860:ARG:HD2	1.90	0.53
2:G:671:VAL:HG22	2:G:740:PRO:HG3	1.91	0.53
2:G:1093:GLU:OE1	2:G:1201:HIS:NE2	2.39	0.53
2:G:1519:UNK:HA	2:G:1526:UNK:HA	1.89	0.53
2:G:4232:GLU:OE1	2:G:5019:TRP:NE1	2.40	0.53
2:I:4190:ILE:HD13	2:I:5028:PHE:H	1.73	0.53
2:I:1796:ALA:HB1	2:I:1797:ARG:HH21	1.74	0.53
2:E:1519:UNK:HA	2:E:1526:UNK:HA	1.89	0.53
2:B:103:TYR:HB3	2:B:152:PRO:HD3	1.89	0.53
2:B:168:ASP:HB3	2:B:199:LEU:HD22	1.91	0.53
2:I:551:LEU:HD11	2:I:589:LEU:HD13	1.90	0.53
2:I:3955:MET:HG3	2:I:4019:LEU:HD22	1.90	0.53
2:G:315:CYS:SG	2:G:316:PHE:N	2.82	0.53
2:G:2004:GLU:HA	2:G:2007:ASN:HD22	1.74	0.53
2:B:315:CYS:SG	2:B:316:PHE:N	2.82	0.53
2:B:497:TYR:HB3	2:B:500:ALA:HB2	1.89	0.53
2:B:718:GLY:HA3	2:B:737:LEU:HA	1.89	0.53
2:B:1764:GLY:HA3	2:B:1859:VAL:HG11	1.90	0.53
2:G:1796:ALA:HB1	2:G:1797:ARG:HH21	1.74	0.53
2:B:35:LEU:HD13	2:B:49:LEU:HD13	1.91	0.53
2:B:671:VAL:HG22	2:B:740:PRO:HG3	1.91	0.53
2:B:1721:GLU:OE2	2:B:1725:ARG:NH2	2.34	0.53
2:B:1796:ALA:HB1	2:B:1797:ARG:HH21	1.74	0.53
2:B:2004:GLU:HA	2:B:2007:ASN:HD22	1.74	0.53
2:I:315:CYS:SG	2:I:316:PHE:N	2.82	0.53
2:I:1727:ARG:HH12	2:I:1772:ARG:HB3	1.73	0.53
2:I:1764:GLY:HA3	2:I:1859:VAL:HG11	1.91	0.53
2:E:241:GLN:O	2:E:289:ARG:NH1	2.42	0.53
2:E:551:LEU:HD11	2:E:589:LEU:HD13	1.90	0.53
2:E:2004:GLU:HA	2:E:2007:ASN:HD22	1.74	0.53
2:G:451:TYR:O	2:G:474:ARG:NH1	2.41	0.53
2:G:465:GLN:HG3	2:G:3710:LEU:HB3	1.90	0.53
2:G:2803:GLU:OE2	2:G:2806:ARG:NH1	2.42	0.53
2:G:4968:PHE:CE2	2:G:4978:HIS:ND1	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3910:THR:HG23	2:B:3911:THR:HG23	1.91	0.53
2:I:451:TYR:O	2:I:474:ARG:NH1	2.41	0.53
2:I:635:THR:HB	2:I:1639:LEU:HD23	1.91	0.53
2:G:1105:ALA:HB1	2:G:1109:LEU:HD21	1.90	0.53
2:I:718:GLY:HA3	2:I:737:LEU:HA	1.89	0.52
2:E:315:CYS:SG	2:E:316:PHE:N	2.82	0.52
2:E:1764:GLY:HA3	2:E:1859:VAL:HG11	1.91	0.52
2:G:635:THR:HB	2:G:1639:LEU:HD23	1.91	0.52
2:G:3955:MET:HG3	2:G:4019:LEU:HD22	1.90	0.52
2:B:465:GLN:HG3	2:B:3710:LEU:HB3	1.90	0.52
2:I:168:ASP:HB3	2:I:199:LEU:HD22	1.91	0.52
2:I:3910:THR:HG23	2:I:3911:THR:HG23	1.91	0.52
2:G:1727:ARG:HH12	2:G:1772:ARG:HB3	1.73	0.52
2:B:2803:GLU:OE2	2:B:2806:ARG:NH1	2.42	0.52
2:G:229:GLU:HA	2:G:249:GLY:HA2	1.89	0.52
2:G:4743:MET:HB3	2:G:4746:ALA:HB3	1.91	0.52
1:H:5:GLU:HB2	1:H:73:LYS:HB3	1.90	0.52
1:J:5:GLU:HB2	1:J:73:LYS:HB3	1.90	0.52
2:B:551:LEU:HD11	2:B:589:LEU:HD13	1.90	0.52
2:B:4743:MET:HB3	2:B:4746:ALA:HB3	1.91	0.52
2:E:35:LEU:HD13	2:E:49:LEU:HD13	1.91	0.52
2:E:1796:ALA:HB1	2:E:1797:ARG:HH21	1.74	0.52
2:E:2803:GLU:OE2	2:E:2806:ARG:NH1	2.42	0.52
2:B:3955:MET:HG3	2:B:4019:LEU:HD22	1.90	0.52
2:I:20:VAL:HG12	2:I:204:PRO:HA	1.92	0.52
2:I:2803:GLU:OE2	2:I:2806:ARG:NH1	2.42	0.52
2:G:551:LEU:HD11	2:G:589:LEU:HD13	1.90	0.52
1:J:55:VAL:HA	2:I:1784:ALA:HA	1.91	0.52
2:I:19:GLU:HB2	2:I:206:CYS:HB3	1.92	0.52
2:I:229:GLU:HA	2:I:249:GLY:HA2	1.89	0.52
2:I:465:GLN:HG3	2:I:3710:LEU:HB3	1.90	0.52
2:E:887:ILE:HG21	2:E:959:TYR:HA	1.92	0.52
2:G:1764:GLY:HA3	2:G:1859:VAL:HG11	1.91	0.52
2:B:20:VAL:HG12	2:B:204:PRO:HA	1.92	0.52
2:I:4743:MET:HB3	2:I:4746:ALA:HB3	1.91	0.52
2:E:1848:LEU:HD22	2:E:1853:ILE:HG13	1.91	0.52
2:G:168:ASP:HB3	2:G:199:LEU:HD22	1.91	0.52
2:G:887:ILE:HG21	2:G:959:TYR:HA	1.92	0.52
2:G:3910:THR:HG23	2:G:3911:THR:HG23	1.91	0.52
1:A:55:VAL:HA	2:B:1784:ALA:HA	1.91	0.52
2:E:19:GLU:HB2	2:E:206:CYS:HB3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:19:GLU:HB2	2:B:206:CYS:HB3	1.92	0.52
2:B:2751:LEU:HD11	2:B:2823:ILE:HG21	1.92	0.52
2:I:2004:GLU:HA	2:I:2007:ASN:HD22	1.74	0.52
2:E:20:VAL:HG12	2:E:204:PRO:HA	1.92	0.52
2:E:3955:MET:HG3	2:E:4019:LEU:HD22	1.90	0.52
2:G:20:VAL:HG12	2:G:204:PRO:HA	1.92	0.52
2:G:2751:LEU:HD11	2:G:2823:ILE:HG21	1.92	0.52
2:E:168:ASP:HB3	2:E:199:LEU:HD22	1.91	0.51
2:E:219:VAL:HG13	2:E:285:VAL:HG21	1.92	0.51
2:E:4230:LYS:CG	2:E:4959:PHE:CE2	2.88	0.51
2:B:637:LEU:HD23	2:B:1637:MET:HB3	1.93	0.51
2:B:1247:PRO:HA	2:B:1598:GLN:HA	1.93	0.51
2:B:2737:PRO:O	2:B:2888:ARG:NH2	2.43	0.51
2:I:35:LEU:HD13	2:I:49:LEU:HD13	1.91	0.51
2:I:132:ALA:HA	2:I:194:SER:HB2	1.93	0.51
2:E:472:ARG:NH2	2:E:3712:GLU:OE2	2.44	0.51
2:E:4743:MET:HB3	2:E:4746:ALA:HB3	1.91	0.51
2:G:19:GLU:HB2	2:G:206:CYS:HB3	1.92	0.51
2:G:2131:LEU:HD23	2:G:3662:ILE:HB	1.93	0.51
2:I:1848:LEU:HD22	2:I:1853:ILE:HG13	1.91	0.51
2:E:2131:LEU:HD23	2:E:3662:ILE:HB	1.93	0.51
2:G:132:ALA:HA	2:G:194:SER:HB2	1.93	0.51
2:B:451:TYR:O	2:B:474:ARG:NH1	2.41	0.51
2:B:472:ARG:NH2	2:B:3712:GLU:OE2	2.44	0.51
2:B:635:THR:HB	2:B:1639:LEU:HD23	1.91	0.51
2:B:4230:LYS:CG	2:B:4959:PHE:CE2	2.88	0.51
2:I:3805:LEU:HA	2:I:3809:ASN:HD22	1.76	0.51
2:G:35:LEU:HD13	2:G:49:LEU:HD13	1.91	0.51
2:G:219:VAL:HG13	2:G:285:VAL:HG21	1.92	0.51
2:G:1848:LEU:HD22	2:G:1853:ILE:HG13	1.91	0.51
2:G:4674:GLU:HB3	2:G:4715:TYR:HB2	1.92	0.51
2:B:719:LEU:HD22	2:B:735:GLN:HG2	1.93	0.51
2:I:2737:PRO:O	2:I:2888:ARG:NH2	2.44	0.51
2:I:4230:LYS:CG	2:I:4959:PHE:CE2	2.88	0.51
2:I:4958:CYS:SG	2:I:4961:CYS:N	2.84	0.51
2:E:2737:PRO:O	2:E:2888:ARG:NH2	2.44	0.51
2:G:2002:PRO:HA	2:G:2005:GLN:HB3	1.93	0.51
2:E:635:THR:HB	2:E:1639:LEU:HD23	1.91	0.51
2:E:637:LEU:HD23	2:E:1637:MET:HB3	1.93	0.51
2:E:719:LEU:HD22	2:E:735:GLN:HG2	1.93	0.51
2:E:3910:THR:HG23	2:E:3911:THR:HG23	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:472:ARG:NH2	2:G:3712:GLU:OE2	2.44	0.51
2:G:682:LEU:HD13	2:G:787:VAL:HG11	1.92	0.51
2:G:3973:CYS:SG	2:G:3976:ASN:ND2	2.84	0.51
2:B:887:ILE:HG21	2:B:959:TYR:HA	1.92	0.51
2:I:2751:LEU:HD11	2:I:2823:ILE:HG21	1.92	0.51
2:B:3973:CYS:SG	2:B:3976:ASN:ND2	2.84	0.51
2:B:4958:CYS:SG	2:B:4961:CYS:N	2.84	0.51
2:I:472:ARG:NH2	2:I:3712:GLU:OE2	2.44	0.51
2:I:3973:CYS:SG	2:I:3976:ASN:ND2	2.84	0.51
2:E:3805:LEU:HA	2:E:3809:ASN:HD22	1.76	0.51
2:G:4687:TYR:OH	2:G:4699:GLY:O	2.27	0.51
2:B:1848:LEU:HD22	2:B:1853:ILE:HG13	1.91	0.51
2:B:4182:GLU:OE1	2:B:4983:HIS:NE2	2.44	0.51
2:B:4674:GLU:HB3	2:B:4715:TYR:HB2	1.92	0.51
2:I:682:LEU:HD13	2:I:787:VAL:HG11	1.92	0.51
2:I:2739:PRO:HB3	2:I:2884:ASN:HB3	1.93	0.51
2:I:4687:TYR:OH	2:I:4699:GLY:O	2.27	0.51
2:E:682:LEU:HD13	2:E:787:VAL:HG11	1.92	0.51
1:J:27:THR:HB	1:J:100:ASP:HB3	1.93	0.51
2:B:682:LEU:HD13	2:B:787:VAL:HG11	1.92	0.51
2:I:241:GLN:O	2:I:289:ARG:NH1	2.42	0.51
2:I:887:ILE:HG21	2:I:959:TYR:HA	1.92	0.51
2:E:132:ALA:HA	2:E:194:SER:HB2	1.93	0.51
2:E:3973:CYS:SG	2:E:3976:ASN:ND2	2.84	0.51
2:G:57:ASN:HD22	2:G:308:HIS:HB2	1.76	0.51
2:G:637:LEU:HD23	2:G:1637:MET:HB3	1.93	0.51
1:H:27:THR:HB	1:H:100:ASP:HB3	1.93	0.50
2:B:219:VAL:HG13	2:B:285:VAL:HG21	1.92	0.50
2:B:683:ARG:NH1	2:B:707:VAL:O	2.37	0.50
2:B:2452:ARG:NH1	2:I:174:VAL:O	2.44	0.50
2:B:2739:PRO:HB3	2:B:2884:ASN:HB3	1.93	0.50
2:I:1247:PRO:HA	2:I:1598:GLN:HA	1.93	0.50
2:E:57:ASN:HD22	2:E:308:HIS:HB2	1.76	0.50
2:E:2002:PRO:HA	2:E:2005:GLN:HB3	1.93	0.50
2:E:2739:PRO:HB3	2:E:2884:ASN:HB3	1.93	0.50
2:G:2737:PRO:O	2:G:2888:ARG:NH2	2.44	0.50
2:B:2042:CYS:SG	2:B:2043:GLY:N	2.84	0.50
2:B:2131:LEU:HD23	2:B:3662:ILE:HB	1.93	0.50
2:I:2347:GLU:O	2:I:2351:ASN:N	2.40	0.50
2:E:2751:LEU:HD11	2:E:2823:ILE:HG21	1.92	0.50
1:F:27:THR:HB	1:F:100:ASP:HB3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1269:CYS:HA	2:B:1473:UNK:HA	1.93	0.50
2:I:485:SER:O	2:I:489:ASN:N	2.40	0.50
2:I:1649:ASP:HB3	2:I:1652:GLU:HG2	1.94	0.50
2:E:1808:ARG:HD2	2:E:1854:PHE:HA	1.94	0.50
2:G:1247:PRO:HA	2:G:1598:GLN:HA	1.93	0.50
2:G:1649:ASP:HB3	2:G:1652:GLU:HG2	1.94	0.50
2:B:132:ALA:HA	2:B:194:SER:HB2	1.93	0.50
2:E:1247:PRO:HA	2:E:1598:GLN:HA	1.93	0.50
2:E:2327:GLY:HA2	2:E:2330:ARG:HD3	1.94	0.50
2:E:4152:GLU:OE1	2:E:4194:TYR:OH	2.29	0.50
2:G:485:SER:O	2:G:489:ASN:N	2.40	0.50
2:G:719:LEU:HD22	2:G:735:GLN:HG2	1.93	0.50
2:G:4152:GLU:OE1	2:G:4194:TYR:OH	2.29	0.50
2:G:4958:CYS:SG	2:G:4961:CYS:N	2.84	0.50
2:I:219:VAL:HG13	2:I:285:VAL:HG21	1.92	0.50
2:I:1808:ARG:HD2	2:I:1854:PHE:HA	1.94	0.50
2:I:4152:GLU:OE1	2:I:4194:TYR:OH	2.29	0.50
2:E:1931:LEU:HB3	2:E:1935:VAL:HB	1.94	0.50
2:E:4674:GLU:HB3	2:E:4715:TYR:HB2	1.93	0.50
2:B:57:ASN:HD22	2:B:308:HIS:HB2	1.76	0.50
2:B:4860:ARG:HG3	2:B:4876:CYS:HB3	1.94	0.50
2:I:2131:LEU:HD23	2:I:3662:ILE:HB	1.93	0.50
2:G:1808:ARG:HD2	2:G:1854:PHE:HA	1.94	0.50
2:G:1931:LEU:HB3	2:G:1935:VAL:HB	1.94	0.50
2:B:2327:GLY:HA2	2:B:2330:ARG:HD3	1.93	0.50
2:B:4687:TYR:OH	2:B:4699:GLY:O	2.27	0.50
2:I:57:ASN:HD22	2:I:308:HIS:HB2	1.76	0.50
2:I:637:LEU:HD23	2:I:1637:MET:HB3	1.93	0.50
2:E:646:PRO:HD2	2:E:779:PRO:HB2	1.94	0.50
2:G:1808:ARG:NH1	2:G:1853:ILE:O	2.41	0.50
1:J:92:PRO:HD3	2:I:627:PRO:HB2	1.94	0.50
2:I:1808:ARG:NH1	2:I:1853:ILE:O	2.41	0.50
2:E:218:HIS:HB3	2:E:392:ARG:HD3	1.94	0.50
2:E:1269:CYS:HA	2:E:1473:UNK:HA	1.93	0.50
2:E:4860:ARG:HG3	2:E:4876:CYS:HB3	1.94	0.50
2:G:173:SER:HB3	2:G:178:ARG:H	1.77	0.50
2:G:2739:PRO:HB3	2:G:2884:ASN:HB3	1.93	0.50
2:G:4860:ARG:HG3	2:G:4876:CYS:HB3	1.94	0.50
2:B:1649:ASP:HB3	2:B:1652:GLU:HG2	1.94	0.50
2:B:1679:ASN:ND2	2:B:1798:LEU:O	2.45	0.50
2:B:3805:LEU:HA	2:B:3809:ASN:HD22	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4152:GLU:OE1	2:B:4194:TYR:OH	2.29	0.50
2:I:719:LEU:HD22	2:I:735:GLN:HG2	1.93	0.50
2:I:2042:CYS:SG	2:I:2043:GLY:N	2.84	0.50
2:I:4674:GLU:HB3	2:I:4715:TYR:HB2	1.93	0.50
2:E:2257:LEU:HD11	2:E:2276:ALA:HB2	1.93	0.50
2:G:2327:GLY:HA2	2:G:2330:ARG:HD3	1.93	0.50
2:B:174:VAL:O	2:E:2452:ARG:NH1	2.45	0.49
2:B:646:PRO:HD2	2:B:779:PRO:HB2	1.94	0.49
2:B:1808:ARG:HD3	2:B:1853:ILE:HG22	1.94	0.49
2:I:4860:ARG:HG3	2:I:4876:CYS:HB3	1.94	0.49
2:E:1679:ASN:ND2	2:E:1798:LEU:O	2.45	0.49
2:E:4958:CYS:SG	2:E:4961:CYS:N	2.84	0.49
2:G:3805:LEU:HA	2:G:3809:ASN:HD22	1.76	0.49
2:B:1093:GLU:OE1	2:B:1201:HIS:NE2	2.39	0.49
2:B:2002:PRO:HA	2:B:2005:GLN:HB3	1.93	0.49
2:I:3922:TYR:O	2:I:3926:LEU:N	2.44	0.49
2:E:1516:UNK:N	2:E:1529:UNK:O	2.45	0.49
2:G:241:GLN:O	2:G:289:ARG:NH1	2.42	0.49
2:G:3897:ASN:O	2:G:3901:ASN:ND2	2.46	0.49
2:G:4666:VAL:HG23	2:G:4669:VAL:HB	1.94	0.49
2:B:173:SER:HB3	2:B:178:ARG:H	1.77	0.49
2:B:218:HIS:HB3	2:B:392:ARG:HD3	1.94	0.49
2:B:1848:LEU:HB3	2:B:1853:ILE:HB	1.95	0.49
2:B:4584:ASP:HA	2:B:4627:MET:HA	1.94	0.49
2:I:111:HIS:CD2	2:I:114:SER:H	2.30	0.49
2:I:1516:UNK:N	2:I:1529:UNK:O	2.45	0.49
2:I:1679:ASN:ND2	2:I:1798:LEU:O	2.45	0.49
2:I:1808:ARG:HD3	2:I:1853:ILE:HG22	1.94	0.49
2:I:2327:GLY:HA2	2:I:2330:ARG:HD3	1.94	0.49
2:E:1093:GLU:OE1	2:E:1201:HIS:NE2	2.39	0.49
2:E:1111:PRO:HD3	2:E:1605:TRP:HE1	1.78	0.49
2:E:4584:ASP:HA	2:E:4627:MET:HA	1.94	0.49
2:G:1660:GLN:O	2:G:1664:SER:N	2.45	0.49
1:A:27:THR:HB	1:A:100:ASP:HB3	1.93	0.49
2:B:1808:ARG:HD2	2:B:1854:PHE:HA	1.94	0.49
2:B:4666:VAL:HG23	2:B:4669:VAL:HB	1.94	0.49
2:B:4864:ASN:ND2	2:B:4871:GLU:OE1	2.42	0.49
2:I:4666:VAL:HG23	2:I:4669:VAL:HB	1.94	0.49
2:E:1649:ASP:HB3	2:E:1652:GLU:HG2	1.94	0.49
2:E:1848:LEU:HB3	2:E:1853:ILE:HB	1.95	0.49
2:E:2862:LEU:HB3	2:E:2928:LYS:HB3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:111:HIS:CD2	2:G:114:SER:H	2.30	0.49
2:G:1269:CYS:HA	2:G:1473:UNK:HA	1.93	0.49
2:G:1516:UNK:N	2:G:1529:UNK:O	2.45	0.49
2:B:241:GLN:O	2:B:289:ARG:NH1	2.42	0.49
2:B:2758:PHE:O	2:B:2762:THR:N	2.45	0.49
2:B:2862:LEU:HB3	2:B:2928:LYS:HB3	1.95	0.49
2:I:1148:VAL:HB	2:I:1165:ASN:HA	1.94	0.49
2:I:1269:CYS:HA	2:I:1473:UNK:HA	1.93	0.49
2:I:2257:LEU:HD11	2:I:2276:ALA:HB2	1.93	0.49
2:E:2758:PHE:O	2:E:2762:THR:N	2.45	0.49
2:G:2042:CYS:SG	2:G:2043:GLY:N	2.84	0.49
2:G:4975:PHE:O	2:G:4979:THR:HG23	2.12	0.49
2:B:989:ALA:O	2:B:1035:ASN:ND2	2.46	0.49
2:B:1516:UNK:N	2:B:1529:UNK:O	2.45	0.49
2:B:1931:LEU:HB3	2:B:1935:VAL:HB	1.94	0.49
2:E:1095:VAL:HB	2:E:1199:VAL:HG23	1.95	0.49
2:E:989:ALA:O	2:E:1035:ASN:ND2	2.46	0.49
2:E:3840:SER:O	2:E:3922:TYR:OH	2.31	0.49
2:G:646:PRO:HD2	2:G:779:PRO:HB2	1.94	0.49
2:G:1960:ALA:O	2:G:1964:ARG:NE	2.44	0.49
2:G:2257:LEU:HD11	2:G:2276:ALA:HB2	1.93	0.49
2:G:4584:ASP:HA	2:G:4627:MET:HA	1.94	0.49
2:B:675:LEU:HD11	2:B:1633:PRO:HB3	1.95	0.49
2:B:1960:ALA:O	2:B:1964:ARG:NE	2.44	0.49
2:B:4928:LEU:HD23	2:B:4931:ILE:HD12	1.95	0.49
2:I:675:LEU:HD11	2:I:1633:PRO:HB3	1.95	0.49
2:I:880:GLU:OE1	2:I:968:ALA:N	2.44	0.49
2:I:978:THR:HB	2:I:980:ALA:H	1.78	0.49
2:I:989:ALA:O	2:I:1035:ASN:ND2	2.46	0.49
2:I:1093:GLU:OE1	2:I:1201:HIS:NE2	2.39	0.49
2:I:4584:ASP:HA	2:I:4627:MET:HA	1.94	0.49
2:I:4892:ARG:NH2	2:G:4898:GLY:O	2.46	0.49
2:B:2257:LEU:HD11	2:B:2276:ALA:HB2	1.93	0.49
2:B:3897:ASN:O	2:B:3901:ASN:ND2	2.46	0.49
2:I:3781:GLN:HA	2:I:3784:SER:HB3	1.95	0.49
2:I:3897:ASN:O	2:I:3901:ASN:ND2	2.46	0.49
2:I:4928:LEU:HD23	2:I:4931:ILE:HD12	1.95	0.49
2:E:485:SER:O	2:E:489:ASN:N	2.40	0.49
2:E:1991:THR:O	2:E:1995:THR:OG1	2.31	0.49
2:E:2347:GLU:O	2:E:2351:ASN:N	2.40	0.49
2:G:1095:VAL:HB	2:G:1199:VAL:HG23	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1848:LEU:HB3	2:G:1853:ILE:HB	1.95	0.49
2:G:1991:THR:O	2:G:1995:THR:OG1	2.31	0.49
2:G:4056:GLU:O	2:G:4060:LYS:N	2.43	0.49
1:F:42:ARG:HG2	2:E:1691:GLN:HG2	1.94	0.49
1:J:2:VAL:HG21	1:J:61:GLU:HB2	1.94	0.49
2:B:978:THR:HB	2:B:980:ALA:H	1.78	0.49
2:I:709:ASP:HA	2:I:725:HIS:H	1.78	0.49
2:I:1931:LEU:HB3	2:I:1935:VAL:HB	1.94	0.49
2:E:3922:TYR:O	2:E:3926:LEU:N	2.44	0.49
2:E:4182:GLU:OE1	2:E:4983:HIS:NE2	2.44	0.49
2:E:4864:ASN:ND2	2:E:4871:GLU:OE1	2.42	0.49
2:E:4928:LEU:HD23	2:E:4931:ILE:HD12	1.95	0.49
2:G:675:LEU:HD11	2:G:1633:PRO:HB3	1.95	0.49
2:G:4928:LEU:HD23	2:G:4931:ILE:HD12	1.95	0.49
2:B:4975:PHE:O	2:B:4979:THR:HG23	2.12	0.48
2:I:173:SER:HB3	2:I:178:ARG:H	1.77	0.48
2:I:2452:ARG:NH1	2:G:174:VAL:O	2.46	0.48
2:I:4056:GLU:O	2:I:4060:LYS:N	2.43	0.48
2:E:1660:GLN:O	2:E:1664:SER:N	2.45	0.48
2:G:978:THR:HB	2:G:980:ALA:H	1.78	0.48
2:G:1148:VAL:HB	2:G:1165:ASN:HA	1.95	0.48
1:F:2:VAL:HG21	1:F:61:GLU:HB2	1.94	0.48
2:B:709:ASP:HA	2:B:725:HIS:H	1.78	0.48
2:B:1095:VAL:HB	2:B:1199:VAL:HG23	1.95	0.48
2:B:1148:VAL:HB	2:B:1165:ASN:HA	1.94	0.48
2:I:695:TYR:OH	2:I:1073:ARG:NH1	2.46	0.48
2:I:1111:PRO:HD3	2:I:1605:TRP:HE1	1.78	0.48
2:I:1848:LEU:HB3	2:I:1853:ILE:HB	1.95	0.48
2:I:3840:SER:O	2:I:3922:TYR:OH	2.31	0.48
2:I:4126:GLU:O	2:I:4130:ASN:ND2	2.46	0.48
2:E:1960:ALA:O	2:E:1964:ARG:NE	2.44	0.48
2:E:2042:CYS:SG	2:E:2043:GLY:N	2.84	0.48
2:E:4126:GLU:O	2:E:4130:ASN:ND2	2.47	0.48
2:E:4666:VAL:HG23	2:E:4669:VAL:HB	1.94	0.48
2:E:4687:TYR:OH	2:E:4699:GLY:O	2.27	0.48
2:G:1679:ASN:ND2	2:G:1798:LEU:O	2.45	0.48
2:G:1808:ARG:HD3	2:G:1853:ILE:HG22	1.94	0.48
2:G:2927:LEU:HD23	2:G:2930:LEU:HD12	1.95	0.48
2:B:645:ARG:N	2:B:824:GLU:O	2.45	0.48
2:I:646:PRO:HD2	2:I:779:PRO:HB2	1.94	0.48
2:E:1148:VAL:HB	2:E:1165:ASN:HA	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:4056:GLU:O	2:E:4060:LYS:N	2.43	0.48
2:G:3840:SER:O	2:G:3922:TYR:OH	2.31	0.48
2:I:2862:LEU:HB3	2:I:2928:LYS:HB3	1.95	0.48
2:I:4975:PHE:O	2:I:4979:THR:HG23	2.12	0.48
2:E:173:SER:HB3	2:E:178:ARG:H	1.77	0.48
2:E:278:GLN:N	2:E:315:CYS:SG	2.87	0.48
2:E:675:LEU:HD11	2:E:1633:PRO:HB3	1.95	0.48
2:E:4921:PHE:HA	2:E:4925:ILE:HD13	1.95	0.48
2:G:2862:LEU:HB3	2:G:2928:LYS:HB3	1.95	0.48
2:G:4182:GLU:OE1	2:G:4983:HIS:NE2	2.44	0.48
2:I:1095:VAL:HB	2:I:1199:VAL:HG23	1.95	0.48
2:E:3897:ASN:O	2:E:3901:ASN:ND2	2.46	0.48
2:G:218:HIS:HB3	2:G:392:ARG:HD3	1.94	0.48
2:G:886:ARG:HB3	2:G:891:TRP:HB2	1.96	0.48
2:G:3767:GLN:HA	2:G:3770:LEU:HB2	1.95	0.48
2:B:1111:PRO:HD3	2:B:1605:TRP:HE1	1.78	0.48
2:I:626:LEU:HG	2:I:628:GLY:H	1.79	0.48
2:I:2002:PRO:HA	2:I:2005:GLN:HB3	1.93	0.48
2:E:2927:LEU:HD23	2:E:2930:LEU:HD12	1.95	0.48
2:G:626:LEU:HG	2:G:628:GLY:H	1.79	0.48
2:G:2347:GLU:O	2:G:2351:ASN:N	2.40	0.48
1:F:92:PRO:HD3	2:E:627:PRO:HB2	1.95	0.48
2:I:4182:GLU:OE1	2:I:4983:HIS:NE2	2.44	0.48
2:E:111:HIS:CD2	2:E:114:SER:H	2.30	0.48
2:E:3781:GLN:HA	2:E:3784:SER:HB3	1.95	0.48
2:E:4975:PHE:O	2:E:4979:THR:HG23	2.12	0.48
2:G:4215:ARG:NH2	3:G:5101:ATP:O1A	2.47	0.48
2:B:695:TYR:OH	2:B:1073:ARG:NH1	2.46	0.48
2:B:886:ARG:HB3	2:B:891:TRP:HB2	1.96	0.48
2:B:1808:ARG:NH1	2:B:1853:ILE:O	2.41	0.48
2:B:4126:GLU:O	2:B:4130:ASN:ND2	2.47	0.48
2:I:218:HIS:HB3	2:I:392:ARG:HD3	1.94	0.48
2:I:886:ARG:HB3	2:I:891:TRP:HB2	1.96	0.48
2:I:4230:LYS:CD	2:I:4959:PHE:HE2	1.94	0.48
2:E:1808:ARG:HD3	2:E:1853:ILE:HG22	1.94	0.48
2:G:695:TYR:OH	2:G:1073:ARG:NH1	2.46	0.48
2:G:709:ASP:HA	2:G:725:HIS:H	1.79	0.48
2:B:1991:THR:O	2:B:1995:THR:OG1	2.31	0.48
2:B:3781:GLN:HA	2:B:3784:SER:HB3	1.95	0.48
2:G:645:ARG:N	2:G:824:GLU:O	2.45	0.48
2:B:1660:GLN:O	2:B:1664:SER:N	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3767:GLN:HA	2:B:3770:LEU:HB2	1.95	0.48
2:I:1991:THR:O	2:I:1995:THR:OG1	2.31	0.48
2:E:709:ASP:HA	2:E:725:HIS:H	1.79	0.48
2:E:886:ARG:HB3	2:E:891:TRP:HB2	1.96	0.48
2:G:278:GLN:N	2:G:315:CYS:SG	2.87	0.48
2:G:989:ALA:O	2:G:1035:ASN:ND2	2.46	0.48
2:G:1111:PRO:HD3	2:G:1605:TRP:HE1	1.78	0.48
2:G:1727:ARG:HH21	2:G:1775:HIS:CE1	2.32	0.48
2:G:3781:GLN:HA	2:G:3784:SER:HB3	1.95	0.48
2:B:278:GLN:N	2:B:315:CYS:SG	2.87	0.47
2:B:1727:ARG:HH21	2:B:1775:HIS:CE1	2.32	0.47
2:B:4921:PHE:HA	2:B:4925:ILE:HD13	1.95	0.47
2:I:1171:SER:OG	2:I:1175:SER:N	2.45	0.47
2:I:2927:LEU:HD23	2:I:2930:LEU:HD12	1.95	0.47
2:I:3984:ARG:HH22	2:G:161:GLU:HA	1.79	0.47
2:I:4921:PHE:HA	2:I:4925:ILE:HD13	1.95	0.47
2:E:1171:SER:OG	2:E:1175:SER:N	2.45	0.47
2:G:575:LEU:HD22	2:G:609:CYS:HB3	1.96	0.47
2:G:4126:GLU:O	2:G:4130:ASN:ND2	2.46	0.47
1:A:7:ILE:HB	1:A:71:ARG:HB3	1.96	0.47
1:J:7:ILE:HB	1:J:71:ARG:HB3	1.96	0.47
2:I:1243:PRO:HB2	2:I:1600:LEU:HD22	1.97	0.47
2:I:2758:PHE:O	2:I:2762:THR:N	2.45	0.47
2:E:575:LEU:HD22	2:E:609:CYS:HB3	1.96	0.47
2:G:1727:ARG:NH2	2:G:1773:PRO:O	2.48	0.47
1:F:7:ILE:HB	1:F:71:ARG:HB3	1.96	0.47
1:A:2:VAL:HG21	1:A:61:GLU:HB2	1.94	0.47
1:H:2:VAL:HG21	1:H:61:GLU:HB2	1.94	0.47
2:B:3840:SER:O	2:B:3922:TYR:OH	2.31	0.47
2:I:40:GLU:HB3	2:I:44:ASN:HB3	1.97	0.47
2:I:1727:ARG:HH21	2:I:1775:HIS:CE1	2.32	0.47
2:E:695:TYR:OH	2:E:1073:ARG:NH1	2.46	0.47
2:B:4056:GLU:O	2:B:4060:LYS:N	2.43	0.47
2:I:2880:GLU:O	2:I:2884:ASN:N	2.47	0.47
1:A:82:TYR:O	1:A:86:GLY:N	2.48	0.47
1:H:82:TYR:O	1:H:86:GLY:N	2.48	0.47
2:B:4898:GLY:O	2:E:4892:ARG:NH2	2.47	0.47
2:E:1243:PRO:HB2	2:E:1600:LEU:HD22	1.97	0.47
2:E:1802:ILE:HG21	2:E:1807:LEU:HD22	1.96	0.47
2:B:40:GLU:HB3	2:B:44:ASN:HB3	1.97	0.47
2:B:1802:ILE:HG21	2:B:1807:LEU:HD22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2927:LEU:HD23	2:B:2930:LEU:HD12	1.95	0.47
2:E:309:THR:O	2:E:313:SER:OG	2.33	0.47
2:E:978:THR:HB	2:E:980:ALA:H	1.78	0.47
2:E:1727:ARG:HH21	2:E:1775:HIS:CE1	2.32	0.47
2:E:4957:LYS:HG2	2:E:4964:GLY:CA	2.25	0.47
2:G:1663:HIS:O	2:G:1667:LEU:N	2.47	0.47
2:B:1725:ARG:HA	2:B:1728:ARG:HG2	1.96	0.47
2:B:1727:ARG:NH2	2:B:1773:PRO:O	2.48	0.47
2:B:4215:ARG:NH2	3:B:5101:ATP:O1A	2.47	0.47
2:I:645:ARG:N	2:I:824:GLU:O	2.45	0.47
2:I:1727:ARG:NH2	2:I:1773:PRO:O	2.48	0.47
2:I:3767:GLN:HA	2:I:3770:LEU:HB2	1.95	0.47
2:E:626:LEU:HG	2:E:628:GLY:H	1.79	0.47
2:E:3767:GLN:HA	2:E:3770:LEU:HB2	1.96	0.47
2:B:626:LEU:HG	2:B:628:GLY:H	1.79	0.47
2:B:2880:GLU:O	2:B:2884:ASN:N	2.47	0.47
2:E:1727:ARG:NH2	2:E:1773:PRO:O	2.47	0.47
2:G:309:THR:O	2:G:313:SER:OG	2.33	0.47
2:G:880:GLU:OE1	2:G:968:ALA:N	2.44	0.47
2:G:4921:PHE:HA	2:G:4925:ILE:HD13	1.95	0.47
1:A:92:PRO:HD3	2:B:627:PRO:HB2	1.96	0.47
2:I:3850:GLN:HB3	2:I:3873:LYS:HD3	1.96	0.47
2:G:1725:ARG:HA	2:G:1728:ARG:HG2	1.96	0.47
1:J:82:TYR:O	1:J:86:GLY:N	2.48	0.47
2:B:1718:ILE:HG13	2:B:1719:HIS:CD2	2.50	0.47
2:I:1663:HIS:O	2:I:1667:LEU:N	2.47	0.47
2:I:1960:ALA:O	2:I:1964:ARG:NE	2.44	0.47
2:G:842:PRO:HD3	2:G:1073:ARG:HG3	1.97	0.47
2:G:1802:ILE:HG21	2:G:1807:LEU:HD22	1.96	0.47
1:F:82:TYR:O	1:F:86:GLY:N	2.48	0.46
1:J:76:CYS:HB2	1:J:97:LEU:HB2	1.96	0.46
2:B:4232:GLU:OE2	2:B:5017:ARG:NH1	2.41	0.46
2:I:1802:ILE:HG21	2:I:1807:LEU:HD22	1.96	0.46
2:E:40:GLU:HB3	2:E:44:ASN:HB3	1.97	0.46
2:B:309:THR:O	2:B:313:SER:OG	2.33	0.46
2:B:1243:PRO:HB2	2:B:1600:LEU:HD22	1.97	0.46
2:E:645:ARG:N	2:E:824:GLU:O	2.45	0.46
1:A:76:CYS:HB2	1:A:97:LEU:HB2	1.97	0.46
2:I:4749:GLU:HA	2:I:4752:ALA:HB3	1.98	0.46
2:E:2868:SER:O	2:E:2872:GLN:N	2.45	0.46
2:G:3850:GLN:HB3	2:G:3873:LYS:HD3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:880:GLU:OE1	2:E:968:ALA:N	2.44	0.46
2:G:40:GLU:HB3	2:G:44:ASN:HB3	1.96	0.46
2:G:913:LEU:O	2:G:918:ARG:NH2	2.49	0.46
1:H:7:ILE:HB	1:H:71:ARG:HB3	1.96	0.46
2:B:4892:ARG:NH2	2:I:4898:GLY:O	2.49	0.46
2:I:1725:ARG:HA	2:I:1728:ARG:HG2	1.96	0.46
2:I:2291:GLN:HB3	2:I:2294:ASP:H	1.80	0.46
2:E:2291:GLN:HB3	2:E:2294:ASP:H	1.80	0.46
1:H:76:CYS:HB2	1:H:97:LEU:HB2	1.97	0.46
2:B:3850:GLN:HB3	2:B:3873:LYS:HD3	1.96	0.46
2:B:3948:LYS:NZ	2:B:4008:SER:O	2.49	0.46
2:E:842:PRO:HD3	2:E:1073:ARG:HG3	1.97	0.46
2:E:1718:ILE:HG13	2:E:1719:HIS:CD2	2.50	0.46
2:E:4215:ARG:NH2	3:E:5101:ATP:O1A	2.47	0.46
2:E:4232:GLU:OE2	2:E:5017:ARG:NH1	2.41	0.46
2:G:3827:GLY:HA2	2:G:3830:GLN:HE21	1.81	0.46
2:G:4749:GLU:HA	2:G:4752:ALA:HB3	1.98	0.46
1:F:76:CYS:HB2	1:F:97:LEU:HB2	1.97	0.46
2:B:488:LEU:O	2:B:492:ASP:N	2.47	0.46
2:B:1101:ARG:HE	2:B:1115:LEU:HB3	1.81	0.46
2:I:575:LEU:HD22	2:I:609:CYS:HB3	1.96	0.46
2:E:1725:ARG:HA	2:E:1728:ARG:HG2	1.96	0.46
2:E:4860:ARG:HD2	2:G:4582:VAL:HG11	1.98	0.46
2:B:111:HIS:CD2	2:B:114:SER:H	2.30	0.46
2:B:3827:GLY:HA2	2:B:3830:GLN:HE21	1.81	0.46
2:I:278:GLN:N	2:I:315:CYS:SG	2.87	0.46
2:E:3850:GLN:HB3	2:E:3873:LYS:HD3	1.96	0.46
2:G:2880:GLU:O	2:G:2884:ASN:N	2.47	0.46
2:B:913:LEU:O	2:B:918:ARG:NH2	2.49	0.46
2:E:913:LEU:O	2:E:918:ARG:NH2	2.49	0.46
2:G:1718:ILE:HG13	2:G:1719:HIS:CD2	2.50	0.46
2:B:575:LEU:HD22	2:B:609:CYS:HB3	1.96	0.46
2:I:1718:ILE:HG13	2:I:1719:HIS:CD2	2.50	0.45
2:E:488:LEU:O	2:E:492:ASP:N	2.47	0.45
2:G:1243:PRO:HB2	2:G:1600:LEU:HD22	1.97	0.45
2:I:681:HIS:HB3	2:I:784:SER:HB3	1.98	0.45
2:I:3830:GLN:HA	2:I:3833:GLN:HG2	1.98	0.45
2:I:3948:LYS:NZ	2:I:4008:SER:O	2.49	0.45
2:E:942:ALA:HB2	2:E:1052:ASN:HB2	1.98	0.45
2:E:1663:HIS:O	2:E:1667:LEU:N	2.47	0.45
2:G:2291:GLN:HB3	2:G:2294:ASP:H	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:23:VAL:HG22	1:F:47:LYS:HG2	1.99	0.45
1:A:23:VAL:HG22	1:A:47:LYS:HG2	1.99	0.45
1:J:23:VAL:HG22	1:J:47:LYS:HG2	1.99	0.45
2:B:681:HIS:HB3	2:B:784:SER:HB3	1.99	0.45
2:B:842:PRO:HD3	2:B:1073:ARG:HG3	1.97	0.45
2:B:2291:GLN:HB3	2:B:2294:ASP:H	1.81	0.45
2:B:3922:TYR:O	2:B:3926:LEU:N	2.44	0.45
2:B:4823:LEU:HD23	2:I:4843:LEU:HD12	1.97	0.45
2:I:309:THR:O	2:I:313:SER:OG	2.33	0.45
2:I:772:ASN:ND2	2:I:774:ASP:OD2	2.50	0.45
2:I:842:PRO:HD3	2:I:1073:ARG:HG3	1.97	0.45
2:B:3830:GLN:HA	2:B:3833:GLN:HG2	1.98	0.45
2:I:913:LEU:O	2:I:918:ARG:NH2	2.49	0.45
2:I:1078:GLU:HB3	2:I:1081:TYR:HD2	1.81	0.45
2:E:864:PRO:HD2	2:E:867:LEU:HD12	1.98	0.45
2:B:2347:GLU:O	2:B:2351:ASN:N	2.40	0.45
2:B:4985:LEU:HB2	3:B:5101:ATP:HN61	1.82	0.45
2:E:596:ASN:HB3	2:E:599:VAL:HG22	1.99	0.45
2:E:621:ILE:O	2:E:625:LEU:N	2.47	0.45
2:E:1078:GLU:HB3	2:E:1081:TYR:HD2	1.81	0.45
1:H:23:VAL:HG22	1:H:47:LYS:HG2	1.99	0.45
2:B:1078:GLU:HB3	2:B:1081:TYR:HD2	1.81	0.45
2:G:488:LEU:O	2:G:492:ASP:N	2.47	0.45
2:G:776:LEU:HG	2:G:848:HIS:HA	1.98	0.45
2:G:1101:ARG:HE	2:G:1115:LEU:HB3	1.81	0.45
2:G:2868:SER:O	2:G:2872:GLN:N	2.45	0.45
2:G:3948:LYS:NZ	2:G:4008:SER:O	2.49	0.45
1:H:21:THR:HA	1:H:49:ARG:HA	1.99	0.45
2:I:776:LEU:HG	2:I:848:HIS:HA	1.98	0.45
2:E:3948:LYS:NZ	2:E:4008:SER:O	2.49	0.45
2:G:345:LEU:HD23	2:G:389:PHE:HB3	1.99	0.45
2:G:864:PRO:HD2	2:G:867:LEU:HD12	1.98	0.45
2:G:942:ALA:HB2	2:G:1052:ASN:HB2	1.98	0.45
2:G:4558:ASN:HB2	2:G:4561:THR:HB	1.99	0.45
1:A:19:GLY:HA2	1:A:49:ARG:HH21	1.81	0.45
2:B:2277:ALA:HB1	2:B:2337:PHE:HD2	1.82	0.45
2:B:4749:GLU:HA	2:B:4752:ALA:HB3	1.98	0.45
2:I:793:LEU:HD22	2:I:821:LEU:HD13	1.99	0.45
2:I:1660:GLN:O	2:I:1664:SER:N	2.45	0.45
2:E:345:LEU:HD23	2:E:389:PHE:HB3	1.99	0.45
2:E:1838:PHE:HB3	2:E:1842:LEU:HD11	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:3827:GLY:HA2	2:E:3830:GLN:HE21	1.81	0.45
2:G:772:ASN:ND2	2:G:774:ASP:OD2	2.50	0.45
1:A:21:THR:HA	1:A:49:ARG:HA	1.99	0.45
2:I:1154:ASP:O	2:I:1158:ASN:N	2.50	0.45
2:I:1843:LYS:HB2	2:I:1938:GLN:HE22	1.82	0.45
2:G:621:ILE:O	2:G:625:LEU:N	2.47	0.45
1:H:19:GLY:HA2	1:H:49:ARG:HH21	1.81	0.45
2:I:2277:ALA:HB1	2:I:2337:PHE:HD2	1.82	0.45
2:I:4558:ASN:HB2	2:I:4561:THR:HB	1.99	0.45
2:E:1101:ARG:HE	2:E:1115:LEU:HB3	1.81	0.45
2:E:1843:LYS:HB2	2:E:1938:GLN:HE22	1.82	0.45
2:E:2880:GLU:O	2:E:2884:ASN:N	2.47	0.45
2:G:1078:GLU:HB3	2:G:1081:TYR:HD2	1.81	0.45
2:G:1154:ASP:O	2:G:1158:ASN:N	2.50	0.45
2:G:2466:LEU:HD23	2:G:2469:ILE:HD12	1.99	0.45
2:B:772:ASN:ND2	2:B:774:ASP:OD2	2.50	0.44
2:B:776:LEU:HG	2:B:848:HIS:HA	1.98	0.44
2:I:614:VAL:HG22	2:I:616:SER:H	1.82	0.44
2:I:1101:ARG:HE	2:I:1115:LEU:HB3	1.81	0.44
2:E:776:LEU:HG	2:E:848:HIS:HA	1.98	0.44
2:E:2326:CYS:SG	2:E:2327:GLY:N	2.91	0.44
2:E:4749:GLU:HA	2:E:4752:ALA:HB3	1.98	0.44
2:G:3772:THR:OG1	2:G:3815:LYS:NZ	2.46	0.44
2:G:3932:ASP:HA	2:G:3935:TRP:HD1	1.81	0.44
2:G:4855:ALA:HA	2:G:4859:PHE:HB2	1.99	0.44
1:A:11:ASP:OD1	1:A:67:SER:OG	2.27	0.44
1:H:30:LEU:HD23	1:H:33:GLY:HA3	1.99	0.44
1:J:21:THR:HA	1:J:49:ARG:HA	1.99	0.44
2:B:942:ALA:HB2	2:B:1052:ASN:HB2	1.98	0.44
2:I:3932:ASP:HA	2:I:3935:TRP:HD1	1.81	0.44
2:E:468:LEU:HB3	2:E:472:ARG:HH12	1.82	0.44
2:E:3830:GLN:HA	2:E:3833:GLN:HG2	1.98	0.44
2:G:596:ASN:HB3	2:G:599:VAL:HG22	1.99	0.44
2:G:614:VAL:HG22	2:G:616:SER:H	1.82	0.44
2:G:1171:SER:OG	2:G:1175:SER:N	2.45	0.44
2:G:2326:CYS:SG	2:G:2327:GLY:N	2.91	0.44
2:G:3922:TYR:O	2:G:3926:LEU:N	2.44	0.44
2:B:596:ASN:HB3	2:B:599:VAL:HG22	1.99	0.44
2:I:1838:PHE:HB3	2:I:1842:LEU:HD11	1.99	0.44
2:I:2326:CYS:SG	2:I:2327:GLY:N	2.91	0.44
2:E:410:LEU:HD12	2:E:413:GLN:HE21	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:614:VAL:HG22	2:E:616:SER:H	1.82	0.44
2:E:772:ASN:ND2	2:E:774:ASP:OD2	2.50	0.44
2:E:4924:VAL:HG23	2:E:4925:ILE:HD12	2.00	0.44
2:G:395:GLN:HG3	2:G:397:GLU:H	1.82	0.44
2:G:1679:ASN:HA	2:G:1682:ALA:HB3	1.99	0.44
2:B:614:VAL:HG22	2:B:616:SER:H	1.82	0.44
2:B:707:VAL:HG23	2:B:713:SER:HB2	1.99	0.44
2:B:864:PRO:HD2	2:B:867:LEU:HD12	1.98	0.44
2:B:1171:SER:OG	2:B:1175:SER:N	2.45	0.44
2:B:4697:VAL:O	2:B:4701:TRP:N	2.51	0.44
2:I:942:ALA:HB2	2:I:1052:ASN:HB2	1.98	0.44
2:I:3827:GLY:HA2	2:I:3830:GLN:HE21	1.81	0.44
2:E:395:GLN:NE2	2:E:397:GLU:OE1	2.51	0.44
2:E:460:GLN:HG2	2:E:462:GLU:H	1.83	0.44
2:E:793:LEU:HD22	2:E:821:LEU:HD13	1.99	0.44
2:G:1843:LYS:HB2	2:G:1938:GLN:HE22	1.82	0.44
2:G:2758:PHE:O	2:G:2762:THR:N	2.44	0.44
2:G:4985:LEU:HB2	3:G:5101:ATP:HN61	1.82	0.44
1:A:42:ARG:HG2	2:B:1691:GLN:HG2	1.99	0.44
1:J:19:GLY:HA2	1:J:49:ARG:HH21	1.81	0.44
2:B:793:LEU:HD22	2:B:821:LEU:HD13	1.99	0.44
2:B:880:GLU:OE1	2:B:968:ALA:N	2.44	0.44
2:B:1973:GLN:O	2:B:1977:TYR:N	2.45	0.44
2:B:2466:LEU:HD23	2:B:2469:ILE:HD12	2.00	0.44
2:I:460:GLN:HG2	2:I:462:GLU:H	1.83	0.44
2:I:864:PRO:HD2	2:I:867:LEU:HD12	1.98	0.44
2:I:3362:UNK:O	2:I:3366:UNK:N	2.51	0.44
2:E:2810:LYS:O	2:E:2814:LYS:N	2.45	0.44
2:E:3362:UNK:O	2:E:3366:UNK:N	2.51	0.44
2:G:395:GLN:NE2	2:G:397:GLU:OE1	2.51	0.44
2:G:460:GLN:HG2	2:G:462:GLU:H	1.83	0.44
2:G:3362:UNK:O	2:G:3366:UNK:N	2.51	0.44
2:G:4924:VAL:HG23	2:G:4925:ILE:HD12	2.00	0.44
1:F:30:LEU:HD23	1:F:33:GLY:HA3	1.99	0.44
2:B:410:LEU:HD12	2:B:413:GLN:HE21	1.83	0.44
2:B:1154:ASP:O	2:B:1158:ASN:N	2.50	0.44
2:I:410:LEU:HD12	2:I:413:GLN:HE21	1.83	0.44
2:I:4985:LEU:HB2	3:I:5101:ATP:HN61	1.82	0.44
2:E:395:GLN:HG3	2:E:397:GLU:H	1.82	0.44
2:E:1457:UNK:N	2:E:1497:UNK:O	2.51	0.44
2:E:2277:ALA:HB1	2:E:2337:PHE:HD2	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:4843:LEU:HD12	2:G:4823:LEU:HD23	1.99	0.44
2:E:4985:LEU:HB2	3:E:5101:ATP:HN61	1.82	0.44
2:G:1838:PHE:HB3	2:G:1842:LEU:HD11	1.99	0.44
2:G:3830:GLN:HA	2:G:3833:GLN:HG2	1.98	0.44
1:F:19:GLY:HA2	1:F:49:ARG:HH21	1.81	0.44
1:A:87:HIS:HD2	1:A:90:VAL:HB	1.83	0.44
2:B:345:LEU:HD23	2:B:389:PHE:HB3	1.99	0.44
2:B:460:GLN:HG2	2:B:462:GLU:H	1.83	0.44
2:I:621:ILE:O	2:I:625:LEU:N	2.47	0.44
2:I:4864:ASN:ND2	2:I:4871:GLU:OE1	2.42	0.44
2:E:707:VAL:HG23	2:E:713:SER:HB2	2.00	0.44
2:E:1679:ASN:HA	2:E:1682:ALA:HB3	1.99	0.44
2:G:468:LEU:HB3	2:G:472:ARG:HH12	1.82	0.44
1:F:21:THR:HA	1:F:49:ARG:HA	1.99	0.44
2:B:206:CYS:SG	2:B:207:SER:N	2.91	0.44
2:B:898:ASP:HB3	2:B:901:LYS:HB2	2.00	0.44
2:B:2326:CYS:SG	2:B:2327:GLY:N	2.91	0.44
2:B:3772:THR:OG1	2:B:3815:LYS:NZ	2.46	0.44
2:B:3842:LEU:O	2:B:3929:SER:OG	2.36	0.44
2:I:1457:UNK:N	2:I:1497:UNK:O	2.51	0.44
2:I:2466:LEU:HD23	2:I:2469:ILE:HD12	2.00	0.44
2:I:4924:VAL:HG23	2:I:4925:ILE:HD12	2.00	0.44
2:G:410:LEU:HD12	2:G:413:GLN:HE21	1.83	0.44
2:G:793:LEU:HD22	2:G:821:LEU:HD13	1.99	0.44
2:B:395:GLN:HG3	2:B:397:GLU:H	1.82	0.44
2:B:468:LEU:HB3	2:B:472:ARG:HH12	1.82	0.44
2:B:1843:LYS:HB2	2:B:1938:GLN:HE22	1.82	0.44
2:I:395:GLN:HG3	2:I:397:GLU:H	1.82	0.44
2:I:898:ASP:HB3	2:I:901:LYS:HB2	2.00	0.44
2:E:206:CYS:SG	2:E:207:SER:N	2.91	0.44
1:J:87:HIS:HD2	1:J:90:VAL:HB	1.83	0.43
2:B:116:MET:HB2	2:B:137:LEU:HD12	2.00	0.43
2:B:3932:ASP:HA	2:B:3935:TRP:HD1	1.81	0.43
2:I:395:GLN:NE2	2:I:397:GLU:OE1	2.51	0.43
2:I:596:ASN:HB3	2:I:599:VAL:HG22	1.99	0.43
2:I:1679:ASN:HA	2:I:1682:ALA:HB3	1.99	0.43
2:I:4855:ALA:HA	2:I:4859:PHE:HB2	1.99	0.43
2:E:3905:THR:HA	2:E:3912:THR:HG23	2.00	0.43
2:E:3932:ASP:HA	2:E:3935:TRP:HD1	1.81	0.43
2:G:3905:THR:HA	2:G:3912:THR:HG23	2.00	0.43
2:B:1838:PHE:HB3	2:B:1842:LEU:HD11	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2868:SER:O	2:B:2872:GLN:N	2.45	0.43
2:B:4924:VAL:HG23	2:B:4925:ILE:HD12	2.00	0.43
2:I:468:LEU:HB3	2:I:472:ARG:HH12	1.82	0.43
2:I:4215:ARG:NH2	3:I:5101:ATP:O1A	2.47	0.43
2:E:681:HIS:HB3	2:E:784:SER:HB3	1.99	0.43
2:E:765:GLN:NE2	2:E:1521:UNK:O	2.52	0.43
2:E:1808:ARG:NH1	2:E:1853:ILE:O	2.41	0.43
2:G:143:GLY:HA3	2:G:147:TRP:HE1	1.84	0.43
2:G:3842:LEU:O	2:G:3929:SER:OG	2.36	0.43
2:G:4031:LEU:HB3	2:G:4034:ASN:HB2	2.00	0.43
2:G:4208:PRO:HA	2:G:4211:LYS:HB3	2.01	0.43
1:A:30:LEU:HD23	1:A:33:GLY:HA3	1.99	0.43
2:B:210:GLU:HG3	2:B:337:PRO:HG3	2.00	0.43
2:B:395:GLN:NE2	2:B:397:GLU:OE1	2.51	0.43
2:I:345:LEU:HD23	2:I:389:PHE:HB3	1.99	0.43
2:I:1076:ARG:HD3	2:I:1237:TRP:HB2	2.00	0.43
2:I:2024:PRO:HB2	2:I:2027:ILE:HG12	2.00	0.43
2:E:116:MET:HB2	2:E:137:LEU:HD12	2.00	0.43
2:G:681:HIS:HB3	2:G:784:SER:HB3	1.99	0.43
1:J:30:LEU:HD23	1:J:33:GLY:HA3	1.99	0.43
2:B:877:ASN:HD22	2:B:1045:THR:HG23	1.84	0.43
2:B:3362:UNK:O	2:B:3366:UNK:N	2.51	0.43
2:B:4577:LEU:HG	2:B:4580:TYR:HE2	1.83	0.43
2:B:4855:ALA:HA	2:B:4859:PHE:HB2	1.99	0.43
2:I:3946:GLN:OE1	2:I:3950:ASN:ND2	2.51	0.43
2:I:4208:PRO:HA	2:I:4211:LYS:HB3	2.00	0.43
2:E:2466:LEU:HD23	2:E:2469:ILE:HD12	2.00	0.43
2:E:3842:LEU:O	2:E:3929:SER:OG	2.36	0.43
2:G:1973:GLN:O	2:G:1977:TYR:N	2.45	0.43
2:G:4003:LEU:HB2	2:G:4013:LEU:HD13	2.00	0.43
2:G:4577:LEU:HG	2:G:4580:TYR:HE2	1.83	0.43
2:B:2024:PRO:HB2	2:B:2027:ILE:HG12	2.00	0.43
2:B:4003:LEU:HB2	2:B:4013:LEU:HD13	2.00	0.43
2:B:4208:PRO:HA	2:B:4211:LYS:HB3	2.00	0.43
2:B:4558:ASN:HB2	2:B:4561:THR:HB	1.99	0.43
2:I:210:GLU:HG3	2:I:337:PRO:HG3	2.00	0.43
2:I:707:VAL:HG23	2:I:713:SER:HB2	1.99	0.43
2:I:1865:MET:SD	2:I:1865:MET:N	2.92	0.43
2:I:3842:LEU:O	2:I:3929:SER:OG	2.36	0.43
2:I:4577:LEU:HG	2:I:4580:TYR:HE2	1.83	0.43
2:E:898:ASP:HB3	2:E:901:LYS:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:765:GLN:NE2	2:G:1521:UNK:O	2.52	0.43
2:G:1937:LEU:O	2:G:1941:ASN:ND2	2.52	0.43
2:G:2277:ALA:HB1	2:G:2337:PHE:HD2	1.82	0.43
2:G:4834:GLY:HA2	2:G:4837:LEU:HD12	2.00	0.43
2:B:1076:ARG:HD3	2:B:1237:TRP:HB2	2.00	0.43
2:I:143:GLY:HA3	2:I:147:TRP:HE1	1.84	0.43
2:I:183:SER:N	2:I:190:GLN:O	2.51	0.43
2:I:2271:THR:HG22	2:I:2273:LEU:H	1.83	0.43
2:I:4031:LEU:HB3	2:I:4034:ASN:HB2	2.00	0.43
2:E:877:ASN:HD22	2:E:1045:THR:HG23	1.84	0.43
2:E:4577:LEU:HG	2:E:4580:TYR:HE2	1.83	0.43
2:E:4697:VAL:O	2:E:4701:TRP:N	2.51	0.43
2:G:206:CYS:SG	2:G:207:SER:N	2.91	0.43
2:G:707:VAL:HG23	2:G:713:SER:HB2	2.00	0.43
1:F:7:ILE:N	1:F:71:ARG:O	2.46	0.43
2:B:1679:ASN:HA	2:B:1682:ALA:HB3	1.99	0.43
2:B:1937:LEU:O	2:B:1941:ASN:ND2	2.52	0.43
2:B:4977:THR:HG22	2:B:4981:GLU:HB2	2.01	0.43
2:I:2103:VAL:O	2:I:2107:GLN:N	2.47	0.43
2:I:3817:LEU:HD13	2:I:3899:PHE:HD1	1.84	0.43
2:E:2003:GLN:O	2:E:2007:ASN:ND2	2.52	0.43
2:E:4558:ASN:HB2	2:E:4561:THR:HB	1.99	0.43
1:F:87:HIS:HD2	1:F:90:VAL:HB	1.83	0.43
2:B:1457:UNK:N	2:B:1497:UNK:O	2.51	0.43
2:B:2003:GLN:O	2:B:2007:ASN:ND2	2.52	0.43
2:E:1154:ASP:O	2:E:1158:ASN:N	2.50	0.43
2:E:3817:LEU:HD13	2:E:3899:PHE:HD1	1.83	0.43
2:E:4003:LEU:HB2	2:E:4013:LEU:HD13	2.00	0.43
2:E:4208:PRO:HA	2:E:4211:LYS:HB3	2.01	0.43
2:E:4834:GLY:HA2	2:E:4837:LEU:HD12	2.00	0.43
2:E:4882:CYS:HG	2:E:4886:HIS:CD2	2.37	0.43
2:E:4977:THR:HG22	2:E:4981:GLU:HB2	2.01	0.43
2:G:1238:PHE:O	2:G:1606:SER:N	2.50	0.43
2:G:1457:UNK:N	2:G:1497:UNK:O	2.51	0.43
2:G:2024:PRO:HB2	2:G:2027:ILE:HG12	2.00	0.43
2:G:3946:GLN:OE1	2:G:3950:ASN:ND2	2.51	0.43
2:G:4239:GLU:OE2	2:G:5014:TYR:OH	2.34	0.43
2:G:4875:LYS:HB3	2:G:4882:CYS:HA	2.01	0.43
2:B:485:SER:O	2:B:489:ASN:N	2.40	0.43
2:B:1865:MET:SD	2:B:1865:MET:N	2.92	0.43
2:B:2271:THR:HG22	2:B:2273:LEU:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3552:UNK:O	2:B:3556:UNK:N	2.52	0.43
2:I:1937:LEU:O	2:I:1941:ASN:ND2	2.52	0.43
2:I:4977:THR:HG22	2:I:4981:GLU:HB2	2.01	0.43
2:E:1154:ASP:HB3	2:E:1157:GLU:HB3	2.01	0.43
2:E:2024:PRO:HB2	2:E:2027:ILE:HG12	2.00	0.43
2:E:2272:PRO:HA	2:E:2275:VAL:HG12	2.01	0.43
2:G:1076:ARG:HD3	2:G:1237:TRP:HB2	2.00	0.43
2:G:1865:MET:SD	2:G:1865:MET:N	2.92	0.43
2:G:2271:THR:HG22	2:G:2273:LEU:H	1.84	0.43
2:B:21:VAL:HG12	2:B:66:CYS:HA	2.01	0.43
2:B:1154:ASP:HB3	2:B:1157:GLU:HB3	2.01	0.43
2:B:1663:HIS:O	2:B:1667:LEU:N	2.47	0.43
2:I:206:CYS:SG	2:I:207:SER:N	2.91	0.43
2:I:3772:THR:OG1	2:I:3815:LYS:NZ	2.46	0.43
2:I:4834:GLY:HA2	2:I:4837:LEU:HD12	2.00	0.43
2:E:143:GLY:HA3	2:E:147:TRP:HE1	1.84	0.43
2:E:3365:UNK:O	2:E:3369:UNK:N	2.52	0.43
2:E:3902:TYR:O	2:E:3906:GLN:NE2	2.52	0.43
2:G:101:LEU:HB3	2:G:150:MET:HE1	2.01	0.43
2:G:898:ASP:HB3	2:G:901:LYS:HB2	2.00	0.43
2:G:3880:PHE:O	2:G:3884:LEU:N	2.52	0.43
2:B:3365:UNK:O	2:B:3369:UNK:N	2.52	0.42
2:B:4681:LEU:HD21	2:B:4687:TYR:HD2	1.84	0.42
2:I:116:MET:HB2	2:I:137:LEU:HD12	2.00	0.42
2:I:877:ASN:HD22	2:I:1045:THR:HG23	1.84	0.42
2:I:2868:SER:O	2:I:2872:GLN:N	2.45	0.42
2:I:3365:UNK:O	2:I:3369:UNK:N	2.52	0.42
2:E:1238:PHE:O	2:E:1606:SER:N	2.50	0.42
2:E:2271:THR:HG22	2:E:2273:LEU:H	1.83	0.42
2:E:3772:THR:OG1	2:E:3815:LYS:NZ	2.46	0.42
2:E:4031:LEU:HB3	2:E:4034:ASN:HB2	2.00	0.42
2:G:4064:MET:O	2:G:4068:LEU:N	2.52	0.42
2:B:183:SER:N	2:B:190:GLN:O	2.51	0.42
2:B:1659:LEU:O	2:B:1663:HIS:N	2.49	0.42
2:B:3817:LEU:HD13	2:B:3899:PHE:HD1	1.84	0.42
2:B:3880:PHE:O	2:B:3884:LEU:N	2.52	0.42
2:B:3902:TYR:O	2:B:3906:GLN:NE2	2.52	0.42
2:B:3905:THR:HA	2:B:3912:THR:HG23	2.00	0.42
2:I:2342:ASN:OD1	2:I:2342:ASN:N	2.52	0.42
2:I:4003:LEU:HB2	2:I:4013:LEU:HD13	2.00	0.42
2:E:21:VAL:HG12	2:E:66:CYS:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:210:GLU:HG3	2:E:337:PRO:HG3	2.00	0.42
2:E:606:LEU:O	2:E:617:ASN:ND2	2.52	0.42
2:E:1937:LEU:O	2:E:1941:ASN:ND2	2.52	0.42
2:E:2793:PRO:HG3	2:E:2855:TYR:CZ	2.54	0.42
2:E:4875:LYS:HB3	2:E:4882:CYS:HA	2.01	0.42
2:G:1812:LEU:HD21	2:G:1861:GLN:HG2	2.02	0.42
2:G:3817:LEU:HD13	2:G:3899:PHE:HD1	1.83	0.42
2:G:4232:GLU:OE2	2:G:5017:ARG:NH1	2.41	0.42
2:G:4977:THR:HG22	2:G:4981:GLU:HB2	2.01	0.42
1:H:87:HIS:HA	1:H:88:PRO:HD3	1.89	0.42
2:B:1694:LEU:O	2:B:1712:TYR:OH	2.27	0.42
2:B:1698:LEU:N	2:B:1712:TYR:OH	2.53	0.42
2:B:2272:PRO:HA	2:B:2275:VAL:HG12	2.01	0.42
2:B:4834:GLY:HA2	2:B:4837:LEU:HD12	2.00	0.42
2:I:606:LEU:O	2:I:617:ASN:ND2	2.52	0.42
2:I:765:GLN:NE2	2:I:1521:UNK:O	2.52	0.42
2:I:2793:PRO:HG3	2:I:2855:TYR:CZ	2.54	0.42
2:I:3880:PHE:O	2:I:3884:LEU:N	2.52	0.42
2:I:3905:THR:HA	2:I:3912:THR:HG23	2.00	0.42
2:E:1698:LEU:N	2:E:1712:TYR:OH	2.53	0.42
2:E:4681:LEU:HD21	2:E:4687:TYR:HD2	1.84	0.42
2:G:21:VAL:HG12	2:G:66:CYS:HA	2.01	0.42
2:G:3902:TYR:O	2:G:3906:GLN:NE2	2.52	0.42
2:G:4681:LEU:HD21	2:G:4687:TYR:HD2	1.84	0.42
1:F:7:ILE:HG22	1:F:9:PRO:HD2	2.01	0.42
2:B:606:LEU:O	2:B:617:ASN:ND2	2.52	0.42
2:B:4031:LEU:HB3	2:B:4034:ASN:HB2	2.00	0.42
2:I:21:VAL:HG12	2:I:66:CYS:HA	2.01	0.42
2:I:4697:VAL:O	2:I:4701:TRP:N	2.51	0.42
2:E:123:THR:OG1	2:E:134:ASP:OD1	2.38	0.42
2:G:1973:GLN:HA	2:G:1976:ARG:HB3	2.02	0.42
2:G:2121:PHE:O	2:G:3725:TYR:OH	2.36	0.42
2:G:2272:PRO:HA	2:G:2275:VAL:HG12	2.01	0.42
2:G:3365:UNK:O	2:G:3369:UNK:N	2.52	0.42
2:G:4673:ARG:HH22	2:G:4698:LYS:HB2	1.85	0.42
2:B:233:ILE:HD12	2:B:242:ARG:HB3	2.01	0.42
2:B:765:GLN:NE2	2:B:1521:UNK:O	2.52	0.42
2:I:1698:LEU:N	2:I:1712:TYR:OH	2.53	0.42
2:E:1973:GLN:O	2:E:1977:TYR:N	2.45	0.42
2:E:2132:GLY:O	2:E:2136:ARG:N	2.53	0.42
2:G:116:MET:HB2	2:G:137:LEU:HD12	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:183:SER:N	2:G:190:GLN:O	2.51	0.42
2:G:210:GLU:HG3	2:G:337:PRO:HG3	2.00	0.42
2:G:877:ASN:HD22	2:G:1045:THR:HG23	1.84	0.42
2:G:2342:ASN:OD1	2:G:2342:ASN:N	2.52	0.42
2:G:2793:PRO:HG3	2:G:2855:TYR:CZ	2.54	0.42
1:H:55:VAL:HA	2:G:1784:ALA:HA	2.02	0.42
2:B:37:LEU:HD11	2:B:47:CYS:HB3	2.01	0.42
2:B:4673:ARG:HH22	2:B:4698:LYS:HB2	1.85	0.42
2:I:488:LEU:O	2:I:492:ASP:N	2.48	0.42
2:I:3902:TYR:O	2:I:3906:GLN:NE2	2.52	0.42
2:I:4681:LEU:HD21	2:I:4687:TYR:HD2	1.84	0.42
2:E:1076:ARG:HD3	2:E:1237:TRP:HB2	2.00	0.42
2:E:1865:MET:SD	2:E:1865:MET:N	2.92	0.42
2:E:4673:ARG:HH22	2:E:4698:LYS:HB2	1.85	0.42
2:E:4855:ALA:HA	2:E:4859:PHE:HB2	1.99	0.42
2:G:2003:GLN:O	2:G:2007:ASN:ND2	2.52	0.42
2:G:3552:UNK:O	2:G:3556:UNK:N	2.52	0.42
1:A:7:ILE:HG22	1:A:9:PRO:HD2	2.01	0.42
2:B:143:GLY:HA3	2:B:147:TRP:HE1	1.84	0.42
2:I:1154:ASP:HB3	2:I:1157:GLU:HB3	2.01	0.42
2:I:1812:LEU:HD21	2:I:1861:GLN:HG2	2.02	0.42
2:I:3850:GLN:HA	2:I:3853:ALA:HB3	2.02	0.42
2:I:4064:MET:O	2:I:4068:LEU:N	2.52	0.42
2:I:4786:ASP:OD2	2:I:4789:PHE:N	2.46	0.42
2:E:3880:PHE:O	2:E:3884:LEU:N	2.52	0.42
2:E:4064:MET:O	2:E:4068:LEU:N	2.52	0.42
2:G:37:LEU:HD11	2:G:47:CYS:HB3	2.01	0.42
1:H:87:HIS:HD2	1:H:90:VAL:HB	1.83	0.42
2:E:37:LEU:HD11	2:E:47:CYS:HB3	2.01	0.42
2:E:4239:GLU:OE2	2:E:5014:TYR:OH	2.34	0.42
2:G:215:THR:H	2:G:218:HIS:CE1	2.38	0.42
2:G:224:HIS:N	2:G:229:GLU:O	2.44	0.42
2:G:606:LEU:O	2:G:617:ASN:ND2	2.52	0.42
2:G:1154:ASP:HB3	2:G:1157:GLU:HB3	2.01	0.42
2:G:1691:GLN:HE22	2:G:1802:ILE:HG12	1.85	0.42
2:G:3850:GLN:HA	2:G:3853:ALA:HB3	2.02	0.42
1:H:7:ILE:HG22	1:H:9:PRO:HD2	2.01	0.42
2:B:2793:PRO:HG3	2:B:2855:TYR:CZ	2.54	0.42
2:B:3946:GLN:OE1	2:B:3950:ASN:ND2	2.51	0.42
2:I:123:THR:OG1	2:I:134:ASP:OD1	2.38	0.42
2:I:3780:LEU:HD11	2:I:3816:MET:HG3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1105:ALA:N	2:E:1189:LEU:O	2.53	0.42
2:E:2022:PRO:O	2:E:2028:ARG:NH2	2.52	0.42
2:E:2342:ASN:N	2:E:2342:ASN:OD1	2.52	0.42
2:E:3946:GLN:OE1	2:E:3950:ASN:ND2	2.51	0.42
2:G:233:ILE:HD12	2:G:242:ARG:HB3	2.01	0.42
2:G:1074:ILE:HA	2:G:1193:SER:HA	2.02	0.42
2:G:3780:LEU:HD11	2:G:3816:MET:HG3	2.01	0.42
2:I:37:LEU:HD11	2:I:47:CYS:HB3	2.01	0.42
2:I:2022:PRO:O	2:I:2028:ARG:NH2	2.52	0.42
2:I:4673:ARG:HH22	2:I:4698:LYS:HB2	1.85	0.42
2:E:940:GLY:O	2:E:1052:ASN:N	2.52	0.42
2:E:1812:LEU:HD21	2:E:1861:GLN:HG2	2.02	0.42
2:E:4965:SER:O	2:E:4969:ASP:N	2.53	0.42
2:E:4993:MET:HA	2:E:4996:ILE:HD12	2.02	0.42
2:G:2103:VAL:O	2:G:2107:GLN:N	2.47	0.42
2:B:927:GLU:HA	2:B:930:LYS:HB2	2.02	0.41
2:B:1973:GLN:HA	2:B:1976:ARG:HB3	2.02	0.41
2:B:2342:ASN:OD1	2:B:2342:ASN:N	2.52	0.41
2:B:3850:GLN:HA	2:B:3853:ALA:HB3	2.02	0.41
2:I:224:HIS:N	2:I:229:GLU:O	2.44	0.41
2:E:629:ARG:HB3	2:E:634:GLN:NE2	2.35	0.41
2:E:1074:ILE:HA	2:E:1193:SER:HA	2.02	0.41
2:E:2143:THR:H	2:E:3651:ASN:HD21	1.68	0.41
2:E:3850:GLN:HA	2:E:3853:ALA:HB3	2.02	0.41
2:G:1698:LEU:N	2:G:1712:TYR:OH	2.53	0.41
2:I:838:HIS:HA	2:I:1201:HIS:HB3	2.02	0.41
2:I:4965:SER:O	2:I:4969:ASP:N	2.53	0.41
2:E:1659:LEU:O	2:E:1663:HIS:N	2.49	0.41
2:G:4864:ASN:ND2	2:G:4871:GLU:OE1	2.42	0.41
2:B:1812:LEU:HD21	2:B:1861:GLN:HG2	2.02	0.41
2:B:4993:MET:HA	2:B:4996:ILE:HD12	2.02	0.41
2:I:2003:GLN:O	2:I:2007:ASN:ND2	2.52	0.41
2:E:3552:UNK:O	2:E:3556:UNK:N	2.52	0.41
2:G:983:THR:O	2:G:987:ARG:N	2.51	0.41
2:G:1105:ALA:N	2:G:1189:LEU:O	2.53	0.41
2:B:629:ARG:HB3	2:B:634:GLN:NE2	2.35	0.41
2:B:1074:ILE:HA	2:B:1193:SER:HA	2.02	0.41
2:B:4965:SER:O	2:B:4969:ASP:N	2.53	0.41
2:I:215:THR:H	2:I:218:HIS:CE1	2.38	0.41
2:I:233:ILE:HD12	2:I:242:ARG:HB3	2.01	0.41
2:I:750:LEU:HD21	2:I:777:PHE:HE2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:983:THR:O	2:I:987:ARG:N	2.51	0.41
2:I:3552:UNK:O	2:I:3556:UNK:N	2.52	0.41
2:E:215:THR:H	2:E:218:HIS:CE1	2.38	0.41
2:E:233:ILE:HD12	2:E:242:ARG:HB3	2.01	0.41
2:E:927:GLU:HA	2:E:930:LYS:HB2	2.02	0.41
2:E:1691:GLN:HE22	2:E:1802:ILE:HG12	1.85	0.41
2:G:629:ARG:HB3	2:G:634:GLN:NE2	2.35	0.41
2:G:4697:VAL:O	2:G:4701:TRP:N	2.51	0.41
1:A:7:ILE:N	1:A:71:ARG:O	2.46	0.41
1:A:8:SER:H	2:B:736:HIS:HB3	1.85	0.41
2:B:750:LEU:HD21	2:B:777:PHE:HE2	1.86	0.41
2:B:4951:LYS:HE2	2:B:4951:LYS:HB3	1.94	0.41
2:I:214:VAL:HG12	2:I:274:LEU:HD12	2.02	0.41
2:E:750:LEU:HD21	2:E:777:PHE:HE2	1.86	0.41
2:E:3780:LEU:HD11	2:E:3816:MET:HG3	2.02	0.41
2:G:485:SER:HA	2:G:488:LEU:HB2	2.03	0.41
2:G:4983:HIS:CE1	2:G:5023:PRO:HG2	2.56	0.41
2:B:940:GLY:O	2:B:1052:ASN:N	2.52	0.41
2:B:4064:MET:O	2:B:4068:LEU:N	2.52	0.41
2:B:4843:LEU:HD12	2:E:4823:LEU:HD23	2.02	0.41
2:I:4826:ILE:O	2:I:4829:SER:OG	2.35	0.41
2:I:4993:MET:HA	2:I:4996:ILE:HD12	2.02	0.41
2:E:414:PHE:HE1	2:E:436:LEU:HB3	1.86	0.41
2:E:1859:VAL:HA	2:E:1862:ILE:HG12	2.03	0.41
2:E:1973:GLN:HA	2:E:1976:ARG:HB3	2.02	0.41
2:E:4983:HIS:CE1	2:E:5023:PRO:HG2	2.56	0.41
2:G:4993:MET:HA	2:G:4996:ILE:HD12	2.01	0.41
1:H:8:SER:H	2:G:736:HIS:HB3	1.84	0.41
2:B:213:TYR:CG	2:B:337:PRO:HB2	2.56	0.41
2:B:1238:PHE:O	2:B:1606:SER:N	2.50	0.41
2:I:215:THR:HG22	2:I:273:HIS:HA	2.03	0.41
2:I:1691:GLN:HE22	2:I:1802:ILE:HG12	1.85	0.41
2:I:1708:ARG:HG2	2:I:1711:TYR:CE2	2.56	0.41
2:I:2231:SER:HA	2:I:2234:ARG:HG2	2.03	0.41
2:I:2272:PRO:HA	2:I:2275:VAL:HG12	2.01	0.41
2:E:485:SER:HA	2:E:488:LEU:HB2	2.03	0.41
2:G:134:ASP:OD1	2:G:134:ASP:N	2.54	0.41
2:G:215:THR:HG22	2:G:273:HIS:HA	2.03	0.41
2:G:1720:LEU:HD12	2:G:1847:THR:HG23	2.02	0.41
2:G:4965:SER:O	2:G:4969:ASP:N	2.53	0.41
1:J:7:ILE:HG22	1:J:9:PRO:HD2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:123:THR:OG1	2:B:134:ASP:OD1	2.38	0.41
2:B:621:ILE:O	2:B:625:LEU:N	2.47	0.41
2:B:1720:LEU:HD12	2:B:1847:THR:HG23	2.02	0.41
2:I:134:ASP:OD1	2:I:134:ASP:N	2.54	0.41
2:I:4232:GLU:OE2	2:I:5017:ARG:NH1	2.41	0.41
2:I:4983:HIS:CE1	2:I:5023:PRO:HG2	2.56	0.41
1:J:7:ILE:N	1:J:71:ARG:O	2.46	0.41
2:B:215:THR:H	2:B:218:HIS:CE1	2.38	0.41
2:B:232:THR:HB	2:B:252:VAL:HG11	2.03	0.41
2:B:500:ALA:HB1	2:B:504:ALA:HB2	2.03	0.41
2:B:1708:ARG:HG2	2:B:1711:TYR:CE2	2.56	0.41
2:B:2132:GLY:O	2:B:2136:ARG:N	2.53	0.41
2:B:2231:SER:HA	2:B:2234:ARG:HG2	2.03	0.41
2:B:4875:LYS:HB3	2:B:4882:CYS:HA	2.01	0.41
2:I:457:GLU:OE1	2:I:464:LYS:NZ	2.50	0.41
2:I:485:SER:HA	2:I:488:LEU:HB2	2.03	0.41
2:I:629:ARG:HB3	2:I:634:GLN:NE2	2.36	0.41
2:I:1141:ARG:HD2	2:I:1141:ARG:H	1.86	0.41
2:I:1720:LEU:HD12	2:I:1847:THR:HG23	2.02	0.41
2:I:1973:GLN:HA	2:I:1976:ARG:HB3	2.02	0.41
2:I:2121:PHE:O	2:I:3725:TYR:OH	2.36	0.41
2:I:2810:LYS:O	2:I:2814:LYS:N	2.45	0.41
2:I:4875:LYS:HB3	2:I:4882:CYS:HA	2.01	0.41
2:E:214:VAL:HG12	2:E:274:LEU:HD12	2.02	0.41
2:E:215:THR:HG22	2:E:273:HIS:HA	2.03	0.41
2:E:243:ARG:NH1	2:E:301:VAL:O	2.42	0.41
2:E:1708:ARG:HG2	2:E:1711:TYR:CE2	2.56	0.41
2:E:4951:LYS:HE2	2:E:4951:LYS:HB3	1.94	0.41
2:G:214:VAL:HG12	2:G:274:LEU:HD12	2.02	0.41
2:G:583:ILE:HA	2:G:586:ILE:HD12	2.03	0.41
2:G:1708:ARG:HG2	2:G:1711:TYR:CE2	2.56	0.41
2:G:2143:THR:H	2:G:3651:ASN:HD21	1.68	0.41
1:F:87:HIS:HA	1:F:88:PRO:HD3	1.89	0.41
2:B:1270:LEU:N	2:B:1472:UNK:O	2.54	0.41
2:B:4882:CYS:HG	2:B:4886:HIS:CD2	2.39	0.41
2:B:4983:HIS:CE1	2:B:5023:PRO:HG2	2.56	0.41
2:I:213:TYR:CG	2:I:337:PRO:HB2	2.56	0.41
2:I:583:ILE:HA	2:I:586:ILE:HD12	2.03	0.41
2:I:4155:PRO:HD2	2:I:5036:LEU:HD23	2.03	0.41
2:E:1720:LEU:HD12	2:E:1847:THR:HG23	2.02	0.41
2:G:1965:TYR:OH	2:G:2027:ILE:O	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4786:ASP:OD2	2:B:4789:PHE:N	2.46	0.40
2:I:1238:PHE:O	2:I:1606:SER:N	2.50	0.40
2:E:232:THR:HB	2:E:252:VAL:HG11	2.03	0.40
2:E:500:ALA:HB1	2:E:504:ALA:HB2	2.03	0.40
2:E:983:THR:O	2:E:987:ARG:N	2.51	0.40
2:E:1270:LEU:N	2:E:1472:UNK:O	2.54	0.40
2:G:123:THR:OG1	2:G:134:ASP:OD1	2.38	0.40
2:G:1092:PHE:N	2:G:1149:VAL:O	2.39	0.40
2:G:1659:LEU:O	2:G:1663:HIS:N	2.49	0.40
2:G:4821:LYS:HE2	2:G:4821:LYS:HB3	1.97	0.40
2:B:215:THR:HG22	2:B:273:HIS:HA	2.03	0.40
2:B:495:ASN:HD21	2:B:550:LYS:HE3	1.87	0.40
2:B:838:HIS:HA	2:B:1201:HIS:HB3	2.02	0.40
2:B:3780:LEU:HD11	2:B:3816:MET:HG3	2.02	0.40
2:E:134:ASP:OD1	2:E:134:ASP:N	2.54	0.40
2:E:1141:ARG:H	2:E:1141:ARG:HD2	1.87	0.40
2:E:4787:ASN:O	2:E:4791:TYR:N	2.49	0.40
2:G:750:LEU:HD21	2:G:777:PHE:HE2	1.86	0.40
2:B:864:PRO:HA	2:B:865:PRO:HD3	1.97	0.40
2:B:1691:GLN:HE22	2:B:1802:ILE:HG12	1.85	0.40
2:I:927:GLU:HA	2:I:930:LYS:HB2	2.02	0.40
2:I:1260:MET:HB2	2:I:1269:CYS:H	1.87	0.40
2:I:4882:CYS:HG	2:I:4886:HIS:CD2	2.39	0.40
2:E:4968:PHE:HE1	2:E:5029:ARG:HD3	1.86	0.40
2:G:213:TYR:CG	2:G:337:PRO:HB2	2.56	0.40
2:G:414:PHE:HE1	2:G:436:LEU:HB3	1.86	0.40
2:G:495:ASN:HD21	2:G:550:LYS:HE3	1.87	0.40
2:G:838:HIS:HA	2:G:1201:HIS:HB3	2.02	0.40
2:G:927:GLU:HA	2:G:930:LYS:HB2	2.02	0.40
2:B:414:PHE:HE1	2:B:436:LEU:HB3	1.86	0.40
2:B:1130:GLN:HG2	2:B:1138:PRO:HA	2.04	0.40
2:I:1074:ILE:HA	2:I:1193:SER:HA	2.02	0.40
2:E:213:TYR:CG	2:E:337:PRO:HB2	2.56	0.40
2:E:2231:SER:HA	2:E:2234:ARG:HG2	2.03	0.40
2:G:243:ARG:NH1	2:G:301:VAL:O	2.42	0.40
2:G:1859:VAL:HA	2:G:1862:ILE:HG12	2.03	0.40
2:G:2231:SER:HA	2:G:2234:ARG:HG2	2.03	0.40
2:B:1090:PHE:HD2	2:B:1202:LEU:HD11	1.87	0.40
2:B:2143:THR:H	2:B:3651:ASN:HD21	1.68	0.40
2:B:4968:PHE:HE1	2:B:5029:ARG:HD3	1.86	0.40
2:I:495:ASN:HD21	2:I:550:LYS:HE3	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1694:LEU:O	2:I:1712:TYR:OH	2.27	0.40
2:I:1804:LEU:O	2:I:1808:ARG:N	2.53	0.40
2:E:495:ASN:HD21	2:E:550:LYS:HE3	1.87	0.40
2:E:2121:PHE:O	2:E:3725:TYR:OH	2.36	0.40
2:G:2022:PRO:O	2:G:2028:ARG:NH2	2.52	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

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

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	105/108 (97%)	96 (91%)	9 (9%)	0	100	100
1	F	105/108 (97%)	96 (91%)	9 (9%)	0	100	100
1	H	105/108 (97%)	96 (91%)	9 (9%)	0	100	100
1	J	105/108 (97%)	96 (91%)	9 (9%)	0	100	100
2	B	3235/4416 (73%)	2929 (90%)	302 (9%)	4 (0%)	48	83
2	E	3235/4416 (73%)	2930 (91%)	301 (9%)	4 (0%)	48	83
2	G	3235/4416 (73%)	2930 (91%)	301 (9%)	4 (0%)	48	83
2	I	3235/4416 (73%)	2928 (90%)	303 (9%)	4 (0%)	48	83
All	All	13360/18096 (74%)	12101 (91%)	1243 (9%)	16 (0%)	50	83

All (16) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	1708	ARG
2	I	1708	ARG
2	E	1708	ARG
2	G	1708	ARG
2	B	1840	PRO

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Mol	Chain	Res	Type
2	B	1932	PRO
2	I	1840	PRO
2	I	1932	PRO
2	E	1840	PRO
2	E	1932	PRO
2	G	1840	PRO
2	G	1932	PRO
2	B	4641	PRO
2	I	4641	PRO
2	E	4641	PRO
2	G	4641	PRO

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

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	88/89 (99%)	88 (100%)	0	100	100
1	F	88/89 (99%)	88 (100%)	0	100	100
1	H	88/89 (99%)	88 (100%)	0	100	100
1	J	88/89 (99%)	88 (100%)	0	100	100
2	B	2493/3022 (82%)	2475 (99%)	18 (1%)	81	87
2	E	2493/3022 (82%)	2475 (99%)	18 (1%)	81	87
2	G	2493/3022 (82%)	2475 (99%)	18 (1%)	81	87
2	I	2493/3022 (82%)	2475 (99%)	18 (1%)	81	87
All	All	10324/12444 (83%)	10252 (99%)	72 (1%)	80	87

All (72) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	B	131	LEU
2	B	534	ARG
2	B	553	ARG
2	B	1076	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	B	1141	ARG
2	B	1600	LEU
2	B	1676	LEU
2	B	1964	ARG
2	B	3663	LEU
2	B	3787	LYS
2	B	3896	ASN
2	B	4034	ASN
2	B	4085	ARG
2	B	4120	ASN
2	B	4131	ARG
2	B	4839	MET
2	B	4982	GLU
2	B	4983	HIS
2	I	131	LEU
2	I	534	ARG
2	I	553	ARG
2	I	1076	ARG
2	I	1141	ARG
2	I	1600	LEU
2	I	1676	LEU
2	I	1964	ARG
2	I	3663	LEU
2	I	3787	LYS
2	I	3896	ASN
2	I	4034	ASN
2	I	4085	ARG
2	I	4120	ASN
2	I	4131	ARG
2	I	4839	MET
2	I	4982	GLU
2	I	4983	HIS
2	E	131	LEU
2	E	534	ARG
2	E	553	ARG
2	E	1076	ARG
2	E	1141	ARG
2	E	1600	LEU
2	E	1676	LEU
2	E	1964	ARG
2	E	3663	LEU
2	E	3787	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	E	3896	ASN
2	E	4034	ASN
2	E	4085	ARG
2	E	4120	ASN
2	E	4131	ARG
2	E	4839	MET
2	E	4982	GLU
2	E	4983	HIS
2	G	131	LEU
2	G	534	ARG
2	G	553	ARG
2	G	1076	ARG
2	G	1141	ARG
2	G	1600	LEU
2	G	1676	LEU
2	G	1964	ARG
2	G	3663	LEU
2	G	3787	LYS
2	G	3896	ASN
2	G	4034	ASN
2	G	4085	ARG
2	G	4120	ASN
2	G	4131	ARG
2	G	4839	MET
2	G	4982	GLU
2	G	4983	HIS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (158) such sidechains are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	F	43	ASN
1	F	87	HIS
1	A	43	ASN
1	A	87	HIS
1	H	43	ASN
1	H	87	HIS
1	J	43	ASN
1	J	87	HIS
2	B	57	ASN
2	B	71	GLN
2	B	111	HIS
2	B	113	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	B	273	HIS
2	B	379	HIS
2	B	383	HIS
2	B	413	GLN
2	B	765	GLN
2	B	949	ASN
2	B	1598	GLN
2	B	1660	GLN
2	B	1679	ASN
2	B	1688	HIS
2	B	1691	GLN
2	B	1702	HIS
2	B	1719	HIS
2	B	1775	HIS
2	B	1941	ASN
2	B	2005	GLN
2	B	2127	GLN
2	B	3647	HIS
2	B	3809	ASN
2	B	3830	GLN
2	B	3889	GLN
2	B	3896	ASN
2	B	3946	GLN
2	B	3950	ASN
2	B	3960	GLN
2	B	3963	ASN
2	B	3976	ASN
2	B	3994	HIS
2	B	4034	ASN
2	B	4054	ASN
2	B	4120	ASN
2	B	4142	ASN
2	B	4833	ASN
2	B	5003	HIS
2	I	57	ASN
2	I	71	GLN
2	I	111	HIS
2	I	113	HIS
2	I	273	HIS
2	I	379	HIS
2	I	383	HIS
2	I	413	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	I	765	GLN
2	I	949	ASN
2	I	1598	GLN
2	I	1660	GLN
2	I	1679	ASN
2	I	1688	HIS
2	I	1691	GLN
2	I	1719	HIS
2	I	1775	HIS
2	I	1941	ASN
2	I	2005	GLN
2	I	2127	GLN
2	I	3647	HIS
2	I	3809	ASN
2	I	3830	GLN
2	I	3889	GLN
2	I	3896	ASN
2	I	3946	GLN
2	I	3950	ASN
2	I	3960	GLN
2	I	3963	ASN
2	I	3976	ASN
2	I	3994	HIS
2	I	4034	ASN
2	I	4054	ASN
2	I	4120	ASN
2	I	4142	ASN
2	I	4833	ASN
2	I	5003	HIS
2	E	57	ASN
2	E	71	GLN
2	E	111	HIS
2	E	113	HIS
2	E	273	HIS
2	E	379	HIS
2	E	383	HIS
2	E	413	GLN
2	E	765	GLN
2	E	949	ASN
2	E	1220	GLN
2	E	1598	GLN
2	E	1660	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	E	1679	ASN
2	E	1688	HIS
2	E	1691	GLN
2	E	1719	HIS
2	E	1775	HIS
2	E	1941	ASN
2	E	2005	GLN
2	E	2127	GLN
2	E	3647	HIS
2	E	3809	ASN
2	E	3830	GLN
2	E	3889	GLN
2	E	3896	ASN
2	E	3946	GLN
2	E	3950	ASN
2	E	3960	GLN
2	E	3963	ASN
2	E	3976	ASN
2	E	3994	HIS
2	E	4034	ASN
2	E	4054	ASN
2	E	4120	ASN
2	E	4142	ASN
2	E	4833	ASN
2	E	5003	HIS
2	G	57	ASN
2	G	71	GLN
2	G	111	HIS
2	G	113	HIS
2	G	273	HIS
2	G	379	HIS
2	G	383	HIS
2	G	413	GLN
2	G	765	GLN
2	G	949	ASN
2	G	1598	GLN
2	G	1660	GLN
2	G	1679	ASN
2	G	1688	HIS
2	G	1691	GLN
2	G	1719	HIS
2	G	1775	HIS

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Mol	Chain	Res	Type
2	G	1941	ASN
2	G	2005	GLN
2	G	2127	GLN
2	G	3647	HIS
2	G	3809	ASN
2	G	3830	GLN
2	G	3889	GLN
2	G	3896	ASN
2	G	3946	GLN
2	G	3950	ASN
2	G	3960	GLN
2	G	3963	ASN
2	G	3976	ASN
2	G	3994	HIS
2	G	4034	ASN
2	G	4054	ASN
2	G	4120	ASN
2	G	4142	ASN
2	G	4833	ASN
2	G	5003	HIS

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

### 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

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

Of 12 ligands modelled in this entry, 4 are monoatomic - leaving 8 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond

length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
4	CFF	I	5102	-	8,15,15	1.98	3 (37%)	8,23,23	1.36	1 (12%)
3	ATP	B	5101	-	28,33,33	0.94	0	34,52,52	1.16	2 (5%)
3	ATP	E	5101	-	28,33,33	0.93	0	34,52,52	1.15	2 (5%)
3	ATP	G	5101	-	28,33,33	0.94	0	34,52,52	1.16	2 (5%)
4	CFF	B	5102	-	8,15,15	1.99	3 (37%)	8,23,23	1.36	1 (12%)
3	ATP	I	5101	-	28,33,33	0.95	0	34,52,52	1.16	2 (5%)
4	CFF	G	5102	-	8,15,15	1.98	3 (37%)	8,23,23	1.35	1 (12%)
4	CFF	E	5102	-	8,15,15	1.99	3 (37%)	8,23,23	1.36	1 (12%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	CFF	I	5102	-	-	-	0/2/2/2
3	ATP	B	5101	-	-	6/18/38/38	0/3/3/3
3	ATP	E	5101	-	-	6/18/38/38	0/3/3/3
3	ATP	G	5101	-	-	6/18/38/38	0/3/3/3
4	CFF	B	5102	-	-	-	0/2/2/2
3	ATP	I	5101	-	-	6/18/38/38	0/3/3/3
4	CFF	G	5102	-	-	-	0/2/2/2
4	CFF	E	5102	-	-	-	0/2/2/2

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	B	5102	CFF	C6-N1	-3.27	1.32	1.38
4	E	5102	CFF	C6-N1	-3.27	1.32	1.38
4	G	5102	CFF	C6-N1	-3.26	1.32	1.38
4	I	5102	CFF	C6-N1	-3.23	1.32	1.38
4	I	5102	CFF	C5-C4	-3.23	1.33	1.39
4	E	5102	CFF	C5-C4	-3.23	1.33	1.39
4	B	5102	CFF	C5-C4	-3.21	1.33	1.39
4	G	5102	CFF	C5-C4	-3.19	1.33	1.39
4	G	5102	CFF	O13-C6	-2.45	1.18	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	B	5102	CFF	O13-C6	-2.42	1.18	1.24
4	I	5102	CFF	O13-C6	-2.38	1.18	1.24
4	E	5102	CFF	O13-C6	-2.38	1.18	1.24

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	I	5101	ATP	N3-C2-N1	-3.78	123.54	128.67
3	G	5101	ATP	N3-C2-N1	-3.75	123.58	128.67
3	B	5101	ATP	N3-C2-N1	-3.75	123.58	128.67
3	E	5101	ATP	N3-C2-N1	-3.73	123.61	128.67
4	B	5102	CFF	C14-N7-C8	-2.82	111.86	125.43
4	G	5102	CFF	C14-N7-C8	-2.82	111.87	125.43
4	I	5102	CFF	C14-N7-C8	-2.82	111.87	125.43
4	E	5102	CFF	C14-N7-C8	-2.81	111.89	125.43
3	I	5101	ATP	C4-C5-N7	-2.66	106.53	109.34
3	B	5101	ATP	C4-C5-N7	-2.66	106.53	109.34
3	G	5101	ATP	C4-C5-N7	-2.64	106.55	109.34
3	E	5101	ATP	C4-C5-N7	-2.60	106.58	109.34

There are no chirality outliers.

All (24) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	B	5101	ATP	C5'-O5'-PA-O1A
3	B	5101	ATP	C5'-O5'-PA-O2A
3	B	5101	ATP	C5'-O5'-PA-O3A
3	I	5101	ATP	C5'-O5'-PA-O1A
3	I	5101	ATP	C5'-O5'-PA-O2A
3	I	5101	ATP	C5'-O5'-PA-O3A
3	E	5101	ATP	C5'-O5'-PA-O1A
3	E	5101	ATP	C5'-O5'-PA-O2A
3	E	5101	ATP	C5'-O5'-PA-O3A
3	G	5101	ATP	C5'-O5'-PA-O1A
3	G	5101	ATP	C5'-O5'-PA-O2A
3	G	5101	ATP	C5'-O5'-PA-O3A
3	B	5101	ATP	O4'-C4'-C5'-O5'
3	B	5101	ATP	C3'-C4'-C5'-O5'
3	I	5101	ATP	O4'-C4'-C5'-O5'
3	I	5101	ATP	C3'-C4'-C5'-O5'
3	E	5101	ATP	O4'-C4'-C5'-O5'
3	E	5101	ATP	C3'-C4'-C5'-O5'

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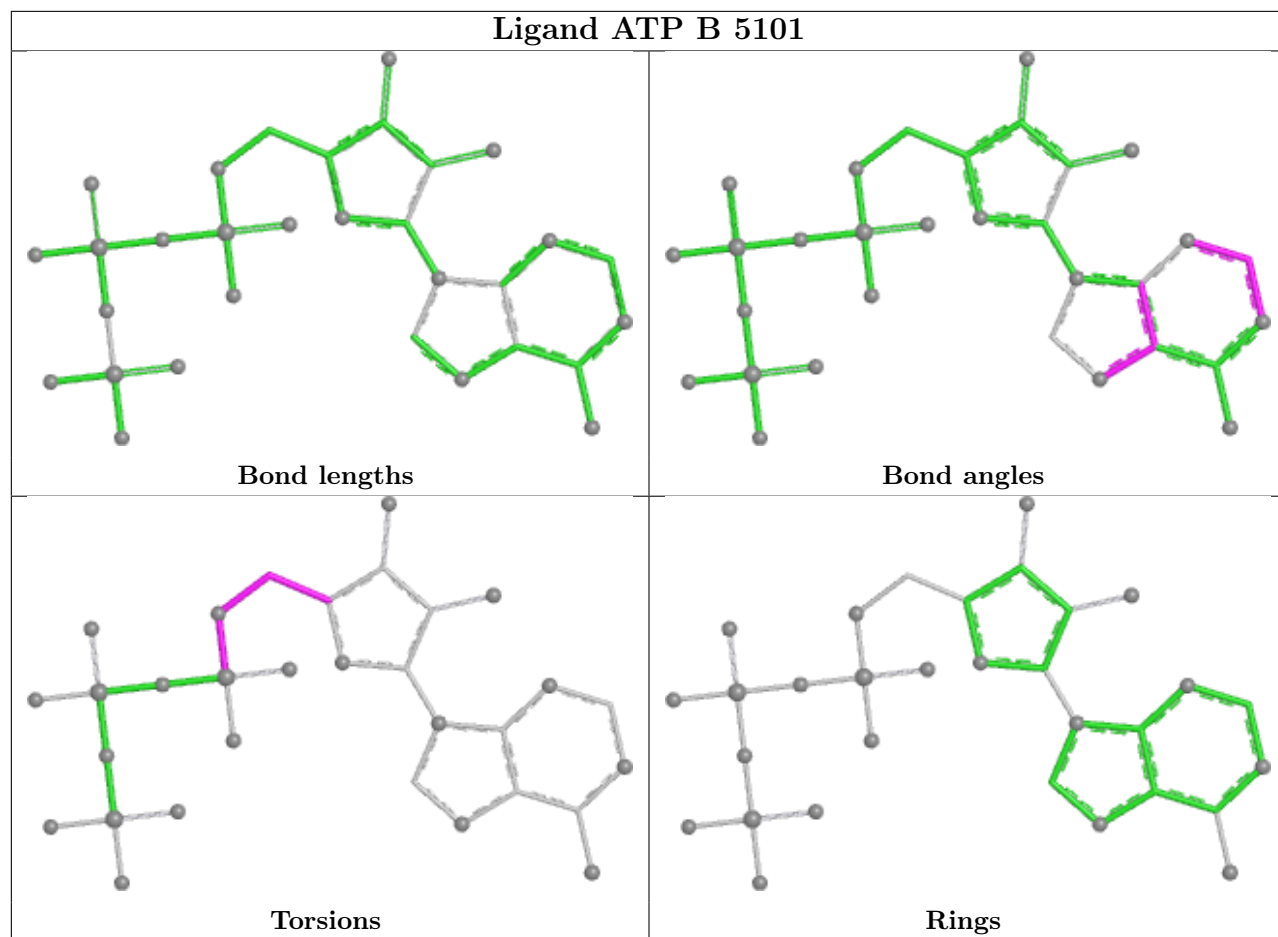
Mol	Chain	Res	Type	Atoms
3	G	5101	ATP	O4'-C4'-C5'-O5'
3	G	5101	ATP	C3'-C4'-C5'-O5'
3	B	5101	ATP	C4'-C5'-O5'-PA
3	I	5101	ATP	C4'-C5'-O5'-PA
3	E	5101	ATP	C4'-C5'-O5'-PA
3	G	5101	ATP	C4'-C5'-O5'-PA

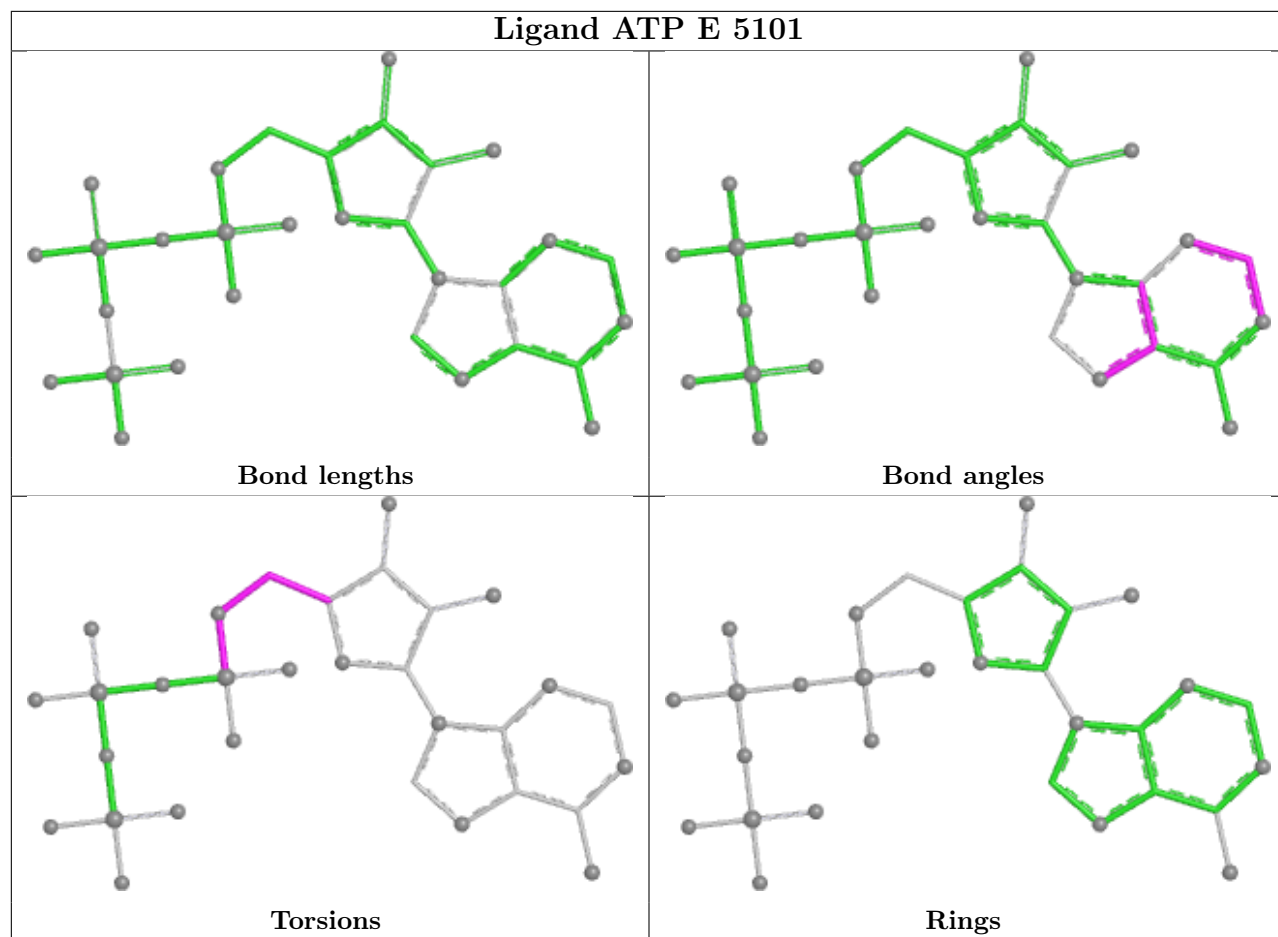
There are no ring outliers.

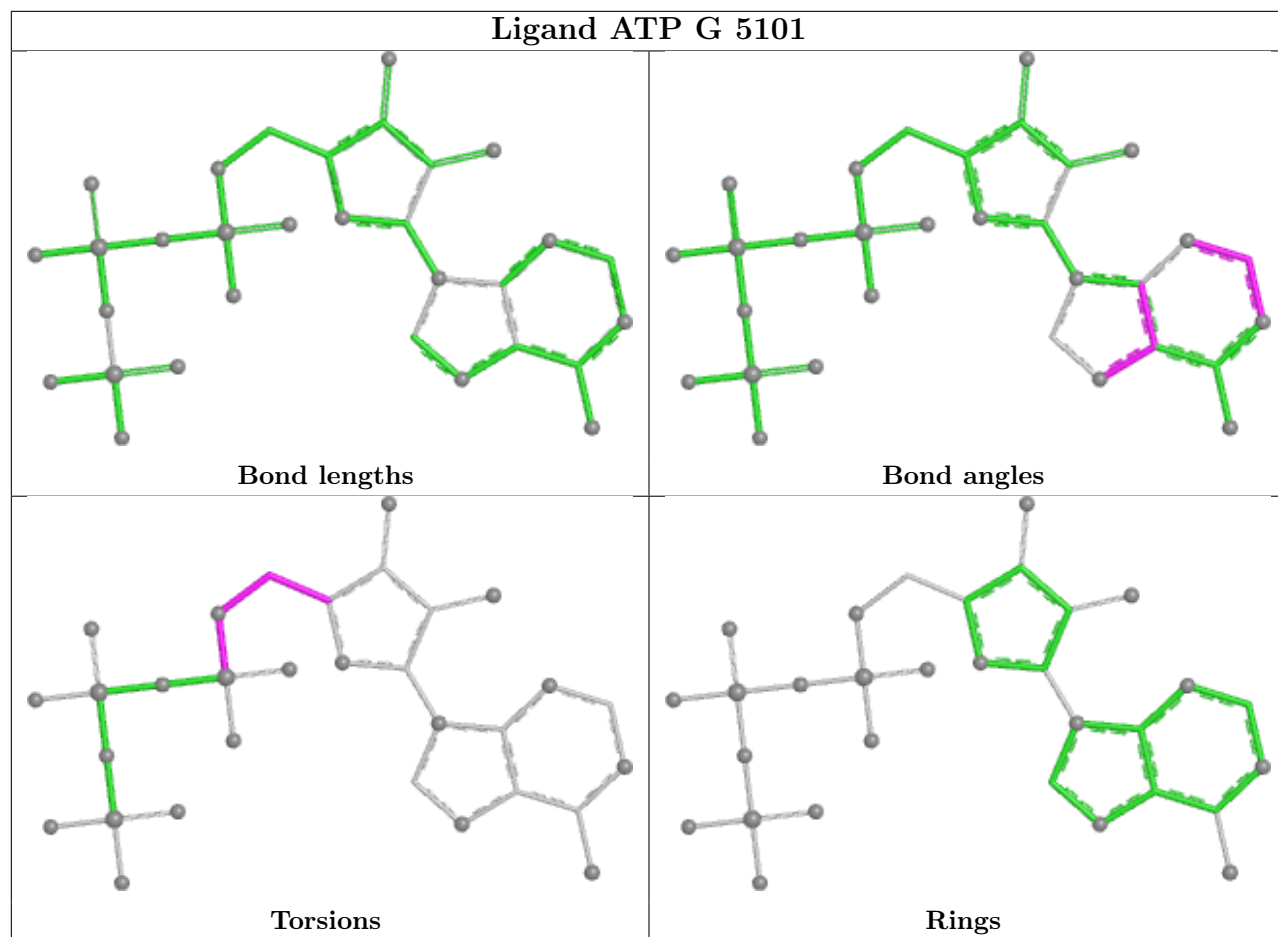
8 monomers are involved in 12 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	I	5102	CFE	1	0
3	B	5101	ATP	2	0
3	E	5101	ATP	2	0
3	G	5101	ATP	2	0
4	B	5102	CFE	1	0
3	I	5101	ATP	2	0
4	G	5102	CFE	1	0
4	E	5102	CFE	1	0

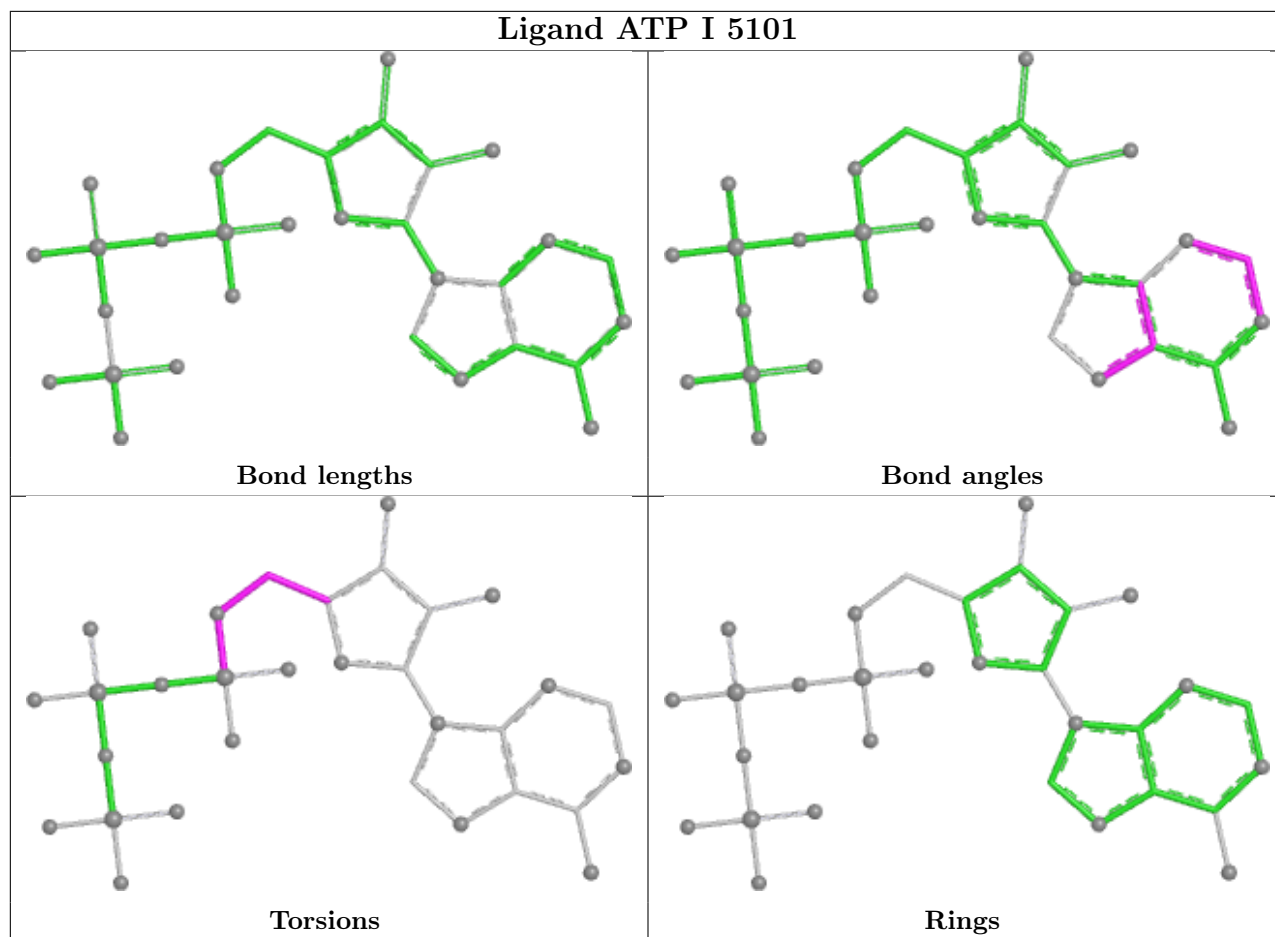
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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











## 5.7 Other polymers [i](#)

There are no such residues in this entry.

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

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	B	14
2	I	14
2	E	14
2	G	14

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B	4345:UNK	C	4540:PHE	N	73.19
1	I	4345:UNK	C	4540:PHE	N	73.19

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	E	4345:UNK	C	4540:PHE	N	73.19
1	G	4345:UNK	C	4540:PHE	N	73.19
1	B	3613:UNK	C	3639:THR	N	44.63
1	I	3613:UNK	C	3639:THR	N	44.63
1	E	3613:UNK	C	3639:THR	N	44.63
1	G	3613:UNK	C	3639:THR	N	44.63
1	B	4253:GLU	C	4320:UNK	N	27.52
1	I	4253:GLU	C	4320:UNK	N	27.52
1	G	4253:GLU	C	4320:UNK	N	27.52
1	E	4253:GLU	C	4320:UNK	N	27.51
1	B	3163:UNK	C	3170:UNK	N	16.25
1	I	3163:UNK	C	3170:UNK	N	16.25
1	E	3163:UNK	C	3170:UNK	N	16.25
1	G	3163:UNK	C	3170:UNK	N	16.25
1	B	3063:UNK	C	3134:UNK	N	14.93
1	I	3063:UNK	C	3134:UNK	N	14.93
1	E	3063:UNK	C	3134:UNK	N	14.93
1	G	3063:UNK	C	3134:UNK	N	14.93
1	B	3468:UNK	C	3511:UNK	N	14.63
1	I	3468:UNK	C	3511:UNK	N	14.63
1	E	3468:UNK	C	3511:UNK	N	14.63
1	G	3468:UNK	C	3511:UNK	N	14.63
1	B	2703:UNK	C	2734:ASN	N	14.10
1	I	2703:UNK	C	2734:ASN	N	14.10
1	E	2703:UNK	C	2734:ASN	N	14.10
1	G	2703:UNK	C	2734:ASN	N	14.10
1	B	3236:UNK	C	3241:UNK	N	13.44
1	I	3236:UNK	C	3241:UNK	N	13.44
1	E	3236:UNK	C	3241:UNK	N	13.44
1	G	3236:UNK	C	3241:UNK	N	13.44
1	B	2976:UNK	C	2995:UNK	N	12.48
1	I	2976:UNK	C	2995:UNK	N	12.48
1	E	2976:UNK	C	2995:UNK	N	12.48
1	G	2976:UNK	C	2995:UNK	N	12.48
1	B	1564:UNK	C	1573:MET	N	12.21
1	I	1564:UNK	C	1573:MET	N	12.21
1	E	1564:UNK	C	1573:MET	N	12.21
1	G	1564:UNK	C	1573:MET	N	12.21
1	B	3254:UNK	C	3261:UNK	N	8.37
1	I	3254:UNK	C	3261:UNK	N	8.37
1	E	3254:UNK	C	3261:UNK	N	8.37
1	G	3254:UNK	C	3261:UNK	N	8.37

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B	1297:UNK	C	1430:UNK	N	5.79
1	I	1297:UNK	C	1430:UNK	N	5.79
1	E	1297:UNK	C	1430:UNK	N	5.79
1	G	1297:UNK	C	1430:UNK	N	5.79
1	B	2479:LEU	C	2487:UNK	N	3.60
1	I	2479:LEU	C	2487:UNK	N	3.60
1	E	2479:LEU	C	2487:UNK	N	3.60
1	G	2479:LEU	C	2487:UNK	N	3.60
1	B	2939:ARG	C	2942:UNK	N	3.57
1	I	2939:ARG	C	2942:UNK	N	3.57
1	E	2939:ARG	C	2942:UNK	N	3.57
1	G	2939:ARG	C	2942:UNK	N	3.57

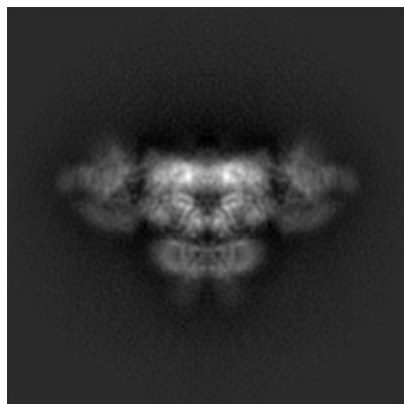
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-8383. These allow visual inspection of the internal detail of the map and identification of artifacts.

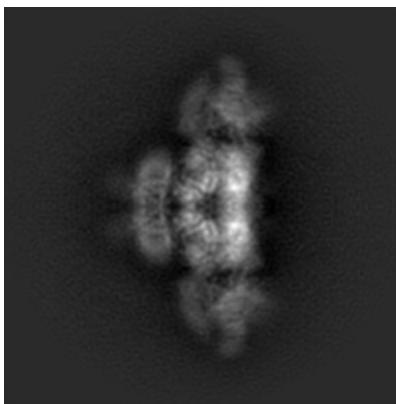
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

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

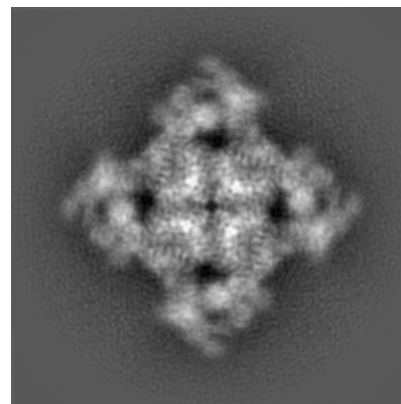
#### 6.1.1 Primary map



X

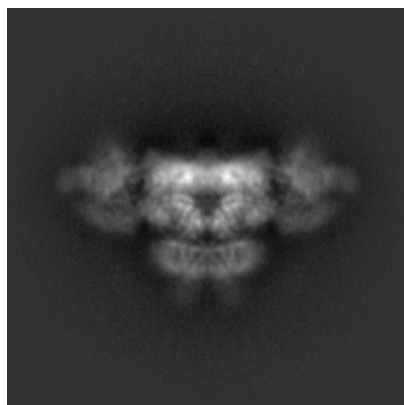


Y

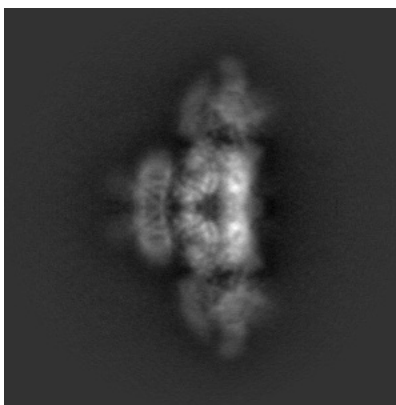


Z

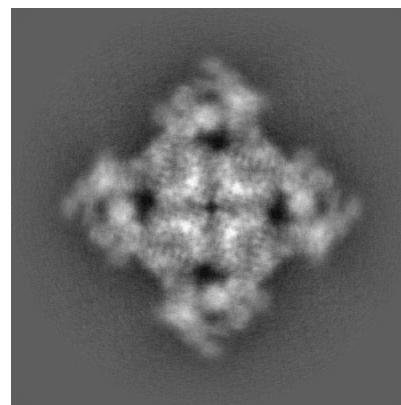
#### 6.1.2 Raw map



X



Y

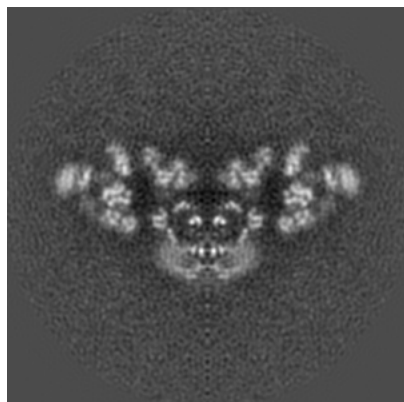


Z

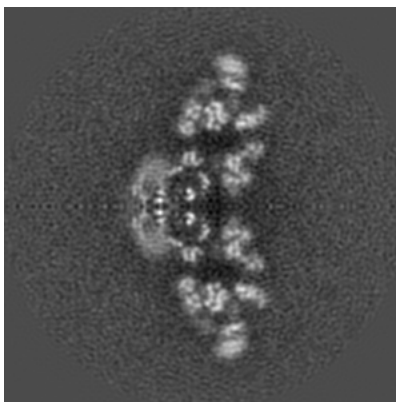
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices [i](#)

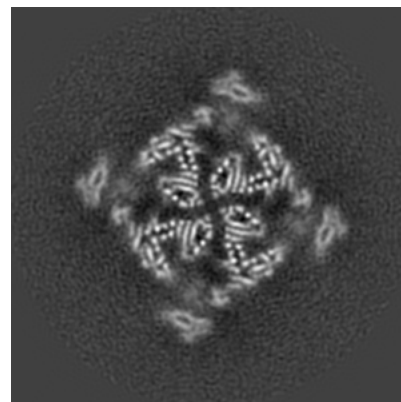
### 6.2.1 Primary map



X Index: 200

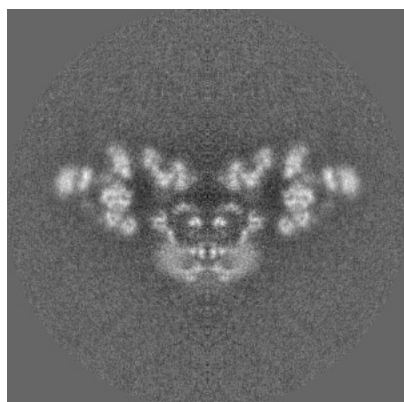


Y Index: 200

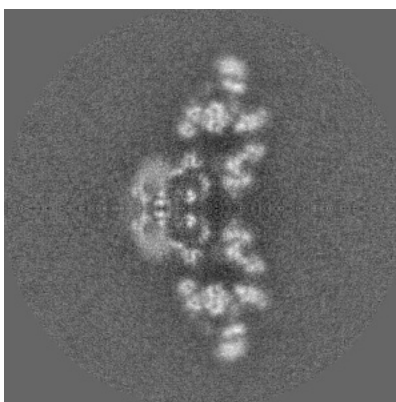


Z Index: 200

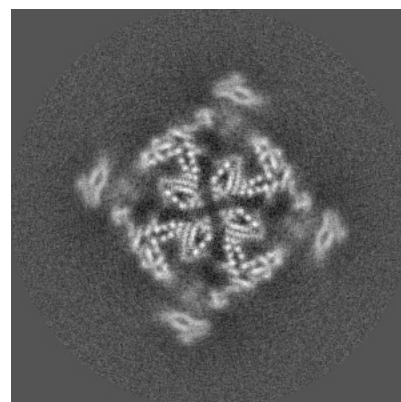
### 6.2.2 Raw map



X Index: 200



Y Index: 200

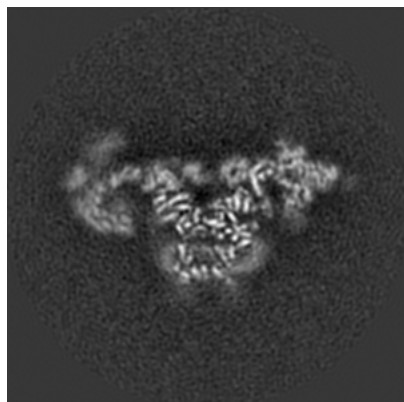


Z Index: 200

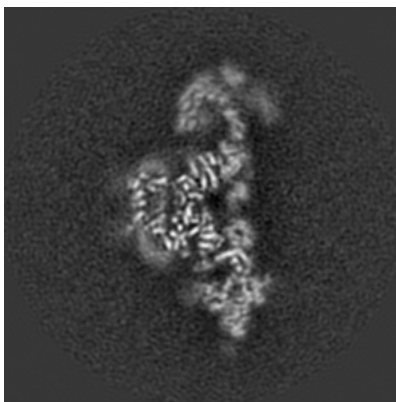
The images above show central slices of the map in three orthogonal directions.

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

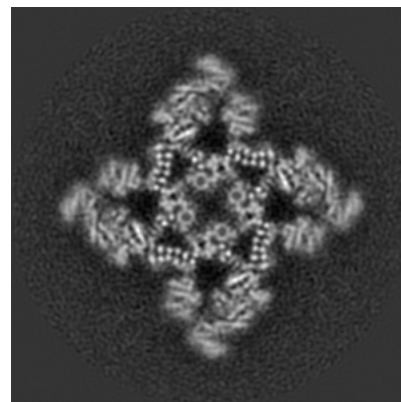
### 6.3.1 Primary map



X Index: 183

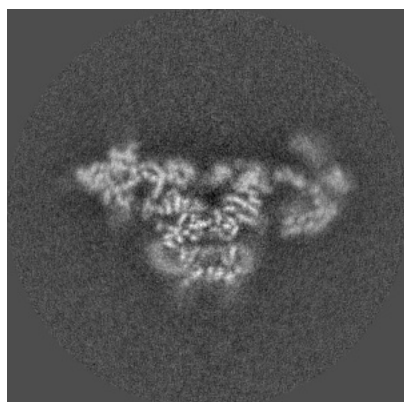


Y Index: 183

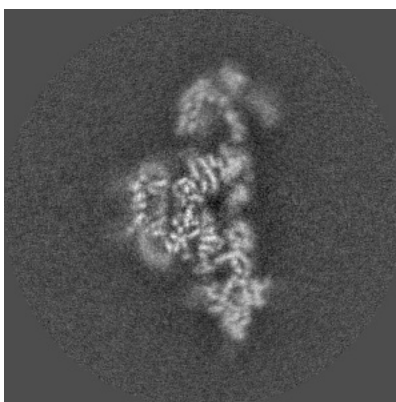


Z Index: 226

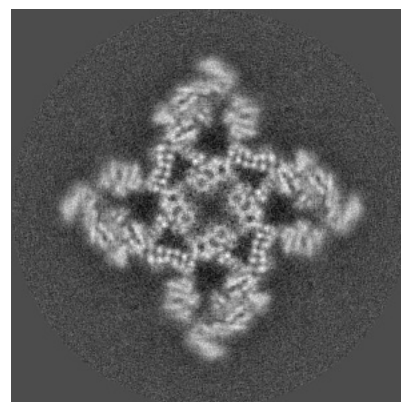
### 6.3.2 Raw map



X Index: 217



Y Index: 183

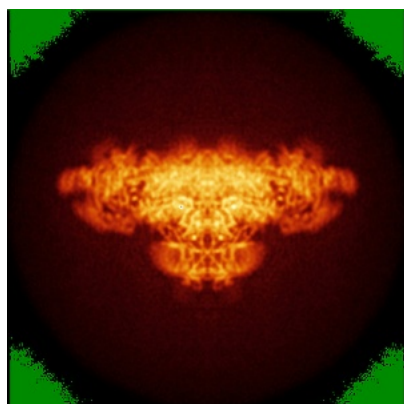


Z Index: 227

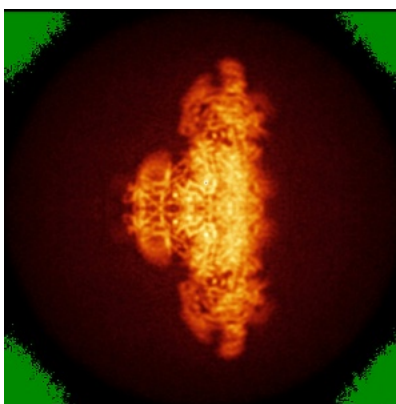
The images above show the largest variance slices of the map in three orthogonal directions.

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

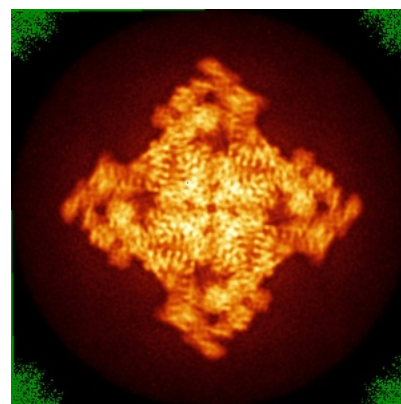
### 6.4.1 Primary map



X

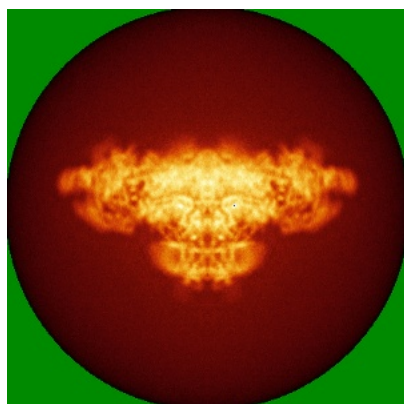


Y

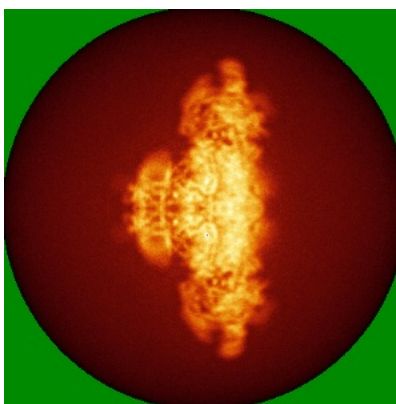


Z

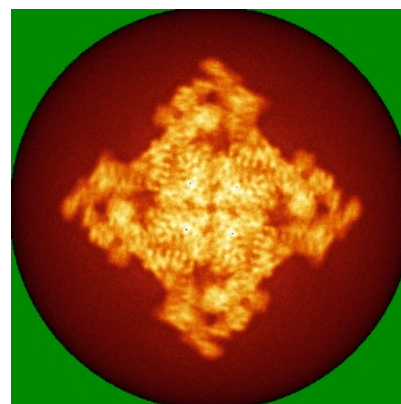
### 6.4.2 Raw map



X



Y

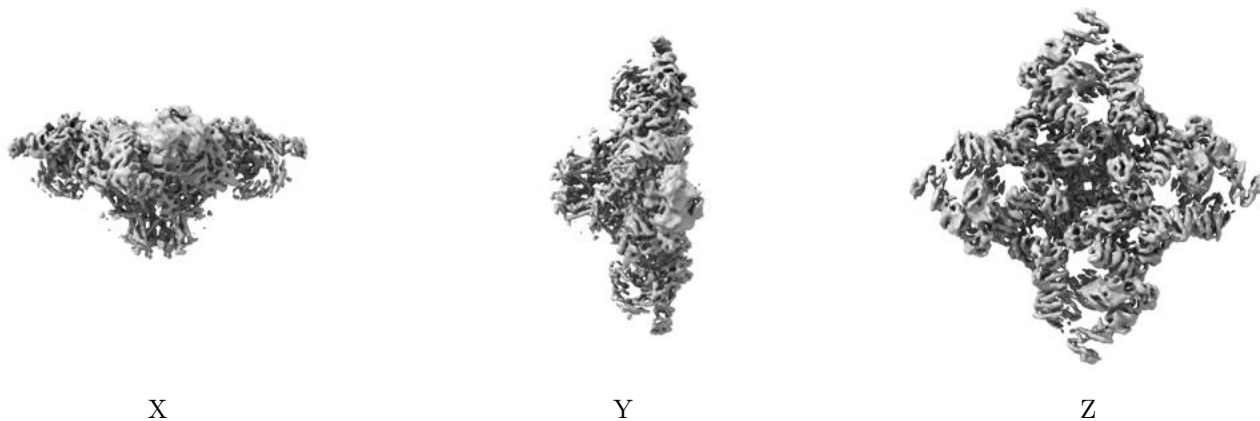


Z

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.

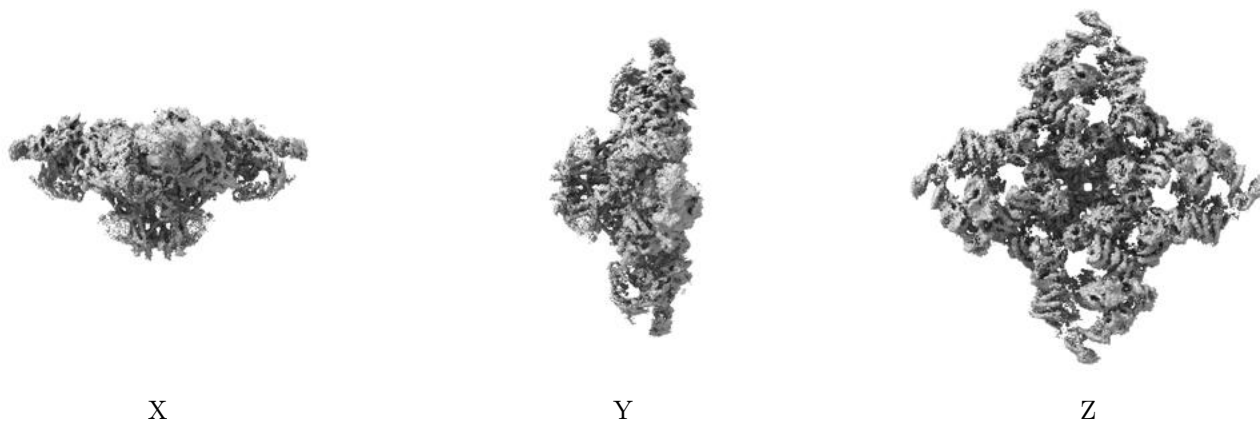
## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.028. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

### 6.5.2 Raw map



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

## 6.6 Mask visualisation [i](#)

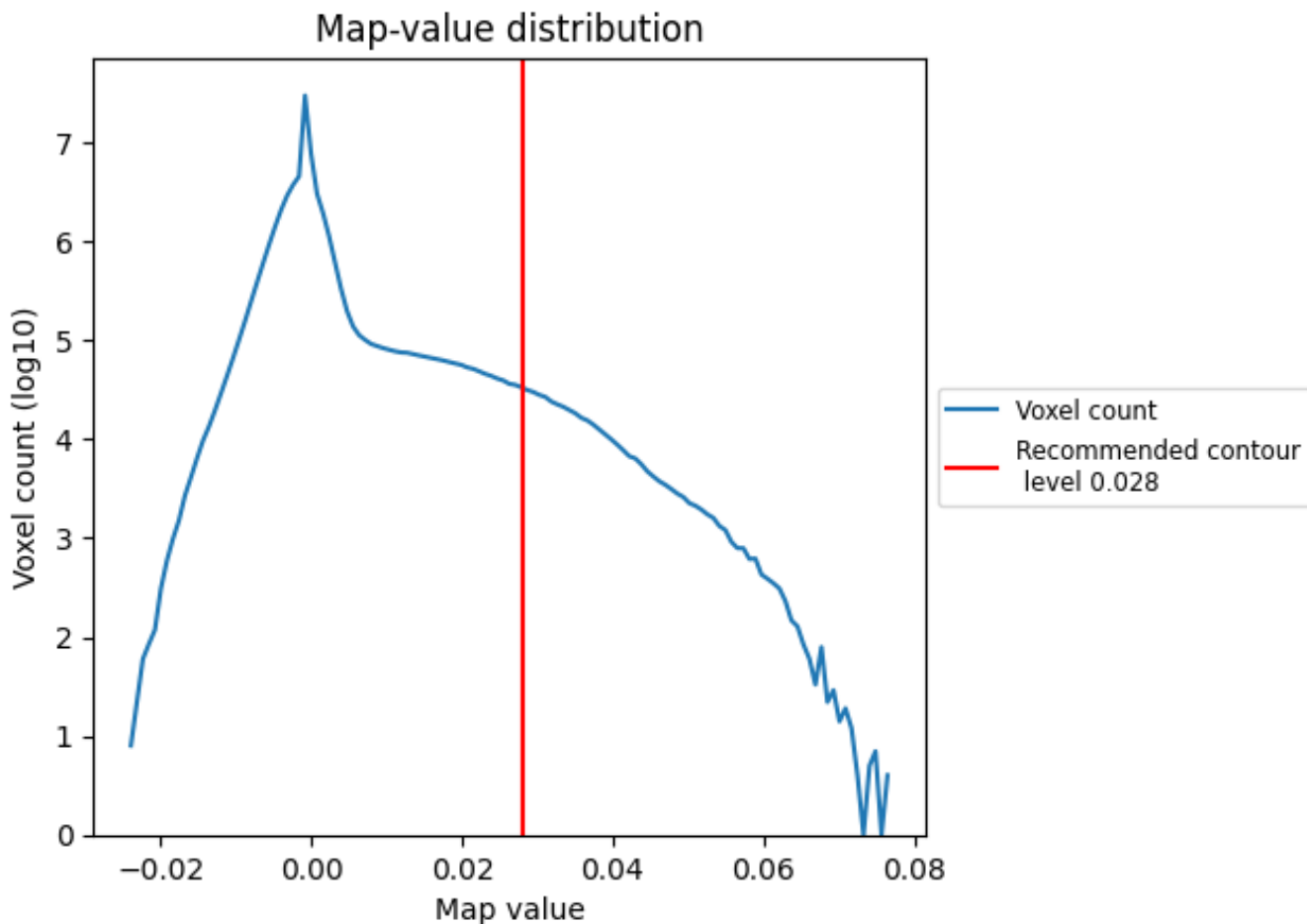
This section was not generated. No masks/segmentation were deposited.



## 7 Map analysis [i](#)

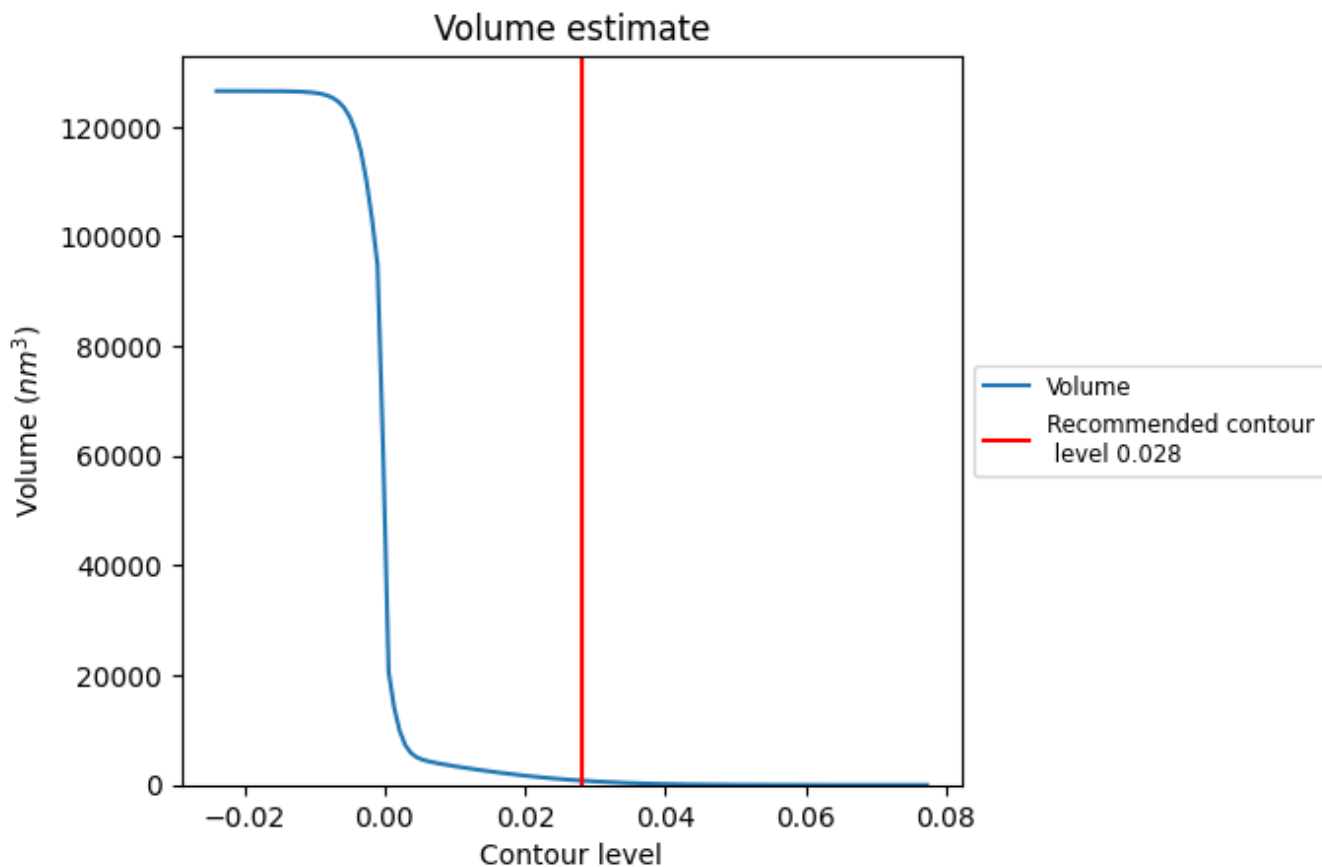
This section contains the results of statistical analysis of the map.

### 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.

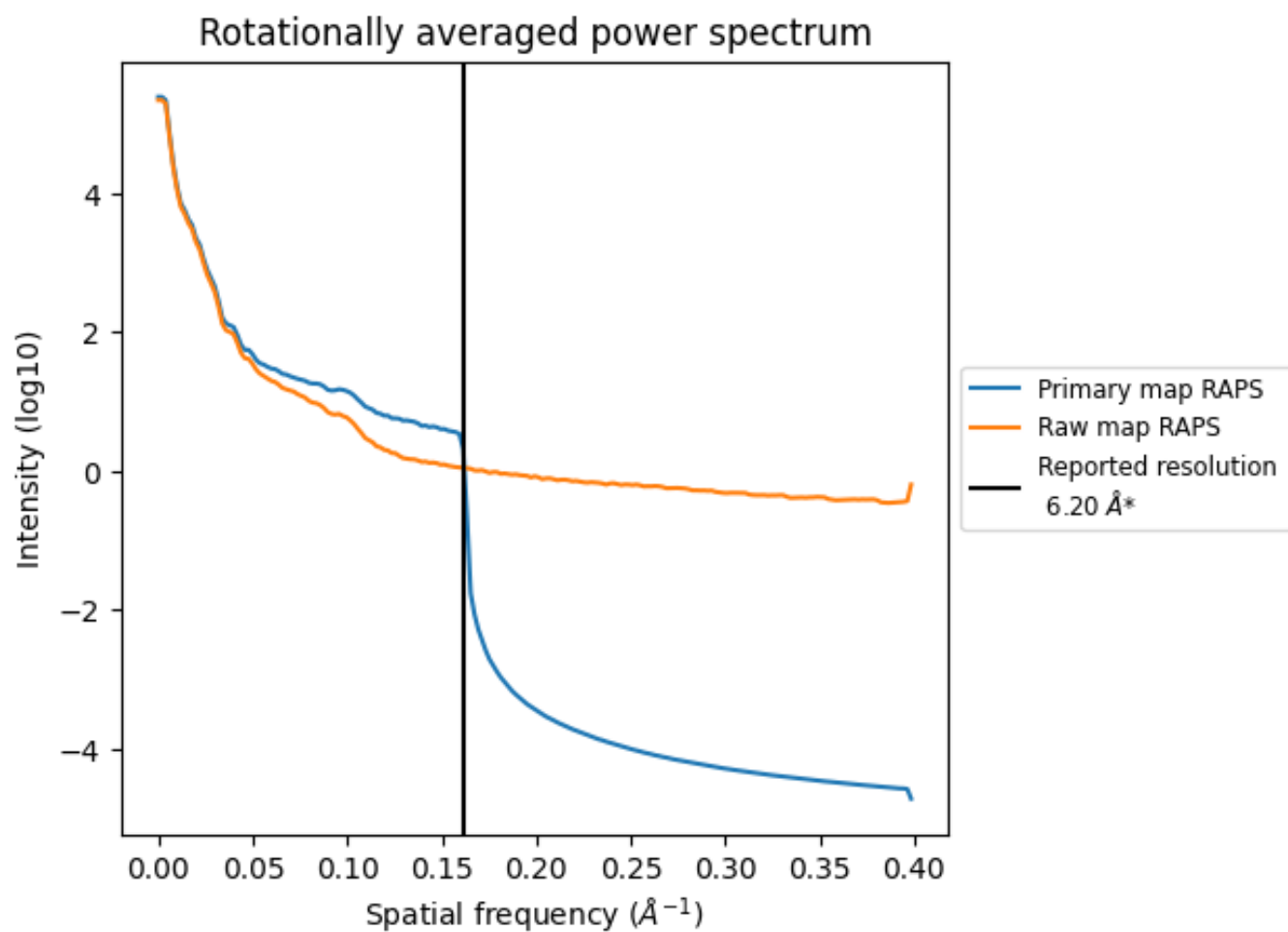
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 804  $\text{nm}^3$ ; this corresponds to an approximate mass of 726 kDa.

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

### 7.3 Rotationally averaged power spectrum [i](#)

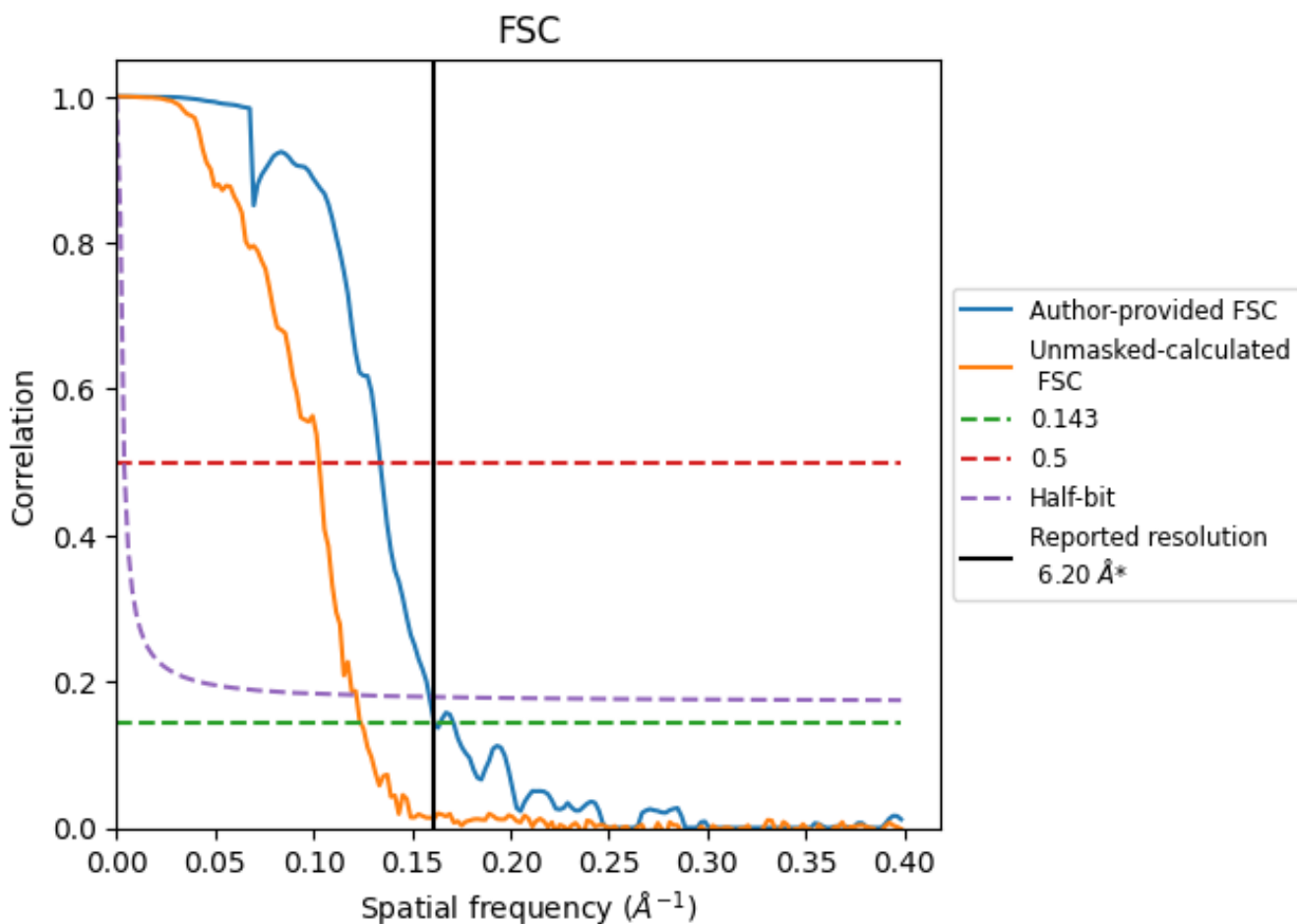


\*Reported resolution corresponds to spatial frequency of 0.161 Å<sup>-1</sup>

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

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

### 8.1 FSC [i](#)



\*Reported resolution corresponds to spatial frequency of 0.161 Å<sup>-1</sup>

## 8.2 Resolution estimates

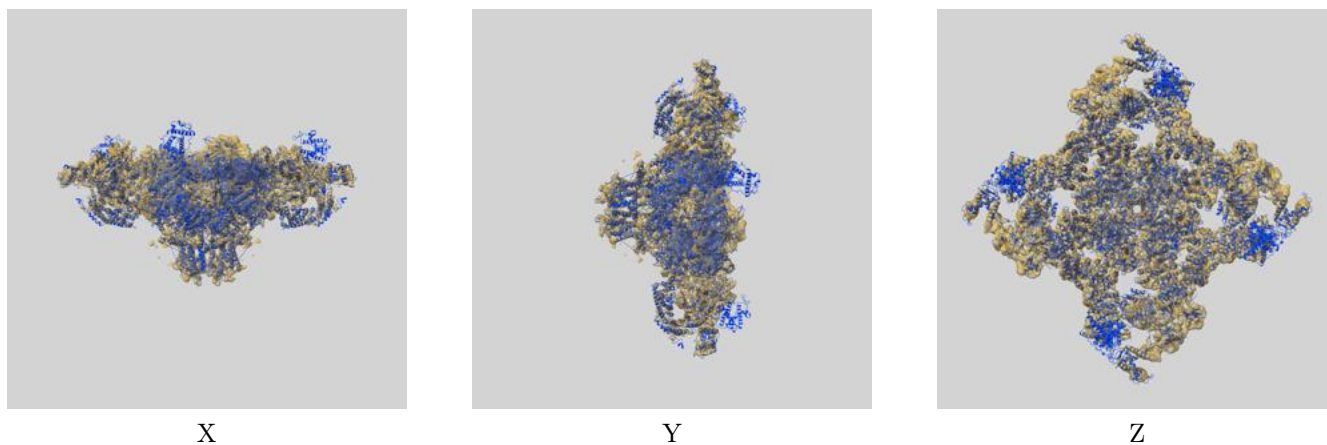
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	6.20	-	-
Author-provided FSC curve	6.19	7.47	6.29
Unmasked-calculated*	8.06	9.72	8.21

\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 8.06 differs from the reported value 6.2 by more than 10 %

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

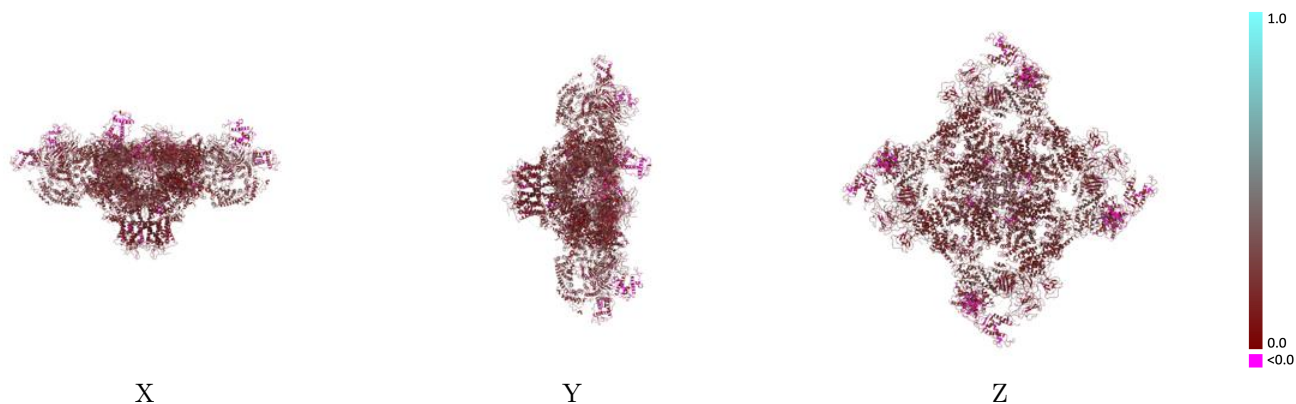
This section contains information regarding the fit between EMDB map EMD-8383 and PDB model 5TAS. Per-residue inclusion information can be found in section 3 on page 6.

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



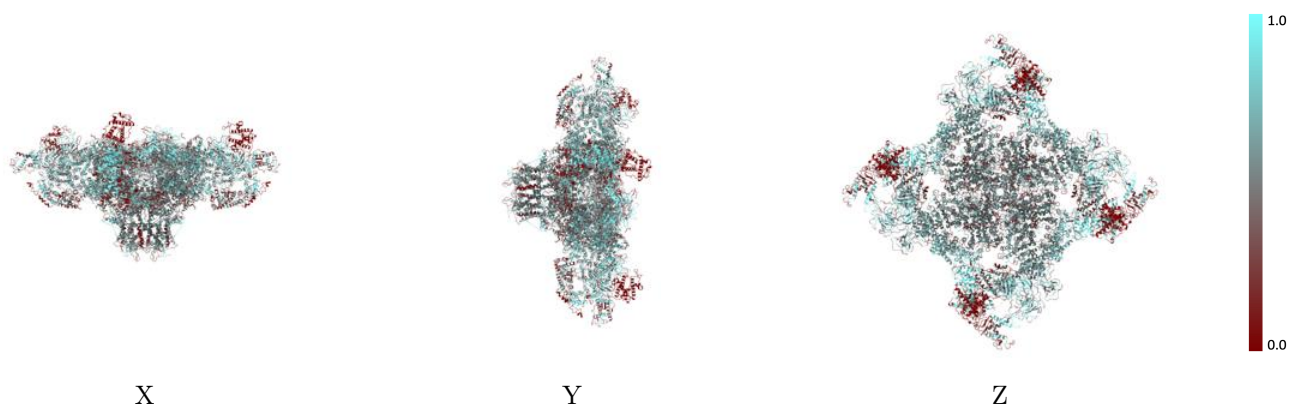
The images above show the 3D surface view of the map at the recommended contour level 0.028 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



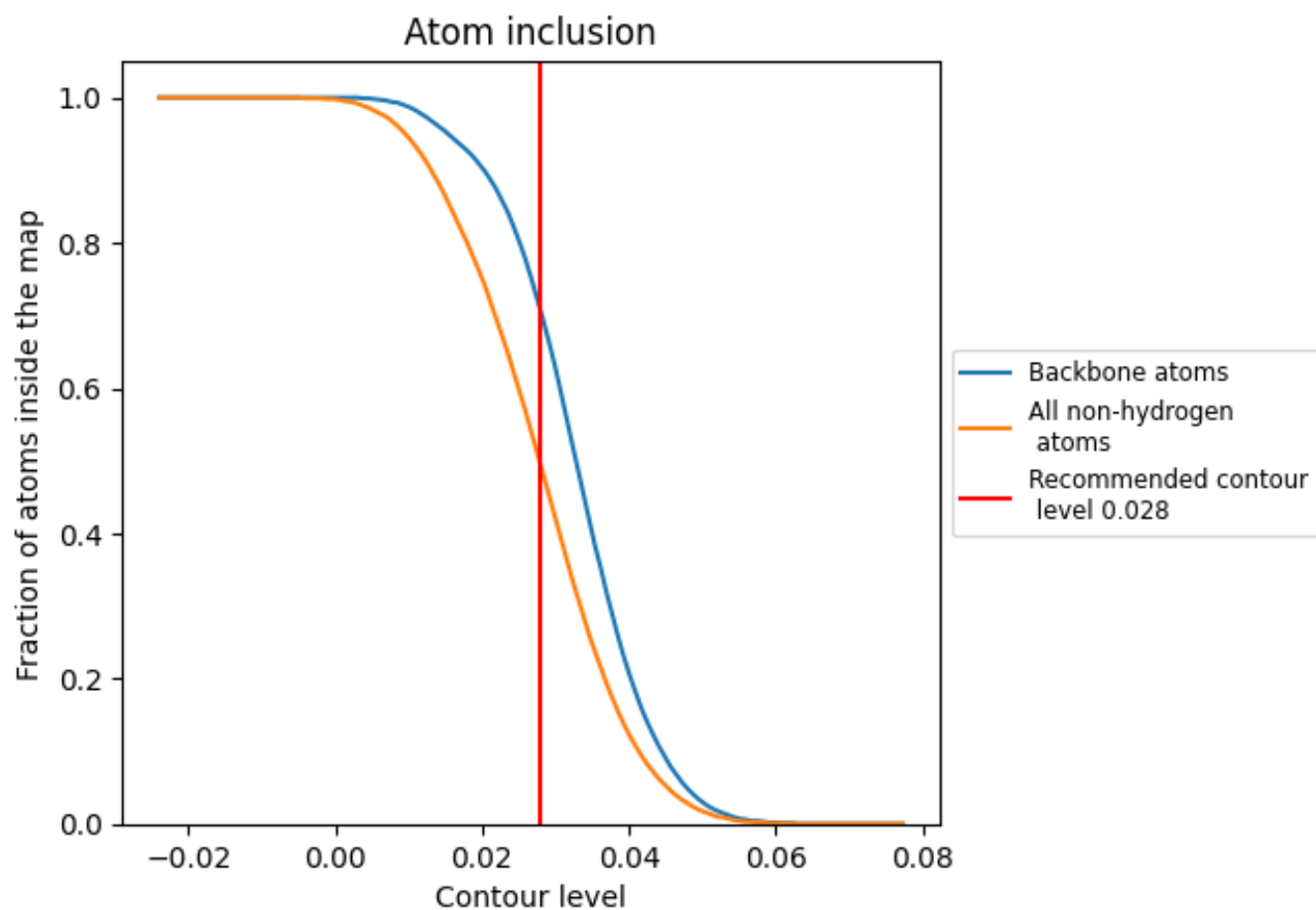
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.028).

## 9.4 Atom inclusion [i](#)



At the recommended contour level, 70% of all backbone atoms, 49% of all non-hydrogen atoms, are inside the map.



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

The table lists the average atom inclusion at the recommended contour level (0.028) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.4930	0.1830
A	0.5400	0.1700
B	0.4910	0.1840
E	0.4910	0.1830
F	0.5470	0.1750
G	0.4930	0.1840
H	0.5450	0.1730
I	0.4920	0.1830
J	0.5450	0.1720

