



wwPDB EM Validation Summary Report ⓘ

Aug 3, 2026 – 08:20 pm BST

PDB ID : 9S5E / pdb_00009s5e
EMDB ID : EMD-54595
Title : Tight class, Apo-state RyR1 in the native membrane solved by StA
Authors : Mikirtumov, V.
Deposited on : 2025-07-29
Resolution : 6.99 Å(reported)
Based on initial model : 7tzc

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

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

A user guide is available at

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

The types of validation reports are described at

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

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

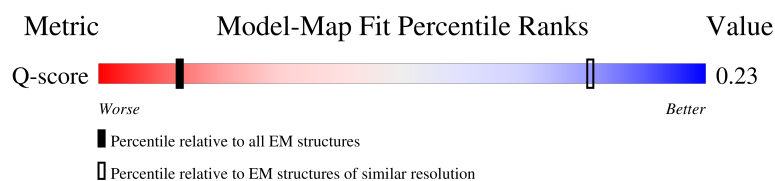
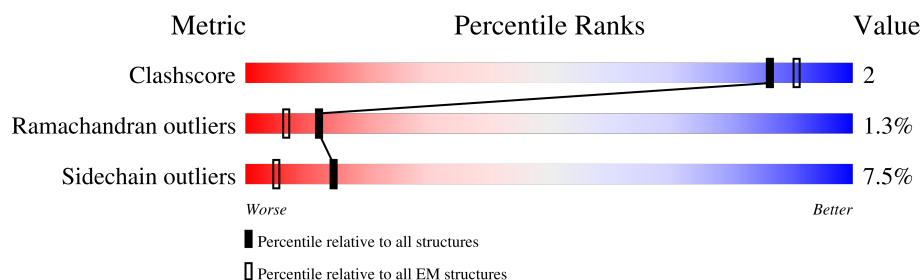
EMDB validation analysis : 0.0.1.dev133
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh &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

1 Overall quality at a glance

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

The reported resolution of this entry is 6.99 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	449 (6.49 - 7.46)

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

Mol	Chain	Length	Quality of chain
1	A	5037	
1	B	5037	
1	C	5037	
1	D	5037	

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Mol	Chain	Length	Quality of chain
2	E	108	41% 86% 11% ..
2	F	108	38% 87% 11% ..
2	G	108	39% 88% 10% ..
2	H	108	44% 87% 11% ..

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 285956 atoms, of which 142276 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 Ryanodine receptor 1.

Mol	Chain	Residues	Atoms						AltConf	Trace
1	A	4404	Total	C	H	N	O	S	0	0
			69828	22323	34740	6046	6482	237		
1	B	4404	Total	C	H	N	O	S	0	0
			69828	22323	34740	6046	6482	237		
1	C	4404	Total	C	H	N	O	S	0	0
			69828	22323	34740	6046	6482	237		
1	D	4404	Total	C	H	N	O	S	0	0
			69828	22323	34740	6046	6482	237		

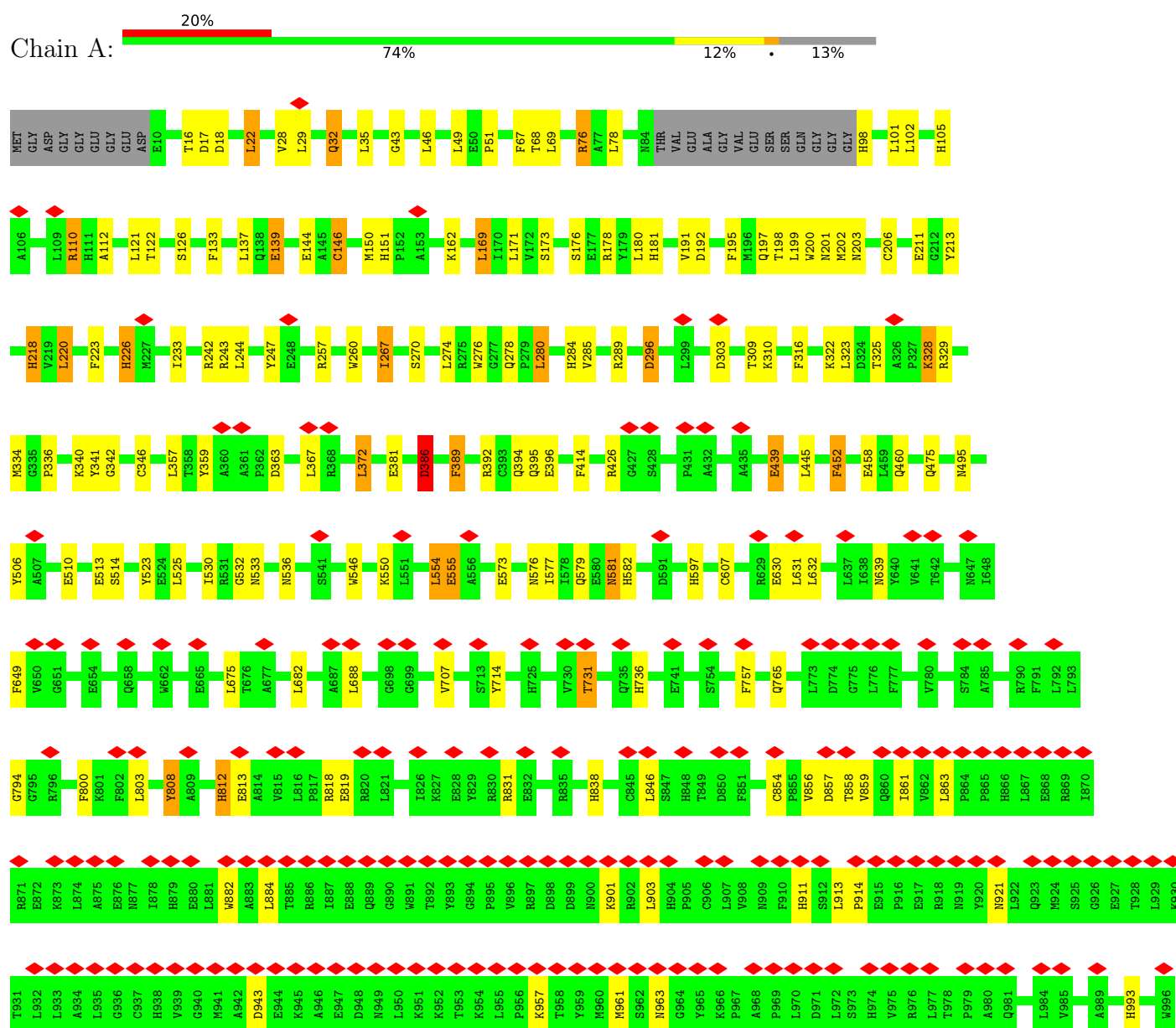
- Molecule 2 is a protein called Peptidyl-prolyl cis-trans isomerase FKBP1A.

Mol	Chain	Residues	Atoms						AltConf	Trace
2	E	107	Total	C	H	N	O	S	0	0
			1661	527	829	146	155	4		
2	F	107	Total	C	H	N	O	S	0	0
			1661	527	829	146	155	4		
2	G	107	Total	C	H	N	O	S	0	0
			1661	527	829	146	155	4		
2	H	107	Total	C	H	N	O	S	0	0
			1661	527	829	146	155	4		

3 Residue-property plots

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

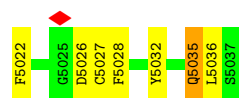
• Molecule 1: Ryanodine receptor 1



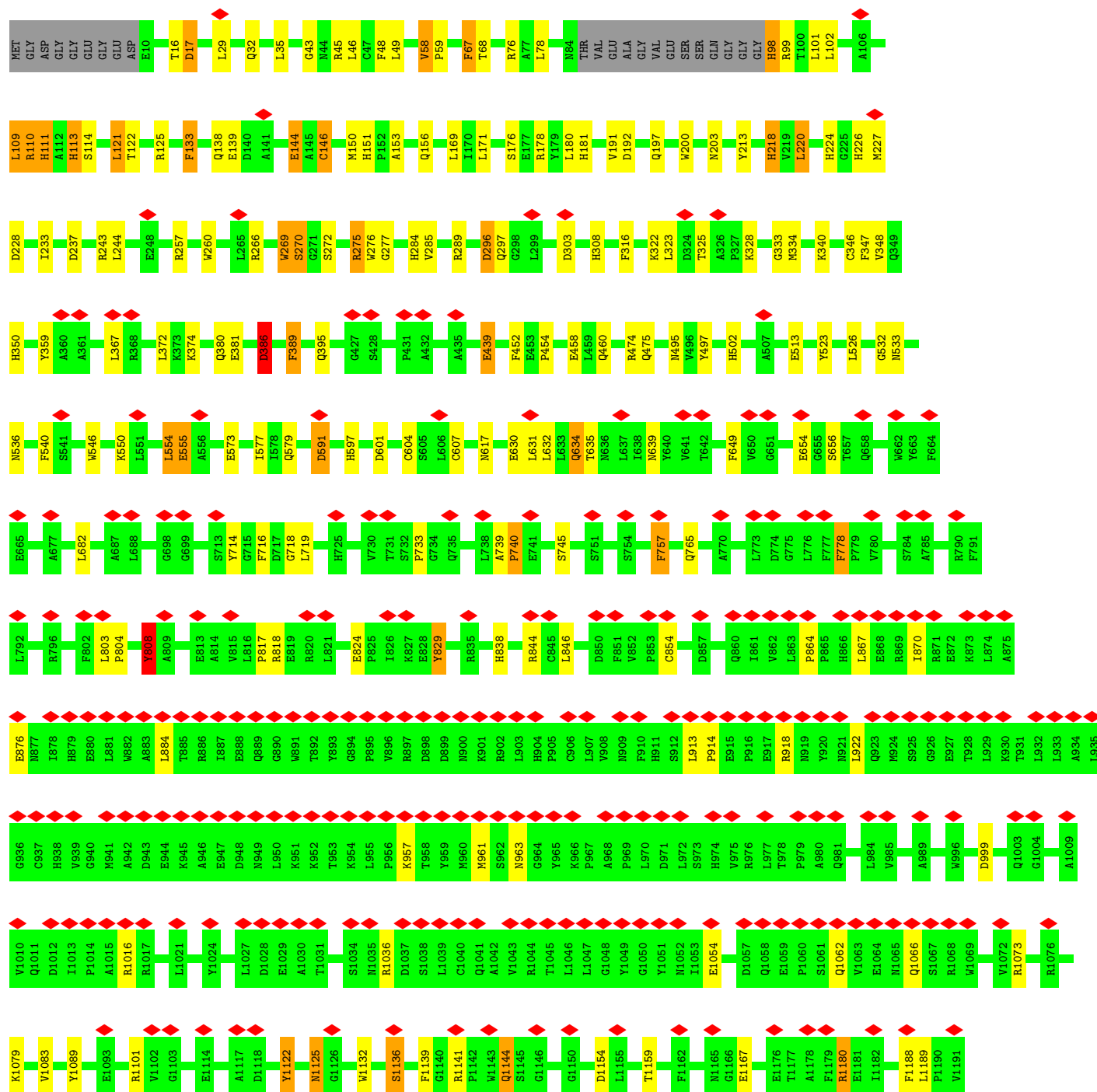
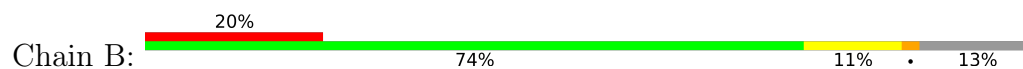


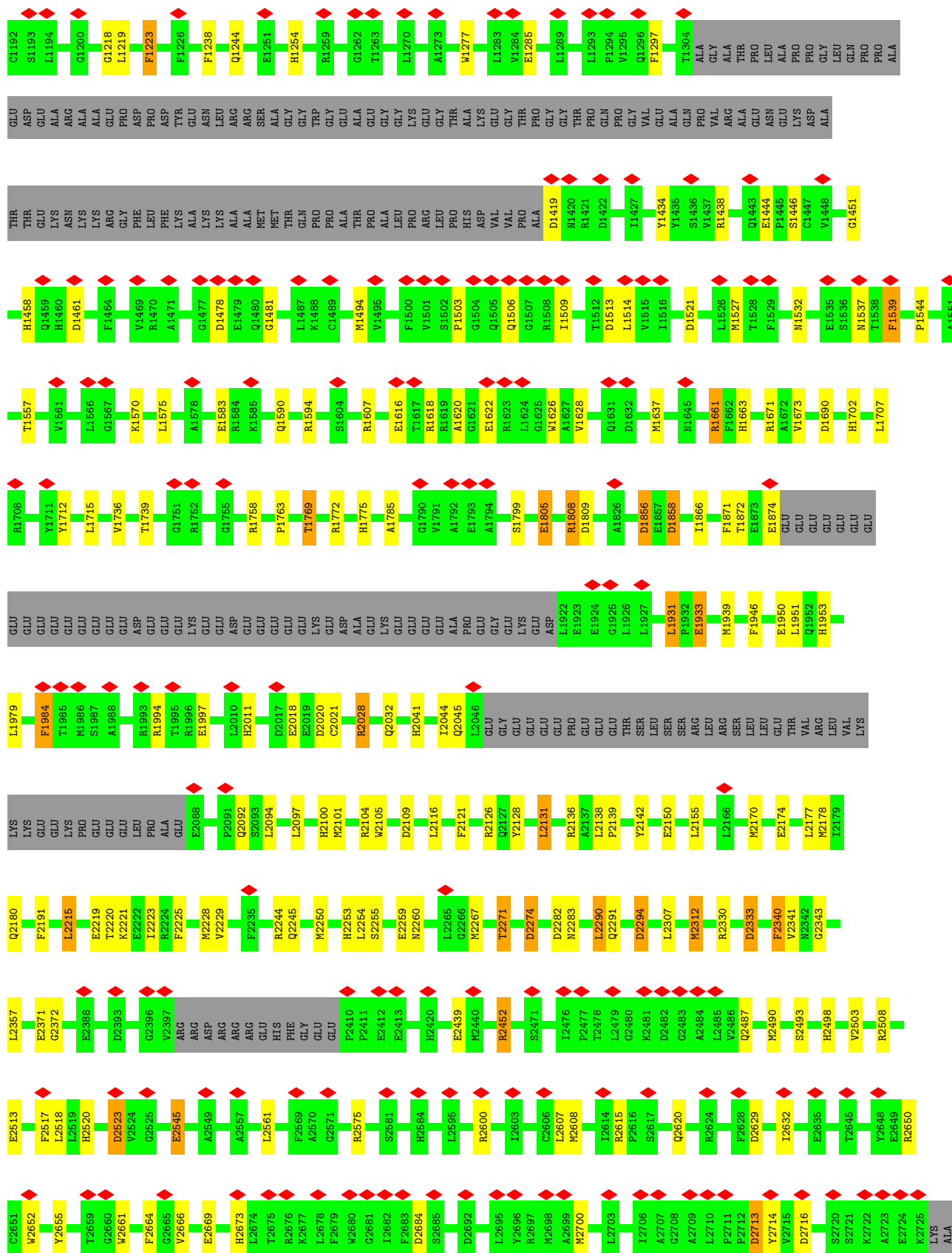
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I3345	V3346	S3347	R3348	R3349	R3350	P3351	E3352	L3353	S3356	I3359	P3360	T3361	R3364	L3365	R3366	K3367	R3368	A3369	V3372	V3373	A3374	E3375	E3376	E3377	Q3378	L3379	R3380	L3381	E3382	A3383	K3384	A3385	E3386	A3387	E3388	E3389	G3390	E3391	L3392	L3393	V3394	R3395	D3396	E3397	F3398	L3401	D3404	L3405	Y3406	A3407	L3408	Y3409	P3410																																																																																																																																																																																																																																																																																																																																																																																																																																		
M3266	I3270	I3271	I3272	I3273	M3276	Y3280	L3281	P3282	R3283	W3284	G3288	P3289	E3290	A3291	P3292	P3293	L3296	P3297	A3298	G3299	A3300	P3301	C3304	T3305	A3306	V3307	D3310	H3311	R3321	I3322	I3323	V3324	N3325	N3326	L3327	G3328	I3329	D3330	E3331	A3332	T3333	Y3334	M3335	K3336	L3337	L3338	F3341	A3342	Q3343	P3344																																																																																																																																																																																																																																																																																																																																																																																																																																					
R3196	L3197	A3198	A3199	P3202	V3203	A3204	L3206	E3207	P3208	Q3209	E3212	Y3213	N3214	A3215	C3216	S3217	V3218	Y3219	T3220	T3221	K3222	S3223	P3224	R3225	E3226	R3227	L3230	G3231	L3232	P3233	N3234	S3235	V3236	E3237	C3240	P3241	D3242	D3247	R3248	L3249	A3251	K3252	I3253	L3256	A3257	E3258	S3259	Y3263	T3264	E3265																																																																																																																																																																																																																																																																																																																																																																																																																																					
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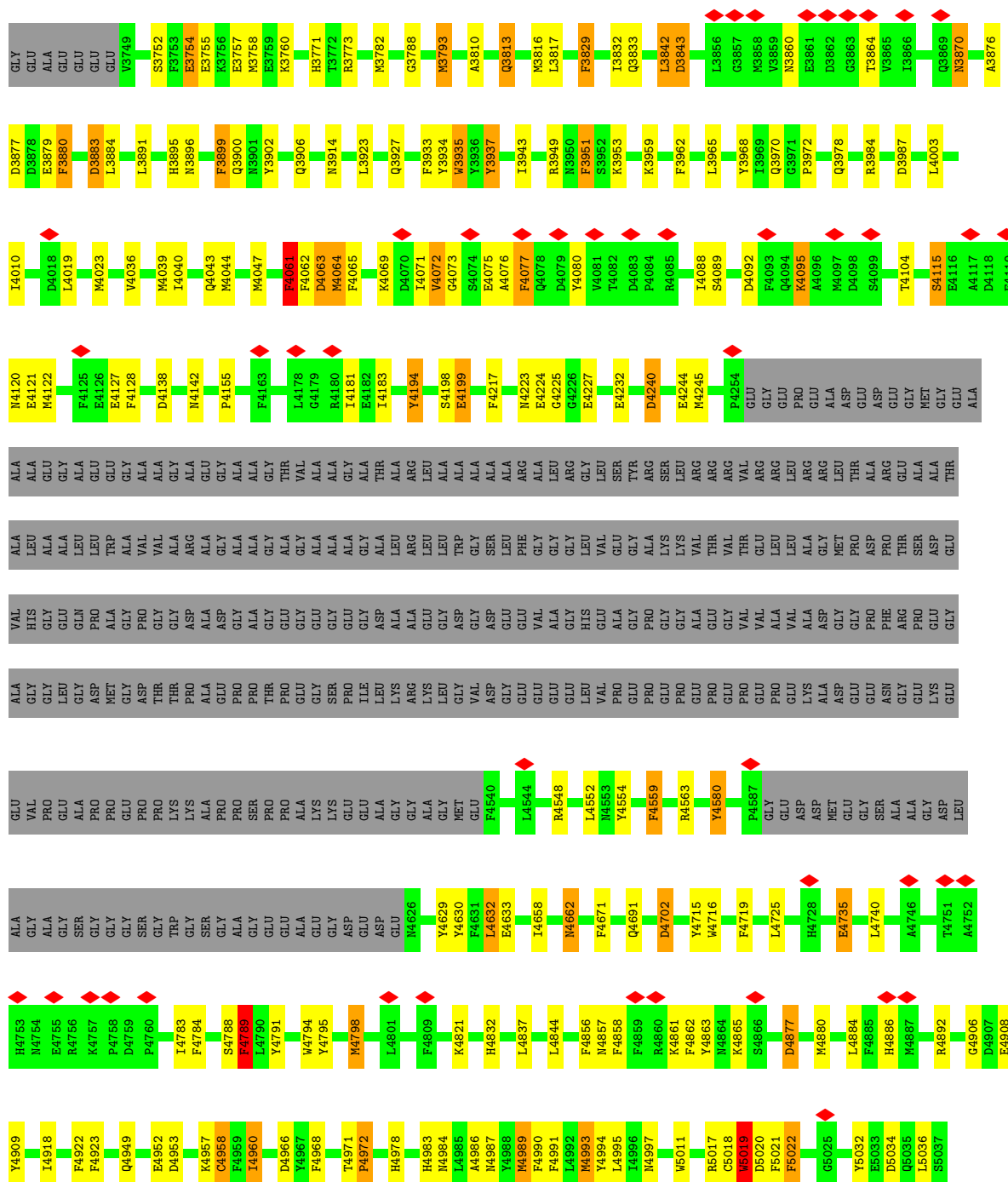


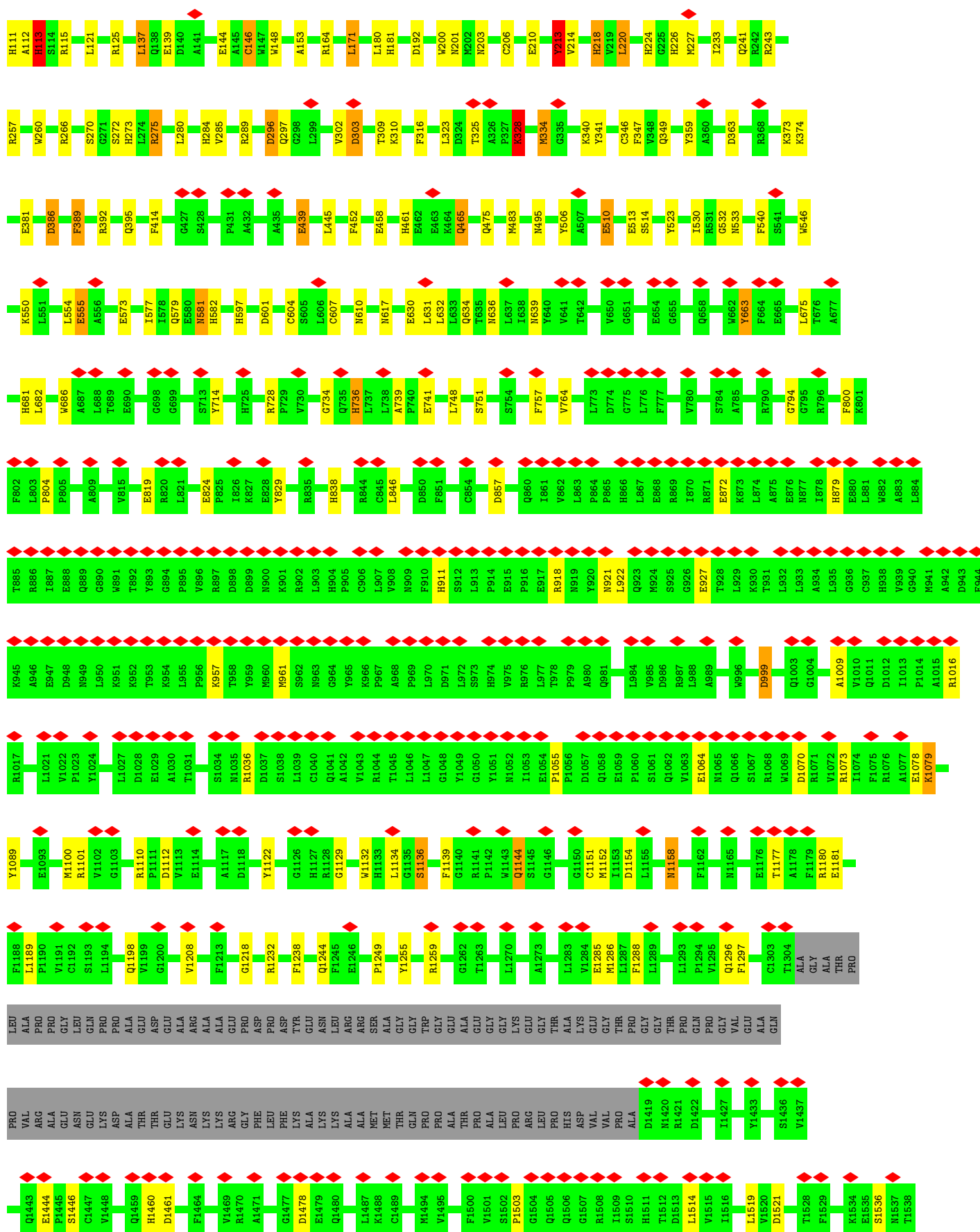
• Molecule 1: Ryanodine receptor 1

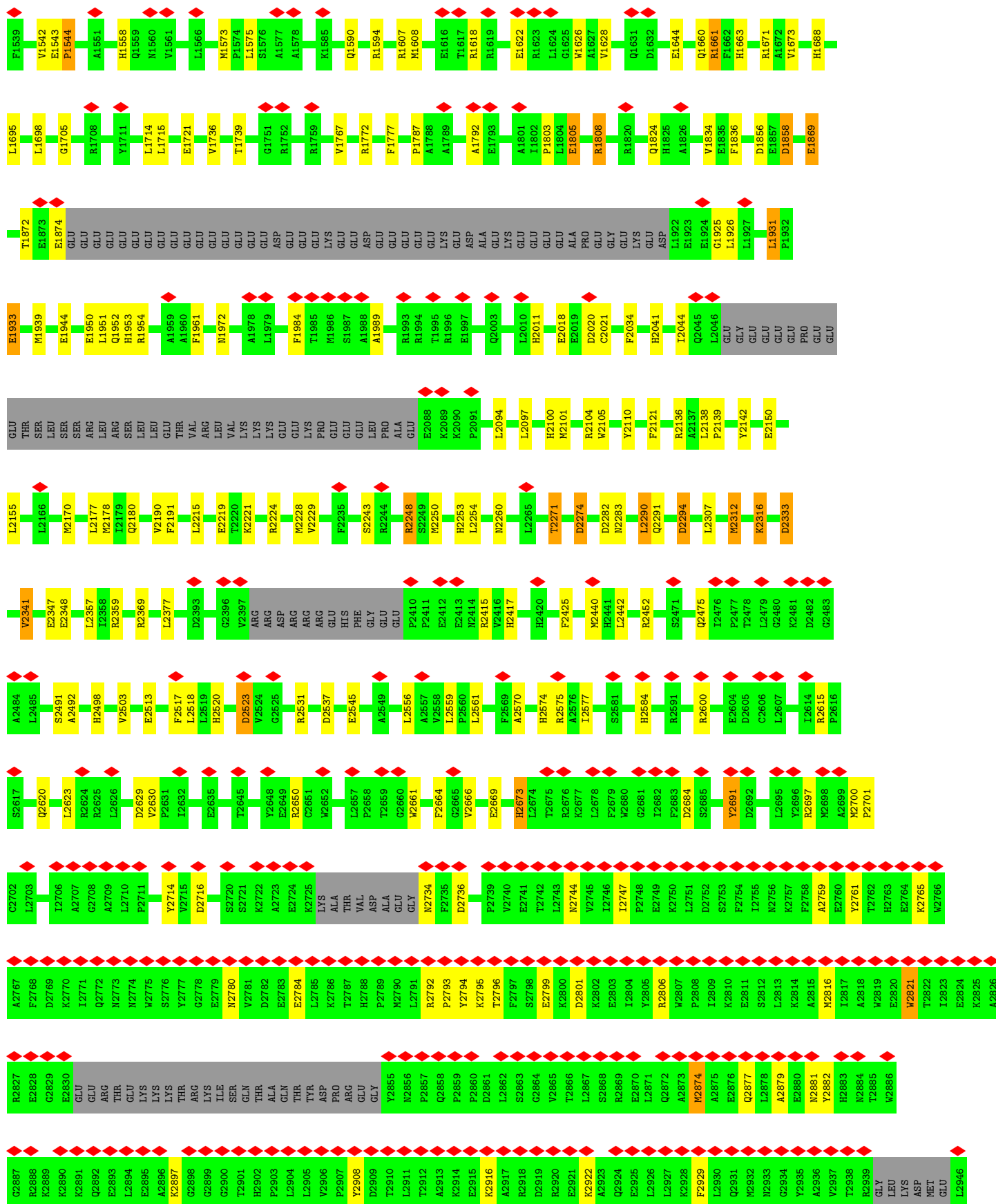


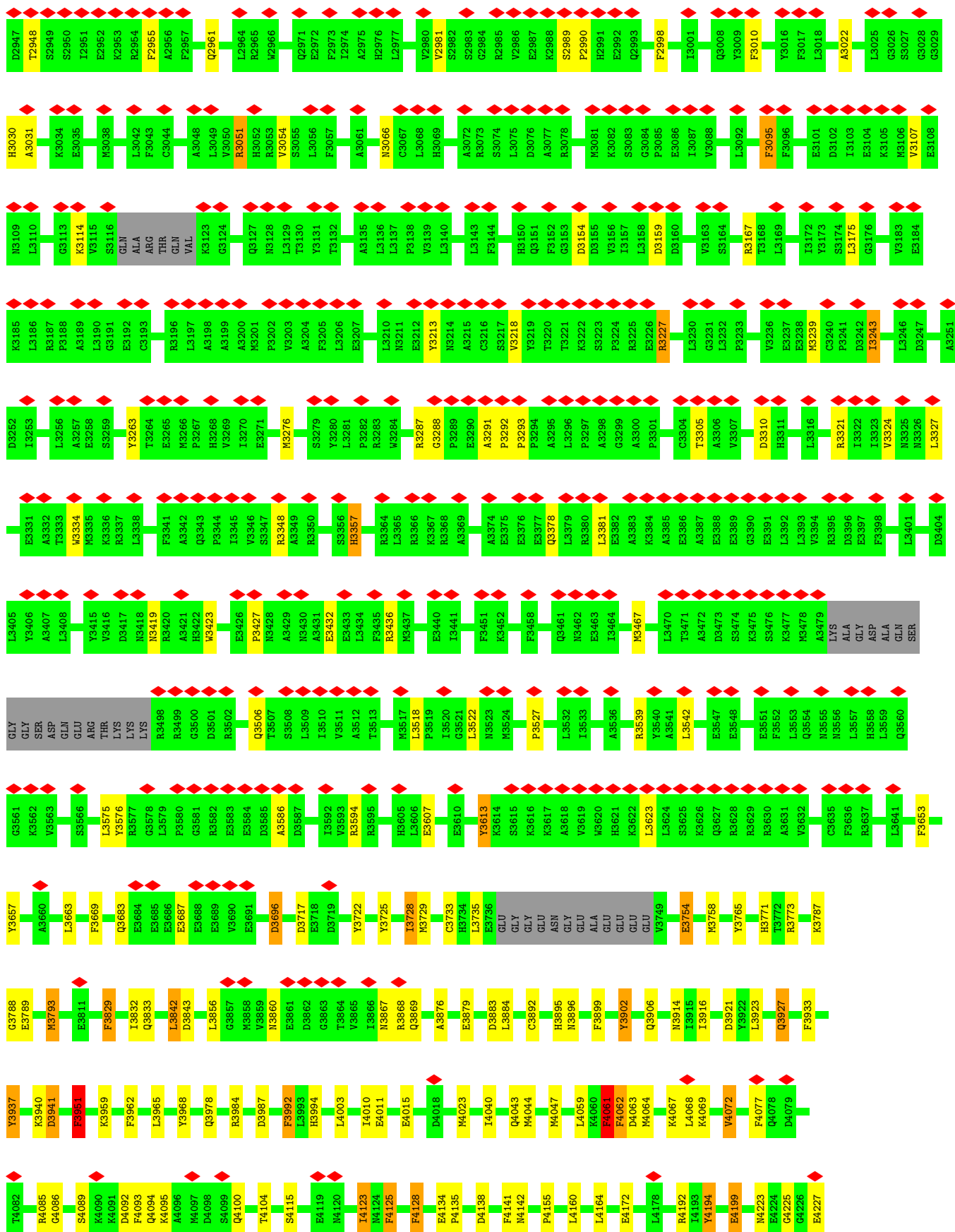


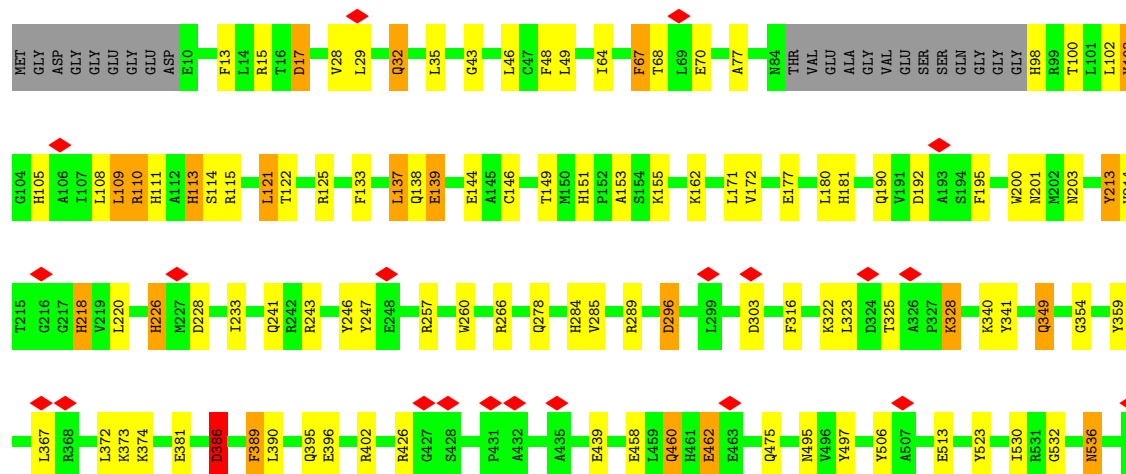
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H2976	L2977	V2980	V2981	R2985	V2986	E2987	K2988	S2989	P2990	H2991	E2992	F2998	N3007	Q3008	Y3009	F3010	F3017	L3018	S3019	T3020	V3024	L3025	G3026	A3031	K3034	E3035	M3038	L3042	F3043	C3044	A3048	L3049	V3050	R3051	H3052	L3056	F3057	A3061	C3067	L3068	H3069	I3070	L3071	A3072	R3073													
Y2908	D2909	T2910	L2911	T2912	A2913	K2914	E2915	K2916	A2917	R2918	D2919	R2920	E2921	K2922	A2923	Q2924	E2925	L2926	L2927	K2928	F2929	L2930	Q2931	M2932	N2933	Q2934	V2935	A2936	V2937	T2938	R2939	GLY	LEU	LYS	ASP	MET	GLU	L2946	D2947	T2948	S2949	S2950	L2951	E2952	K2953	R2954	F2955	A2956	F2957	L2964	R2965	T2966	Q2971	F2973	A2975			
H2788	P2789	M2790	L2791	R2792	P2793	Y2794	K2795	T2796	Q2797	P2798	E2799	K2800	D2801	S2803	I2804	T2805	R2806	W2807	P2808	L2809	K2810	E2811	S2812	L2813	K2814	A2815	M2816	L2817	A2818	E2819	E2820	W2821	T2822	I2823	W2885	W2886	Q2887	R2888	K2889	K2890	K2891	Q2892	E2893	L2894	E2895	A2896	K2897	G2898	C2899	G2900	T2901	H2902	P2903	L2904	V2906	P2907		
THR	VAL	ASP	ALA	GLY	N2734	F2735	D2736	T2737	R2738	P2739	V2740	E2741	T2742	L2743	N2744	V2745	I2746	I2747	P2748	E2749	K2750	L2751	D2752	S2753	F2754	I2755	L2756	K2757	F2758	A2759	E2760	V2761	T2762	K2763	E2764	K2765	V2766	A2767	F2768	D2769	K2770	I2771	Q2772	K2773	N2774	W2775	S2776	Y2777	G2778	E2779	W2780	V2781	D2782	E2783	E2784	L2785	K2786	T2787







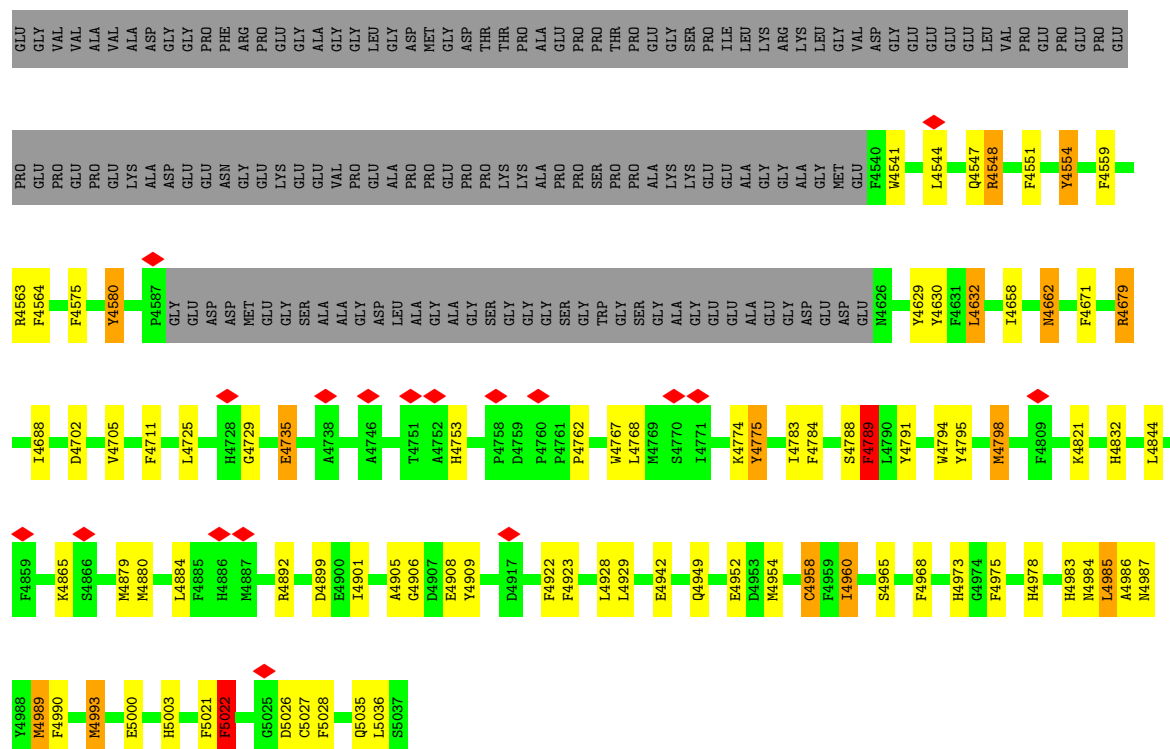




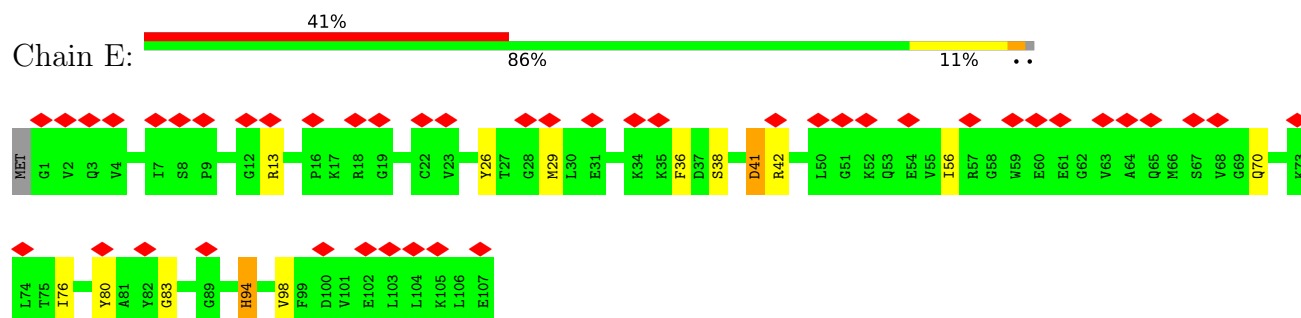




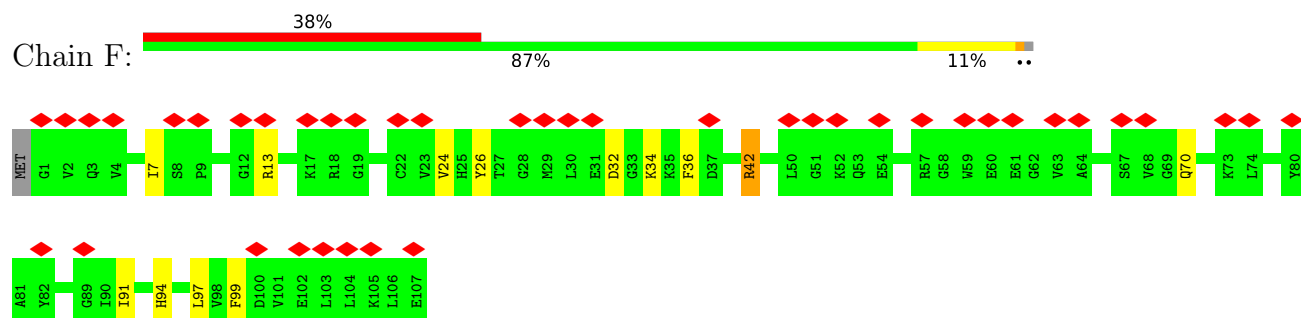




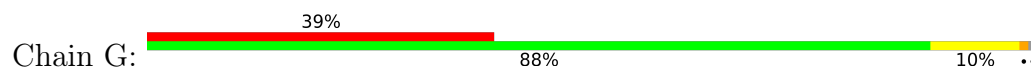
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A

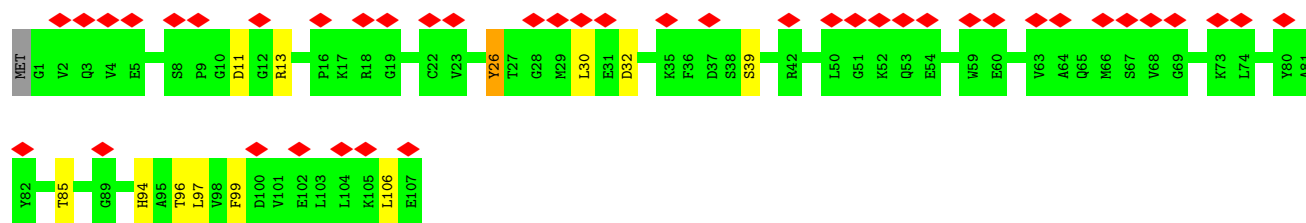


• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A

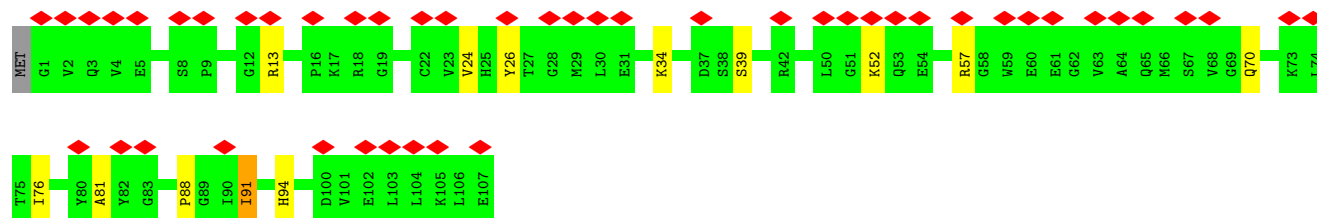
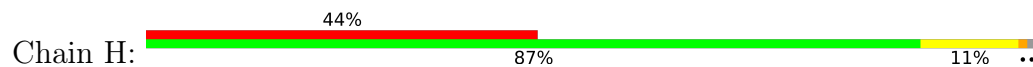


• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A





• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A



4 Experimental information

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	POINT, C4	Depositor
Number of subtomograms used	1088	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	132	Depositor
Minimum defocus (nm)	1800	Depositor
Maximum defocus (nm)	3800	Depositor
Magnification	64000	Depositor
Image detector	TFS FALCON 4i (4k x 4k)	Depositor
Maximum map value	0.706	Depositor
Minimum map value	-0.417	Depositor
Average map value	-0.006	Depositor
Map value standard deviation	0.043	Depositor
Recommended contour level	0.105	Depositor
Map size (Å)	496.74, 496.74, 496.74	wwPDB
Map dimensions	170, 170, 170	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	2.922, 2.922, 2.922	Depositor

5 Model quality

5.1 Standard geometry

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	0.82	0/35885	1.47	227/48603 (0.5%)
1	B	0.81	0/35885	1.46	228/48603 (0.5%)
1	C	0.82	0/35885	1.47	218/48603 (0.4%)
1	D	0.82	1/35885 (0.0%)	1.47	215/48603 (0.4%)
2	E	0.78	0/851	1.50	4/1146 (0.3%)
2	F	0.77	0/851	1.44	5/1146 (0.4%)
2	G	0.78	0/851	1.44	1/1146 (0.1%)
2	H	0.79	0/851	1.47	5/1146 (0.4%)
All	All	0.82	1/146944 (0.0%)	1.47	903/198996 (0.5%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	44
1	B	0	40
1	C	0	45
1	D	0	52
2	E	0	1
2	F	0	1
All	All	0	183

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	D	2859	PRO	CA-C	5.61	1.54	1.51

The worst 5 of 903 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	41	ASP	CA-CB-CG	12.77	125.37	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	4077	PHE	CA-CB-CG	9.76	123.56	113.80
1	C	2794	TYR	N-CA-C	9.14	121.25	111.28
1	C	3293	PRO	N-CA-C	8.84	121.49	110.70
1	B	1539	PHE	CA-CB-CG	8.61	122.41	113.80

There are no chirality outliers.

5 of 183 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	178	ARG	Sidechain
1	A	218	HIS	Sidechain
1	A	226	HIS	Sidechain
1	A	242	ARG	Sidechain
1	A	76	ARG	Sidechain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	35088	34740	34717	147	0
1	B	35088	34740	34717	148	0
1	C	35088	34740	34717	144	0
1	D	35088	34740	34717	157	0
2	E	832	829	831	2	0
2	F	832	829	831	1	0
2	G	832	829	831	2	0
2	H	832	829	831	0	0
All	All	143680	142276	142192	590	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 2.

The worst 5 of 590 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:19:GLU:HG2	1:C:68:THR:HG23	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3324:VAL:HG11	1:B:3361:THR:HG21	1.70	0.71
1:A:4199:GLU:CD	1:A:4199:GLU:H	2.04	0.64
1:B:1931:LEU:HD22	1:B:1931:LEU:H	1.64	0.63
1:C:19:GLU:CG	1:C:68:THR:HG23	2.29	0.62

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	4376/5037 (87%)	3991 (91%)	331 (8%)	54 (1%)	10	44
1	B	4376/5037 (87%)	3973 (91%)	345 (8%)	58 (1%)	9	42
1	C	4376/5037 (87%)	3976 (91%)	343 (8%)	57 (1%)	9	42
1	D	4376/5037 (87%)	3980 (91%)	332 (8%)	64 (2%)	8	40
2	E	105/108 (97%)	92 (88%)	11 (10%)	2 (2%)	6	32
2	F	105/108 (97%)	96 (91%)	8 (8%)	1 (1%)	12	48
2	G	105/108 (97%)	93 (89%)	11 (10%)	1 (1%)	12	48
2	H	105/108 (97%)	92 (88%)	10 (10%)	3 (3%)	3	23
All	All	17924/20580 (87%)	16293 (91%)	1391 (8%)	240 (1%)	12	42

5 of 240 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	112	ALA
1	A	126	SER
1	A	285	VAL
1	A	329	ARG
1	A	4072	VAL

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	3827/4276 (90%)	3527 (92%)	300 (8%)	11	32
1	B	3827/4276 (90%)	3537 (92%)	290 (8%)	12	33
1	C	3827/4276 (90%)	3552 (93%)	275 (7%)	13	35
1	D	3827/4276 (90%)	3536 (92%)	291 (8%)	12	33
2	E	89/90 (99%)	84 (94%)	5 (6%)	19	40
2	F	89/90 (99%)	84 (94%)	5 (6%)	19	40
2	G	89/90 (99%)	81 (91%)	8 (9%)	9	27
2	H	89/90 (99%)	83 (93%)	6 (7%)	15	36
All	All	15664/17464 (90%)	14484 (92%)	1180 (8%)	14	33

5 of 1180 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	D	819	GLU
1	D	4929	LEU
1	D	1254	HIS
1	D	745	SER
1	D	3096	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 190 such sidechains are listed below:

Mol	Chain	Res	Type
1	C	2184	ASN
1	D	32	GLN
1	C	2417	HIS
1	C	3146	HIS
1	D	949	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

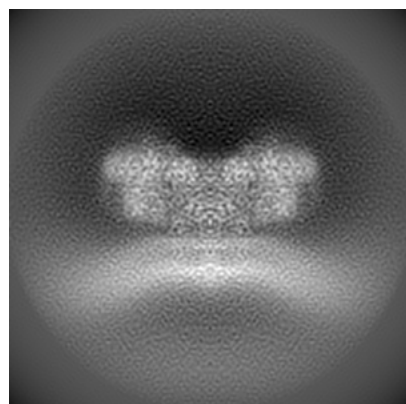
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-54595. These allow visual inspection of the internal detail of the map and identification of artifacts.

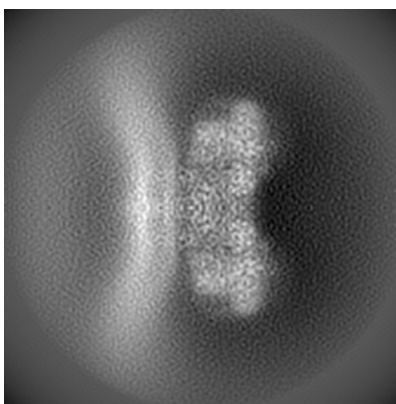
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

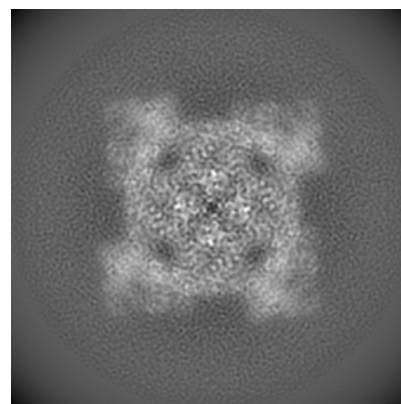
6.1.1 Primary map



X

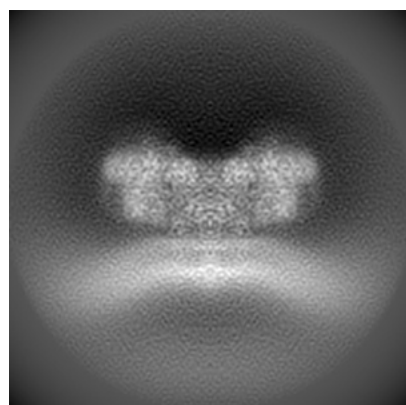


Y

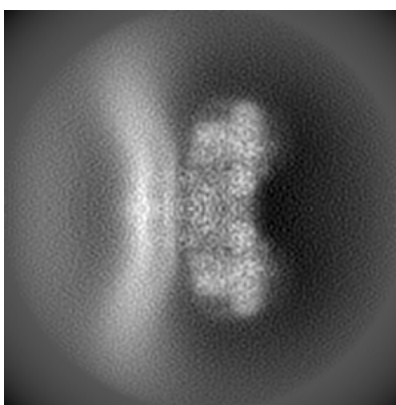


Z

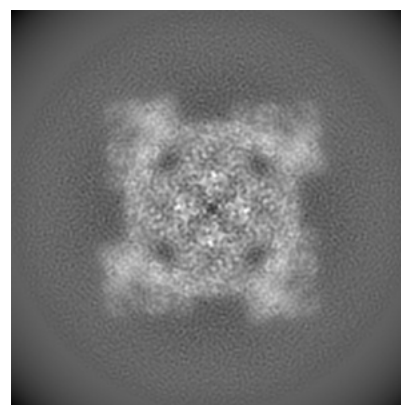
6.1.2 Raw map



X



Y

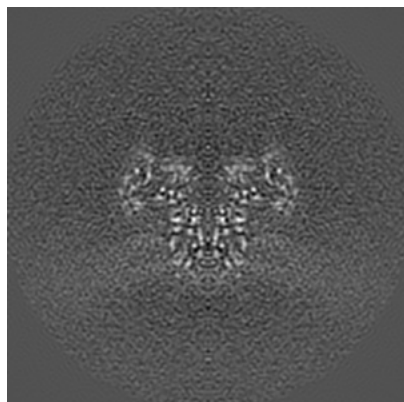


Z

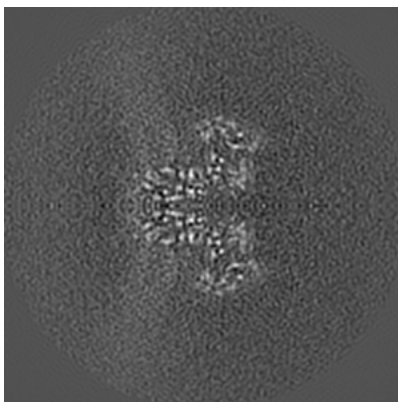
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

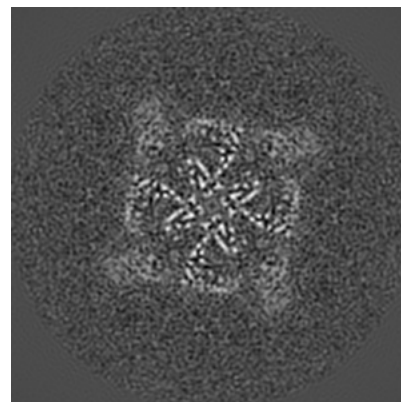
6.2.1 Primary map



X Index: 85

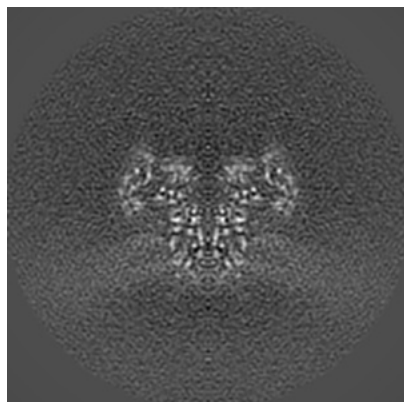


Y Index: 85

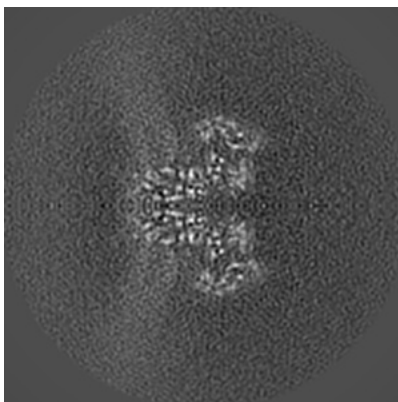


Z Index: 85

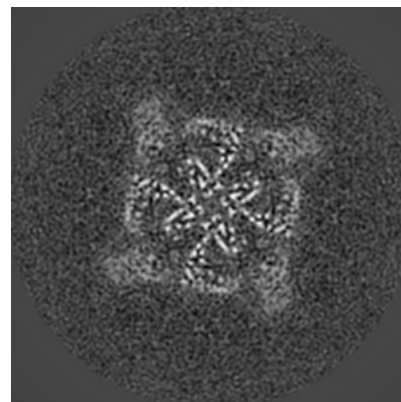
6.2.2 Raw map



X Index: 85



Y Index: 85

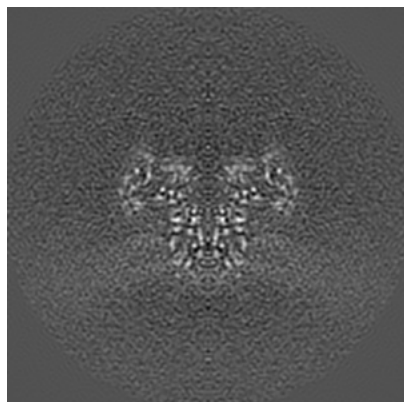


Z Index: 85

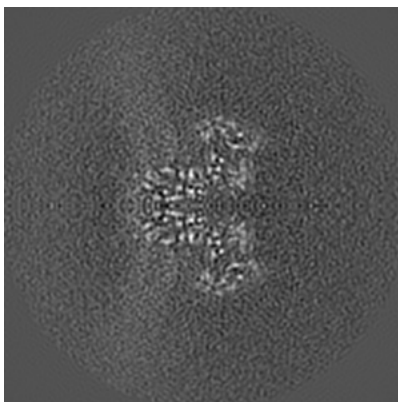
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

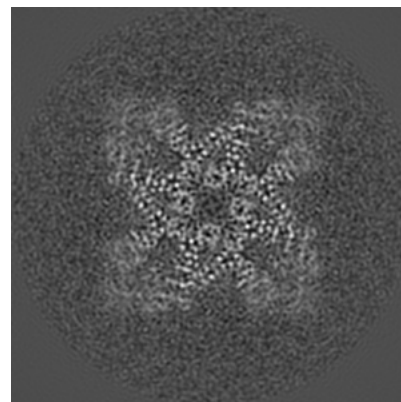
6.3.1 Primary map



X Index: 85

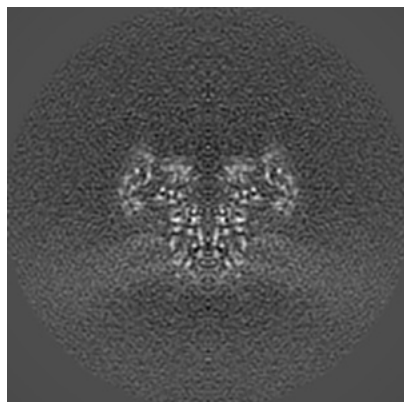


Y Index: 85

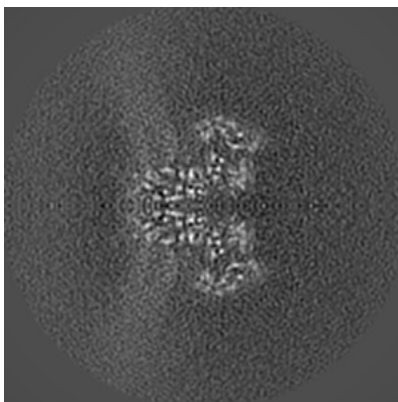


Z Index: 100

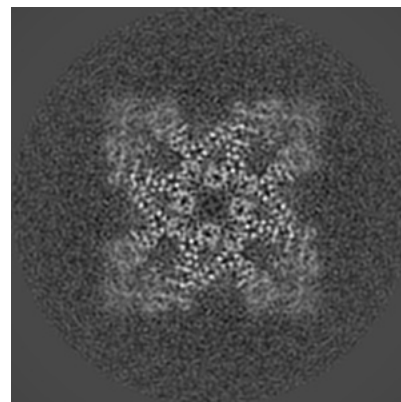
6.3.2 Raw map



X Index: 85



Y Index: 85

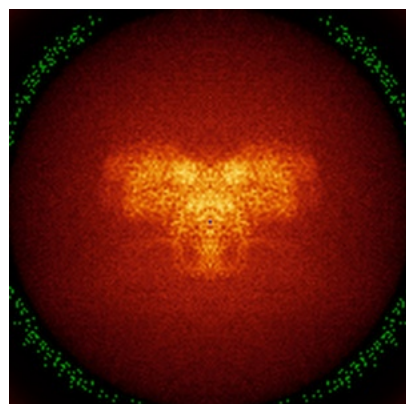


Z Index: 100

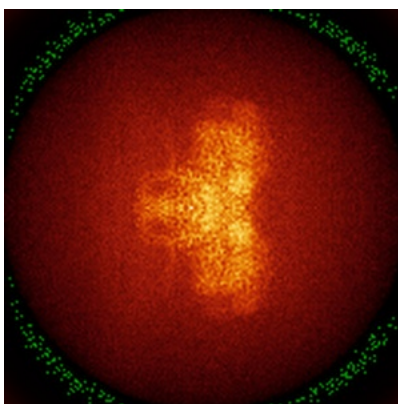
The images above show the largest variance slices of the map in three orthogonal directions.

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

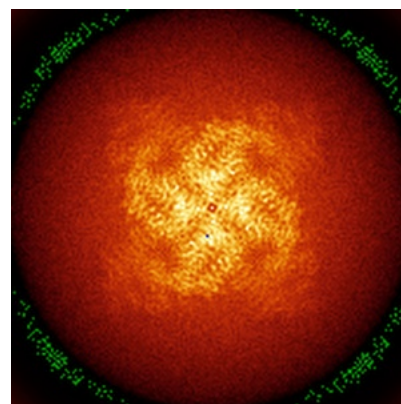
6.4.1 Primary map



X

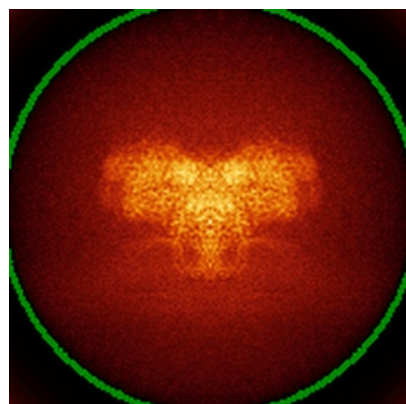


Y

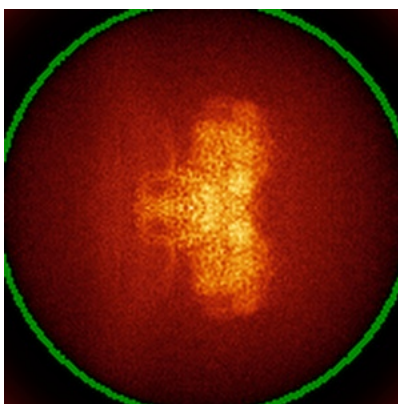


Z

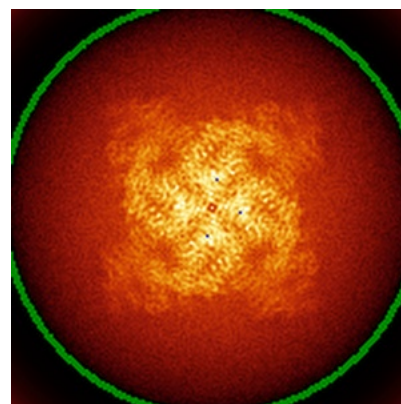
6.4.2 Raw map



X



Y

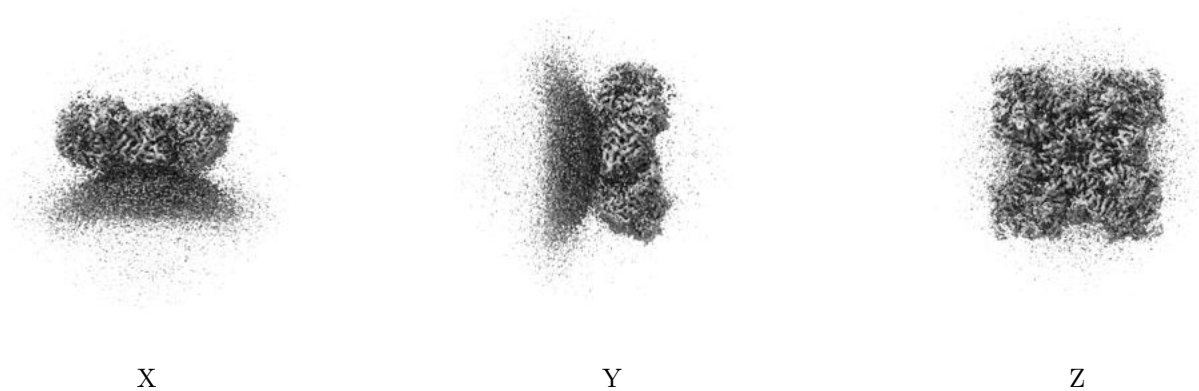


Z

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.

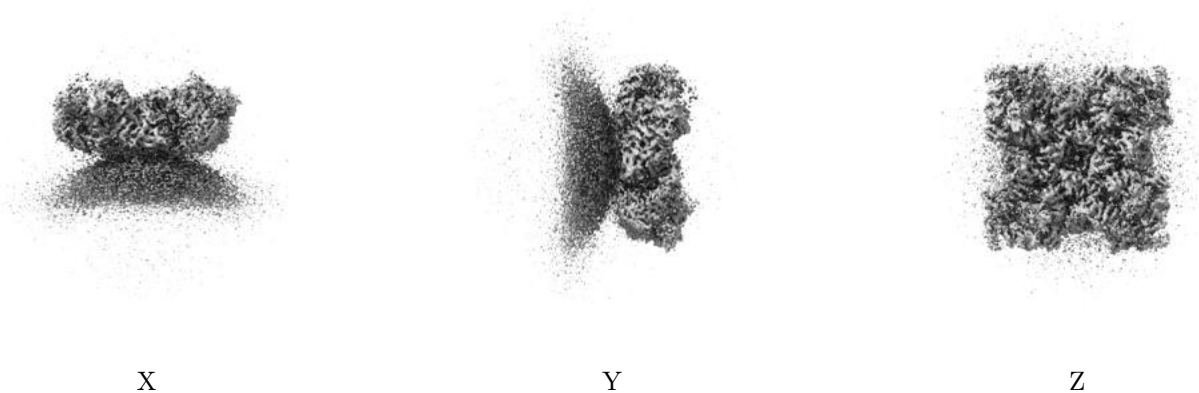
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.105. 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.

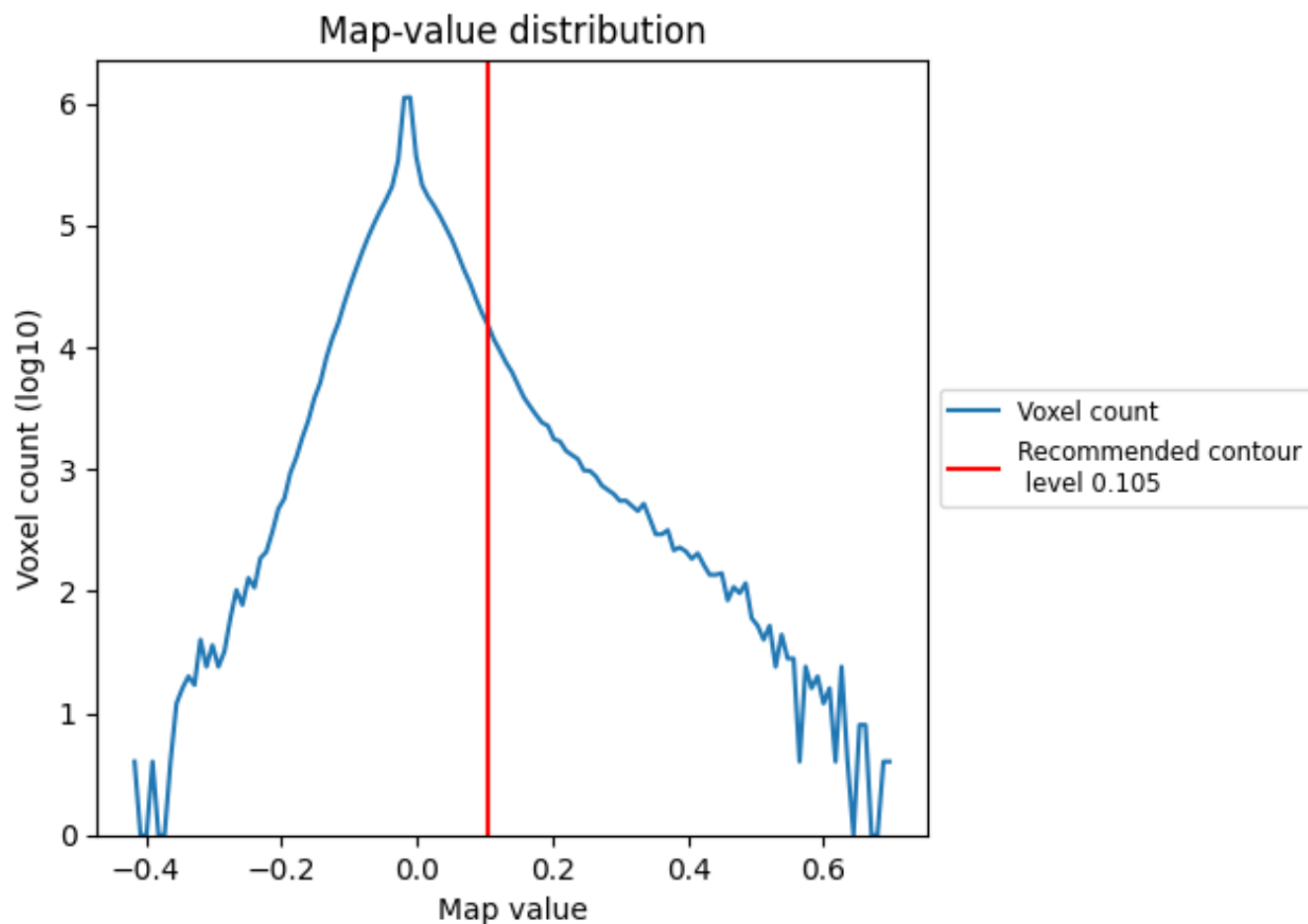
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

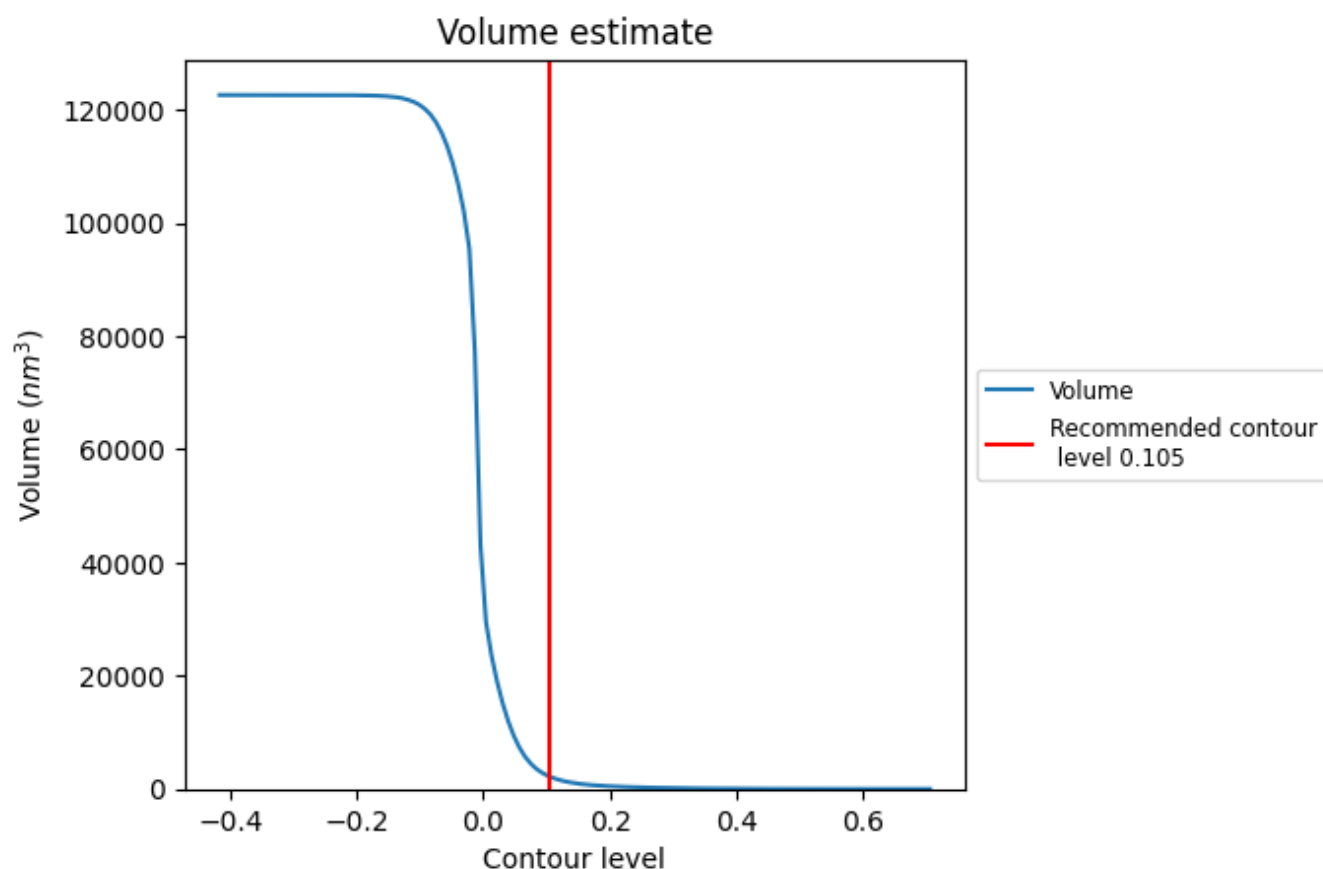
This section contains the results of statistical analysis of the map.

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.

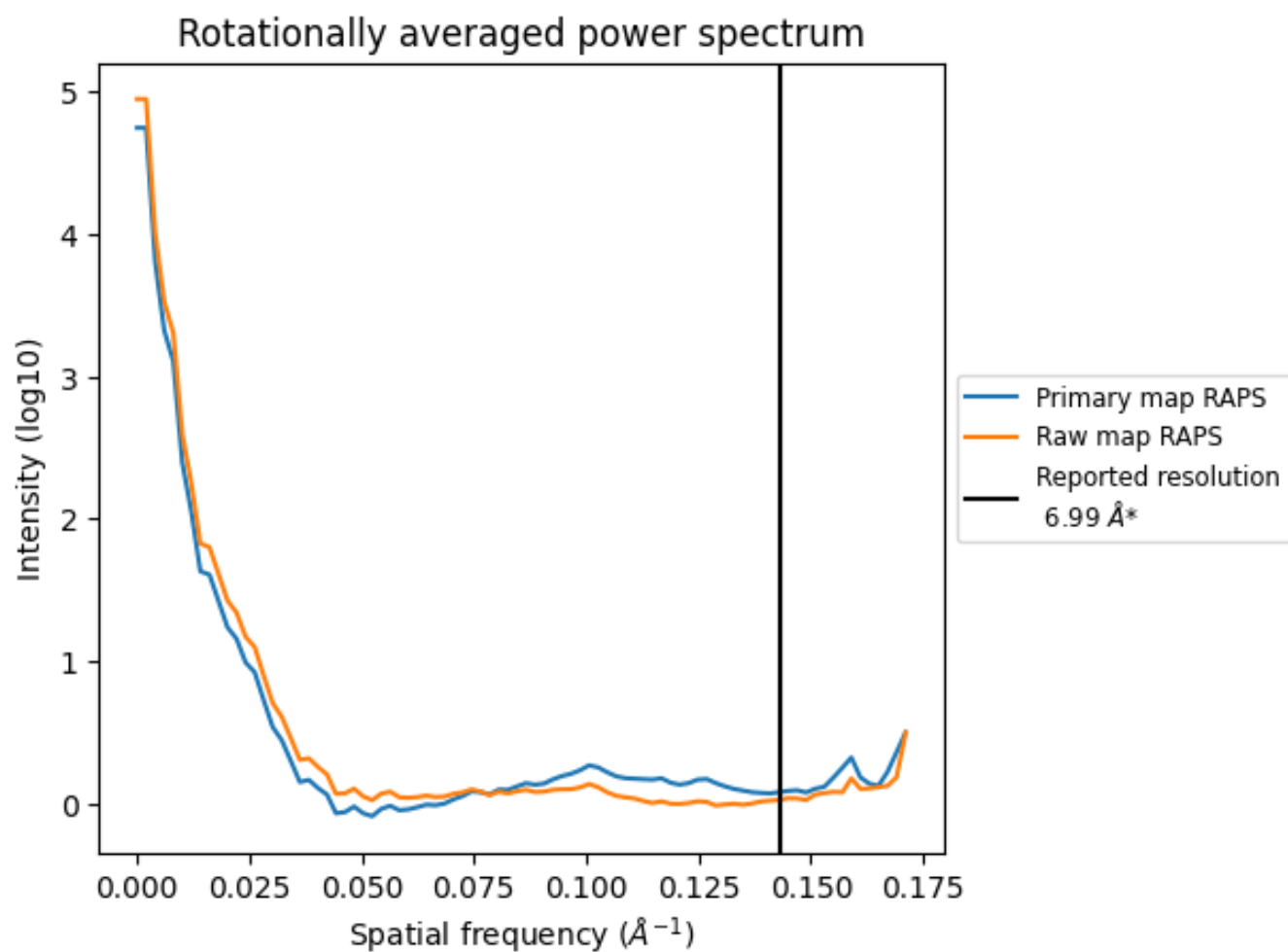
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2199 nm³; this corresponds to an approximate mass of 1987 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ

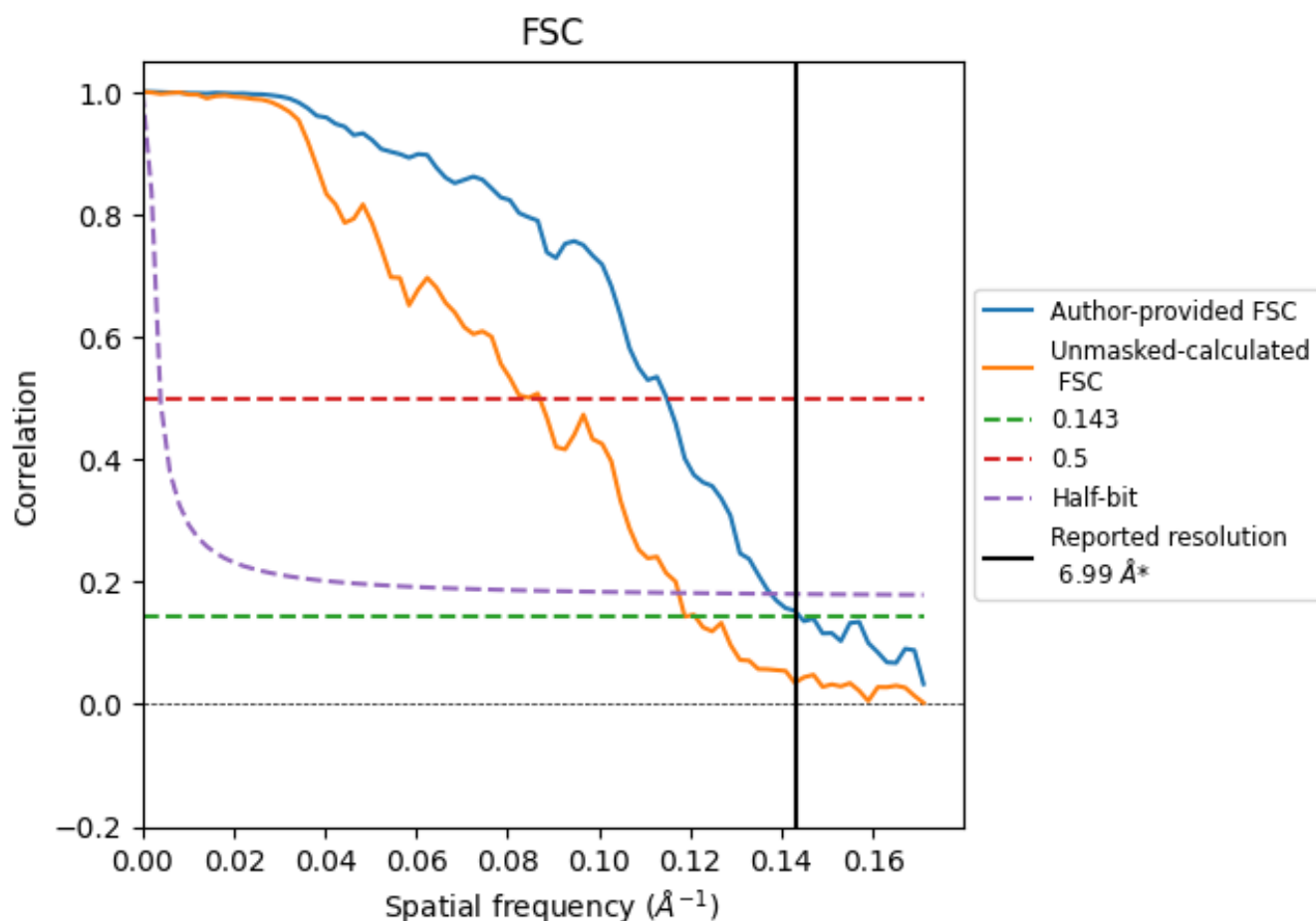


*Reported resolution corresponds to spatial frequency of 0.143 Å⁻¹

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 0.143 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

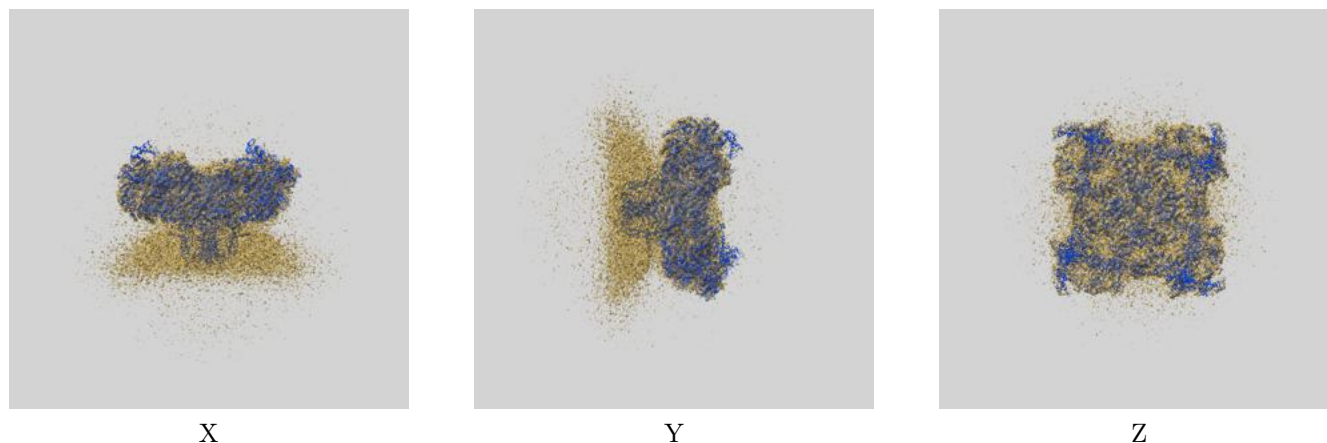
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	6.99	-	-
Author-provided FSC curve	6.94	8.70	7.26
Unmasked-calculated*	8.42	11.51	8.52

*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 8.42 differs from the reported value 6.99 by more than 10 %

9 Map-model fit [i](#)

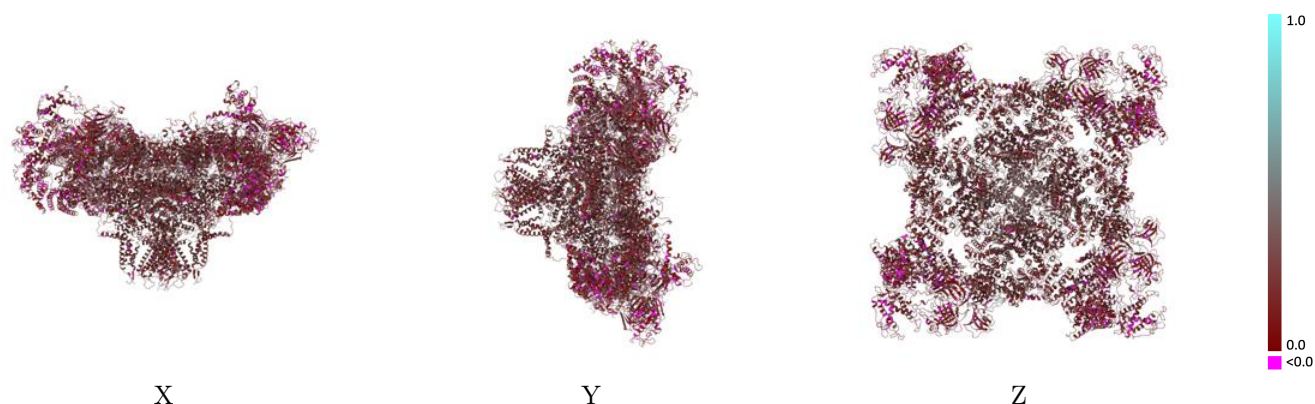
This section contains information regarding the fit between EMDB map EMD-54595 and PDB model 9S5E. Per-residue inclusion information can be found in [section 3](#) on [page 5](#).

9.1 Map-model overlay [i](#)



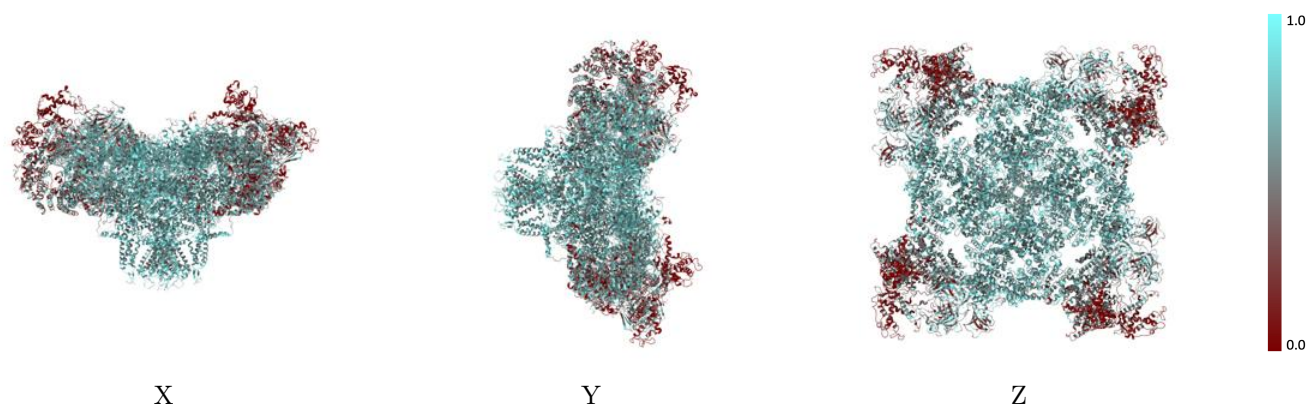
The images above show the 3D surface view of the map at the recommended contour level 0.105 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



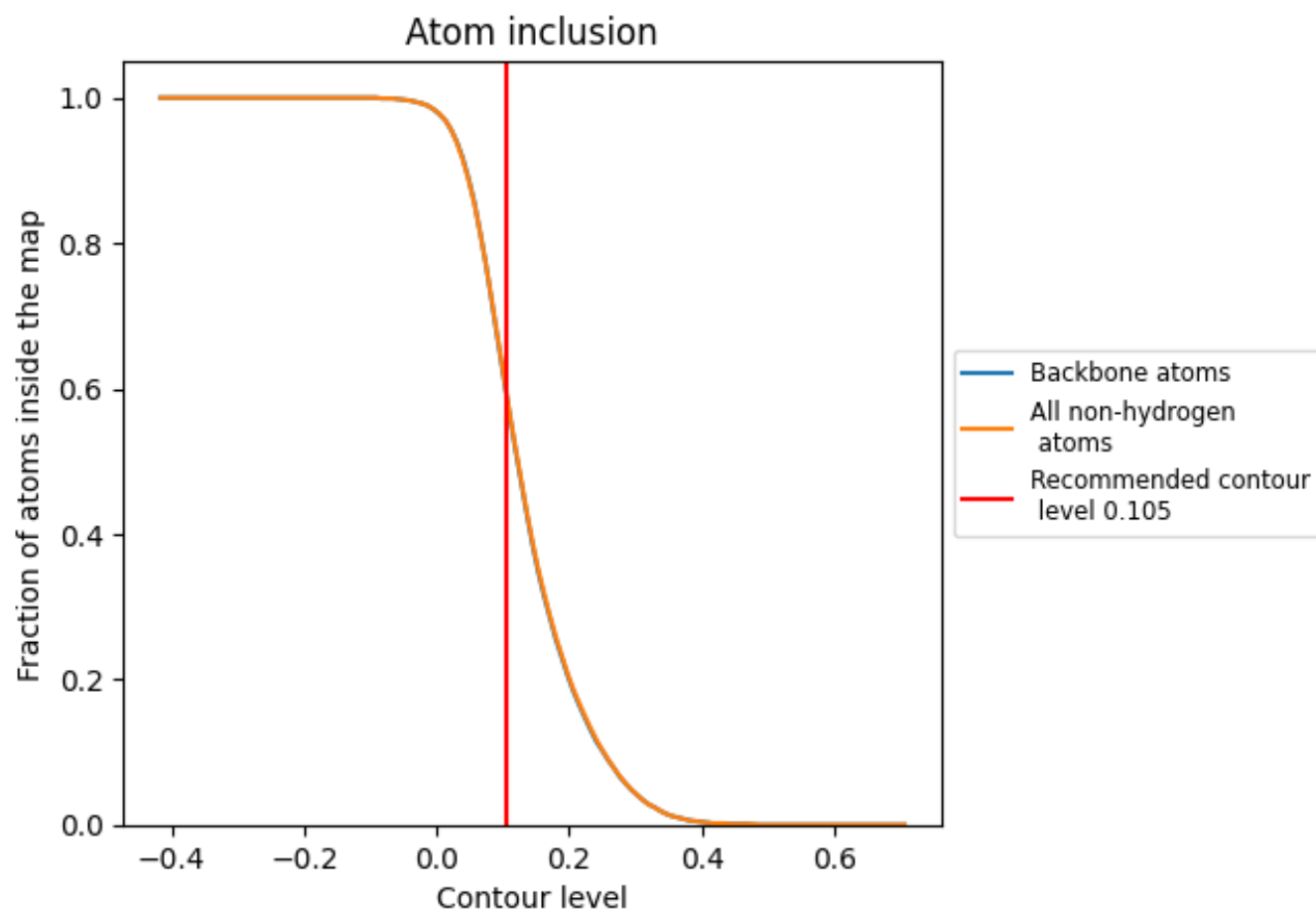
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.105).

9.4 Atom inclusion [i](#)



At the recommended contour level, 59% of all backbone atoms, 60% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.105) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5960	0.2300
A	0.6050	0.2310
B	0.6070	0.2300
C	0.6080	0.2300
D	0.6080	0.2310
E	0.4820	0.2010
F	0.4750	0.1990
G	0.4860	0.1990
H	0.4680	0.2020

1.0

0.0

<0.0