



wwPDB EM Validation Summary Report ⓘ

Dec 18, 2023 – 03:29 PM EST

PDB ID : 1O1D
EMDB ID : EMD-1001
Title : MOLECULAR MODELS OF AVERAGED RIGOR CROSSBRIDGES FROM TOMOGRAMS OF INSECT FLIGHT MUSCLE
Authors : Chen, L.F.; Winkler, H.; Reedy, M.K.; Reedy, M.C.; Taylor, K.A.
Deposited on : 2002-11-18
Resolution : 70.00 Å (reported)
Based on initial models : 1ATN, 2MYS

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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.dev70
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

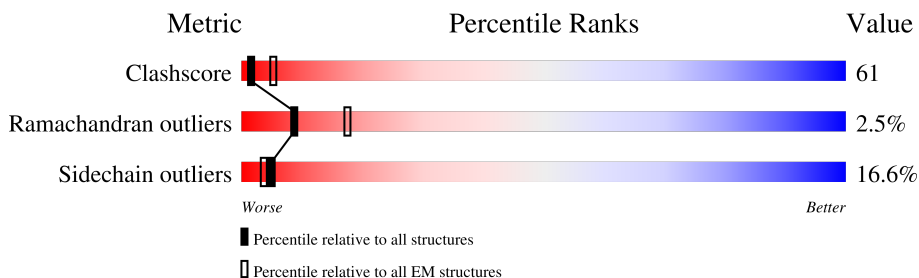
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 70.00 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 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	840	100% 24% 51% 21% .
1	D	840	100% 25% 51% 19% .
1	G	840	100% 25% 51% 20% .
1	J	840	100% 26% 50% 21% .
1	M	840	100% 24% 51% 21% .
1	P	840	100% 25% 50% 20% .
2	B	145	100% 65% 26% 6% .
2	E	145	100% 64% 27% 6% .

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Mol	Chain	Length	Quality of chain				
2	H	145	100%	63%	28%	6%	.
2	K	145	99%	63%	27%	6%	.
2	N	145	100%	66%	26%	6%	.
2	Q	145	100%	66%	26%	6%	.
3	C	147	100%	61%	37%		.
3	F	147	87%	60%	38%		.
3	I	147	100%	60%	38%		.
3	L	147	100%	60%	38%		.
3	O	147	100%	60%	37%		.
3	R	147	100%	59%	38%		.
4	0	375	99%	57%	32%	8%	..
4	1	375	97%	61%	31%	7%	..
4	2	375	99%	62%	30%	6%	..
4	3	375	99%	62%	30%	6%	..
4	4	375	99%	63%	29%	6%	..
4	5	375	99%	64%	27%	6%	..
4	7	375	99%	63%	28%	6%	..
4	8	375	99%	59%	30%	8%	..
4	9	375	99%	58%	31%	8%	..
4	V	375	99%	56%	33%	9%	..
4	W	375	99%	56%	33%	8%	..
4	X	375	92%	61%	29%	7%	..
4	Y	375	99%	62%	29%	7%	..
4	Z	375	97%	57%	32%	8%	..

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit crite-

ria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
1	MLY	A	505	-	-	X	-
1	MLY	A	553	-	-	X	-
1	MLY	A	764	-	-	X	-
1	MLY	A	768	-	-	X	-
1	MLY	A	782	-	-	X	-
1	MLY	A	839	-	-	X	-
1	MLY	D	553	-	-	X	-
1	MLY	D	764	-	-	X	-
1	MLY	D	768	-	-	X	-
1	MLY	D	782	-	-	X	-
1	MLY	G	553	-	-	X	-
1	MLY	G	764	-	-	X	-
1	MLY	G	768	-	-	X	-
1	MLY	G	84	-	-	X	-
1	MLY	J	505	-	-	X	-
1	MLY	J	553	-	-	X	-
1	MLY	J	839	-	-	X	-
1	MLY	J	84	-	-	X	-
1	MLY	M	35	-	-	X	-
1	MLY	M	505	-	-	X	-
1	MLY	M	553	-	-	X	-
1	MLY	M	782	-	-	X	-
1	MLY	M	839	-	-	X	-
1	MLY	M	84	-	-	X	-
1	MLY	P	764	-	-	X	-
1	MLY	P	839	-	-	X	-

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 94966 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 SKELETAL MUSCLE MYOSIN II.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	840	6797	4382	1135	1243	37	0	0
1	D	840	6797	4382	1135	1243	37	0	0
1	G	840	6797	4382	1135	1243	37	0	0
1	J	840	6797	4382	1135	1243	37	0	0
1	M	840	6797	4382	1135	1243	37	0	0
1	P	840	6797	4382	1135	1243	37	0	0

- Molecule 2 is a protein called SKELETAL MUSCLE MYOSIN II REGULATORY LIGHT CHAIN.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	145	1127	717	177	227	6	0	0
2	E	145	1127	717	177	227	6	0	0
2	H	145	1127	717	177	227	6	0	0
2	K	145	1127	717	177	227	6	0	0
2	N	145	1127	717	177	227	6	0	0
2	Q	145	1127	717	177	227	6	0	0

- Molecule 3 is a protein called SKELETAL MUSCLE MYOSIN II ESSENTIAL LIGHT CHAIN.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	147	Total	C	N	O	S	0	0
			1123	698	188	230	7		
3	F	147	Total	C	N	O	S	0	0
			1123	698	188	230	7		
3	I	147	Total	C	N	O	S	0	0
			1123	698	188	230	7		
3	L	147	Total	C	N	O	S	0	0
			1123	698	188	230	7		
3	O	147	Total	C	N	O	S	0	0
			1123	698	188	230	7		
3	R	147	Total	C	N	O	S	0	0
			1123	698	188	230	7		

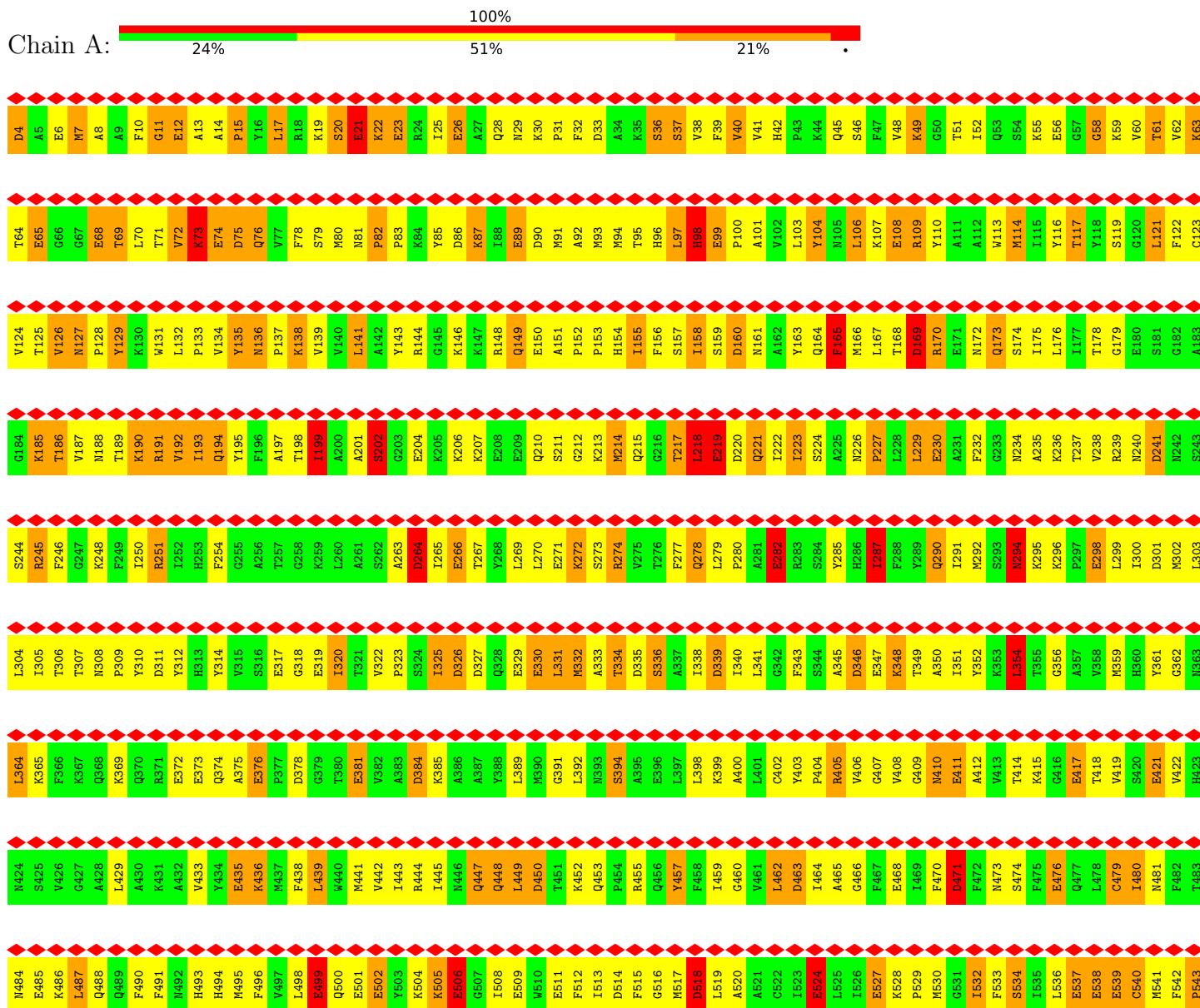
- Molecule 4 is a protein called SKELETAL MUSCLE ACTIN.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	0	372	Total	C	N	O	S	0	0
			2906	1836	489	561	20		
4	1	372	Total	C	N	O	S	0	0
			2906	1836	489	561	20		
4	2	372	Total	C	N	O	S	0	0
			2906	1836	489	561	20		
4	3	372	Total	C	N	O	S	0	0
			2906	1836	489	561	20		
4	4	372	Total	C	N	O	S	0	0
			2906	1836	489	561	20		
4	5	372	Total	C	N	O	S	0	0
			2906	1836	489	561	20		
4	7	372	Total	C	N	O	S	0	0
			2906	1836	489	561	20		
4	8	372	Total	C	N	O	S	0	0
			2906	1836	489	561	20		
4	9	372	Total	C	N	O	S	0	0
			2906	1836	489	561	20		
4	V	372	Total	C	N	O	S	0	0
			2906	1836	489	561	20		
4	W	372	Total	C	N	O	S	0	0
			2906	1836	489	561	20		
4	X	372	Total	C	N	O	S	0	0
			2906	1836	489	561	20		
4	Y	372	Total	C	N	O	S	0	0
			2906	1836	489	561	20		
4	Z	372	Total	C	N	O	S	0	0
			2906	1836	489	561	20		

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: SKELETAL MUSCLE MYOSIN II



M484	E485	K486	L487	Q488	F490	F491	M492	H493	H494	M495	F496	V497	L498	E499	Q500	E501	Y503	K504	K505	E506	G507	I508	E509	M510	E511	F512	I513	D514	F515	G516	M517	D518	L519	A520	C522	I523	E524	L525	L526	E527	K528	P529	M530	G531	L532	F533	S534	I535	L536	E537	E538	E539	C540	M541	F542	P543			
K544	E545	T546	D547	T548	S549	F550	K551	M552	K553	L554	Y555	D556	H558	L559	G560	K561	S562	M563	N564	F565	Q566	K567	P568	K569	P570	A571	K572	G573	K574	A575	E576	A577	H578	F579	S580	L581	V582	H583	Y584	G585	G586	T587	V588	D589	Y590	N591	L592	S593	F594	G595	L596	L597	K598	N599	K600	D601	P602	L603	
N604	E605	T606	V607	I608	G609	L610	Y611	Q612	K613	S614	S615	L616	K617	T618	L619	A620	L621	L622	F623	N624	T625	Y626	G627	G628	E629	A630	E631	G632	G633	G634	G635	K636	K637	G638	G639	K640	V641	K642	G643	S644	S645	F646	Q647	T648	V649	S650	A651	L652	F653	F654	R655	L656	L657	M658	K659	L660	M661	A662	N663
L664	R665	S666	T667	H668	P669	H670	F671	H672	R673	C674	I675	I676	P677	M678	E679	T680	K681	L682	P683	G684	A685	M686	E687	H688	E689	L689	V691	L692	H693	Q694	L695	R696	C697	M698	G699	V700	L701	E702	G703	I704	S705	I706	C707	R708	K709	G710	F711	L712	S713	R714	V715	L716	L717	A718	D719	F720	K721	Q722	R723
Y724	R725	V726	L727	M728	A729	S730	A731	I732	P733	E734	G735	Q736	F737	M738	D739	S740	K741	K742	A743	G844	E745	K746	L747	L748	G749	G750	G751	D752	V753	D754	H755	T756	Q757	Y758	A759	F760	G761	H762	T763	K764	V765	F766	F767	K768	A769	G770	L771	L772	G773	L774	L775	E776	F777	M778	R779	D780	K781	K782	L783
A784	E785	I786	I787	T788	A789	T790	Q791	R792	R793	C794	R795	G796	F797	L798	M799	R800	V801	E802	Y803	R804	A805	M806	V807	E808	R809	R810	E811	S812	I813	F814	C815	I816	Q817	Y818	N819	V820	R821	S822	F823	M824	N825	V826	K827	H828	N829	P830	M831	M832	K833	L834	F835	P836	K837	T838	K839	P840	L841	L842	K843

• Molecule 1: SKELETAL MUSCLE MYOSIN II



D4	A5	E6	M7	A8	A9	F10	G11	E12	A13	A14	P15	Y16	L17	R18	K19	S20	E21	K22	Y23	R24	I25	E26	A27	Q28	N29	K30	P31	F32	D33	A34	K35	S36	R37	V38	F39	V40	L41	H42	P43	K44	Q45	S46	F47	V48	G49	T51	A112	I113	S114	K115	L116	E117	G118	K119	P120	V121	F122	K123	
T64	E65	G66	G67	E68	T69	L70	T71	V72	K73	E74	D75	Q76	V77	F78	S79	M80	N81	P82	R83	K84	Y85	D86	K87	I88	E89	D90	M91	A92	P93	M94	T95	H96	L97	H98	E99	P100	A101	Y102	L103	Y104	N105	L106	K107	E108	R109	Y110	A111	A112	M113	M114	I115	Y116	E117	Y118	K119	G120	L121	F122	C123
V124	T125	V126	M127	A128	P129	K130	V131	L132	P133	V134	Y135	M136	P137	K138	V139	Y140	A141	A142	Y143	R144	G145	K146	K147	R148	Q149	E150	A151	P152	P153	H154	I155	F156	T157	I158	S159	D160	M161	A162	Y163	Q164	F165	M166	L167	L168	D169	R170	E171	M172	Q173	S174	I175	L176	L177	I178	G179	E180	L181	G182	A183
G184	K185	T186	V187	M188	T189	K190	R191	L192	I193	Q194	Y195	F196	A197	T198	I199	A200	A201	S202	G203	E204	K205	K206	K207	E208	E209	Q210	S211	G212	K213	M214	Q215	G216	L218	E219	D220	Q221	I222	I223	S224	A225	M226	P227	L228	L229	E230	A231	F232	G233	M234	A235	K236	L237	V238	R239	N240	D241	M242	S243	
S244	R245	F246	G247	K248	F249	L250	R251	L252	H253	F254	G255	A256	G258	K259	L260	A261	S262	A263	D264	I265	E266	T267	Y268	L269	L270	E271	K272	S273	K274	V275	T276	F277	Q278	L279	P280	E282	R283	S284	Y285	H286	F288	Y289	Q290	I291	M292	S293	K294	K295	K296	P297	E298	L299	T300	D301	M302	L303			
L304	T305	T306	T307	N308	P309	Y310	D311	Y312	H313	Y314	V315	S316	E317	G318	E319	L320	T321	V322	P323	S324	L325	D326	D327	Q328	E329	E330	L331	M332	A333	S334	D335	S336	L338	D339	L340	C342	F343	S344	A345	D346	E347	K348	A350	L351	Y352	M353	L354	T355	G356	V358	K359	H360	G362	N363					
L364	K365	F366	K367	Q368	K369	Q370	R371	E372	E373	Q374	A375	E376	P377	D378	Q379	T380	E381	Y382	A383	D384	A386	A387	Y388	L389	M390	G391	L392	N393	S394	A395	E396	L397	L398	K399	A400	C402	Y403	P404	R405	V406	G407	V408	A409	N410	E411	A412	V413	L414	K415	G416	E417	T418	V419	S420	E421	V422	H423		

N424	N425	S426	V426	G427	A428	A430	K431	A432	V433	Y434	E435	K436	M437	F438	L439	V440	M441	V442	I443	R444	I445	N446	Q447	Q448	L449	D450	K451	K452	Q453	P454	R455	Q456	Y457	F458	I459	G460	L462	D463	I464	A465	G466	F467	E468	I469	F470	D471	F472	N473	S474	F475	A476	Q477	L478	C479	I480	M481	F482	T483	
M484	E485	K486	L487	Q488	F489	F491	N492	H493	H494	M495	F496	V497	L498	E499	Q500	E501	E502	Y503	K504	K505	E506	G507	I508	E509	W510	E511	F512	I513	D514	F515	G516	M517	D518	L519	A520	C522	I523	E524	L525	I526	E527	K528	P529	M530	G531	L532	F533	S534	I535	L536	E537	E538	C539	C540	M541	F542	P543		
K544	A545	T546	D547	T548	S549	F550	K551	N552	K553	L554	Y555	D556	H557	H558	L559	G560	K561	S562	N563	N564	F565	Q566	P567	P568	E569	P570	A571	K572	G573	K574	A575	E576	A577	H578	F579	S580	L581	V582	H583	Y584	G585	G586	T587	V588	E589	Y590	N591	L592	F593	S594	W595	L596	E597	K598	N599	K600	D601	P602	L603
N604	E605	T606	V607	I608	G609	L610	H611	Q612	K613	S614	S615	V616	K617	T618	L619	A620	L621	L622	F623	A624	F625	Y626	G627	G628	E629	A630	E631	G632	G633	G634	G635	K636	K637	G638	G639	K640	K641	K642	G643	S644	S645	F646	T647	T648	V649	S650	A651	L652	F653	F654	E655	M656	L657	M658	K659	L660	M661	A662	N663
L664	R665	S666	T667	H668	P669	H670	F671	V672	K673	C674	I675	I676	P677	N678	E679	T680	K681	T682	P683	G684	A685	M686	E687	H688	E689	L690	V691	L692	G693	H694	L695	R696	C697	M698	G699	V700	L701	K702	G703	I704	R705	I706	C707	R708	V709	G710	F711	L712	S713	R714	V715	L716	A717	M718	D719	F720	K721	Q722	R723
Y724	R725	V726	L727	M728	A729	S730	A731	I732	P733	E734	G735	Q736	M737	D738	S740	K741	K742	A743	E744	E745	K746	L747	L748	G749	G750	G751	D752	F753	D754	H755	T756	Q757	Y758	A759	F760	G761	H762	T763	K764	V765	R766	F767	K768	A769	G770	L771	L772	G773	L774	L775	E776	E777	M778	R779	D780	L781	K782	L783	
A784	E785	I786	I787	T788	A789	T790	Q791	R792	R793	C794	R795	G796	F797	L798	M799	R800	E801	H803	R804	A805	M806	V807	E808	R809	R810	E811	S812	L813	F814	C815	L816	Q817	Y818	N819	V820	R821	S822	P823	M824	N825	V826	K827	H828	R829	P830	M831	M832	K833	L834	P835	F836	T837	L838	K839	P840	L841	L842	K843	

• Molecule 1: SKELETAL MUSCLE MYOSIN II



D4	A5	E6	M7	A8	A9	F10	G11	E12	A13	A14	P15	V16	L17	R18	K19	S20	E21	K22	E23	K24	L25	E26	A27	Q28	N29	K30	P31	F32	D33	A34	K35	S36	S37	V38	F39	V40	V41	H42	P43	K44	Q45	S46	F47	V48	V49	G50	T51	A52	Q53	L54	S55	K56	E57	G58	S59	G60	G61	L62	M63	S64	I65	L66	E67	V68	G69	G70	L71	M72	L73	V74	I75	L76	L77	T78	G79	E80	G81	L82	L83	F84	L85	M86	L87	V88	R89	M90	S91	A92	G93	E94	K95	L96	L97	L98	E99	P100	A101	H102	L103	Y104	N105	L106	L107	E108	R109	D110	R111	E112	M113	M114	L115	I116	T117	L118	S119	G120	L121	F122	C123
T64	E65	G66	G67	E68	T69	L70	T71	V72	K73	E74	D75	V76	V77	F78	S79	M80	N81	P82	P83	K84	Y85	D86	K87	I88	E89	D90	M91	A92	M93	M94	T95	H96	L97	H98	E99	P100	A101	H102	L103	Y104	N105	L106	L107	E108	R109	D110	R111	E112	M113	M114	L115	I116	T117	L118	S119	G120	L121	F122	C123																																																												
V124	T125	V126	M127	P128	Y129	K130	M131	L132	P133	V134	Y135	M136	P137	K138	V139	V140	L141	A142	Y143	L144	G145	K146	K147	L148	Q149	E150	A151	P152	P153	H154	I155	F156	S157	I158	S159	D160	M161	A162	Y163	Q164	M166	L167	T168	D169	R170	E171	M172	L173	Q173	Q173	S174	I175	L176	L177	T178	G179	E180	L181	G182	A183																																																											
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• Molecule 1: SKELETAL MUSCLE MYOSIN II



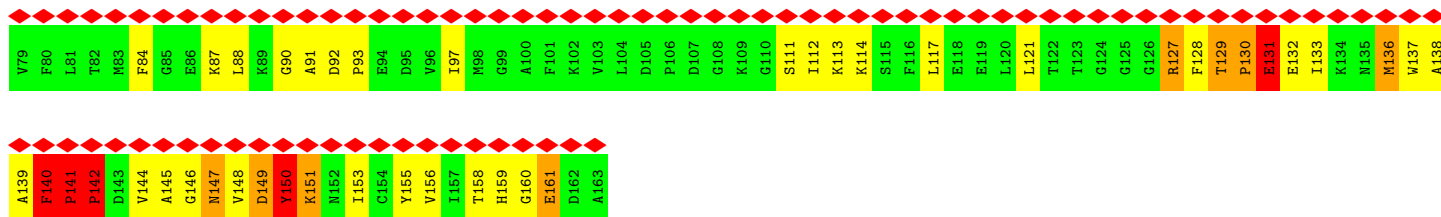
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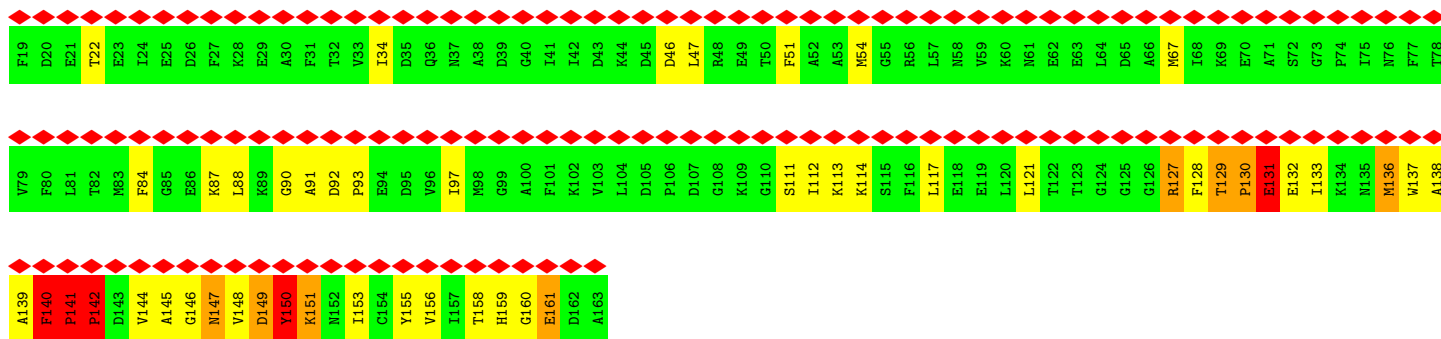
• Molecule 1: SKELETAL MUSCLE MYOSIN II



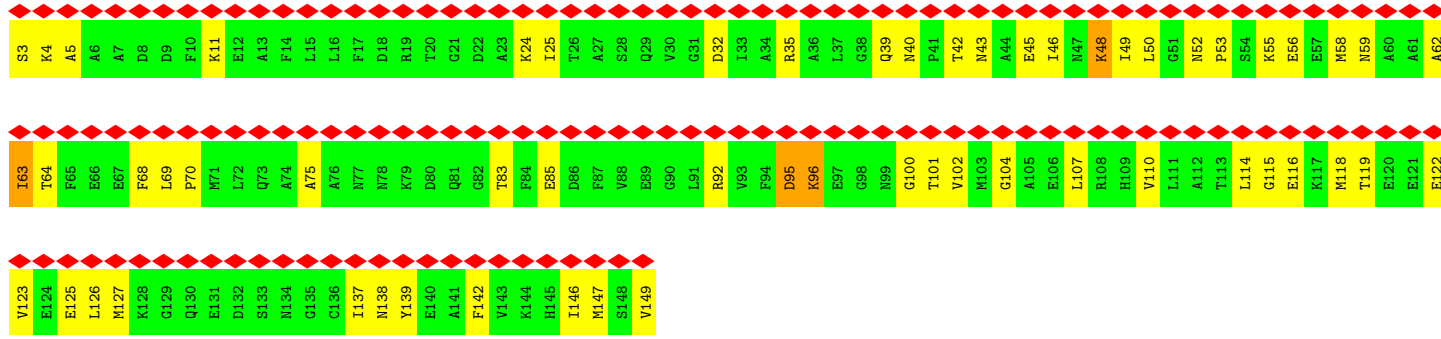
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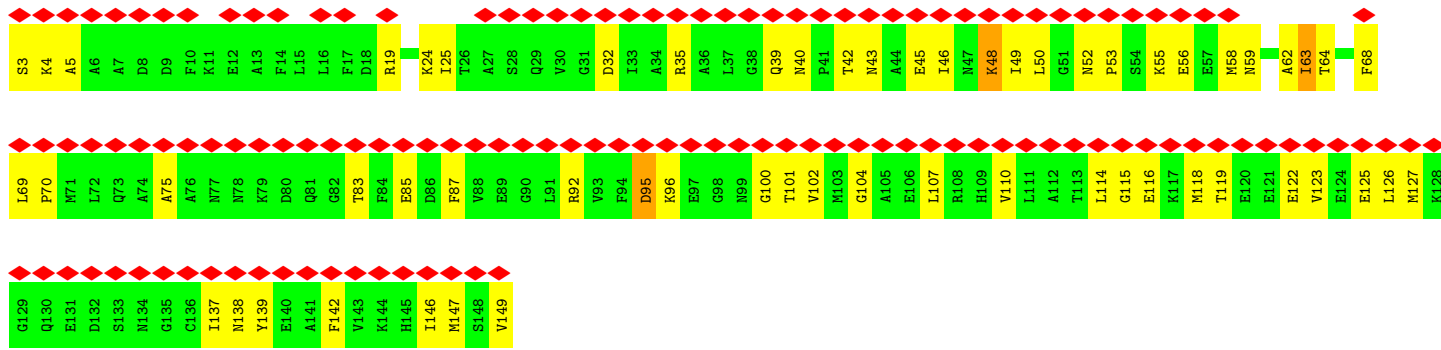
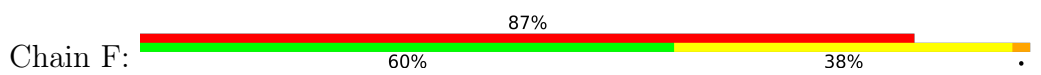
• Molecule 2: SKELETAL MUSCLE MYOSIN II REGULATORY LIGHT CHAIN



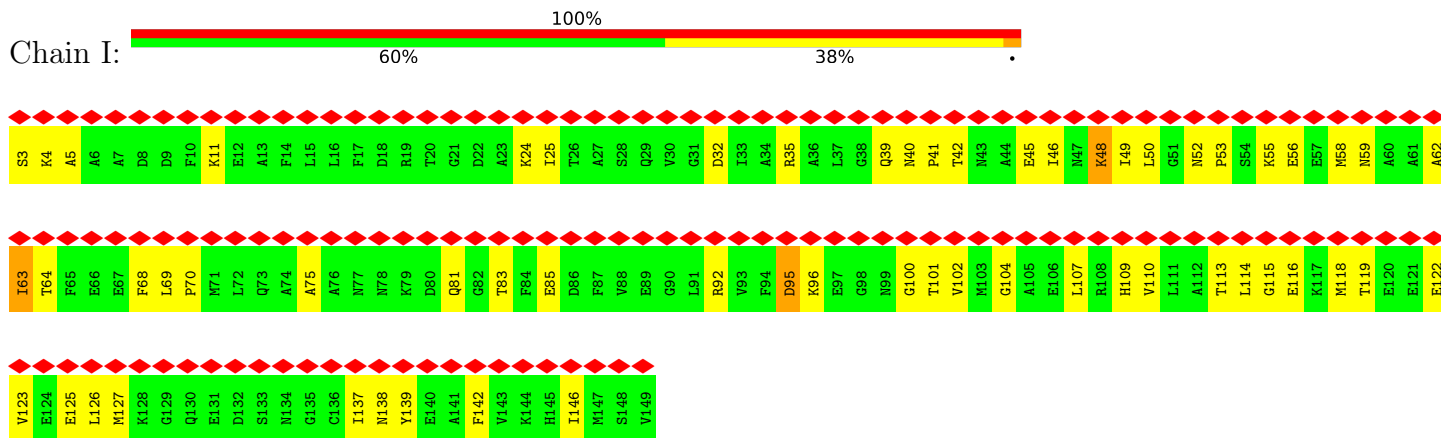
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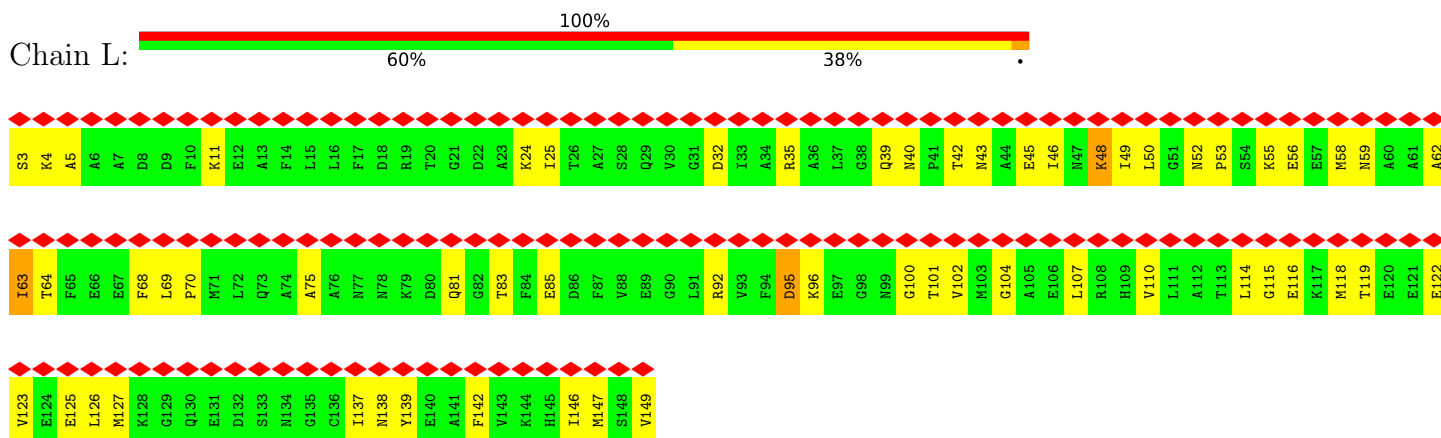
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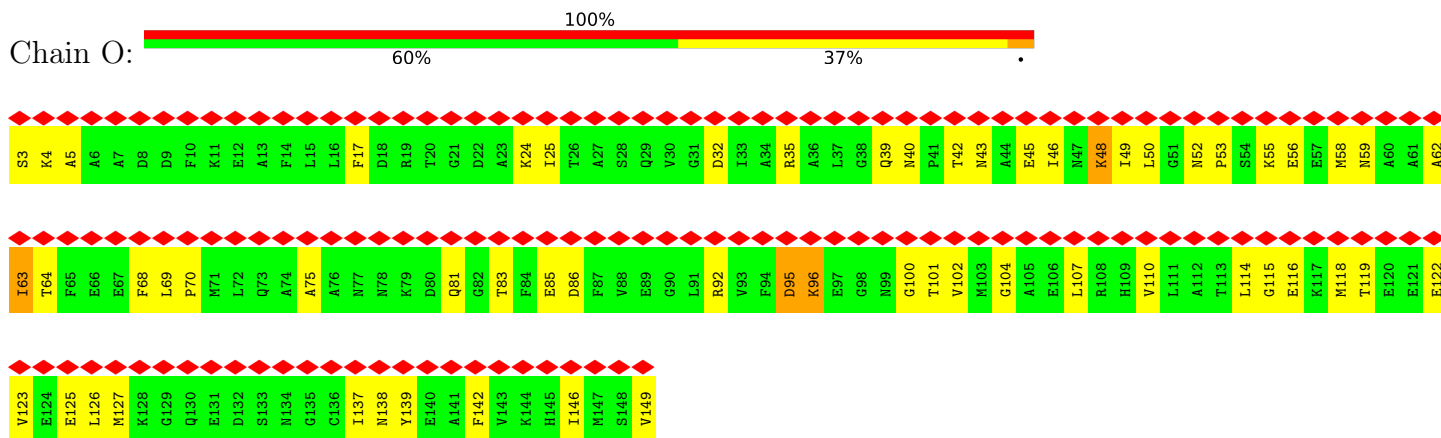
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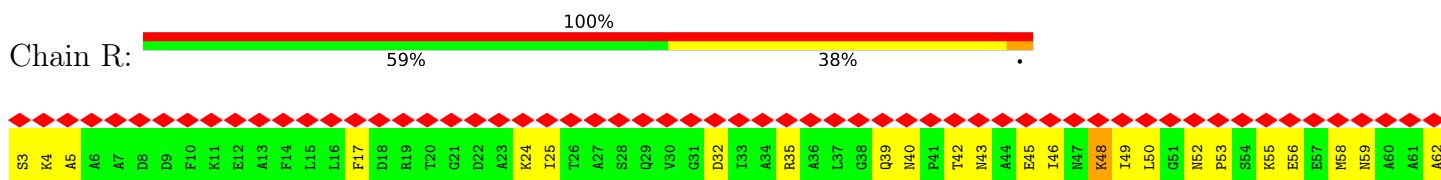
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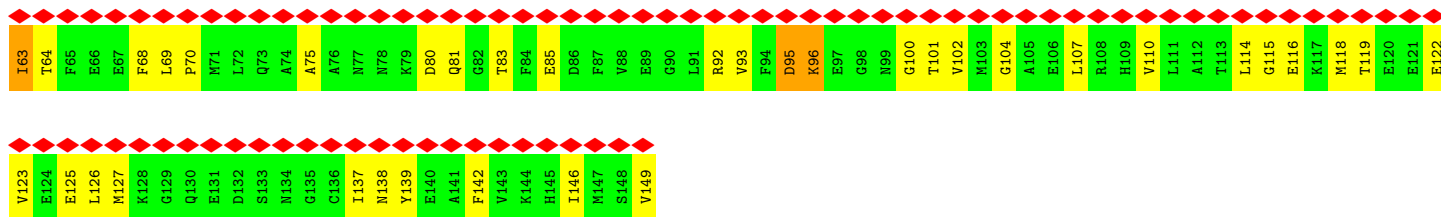


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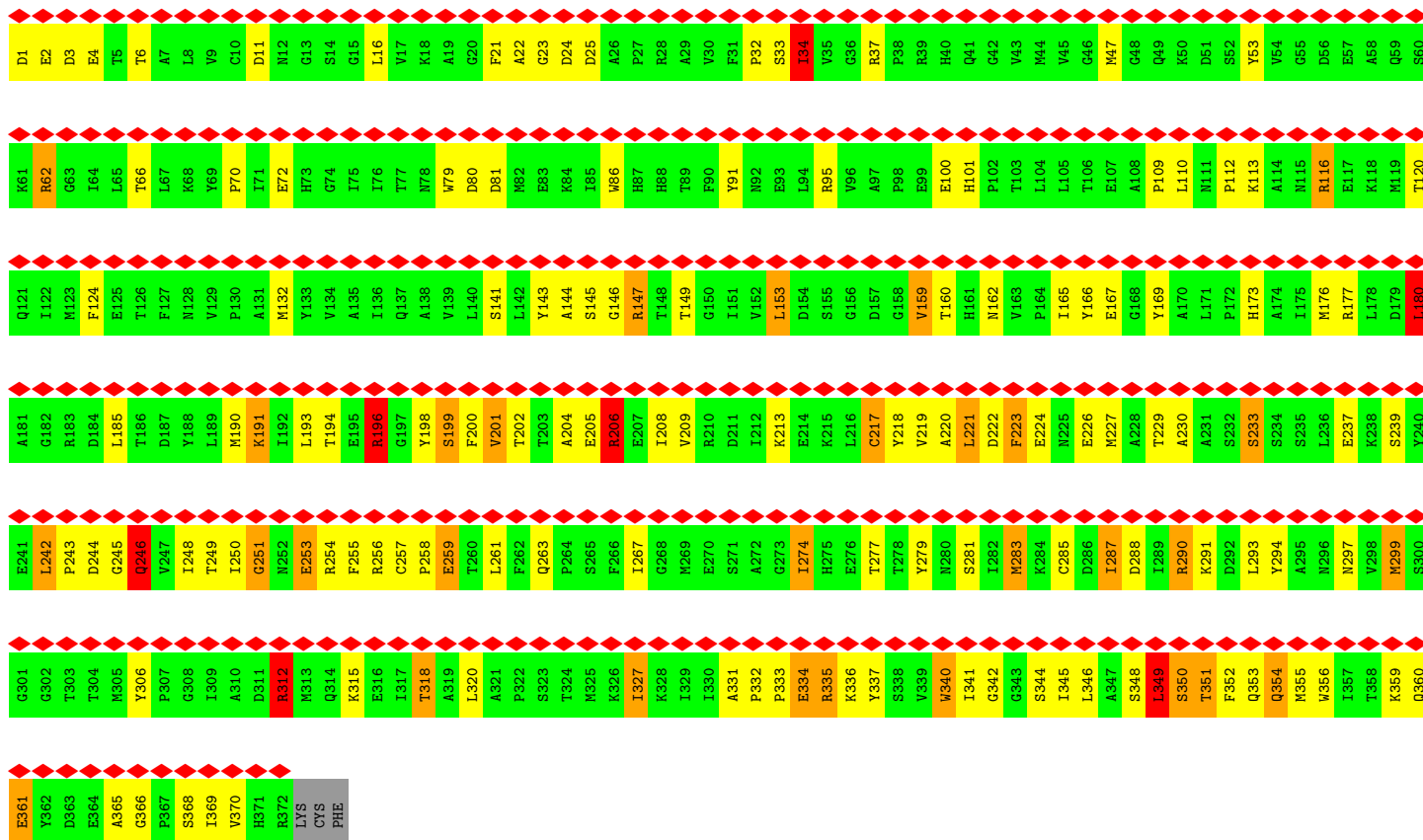


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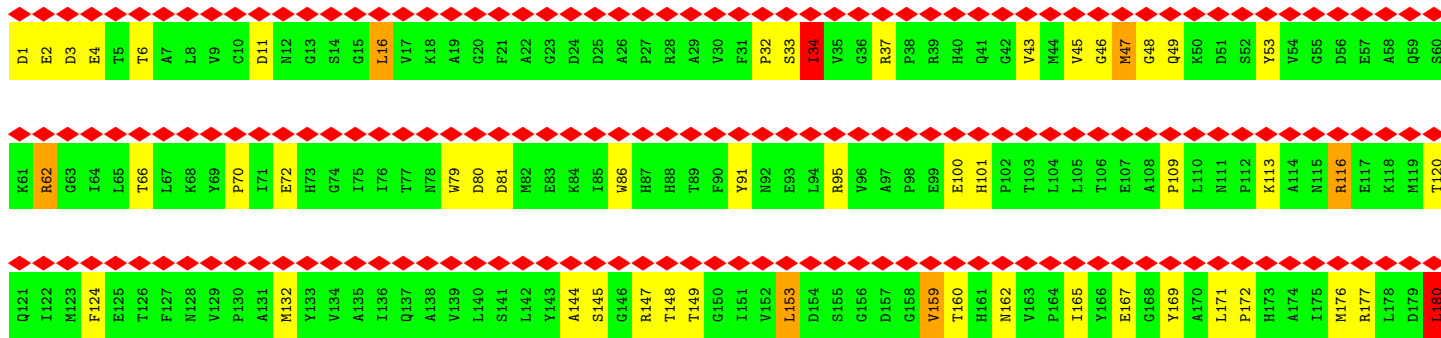


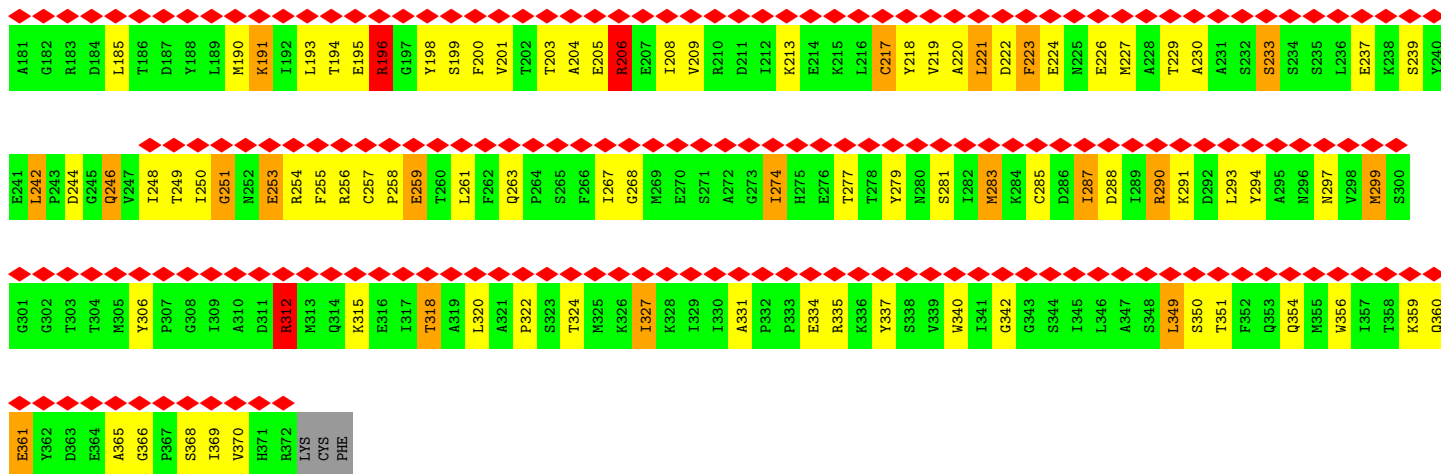


• Molecule 4: SKELETAL MUSCLE ACTIN

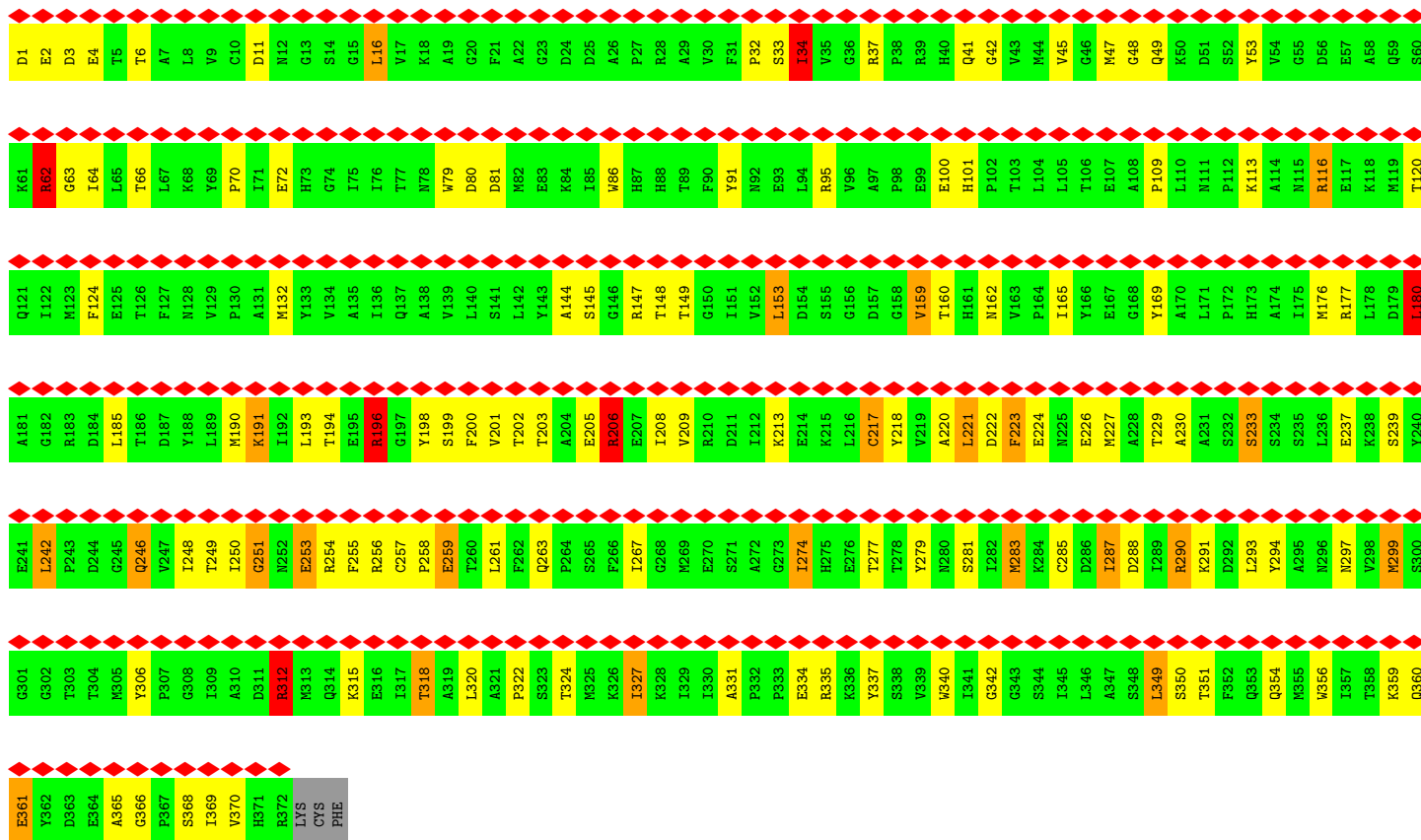


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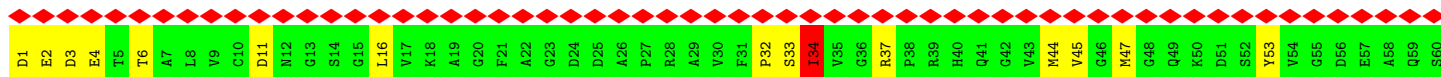


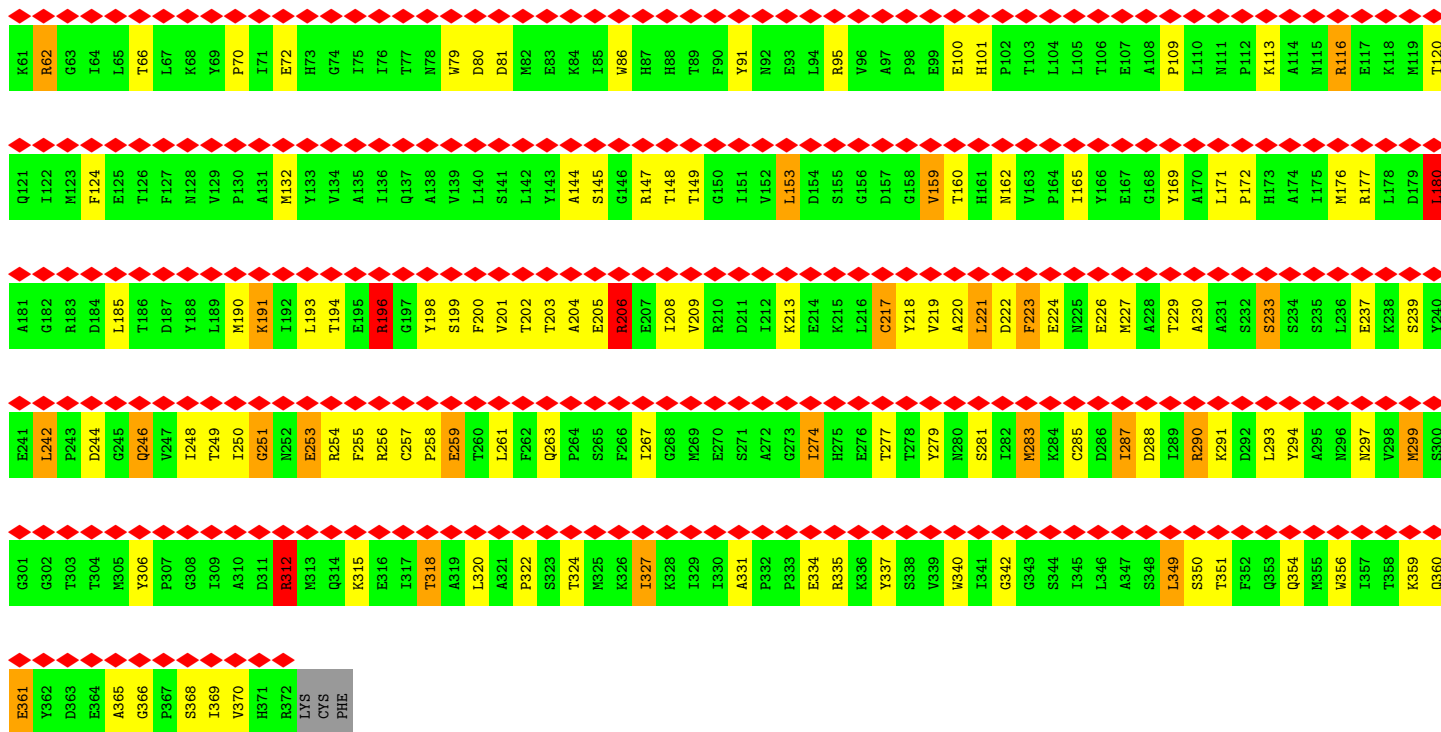


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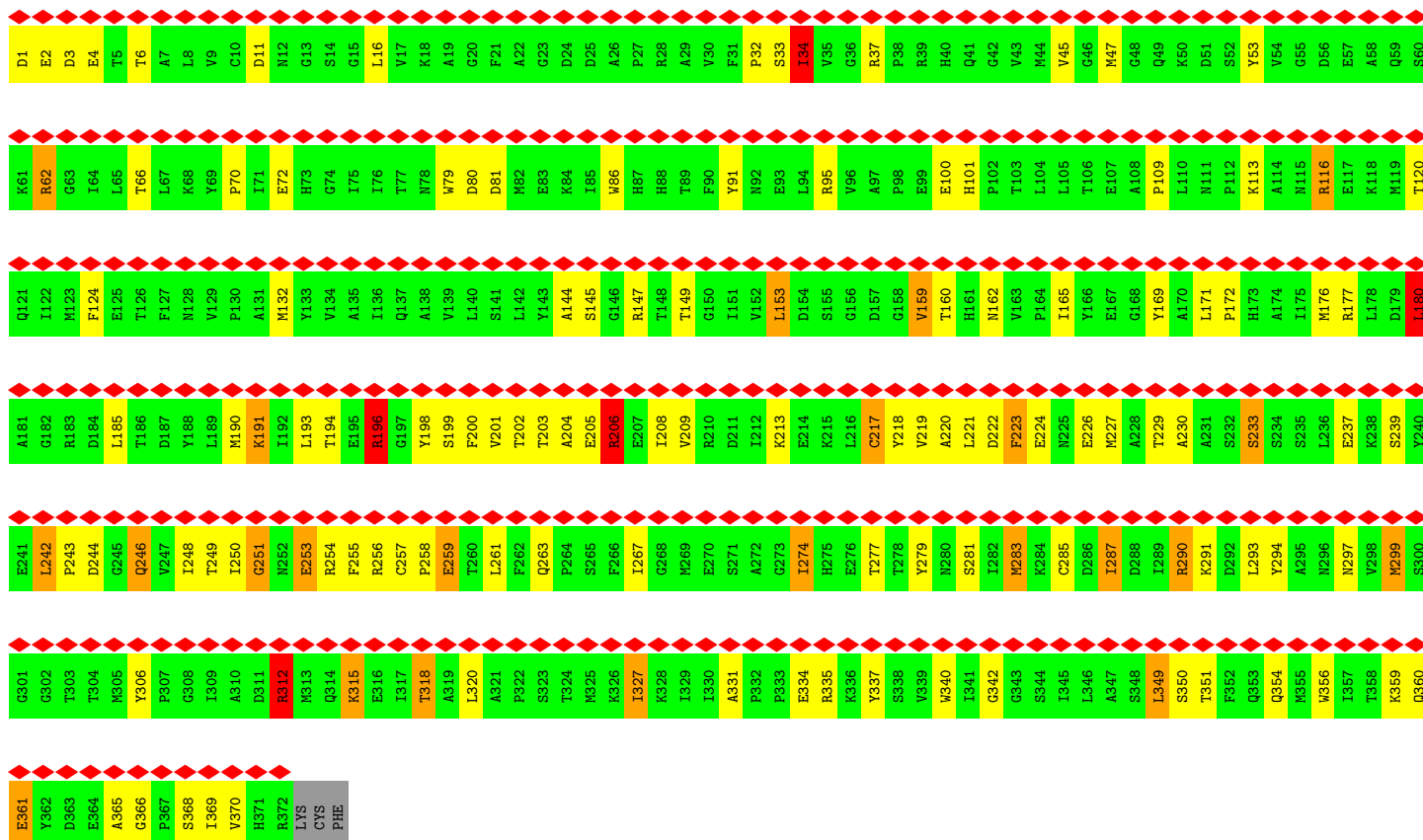


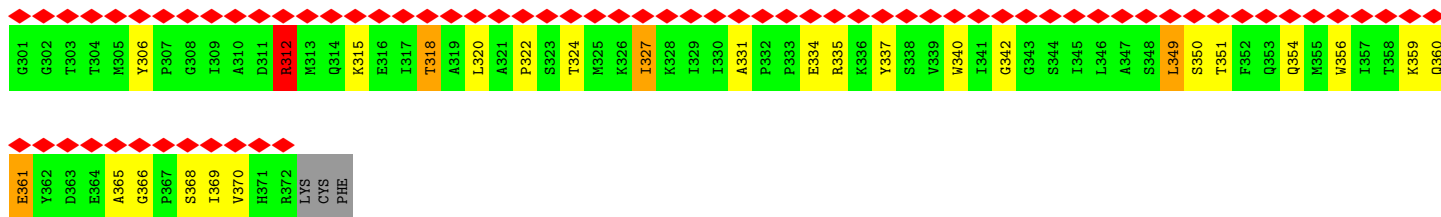
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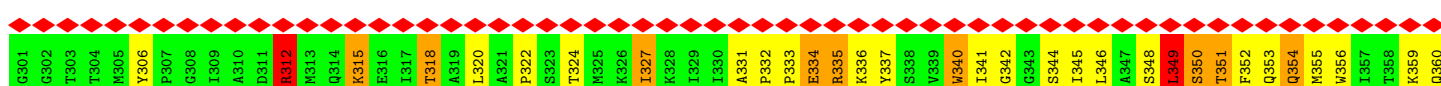
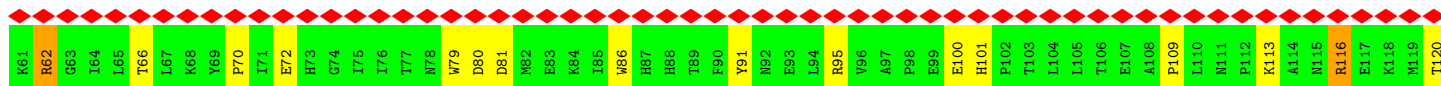
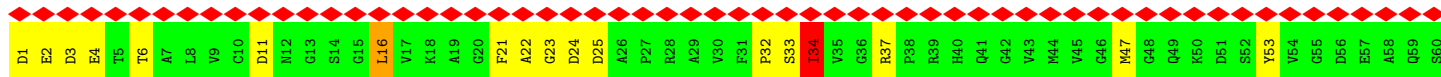


● Molecule 4: SKELETAL MUSCLE ACTIN

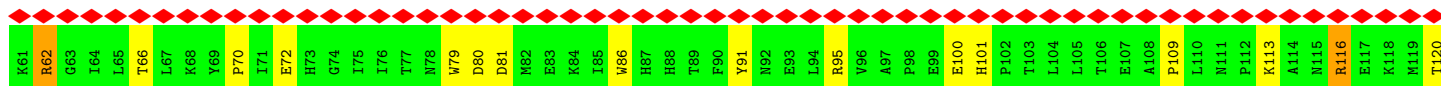
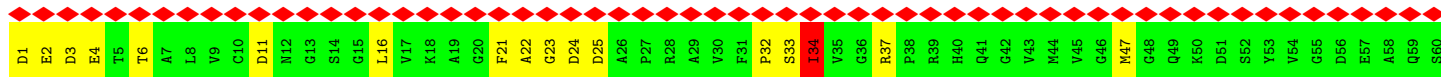


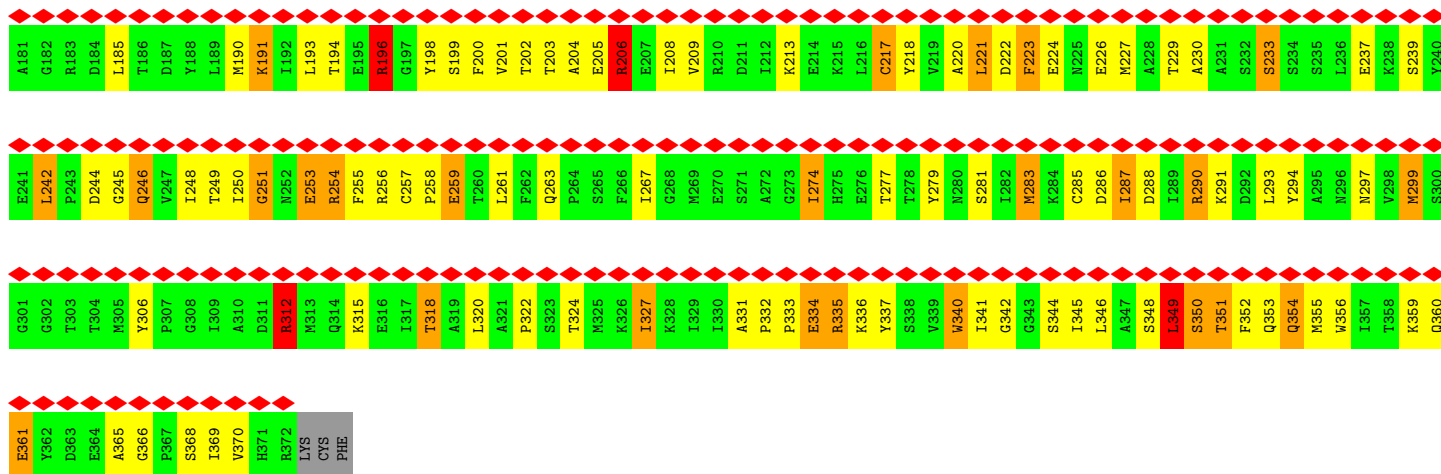


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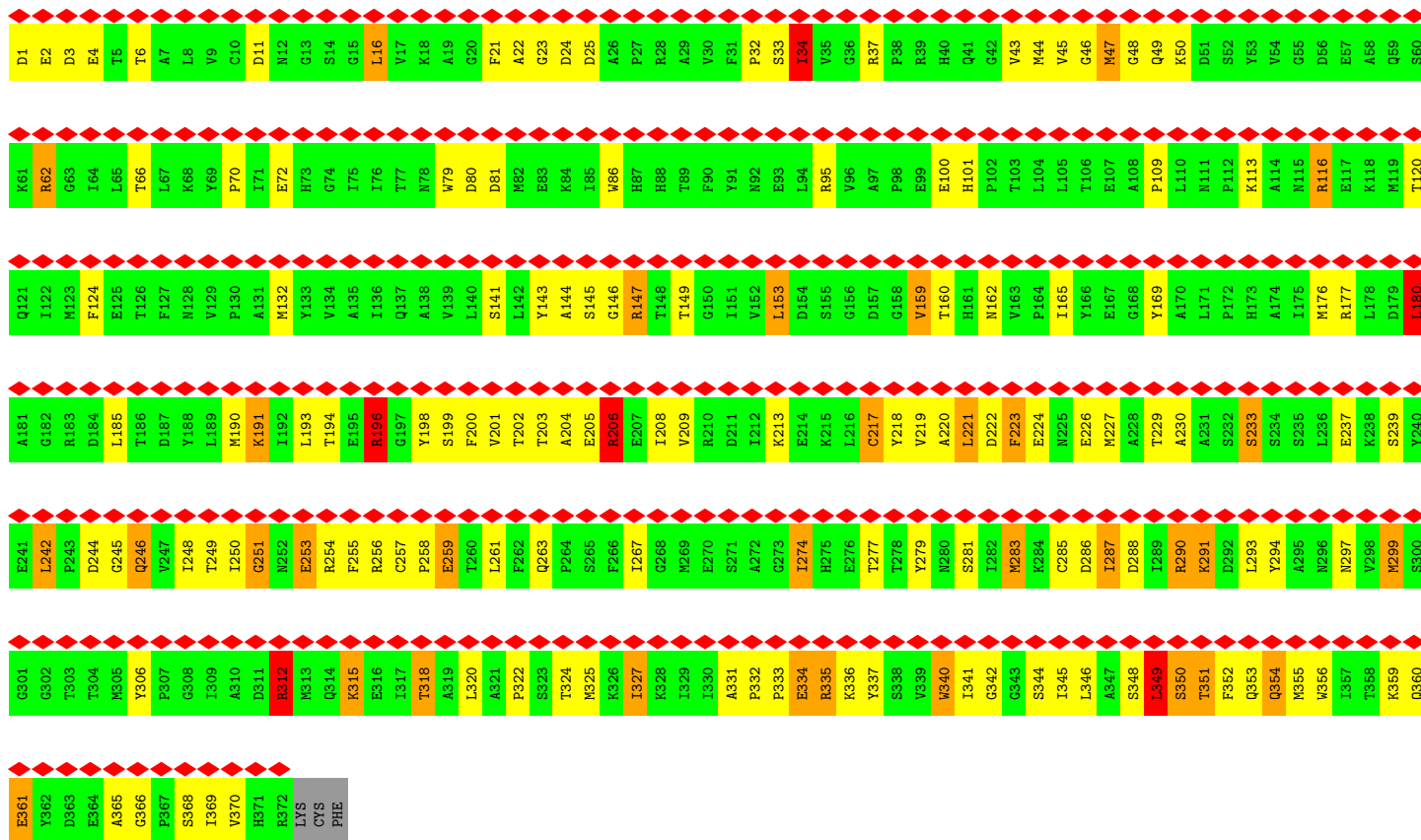


• Molecule 4: SKELETAL MUSCLE ACTIN

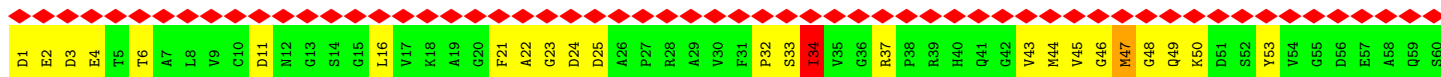


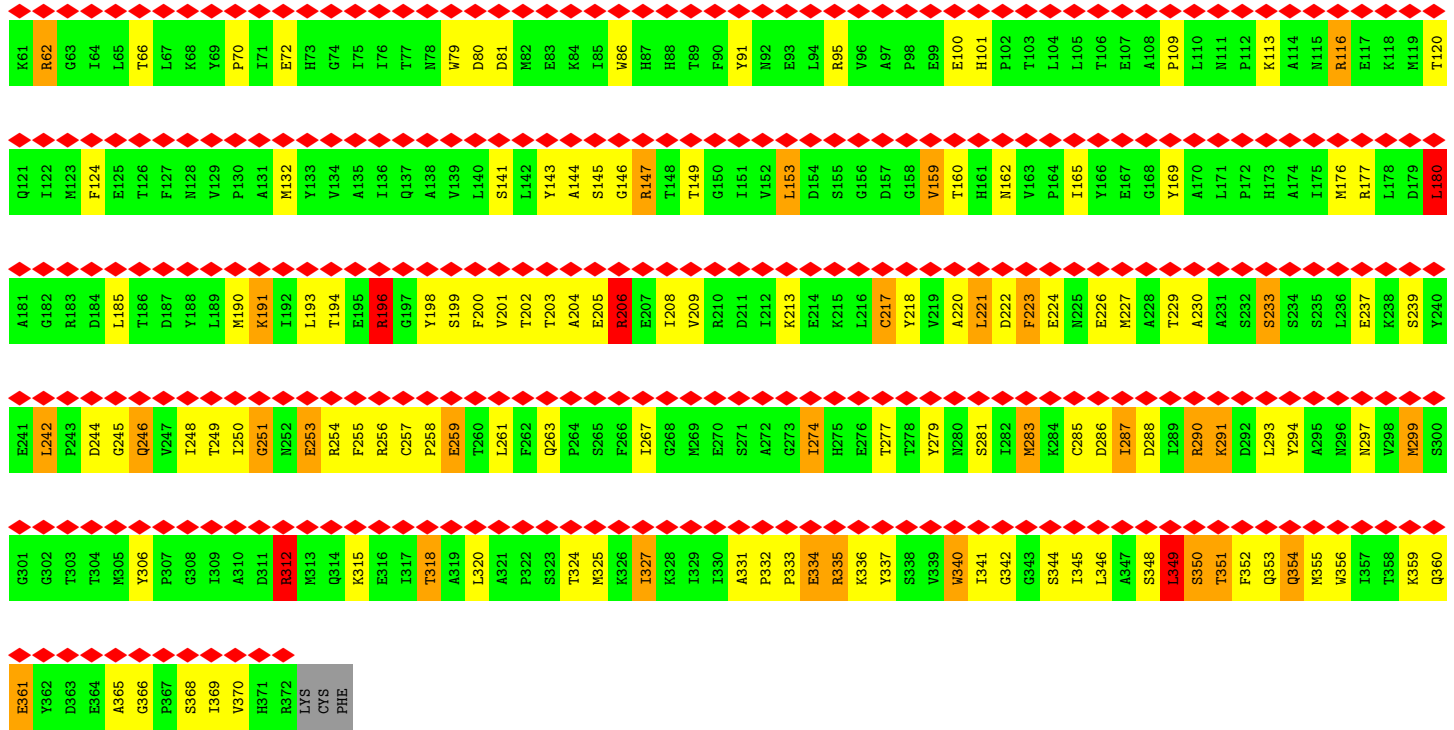


• Molecule 4: SKELETAL MUSCLE ACTIN

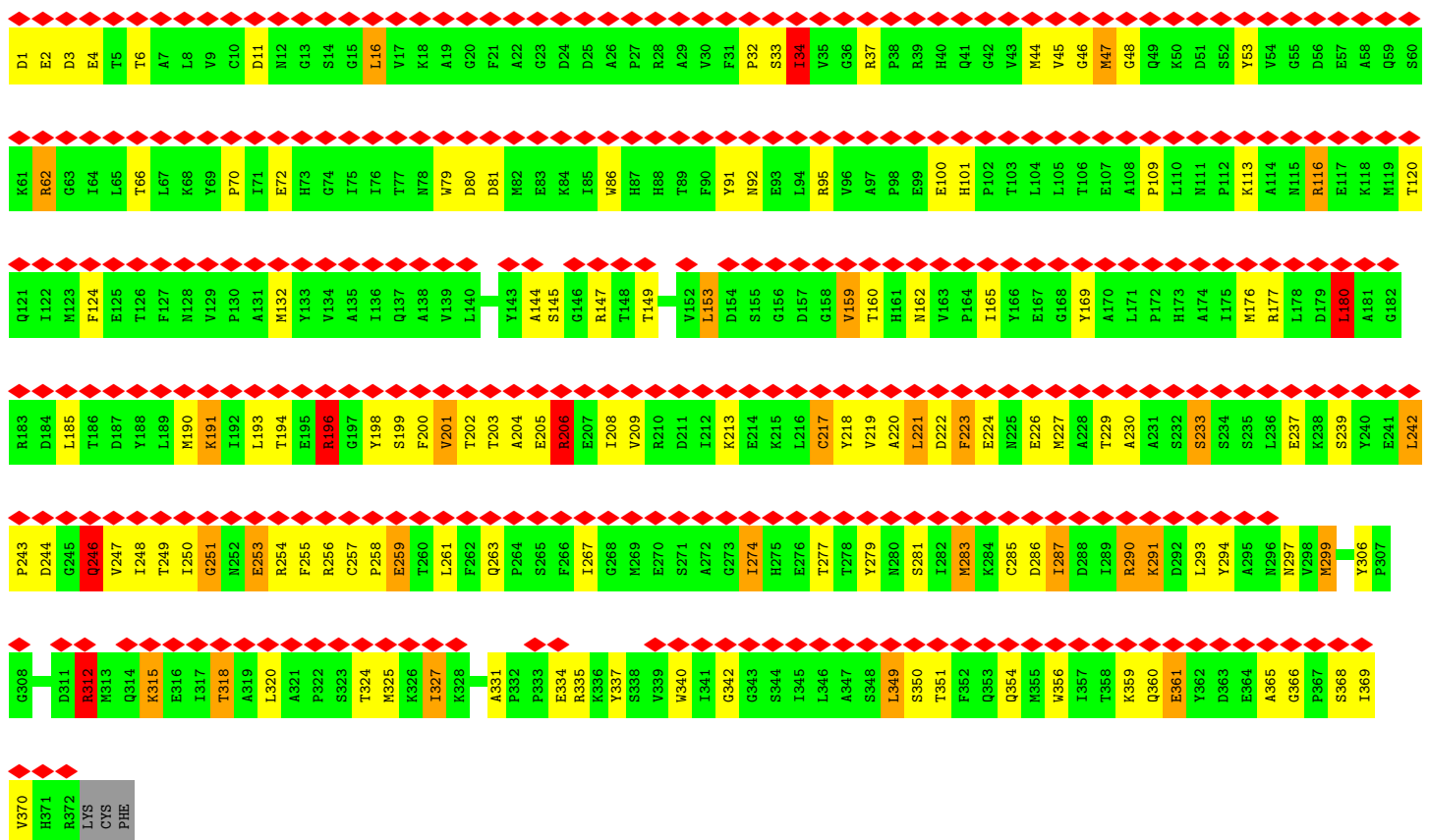
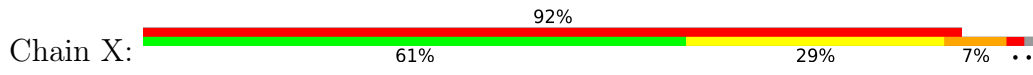


• Molecule 4: SKELETAL MUSCLE ACTIN





• Molecule 4: SKELETAL MUSCLE ACTIN



• Molecule 4: SKELETAL MUSCLE ACTIN



D1	E2	D3	E4	T5	T6	A7	L8	W9	C10	D11	N12	G13	S14	G15	L16	V17	K18	A19	G20	F21	A22	G23	D24	D25	A26	P27	R28	A29	V30	F31	P32	S33	I34	V35	G36	R37	P38	R39	H40	Q41	O42	V43	M44	V45	O46	M47	C48	Q49	K50	D51	S52	Y53	V54	G55	D56	E57	A58	Q59	S60
K61	R62	G63	I64	L65	T66	L67	K68	V69	P70	I71	E72	H73	G74	I75	I76	T77	M78	W79	D80	D81	M82	E83	K84	I85	W86	H87	H88	T89	F90	Y91	N92	E93	L94	R95	V96	A97	P98	E99	E100	H101	P102	T103	L104	L105	T106	E107	A108	P109	L110	M111	P112	K113	A114	M115	R116	E117	K118	M119	T120
Q121	I122	M123	F124	E125	T126	F127	M128	V129	P130	A131	M132	Y133	V134	A135	I136	Q137	W138	V139	L140	S141	L142	Y143	A144	S145	G146	R147	T148	T149	G150	I151	V152	L153	D154	S155	G156	D157	V158	T160	H161	M162	V163	P164	I165	I166	E167	G168	Y169	A170	L171	P172	H173	A174	I175	M176	R177	L178	D179	L180	
A181	G182	R183	D184	L185	T186	D187	Y188	L189	M190	K191	I192	L193	T194	E195	R196	G197	Y198	S199	F200	V201	T202	T203	A204	E205	R206	E207	I208	V209	R210	D211	I212	K213	E214	K215	L216	C217	Y218	V219	A220	L221	F223	E224	M225	E226	M227	A228	T229	A230	A231	S232	S233	S234	S235	L236	E237	K238	S239	Y240	
E241	L242	P243	D244	G245	Q246	V247	L248	T249	I250	G251	M252	E253	R254	F255	R256	C257	P258	E259	T260	L261	Q262	S263	P264	S265	R266	I267	G268	M269	E270	S271	A272	G273	I274	H275	E276	T277	V278	Y279	N280	S281	F283	M284	E285	D286	I287	D288	T289	R290	K291	D292	L293	Y294	A295	N296	N297	V298	M299	S300	
G301	G302	T303	T304	M305	Y306	P307	G308	I309	A310	D311	R312	M313	Q314	K315	E316	I317	T318	A319	L320	A321	P322	S323	T324	M325	K326	I327	K328	I329	I330	A331	P332	P333	E334	R335	K336	Y337	S338	V339	W340	I341	G342	G343	S344	I345	L346	A347	S348	L349	S350	T351	F352	Q353	Q354	M355	W356	I357	T358	K359	Q360
E361	Y362	D363	E364	A365	G366	P367	S368	I369	V370	H371	R372	LYS	CYS	PHE																																													

• Molecule 4: SKELETAL MUSCLE ACTIN



D1	E2	D3	E4	T5	T6	A7	L8	W9	C10	D11	N12	G13	S14	G15	L16	V17	K18	A19	G20	F21	A22	G23	D24	D25	A26	P27	R28	A29	V30	F31	P32	S33	I34	V35	G36	R37	P38	R39	H40	Q41	O42	V43	M44	V45	O46	M47	C48	Q49	K50	D51	S52	Y53	V54	G55	D56	E57	A58	Q59	S60
K61	R62	G63	I64	L65	T66	L67	K68	V69	P70	I71	E72	H73	G74	I75	I76	T77	M78	W79	D80	D81	M82	E83	K84	I85	W86	H87	H88	T89	F90	Y91	N92	E93	L94	R95	V96	A97	P98	E99	E100	H101	P102	T103	L104	L105	T106	E107	A108	P109	L110	M111	P112	K113	A114	M115	R116	E117	K118	M119	T120
Q121	I122	M123	F124	E125	T126	F127	M128	V129	P130	A131	M132	Y133	V134	A135	I136	Q137	W138	V139	L140	S141	L142	Y143	A144	S145	G146	R147	T148	T149	G150	I151	V152	L153	D154	S155	G156	D157	V158	Y159	T160	H161	M162	V163	P164	I165	I166	E167	G168	Y169	A170	L171	P172	H173	A174	I175	M176	R177	L178	D179	L180
A181	G182	R183	D184	L185	T186	D187	Y188	L189	M190	K191	I192	L193	T194	E195	R196	G197	Y198	S199	F200	V201	T202	T203	A204	E205	R206	E207	I208	V209	R210	D211	I212	K213	E214	K215	L216	C217	Y218	V219	A220	L221	F223	E224	M225	E226	M227	A228	T229	A230	A231	S232	S233	S234	S235	L236	E237	K238	S239	Y240	
E241	L242	P243	D244	G245	Q246	V247	L248	T249	I250	G251	M252	E253	R254	F255	R256	C257	P258	E259	T260	L261	Q262	S263	P264	S265	R266	I267	G268	M269	E270	S271	A272	G273	I274	H275	E276	T277	V278	Y279	N280	S281	F283	M284	E285	D286	I287	D288	T289	R290	K291	D292	L293	Y294	A295	N296	N297	V298	M299	S300	

4 Experimental information

Property	Value	Source
EM reconstruction method	TOMOGRAPHY	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of tilted images used	Not provided	
Resolution determination method	Not provided	
CTF correction method	Not provided	
Microscope	FEI/PHILIPS EM400	Depositor
Voltage (kV)	100	Depositor
Electron dose ($e^-/\text{\AA}^2$)	Not provided	
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	17000	Depositor
Image detector	KODAK SO-163 FILM	Depositor
Maximum voxel value	366.680	Depositor
Minimum voxel value	-417.992	Depositor
Average voxel value	1.860	Depositor
Voxel value standard deviation	47.792	Depositor
Recommended contour level	81.2	Depositor
Tomogram size (\AA)	9280, 9280, 464	wwPDB
Tomogram dimensions	600, 600, 30	wwPDB
Tomogram angles ($^\circ$)	90, 90, 90	wwPDB
Grid spacing (\AA)	15.4667, 15.4667, 15.4667	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: MLY

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	1.77	67/6448 (1.0%)	1.82	118/8729 (1.4%)
1	D	1.77	63/6448 (1.0%)	1.82	117/8729 (1.3%)
1	G	1.78	67/6449 (1.0%)	1.83	118/8732 (1.4%)
1	J	1.77	68/6449 (1.1%)	1.87	117/8732 (1.3%)
1	M	1.78	66/6446 (1.0%)	1.83	118/8723 (1.4%)
1	P	1.81	67/6448 (1.0%)	1.87	122/8729 (1.4%)
2	B	1.22	10/1148 (0.9%)	1.61	16/1548 (1.0%)
2	E	1.22	10/1148 (0.9%)	1.62	16/1548 (1.0%)
2	H	1.22	10/1148 (0.9%)	1.62	17/1548 (1.1%)
2	K	1.22	10/1148 (0.9%)	1.61	16/1548 (1.0%)
2	N	1.22	10/1148 (0.9%)	1.62	16/1548 (1.0%)
2	Q	1.22	10/1148 (0.9%)	1.61	16/1548 (1.0%)
3	C	0.80	0/1136	0.95	4/1525 (0.3%)
3	F	0.80	0/1136	0.95	4/1525 (0.3%)
3	I	0.80	0/1136	0.94	4/1525 (0.3%)
3	L	0.79	0/1136	0.94	4/1525 (0.3%)
3	O	0.79	0/1136	0.95	4/1525 (0.3%)
3	R	0.79	0/1136	0.94	4/1525 (0.3%)
4	0	0.89	1/2968 (0.0%)	1.64	51/4023 (1.3%)
4	1	0.89	1/2968 (0.0%)	1.64	51/4023 (1.3%)
4	2	0.89	1/2968 (0.0%)	1.64	52/4023 (1.3%)
4	3	0.89	2/2968 (0.1%)	1.64	51/4023 (1.3%)
4	4	0.89	2/2968 (0.1%)	1.64	51/4023 (1.3%)
4	5	0.89	2/2968 (0.1%)	1.64	51/4023 (1.3%)
4	7	0.89	1/2968 (0.0%)	1.64	51/4023 (1.3%)
4	8	0.89	2/2968 (0.1%)	1.64	52/4023 (1.3%)
4	9	0.89	2/2968 (0.1%)	1.64	51/4023 (1.3%)
4	V	0.89	2/2968 (0.1%)	1.64	50/4023 (1.2%)
4	W	0.89	2/2968 (0.1%)	1.64	51/4023 (1.3%)
4	X	0.89	2/2968 (0.1%)	1.64	52/4023 (1.3%)
4	Y	0.89	2/2968 (0.1%)	1.64	51/4023 (1.3%)
4	Z	0.89	2/2968 (0.1%)	1.64	52/4023 (1.3%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
All	All	1.35	482/93944 (0.5%)	1.69	1548/127134 (1.2%)

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	1	4
1	D	1	4
1	G	1	4
1	J	1	6
1	M	1	6
1	P	1	6
2	B	0	3
2	E	0	3
2	H	0	3
2	K	0	3
2	N	0	3
2	Q	0	3
3	C	0	2
3	F	0	2
3	I	0	2
3	L	0	2
3	O	0	2
3	R	0	2
4	0	0	1
4	1	0	1
4	2	0	1
4	3	0	1
4	4	0	1
4	5	0	1
4	7	0	1
4	8	0	1
4	9	0	1
4	V	0	1
4	W	0	1
4	X	0	1
4	Y	0	1
4	Z	0	1
All	All	6	74

The worst 5 of 482 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	J	649	VAL	CB-CG1	53.30	2.64	1.52
1	G	649	VAL	CB-CG1	53.30	2.64	1.52
1	M	649	VAL	CB-CG1	53.28	2.64	1.52
1	P	649	VAL	CB-CG1	53.28	2.64	1.52
1	D	649	VAL	CB-CG1	53.20	2.64	1.52

The worst 5 of 1548 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	G	637	LYS	O-C-N	-58.51	23.73	123.20
1	D	637	LYS	O-C-N	-58.48	23.79	123.20
1	M	637	LYS	O-C-N	-58.47	23.80	123.20
1	J	637	LYS	O-C-N	-58.45	23.83	123.20
1	P	637	LYS	O-C-N	-58.45	23.83	123.20

5 of 6 chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	A	648	THR	CB
1	D	648	THR	CB
1	G	648	THR	CB
1	J	648	THR	CB
1	M	648	THR	CB

5 of 74 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	623	PHE	Sidechain
1	A	637	LYS	Mainchain
1	A	649	VAL	Mainchain
1	A	98	HIS	Mainchain
2	B	22	THR	Mainchain

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	6797	0	6753	1539	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	D	6797	0	6758	1519	0
1	G	6797	0	6764	1543	0
1	J	6797	0	6760	1449	0
1	M	6797	0	6765	1504	0
1	P	6797	0	6765	1493	0
2	B	1127	0	1085	226	0
2	E	1127	0	1085	249	0
2	H	1127	0	1087	278	0
2	K	1127	0	1088	282	0
2	N	1127	0	1088	238	0
2	Q	1127	0	1088	253	0
3	C	1123	0	1083	200	0
3	F	1123	0	1084	200	0
3	I	1123	0	1082	211	0
3	L	1123	0	1083	168	0
3	O	1123	0	1084	152	0
3	R	1123	0	1084	238	0
4	0	2906	0	2855	404	0
4	1	2906	0	2858	259	0
4	2	2906	0	2864	173	0
4	3	2906	0	2863	178	0
4	4	2906	0	2865	96	0
4	5	2906	0	2865	97	0
4	7	2906	0	2866	79	0
4	8	2906	0	2857	317	0
4	9	2906	0	2855	341	0
4	V	2906	0	2851	390	0
4	W	2906	0	2851	382	0
4	X	2906	0	2862	208	0
4	Y	2906	0	2863	168	0
4	Z	2906	0	2853	410	0
All	All	94966	0	93614	11439	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 61.

The worst 5 of 11439 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:D:797:PHE:CE2	3:F:126:LEU:HD22	1.31	1.66
1:J:797:PHE:CE1	3:L:146:ILE:HG23	1.26	1.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:797:PHE:CZ	3:I:146:ILE:HD12	1.28	1.66
1:A:505:MLY:HB3	1:A:762:HIS:CD2	1.30	1.65
1:D:508:ILE:HD11	1:D:766:PHE:CE1	1.24	1.65

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	789/840 (94%)	651 (82%)	112 (14%)	26 (3%)	4	26
1	D	789/840 (94%)	651 (82%)	112 (14%)	26 (3%)	4	26
1	G	791/840 (94%)	652 (82%)	112 (14%)	27 (3%)	3	26
1	J	791/840 (94%)	652 (82%)	112 (14%)	27 (3%)	3	26
1	M	786/840 (94%)	649 (83%)	111 (14%)	26 (3%)	4	26
1	P	789/840 (94%)	649 (82%)	114 (14%)	26 (3%)	4	26
2	B	143/145 (99%)	126 (88%)	9 (6%)	8 (6%)	2	19
2	E	143/145 (99%)	126 (88%)	9 (6%)	8 (6%)	2	19
2	H	143/145 (99%)	126 (88%)	9 (6%)	8 (6%)	2	19
2	K	143/145 (99%)	126 (88%)	9 (6%)	8 (6%)	2	19
2	N	143/145 (99%)	126 (88%)	9 (6%)	8 (6%)	2	19
2	Q	143/145 (99%)	126 (88%)	9 (6%)	8 (6%)	2	19
3	C	143/147 (97%)	133 (93%)	10 (7%)	0	100	100
3	F	143/147 (97%)	133 (93%)	10 (7%)	0	100	100
3	I	143/147 (97%)	133 (93%)	10 (7%)	0	100	100
3	L	143/147 (97%)	133 (93%)	10 (7%)	0	100	100
3	O	143/147 (97%)	133 (93%)	10 (7%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	R	143/147 (97%)	133 (93%)	10 (7%)	0	100	100
4	0	370/375 (99%)	333 (90%)	31 (8%)	6 (2%)	9	44
4	1	370/375 (99%)	335 (90%)	29 (8%)	6 (2%)	9	44
4	2	370/375 (99%)	334 (90%)	30 (8%)	6 (2%)	9	44
4	3	370/375 (99%)	334 (90%)	30 (8%)	6 (2%)	9	44
4	4	370/375 (99%)	334 (90%)	30 (8%)	6 (2%)	9	44
4	5	370/375 (99%)	335 (90%)	29 (8%)	6 (2%)	9	44
4	7	370/375 (99%)	335 (90%)	29 (8%)	6 (2%)	9	44
4	8	370/375 (99%)	334 (90%)	30 (8%)	6 (2%)	9	44
4	9	370/375 (99%)	334 (90%)	30 (8%)	6 (2%)	9	44
4	V	370/375 (99%)	335 (90%)	29 (8%)	6 (2%)	9	44
4	W	370/375 (99%)	334 (90%)	30 (8%)	6 (2%)	9	44
4	X	370/375 (99%)	335 (90%)	29 (8%)	6 (2%)	9	44
4	Y	370/375 (99%)	334 (90%)	30 (8%)	6 (2%)	9	44
4	Z	370/375 (99%)	334 (90%)	30 (8%)	6 (2%)	9	44
All	All	11631/12042 (97%)	10138 (87%)	1203 (10%)	290 (2%)	9	32

5 of 290 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	73	LYS
1	A	202	SER
1	A	572	LYS
1	A	712	PRO
1	A	729	ALA

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	672/672 (100%)	510 (76%)	162 (24%)	0	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	D	672/672 (100%)	514 (76%)	158 (24%)	1	4
1	G	672/672 (100%)	513 (76%)	159 (24%)	1	4
1	J	672/672 (100%)	515 (77%)	157 (23%)	1	4
1	M	672/672 (100%)	514 (76%)	158 (24%)	1	4
1	P	672/672 (100%)	514 (76%)	158 (24%)	1	4
2	B	120/120 (100%)	119 (99%)	1 (1%)	81	89
2	E	120/120 (100%)	119 (99%)	1 (1%)	81	89
2	H	120/120 (100%)	119 (99%)	1 (1%)	81	89
2	K	120/120 (100%)	119 (99%)	1 (1%)	81	89
2	N	120/120 (100%)	119 (99%)	1 (1%)	81	89
2	Q	120/120 (100%)	119 (99%)	1 (1%)	81	89
3	C	117/117 (100%)	112 (96%)	5 (4%)	29	53
3	F	117/117 (100%)	112 (96%)	5 (4%)	29	53
3	I	117/117 (100%)	112 (96%)	5 (4%)	29	53
3	L	117/117 (100%)	112 (96%)	5 (4%)	29	53
3	O	117/117 (100%)	112 (96%)	5 (4%)	29	53
3	R	117/117 (100%)	112 (96%)	5 (4%)	29	53
4	0	315/318 (99%)	269 (85%)	46 (15%)	3	15
4	1	315/318 (99%)	268 (85%)	47 (15%)	3	15
4	2	315/318 (99%)	268 (85%)	47 (15%)	3	15
4	3	315/318 (99%)	269 (85%)	46 (15%)	3	15
4	4	315/318 (99%)	269 (85%)	46 (15%)	3	15
4	5	315/318 (99%)	268 (85%)	47 (15%)	3	15
4	7	315/318 (99%)	269 (85%)	46 (15%)	3	15
4	8	315/318 (99%)	268 (85%)	47 (15%)	3	15
4	9	315/318 (99%)	269 (85%)	46 (15%)	3	15
4	V	315/318 (99%)	268 (85%)	47 (15%)	3	15
4	W	315/318 (99%)	269 (85%)	46 (15%)	3	15
4	X	315/318 (99%)	268 (85%)	47 (15%)	3	15
4	Y	315/318 (99%)	268 (85%)	47 (15%)	3	15
4	Z	315/318 (99%)	269 (85%)	46 (15%)	3	15

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	9864/9906 (100%)	8225 (83%)	1639 (17%)	5 12

5 of 1639 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	P	543	PRO
4	3	221	LEU
4	Z	100	GLU
1	P	708	ARG
1	P	537	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 237 such sidechains are listed below:

Mol	Chain	Res	Type
1	M	424	ASN
4	X	92	ASN
1	P	481	ASN
4	W	263	GLN
4	Z	263	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

270 non-standard protein/DNA/RNA residues are modelled in this entry.

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	$\# Z > 2$
1	MLY	J	248	1	9,10,11	0.83	0	6,11,13	0.63	0
1	MLY	A	768	1	9,10,11	0.76	0	6,11,13	0.41	0
1	MLY	J	190	1	9,10,11	1.27	1 (11%)	6,11,13	0.52	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	MLY	D	35	1	9,10,11	0.72	0	6,11,13	0.38	0
1	MLY	A	248	1	9,10,11	0.83	0	6,11,13	0.61	0
1	MLY	A	55	1	9,10,11	0.72	0	6,11,13	0.78	0
1	MLY	A	190	1	9,10,11	1.26	1 (11%)	6,11,13	0.51	0
1	MLY	G	613	1	9,10,11	0.59	0	6,11,13	0.63	0
1	MLY	G	272	1	9,10,11	0.97	1 (11%)	6,11,13	0.55	0
1	MLY	P	833	1	9,10,11	1.17	1 (11%)	6,11,13	0.32	0
1	MLY	J	296	1	9,10,11	0.69	0	6,11,13	0.36	0
1	MLY	A	130	1	9,10,11	0.81	0	6,11,13	0.75	0
1	MLY	A	553	1,4	9,10,11	0.67	0	6,11,13	0.55	0
1	MLY	A	504	1	9,10,11	0.87	0	6,11,13	0.23	0
1	MLY	J	295	1	9,10,11	0.78	0	6,11,13	0.35	0
1	MLY	J	272	1	9,10,11	1.00	1 (11%)	6,11,13	0.56	0
1	MLY	G	764	1	9,10,11	0.80	0	6,11,13	0.35	0
1	MLY	G	107	1	9,10,11	0.47	0	6,11,13	0.34	0
1	MLY	A	295	1	9,10,11	0.81	0	6,11,13	0.32	0
1	MLY	G	551	1	9,10,11	0.52	0	6,11,13	0.20	0
1	MLY	M	659	1	9,10,11	0.82	0	6,11,13	0.58	0
1	MLY	G	617	1	9,10,11	0.96	1 (11%)	6,11,13	0.34	0
1	MLY	P	138	1	9,10,11	1.34	1 (11%)	6,11,13	0.84	0
1	MLY	P	600	1	9,10,11	0.52	0	6,11,13	0.37	0
1	MLY	A	272	1	9,10,11	1.00	1 (11%)	6,11,13	0.55	0
1	MLY	D	551	1	9,10,11	0.53	0	6,11,13	0.20	0
1	MLY	P	768	1	9,10,11	0.78	0	6,11,13	0.41	0
1	MLY	D	598	1	9,10,11	0.91	1 (11%)	6,11,13	0.43	0
1	MLY	D	617	1	9,10,11	0.99	1 (11%)	6,11,13	0.34	0
1	MLY	P	613	1	9,10,11	0.56	0	6,11,13	0.64	0
1	MLY	P	659	1	9,10,11	0.83	0	6,11,13	0.58	0
1	MLY	M	436	1	9,10,11	1.08	1 (11%)	6,11,13	0.49	0
1	MLY	D	353	1	9,10,11	0.85	0	6,11,13	0.79	0
1	MLY	P	431	1	9,10,11	0.50	0	6,11,13	0.45	0
1	MLY	A	59	1	9,10,11	0.86	0	6,11,13	0.49	0
1	MLY	D	367	1	9,10,11	0.60	0	6,11,13	0.40	0
1	MLY	P	504	1	9,10,11	0.83	0	6,11,13	0.22	0
1	MLY	P	415	1	9,10,11	0.78	0	6,11,13	0.19	0
1	MLY	A	35	1	9,10,11	0.71	0	6,11,13	0.38	0
1	MLY	J	659	1	9,10,11	0.81	0	6,11,13	0.58	0
1	MLY	J	385	1	9,10,11	1.02	1 (11%)	6,11,13	0.44	0
1	MLY	M	764	1	9,10,11	0.84	0	6,11,13	0.38	0
1	MLY	A	659	1	9,10,11	0.83	0	6,11,13	0.60	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	MLY	G	833	1	9,10,11	1.15	2 (22%)	6,11,13	0.32	0
1	MLY	M	295	1	9,10,11	0.79	0	6,11,13	0.35	0
1	MLY	D	486	1	9,10,11	0.65	0	6,11,13	0.39	0
1	MLY	D	827	1	9,10,11	0.68	0	6,11,13	0.47	0
1	MLY	G	348	1	9,10,11	0.86	1 (11%)	6,11,13	0.46	0
1	MLY	G	528	1	9,10,11	0.89	0	6,11,13	0.66	0
1	MLY	J	19	1	9,10,11	1.19	1 (11%)	6,11,13	0.58	0
1	MLY	J	486	1	9,10,11	0.63	0	6,11,13	0.39	0
1	MLY	P	782	1	9,10,11	0.77	0	6,11,13	0.38	0
1	MLY	P	35	1	9,10,11	0.72	0	6,11,13	0.38	0
1	MLY	P	84	1	9,10,11	0.50	0	6,11,13	0.80	0
1	MLY	G	236	1	9,10,11	0.78	1 (11%)	6,11,13	0.47	0
1	MLY	M	59	1	9,10,11	0.87	0	6,11,13	0.49	0
1	MLY	G	84	1	9,10,11	0.49	0	6,11,13	0.80	0
1	MLY	G	130	1	9,10,11	0.80	0	6,11,13	0.75	0
1	MLY	J	436	1	9,10,11	1.07	1 (11%)	6,11,13	0.48	0
1	MLY	J	768	1	9,10,11	0.76	0	6,11,13	0.42	0
1	MLY	A	436	1	9,10,11	1.07	1 (11%)	6,11,13	0.50	0
1	MLY	P	190	1	9,10,11	1.25	1 (11%)	6,11,13	0.53	0
1	MLY	D	130	1	9,10,11	0.81	0	6,11,13	0.74	0
1	MLY	A	764	1	9,10,11	0.84	0	6,11,13	0.36	0
1	MLY	M	84	1	9,10,11	0.50	0	6,11,13	0.81	0
1	MLY	M	348	1	9,10,11	0.81	0	6,11,13	0.47	0
1	MLY	D	385	1	9,10,11	0.99	1 (11%)	6,11,13	0.45	0
1	MLY	G	369	1	9,10,11	0.70	0	6,11,13	0.46	0
1	MLY	D	839	1	9,10,11	0.70	0	6,11,13	0.79	0
1	MLY	G	782	1	9,10,11	0.77	0	6,11,13	0.35	0
1	MLY	M	839	1	9,10,11	0.70	0	6,11,13	0.77	0
1	MLY	P	486	1	9,10,11	0.63	0	6,11,13	0.39	0
1	MLY	P	764	1	9,10,11	0.83	0	6,11,13	0.38	0
1	MLY	A	505	1	9,10,11	0.90	1 (11%)	6,11,13	0.33	0
1	MLY	D	107	1	9,10,11	0.51	0	6,11,13	0.34	0
1	MLY	J	236	1	9,10,11	0.79	1 (11%)	6,11,13	0.48	0
1	MLY	M	681	1	9,10,11	0.58	0	6,11,13	0.45	0
1	MLY	G	35	1	9,10,11	0.72	0	6,11,13	0.39	0
1	MLY	J	348	1	9,10,11	0.80	0	6,11,13	0.47	0
1	MLY	A	87	1	9,10,11	1.23	1 (11%)	6,11,13	0.42	0
1	MLY	P	248	1	9,10,11	0.82	0	6,11,13	0.62	0
1	MLY	D	19	1	9,10,11	1.17	1 (11%)	6,11,13	0.56	0
1	MLY	G	659	1	9,10,11	0.84	0	6,11,13	0.59	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	MLY	A	348	1	9,10,11	0.87	1 (11%)	6,11,13	0.48	0
1	MLY	A	528	1	9,10,11	0.87	0	6,11,13	0.66	0
1	MLY	A	617	1	9,10,11	0.95	1 (11%)	6,11,13	0.34	0
1	MLY	J	415	1	9,10,11	0.79	0	6,11,13	0.19	0
1	MLY	M	49	1	9,10,11	1.09	1 (11%)	6,11,13	0.74	0
1	MLY	P	59	1	9,10,11	0.88	0	6,11,13	0.49	0
1	MLY	P	553	1	9,10,11	0.67	0	6,11,13	0.54	0
1	MLY	M	833	1	9,10,11	1.20	1 (11%)	6,11,13	0.32	0
1	MLY	D	553	1,4	9,10,11	0.69	0	6,11,13	0.55	0
1	MLY	P	837	1	9,10,11	0.58	0	6,11,13	0.55	0
1	MLY	J	553	1	9,10,11	0.67	0	6,11,13	0.54	0
1	MLY	A	84	1	9,10,11	0.50	0	6,11,13	0.80	0
1	MLY	D	296	1	9,10,11	0.65	0	6,11,13	0.37	0
1	MLY	P	295	1	9,10,11	0.80	0	6,11,13	0.34	0
1	MLY	G	839	1	9,10,11	0.73	0	6,11,13	0.80	0
1	MLY	D	295	1	9,10,11	0.78	0	6,11,13	0.36	0
1	MLY	J	59	1	9,10,11	0.87	0	6,11,13	0.49	0
1	MLY	M	35	1	9,10,11	0.72	0	6,11,13	0.39	0
1	MLY	J	681	1	9,10,11	0.59	0	6,11,13	0.45	0
1	MLY	P	528	1	9,10,11	0.88	0	6,11,13	0.66	0
1	MLY	A	296	1	9,10,11	0.62	0	6,11,13	0.36	0
1	MLY	D	87	1	9,10,11	1.20	1 (11%)	6,11,13	0.44	0
1	MLY	M	248	1	9,10,11	0.82	0	6,11,13	0.62	0
1	MLY	P	63	1	9,10,11	0.90	0	6,11,13	0.43	0
1	MLY	G	486	1	9,10,11	0.64	0	6,11,13	0.39	0
1	MLY	A	681	1	9,10,11	0.60	0	6,11,13	0.46	0
1	MLY	G	768	1	9,10,11	0.72	0	6,11,13	0.42	0
1	MLY	P	87	1	9,10,11	1.25	1 (11%)	6,11,13	0.43	0
1	MLY	J	55	1	9,10,11	0.72	0	6,11,13	0.78	0
1	MLY	A	385	1	9,10,11	1.00	1 (11%)	6,11,13	0.43	0
1	MLY	J	84	1	9,10,11	0.49	0	6,11,13	0.80	0
1	MLY	D	768	1	9,10,11	0.73	0	6,11,13	0.41	0
1	MLY	J	369	1	9,10,11	0.70	0	6,11,13	0.45	0
1	MLY	M	130	1	9,10,11	0.78	0	6,11,13	0.75	0
1	MLY	M	768	1	9,10,11	0.75	0	6,11,13	0.42	0
1	MLY	A	236	1	9,10,11	0.79	1 (11%)	6,11,13	0.48	0
1	MLY	G	190	1	9,10,11	1.24	1 (11%)	6,11,13	0.52	0
1	MLY	M	528	1	9,10,11	0.88	0	6,11,13	0.65	0
1	MLY	D	248	1	9,10,11	0.84	0	6,11,13	0.62	0
1	MLY	P	367	1	9,10,11	0.63	0	6,11,13	0.36	0
1	MLY	A	369	1	9,10,11	0.70	0	6,11,13	0.46	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	MLY	M	617	1	9,10,11	0.96	1 (11%)	6,11,13	0.33	0
1	MLY	M	19	1	9,10,11	1.17	1 (11%)	6,11,13	0.58	0
1	MLY	D	613	1	9,10,11	0.57	0	6,11,13	0.63	0
1	MLY	G	504	1	9,10,11	0.88	0	6,11,13	0.22	0
1	MLY	D	272	1	9,10,11	0.96	1 (11%)	6,11,13	0.58	0
1	MLY	M	837	1	9,10,11	0.58	0	6,11,13	0.55	0
1	MLY	D	431	1	9,10,11	0.54	0	6,11,13	0.46	0
1	MLY	G	296	1	9,10,11	0.65	0	6,11,13	0.37	0
1	MLY	D	504	1	9,10,11	0.89	0	6,11,13	0.22	0
1	MLY	G	827	1	9,10,11	0.71	0	6,11,13	0.49	0
1	MLY	M	63	1	9,10,11	0.92	1 (11%)	6,11,13	0.44	0
1	MLY	M	353	1	9,10,11	0.85	0	6,11,13	0.79	0
1	MLY	P	385	1	9,10,11	1.02	1 (11%)	6,11,13	0.44	0
1	MLY	P	30	1	9,10,11	0.89	0	6,11,13	0.32	0
1	MLY	J	833	1	9,10,11	1.18	1 (11%)	6,11,13	0.32	0
1	MLY	M	367	1	9,10,11	0.63	0	6,11,13	0.36	0
1	MLY	D	782	1	9,10,11	0.77	0	6,11,13	0.35	0
1	MLY	D	415	1	9,10,11	0.78	0	6,11,13	0.19	0
1	MLY	M	296	1	9,10,11	0.69	0	6,11,13	0.36	0
1	MLY	P	369	1	9,10,11	0.69	0	6,11,13	0.46	0
1	MLY	J	551	1	9,10,11	0.53	0	6,11,13	0.19	0
1	MLY	G	49	1	9,10,11	1.07	1 (11%)	6,11,13	0.74	0
1	MLY	G	431	1	9,10,11	0.54	0	6,11,13	0.46	0
1	MLY	J	837	1	9,10,11	0.60	0	6,11,13	0.55	0
1	MLY	G	598	1	9,10,11	0.90	1 (11%)	6,11,13	0.42	0
1	MLY	G	415	1	9,10,11	0.78	0	6,11,13	0.19	0
1	MLY	P	436	1	9,10,11	1.08	1 (11%)	6,11,13	0.49	0
1	MLY	A	19	1	9,10,11	1.12	1 (11%)	6,11,13	0.56	0
1	MLY	A	837	1	9,10,11	0.60	0	6,11,13	0.53	0
1	MLY	A	839	1	9,10,11	0.69	0	6,11,13	0.81	0
1	MLY	J	353	1	9,10,11	0.85	0	6,11,13	0.78	0
1	MLY	M	138	1	9,10,11	1.33	1 (11%)	6,11,13	0.83	0
1	MLY	M	369	1	9,10,11	0.70	0	6,11,13	0.46	0
1	MLY	M	600	1	9,10,11	0.52	0	6,11,13	0.37	0
1	MLY	M	827	1	9,10,11	0.71	0	6,11,13	0.48	0
1	MLY	M	782	1	9,10,11	0.78	0	6,11,13	0.38	0
1	MLY	A	353	1	9,10,11	0.88	0	6,11,13	0.79	0
1	MLY	M	236	1	9,10,11	0.81	1 (11%)	6,11,13	0.47	0
1	MLY	A	63	1	9,10,11	0.93	1 (11%)	6,11,13	0.44	0
1	MLY	M	613	1	9,10,11	0.55	0	6,11,13	0.63	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	MLY	G	681	1	9,10,11	0.64	0	6,11,13	0.45	0
1	MLY	A	107	1	9,10,11	0.46	0	6,11,13	0.34	0
1	MLY	M	55	1	9,10,11	0.73	0	6,11,13	0.79	0
1	MLY	G	138	1	9,10,11	1.36	1 (11%)	6,11,13	0.84	0
1	MLY	D	681	1	9,10,11	0.58	0	6,11,13	0.45	0
1	MLY	J	87	1	9,10,11	1.22	1 (11%)	6,11,13	0.43	0
1	MLY	M	190	1	9,10,11	1.26	1 (11%)	6,11,13	0.52	0
1	MLY	J	367	1	9,10,11	0.62	0	6,11,13	0.36	0
1	MLY	P	551	1	9,10,11	0.53	0	6,11,13	0.20	0
1	MLY	M	415	1	9,10,11	0.79	0	6,11,13	0.19	0
1	MLY	J	528	1	9,10,11	0.88	0	6,11,13	0.66	0
1	MLY	A	367	1	9,10,11	0.64	0	6,11,13	0.36	0
1	MLY	P	505	1	9,10,11	0.91	1 (11%)	6,11,13	0.34	0
1	MLY	J	827	1	9,10,11	0.74	0	6,11,13	0.48	0
1	MLY	P	353	1	9,10,11	0.86	0	6,11,13	0.78	0
1	MLY	D	30	1	9,10,11	0.91	0	6,11,13	0.31	0
1	MLY	J	138	1	9,10,11	1.34	1 (11%)	6,11,13	0.84	0
1	MLY	J	598	1	9,10,11	0.88	1 (11%)	6,11,13	0.43	0
1	MLY	J	617	1	9,10,11	0.97	1 (11%)	6,11,13	0.33	0
1	MLY	J	600	1	9,10,11	0.53	0	6,11,13	0.36	0
1	MLY	G	353	1	9,10,11	0.85	0	6,11,13	0.80	0
1	MLY	A	827	1	9,10,11	0.71	0	6,11,13	0.46	0
1	MLY	J	782	1	9,10,11	0.79	0	6,11,13	0.37	0
1	MLY	J	839	1	9,10,11	0.71	0	6,11,13	0.77	0
1	MLY	A	138	1	9,10,11	1.33	1 (11%)	6,11,13	0.84	0
1	MLY	A	598	1	9,10,11	0.90	1 (11%)	6,11,13	0.44	0
1	MLY	J	30	1	9,10,11	0.88	0	6,11,13	0.31	0
1	MLY	A	600	1	9,10,11	0.51	0	6,11,13	0.38	0
1	MLY	P	107	1	9,10,11	0.48	0	6,11,13	0.35	0
1	MLY	P	348	1	9,10,11	0.83	0	6,11,13	0.47	0
1	MLY	A	782	1	9,10,11	0.78	0	6,11,13	0.37	0
1	MLY	P	617	1	9,10,11	0.98	1 (11%)	6,11,13	0.33	0
1	MLY	A	30	1	9,10,11	0.88	0	6,11,13	0.32	0
1	MLY	M	505	1	9,10,11	0.93	1 (11%)	6,11,13	0.34	0
1	MLY	J	63	1	9,10,11	0.91	1 (11%)	6,11,13	0.44	0
1	MLY	A	613	1	9,10,11	0.57	0	6,11,13	0.63	0
1	MLY	D	764	1	9,10,11	0.84	0	6,11,13	0.35	0
1	MLY	J	130	1	9,10,11	0.76	0	6,11,13	0.75	0
1	MLY	J	431	1	9,10,11	0.50	0	6,11,13	0.44	0
1	MLY	J	504	1	9,10,11	0.84	0	6,11,13	0.23	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	MLY	M	431	1	9,10,11	0.52	0	6,11,13	0.44	0
1	MLY	A	431	1	9,10,11	0.52	0	6,11,13	0.45	0
1	MLY	M	107	1	9,10,11	0.48	0	6,11,13	0.34	0
1	MLY	M	551	1	9,10,11	0.52	0	6,11,13	0.20	0
1	MLY	M	598	1	9,10,11	0.87	1 (11%)	6,11,13	0.43	0
1	MLY	A	415	1	9,10,11	0.75	0	6,11,13	0.19	0
1	MLY	G	59	1	9,10,11	0.83	0	6,11,13	0.50	0
1	MLY	P	296	1	9,10,11	0.66	0	6,11,13	0.36	0
1	MLY	G	553	1,4	9,10,11	0.66	0	6,11,13	0.55	0
1	MLY	G	837	1	9,10,11	0.59	0	6,11,13	0.52	0
1	MLY	D	528	1	9,10,11	0.90	0	6,11,13	0.65	0
1	MLY	P	681	1	9,10,11	0.61	0	6,11,13	0.46	0
1	MLY	P	827	1	9,10,11	0.73	0	6,11,13	0.49	0
1	MLY	D	59	1	9,10,11	0.86	0	6,11,13	0.49	0
1	MLY	G	505	1	9,10,11	0.90	1 (11%)	6,11,13	0.35	0
1	MLY	D	837	1	9,10,11	0.61	0	6,11,13	0.57	0
1	MLY	P	55	1	9,10,11	0.72	0	6,11,13	0.78	0
1	MLY	G	248	1	9,10,11	0.80	0	6,11,13	0.63	0
1	MLY	G	63	1	9,10,11	0.90	1 (11%)	6,11,13	0.43	0
1	MLY	P	236	1	9,10,11	0.80	1 (11%)	6,11,13	0.48	0
1	MLY	G	55	1	9,10,11	0.73	0	6,11,13	0.80	0
1	MLY	G	87	1	9,10,11	1.22	1 (11%)	6,11,13	0.43	0
1	MLY	D	505	1	9,10,11	0.85	1 (11%)	6,11,13	0.34	0
1	MLY	D	84	1	9,10,11	0.50	0	6,11,13	0.80	0
1	MLY	D	348	1	9,10,11	0.83	0	6,11,13	0.47	0
1	MLY	D	63	1	9,10,11	0.90	0	6,11,13	0.45	0
1	MLY	D	436	1	9,10,11	1.11	1 (11%)	6,11,13	0.49	0
1	MLY	J	35	1	9,10,11	0.72	0	6,11,13	0.39	0
1	MLY	D	55	1	9,10,11	0.71	0	6,11,13	0.80	0
1	MLY	J	107	1	9,10,11	0.48	0	6,11,13	0.33	0
1	MLY	P	130	1	9,10,11	0.77	0	6,11,13	0.75	0
1	MLY	M	87	1	9,10,11	1.22	1 (11%)	6,11,13	0.43	0
1	MLY	A	551	1	9,10,11	0.51	0	6,11,13	0.19	0
1	MLY	D	600	1	9,10,11	0.51	0	6,11,13	0.38	0
1	MLY	G	436	1	9,10,11	1.04	1 (11%)	6,11,13	0.49	0
1	MLY	M	486	1	9,10,11	0.62	0	6,11,13	0.39	0
1	MLY	G	385	1	9,10,11	1.00	1 (11%)	6,11,13	0.43	0
1	MLY	P	272	1	9,10,11	1.02	1 (11%)	6,11,13	0.55	0
1	MLY	G	19	1	9,10,11	1.15	1 (11%)	6,11,13	0.58	0
1	MLY	G	367	1	9,10,11	0.66	0	6,11,13	0.38	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	MLY	J	49	1	9,10,11	1.08	1 (11%)	6,11,13	0.74	0
1	MLY	M	385	1	9,10,11	1.02	1 (11%)	6,11,13	0.44	0
1	MLY	A	49	1	9,10,11	1.04	1 (11%)	6,11,13	0.74	0
1	MLY	G	600	1	9,10,11	0.51	0	6,11,13	0.37	0
1	MLY	D	369	1	9,10,11	0.69	0	6,11,13	0.45	0
1	MLY	D	138	1	9,10,11	1.38	1 (11%)	6,11,13	0.85	0
1	MLY	M	272	1	9,10,11	1.00	1 (11%)	6,11,13	0.56	0
1	MLY	D	659	1	9,10,11	0.82	0	6,11,13	0.60	0
1	MLY	G	30	1	9,10,11	0.88	0	6,11,13	0.30	0
1	MLY	J	505	1	9,10,11	0.92	1 (11%)	6,11,13	0.34	0
1	MLY	M	553	1,4	9,10,11	0.67	0	6,11,13	0.54	0
1	MLY	G	295	1	9,10,11	0.79	0	6,11,13	0.34	0
1	MLY	M	504	1	9,10,11	0.84	0	6,11,13	0.23	0
1	MLY	M	30	1	9,10,11	0.90	0	6,11,13	0.31	0
1	MLY	P	598	1	9,10,11	0.89	1 (11%)	6,11,13	0.43	0
1	MLY	P	19	1	9,10,11	1.18	1 (11%)	6,11,13	0.57	0
1	MLY	D	236	1	9,10,11	0.80	1 (11%)	6,11,13	0.47	0
1	MLY	P	839	1	9,10,11	0.71	0	6,11,13	0.77	0
1	MLY	J	764	1	9,10,11	0.83	0	6,11,13	0.37	0
1	MLY	A	833	1	9,10,11	1.15	1 (11%)	6,11,13	0.32	0
1	MLY	A	486	1	9,10,11	0.64	0	6,11,13	0.39	0
1	MLY	P	49	1	9,10,11	1.12	1 (11%)	6,11,13	0.75	0
1	MLY	D	49	1	9,10,11	1.08	1 (11%)	6,11,13	0.74	0
1	MLY	D	190	1	9,10,11	1.22	1 (11%)	6,11,13	0.54	0
1	MLY	D	833	1	9,10,11	1.15	2 (22%)	6,11,13	0.31	0
1	MLY	J	613	1	9,10,11	0.56	0	6,11,13	0.64	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	MLY	J	248	1	-	6/8/9/11	-
1	MLY	A	768	1	-	4/8/9/11	-
1	MLY	J	190	1	-	5/8/9/11	-
1	MLY	D	35	1	-	3/8/9/11	-
1	MLY	A	248	1	-	6/8/9/11	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	MLY	A	55	1	-	6/8/9/11	-
1	MLY	A	190	1	-	5/8/9/11	-
1	MLY	G	613	1	-	4/8/9/11	-
1	MLY	G	272	1	-	3/8/9/11	-
1	MLY	P	833	1	-	6/8/9/11	-
1	MLY	J	296	1	-	4/8/9/11	-
1	MLY	A	130	1	-	5/8/9/11	-
1	MLY	A	553	1,4	-	4/8/9/11	-
1	MLY	A	504	1	-	4/8/9/11	-
1	MLY	J	295	1	-	2/8/9/11	-
1	MLY	J	272	1	-	3/8/9/11	-
1	MLY	G	764	1	-	2/8/9/11	-
1	MLY	G	107	1	-	2/8/9/11	-
1	MLY	A	295	1	-	2/8/9/11	-
1	MLY	G	551	1	-	3/8/9/11	-
1	MLY	M	659	1	-	3/8/9/11	-
1	MLY	G	617	1	-	1/8/9/11	-
1	MLY	P	138	1	-	4/8/9/11	-
1	MLY	P	600	1	-	3/8/9/11	-
1	MLY	A	272	1	-	3/8/9/11	-
1	MLY	D	551	1	-	3/8/9/11	-
1	MLY	P	768	1	-	4/8/9/11	-
1	MLY	D	598	1	-	5/8/9/11	-
1	MLY	D	617	1	-	1/8/9/11	-
1	MLY	P	613	1	-	4/8/9/11	-
1	MLY	P	659	1	-	3/8/9/11	-
1	MLY	M	436	1	-	4/8/9/11	-
1	MLY	D	353	1	-	4/8/9/11	-
1	MLY	P	431	1	-	4/8/9/11	-
1	MLY	A	59	1	-	3/8/9/11	-
1	MLY	D	367	1	-	2/8/9/11	-
1	MLY	P	504	1	-	4/8/9/11	-
1	MLY	P	415	1	-	3/8/9/11	-
1	MLY	A	35	1	-	3/8/9/11	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	MLY	J	659	1	-	3/8/9/11	-
1	MLY	J	385	1	-	2/8/9/11	-
1	MLY	M	764	1	-	2/8/9/11	-
1	MLY	A	659	1	-	3/8/9/11	-
1	MLY	G	833	1	-	6/8/9/11	-
1	MLY	M	295	1	-	2/8/9/11	-
1	MLY	D	486	1	-	2/8/9/11	-
1	MLY	D	827	1	-	0/8/9/11	-
1	MLY	G	348	1	-	5/8/9/11	-
1	MLY	G	528	1	-	4/8/9/11	-
1	MLY	J	19	1	-	4/8/9/11	-
1	MLY	J	486	1	-	2/8/9/11	-
1	MLY	P	782	1	-	6/8/9/11	-
1	MLY	P	35	1	-	3/8/9/11	-
1	MLY	P	84	1	-	4/8/9/11	-
1	MLY	G	236	1	-	3/8/9/11	-
1	MLY	M	59	1	-	3/8/9/11	-
1	MLY	G	84	1	-	4/8/9/11	-
1	MLY	G	130	1	-	5/8/9/11	-
1	MLY	J	436	1	-	4/8/9/11	-
1	MLY	J	768	1	-	4/8/9/11	-
1	MLY	A	436	1	-	4/8/9/11	-
1	MLY	P	190	1	-	5/8/9/11	-
1	MLY	D	130	1	-	5/8/9/11	-
1	MLY	A	764	1	-	2/8/9/11	-
1	MLY	M	84	1	-	4/8/9/11	-
1	MLY	M	348	1	-	5/8/9/11	-
1	MLY	D	385	1	-	2/8/9/11	-
1	MLY	G	369	1	-	2/8/9/11	-
1	MLY	D	839	1	-	3/8/9/11	-
1	MLY	G	782	1	-	6/8/9/11	-
1	MLY	M	839	1	-	3/8/9/11	-
1	MLY	P	486	1	-	2/8/9/11	-
1	MLY	P	764	1	-	2/8/9/11	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	MLY	A	505	1	-	5/8/9/11	-
1	MLY	D	107	1	-	2/8/9/11	-
1	MLY	J	236	1	-	3/8/9/11	-
1	MLY	M	681	1	-	4/8/9/11	-
1	MLY	G	35	1	-	3/8/9/11	-
1	MLY	J	348	1	-	5/8/9/11	-
1	MLY	A	87	1	-	2/8/9/11	-
1	MLY	P	248	1	-	6/8/9/11	-
1	MLY	D	19	1	-	4/8/9/11	-
1	MLY	G	659	1	-	3/8/9/11	-
1	MLY	A	348	1	-	5/8/9/11	-
1	MLY	A	528	1	-	5/8/9/11	-
1	MLY	A	617	1	-	1/8/9/11	-
1	MLY	J	415	1	-	3/8/9/11	-
1	MLY	M	49	1	-	3/8/9/11	-
1	MLY	P	59	1	-	3/8/9/11	-
1	MLY	P	553	1	-	4/8/9/11	-
1	MLY	M	833	1	-	6/8/9/11	-
1	MLY	D	553	1,4	-	5/8/9/11	-
1	MLY	P	837	1	-	5/8/9/11	-
1	MLY	J	553	1	-	4/8/9/11	-
1	MLY	A	84	1	-	4/8/9/11	-
1	MLY	D	296	1	-	4/8/9/11	-
1	MLY	P	295	1	-	2/8/9/11	-
1	MLY	G	839	1	-	3/8/9/11	-
1	MLY	D	295	1	-	2/8/9/11	-
1	MLY	J	59	1	-	3/8/9/11	-
1	MLY	M	35	1	-	3/8/9/11	-
1	MLY	J	681	1	-	4/8/9/11	-
1	MLY	P	528	1	-	4/8/9/11	-
1	MLY	A	296	1	-	4/8/9/11	-
1	MLY	D	87	1	-	2/8/9/11	-
1	MLY	M	248	1	-	6/8/9/11	-
1	MLY	P	63	1	-	4/8/9/11	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	MLY	G	486	1	-	2/8/9/11	-
1	MLY	A	681	1	-	4/8/9/11	-
1	MLY	G	768	1	-	4/8/9/11	-
1	MLY	P	87	1	-	2/8/9/11	-
1	MLY	J	55	1	-	6/8/9/11	-
1	MLY	A	385	1	-	2/8/9/11	-
1	MLY	J	84	1	-	4/8/9/11	-
1	MLY	D	768	1	-	4/8/9/11	-
1	MLY	J	369	1	-	2/8/9/11	-
1	MLY	M	130	1	-	5/8/9/11	-
1	MLY	M	768	1	-	4/8/9/11	-
1	MLY	A	236	1	-	3/8/9/11	-
1	MLY	G	190	1	-	5/8/9/11	-
1	MLY	M	528	1	-	4/8/9/11	-
1	MLY	D	248	1	-	6/8/9/11	-
1	MLY	P	367	1	-	2/8/9/11	-
1	MLY	A	369	1	-	2/8/9/11	-
1	MLY	M	617	1	-	1/8/9/11	-
1	MLY	M	19	1	-	4/8/9/11	-
1	MLY	D	613	1	-	4/8/9/11	-
1	MLY	G	504	1	-	4/8/9/11	-
1	MLY	D	272	1	-	3/8/9/11	-
1	MLY	M	837	1	-	5/8/9/11	-
1	MLY	D	431	1	-	4/8/9/11	-
1	MLY	G	296	1	-	4/8/9/11	-
1	MLY	D	504	1	-	4/8/9/11	-
1	MLY	G	827	1	-	0/8/9/11	-
1	MLY	M	63	1	-	4/8/9/11	-
1	MLY	M	353	1	-	4/8/9/11	-
1	MLY	P	385	1	-	2/8/9/11	-
1	MLY	P	30	1	-	2/8/9/11	-
1	MLY	J	833	1	-	6/8/9/11	-
1	MLY	M	367	1	-	2/8/9/11	-
1	MLY	D	782	1	-	6/8/9/11	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	MLY	D	415	1	-	3/8/9/11	-
1	MLY	M	296	1	-	4/8/9/11	-
1	MLY	P	369	1	-	2/8/9/11	-
1	MLY	J	551	1	-	3/8/9/11	-
1	MLY	G	49	1	-	3/8/9/11	-
1	MLY	G	431	1	-	4/8/9/11	-
1	MLY	J	837	1	-	5/8/9/11	-
1	MLY	G	598	1	-	5/8/9/11	-
1	MLY	G	415	1	-	3/8/9/11	-
1	MLY	P	436	1	-	4/8/9/11	-
1	MLY	A	19	1	-	4/8/9/11	-
1	MLY	A	837	1	-	5/8/9/11	-
1	MLY	A	839	1	-	3/8/9/11	-
1	MLY	J	353	1	-	4/8/9/11	-
1	MLY	M	138	1	-	4/8/9/11	-
1	MLY	M	369	1	-	2/8/9/11	-
1	MLY	M	600	1	-	3/8/9/11	-
1	MLY	M	827	1	-	0/8/9/11	-
1	MLY	M	782	1	-	6/8/9/11	-
1	MLY	A	353	1	-	4/8/9/11	-
1	MLY	M	236	1	-	3/8/9/11	-
1	MLY	A	63	1	-	4/8/9/11	-
1	MLY	M	613	1	-	4/8/9/11	-
1	MLY	G	681	1	-	4/8/9/11	-
1	MLY	A	107	1	-	2/8/9/11	-
1	MLY	M	55	1	-	6/8/9/11	-
1	MLY	G	138	1	-	4/8/9/11	-
1	MLY	D	681	1	-	4/8/9/11	-
1	MLY	J	87	1	-	2/8/9/11	-
1	MLY	M	190	1	-	5/8/9/11	-
1	MLY	J	367	1	-	2/8/9/11	-
1	MLY	P	551	1	-	3/8/9/11	-
1	MLY	M	415	1	-	3/8/9/11	-
1	MLY	J	528	1	-	4/8/9/11	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	MLY	A	367	1	-	2/8/9/11	-
1	MLY	P	505	1	-	5/8/9/11	-
1	MLY	J	827	1	-	0/8/9/11	-
1	MLY	P	353	1	-	4/8/9/11	-
1	MLY	D	30	1	-	2/8/9/11	-
1	MLY	J	138	1	-	4/8/9/11	-
1	MLY	J	598	1	-	5/8/9/11	-
1	MLY	J	617	1	-	1/8/9/11	-
1	MLY	J	600	1	-	3/8/9/11	-
1	MLY	G	353	1	-	4/8/9/11	-
1	MLY	A	827	1	-	0/8/9/11	-
1	MLY	J	782	1	-	6/8/9/11	-
1	MLY	J	839	1	-	3/8/9/11	-
1	MLY	A	138	1	-	4/8/9/11	-
1	MLY	A	598	1	-	5/8/9/11	-
1	MLY	J	30	1	-	2/8/9/11	-
1	MLY	A	600	1	-	3/8/9/11	-
1	MLY	P	107	1	-	2/8/9/11	-
1	MLY	P	348	1	-	5/8/9/11	-
1	MLY	A	782	1	-	6/8/9/11	-
1	MLY	P	617	1	-	1/8/9/11	-
1	MLY	A	30	1	-	2/8/9/11	-
1	MLY	M	505	1	-	5/8/9/11	-
1	MLY	J	63	1	-	4/8/9/11	-
1	MLY	A	613	1	-	4/8/9/11	-
1	MLY	D	764	1	-	2/8/9/11	-
1	MLY	J	130	1	-	5/8/9/11	-
1	MLY	J	431	1	-	4/8/9/11	-
1	MLY	J	504	1	-	4/8/9/11	-
1	MLY	M	431	1	-	4/8/9/11	-
1	MLY	A	431	1	-	4/8/9/11	-
1	MLY	M	107	1	-	2/8/9/11	-
1	MLY	M	551	1	-	3/8/9/11	-
1	MLY	M	598	1	-	5/8/9/11	-
1	MLY	A	415	1	-	3/8/9/11	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	MLY	G	59	1	-	3/8/9/11	-
1	MLY	P	296	1	-	4/8/9/11	-
1	MLY	G	553	1,4	-	4/8/9/11	-
1	MLY	G	837	1	-	5/8/9/11	-
1	MLY	D	528	1	-	4/8/9/11	-
1	MLY	P	681	1	-	4/8/9/11	-
1	MLY	P	827	1	-	0/8/9/11	-
1	MLY	D	59	1	-	3/8/9/11	-
1	MLY	G	505	1	-	5/8/9/11	-
1	MLY	D	837	1	-	5/8/9/11	-
1	MLY	P	55	1	-	6/8/9/11	-
1	MLY	G	248	1	-	6/8/9/11	-
1	MLY	G	63	1	-	4/8/9/11	-
1	MLY	P	236	1	-	3/8/9/11	-
1	MLY	G	55	1	-	6/8/9/11	-
1	MLY	G	87	1	-	2/8/9/11	-
1	MLY	D	505	1	-	5/8/9/11	-
1	MLY	D	84	1	-	4/8/9/11	-
1	MLY	D	348	1	-	5/8/9/11	-
1	MLY	D	63	1	-	4/8/9/11	-
1	MLY	D	436	1	-	4/8/9/11	-
1	MLY	J	35	1	-	3/8/9/11	-
1	MLY	D	55	1	-	6/8/9/11	-
1	MLY	J	107	1	-	2/8/9/11	-
1	MLY	P	130	1	-	5/8/9/11	-
1	MLY	M	87	1	-	2/8/9/11	-
1	MLY	A	551	1	-	3/8/9/11	-
1	MLY	D	600	1	-	3/8/9/11	-
1	MLY	G	436	1	-	4/8/9/11	-
1	MLY	M	486	1	-	2/8/9/11	-
1	MLY	G	385	1	-	2/8/9/11	-
1	MLY	P	272	1	-	3/8/9/11	-
1	MLY	G	19	1	-	4/8/9/11	-
1	MLY	G	367	1	-	2/8/9/11	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	MLY	J	49	1	-	3/8/9/11	-
1	MLY	M	385	1	-	2/8/9/11	-
1	MLY	A	49	1	-	3/8/9/11	-
1	MLY	G	600	1	-	3/8/9/11	-
1	MLY	D	369	1	-	2/8/9/11	-
1	MLY	D	138	1	-	4/8/9/11	-
1	MLY	M	272	1	-	3/8/9/11	-
1	MLY	D	659	1	-	3/8/9/11	-
1	MLY	G	30	1	-	2/8/9/11	-
1	MLY	J	505	1	-	5/8/9/11	-
1	MLY	M	553	1,4	-	4/8/9/11	-
1	MLY	G	295	1	-	2/8/9/11	-
1	MLY	M	504	1	-	4/8/9/11	-
1	MLY	M	30	1	-	2/8/9/11	-
1	MLY	P	598	1	-	5/8/9/11	-
1	MLY	P	19	1	-	4/8/9/11	-
1	MLY	D	236	1	-	3/8/9/11	-
1	MLY	P	839	1	-	3/8/9/11	-
1	MLY	J	764	1	-	2/8/9/11	-
1	MLY	A	833	1	-	6/8/9/11	-
1	MLY	A	486	1	-	2/8/9/11	-
1	MLY	P	49	1	-	3/8/9/11	-
1	MLY	D	49	1	-	3/8/9/11	-
1	MLY	D	190	1	-	5/8/9/11	-
1	MLY	D	833	1	-	6/8/9/11	-
1	MLY	J	613	1	-	4/8/9/11	-

The worst 5 of 86 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	D	138	MLY	CB-CA	-3.79	1.48	1.53
1	G	138	MLY	CB-CA	-3.74	1.48	1.53
1	P	138	MLY	CB-CA	-3.66	1.48	1.53
1	J	138	MLY	CB-CA	-3.64	1.48	1.53
1	M	138	MLY	CB-CA	-3.63	1.48	1.53

There are no bond angle outliers.

There are no chirality outliers.

5 of 956 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	A	19	MLY	C-CA-CB-CG
1	A	49	MLY	N-CA-CB-CG
1	A	49	MLY	C-CA-CB-CG
1	A	55	MLY	N-CA-CB-CG
1	A	55	MLY	C-CA-CB-CG

There are no ring outliers.

184 monomers are involved in 810 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	J	248	MLY	2	0
1	A	768	MLY	18	0
1	J	190	MLY	2	0
1	A	248	MLY	2	0
1	A	55	MLY	1	0
1	A	190	MLY	2	0
1	G	272	MLY	1	0
1	J	296	MLY	3	0
1	A	553	MLY	19	0
1	A	504	MLY	2	0
1	J	295	MLY	6	0
1	J	272	MLY	1	0
1	G	764	MLY	22	0
1	G	107	MLY	2	0
1	A	295	MLY	6	0
1	M	659	MLY	2	0
1	G	617	MLY	1	0
1	P	138	MLY	1	0
1	P	600	MLY	1	0
1	A	272	MLY	1	0
1	D	551	MLY	1	0
1	D	598	MLY	1	0
1	D	617	MLY	1	0
1	P	659	MLY	1	0
1	M	436	MLY	2	0
1	A	59	MLY	2	0
1	P	415	MLY	1	0
1	J	659	MLY	2	0
1	M	764	MLY	6	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	A	659	MLY	2	0
1	M	295	MLY	6	0
1	D	486	MLY	3	0
1	D	827	MLY	2	0
1	G	348	MLY	4	0
1	G	528	MLY	3	0
1	J	486	MLY	3	0
1	P	782	MLY	2	0
1	P	84	MLY	5	0
1	M	59	MLY	2	0
1	G	84	MLY	18	0
1	J	436	MLY	2	0
1	J	768	MLY	4	0
1	A	436	MLY	2	0
1	P	190	MLY	2	0
1	A	764	MLY	9	0
1	M	84	MLY	37	0
1	M	348	MLY	5	0
1	G	369	MLY	1	0
1	D	839	MLY	4	0
1	G	782	MLY	1	0
1	M	839	MLY	11	0
1	P	486	MLY	3	0
1	P	764	MLY	9	0
1	A	505	MLY	35	0
1	D	107	MLY	2	0
1	J	348	MLY	5	0
1	A	87	MLY	3	0
1	P	248	MLY	2	0
1	G	659	MLY	2	0
1	A	348	MLY	5	0
1	A	528	MLY	2	0
1	A	617	MLY	1	0
1	J	415	MLY	1	0
1	M	49	MLY	3	0
1	P	59	MLY	2	0
1	P	553	MLY	2	0
1	D	553	MLY	16	0
1	P	837	MLY	1	0
1	J	553	MLY	11	0
1	D	296	MLY	3	0
1	P	295	MLY	6	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	G	839	MLY	4	0
1	D	295	MLY	6	0
1	J	59	MLY	2	0
1	M	35	MLY	12	0
1	P	528	MLY	2	0
1	A	296	MLY	2	0
1	D	87	MLY	3	0
1	M	248	MLY	2	0
1	P	63	MLY	3	0
1	G	486	MLY	3	0
1	G	768	MLY	7	0
1	P	87	MLY	3	0
1	J	55	MLY	1	0
1	J	84	MLY	23	0
1	D	768	MLY	11	0
1	M	768	MLY	1	0
1	G	190	MLY	2	0
1	M	528	MLY	3	0
1	D	248	MLY	2	0
1	A	369	MLY	1	0
1	M	617	MLY	1	0
1	D	272	MLY	1	0
1	M	837	MLY	1	0
1	G	296	MLY	2	0
1	M	63	MLY	3	0
1	P	30	MLY	1	0
1	D	782	MLY	87	0
1	D	415	MLY	1	0
1	M	296	MLY	3	0
1	G	49	MLY	2	0
1	J	837	MLY	1	0
1	G	598	MLY	1	0
1	G	415	MLY	1	0
1	P	436	MLY	2	0
1	A	837	MLY	4	0
1	A	839	MLY	8	0
1	M	138	MLY	1	0
1	M	369	MLY	1	0
1	M	600	MLY	1	0
1	M	782	MLY	9	0
1	A	63	MLY	3	0
1	A	107	MLY	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	M	55	MLY	1	0
1	G	138	MLY	1	0
1	J	87	MLY	3	0
1	M	190	MLY	2	0
1	M	415	MLY	1	0
1	J	528	MLY	3	0
1	D	30	MLY	1	0
1	J	138	MLY	1	0
1	J	598	MLY	1	0
1	J	617	MLY	1	0
1	J	600	MLY	1	0
1	J	782	MLY	1	0
1	J	839	MLY	8	0
1	A	138	MLY	1	0
1	A	598	MLY	1	0
1	J	30	MLY	1	0
1	A	600	MLY	1	0
1	P	107	MLY	3	0
1	P	348	MLY	5	0
1	A	782	MLY	7	0
1	P	617	MLY	1	0
1	A	30	MLY	1	0
1	M	505	MLY	12	0
1	J	63	MLY	4	0
1	D	764	MLY	9	0
1	M	107	MLY	3	0
1	M	551	MLY	3	0
1	M	598	MLY	1	0
1	A	415	MLY	1	0
1	G	59	MLY	3	0
1	P	296	MLY	3	0
1	G	553	MLY	27	0
1	G	837	MLY	1	0
1	D	528	MLY	3	0
1	D	59	MLY	2	0
1	G	505	MLY	1	0
1	D	837	MLY	1	0
1	P	55	MLY	1	0
1	G	248	MLY	2	0
1	G	63	MLY	4	0
1	G	55	MLY	1	0
1	G	87	MLY	3	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	D	348	MLY	6	0
1	D	63	MLY	3	0
1	D	436	MLY	2	0
1	D	55	MLY	1	0
1	J	107	MLY	3	0
1	M	87	MLY	3	0
1	A	551	MLY	2	0
1	D	600	MLY	1	0
1	G	436	MLY	2	0
1	M	486	MLY	3	0
1	P	272	MLY	1	0
1	J	49	MLY	2	0
1	A	49	MLY	3	0
1	G	600	MLY	1	0
1	D	138	MLY	1	0
1	M	272	MLY	1	0
1	D	659	MLY	2	0
1	G	30	MLY	1	0
1	J	505	MLY	9	0
1	M	553	MLY	27	0
1	G	295	MLY	5	0
1	M	30	MLY	1	0
1	P	598	MLY	1	0
1	P	839	MLY	12	0
1	J	764	MLY	2	0
1	A	486	MLY	3	0
1	P	49	MLY	3	0
1	D	49	MLY	3	0
1	D	190	MLY	2	0

5.5 Carbohydrates [i](#)

There are no monosaccharides 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

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	M	7
1	P	6
1	D	4
1	A	4
1	J	3
1	G	3
3	C	1
3	F	1
3	I	1
3	L	1
3	O	1
3	R	1
2	B	1
2	E	1
2	H	1
2	K	1
2	N	1
2	Q	1

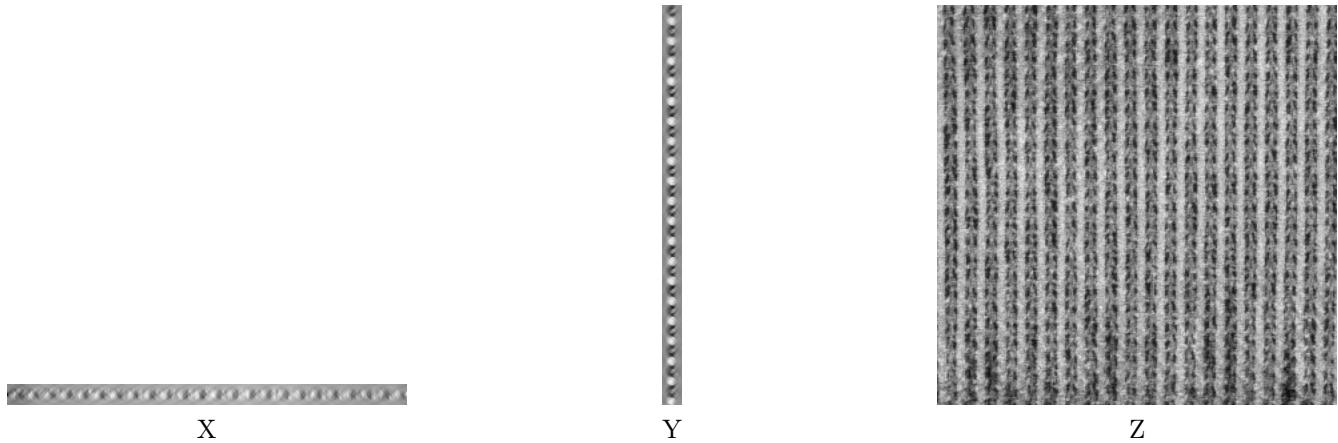
The worst 5 of 39 chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	J	769:ALA	C	770:GLY	N	5.54
1	D	769:ALA	C	770:GLY	N	5.18
1	G	769:ALA	C	770:GLY	N	4.67
1	A	709:LYS	C	710:GLY	N	3.39
1	D	709:LYS	C	710:GLY	N	3.25

6 Tomogram visualisation [i](#)

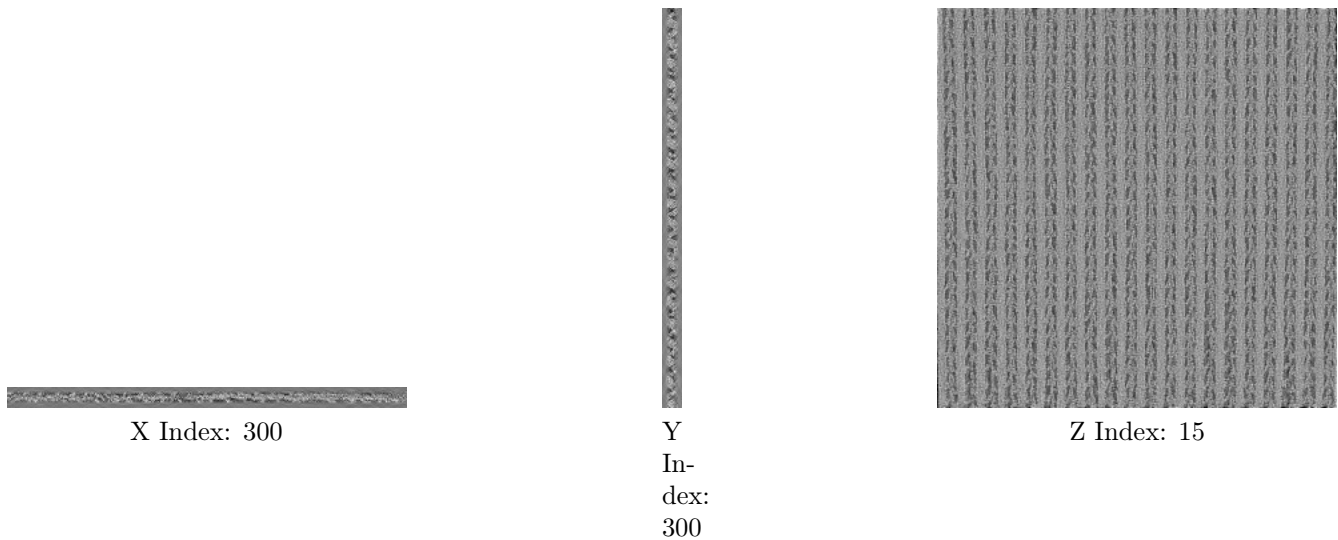
This section contains visualisations of the EMDB entry EMD-1001. These allow visual inspection of the internal detail of the tomogram and identification of artifacts.

6.1 Orthogonal projections [i](#)



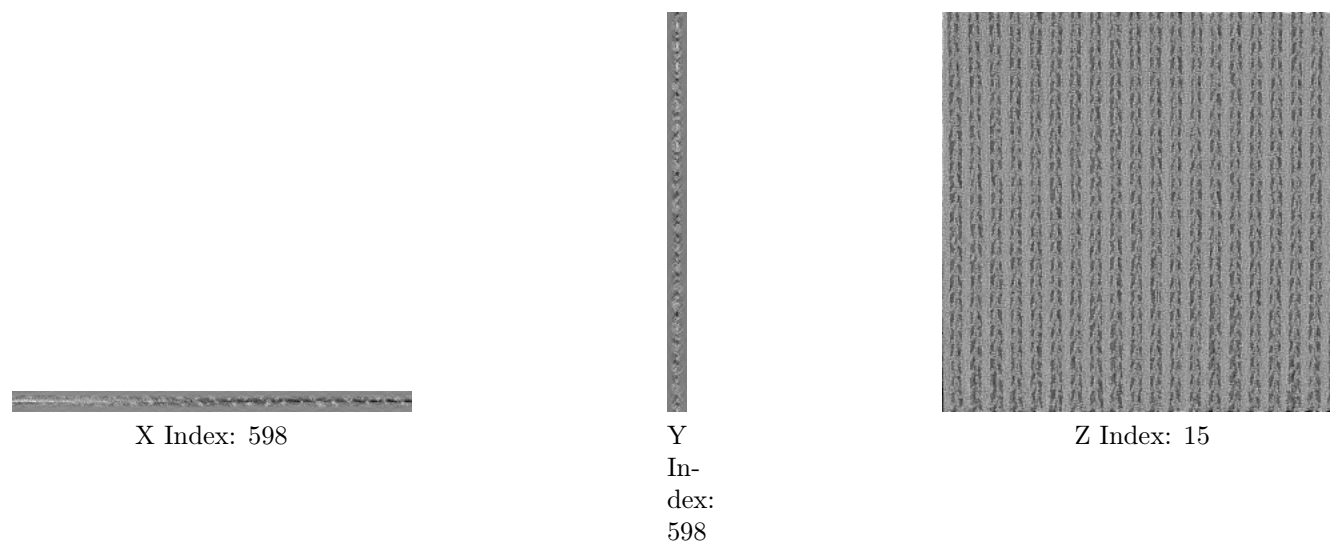
The images above show the tomogram projected in three orthogonal directions.

6.2 Central slices [i](#)



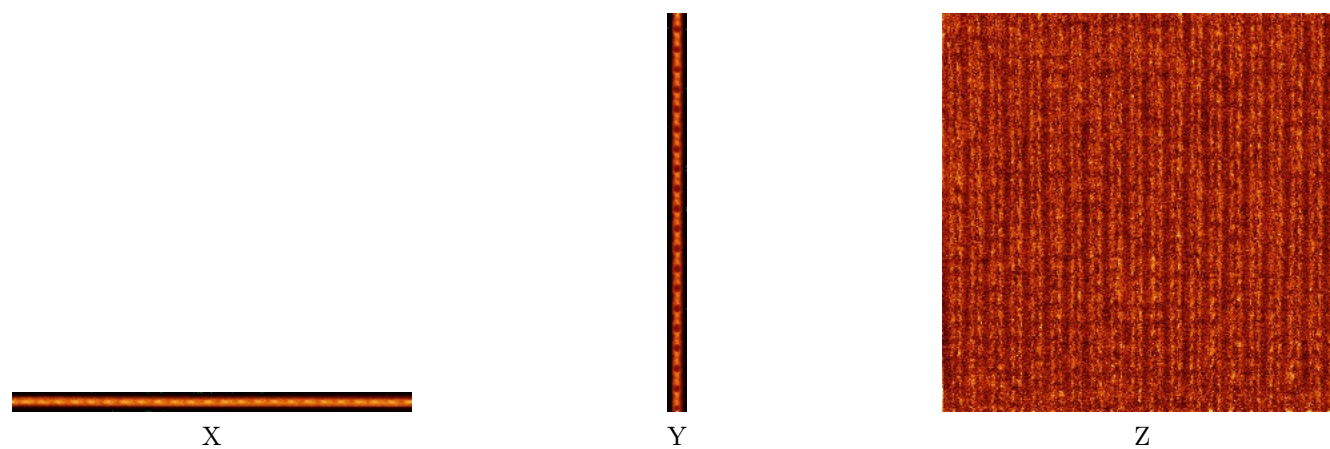
The images above show central slices of the tomogram in three orthogonal directions.

6.3 Largest variance slices [i](#)



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

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



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

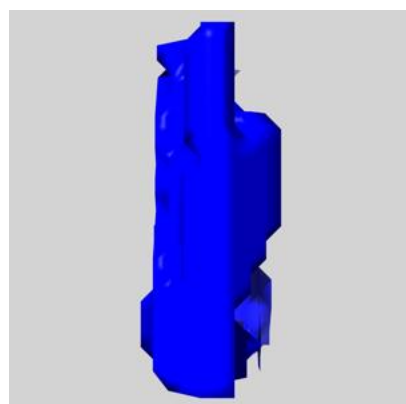
6.5 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

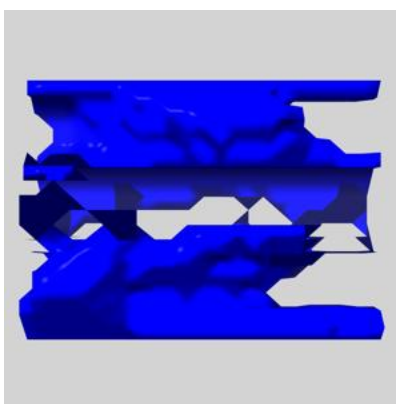
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

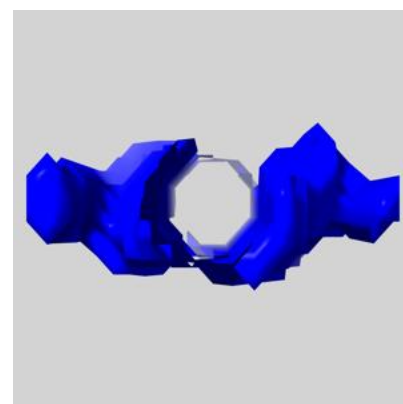
6.5.1 emd_1001_msk_25.map [i](#)



X

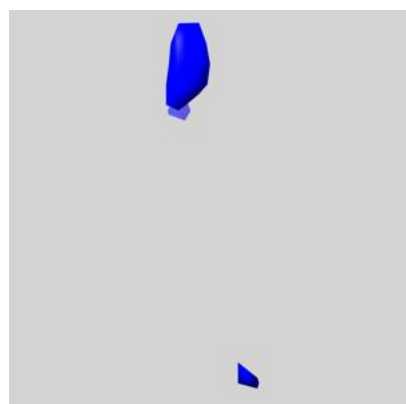


Y

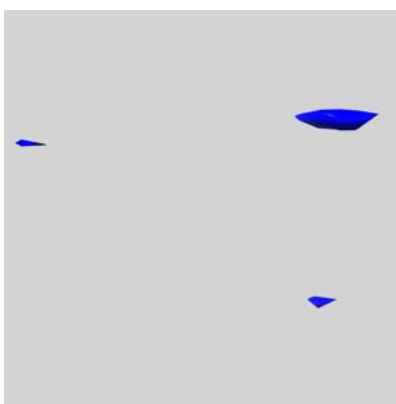


Z

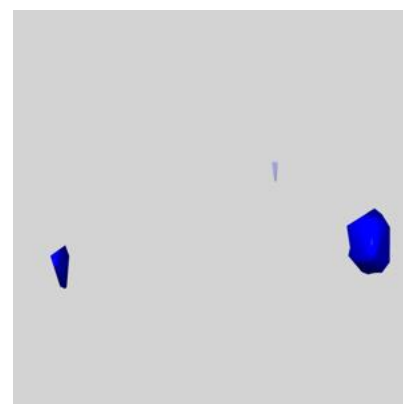
6.5.2 emd_1001_msk_24.map [i](#)



X

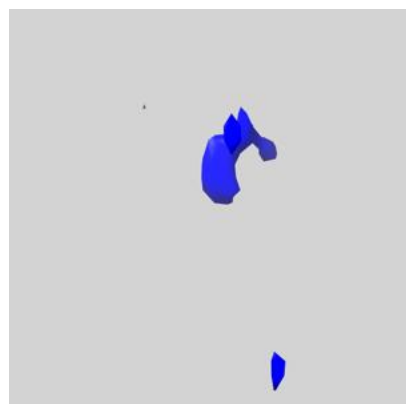


Y

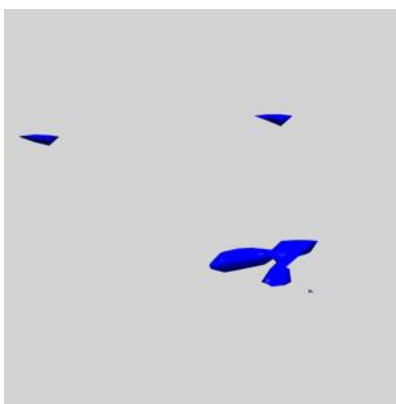


Z

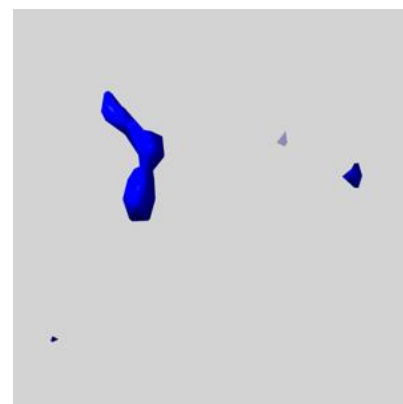
6.5.3 emd_1001_msk_23.map [i](#)



X

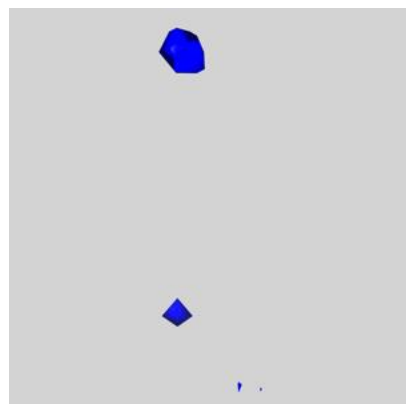


Y

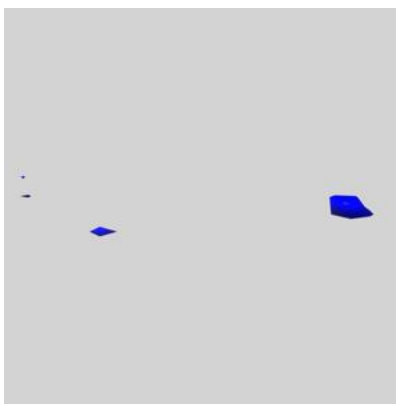


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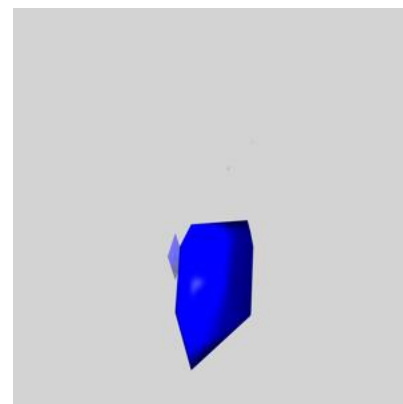
6.5.4 emd_1001_msk_22.map [i](#)



X

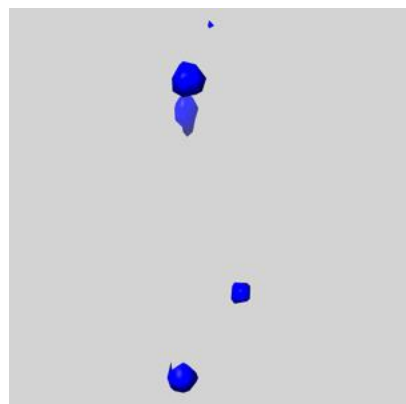


Y

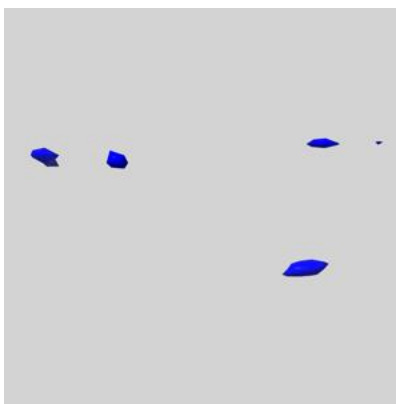


Z

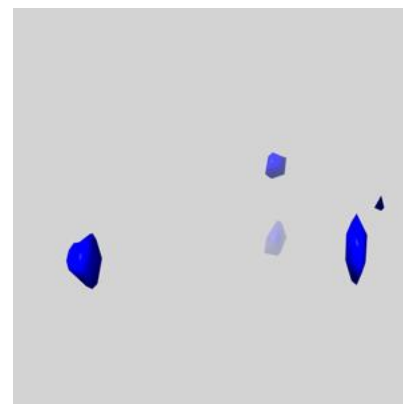
6.5.5 emd_1001_msk_21.map [i](#)



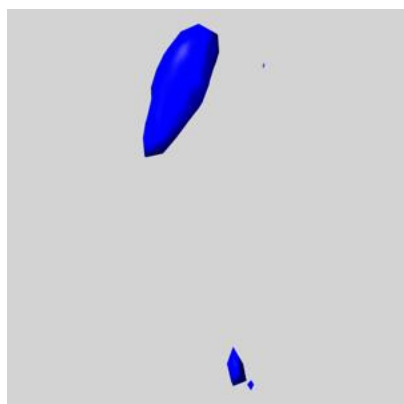
X



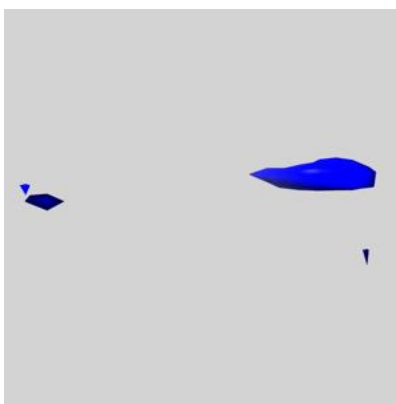
Y



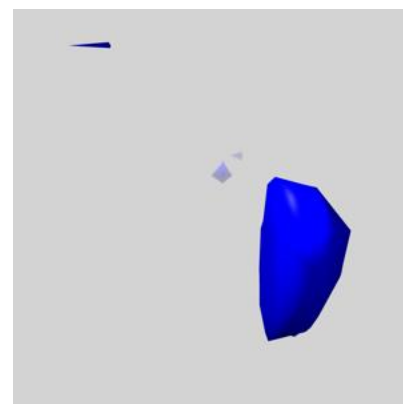
Z

6.5.6 emd_1001_msk_20.map [i](#)

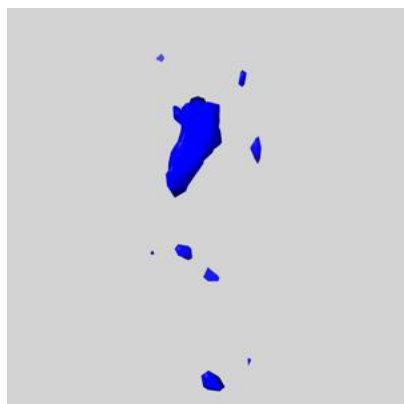
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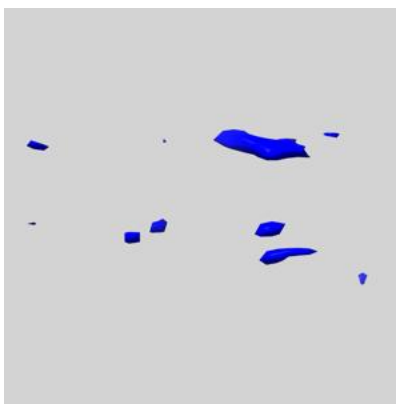
Y



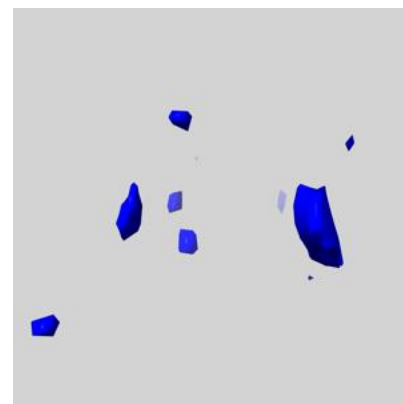
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6.5.7 emd_1001_msk_19.map [i](#)

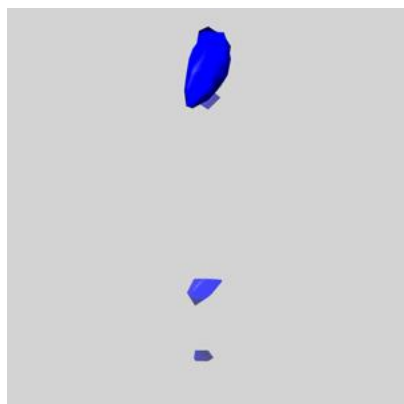
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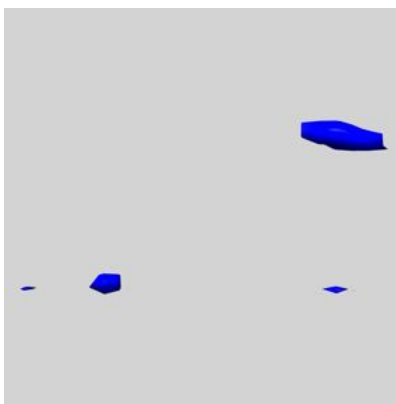
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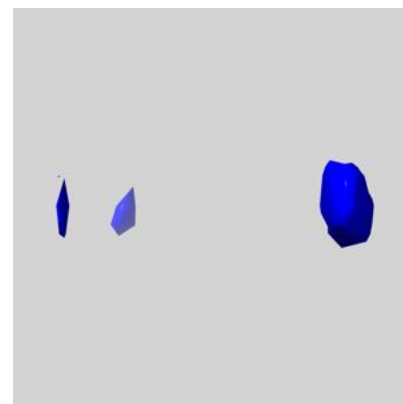
Z

6.5.8 emd_1001_msk_18.map [i](#)

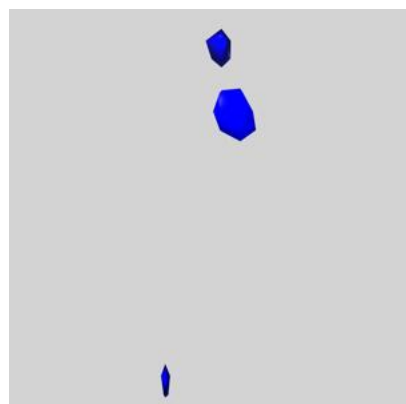
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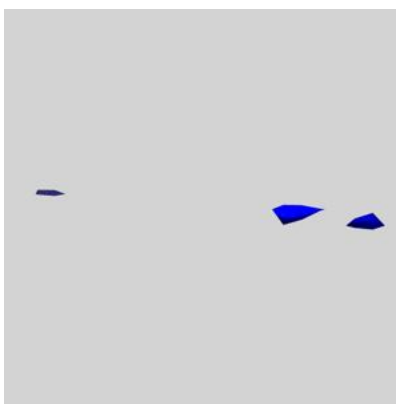
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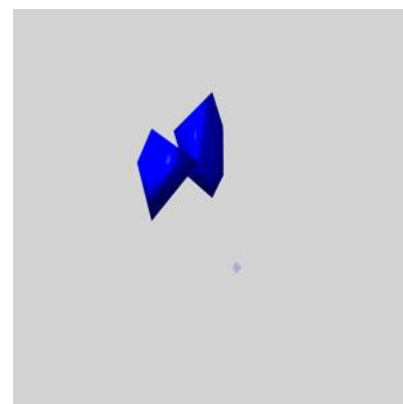
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6.5.9 emd_1001_msk_17.map [i](#)

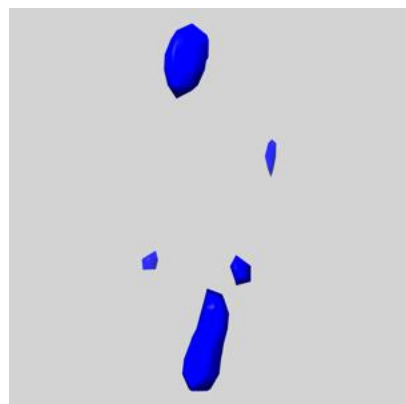
X



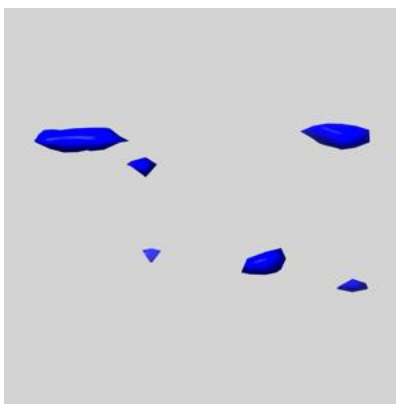
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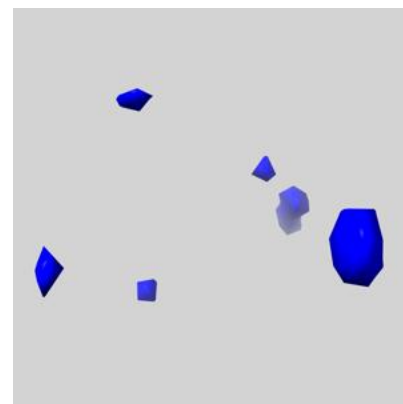
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6.5.10 emd_1001_msk_16.map [i](#)

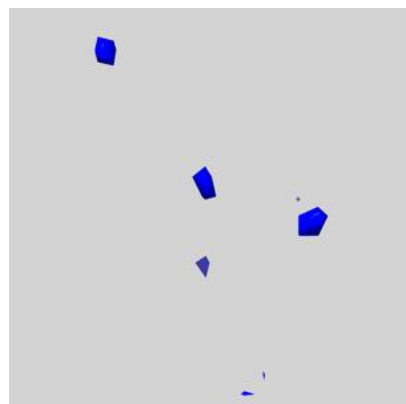
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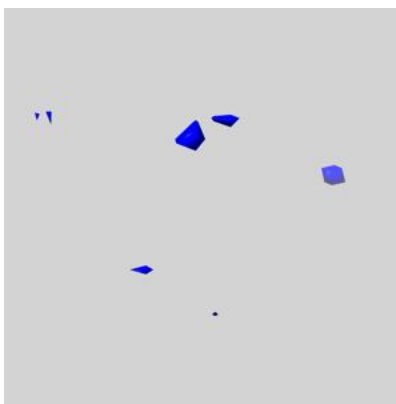
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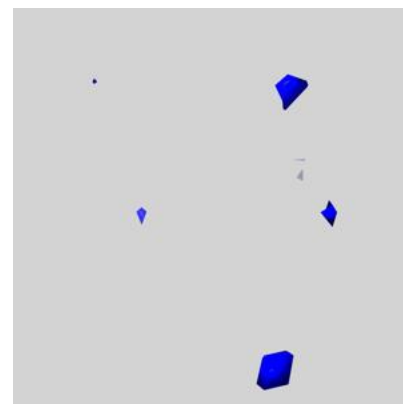
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6.5.11 emd_1001_msk_15.map [i](#)

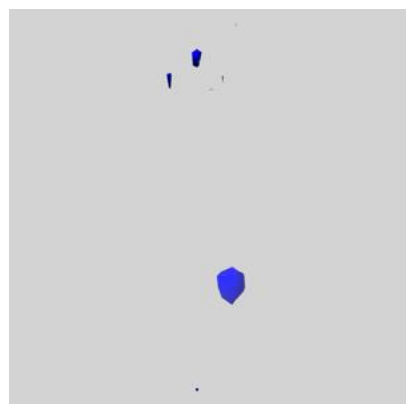
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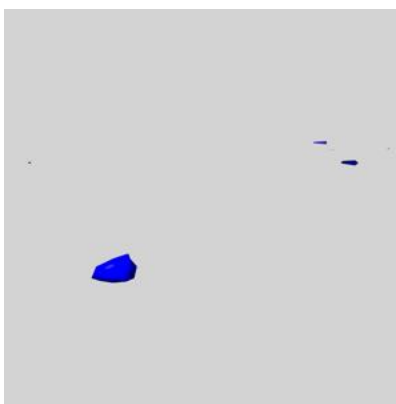
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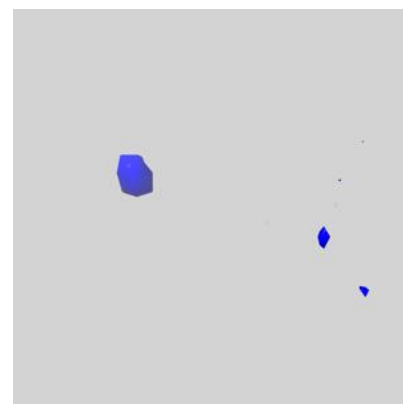
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6.5.12 emd_1001_msk_14.map [i](#)

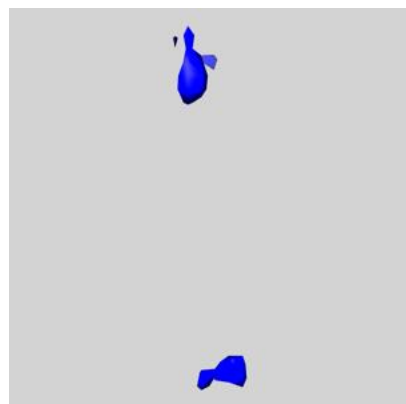
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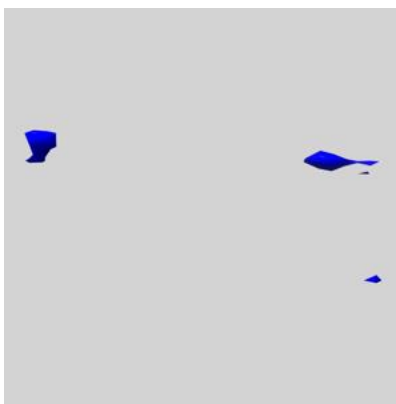
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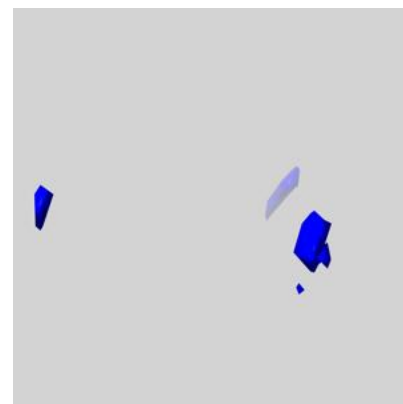
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6.5.13 emd_1001_msk_13.map [i](#)

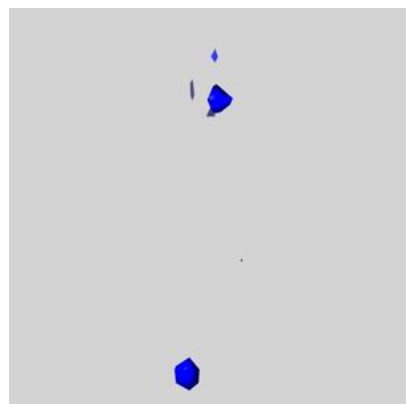
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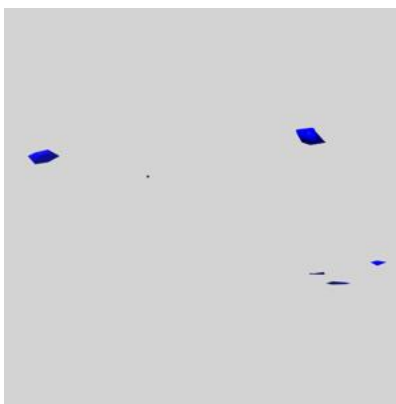
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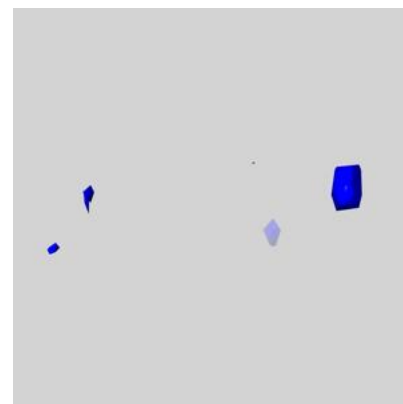
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6.5.14 emd_1001_msk_12.map [i](#)

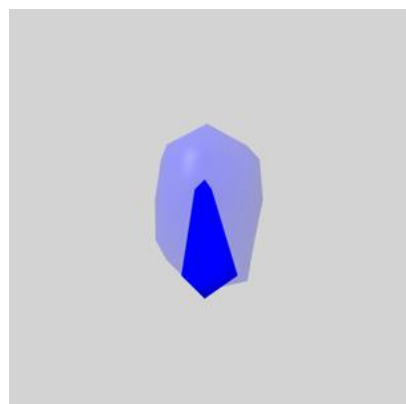
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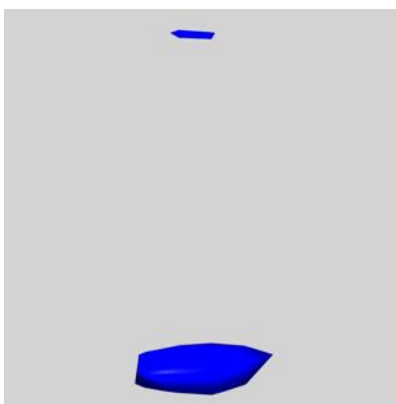
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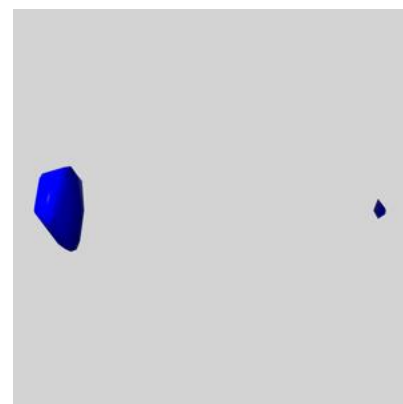
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6.5.15 emd_1001_msk_11.map [i](#)

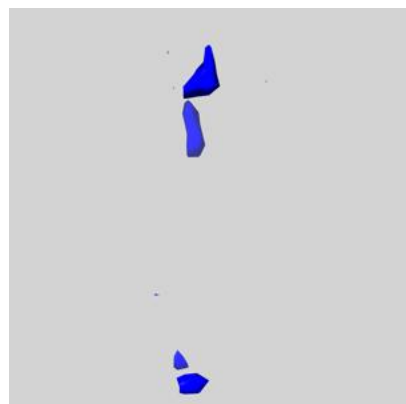
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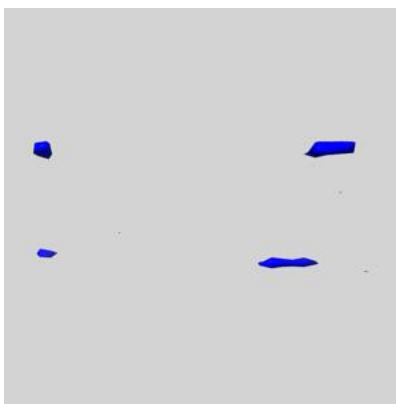
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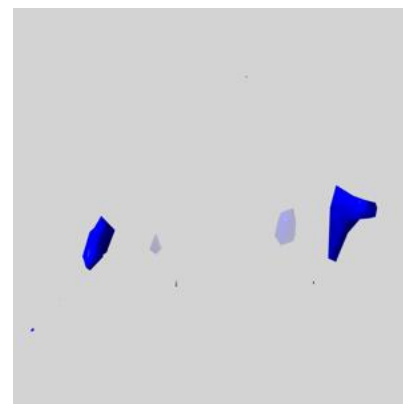
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6.5.16 emd_1001_msk_10.map [i](#)

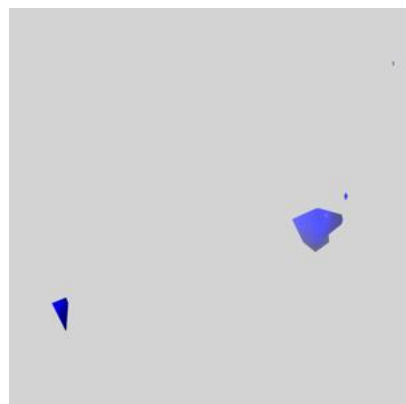
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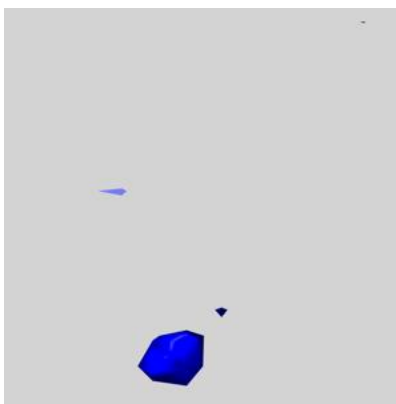
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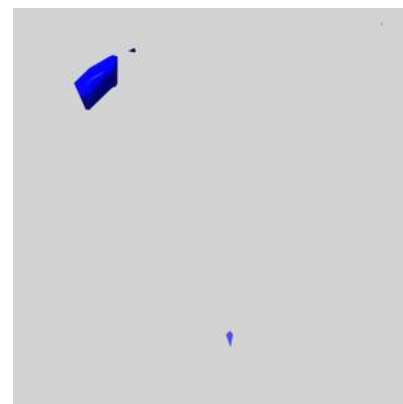
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6.5.17 emd_1001_msk_9.map [i](#)

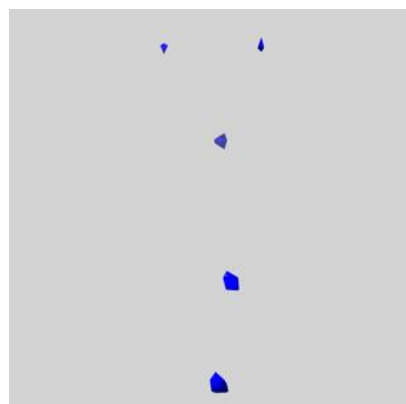
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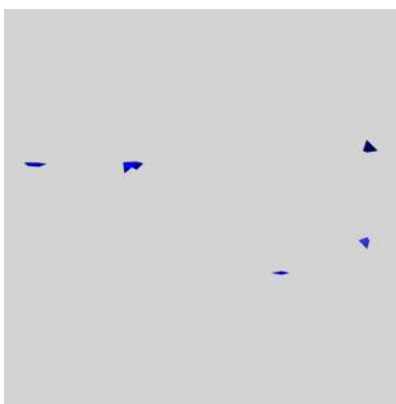
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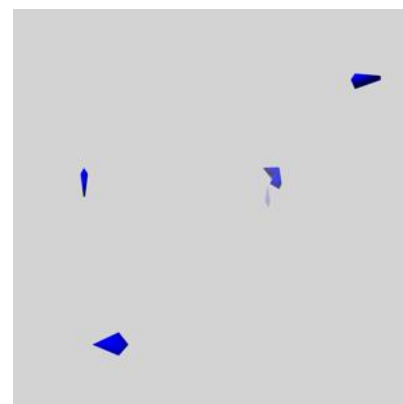
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6.5.18 emd_1001_msk_8.map [i](#)

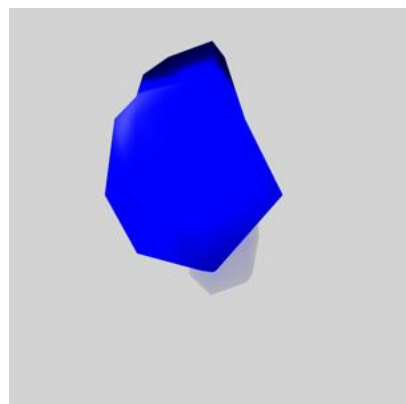
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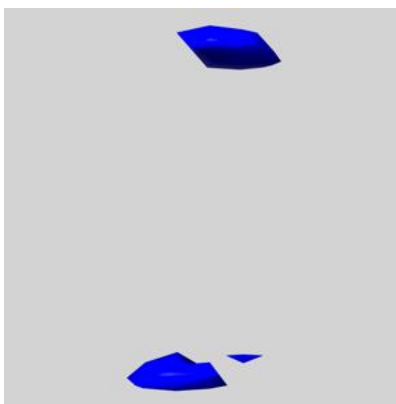
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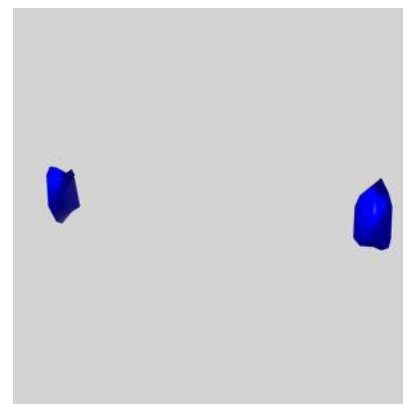
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6.5.19 emd_1001_msk_7.map [i](#)

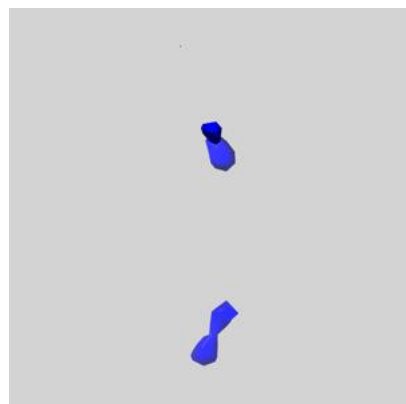
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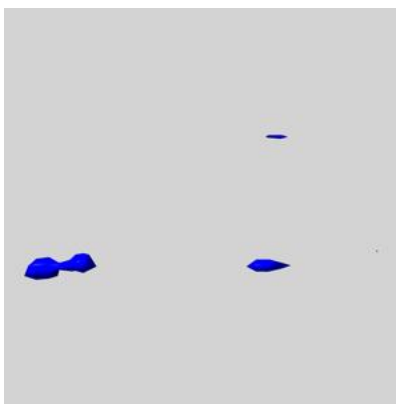
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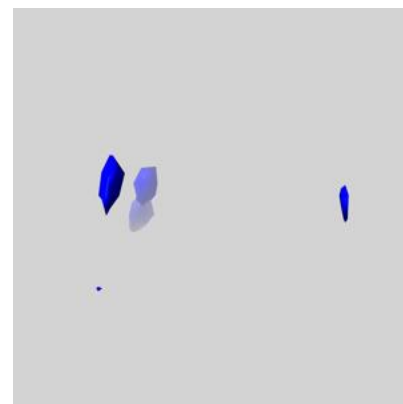
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6.5.20 emd_1001_msk_6.map [i](#)

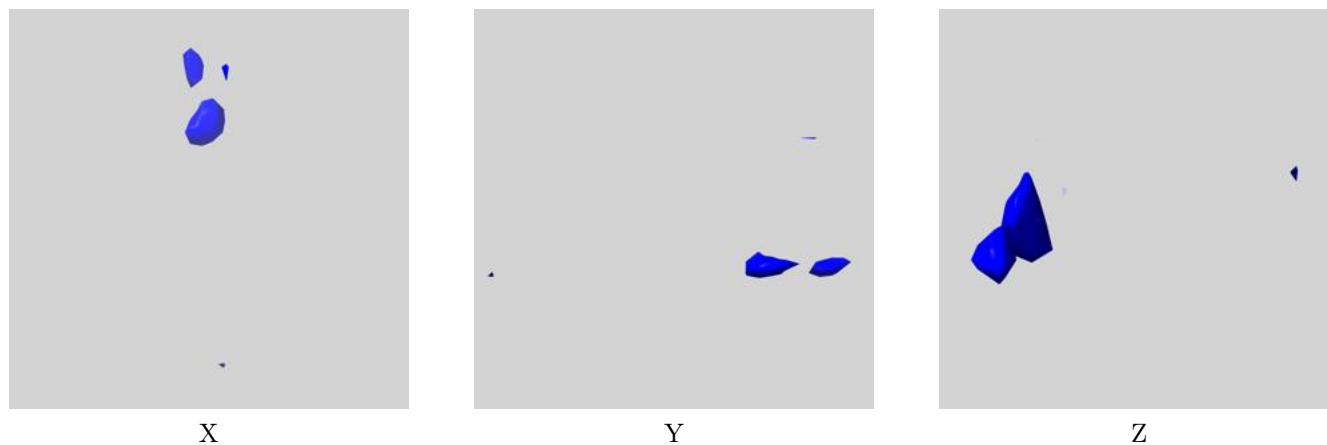
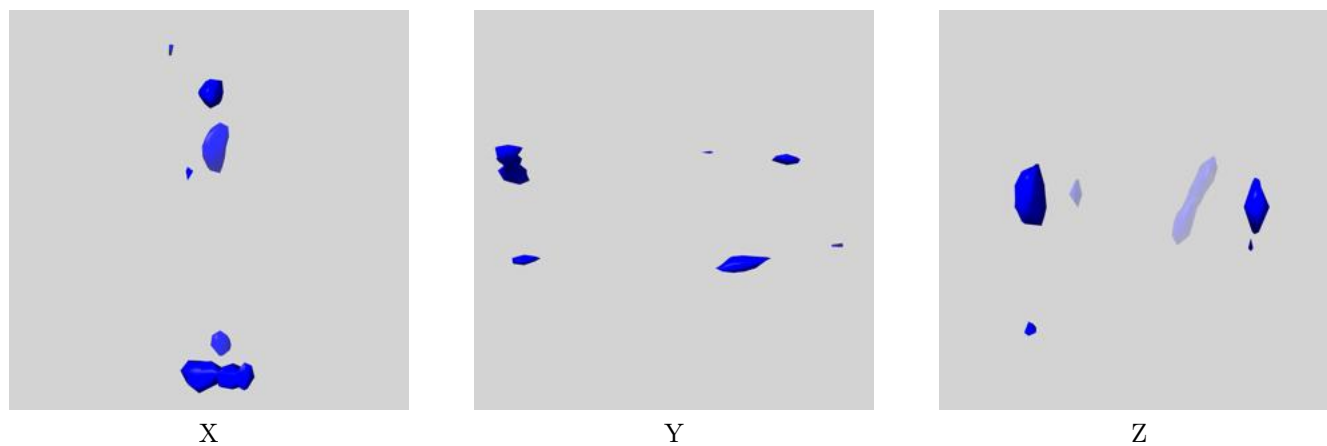
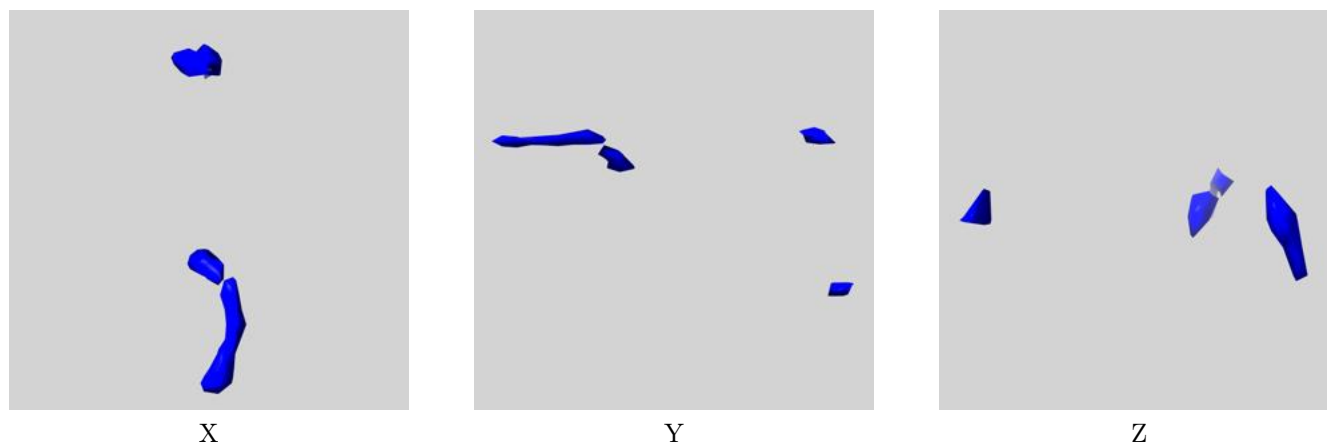
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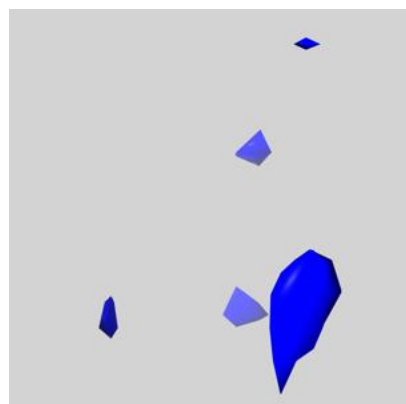


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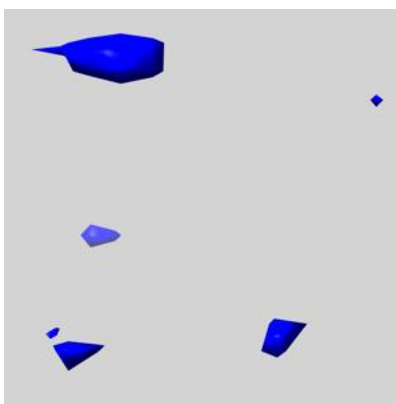


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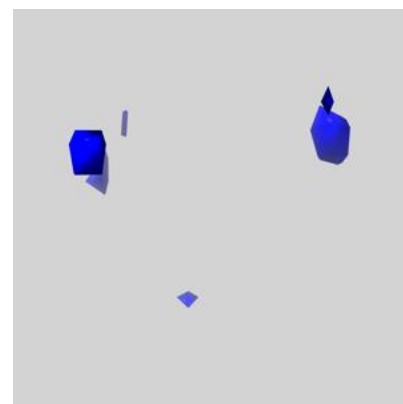
6.5.21 emd_1001_msk_5.map [i](#)6.5.22 emd_1001_msk_4.map [i](#)6.5.23 emd_1001_msk_3.map [i](#)

6.5.24 emd_1001_msk_2.map [i](#)

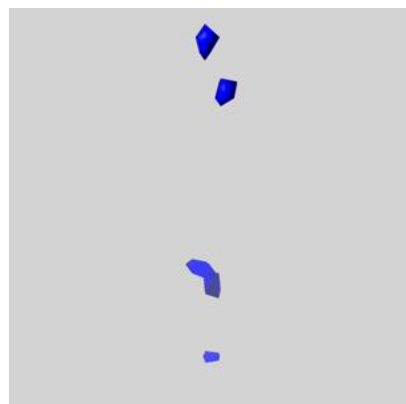
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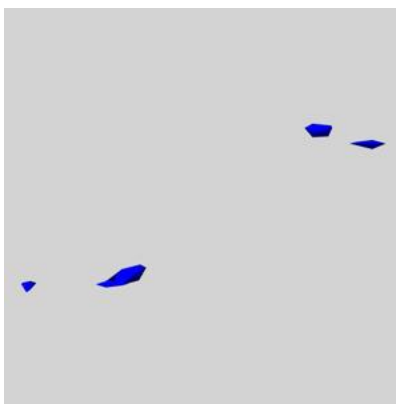
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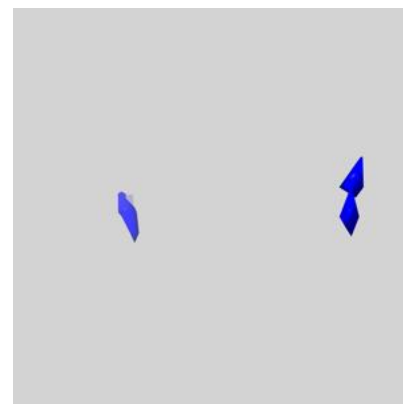
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6.5.25 emd_1001_msk_1.map [i](#)

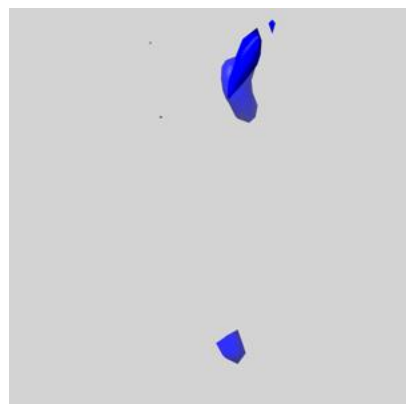
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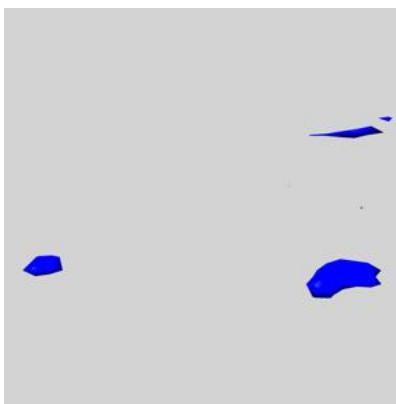
Y



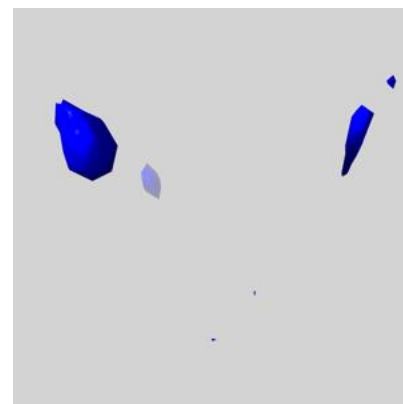
Z

6.5.26 emd_1001_msk_26.map [i](#)

X



Y

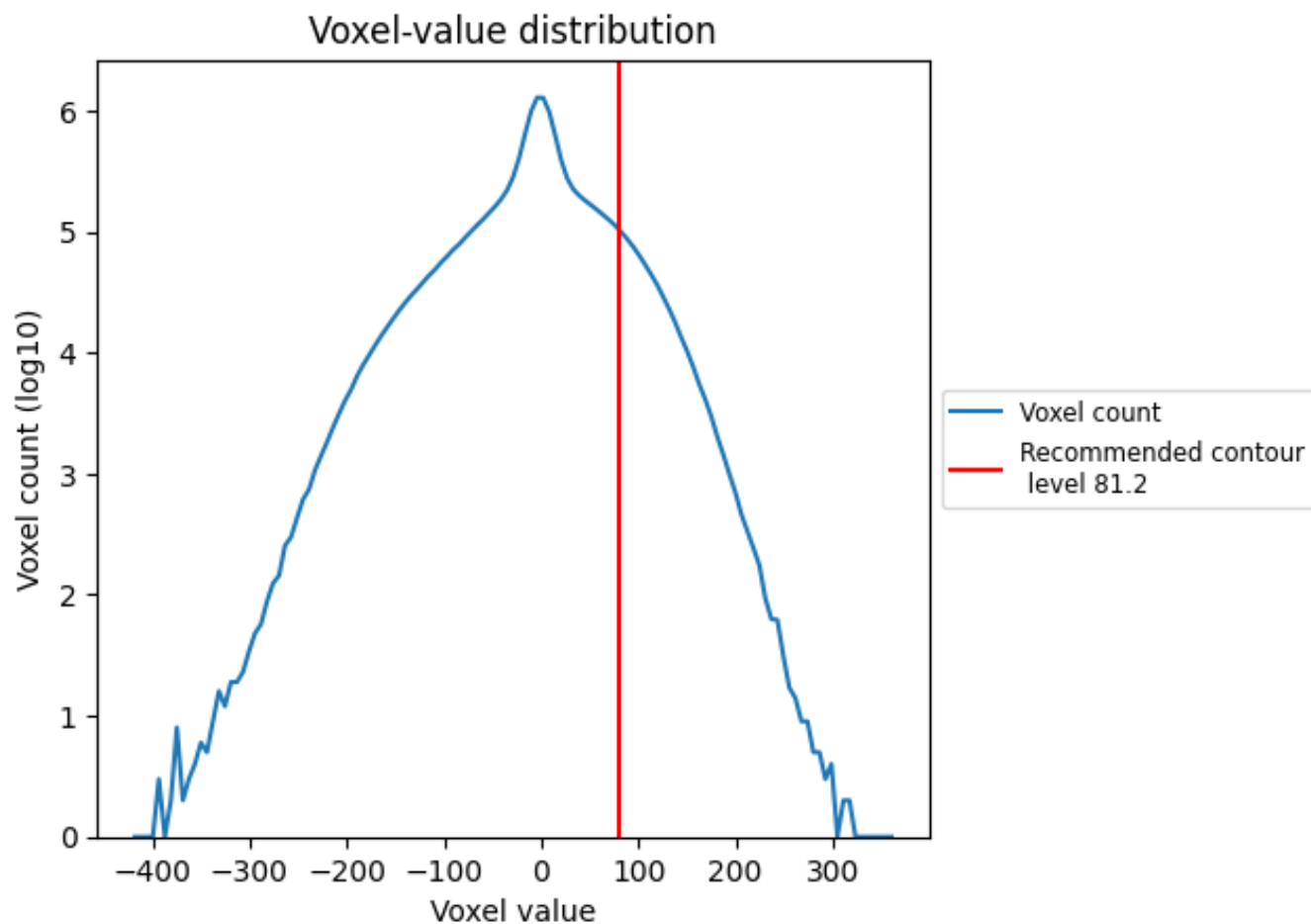


Z

7 Tomogram analysis [i](#)

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

7.1 Voxel-value distribution [i](#)



The voxel-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic.

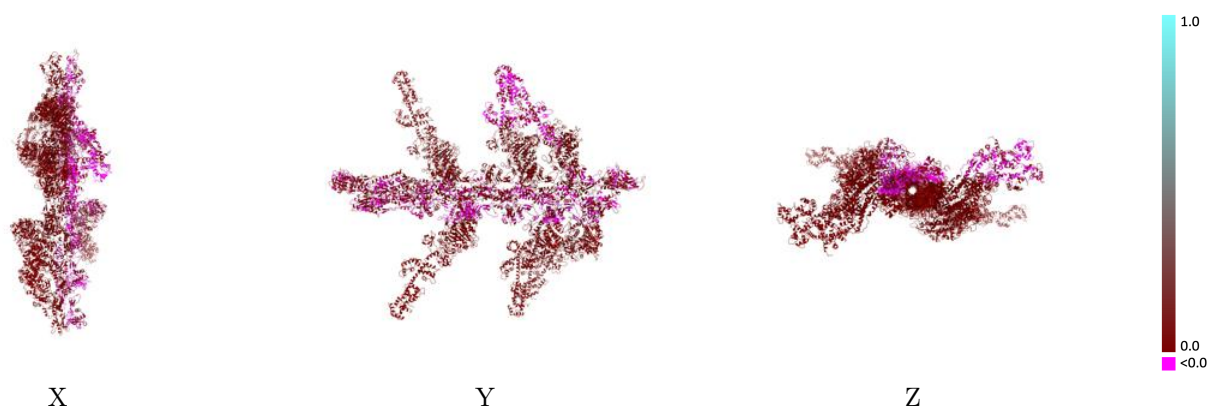
8 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-1001 and PDB model 1O1D. Per-residue inclusion information can be found in section 3 on page 7.

8.1 Map-model overlay [i](#)

This section was not generated.

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

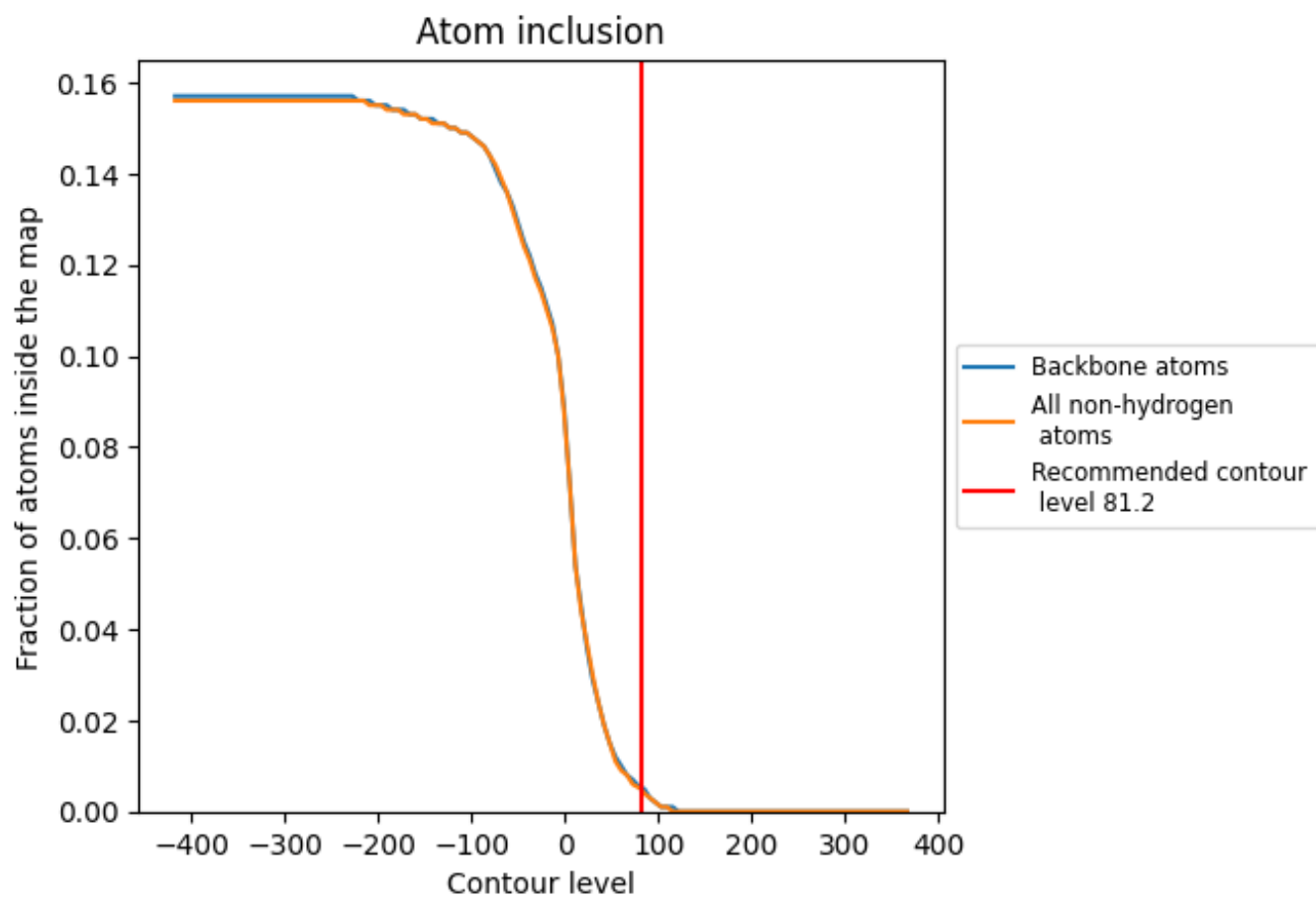


The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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

This section was not generated.



































































8.4 Atom inclusion [i](#)



At the recommended contour level, 0% of all backbone atoms, 0% of all non-hydrogen atoms, are inside the map.

8.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (81.2) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.0050	 -0.0000
0	 0.0000	 -0.0000
1	 0.0150	 0.0200
2	 0.0000	 -0.0080
3	 0.0000	 -0.0050
4	 0.0000	 -0.0020
5	 0.0000	 0.0110
7	 0.0000	 0.0000
8	 0.0000	 -0.0050
9	 0.0000	 -0.0000
A	 0.0000	 -0.0020
B	 0.0000	 0.0000
C	 0.0000	 0.0000
D	 0.0000	 0.0080
E	 0.0000	 -0.0190
F	 0.1160	 0.0070
G	 0.0000	 -0.0030
H	 0.0000	 0.0000
I	 0.0000	 0.0000
J	 0.0000	 -0.0010
K	 0.0150	 0.0060
L	 0.0000	 -0.0230
M	 0.0000	 0.0030
N	 0.0000	 0.0000
O	 0.0000	 0.0000
P	 0.0000	 0.0000
Q	 0.0000	 0.0000
R	 0.0000	 0.0000
V	 0.0000	 -0.0140
W	 0.0000	 0.0000
X	 0.0690	 -0.0040
Y	 0.0000	 0.0000
Z	 0.0190	 0.0020

