



Full wwPDB EM Validation Report ⓘ

Nov 10, 2024 – 12:26 pm GMT

PDB ID : 7O7N
EMDB ID : EMD-12750
Title : (h-alpha2M)4 semiactivated I state
Authors : Luque, D.; Goulas, T.; Mata, C.P.; Mendes, S.R.; Gomis-Ruth, F.X.; Caston, J.R.
Deposited on : 2021-04-13
Resolution : 7.30 Å(reported)

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<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.dev113
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.39

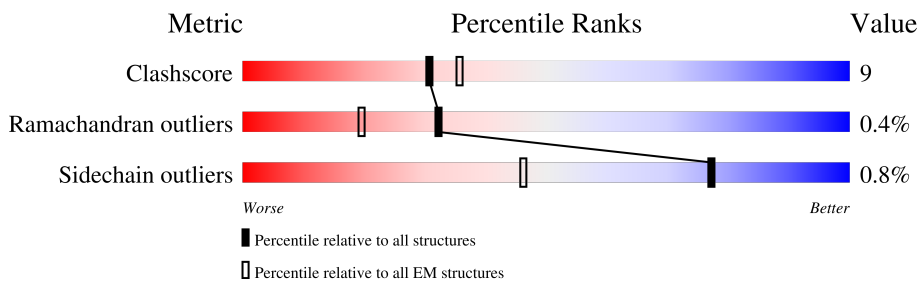
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 7.30 Å.

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



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

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 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	1474	
1	B	1474	
1	C	1474	
1	D	1474	
2	E	2	
2	F	2	
2	G	2	
2	H	2	

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 criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	NAG	B	2005	X	-	-	-
3	NAG	D	2005	X	-	-	-

2 Entry composition [i](#)

There are 3 unique types of molecules in this entry. The entry contains 42372 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 Alpha-2-macroglobulin.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1275	9944	6322	1670	1909	43	0	0
1	B	1410	11004	6999	1840	2117	48	0	0
1	C	1275	9944	6322	1670	1909	43	0	0
1	D	1410	11004	6999	1840	2117	48	0	0

- Molecule 2 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.



Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
2	E	2	28	16	2	10	0	0
2	F	2	28	16	2	10	0	0
2	G	2	28	16	2	10	0	0
2	H	2	28	16	2	10	0	0

- Molecule 3 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).

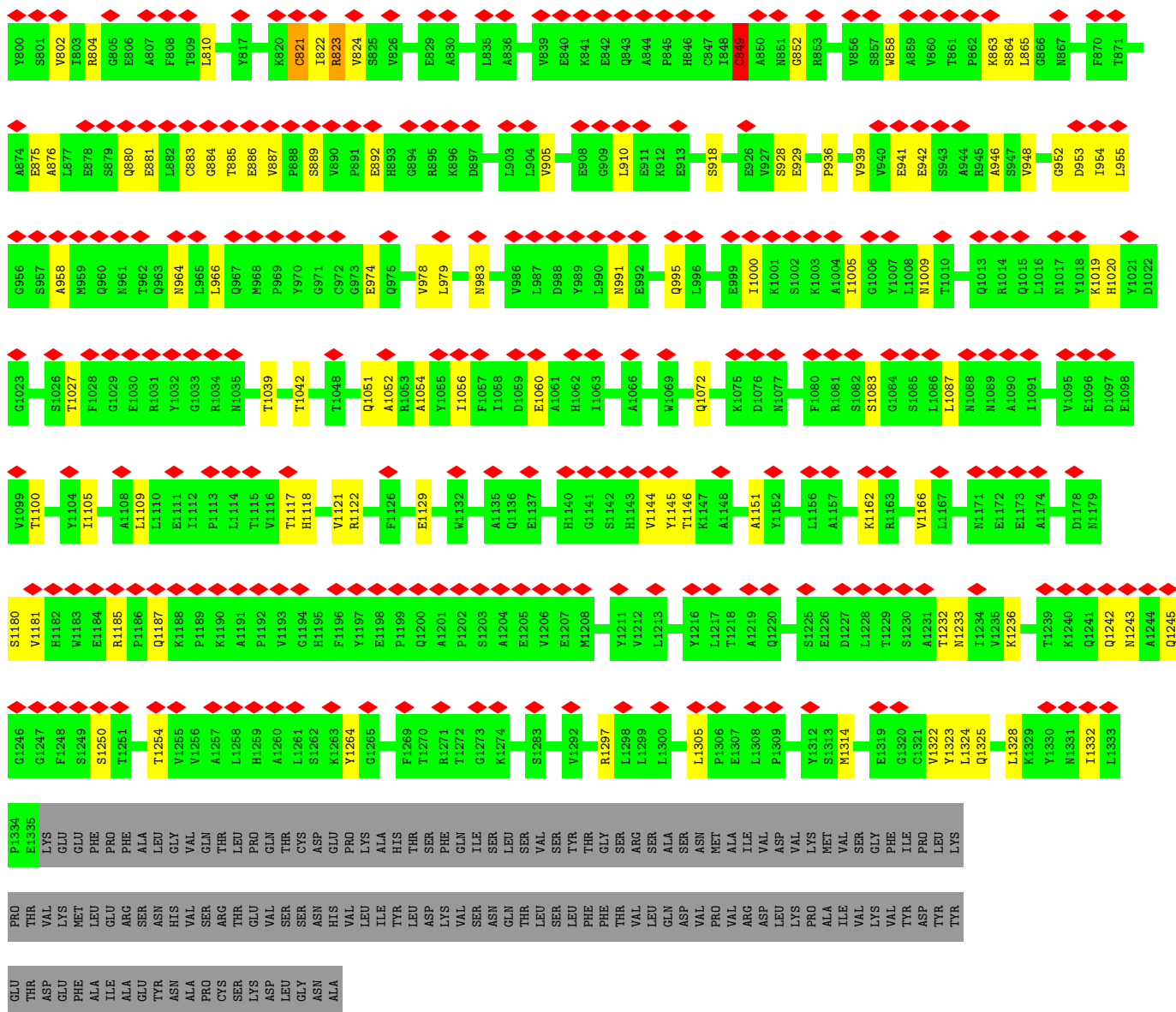


Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
3	A	1	14	8	1	5	0
3	A	1	14	8	1	5	0
3	A	1	14	8	1	5	0
3	A	1	14	8	1	5	0
3	A	1	14	8	1	5	0
3	B	1	14	8	1	5	0
3	B	1	14	8	1	5	0
3	B	1	14	8	1	5	0
3	B	1	14	8	1	5	0
3	B	1	14	8	1	5	0
3	B	1	14	8	1	5	0
3	B	1	14	8	1	5	0
3	B	1	14	8	1	5	0
3	B	1	14	8	1	5	0
3	C	1	14	8	1	5	0

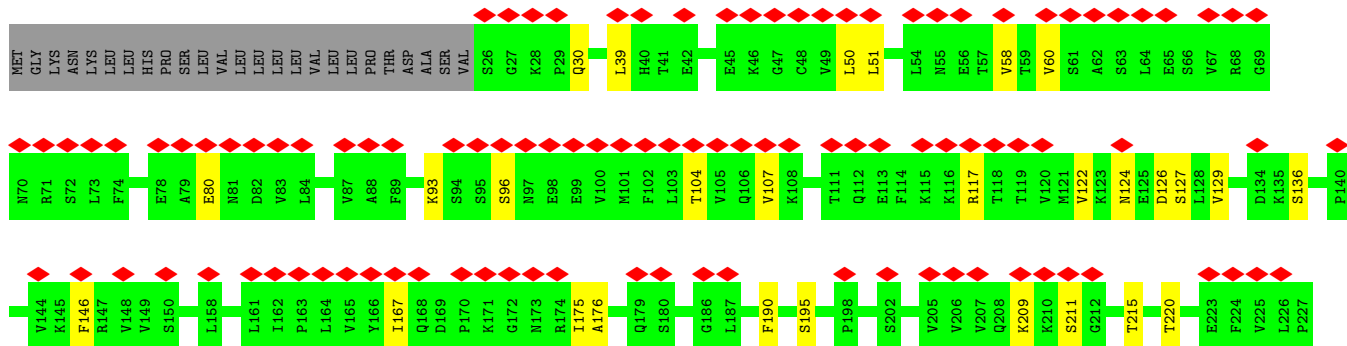
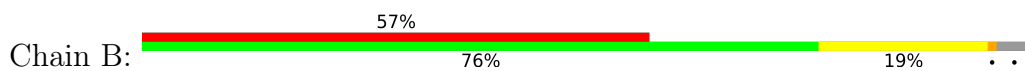
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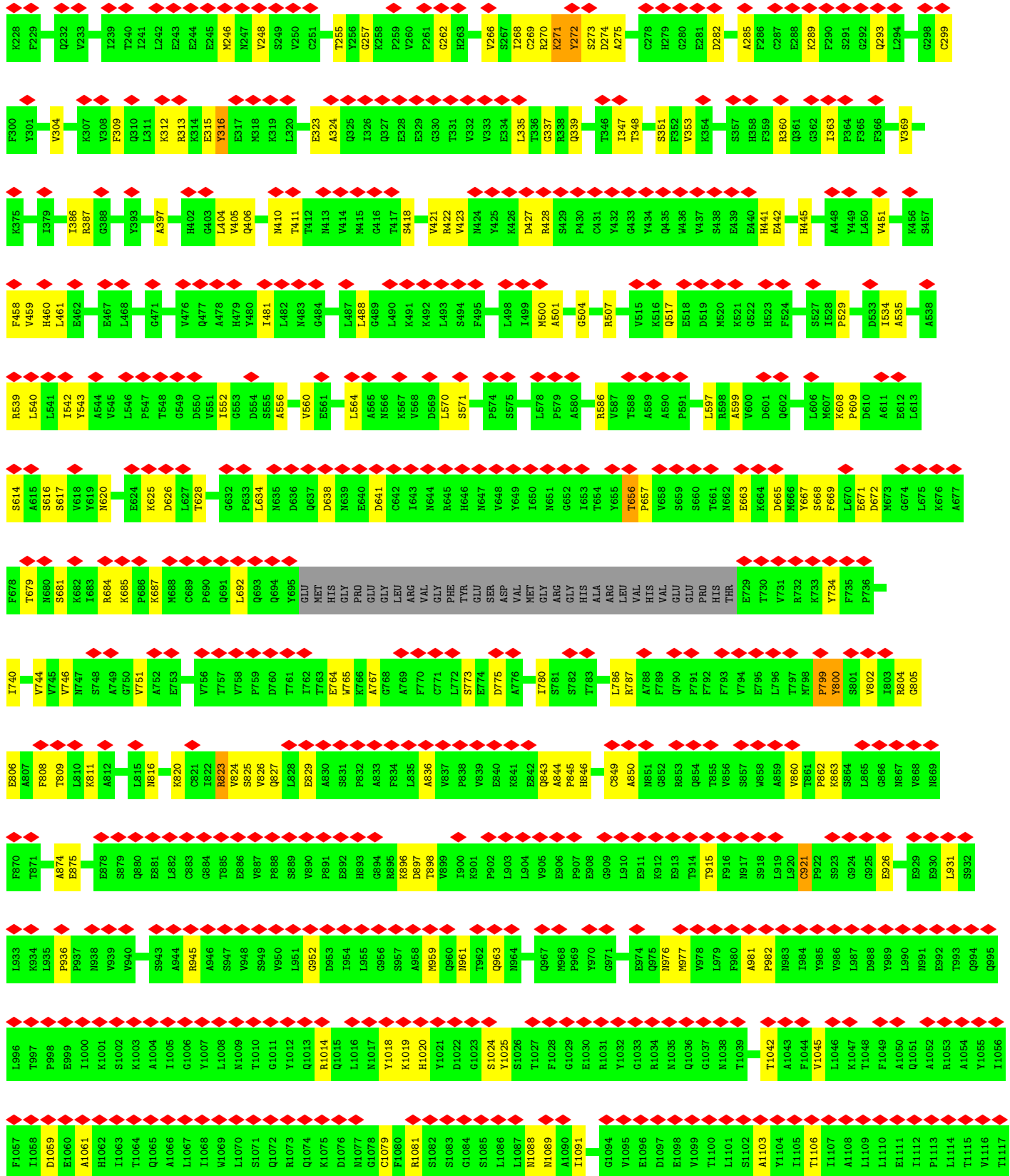
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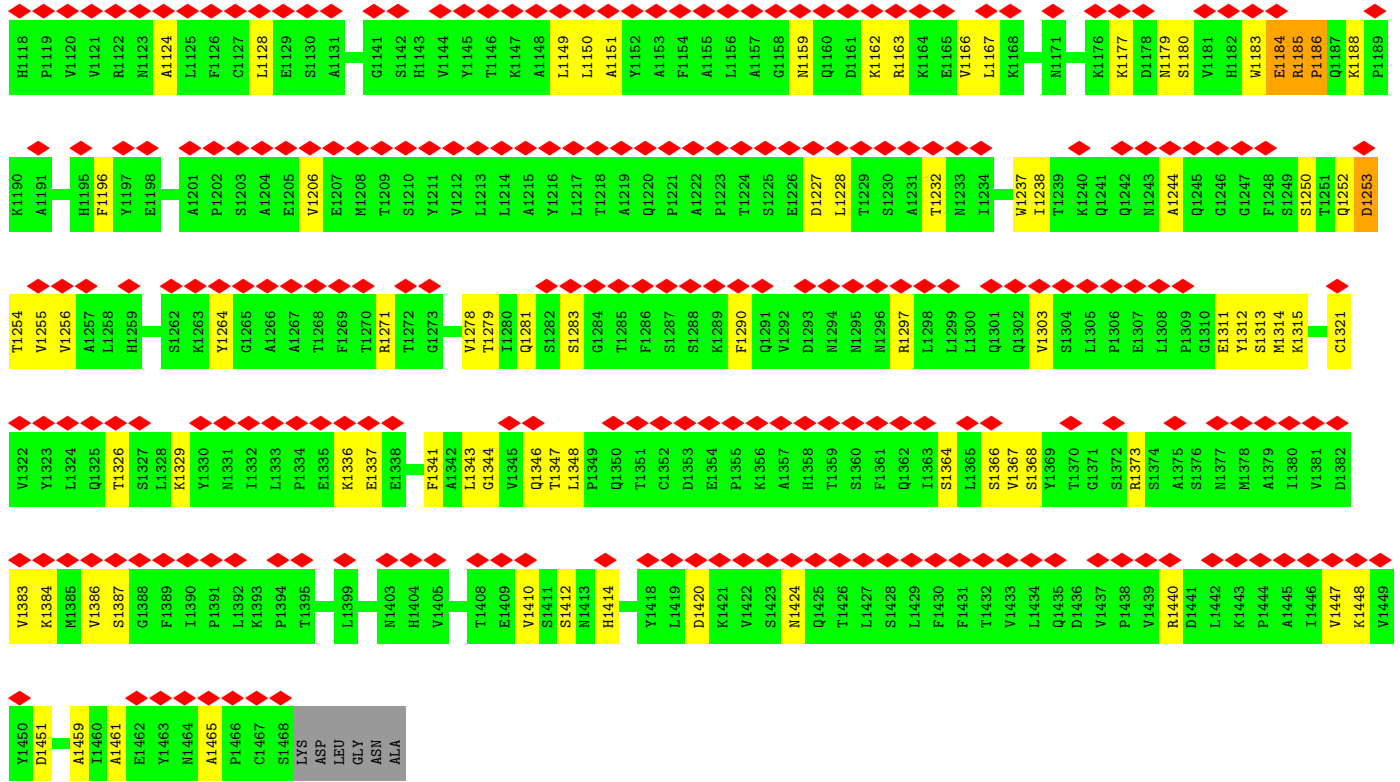
Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
3	C	1	Total 14	8	1	5	0
3	C	1	Total 14	8	1	5	0
3	C	1	Total 14	8	1	5	0
3	C	1	Total 14	8	1	5	0
3	D	1	Total 14	8	1	5	0
3	D	1	Total 14	8	1	5	0
3	D	1	Total 14	8	1	5	0
3	D	1	Total 14	8	1	5	0
3	D	1	Total 14	8	1	5	0
3	D	1	Total 14	8	1	5	0
3	D	1	Total 14	8	1	5	0
3	D	1	Total 14	8	1	5	0
3	D	1	Total 14	8	1	5	0
3	D	1	Total 14	8	1	5	0



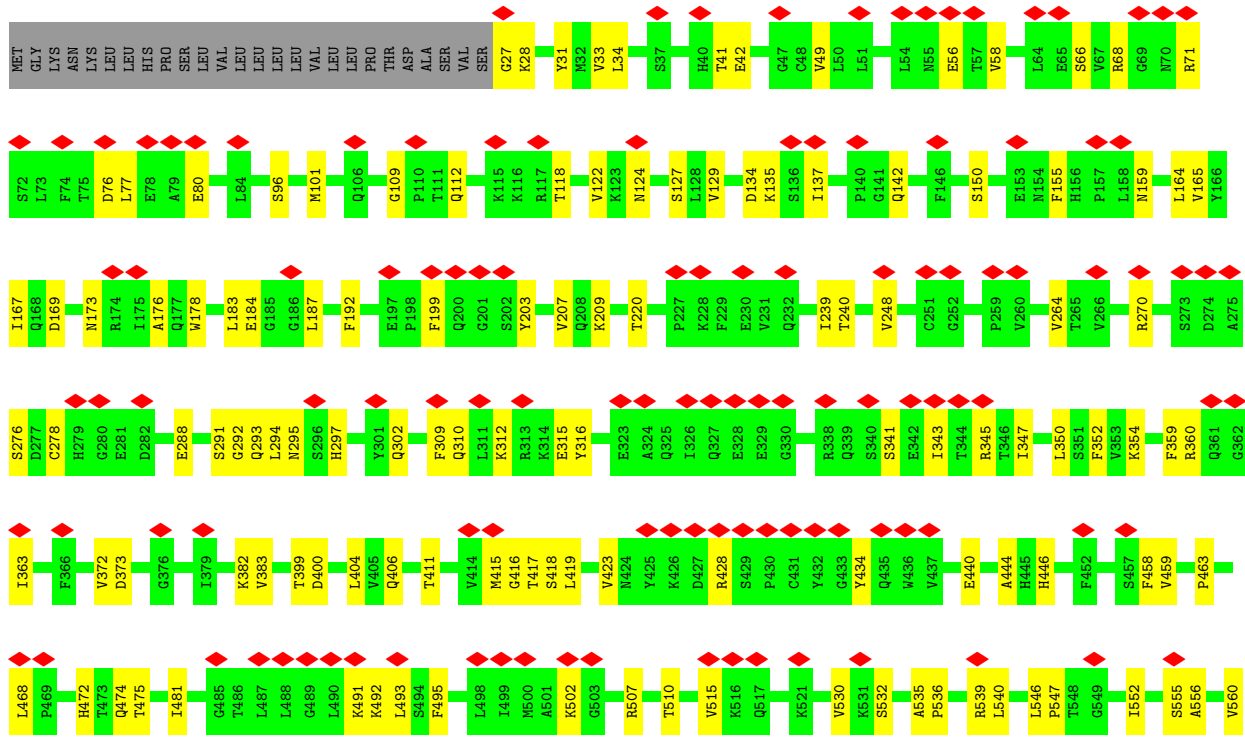
• Molecule 1: Alpha-2-macroglobulin



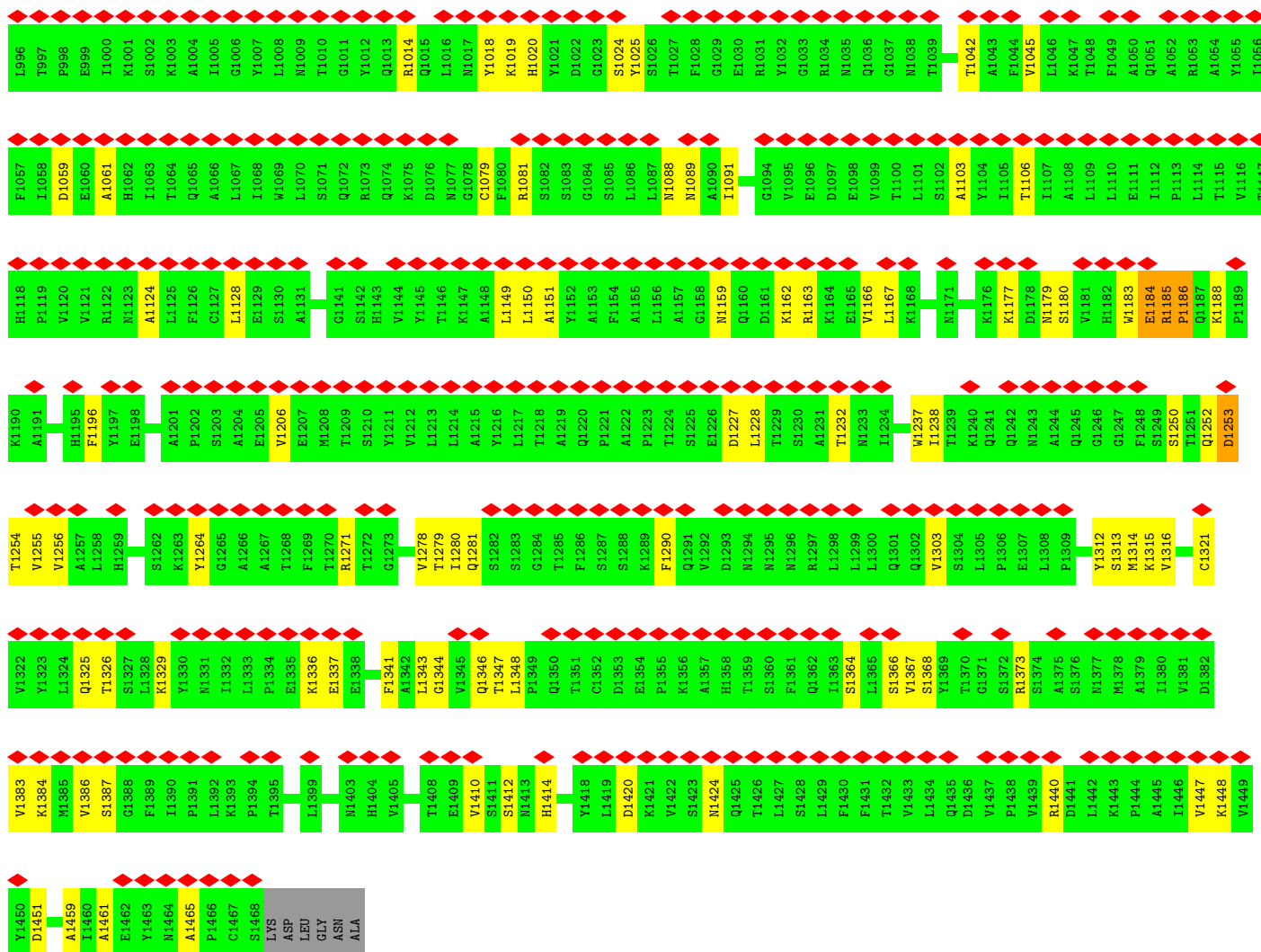




• Molecule 1: Alpha-2-macroglobulin



MET	LYS	ASN	LYS	LEU	HIS	PRO	SER	LEU	VAL	LEU	LEU	VAL	LEU	LEU	VAL	LEU	PRO	THR	ASP	ALA	SER	VAL	S26	G27	K28	P29	Q30	L39	H40	T41	E42	E45	K46	G47	C48	V49	L50	L51	L54	N55	E56	T57	T59	V60	S61	A62	S63	L64	E65	S66	V67	R68	G69																																																																
N70	R71	S72	L73	F74	E76	A79	E90	N81	D82	V83	L84	V87	A88	F89	K93	S94	S95	S96	N97	E98	P99	E99	V100	M101	F102	L103	T104	V105	Q106	V107	K108	T111	Q112	E113	F114	K115	K116	R117	T118	T119	V120	M121	V122	K123	M124	E125	D126	S127	V128	L129	E130	D134	K135	S136	P140																																																														
V144	K145	F146	R147	V148	V149	S150	L158	L161	I162	V163	L164	V165	Y166	I167	Q168	D169	P170	K171	G172	N173	R174	I175	A176	Q179	S180	G186	L187	F190	S195	P198	S202	V205	V206	V207	Q208	K209	K210	S211	G212	T215	T220	E223	F224	V225	L226	P227	K228	F229	Q232	V233	I239	T240	I241	L242	E243	E244	E245	M246	M247	V248	V249	V250	C251	T255	Y256	G257	K258	P259	V260	P261	G262	H263	V266	S267	C269	R270	K271	Y272	S273	D274	A275	C278	H279	G280	E281	D282	A285	F286	C287	E288	K289	F290	S291	G292	Q293	L294	G296	C299																			
F300	Y301	V304	K307	V308	F309	L311	K312	R313	K314	E315	Y316	E317	M318	K319	L320	E323	A324	Q325	I326	Q327	E328	E329	G330	T331	V332	E333	L335	T336	G337	R338	Q339	T346	I347	T348	S351	F352	V353	K354	S357	H358	F359	R360	Q361	G362	I363	F364	F365	F366	V369	K375	L379	L386	R387	G388	Y393	A397	H402	G403	L404	V405	Q406	M410	T411	T412	M413	V414	M415	G416	T417	S418	V421	R422	V423	M424	Y425	K426	D427	R428	S429	P430	C431	Y432	G433	Q435	W436	Y437	S438	E439	E440	H441	E442	H445	A448	Y449	L450	V451	K456	S457																			
F458	V459	H460	L461	E462	E467	L468	G471	V476	Q477	A478	H479	Y480	L481	N482	N483	G484	L487	L488	G489	L490	K491	K492	L493	S494	F495	L498	L499	M500	A501	G504	R507	V515	K516	Q517	E518	D519	M520	K521	G522	H523	F524	S527	L528	P529	D533	L534	A535	A538	H460	L461	E462	E467	L468	G471	V476	Q477	A478	H479	Y480	L481	N482	N483	G484	L487	L488	G489	L490	K491	K492	L493	S494	F495	L498	L499	M500	A501	G504	R507	V515	K516	Q517	E518	D519	M520	K521	G522	H523	F524	S527	L528	P529	D533	L534	A535	A538																						
R539	L540	L541	Y543	V544	L545	L546	P547	T548	D550	V551	I552	G553	D554	S555	A556	V560	E561	L564	A565	N566	K567	V568	L570	S571	F574	S575	L578	P579	A580	R586	V587	T588	A589	A590	P591	L597	R598	N600	D601	G602	L606	R607	K608	P609	D610	A611	E612	L613	F458	V459	H460	L461	E462	E467	L468	G471	V476	Q477	A478	H479	Y480	L481	N482	N483	G484	L487	L488	G489	L490	K491	K492	L493	S494	F495	L498	L499	M500	A501	G504	R507	V515	K516	Q517	E518	D519	M520	K521	G522	H523	F524	S527	L528	P529	D533	L534	A535	A538																				
S614	A615	S616	S617	V618	Y619	N620	E624	K625	D626	L627	L628	G632	P633	L634	M635	D636	Q637	M639	E640	D641	C642	L643	N644	R645	H646	N647	V648	Y649	L650	L651	G652	L653	L654	T656	P657	V658	S659	S660	T661	N662	E663	R664	D665	R666	Y667	S668	F669	L670	D671	M673	G674	L675	K676	A677	R539	L540	L541	Y543	V544	L546	P547	T548	D550	V551	I552	G553	D554	S555	A556	V560	E561	L564	A565	N566	K567	V568	L570	S571	F574	S575	L578	P579	A580	R586	V587	T588	A589	A590	P591	L597	R598	N600	D601	G602	L606	R607	K608	P609	D610	A611	E612	L613															
F678	T679	M680	S681	K682	L683	R684	K685	P686	K687	M688	P689	Q691	L692	L693	Q694	GLU	MET	HIS	GLY	PRO	GLU	GLY	LEU	ARG	ARG	VAL	GLY	PHE	TYR	GLU	SER	ASP	VAL	MET	GLY	ARG	GLY	GLU	PRO	HIS	THR	E729	T730	V731	R732	K733	Y734	F735	P736	T678	T679	M680	S681	K682	L683	R684	K685	P686	K687	M688	P689	Q691	L692	L693	Q694	GLU	MET	HIS	GLY	PRO	GLU	GLY	LEU	ARG	ARG	VAL	GLY	PHE	TYR	GLU	SER	ASP	VAL	MET	GLY	ARG	GLY	GLU	PRO	HIS	THR	E729	T730	V731	R732	K733	Y734	F735	P736																		
I740	V744	V745	L746	N747	S748	A749	G750	V751	A752	E753	V756	T757	F758	P759	Q760	L761	I762	W765	K766	A767	G768	A769	F770	C771	L772	S773	E774	D775	A776	I780	S781	S782	T783	L786	R787	A788	F789	Q790	Q854	T855	T856	V857	N858	S859	V860	T861	P862	K863	S864	G865	L866	G866	N867	R868	G805	E806	I740	V744	V745	L746	N747	S748	A749	G750	V751	A752	E753	V756	T757	F758	P759	Q760	L761	I762	W765	K766	A767	G768	A769	F770	C771	L772	S773	E774	D775	A776	I780	S781	S782	T783	L786	R787	A788	F789	Q790	Q854	T855	T856	V857	N858	S859	V860	T861	P862	K863	S864	G865	L866	G866	N867	R868	G805	E806				
A807	F808	T809	K810	L811	A812	L815	N816	K820	C821	I822	R823	V824	S825	V826	Q827	L828	E829	A830	S831	P832	A833	F834	L835	A836	V837	P838	K901	P902	E840	K841	E842	Q843	A844	P845	H846	C849	A850	N851	G852	R853	Q854	T855	T856	V857	N858	S859	V860	T861	P862	K863	S864	G865	L866	G866	N867	R868	G805	E806	A807	F808	T809	K810	L811	A812	L815	N816	K820	C821	I822	R823	V824	S825	V826	Q827	L828	E829	A830	S831	P832	A833	F834	L835	A836	V837	P838	K901	P902	E840	K841	E842	Q843	A844	P845	H846	C849	A850	N851	G852	R853	Q854	T855	T856	V857	N858	S859	V860	T861	P862	K863	S864	G865	L866	G866	N867	R868	G805	E806
T871	A874	E875	E878	S879	Q880	E881	C883	T885	E886	V887	P888	S889	V890	L891	G892	E893	I894	G895	G896	S897	T898	V899	I900	K901	P902	L903	L904	V905	E906	P907	E908	G909	L910	E911	K912	E913	T914	T915	F916	N917	S918	L919	L920	C921	P922	S923	G924	G925	E926	V927	S928	E929	E930	L931	S932	T871	A874	E875	E878	S879	Q880	E881	C883	T885	E886	V887	P888	S889	V890	L891	G892	E893	I894	G895	G896	S897	T898	V899	I900	K901	P902	L903	L904	V905	E906	P907	E908	G909	L910	E911	K912	E913	T914	T915	F916	N917	S918	L919	L920	C921	P922	S923	G924	G925	E926	V927	S928	E929	E930	L931	S932						
L933	K934	L935	P936	N938	V939	V940	S943	A944	R945	A946	S947	V948	S949	V950	L951	G952	E953	I954	G955	G956	S957	A958	M959	Q960	N961	T962	Q963	N964	Q967	M968	P969	Y970	G971	E974	Q975	N976	M977	V978	L979	F980	A981	P982	N983	I984	Y985	V986	L987	D988	Y989	L990	N991	E992	T993	Q994	L933	K934	L935	P936	N938	V939	V940	S943	A944	R945	A946	S947	V948	S949	V950	L951	G952	E953	I954	G955	G956	S957	A958	M959	Q960	N961	T962	Q963	N964	Q967	M968	P969	Y970	G971	E974	Q975	N976	M977	V978	L979	F980	A981	P982	N983	I984	Y985	V986	L987	D988	Y989	L990	N991	E992	T993	Q994								



• Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose



• Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose



• Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose



- Molecule 2: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C2	Depositor
Number of particles used	35993	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	39.6	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	3250	Depositor
Magnification	47775	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.056	Depositor
Minimum map value	-0.002	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.002	Depositor
Recommended contour level	0.0135	Depositor
Map size (\AA)	335.04, 335.04, 335.04	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.047, 1.047, 1.047	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: NAG

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	0.32	1/10165 (0.0%)	0.60	4/13811 (0.0%)
1	B	0.34	2/11249 (0.0%)	0.62	2/15286 (0.0%)
1	C	0.32	1/10165 (0.0%)	0.60	4/13811 (0.0%)
1	D	0.34	2/11249 (0.0%)	0.62	2/15286 (0.0%)
All	All	0.33	6/42828 (0.0%)	0.61	12/58194 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
1	C	0	1
All	All	0	2

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	821	CYS	CB-SG	9.03	1.97	1.82
1	C	821	CYS	CB-SG	9.03	1.97	1.82
1	B	845	PRO	CA-CB	-7.30	1.39	1.53
1	D	845	PRO	CA-CB	-7.30	1.39	1.53
1	B	845	PRO	N-CA	6.90	1.58	1.47
1	D	845	PRO	N-CA	6.90	1.58	1.47

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	849	CYS	CA-CB-SG	9.76	131.58	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	849	CYS	CA-CB-SG	9.76	131.58	114.00
1	A	821	CYS	O-C-N	-7.32	110.99	122.70
1	C	821	CYS	O-C-N	-7.32	110.99	122.70
1	A	821	CYS	C-N-CA	7.12	139.51	121.70
1	C	821	CYS	C-N-CA	7.12	139.51	121.70
1	B	921	CYS	CA-CB-SG	6.74	126.13	114.00
1	D	921	CYS	CA-CB-SG	6.74	126.13	114.00
1	A	821	CYS	CA-CB-SG	6.45	125.60	114.00
1	C	821	CYS	CA-CB-SG	6.45	125.60	114.00
1	B	845	PRO	N-CA-C	-5.58	97.58	112.10
1	D	845	PRO	N-CA-C	-5.58	97.58	112.10

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	821	CYS	Mainchain
1	C	821	CYS	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	9944	0	9843	176	0
1	B	11004	0	10889	190	0
1	C	9944	0	9843	174	0
1	D	11004	0	10889	189	0
2	E	28	0	25	1	0
2	F	28	0	25	5	0
2	G	28	0	25	0	0
2	H	28	0	25	5	0
3	A	70	0	65	1	0
3	B	112	0	104	1	0
3	C	70	0	65	1	0
3	D	112	0	104	1	0
All	All	42372	0	41902	736	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 9.

All (736) 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:B:1185:ARG:HB3	1:B:1186:PRO:CD	1.98	0.93
1:B:656:THR:HB	1:B:657:PRO:CD	1.99	0.92
1:D:1185:ARG:HB3	1:D:1186:PRO:CD	1.98	0.92
1:D:656:THR:HB	1:D:657:PRO:CD	1.99	0.91
1:D:597:LEU:HD11	1:D:744:VAL:HG22	1.62	0.80
2:F:2:NAG:H3	2:F:2:NAG:C8	2.12	0.80
1:B:597:LEU:HD11	1:B:744:VAL:HG22	1.62	0.79
2:H:2:NAG:C8	2:H:2:NAG:H3	2.12	0.79
1:B:539:ARG:NH1	1:B:672:ASP:O	2.17	0.78
1:A:946:ALA:HB2	1:A:1328:LEU:HD13	1.66	0.78
1:D:539:ARG:NH1	1:D:672:ASP:O	2.17	0.77
1:C:822:ILE:HA	1:C:887:VAL:HG23	1.66	0.77
1:C:946:ALA:HB2	1:C:1328:LEU:HD13	1.66	0.76
1:B:1185:ARG:HB3	1:B:1186:PRO:HD3	1.67	0.76
1:A:822:ILE:HA	1:A:887:VAL:HG23	1.66	0.75
1:B:269:CYS:SG	1:B:289:LYS:NZ	2.59	0.75
1:B:805:GLY:O	1:B:1440:ARG:NH2	2.20	0.75
1:D:805:GLY:O	1:D:1440:ARG:NH2	2.20	0.75
1:A:127:SER:O	1:A:209:LYS:NZ	2.20	0.75
1:D:269:CYS:SG	1:D:289:LYS:NZ	2.59	0.75
1:D:915:THR:OG1	1:D:1326:THR:O	2.05	0.75
1:D:1185:ARG:HB3	1:D:1186:PRO:HD3	1.67	0.74
1:B:843:GLN:NE2	1:B:844:ALA:O	2.20	0.74
1:B:1079:CYS:O	1:B:1081:ARG:NH1	2.21	0.74
1:D:843:GLN:NE2	1:D:844:ALA:O	2.20	0.74
1:B:656:THR:HB	1:B:657:PRO:HD3	1.70	0.73
1:B:360:ARG:NH1	1:B:459:VAL:O	2.21	0.73
1:C:127:SER:O	1:C:209:LYS:NZ	2.20	0.73
1:D:656:THR:HB	1:D:657:PRO:HD2	1.70	0.73
1:B:656:THR:CB	1:B:657:PRO:CD	2.67	0.73
1:C:849:CYS:O	1:C:852:GLY:N	2.22	0.73
1:A:849:CYS:O	1:A:852:GLY:N	2.22	0.73
1:A:295:ASN:ND2	1:A:297:HIS:O	2.22	0.72
1:B:656:THR:HB	1:B:657:PRO:HD2	1.70	0.72
1:D:360:ARG:NH1	1:D:459:VAL:O	2.21	0.72
1:D:656:THR:CB	1:D:657:PRO:CD	2.67	0.72
1:C:295:ASN:ND2	1:C:297:HIS:O	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:656:THR:HB	1:D:657:PRO:HD3	1.70	0.72
1:D:270:ARG:NE	1:D:316:TYR:O	2.23	0.72
1:B:1184:GLU:OE1	1:B:1184:GLU:HA	1.89	0.71
1:D:1184:GLU:OE1	1:D:1184:GLU:HA	1.89	0.71
1:D:1079:CYS:O	1:D:1081:ARG:NH1	2.21	0.71
1:A:964:ASN:ND2	1:A:1245:GLN:O	2.24	0.71
1:B:915:THR:OG1	1:B:1326:THR:O	2.05	0.71
1:B:571:SER:O	1:B:586:ARG:N	2.24	0.71
1:B:860:VAL:HG22	1:B:862:PRO:HD3	1.72	0.71
1:C:964:ASN:ND2	1:C:1245:GLN:O	2.24	0.71
1:C:434:TYR:OH	1:D:274:ASP:OD1	2.09	0.70
1:A:434:TYR:OH	1:B:274:ASP:OD1	2.09	0.70
1:C:823:ARG:NH1	1:C:824:VAL:O	2.24	0.70
1:B:270:ARG:NE	1:B:316:TYR:O	2.23	0.70
1:C:96:SER:O	1:C:124:ASN:ND2	2.24	0.70
1:D:571:SER:O	1:D:586:ARG:N	2.24	0.70
1:D:860:VAL:HG22	1:D:862:PRO:HD3	1.72	0.70
1:D:353:VAL:HG21	1:D:404:LEU:HD13	1.73	0.69
1:B:608:LYS:NZ	1:B:609:PRO:O	2.25	0.69
1:C:1185:ARG:O	1:C:1187:GLN:NE2	2.25	0.69
1:C:1250:SER:O	1:C:1254:THR:OG1	2.09	0.69
1:C:536:PRO:O	1:C:560:VAL:N	2.26	0.69
1:A:96:SER:O	1:A:124:ASN:ND2	2.24	0.69
1:B:488:LEU:O	1:B:517:GLN:NE2	2.26	0.69
1:B:1250:SER:HB3	1:B:1253:ASP:HB2	1.74	0.69
1:D:418:SER:OG	1:D:445:HIS:NE2	2.25	0.69
1:A:507:ARG:NH2	1:A:532:SER:O	2.26	0.69
1:A:536:PRO:O	1:A:560:VAL:N	2.26	0.69
1:A:1185:ARG:O	1:A:1187:GLN:NE2	2.25	0.69
1:B:418:SER:OG	1:B:445:HIS:NE2	2.25	0.69
1:C:270:ARG:NH1	1:C:309:PHE:O	2.26	0.69
1:D:488:LEU:O	1:D:517:GLN:NE2	2.26	0.69
1:A:270:ARG:NH1	1:A:309:PHE:O	2.26	0.69
1:C:614:SER:O	1:C:617:SER:OG	2.09	0.69
1:A:637:GLN:O	1:A:684:ARG:NH1	2.26	0.68
1:C:637:GLN:O	1:C:684:ARG:NH1	2.26	0.68
1:A:823:ARG:NH1	1:A:824:VAL:O	2.24	0.68
1:B:1106:THR:HG21	1:B:1124:ALA:HB3	1.75	0.68
1:C:507:ARG:NH2	1:C:532:SER:O	2.26	0.68
1:D:608:LYS:NZ	1:D:609:PRO:O	2.25	0.68
1:B:353:VAL:HG21	1:B:404:LEU:HD13	1.73	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1250:SER:HB3	1:D:1253:ASP:HB2	1.74	0.68
1:B:507:ARG:NH1	1:B:529:PRO:O	2.26	0.68
1:C:288:GLU:N	1:C:288:GLU:OE1	2.27	0.68
1:D:507:ARG:NH1	1:D:529:PRO:O	2.26	0.68
1:A:288:GLU:OE1	1:A:288:GLU:N	2.27	0.67
1:B:626:ASP:OD2	1:B:628:THR:OG1	2.12	0.67
1:C:33:VAL:HG12	1:C:49:VAL:HG23	1.77	0.67
1:C:415:MET:SD	1:C:416:GLY:N	2.68	0.67
1:D:1232:THR:HG22	1:D:1264:TYR:OH	1.95	0.67
1:D:626:ASP:OD2	1:D:628:THR:OG1	2.12	0.67
1:D:825:SER:N	1:D:875:GLU:O	2.28	0.67
1:D:773:SER:OG	1:D:775:ASP:OD1	2.10	0.66
1:A:415:MET:SD	1:A:416:GLY:N	2.68	0.66
1:B:1177:LYS:N	1:B:1180:SER:O	2.29	0.66
1:C:270:ARG:NH2	1:C:315:GLU:O	2.29	0.66
1:A:614:SER:O	1:A:617:SER:OG	2.09	0.66
1:B:1185:ARG:HD3	1:B:1196:PHE:HB2	1.76	0.66
1:D:1106:THR:HG21	1:D:1124:ALA:HB3	1.75	0.66
1:A:400:ASP:OD1	1:A:404:LEU:N	2.28	0.66
1:A:33:VAL:HG12	1:A:49:VAL:HG23	1.77	0.66
1:B:825:SER:N	1:B:875:GLU:O	2.28	0.66
1:D:271:LYS:O	1:D:272:TYR:HB2	1.95	0.66
1:D:1177:LYS:N	1:D:1180:SER:O	2.29	0.66
1:C:400:ASP:OD1	1:C:404:LEU:N	2.28	0.66
1:B:271:LYS:O	1:B:272:TYR:HB2	1.95	0.66
1:C:1180:SER:OG	1:C:1233:ASN:O	2.08	0.66
1:D:823:ARG:NH1	1:D:846:HIS:O	2.29	0.66
1:D:1185:ARG:HB3	1:D:1186:PRO:HD2	1.78	0.66
1:C:363:ILE:O	1:C:411:THR:OG1	2.15	0.65
1:B:823:ARG:NH1	1:B:846:HIS:O	2.29	0.65
1:D:800:TYR:O	1:D:802:VAL:HG13	1.96	0.65
1:B:1185:ARG:CB	1:B:1186:PRO:CD	2.75	0.65
1:B:1232:THR:HG22	1:B:1264:TYR:OH	1.95	0.65
1:B:800:TYR:O	1:B:802:VAL:HG13	1.96	0.65
1:B:1185:ARG:HB3	1:B:1186:PRO:HD2	1.78	0.65
1:D:1185:ARG:HD3	1:D:1196:PHE:HB2	1.76	0.65
1:A:363:ILE:O	1:A:411:THR:OG1	2.15	0.65
1:A:270:ARG:NH2	1:A:315:GLU:O	2.29	0.64
1:A:495:PHE:O	1:A:510:THR:OG1	2.11	0.64
1:A:1250:SER:O	1:A:1254:THR:OG1	2.09	0.64
1:D:638:ASP:OD2	1:D:641:ASP:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1373:ARG:HD2	1:B:1373:ARG:O	1.98	0.64
1:D:1228:LEU:O	1:D:1232:THR:HG23	1.98	0.63
1:B:976:ASN:OD1	1:B:1014:ARG:NH1	2.31	0.63
1:C:458:PHE:CZ	1:C:481:ILE:HD11	2.33	0.63
1:D:976:ASN:OD1	1:D:1014:ARG:NH1	2.31	0.63
1:A:458:PHE:CZ	1:A:481:ILE:HD11	2.33	0.63
1:B:1228:LEU:O	1:B:1232:THR:HG23	1.98	0.63
1:C:1129:GLU:OE1	1:C:1162:LYS:NZ	2.31	0.63
2:F:2:NAG:H3	2:F:2:NAG:H82	1.81	0.63
1:B:616:SER:O	1:B:620:ASN:ND2	2.32	0.63
1:D:616:SER:O	1:D:620:ASN:ND2	2.32	0.63
1:A:1117:THR:O	1:A:1122:ARG:NH1	2.32	0.63
1:D:1373:ARG:HD2	1:D:1373:ARG:O	1.98	0.63
1:A:1129:GLU:OE1	1:A:1162:LYS:NZ	2.31	0.62
1:B:638:ASP:OD2	1:B:641:ASP:N	2.31	0.62
1:C:769:ALA:HB3	1:C:781:SER:HB3	1.81	0.62
1:A:769:ALA:HB3	1:A:781:SER:HB3	1.81	0.62
1:C:1019:LYS:NZ	1:C:1020:HIS:O	2.20	0.62
1:A:1180:SER:OG	1:A:1233:ASN:O	2.08	0.62
1:C:293:GLN:NE2	1:C:294:LEU:O	2.33	0.62
1:C:928:SER:OG	1:C:1314:MET:O	2.11	0.62
1:D:270:ARG:O	1:D:285:ALA:N	2.32	0.62
1:B:270:ARG:O	1:B:285:ALA:N	2.32	0.62
1:B:195:SER:N	1:B:963:GLN:OE1	2.33	0.62
1:B:404:LEU:O	1:B:406:GLN:NE2	2.33	0.62
1:D:195:SER:N	1:D:963:GLN:OE1	2.33	0.62
1:D:620:ASN:O	1:D:625:LYS:NZ	2.26	0.62
1:A:293:GLN:NE2	1:A:294:LEU:O	2.33	0.62
1:B:620:ASN:O	1:B:625:LYS:NZ	2.26	0.61
1:D:404:LEU:O	1:D:406:GLN:NE2	2.33	0.61
2:F:2:NAG:H3	2:F:2:NAG:H83	1.82	0.61
2:H:2:NAG:H3	2:H:2:NAG:H82	1.81	0.61
1:C:383:VAL:O	1:C:423:VAL:HG23	2.00	0.61
1:C:1117:THR:O	1:C:1122:ARG:NH1	2.32	0.61
1:D:816:ASN:ND2	1:D:820:LYS:O	2.34	0.61
1:A:383:VAL:O	1:A:423:VAL:HG23	2.00	0.61
1:B:540:LEU:O	1:B:556:ALA:N	2.33	0.61
2:H:2:NAG:H3	2:H:2:NAG:H83	1.82	0.61
1:A:360:ARG:O	1:A:411:THR:OG1	2.12	0.61
1:D:1103:ALA:HB1	1:D:1149:LEU:HD13	1.83	0.61
1:B:1103:ALA:HB1	1:B:1149:LEU:HD13	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1089:ASN:ND2	1:B:1420:ASP:O	2.35	0.60
1:C:1005:ILE:O	1:C:1009:ASN:ND2	2.34	0.60
1:D:540:LEU:O	1:D:556:ALA:N	2.33	0.60
1:D:614:SER:O	1:D:617:SER:OG	2.15	0.60
1:B:428:ARG:NH2	1:B:441:HIS:O	2.34	0.60
1:B:816:ASN:ND2	1:B:820:LYS:O	2.34	0.60
1:D:428:ARG:NH2	1:D:441:HIS:O	2.34	0.60
1:B:1185:ARG:NE	1:B:1185:ARG:HA	2.16	0.60
1:A:1005:ILE:O	1:A:1009:ASN:ND2	2.34	0.60
1:C:885:THR:OG1	1:C:886:GLU:OE1	2.11	0.60
1:D:981:ALA:HB3	1:D:982:PRO:HD3	1.84	0.60
1:D:1089:ASN:ND2	1:D:1420:ASP:O	2.35	0.60
1:D:1185:ARG:HA	1:D:1185:ARG:NE	2.16	0.60
1:C:495:PHE:O	1:C:510:THR:OG1	2.11	0.59
1:C:955:LEU:HD23	1:C:958:ALA:HB3	1.84	0.59
1:A:580:ALA:O	1:A:757:THR:OG1	2.14	0.59
1:D:1185:ARG:HA	1:D:1185:ARG:HE	1.67	0.59
1:D:1278:VAL:N	1:D:1290:PHE:O	2.36	0.59
1:B:1185:ARG:HA	1:B:1185:ARG:HE	1.67	0.59
1:A:955:LEU:HD23	1:A:958:ALA:HB3	1.84	0.59
1:B:255:THR:HG1	1:B:734:TYR:HH	1.45	0.59
1:B:799:PRO:O	1:B:800:TYR:HB2	2.02	0.59
1:D:270:ARG:NH1	1:D:315:GLU:HB2	2.18	0.59
1:B:981:ALA:HB3	1:B:982:PRO:HD3	1.84	0.59
1:B:1278:VAL:N	1:B:1290:PHE:O	2.36	0.59
1:C:169:ASP:N	1:C:173:ASN:O	2.36	0.58
1:A:68:ARG:NH2	1:C:1060:GLU:OE1	2.36	0.58
1:A:169:ASP:N	1:A:173:ASN:O	2.36	0.58
1:B:270:ARG:NH1	1:B:315:GLU:HB2	2.18	0.58
1:A:636:ASP:O	1:C:1072:GLN:NE2	2.36	0.58
1:B:60:VAL:HG12	1:B:107:VAL:HA	1.86	0.58
1:B:126:ASP:OD2	1:B:211:SER:OG	2.22	0.58
1:D:799:PRO:O	1:D:800:TYR:HB2	2.02	0.58
1:A:491:LYS:O	1:A:515:VAL:HG22	2.04	0.58
1:A:1072:GLN:NE2	1:C:636:ASP:O	2.36	0.58
1:B:312:LYS:HB2	1:B:315:GLU:HG2	1.86	0.58
1:D:60:VAL:HG12	1:D:107:VAL:HA	1.86	0.58
1:B:773:SER:OG	1:B:775:ASP:OD1	2.10	0.57
1:D:312:LYS:HB2	1:D:315:GLU:HG2	1.86	0.57
1:A:1060:GLU:OE1	1:C:68:ARG:NH2	2.36	0.57
1:B:273:SER:N	1:B:316:TYR:HB3	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:979:LEU:O	1:A:983:ASN:ND2	2.38	0.57
1:A:540:LEU:O	1:A:556:ALA:N	2.37	0.57
1:A:928:SER:OG	1:A:1314:MET:O	2.11	0.57
1:B:614:SER:O	1:B:617:SER:OG	2.15	0.57
1:C:459:VAL:HG23	1:C:552:ILE:HD12	1.86	0.57
1:C:580:ALA:O	1:C:757:THR:OG1	2.14	0.57
1:D:959:MET:SD	1:D:959:MET:N	2.77	0.57
1:B:959:MET:SD	1:B:959:MET:N	2.77	0.56
1:D:1250:SER:CB	1:D:1253:ASP:HB2	2.35	0.56
1:A:782:SER:OG	1:A:783:THR:N	2.38	0.56
1:A:1027:THR:HG21	1:A:1087:LEU:HD11	1.88	0.56
1:C:979:LEU:O	1:C:983:ASN:ND2	2.38	0.56
1:A:459:VAL:HG23	1:A:552:ILE:HD12	1.86	0.56
1:C:491:LYS:O	1:C:515:VAL:HG22	2.04	0.56
1:C:540:LEU:O	1:C:556:ALA:N	2.37	0.56
1:D:273:SER:N	1:D:316:TYR:HB3	2.19	0.56
1:A:165:VAL:HG22	1:A:207:VAL:HG22	1.87	0.56
1:C:493:LEU:HD21	1:C:546:LEU:CD2	2.36	0.56
1:D:921:CYS:HB2	1:D:1321:CYS:HA	1.88	0.56
1:D:126:ASP:OD2	1:D:211:SER:OG	2.22	0.56
1:D:1020:HIS:N	1:D:1024:SER:O	2.39	0.56
1:A:1019:LYS:NZ	1:A:1020:HIS:O	2.20	0.56
1:B:1020:HIS:N	1:B:1024:SER:O	2.39	0.56
1:B:1250:SER:CB	1:B:1253:ASP:HB2	2.35	0.56
1:C:360:ARG:O	1:C:411:THR:OG1	2.12	0.56
1:C:592:GLN:OE1	1:C:748:SER:OG	2.23	0.56
1:A:493:LEU:HD21	1:A:546:LEU:CD2	2.36	0.56
1:B:1341:PHE:O	1:B:1461:ALA:HB2	2.06	0.56
1:C:56:GLU:O	1:C:58:VAL:HG12	2.06	0.56
1:C:1027:THR:HG21	1:C:1087:LEU:HD11	1.88	0.56
1:B:634:LEU:O	1:B:687:LYS:NZ	2.30	0.55
1:B:1106:THR:HG21	1:B:1124:ALA:CB	2.36	0.55
1:C:782:SER:OG	1:C:783:THR:N	2.38	0.55
1:C:165:VAL:HG22	1:C:207:VAL:HG22	1.87	0.55
1:C:583:ALA:O	1:C:755:GLY:N	2.39	0.55
1:C:579:PRO:HB3	1:C:731:VAL:HG12	1.88	0.55
2:F:1:NAG:H83	2:F:1:NAG:C1	2.37	0.55
1:C:929:GLU:O	1:C:1314:MET:N	2.39	0.55
1:A:583:ALA:O	1:A:755:GLY:N	2.39	0.55
1:A:592:GLN:OE1	1:A:748:SER:OG	2.23	0.55
1:C:472:HIS:O	1:C:530:VAL:N	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:822:ILE:HG21	1:C:876:ALA:HB1	1.89	0.55
1:D:1341:PHE:O	1:D:1461:ALA:HB2	2.06	0.55
1:B:921:CYS:HB2	1:B:1321:CYS:HA	1.88	0.55
1:C:345:ARG:O	1:C:440:GLU:N	2.39	0.54
1:D:827:GLN:NE2	1:D:829:GLU:OE2	2.40	0.54
1:A:56:GLU:O	1:A:58:VAL:HG12	2.06	0.54
1:A:345:ARG:O	1:A:440:GLU:N	2.39	0.54
1:D:127:SER:O	1:D:209:LYS:NZ	2.35	0.54
2:H:1:NAG:C1	2:H:1:NAG:H83	2.37	0.54
1:B:96:SER:O	1:B:124:ASN:ND2	2.41	0.54
1:D:30:GLN:O	1:D:51:LEU:HD12	2.08	0.54
1:A:382:LYS:N	1:A:399:THR:OG1	2.40	0.54
1:A:948:VAL:HG12	1:A:1305:LEU:HD11	1.90	0.54
1:D:96:SER:O	1:D:124:ASN:ND2	2.41	0.54
1:A:109:GLY:N	1:A:112:GLN:O	2.41	0.54
1:A:579:PRO:HB3	1:A:731:VAL:HG12	1.88	0.54
1:B:827:GLN:NE2	1:B:829:GLU:OE2	2.40	0.54
1:C:31:TYR:O	1:C:679:THR:HG23	2.08	0.54
1:D:351:SER:O	1:D:369:VAL:HG13	2.08	0.54
1:D:1185:ARG:CB	1:D:1186:PRO:CD	2.75	0.54
1:A:382:LYS:HE2	1:A:423:VAL:HG21	1.89	0.54
1:B:351:SER:O	1:B:369:VAL:HG13	2.08	0.54
1:C:382:LYS:N	1:C:399:THR:OG1	2.40	0.54
1:C:955:LEU:HD21	1:C:995:GLN:OE1	2.08	0.54
1:D:656:THR:CB	1:D:657:PRO:HD2	2.36	0.54
1:A:31:TYR:O	1:A:679:THR:HG23	2.08	0.54
1:A:1027:THR:HG21	1:A:1087:LEU:CD1	2.38	0.54
1:C:539:ARG:NH1	1:C:672:ASP:O	2.41	0.54
1:C:822:ILE:HD11	1:C:889:SER:H	1.73	0.54
1:C:1027:THR:HG21	1:C:1087:LEU:CD1	2.38	0.54
1:D:1106:THR:HG21	1:D:1124:ALA:CB	2.36	0.54
1:A:929:GLU:O	1:A:1314:MET:N	2.39	0.54
1:C:1100:THR:CG2	1:C:1146:THR:HG22	2.38	0.54
1:C:109:GLY:N	1:C:112:GLN:O	2.41	0.54
1:A:539:ARG:NH1	1:A:672:ASP:O	2.41	0.54
1:B:262:GLY:O	1:B:293:GLN:NE2	2.40	0.53
1:D:271:LYS:O	1:D:271:LYS:NZ	2.26	0.53
1:A:822:ILE:HD11	1:A:889:SER:H	1.73	0.53
1:C:892:GLU:N	1:C:892:GLU:OE1	2.41	0.53
1:A:1100:THR:CG2	1:A:1146:THR:HG22	2.38	0.53
1:C:382:LYS:HE2	1:C:423:VAL:HG21	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:262:GLY:O	1:D:293:GLN:NE2	2.40	0.53
1:A:892:GLU:N	1:A:892:GLU:OE1	2.41	0.53
1:C:948:VAL:HG12	1:C:1305:LEU:HD11	1.90	0.53
1:D:129:VAL:HG23	1:D:215:THR:HG21	1.90	0.53
1:A:946:ALA:HB3	1:A:1305:LEU:HB2	1.90	0.53
3:C:2004:NAG:O7	3:C:2004:NAG:O3	2.24	0.53
1:D:255:THR:HG1	1:D:734:TYR:HH	1.45	0.53
1:A:955:LEU:HD21	1:A:995:GLN:OE1	2.08	0.53
1:B:30:GLN:O	1:B:51:LEU:HD12	2.08	0.53
1:D:599:ALA:HB3	1:D:740:ILE:HG13	1.91	0.53
1:D:836:ALA:HA	1:D:860:VAL:HG23	1.90	0.53
1:A:822:ILE:HG21	1:A:876:ALA:HB1	1.89	0.53
1:B:136:SER:O	1:B:220:THR:N	2.42	0.53
1:B:1346:GLN:NE2	1:B:1348:LEU:O	2.42	0.53
1:A:584:HIS:NE2	1:A:754:VAL:HG22	2.24	0.53
1:A:472:HIS:O	1:A:530:VAL:N	2.39	0.52
1:B:129:VAL:HG23	1:B:215:THR:HG21	1.90	0.52
1:B:599:ALA:HB3	1:B:740:ILE:HG13	1.91	0.52
1:D:1346:GLN:NE2	1:D:1348:LEU:O	2.42	0.52
1:B:127:SER:O	1:B:209:LYS:NZ	2.35	0.52
1:B:836:ALA:HA	1:B:860:VAL:HG23	1.90	0.52
1:C:276:SER:OG	1:C:278:CYS:O	2.27	0.52
1:C:584:HIS:NE2	1:C:754:VAL:HG22	2.24	0.52
1:B:1014:ARG:O	1:B:1018:TYR:N	2.43	0.52
1:B:1451:ASP:OD1	1:B:1451:ASP:N	2.43	0.52
1:C:974:GLU:O	1:C:978:VAL:HG23	2.10	0.52
1:B:1283:SER:OG	1:B:1311:GLU:OE2	2.20	0.52
1:A:974:GLU:O	1:A:978:VAL:HG23	2.10	0.52
3:A:2004:NAG:O7	3:A:2004:NAG:O3	2.24	0.52
1:C:946:ALA:HB3	1:C:1305:LEU:HB2	1.90	0.52
1:D:136:SER:O	1:D:220:THR:N	2.42	0.52
1:A:239:ILE:HG22	1:A:341:SER:HB3	1.92	0.52
1:A:918:SER:O	1:A:1324:LEU:N	2.42	0.52
1:A:1242:GLN:NE2	1:A:1243:ASN:O	2.43	0.52
1:D:1014:ARG:O	1:D:1018:TYR:N	2.43	0.51
1:A:936:PRO:O	1:A:939:VAL:HG12	2.11	0.51
1:B:50:LEU:HD11	1:B:543:TYR:CE1	2.45	0.51
1:A:276:SER:OG	1:A:278:CYS:O	2.27	0.51
1:A:1232:THR:HG1	1:A:1264:TYR:HH	1.56	0.51
1:B:1344:GLY:O	1:B:1366:SER:N	2.41	0.51
1:C:936:PRO:O	1:C:939:VAL:HG12	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:50:LEU:HD11	1:D:543:TYR:CE1	2.45	0.51
1:A:885:THR:OG1	1:A:886:GLU:OE1	2.11	0.51
1:B:167:ILE:HD12	1:B:176:ALA:HB3	1.93	0.51
1:B:1336:LYS:NZ	1:B:1337:GLU:OE1	2.36	0.51
1:C:239:ILE:HG22	1:C:341:SER:HB3	1.92	0.51
1:D:167:ILE:HD12	1:D:176:ALA:HB3	1.93	0.51
1:D:945:ARG:O	1:D:1329:LYS:N	2.44	0.51
1:C:135:LYS:NZ	1:C:142:GLN:OE1	2.44	0.51
1:A:579:PRO:O	1:A:581:SER:N	2.44	0.51
1:A:1232:THR:OG1	1:A:1264:TYR:OH	2.26	0.51
1:B:599:ALA:HB3	1:B:740:ILE:CG1	2.40	0.51
1:C:1242:GLN:NE2	1:C:1243:ASN:O	2.43	0.51
1:D:665:ASP:O	1:D:668:SER:OG	2.27	0.51
1:A:350:LEU:HD11	1:A:444:ALA:HB2	1.93	0.51
1:A:648:VAL:HG22	1:A:658:VAL:HG13	1.93	0.51
1:B:945:ARG:O	1:B:1329:LYS:N	2.44	0.51
1:D:928:SER:OG	1:D:1314:MET:O	2.10	0.51
1:D:1344:GLY:O	1:D:1366:SER:N	2.41	0.51
1:D:874:ALA:N	1:D:897:ASP:O	2.44	0.50
1:D:667:TYR:OH	1:D:684:ARG:NH1	2.45	0.50
1:A:1180:SER:OG	1:A:1181:VAL:N	2.44	0.50
1:C:563:CYS:O	1:C:619:TYR:OH	2.29	0.50
1:A:598:ARG:O	1:A:768:GLY:N	2.43	0.50
1:B:874:ALA:N	1:B:897:ASP:O	2.44	0.50
1:B:1151:ALA:HB2	1:B:1167:LEU:HD11	1.93	0.50
1:C:579:PRO:O	1:C:581:SER:N	2.44	0.50
1:D:599:ALA:HB3	1:D:740:ILE:CG1	2.40	0.50
1:D:1024:SER:OG	1:D:1025:TYR:N	2.45	0.50
1:A:563:CYS:O	1:A:619:TYR:OH	2.29	0.50
1:D:1151:ALA:HB2	1:D:1167:LEU:HD11	1.93	0.50
1:B:667:TYR:OH	1:B:684:ARG:NH1	2.45	0.50
1:B:1024:SER:OG	1:B:1025:TYR:N	2.45	0.50
1:C:350:LEU:HD11	1:C:444:ALA:HB2	1.93	0.50
1:D:1150:LEU:HD13	1:D:1166:VAL:HG21	1.94	0.50
1:A:135:LYS:NZ	1:A:142:GLN:OE1	2.44	0.50
1:C:134:ASP:OD1	1:C:738:THR:OG1	2.28	0.50
1:D:1451:ASP:N	1:D:1451:ASP:OD1	2.43	0.50
1:B:849:CYS:SG	1:B:850:ALA:N	2.85	0.49
1:C:66:SER:OG	1:C:71:ARG:N	2.45	0.49
1:C:875:GLU:OE1	1:C:875:GLU:N	2.45	0.49
1:C:648:VAL:HG21	1:C:657:PRO:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:648:VAL:HG22	1:C:658:VAL:HG13	1.93	0.49
2:F:2:NAG:C8	2:F:2:NAG:C3	2.84	0.49
1:A:354:LYS:NZ	1:A:463:PRO:O	2.32	0.49
1:A:875:GLU:N	1:A:875:GLU:OE1	2.45	0.49
1:D:167:ILE:HD12	1:D:176:ALA:CB	2.43	0.49
1:C:1180:SER:OG	1:C:1181:VAL:N	2.44	0.49
1:A:474:GLN:NE2	1:A:475:THR:O	2.43	0.49
1:A:648:VAL:HG21	1:A:657:PRO:HA	1.94	0.49
1:C:167:ILE:HD12	1:C:176:ALA:HB3	1.94	0.49
1:C:598:ARG:O	1:C:768:GLY:N	2.43	0.49
1:B:167:ILE:HD12	1:B:176:ALA:CB	2.43	0.49
1:C:593:SER:OG	1:C:772:LEU:O	2.13	0.49
1:D:634:LEU:O	1:D:687:LYS:NZ	2.30	0.49
1:A:41:THR:OG1	1:A:42:GLU:OE1	2.26	0.49
1:B:1150:LEU:HD13	1:B:1166:VAL:HG21	1.94	0.49
1:B:1163:ARG:O	1:B:1167:LEU:HD13	2.13	0.49
1:C:474:GLN:NE2	1:C:475:THR:O	2.43	0.49
1:C:555:SER:OG	1:C:556:ALA:N	2.46	0.49
1:D:146:PHE:O	1:D:190:PHE:N	2.46	0.49
1:A:66:SER:OG	1:A:71:ARG:N	2.45	0.48
1:B:255:THR:HG23	1:B:257:GLY:H	1.78	0.48
1:B:1253:ASP:O	1:B:1256:VAL:N	2.42	0.48
1:D:411:THR:O	3:D:2005:NAG:N2	2.45	0.48
1:A:129:VAL:HG12	1:A:150:SER:CB	2.44	0.48
1:C:176:ALA:HB2	1:C:192:PHE:CE1	2.48	0.48
1:C:810:LEU:O	1:C:858:TRP:N	2.47	0.48
1:D:255:THR:HG23	1:D:257:GLY:H	1.78	0.48
1:D:1042:THR:HA	1:D:1045:VAL:HG12	1.96	0.48
1:A:167:ILE:HD12	1:A:176:ALA:HB3	1.94	0.48
1:B:146:PHE:O	1:B:190:PHE:N	2.46	0.48
1:C:27:GLY:HA3	1:C:547:PRO:HB2	1.96	0.48
1:A:555:SER:OG	1:A:556:ALA:N	2.46	0.48
1:C:918:SER:O	1:C:1324:LEU:N	2.42	0.48
1:D:339:GLN:OE1	1:D:339:GLN:N	2.44	0.48
1:D:534:ILE:HG23	1:D:560:VAL:HG11	1.96	0.48
1:D:1183:TRP:CE3	1:D:1184:GLU:HB2	2.48	0.48
1:A:27:GLY:HA3	1:A:547:PRO:HB2	1.96	0.48
1:B:411:THR:O	3:B:2005:NAG:N2	2.45	0.48
1:D:1336:LYS:NZ	1:D:1337:GLU:OE1	2.36	0.48
1:C:665:ASP:OD1	1:C:667:TYR:N	2.44	0.48
1:D:387:ARG:HB2	1:D:423:VAL:HG11	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:570:LEU:HD22	1:A:784:ALA:CB	2.44	0.48
1:D:1163:ARG:O	1:D:1167:LEU:HD13	2.13	0.48
1:A:291:SER:OG	1:A:292:GLY:N	2.47	0.47
1:B:339:GLN:OE1	1:B:339:GLN:N	2.44	0.47
1:B:1183:TRP:CE3	1:B:1184:GLU:HB2	2.48	0.47
1:B:387:ARG:HB2	1:B:423:VAL:HG11	1.95	0.47
1:B:1383:VAL:HG23	1:B:1414:HIS:HA	1.96	0.47
1:C:270:ARG:NE	1:C:316:TYR:O	2.45	0.47
1:D:1383:VAL:HG23	1:D:1414:HIS:HA	1.96	0.47
1:A:810:LEU:O	1:A:858:TRP:N	2.47	0.47
1:C:129:VAL:HG12	1:C:150:SER:CB	2.44	0.47
1:D:575:SER:OG	1:D:787:ARG:O	2.24	0.47
1:A:176:ALA:HB2	1:A:192:PHE:CE1	2.48	0.47
1:A:1118:HIS:HB3	1:A:1121:VAL:HG12	1.96	0.47
1:B:58:VAL:HG12	1:B:60:VAL:HG13	1.97	0.47
1:B:656:THR:CB	1:B:657:PRO:HD2	2.36	0.47
1:C:354:LYS:NZ	1:C:463:PRO:O	2.32	0.47
1:D:347:ILE:HG22	1:D:348:THR:HG23	1.96	0.47
1:B:534:ILE:HG23	1:B:560:VAL:HG11	1.96	0.47
1:B:268:ILE:HD11	1:B:309:PHE:CE1	2.50	0.47
1:D:58:VAL:HG12	1:D:60:VAL:HG13	1.97	0.47
1:A:910:LEU:HD22	1:A:1332:ILE:HD11	1.96	0.47
1:B:1042:THR:HA	1:B:1045:VAL:HG12	1.96	0.47
1:B:347:ILE:HG22	1:B:348:THR:HG23	1.96	0.47
1:C:419:LEU:N	1:C:446:HIS:O	2.45	0.47
1:C:570:LEU:HD22	1:C:784:ALA:CB	2.44	0.47
1:D:323:GLU:OE1	1:D:324:ALA:N	2.48	0.47
1:D:387:ARG:HG3	1:D:423:VAL:HG11	1.97	0.47
1:D:1279:THR:N	1:D:1315:LYS:O	2.45	0.47
1:B:458:PHE:CE1	1:B:481:ILE:HD11	2.50	0.47
1:B:1252:GLN:O	1:B:1253:ASP:C	2.54	0.46
1:C:1118:HIS:HB3	1:C:1121:VAL:HG12	1.96	0.46
1:C:910:LEU:HD22	1:C:1332:ILE:HD11	1.96	0.46
1:B:1279:THR:N	1:B:1315:LYS:O	2.45	0.46
1:D:312:LYS:HB2	1:D:315:GLU:CG	2.45	0.46
1:D:427:ASP:OD1	1:D:428:ARG:N	2.48	0.46
1:A:270:ARG:NE	1:A:316:TYR:O	2.45	0.46
1:B:665:ASP:O	1:B:668:SER:OG	2.27	0.46
1:C:291:SER:OG	1:C:292:GLY:N	2.47	0.46
1:C:1232:THR:OG1	1:C:1264:TYR:OH	2.26	0.46
1:D:458:PHE:CE1	1:D:481:ILE:HD11	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1252:GLN:O	1:D:1253:ASP:C	2.54	0.46
1:A:593:SER:OG	1:A:772:LEU:O	2.13	0.46
1:A:1083:SER:OG	1:A:1083:SER:O	2.32	0.46
1:B:1384:LYS:H	1:B:1447:VAL:HG11	1.81	0.46
1:D:369:VAL:O	1:D:405:VAL:HG12	2.16	0.46
1:B:312:LYS:HB2	1:B:315:GLU:CG	2.45	0.46
1:B:369:VAL:O	1:B:405:VAL:HG12	2.16	0.46
1:B:564:LEU:CD1	1:B:780:ILE:HG22	2.46	0.46
1:D:1343:LEU:H	1:D:1461:ALA:HB3	1.81	0.46
1:B:427:ASP:OD1	1:B:428:ARG:N	2.48	0.46
1:B:1343:LEU:H	1:B:1461:ALA:HB3	1.81	0.46
1:C:883:CYS:SG	1:C:884:GLY:N	2.89	0.46
1:D:268:ILE:HD11	1:D:309:PHE:CE1	2.50	0.46
1:A:76:ASP:OD1	1:A:77:LEU:N	2.49	0.46
1:A:1322:VAL:HG23	1:A:1324:LEU:HD11	1.98	0.46
1:B:323:GLU:OE1	1:B:324:ALA:N	2.48	0.46
1:B:671:GLU:OE1	1:B:685:LYS:NZ	2.49	0.46
1:C:76:ASP:OD1	1:C:77:LEU:N	2.49	0.46
1:D:671:GLU:OE1	1:D:685:LYS:NZ	2.49	0.46
1:A:350:LEU:CD1	1:A:444:ALA:HB2	2.46	0.46
1:B:387:ARG:HG3	1:B:423:VAL:HG11	1.97	0.46
1:C:33:VAL:C	1:C:34:LEU:HD12	2.35	0.46
1:C:1322:VAL:HG23	1:C:1324:LEU:HD11	1.98	0.46
1:D:1184:GLU:HG3	1:D:1185:ARG:O	2.16	0.46
1:D:1384:LYS:H	1:D:1447:VAL:HG11	1.81	0.46
1:A:665:ASP:OD1	1:A:667:TYR:N	2.44	0.46
1:C:763:THR:HG23	1:C:764:GLU:O	2.16	0.46
1:D:804:ARG:NH2	1:D:806:GLU:OE2	2.49	0.46
1:A:187:LEU:HD11	1:A:743:LEU:HD21	1.99	0.45
1:A:883:CYS:SG	1:A:884:GLY:N	2.89	0.45
1:B:1184:GLU:HG3	1:B:1185:ARG:O	2.16	0.45
1:C:953:ASP:OD1	1:C:953:ASP:N	2.50	0.45
1:C:966:LEU:HD22	1:C:1000:ILE:HD11	1.97	0.45
1:D:246:MET:N	1:D:304:VAL:O	2.49	0.45
1:A:33:VAL:C	1:A:34:LEU:HD12	2.35	0.45
1:A:804:ARG:NH2	1:A:863:LYS:O	2.50	0.45
1:D:931:LEU:HD23	1:D:1314:MET:CE	2.47	0.45
1:A:570:LEU:HD23	1:A:571:SER:N	2.32	0.45
1:B:570:LEU:HD22	1:B:767:ALA:HB3	1.99	0.45
1:A:345:ARG:NE	1:A:440:GLU:OE1	2.50	0.45
1:A:598:ARG:NH2	1:A:610:ASP:OD2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:80:GLU:N	1:C:80:GLU:OE1	2.50	0.45
1:C:570:LEU:HD23	1:C:571:SER:N	2.32	0.45
1:B:271:LYS:O	1:B:271:LYS:NZ	2.26	0.45
1:B:657:PRO:CG	1:B:692:LEU:HD23	2.46	0.45
1:C:598:ARG:NH2	1:C:610:ASP:OD2	2.49	0.45
1:B:246:MET:N	1:B:304:VAL:O	2.49	0.45
1:C:310:GLN:O	1:C:312:LYS:N	2.50	0.45
1:C:954:ILE:HG22	1:C:1297:ARG:NH2	2.32	0.45
1:D:657:PRO:CG	1:D:692:LEU:HD23	2.46	0.45
1:C:599:ALA:HB3	1:C:740:ILE:HB	1.99	0.45
1:D:564:LEU:CD1	1:D:780:ILE:HG22	2.46	0.45
1:D:849:CYS:SG	1:D:850:ALA:N	2.85	0.45
1:C:137:ILE:HG22	1:C:220:THR:HB	1.99	0.45
1:D:599:ALA:HB3	1:D:740:ILE:HB	1.99	0.45
1:D:1346:GLN:O	1:D:1364:SER:N	2.50	0.45
1:A:137:ILE:HG22	1:A:220:THR:HB	1.99	0.45
1:A:599:ALA:HB3	1:A:740:ILE:HB	1.99	0.45
1:A:966:LEU:HD22	1:A:1000:ILE:HD11	1.97	0.45
1:B:535:ALA:O	1:B:560:VAL:HG21	2.16	0.45
1:C:345:ARG:NE	1:C:440:GLU:OE1	2.50	0.45
1:A:763:THR:HG23	1:A:764:GLU:O	2.16	0.44
1:B:80:GLU:OE1	1:B:80:GLU:N	2.47	0.44
1:B:931:LEU:HD23	1:B:1314:MET:CE	2.47	0.44
1:A:80:GLU:N	1:A:80:GLU:OE1	2.50	0.44
1:B:1346:GLN:O	1:B:1364:SER:N	2.50	0.44
1:D:1255:VAL:HG23	1:D:1256:VAL:HG23	2.00	0.44
1:B:1059:ASP:OD1	1:B:1061:ALA:HB3	2.17	0.44
1:D:1206:VAL:HB	1:D:1253:ASP:OD2	2.17	0.44
1:A:372:VAL:HG12	1:A:373:ASP:N	2.32	0.44
1:B:422:ARG:NH1	1:B:442:GLU:O	2.51	0.44
1:D:535:ALA:O	1:D:560:VAL:HG21	2.16	0.44
1:D:580:ALA:O	1:D:757:THR:OG1	2.20	0.44
1:B:451:VAL:HG23	1:B:669:PHE:HZ	1.83	0.44
1:C:350:LEU:CD1	1:C:444:ALA:HB2	2.46	0.44
1:C:352:PHE:CZ	1:C:444:ALA:HB1	2.53	0.44
1:A:502:LYS:H	1:A:535:ALA:HB2	1.82	0.44
1:A:952:GLY:O	1:A:1297:ARG:NH1	2.49	0.44
1:B:1255:VAL:HG23	1:B:1256:VAL:HG23	2.00	0.44
1:C:183:LEU:HD22	1:C:187:LEU:C	2.38	0.44
1:C:187:LEU:HD11	1:C:743:LEU:HD21	1.99	0.44
1:A:428:ARG:NH2	1:A:440:GLU:OE2	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:310:GLN:O	1:A:312:LYS:N	2.50	0.44
1:A:881:GLU:HG3	1:A:887:VAL:HG12	1.99	0.44
1:B:804:ARG:NH2	1:B:806:GLU:OE2	2.49	0.44
1:B:926:GLU:OE2	1:B:1315:LYS:NZ	2.42	0.44
1:B:1206:VAL:HB	1:B:1253:ASP:OD2	2.17	0.44
1:C:264:VAL:O	1:C:292:GLY:N	2.51	0.44
1:C:372:VAL:HG12	1:C:373:ASP:N	2.32	0.44
1:C:804:ARG:NH2	1:C:863:LYS:O	2.50	0.44
1:B:39:LEU:HD12	1:B:122:VAL:HG12	2.00	0.44
1:D:570:LEU:HD22	1:D:767:ALA:HB3	1.99	0.44
1:A:183:LEU:HD22	1:A:187:LEU:C	2.38	0.43
1:A:1039:THR:O	1:A:1042:THR:OG1	2.29	0.43
1:B:599:ALA:HB3	1:B:740:ILE:HB	1.99	0.43
1:C:341:SER:O	1:C:343:ILE:HD12	2.18	0.43
1:C:428:ARG:NH2	1:C:440:GLU:OE2	2.49	0.43
1:C:502:LYS:H	1:C:535:ALA:HB2	1.82	0.43
1:C:822:ILE:CD1	1:C:889:SER:H	2.29	0.43
1:C:881:GLU:HG3	1:C:887:VAL:HG12	1.99	0.43
1:D:1059:ASP:OD1	1:D:1061:ALA:HB3	2.17	0.43
1:A:822:ILE:CD1	1:A:889:SER:H	2.29	0.43
1:A:954:ILE:HG22	1:A:1297:ARG:NH2	2.32	0.43
1:B:1347:THR:HG21	1:B:1465:ALA:HA	2.00	0.43
1:C:199:PHE:O	1:C:203:TYR:OH	2.30	0.43
1:D:1341:PHE:HB2	1:D:1459:ALA:HB1	1.99	0.43
1:D:1347:THR:HG21	1:D:1465:ALA:HA	2.00	0.43
1:C:164:LEU:HD12	1:C:178:TRP:O	2.18	0.43
1:D:80:GLU:OE1	1:D:80:GLU:N	2.47	0.43
1:D:422:ARG:NH1	1:D:442:GLU:O	2.51	0.43
1:D:429:SER:O	1:D:431:CYS:N	2.48	0.43
1:A:164:LEU:HD12	1:A:178:TRP:O	2.18	0.43
1:A:173:ASN:OD1	1:A:173:ASN:N	2.51	0.43
1:A:264:VAL:O	1:A:292:GLY:N	2.51	0.43
1:A:352:PHE:CZ	1:A:444:ALA:HB1	2.53	0.43
2:H:2:NAG:C8	2:H:2:NAG:C3	2.84	0.43
1:B:1341:PHE:HB2	1:B:1459:ALA:HB1	1.99	0.43
1:C:964:ASN:O	1:C:966:LEU:N	2.51	0.43
1:D:1253:ASP:O	1:D:1256:VAL:N	2.42	0.43
1:B:104:THR:HG22	1:B:117:ARG:HA	2.00	0.43
1:C:359:PHE:CE1	1:C:417:THR:HG22	2.54	0.43
1:D:679:THR:HG22	1:D:681:SER:H	1.84	0.43
1:A:1052:ALA:O	1:A:1056:ILE:N	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:931:LEU:O	1:B:1312:TYR:N	2.48	0.43
1:B:1227:ASP:N	1:B:1227:ASP:OD1	2.51	0.43
1:C:33:VAL:HG12	1:C:49:VAL:CG2	2.47	0.43
1:C:1039:THR:O	1:C:1042:THR:OG1	2.29	0.43
1:A:739:TRP:O	1:A:740:ILE:HD13	2.19	0.43
1:C:118:THR:HG22	1:C:678:PHE:HZ	1.84	0.43
1:D:1163:ARG:HA	1:D:1166:VAL:HG22	2.01	0.43
1:D:1410:VAL:HG22	1:D:1412:SER:H	1.84	0.43
1:A:134:ASP:OD1	1:A:738:THR:OG1	2.28	0.43
1:B:679:THR:HG22	1:B:681:SER:H	1.84	0.43
1:C:173:ASN:OD1	1:C:173:ASN:N	2.51	0.43
1:C:887:VAL:O	1:C:887:VAL:HG13	2.19	0.43
1:D:104:THR:HG22	1:D:117:ARG:HA	2.00	0.43
1:D:335:LEU:HD23	1:D:337:GLY:N	2.34	0.43
1:D:1386:VAL:HG12	1:D:1387:SER:H	1.84	0.43
1:A:359:PHE:CE1	1:A:417:THR:HG22	2.54	0.43
1:A:964:ASN:O	1:A:966:LEU:N	2.51	0.43
1:B:896:LYS:O	1:B:898:THR:HG23	2.19	0.43
1:A:406:GLN:OE1	1:A:406:GLN:N	2.52	0.42
1:A:802:VAL:HG23	1:A:905:VAL:HG23	2.00	0.42
1:A:941:GLU:OE1	1:A:942:GLU:N	2.52	0.42
1:A:1105:ILE:O	1:A:1109:LEU:HD23	2.19	0.42
1:B:501:ALA:N	1:B:504:GLY:O	2.49	0.42
1:C:418:SER:C	1:C:419:LEU:HD12	2.39	0.42
1:C:802:VAL:HG23	1:C:905:VAL:HG23	2.00	0.42
1:C:961:ASN:OD1	1:C:1247:GLY:N	2.50	0.42
1:D:39:LEU:HD12	1:D:122:VAL:HG12	2.00	0.42
1:D:926:GLU:OE2	1:D:1315:LYS:NZ	2.42	0.42
1:B:571:SER:N	1:B:586:ARG:O	2.52	0.42
1:C:248:VAL:N	1:C:302:GLN:O	2.51	0.42
1:A:419:LEU:N	1:A:446:HIS:O	2.45	0.42
1:A:953:ASP:OD1	1:A:953:ASP:N	2.50	0.42
1:C:1151:ALA:HA	1:C:1166:VAL:HG11	2.01	0.42
1:D:571:SER:N	1:D:586:ARG:O	2.52	0.42
1:D:657:PRO:HG3	1:D:692:LEU:HD23	2.02	0.42
1:D:826:VAL:HG12	1:D:874:ALA:HB1	2.01	0.42
1:D:1227:ASP:N	1:D:1227:ASP:OD1	2.51	0.42
1:B:1163:ARG:HA	1:B:1166:VAL:HG22	2.01	0.42
1:B:1410:VAL:HG22	1:B:1412:SER:H	1.84	0.42
1:C:159:ASN:ND2	1:C:184:GLU:O	2.53	0.42
1:C:406:GLN:OE1	1:C:406:GLN:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:822:ILE:HG12	1:C:889:SER:OG	2.20	0.42
1:C:880:GLN:H	1:C:887:VAL:HG11	1.84	0.42
1:D:896:LYS:O	1:D:898:THR:HG23	2.19	0.42
1:D:977:MET:SD	1:D:1091:ILE:HD12	2.60	0.42
1:B:1386:VAL:HG12	1:B:1387:SER:H	1.84	0.42
1:C:737:GLU:O	1:C:738:THR:OG1	2.38	0.42
1:C:1052:ALA:O	1:C:1056:ILE:N	2.50	0.42
1:D:451:VAL:HG23	1:D:669:PHE:HZ	1.83	0.42
1:A:880:GLN:H	1:A:887:VAL:HG11	1.84	0.42
1:B:335:LEU:HD23	1:B:337:GLY:N	2.34	0.42
1:C:739:TRP:O	1:C:740:ILE:HD13	2.19	0.42
1:A:155:PHE:HB3	1:A:778:LEU:HD22	2.00	0.42
1:A:822:ILE:HG12	1:A:889:SER:OG	2.20	0.42
1:A:1236:LYS:NZ	1:A:1325:GLN:OE1	2.53	0.42
1:B:458:PHE:HB3	1:B:552:ILE:HG21	2.02	0.42
1:C:155:PHE:HB3	1:C:778:LEU:HD22	2.00	0.42
1:C:1144:VAL:HG23	1:C:1145:TYR:N	2.35	0.42
1:C:1323:TYR:C	1:C:1324:LEU:HD12	2.40	0.42
1:D:248:VAL:HG21	1:D:266:VAL:HG11	2.02	0.42
1:D:746:VAL:HG23	1:D:751:VAL:H	1.84	0.42
1:D:1088:ASN:HB3	1:D:1091:ILE:HG22	2.01	0.42
1:D:1367:VAL:O	1:D:1368:SER:OG	2.29	0.42
1:B:1179:ASN:HB2	1:B:1237:TRP:HB2	2.02	0.42
1:D:1447:VAL:O	1:D:1447:VAL:HG13	2.19	0.42
1:A:341:SER:O	1:A:343:ILE:HD12	2.18	0.42
1:A:418:SER:C	1:A:419:LEU:HD12	2.39	0.42
1:A:887:VAL:O	1:A:887:VAL:HG13	2.19	0.42
1:B:421:VAL:HG12	1:B:422:ARG:H	1.85	0.42
1:A:159:ASN:ND2	1:A:184:GLU:O	2.53	0.42
1:D:765:TRP:HB2	1:D:786:LEU:HD22	2.02	0.42
1:D:1128:LEU:HD21	1:D:1150:LEU:HD21	2.02	0.42
1:D:1281:GLN:NE2	1:D:1313:SER:OG	2.53	0.42
1:A:118:THR:HG22	1:A:678:PHE:HZ	1.84	0.41
1:A:1051:GLN:O	1:A:1054:ALA:HB3	2.20	0.41
1:A:1144:VAL:HG23	1:A:1145:TYR:N	2.35	0.41
1:B:167:ILE:O	1:B:175:ILE:N	2.53	0.41
1:B:764:GLU:OE1	1:B:764:GLU:N	2.51	0.41
1:B:977:MET:SD	1:B:1091:ILE:HD12	2.60	0.41
1:B:1343:LEU:HD13	1:B:1448:LYS:HG3	2.02	0.41
1:B:1447:VAL:O	1:B:1447:VAL:HG13	2.19	0.41
1:C:1236:LYS:NZ	1:C:1325:GLN:OE1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:657:PRO:HG3	1:B:692:LEU:HD23	2.02	0.41
1:B:663:GLU:OE1	1:B:663:GLU:N	2.52	0.41
1:C:577:SER:OG	1:C:580:ALA:HB2	2.21	0.41
1:D:458:PHE:HB3	1:D:552:ILE:HG21	2.02	0.41
1:A:1151:ALA:HA	1:A:1166:VAL:HG11	2.01	0.41
1:C:617:SER:O	1:C:621:LEU:HD13	2.20	0.41
1:C:643:ILE:O	1:C:643:ILE:HG22	2.20	0.41
1:D:461:LEU:HD11	1:D:542:ILE:CG2	2.51	0.41
1:D:824:VAL:HG13	1:D:824:VAL:O	2.20	0.41
1:D:1343:LEU:HD13	1:D:1448:LYS:HG3	2.02	0.41
1:A:737:GLU:O	1:A:738:THR:OG1	2.38	0.41
1:B:461:LEU:HD11	1:B:542:ILE:CG2	2.51	0.41
1:C:952:GLY:O	1:C:1297:ARG:NH1	2.49	0.41
1:A:468:LEU:HD23	1:A:560:VAL:HG22	2.02	0.41
1:A:643:ILE:HG22	1:A:643:ILE:O	2.20	0.41
1:B:961:ASN:ND2	1:B:1238:ILE:O	2.51	0.41
1:C:1105:ILE:O	1:C:1109:LEU:HD23	2.19	0.41
1:D:1159:ASN:O	1:D:1162:LYS:NZ	2.53	0.41
1:D:1278:VAL:HG22	1:D:1316:VAL:HG12	2.03	0.41
1:A:617:SER:O	1:A:621:LEU:HD13	2.20	0.41
1:B:826:VAL:HG12	1:B:874:ALA:HB1	2.01	0.41
1:B:1281:GLN:NE2	1:B:1313:SER:OG	2.53	0.41
1:C:41:THR:OG1	1:C:42:GLU:OE1	2.26	0.41
1:D:386:ILE:HD11	1:D:397:ALA:HB3	2.03	0.41
1:D:421:VAL:HG12	1:D:422:ARG:H	1.85	0.41
1:A:240:THR:OG1	1:A:347:ILE:HD12	2.21	0.41
1:B:765:TRP:HB2	1:B:786:LEU:HD22	2.02	0.41
1:C:28:LYS:N	1:C:547:PRO:O	2.53	0.41
1:D:167:ILE:O	1:D:175:ILE:N	2.53	0.41
1:D:272:TYR:CB	1:D:275:ALA:HB2	2.51	0.41
1:D:961:ASN:ND2	1:D:1238:ILE:O	2.51	0.41
1:A:577:SER:OG	1:A:580:ALA:HB2	2.21	0.41
1:A:1323:TYR:C	1:A:1324:LEU:HD12	2.40	0.41
1:B:386:ILE:HD11	1:B:397:ALA:HB3	2.03	0.41
1:B:952:GLY:N	1:B:1297:ARG:O	2.54	0.41
1:B:1128:LEU:HD21	1:B:1150:LEU:HD21	2.02	0.41
1:B:1159:ASN:O	1:B:1162:LYS:NZ	2.53	0.41
1:C:101:MET:SD	1:C:122:VAL:HG11	2.61	0.41
1:A:28:LYS:N	1:A:547:PRO:O	2.53	0.41
1:A:101:MET:SD	1:A:122:VAL:HG11	2.61	0.41
1:B:248:VAL:HG21	1:B:266:VAL:HG11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:746:VAL:HG23	1:B:751:VAL:H	1.84	0.41
1:B:824:VAL:HG13	1:B:824:VAL:O	2.20	0.41
1:B:931:LEU:HD23	1:B:1314:MET:HE2	2.02	0.41
1:B:1088:ASN:HB3	1:B:1091:ILE:HG22	2.01	0.41
1:C:468:LEU:HD23	1:C:560:VAL:HG22	2.02	0.41
1:C:775:ASP:OD1	1:C:776:ALA:N	2.54	0.41
1:C:864:SER:OG	1:C:865:LEU:N	2.54	0.41
1:D:1177:LYS:O	1:D:1325:GLN:NE2	2.54	0.41
1:B:1367:VAL:O	1:B:1368:SER:OG	2.29	0.41
1:B:1373:ARG:O	1:B:1373:ARG:CD	2.69	0.41
1:C:1051:GLN:O	1:C:1054:ALA:HB3	2.20	0.41
1:D:65:GLU:OE2	1:D:104:THR:OG1	2.39	0.41
1:D:501:ALA:N	1:D:504:GLY:O	2.49	0.41
1:D:1179:ASN:HB2	1:D:1237:TRP:HB2	2.02	0.41
1:D:1252:GLN:O	1:D:1254:THR:N	2.54	0.41
1:A:864:SER:OG	1:A:865:LEU:N	2.54	0.40
1:B:50:LEU:HD11	1:B:543:TYR:CZ	2.56	0.40
1:B:500:MET:SD	1:B:504:GLY:N	2.94	0.40
1:C:493:LEU:HD21	1:C:546:LEU:HD23	2.02	0.40
1:C:568:VAL:HG11	1:C:780:ILE:N	2.36	0.40
1:C:778:LEU:H	1:C:778:LEU:HD23	1.85	0.40
1:A:118:THR:HG21	1:A:676:LYS:HD2	2.03	0.40
1:A:568:VAL:HG11	1:A:780:ILE:N	2.36	0.40
1:A:778:LEU:H	1:A:778:LEU:HD23	1.85	0.40
1:A:822:ILE:CA	1:A:887:VAL:HG23	2.44	0.40
1:B:1252:GLN:O	1:B:1254:THR:N	2.54	0.40
2:E:1:NAG:H61	2:E:2:NAG:HN2	1.87	0.40
1:A:1181:VAL:HG22	1:A:1233:ASN:CB	2.51	0.40
1:B:272:TYR:CB	1:B:275:ALA:HB2	2.51	0.40
1:B:282:ASP:OD1	1:B:282:ASP:N	2.55	0.40
1:B:963:GLN:O	1:B:1244:ALA:HB1	2.21	0.40
1:C:240:THR:OG1	1:C:347:ILE:HD12	2.21	0.40
1:C:821:CYS:HB3	1:C:849:CYS:HB3	1.88	0.40
1:D:50:LEU:HD11	1:D:543:TYR:CZ	2.56	0.40
1:D:270:ARG:HD3	1:D:315:GLU:HB3	2.03	0.40
1:D:931:LEU:O	1:D:1312:TYR:N	2.48	0.40
1:D:1280:ILE:HD13	1:D:1314:MET:HG3	2.03	0.40
1:A:33:VAL:HG12	1:A:49:VAL:CG2	2.47	0.40
1:A:199:PHE:O	1:A:203:TYR:OH	2.30	0.40
1:B:270:ARG:HD3	1:B:315:GLU:HB3	2.03	0.40
1:B:363:ILE:HG22	1:B:460:HIS:HB3	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:500:MET:SD	1:D:504:GLY:N	2.94	0.40
1:A:597:LEU:HD13	1:A:744:VAL:HG22	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	1271/1474 (86%)	1138 (90%)	133 (10%)	0	100	100
1	B	1406/1474 (95%)	1198 (85%)	197 (14%)	11 (1%)	16	55
1	C	1271/1474 (86%)	1138 (90%)	133 (10%)	0	100	100
1	D	1406/1474 (95%)	1198 (85%)	197 (14%)	11 (1%)	16	55
All	All	5354/5896 (91%)	4672 (87%)	660 (12%)	22 (0%)	32	68

All (22) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	272	TYR
1	B	800	TYR
1	B	1253	ASP
1	D	272	TYR
1	D	800	TYR
1	D	1253	ASP
1	B	1186	PRO
1	D	1186	PRO
1	B	799	PRO
1	B	809	THR
1	B	1184	GLU
1	D	799	PRO
1	D	809	THR

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Mol	Chain	Res	Type
1	D	1184	GLU
1	B	808	PHE
1	D	808	PHE
1	B	1185	ARG
1	D	1185	ARG
1	B	656	THR
1	B	936	PRO
1	D	656	THR
1	D	936	PRO

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	1112/1290 (86%)	1108 (100%)	4 (0%)	89	91
1	B	1236/1290 (96%)	1221 (99%)	15 (1%)	67	78
1	C	1112/1290 (86%)	1108 (100%)	4 (0%)	89	91
1	D	1236/1290 (96%)	1221 (99%)	15 (1%)	67	78
All	All	4696/5160 (91%)	4658 (99%)	38 (1%)	77	85

All (38) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	492	LYS
1	A	823	ARG
1	A	849	CYS
1	A	991	ASN
1	B	93	LYS
1	B	271	LYS
1	B	299	CYS
1	B	313	ARG
1	B	316	TYR
1	B	410	ASN
1	B	787	ARG
1	B	811	LYS

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Mol	Chain	Res	Type
1	B	823	ARG
1	B	863	LYS
1	B	1019	LYS
1	B	1188	LYS
1	B	1271	ARG
1	B	1303	VAL
1	B	1424	ASN
1	C	492	LYS
1	C	823	ARG
1	C	849	CYS
1	C	991	ASN
1	D	93	LYS
1	D	271	LYS
1	D	299	CYS
1	D	313	ARG
1	D	316	TYR
1	D	410	ASN
1	D	787	ARG
1	D	811	LYS
1	D	823	ARG
1	D	863	LYS
1	D	1019	LYS
1	D	1188	LYS
1	D	1271	ARG
1	D	1303	VAL
1	D	1424	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (20) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1302	GLN
1	B	651	ASN
1	B	827	GLN
1	B	843	GLN
1	B	1015	GLN
1	B	1195	HIS
1	B	1259	HIS
1	B	1277	GLN
1	B	1295	ASN
1	B	1302	GLN
1	C	1302	GLN
1	D	651	ASN

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Mol	Chain	Res	Type
1	D	827	GLN
1	D	843	GLN
1	D	1015	GLN
1	D	1195	HIS
1	D	1259	HIS
1	D	1277	GLN
1	D	1295	ASN
1	D	1302	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

8 monosaccharides 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	$\# Z > 2$
2	NAG	E	1	1,2	14,14,15	0.25	0	17,19,21	0.61	0
2	NAG	E	2	2	14,14,15	0.31	0	17,19,21	0.52	0
2	NAG	F	1	2	14,14,15	0.41	0	17,19,21	1.22	3 (17%)
2	NAG	F	2	2	14,14,15	0.30	0	17,19,21	0.56	0
2	NAG	G	1	1,2	14,14,15	0.25	0	17,19,21	0.61	0
2	NAG	G	2	2	14,14,15	0.31	0	17,19,21	0.52	0
2	NAG	H	1	2	14,14,15	0.41	0	17,19,21	1.22	3 (17%)
2	NAG	H	2	2	14,14,15	0.30	0	17,19,21	0.56	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
2	NAG	E	1	1,2	-	4/6/23/26	0/1/1/1
2	NAG	E	2	2	-	4/6/23/26	0/1/1/1
2	NAG	F	1	2	-	4/6/23/26	0/1/1/1
2	NAG	F	2	2	-	5/6/23/26	0/1/1/1
2	NAG	G	1	1,2	-	4/6/23/26	0/1/1/1
2	NAG	G	2	2	-	4/6/23/26	0/1/1/1
2	NAG	H	1	2	-	4/6/23/26	0/1/1/1
2	NAG	H	2	2	-	5/6/23/26	0/1/1/1

There are no bond length outliers.

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	1	NAG	C4-C3-C2	3.16	115.65	111.02
2	H	1	NAG	C4-C3-C2	3.16	115.65	111.02
2	F	1	NAG	C2-N2-C7	-2.19	119.78	122.90
2	H	1	NAG	C2-N2-C7	-2.19	119.78	122.90
2	F	1	NAG	O5-C5-C6	2.06	110.44	107.20
2	H	1	NAG	O5-C5-C6	2.06	110.44	107.20

There are no chirality outliers.

All (34) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	E	1	NAG	C8-C7-N2-C2
2	E	1	NAG	O7-C7-N2-C2
2	E	2	NAG	C3-C2-N2-C7
2	E	2	NAG	C8-C7-N2-C2
2	E	2	NAG	O7-C7-N2-C2
2	F	1	NAG	C8-C7-N2-C2
2	F	1	NAG	O7-C7-N2-C2
2	F	2	NAG	C8-C7-N2-C2
2	F	2	NAG	O7-C7-N2-C2
2	G	1	NAG	C8-C7-N2-C2
2	G	1	NAG	O7-C7-N2-C2
2	G	2	NAG	C3-C2-N2-C7
2	G	2	NAG	C8-C7-N2-C2

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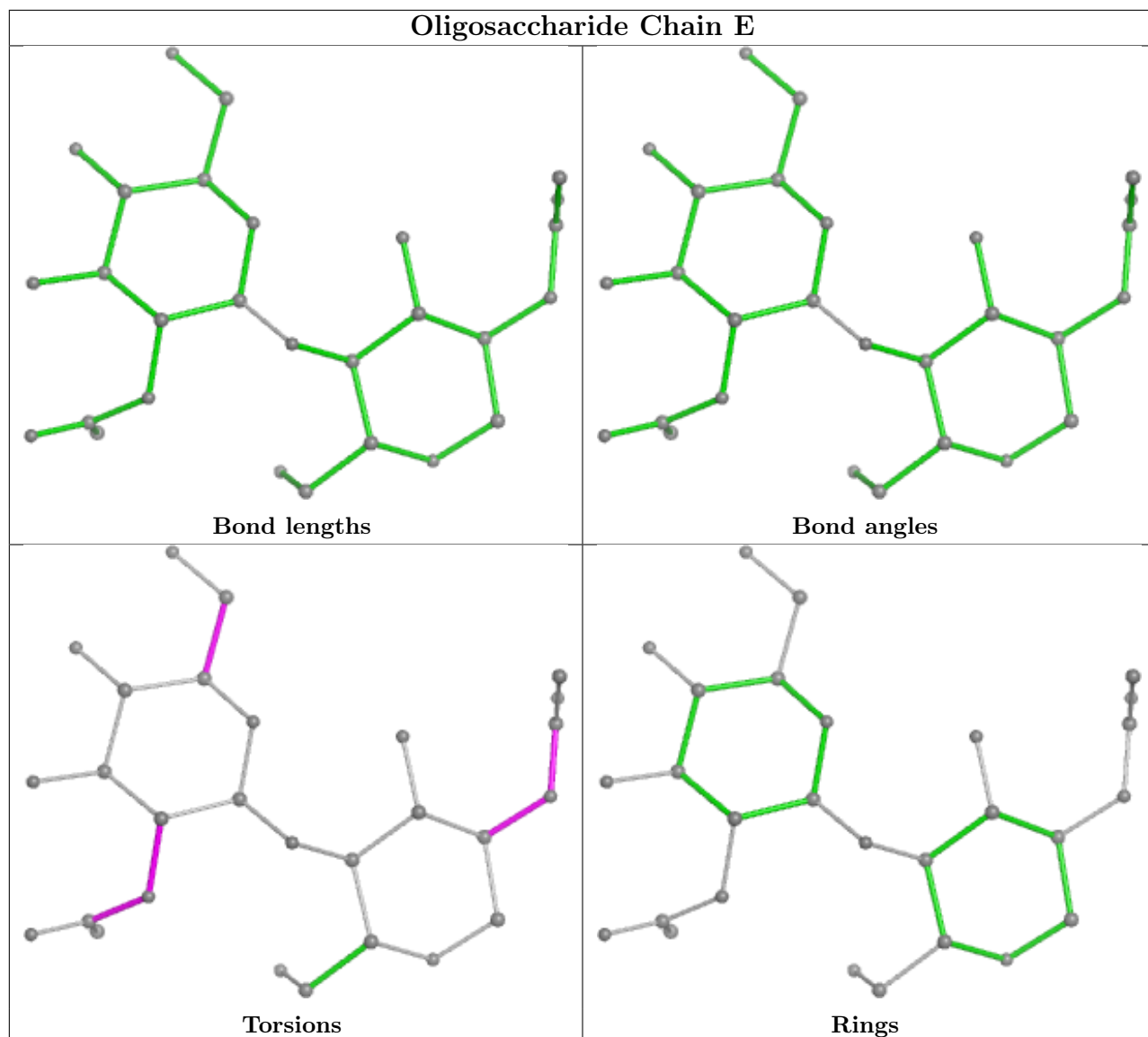
Mol	Chain	Res	Type	Atoms
2	G	2	NAG	O7-C7-N2-C2
2	H	1	NAG	C8-C7-N2-C2
2	H	1	NAG	O7-C7-N2-C2
2	H	2	NAG	C8-C7-N2-C2
2	H	2	NAG	O7-C7-N2-C2
2	E	1	NAG	C1-C2-N2-C7
2	G	1	NAG	C1-C2-N2-C7
2	F	2	NAG	O5-C5-C6-O6
2	H	2	NAG	O5-C5-C6-O6
2	F	1	NAG	O5-C5-C6-O6
2	H	1	NAG	O5-C5-C6-O6
2	E	2	NAG	O5-C5-C6-O6
2	G	2	NAG	O5-C5-C6-O6
2	F	2	NAG	C1-C2-N2-C7
2	H	2	NAG	C1-C2-N2-C7
2	F	1	NAG	C3-C2-N2-C7
2	H	1	NAG	C3-C2-N2-C7
2	E	1	NAG	C3-C2-N2-C7
2	F	2	NAG	C3-C2-N2-C7
2	G	1	NAG	C3-C2-N2-C7
2	H	2	NAG	C3-C2-N2-C7

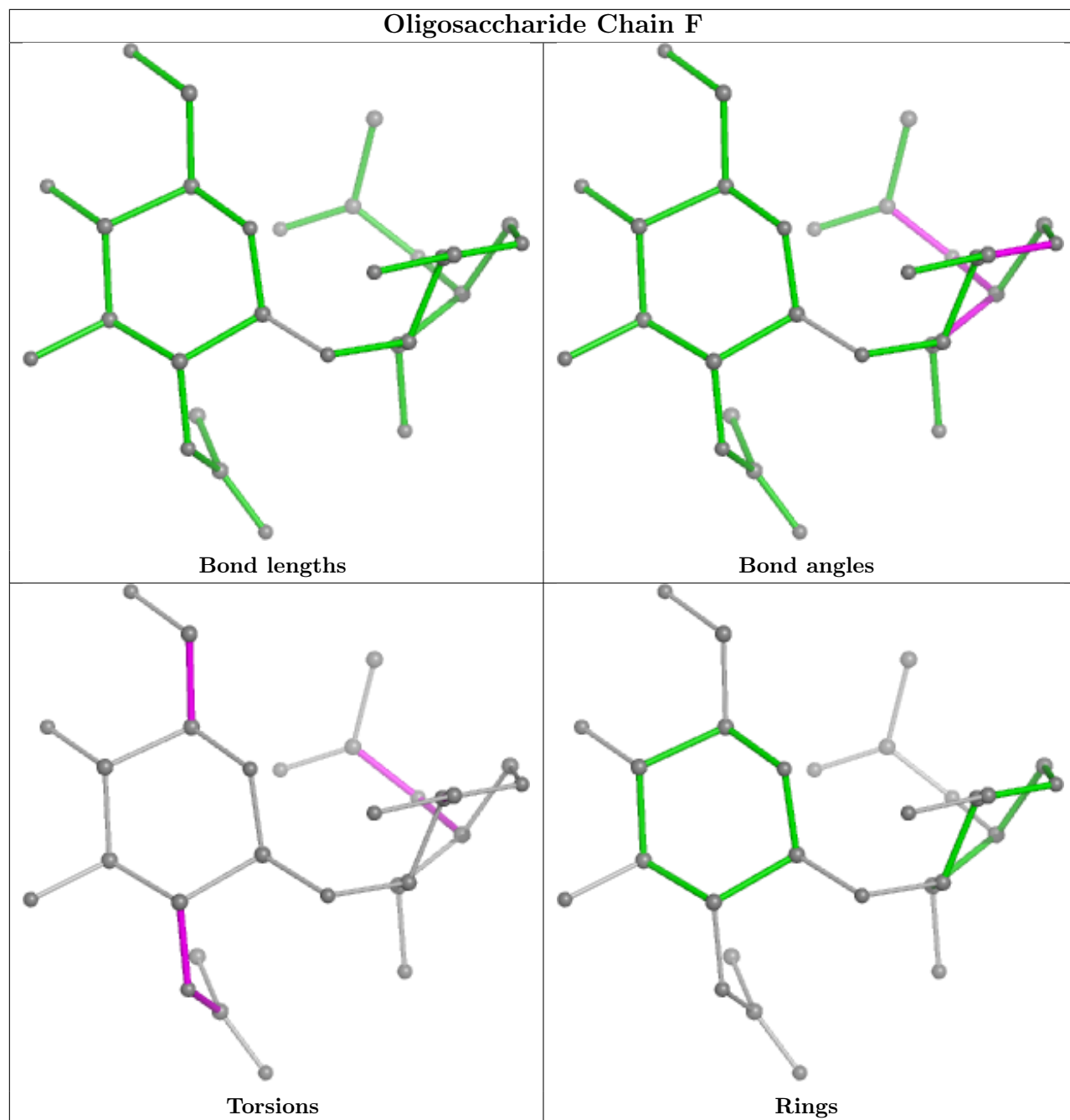
There are no ring outliers.

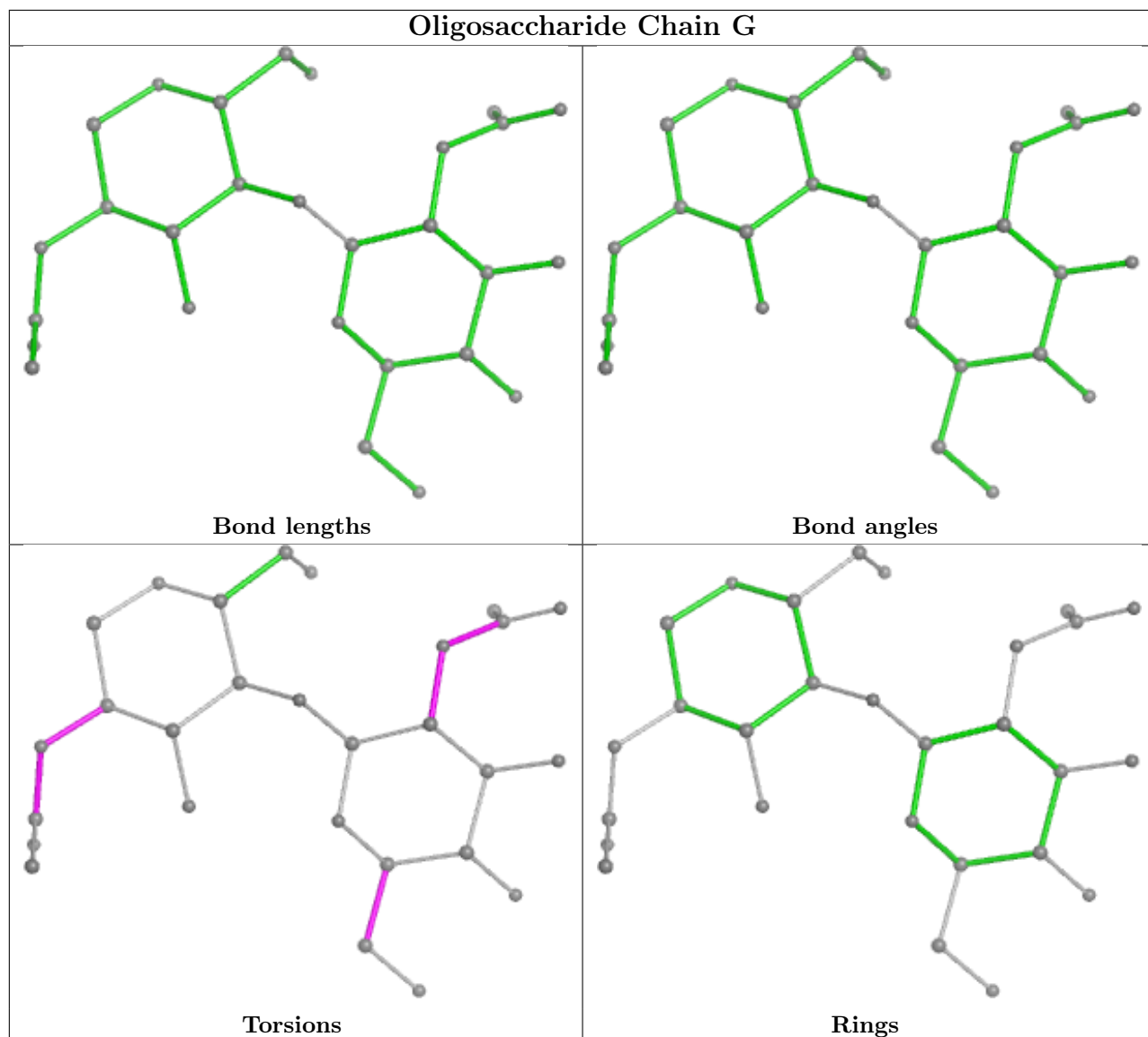
6 monomers are involved in 11 short contacts:

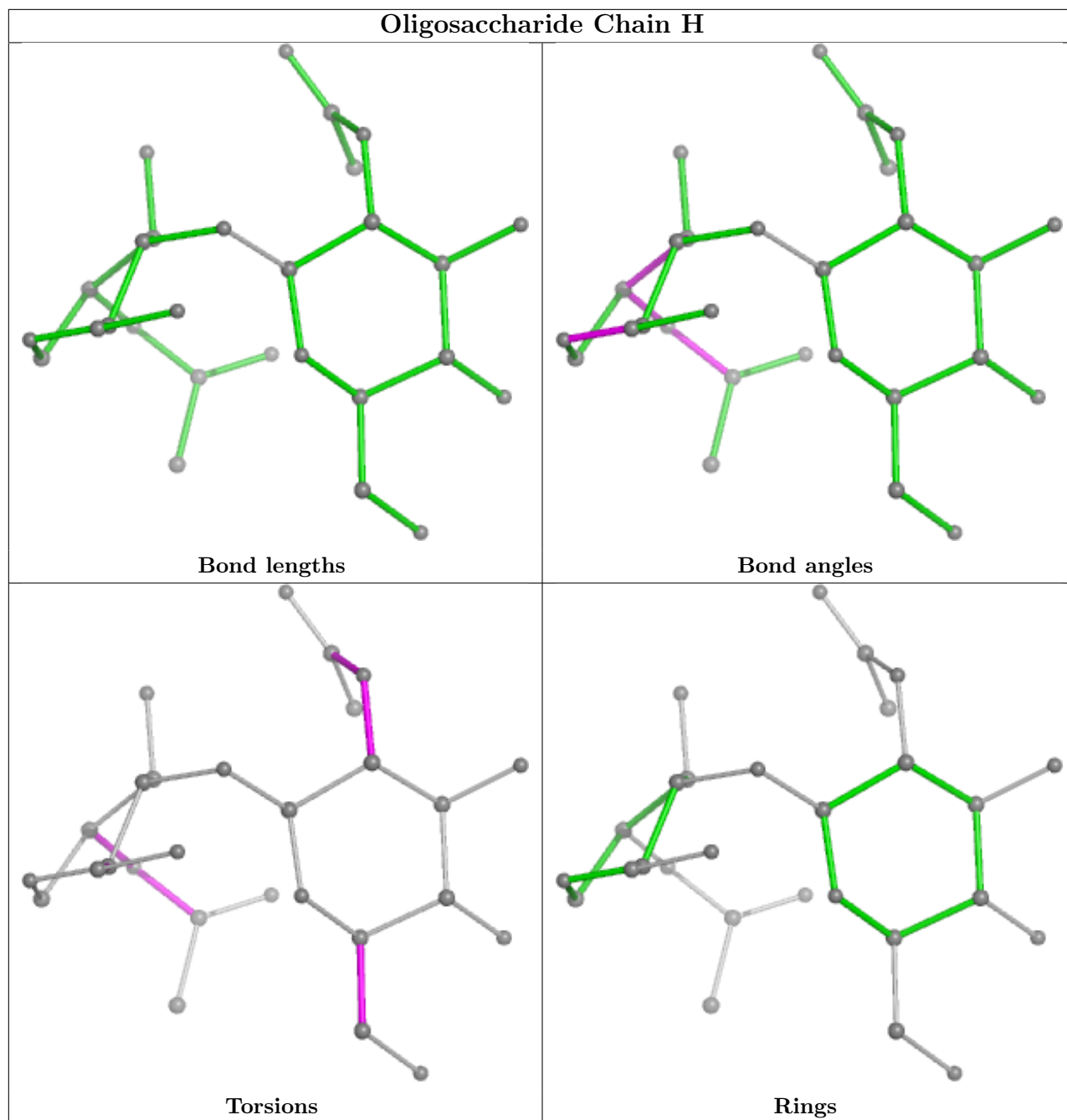
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	F	2	NAG	4	0
2	E	1	NAG	1	0
2	E	2	NAG	1	0
2	H	2	NAG	4	0
2	F	1	NAG	1	0
2	H	1	NAG	1	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.









5.6 Ligand geometry [i](#)

26 ligands 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
3	NAG	B	2003	1	14,14,15	0.29	0	17,19,21	0.92	1 (5%)
3	NAG	B	2005	1	14,14,15	0.36	0	17,19,21	0.75	1 (5%)
3	NAG	B	2007	1	14,14,15	0.30	0	17,19,21	0.68	0
3	NAG	D	2006	1	14,14,15	0.32	0	17,19,21	0.84	0
3	NAG	A	2002	-	14,14,15	1.93	3 (21%)	17,19,21	1.07	1 (5%)
3	NAG	A	2001	1	14,14,15	2.09	4 (28%)	17,19,21	2.01	5 (29%)
3	NAG	D	2002	1	14,14,15	0.32	0	17,19,21	0.51	0
3	NAG	A	2004	1	14,14,15	1.79	3 (21%)	17,19,21	1.34	1 (5%)
3	NAG	D	2003	1	14,14,15	0.29	0	17,19,21	0.92	1 (5%)
3	NAG	D	2005	1	14,14,15	0.36	0	17,19,21	0.75	1 (5%)
3	NAG	D	2007	1	14,14,15	0.30	0	17,19,21	0.68	0
3	NAG	D	2004	1	14,14,15	0.33	0	17,19,21	0.63	0
3	NAG	D	2001	1	14,14,15	0.27	0	17,19,21	1.26	2 (11%)
3	NAG	D	2008	1	14,14,15	0.32	0	17,19,21	0.48	0
3	NAG	C	2001	1	14,14,15	2.09	4 (28%)	17,19,21	2.01	5 (29%)
3	NAG	A	2003	1	14,14,15	1.82	2 (14%)	17,19,21	1.13	1 (5%)
3	NAG	B	2001	1	14,14,15	0.27	0	17,19,21	1.26	2 (11%)
3	NAG	C	2002	-	14,14,15	1.93	3 (21%)	17,19,21	1.07	1 (5%)
3	NAG	B	2008	1	14,14,15	0.32	0	17,19,21	0.48	0
3	NAG	C	2004	1	14,14,15	1.79	3 (21%)	17,19,21	1.34	1 (5%)
3	NAG	B	2002	1	14,14,15	0.32	0	17,19,21	0.51	0
3	NAG	A	2005	1	14,14,15	1.91	5 (35%)	17,19,21	1.48	2 (11%)
3	NAG	C	2005	1	14,14,15	1.91	5 (35%)	17,19,21	1.48	2 (11%)
3	NAG	B	2004	1	14,14,15	0.33	0	17,19,21	0.63	0
3	NAG	B	2006	1	14,14,15	0.32	0	17,19,21	0.84	0
3	NAG	C	2003	1	14,14,15	1.82	2 (14%)	17,19,21	1.13	1 (5%)

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
3	NAG	B	2003	1	-	0/6/23/26	0/1/1/1
3	NAG	B	2005	1	1/1/5/7	3/6/23/26	0/1/1/1
3	NAG	B	2007	1	-	3/6/23/26	0/1/1/1
3	NAG	D	2006	1	-	2/6/23/26	0/1/1/1
3	NAG	A	2002	-	-	2/6/23/26	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	NAG	A	2001	1	-	3/6/23/26	0/1/1/1
3	NAG	D	2002	1	-	3/6/23/26	0/1/1/1
3	NAG	A	2004	1	-	2/6/23/26	0/1/1/1
3	NAG	D	2003	1	-	0/6/23/26	0/1/1/1
3	NAG	D	2005	1	1/1/5/7	3/6/23/26	0/1/1/1
3	NAG	D	2007	1	-	3/6/23/26	0/1/1/1
3	NAG	D	2004	1	-	4/6/23/26	0/1/1/1
3	NAG	D	2001	1	-	1/6/23/26	0/1/1/1
3	NAG	D	2008	1	-	4/6/23/26	0/1/1/1
3	NAG	C	2001	1	-	3/6/23/26	0/1/1/1
3	NAG	A	2003	1	-	1/6/23/26	0/1/1/1
3	NAG	B	2001	1	-	1/6/23/26	0/1/1/1
3	NAG	C	2002	-	-	2/6/23/26	0/1/1/1
3	NAG	B	2008	1	-	4/6/23/26	0/1/1/1
3	NAG	C	2004	1	-	2/6/23/26	0/1/1/1
3	NAG	B	2002	1	-	3/6/23/26	0/1/1/1
3	NAG	A	2005	1	-	3/6/23/26	0/1/1/1
3	NAG	C	2005	1	-	3/6/23/26	0/1/1/1
3	NAG	B	2004	1	-	4/6/23/26	0/1/1/1
3	NAG	B	2006	1	-	2/6/23/26	0/1/1/1
3	NAG	C	2003	1	-	1/6/23/26	0/1/1/1

All (34) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	2001	NAG	O5-C1	4.59	1.51	1.43
3	C	2001	NAG	O5-C1	4.59	1.51	1.43
3	A	2002	NAG	O5-C1	4.38	1.50	1.43
3	C	2002	NAG	O5-C1	4.38	1.50	1.43
3	A	2005	NAG	O5-C1	4.17	1.50	1.43
3	C	2005	NAG	O5-C1	4.17	1.50	1.43
3	A	2003	NAG	O5-C1	3.95	1.50	1.43
3	C	2003	NAG	O5-C1	3.95	1.50	1.43
3	A	2004	NAG	O5-C1	3.92	1.50	1.43
3	C	2004	NAG	O5-C1	3.92	1.50	1.43
3	A	2001	NAG	C7-N2	3.65	1.46	1.34
3	C	2001	NAG	C7-N2	3.65	1.46	1.34
3	A	2002	NAG	C7-N2	3.43	1.46	1.34
3	C	2002	NAG	C7-N2	3.43	1.46	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	2005	NAG	C7-N2	3.35	1.45	1.34
3	C	2005	NAG	C7-N2	3.35	1.45	1.34
3	A	2004	NAG	C7-N2	3.29	1.45	1.34
3	C	2004	NAG	C7-N2	3.29	1.45	1.34
3	A	2003	NAG	C7-N2	3.26	1.45	1.34
3	C	2003	NAG	C7-N2	3.26	1.45	1.34
3	A	2001	NAG	C2-N2	2.96	1.51	1.46
3	C	2001	NAG	C2-N2	2.96	1.51	1.46
3	A	2002	NAG	C2-N2	2.51	1.50	1.46
3	C	2002	NAG	C2-N2	2.51	1.50	1.46
3	A	2005	NAG	O5-C5	2.23	1.48	1.43
3	C	2005	NAG	O5-C5	2.23	1.48	1.43
3	A	2004	NAG	C2-N2	2.20	1.50	1.46
3	C	2004	NAG	C2-N2	2.20	1.50	1.46
3	A	2005	NAG	C3-C2	-2.16	1.47	1.52
3	C	2005	NAG	C3-C2	-2.16	1.47	1.52
3	A	2005	NAG	C2-N2	2.13	1.49	1.46
3	C	2005	NAG	C2-N2	2.13	1.49	1.46
3	A	2001	NAG	O7-C7	-2.00	1.18	1.23
3	C	2001	NAG	O7-C7	-2.00	1.18	1.23

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	2001	NAG	C8-C7-N2	5.60	125.58	116.10
3	C	2001	NAG	C8-C7-N2	5.60	125.58	116.10
3	B	2001	NAG	C1-O5-C5	3.87	117.44	112.19
3	D	2001	NAG	C1-O5-C5	3.87	117.44	112.19
3	A	2005	NAG	C8-C7-N2	3.75	122.45	116.10
3	C	2005	NAG	C8-C7-N2	3.75	122.45	116.10
3	A	2003	NAG	C1-O5-C5	-3.00	108.13	112.19
3	C	2003	NAG	C1-O5-C5	-3.00	108.13	112.19
3	A	2001	NAG	C1-C2-N2	2.96	115.54	110.49
3	C	2001	NAG	C1-C2-N2	2.96	115.54	110.49
3	A	2001	NAG	O7-C7-C8	-2.92	116.64	122.06
3	C	2001	NAG	O7-C7-C8	-2.92	116.64	122.06
3	A	2001	NAG	C2-N2-C7	2.86	126.98	122.90
3	C	2001	NAG	C2-N2-C7	2.86	126.98	122.90
3	A	2004	NAG	C8-C7-N2	2.48	120.29	116.10
3	C	2004	NAG	C8-C7-N2	2.48	120.29	116.10
3	A	2005	NAG	C6-C5-C4	-2.47	107.21	113.00
3	C	2005	NAG	C6-C5-C4	-2.47	107.21	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	2002	NAG	C1-O5-C5	2.28	115.28	112.19
3	C	2002	NAG	C1-O5-C5	2.28	115.28	112.19
3	A	2001	NAG	O7-C7-N2	-2.27	117.78	121.95
3	C	2001	NAG	O7-C7-N2	-2.27	117.78	121.95
3	B	2001	NAG	C4-C3-C2	-2.17	107.84	111.02
3	D	2001	NAG	C4-C3-C2	-2.17	107.84	111.02
3	B	2003	NAG	C3-C4-C5	2.03	113.85	110.24
3	D	2003	NAG	C3-C4-C5	2.03	113.85	110.24
3	B	2005	NAG	C1-O5-C5	-2.02	109.45	112.19
3	D	2005	NAG	C1-O5-C5	-2.02	109.45	112.19

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
3	B	2005	NAG	C1
3	D	2005	NAG	C1

All (62) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	B	2002	NAG	C3-C2-N2-C7
3	B	2002	NAG	C8-C7-N2-C2
3	B	2002	NAG	O7-C7-N2-C2
3	B	2004	NAG	C8-C7-N2-C2
3	B	2004	NAG	O7-C7-N2-C2
3	B	2005	NAG	C3-C2-N2-C7
3	B	2005	NAG	C8-C7-N2-C2
3	B	2005	NAG	O7-C7-N2-C2
3	B	2006	NAG	C8-C7-N2-C2
3	B	2006	NAG	O7-C7-N2-C2
3	B	2007	NAG	C3-C2-N2-C7
3	B	2007	NAG	C8-C7-N2-C2
3	B	2007	NAG	O7-C7-N2-C2
3	B	2008	NAG	C8-C7-N2-C2
3	B	2008	NAG	O7-C7-N2-C2
3	D	2002	NAG	C3-C2-N2-C7
3	D	2002	NAG	C8-C7-N2-C2
3	D	2002	NAG	O7-C7-N2-C2
3	D	2004	NAG	C8-C7-N2-C2
3	D	2004	NAG	O7-C7-N2-C2
3	D	2005	NAG	C3-C2-N2-C7
3	D	2005	NAG	C8-C7-N2-C2

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Mol	Chain	Res	Type	Atoms
3	D	2005	NAG	O7-C7-N2-C2
3	D	2006	NAG	C8-C7-N2-C2
3	D	2006	NAG	O7-C7-N2-C2
3	D	2007	NAG	C3-C2-N2-C7
3	D	2007	NAG	C8-C7-N2-C2
3	D	2007	NAG	O7-C7-N2-C2
3	D	2008	NAG	C8-C7-N2-C2
3	D	2008	NAG	O7-C7-N2-C2
3	A	2004	NAG	C1-C2-N2-C7
3	C	2004	NAG	C1-C2-N2-C7
3	A	2001	NAG	C8-C7-N2-C2
3	A	2001	NAG	O7-C7-N2-C2
3	A	2005	NAG	C8-C7-N2-C2
3	A	2005	NAG	O7-C7-N2-C2
3	C	2001	NAG	C8-C7-N2-C2
3	C	2001	NAG	O7-C7-N2-C2
3	C	2005	NAG	C8-C7-N2-C2
3	C	2005	NAG	O7-C7-N2-C2
3	B	2008	NAG	O5-C5-C6-O6
3	D	2008	NAG	O5-C5-C6-O6
3	A	2002	NAG	O5-C5-C6-O6
3	A	2005	NAG	O5-C5-C6-O6
3	C	2002	NAG	O5-C5-C6-O6
3	C	2005	NAG	O5-C5-C6-O6
3	B	2004	NAG	C4-C5-C6-O6
3	D	2004	NAG	C4-C5-C6-O6
3	A	2002	NAG	C3-C2-N2-C7
3	A	2004	NAG	C3-C2-N2-C7
3	B	2008	NAG	C3-C2-N2-C7
3	C	2002	NAG	C3-C2-N2-C7
3	C	2004	NAG	C3-C2-N2-C7
3	D	2008	NAG	C3-C2-N2-C7
3	B	2004	NAG	O5-C5-C6-O6
3	D	2004	NAG	O5-C5-C6-O6
3	A	2001	NAG	C3-C2-N2-C7
3	A	2003	NAG	C3-C2-N2-C7
3	B	2001	NAG	C3-C2-N2-C7
3	C	2001	NAG	C3-C2-N2-C7
3	C	2003	NAG	C3-C2-N2-C7
3	D	2001	NAG	C3-C2-N2-C7

There are no ring outliers.

4 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	2005	NAG	1	0
3	A	2004	NAG	1	0
3	D	2005	NAG	1	0
3	C	2004	NAG	1	0

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.

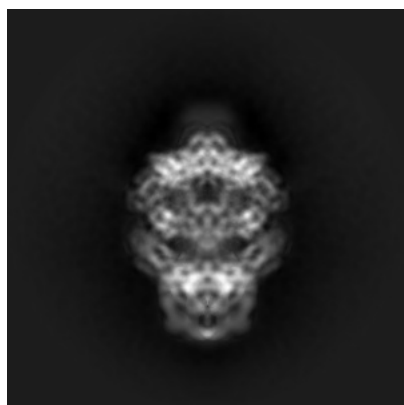
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-12750. These allow visual inspection of the internal detail of the map and identification of artifacts.

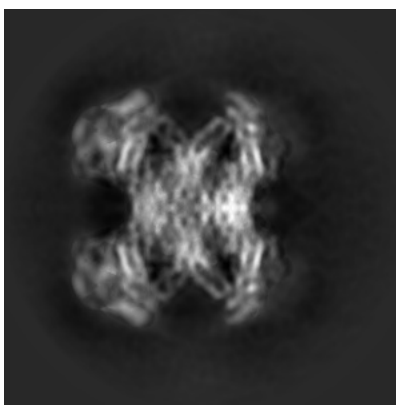
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

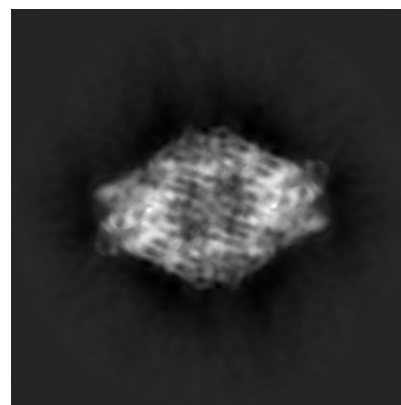
6.1.1 Primary map



X



Y



Z

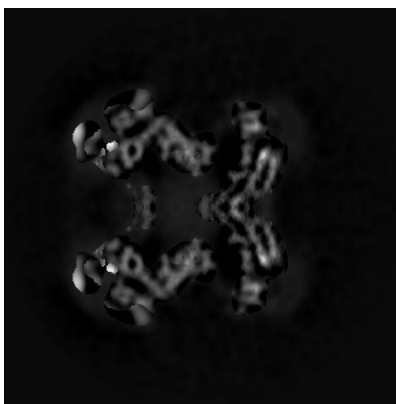
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

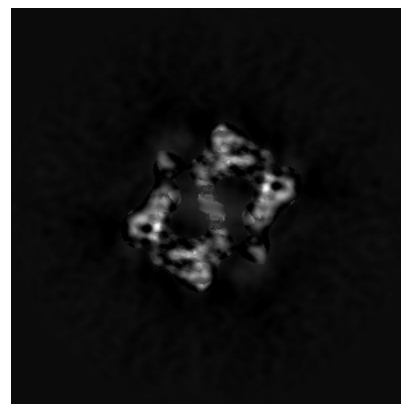
6.2.1 Primary map



X Index: 160



Y Index: 160

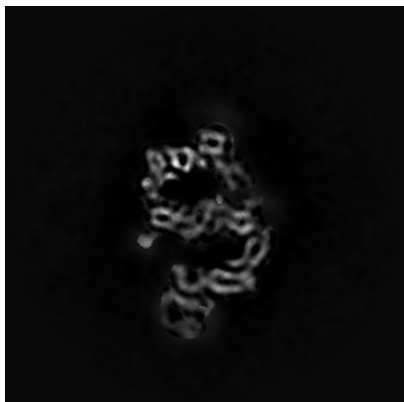


Z Index: 160

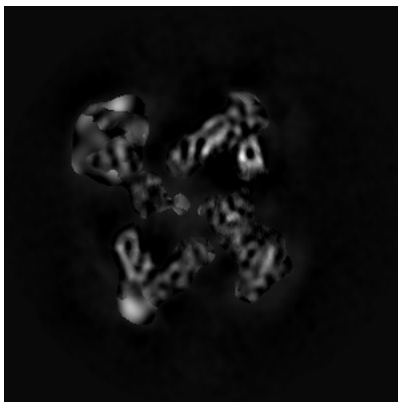
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

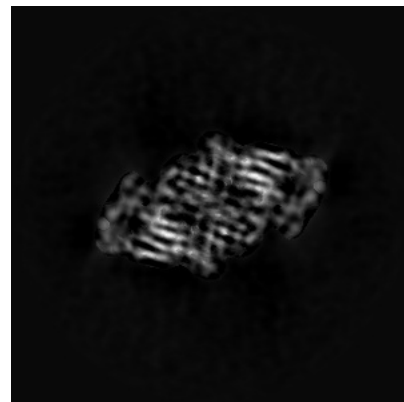
6.3.1 Primary map



X Index: 124



Y Index: 174

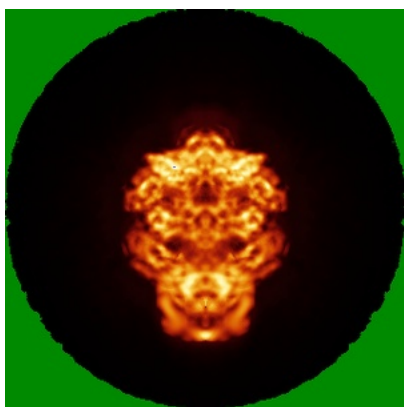


Z Index: 192

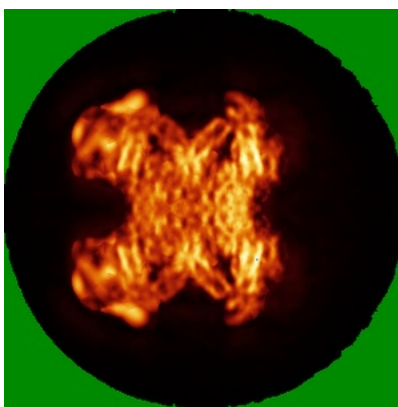
The images above show the largest variance slices of the map in three orthogonal directions.

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

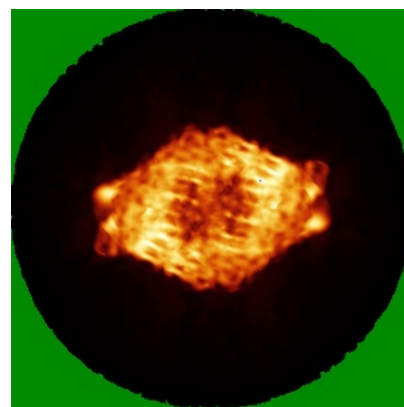
6.4.1 Primary map



X



Y

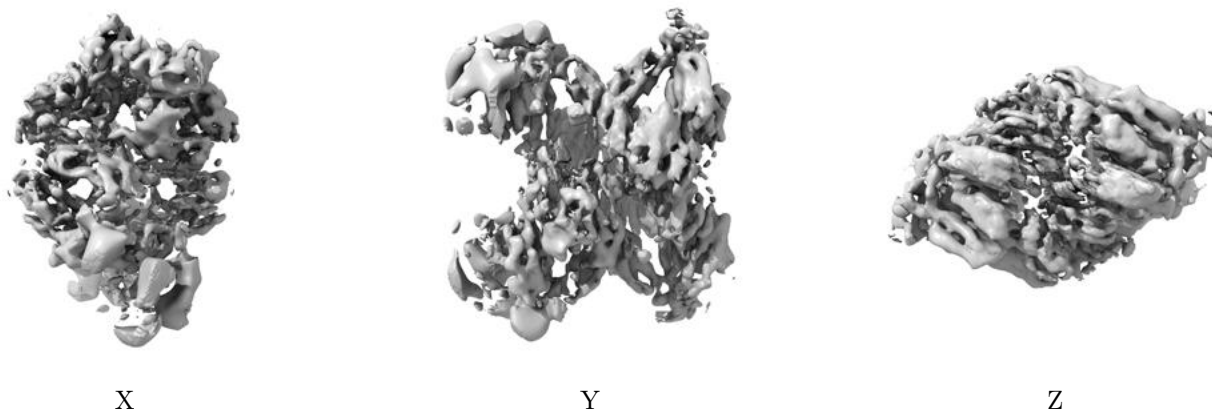


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.0135. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

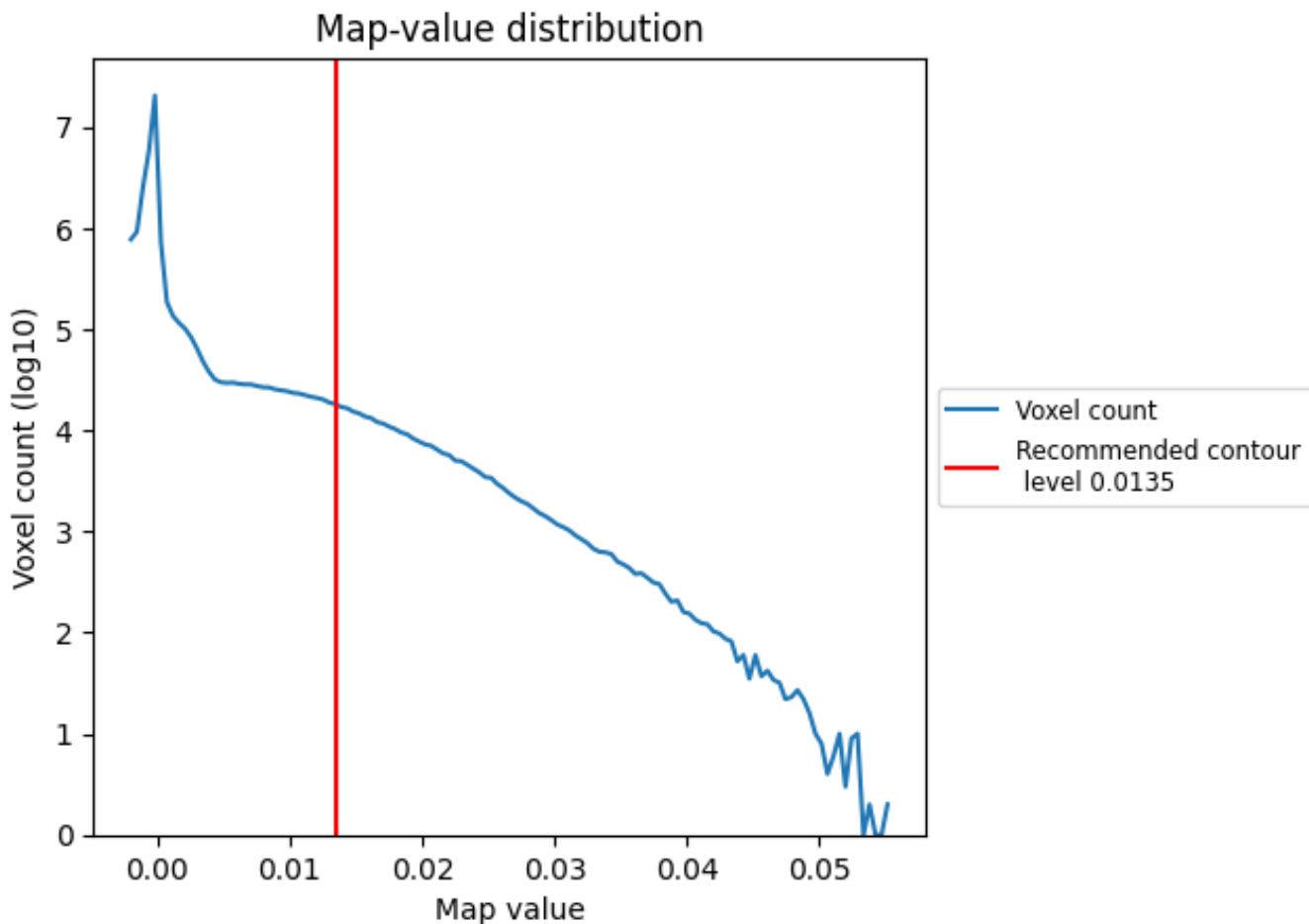
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

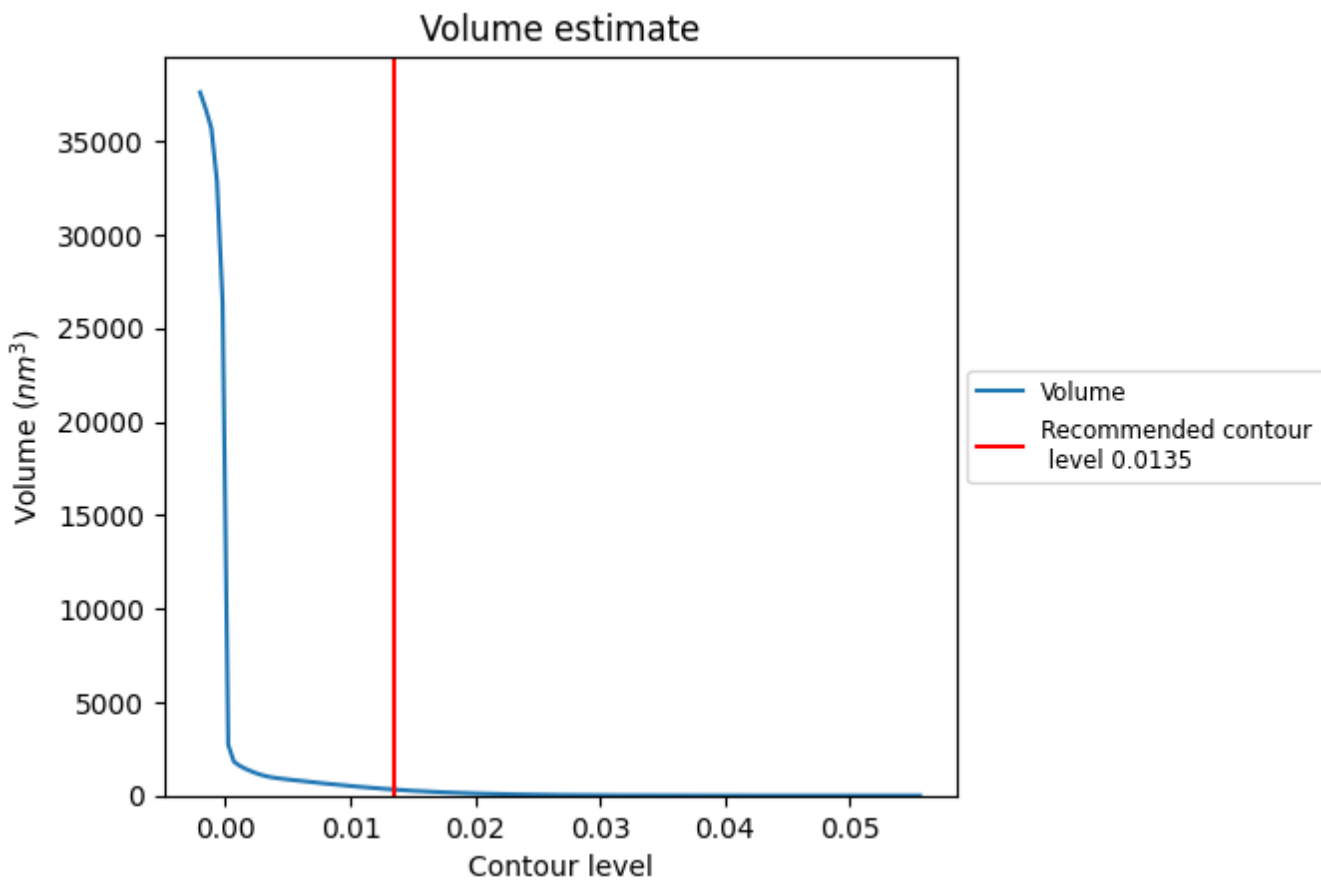
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

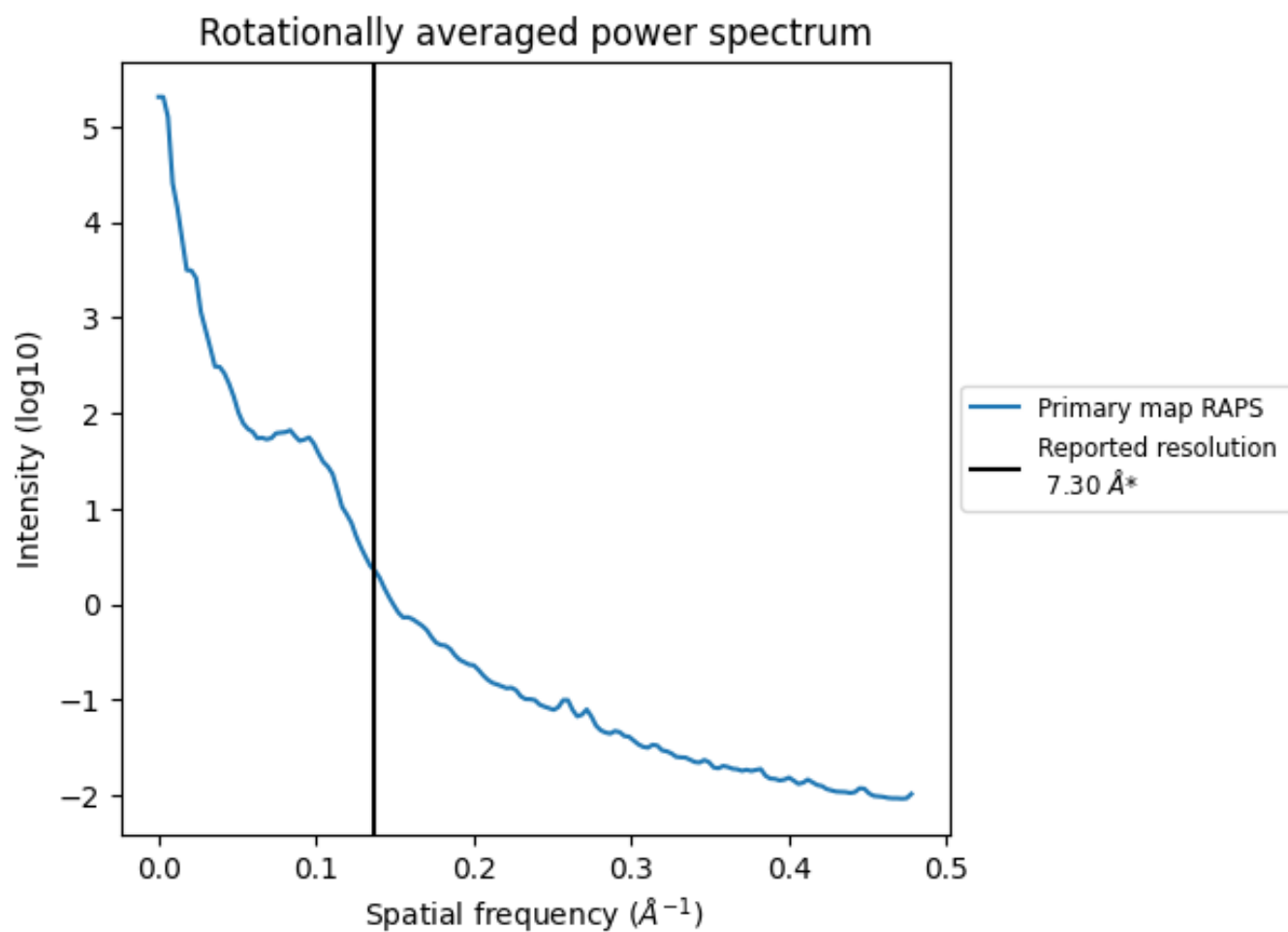
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 322 nm³; this corresponds to an approximate mass of 291 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)



*Reported resolution corresponds to spatial frequency of 0.137 Å⁻¹

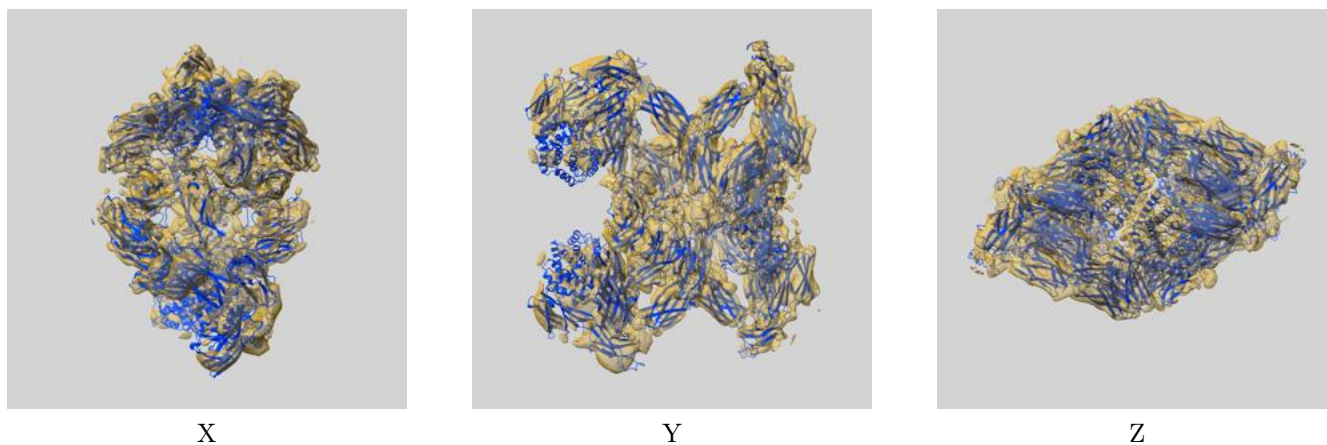
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

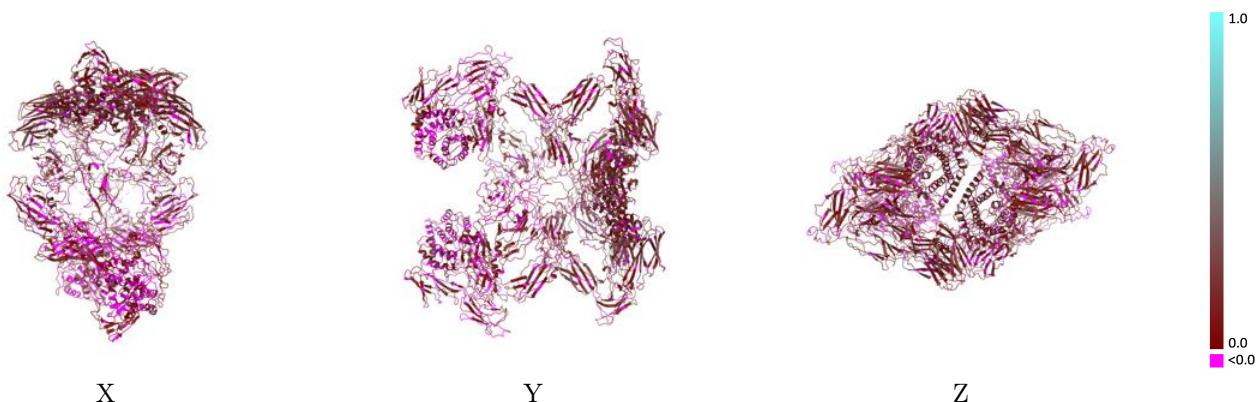
This section contains information regarding the fit between EMDB map EMD-12750 and PDB model 7O7N. Per-residue inclusion information can be found in section 3 on page 7.

9.1 Map-model overlay [i](#)



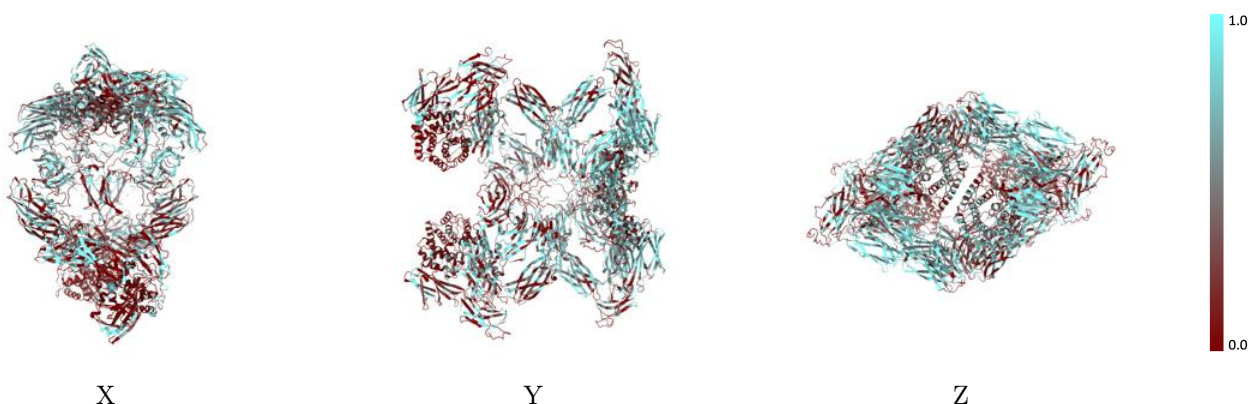
The images above show the 3D surface view of the map at the recommended contour level 0.0135 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



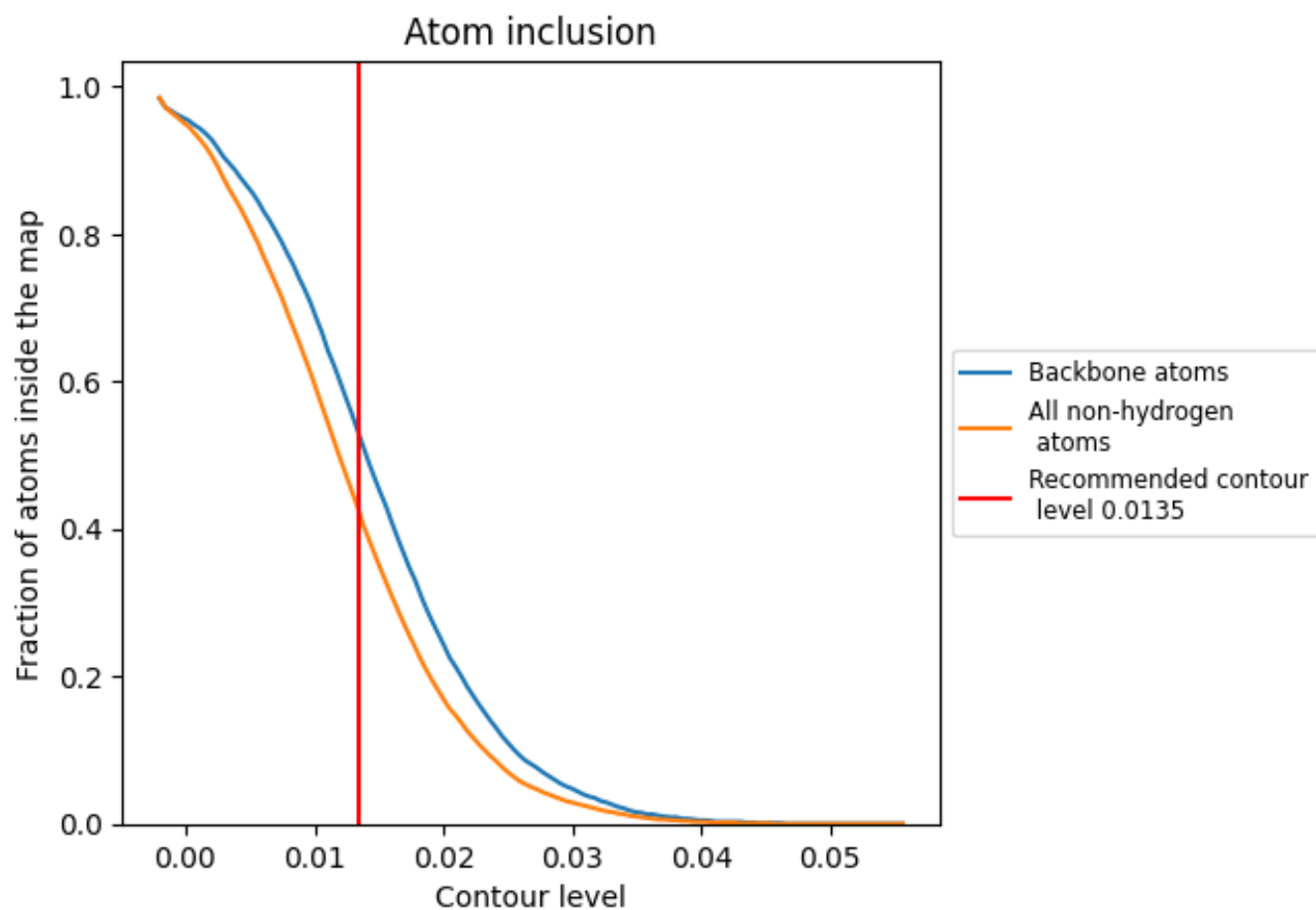
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.0135).

9.4 Atom inclusion [i](#)



At the recommended contour level, 53% of all backbone atoms, 42% of all non-hydrogen atoms, are inside the map.

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

The table lists the average atom inclusion at the recommended contour level (0.0135) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.4220	0.1100
A	0.5150	0.1550
B	0.3380	0.0690
C	0.5160	0.1550
D	0.3380	0.0690
E	0.0360	0.0970
F	0.2860	0.2640
G	0.0360	0.0790
H	0.2860	0.2510

