



Full wwPDB EM Validation Report ⓘ

Apr 16, 2022 – 12:28 am BST

PDB ID : 7PK6
EMDB ID : EMD-13466
Title : Providencia stuartii Arginine decarboxylase (Adc), stack structure
Authors : Jessop, M.; Desfosses, A.; Bacia-Verloop, M.; Gutsche, I.
Deposited on : 2021-08-25
Resolution : 2.15 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

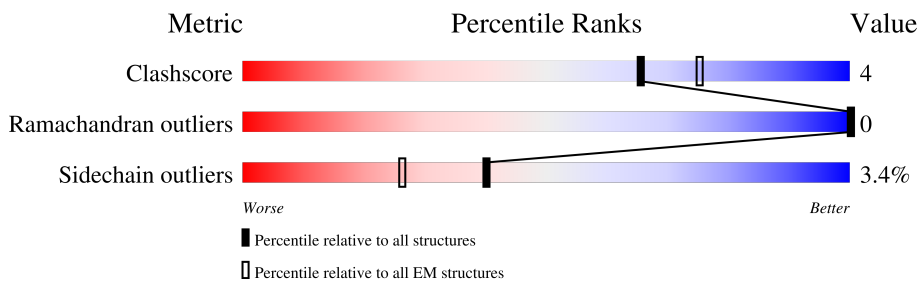
EMDB validation analysis : 0.0.0.dev97
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.27

1 Overall quality at a glance i

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

The reported resolution of this entry is 2.15 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	758	
1	B	758	
1	C	758	
1	D	758	
1	E	758	
1	F	758	
1	G	758	
1	H	758	

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Mol	Chain	Length	Quality of chain
1	I	758	<p>27% 87% 12%</p>
1	J	758	<p>73% 87% 12%</p>
1	K	758	<p>86% 13%</p>
1	L	758	<p>86% 12%</p>
1	M	758	<p>87% 11%</p>
1	N	758	<p>87% 12%</p>
1	O	758	<p>73% 87% 12%</p>
1	P	758	<p>86% 12%</p>
1	Q	758	<p>87% 11%</p>
1	R	758	<p>88% 11%</p>
1	S	758	<p>86% 12%</p>
1	T	758	<p>26% 86% 12%</p>

2 Entry composition [\(i\)](#)

There is only 1 type of molecule in this entry. The entry contains 120580 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 Biodegradative arginine decarboxylase.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	N	O	P	S		
1	A	755	6029	3816	1038	1138	1	36	0	0
1	B	755	6029	3816	1038	1138	1	36	0	0
1	K	755	6029	3816	1038	1138	1	36	0	0
1	P	755	6029	3816	1038	1138	1	36	0	0
1	L	755	6029	3816	1038	1138	1	36	0	0
1	Q	755	6029	3816	1038	1138	1	36	0	0
1	M	755	6029	3816	1038	1138	1	36	0	0
1	R	755	6029	3816	1038	1138	1	36	0	0
1	N	755	6029	3816	1038	1138	1	36	0	0
1	S	755	6029	3816	1038	1138	1	36	0	0
1	O	755	6029	3816	1038	1138	1	36	0	0
1	T	755	6029	3816	1038	1138	1	36	0	0
1	C	755	6029	3816	1038	1138	1	36	0	0
1	G	755	6029	3816	1038	1138	1	36	0	0
1	D	755	6029	3816	1038	1138	1	36	0	0
1	H	755	6029	3816	1038	1138	1	36	0	0
1	E	755	6029	3816	1038	1138	1	36	0	0

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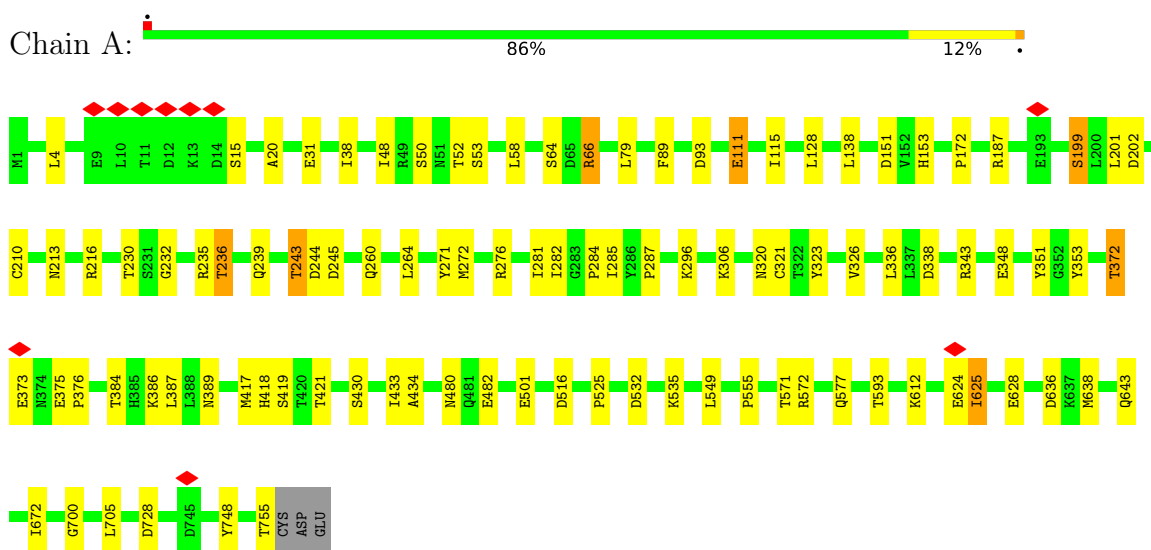
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Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	N	O	P	S		
1	I	755	Total 6029	C 3816	N 1038	O 1138	P 1	S 36	0	0
1	F	755	Total 6029	C 3816	N 1038	O 1138	P 1	S 36	0	0
1	J	755	Total 6029	C 3816	N 1038	O 1138	P 1	S 36	0	0

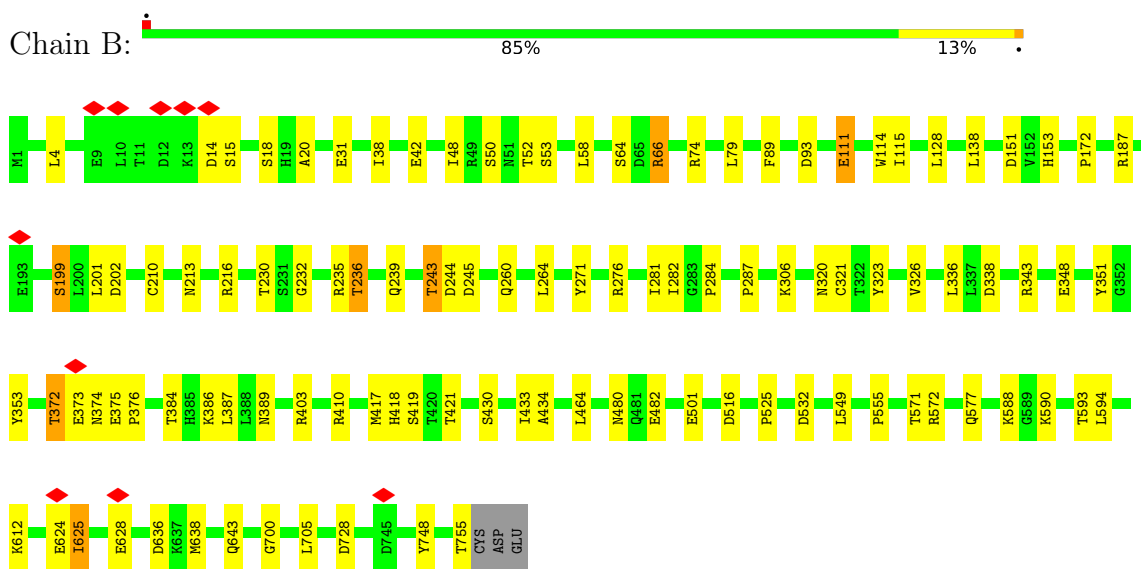
3 Residue-property plots [i](#)

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

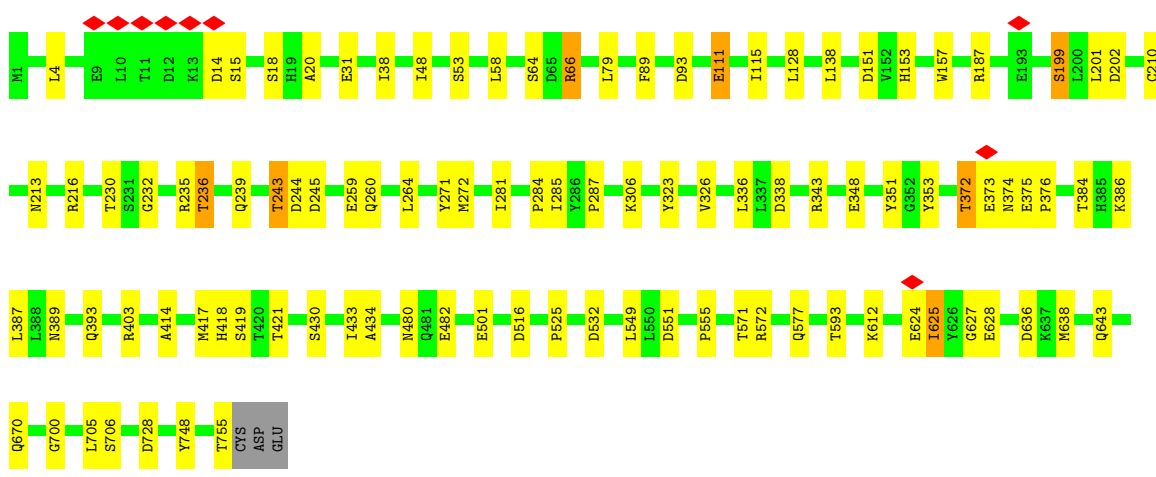
- Molecule 1: Biodegradative arginine decarboxylase



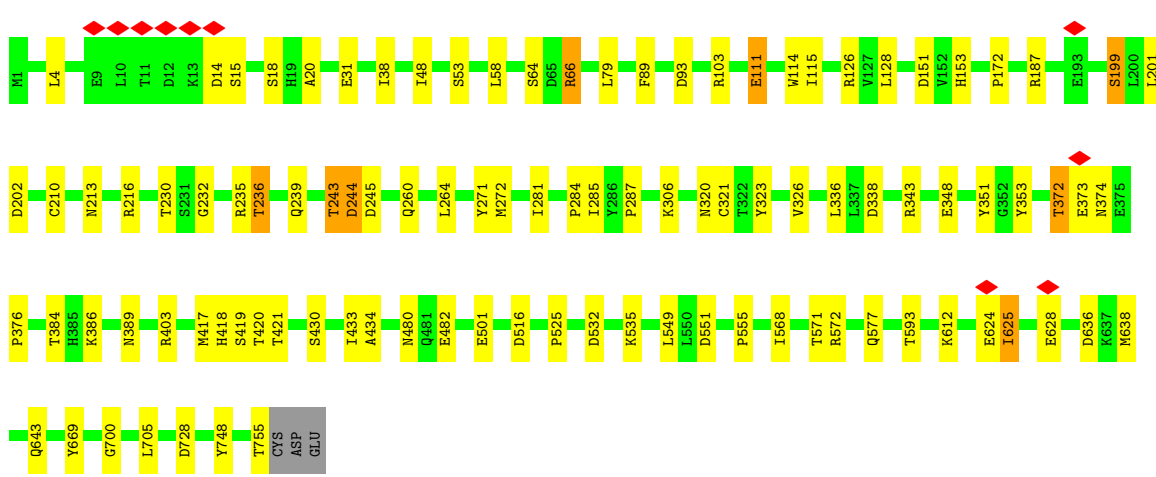
- Molecule 1: Biodegradative arginine decarboxylase



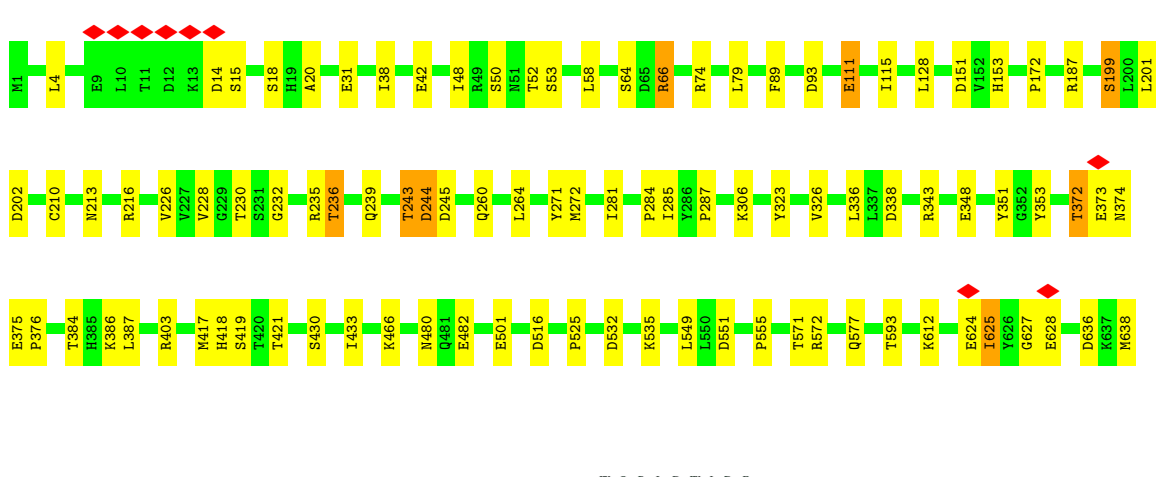
- Molecule 1: Biodegradative arginine decarboxylase



• Molecule 1: Biodegradative arginine decarboxylase

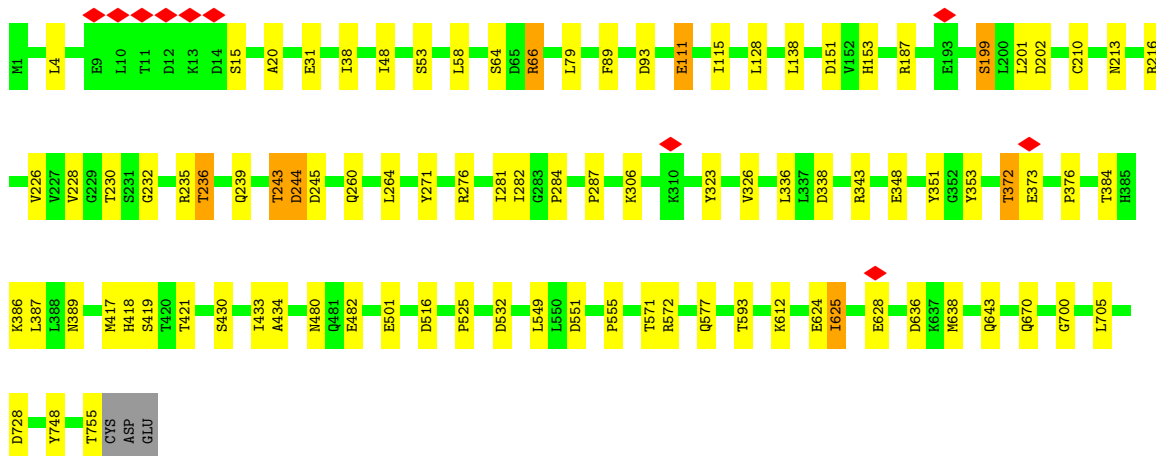
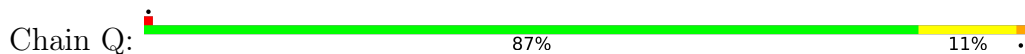


• Molecule 1: Biodegradative arginine decarboxylase

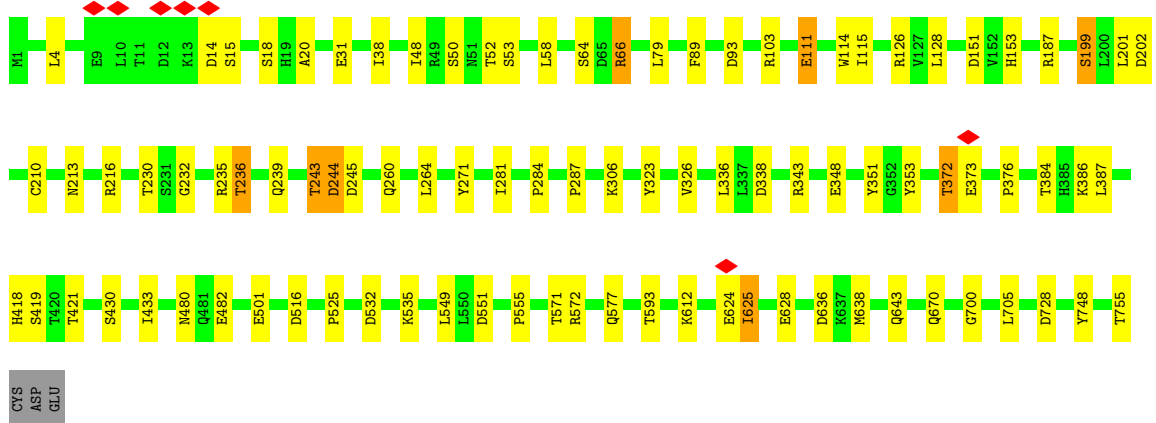
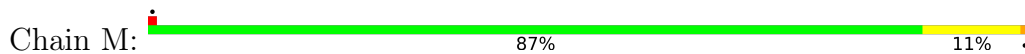




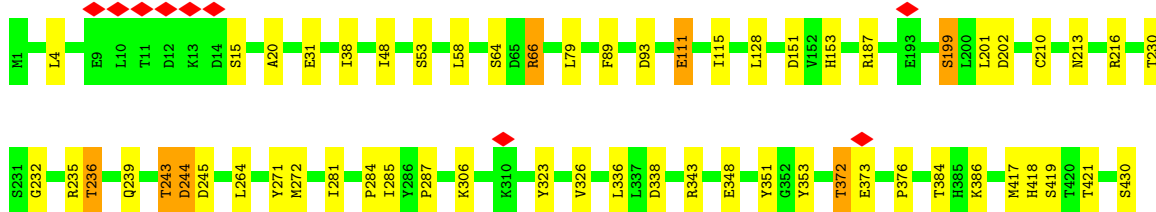
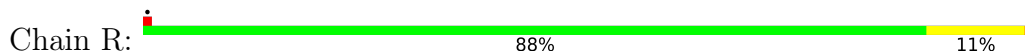
• Molecule 1: Biodegradative arginine decarboxylase

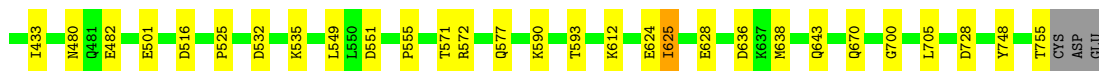


• Molecule 1: Biodegradative arginine decarboxylase

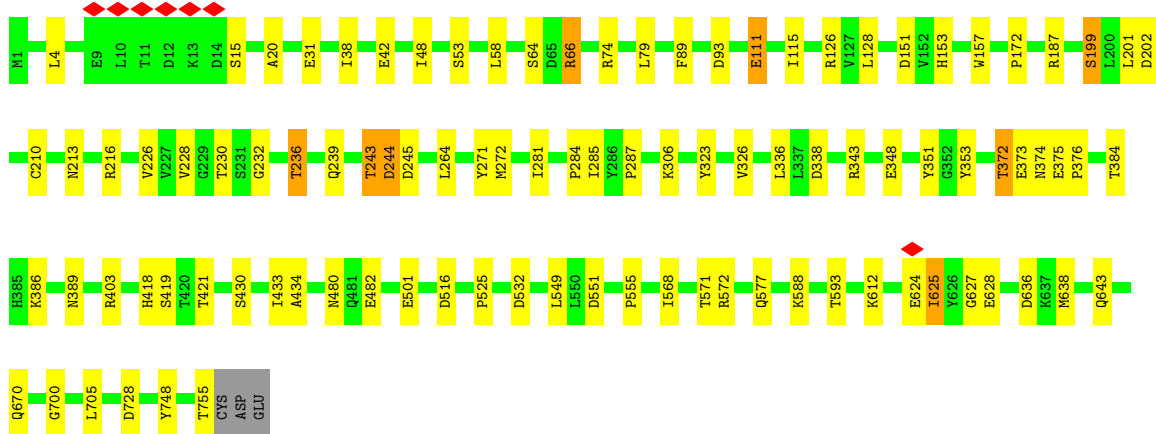
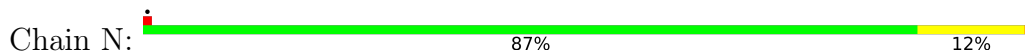


• Molecule 1: Biodegradative arginine decarboxylase

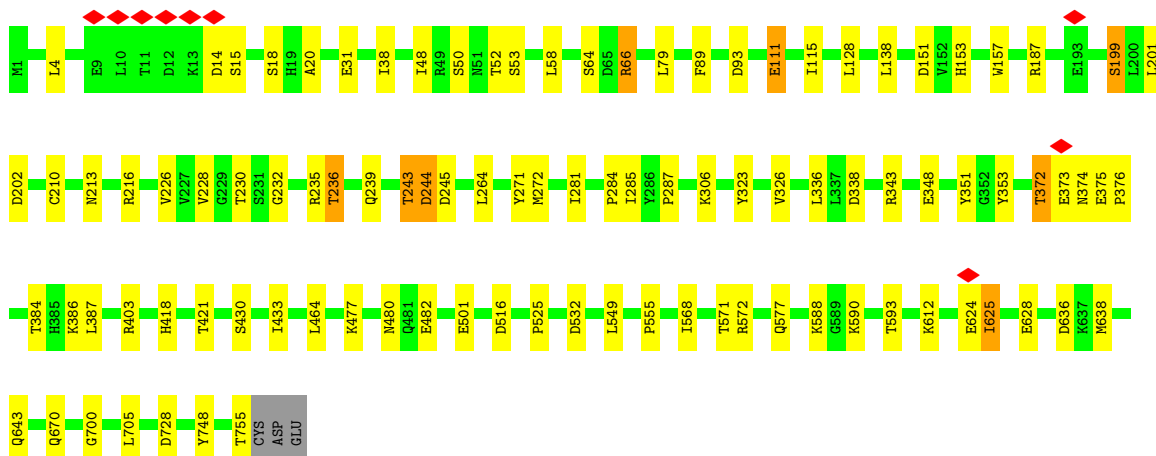
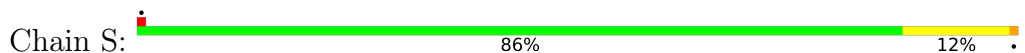




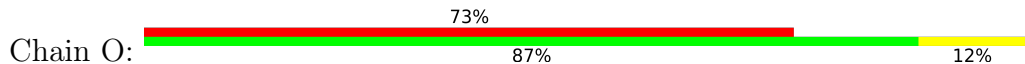
• Molecule 1: Biodegradative arginine decarboxylase

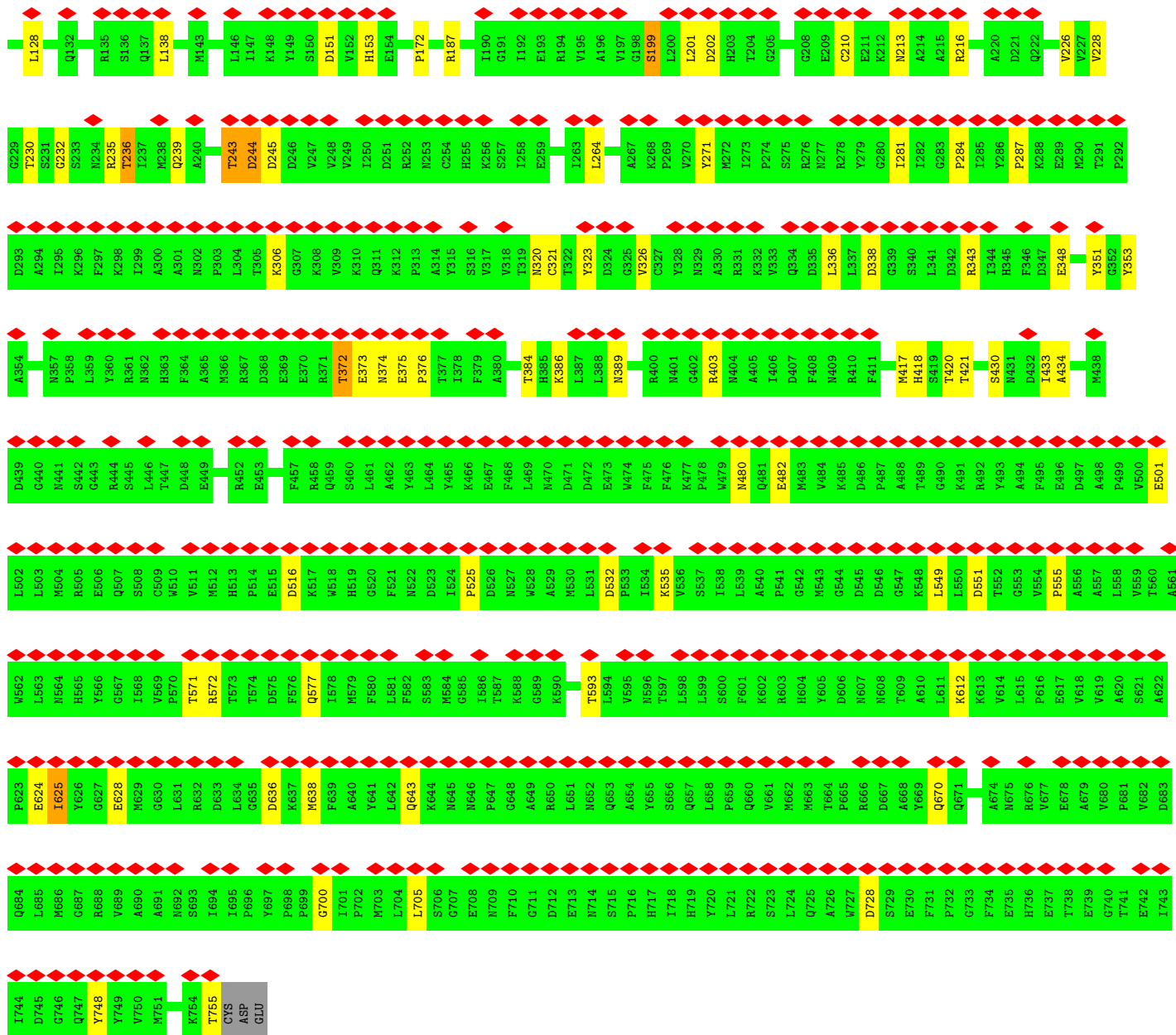


• Molecule 1: Biodegradative arginine decarboxylase

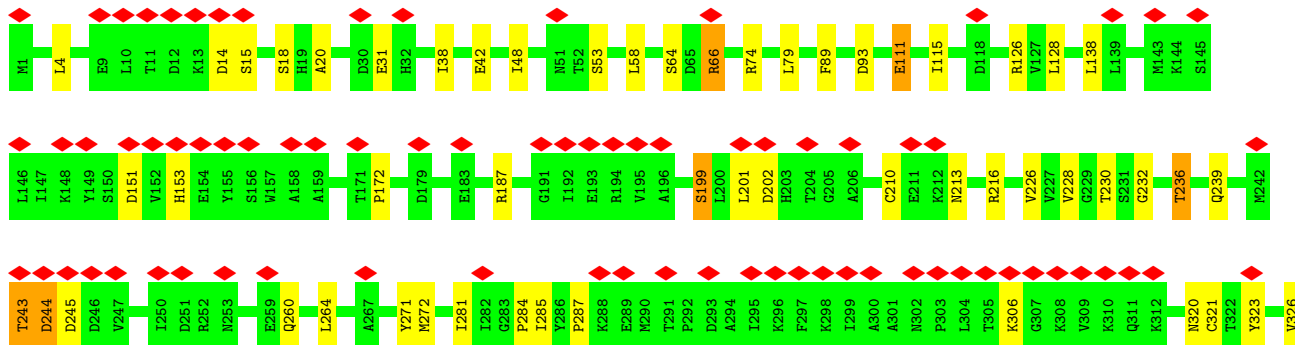
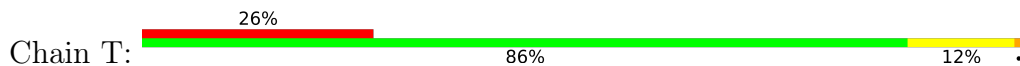


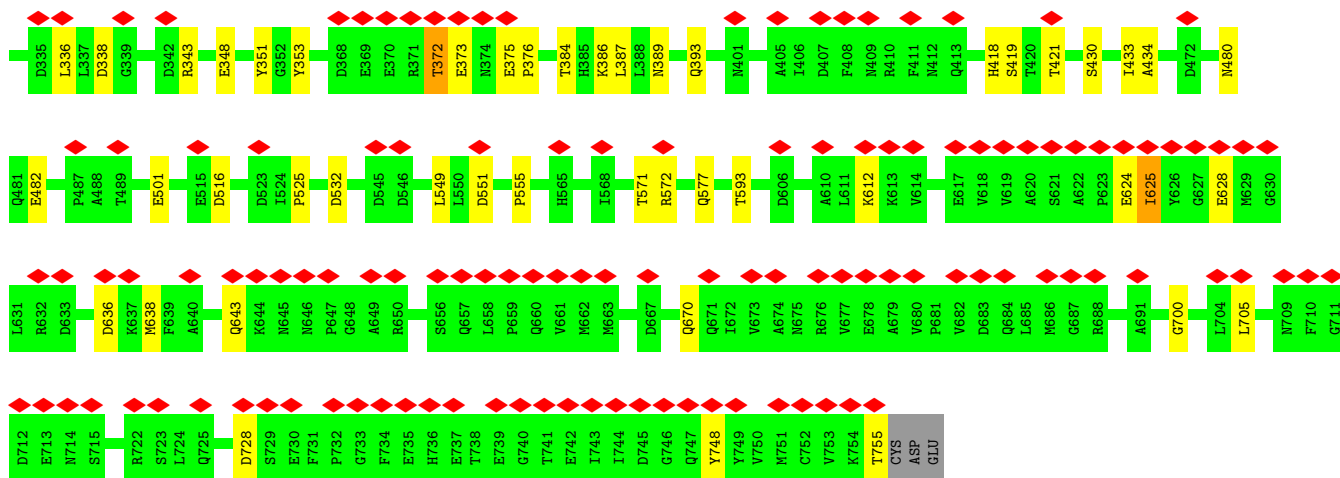
• Molecule 1: Biodegradative arginine decarboxylase



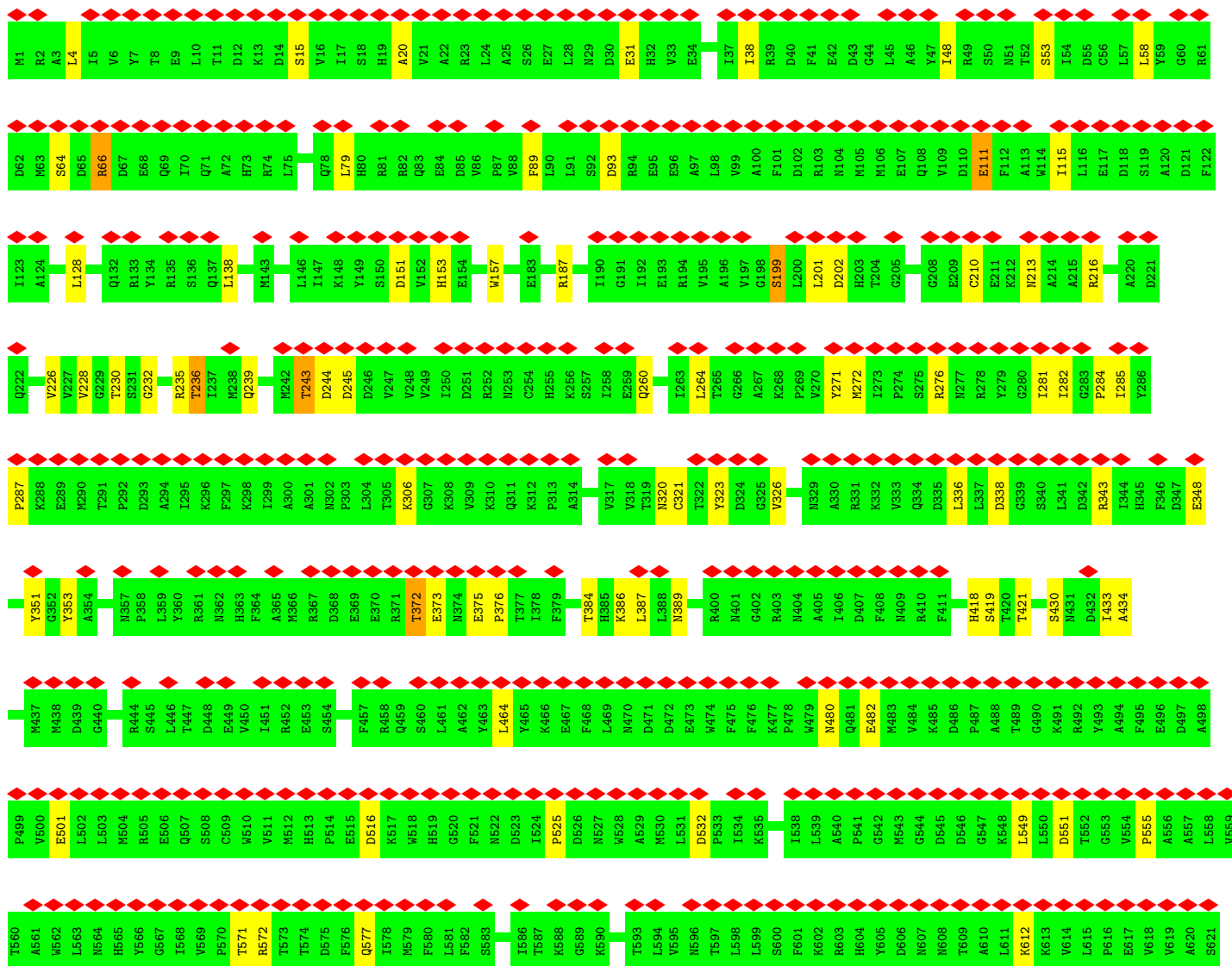
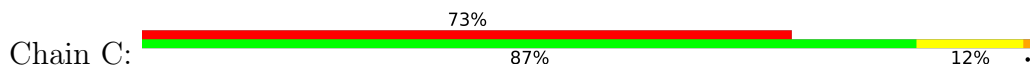


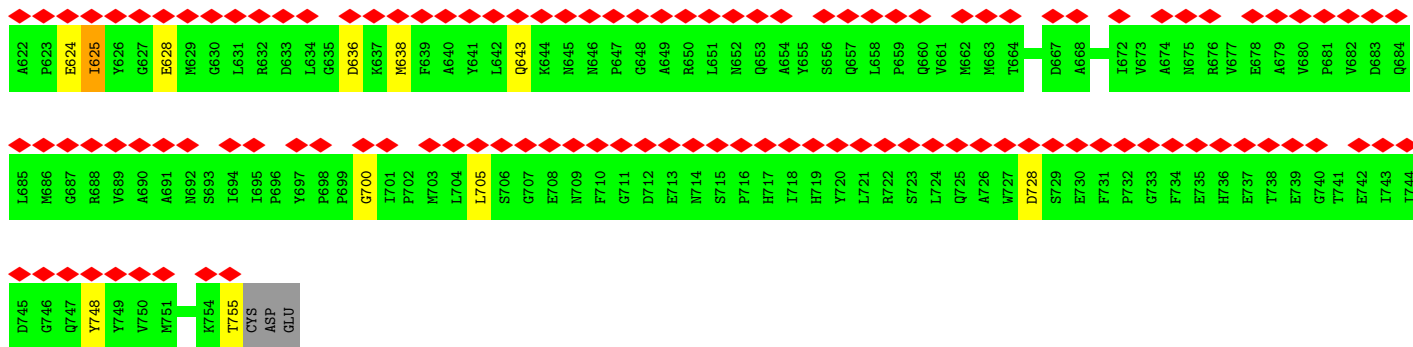
• Molecule 1: Biodegradative arginine decarboxylase



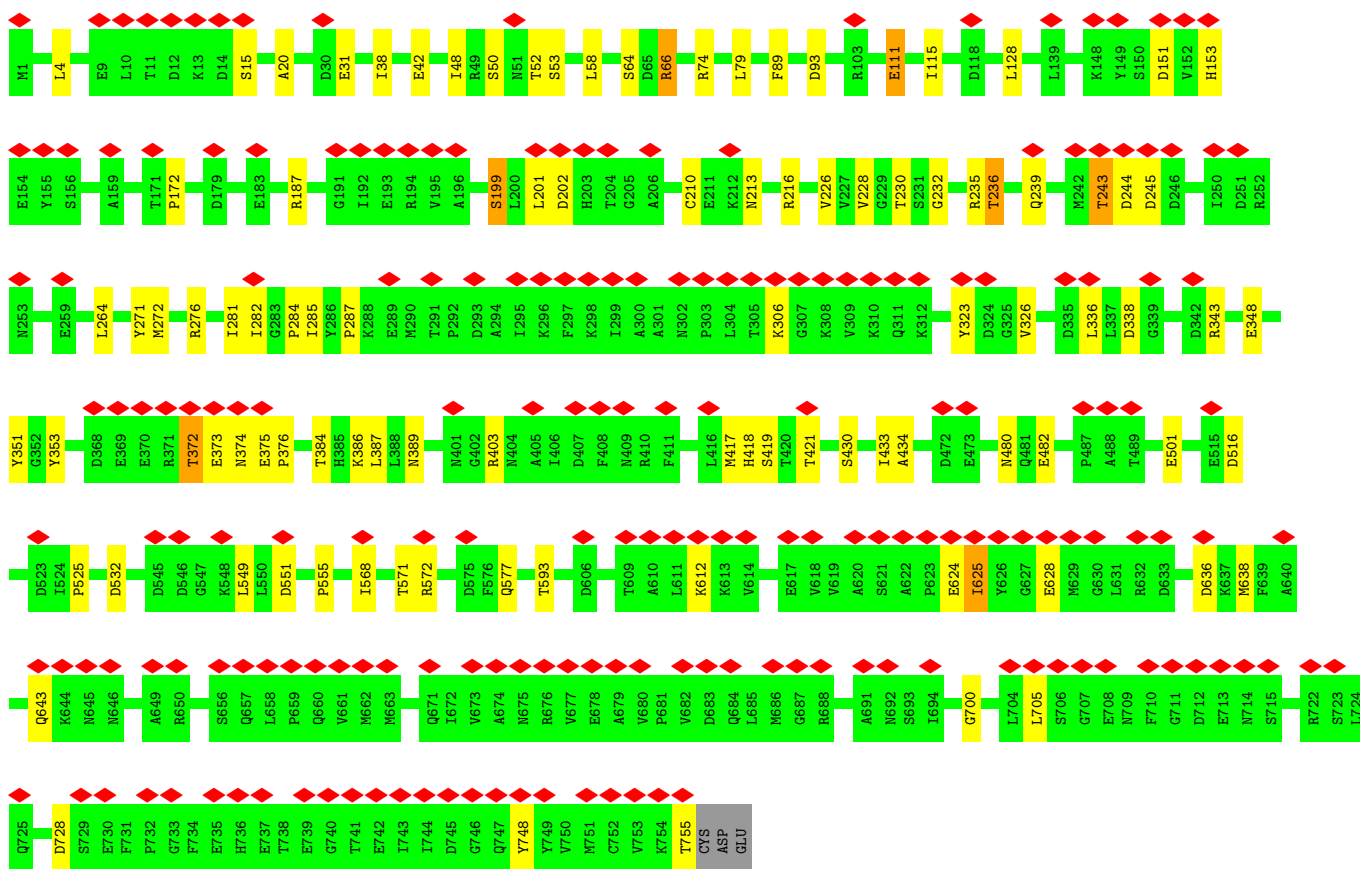
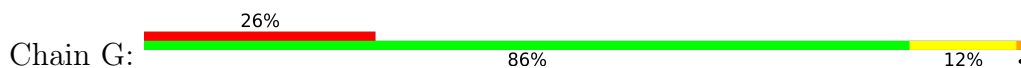


• Molecule 1: Biodegradative arginine decarboxylase

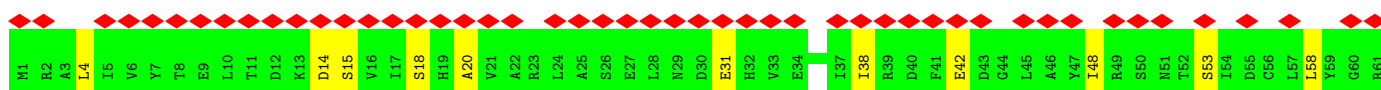
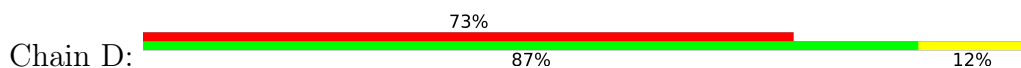


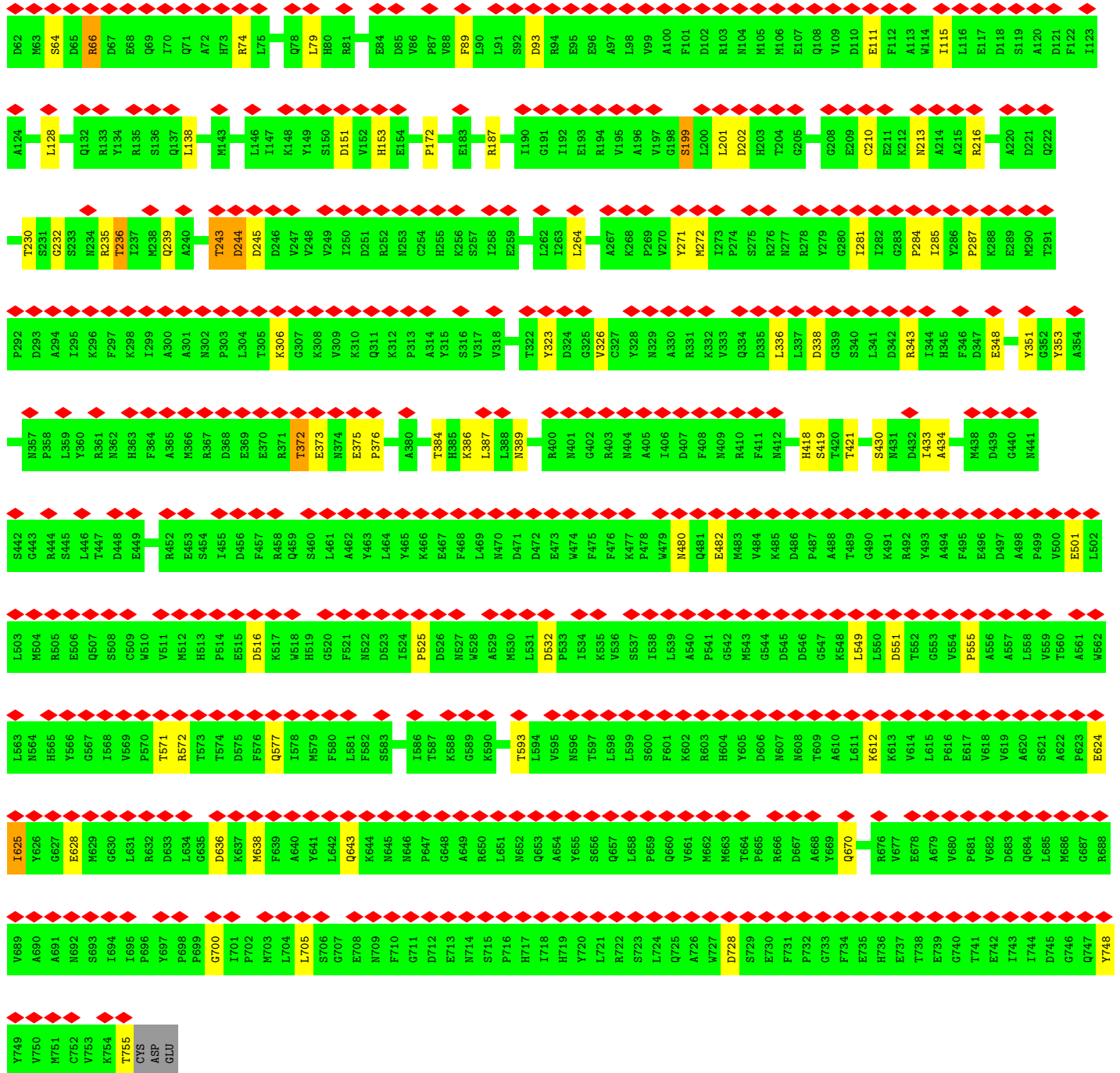


• Molecule 1: Biodegradative arginine decarboxylase

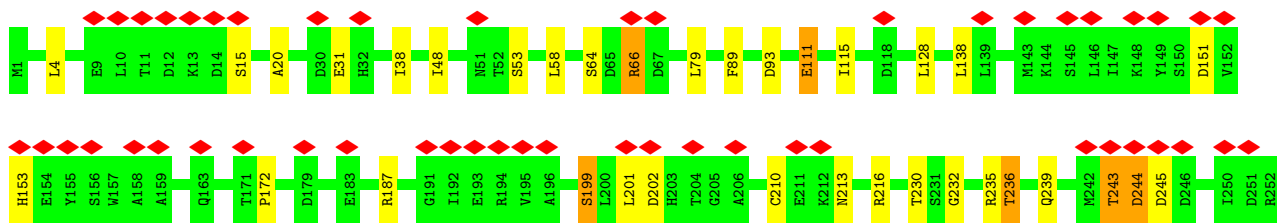
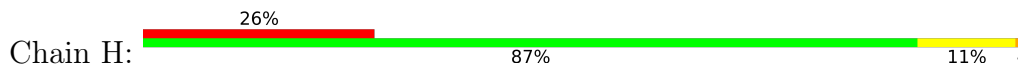


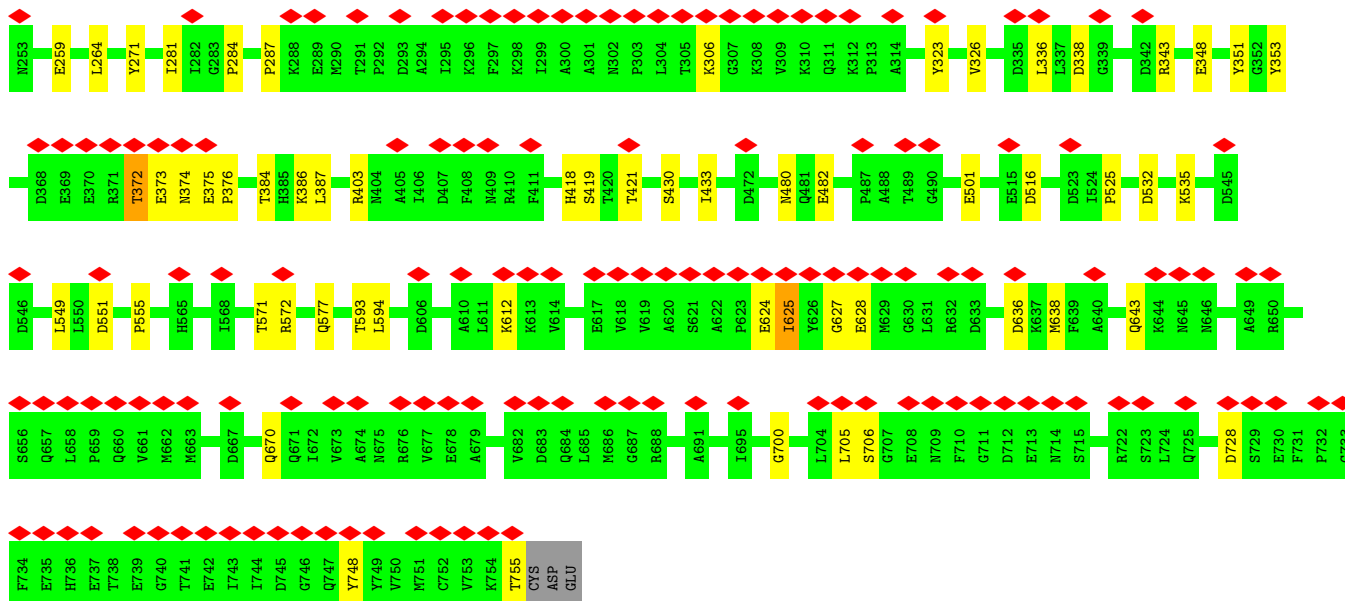
• Molecule 1: Biodegradative arginine decarboxylase



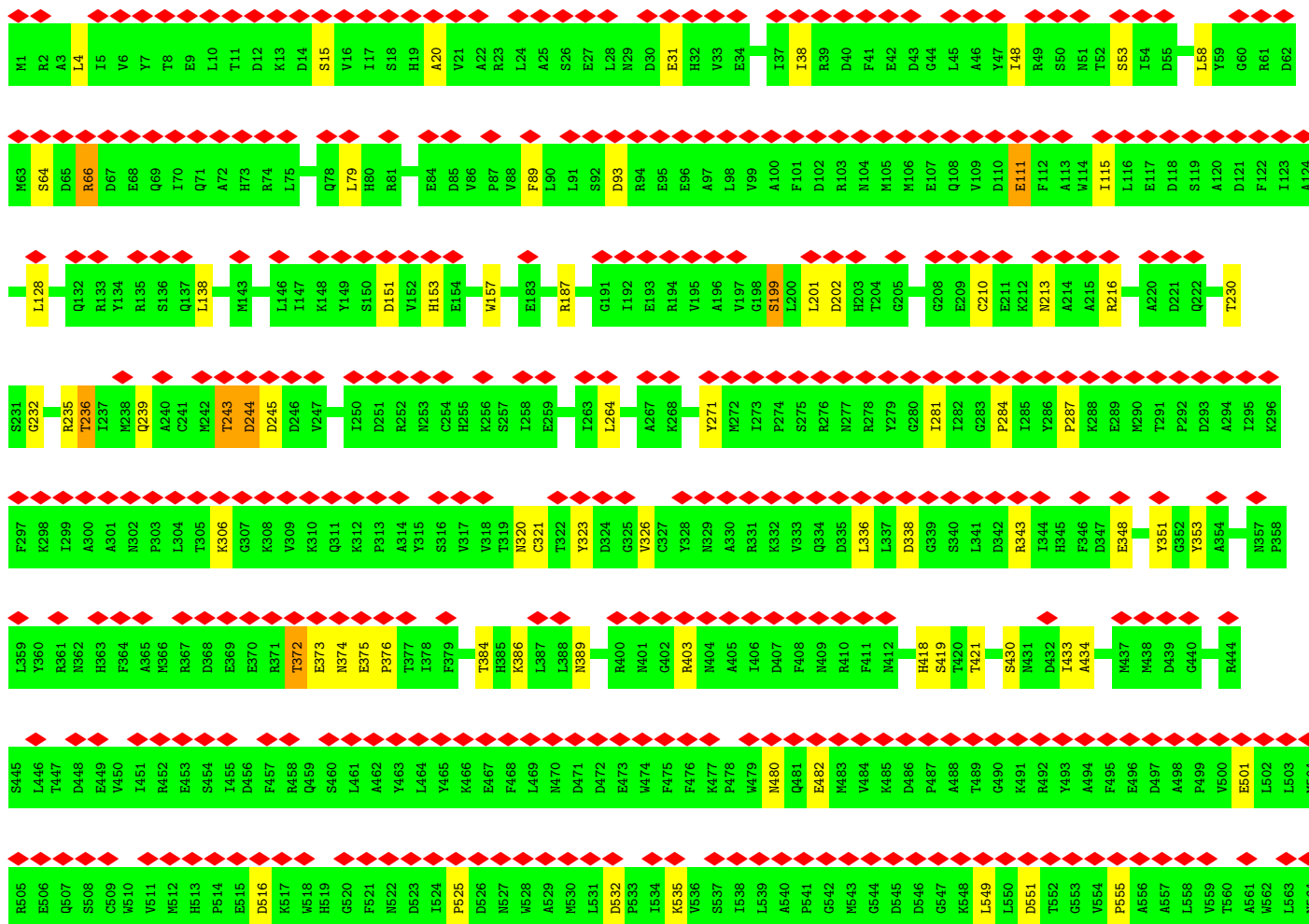
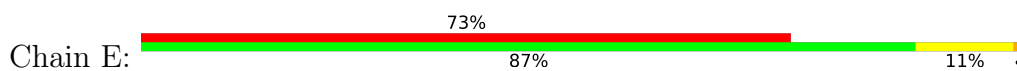


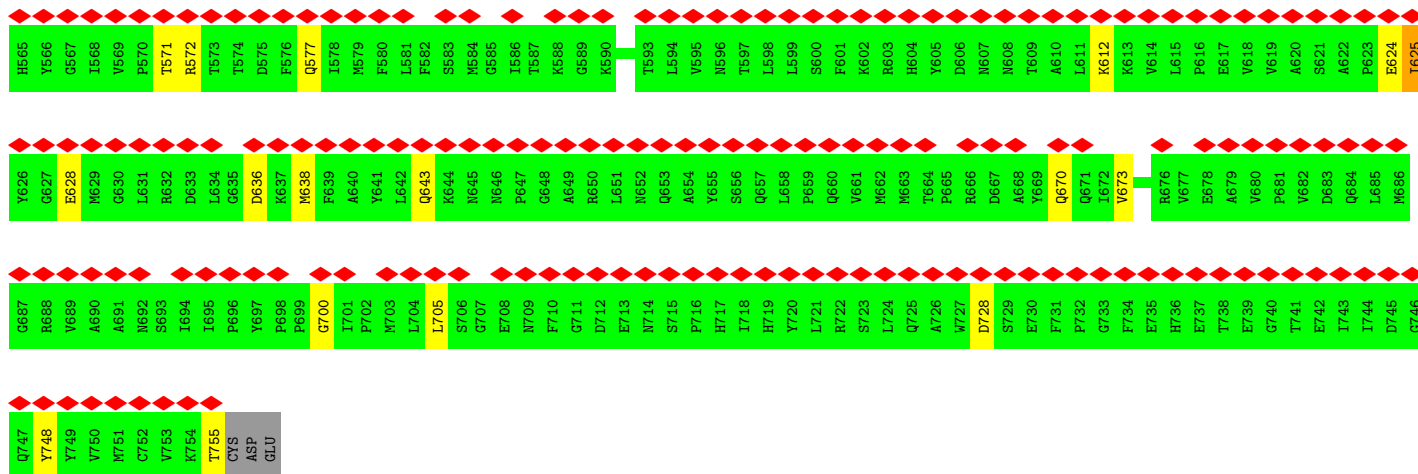
● Molecule 1: Biodegradative arginine decarboxylase



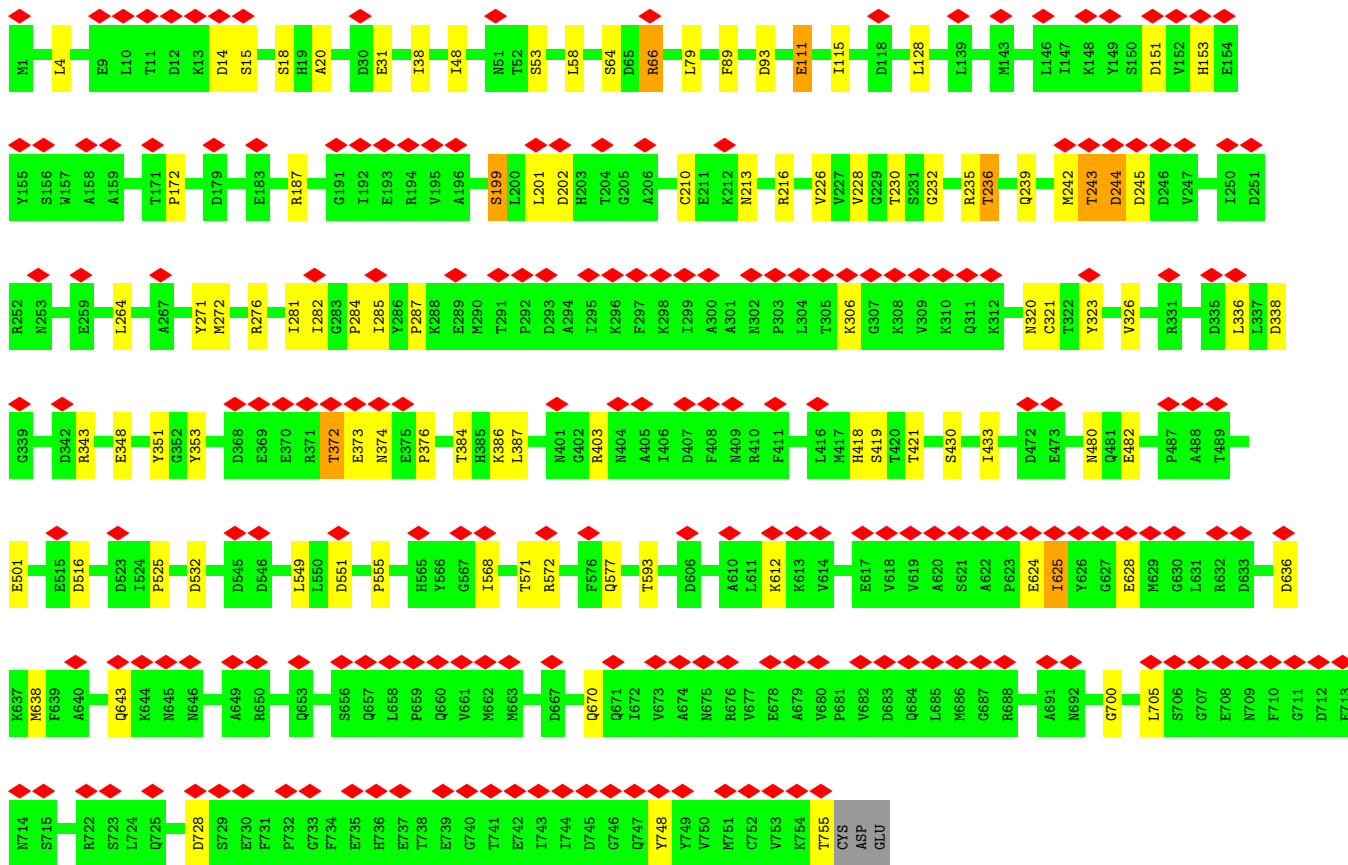
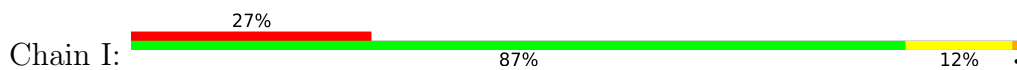


• Molecule 1: Biodegradative arginine decarboxylase

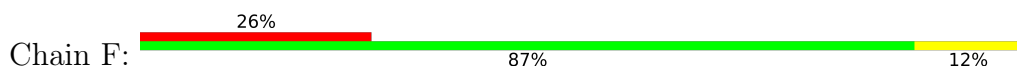


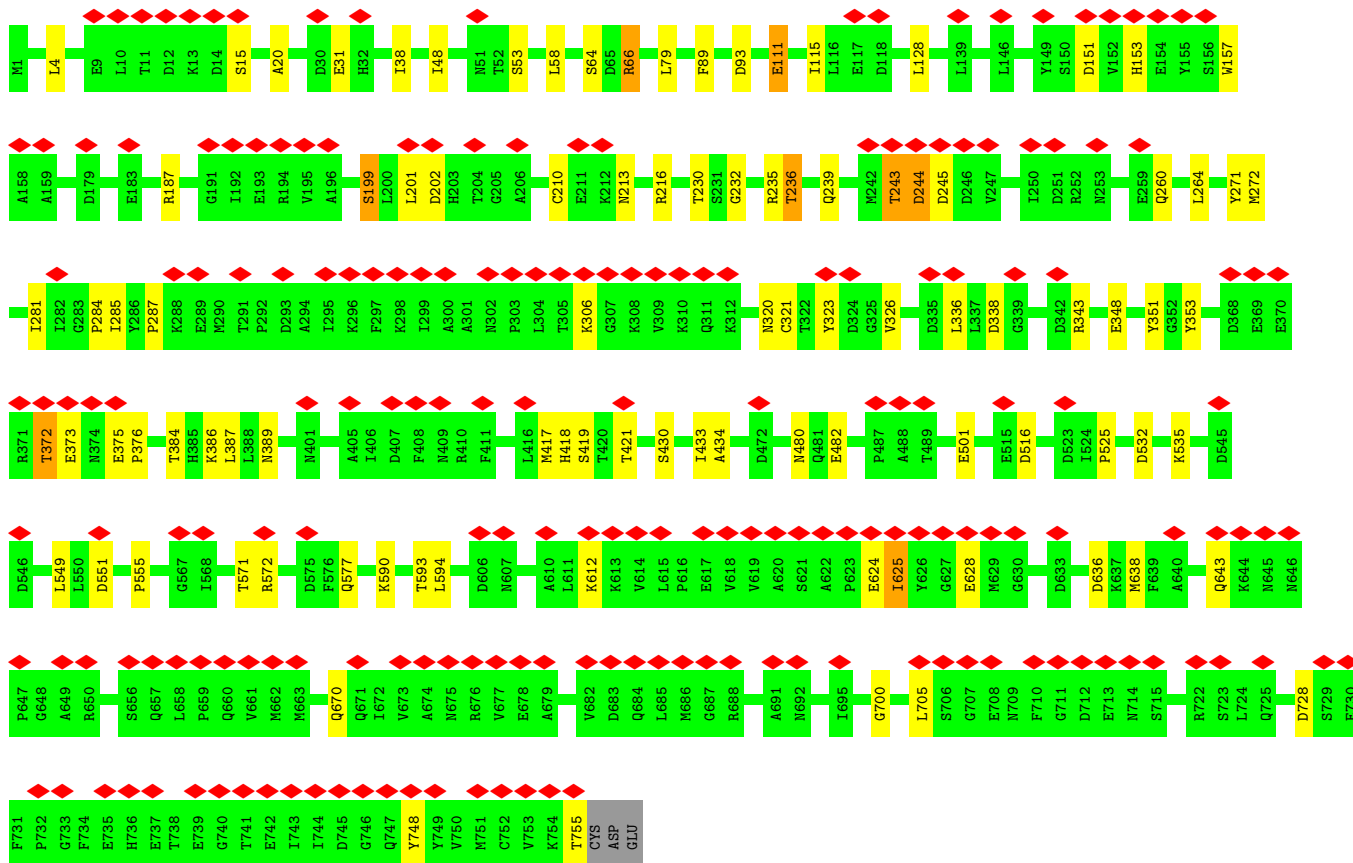


• Molecule 1: Biodegradative arginine decarboxylase

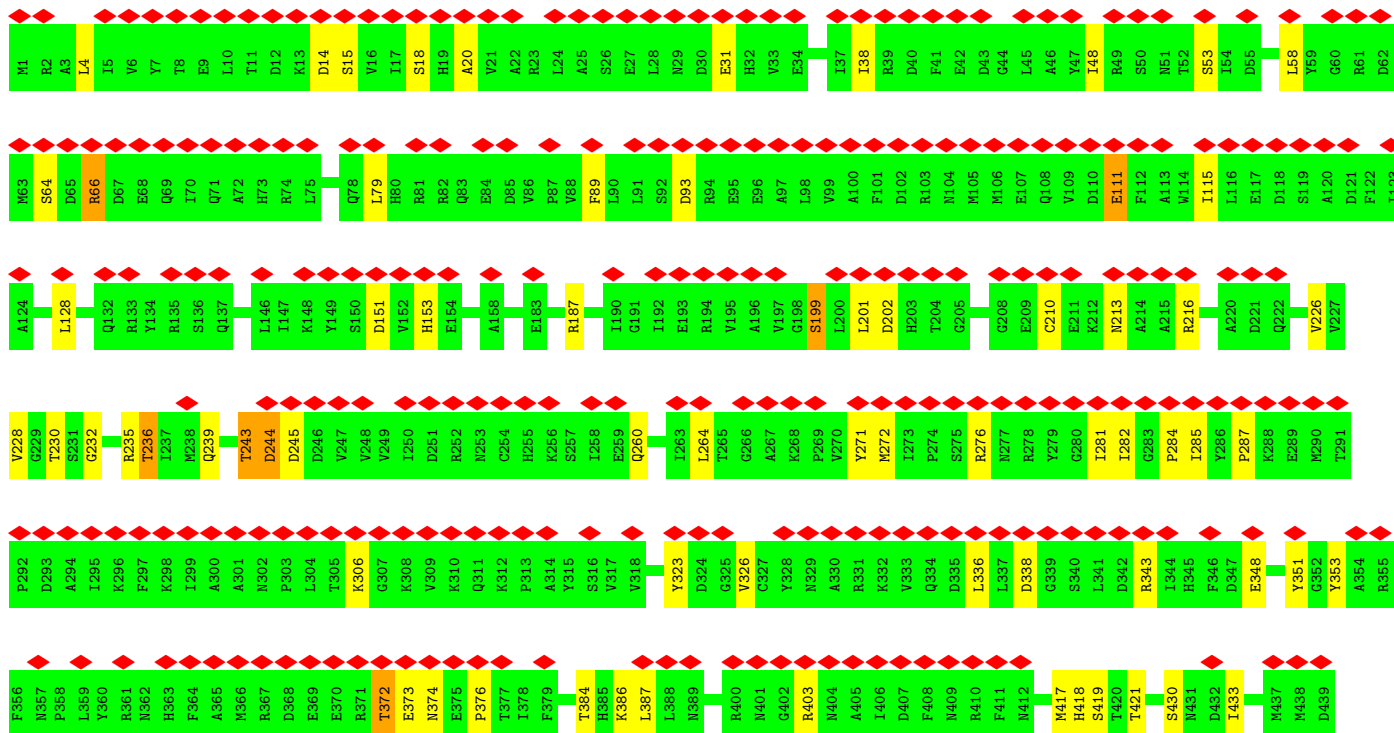
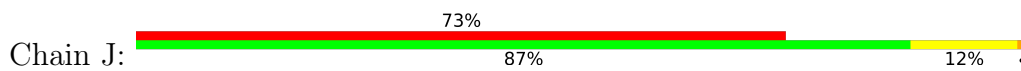


• Molecule 1: Biodegradative arginine decarboxylase





• Molecule 1: Biodegradative arginine decarboxylase



G440	N441	S442	G443	R444	S445	L446	T447	D448	E449	V450	I451	R452	E453	S454	I455	D456	F457	R458	Q459	S460	L461	A462	Y463	L464	Y465	K466	E467	F468	L469	N470	D471	D472	E473	W474	F475	F476	K477	P478	W479	M480	Q481	E482	M483	V484	K485	D486	P487	A488	T489	G490	K491	R492	Y493	A494	F495	E496	D497	A498	P499		
V500	E501	L502	L503	M504	R505	E506	Q507	S508	C509	W510	V511	M512	H513	P514	E515	D516	K517	W518	H519	G520	F521	N522	D523	I524	P525	D526	N527	W528	A529	M530	L531	D532	P533	I534	K535	V536	S537	S538	I539	A540	P541	G542	M543	G544	D545	D546	N547	T548	G549	K548	L549	L550	D551	T552	G553	V554	P555	A556	A557	L558	V559
T560	A561	W562	L563	N564	H565	Y566	G567	I568	V569	P570	T571	R572	T573	T574	D575	F576	Q577	I578	M579	F580	L581	F582	S583	I586	T587	K588	G589	K590	T593	L594	V595	N596	T597	L598	L599	S600	F601	K602	R603	H604	Y605	D606	N607	N608	T609	A610	L611	K612	K613	V614	L615	P616	E617	V618	V619	A620	S621				
A622	P623	E624	I625	Y626	G627	E628	M629	G630	L631	R632	D633	L634	G635	D636	K637	M638	F639	A640	Y641	L642	Q643	K644	N645	N646	P647	G648	A649	R650	L651	N652	Q653	A654	Y655	S656	Q657	L658	P659	Q660	V661	M662	M663	T664	P665	R666	D667	A668	Y669	Q670	Q671	I672	R676	V677	E678	A679	V680	P681	V682	D683			
Q684	L685	M686	G687	R688	A689	A691	N692	S693	I694	I695	P696	Y697	P698	P699	G700	I701	P702	M703	L704	L705	S706	G707	E708	M709	F710	G711	D712	E713	N714	S715	P716	H717	I718	H719	Y720	L721	R722	S723	L724	Q725	A726	W727	D728	S729	E730	F731	P732	G733	F734	E735	H736	E737	T738	E739	G740	T741	E742	I743			
I744	D745	G746	O747	Y748	V750	M751	K754	I755	CYS	ASP	GLU																																																		

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, D5	Depositor
Number of particles used	268579	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	40	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	215000	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	1.809	Depositor
Minimum map value	-0.701	Depositor
Average map value	0.003	Depositor
Map value standard deviation	0.053	Depositor
Recommended contour level	0.2	Depositor
Map size (\AA)	374.4, 374.4, 374.4	wwPDB
Map dimensions	576, 576, 576	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	0.65, 0.65, 0.65	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: LLP

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	0.30	0/6148	0.44	0/8340
1	B	0.30	0/6148	0.44	0/8340
1	C	0.30	0/6148	0.44	0/8340
1	D	0.30	0/6148	0.44	0/8340
1	E	0.30	0/6148	0.44	0/8340
1	F	0.30	0/6148	0.44	0/8340
1	G	0.30	0/6148	0.44	0/8340
1	H	0.30	0/6148	0.44	0/8340
1	I	0.30	0/6148	0.44	0/8340
1	J	0.30	0/6148	0.44	0/8340
1	K	0.30	0/6148	0.44	0/8340
1	L	0.30	0/6148	0.44	0/8340
1	M	0.30	0/6148	0.44	0/8340
1	N	0.30	0/6148	0.44	0/8340
1	O	0.30	0/6148	0.44	0/8340
1	P	0.30	0/6148	0.44	0/8340
1	Q	0.30	0/6148	0.44	0/8340
1	R	0.30	0/6148	0.44	0/8340
1	S	0.30	0/6148	0.44	0/8340
1	T	0.30	0/6148	0.44	0/8340
All	All	0.30	0/122960	0.44	0/166800

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	6029	0	5849	54	0
1	B	6029	0	5849	60	0
1	C	6029	0	5849	53	0
1	D	6029	0	5849	51	0
1	E	6029	0	5849	50	0
1	F	6029	0	5849	56	0
1	G	6029	0	5849	55	0
1	H	6029	0	5849	52	0
1	I	6029	0	5849	53	0
1	J	6029	0	5849	54	0
1	K	6029	0	5849	56	0
1	L	6029	0	5849	56	0
1	M	6029	0	5849	51	0
1	N	6029	0	5849	55	0
1	O	6029	0	5849	53	0
1	P	6029	0	5849	57	0
1	Q	6029	0	5849	50	0
1	R	6029	0	5849	48	0
1	S	6029	0	5849	57	0
1	T	6029	0	5849	56	0
All	All	120580	0	116980	980	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 4.

All (980) 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:P:593:THR:OG1	1:Q:111:GLU:OE1	1.86	0.92
1:O:244:ASP:OD2	1:T:670:GLN:NE2	2.06	0.88
1:B:111:GLU:OE1	1:N:593:THR:OG1	1.92	0.88
1:T:111:GLU:OE1	1:F:593:THR:OG1	1.89	0.88
1:G:593:THR:OG1	1:H:111:GLU:OE1	1.95	0.85
1:M:111:GLU:OE1	1:S:593:THR:OG1	1.98	0.81
1:T:64:SER:O	1:T:66:ARG:NH1	2.14	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:64:SER:O	1:L:66:ARG:NH1	2.14	0.80
1:O:64:SER:O	1:O:66:ARG:NH1	2.14	0.80
1:K:64:SER:O	1:K:66:ARG:NH1	2.14	0.80
1:A:64:SER:O	1:A:66:ARG:NH1	2.14	0.80
1:P:64:SER:O	1:P:66:ARG:NH1	2.15	0.80
1:R:64:SER:O	1:R:66:ARG:NH1	2.14	0.80
1:J:64:SER:O	1:J:66:ARG:NH1	2.14	0.80
1:Q:64:SER:O	1:Q:66:ARG:NH1	2.14	0.80
1:O:235:ARG:NH2	1:T:419:SER:O	2.13	0.80
1:C:64:SER:O	1:C:66:ARG:NH1	2.14	0.80
1:G:64:SER:O	1:G:66:ARG:NH1	2.14	0.80
1:F:64:SER:O	1:F:66:ARG:NH1	2.14	0.80
1:B:64:SER:O	1:B:66:ARG:NH1	2.15	0.80
1:S:64:SER:O	1:S:66:ARG:NH1	2.14	0.80
1:D:64:SER:O	1:D:66:ARG:NH1	2.15	0.80
1:I:64:SER:O	1:I:66:ARG:NH1	2.14	0.80
1:M:64:SER:O	1:M:66:ARG:NH1	2.14	0.79
1:H:64:SER:O	1:H:66:ARG:NH1	2.14	0.79
1:E:64:SER:O	1:E:66:ARG:NH1	2.14	0.79
1:N:64:SER:O	1:N:66:ARG:NH1	2.14	0.79
1:A:235:ARG:NH2	1:B:419:SER:O	2.13	0.78
1:K:419:SER:O	1:P:235:ARG:NH2	2.12	0.78
1:C:419:SER:O	1:G:235:ARG:NH2	2.16	0.78
1:E:670:GLN:NE2	1:I:244:ASP:OD2	2.17	0.78
1:K:111:GLU:OE1	1:L:593:THR:OG1	2.03	0.77
1:L:111:GLU:OE1	1:M:593:THR:OG1	2.02	0.75
1:I:593:THR:OG1	1:F:111:GLU:OE1	2.04	0.74
1:F:153:HIS:HA	1:F:187:ARG:HH21	1.53	0.73
1:L:153:HIS:HA	1:L:187:ARG:HH21	1.53	0.73
1:J:153:HIS:HA	1:J:187:ARG:HH21	1.53	0.73
1:A:419:SER:O	1:B:235:ARG:NH2	2.17	0.73
1:E:153:HIS:HA	1:E:187:ARG:HH21	1.53	0.73
1:A:153:HIS:HA	1:A:187:ARG:HH21	1.53	0.73
1:Q:153:HIS:HA	1:Q:187:ARG:HH21	1.53	0.73
1:R:153:HIS:HA	1:R:187:ARG:HH21	1.53	0.73
1:H:153:HIS:HA	1:H:187:ARG:HH21	1.53	0.72
1:K:153:HIS:HA	1:K:187:ARG:HH21	1.53	0.72
1:G:153:HIS:HA	1:G:187:ARG:HH21	1.53	0.72
1:I:153:HIS:HA	1:I:187:ARG:HH21	1.53	0.72
1:T:153:HIS:HA	1:T:187:ARG:HH21	1.53	0.72
1:S:153:HIS:HA	1:S:187:ARG:HH21	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:153:HIS:HA	1:M:187:ARG:HH21	1.53	0.72
1:D:670:GLN:NE2	1:H:244:ASP:OD2	2.21	0.72
1:P:153:HIS:HA	1:P:187:ARG:HH21	1.53	0.71
1:O:153:HIS:HA	1:O:187:ARG:HH21	1.53	0.71
1:B:153:HIS:HA	1:B:187:ARG:HH21	1.53	0.71
1:N:153:HIS:HA	1:N:187:ARG:HH21	1.53	0.71
1:D:153:HIS:HA	1:D:187:ARG:HH21	1.53	0.71
1:N:419:SER:O	1:S:235:ARG:NH2	2.19	0.70
1:C:153:HIS:HA	1:C:187:ARG:HH21	1.53	0.70
1:M:419:SER:O	1:R:235:ARG:NH2	2.19	0.70
1:D:244:ASP:OD2	1:H:670:GLN:NE2	2.19	0.68
1:A:111:GLU:OE1	1:K:593:THR:OG1	2.09	0.67
1:R:593:THR:OG1	1:N:111:GLU:OE1	2.09	0.67
1:I:624:GLU:HG2	1:I:625:ILE:HG12	1.77	0.67
1:Q:624:GLU:HG2	1:Q:625:ILE:HG12	1.77	0.66
1:E:244:ASP:OD2	1:I:670:GLN:NE2	2.23	0.66
1:R:624:GLU:HG2	1:R:625:ILE:HG12	1.77	0.66
1:M:232:GLY:O	1:M:236:THR:HG22	1.96	0.66
1:M:624:GLU:HG2	1:M:625:ILE:HG12	1.77	0.66
1:F:624:GLU:HG2	1:F:625:ILE:HG12	1.77	0.66
1:J:624:GLU:HG2	1:J:625:ILE:HG12	1.77	0.66
1:B:624:GLU:HG2	1:B:625:ILE:HG12	1.77	0.66
1:K:624:GLU:HG2	1:K:625:ILE:HG12	1.77	0.66
1:I:232:GLY:O	1:I:236:THR:HG22	1.96	0.66
1:H:593:THR:OG1	1:I:111:GLU:OE1	2.08	0.66
1:H:624:GLU:HG2	1:H:625:ILE:HG12	1.77	0.66
1:E:232:GLY:O	1:E:236:THR:HG22	1.96	0.66
1:J:232:GLY:O	1:J:236:THR:HG22	1.96	0.66
1:S:624:GLU:HG2	1:S:625:ILE:HG12	1.77	0.66
1:C:624:GLU:HG2	1:C:625:ILE:HG12	1.77	0.66
1:E:624:GLU:HG2	1:E:625:ILE:HG12	1.77	0.66
1:F:232:GLY:O	1:F:236:THR:HG22	1.96	0.66
1:T:624:GLU:HG2	1:T:625:ILE:HG12	1.77	0.66
1:G:624:GLU:HG2	1:G:625:ILE:HG12	1.77	0.66
1:A:624:GLU:HG2	1:A:625:ILE:HG12	1.77	0.65
1:L:232:GLY:O	1:L:236:THR:HG22	1.96	0.65
1:D:624:GLU:HG2	1:D:625:ILE:HG12	1.77	0.65
1:B:232:GLY:O	1:B:236:THR:HG22	1.96	0.65
1:Q:232:GLY:O	1:Q:236:THR:HG22	1.96	0.65
1:R:232:GLY:O	1:R:236:THR:HG22	1.96	0.65
1:F:235:ARG:NH2	1:J:419:SER:O	2.25	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:232:GLY:O	1:G:236:THR:HG22	1.96	0.65
1:K:232:GLY:O	1:K:236:THR:HG22	1.96	0.65
1:L:624:GLU:HG2	1:L:625:ILE:HG12	1.77	0.65
1:N:624:GLU:HG2	1:N:625:ILE:HG12	1.77	0.65
1:O:624:GLU:HG2	1:O:625:ILE:HG12	1.77	0.65
1:P:624:GLU:HG2	1:P:625:ILE:HG12	1.77	0.65
1:O:232:GLY:O	1:O:236:THR:HG22	1.96	0.65
1:A:232:GLY:O	1:A:236:THR:HG22	1.96	0.65
1:C:232:GLY:O	1:C:236:THR:HG22	1.96	0.65
1:N:232:GLY:O	1:N:236:THR:HG22	1.96	0.65
1:H:232:GLY:O	1:H:236:THR:HG22	1.96	0.65
1:M:670:GLN:NE2	1:R:244:ASP:OD2	2.22	0.64
1:S:232:GLY:O	1:S:236:THR:HG22	1.96	0.64
1:P:232:GLY:O	1:P:236:THR:HG22	1.96	0.64
1:N:670:GLN:NE2	1:S:244:ASP:OD2	2.22	0.64
1:T:232:GLY:O	1:T:236:THR:HG22	1.96	0.64
1:D:232:GLY:O	1:D:236:THR:HG22	1.96	0.64
1:F:419:SER:O	1:J:235:ARG:NH2	2.25	0.62
1:B:593:THR:OG1	1:P:111:GLU:OE1	2.10	0.62
1:L:419:SER:O	1:Q:235:ARG:NH2	2.23	0.62
1:K:670:GLN:NE2	1:P:244:ASP:OD2	2.20	0.61
1:L:235:ARG:NH2	1:Q:419:SER:O	2.26	0.61
1:C:111:GLU:OE1	1:D:593:THR:OG1	2.16	0.60
1:M:239:GLN:HG3	1:M:418:HIS:NE2	2.18	0.59
1:S:239:GLN:HG3	1:S:418:HIS:NE2	2.18	0.59
1:J:239:GLN:HG3	1:J:418:HIS:NE2	2.18	0.59
1:O:239:GLN:HG3	1:O:418:HIS:NE2	2.18	0.59
1:N:239:GLN:HG3	1:N:418:HIS:NE2	2.18	0.59
1:K:239:GLN:HG3	1:K:418:HIS:NE2	2.18	0.59
1:G:239:GLN:HG3	1:G:418:HIS:NE2	2.18	0.59
1:E:239:GLN:HG3	1:E:418:HIS:NE2	2.18	0.59
1:F:239:GLN:HG3	1:F:418:HIS:NE2	2.18	0.59
1:C:239:GLN:HG3	1:C:418:HIS:NE2	2.18	0.59
1:D:239:GLN:HG3	1:D:418:HIS:NE2	2.18	0.59
1:A:239:GLN:HG3	1:A:418:HIS:NE2	2.18	0.59
1:L:239:GLN:HG3	1:L:418:HIS:NE2	2.18	0.59
1:P:239:GLN:HG3	1:P:418:HIS:NE2	2.18	0.58
1:R:239:GLN:HG3	1:R:418:HIS:NE2	2.18	0.58
1:J:353:TYR:OH	1:J:532:ASP:OD2	2.21	0.58
1:I:239:GLN:HG3	1:I:418:HIS:NE2	2.18	0.58
1:B:239:GLN:HG3	1:B:418:HIS:NE2	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:T:239:GLN:HG3	1:T:418:HIS:NE2	2.18	0.58
1:O:593:THR:OG1	1:J:111:GLU:OE1	2.12	0.58
1:H:239:GLN:HG3	1:H:418:HIS:NE2	2.18	0.58
1:Q:239:GLN:HG3	1:Q:418:HIS:NE2	2.18	0.58
1:C:138:LEU:HD21	1:G:172:PRO:HB2	1.86	0.57
1:K:260:GLN:HG2	1:P:417:MET:HG3	1.85	0.57
1:A:353:TYR:OH	1:A:532:ASP:OD2	2.21	0.57
1:D:728:ASP:OD1	1:D:748:TYR:OH	2.17	0.57
1:C:353:TYR:OH	1:C:532:ASP:OD2	2.21	0.57
1:E:419:SER:O	1:I:235:ARG:NH2	2.31	0.56
1:M:353:TYR:OH	1:M:532:ASP:OD2	2.21	0.56
1:R:353:TYR:OH	1:R:532:ASP:OD2	2.21	0.56
1:G:353:TYR:OH	1:G:532:ASP:OD2	2.21	0.56
1:H:728:ASP:OD1	1:H:748:TYR:OH	2.17	0.56
1:B:353:TYR:OH	1:B:532:ASP:OD2	2.21	0.56
1:R:153:HIS:HA	1:R:187:ARG:NH2	2.21	0.56
1:L:153:HIS:HA	1:L:187:ARG:NH2	2.21	0.56
1:L:353:TYR:OH	1:L:532:ASP:OD2	2.21	0.56
1:I:153:HIS:HA	1:I:187:ARG:NH2	2.21	0.56
1:F:353:TYR:OH	1:F:532:ASP:OD2	2.21	0.56
1:F:153:HIS:HA	1:F:187:ARG:NH2	2.21	0.56
1:J:153:HIS:HA	1:J:187:ARG:NH2	2.21	0.55
1:E:353:TYR:OH	1:E:532:ASP:OD2	2.21	0.55
1:M:153:HIS:HA	1:M:187:ARG:NH2	2.21	0.55
1:N:153:HIS:HA	1:N:187:ARG:NH2	2.21	0.55
1:I:728:ASP:OD1	1:I:748:TYR:OH	2.17	0.55
1:S:728:ASP:OD1	1:S:748:TYR:OH	2.17	0.55
1:D:153:HIS:HA	1:D:187:ARG:NH2	2.21	0.55
1:B:153:HIS:HA	1:B:187:ARG:NH2	2.21	0.55
1:K:153:HIS:HA	1:K:187:ARG:NH2	2.21	0.55
1:Q:153:HIS:HA	1:Q:187:ARG:NH2	2.21	0.55
1:P:728:ASP:OD1	1:P:748:TYR:OH	2.17	0.54
1:O:153:HIS:HA	1:O:187:ARG:NH2	2.21	0.54
1:C:157:TRP:CD1	1:G:568:ILE:HG23	2.42	0.54
1:E:153:HIS:HA	1:E:187:ARG:NH2	2.21	0.54
1:Q:593:THR:OG1	1:R:111:GLU:OE1	2.18	0.54
1:D:353:TYR:OH	1:D:532:ASP:OD2	2.21	0.54
1:H:153:HIS:HA	1:H:187:ARG:NH2	2.21	0.54
1:A:153:HIS:HA	1:A:187:ARG:NH2	2.21	0.54
1:P:549:LEU:HD13	1:P:643:GLN:HA	1.89	0.54
1:C:153:HIS:HA	1:C:187:ARG:NH2	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:549:LEU:HD13	1:C:643:GLN:HA	1.90	0.54
1:G:549:LEU:HD13	1:G:643:GLN:HA	1.90	0.54
1:D:235:ARG:NH2	1:H:419:SER:O	2.35	0.54
1:S:153:HIS:HA	1:S:187:ARG:NH2	2.21	0.54
1:K:549:LEU:HD13	1:K:643:GLN:HA	1.89	0.54
1:B:549:LEU:HD13	1:B:643:GLN:HA	1.89	0.54
1:T:153:HIS:HA	1:T:187:ARG:NH2	2.21	0.54
1:D:172:PRO:HB2	1:H:138:LEU:HD21	1.90	0.54
1:F:549:LEU:HD13	1:F:643:GLN:HA	1.89	0.54
1:F:728:ASP:OD1	1:F:748:TYR:OH	2.17	0.54
1:S:549:LEU:HD13	1:S:643:GLN:HA	1.89	0.53
1:R:549:LEU:HD13	1:R:643:GLN:HA	1.89	0.53
1:O:728:ASP:OD1	1:O:748:TYR:OH	2.17	0.53
1:Q:353:TYR:OH	1:Q:532:ASP:OD2	2.21	0.53
1:H:549:LEU:HD13	1:H:643:GLN:HA	1.89	0.53
1:P:153:HIS:HA	1:P:187:ARG:NH2	2.21	0.53
1:M:549:LEU:HD13	1:M:643:GLN:HA	1.90	0.53
1:E:549:LEU:HD13	1:E:643:GLN:HA	1.89	0.53
1:I:549:LEU:HD13	1:I:643:GLN:HA	1.89	0.53
1:K:353:TYR:OH	1:K:532:ASP:OD2	2.21	0.53
1:G:153:HIS:HA	1:G:187:ARG:NH2	2.21	0.53
1:L:549:LEU:HD13	1:L:643:GLN:HA	1.89	0.53
1:N:549:LEU:HD13	1:N:643:GLN:HA	1.90	0.53
1:O:172:PRO:HB2	1:T:138:LEU:HD21	1.90	0.53
1:Q:549:LEU:HD13	1:Q:643:GLN:HA	1.89	0.53
1:T:549:LEU:HD13	1:T:643:GLN:HA	1.89	0.53
1:A:549:LEU:HD13	1:A:643:GLN:HA	1.89	0.53
1:B:464:LEU:HD22	1:P:103:ARG:HG3	1.90	0.53
1:J:549:LEU:HD13	1:J:643:GLN:HA	1.89	0.53
1:O:549:LEU:HD13	1:O:643:GLN:HA	1.89	0.52
1:D:549:LEU:HD13	1:D:643:GLN:HA	1.90	0.52
1:I:213:ASN:OD1	1:I:216:ARG:NH1	2.43	0.52
1:S:213:ASN:OD1	1:S:216:ARG:NH1	2.43	0.52
1:R:501:GLU:H	1:R:501:GLU:CD	2.13	0.52
1:D:501:GLU:CD	1:D:501:GLU:H	2.13	0.52
1:K:501:GLU:CD	1:K:501:GLU:H	2.13	0.52
1:L:348:GLU:HB3	1:L:351:TYR:HB3	1.92	0.52
1:N:501:GLU:CD	1:N:501:GLU:H	2.13	0.52
1:C:501:GLU:H	1:C:501:GLU:CD	2.13	0.52
1:F:348:GLU:HB3	1:F:351:TYR:HB3	1.92	0.52
1:J:213:ASN:OD1	1:J:216:ARG:NH1	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:243:THR:HG23	1:L:245:ASP:H	1.75	0.52
1:R:213:ASN:OD1	1:R:216:ARG:NH1	2.43	0.52
1:R:348:GLU:HB3	1:R:351:TYR:HB3	1.92	0.52
1:N:348:GLU:HB3	1:N:351:TYR:HB3	1.92	0.52
1:T:501:GLU:H	1:T:501:GLU:CD	2.13	0.52
1:H:348:GLU:HB3	1:H:351:TYR:HB3	1.92	0.52
1:B:501:GLU:CD	1:B:501:GLU:H	2.14	0.52
1:O:348:GLU:HB3	1:O:351:TYR:HB3	1.92	0.52
1:C:348:GLU:HB3	1:C:351:TYR:HB3	1.92	0.52
1:G:348:GLU:HB3	1:G:351:TYR:HB3	1.92	0.52
1:I:348:GLU:HB3	1:I:351:TYR:HB3	1.92	0.52
1:M:348:GLU:HB3	1:M:351:TYR:HB3	1.92	0.51
1:T:348:GLU:HB3	1:T:351:TYR:HB3	1.92	0.51
1:E:348:GLU:HB3	1:E:351:TYR:HB3	1.92	0.51
1:F:243:THR:HG23	1:F:245:ASP:H	1.75	0.51
1:F:501:GLU:CD	1:F:501:GLU:H	2.13	0.51
1:J:501:GLU:CD	1:J:501:GLU:H	2.14	0.51
1:P:348:GLU:HB3	1:P:351:TYR:HB3	1.92	0.51
1:Q:348:GLU:HB3	1:Q:351:TYR:HB3	1.92	0.51
1:D:348:GLU:HB3	1:D:351:TYR:HB3	1.92	0.51
1:F:670:GLN:NE2	1:J:244:ASP:OD2	2.30	0.51
1:B:348:GLU:HB3	1:B:351:TYR:HB3	1.92	0.51
1:K:348:GLU:HB3	1:K:351:TYR:HB3	1.92	0.51
1:P:243:THR:HG23	1:P:245:ASP:H	1.75	0.51
1:P:353:TYR:OH	1:P:532:ASP:OD2	2.21	0.51
1:M:501:GLU:H	1:M:501:GLU:CD	2.14	0.51
1:S:243:THR:HG23	1:S:245:ASP:H	1.75	0.51
1:S:348:GLU:HB3	1:S:351:TYR:HB3	1.92	0.51
1:O:501:GLU:CD	1:O:501:GLU:H	2.14	0.51
1:T:593:THR:OG1	1:G:111:GLU:OE1	2.18	0.51
1:A:348:GLU:HB3	1:A:351:TYR:HB3	1.92	0.51
1:A:501:GLU:H	1:A:501:GLU:CD	2.14	0.51
1:B:243:THR:HG23	1:B:245:ASP:H	1.75	0.51
1:B:213:ASN:OD1	1:B:216:ARG:NH1	2.43	0.51
1:G:501:GLU:CD	1:G:501:GLU:H	2.13	0.51
1:J:243:THR:HG23	1:J:245:ASP:H	1.75	0.51
1:A:243:THR:HG23	1:A:245:ASP:H	1.75	0.51
1:K:138:LEU:HD21	1:P:172:PRO:HB2	1.93	0.51
1:L:501:GLU:CD	1:L:501:GLU:H	2.13	0.51
1:J:348:GLU:HB3	1:J:351:TYR:HB3	1.92	0.51
1:P:501:GLU:CD	1:P:501:GLU:H	2.14	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Q:501:GLU:CD	1:Q:501:GLU:H	2.13	0.51
1:G:213:ASN:OD1	1:G:216:ARG:NH1	2.43	0.51
1:I:501:GLU:CD	1:I:501:GLU:H	2.14	0.51
1:M:243:THR:HG23	1:M:245:ASP:H	1.75	0.51
1:S:501:GLU:CD	1:S:501:GLU:H	2.13	0.51
1:E:243:THR:HG23	1:E:245:ASP:H	1.75	0.51
1:I:243:THR:HG23	1:I:245:ASP:H	1.75	0.51
1:Q:243:THR:HG23	1:Q:245:ASP:H	1.75	0.51
1:N:243:THR:HG23	1:N:245:ASP:H	1.75	0.51
1:P:213:ASN:OD1	1:P:216:ARG:NH1	2.43	0.50
1:S:353:TYR:OH	1:S:532:ASP:OD2	2.21	0.50
1:T:213:ASN:OD1	1:T:216:ARG:NH1	2.43	0.50
1:C:213:ASN:OD1	1:C:216:ARG:NH1	2.43	0.50
1:G:612:LYS:NZ	1:G:628:GLU:H	2.10	0.50
1:G:728:ASP:OD1	1:G:748:TYR:OH	2.17	0.50
1:H:243:THR:HG23	1:H:245:ASP:H	1.75	0.50
1:A:213:ASN:OD1	1:A:216:ARG:NH1	2.43	0.50
1:M:213:ASN:OD1	1:M:216:ARG:NH1	2.43	0.50
1:T:353:TYR:OH	1:T:532:ASP:OD2	2.21	0.50
1:H:501:GLU:H	1:H:501:GLU:CD	2.14	0.50
1:Q:728:ASP:OD1	1:Q:748:TYR:OH	2.17	0.50
1:R:243:THR:HG23	1:R:245:ASP:H	1.75	0.50
1:C:243:THR:HG23	1:C:245:ASP:H	1.75	0.50
1:D:213:ASN:OD1	1:D:216:ARG:NH1	2.43	0.50
1:J:323:TYR:HB3	1:J:572:ARG:HD3	1.94	0.50
1:K:213:ASN:OD1	1:K:216:ARG:NH1	2.43	0.50
1:K:243:THR:HG23	1:K:245:ASP:H	1.75	0.50
1:P:612:LYS:NZ	1:P:628:GLU:H	2.10	0.50
1:S:612:LYS:NZ	1:S:628:GLU:H	2.10	0.50
1:C:728:ASP:OD1	1:C:748:TYR:OH	2.17	0.50
1:I:612:LYS:NZ	1:I:628:GLU:H	2.10	0.50
1:J:612:LYS:NZ	1:J:628:GLU:H	2.10	0.50
1:O:243:THR:HG23	1:O:245:ASP:H	1.75	0.50
1:T:243:THR:HG23	1:T:245:ASP:H	1.75	0.50
1:C:612:LYS:NZ	1:C:628:GLU:H	2.10	0.50
1:D:243:THR:HG23	1:D:245:ASP:H	1.75	0.50
1:E:501:GLU:CD	1:E:501:GLU:H	2.13	0.50
1:A:728:ASP:OD1	1:A:748:TYR:OH	2.17	0.50
1:B:728:ASP:OD1	1:B:748:TYR:OH	2.17	0.50
1:K:230:THR:HB	1:K:386:LLP:OP4	2.12	0.50
1:N:213:ASN:OD1	1:N:216:ARG:NH1	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:230:THR:HB	1:G:386:LLP:OP4	2.12	0.50
1:K:612:LYS:NZ	1:K:628:GLU:H	2.10	0.50
1:P:230:THR:HB	1:P:386:LLP:OP4	2.12	0.50
1:N:230:THR:HB	1:N:386:LLP:OP4	2.12	0.50
1:S:323:TYR:HB3	1:S:572:ARG:HD3	1.94	0.50
1:E:235:ARG:NH2	1:I:419:SER:O	2.35	0.50
1:E:728:ASP:OD1	1:E:748:TYR:OH	2.17	0.50
1:I:323:TYR:HB3	1:I:572:ARG:HD3	1.94	0.50
1:I:353:TYR:OH	1:I:532:ASP:OD2	2.21	0.50
1:F:213:ASN:OD1	1:F:216:ARG:NH1	2.43	0.50
1:P:323:TYR:HB3	1:P:572:ARG:HD3	1.94	0.50
1:L:230:THR:HB	1:L:386:LLP:OP4	2.12	0.50
1:D:230:THR:HB	1:D:386:LLP:OP4	2.12	0.50
1:D:419:SER:O	1:H:235:ARG:NH2	2.36	0.50
1:H:353:TYR:OH	1:H:532:ASP:OD2	2.21	0.50
1:R:612:LYS:NZ	1:R:628:GLU:H	2.10	0.50
1:N:372:THR:OG1	1:N:373:GLU:N	2.45	0.50
1:O:230:THR:HB	1:O:386:LLP:OP4	2.12	0.50
1:O:353:TYR:OH	1:O:532:ASP:OD2	2.21	0.50
1:O:612:LYS:NZ	1:O:628:GLU:H	2.10	0.50
1:D:287:PRO:HB3	1:D:336:LEU:HD11	1.94	0.50
1:F:230:THR:HB	1:F:386:LLP:OP4	2.12	0.50
1:A:230:THR:HB	1:A:386:LLP:OP4	2.12	0.49
1:A:612:LYS:NZ	1:A:628:GLU:H	2.10	0.49
1:B:230:THR:HB	1:B:386:LLP:OP4	2.12	0.49
1:K:287:PRO:HB3	1:K:336:LEU:HD11	1.94	0.49
1:P:287:PRO:HB3	1:P:336:LEU:HD11	1.94	0.49
1:L:287:PRO:HB3	1:L:336:LEU:HD11	1.94	0.49
1:M:372:THR:OG1	1:M:373:GLU:N	2.45	0.49
1:N:287:PRO:HB3	1:N:336:LEU:HD11	1.95	0.49
1:T:372:THR:OG1	1:T:373:GLU:N	2.45	0.49
1:C:230:THR:HB	1:C:386:LLP:OP4	2.12	0.49
1:G:243:THR:HG23	1:G:245:ASP:H	1.75	0.49
1:H:287:PRO:HB3	1:H:336:LEU:HD11	1.95	0.49
1:F:323:TYR:HB3	1:F:572:ARG:HD3	1.94	0.49
1:F:612:LYS:NZ	1:F:628:GLU:H	2.10	0.49
1:J:372:THR:OG1	1:J:373:GLU:N	2.45	0.49
1:A:287:PRO:HB3	1:A:336:LEU:HD11	1.94	0.49
1:B:287:PRO:HB3	1:B:336:LEU:HD11	1.94	0.49
1:L:213:ASN:OD1	1:L:216:ARG:NH1	2.43	0.49
1:S:287:PRO:HB3	1:S:336:LEU:HD11	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:323:TYR:HB3	1:O:572:ARG:HD3	1.94	0.49
1:D:372:THR:OG1	1:D:373:GLU:N	2.45	0.49
1:I:230:THR:HB	1:I:386:LLP:OP4	2.12	0.49
1:J:230:THR:HB	1:J:386:LLP:OP4	2.12	0.49
1:A:593:THR:OG1	1:S:111:GLU:OE1	2.15	0.49
1:L:323:TYR:HB3	1:L:572:ARG:HD3	1.94	0.49
1:R:230:THR:HB	1:R:386:LLP:OP4	2.12	0.49
1:R:287:PRO:HB3	1:R:336:LEU:HD11	1.94	0.49
1:R:323:TYR:HB3	1:R:572:ARG:HD3	1.94	0.49
1:N:353:TYR:OH	1:N:532:ASP:OD2	2.21	0.49
1:S:230:THR:HB	1:S:386:LLP:OP4	2.12	0.49
1:G:287:PRO:HB3	1:G:336:LEU:HD11	1.94	0.49
1:D:138:LEU:HD21	1:H:172:PRO:HB2	1.94	0.49
1:E:287:PRO:HB3	1:E:336:LEU:HD11	1.94	0.49
1:I:372:THR:OG1	1:I:373:GLU:N	2.45	0.49
1:K:372:THR:OG1	1:K:373:GLU:N	2.45	0.49
1:L:612:LYS:NZ	1:L:628:GLU:H	2.10	0.49
1:Q:287:PRO:HB3	1:Q:336:LEU:HD11	1.94	0.49
1:Q:323:TYR:HB3	1:Q:572:ARG:HD3	1.94	0.49
1:Q:372:THR:OG1	1:Q:373:GLU:N	2.45	0.49
1:M:287:PRO:HB3	1:M:336:LEU:HD11	1.94	0.49
1:N:612:LYS:NZ	1:N:628:GLU:H	2.10	0.49
1:T:287:PRO:HB3	1:T:336:LEU:HD11	1.94	0.49
1:T:612:LYS:NZ	1:T:628:GLU:H	2.10	0.49
1:I:287:PRO:HB3	1:I:336:LEU:HD11	1.94	0.49
1:L:670:GLN:NE2	1:Q:244:ASP:OD2	2.28	0.49
1:Q:612:LYS:NZ	1:Q:628:GLU:H	2.10	0.49
1:O:213:ASN:OD1	1:O:216:ARG:NH1	2.43	0.49
1:O:287:PRO:HB3	1:O:336:LEU:HD11	1.94	0.49
1:C:287:PRO:HB3	1:C:336:LEU:HD11	1.94	0.49
1:E:213:ASN:OD1	1:E:216:ARG:NH1	2.43	0.49
1:H:612:LYS:NZ	1:H:628:GLU:H	2.10	0.49
1:E:612:LYS:NZ	1:E:628:GLU:H	2.10	0.49
1:F:287:PRO:HB3	1:F:336:LEU:HD11	1.94	0.49
1:M:4:LEU:HD11	1:M:38:ILE:HD12	1.95	0.49
1:M:612:LYS:NZ	1:M:628:GLU:H	2.10	0.49
1:R:372:THR:OG1	1:R:373:GLU:N	2.45	0.49
1:G:323:TYR:HB3	1:G:572:ARG:HD3	1.94	0.49
1:J:4:LEU:HD11	1:J:38:ILE:HD12	1.95	0.49
1:J:287:PRO:HB3	1:J:336:LEU:HD11	1.94	0.49
1:B:284:PRO:HD3	1:B:326:VAL:HG11	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:612:LYS:NZ	1:B:628:GLU:H	2.10	0.49
1:Q:4:LEU:HD11	1:Q:38:ILE:HD12	1.95	0.49
1:O:284:PRO:HD3	1:O:326:VAL:HG11	1.95	0.49
1:T:230:THR:HB	1:T:386:LLP:OP4	2.12	0.49
1:D:612:LYS:NZ	1:D:628:GLU:H	2.10	0.49
1:I:284:PRO:HD3	1:I:326:VAL:HG11	1.95	0.49
1:F:372:THR:OG1	1:F:373:GLU:N	2.45	0.49
1:A:284:PRO:HD3	1:A:326:VAL:HG11	1.95	0.49
1:A:323:TYR:HB3	1:A:572:ARG:HD3	1.94	0.49
1:L:372:THR:OG1	1:L:373:GLU:N	2.45	0.49
1:L:417:MET:HG3	1:Q:260:GLN:HG2	1.95	0.49
1:I:4:LEU:HD11	1:I:38:ILE:HD12	1.94	0.49
1:R:4:LEU:HD11	1:R:38:ILE:HD12	1.95	0.49
1:H:323:TYR:HB3	1:H:572:ARG:HD3	1.94	0.49
1:E:4:LEU:HD11	1:E:38:ILE:HD12	1.95	0.49
1:K:323:TYR:HB3	1:K:572:ARG:HD3	1.94	0.48
1:M:323:TYR:HB3	1:M:572:ARG:HD3	1.94	0.48
1:N:323:TYR:HB3	1:N:572:ARG:HD3	1.94	0.48
1:G:4:LEU:HD11	1:G:38:ILE:HD12	1.95	0.48
1:H:213:ASN:OD1	1:H:216:ARG:NH1	2.43	0.48
1:E:111:GLU:OE1	1:J:593:THR:OG1	2.18	0.48
1:E:138:LEU:HD21	1:I:172:PRO:HB2	1.94	0.48
1:E:323:TYR:HB3	1:E:572:ARG:HD3	1.94	0.48
1:A:4:LEU:HD11	1:A:38:ILE:HD12	1.95	0.48
1:B:372:THR:OG1	1:B:373:GLU:N	2.45	0.48
1:Q:230:THR:HB	1:Q:386:LLP:OP4	2.12	0.48
1:M:284:PRO:HD3	1:M:326:VAL:HG11	1.95	0.48
1:R:284:PRO:HD3	1:R:326:VAL:HG11	1.95	0.48
1:S:4:LEU:HD11	1:S:38:ILE:HD12	1.95	0.48
1:S:372:THR:OG1	1:S:373:GLU:N	2.45	0.48
1:T:284:PRO:HD3	1:T:326:VAL:HG11	1.95	0.48
1:C:323:TYR:HB3	1:C:572:ARG:HD3	1.94	0.48
1:G:372:THR:OG1	1:G:373:GLU:N	2.45	0.48
1:D:323:TYR:HB3	1:D:572:ARG:HD3	1.94	0.48
1:H:230:THR:HB	1:H:386:LLP:OP4	2.12	0.48
1:E:230:THR:HB	1:E:386:LLP:OP4	2.12	0.48
1:P:284:PRO:HD3	1:P:326:VAL:HG11	1.95	0.48
1:F:4:LEU:HD11	1:F:38:ILE:HD12	1.95	0.48
1:L:244:ASP:OD2	1:Q:670:GLN:NE2	2.28	0.48
1:M:230:THR:HB	1:M:386:LLP:OP4	2.12	0.48
1:O:372:THR:OG1	1:O:373:GLU:N	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:372:THR:OG1	1:E:373:GLU:N	2.45	0.48
1:K:284:PRO:HD3	1:K:326:VAL:HG11	1.95	0.48
1:P:372:THR:OG1	1:P:373:GLU:N	2.45	0.48
1:T:323:TYR:HB3	1:T:572:ARG:HD3	1.94	0.48
1:D:4:LEU:HD11	1:D:38:ILE:HD12	1.95	0.48
1:H:4:LEU:HD11	1:H:38:ILE:HD12	1.94	0.48
1:H:284:PRO:HD3	1:H:326:VAL:HG11	1.95	0.48
1:H:372:THR:OG1	1:H:373:GLU:N	2.45	0.48
1:D:284:PRO:HD3	1:D:326:VAL:HG11	1.95	0.48
1:J:284:PRO:HD3	1:J:326:VAL:HG11	1.95	0.48
1:L:4:LEU:HD11	1:L:38:ILE:HD12	1.95	0.48
1:L:284:PRO:HD3	1:L:326:VAL:HG11	1.95	0.48
1:C:284:PRO:HD3	1:C:326:VAL:HG11	1.95	0.48
1:C:372:THR:OG1	1:C:373:GLU:N	2.45	0.48
1:A:372:THR:OG1	1:A:373:GLU:N	2.45	0.48
1:B:4:LEU:HD11	1:B:38:ILE:HD12	1.95	0.48
1:B:323:TYR:HB3	1:B:572:ARG:HD3	1.94	0.48
1:P:4:LEU:HD11	1:P:38:ILE:HD12	1.95	0.48
1:N:4:LEU:HD11	1:N:38:ILE:HD12	1.95	0.48
1:E:284:PRO:HD3	1:E:326:VAL:HG11	1.95	0.48
1:P:281:ILE:HD11	1:P:577:GLN:HG3	1.96	0.48
1:Q:284:PRO:HD3	1:Q:326:VAL:HG11	1.95	0.48
1:S:284:PRO:HD3	1:S:326:VAL:HG11	1.95	0.48
1:O:4:LEU:HD11	1:O:38:ILE:HD12	1.95	0.48
1:C:4:LEU:HD11	1:C:38:ILE:HD12	1.95	0.48
1:G:284:PRO:HD3	1:G:326:VAL:HG11	1.95	0.48
1:K:4:LEU:HD11	1:K:38:ILE:HD12	1.94	0.48
1:L:172:PRO:HB2	1:Q:138:LEU:HD21	1.95	0.48
1:Q:213:ASN:OD1	1:Q:216:ARG:NH1	2.43	0.48
1:H:281:ILE:HD11	1:H:577:GLN:HG3	1.96	0.48
1:E:281:ILE:HD11	1:E:577:GLN:HG3	1.96	0.48
1:I:281:ILE:HD11	1:I:577:GLN:HG3	1.96	0.48
1:A:281:ILE:HD11	1:A:577:GLN:HG3	1.96	0.47
1:K:259:GLU:OE1	1:K:706:SER:OG	2.30	0.47
1:Q:281:ILE:HD11	1:Q:577:GLN:HG3	1.96	0.47
1:O:281:ILE:HD11	1:O:577:GLN:HG3	1.96	0.47
1:G:281:ILE:HD11	1:G:577:GLN:HG3	1.96	0.47
1:F:281:ILE:HD11	1:F:577:GLN:HG3	1.96	0.47
1:R:281:ILE:HD11	1:R:577:GLN:HG3	1.96	0.47
1:S:281:ILE:HD11	1:S:577:GLN:HG3	1.96	0.47
1:T:4:LEU:HD11	1:T:38:ILE:HD12	1.94	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:281:ILE:HD11	1:B:577:GLN:HG3	1.96	0.47
1:T:281:ILE:HD11	1:T:577:GLN:HG3	1.96	0.47
1:J:281:ILE:HD11	1:J:577:GLN:HG3	1.96	0.47
1:L:281:ILE:HD11	1:L:577:GLN:HG3	1.96	0.47
1:M:281:ILE:HD11	1:M:577:GLN:HG3	1.96	0.47
1:O:138:LEU:HD21	1:T:172:PRO:HB2	1.96	0.47
1:C:235:ARG:NH2	1:G:419:SER:O	2.31	0.47
1:C:281:ILE:HD11	1:C:577:GLN:HG3	1.96	0.47
1:A:417:MET:HG3	1:B:260:GLN:HG2	1.96	0.47
1:K:281:ILE:HD11	1:K:577:GLN:HG3	1.96	0.47
1:N:281:ILE:HD11	1:N:577:GLN:HG3	1.96	0.47
1:G:387:LEU:HD23	1:G:387:LEU:HA	1.79	0.47
1:D:281:ILE:HD11	1:D:577:GLN:HG3	1.96	0.47
1:L:260:GLN:HG2	1:Q:417:MET:HG3	1.97	0.47
1:N:284:PRO:HD3	1:N:326:VAL:HG11	1.95	0.47
1:F:284:PRO:HD3	1:F:326:VAL:HG11	1.95	0.47
1:M:126:ARG:HD3	1:S:590:LYS:HD3	1.97	0.46
1:O:670:GLN:NE2	1:T:244:ASP:OD2	2.39	0.46
1:M:244:ASP:OD2	1:R:670:GLN:NE2	2.33	0.46
1:C:387:LEU:HD23	1:C:387:LEU:HA	1.79	0.46
1:R:728:ASP:OD1	1:R:748:TYR:OH	2.17	0.46
1:G:58:LEU:HG	1:G:89:PHE:HB2	1.98	0.46
1:F:387:LEU:HD23	1:F:387:LEU:HA	1.79	0.46
1:A:58:LEU:HG	1:A:89:PHE:HB2	1.98	0.46
1:M:114:TRP:HD1	1:S:588:LYS:HB3	1.81	0.46
1:T:58:LEU:HG	1:T:89:PHE:HB2	1.98	0.46
1:P:58:LEU:HG	1:P:89:PHE:HB2	1.98	0.45
1:D:58:LEU:HG	1:D:89:PHE:HB2	1.98	0.45
1:B:58:LEU:HG	1:B:89:PHE:HB2	1.98	0.45
1:J:287:PRO:HG2	1:J:525:PRO:HG2	1.98	0.45
1:K:58:LEU:HG	1:K:89:PHE:HB2	1.99	0.45
1:H:58:LEU:HG	1:H:89:PHE:HB2	1.98	0.45
1:A:287:PRO:HG2	1:A:525:PRO:HG2	1.98	0.45
1:K:387:LEU:HD23	1:K:387:LEU:HA	1.79	0.45
1:Q:287:PRO:HG2	1:Q:525:PRO:HG2	1.98	0.45
1:M:287:PRO:HG2	1:M:525:PRO:HG2	1.98	0.45
1:O:58:LEU:HG	1:O:89:PHE:HB2	1.98	0.45
1:C:58:LEU:HG	1:C:89:PHE:HB2	1.98	0.45
1:G:287:PRO:HG2	1:G:525:PRO:HG2	1.98	0.45
1:L:58:LEU:HG	1:L:89:PHE:HB2	1.98	0.45
1:N:58:LEU:HG	1:N:89:PHE:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:66:ARG:CZ	1:O:66:ARG:H	2.30	0.45
1:D:287:PRO:HG2	1:D:525:PRO:HG2	1.98	0.45
1:E:157:TRP:CD1	1:I:568:ILE:HG23	2.51	0.45
1:I:287:PRO:HG2	1:I:525:PRO:HG2	1.98	0.45
1:F:58:LEU:HG	1:F:89:PHE:HB2	1.98	0.45
1:S:58:LEU:HG	1:S:89:PHE:HB2	1.98	0.45
1:S:199:SER:OG	1:S:202:ASP:HB2	2.17	0.45
1:T:728:ASP:OD1	1:T:748:TYR:OH	2.17	0.45
1:H:199:SER:OG	1:H:202:ASP:HB2	2.17	0.45
1:E:199:SER:OG	1:E:202:ASP:HB2	2.17	0.45
1:E:287:PRO:HG2	1:E:525:PRO:HG2	1.98	0.45
1:F:287:PRO:HG2	1:F:525:PRO:HG2	1.98	0.45
1:J:199:SER:OG	1:J:202:ASP:HB2	2.17	0.45
1:P:287:PRO:HG2	1:P:525:PRO:HG2	1.98	0.45
1:L:199:SER:OG	1:L:202:ASP:HB2	2.17	0.45
1:Q:199:SER:OG	1:Q:202:ASP:HB2	2.17	0.45
1:M:235:ARG:NH2	1:R:419:SER:O	2.32	0.45
1:R:287:PRO:HG2	1:R:525:PRO:HG2	1.98	0.45
1:N:287:PRO:HG2	1:N:525:PRO:HG2	1.98	0.45
1:A:260:GLN:HG2	1:B:417:MET:HG3	1.99	0.45
1:K:66:ARG:H	1:K:66:ARG:CZ	2.30	0.45
1:Q:58:LEU:HG	1:Q:89:PHE:HB2	1.98	0.45
1:M:728:ASP:OD1	1:M:748:TYR:OH	2.17	0.45
1:S:287:PRO:HG2	1:S:525:PRO:HG2	1.98	0.45
1:D:66:ARG:CZ	1:D:66:ARG:H	2.30	0.45
1:H:66:ARG:CZ	1:H:66:ARG:H	2.30	0.45
1:E:58:LEU:HG	1:E:89:PHE:HB2	1.99	0.45
1:F:199:SER:OG	1:F:202:ASP:HB2	2.17	0.45
1:A:199:SER:OG	1:A:202:ASP:HB2	2.17	0.45
1:B:66:ARG:CZ	1:B:66:ARG:H	2.30	0.45
1:P:199:SER:OG	1:P:202:ASP:HB2	2.17	0.45
1:M:199:SER:OG	1:M:202:ASP:HB2	2.17	0.45
1:R:264:LEU:HD13	1:R:418:HIS:HE1	1.82	0.45
1:N:199:SER:OG	1:N:202:ASP:HB2	2.17	0.45
1:N:264:LEU:HD13	1:N:418:HIS:HE1	1.82	0.45
1:G:66:ARG:CZ	1:G:66:ARG:H	2.30	0.45
1:I:58:LEU:HG	1:I:89:PHE:HB2	1.98	0.45
1:F:264:LEU:HD13	1:F:418:HIS:HE1	1.82	0.45
1:K:287:PRO:HG2	1:K:525:PRO:HG2	1.98	0.45
1:N:728:ASP:OD1	1:N:748:TYR:OH	2.17	0.45
1:S:66:ARG:CZ	1:S:66:ARG:H	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:66:ARG:CZ	1:C:66:ARG:H	2.30	0.45
1:H:387:LEU:HD23	1:H:387:LEU:HA	1.79	0.45
1:B:320:ASN:HA	1:B:321:CYS:HA	1.82	0.44
1:M:58:LEU:HG	1:M:89:PHE:HB2	1.98	0.44
1:M:66:ARG:CZ	1:M:66:ARG:H	2.30	0.44
1:R:58:LEU:HG	1:R:89:PHE:HB2	1.99	0.44
1:O:287:PRO:HG2	1:O:525:PRO:HG2	1.98	0.44
1:T:199:SER:OG	1:T:202:ASP:HB2	2.17	0.44
1:T:287:PRO:HG2	1:T:525:PRO:HG2	1.98	0.44
1:C:199:SER:OG	1:C:202:ASP:HB2	2.17	0.44
1:J:58:LEU:HG	1:J:89:PHE:HB2	1.98	0.44
1:Q:66:ARG:CZ	1:Q:66:ARG:H	2.30	0.44
1:Q:264:LEU:HD13	1:Q:418:HIS:HE1	1.82	0.44
1:M:103:ARG:HG3	1:S:464:LEU:HD22	1.99	0.44
1:S:430:SER:HA	1:S:433:ILE:HG22	2.00	0.44
1:O:199:SER:OG	1:O:202:ASP:HB2	2.17	0.44
1:G:430:SER:HA	1:G:433:ILE:HG22	2.00	0.44
1:B:287:PRO:HG2	1:B:525:PRO:HG2	1.98	0.44
1:K:264:LEU:HD13	1:K:418:HIS:HE1	1.82	0.44
1:N:66:ARG:CZ	1:N:66:ARG:H	2.30	0.44
1:C:287:PRO:HG2	1:C:525:PRO:HG2	1.98	0.44
1:C:430:SER:HA	1:C:433:ILE:HG22	2.00	0.44
1:D:264:LEU:HD13	1:D:418:HIS:HE1	1.82	0.44
1:I:199:SER:OG	1:I:202:ASP:HB2	2.17	0.44
1:J:66:ARG:CZ	1:J:66:ARG:H	2.30	0.44
1:A:172:PRO:HB2	1:B:138:LEU:HD21	1.99	0.44
1:B:264:LEU:HD13	1:B:418:HIS:HE1	1.82	0.44
1:B:430:SER:HA	1:B:433:ILE:HG22	2.00	0.44
1:K:430:SER:HA	1:K:433:ILE:HG22	2.00	0.44
1:P:430:SER:HA	1:P:433:ILE:HG22	2.00	0.44
1:L:287:PRO:HG2	1:L:525:PRO:HG2	1.98	0.44
1:Q:430:SER:HA	1:Q:433:ILE:HG22	2.00	0.44
1:O:430:SER:HA	1:O:433:ILE:HG22	2.00	0.44
1:T:66:ARG:CZ	1:T:66:ARG:H	2.30	0.44
1:H:287:PRO:HG2	1:H:525:PRO:HG2	1.98	0.44
1:E:66:ARG:CZ	1:E:66:ARG:H	2.30	0.44
1:E:264:LEU:HD13	1:E:418:HIS:HE1	1.82	0.44
1:I:264:LEU:HD13	1:I:418:HIS:HE1	1.82	0.44
1:F:66:ARG:H	1:F:66:ARG:CZ	2.30	0.44
1:J:264:LEU:HD13	1:J:418:HIS:HE1	1.82	0.44
1:P:66:ARG:CZ	1:P:66:ARG:H	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:264:LEU:HD13	1:L:418:HIS:HE1	1.82	0.44
1:O:103:ARG:HG3	1:C:464:LEU:HD22	1.99	0.44
1:O:420:THR:HG21	1:T:393:GLN:HG2	1.99	0.44
1:E:320:ASN:HA	1:E:321:CYS:HA	1.82	0.44
1:I:430:SER:HA	1:I:433:ILE:HG22	2.00	0.44
1:A:66:ARG:H	1:A:66:ARG:CZ	2.30	0.44
1:R:66:ARG:H	1:R:66:ARG:CZ	2.30	0.44
1:H:430:SER:HA	1:H:433:ILE:HG22	2.00	0.44
1:J:430:SER:HA	1:J:433:ILE:HG22	2.00	0.44
1:A:430:SER:HA	1:A:433:ILE:HG22	2.00	0.44
1:P:264:LEU:HD13	1:P:418:HIS:HE1	1.82	0.44
1:M:430:SER:HA	1:M:433:ILE:HG22	2.00	0.44
1:N:172:PRO:HB2	1:S:138:LEU:HD21	1.99	0.44
1:C:264:LEU:HD13	1:C:418:HIS:HE1	1.82	0.44
1:G:199:SER:OG	1:G:202:ASP:HB2	2.17	0.44
1:D:430:SER:HA	1:D:433:ILE:HG22	2.00	0.44
1:I:66:ARG:CZ	1:I:66:ARG:H	2.30	0.44
1:I:387:LEU:HD23	1:I:387:LEU:HA	1.79	0.44
1:A:138:LEU:HD21	1:B:172:PRO:HB2	1.99	0.44
1:K:14:ASP:OD1	1:K:18:SER:OG	2.36	0.44
1:M:264:LEU:HD13	1:M:418:HIS:HE1	1.82	0.44
1:T:264:LEU:HD13	1:T:418:HIS:HE1	1.82	0.44
1:T:430:SER:HA	1:T:433:ILE:HG22	2.00	0.44
1:E:572:ARG:HH22	1:E:700:GLY:HA3	1.83	0.44
1:A:320:ASN:HA	1:A:321:CYS:HA	1.82	0.44
1:K:199:SER:OG	1:K:202:ASP:HB2	2.17	0.44
1:L:387:LEU:HD23	1:L:387:LEU:HA	1.79	0.44
1:R:572:ARG:HH22	1:R:700:GLY:HA3	1.83	0.44
1:A:572:ARG:HH22	1:A:700:GLY:HA3	1.83	0.43
1:B:199:SER:OG	1:B:202:ASP:HB2	2.17	0.43
1:K:271:TYR:OH	1:K:705:LEU:HD12	2.18	0.43
1:K:572:ARG:HH22	1:K:700:GLY:HA3	1.83	0.43
1:L:430:SER:HA	1:L:433:ILE:HG22	2.00	0.43
1:M:572:ARG:HH22	1:M:700:GLY:HA3	1.83	0.43
1:R:199:SER:OG	1:R:202:ASP:HB2	2.17	0.43
1:O:264:LEU:HD13	1:O:418:HIS:HE1	1.82	0.43
1:E:271:TYR:OH	1:E:705:LEU:HD12	2.18	0.43
1:L:66:ARG:CZ	1:L:66:ARG:H	2.30	0.43
1:Q:572:ARG:HH22	1:Q:700:GLY:HA3	1.83	0.43
1:R:48:ILE:HD13	1:R:79:LEU:HB2	2.01	0.43
1:R:430:SER:HA	1:R:433:ILE:HG22	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:20:ALA:HB1	1:N:115:ILE:HG13	2.01	0.43
1:N:430:SER:HA	1:N:433:ILE:HG22	2.00	0.43
1:S:264:LEU:HD13	1:S:418:HIS:HE1	1.82	0.43
1:T:271:TYR:OH	1:T:705:LEU:HD12	2.18	0.43
1:C:271:TYR:OH	1:C:705:LEU:HD12	2.18	0.43
1:E:430:SER:HA	1:E:433:ILE:HG22	2.00	0.43
1:I:572:ARG:HH22	1:I:700:GLY:HA3	1.83	0.43
1:F:430:SER:HA	1:F:433:ILE:HG22	2.00	0.43
1:F:572:ARG:HH22	1:F:700:GLY:HA3	1.83	0.43
1:B:271:TYR:OH	1:B:705:LEU:HD12	2.18	0.43
1:K:20:ALA:HB1	1:K:115:ILE:HG13	2.01	0.43
1:K:393:GLN:HG2	1:P:420:THR:HG21	2.00	0.43
1:L:572:ARG:HH22	1:L:700:GLY:HA3	1.83	0.43
1:N:157:TRP:CD1	1:S:568:ILE:HG23	2.53	0.43
1:T:20:ALA:HB1	1:T:115:ILE:HG13	2.01	0.43
1:D:199:SER:OG	1:D:202:ASP:HB2	2.17	0.43
1:I:48:ILE:HD13	1:I:79:LEU:HB2	2.01	0.43
1:A:387:LEU:HD23	1:A:387:LEU:HA	1.79	0.43
1:L:20:ALA:HB1	1:L:115:ILE:HG13	2.00	0.43
1:L:271:TYR:OH	1:L:705:LEU:HD12	2.18	0.43
1:N:568:ILE:HG23	1:S:157:TRP:CD1	2.53	0.43
1:S:572:ARG:HH22	1:S:700:GLY:HA3	1.83	0.43
1:O:48:ILE:HD13	1:O:79:LEU:HB2	2.01	0.43
1:D:14:ASP:OD1	1:D:18:SER:OG	2.36	0.43
1:P:48:ILE:HD13	1:P:79:LEU:HB2	2.01	0.43
1:L:48:ILE:HD13	1:L:79:LEU:HB2	2.01	0.43
1:S:48:ILE:HD13	1:S:79:LEU:HB2	2.00	0.43
1:G:572:ARG:HH22	1:G:700:GLY:HA3	1.83	0.43
1:E:20:ALA:HB1	1:E:115:ILE:HG13	2.01	0.43
1:A:264:LEU:HD13	1:A:418:HIS:HE1	1.82	0.43
1:P:572:ARG:HH22	1:P:700:GLY:HA3	1.83	0.43
1:M:271:TYR:OH	1:M:705:LEU:HD12	2.18	0.43
1:R:271:TYR:OH	1:R:705:LEU:HD12	2.18	0.43
1:N:271:TYR:OH	1:N:705:LEU:HD12	2.18	0.43
1:D:20:ALA:HB1	1:D:115:ILE:HG13	2.01	0.43
1:E:48:ILE:HD13	1:E:79:LEU:HB2	2.01	0.43
1:F:20:ALA:HB1	1:F:115:ILE:HG13	2.01	0.43
1:F:271:TYR:OH	1:F:705:LEU:HD12	2.18	0.43
1:F:320:ASN:HA	1:F:321:CYS:HA	1.82	0.43
1:B:20:ALA:HB1	1:B:115:ILE:HG13	2.00	0.43
1:M:48:ILE:HD13	1:M:79:LEU:HB2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:T:572:ARG:HH22	1:T:700:GLY:HA3	1.83	0.43
1:C:20:ALA:HB1	1:C:115:ILE:HG13	2.01	0.43
1:G:20:ALA:HB1	1:G:115:ILE:HG13	2.00	0.43
1:H:271:TYR:OH	1:H:705:LEU:HD12	2.18	0.43
1:J:572:ARG:HH22	1:J:700:GLY:HA3	1.83	0.43
1:A:271:TYR:OH	1:A:705:LEU:HD12	2.18	0.43
1:Q:271:TYR:OH	1:Q:705:LEU:HD12	2.18	0.43
1:N:572:ARG:HH22	1:N:700:GLY:HA3	1.83	0.43
1:S:66:ARG:NH1	1:G:64:SER:HB2	2.34	0.43
1:D:271:TYR:OH	1:D:705:LEU:HD12	2.18	0.43
1:D:572:ARG:HH22	1:D:700:GLY:HA3	1.83	0.43
1:E:551:ASP:OD2	1:E:551:ASP:N	2.52	0.43
1:J:48:ILE:HD13	1:J:79:LEU:HB2	2.01	0.43
1:J:387:LEU:HD23	1:J:387:LEU:HA	1.79	0.43
1:A:48:ILE:HD13	1:A:79:LEU:HB2	2.01	0.43
1:T:48:ILE:HD13	1:T:79:LEU:HB2	2.01	0.43
1:G:271:TYR:OH	1:G:705:LEU:HD12	2.18	0.43
1:G:551:ASP:OD2	1:G:551:ASP:N	2.52	0.43
1:D:48:ILE:HD13	1:D:79:LEU:HB2	2.01	0.43
1:N:551:ASP:N	1:N:551:ASP:OD2	2.52	0.43
1:O:572:ARG:HH22	1:O:700:GLY:HA3	1.83	0.43
1:B:572:ARG:HH22	1:B:700:GLY:HA3	1.83	0.42
1:K:551:ASP:OD2	1:K:551:ASP:N	2.52	0.42
1:R:20:ALA:HB1	1:R:115:ILE:HG13	2.01	0.42
1:G:48:ILE:HD13	1:G:79:LEU:HB2	2.01	0.42
1:G:264:LEU:HD13	1:G:418:HIS:HE1	1.82	0.42
1:A:20:ALA:HB1	1:A:115:ILE:HG13	2.01	0.42
1:S:271:TYR:OH	1:S:705:LEU:HD12	2.18	0.42
1:O:103:ARG:HG3	1:C:464:LEU:CD2	2.48	0.42
1:O:271:TYR:OH	1:O:705:LEU:HD12	2.18	0.42
1:O:551:ASP:OD2	1:O:551:ASP:N	2.52	0.42
1:H:572:ARG:HH22	1:H:700:GLY:HA3	1.83	0.42
1:F:260:GLN:HG2	1:J:417:MET:HG3	2.01	0.42
1:J:551:ASP:OD2	1:J:551:ASP:N	2.52	0.42
1:Q:387:LEU:HD23	1:Q:387:LEU:HA	1.79	0.42
1:S:387:LEU:HD23	1:S:387:LEU:HA	1.79	0.42
1:T:387:LEU:HA	1:T:387:LEU:HD23	1.79	0.42
1:I:555:PRO:HG2	1:I:638:MET:HB2	2.01	0.42
1:J:271:TYR:OH	1:J:705:LEU:HD12	2.18	0.42
1:J:555:PRO:HG2	1:J:638:MET:HB2	2.01	0.42
1:P:20:ALA:HB1	1:P:115:ILE:HG13	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:201:LEU:HD11	1:L:421:THR:HA	2.02	0.42
1:L:612:LYS:HZ2	1:L:627:GLY:HA2	1.84	0.42
1:Q:555:PRO:HG2	1:Q:638:MET:HB2	2.01	0.42
1:M:20:ALA:HB1	1:M:115:ILE:HG13	2.01	0.42
1:M:555:PRO:HG2	1:M:638:MET:HB2	2.01	0.42
1:N:244:ASP:OD2	1:S:670:GLN:NE2	2.38	0.42
1:C:320:ASN:HA	1:C:321:CYS:HA	1.82	0.42
1:H:264:LEU:HD13	1:H:418:HIS:HE1	1.82	0.42
1:E:673:VAL:HG11	1:I:242:MET:O	2.19	0.42
1:I:20:ALA:HB1	1:I:115:ILE:HG13	2.00	0.42
1:I:201:LEU:HD11	1:I:421:THR:HA	2.02	0.42
1:I:271:TYR:OH	1:I:705:LEU:HD12	2.18	0.42
1:F:31:GLU:OE1	1:F:128:LEU:HB2	2.20	0.42
1:A:31:GLU:OE1	1:A:128:LEU:HB2	2.20	0.42
1:B:48:ILE:HD13	1:B:79:LEU:HB2	2.01	0.42
1:K:157:TRP:CD1	1:P:568:ILE:HG23	2.53	0.42
1:P:271:TYR:OH	1:P:705:LEU:HD12	2.19	0.42
1:Q:201:LEU:HD11	1:Q:421:THR:HA	2.02	0.42
1:M:551:ASP:OD2	1:M:551:ASP:N	2.52	0.42
1:R:201:LEU:HD11	1:R:421:THR:HA	2.02	0.42
1:T:31:GLU:OE1	1:T:128:LEU:HB2	2.20	0.42
1:C:31:GLU:OE1	1:C:128:LEU:HB2	2.20	0.42
1:D:201:LEU:HD11	1:D:421:THR:HA	2.02	0.42
1:E:201:LEU:HD11	1:E:421:THR:HA	2.02	0.42
1:J:201:LEU:HD11	1:J:421:THR:HA	2.02	0.42
1:B:14:ASP:OD1	1:B:18:SER:OG	2.36	0.42
1:B:31:GLU:OE1	1:B:128:LEU:HB2	2.20	0.42
1:B:387:LEU:HA	1:B:387:LEU:HD23	1.79	0.42
1:P:31:GLU:OE1	1:P:128:LEU:HB2	2.20	0.42
1:L:551:ASP:OD2	1:L:551:ASP:N	2.52	0.42
1:Q:48:ILE:HD13	1:Q:79:LEU:HB2	2.01	0.42
1:N:201:LEU:HD11	1:N:421:THR:HA	2.02	0.42
1:S:201:LEU:HD11	1:S:421:THR:HA	2.02	0.42
1:O:20:ALA:HB1	1:O:115:ILE:HG13	2.00	0.42
1:T:201:LEU:HD11	1:T:421:THR:HA	2.02	0.42
1:D:31:GLU:OE1	1:D:128:LEU:HB2	2.20	0.42
1:H:31:GLU:OE1	1:H:128:LEU:HB2	2.20	0.42
1:H:48:ILE:HD13	1:H:79:LEU:HB2	2.01	0.42
1:F:48:ILE:HD13	1:F:79:LEU:HB2	2.01	0.42
1:F:201:LEU:HD11	1:F:421:THR:HA	2.02	0.42
1:Q:20:ALA:HB1	1:Q:115:ILE:HG13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:31:GLU:OE1	1:M:128:LEU:HB2	2.20	0.42
1:M:201:LEU:HD11	1:M:421:THR:HA	2.02	0.42
1:R:31:GLU:OE1	1:R:128:LEU:HB2	2.20	0.42
1:N:48:ILE:HD13	1:N:79:LEU:HB2	2.01	0.42
1:O:201:LEU:HD11	1:O:421:THR:HA	2.02	0.42
1:H:20:ALA:HB1	1:H:115:ILE:HG13	2.00	0.42
1:H:201:LEU:HD11	1:H:421:THR:HA	2.02	0.42
1:E:374:ASN:O	1:E:403:ARG:NH1	2.53	0.42
1:P:243:THR:CG2	1:P:245:ASP:H	2.33	0.42
1:L:31:GLU:OE1	1:L:128:LEU:HB2	2.20	0.42
1:L:555:PRO:HG2	1:L:638:MET:HB2	2.01	0.42
1:N:31:GLU:OE1	1:N:128:LEU:HB2	2.20	0.42
1:N:555:PRO:HG2	1:N:638:MET:HB2	2.01	0.42
1:S:20:ALA:HB1	1:S:115:ILE:HG13	2.00	0.42
1:C:551:ASP:OD2	1:C:551:ASP:N	2.52	0.42
1:G:31:GLU:OE1	1:G:128:LEU:HB2	2.20	0.42
1:H:551:ASP:OD2	1:H:551:ASP:N	2.52	0.42
1:E:31:GLU:OE1	1:E:128:LEU:HB2	2.20	0.42
1:J:31:GLU:OE1	1:J:128:LEU:HB2	2.20	0.42
1:B:201:LEU:HD11	1:B:421:THR:HA	2.02	0.42
1:B:243:THR:CG2	1:B:245:ASP:H	2.33	0.42
1:B:338:ASP:OD1	1:B:376:PRO:HD3	2.20	0.42
1:K:201:LEU:HD11	1:K:421:THR:HA	2.02	0.42
1:K:417:MET:HG3	1:P:260:GLN:HG2	2.02	0.42
1:R:338:ASP:OD1	1:R:376:PRO:HD3	2.20	0.42
1:O:417:MET:HG3	1:T:260:GLN:HG2	2.02	0.42
1:T:320:ASN:HA	1:T:321:CYS:HA	1.82	0.42
1:C:48:ILE:HD13	1:C:79:LEU:HB2	2.01	0.42
1:C:260:GLN:HG2	1:G:417:MET:HG3	2.02	0.42
1:C:572:ARG:HH22	1:C:700:GLY:HA3	1.83	0.42
1:F:555:PRO:HG2	1:F:638:MET:HB2	2.01	0.42
1:K:31:GLU:OE1	1:K:128:LEU:HB2	2.20	0.42
1:L:466:LYS:HD2	1:L:466:LYS:HA	1.89	0.42
1:Q:338:ASP:OD1	1:Q:376:PRO:HD3	2.20	0.42
1:S:64:SER:HB2	1:G:66:ARG:NH1	2.34	0.42
1:S:338:ASP:OD1	1:S:376:PRO:HD3	2.20	0.42
1:O:31:GLU:OE1	1:O:128:LEU:HB2	2.20	0.42
1:T:14:ASP:OD1	1:T:18:SER:OG	2.36	0.42
1:C:243:THR:CG2	1:C:245:ASP:H	2.33	0.42
1:G:338:ASP:OD1	1:G:376:PRO:HD3	2.20	0.42
1:I:374:ASN:O	1:I:403:ARG:NH1	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:20:ALA:HB1	1:J:115:ILE:HG13	2.01	0.42
1:J:338:ASP:OD1	1:J:376:PRO:HD3	2.20	0.42
1:A:201:LEU:HD11	1:A:421:THR:HA	2.02	0.41
1:Q:243:THR:CG2	1:Q:245:ASP:H	2.33	0.41
1:R:551:ASP:OD2	1:R:551:ASP:N	2.52	0.41
1:O:243:THR:CG2	1:O:245:ASP:H	2.33	0.41
1:T:551:ASP:OD2	1:T:551:ASP:N	2.52	0.41
1:C:338:ASP:OD1	1:C:376:PRO:HD3	2.20	0.41
1:G:201:LEU:HD11	1:G:421:THR:HA	2.02	0.41
1:H:338:ASP:OD1	1:H:376:PRO:HD3	2.20	0.41
1:H:612:LYS:HZ2	1:H:627:GLY:HA2	1.84	0.41
1:F:417:MET:HG3	1:J:260:GLN:HG2	2.02	0.41
1:K:338:ASP:OD1	1:K:376:PRO:HD3	2.20	0.41
1:K:374:ASN:O	1:K:403:ARG:NH1	2.53	0.41
1:L:14:ASP:OD1	1:L:18:SER:OG	2.36	0.41
1:R:555:PRO:HG2	1:R:638:MET:HB2	2.01	0.41
1:D:243:THR:CG2	1:D:245:ASP:H	2.33	0.41
1:D:338:ASP:OD1	1:D:376:PRO:HD3	2.20	0.41
1:D:555:PRO:HG2	1:D:638:MET:HB2	2.01	0.41
1:I:551:ASP:OD2	1:I:551:ASP:N	2.52	0.41
1:F:551:ASP:OD2	1:F:551:ASP:N	2.52	0.41
1:B:594:LEU:HD12	1:B:594:LEU:HA	1.92	0.41
1:K:48:ILE:HD13	1:K:79:LEU:HB2	2.01	0.41
1:P:201:LEU:HD11	1:P:421:THR:HA	2.02	0.41
1:P:338:ASP:OD1	1:P:376:PRO:HD3	2.20	0.41
1:L:272:MET:HB2	1:L:285:ILE:HD13	2.03	0.41
1:R:590:LYS:HD3	1:N:126:ARG:HD3	2.01	0.41
1:N:374:ASN:O	1:N:403:ARG:NH1	2.53	0.41
1:T:555:PRO:HG2	1:T:638:MET:HB2	2.01	0.41
1:C:201:LEU:HD11	1:C:421:THR:HA	2.02	0.41
1:I:31:GLU:OE1	1:I:128:LEU:HB2	2.20	0.41
1:I:338:ASP:OD1	1:I:376:PRO:HD3	2.20	0.41
1:B:389:ASN:O	1:B:434:ALA:HB2	2.21	0.41
1:M:338:ASP:OD1	1:M:376:PRO:HD3	2.20	0.41
1:N:243:THR:CG2	1:N:245:ASP:H	2.33	0.41
1:S:555:PRO:HG2	1:S:638:MET:HB2	2.01	0.41
1:G:555:PRO:HG2	1:G:638:MET:HB2	2.01	0.41
1:I:14:ASP:OD1	1:I:18:SER:OG	2.36	0.41
1:I:320:ASN:HA	1:I:321:CYS:HA	1.82	0.41
1:F:338:ASP:OD1	1:F:376:PRO:HD3	2.20	0.41
1:J:243:THR:CG2	1:J:245:ASP:H	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:728:ASP:OD1	1:J:748:TYR:OH	2.17	0.41
1:A:389:ASN:O	1:A:434:ALA:HB2	2.21	0.41
1:L:243:THR:CG2	1:L:245:ASP:H	2.33	0.41
1:Q:31:GLU:OE1	1:Q:128:LEU:HB2	2.20	0.41
1:N:272:MET:HB2	1:N:285:ILE:HD13	2.03	0.41
1:S:477:LYS:HB2	1:S:477:LYS:HE3	1.88	0.41
1:H:594:LEU:HD12	1:H:594:LEU:HA	1.92	0.41
1:E:555:PRO:HG2	1:E:638:MET:HB2	2.01	0.41
1:B:555:PRO:HG2	1:B:638:MET:HB2	2.01	0.41
1:K:555:PRO:HG2	1:K:638:MET:HB2	2.01	0.41
1:L:374:ASN:O	1:L:403:ARG:NH1	2.53	0.41
1:R:272:MET:HB2	1:R:285:ILE:HD13	2.03	0.41
1:O:338:ASP:OD1	1:O:376:PRO:HD3	2.20	0.41
1:T:338:ASP:OD1	1:T:376:PRO:HD3	2.20	0.41
1:T:389:ASN:O	1:T:434:ALA:HB2	2.21	0.41
1:T:612:LYS:HZ1	1:T:628:GLU:H	1.68	0.41
1:C:555:PRO:HG2	1:C:638:MET:HB2	2.01	0.41
1:D:272:MET:HB2	1:D:285:ILE:HD13	2.03	0.41
1:F:243:THR:CG2	1:F:245:ASP:H	2.33	0.41
1:K:389:ASN:O	1:K:434:ALA:HB2	2.21	0.41
1:P:555:PRO:HG2	1:P:638:MET:HB2	2.01	0.41
1:L:50:SER:O	1:L:52:THR:N	2.50	0.41
1:N:338:ASP:OD1	1:N:376:PRO:HD3	2.20	0.41
1:O:374:ASN:O	1:O:403:ARG:NH1	2.53	0.41
1:G:272:MET:HB2	1:G:285:ILE:HD13	2.03	0.41
1:F:272:MET:HB2	1:F:285:ILE:HD13	2.03	0.41
1:A:555:PRO:HG2	1:A:638:MET:HB2	2.01	0.41
1:B:590:LYS:HD3	1:P:126:ARG:HD3	2.03	0.41
1:K:272:MET:HB2	1:K:285:ILE:HD13	2.03	0.41
1:K:728:ASP:OD1	1:K:748:TYR:OH	2.17	0.41
1:L:338:ASP:OD1	1:L:376:PRO:HD3	2.20	0.41
1:M:14:ASP:OD1	1:M:18:SER:OG	2.36	0.41
1:M:387:LEU:HD23	1:M:387:LEU:HA	1.79	0.41
1:R:243:THR:CG2	1:R:245:ASP:H	2.33	0.41
1:S:50:SER:O	1:S:52:THR:N	2.50	0.41
1:C:272:MET:HB2	1:C:285:ILE:HD13	2.03	0.41
1:C:389:ASN:O	1:C:434:ALA:HB2	2.21	0.41
1:C:612:LYS:HZ1	1:C:628:GLU:H	1.67	0.41
1:G:243:THR:CG2	1:G:245:ASP:H	2.33	0.41
1:G:374:ASN:O	1:G:403:ARG:NH1	2.53	0.41
1:D:612:LYS:HZ1	1:D:628:GLU:H	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:243:THR:CG2	1:H:245:ASP:H	2.33	0.41
1:E:338:ASP:OD1	1:E:376:PRO:HD3	2.20	0.41
1:F:594:LEU:HD12	1:F:594:LEU:HA	1.92	0.41
1:J:14:ASP:OD1	1:J:18:SER:OG	2.35	0.41
1:J:272:MET:HB2	1:J:285:ILE:HD13	2.03	0.41
1:K:235:ARG:NH2	1:P:419:SER:O	2.34	0.41
1:K:414:ALA:HB2	1:P:669:TYR:OH	2.21	0.41
1:K:612:LYS:HZ2	1:K:627:GLY:HA2	1.86	0.41
1:P:320:ASN:HA	1:P:321:CYS:HA	1.82	0.41
1:P:389:ASN:O	1:P:434:ALA:HB2	2.21	0.41
1:N:389:ASN:O	1:N:434:ALA:HB2	2.21	0.41
1:N:612:LYS:HZ2	1:N:627:GLY:HA2	1.86	0.41
1:N:612:LYS:HZ1	1:N:628:GLU:H	1.69	0.41
1:S:14:ASP:OD1	1:S:18:SER:OG	2.36	0.41
1:S:31:GLU:OE1	1:S:128:LEU:HB2	2.20	0.41
1:S:243:THR:CG2	1:S:245:ASP:H	2.33	0.41
1:O:320:ASN:HA	1:O:321:CYS:HA	1.82	0.41
1:T:243:THR:CG2	1:T:245:ASP:H	2.33	0.41
1:H:555:PRO:HG2	1:H:638:MET:HB2	2.01	0.41
1:I:272:MET:HB2	1:I:285:ILE:HD13	2.03	0.41
1:F:157:TRP:CD1	1:J:568:ILE:HG23	2.56	0.41
1:F:389:ASN:O	1:F:434:ALA:HB2	2.21	0.41
1:J:612:LYS:HZ1	1:J:628:GLU:H	1.68	0.41
1:A:243:THR:CG2	1:A:245:ASP:H	2.33	0.41
1:A:338:ASP:OD1	1:A:376:PRO:HD3	2.20	0.41
1:A:672:ILE:HG23	1:B:410:ARG:HG2	2.02	0.41
1:B:374:ASN:O	1:B:403:ARG:NH1	2.53	0.41
1:P:272:MET:HB2	1:P:285:ILE:HD13	2.03	0.41
1:S:374:ASN:O	1:S:403:ARG:NH1	2.53	0.41
1:O:389:ASN:O	1:O:434:ALA:HB2	2.21	0.41
1:D:372:THR:HG23	1:D:375:GLU:HG3	2.04	0.41
1:D:551:ASP:OD2	1:D:551:ASP:N	2.52	0.41
1:I:243:THR:CG2	1:I:245:ASP:H	2.33	0.41
1:J:353:TYR:OH	1:J:535:LYS:NZ	2.54	0.41
1:J:374:ASN:O	1:J:403:ARG:NH1	2.53	0.41
1:A:353:TYR:OH	1:A:535:LYS:NZ	2.54	0.40
1:A:372:THR:HG23	1:A:375:GLU:HG3	2.03	0.40
1:B:372:THR:HG23	1:B:375:GLU:HG3	2.04	0.40
1:K:372:THR:HG23	1:K:375:GLU:HG3	2.03	0.40
1:P:551:ASP:N	1:P:551:ASP:OD2	2.52	0.40
1:L:226:VAL:HG12	1:L:228:VAL:H	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:372:THR:HG23	1:L:375:GLU:HG3	2.03	0.40
1:Q:551:ASP:N	1:Q:551:ASP:OD2	2.52	0.40
1:M:50:SER:O	1:M:52:THR:N	2.51	0.40
1:M:260:GLN:HG2	1:R:417:MET:HG3	2.03	0.40
1:T:372:THR:HG23	1:T:375:GLU:HG3	2.03	0.40
1:G:226:VAL:HG12	1:G:228:VAL:H	1.87	0.40
1:G:372:THR:HG23	1:G:375:GLU:HG3	2.03	0.40
1:D:387:LEU:HD23	1:D:387:LEU:HA	1.79	0.40
1:F:612:LYS:HZ2	1:F:612:LYS:HG3	1.80	0.40
1:B:588:LYS:HB3	1:P:114:TRP:HD1	1.85	0.40
1:P:374:ASN:O	1:P:403:ARG:NH1	2.53	0.40
1:Q:276:ARG:HG2	1:Q:282:ILE:HD13	2.04	0.40
1:M:353:TYR:OH	1:M:535:LYS:NZ	2.54	0.40
1:R:353:TYR:OH	1:R:535:LYS:NZ	2.54	0.40
1:S:272:MET:HB2	1:S:285:ILE:HD13	2.03	0.40
1:O:555:PRO:HG2	1:O:638:MET:HB2	2.01	0.40
1:C:226:VAL:HG12	1:C:228:VAL:H	1.87	0.40
1:C:276:ARG:HG2	1:C:282:ILE:HD13	2.04	0.40
1:D:389:ASN:O	1:D:434:ALA:HB2	2.21	0.40
1:E:353:TYR:OH	1:E:535:LYS:NZ	2.54	0.40
1:J:276:ARG:HG2	1:J:282:ILE:HD13	2.04	0.40
1:A:272:MET:HB2	1:A:285:ILE:HD13	2.03	0.40
1:B:276:ARG:HG2	1:B:282:ILE:HD13	2.04	0.40
1:B:612:LYS:HZ1	1:B:628:GLU:H	1.69	0.40
1:L:42:GLU:OE2	1:L:74:ARG:NH2	2.55	0.40
1:N:226:VAL:HG12	1:N:228:VAL:H	1.87	0.40
1:N:372:THR:HG23	1:N:375:GLU:HG3	2.03	0.40
1:S:372:THR:HG23	1:S:375:GLU:HG3	2.03	0.40
1:O:372:THR:HG23	1:O:375:GLU:HG3	2.04	0.40
1:T:42:GLU:OE2	1:T:74:ARG:NH2	2.55	0.40
1:T:272:MET:HB2	1:T:285:ILE:HD13	2.03	0.40
1:C:372:THR:HG23	1:C:375:GLU:HG3	2.03	0.40
1:G:50:SER:O	1:G:52:THR:N	2.51	0.40
1:G:389:ASN:O	1:G:434:ALA:HB2	2.21	0.40
1:H:259:GLU:OE1	1:H:706:SER:OG	2.30	0.40
1:H:353:TYR:OH	1:H:535:LYS:NZ	2.54	0.40
1:E:243:THR:CG2	1:E:245:ASP:H	2.33	0.40
1:E:389:ASN:O	1:E:434:ALA:HB2	2.21	0.40
1:I:226:VAL:HG12	1:I:228:VAL:H	1.87	0.40
1:F:244:ASP:OD2	1:J:670:GLN:NE2	2.31	0.40
1:F:612:LYS:HZ1	1:F:628:GLU:H	1.67	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:42:GLU:OE2	1:B:74:ARG:NH2	2.55	0.40
1:B:50:SER:O	1:B:52:THR:N	2.51	0.40
1:B:114:TRP:HD1	1:N:588:LYS:HB3	1.86	0.40
1:K:243:THR:CG2	1:K:245:ASP:H	2.33	0.40
1:P:353:TYR:OH	1:P:535:LYS:NZ	2.54	0.40
1:Q:226:VAL:HG12	1:Q:228:VAL:H	1.87	0.40
1:Q:389:ASN:O	1:Q:434:ALA:HB2	2.21	0.40
1:M:243:THR:CG2	1:M:245:ASP:H	2.33	0.40
1:R:612:LYS:HZ1	1:R:628:GLU:H	1.68	0.40
1:T:226:VAL:HG12	1:T:228:VAL:H	1.87	0.40
1:G:276:ARG:HG2	1:G:282:ILE:HD13	2.04	0.40
1:H:372:THR:HG23	1:H:375:GLU:HG3	2.03	0.40
1:H:374:ASN:O	1:H:403:ARG:NH1	2.53	0.40
1:F:353:TYR:OH	1:F:535:LYS:NZ	2.54	0.40
1:A:50:SER:O	1:A:52:THR:N	2.51	0.40
1:A:276:ARG:HG2	1:A:282:ILE:HD13	2.04	0.40
1:A:296:LYS:HZ3	1:A:296:LYS:HG3	1.79	0.40
1:P:14:ASP:OD1	1:P:18:SER:OG	2.35	0.40
1:L:353:TYR:OH	1:L:535:LYS:NZ	2.54	0.40
1:N:42:GLU:OE2	1:N:74:ARG:NH2	2.55	0.40
1:S:226:VAL:HG12	1:S:228:VAL:H	1.87	0.40
1:O:226:VAL:HG12	1:O:228:VAL:H	1.87	0.40
1:O:353:TYR:OH	1:O:535:LYS:NZ	2.54	0.40
1:T:126:ARG:HD3	1:F:590:LYS:HD3	2.03	0.40
1:G:42:GLU:OE2	1:G:74:ARG:NH2	2.55	0.40
1:D:42:GLU:OE2	1:D:74:ARG:NH2	2.55	0.40
1:E:372:THR:HG23	1:E:375:GLU:HG3	2.03	0.40
1:I:276:ARG:HG2	1:I:282:ILE:HD13	2.04	0.40
1:F:372:THR:HG23	1:F:375:GLU:HG3	2.03	0.40
1:J:226:VAL:HG12	1:J:228:VAL:H	1.87	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	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	B	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	C	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	D	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	E	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	F	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	G	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	H	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	I	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	J	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	K	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	L	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	M	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	N	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	O	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	P	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	Q	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	R	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	S	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
1	T	752/758 (99%)	737 (98%)	15 (2%)	0	100	100
All	All	15040/15160 (99%)	14740 (98%)	300 (2%)	0	100	100

There are no Ramachandran outliers to report.

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	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	B	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	C	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	D	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	E	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	F	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	G	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	H	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	I	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	J	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	K	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	L	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	M	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	N	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	O	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	P	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	Q	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	R	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	S	645/648 (100%)	623 (97%)	22 (3%)	37	35
1	T	645/648 (100%)	623 (97%)	22 (3%)	37	35
All	All	12900/12960 (100%)	12460 (97%)	440 (3%)	40	35

All (440) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	15	SER
1	A	53	SER
1	A	66	ARG
1	A	93	ASP
1	A	111	GLU
1	A	151	ASP
1	A	199	SER
1	A	210	CYS
1	A	236	THR
1	A	243	THR
1	A	244	ASP

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Mol	Chain	Res	Type
1	A	306	LYS
1	A	343	ARG
1	A	372	THR
1	A	384	THR
1	A	480	ASN
1	A	482	GLU
1	A	516	ASP
1	A	571	THR
1	A	625	ILE
1	A	636	ASP
1	A	755	THR
1	B	15	SER
1	B	53	SER
1	B	66	ARG
1	B	93	ASP
1	B	111	GLU
1	B	151	ASP
1	B	199	SER
1	B	210	CYS
1	B	236	THR
1	B	243	THR
1	B	244	ASP
1	B	306	LYS
1	B	343	ARG
1	B	372	THR
1	B	384	THR
1	B	480	ASN
1	B	482	GLU
1	B	516	ASP
1	B	571	THR
1	B	625	ILE
1	B	636	ASP
1	B	755	THR
1	K	15	SER
1	K	53	SER
1	K	66	ARG
1	K	93	ASP
1	K	111	GLU
1	K	151	ASP
1	K	199	SER
1	K	210	CYS
1	K	236	THR

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Mol	Chain	Res	Type
1	K	243	THR
1	K	244	ASP
1	K	306	LYS
1	K	343	ARG
1	K	372	THR
1	K	384	THR
1	K	480	ASN
1	K	482	GLU
1	K	516	ASP
1	K	571	THR
1	K	625	ILE
1	K	636	ASP
1	K	755	THR
1	P	15	SER
1	P	53	SER
1	P	66	ARG
1	P	93	ASP
1	P	111	GLU
1	P	151	ASP
1	P	199	SER
1	P	210	CYS
1	P	236	THR
1	P	243	THR
1	P	244	ASP
1	P	306	LYS
1	P	343	ARG
1	P	372	THR
1	P	384	THR
1	P	480	ASN
1	P	482	GLU
1	P	516	ASP
1	P	571	THR
1	P	625	ILE
1	P	636	ASP
1	P	755	THR
1	L	15	SER
1	L	53	SER
1	L	66	ARG
1	L	93	ASP
1	L	111	GLU
1	L	151	ASP
1	L	199	SER

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Mol	Chain	Res	Type
1	L	210	CYS
1	L	236	THR
1	L	243	THR
1	L	244	ASP
1	L	306	LYS
1	L	343	ARG
1	L	372	THR
1	L	384	THR
1	L	480	ASN
1	L	482	GLU
1	L	516	ASP
1	L	571	THR
1	L	625	ILE
1	L	636	ASP
1	L	755	THR
1	Q	15	SER
1	Q	53	SER
1	Q	66	ARG
1	Q	93	ASP
1	Q	111	GLU
1	Q	151	ASP
1	Q	199	SER
1	Q	210	CYS
1	Q	236	THR
1	Q	243	THR
1	Q	244	ASP
1	Q	306	LYS
1	Q	343	ARG
1	Q	372	THR
1	Q	384	THR
1	Q	480	ASN
1	Q	482	GLU
1	Q	516	ASP
1	Q	571	THR
1	Q	625	ILE
1	Q	636	ASP
1	Q	755	THR
1	M	15	SER
1	M	53	SER
1	M	66	ARG
1	M	93	ASP
1	M	111	GLU

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Mol	Chain	Res	Type
1	M	151	ASP
1	M	199	SER
1	M	210	CYS
1	M	236	THR
1	M	243	THR
1	M	244	ASP
1	M	306	LYS
1	M	343	ARG
1	M	372	THR
1	M	384	THR
1	M	480	ASN
1	M	482	GLU
1	M	516	ASP
1	M	571	THR
1	M	625	ILE
1	M	636	ASP
1	M	755	THR
1	R	15	SER
1	R	53	SER
1	R	66	ARG
1	R	93	ASP
1	R	111	GLU
1	R	151	ASP
1	R	199	SER
1	R	210	CYS
1	R	236	THR
1	R	243	THR
1	R	244	ASP
1	R	306	LYS
1	R	343	ARG
1	R	372	THR
1	R	384	THR
1	R	480	ASN
1	R	482	GLU
1	R	516	ASP
1	R	571	THR
1	R	625	ILE
1	R	636	ASP
1	R	755	THR
1	N	15	SER
1	N	53	SER
1	N	66	ARG

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Mol	Chain	Res	Type
1	N	93	ASP
1	N	111	GLU
1	N	151	ASP
1	N	199	SER
1	N	210	CYS
1	N	236	THR
1	N	243	THR
1	N	244	ASP
1	N	306	LYS
1	N	343	ARG
1	N	372	THR
1	N	384	THR
1	N	480	ASN
1	N	482	GLU
1	N	516	ASP
1	N	571	THR
1	N	625	ILE
1	N	636	ASP
1	N	755	THR
1	S	15	SER
1	S	53	SER
1	S	66	ARG
1	S	93	ASP
1	S	111	GLU
1	S	151	ASP
1	S	199	SER
1	S	210	CYS
1	S	236	THR
1	S	243	THR
1	S	244	ASP
1	S	306	LYS
1	S	343	ARG
1	S	372	THR
1	S	384	THR
1	S	480	ASN
1	S	482	GLU
1	S	516	ASP
1	S	571	THR
1	S	625	ILE
1	S	636	ASP
1	S	755	THR
1	O	15	SER

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Mol	Chain	Res	Type
1	O	53	SER
1	O	66	ARG
1	O	93	ASP
1	O	111	GLU
1	O	151	ASP
1	O	199	SER
1	O	210	CYS
1	O	236	THR
1	O	243	THR
1	O	244	ASP
1	O	306	LYS
1	O	343	ARG
1	O	372	THR
1	O	384	THR
1	O	480	ASN
1	O	482	GLU
1	O	516	ASP
1	O	571	THR
1	O	625	ILE
1	O	636	ASP
1	O	755	THR
1	T	15	SER
1	T	53	SER
1	T	66	ARG
1	T	93	ASP
1	T	111	GLU
1	T	151	ASP
1	T	199	SER
1	T	210	CYS
1	T	236	THR
1	T	243	THR
1	T	244	ASP
1	T	306	LYS
1	T	343	ARG
1	T	372	THR
1	T	384	THR
1	T	480	ASN
1	T	482	GLU
1	T	516	ASP
1	T	571	THR
1	T	625	ILE
1	T	636	ASP

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Mol	Chain	Res	Type
1	T	755	THR
1	C	15	SER
1	C	53	SER
1	C	66	ARG
1	C	93	ASP
1	C	111	GLU
1	C	151	ASP
1	C	199	SER
1	C	210	CYS
1	C	236	THR
1	C	243	THR
1	C	244	ASP
1	C	306	LYS
1	C	343	ARG
1	C	372	THR
1	C	384	THR
1	C	480	ASN
1	C	482	GLU
1	C	516	ASP
1	C	571	THR
1	C	625	ILE
1	C	636	ASP
1	C	755	THR
1	G	15	SER
1	G	53	SER
1	G	66	ARG
1	G	93	ASP
1	G	111	GLU
1	G	151	ASP
1	G	199	SER
1	G	210	CYS
1	G	236	THR
1	G	243	THR
1	G	244	ASP
1	G	306	LYS
1	G	343	ARG
1	G	372	THR
1	G	384	THR
1	G	480	ASN
1	G	482	GLU
1	G	516	ASP
1	G	571	THR

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Mol	Chain	Res	Type
1	G	625	ILE
1	G	636	ASP
1	G	755	THR
1	D	15	SER
1	D	53	SER
1	D	66	ARG
1	D	93	ASP
1	D	111	GLU
1	D	151	ASP
1	D	199	SER
1	D	210	CYS
1	D	236	THR
1	D	243	THR
1	D	244	ASP
1	D	306	LYS
1	D	343	ARG
1	D	372	THR
1	D	384	THR
1	D	480	ASN
1	D	482	GLU
1	D	516	ASP
1	D	571	THR
1	D	625	ILE
1	D	636	ASP
1	D	755	THR
1	H	15	SER
1	H	53	SER
1	H	66	ARG
1	H	93	ASP
1	H	111	GLU
1	H	151	ASP
1	H	199	SER
1	H	210	CYS
1	H	236	THR
1	H	243	THR
1	H	244	ASP
1	H	306	LYS
1	H	343	ARG
1	H	372	THR
1	H	384	THR
1	H	480	ASN
1	H	482	GLU

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Mol	Chain	Res	Type
1	H	516	ASP
1	H	571	THR
1	H	625	ILE
1	H	636	ASP
1	H	755	THR
1	E	15	SER
1	E	53	SER
1	E	66	ARG
1	E	93	ASP
1	E	111	GLU
1	E	151	ASP
1	E	199	SER
1	E	210	CYS
1	E	236	THR
1	E	243	THR
1	E	244	ASP
1	E	306	LYS
1	E	343	ARG
1	E	372	THR
1	E	384	THR
1	E	480	ASN
1	E	482	GLU
1	E	516	ASP
1	E	571	THR
1	E	625	ILE
1	E	636	ASP
1	E	755	THR
1	I	15	SER
1	I	53	SER
1	I	66	ARG
1	I	93	ASP
1	I	111	GLU
1	I	151	ASP
1	I	199	SER
1	I	210	CYS
1	I	236	THR
1	I	243	THR
1	I	244	ASP
1	I	306	LYS
1	I	343	ARG
1	I	372	THR
1	I	384	THR

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Mol	Chain	Res	Type
1	I	480	ASN
1	I	482	GLU
1	I	516	ASP
1	I	571	THR
1	I	625	ILE
1	I	636	ASP
1	I	755	THR
1	F	15	SER
1	F	53	SER
1	F	66	ARG
1	F	93	ASP
1	F	111	GLU
1	F	151	ASP
1	F	199	SER
1	F	210	CYS
1	F	236	THR
1	F	243	THR
1	F	244	ASP
1	F	306	LYS
1	F	343	ARG
1	F	372	THR
1	F	384	THR
1	F	480	ASN
1	F	482	GLU
1	F	516	ASP
1	F	571	THR
1	F	625	ILE
1	F	636	ASP
1	F	755	THR
1	J	15	SER
1	J	53	SER
1	J	66	ARG
1	J	93	ASP
1	J	111	GLU
1	J	151	ASP
1	J	199	SER
1	J	210	CYS
1	J	236	THR
1	J	243	THR
1	J	244	ASP
1	J	306	LYS
1	J	343	ARG

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Mol	Chain	Res	Type
1	J	372	THR
1	J	384	THR
1	J	480	ASN
1	J	482	GLU
1	J	516	ASP
1	J	571	THR
1	J	625	ILE
1	J	636	ASP
1	J	755	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (39) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	389	ASN
1	A	401	ASN
1	B	389	ASN
1	B	401	ASN
1	K	389	ASN
1	K	401	ASN
1	P	389	ASN
1	P	401	ASN
1	L	389	ASN
1	L	401	ASN
1	Q	389	ASN
1	Q	401	ASN
1	M	389	ASN
1	M	401	ASN
1	R	401	ASN
1	N	389	ASN
1	N	401	ASN
1	S	389	ASN
1	S	401	ASN
1	O	401	ASN
1	T	389	ASN
1	T	401	ASN
1	C	51	ASN
1	C	389	ASN
1	C	401	ASN
1	G	389	ASN
1	G	401	ASN
1	D	389	ASN
1	D	401	ASN

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Mol	Chain	Res	Type
1	H	389	ASN
1	H	401	ASN
1	E	389	ASN
1	E	401	ASN
1	I	389	ASN
1	I	401	ASN
1	F	389	ASN
1	F	401	ASN
1	J	389	ASN
1	J	401	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

20 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	LLP	H	386	1	23,24,25	0.70	0	25,32,34	0.73	0
1	LLP	G	386	1	23,24,25	0.70	0	25,32,34	0.72	0
1	LLP	K	386	1	23,24,25	0.70	0	25,32,34	0.72	0
1	LLP	D	386	1	23,24,25	0.70	0	25,32,34	0.73	0
1	LLP	L	386	1	23,24,25	0.71	0	25,32,34	0.73	0
1	LLP	F	386	1	23,24,25	0.71	0	25,32,34	0.73	0
1	LLP	S	386	1	23,24,25	0.71	0	25,32,34	0.73	0
1	LLP	C	386	1	23,24,25	0.70	0	25,32,34	0.73	0
1	LLP	M	386	1	23,24,25	0.70	0	25,32,34	0.73	0
1	LLP	O	386	1	23,24,25	0.70	0	25,32,34	0.73	0
1	LLP	E	386	1	23,24,25	0.70	0	25,32,34	0.73	0
1	LLP	P	386	1	23,24,25	0.70	0	25,32,34	0.73	0
1	LLP	T	386	1	23,24,25	0.70	0	25,32,34	0.73	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	LLP	Q	386	1	23,24,25	0.70	0	25,32,34	0.73	0
1	LLP	B	386	1	23,24,25	0.70	0	25,32,34	0.73	0
1	LLP	J	386	1	23,24,25	0.70	0	25,32,34	0.72	0
1	LLP	N	386	1	23,24,25	0.71	0	25,32,34	0.72	0
1	LLP	I	386	1	23,24,25	0.71	0	25,32,34	0.72	0
1	LLP	R	386	1	23,24,25	0.70	0	25,32,34	0.72	0
1	LLP	A	386	1	23,24,25	0.71	0	25,32,34	0.73	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	LLP	H	386	1	-	5/16/17/19	0/1/1/1
1	LLP	G	386	1	-	5/16/17/19	0/1/1/1
1	LLP	K	386	1	-	5/16/17/19	0/1/1/1
1	LLP	D	386	1	-	5/16/17/19	0/1/1/1
1	LLP	L	386	1	-	5/16/17/19	0/1/1/1
1	LLP	F	386	1	-	5/16/17/19	0/1/1/1
1	LLP	S	386	1	-	5/16/17/19	0/1/1/1
1	LLP	C	386	1	-	5/16/17/19	0/1/1/1
1	LLP	M	386	1	-	5/16/17/19	0/1/1/1
1	LLP	O	386	1	-	5/16/17/19	0/1/1/1
1	LLP	E	386	1	-	5/16/17/19	0/1/1/1
1	LLP	P	386	1	-	5/16/17/19	0/1/1/1
1	LLP	T	386	1	-	5/16/17/19	0/1/1/1
1	LLP	Q	386	1	-	5/16/17/19	0/1/1/1
1	LLP	B	386	1	-	5/16/17/19	0/1/1/1
1	LLP	J	386	1	-	5/16/17/19	0/1/1/1
1	LLP	N	386	1	-	5/16/17/19	0/1/1/1
1	LLP	I	386	1	-	5/16/17/19	0/1/1/1
1	LLP	R	386	1	-	5/16/17/19	0/1/1/1
1	LLP	A	386	1	-	5/16/17/19	0/1/1/1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (100) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	A	386	LLP	C4-C4'-NZ-CE
1	A	386	LLP	C-CA-CB-CG
1	A	386	LLP	CG-CD-CE-NZ
1	B	386	LLP	C4-C4'-NZ-CE
1	B	386	LLP	C-CA-CB-CG
1	B	386	LLP	CG-CD-CE-NZ
1	K	386	LLP	C4-C4'-NZ-CE
1	K	386	LLP	C-CA-CB-CG
1	K	386	LLP	CG-CD-CE-NZ
1	P	386	LLP	C4-C4'-NZ-CE
1	P	386	LLP	C-CA-CB-CG
1	P	386	LLP	CG-CD-CE-NZ
1	L	386	LLP	C4-C4'-NZ-CE
1	L	386	LLP	C-CA-CB-CG
1	L	386	LLP	CG-CD-CE-NZ
1	Q	386	LLP	C4-C4'-NZ-CE
1	Q	386	LLP	C-CA-CB-CG
1	Q	386	LLP	CG-CD-CE-NZ
1	M	386	LLP	C4-C4'-NZ-CE
1	M	386	LLP	C-CA-CB-CG
1	M	386	LLP	CG-CD-CE-NZ
1	R	386	LLP	C4-C4'-NZ-CE
1	R	386	LLP	C-CA-CB-CG
1	R	386	LLP	CG-CD-CE-NZ
1	N	386	LLP	C4-C4'-NZ-CE
1	N	386	LLP	C-CA-CB-CG
1	N	386	LLP	CG-CD-CE-NZ
1	S	386	LLP	C4-C4'-NZ-CE
1	S	386	LLP	C-CA-CB-CG
1	S	386	LLP	CG-CD-CE-NZ
1	O	386	LLP	C4-C4'-NZ-CE
1	O	386	LLP	C-CA-CB-CG
1	O	386	LLP	CG-CD-CE-NZ
1	T	386	LLP	C4-C4'-NZ-CE
1	T	386	LLP	C-CA-CB-CG
1	T	386	LLP	CG-CD-CE-NZ
1	C	386	LLP	C4-C4'-NZ-CE
1	C	386	LLP	C-CA-CB-CG
1	C	386	LLP	CG-CD-CE-NZ
1	G	386	LLP	C4-C4'-NZ-CE

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Mol	Chain	Res	Type	Atoms
1	G	386	LLP	C-CA-CB-CG
1	G	386	LLP	CG-CD-CE-NZ
1	D	386	LLP	C4-C4'-NZ-CE
1	D	386	LLP	C-CA-CB-CG
1	D	386	LLP	CG-CD-CE-NZ
1	H	386	LLP	C4-C4'-NZ-CE
1	H	386	LLP	C-CA-CB-CG
1	H	386	LLP	CG-CD-CE-NZ
1	E	386	LLP	C4-C4'-NZ-CE
1	E	386	LLP	C-CA-CB-CG
1	E	386	LLP	CG-CD-CE-NZ
1	I	386	LLP	C4-C4'-NZ-CE
1	I	386	LLP	C-CA-CB-CG
1	I	386	LLP	CG-CD-CE-NZ
1	F	386	LLP	C4-C4'-NZ-CE
1	F	386	LLP	C-CA-CB-CG
1	F	386	LLP	CG-CD-CE-NZ
1	J	386	LLP	C4-C4'-NZ-CE
1	J	386	LLP	C-CA-CB-CG
1	J	386	LLP	CG-CD-CE-NZ
1	P	386	LLP	CE-CD-CG-CB
1	D	386	LLP	CE-CD-CG-CB
1	E	386	LLP	CE-CD-CG-CB
1	F	386	LLP	CE-CD-CG-CB
1	A	386	LLP	CE-CD-CG-CB
1	B	386	LLP	CE-CD-CG-CB
1	K	386	LLP	CE-CD-CG-CB
1	L	386	LLP	CE-CD-CG-CB
1	Q	386	LLP	CE-CD-CG-CB
1	R	386	LLP	CE-CD-CG-CB
1	N	386	LLP	CE-CD-CG-CB
1	S	386	LLP	CE-CD-CG-CB
1	O	386	LLP	CE-CD-CG-CB
1	T	386	LLP	CE-CD-CG-CB
1	C	386	LLP	CE-CD-CG-CB
1	G	386	LLP	CE-CD-CG-CB
1	H	386	LLP	CE-CD-CG-CB
1	I	386	LLP	CE-CD-CG-CB
1	J	386	LLP	CE-CD-CG-CB
1	M	386	LLP	CE-CD-CG-CB
1	A	386	LLP	C3-C4-C4'-NZ
1	B	386	LLP	C3-C4-C4'-NZ

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Mol	Chain	Res	Type	Atoms
1	K	386	LLP	C3-C4-C4'-NZ
1	P	386	LLP	C3-C4-C4'-NZ
1	L	386	LLP	C3-C4-C4'-NZ
1	Q	386	LLP	C3-C4-C4'-NZ
1	M	386	LLP	C3-C4-C4'-NZ
1	R	386	LLP	C3-C4-C4'-NZ
1	N	386	LLP	C3-C4-C4'-NZ
1	S	386	LLP	C3-C4-C4'-NZ
1	O	386	LLP	C3-C4-C4'-NZ
1	T	386	LLP	C3-C4-C4'-NZ
1	C	386	LLP	C3-C4-C4'-NZ
1	G	386	LLP	C3-C4-C4'-NZ
1	D	386	LLP	C3-C4-C4'-NZ
1	H	386	LLP	C3-C4-C4'-NZ
1	E	386	LLP	C3-C4-C4'-NZ
1	I	386	LLP	C3-C4-C4'-NZ
1	F	386	LLP	C3-C4-C4'-NZ
1	J	386	LLP	C3-C4-C4'-NZ

There are no ring outliers.

20 monomers are involved in 20 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	H	386	LLP	1	0
1	G	386	LLP	1	0
1	K	386	LLP	1	0
1	D	386	LLP	1	0
1	L	386	LLP	1	0
1	F	386	LLP	1	0
1	S	386	LLP	1	0
1	C	386	LLP	1	0
1	M	386	LLP	1	0
1	O	386	LLP	1	0
1	E	386	LLP	1	0
1	P	386	LLP	1	0
1	T	386	LLP	1	0
1	Q	386	LLP	1	0
1	B	386	LLP	1	0
1	J	386	LLP	1	0
1	N	386	LLP	1	0
1	I	386	LLP	1	0
1	R	386	LLP	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	A	386	LLP	1	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 [i](#)

There are no chain breaks in this entry.

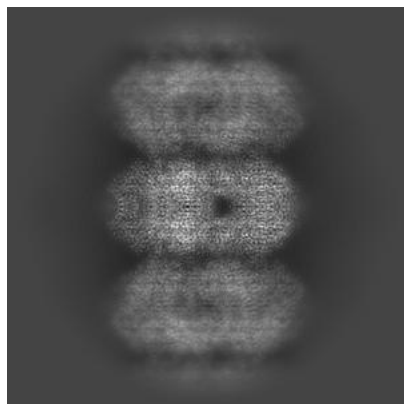
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-13466. These allow visual inspection of the internal detail of the map and identification of artifacts.

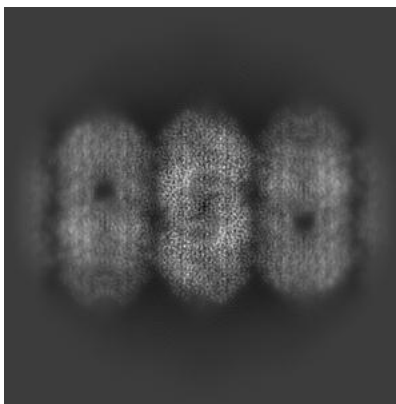
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

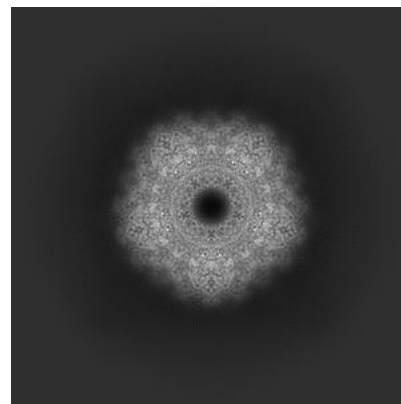
6.1.1 Primary map



X

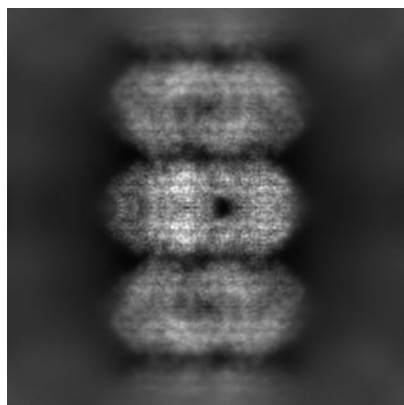


Y

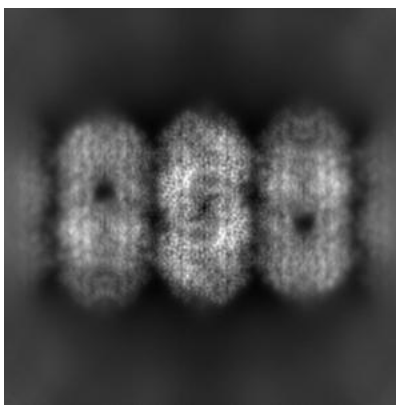


Z

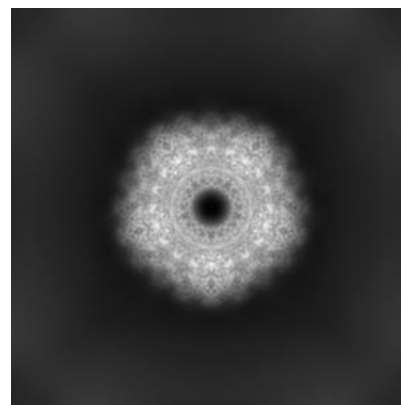
6.1.2 Raw map



X



Y

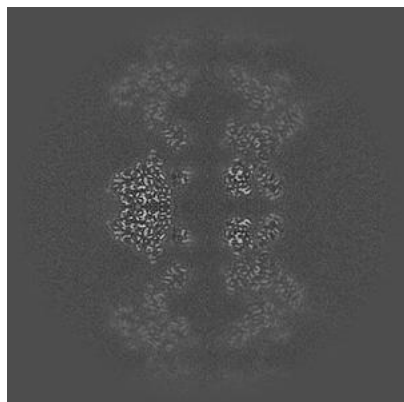


Z

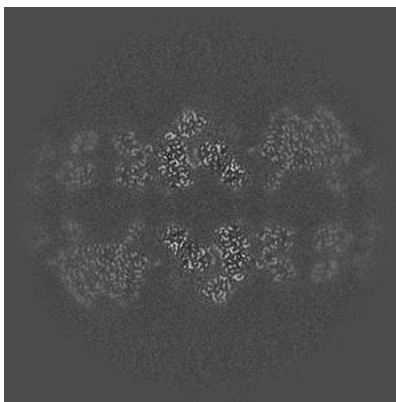
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

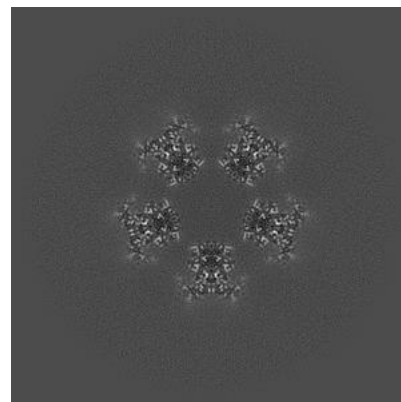
6.2.1 Primary map



X Index: 288

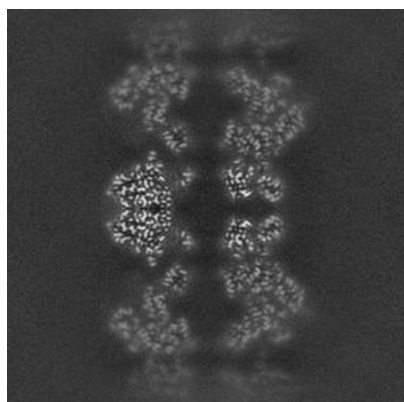


Y Index: 288

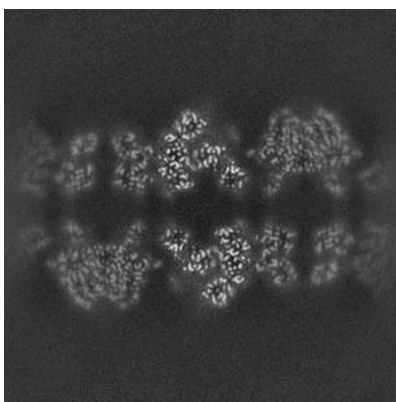


Z Index: 288

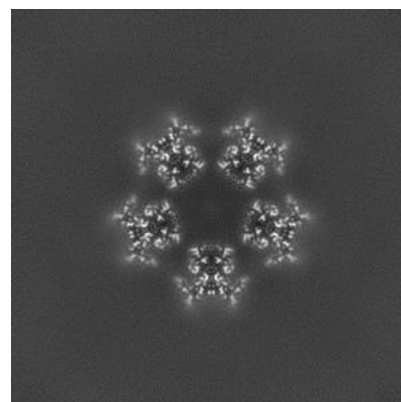
6.2.2 Raw map



X Index: 288



Y Index: 288

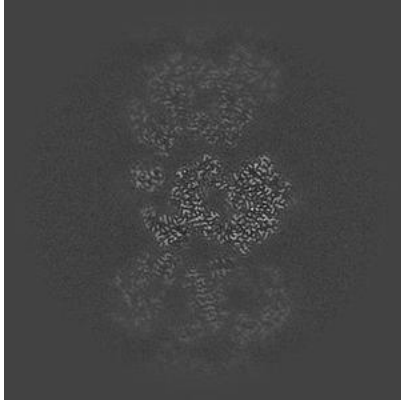


Z Index: 288

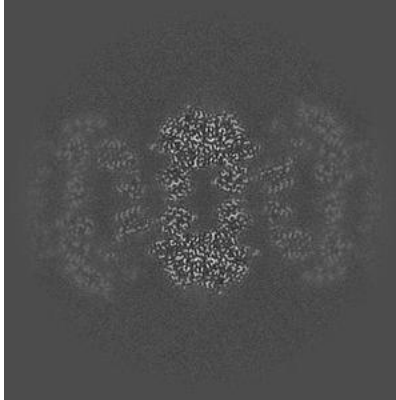
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

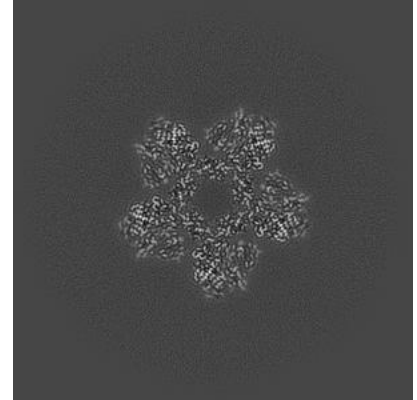
6.3.1 Primary map



X Index: 231

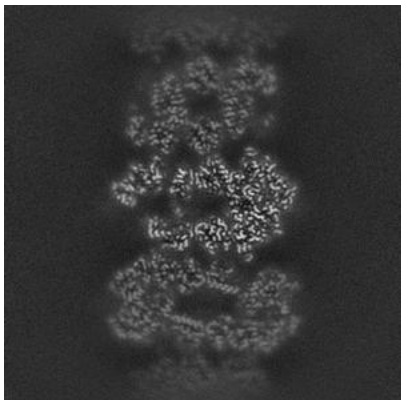


Y Index: 260

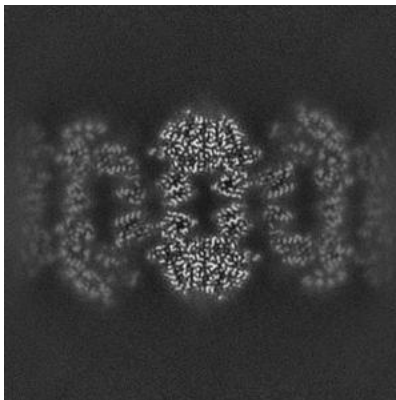


Z Index: 259

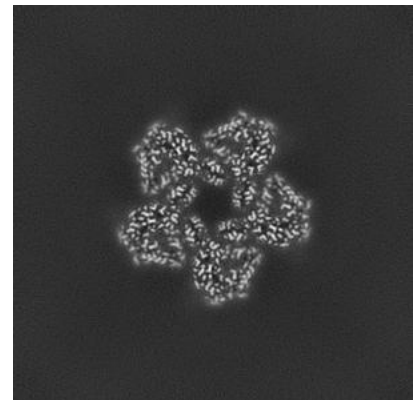
6.3.2 Raw map



X Index: 243



Y Index: 260

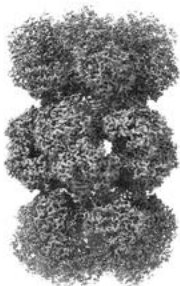


Z Index: 265

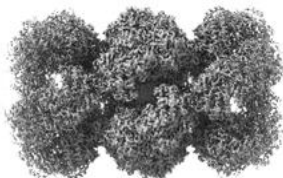
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views [i](#)

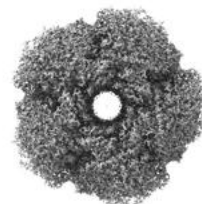
6.4.1 Primary map



X



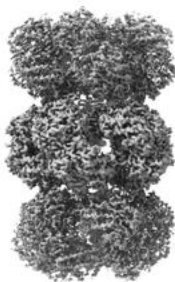
Y



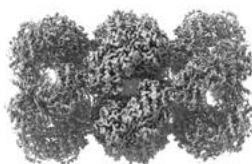
Z

The images above show the 3D surface view of the map at the recommended contour level 0.2. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

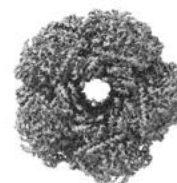
6.4.2 Raw map



X



Y



Z

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

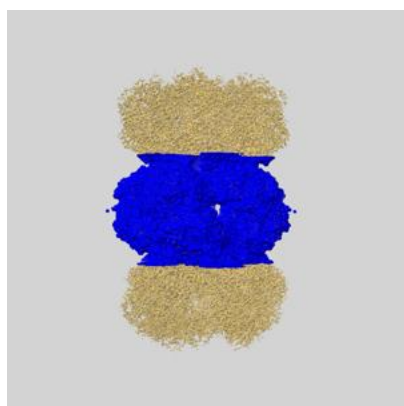
6.5 Mask visualisation [i](#)

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

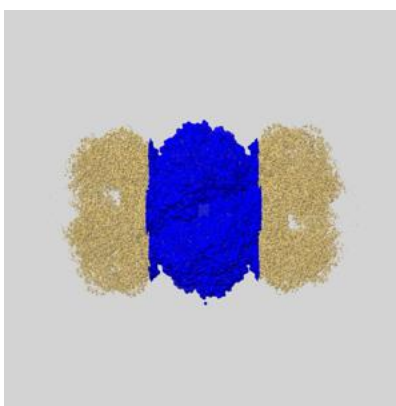
A mask typically either:

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

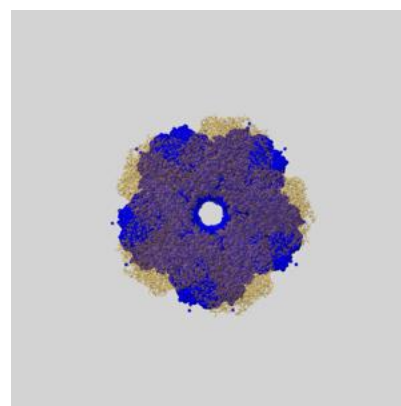
6.5.1 emd_13466_msk_1.map [i](#)



X



Y

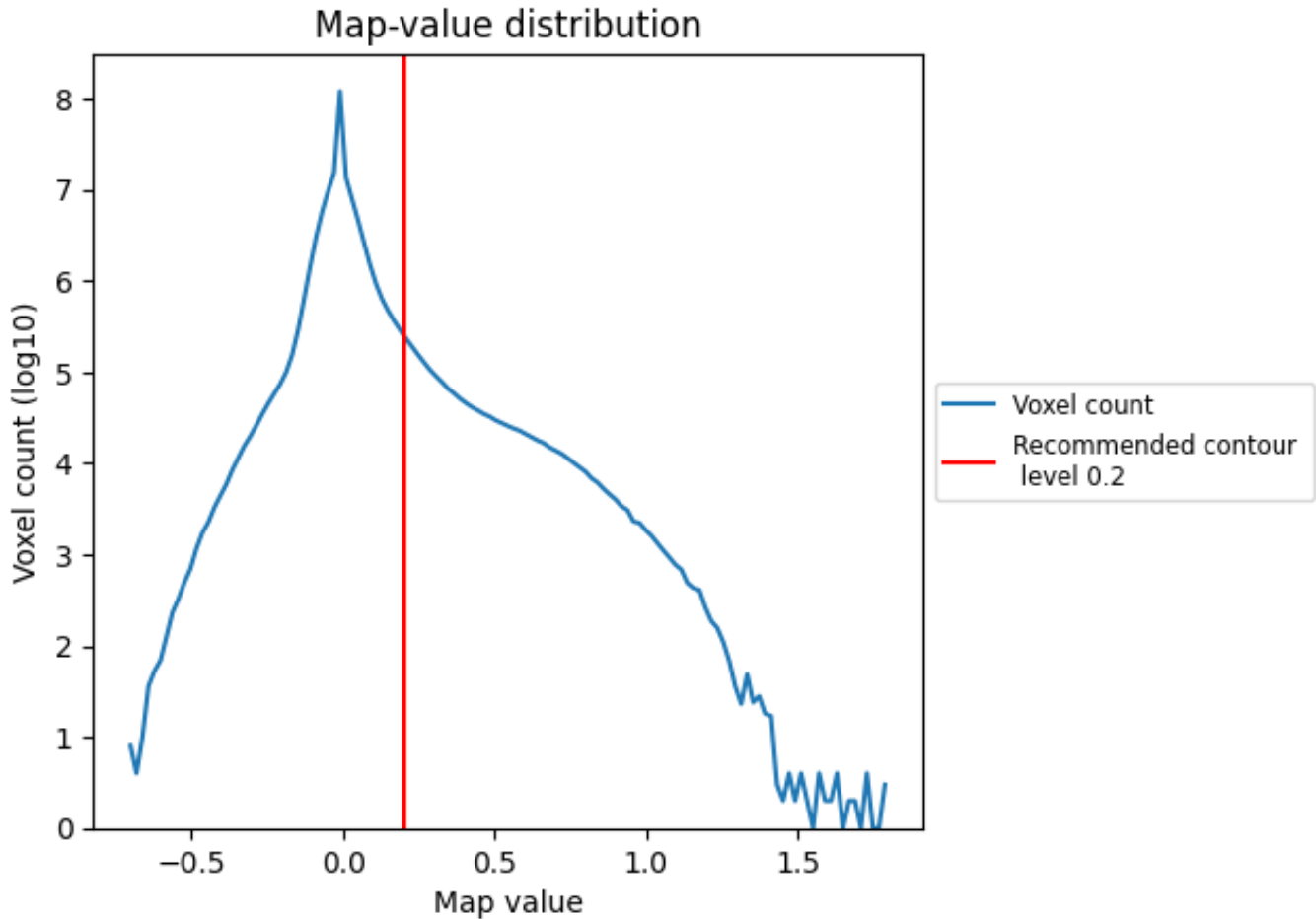


Z

7 Map analysis [i](#)

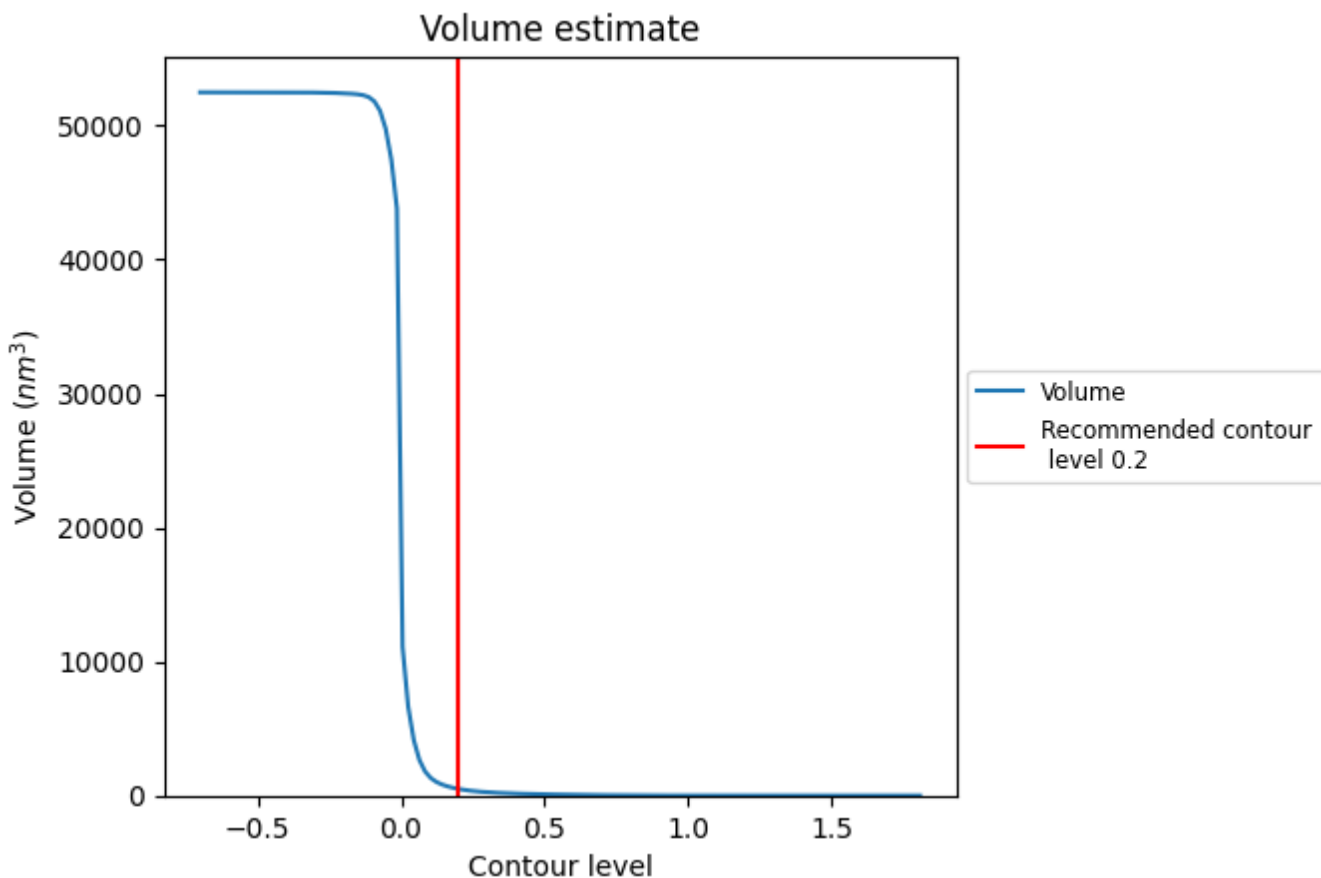
This section contains the results of statistical analysis of the map.

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.

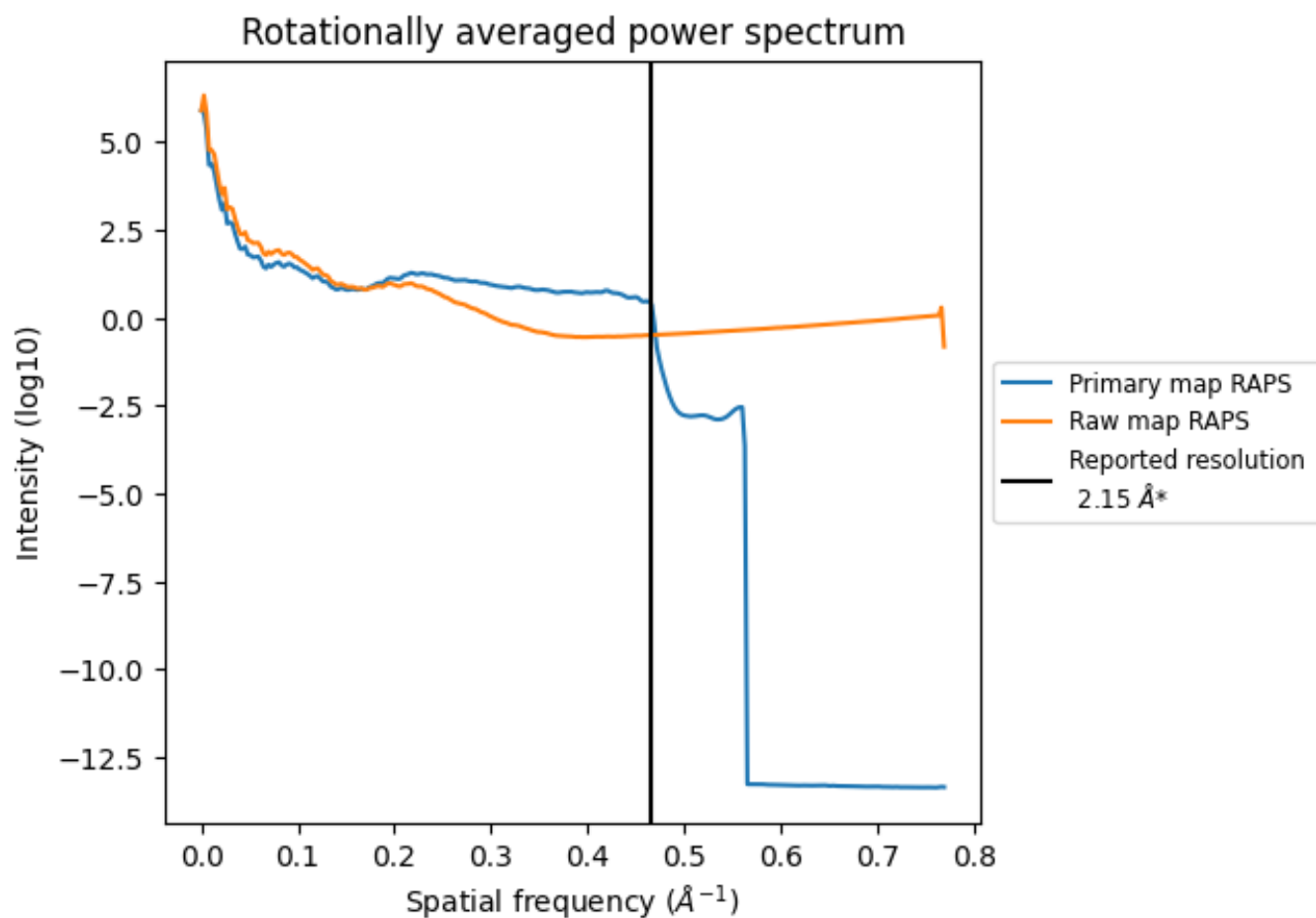
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 494 nm³; this corresponds to an approximate mass of 446 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

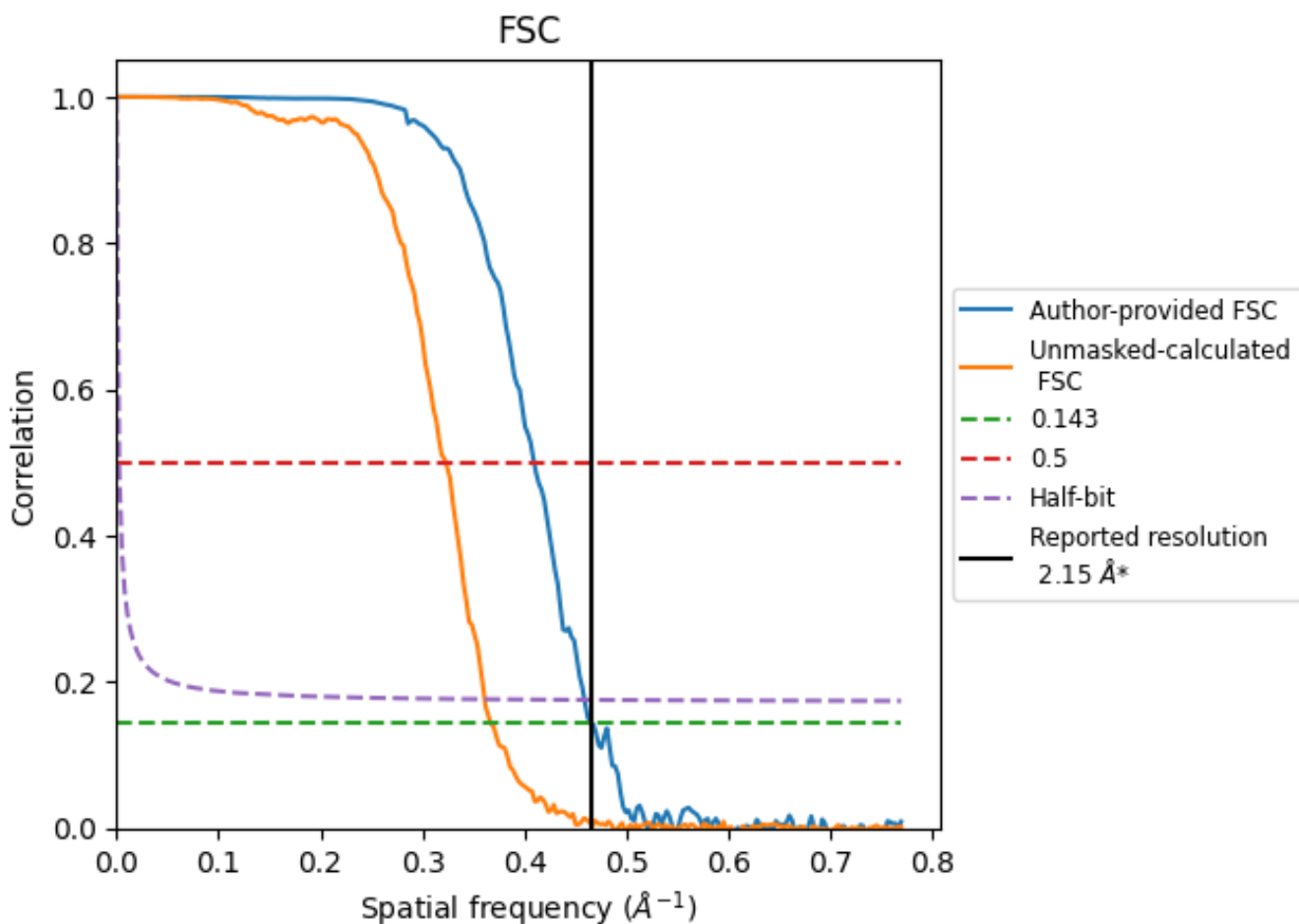


*Reported resolution corresponds to spatial frequency of 0.465 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.465 \AA^{-1}

8.2 Resolution estimates [i](#)

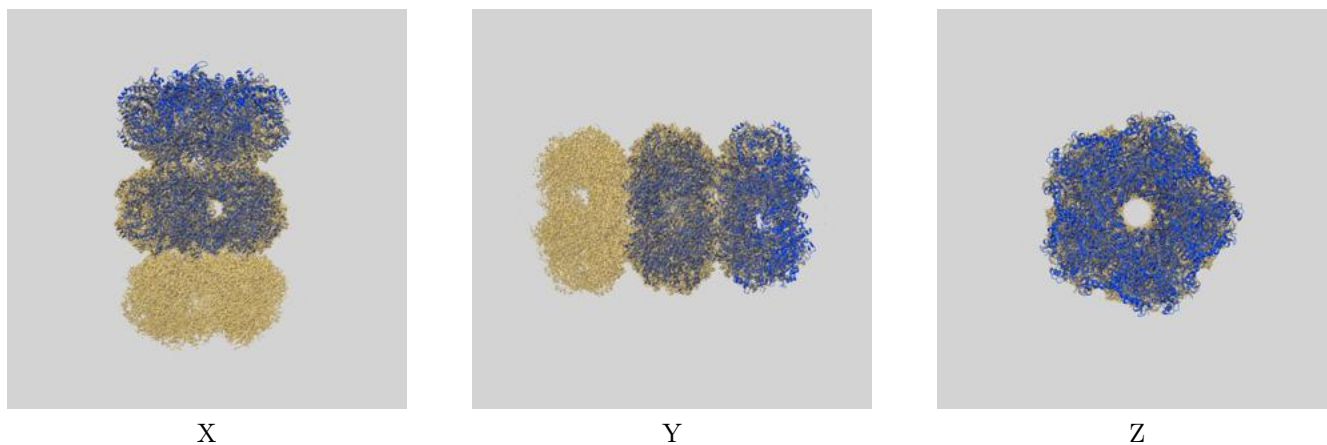
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.15	-	-
Author-provided FSC curve	2.15	2.44	2.18
Unmasked-calculated*	2.72	3.10	2.77

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 2.72 differs from the reported value 2.15 by more than 10 %

9 Map-model fit [i](#)

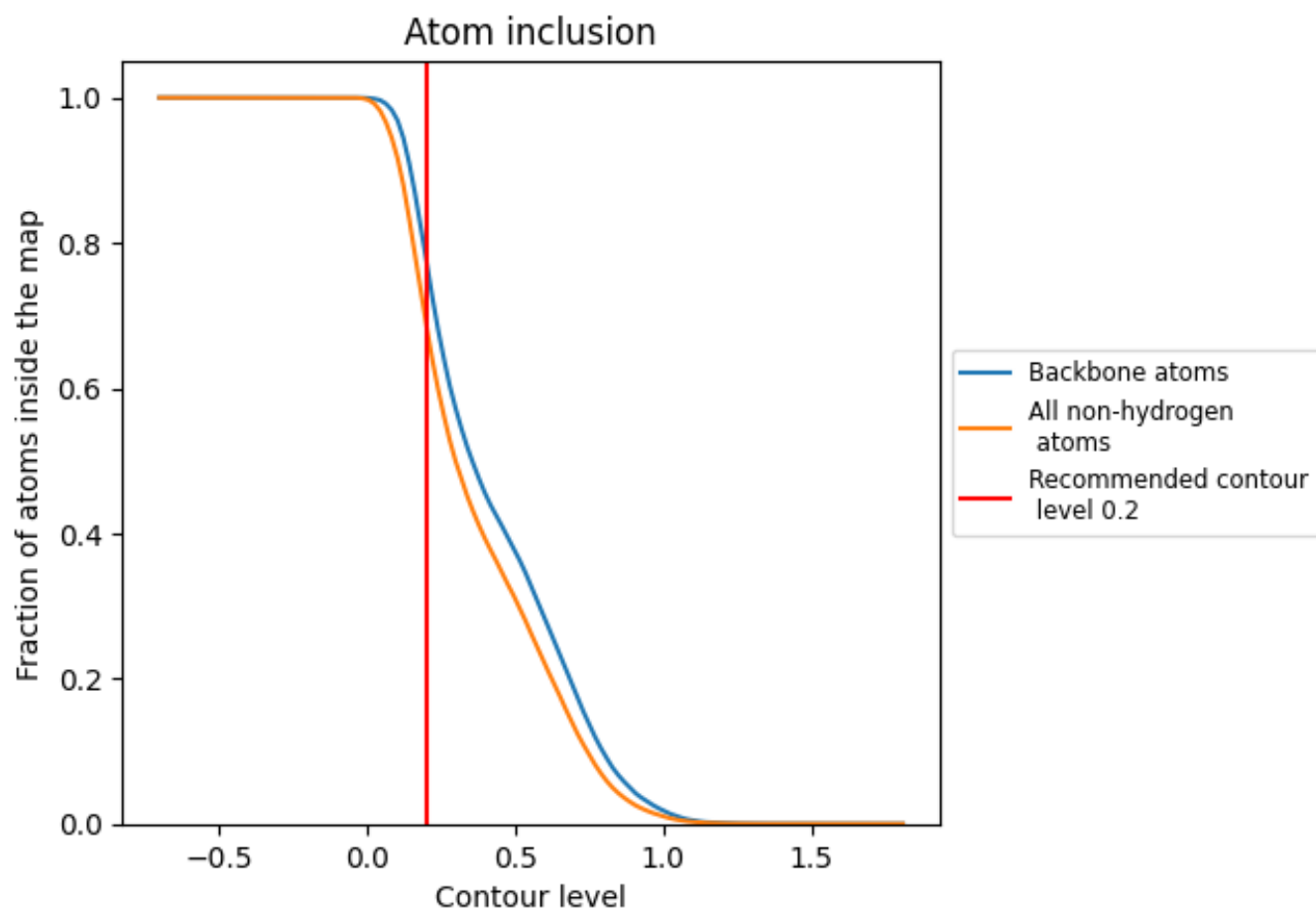
This section contains information regarding the fit between EMDB map EMD-13466 and PDB model 7PK6. Per-residue inclusion information can be found in section 3 on page 6.

9.1 Map-model overlay [i](#)



The images above show the 3D surface view of the map at the recommended contour level 0.2 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 Atom inclusion [i](#)



At the recommended contour level, 78% of all backbone atoms, 69% of all non-hydrogen atoms, are inside the map.