Full wwPDB EM Validation Report

Mar 15, 2022 – 09:51 am GMT

PDB ID	:	7PKY
EMDB ID	:	EMD-13482
Title	:	Half-vault structure
Authors	:	Guerra, P.; Gonzalez-Alamos, M.; Llauro, A.; Casanas, A.; Querol-Audi, J.; de Pablo, P.; Verdaguer, N.
Deposited on	:	2021-08-27
Resolution	:	7.90 Å(reported)
Based on initial model	:	4HL8

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 (i) symbol.

The following versions of software and data (see references (1)) were used in the production of this report:

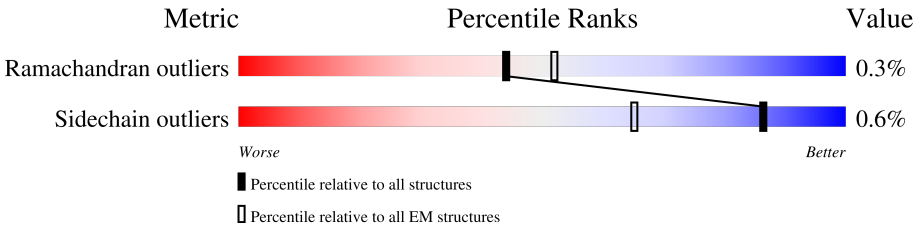
EMDB validation analysis	:	0.0.0.dev97
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.27

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 7.90 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)
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 <=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	861	14% 90% • 9%
1	B	861	16% 90% • 9%
1	C	861	16% 90% • 9%
1	D	861	18% 90% • 9%
1	E	861	17% 90% • 9%
1	F	861	18% 90% • 9%
1	G	861	17% 90% • 9%
1	H	861	18% 90% • 9%
1	I	861	22% 90% • 9%

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Mol	Chain	Length	Quality of chain
1	J	861	24% 90% 9%
1	K	861	28% 90% 9%
1	L	861	29% 90% 9%
1	M	861	28% 90% 9%
1	N	861	28% 90% 9%
1	O	861	29% 90% 9%
1	P	861	31% 90% 9%
1	Q	861	35% 90% 9%
1	R	861	36% 90% 9%
1	S	861	35% 90% 9%
1	T	861	32% 90% 9%
1	U	861	25% 90% 9%
1	V	861	18% 90% 9%
1	W	861	12% 90% 9%
1	X	861	18% 90% 9%
1	Y	861	26% 90% 9%
1	Z	861	34% 90% 9%
1	a	861	38% 90% 9%
1	b	861	41% 90% 9%
1	c	861	41% 90% 9%
1	d	861	33% 90% 9%
1	e	861	27% 90% 9%
1	f	861	24% 90% 9%
1	g	861	23% 90% 9%
1	h	861	23% 90% 9%

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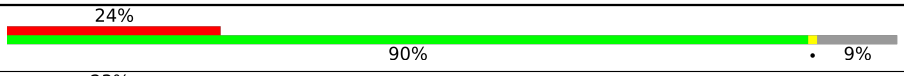
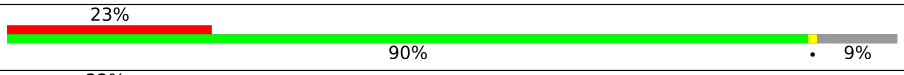
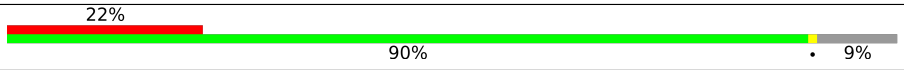
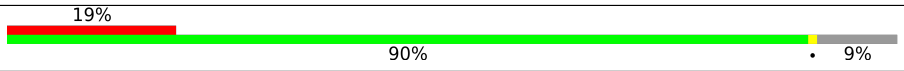
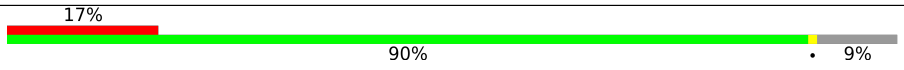
Mol	Chain	Length	Quality of chain
1	i	861	
1	j	861	
1	k	861	
1	l	861	
1	m	861	

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 240123 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 Major vault protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	B	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	C	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	D	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	E	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	F	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	G	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	H	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	I	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	J	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	K	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	L	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	M	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	N	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	O	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	P	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0
1	Q	782	Total 6157	C 3874	N 1101	O 1167	S 15	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	R	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	S	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	T	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	U	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	V	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	W	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	X	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	Y	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	Z	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	a	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	b	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	c	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	d	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	e	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	f	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	g	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	h	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	i	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	j	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	k	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		
1	l	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		

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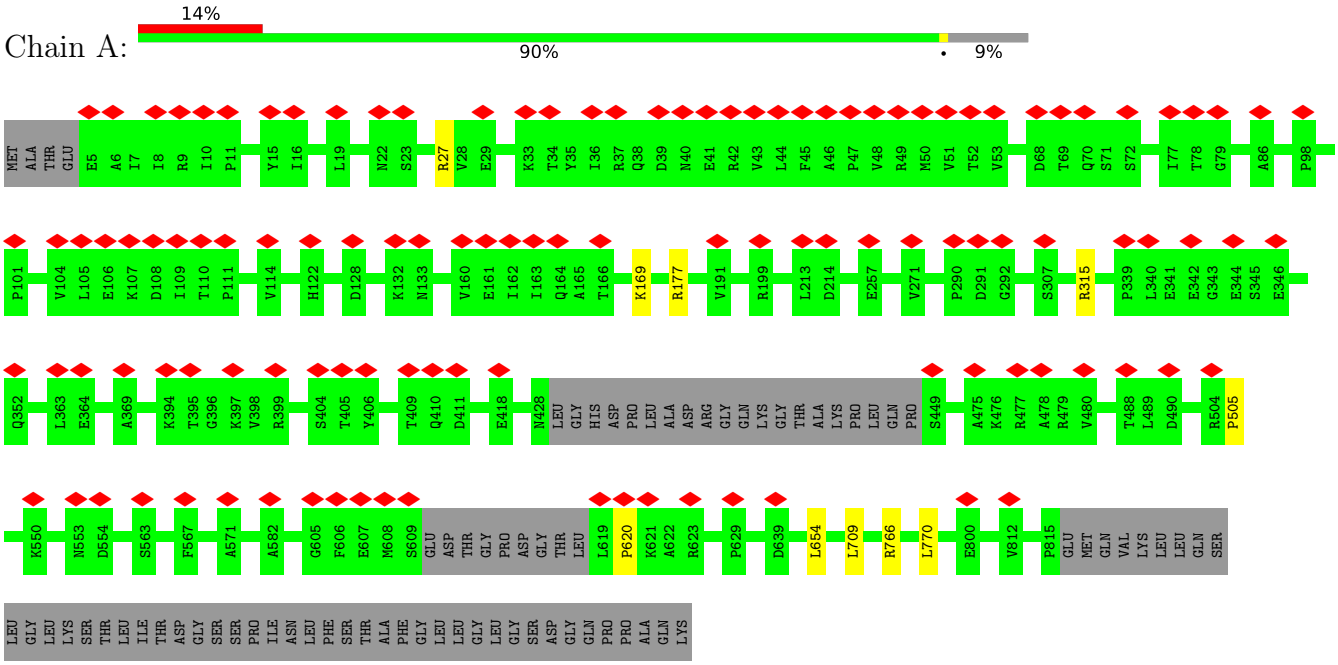
Mol	Chain	Residues	Atoms					AltConf	Trace
1	m	782	Total	C	N	O	S	0	0
			6157	3874	1101	1167	15		

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.

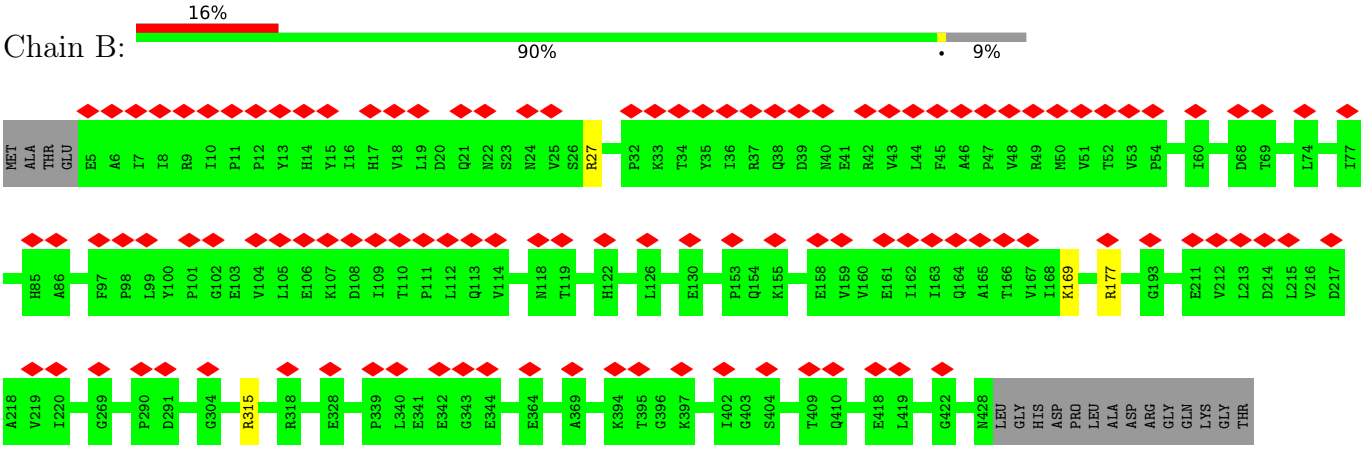
• Molecule 1: Major vault protein

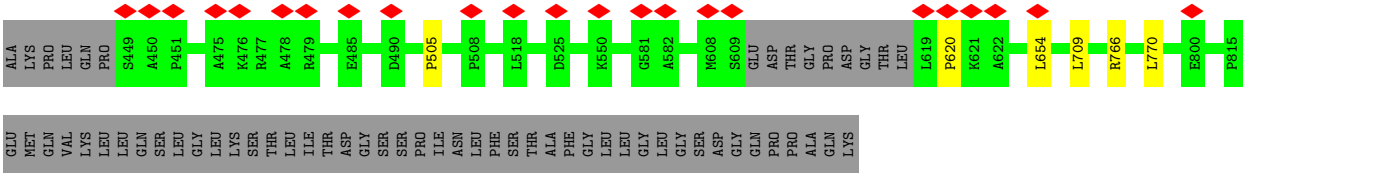
Chain A:



• Molecule 1: Major vault protein

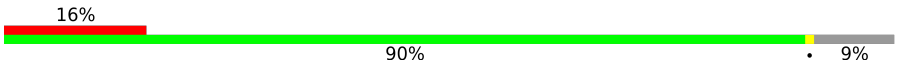
Chain B:

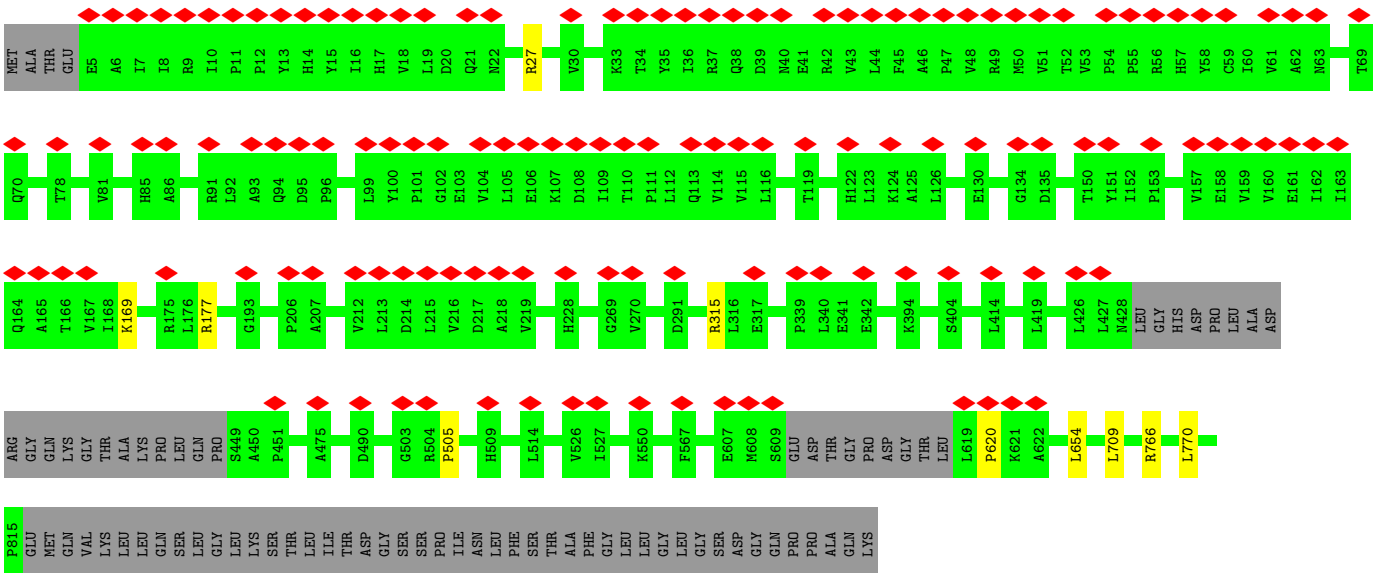




• Molecule 1: Major vault protein

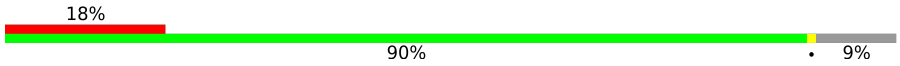
Chain C:

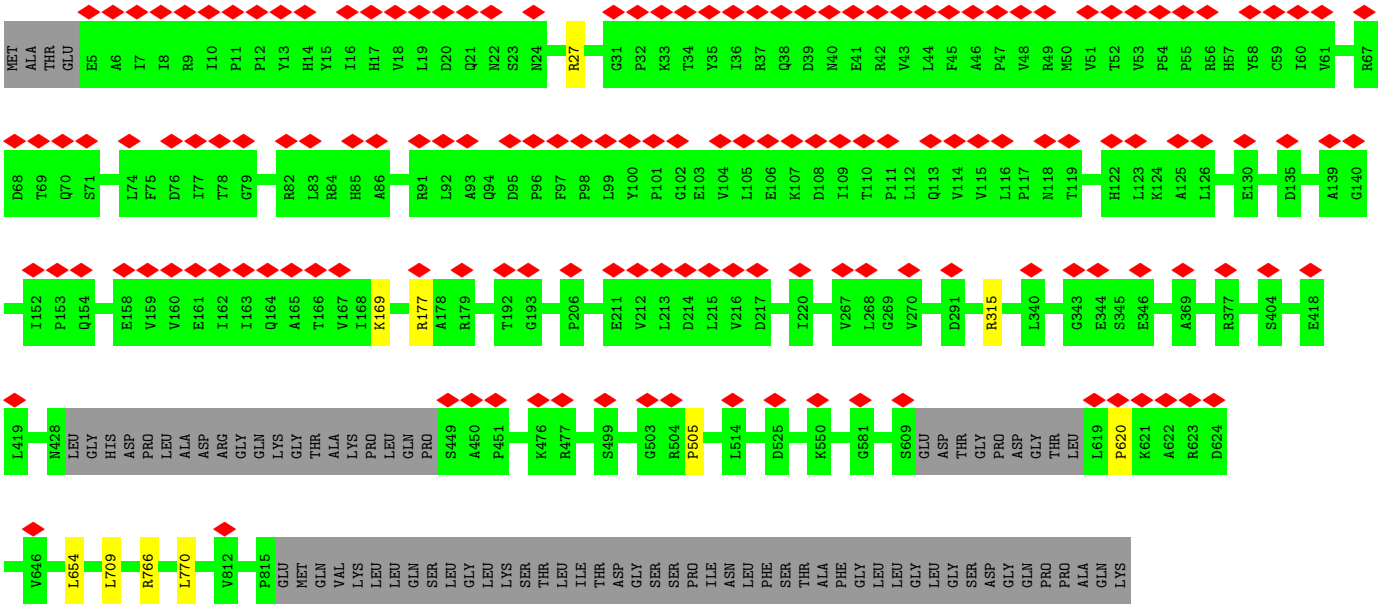




• Molecule 1: Major vault protein

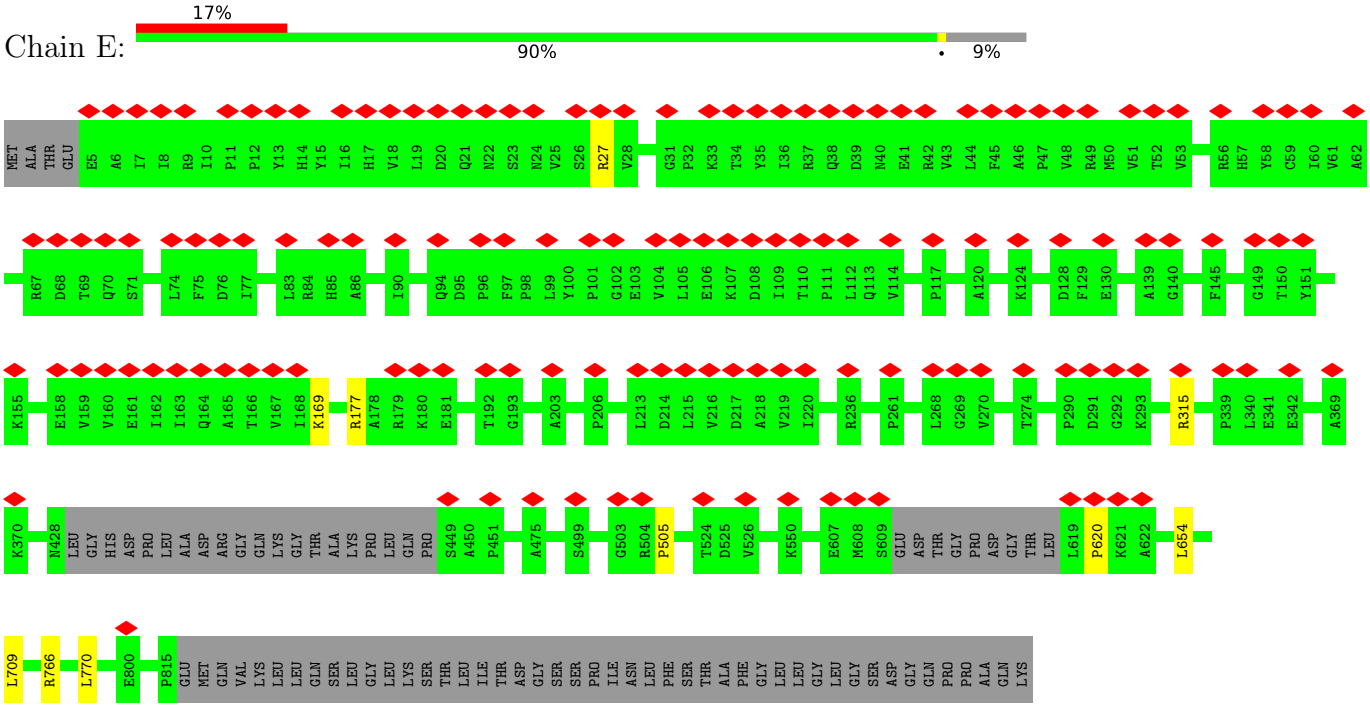
Chain D:





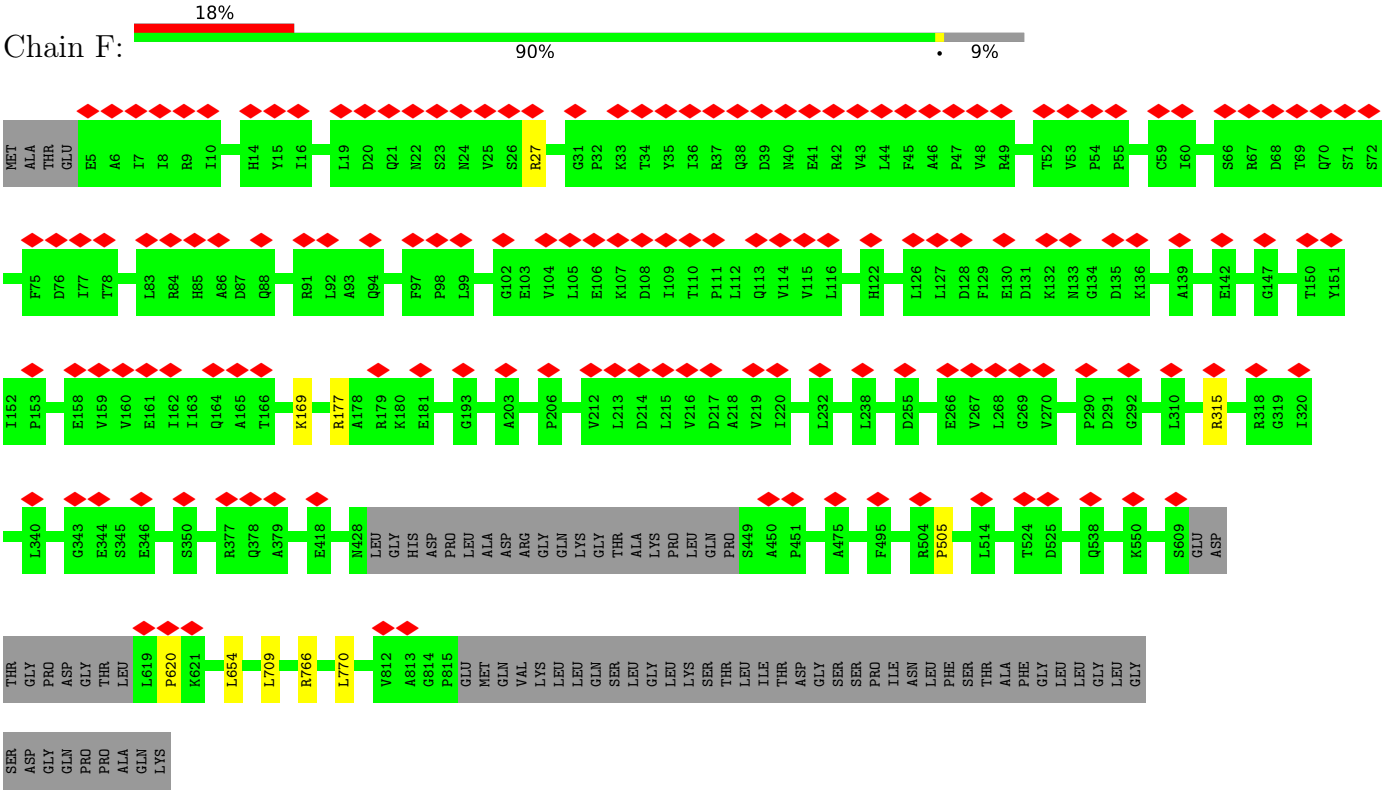
• Molecule 1: Major vault protein

Chain E:



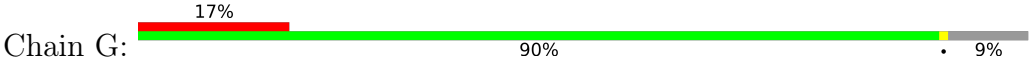
• Molecule 1: Major vault protein

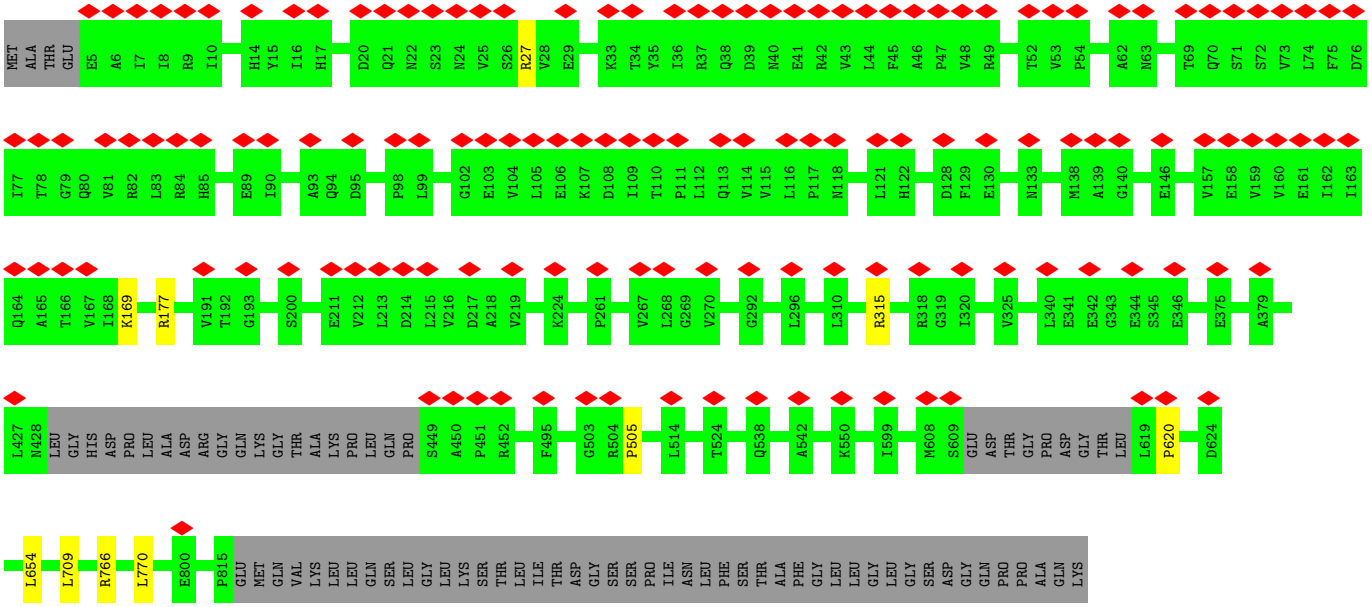
Chain F:



• Molecule 1: Major vault protein

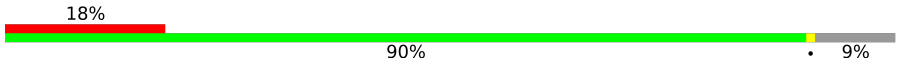
Chain G:

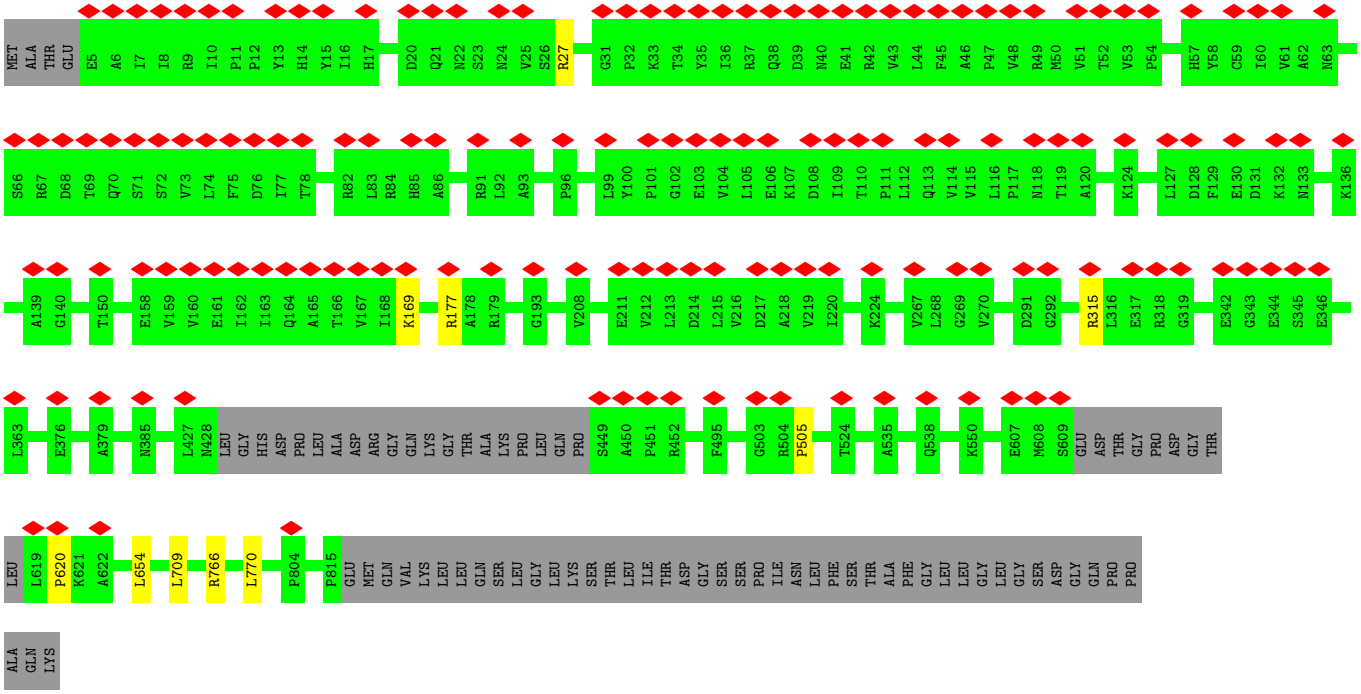




• Molecule 1: Major vault protein

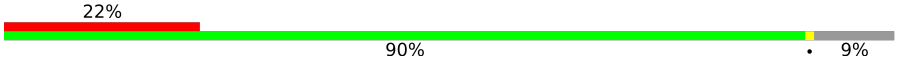
Chain H:

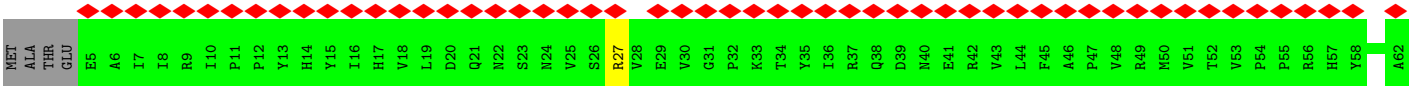


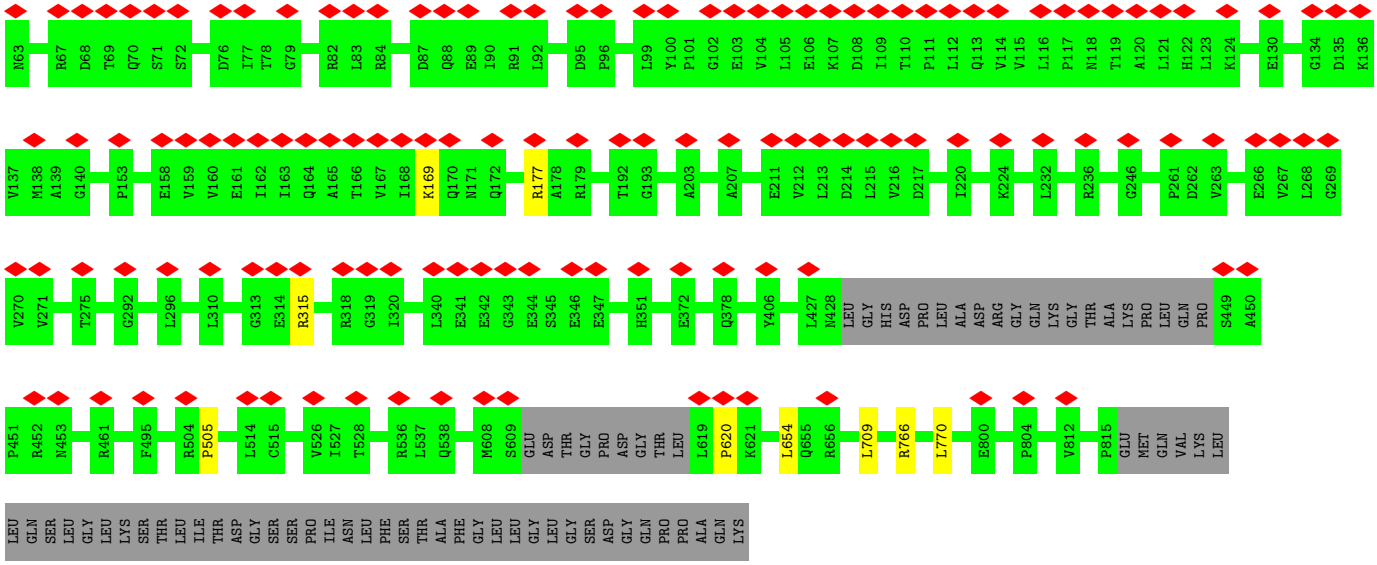


• Molecule 1: Major vault protein

Chain I:

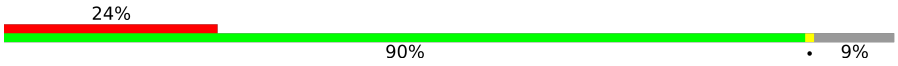


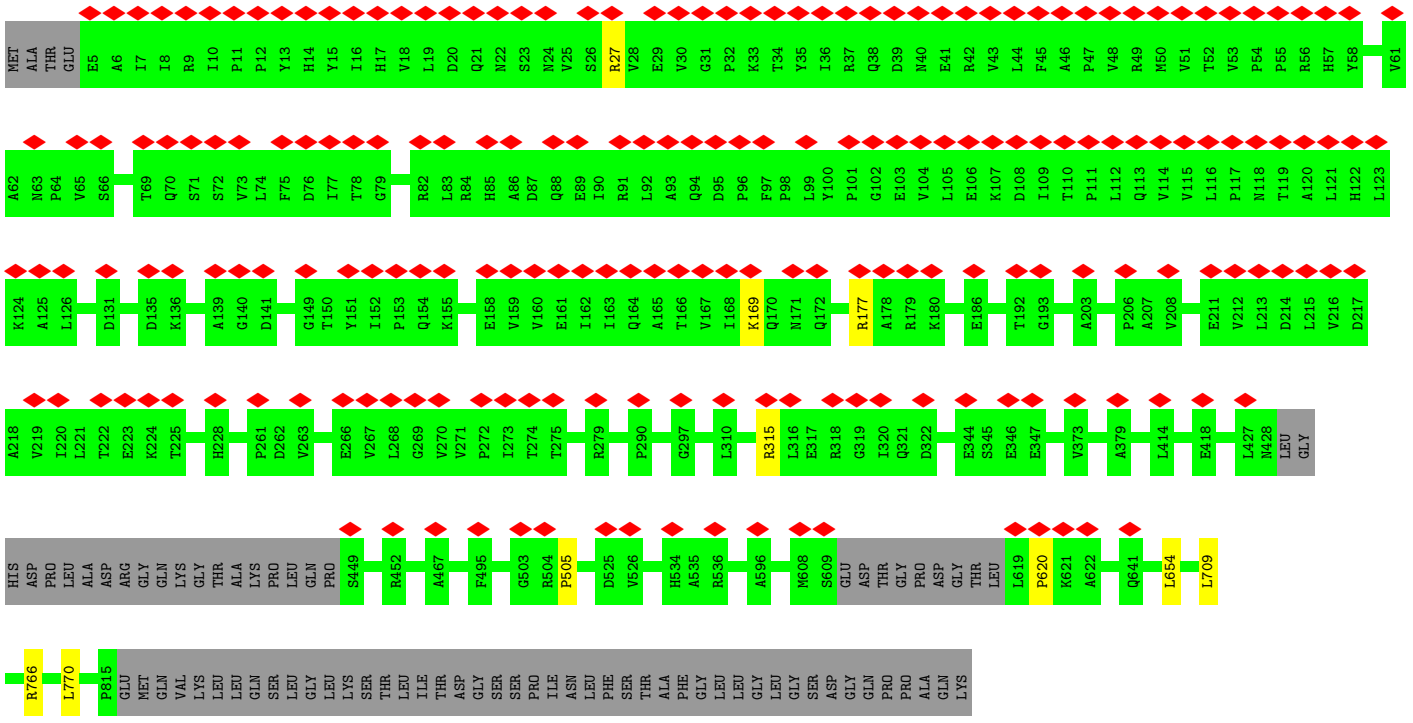




• Molecule 1: Major vault protein

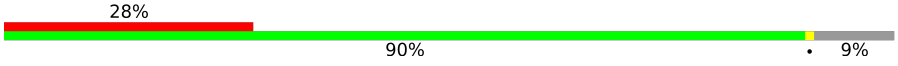
Chain J:

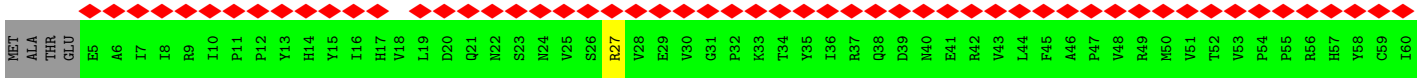


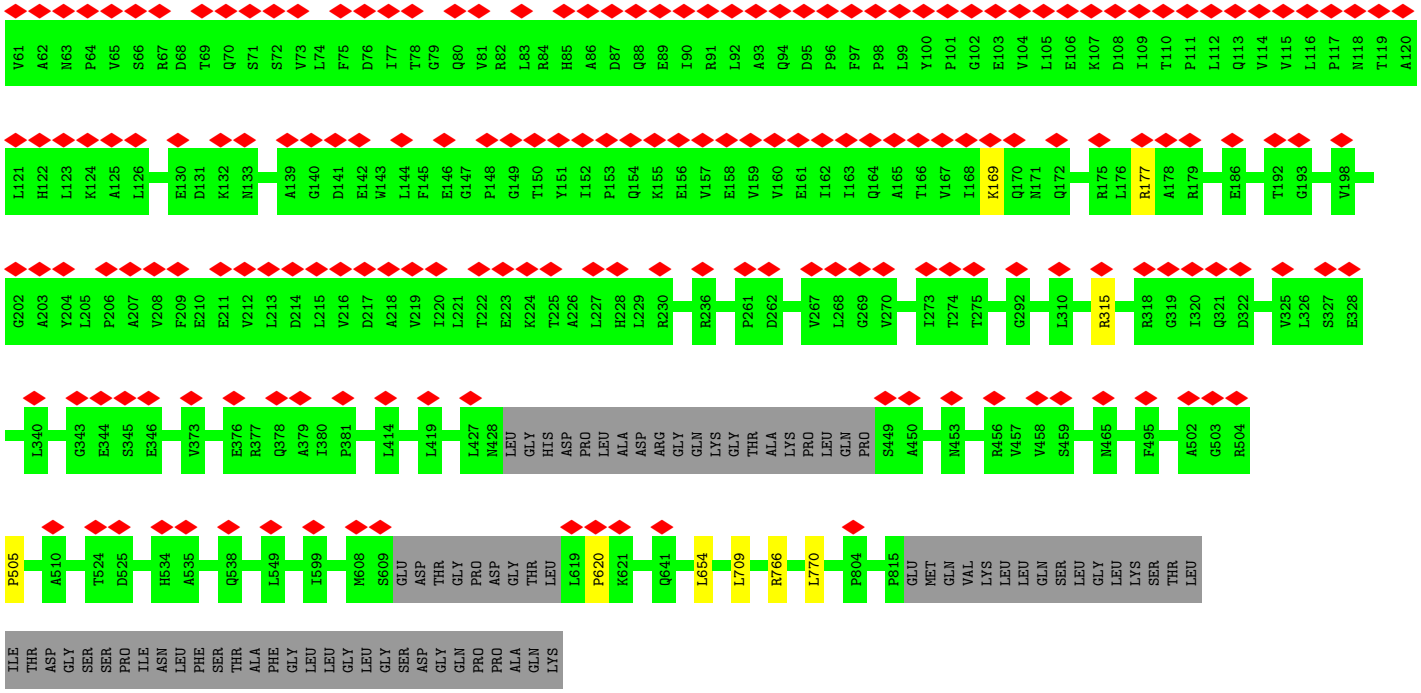


• Molecule 1: Major vault protein

Chain K:

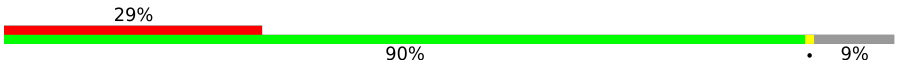


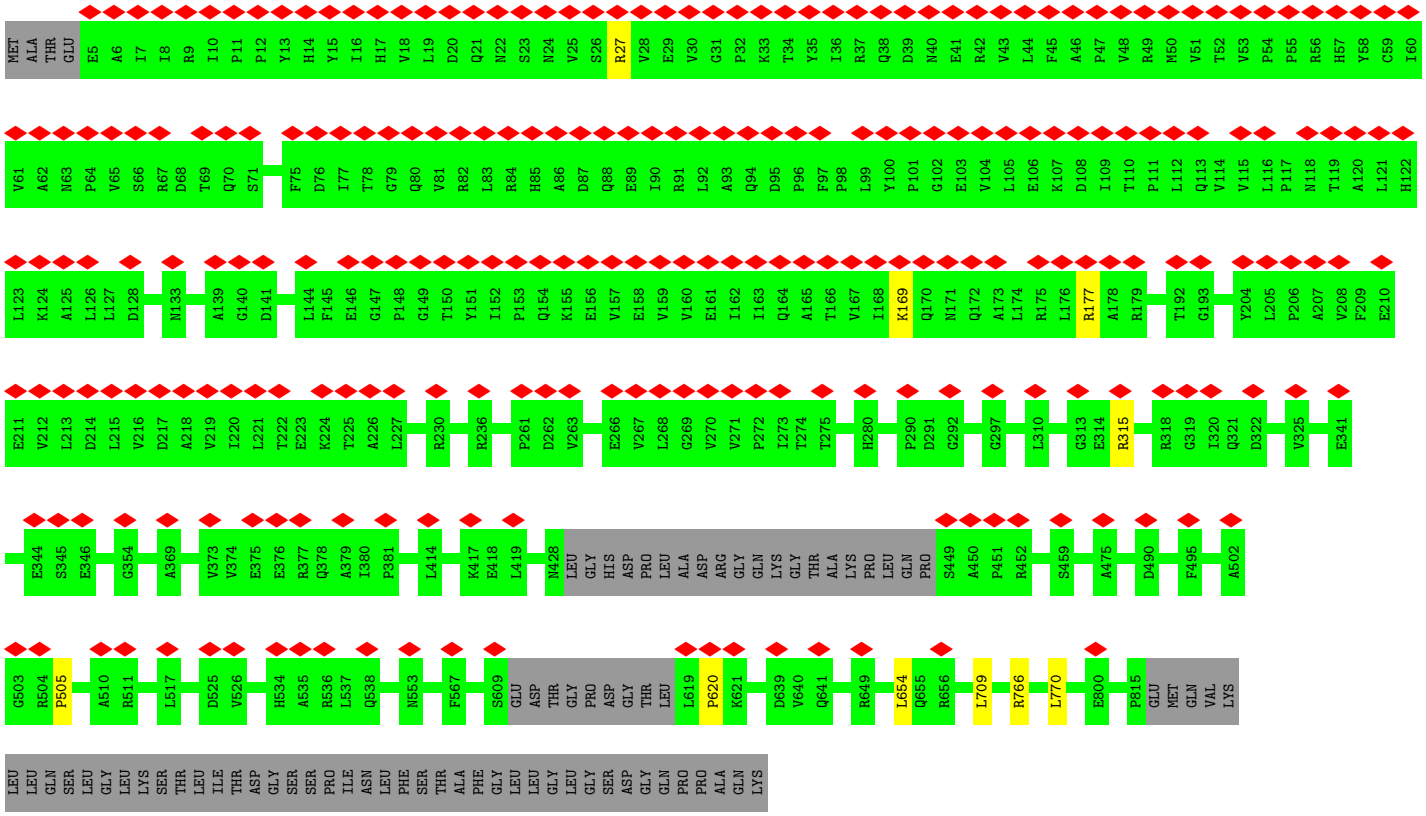




• Molecule 1: Major vault protein

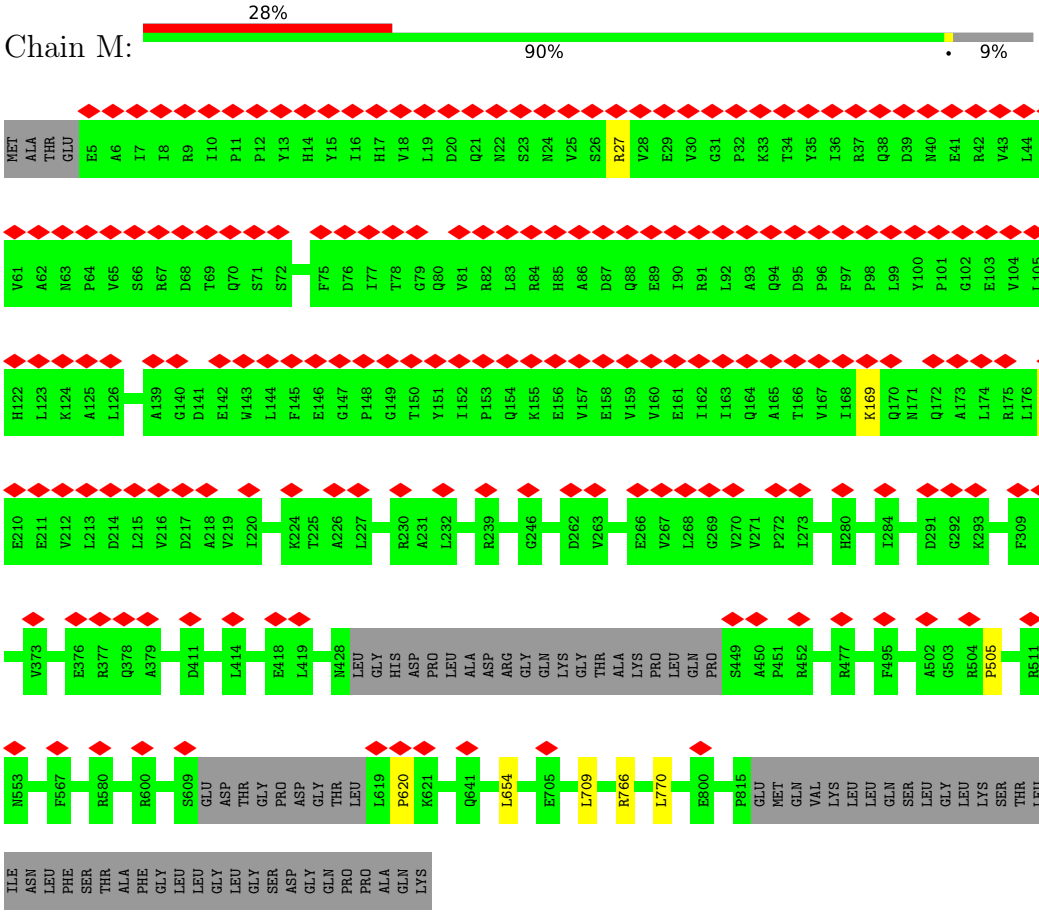
Chain L:





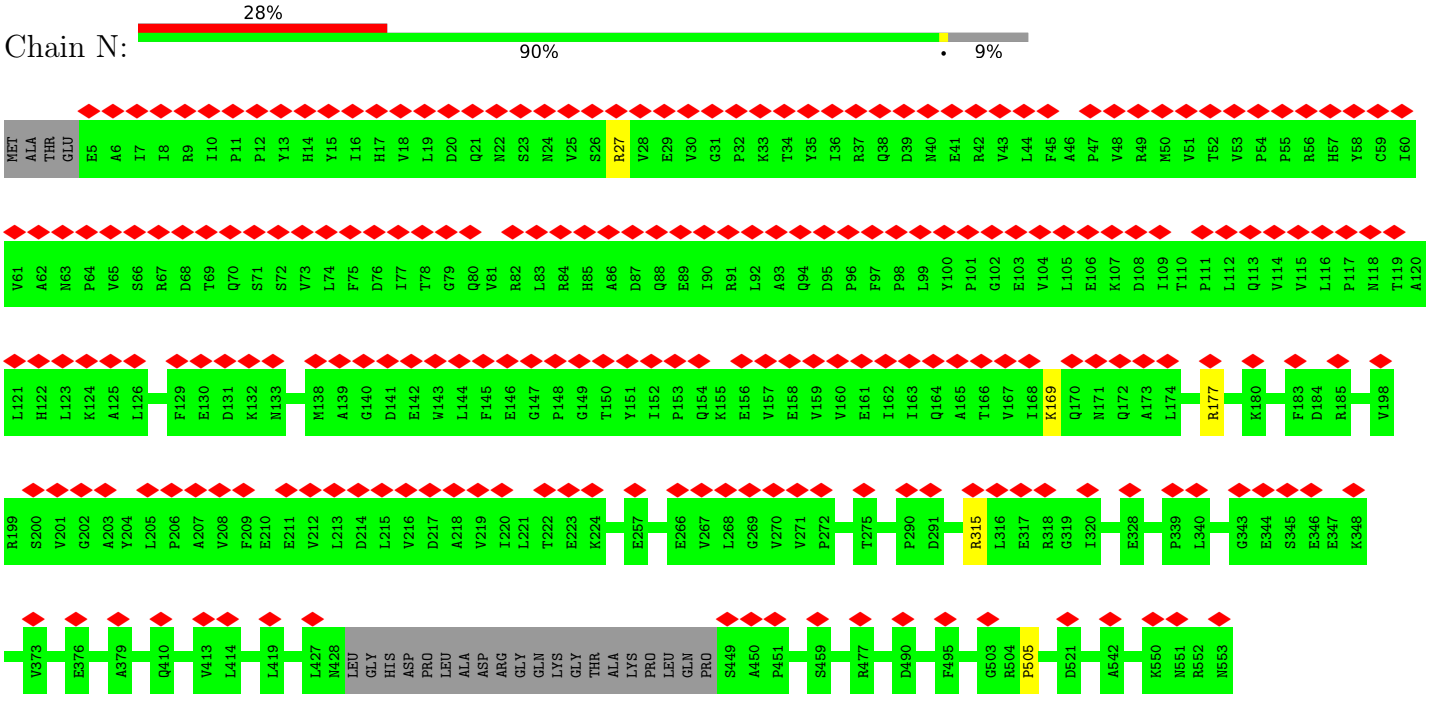
• Molecule 1: Major vault protein

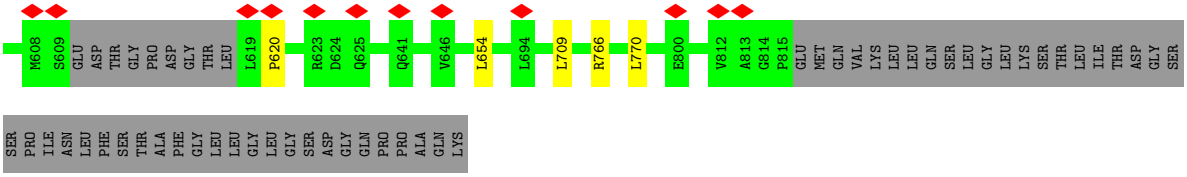
Chain M:



• Molecule 1: Major vault protein

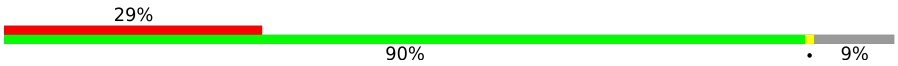
Chain N:

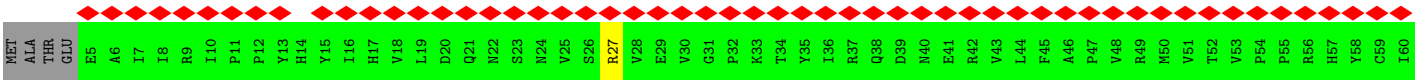


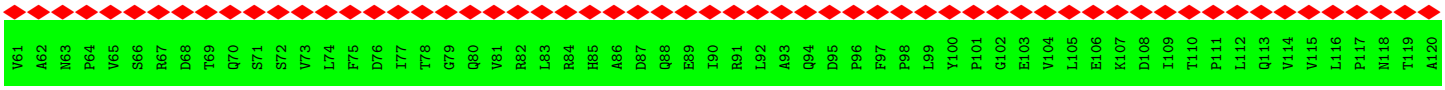


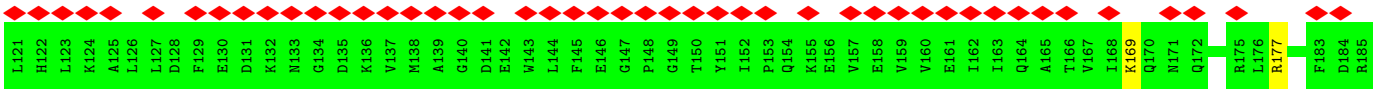
• Molecule 1: Major vault protein

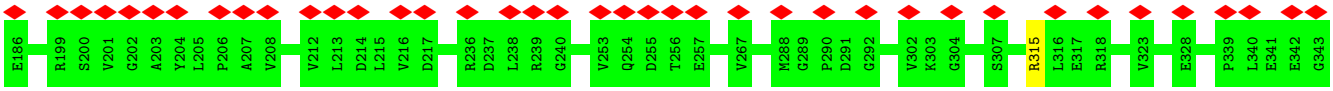
Chain O:

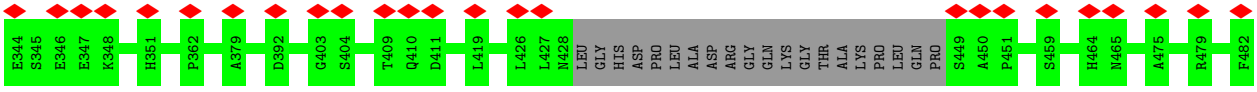


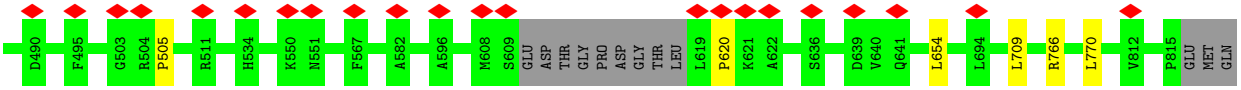






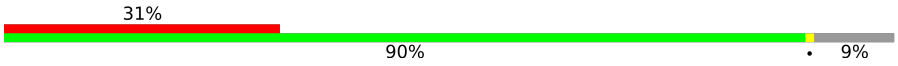


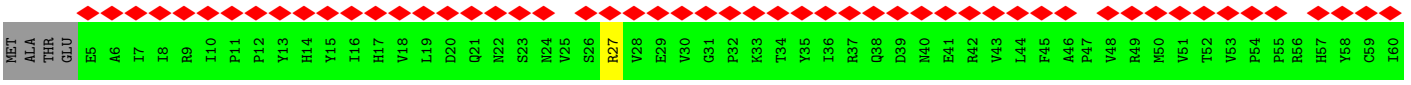


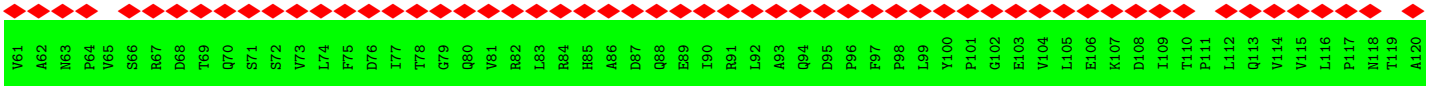


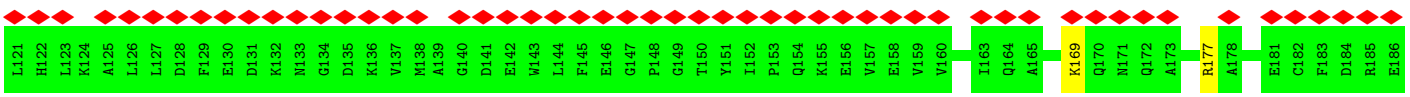
• Molecule 1: Major vault protein

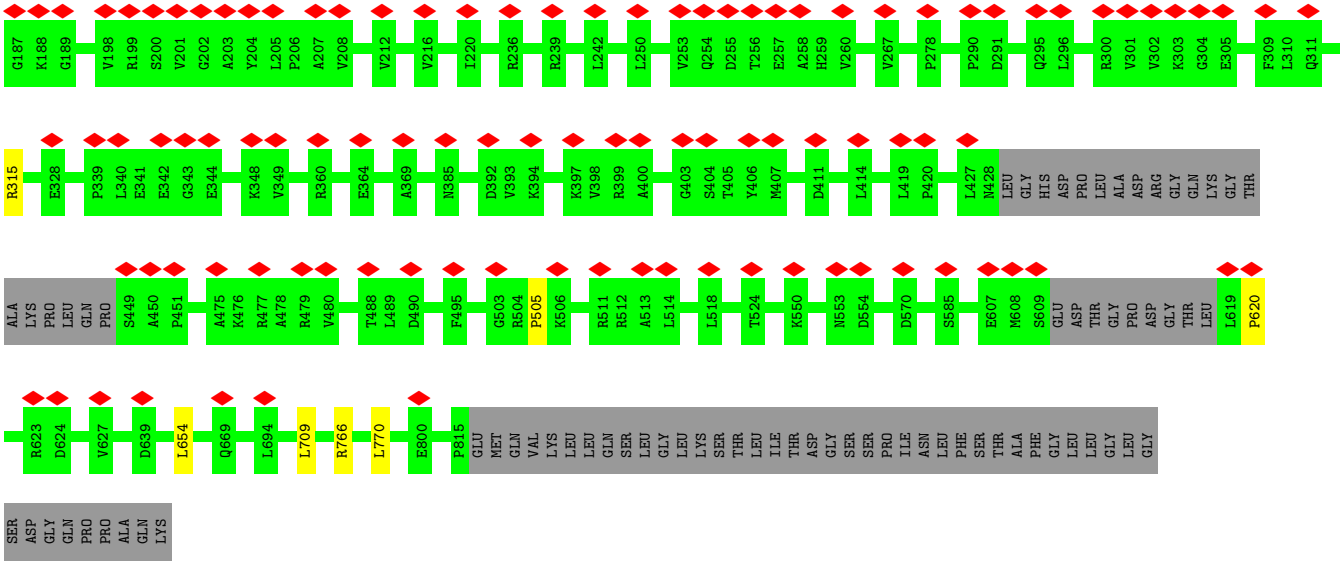
Chain P:





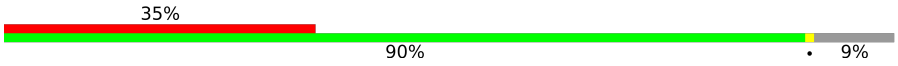


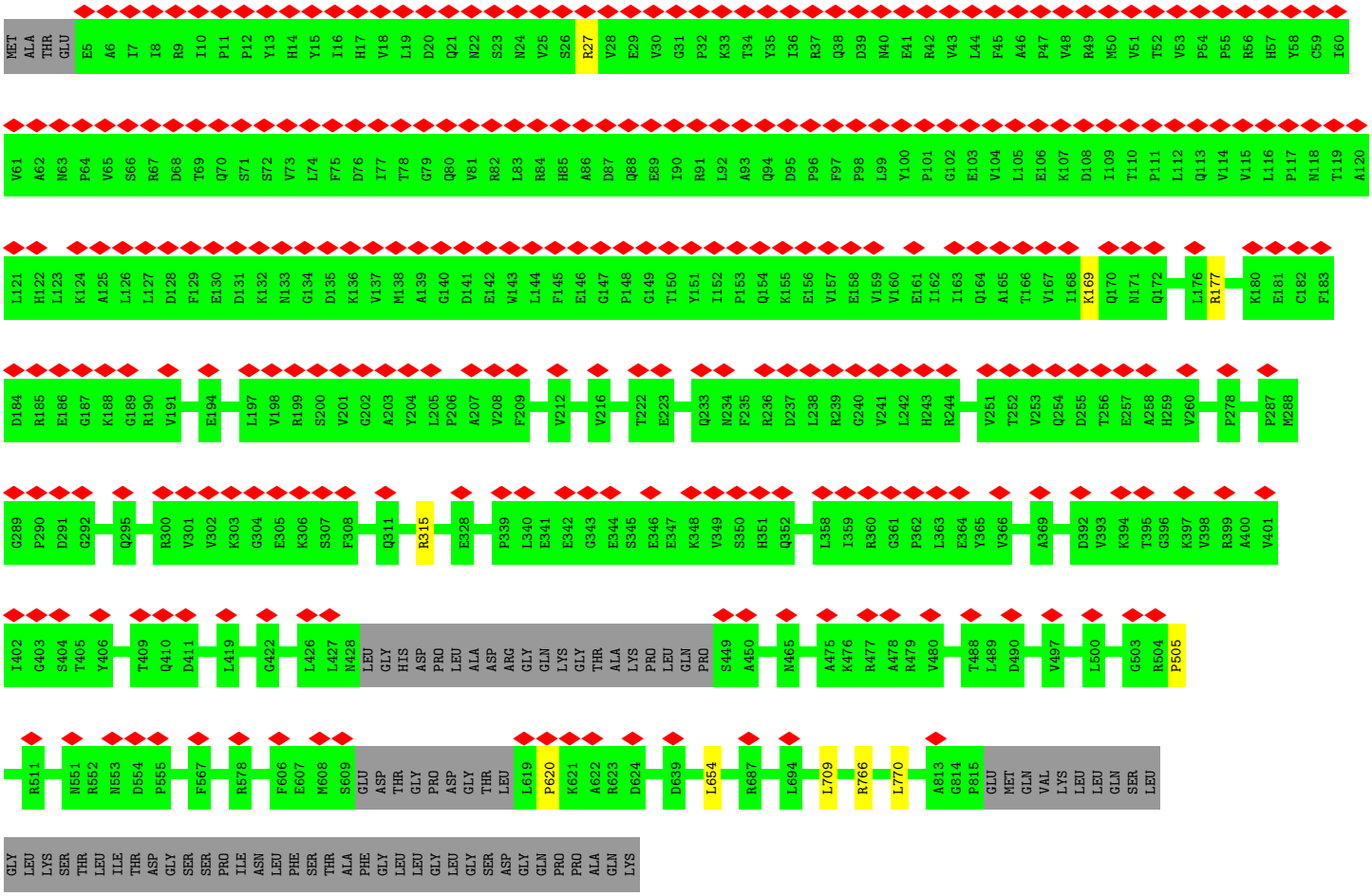




• Molecule 1: Major vault protein

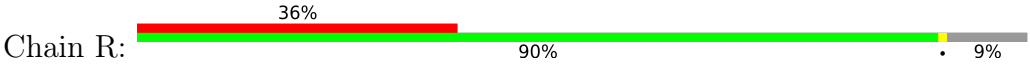
Chain Q:

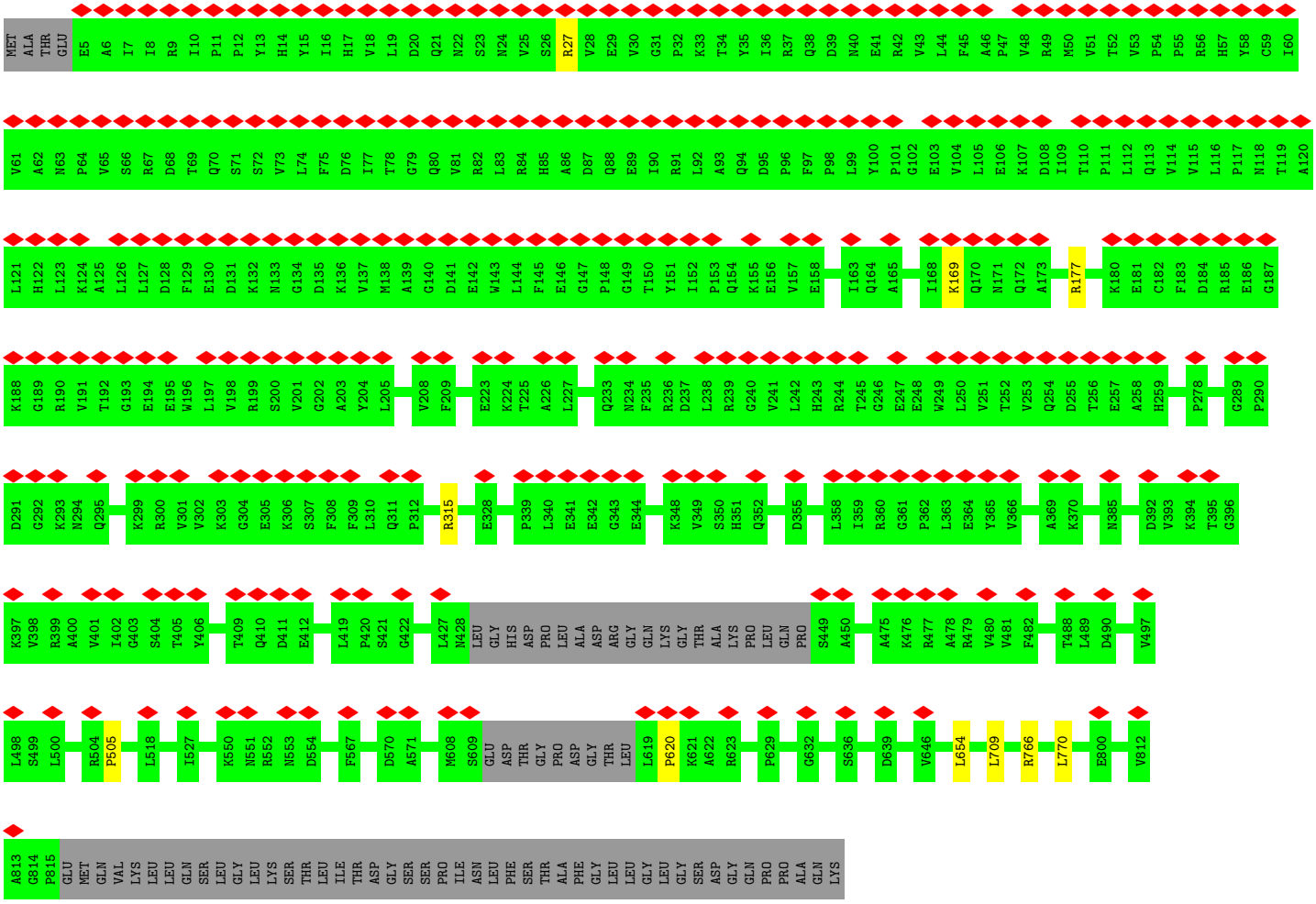




• Molecule 1: Major vault protein

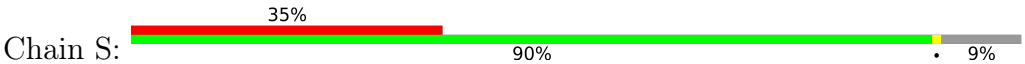
Chain R:

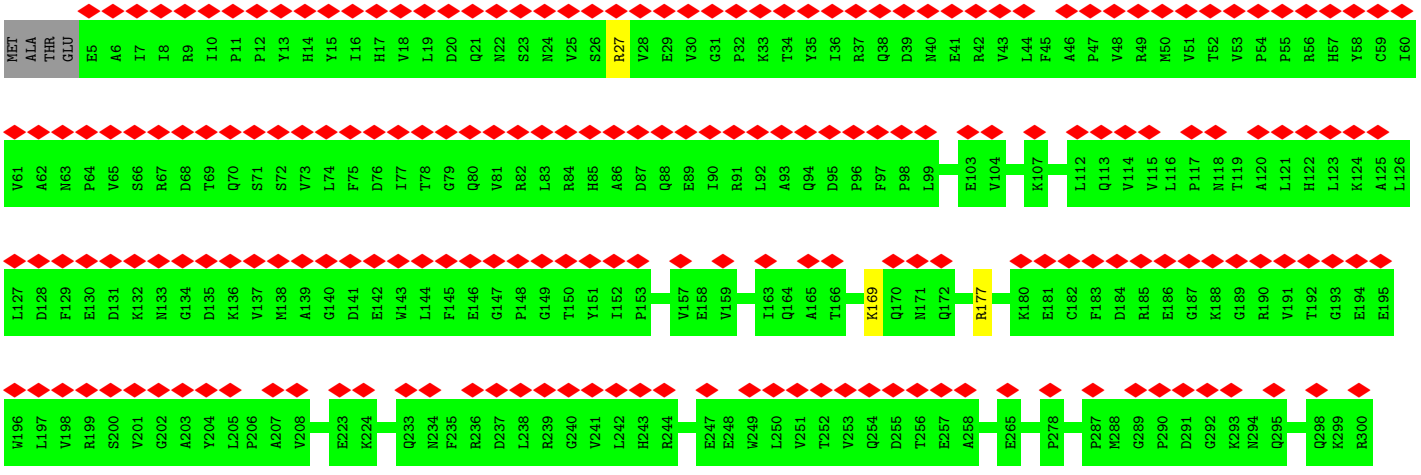


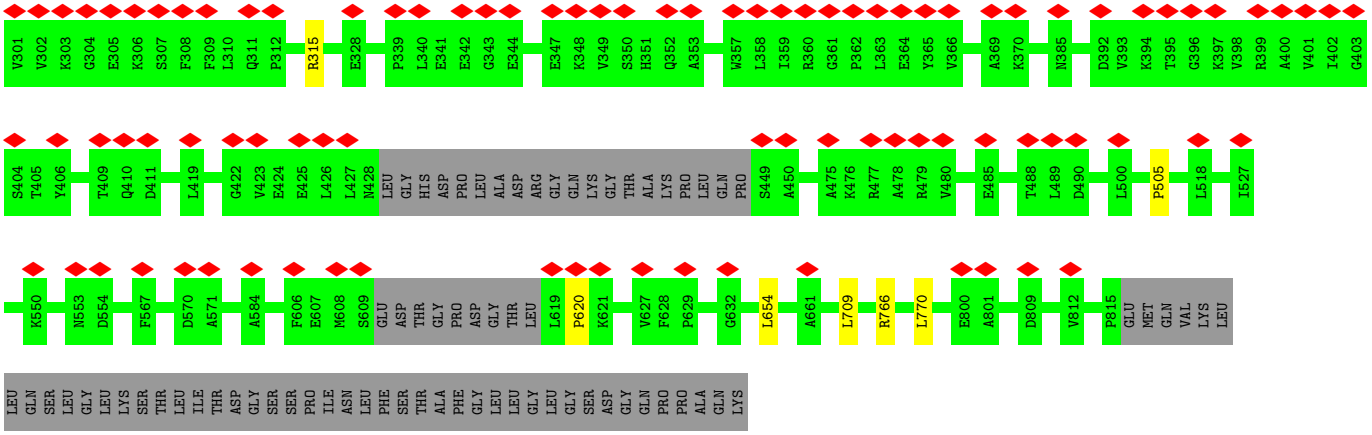


• Molecule 1: Major vault protein

Chain S:

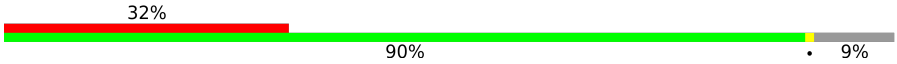


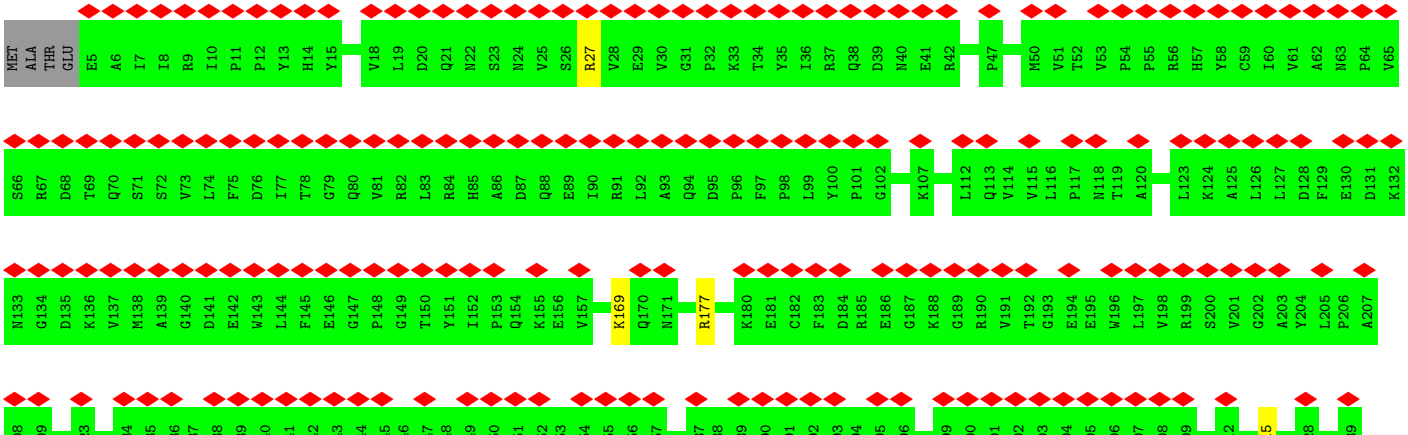




• Molecule 1: Major vault protein

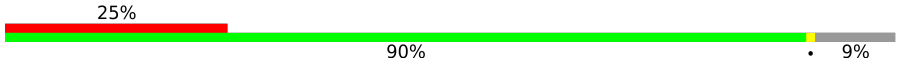
Chain T:

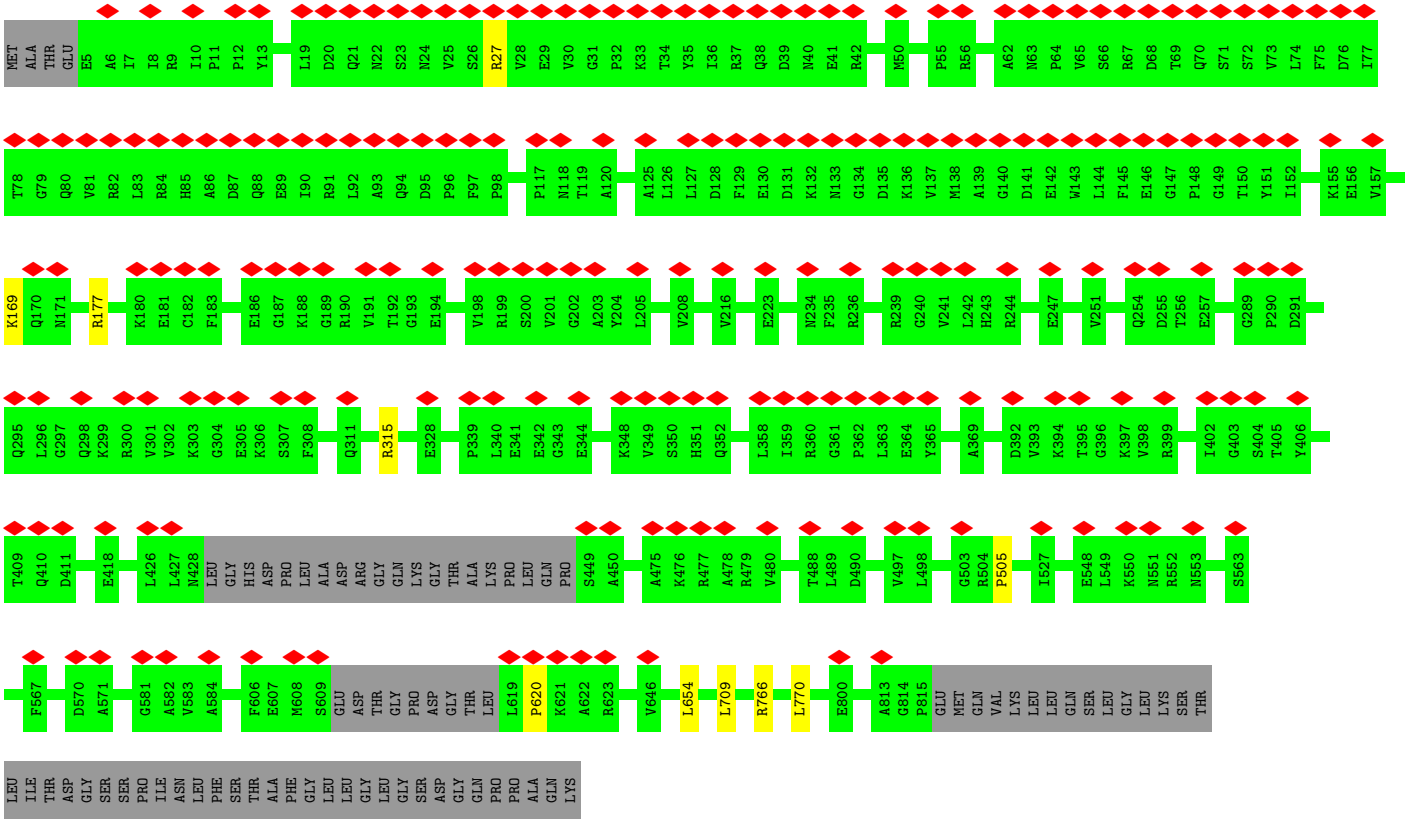




• Molecule 1: Major vault protein

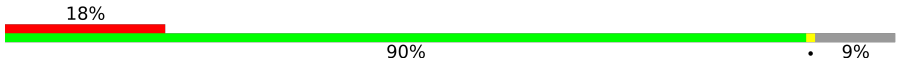
Chain U:

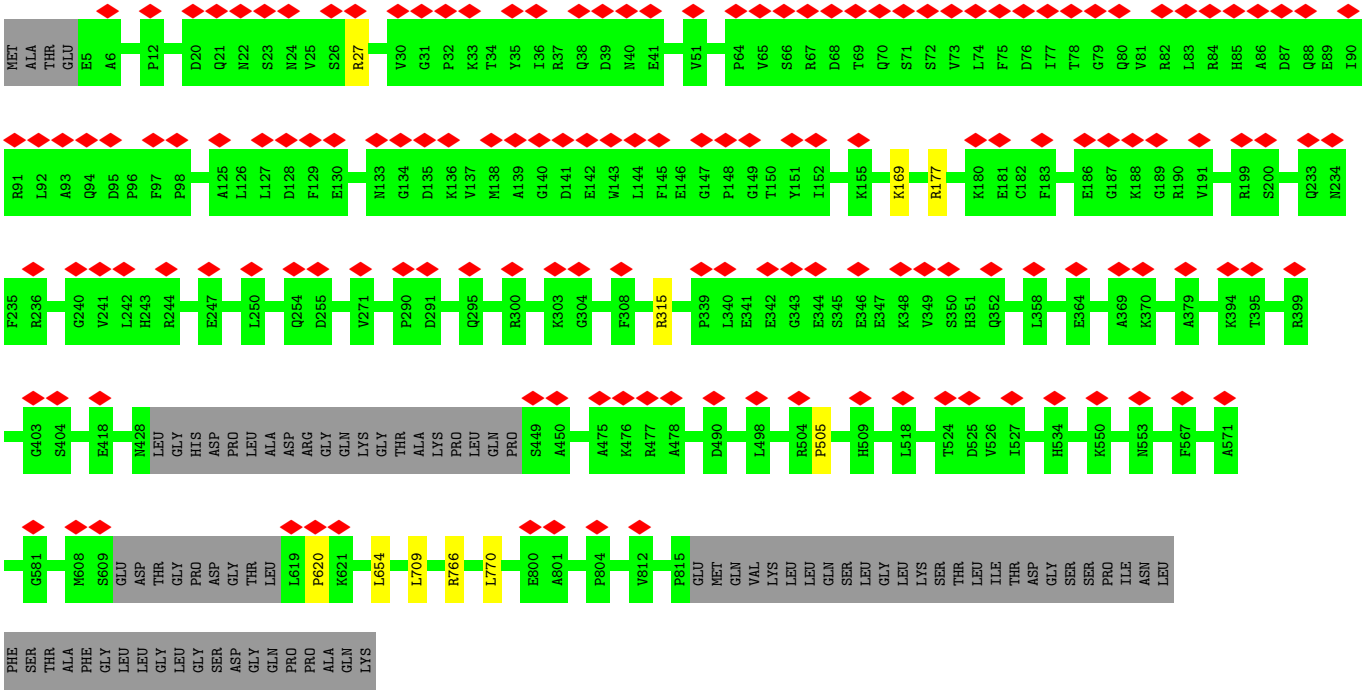




• Molecule 1: Major vault protein

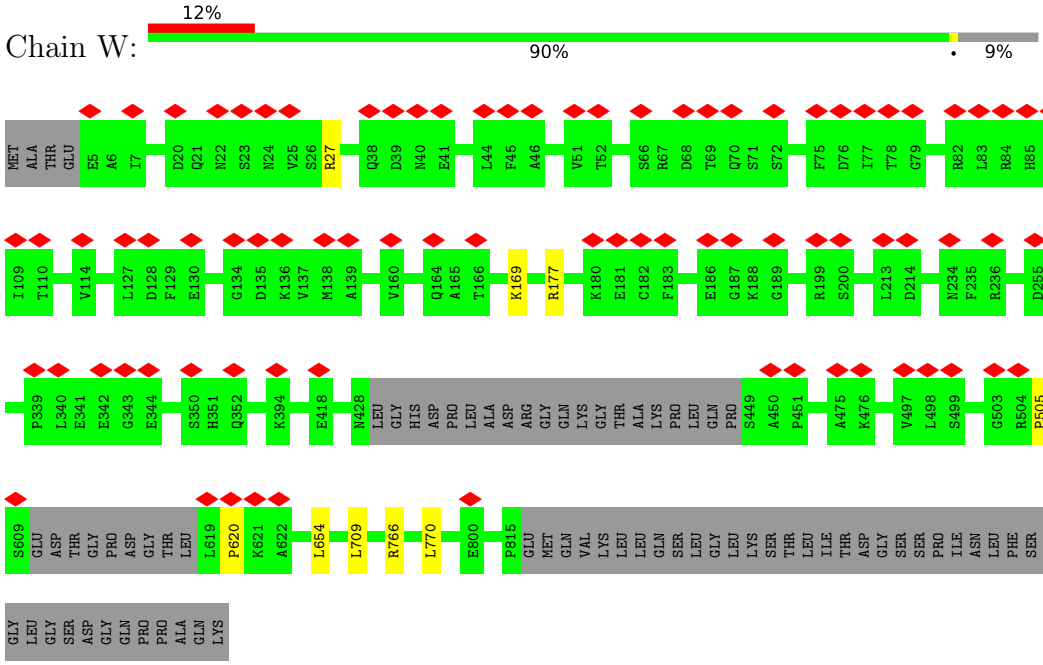
Chain V:





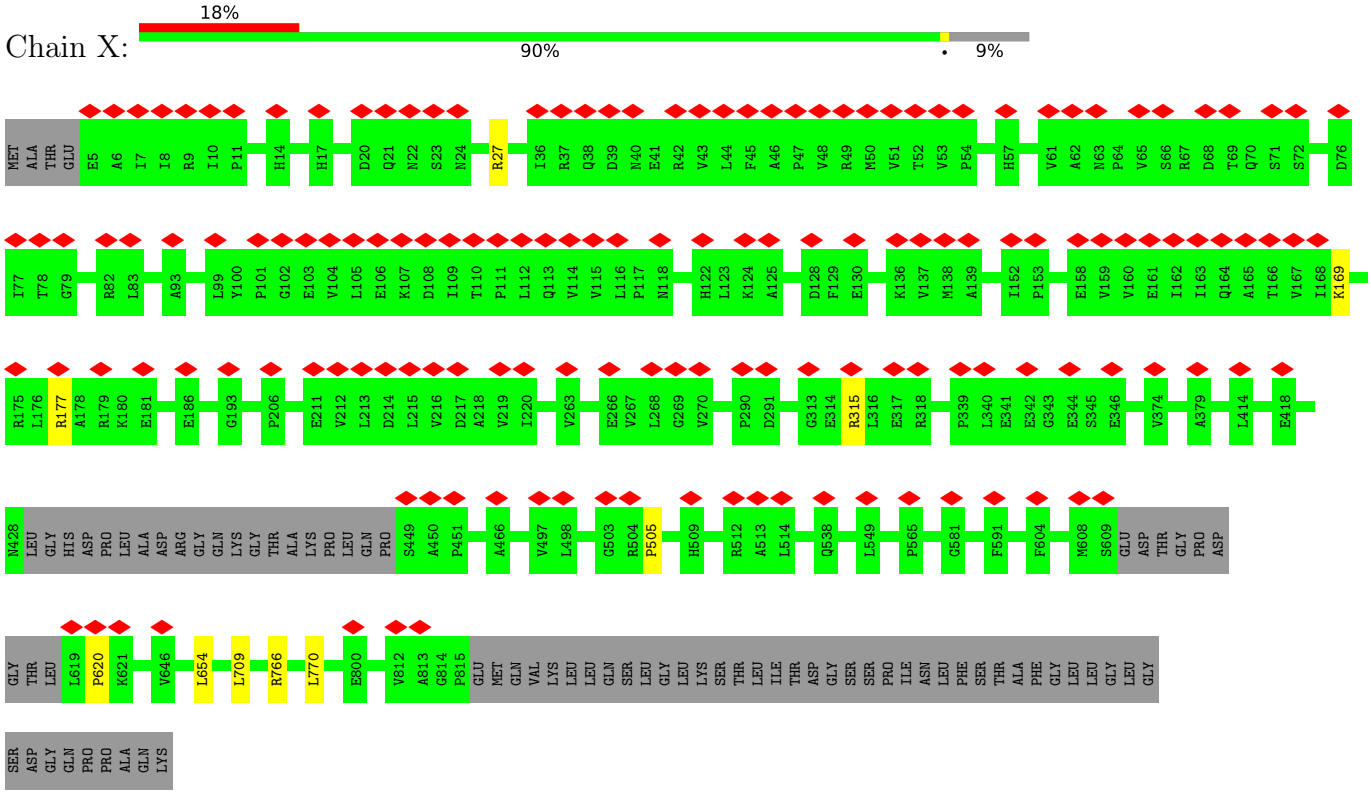
• Molecule 1: Major vault protein

Chain W:



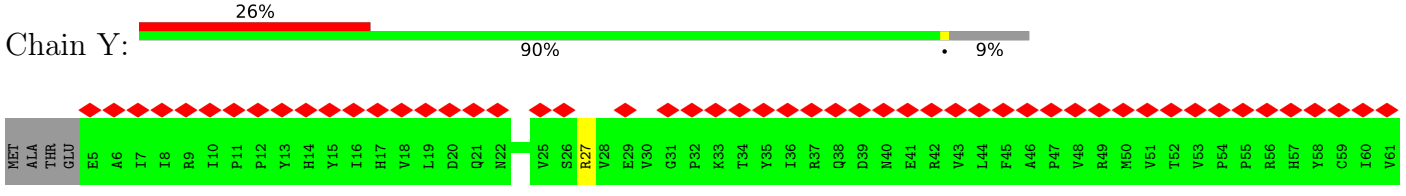
• Molecule 1: Major vault protein

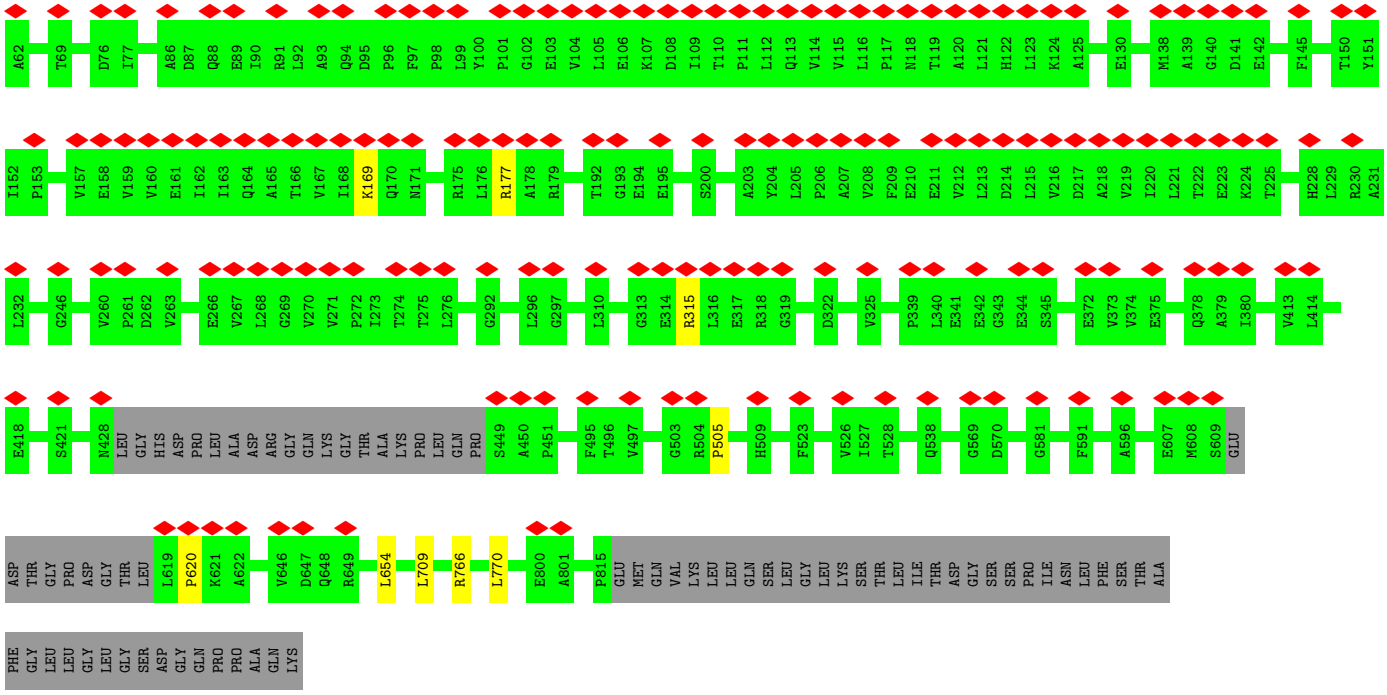
Chain X:



• Molecule 1: Major vault protein

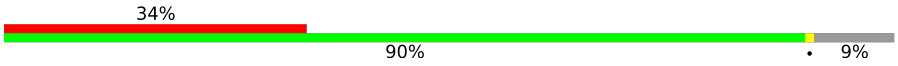
Chain Y:

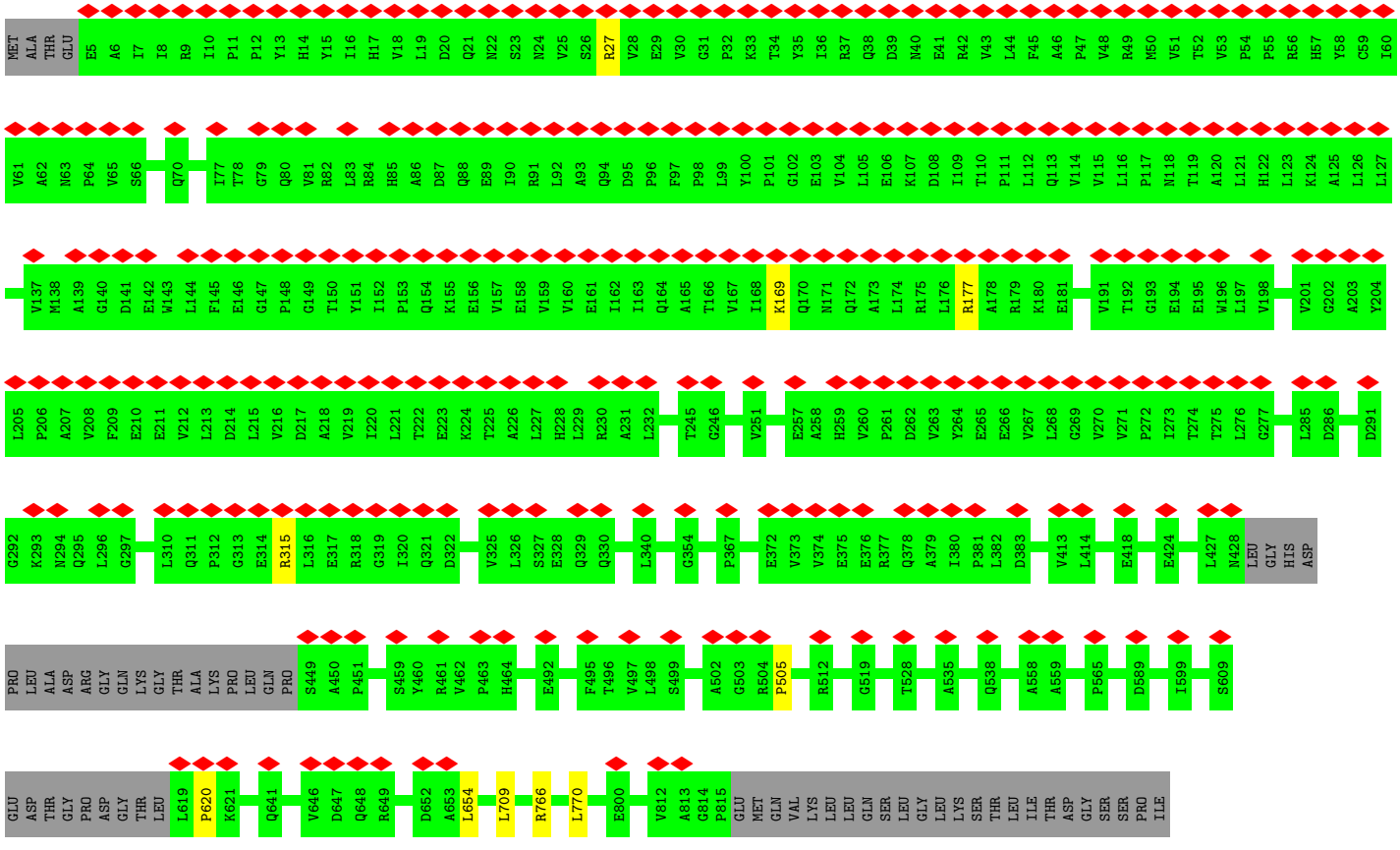


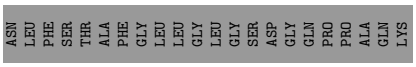


• Molecule 1: Major vault protein

Chain Z:

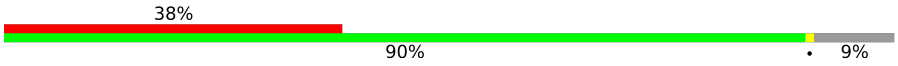


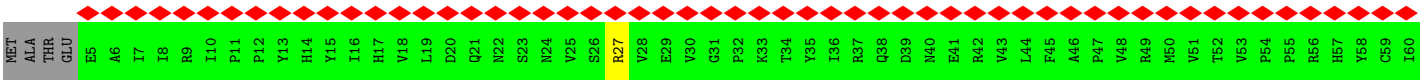


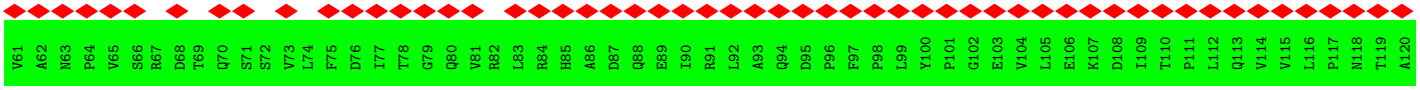


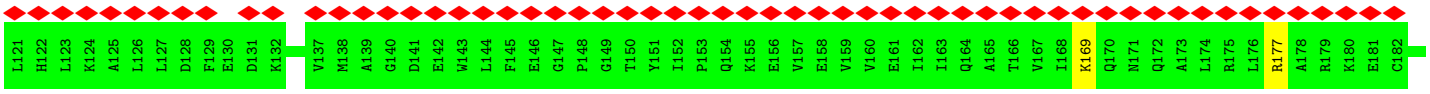
• Molecule 1: Major vault protein

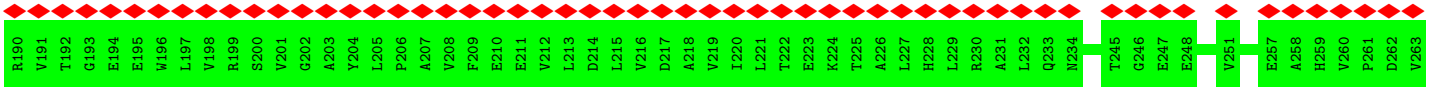
Chain a:

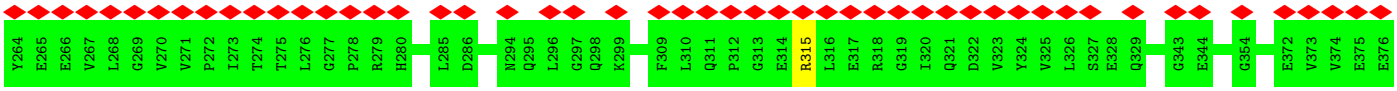


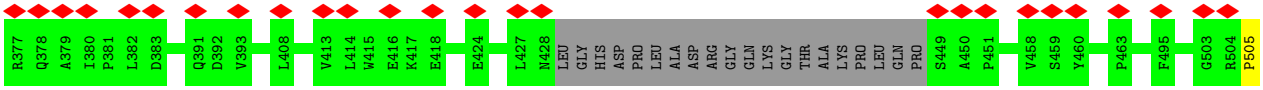


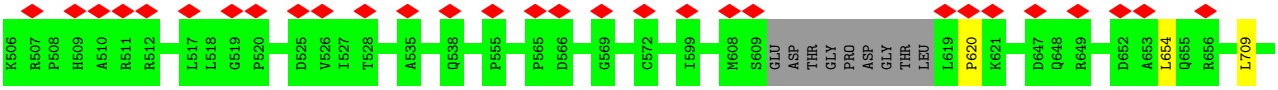






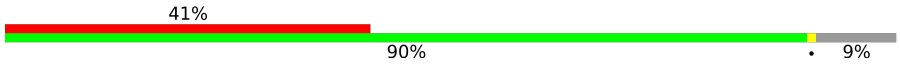


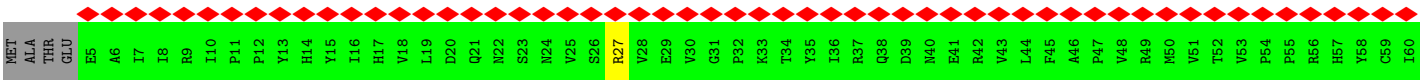


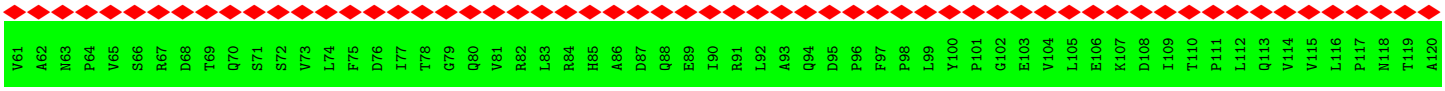


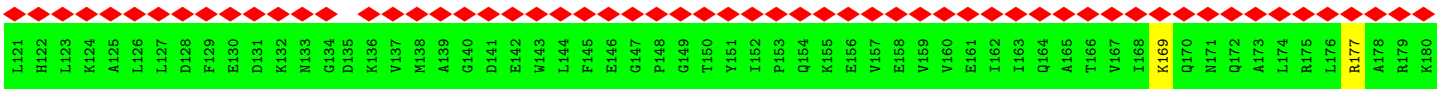
• Molecule 1: Major vault protein

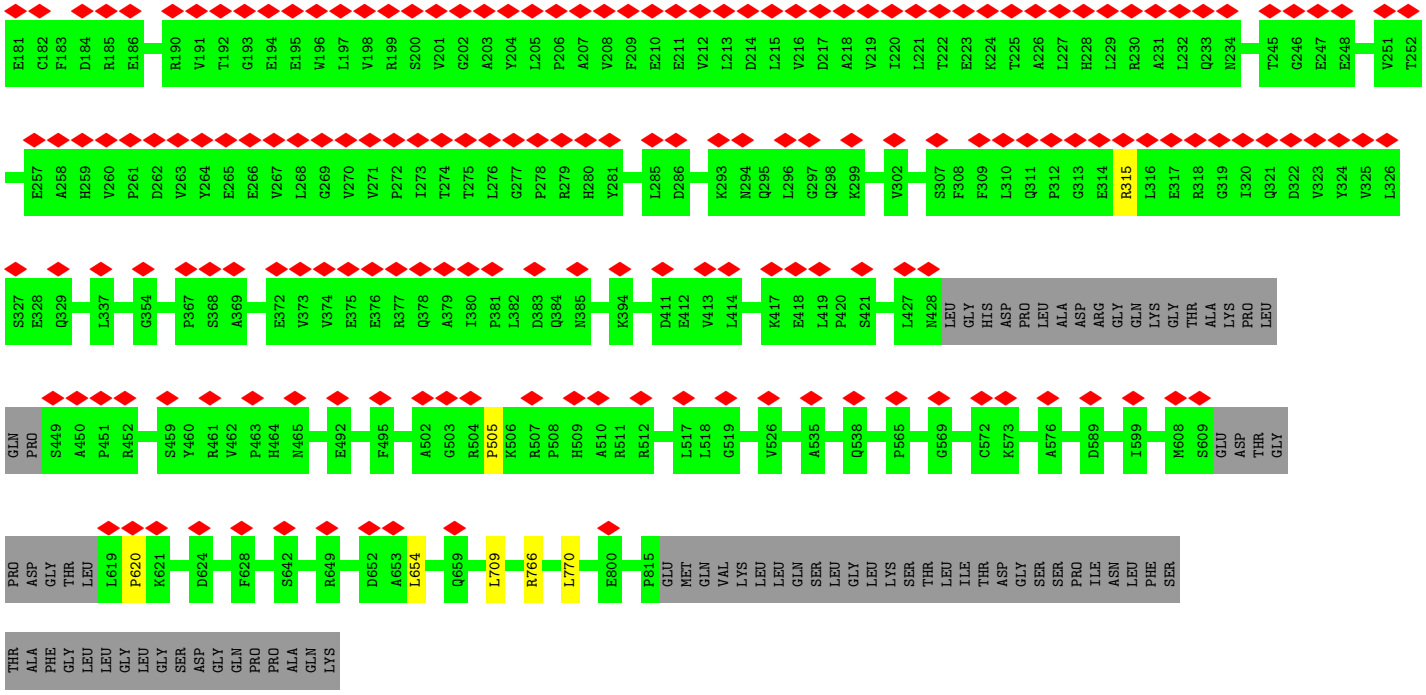
Chain b:





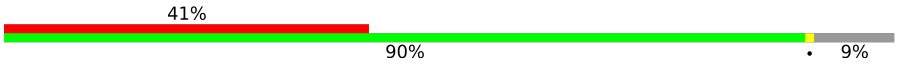


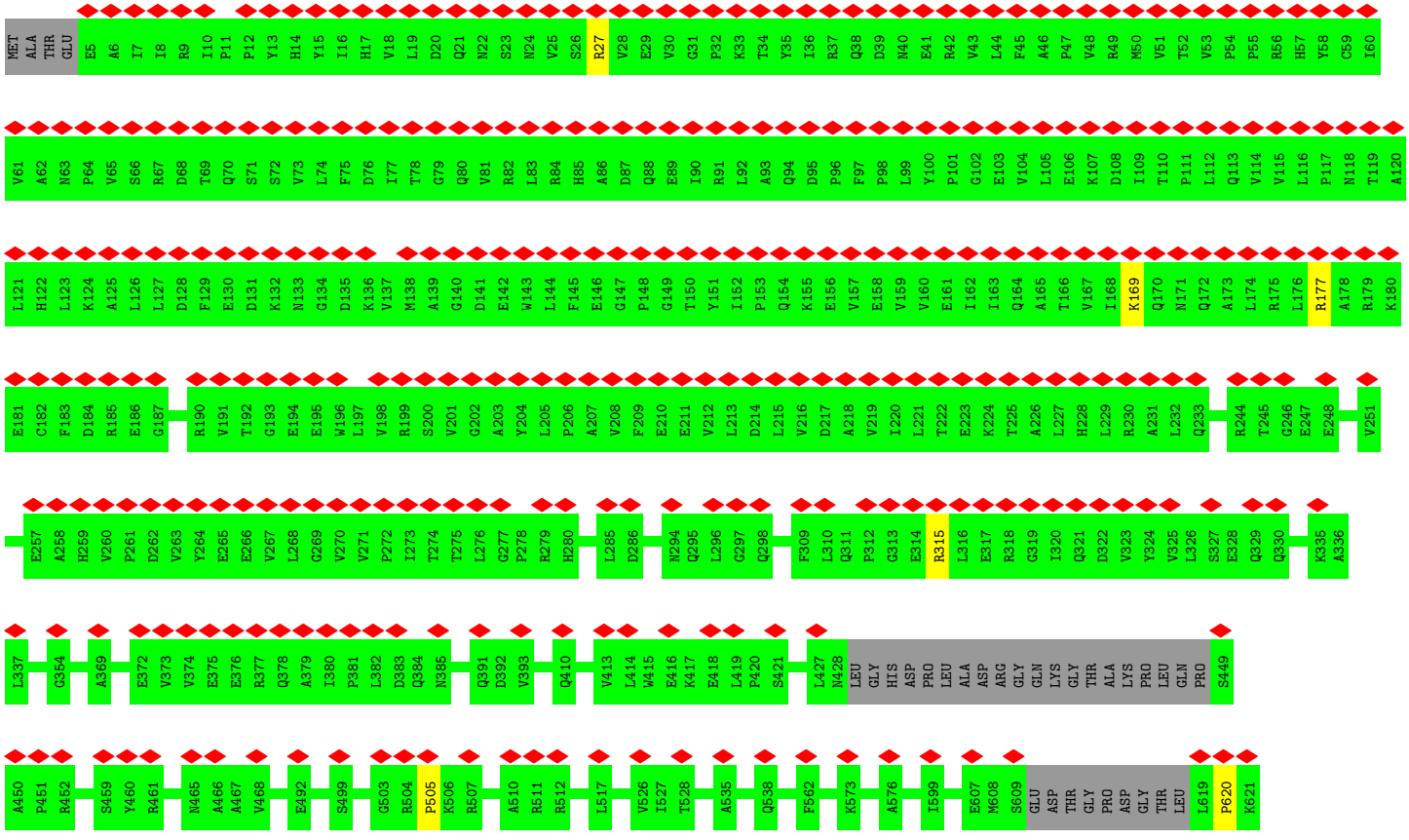


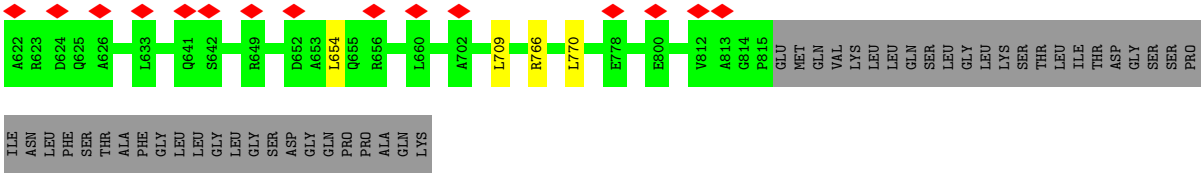


- Molecule 1: Major vault protein

Chain c:

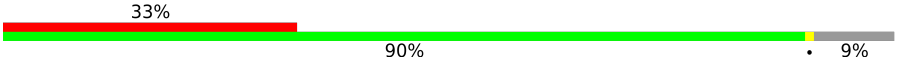


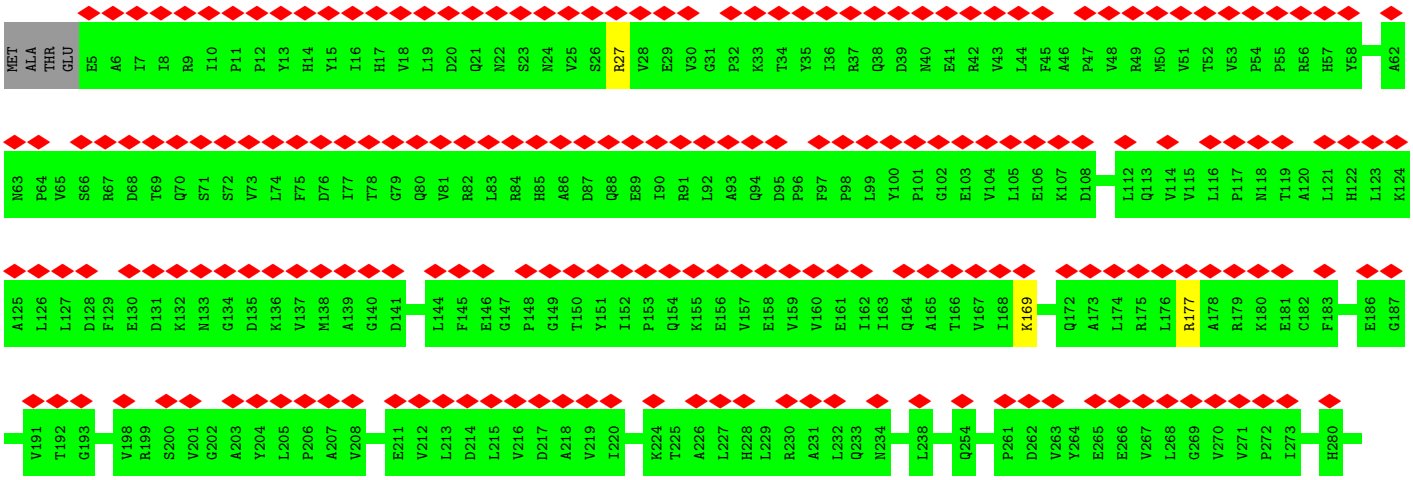




• Molecule 1: Major vault protein

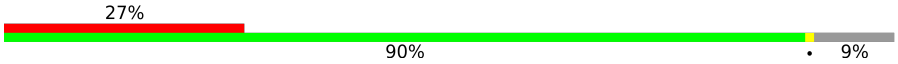
Chain d:

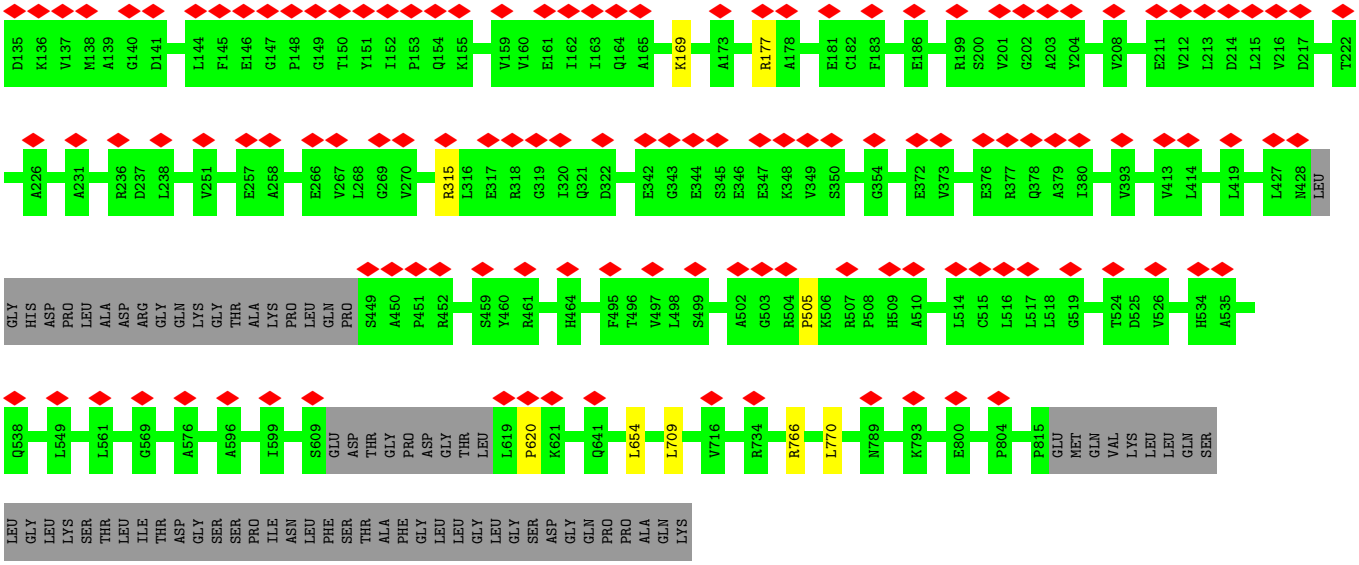




• Molecule 1: Major vault protein

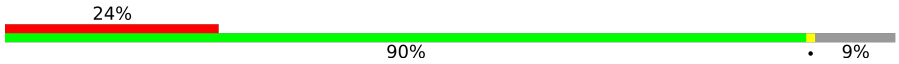
Chain e:

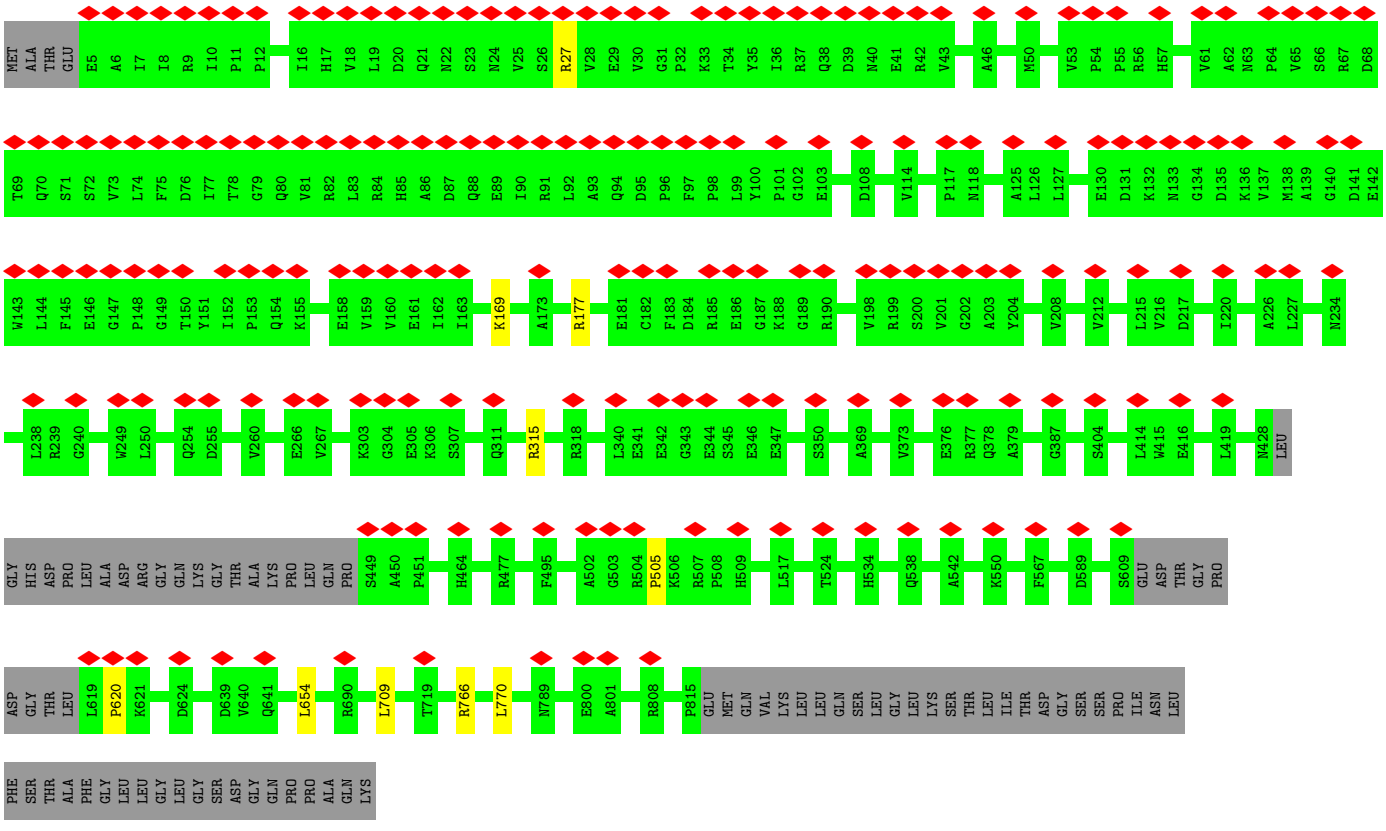




• Molecule 1: Major vault protein

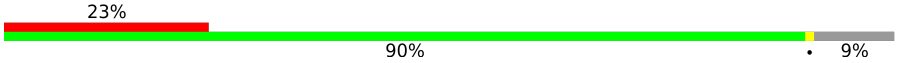
Chain f:

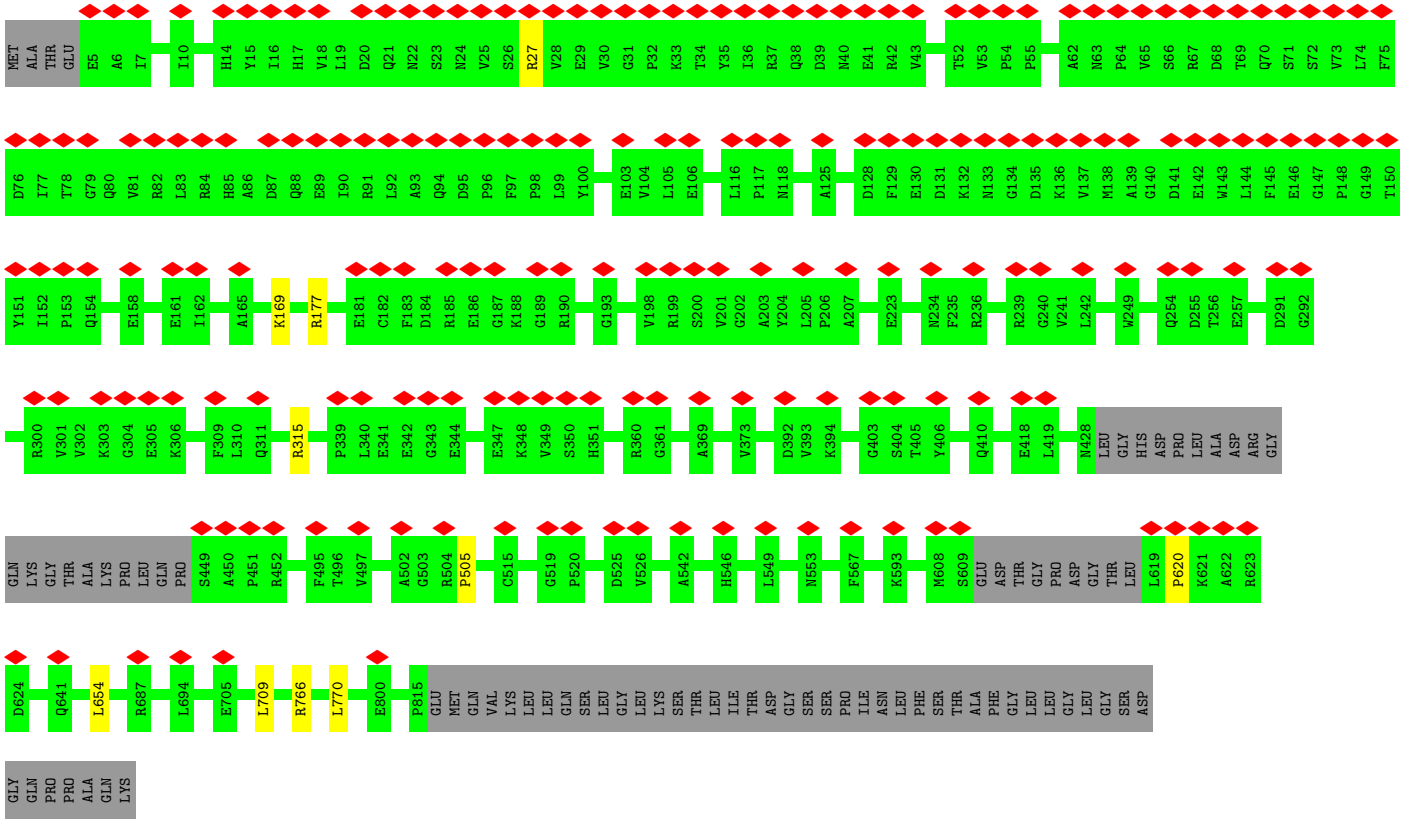




• Molecule 1: Major vault protein

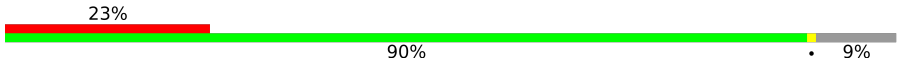
Chain g:

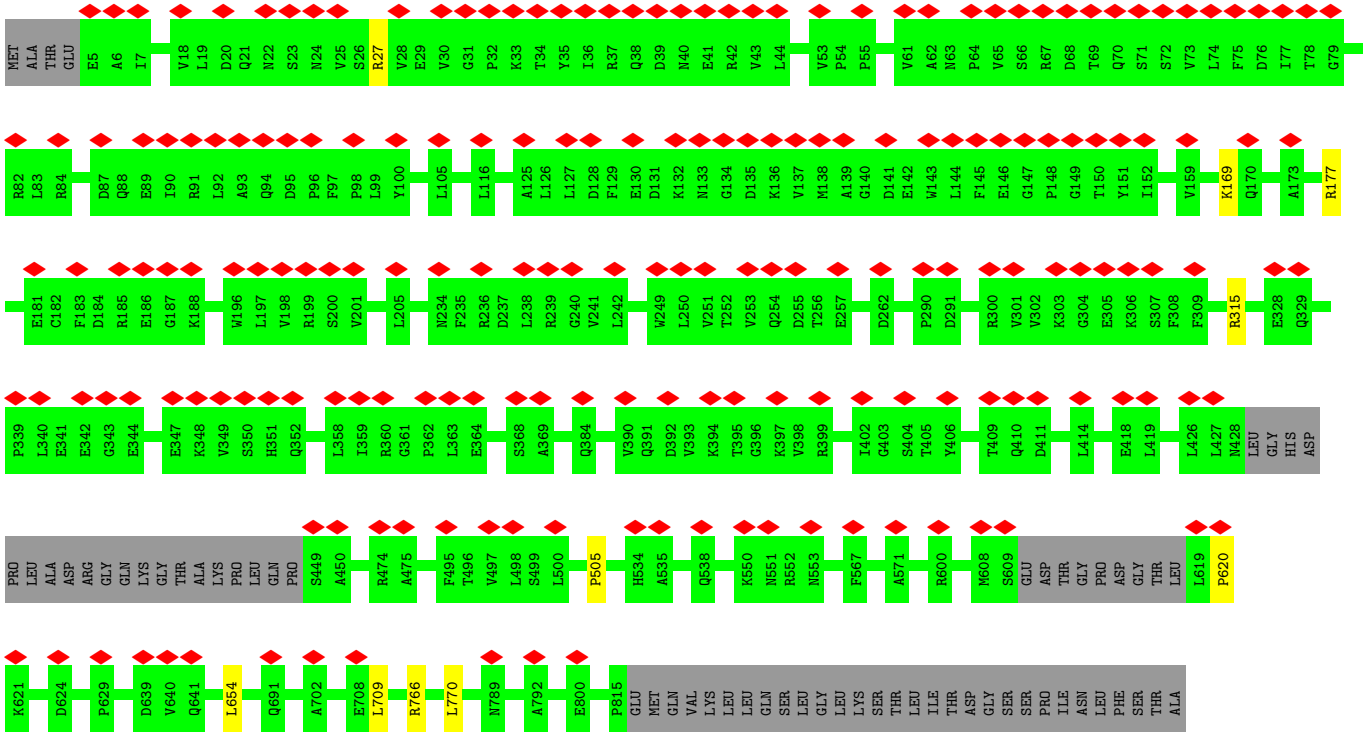




• Molecule 1: Major vault protein

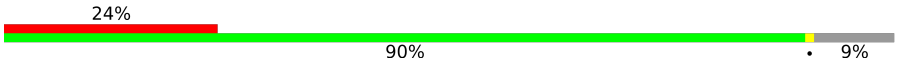
Chain h:

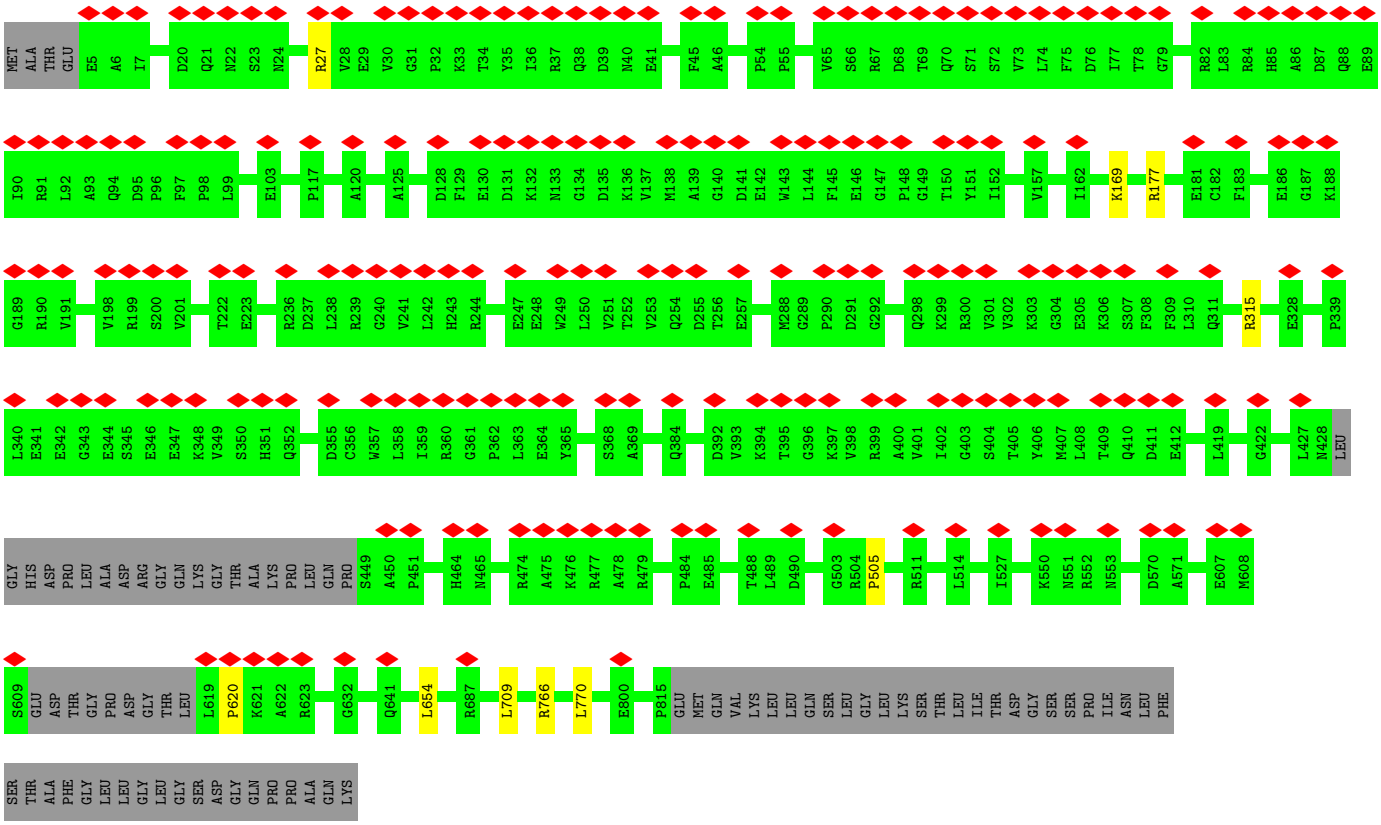




• Molecule 1: Major vault protein

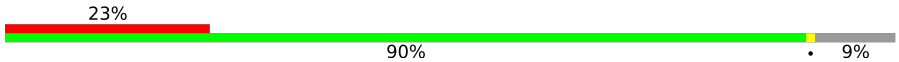
Chain i:

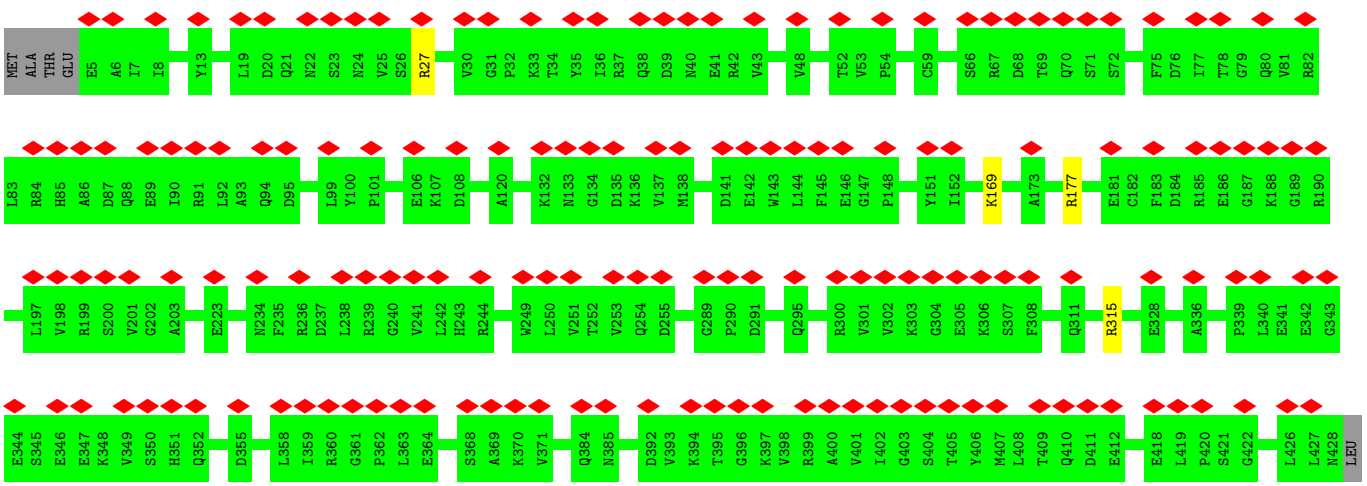


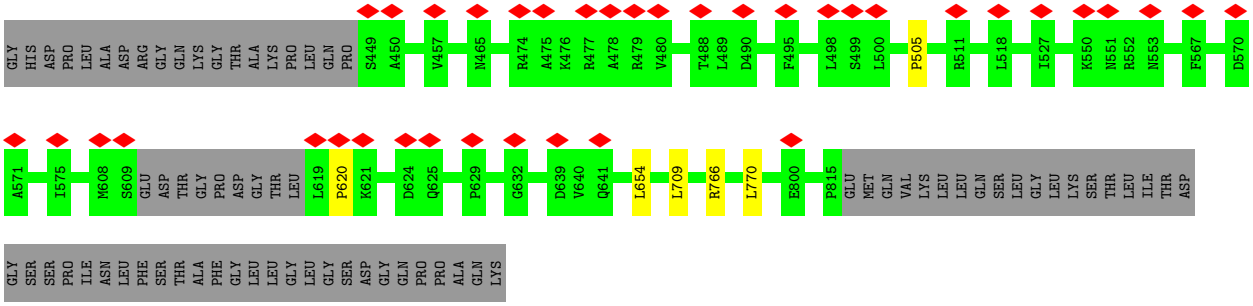


• Molecule 1: Major vault protein

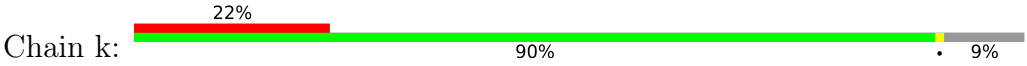
Chain j:

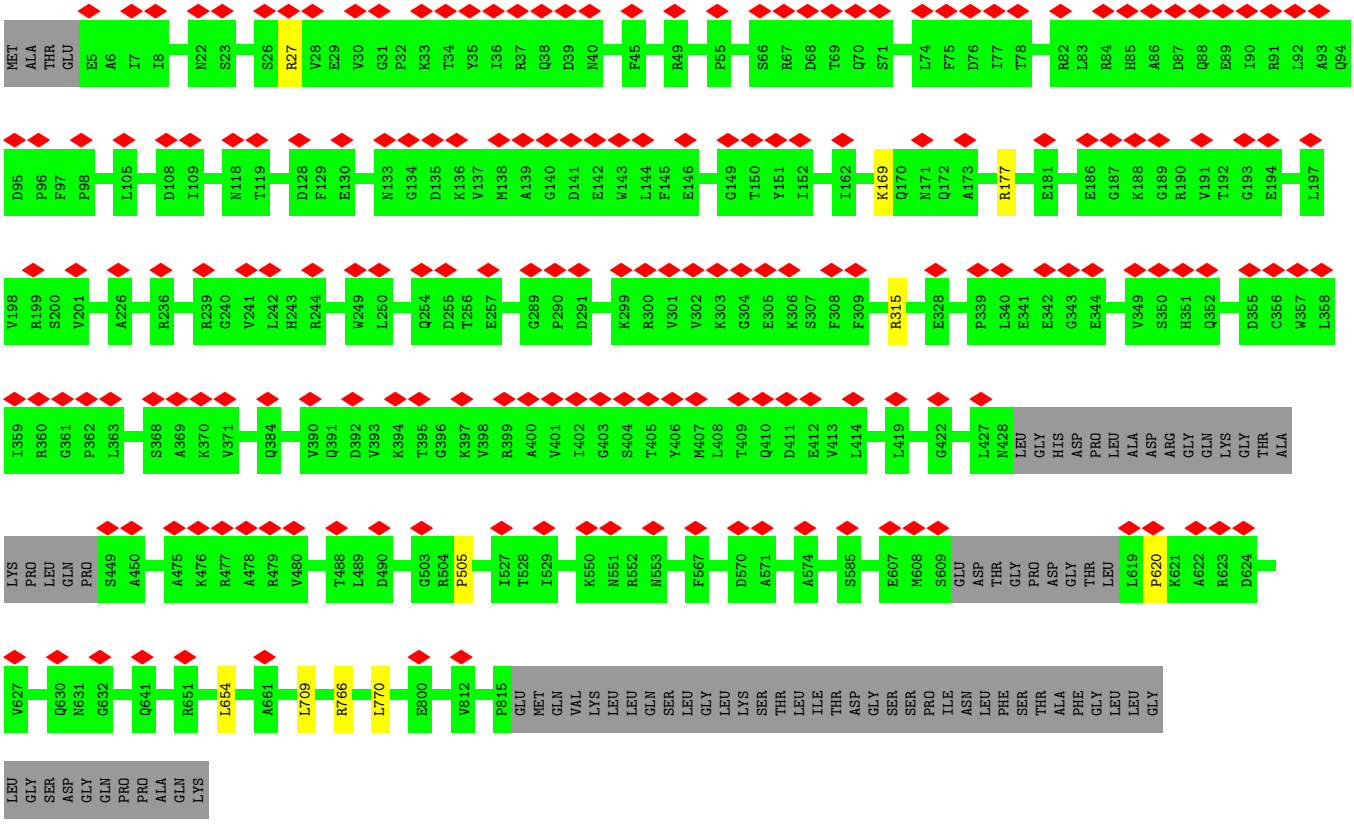




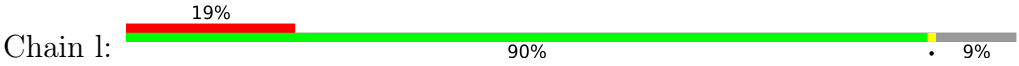


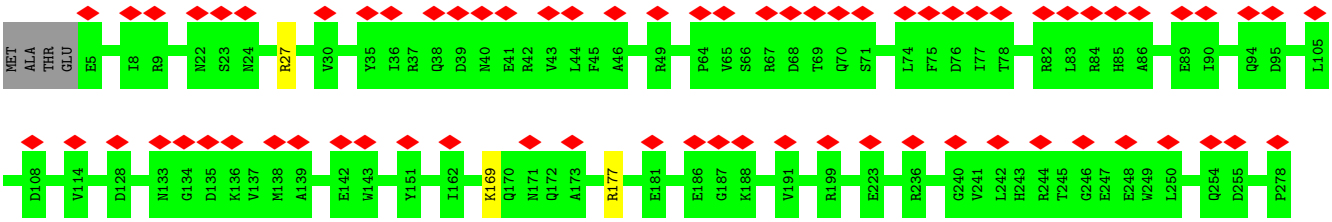
• Molecule 1: Major vault protein

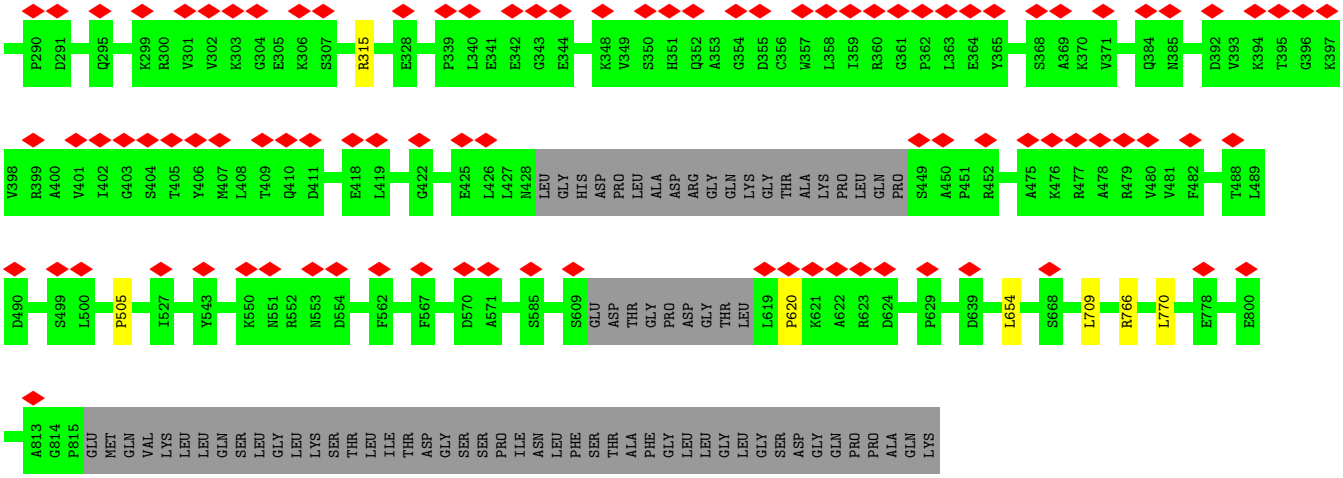




• Molecule 1: Major vault protein

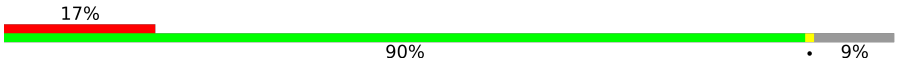


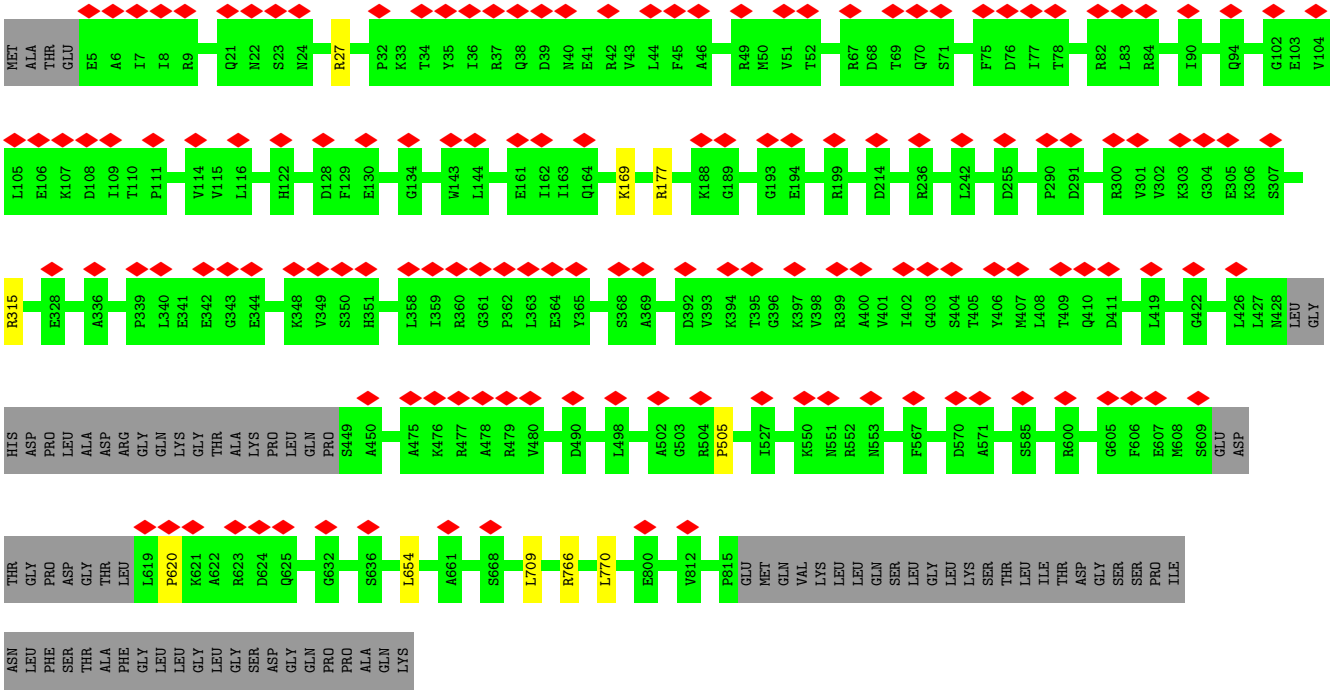




- Molecule 1: Major vault protein

Chain m:





4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	7539	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 ($e^-/Å^2$)	30	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor
Maximum map value	0.503	Depositor
Minimum map value	-0.163	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.026	Depositor
Recommended contour level	0.08	Depositor
Map size (Å)	676.0, 676.0, 676.0	wwPDB
Map dimensions	200, 200, 200	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	3.38, 3.38, 3.38	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
1	A	0.28	0/6262	0.61	5/8484 (0.1%)
1	B	0.28	0/6262	0.61	5/8484 (0.1%)
1	C	0.28	0/6262	0.61	5/8484 (0.1%)
1	D	0.28	0/6262	0.61	5/8484 (0.1%)
1	E	0.28	0/6262	0.61	5/8484 (0.1%)
1	F	0.28	0/6262	0.61	5/8484 (0.1%)
1	G	0.28	0/6262	0.61	5/8484 (0.1%)
1	H	0.28	0/6262	0.61	5/8484 (0.1%)
1	I	0.28	0/6262	0.61	5/8484 (0.1%)
1	J	0.28	0/6262	0.61	5/8484 (0.1%)
1	K	0.28	0/6262	0.61	5/8484 (0.1%)
1	L	0.28	0/6262	0.61	5/8484 (0.1%)
1	M	0.28	0/6262	0.61	5/8484 (0.1%)
1	N	0.28	0/6262	0.61	5/8484 (0.1%)
1	O	0.28	0/6262	0.61	5/8484 (0.1%)
1	P	0.28	0/6262	0.61	5/8484 (0.1%)
1	Q	0.28	0/6262	0.61	5/8484 (0.1%)
1	R	0.28	0/6262	0.61	5/8484 (0.1%)
1	S	0.28	0/6262	0.61	5/8484 (0.1%)
1	T	0.28	0/6262	0.61	5/8484 (0.1%)
1	U	0.28	0/6262	0.61	5/8484 (0.1%)
1	V	0.28	0/6262	0.61	5/8484 (0.1%)
1	W	0.28	0/6262	0.61	5/8484 (0.1%)
1	X	0.28	0/6262	0.61	5/8484 (0.1%)
1	Y	0.28	0/6262	0.61	5/8484 (0.1%)
1	Z	0.28	0/6262	0.61	5/8484 (0.1%)
1	a	0.28	0/6262	0.61	5/8484 (0.1%)
1	b	0.28	0/6262	0.61	5/8484 (0.1%)
1	c	0.28	0/6262	0.61	5/8484 (0.1%)
1	d	0.28	0/6262	0.61	5/8484 (0.1%)
1	e	0.28	0/6262	0.61	5/8484 (0.1%)
1	f	0.28	0/6262	0.61	5/8484 (0.1%)
1	g	0.28	0/6262	0.61	5/8484 (0.1%)
1	h	0.28	0/6262	0.61	5/8484 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
1	i	0.28	0/6262	0.61	5/8484 (0.1%)
1	j	0.28	0/6262	0.61	5/8484 (0.1%)
1	k	0.28	0/6262	0.61	5/8484 (0.1%)
1	l	0.28	0/6262	0.61	5/8484 (0.1%)
1	m	0.28	0/6262	0.61	5/8484 (0.1%)
All	All	0.28	0/244218	0.61	195/330876 (0.1%)

There are no bond length outliers.

All (195) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	709	LEU	CA-CB-CG	8.24	134.26	115.30
1	L	709	LEU	CA-CB-CG	8.24	134.26	115.30
1	H	709	LEU	CA-CB-CG	8.24	134.25	115.30
1	i	709	LEU	CA-CB-CG	8.24	134.25	115.30
1	X	709	LEU	CA-CB-CG	8.24	134.25	115.30
1	F	709	LEU	CA-CB-CG	8.24	134.24	115.30
1	V	709	LEU	CA-CB-CG	8.24	134.25	115.30
1	d	709	LEU	CA-CB-CG	8.24	134.24	115.30
1	g	709	LEU	CA-CB-CG	8.24	134.24	115.30
1	f	709	LEU	CA-CB-CG	8.23	134.24	115.30
1	M	709	LEU	CA-CB-CG	8.23	134.24	115.30
1	O	709	LEU	CA-CB-CG	8.23	134.24	115.30
1	S	709	LEU	CA-CB-CG	8.23	134.24	115.30
1	Y	709	LEU	CA-CB-CG	8.23	134.24	115.30
1	Z	709	LEU	CA-CB-CG	8.23	134.24	115.30
1	j	709	LEU	CA-CB-CG	8.23	134.24	115.30
1	A	709	LEU	CA-CB-CG	8.23	134.23	115.30
1	G	709	LEU	CA-CB-CG	8.23	134.23	115.30
1	W	709	LEU	CA-CB-CG	8.23	134.23	115.30
1	k	709	LEU	CA-CB-CG	8.23	134.23	115.30
1	Q	709	LEU	CA-CB-CG	8.23	134.22	115.30
1	a	709	LEU	CA-CB-CG	8.23	134.23	115.30
1	E	709	LEU	CA-CB-CG	8.23	134.22	115.30
1	R	709	LEU	CA-CB-CG	8.23	134.22	115.30
1	P	709	LEU	CA-CB-CG	8.22	134.21	115.30
1	T	709	LEU	CA-CB-CG	8.22	134.21	115.30
1	m	709	LEU	CA-CB-CG	8.22	134.21	115.30
1	C	709	LEU	CA-CB-CG	8.22	134.21	115.30
1	h	709	LEU	CA-CB-CG	8.22	134.21	115.30
1	K	709	LEU	CA-CB-CG	8.22	134.21	115.30
1	c	709	LEU	CA-CB-CG	8.22	134.21	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	I	709	LEU	CA-CB-CG	8.21	134.19	115.30
1	J	709	LEU	CA-CB-CG	8.21	134.19	115.30
1	N	709	LEU	CA-CB-CG	8.21	134.19	115.30
1	b	709	LEU	CA-CB-CG	8.21	134.19	115.30
1	U	709	LEU	CA-CB-CG	8.21	134.18	115.30
1	e	709	LEU	CA-CB-CG	8.21	134.18	115.30
1	B	709	LEU	CA-CB-CG	8.21	134.18	115.30
1	l	709	LEU	CA-CB-CG	8.21	134.17	115.30
1	Z	766	ARG	CA-CB-CG	7.09	129.00	113.40
1	e	766	ARG	CA-CB-CG	7.08	128.98	113.40
1	W	766	ARG	CA-CB-CG	7.08	128.98	113.40
1	Y	766	ARG	CA-CB-CG	7.08	128.98	113.40
1	T	766	ARG	CA-CB-CG	7.08	128.97	113.40
1	k	766	ARG	CA-CB-CG	7.08	128.97	113.40
1	I	766	ARG	CA-CB-CG	7.08	128.97	113.40
1	O	766	ARG	CA-CB-CG	7.08	128.97	113.40
1	U	766	ARG	CA-CB-CG	7.08	128.97	113.40
1	c	766	ARG	CA-CB-CG	7.08	128.97	113.40
1	X	766	ARG	CA-CB-CG	7.07	128.96	113.40
1	g	766	ARG	CA-CB-CG	7.07	128.96	113.40
1	f	766	ARG	CA-CB-CG	7.07	128.96	113.40
1	J	766	ARG	CA-CB-CG	7.07	128.96	113.40
1	h	766	ARG	CA-CB-CG	7.07	128.96	113.40
1	l	766	ARG	CA-CB-CG	7.07	128.96	113.40
1	B	766	ARG	CA-CB-CG	7.07	128.95	113.40
1	Q	766	ARG	CA-CB-CG	7.07	128.95	113.40
1	b	766	ARG	CA-CB-CG	7.07	128.95	113.40
1	K	766	ARG	CA-CB-CG	7.07	128.95	113.40
1	N	766	ARG	CA-CB-CG	7.07	128.95	113.40
1	E	766	ARG	CA-CB-CG	7.07	128.94	113.40
1	F	766	ARG	CA-CB-CG	7.07	128.94	113.40
1	L	766	ARG	CA-CB-CG	7.07	128.94	113.40
1	M	766	ARG	CA-CB-CG	7.07	128.94	113.40
1	a	766	ARG	CA-CB-CG	7.07	128.94	113.40
1	V	766	ARG	CA-CB-CG	7.06	128.94	113.40
1	R	766	ARG	CA-CB-CG	7.06	128.94	113.40
1	A	766	ARG	CA-CB-CG	7.06	128.93	113.40
1	C	766	ARG	CA-CB-CG	7.06	128.93	113.40
1	G	766	ARG	CA-CB-CG	7.06	128.93	113.40
1	i	766	ARG	CA-CB-CG	7.06	128.93	113.40
1	m	766	ARG	CA-CB-CG	7.06	128.93	113.40
1	S	766	ARG	CA-CB-CG	7.06	128.93	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	d	766	ARG	CA-CB-CG	7.06	128.93	113.40
1	H	766	ARG	CA-CB-CG	7.06	128.92	113.40
1	P	766	ARG	CA-CB-CG	7.05	128.92	113.40
1	j	766	ARG	CA-CB-CG	7.05	128.91	113.40
1	D	766	ARG	CA-CB-CG	7.05	128.91	113.40
1	M	770	LEU	CA-CB-CG	5.12	127.08	115.30
1	a	770	LEU	CA-CB-CG	5.11	127.06	115.30
1	X	770	LEU	CA-CB-CG	5.11	127.05	115.30
1	K	770	LEU	CA-CB-CG	5.11	127.04	115.30
1	R	770	LEU	CA-CB-CG	5.11	127.04	115.30
1	g	770	LEU	CA-CB-CG	5.10	127.04	115.30
1	G	770	LEU	CA-CB-CG	5.10	127.03	115.30
1	Z	770	LEU	CA-CB-CG	5.10	127.03	115.30
1	I	770	LEU	CA-CB-CG	5.10	127.02	115.30
1	V	770	LEU	CA-CB-CG	5.10	127.03	115.30
1	Y	770	LEU	CA-CB-CG	5.10	127.03	115.30
1	d	770	LEU	CA-CB-CG	5.10	127.03	115.30
1	l	770	LEU	CA-CB-CG	5.10	127.02	115.30
1	S	770	LEU	CA-CB-CG	5.10	127.02	115.30
1	f	770	LEU	CA-CB-CG	5.10	127.02	115.30
1	F	770	LEU	CA-CB-CG	5.09	127.02	115.30
1	O	770	LEU	CA-CB-CG	5.09	127.02	115.30
1	Q	770	LEU	CA-CB-CG	5.09	127.02	115.30
1	e	770	LEU	CA-CB-CG	5.09	127.02	115.30
1	i	770	LEU	CA-CB-CG	5.09	127.02	115.30
1	j	770	LEU	CA-CB-CG	5.09	127.02	115.30
1	m	770	LEU	CA-CB-CG	5.09	127.02	115.30
1	J	770	LEU	CA-CB-CG	5.09	127.01	115.30
1	N	770	LEU	CA-CB-CG	5.09	127.01	115.30
1	B	770	LEU	CA-CB-CG	5.09	127.00	115.30
1	D	770	LEU	CA-CB-CG	5.09	127.00	115.30
1	E	770	LEU	CA-CB-CG	5.09	127.00	115.30
1	b	770	LEU	CA-CB-CG	5.09	127.00	115.30
1	C	770	LEU	CA-CB-CG	5.09	127.00	115.30
1	L	770	LEU	CA-CB-CG	5.09	127.00	115.30
1	W	770	LEU	CA-CB-CG	5.09	127.00	115.30
1	A	770	LEU	CA-CB-CG	5.08	126.99	115.30
1	H	770	LEU	CA-CB-CG	5.08	126.99	115.30
1	c	770	LEU	CA-CB-CG	5.08	126.99	115.30
1	T	770	LEU	CA-CB-CG	5.08	126.99	115.30
1	U	770	LEU	CA-CB-CG	5.08	126.99	115.30
1	h	770	LEU	CA-CB-CG	5.08	126.99	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	k	770	LEU	CA-CB-CG	5.08	126.99	115.30
1	P	770	LEU	CA-CB-CG	5.07	126.97	115.30
1	m	766	ARG	CB-CA-C	5.05	120.51	110.40
1	W	766	ARG	CB-CA-C	5.05	120.50	110.40
1	C	766	ARG	CB-CA-C	5.05	120.50	110.40
1	S	654	LEU	CA-CB-CG	5.05	126.91	115.30
1	h	654	LEU	CA-CB-CG	5.05	126.91	115.30
1	a	766	ARG	CB-CA-C	5.05	120.50	110.40
1	V	766	ARG	CB-CA-C	5.05	120.49	110.40
1	Y	654	LEU	CA-CB-CG	5.05	126.91	115.30
1	f	654	LEU	CA-CB-CG	5.05	126.91	115.30
1	j	654	LEU	CA-CB-CG	5.05	126.91	115.30
1	E	654	LEU	CA-CB-CG	5.04	126.90	115.30
1	G	766	ARG	CB-CA-C	5.04	120.49	110.40
1	l	654	LEU	CA-CB-CG	5.04	126.90	115.30
1	Y	766	ARG	CB-CA-C	5.04	120.48	110.40
1	b	654	LEU	CA-CB-CG	5.04	126.90	115.30
1	b	766	ARG	CB-CA-C	5.04	120.48	110.40
1	H	766	ARG	CB-CA-C	5.04	120.48	110.40
1	S	766	ARG	CB-CA-C	5.04	120.48	110.40
1	F	654	LEU	CA-CB-CG	5.04	126.89	115.30
1	Z	654	LEU	CA-CB-CG	5.04	126.89	115.30
1	h	766	ARG	CB-CA-C	5.04	120.47	110.40
1	I	654	LEU	CA-CB-CG	5.04	126.88	115.30
1	I	766	ARG	CB-CA-C	5.04	120.47	110.40
1	Q	654	LEU	CA-CB-CG	5.04	126.88	115.30
1	m	654	LEU	CA-CB-CG	5.04	126.88	115.30
1	G	654	LEU	CA-CB-CG	5.03	126.88	115.30
1	P	654	LEU	CA-CB-CG	5.03	126.88	115.30
1	e	766	ARG	CB-CA-C	5.03	120.47	110.40
1	i	654	LEU	CA-CB-CG	5.03	126.88	115.30
1	k	654	LEU	CA-CB-CG	5.03	126.88	115.30
1	l	766	ARG	CB-CA-C	5.03	120.47	110.40
1	N	766	ARG	CB-CA-C	5.03	120.46	110.40
1	R	654	LEU	CA-CB-CG	5.03	126.87	115.30
1	d	766	ARG	CB-CA-C	5.03	120.47	110.40
1	A	654	LEU	CA-CB-CG	5.03	126.87	115.30
1	A	766	ARG	CB-CA-C	5.03	120.46	110.40
1	L	654	LEU	CA-CB-CG	5.03	126.87	115.30
1	Q	766	ARG	CB-CA-C	5.03	120.46	110.40
1	g	654	LEU	CA-CB-CG	5.03	126.87	115.30
1	K	766	ARG	CB-CA-C	5.03	120.46	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	L	766	ARG	CB-CA-C	5.03	120.46	110.40
1	V	654	LEU	CA-CB-CG	5.03	126.87	115.30
1	e	654	LEU	CA-CB-CG	5.03	126.87	115.30
1	f	766	ARG	CB-CA-C	5.03	120.46	110.40
1	M	654	LEU	CA-CB-CG	5.03	126.86	115.30
1	N	654	LEU	CA-CB-CG	5.03	126.86	115.30
1	P	766	ARG	CB-CA-C	5.03	120.45	110.40
1	R	766	ARG	CB-CA-C	5.03	120.45	110.40
1	T	654	LEU	CA-CB-CG	5.03	126.86	115.30
1	T	766	ARG	CB-CA-C	5.03	120.46	110.40
1	a	654	LEU	CA-CB-CG	5.03	126.86	115.30
1	B	766	ARG	CB-CA-C	5.03	120.45	110.40
1	H	654	LEU	CA-CB-CG	5.03	126.86	115.30
1	O	654	LEU	CA-CB-CG	5.03	126.86	115.30
1	j	766	ARG	CB-CA-C	5.03	120.45	110.40
1	D	766	ARG	CB-CA-C	5.02	120.45	110.40
1	i	766	ARG	CB-CA-C	5.02	120.45	110.40
1	O	766	ARG	CB-CA-C	5.02	120.45	110.40
1	W	654	LEU	CA-CB-CG	5.02	126.85	115.30
1	X	654	LEU	CA-CB-CG	5.02	126.85	115.30
1	D	654	LEU	CA-CB-CG	5.02	126.85	115.30
1	J	766	ARG	CB-CA-C	5.02	120.44	110.40
1	K	654	LEU	CA-CB-CG	5.02	126.85	115.30
1	d	654	LEU	CA-CB-CG	5.02	126.85	115.30
1	M	766	ARG	CB-CA-C	5.02	120.44	110.40
1	U	766	ARG	CB-CA-C	5.02	120.44	110.40
1	c	654	LEU	CA-CB-CG	5.02	126.84	115.30
1	k	766	ARG	CB-CA-C	5.02	120.43	110.40
1	Z	766	ARG	CB-CA-C	5.02	120.43	110.40
1	g	766	ARG	CB-CA-C	5.02	120.43	110.40
1	X	766	ARG	CB-CA-C	5.01	120.43	110.40
1	B	654	LEU	CA-CB-CG	5.01	126.83	115.30
1	E	766	ARG	CB-CA-C	5.01	120.42	110.40
1	J	654	LEU	CA-CB-CG	5.01	126.83	115.30
1	U	654	LEU	CA-CB-CG	5.01	126.82	115.30
1	C	654	LEU	CA-CB-CG	5.01	126.82	115.30
1	c	766	ARG	CB-CA-C	5.01	120.42	110.40
1	F	766	ARG	CB-CA-C	5.01	120.41	110.40

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

Due to software issues we are unable to calculate clashes - this section is therefore empty.

5.3 Torsion angles

5.3.1 Protein backbone

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	776/861 (90%)	742 (96%)	32 (4%)	2 (0%)	41	77
1	B	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	C	776/861 (90%)	740 (95%)	34 (4%)	2 (0%)	41	77
1	D	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	E	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	F	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	G	776/861 (90%)	740 (95%)	34 (4%)	2 (0%)	41	77
1	H	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	I	776/861 (90%)	740 (95%)	34 (4%)	2 (0%)	41	77
1	J	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	K	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	L	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	M	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	N	776/861 (90%)	742 (96%)	32 (4%)	2 (0%)	41	77
1	O	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	P	776/861 (90%)	740 (95%)	34 (4%)	2 (0%)	41	77
1	Q	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	R	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	S	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	T	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	U	776/861 (90%)	740 (95%)	34 (4%)	2 (0%)	41	77

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	V	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	W	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	X	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	Y	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	Z	776/861 (90%)	742 (96%)	32 (4%)	2 (0%)	41	77
1	a	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	b	776/861 (90%)	742 (96%)	32 (4%)	2 (0%)	41	77
1	c	776/861 (90%)	742 (96%)	32 (4%)	2 (0%)	41	77
1	d	776/861 (90%)	740 (95%)	34 (4%)	2 (0%)	41	77
1	e	776/861 (90%)	740 (95%)	34 (4%)	2 (0%)	41	77
1	f	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	g	776/861 (90%)	742 (96%)	32 (4%)	2 (0%)	41	77
1	h	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	i	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	j	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	k	776/861 (90%)	742 (96%)	32 (4%)	2 (0%)	41	77
1	l	776/861 (90%)	741 (96%)	33 (4%)	2 (0%)	41	77
1	m	776/861 (90%)	740 (95%)	34 (4%)	2 (0%)	41	77
All	All	30264/33579 (90%)	28898 (96%)	1288 (4%)	78 (0%)	44	77

All (78) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	620	PRO
1	B	620	PRO
1	C	620	PRO
1	D	620	PRO
1	E	620	PRO
1	F	620	PRO
1	G	620	PRO
1	H	620	PRO
1	I	620	PRO
1	J	620	PRO
1	K	620	PRO
1	L	620	PRO
1	M	620	PRO

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Mol	Chain	Res	Type
1	N	620	PRO
1	O	620	PRO
1	P	620	PRO
1	Q	620	PRO
1	R	620	PRO
1	S	620	PRO
1	T	620	PRO
1	U	620	PRO
1	V	620	PRO
1	W	620	PRO
1	X	620	PRO
1	Y	620	PRO
1	Z	620	PRO
1	a	620	PRO
1	b	620	PRO
1	c	620	PRO
1	d	620	PRO
1	e	620	PRO
1	f	620	PRO
1	g	620	PRO
1	h	620	PRO
1	i	620	PRO
1	j	620	PRO
1	k	620	PRO
1	l	620	PRO
1	m	620	PRO
1	A	505	PRO
1	B	505	PRO
1	C	505	PRO
1	D	505	PRO
1	E	505	PRO
1	F	505	PRO
1	G	505	PRO
1	H	505	PRO
1	I	505	PRO
1	J	505	PRO
1	K	505	PRO
1	L	505	PRO
1	M	505	PRO
1	N	505	PRO
1	O	505	PRO
1	P	505	PRO

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Mol	Chain	Res	Type
1	Q	505	PRO
1	R	505	PRO
1	S	505	PRO
1	T	505	PRO
1	U	505	PRO
1	V	505	PRO
1	W	505	PRO
1	X	505	PRO
1	Y	505	PRO
1	Z	505	PRO
1	a	505	PRO
1	b	505	PRO
1	c	505	PRO
1	d	505	PRO
1	e	505	PRO
1	f	505	PRO
1	g	505	PRO
1	h	505	PRO
1	i	505	PRO
1	j	505	PRO
1	k	505	PRO
1	l	505	PRO
1	m	505	PRO

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	657/727 (90%)	653 (99%)	4 (1%)	86 92
1	B	657/727 (90%)	653 (99%)	4 (1%)	86 92
1	C	657/727 (90%)	653 (99%)	4 (1%)	86 92
1	D	657/727 (90%)	653 (99%)	4 (1%)	86 92
1	E	657/727 (90%)	653 (99%)	4 (1%)	86 92
1	F	657/727 (90%)	653 (99%)	4 (1%)	86 92

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	G	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	H	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	I	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	J	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	K	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	L	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	M	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	N	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	O	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	P	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	Q	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	R	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	S	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	T	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	U	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	V	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	W	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	X	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	Y	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	Z	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	a	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	b	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	c	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	d	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	e	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	f	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	g	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	h	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	i	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	j	657/727 (90%)	653 (99%)	4 (1%)	86	92
1	k	657/727 (90%)	653 (99%)	4 (1%)	86	92

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	l	657/727 (90%)	653 (99%)	4 (1%)	86 92
1	m	657/727 (90%)	653 (99%)	4 (1%)	86 92
All	All	25623/28353 (90%)	25467 (99%)	156 (1%)	86 92

All (156) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	27	ARG
1	A	169	LYS
1	A	177	ARG
1	A	315	ARG
1	B	27	ARG
1	B	169	LYS
1	B	177	ARG
1	B	315	ARG
1	C	27	ARG
1	C	169	LYS
1	C	177	ARG
1	C	315	ARG
1	D	27	ARG
1	D	169	LYS
1	D	177	ARG
1	D	315	ARG
1	E	27	ARG
1	E	169	LYS
1	E	177	ARG
1	E	315	ARG
1	F	27	ARG
1	F	169	LYS
1	F	177	ARG
1	F	315	ARG
1	G	27	ARG
1	G	169	LYS
1	G	177	ARG
1	G	315	ARG
1	H	27	ARG
1	H	169	LYS
1	H	177	ARG
1	H	315	ARG
1	I	27	ARG
1	I	169	LYS

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Mol	Chain	Res	Type
1	I	177	ARG
1	I	315	ARG
1	J	27	ARG
1	J	169	LYS
1	J	177	ARG
1	J	315	ARG
1	K	27	ARG
1	K	169	LYS
1	K	177	ARG
1	K	315	ARG
1	L	27	ARG
1	L	169	LYS
1	L	177	ARG
1	L	315	ARG
1	M	27	ARG
1	M	169	LYS
1	M	177	ARG
1	M	315	ARG
1	N	27	ARG
1	N	169	LYS
1	N	177	ARG
1	N	315	ARG
1	O	27	ARG
1	O	169	LYS
1	O	177	ARG
1	O	315	ARG
1	P	27	ARG
1	P	169	LYS
1	P	177	ARG
1	P	315	ARG
1	Q	27	ARG
1	Q	169	LYS
1	Q	177	ARG
1	Q	315	ARG
1	R	27	ARG
1	R	169	LYS
1	R	177	ARG
1	R	315	ARG
1	S	27	ARG
1	S	169	LYS
1	S	177	ARG
1	S	315	ARG

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Mol	Chain	Res	Type
1	T	27	ARG
1	T	169	LYS
1	T	177	ARG
1	T	315	ARG
1	U	27	ARG
1	U	169	LYS
1	U	177	ARG
1	U	315	ARG
1	V	27	ARG
1	V	169	LYS
1	V	177	ARG
1	V	315	ARG
1	W	27	ARG
1	W	169	LYS
1	W	177	ARG
1	W	315	ARG
1	X	27	ARG
1	X	169	LYS
1	X	177	ARG
1	X	315	ARG
1	Y	27	ARG
1	Y	169	LYS
1	Y	177	ARG
1	Y	315	ARG
1	Z	27	ARG
1	Z	169	LYS
1	Z	177	ARG
1	Z	315	ARG
1	a	27	ARG
1	a	169	LYS
1	a	177	ARG
1	a	315	ARG
1	b	27	ARG
1	b	169	LYS
1	b	177	ARG
1	b	315	ARG
1	c	27	ARG
1	c	169	LYS
1	c	177	ARG
1	c	315	ARG
1	d	27	ARG
1	d	169	LYS

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Mol	Chain	Res	Type
1	d	177	ARG
1	d	315	ARG
1	e	27	ARG
1	e	169	LYS
1	e	177	ARG
1	e	315	ARG
1	f	27	ARG
1	f	169	LYS
1	f	177	ARG
1	f	315	ARG
1	g	27	ARG
1	g	169	LYS
1	g	177	ARG
1	g	315	ARG
1	h	27	ARG
1	h	169	LYS
1	h	177	ARG
1	h	315	ARG
1	i	27	ARG
1	i	169	LYS
1	i	177	ARG
1	i	315	ARG
1	j	27	ARG
1	j	169	LYS
1	j	177	ARG
1	j	315	ARG
1	k	27	ARG
1	k	169	LYS
1	k	177	ARG
1	k	315	ARG
1	l	27	ARG
1	l	169	LYS
1	l	177	ARG
1	l	315	ARG
1	m	27	ARG
1	m	169	LYS
1	m	177	ARG
1	m	315	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (351) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	113	GLN
1	A	321	GLN
1	A	469	GLN
1	A	538	GLN
1	A	641	GLN
1	A	655	GLN
1	A	669	GLN
1	A	691	GLN
1	A	749	GLN
1	B	113	GLN
1	B	321	GLN
1	B	469	GLN
1	B	538	GLN
1	B	641	GLN
1	B	655	GLN
1	B	669	GLN
1	B	691	GLN
1	B	749	GLN
1	C	113	GLN
1	C	321	GLN
1	C	469	GLN
1	C	538	GLN
1	C	641	GLN
1	C	655	GLN
1	C	669	GLN
1	C	691	GLN
1	C	749	GLN
1	D	113	GLN
1	D	321	GLN
1	D	469	GLN
1	D	538	GLN
1	D	641	GLN
1	D	655	GLN
1	D	669	GLN
1	D	691	GLN
1	D	749	GLN
1	E	113	GLN
1	E	321	GLN
1	E	469	GLN
1	E	538	GLN
1	E	641	GLN
1	E	655	GLN
1	E	669	GLN

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Mol	Chain	Res	Type
1	E	691	GLN
1	E	749	GLN
1	F	113	GLN
1	F	321	GLN
1	F	469	GLN
1	F	538	GLN
1	F	641	GLN
1	F	655	GLN
1	F	669	GLN
1	F	691	GLN
1	F	749	GLN
1	G	113	GLN
1	G	321	GLN
1	G	469	GLN
1	G	538	GLN
1	G	641	GLN
1	G	655	GLN
1	G	669	GLN
1	G	691	GLN
1	G	749	GLN
1	H	113	GLN
1	H	321	GLN
1	H	469	GLN
1	H	538	GLN
1	H	641	GLN
1	H	655	GLN
1	H	669	GLN
1	H	691	GLN
1	H	749	GLN
1	I	113	GLN
1	I	321	GLN
1	I	469	GLN
1	I	538	GLN
1	I	641	GLN
1	I	655	GLN
1	I	669	GLN
1	I	691	GLN
1	I	749	GLN
1	J	113	GLN
1	J	321	GLN
1	J	469	GLN
1	J	538	GLN

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Mol	Chain	Res	Type
1	J	641	GLN
1	J	655	GLN
1	J	669	GLN
1	J	691	GLN
1	J	749	GLN
1	K	113	GLN
1	K	321	GLN
1	K	469	GLN
1	K	538	GLN
1	K	641	GLN
1	K	655	GLN
1	K	669	GLN
1	K	691	GLN
1	K	749	GLN
1	L	113	GLN
1	L	321	GLN
1	L	469	GLN
1	L	538	GLN
1	L	641	GLN
1	L	655	GLN
1	L	669	GLN
1	L	691	GLN
1	L	749	GLN
1	M	113	GLN
1	M	321	GLN
1	M	469	GLN
1	M	538	GLN
1	M	641	GLN
1	M	655	GLN
1	M	669	GLN
1	M	691	GLN
1	M	749	GLN
1	N	113	GLN
1	N	321	GLN
1	N	469	GLN
1	N	538	GLN
1	N	641	GLN
1	N	655	GLN
1	N	669	GLN
1	N	691	GLN
1	N	749	GLN
1	O	113	GLN

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Mol	Chain	Res	Type
1	O	321	GLN
1	O	469	GLN
1	O	538	GLN
1	O	641	GLN
1	O	655	GLN
1	O	669	GLN
1	O	691	GLN
1	O	749	GLN
1	P	113	GLN
1	P	321	GLN
1	P	469	GLN
1	P	538	GLN
1	P	641	GLN
1	P	655	GLN
1	P	669	GLN
1	P	691	GLN
1	P	749	GLN
1	Q	113	GLN
1	Q	321	GLN
1	Q	469	GLN
1	Q	538	GLN
1	Q	641	GLN
1	Q	655	GLN
1	Q	669	GLN
1	Q	691	GLN
1	Q	749	GLN
1	R	113	GLN
1	R	321	GLN
1	R	469	GLN
1	R	538	GLN
1	R	641	GLN
1	R	655	GLN
1	R	669	GLN
1	R	691	GLN
1	R	749	GLN
1	S	113	GLN
1	S	321	GLN
1	S	469	GLN
1	S	538	GLN
1	S	641	GLN
1	S	655	GLN
1	S	669	GLN

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Mol	Chain	Res	Type
1	S	691	GLN
1	S	749	GLN
1	T	113	GLN
1	T	321	GLN
1	T	469	GLN
1	T	538	GLN
1	T	641	GLN
1	T	655	GLN
1	T	669	GLN
1	T	691	GLN
1	T	749	GLN
1	U	113	GLN
1	U	321	GLN
1	U	469	GLN
1	U	538	GLN
1	U	641	GLN
1	U	655	GLN
1	U	669	GLN
1	U	691	GLN
1	U	749	GLN
1	V	113	GLN
1	V	321	GLN
1	V	469	GLN
1	V	538	GLN
1	V	641	GLN
1	V	655	GLN
1	V	669	GLN
1	V	691	GLN
1	V	749	GLN
1	W	113	GLN
1	W	321	GLN
1	W	469	GLN
1	W	538	GLN
1	W	641	GLN
1	W	655	GLN
1	W	669	GLN
1	W	691	GLN
1	W	749	GLN
1	X	113	GLN
1	X	321	GLN
1	X	469	GLN
1	X	538	GLN

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Mol	Chain	Res	Type
1	X	641	GLN
1	X	655	GLN
1	X	669	GLN
1	X	691	GLN
1	X	749	GLN
1	Y	113	GLN
1	Y	321	GLN
1	Y	469	GLN
1	Y	538	GLN
1	Y	641	GLN
1	Y	655	GLN
1	Y	669	GLN
1	Y	691	GLN
1	Y	749	GLN
1	Z	113	GLN
1	Z	321	GLN
1	Z	469	GLN
1	Z	538	GLN
1	Z	641	GLN
1	Z	655	GLN
1	Z	669	GLN
1	Z	691	GLN
1	Z	749	GLN
1	a	113	GLN
1	a	321	GLN
1	a	469	GLN
1	a	538	GLN
1	a	641	GLN
1	a	655	GLN
1	a	669	GLN
1	a	691	GLN
1	a	749	GLN
1	b	113	GLN
1	b	321	GLN
1	b	469	GLN
1	b	538	GLN
1	b	641	GLN
1	b	655	GLN
1	b	669	GLN
1	b	691	GLN
1	b	749	GLN
1	c	113	GLN

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Mol	Chain	Res	Type
1	c	321	GLN
1	c	469	GLN
1	c	538	GLN
1	c	641	GLN
1	c	655	GLN
1	c	669	GLN
1	c	691	GLN
1	c	749	GLN
1	d	113	GLN
1	d	321	GLN
1	d	469	GLN
1	d	538	GLN
1	d	641	GLN
1	d	655	GLN
1	d	669	GLN
1	d	691	GLN
1	d	749	GLN
1	e	113	GLN
1	e	321	GLN
1	e	469	GLN
1	e	538	GLN
1	e	641	GLN
1	e	655	GLN
1	e	669	GLN
1	e	691	GLN
1	e	749	GLN
1	f	113	GLN
1	f	321	GLN
1	f	469	GLN
1	f	538	GLN
1	f	641	GLN
1	f	655	GLN
1	f	669	GLN
1	f	691	GLN
1	f	749	GLN
1	g	113	GLN
1	g	321	GLN
1	g	469	GLN
1	g	538	GLN
1	g	641	GLN
1	g	655	GLN
1	g	669	GLN

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Mol	Chain	Res	Type
1	g	691	GLN
1	g	749	GLN
1	h	113	GLN
1	h	321	GLN
1	h	469	GLN
1	h	538	GLN
1	h	641	GLN
1	h	655	GLN
1	h	669	GLN
1	h	691	GLN
1	h	749	GLN
1	i	113	GLN
1	i	321	GLN
1	i	469	GLN
1	i	538	GLN
1	i	641	GLN
1	i	655	GLN
1	i	669	GLN
1	i	691	GLN
1	i	749	GLN
1	j	113	GLN
1	j	321	GLN
1	j	469	GLN
1	j	538	GLN
1	j	641	GLN
1	j	655	GLN
1	j	669	GLN
1	j	691	GLN
1	j	749	GLN
1	k	113	GLN
1	k	321	GLN
1	k	469	GLN
1	k	538	GLN
1	k	641	GLN
1	k	655	GLN
1	k	669	GLN
1	k	691	GLN
1	k	749	GLN
1	l	113	GLN
1	l	321	GLN
1	l	469	GLN
1	l	538	GLN

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Continued from previous page...

Mol	Chain	Res	Type
1	l	641	GLN
1	l	655	GLN
1	l	669	GLN
1	l	691	GLN
1	l	749	GLN
1	m	113	GLN
1	m	321	GLN
1	m	469	GLN
1	m	538	GLN
1	m	641	GLN
1	m	655	GLN
1	m	669	GLN
1	m	691	GLN
1	m	749	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

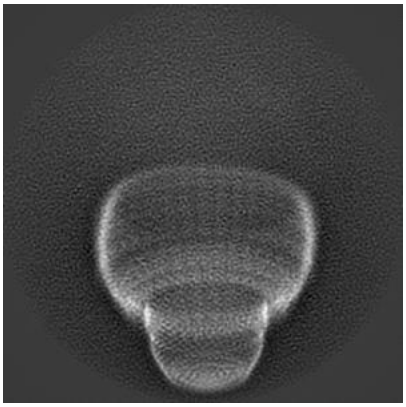
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-13482. These allow visual inspection of the internal detail of the map and identification of artifacts.

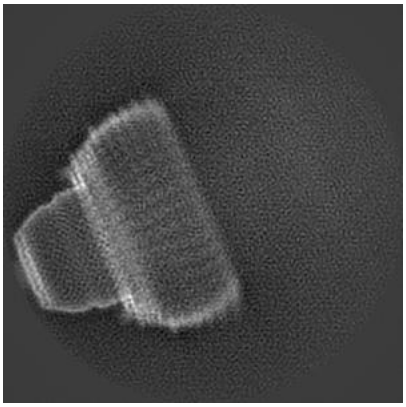
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

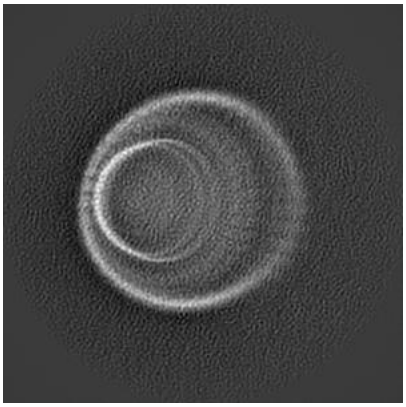
6.1.1 Primary map



X



Y

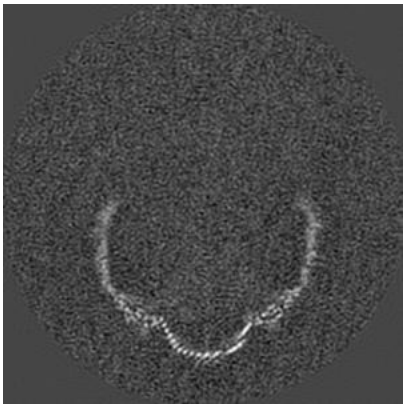


Z

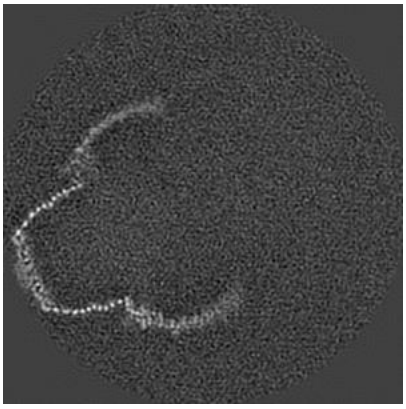
The images above show the map projected in three orthogonal directions.

6.2 Central slices

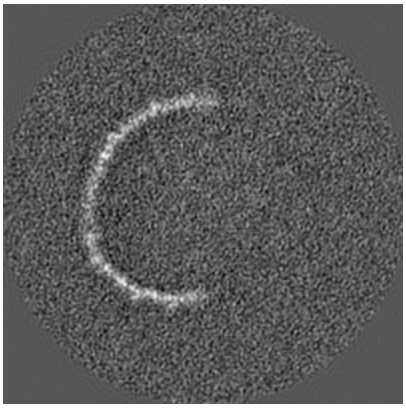
6.2.1 Primary map



X Index: 100



Y Index: 100

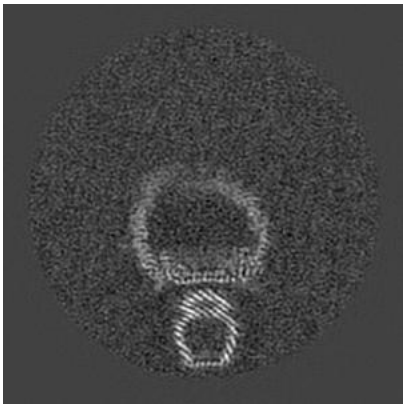


Z Index: 100

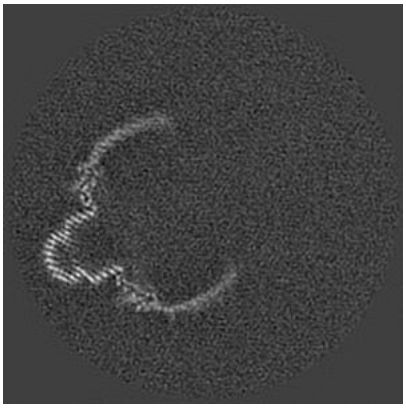
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

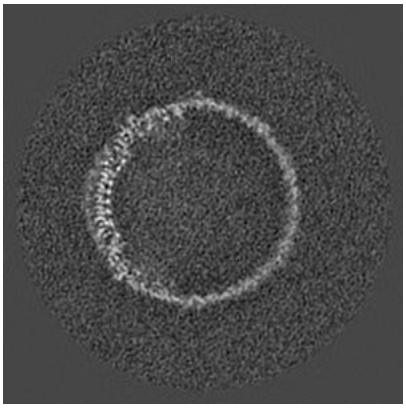
6.3.1 Primary map



X Index: 49



Y Index: 127

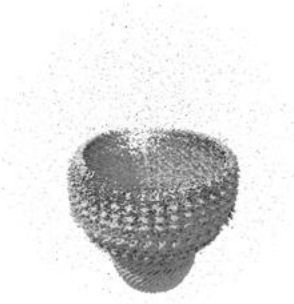


Z Index: 61

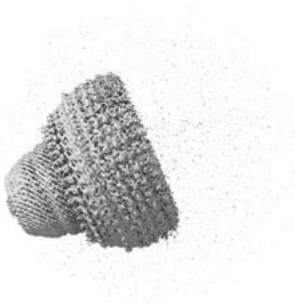
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views (i)

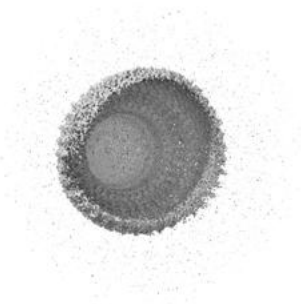
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.08. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

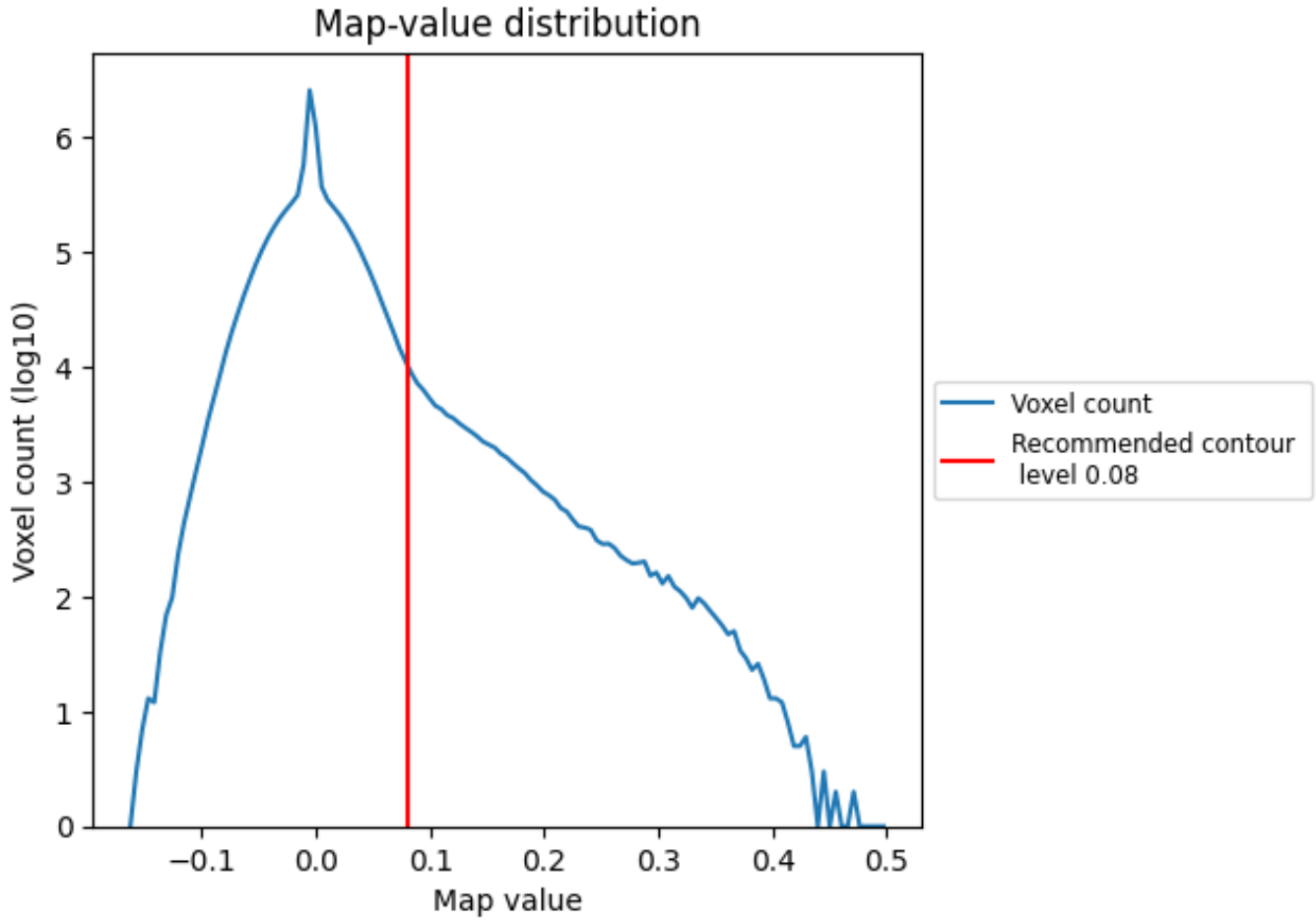
6.5 Mask visualisation (i)

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

7 Map analysis

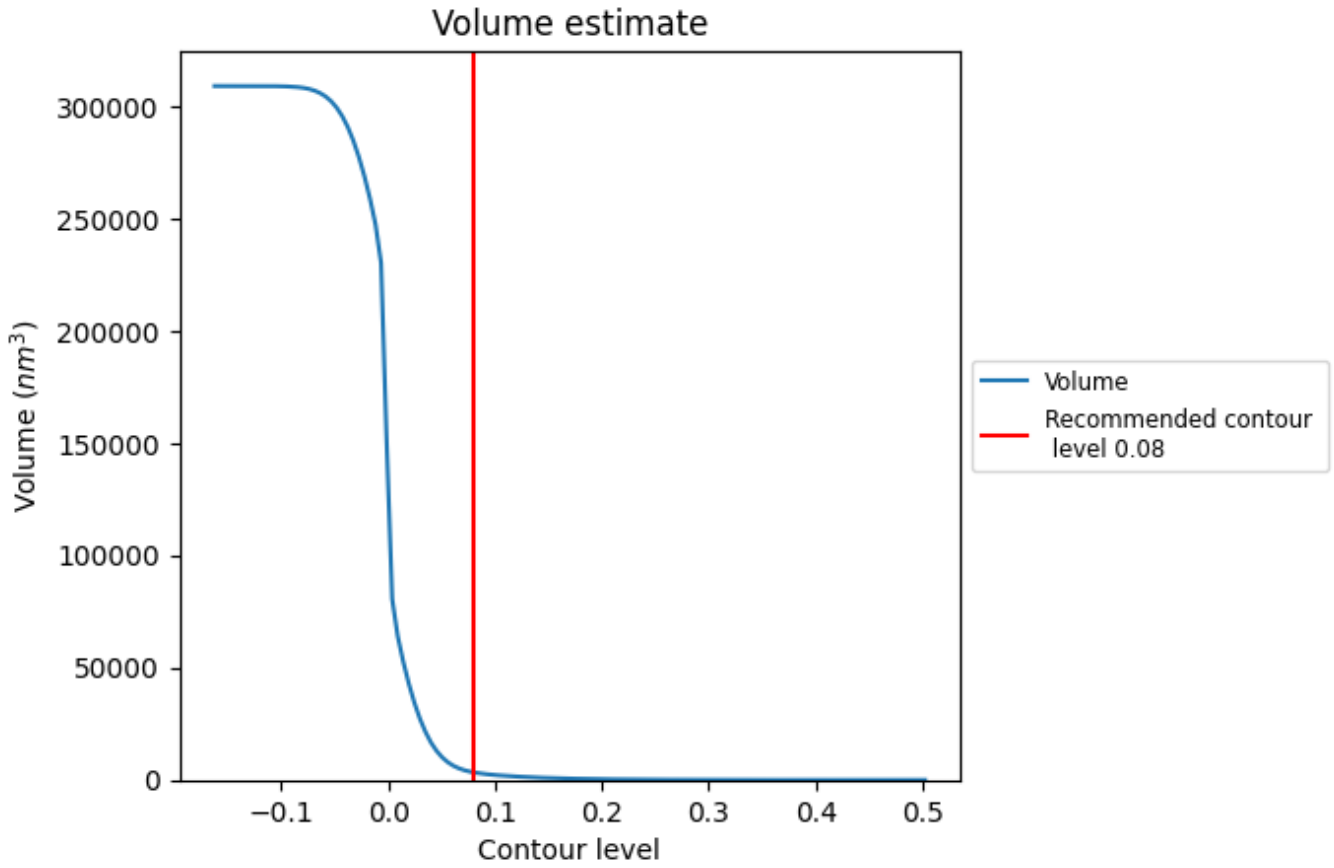
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

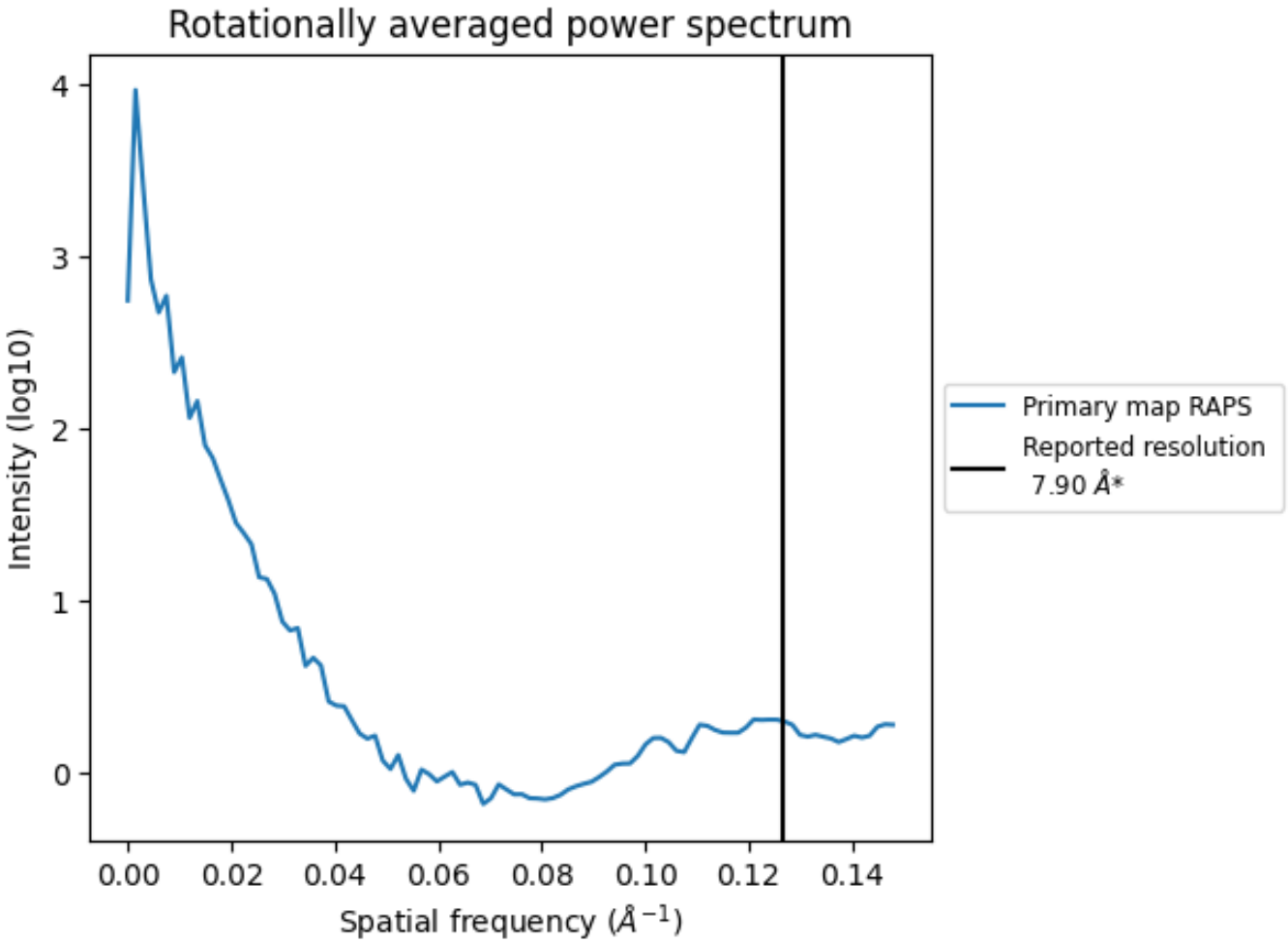
7.2 Volume estimate



The volume at the recommended contour level is 3387 nm^3; this corresponds to an approximate mass of 3060 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 0.127 Å^{-1}

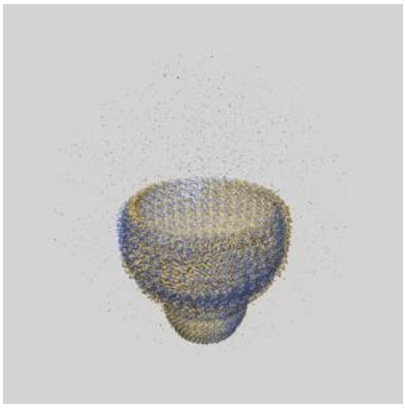
8 Fourier-Shell correlation

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

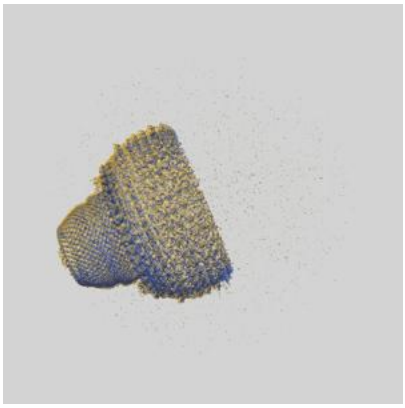
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-13482 and PDB model 7PKY. Per-residue inclusion information can be found in section 3 on page 8.

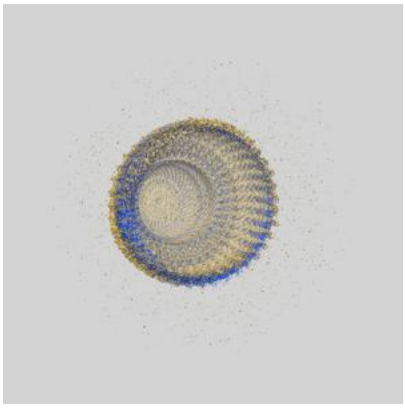
9.1 Map-model overlay



X



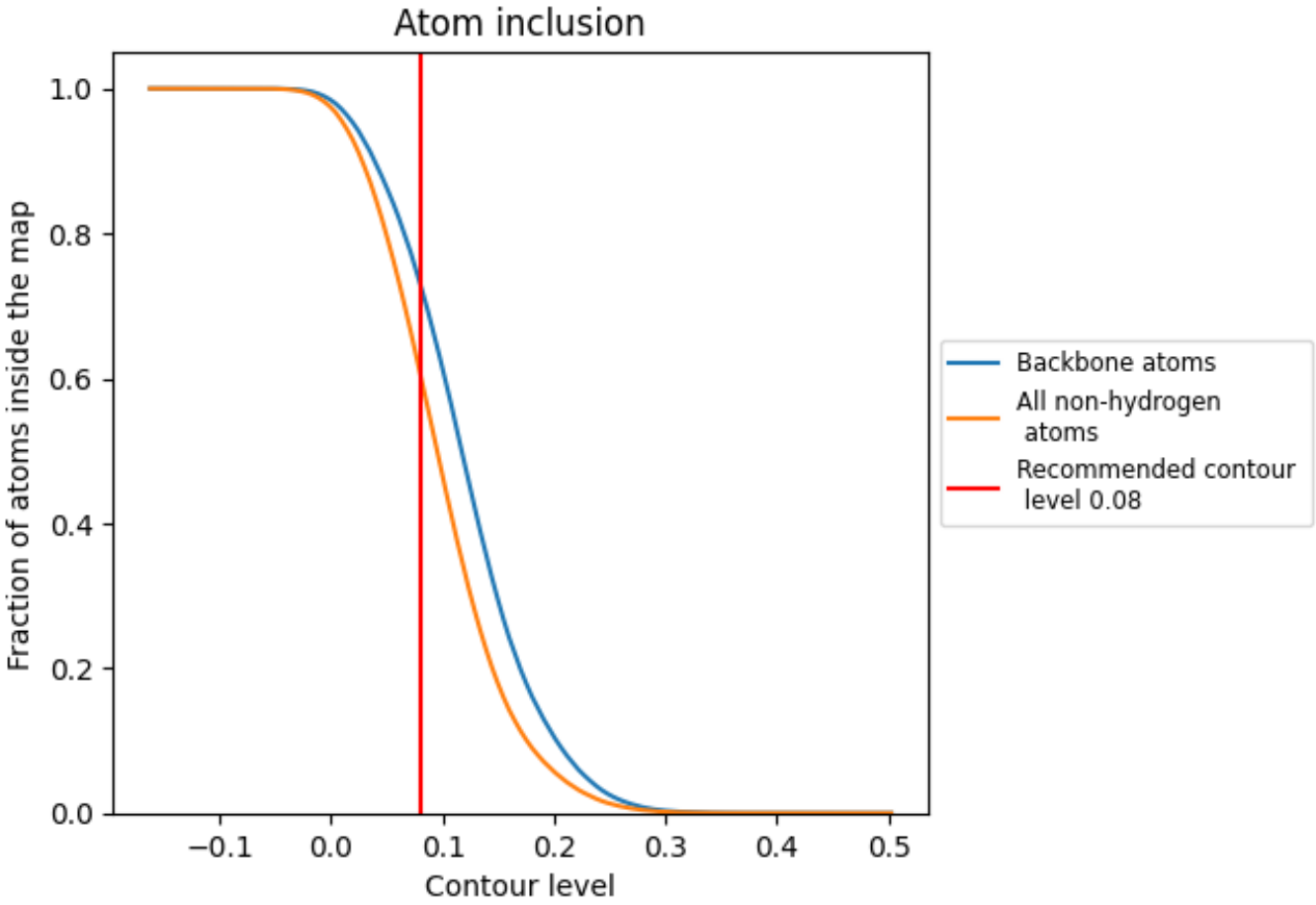
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.08 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, 73% of all backbone atoms, 61% of all non-hydrogen atoms, are inside the map.