



Full wwPDB EM Validation Report ⓘ

Nov 7, 2022 – 07:53 AM EST

PDB ID : 6CBE
EMDB ID : EMD-7452
Title : Atomic structure of a rationally engineered gene delivery vector, AAV2.5
Authors : Burg, M.; Rosebrough, C.; Drouin, L.; Bennett, A.; Mietzsch, M.; Chipman, P.; McKenna, R.; Sousa, D.; Potter, M.; Byrne, B.; Kozyreva, O.G.; Samulski, R.J.; Agbandje-McKenna, M.
Deposited on : 2018-02-02
Resolution : 2.78 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 types of validation reports are described at

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

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

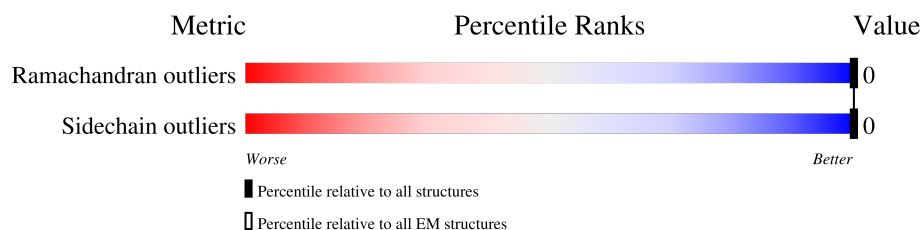
EMDB validation analysis : 0.0.1.dev43
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.2

1 Overall quality at a glance

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

The reported resolution of this entry is 2.78 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.








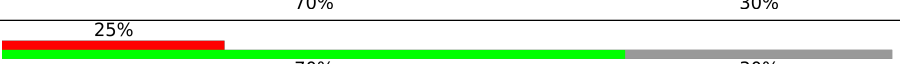
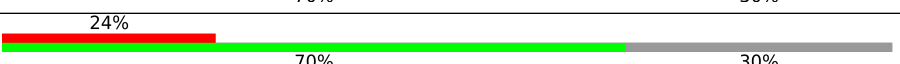
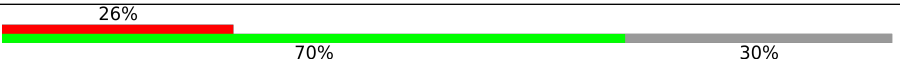


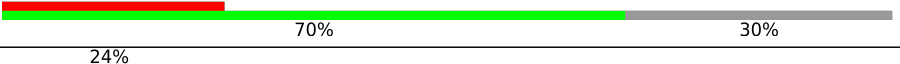
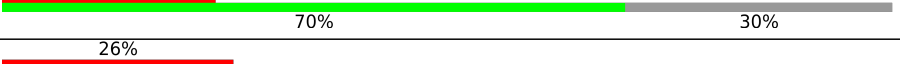

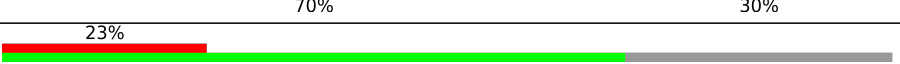
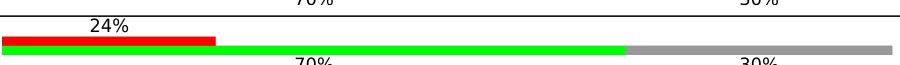










Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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 $\leq 5\%$. 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	0	736	<div> <div>24%</div> <div>70%</div> <div>30%</div> </div>
1	1	736	<div> <div>24%</div> <div>70%</div> <div>30%</div> </div>
1	2	736	<div> <div>23%</div> <div>70%</div> <div>30%</div> </div>
1	3	736	<div> <div>24%</div> <div>70%</div> <div>30%</div> </div>
1	4	736	<div> <div>26%</div> <div>70%</div> <div>30%</div> </div>
1	5	736	<div> <div>24%</div> <div>70%</div> <div>30%</div> </div>
1	6	736	<div> <div>25%</div> <div>70%</div> <div>30%</div> </div>
1	7	736	<div> <div>25%</div> <div>70%</div> <div>30%</div> </div>
1	A	736	<div> <div>24%</div> <div>70%</div> <div>30%</div> </div>






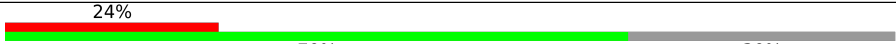


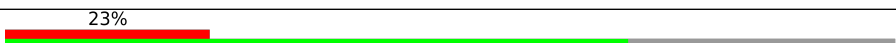
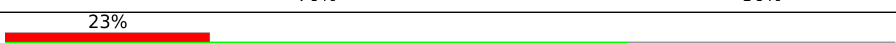
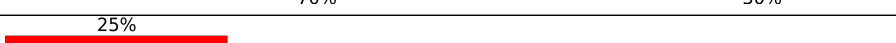
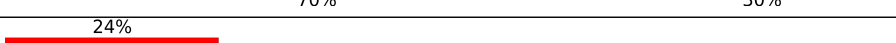
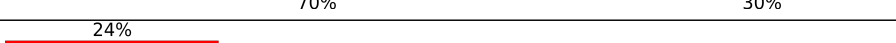

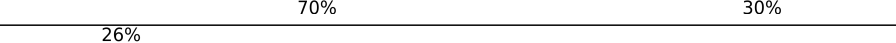
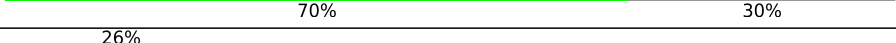



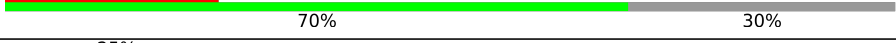





Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
1	B	736	26% 
1	C	736	24% 
1	D	736	25% 
1	E	736	23% 
1	F	736	23% 
1	G	736	25% 
1	H	736	25% 
1	I	736	24% 
1	J	736	26% 
1	K	736	24% 
1	L	736	26% 
1	M	736	25% 
1	N	736	24% 
1	O	736	26% 
1	P	736	24% 
1	Q	736	23% 
1	R	736	24% 
1	S	736	25% 
1	T	736	25% 
1	U	736	24% 
1	V	736	26% 
1	W	736	24% 
1	X	736	26% 
1	Y	736	24% 
1	Z	736	23% 

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
1	a	736	25% 
1	b	736	24% 
1	c	736	23% 
1	d	736	23% 
1	e	736	23% 
1	f	736	24% 
1	g	736	26% 
1	h	736	25% 
1	i	736	23% 
1	j	736	23% 
1	k	736	25% 
1	l	736	24% 
1	m	736	24% 
1	n	736	26% 
1	o	736	26% 
1	p	736	26% 
1	q	736	24% 
1	r	736	25% 
1	s	736	24% 
1	t	736	25% 
1	u	736	24% 
1	v	736	24% 
1	w	736	23% 
1	x	736	23% 
1	y	736	24% 

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
1	z	736	<div> <div style="width: 24%;"></div> <div style="width: 70%;"></div> <div style="width: 30%;"></div> </div>

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 248520 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 Capsid protein VP1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	B	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	C	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	D	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	E	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	F	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	G	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	H	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	I	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	J	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	K	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	L	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	M	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	N	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	O	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	P	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		
1	Q	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	Trace
1	R	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	S	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	T	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	U	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	V	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	W	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	X	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	Y	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	Z	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	0	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	1	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	2	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	3	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	4	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	5	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	a	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	b	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	c	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	d	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	e	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	f	518	Total 4142	C 2606	N 723	O 800	S 13	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	Trace
1	g	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	h	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	i	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	j	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	k	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	l	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	m	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	n	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	o	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	p	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	q	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	r	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	s	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	t	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	u	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	v	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	w	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	x	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	y	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	z	518	Total 4142	C 2606	N 723	O 800	S 13	0	0
1	6	518	Total 4142	C 2606	N 723	O 800	S 13	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	Trace
1	7	518	Total	C	N	O	S	0	0
			4142	2606	723	800	13		

There are 300 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	263	ALA	GLN	conflict	UNP P03135
A	265	THR	-	insertion	UNP P03135
A	706	ALA	ASN	conflict	UNP P03135
A	709	ALA	VAL	conflict	UNP P03135
A	717	ASN	THR	conflict	UNP P03135
B	263	ALA	GLN	conflict	UNP P03135
B	265	THR	-	insertion	UNP P03135
B	706	ALA	ASN	conflict	UNP P03135
B	709	ALA	VAL	conflict	UNP P03135
B	717	ASN	THR	conflict	UNP P03135
C	263	ALA	GLN	conflict	UNP P03135
C	265	THR	-	insertion	UNP P03135
C	706	ALA	ASN	conflict	UNP P03135
C	709	ALA	VAL	conflict	UNP P03135
C	717	ASN	THR	conflict	UNP P03135
D	263	ALA	GLN	conflict	UNP P03135
D	265	THR	-	insertion	UNP P03135
D	706	ALA	ASN	conflict	UNP P03135
D	709	ALA	VAL	conflict	UNP P03135
D	717	ASN	THR	conflict	UNP P03135
E	263	ALA	GLN	conflict	UNP P03135
E	265	THR	-	insertion	UNP P03135
E	706	ALA	ASN	conflict	UNP P03135
E	709	ALA	VAL	conflict	UNP P03135
E	717	ASN	THR	conflict	UNP P03135
F	263	ALA	GLN	conflict	UNP P03135
F	265	THR	-	insertion	UNP P03135
F	706	ALA	ASN	conflict	UNP P03135
F	709	ALA	VAL	conflict	UNP P03135
F	717	ASN	THR	conflict	UNP P03135
G	263	ALA	GLN	conflict	UNP P03135
G	265	THR	-	insertion	UNP P03135
G	706	ALA	ASN	conflict	UNP P03135
G	709	ALA	VAL	conflict	UNP P03135
G	717	ASN	THR	conflict	UNP P03135
H	263	ALA	GLN	conflict	UNP P03135

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
H	265	THR	-	insertion	UNP P03135
H	706	ALA	ASN	conflict	UNP P03135
H	709	ALA	VAL	conflict	UNP P03135
H	717	ASN	THR	conflict	UNP P03135
I	263	ALA	GLN	conflict	UNP P03135
I	265	THR	-	insertion	UNP P03135
I	706	ALA	ASN	conflict	UNP P03135
I	709	ALA	VAL	conflict	UNP P03135
I	717	ASN	THR	conflict	UNP P03135
J	263	ALA	GLN	conflict	UNP P03135
J	265	THR	-	insertion	UNP P03135
J	706	ALA	ASN	conflict	UNP P03135
J	709	ALA	VAL	conflict	UNP P03135
J	717	ASN	THR	conflict	UNP P03135
K	263	ALA	GLN	conflict	UNP P03135
K	265	THR	-	insertion	UNP P03135
K	706	ALA	ASN	conflict	UNP P03135
K	709	ALA	VAL	conflict	UNP P03135
K	717	ASN	THR	conflict	UNP P03135
L	263	ALA	GLN	conflict	UNP P03135
L	265	THR	-	insertion	UNP P03135
L	706	ALA	ASN	conflict	UNP P03135
L	709	ALA	VAL	conflict	UNP P03135
L	717	ASN	THR	conflict	UNP P03135
M	263	ALA	GLN	conflict	UNP P03135
M	265	THR	-	insertion	UNP P03135
M	706	ALA	ASN	conflict	UNP P03135
M	709	ALA	VAL	conflict	UNP P03135
M	717	ASN	THR	conflict	UNP P03135
N	263	ALA	GLN	conflict	UNP P03135
N	265	THR	-	insertion	UNP P03135
N	706	ALA	ASN	conflict	UNP P03135
N	709	ALA	VAL	conflict	UNP P03135
N	717	ASN	THR	conflict	UNP P03135
O	263	ALA	GLN	conflict	UNP P03135
O	265	THR	-	insertion	UNP P03135
O	706	ALA	ASN	conflict	UNP P03135
O	709	ALA	VAL	conflict	UNP P03135
O	717	ASN	THR	conflict	UNP P03135
P	263	ALA	GLN	conflict	UNP P03135
P	265	THR	-	insertion	UNP P03135
P	706	ALA	ASN	conflict	UNP P03135

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
P	709	ALA	VAL	conflict	UNP P03135
P	717	ASN	THR	conflict	UNP P03135
Q	263	ALA	GLN	conflict	UNP P03135
Q	265	THR	-	insertion	UNP P03135
Q	706	ALA	ASN	conflict	UNP P03135
Q	709	ALA	VAL	conflict	UNP P03135
Q	717	ASN	THR	conflict	UNP P03135
R	263	ALA	GLN	conflict	UNP P03135
R	265	THR	-	insertion	UNP P03135
R	706	ALA	ASN	conflict	UNP P03135
R	709	ALA	VAL	conflict	UNP P03135
R	717	ASN	THR	conflict	UNP P03135
S	263	ALA	GLN	conflict	UNP P03135
S	265	THR	-	insertion	UNP P03135
S	706	ALA	ASN	conflict	UNP P03135
S	709	ALA	VAL	conflict	UNP P03135
S	717	ASN	THR	conflict	UNP P03135
T	263	ALA	GLN	conflict	UNP P03135
T	265	THR	-	insertion	UNP P03135
T	706	ALA	ASN	conflict	UNP P03135
T	709	ALA	VAL	conflict	UNP P03135
T	717	ASN	THR	conflict	UNP P03135
U	263	ALA	GLN	conflict	UNP P03135
U	265	THR	-	insertion	UNP P03135
U	706	ALA	ASN	conflict	UNP P03135
U	709	ALA	VAL	conflict	UNP P03135
U	717	ASN	THR	conflict	UNP P03135
V	263	ALA	GLN	conflict	UNP P03135
V	265	THR	-	insertion	UNP P03135
V	706	ALA	ASN	conflict	UNP P03135
V	709	ALA	VAL	conflict	UNP P03135
V	717	ASN	THR	conflict	UNP P03135
W	263	ALA	GLN	conflict	UNP P03135
W	265	THR	-	insertion	UNP P03135
W	706	ALA	ASN	conflict	UNP P03135
W	709	ALA	VAL	conflict	UNP P03135
W	717	ASN	THR	conflict	UNP P03135
X	263	ALA	GLN	conflict	UNP P03135
X	265	THR	-	insertion	UNP P03135
X	706	ALA	ASN	conflict	UNP P03135
X	709	ALA	VAL	conflict	UNP P03135
X	717	ASN	THR	conflict	UNP P03135

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
Y	263	ALA	GLN	conflict	UNP P03135
Y	265	THR	-	insertion	UNP P03135
Y	706	ALA	ASN	conflict	UNP P03135
Y	709	ALA	VAL	conflict	UNP P03135
Y	717	ASN	THR	conflict	UNP P03135
Z	263	ALA	GLN	conflict	UNP P03135
Z	265	THR	-	insertion	UNP P03135
Z	706	ALA	ASN	conflict	UNP P03135
Z	709	ALA	VAL	conflict	UNP P03135
Z	717	ASN	THR	conflict	UNP P03135
0	263	ALA	GLN	conflict	UNP P03135
0	265	THR	-	insertion	UNP P03135
0	706	ALA	ASN	conflict	UNP P03135
0	709	ALA	VAL	conflict	UNP P03135
0	717	ASN	THR	conflict	UNP P03135
1	263	ALA	GLN	conflict	UNP P03135
1	265	THR	-	insertion	UNP P03135
1	706	ALA	ASN	conflict	UNP P03135
1	709	ALA	VAL	conflict	UNP P03135
1	717	ASN	THR	conflict	UNP P03135
2	263	ALA	GLN	conflict	UNP P03135
2	265	THR	-	insertion	UNP P03135
2	706	ALA	ASN	conflict	UNP P03135
2	709	ALA	VAL	conflict	UNP P03135
2	717	ASN	THR	conflict	UNP P03135
3	263	ALA	GLN	conflict	UNP P03135
3	265	THR	-	insertion	UNP P03135
3	706	ALA	ASN	conflict	UNP P03135
3	709	ALA	VAL	conflict	UNP P03135
3	717	ASN	THR	conflict	UNP P03135
4	263	ALA	GLN	conflict	UNP P03135
4	265	THR	-	insertion	UNP P03135
4	706	ALA	ASN	conflict	UNP P03135
4	709	ALA	VAL	conflict	UNP P03135
4	717	ASN	THR	conflict	UNP P03135
5	263	ALA	GLN	conflict	UNP P03135
5	265	THR	-	insertion	UNP P03135
5	706	ALA	ASN	conflict	UNP P03135
5	709	ALA	VAL	conflict	UNP P03135
5	717	ASN	THR	conflict	UNP P03135
a	263	ALA	GLN	conflict	UNP P03135
a	265	THR	-	insertion	UNP P03135

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
a	706	ALA	ASN	conflict	UNP P03135
a	709	ALA	VAL	conflict	UNP P03135
a	717	ASN	THR	conflict	UNP P03135
b	263	ALA	GLN	conflict	UNP P03135
b	265	THR	-	insertion	UNP P03135
b	706	ALA	ASN	conflict	UNP P03135
b	709	ALA	VAL	conflict	UNP P03135
b	717	ASN	THR	conflict	UNP P03135
c	263	ALA	GLN	conflict	UNP P03135
c	265	THR	-	insertion	UNP P03135
c	706	ALA	ASN	conflict	UNP P03135
c	709	ALA	VAL	conflict	UNP P03135
c	717	ASN	THR	conflict	UNP P03135
d	263	ALA	GLN	conflict	UNP P03135
d	265	THR	-	insertion	UNP P03135
d	706	ALA	ASN	conflict	UNP P03135
d	709	ALA	VAL	conflict	UNP P03135
d	717	ASN	THR	conflict	UNP P03135
e	263	ALA	GLN	conflict	UNP P03135
e	265	THR	-	insertion	UNP P03135
e	706	ALA	ASN	conflict	UNP P03135
e	709	ALA	VAL	conflict	UNP P03135
e	717	ASN	THR	conflict	UNP P03135
f	263	ALA	GLN	conflict	UNP P03135
f	265	THR	-	insertion	UNP P03135
f	706	ALA	ASN	conflict	UNP P03135
f	709	ALA	VAL	conflict	UNP P03135
f	717	ASN	THR	conflict	UNP P03135
g	263	ALA	GLN	conflict	UNP P03135
g	265	THR	-	insertion	UNP P03135
g	706	ALA	ASN	conflict	UNP P03135
g	709	ALA	VAL	conflict	UNP P03135
g	717	ASN	THR	conflict	UNP P03135
h	263	ALA	GLN	conflict	UNP P03135
h	265	THR	-	insertion	UNP P03135
h	706	ALA	ASN	conflict	UNP P03135
h	709	ALA	VAL	conflict	UNP P03135
h	717	ASN	THR	conflict	UNP P03135
i	263	ALA	GLN	conflict	UNP P03135
i	265	THR	-	insertion	UNP P03135
i	706	ALA	ASN	conflict	UNP P03135
i	709	ALA	VAL	conflict	UNP P03135

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
i	717	ASN	THR	conflict	UNP P03135
j	263	ALA	GLN	conflict	UNP P03135
j	265	THR	-	insertion	UNP P03135
j	706	ALA	ASN	conflict	UNP P03135
j	709	ALA	VAL	conflict	UNP P03135
j	717	ASN	THR	conflict	UNP P03135
k	263	ALA	GLN	conflict	UNP P03135
k	265	THR	-	insertion	UNP P03135
k	706	ALA	ASN	conflict	UNP P03135
k	709	ALA	VAL	conflict	UNP P03135
k	717	ASN	THR	conflict	UNP P03135
l	263	ALA	GLN	conflict	UNP P03135
l	265	THR	-	insertion	UNP P03135
l	706	ALA	ASN	conflict	UNP P03135
l	709	ALA	VAL	conflict	UNP P03135
l	717	ASN	THR	conflict	UNP P03135
m	263	ALA	GLN	conflict	UNP P03135
m	265	THR	-	insertion	UNP P03135
m	706	ALA	ASN	conflict	UNP P03135
m	709	ALA	VAL	conflict	UNP P03135
m	717	ASN	THR	conflict	UNP P03135
n	263	ALA	GLN	conflict	UNP P03135
n	265	THR	-	insertion	UNP P03135
n	706	ALA	ASN	conflict	UNP P03135
n	709	ALA	VAL	conflict	UNP P03135
n	717	ASN	THR	conflict	UNP P03135
o	263	ALA	GLN	conflict	UNP P03135
o	265	THR	-	insertion	UNP P03135
o	706	ALA	ASN	conflict	UNP P03135
o	709	ALA	VAL	conflict	UNP P03135
o	717	ASN	THR	conflict	UNP P03135
p	263	ALA	GLN	conflict	UNP P03135
p	265	THR	-	insertion	UNP P03135
p	706	ALA	ASN	conflict	UNP P03135
p	709	ALA	VAL	conflict	UNP P03135
p	717	ASN	THR	conflict	UNP P03135
q	263	ALA	GLN	conflict	UNP P03135
q	265	THR	-	insertion	UNP P03135
q	706	ALA	ASN	conflict	UNP P03135
q	709	ALA	VAL	conflict	UNP P03135
q	717	ASN	THR	conflict	UNP P03135
r	263	ALA	GLN	conflict	UNP P03135

Continued on next page...

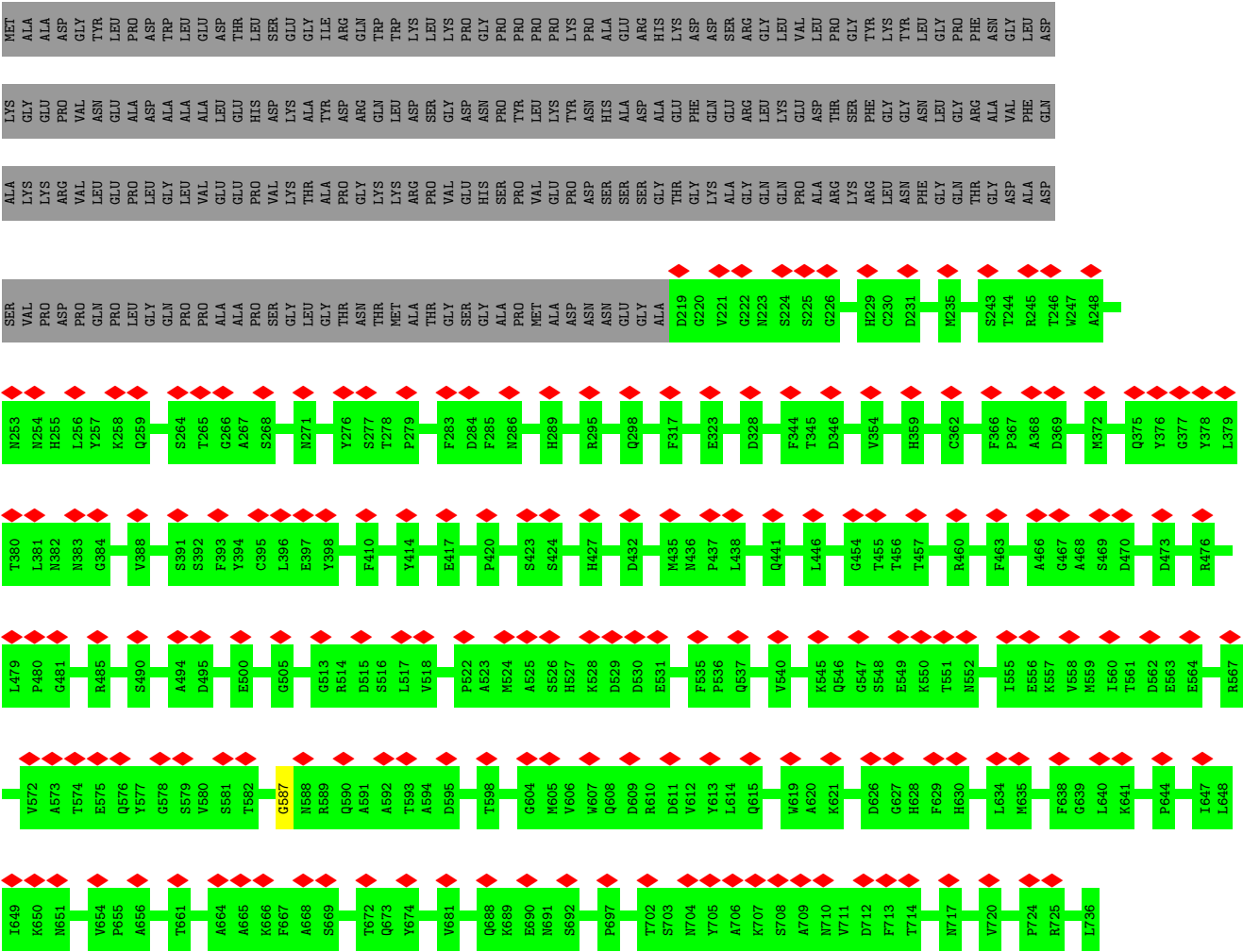
Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
r	265	THR	-	insertion	UNP P03135
r	706	ALA	ASN	conflict	UNP P03135
r	709	ALA	VAL	conflict	UNP P03135
r	717	ASN	THR	conflict	UNP P03135
s	263	ALA	GLN	conflict	UNP P03135
s	265	THR	-	insertion	UNP P03135
s	706	ALA	ASN	conflict	UNP P03135
s	709	ALA	VAL	conflict	UNP P03135
s	717	ASN	THR	conflict	UNP P03135
t	263	ALA	GLN	conflict	UNP P03135
t	265	THR	-	insertion	UNP P03135
t	706	ALA	ASN	conflict	UNP P03135
t	709	ALA	VAL	conflict	UNP P03135
t	717	ASN	THR	conflict	UNP P03135
u	263	ALA	GLN	conflict	UNP P03135
u	265	THR	-	insertion	UNP P03135
u	706	ALA	ASN	conflict	UNP P03135
u	709	ALA	VAL	conflict	UNP P03135
u	717	ASN	THR	conflict	UNP P03135
v	263	ALA	GLN	conflict	UNP P03135
v	265	THR	-	insertion	UNP P03135
v	706	ALA	ASN	conflict	UNP P03135
v	709	ALA	VAL	conflict	UNP P03135
v	717	ASN	THR	conflict	UNP P03135
w	263	ALA	GLN	conflict	UNP P03135
w	265	THR	-	insertion	UNP P03135
w	706	ALA	ASN	conflict	UNP P03135
w	709	ALA	VAL	conflict	UNP P03135
w	717	ASN	THR	conflict	UNP P03135
x	263	ALA	GLN	conflict	UNP P03135
x	265	THR	-	insertion	UNP P03135
x	706	ALA	ASN	conflict	UNP P03135
x	709	ALA	VAL	conflict	UNP P03135
x	717	ASN	THR	conflict	UNP P03135
y	263	ALA	GLN	conflict	UNP P03135
y	265	THR	-	insertion	UNP P03135
y	706	ALA	ASN	conflict	UNP P03135
y	709	ALA	VAL	conflict	UNP P03135
y	717	ASN	THR	conflict	UNP P03135
z	263	ALA	GLN	conflict	UNP P03135
z	265	THR	-	insertion	UNP P03135
z	706	ALA	ASN	conflict	UNP P03135

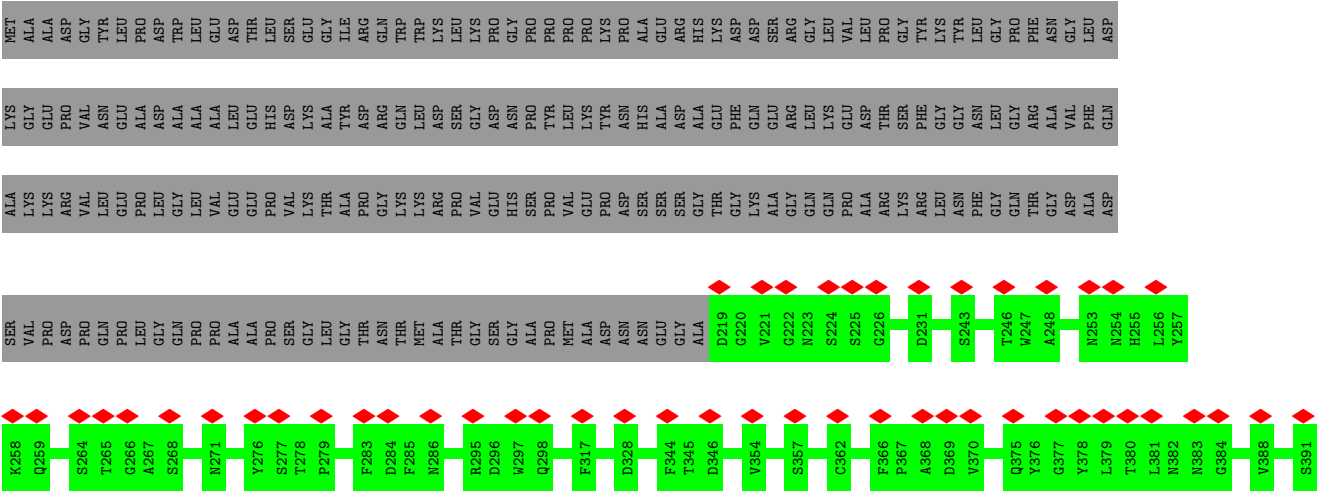
Continued on next page...

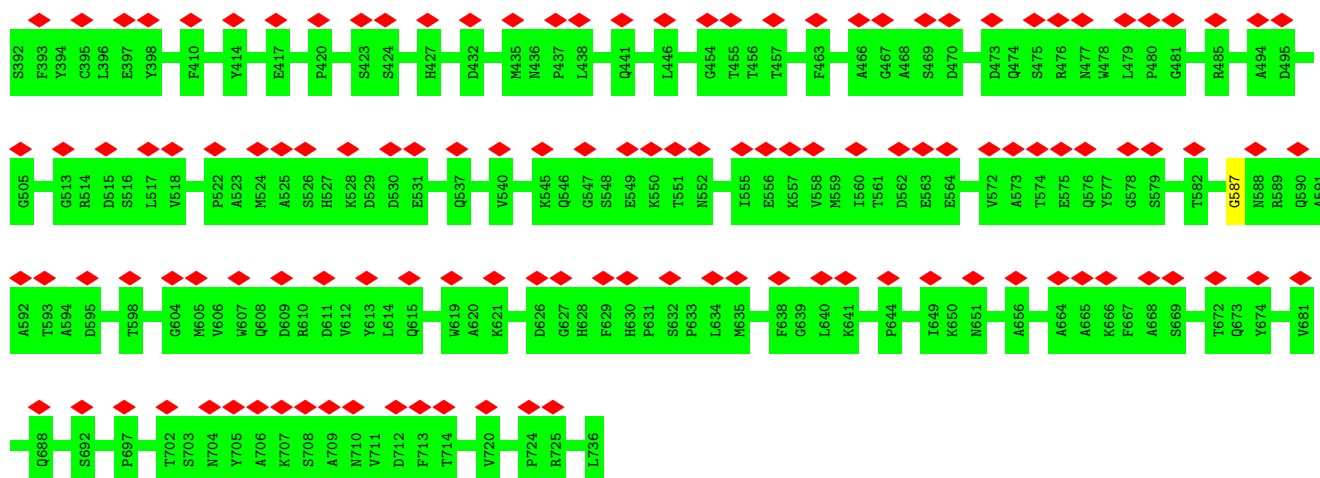
Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
z	709	ALA	VAL	conflict	UNP P03135
z	717	ASN	THR	conflict	UNP P03135
6	263	ALA	GLN	conflict	UNP P03135
6	265	THR	-	insertion	UNP P03135
6	706	ALA	ASN	conflict	UNP P03135
6	709	ALA	VAL	conflict	UNP P03135
6	717	ASN	THR	conflict	UNP P03135
7	263	ALA	GLN	conflict	UNP P03135
7	265	THR	-	insertion	UNP P03135
7	706	ALA	ASN	conflict	UNP P03135
7	709	ALA	VAL	conflict	UNP P03135
7	717	ASN	THR	conflict	UNP P03135

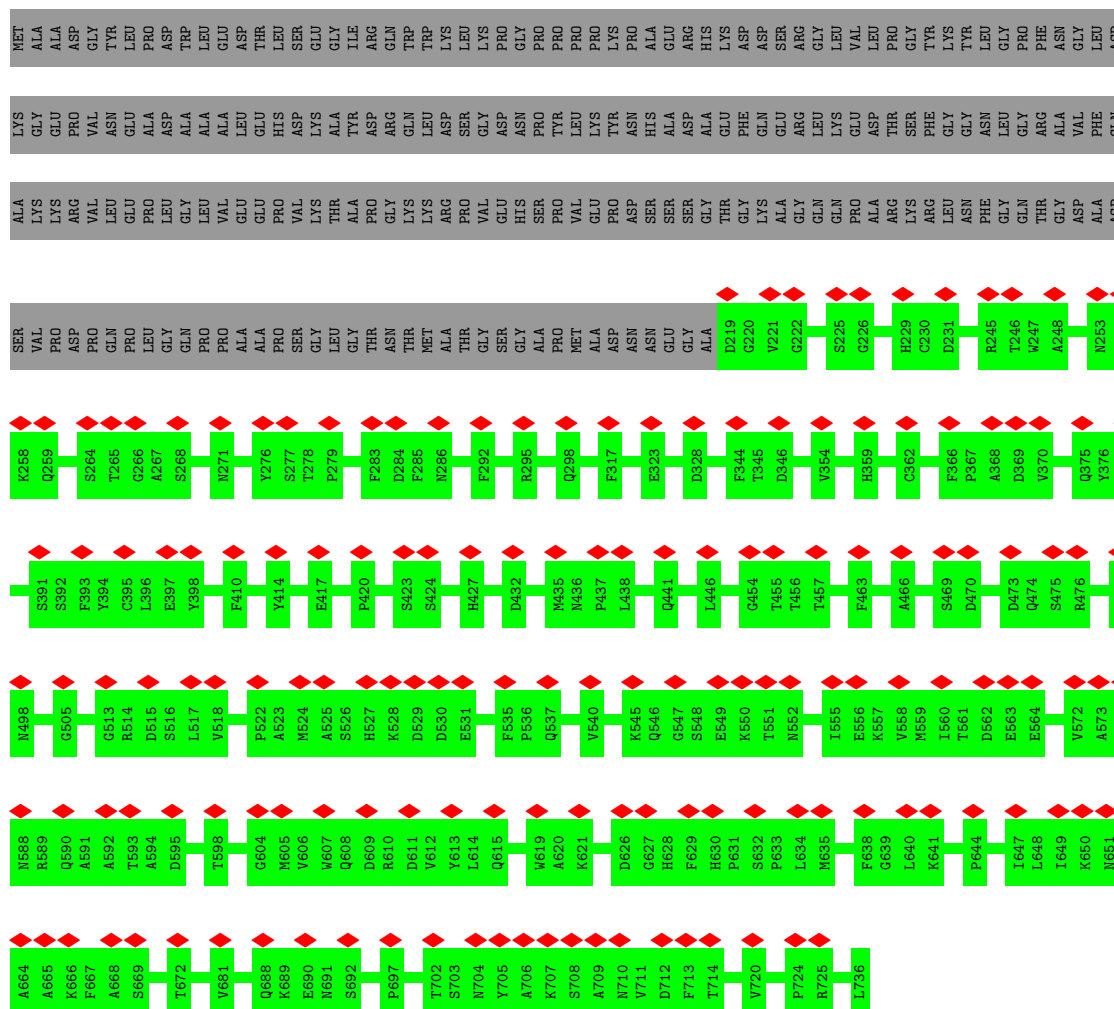


● Molecule 1: Capsid protein VP1

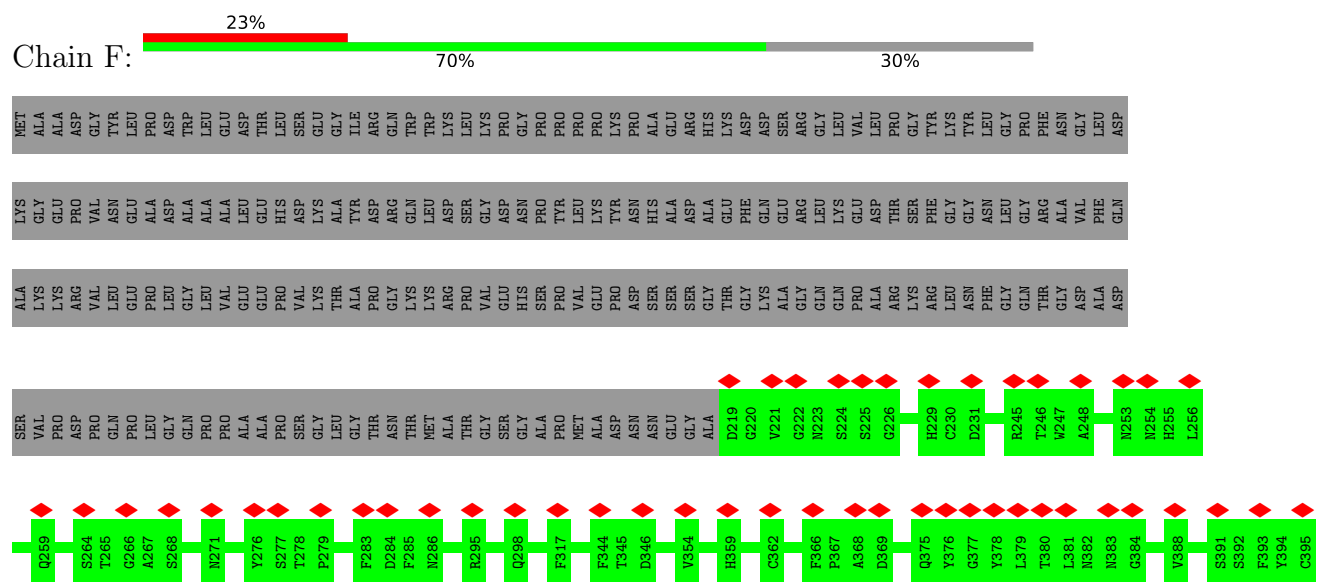


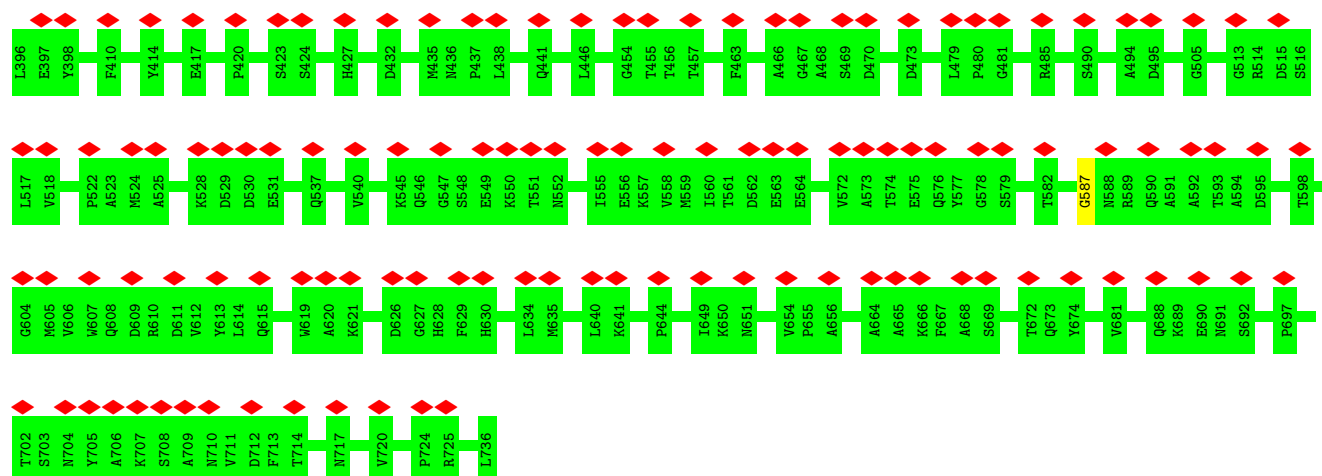


• Molecule 1: Capsid protein VP1

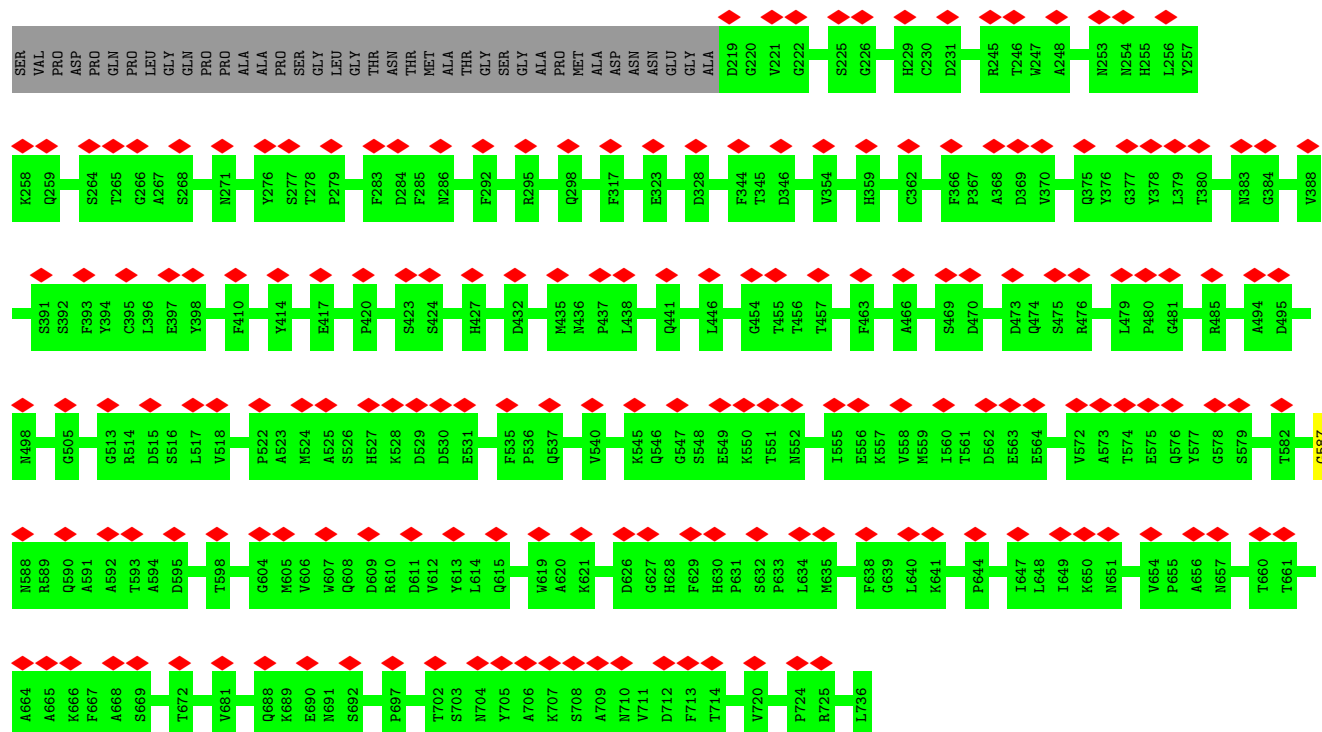
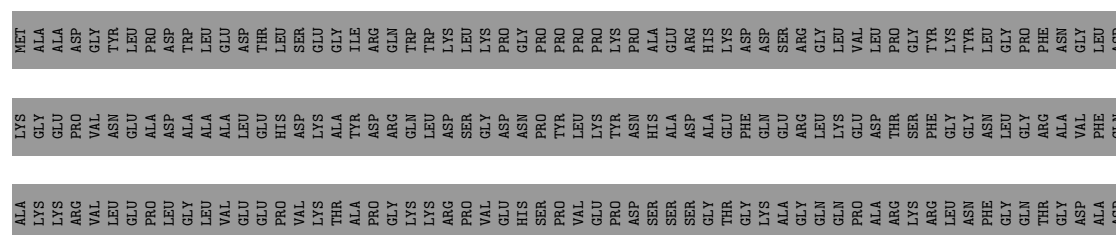


• Molecule 1: Capsid protein VP1

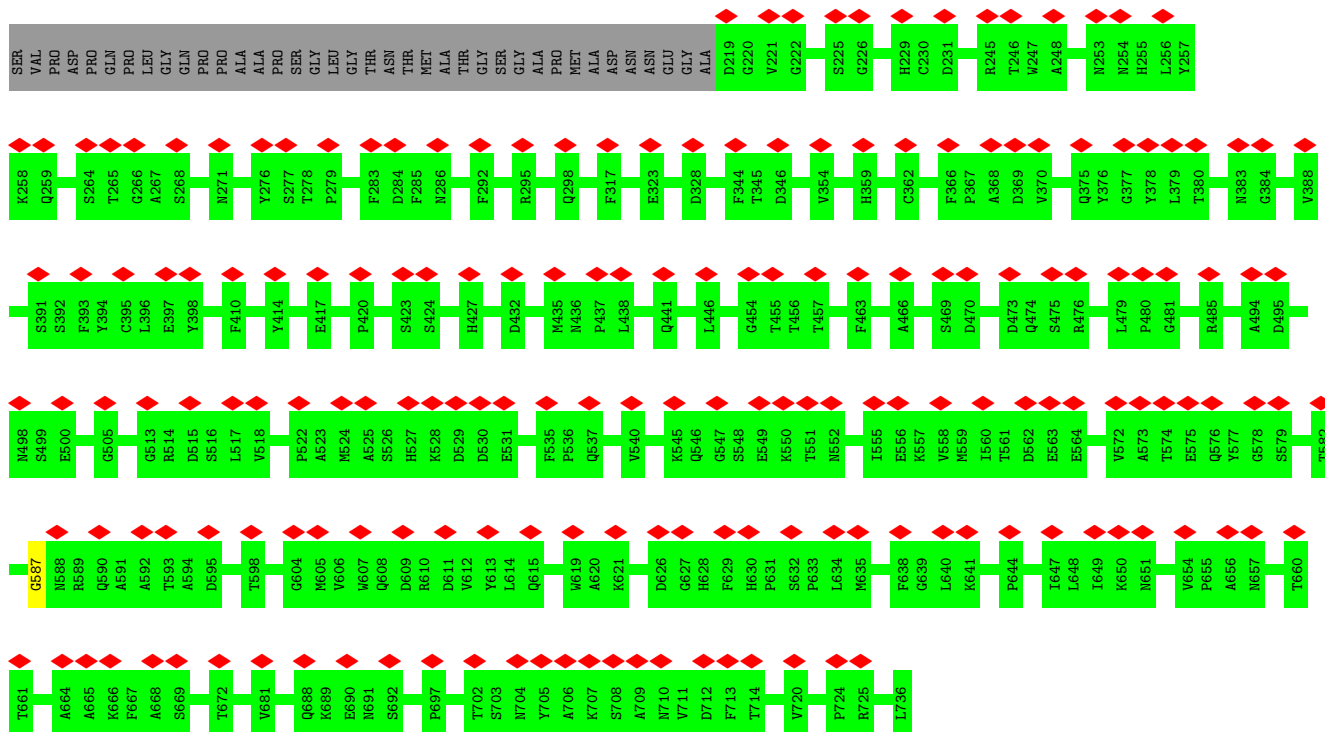




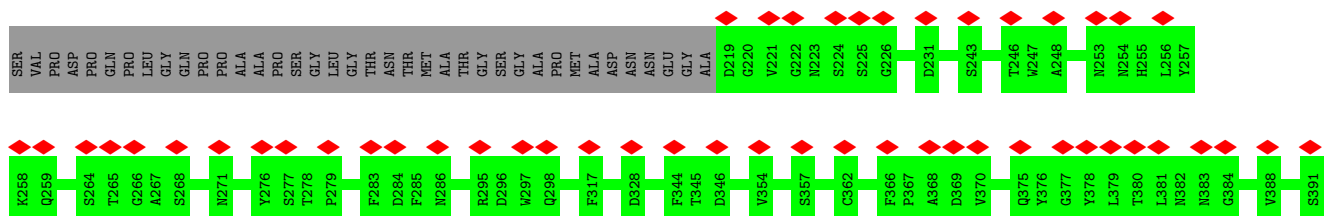
• Molecule 1: Capsid protein VP1

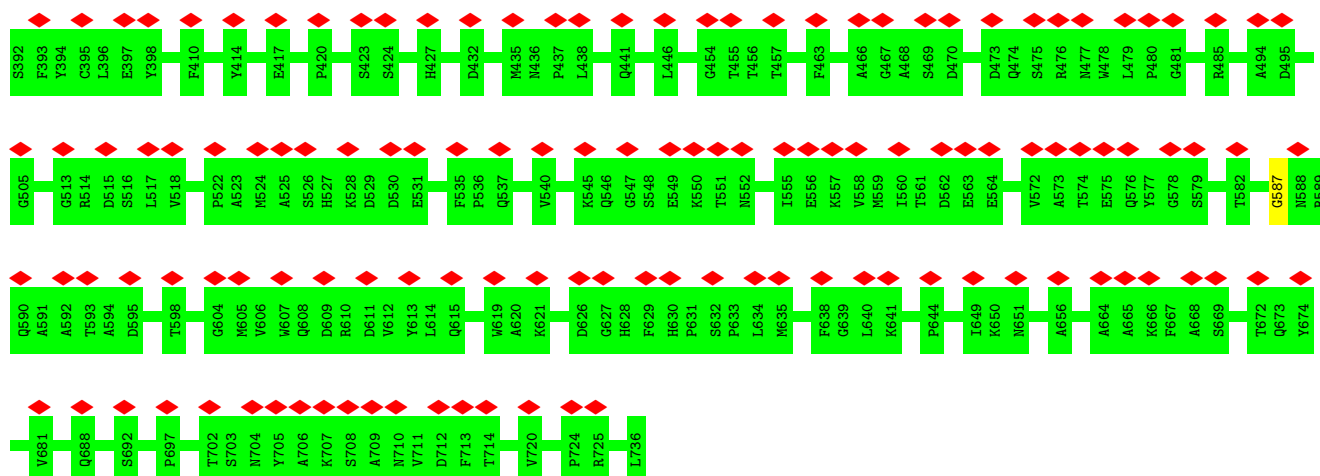


• Molecule 1: Capsid protein VP1

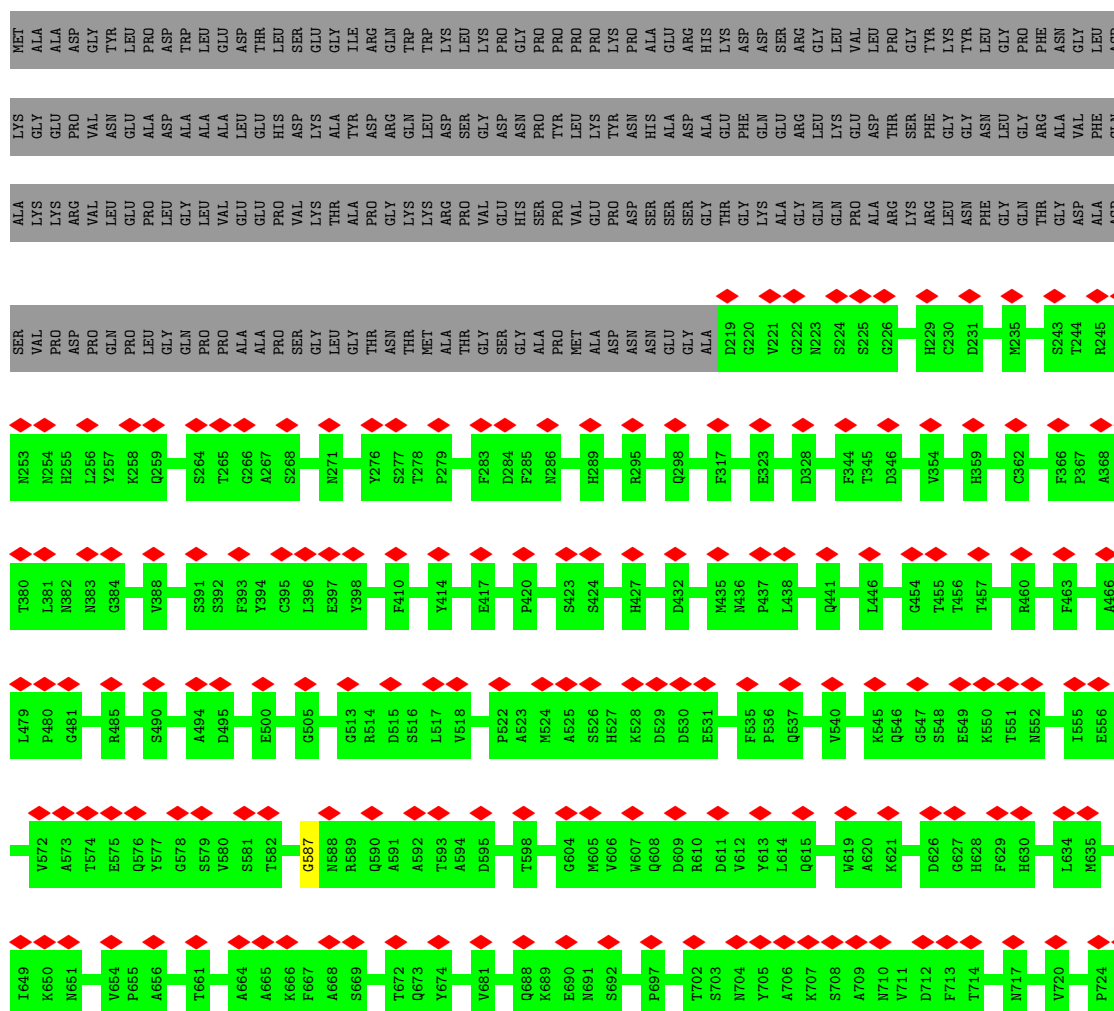


- Molecule 1: Capsid protein VP1





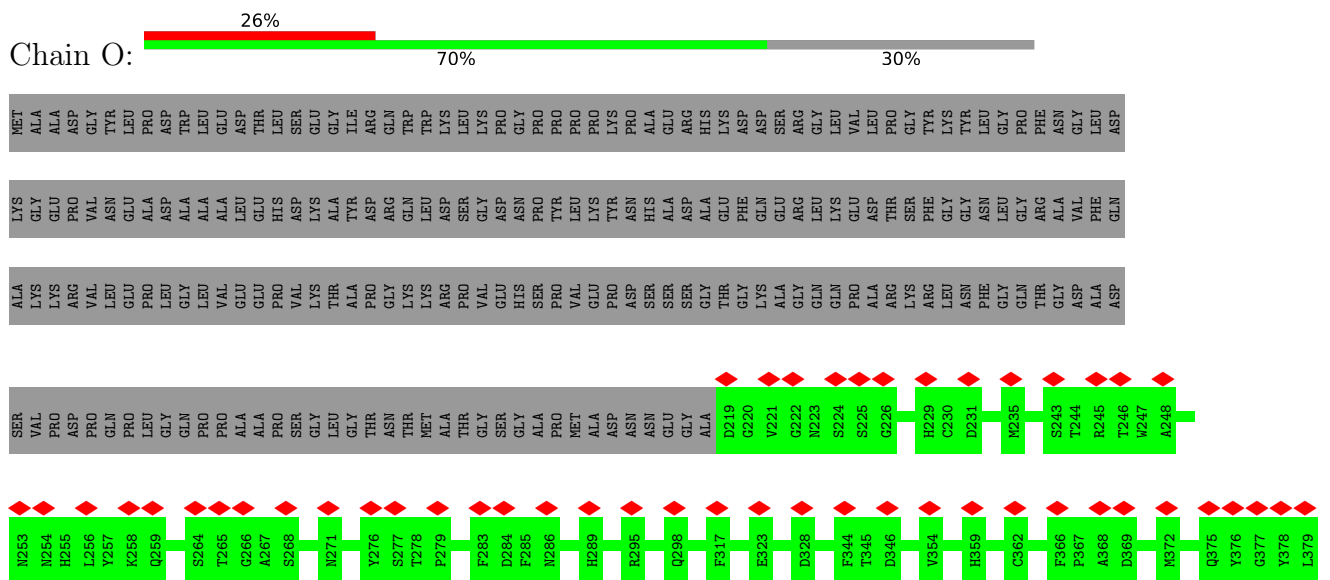
• Molecule 1: Capsid protein VP1

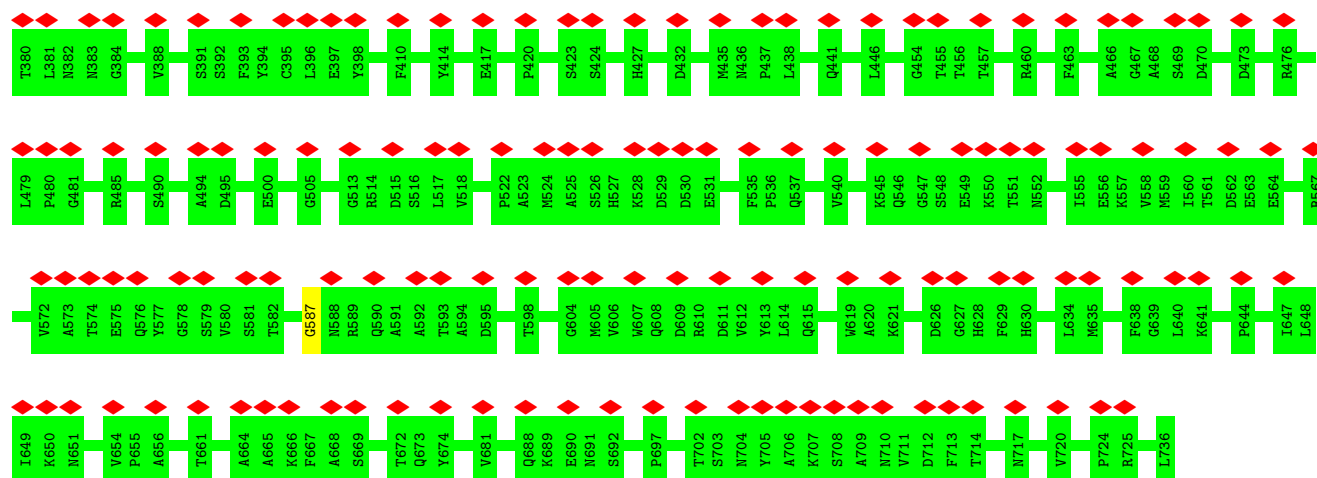


• Molecule 1: Capsid protein VP1

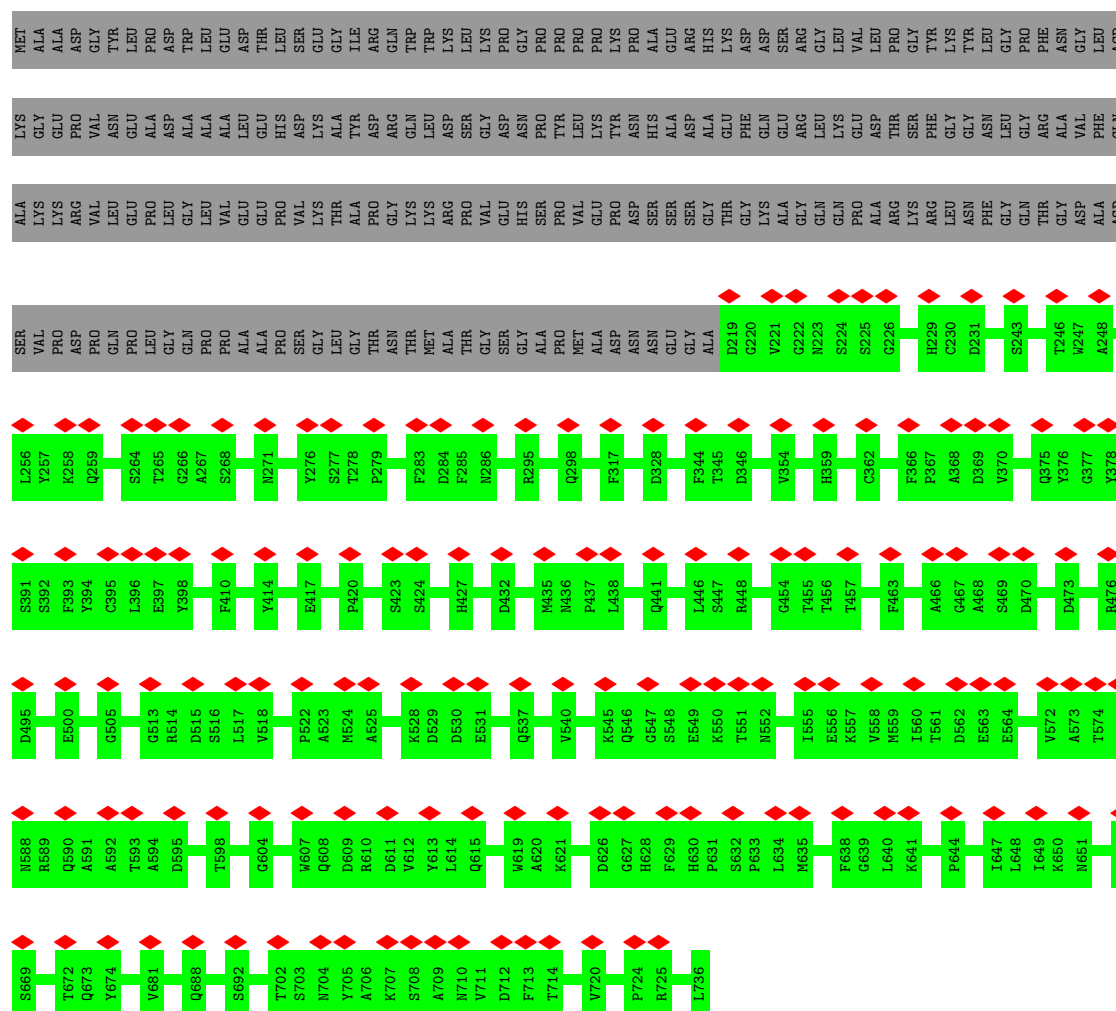




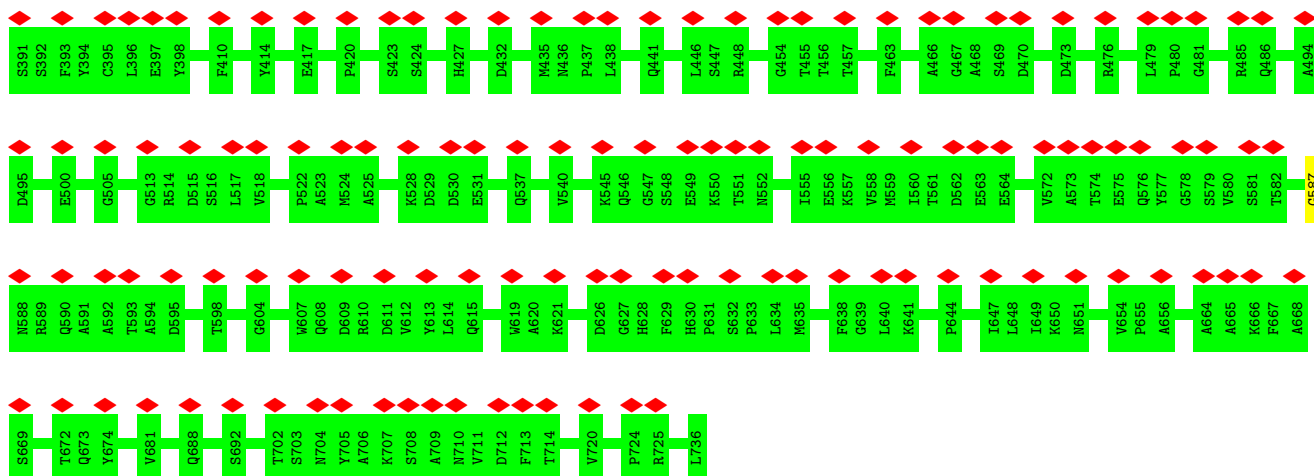




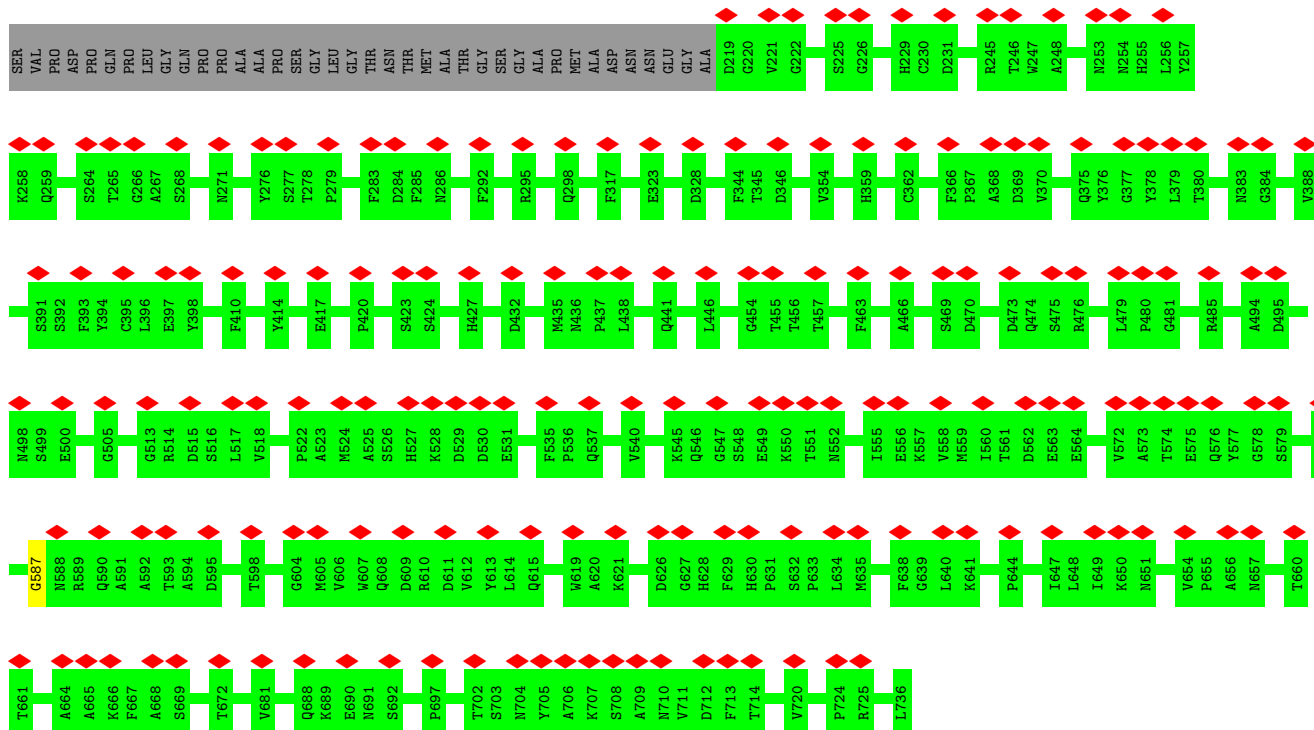
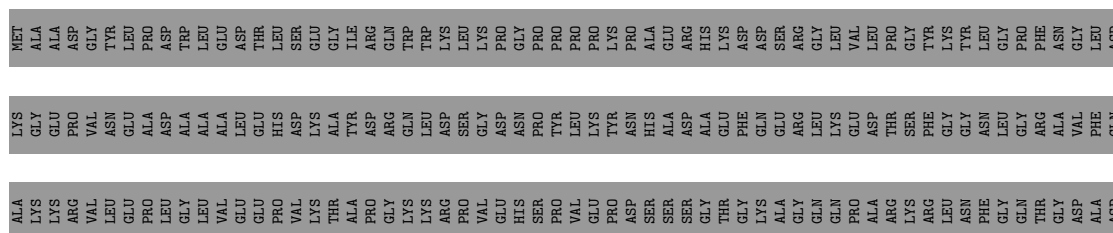
• Molecule 1: Capsid protein VP1



• Molecule 1: Capsid protein VP1



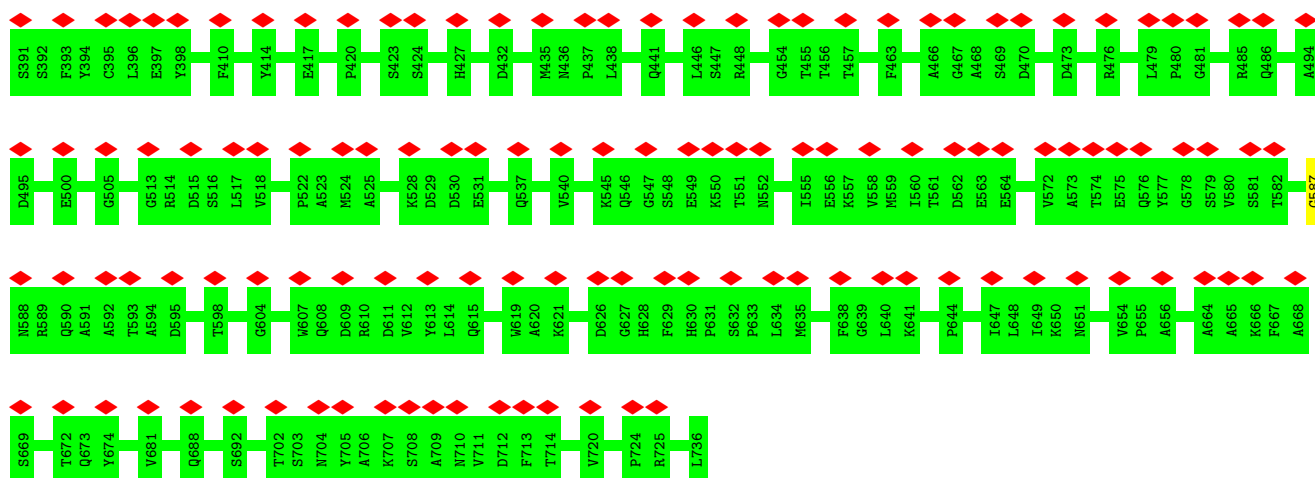
• Molecule 1: Capsid protein VP1



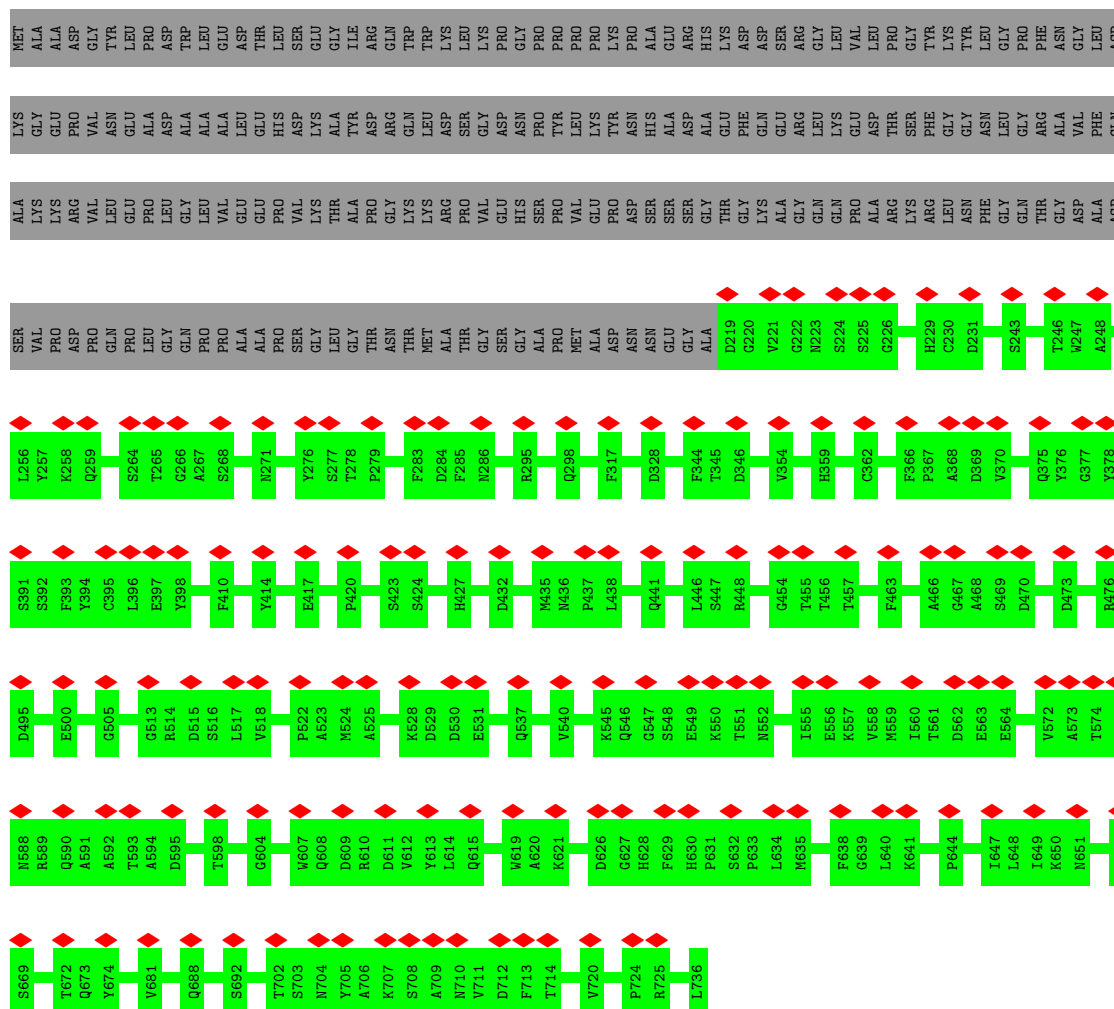
• Molecule 1: Capsid protein VP1



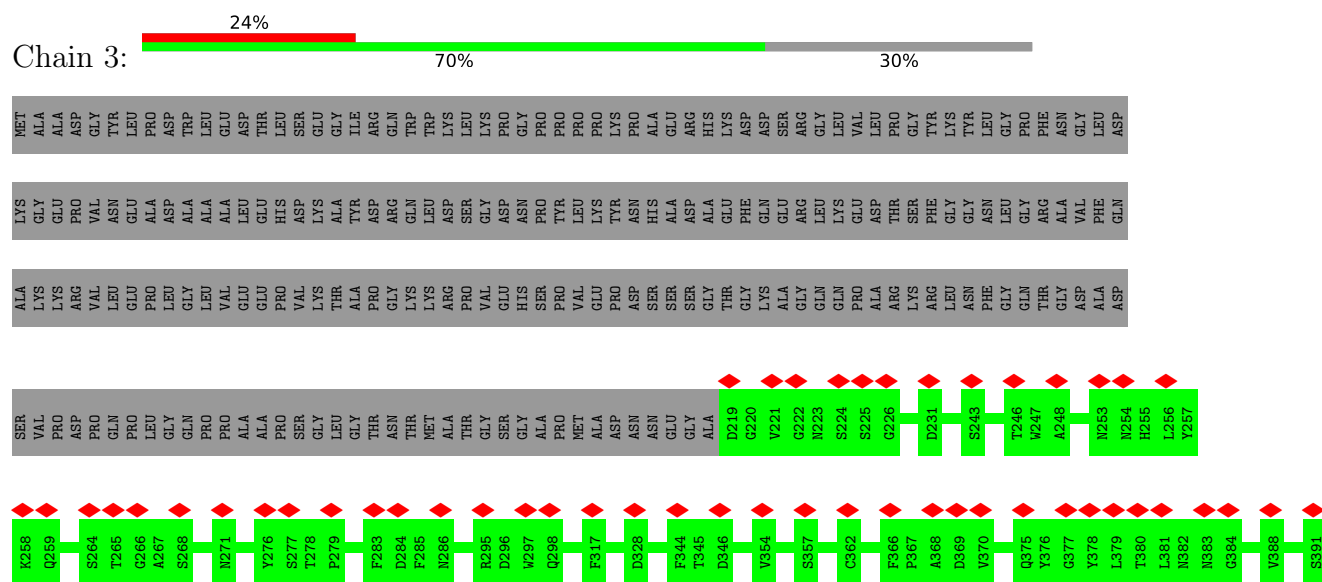


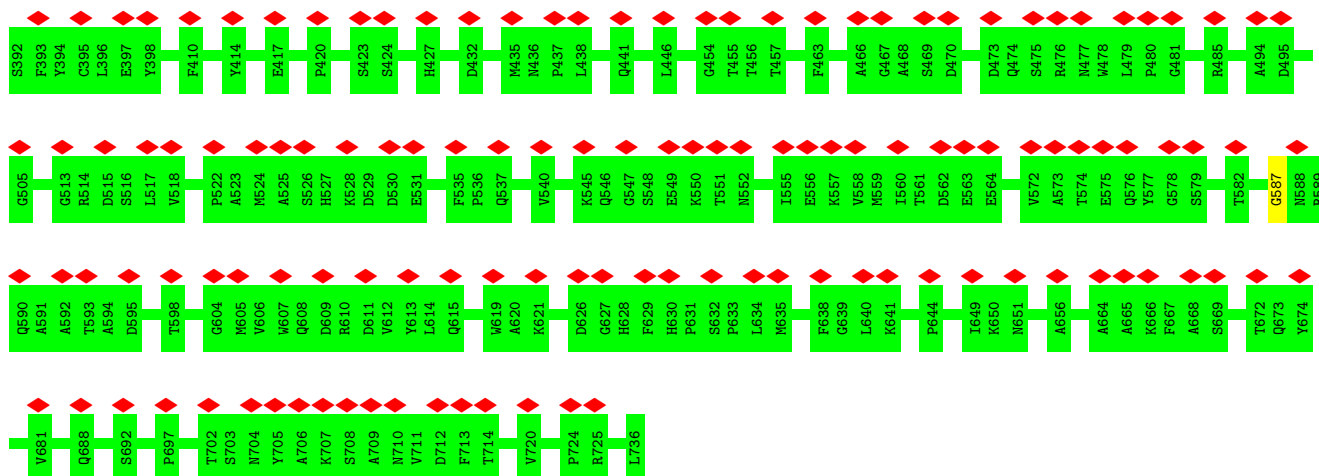


• Molecule 1: Capsid protein VP1



• Molecule 1: Capsid protein VP1

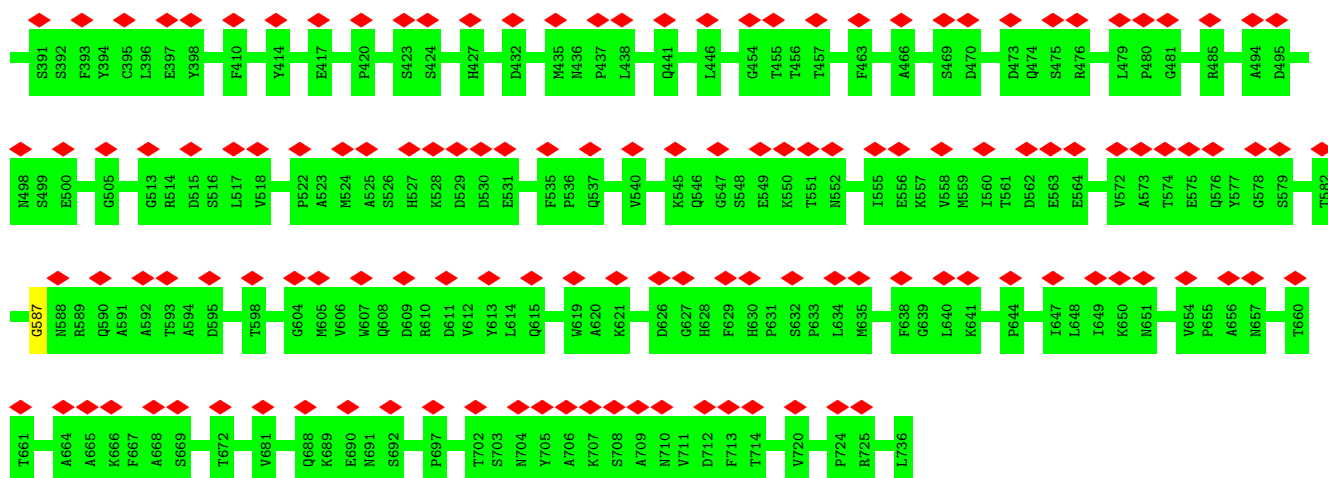




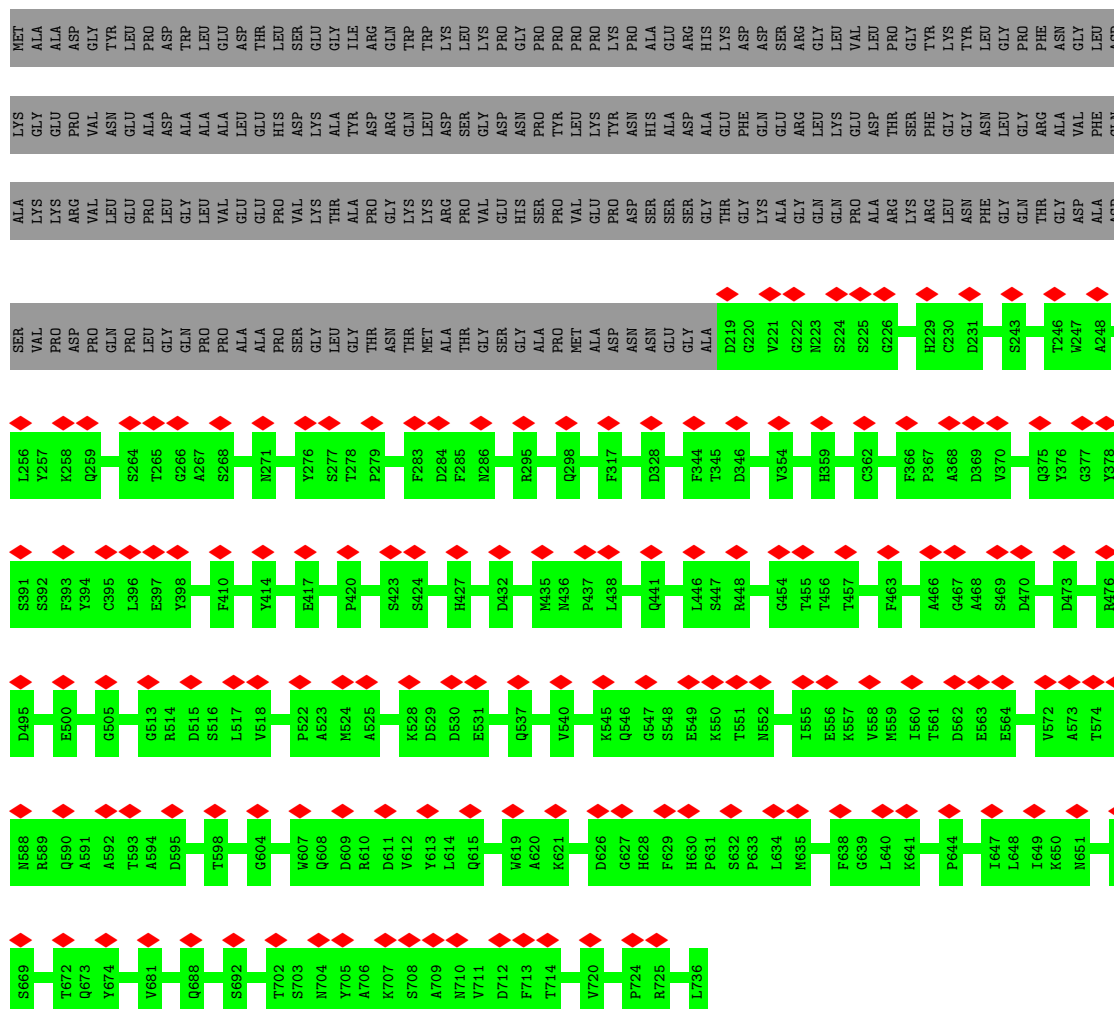
• Molecule 1: Capsid protein VP1



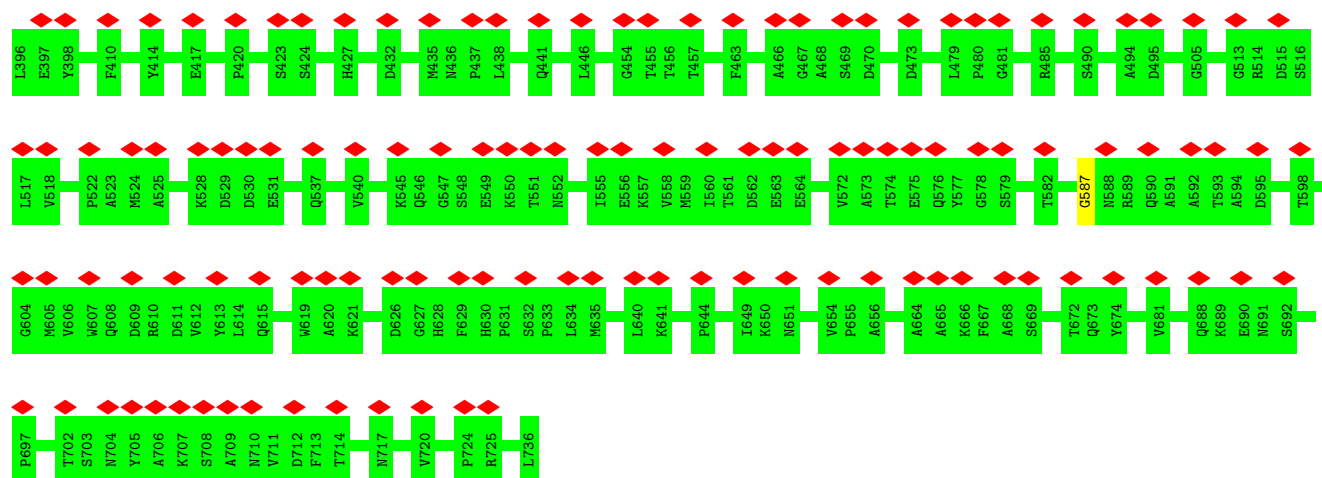
• Molecule 1: Capsid protein VP1



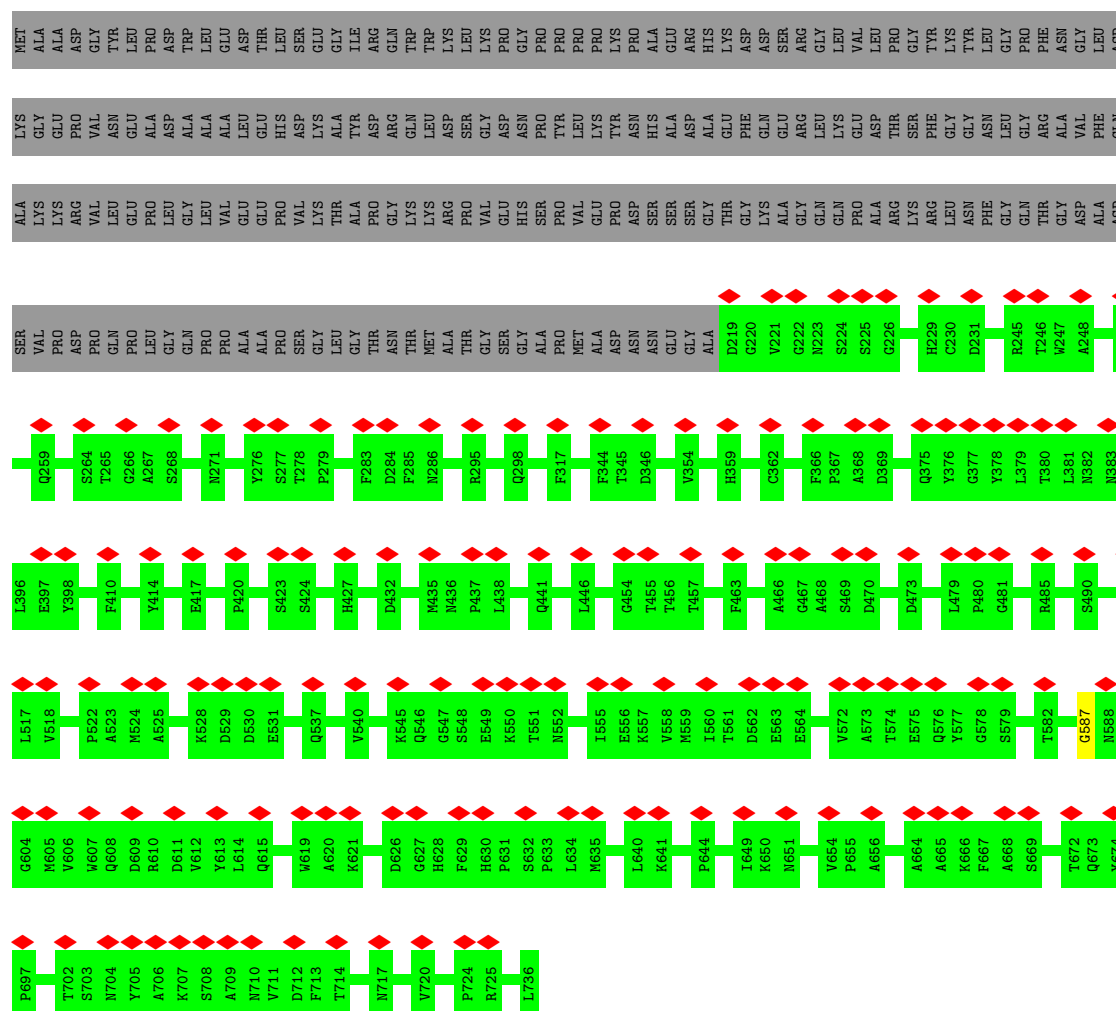
• Molecule 1: Capsid protein VP1



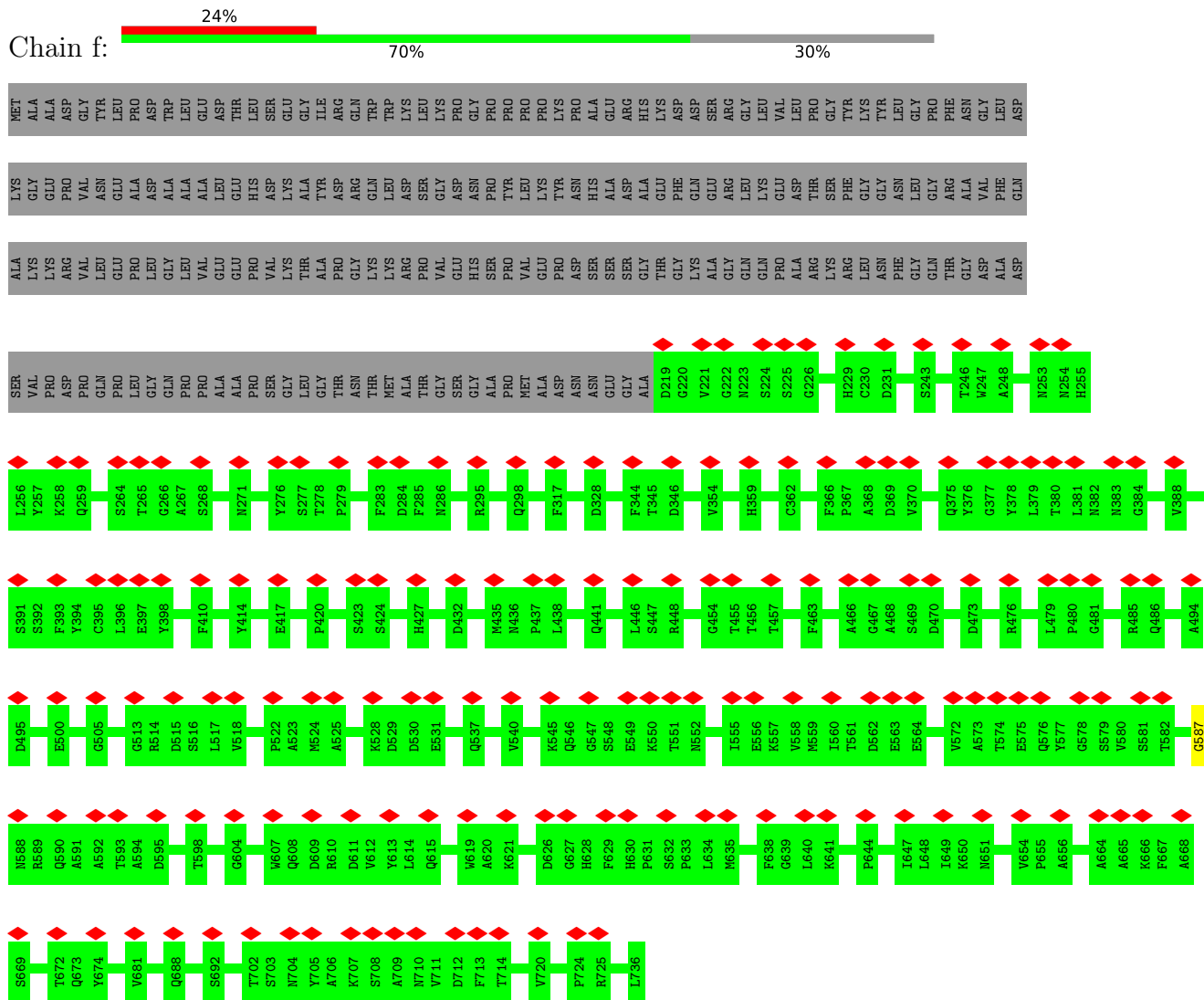
• Molecule 1: Capsid protein VP1



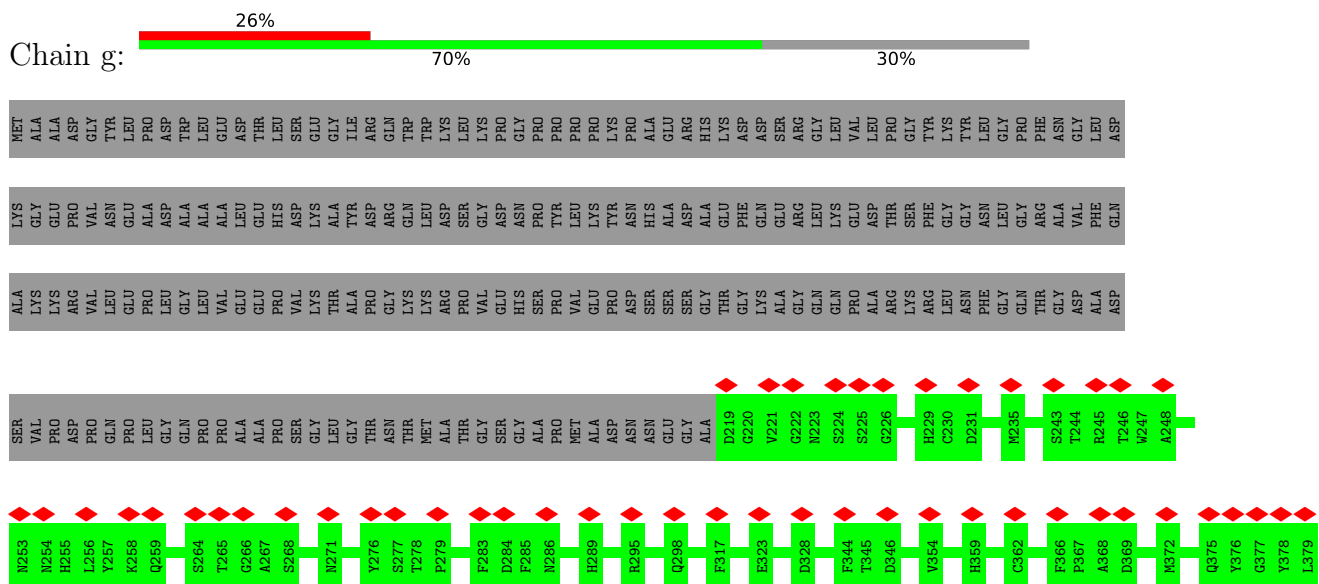
• Molecule 1: Capsid protein VP1



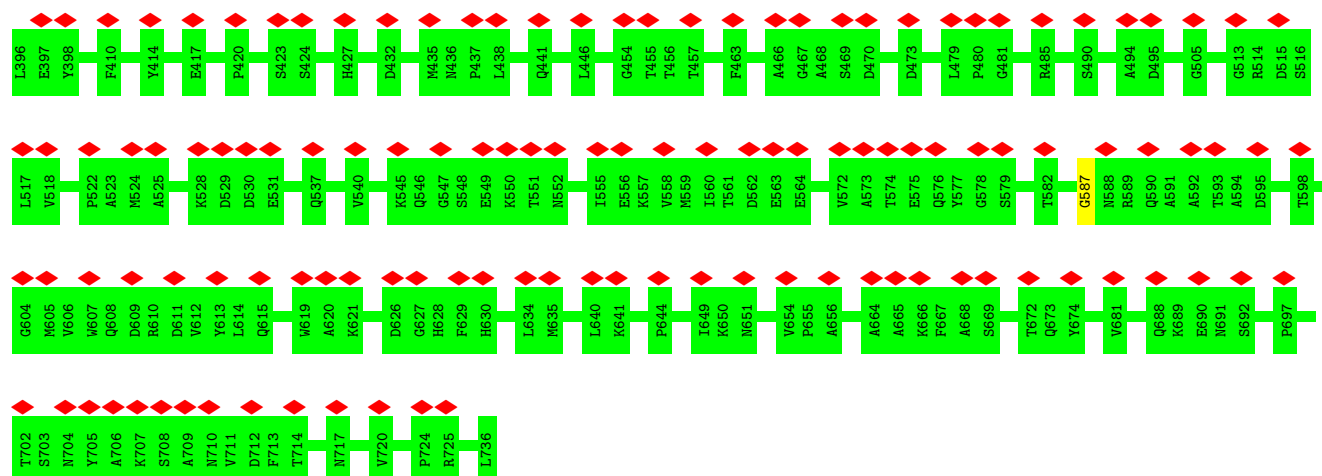
• Molecule 1: Capsid protein VP1



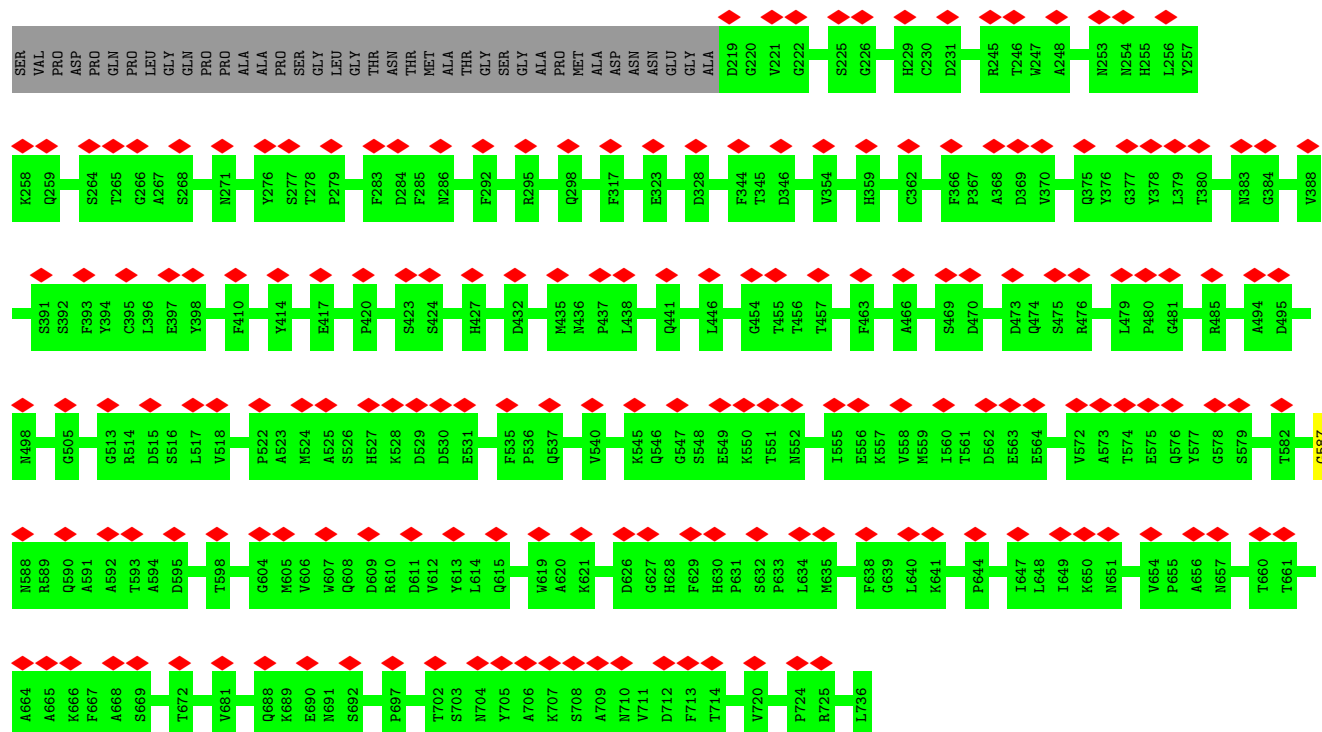
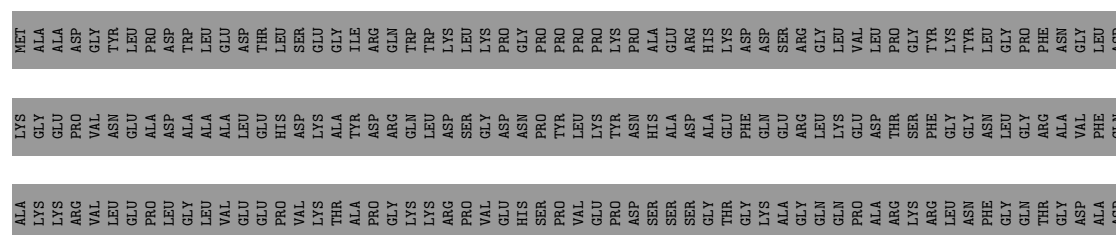
- Molecule 1: Capsid protein VP1



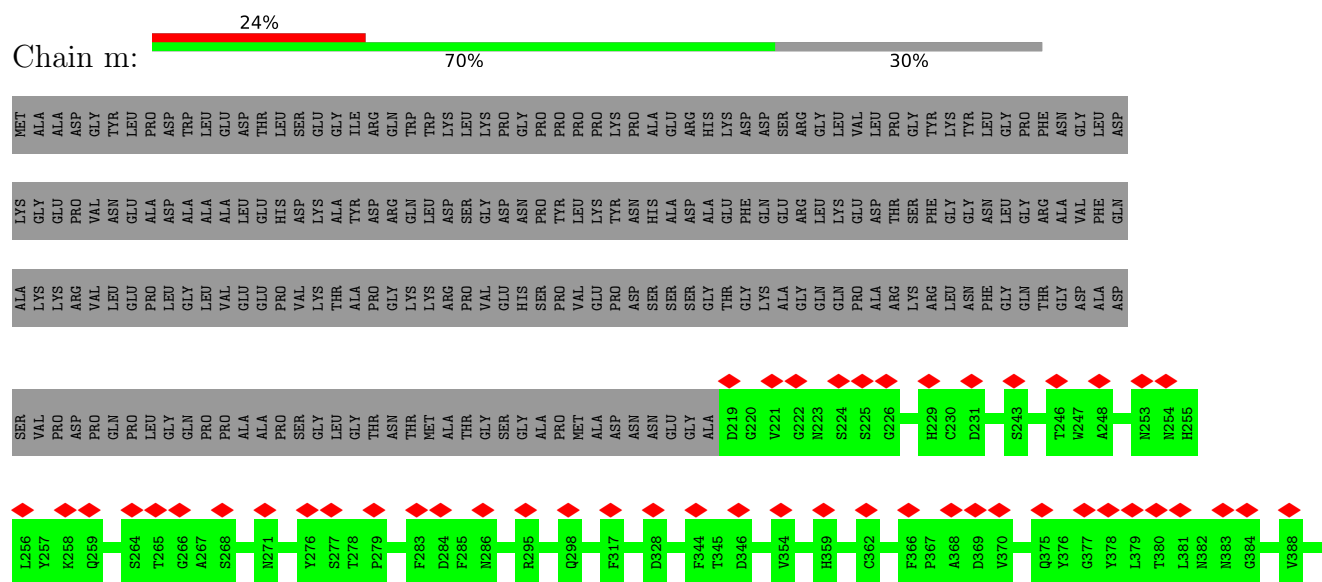


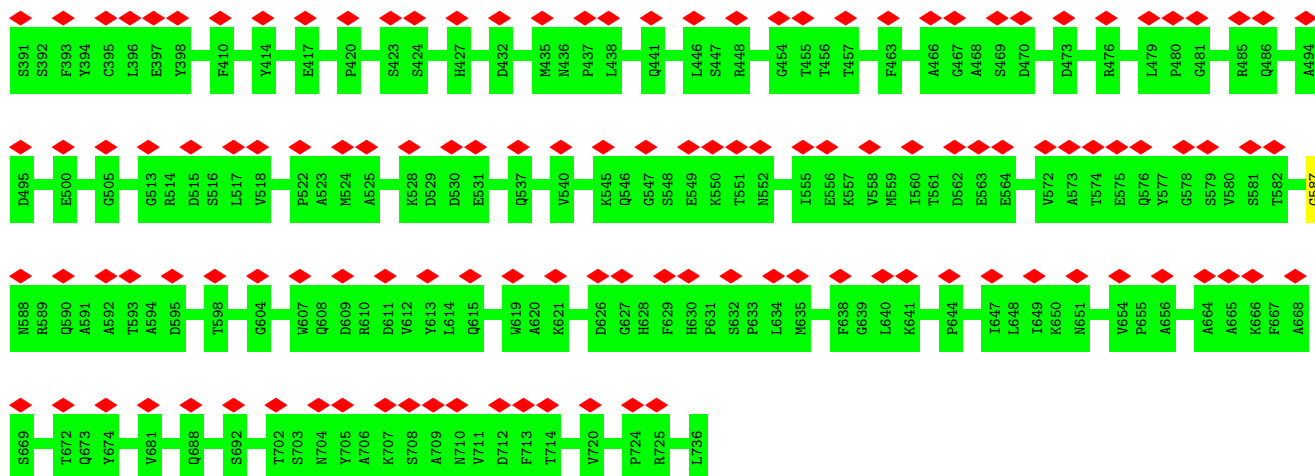


• Molecule 1: Capsid protein VP1

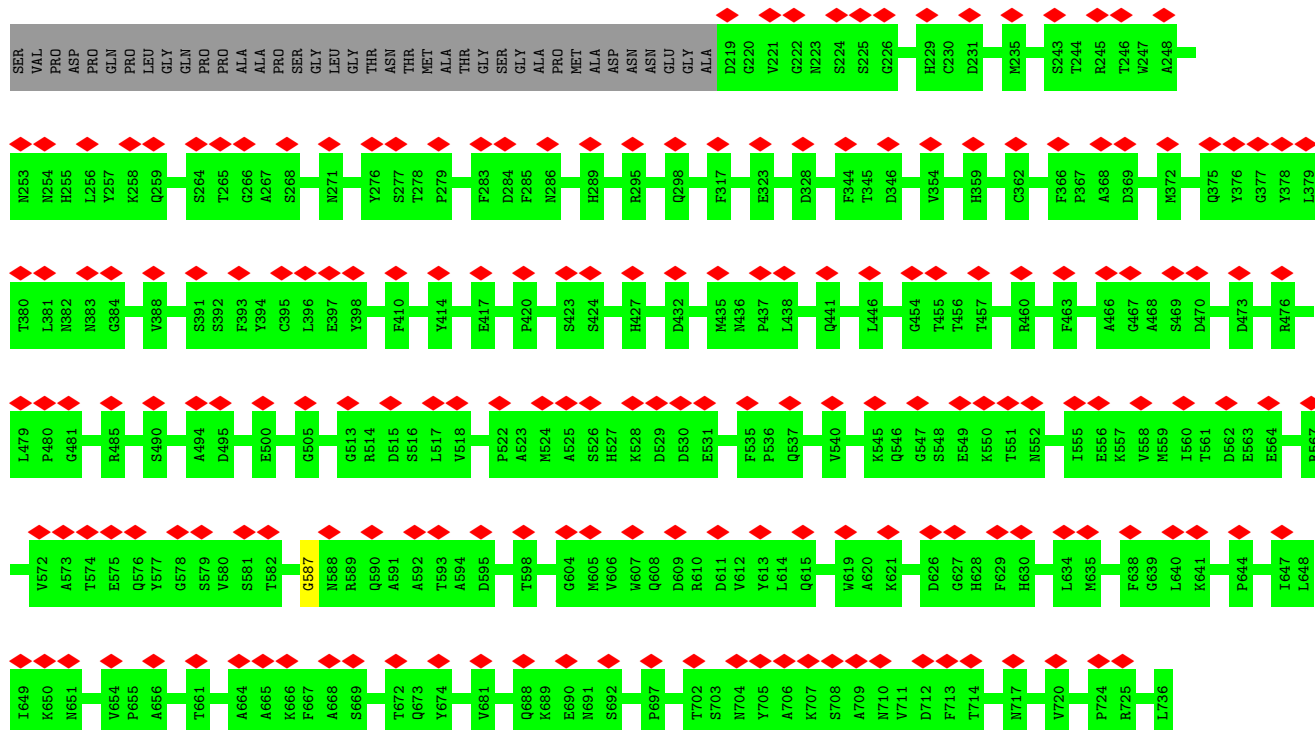
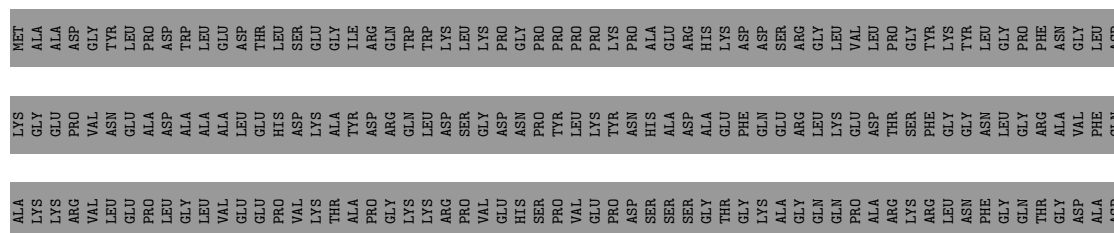


• Molecule 1: Capsid protein VP1

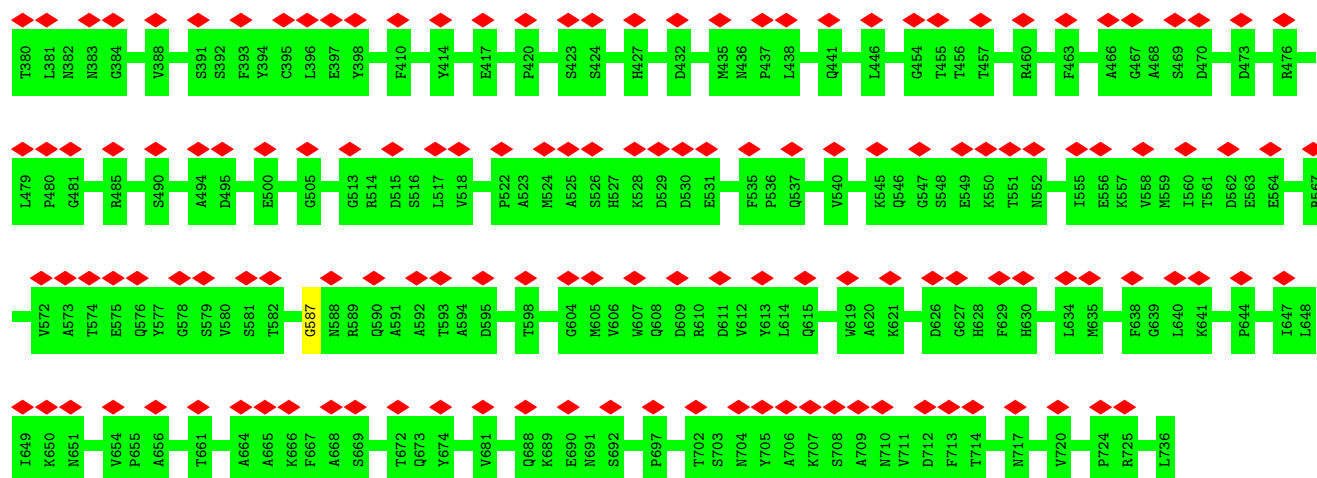




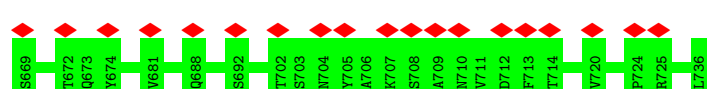
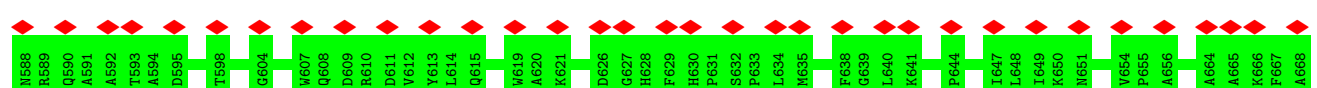
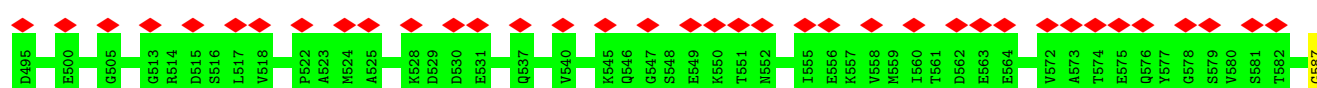
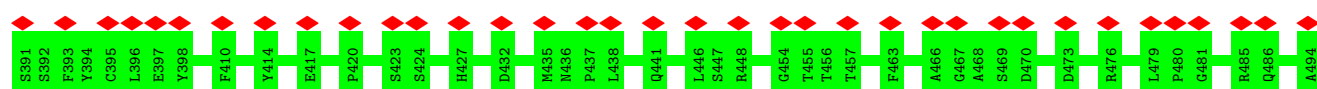
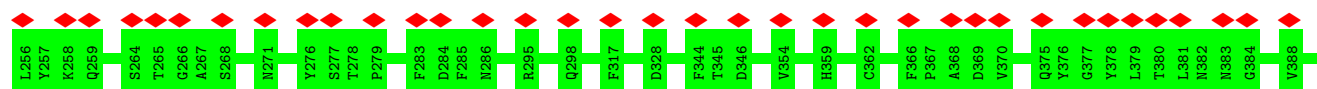
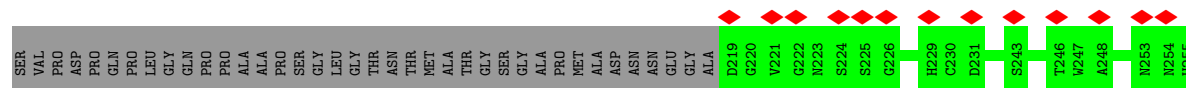
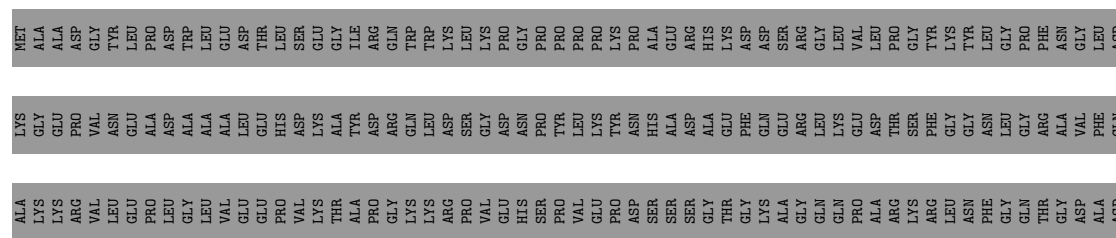
• Molecule 1: Capsid protein VP1



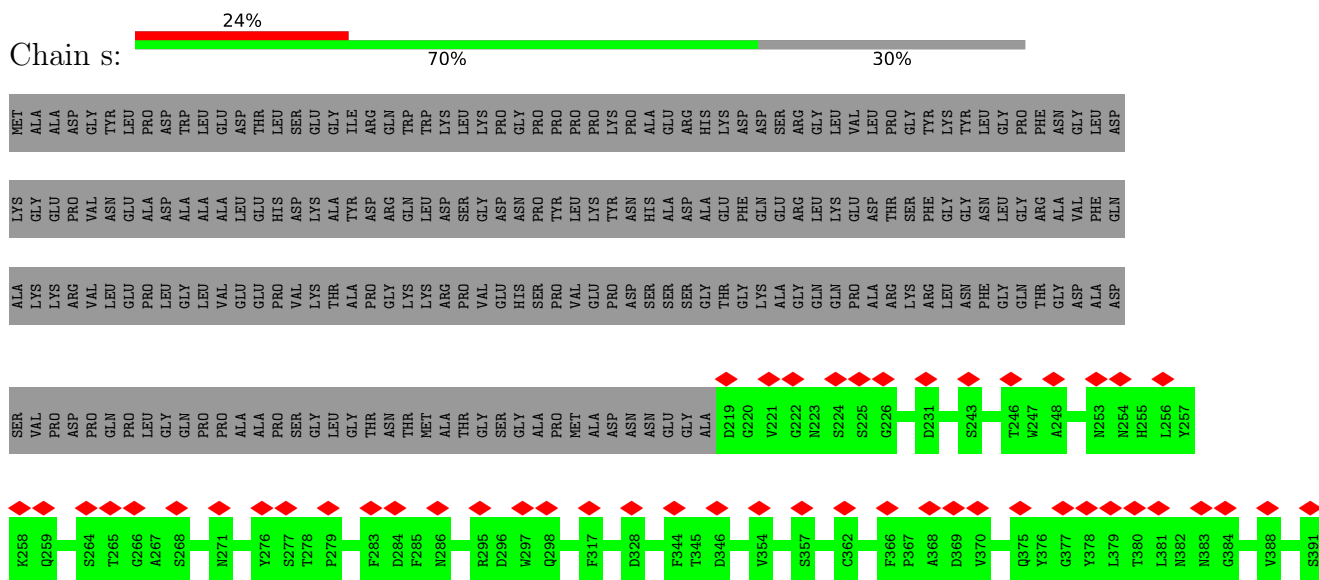
• Molecule 1: Capsid protein VP1

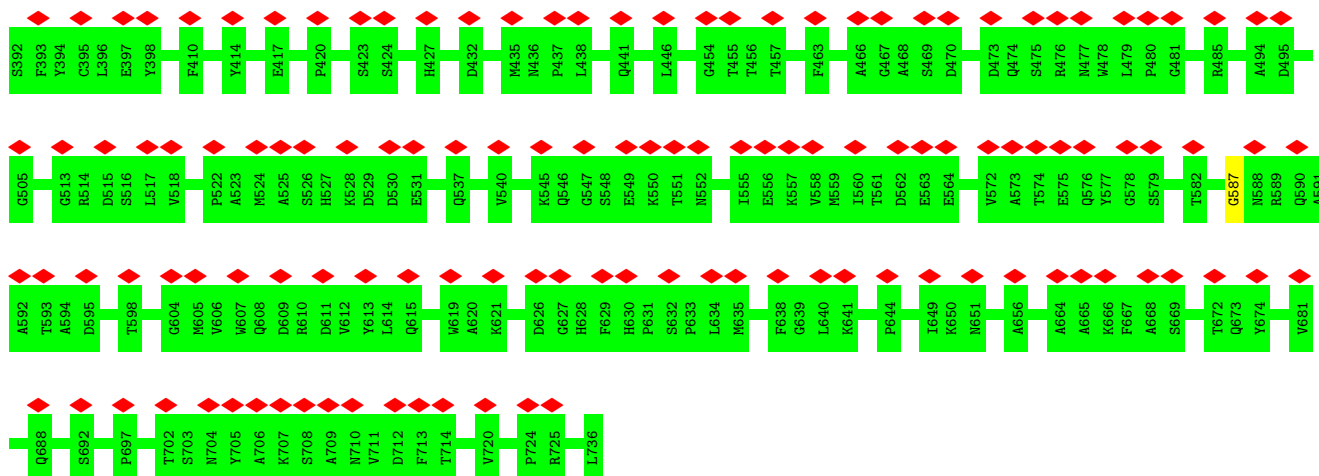


• Molecule 1: Capsid protein VP1

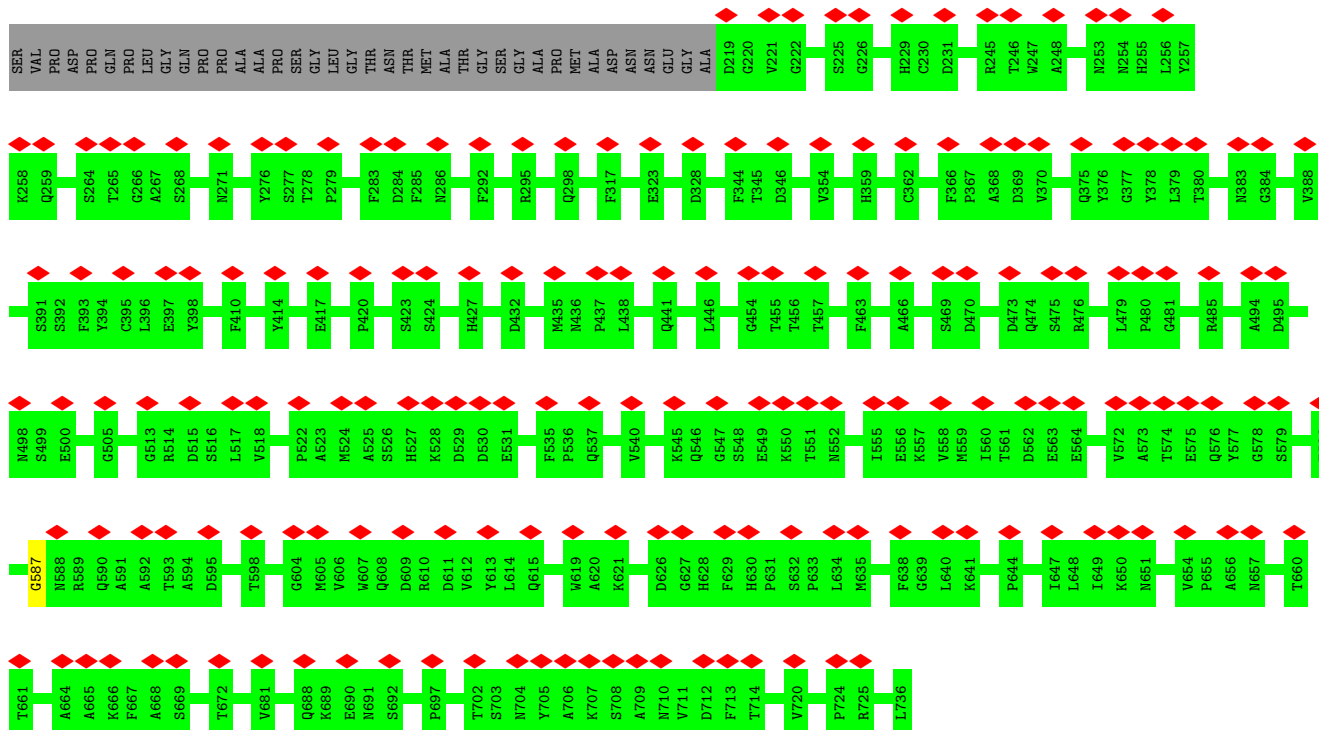
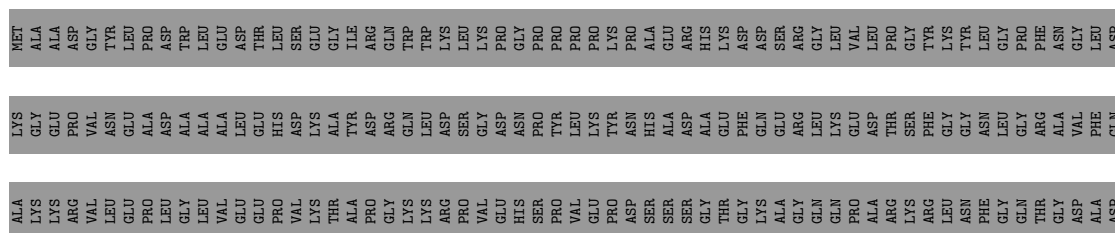


• Molecule 1: Capsid protein VP1

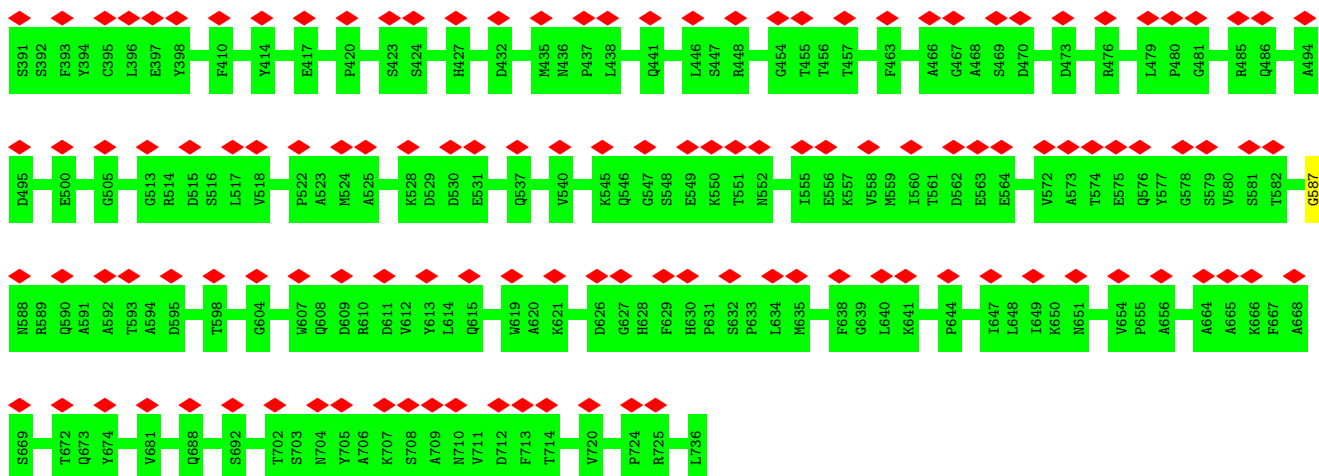




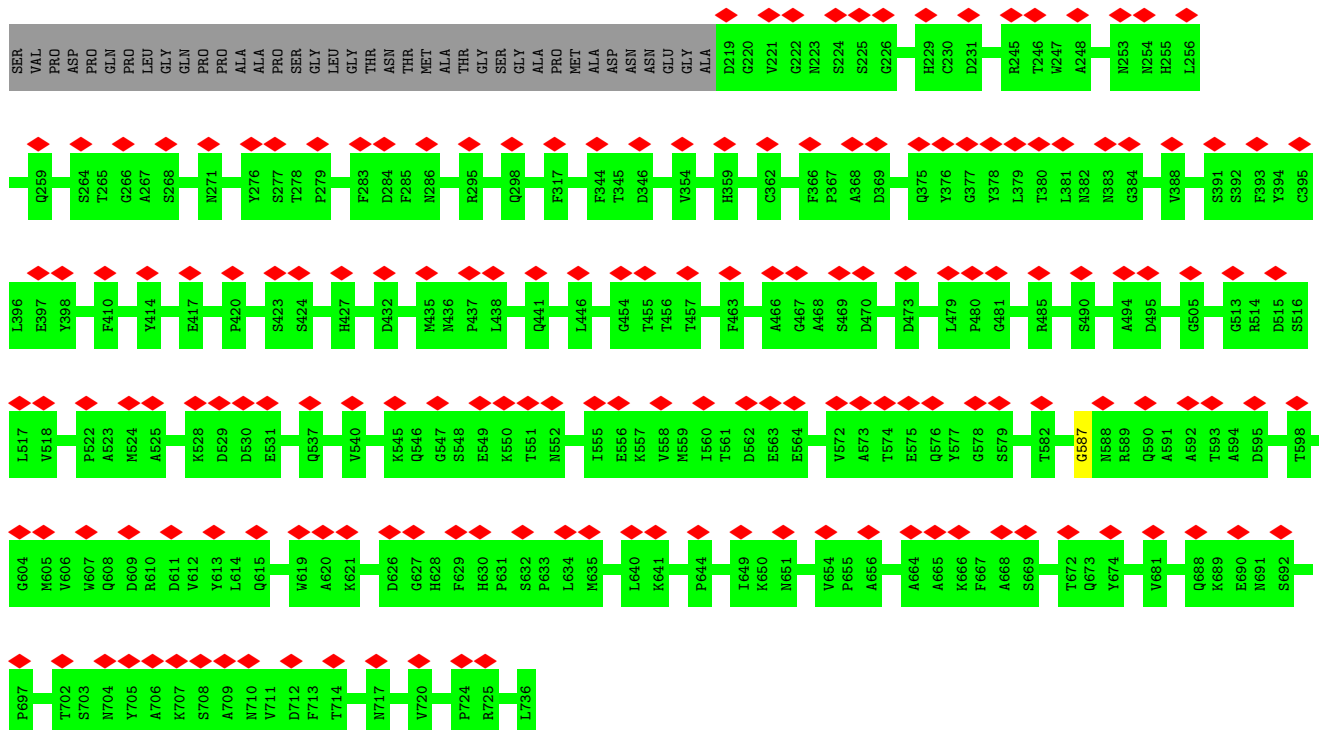
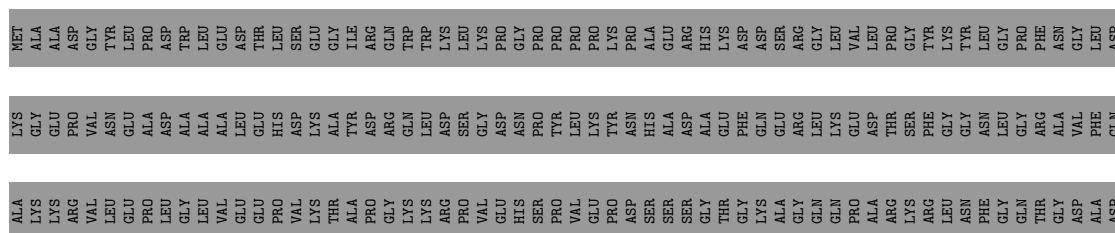
• Molecule 1: Capsid protein VP1



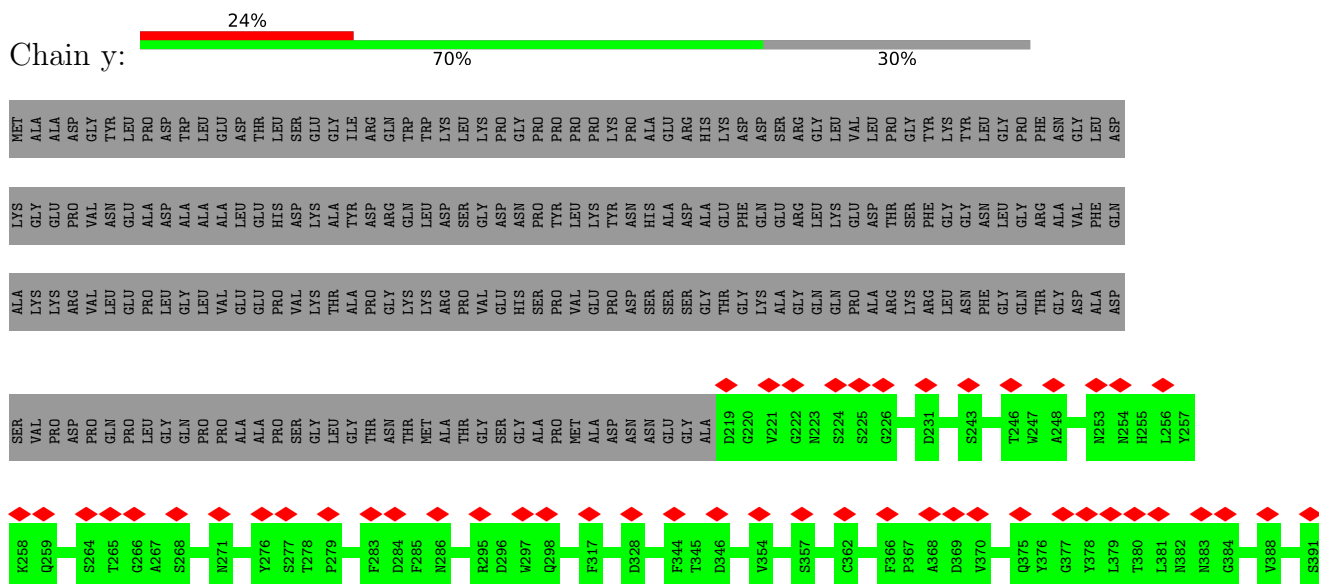
• Molecule 1: Capsid protein VP1

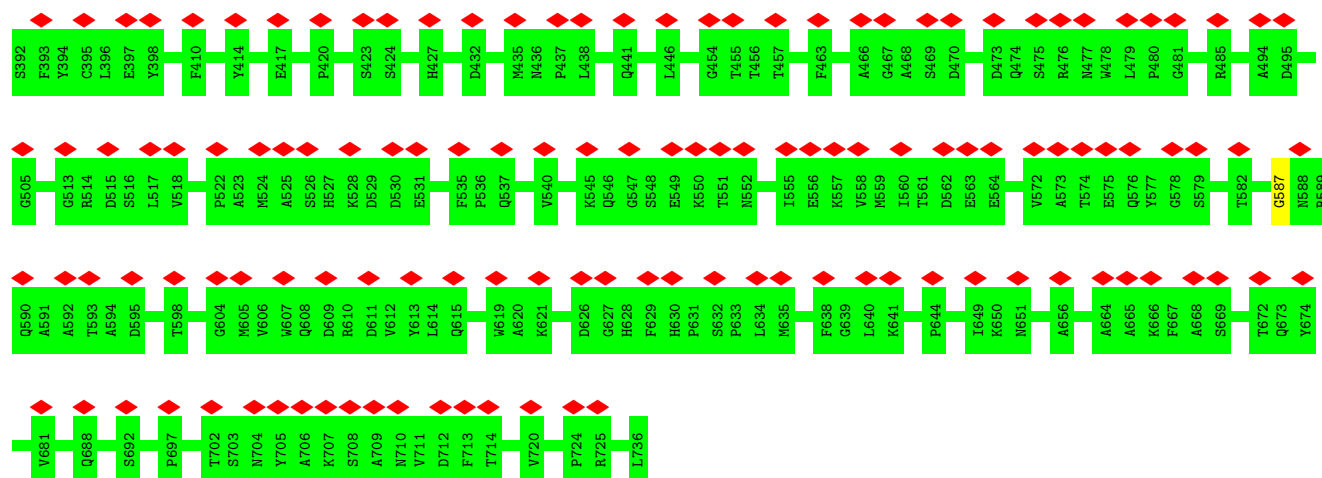


• Molecule 1: Capsid protein VP1

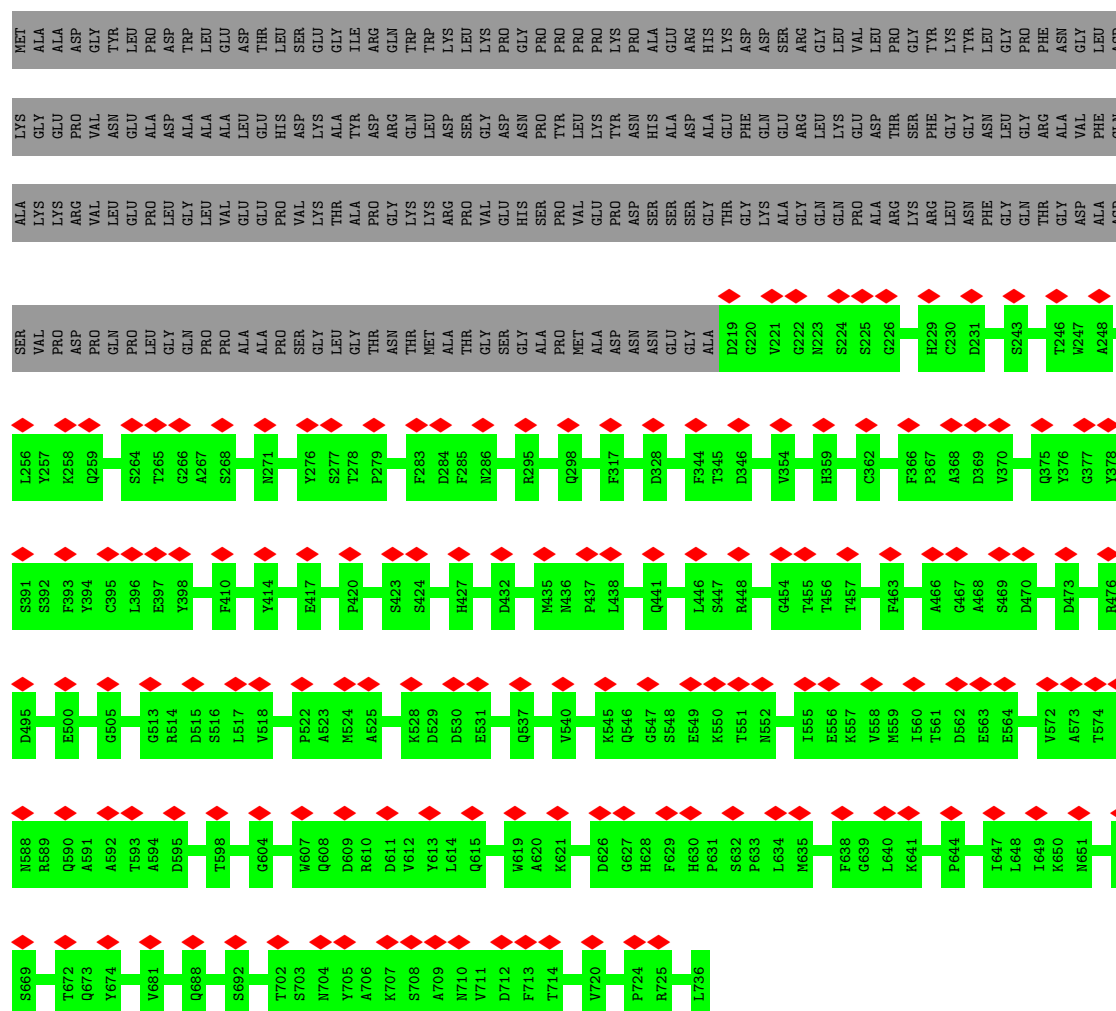


• Molecule 1: Capsid protein VP1

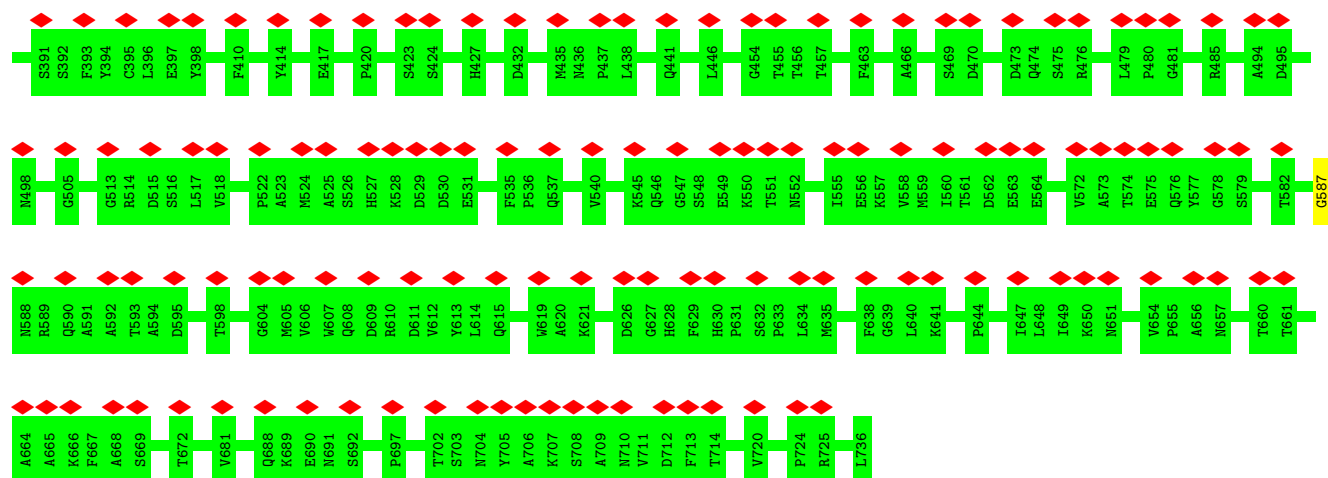




- Molecule 1: Capsid protein VP1



- Molecule 1: Capsid protein VP1



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	24618	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 ($e^-/\text{\AA}^2$)	2	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	DIRECT ELECTRON DE-20 (5k x 3k)	Depositor
Maximum map value	16.777	Depositor
Minimum map value	-8.740	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	1.000	Depositor
Recommended contour level	1.0	Depositor
Map size (Å)	379.05, 379.05, 379.05	wwPDB
Map dimensions	399, 399, 399	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.95, 0.95, 0.95	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	0	0.53	0/4265	0.53	0/5814
1	1	0.53	0/4265	0.53	0/5814
1	2	0.53	0/4265	0.53	0/5814
1	3	0.53	0/4265	0.53	0/5814
1	4	0.53	0/4265	0.53	0/5814
1	5	0.53	0/4265	0.53	0/5814
1	6	0.53	0/4265	0.53	0/5814
1	7	0.53	0/4265	0.53	0/5814
1	A	0.53	0/4265	0.53	0/5814
1	B	0.53	0/4265	0.53	0/5814
1	C	0.53	0/4265	0.53	0/5814
1	D	0.53	0/4265	0.53	0/5814
1	E	0.53	0/4265	0.53	0/5814
1	F	0.53	0/4265	0.53	0/5814
1	G	0.53	0/4265	0.53	0/5814
1	H	0.53	0/4265	0.53	0/5814
1	I	0.53	0/4265	0.53	0/5814
1	J	0.53	0/4265	0.53	0/5814
1	K	0.53	0/4265	0.53	0/5814
1	L	0.53	0/4265	0.53	0/5814
1	M	0.53	0/4265	0.53	0/5814
1	N	0.53	0/4265	0.53	0/5814
1	O	0.53	0/4265	0.53	0/5814
1	P	0.53	0/4265	0.53	0/5814
1	Q	0.53	0/4265	0.53	0/5814
1	R	0.53	0/4265	0.53	0/5814
1	S	0.53	0/4265	0.53	0/5814
1	T	0.53	0/4265	0.53	0/5814
1	U	0.53	0/4265	0.53	0/5814
1	V	0.53	0/4265	0.53	0/5814
1	W	0.53	0/4265	0.53	0/5814
1	X	0.53	0/4265	0.53	0/5814
1	Y	0.53	0/4265	0.53	0/5814
1	Z	0.53	0/4265	0.53	0/5814

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	a	0.53	0/4265	0.53	0/5814
1	b	0.53	0/4265	0.53	0/5814
1	c	0.53	0/4265	0.53	0/5814
1	d	0.53	0/4265	0.53	0/5814
1	e	0.53	0/4265	0.53	0/5814
1	f	0.53	0/4265	0.53	0/5814
1	g	0.53	0/4265	0.53	0/5814
1	h	0.53	0/4265	0.53	0/5814
1	i	0.53	0/4265	0.53	0/5814
1	j	0.53	0/4265	0.53	0/5814
1	k	0.53	0/4265	0.53	0/5814
1	l	0.53	0/4265	0.53	0/5814
1	m	0.53	0/4265	0.53	0/5814
1	n	0.53	0/4265	0.53	0/5814
1	o	0.53	0/4265	0.53	0/5814
1	p	0.53	0/4265	0.53	0/5814
1	q	0.53	0/4265	0.53	0/5814
1	r	0.53	0/4265	0.53	0/5814
1	s	0.53	0/4265	0.53	0/5814
1	t	0.53	0/4265	0.53	0/5814
1	u	0.53	0/4265	0.53	0/5814
1	v	0.53	0/4265	0.53	0/5814
1	w	0.53	0/4265	0.53	0/5814
1	x	0.53	0/4265	0.53	0/5814
1	y	0.53	0/4265	0.53	0/5814
1	z	0.53	0/4265	0.53	0/5814
All	All	0.53	0/255900	0.53	0/348840

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	0	0	1
1	1	0	1
1	2	0	1
1	3	0	1
1	4	0	1
1	5	0	1
1	6	0	1
1	7	0	1

Continued on next page...

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
1	B	0	1
1	C	0	1
1	D	0	1
1	E	0	1
1	F	0	1
1	G	0	1
1	H	0	1
1	I	0	1
1	J	0	1
1	K	0	1
1	L	0	1
1	M	0	1
1	N	0	1
1	O	0	1
1	P	0	1
1	Q	0	1
1	R	0	1
1	S	0	1
1	T	0	1
1	U	0	1
1	V	0	1
1	W	0	1
1	X	0	1
1	Y	0	1
1	Z	0	1
1	a	0	1
1	b	0	1
1	c	0	1
1	d	0	1
1	e	0	1
1	f	0	1
1	g	0	1
1	h	0	1
1	i	0	1
1	j	0	1
1	k	0	1
1	l	0	1
1	m	0	1
1	n	0	1
1	o	0	1
1	p	0	1

Continued on next page...

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
1	q	0	1
1	r	0	1
1	s	0	1
1	t	0	1
1	u	0	1
1	v	0	1
1	w	0	1
1	x	0	1
1	y	0	1
1	z	0	1
All	All	0	60

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (60) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	587	GLY	Peptide
1	1	587	GLY	Peptide
1	2	587	GLY	Peptide
1	3	587	GLY	Peptide
1	4	587	GLY	Peptide
1	5	587	GLY	Peptide
1	6	587	GLY	Peptide
1	7	587	GLY	Peptide
1	A	587	GLY	Peptide
1	B	587	GLY	Peptide
1	C	587	GLY	Peptide
1	D	587	GLY	Peptide
1	E	587	GLY	Peptide
1	F	587	GLY	Peptide
1	G	587	GLY	Peptide
1	H	587	GLY	Peptide
1	I	587	GLY	Peptide
1	J	587	GLY	Peptide
1	K	587	GLY	Peptide
1	L	587	GLY	Peptide
1	M	587	GLY	Peptide
1	N	587	GLY	Peptide
1	O	587	GLY	Peptide

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
1	P	587	GLY	Peptide
1	Q	587	GLY	Peptide
1	R	587	GLY	Peptide
1	S	587	GLY	Peptide
1	T	587	GLY	Peptide
1	U	587	GLY	Peptide
1	V	587	GLY	Peptide
1	W	587	GLY	Peptide
1	X	587	GLY	Peptide
1	Y	587	GLY	Peptide
1	Z	587	GLY	Peptide
1	a	587	GLY	Peptide
1	b	587	GLY	Peptide
1	c	587	GLY	Peptide
1	d	587	GLY	Peptide
1	e	587	GLY	Peptide
1	f	587	GLY	Peptide
1	g	587	GLY	Peptide
1	h	587	GLY	Peptide
1	i	587	GLY	Peptide
1	j	587	GLY	Peptide
1	k	587	GLY	Peptide
1	l	587	GLY	Peptide
1	m	587	GLY	Peptide
1	n	587	GLY	Peptide
1	o	587	GLY	Peptide
1	p	587	GLY	Peptide
1	q	587	GLY	Peptide
1	r	587	GLY	Peptide
1	s	587	GLY	Peptide
1	t	587	GLY	Peptide
1	u	587	GLY	Peptide
1	v	587	GLY	Peptide
1	w	587	GLY	Peptide
1	x	587	GLY	Peptide
1	y	587	GLY	Peptide
1	z	587	GLY	Peptide

5.2 Too-close contacts [i](#)

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	0	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	1	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	2	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	3	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	4	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	5	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	6	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	7	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	A	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	B	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	C	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	D	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	E	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	F	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	G	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	H	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	I	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	J	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	K	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	L	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	M	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	N	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	O	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	P	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	Q	516/736 (70%)	507 (98%)	9 (2%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	R	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	S	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	T	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	U	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	V	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	W	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	X	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	Y	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	Z	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	a	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	b	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	c	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	d	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	e	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	f	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	g	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	h	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	i	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	j	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	k	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	l	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	m	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	n	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	o	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	p	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	q	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	r	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	s	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	t	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	u	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	v	516/736 (70%)	506 (98%)	10 (2%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	w	516/736 (70%)	507 (98%)	9 (2%)	0	100	100
1	x	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	y	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
1	z	516/736 (70%)	506 (98%)	10 (2%)	0	100	100
All	All	30960/44160 (70%)	30384 (98%)	576 (2%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains ⓘ

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	0	457/628 (73%)	457 (100%)	0	100	100
1	1	457/628 (73%)	457 (100%)	0	100	100
1	2	457/628 (73%)	457 (100%)	0	100	100
1	3	457/628 (73%)	457 (100%)	0	100	100
1	4	457/628 (73%)	457 (100%)	0	100	100
1	5	457/628 (73%)	457 (100%)	0	100	100
1	6	457/628 (73%)	457 (100%)	0	100	100
1	7	457/628 (73%)	457 (100%)	0	100	100
1	A	457/628 (73%)	457 (100%)	0	100	100
1	B	457/628 (73%)	457 (100%)	0	100	100
1	C	457/628 (73%)	457 (100%)	0	100	100
1	D	457/628 (73%)	457 (100%)	0	100	100
1	E	457/628 (73%)	457 (100%)	0	100	100
1	F	457/628 (73%)	457 (100%)	0	100	100
1	G	457/628 (73%)	457 (100%)	0	100	100
1	H	457/628 (73%)	457 (100%)	0	100	100
1	I	457/628 (73%)	457 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	J	457/628 (73%)	457 (100%)	0	100	100
1	K	457/628 (73%)	457 (100%)	0	100	100
1	L	457/628 (73%)	457 (100%)	0	100	100
1	M	457/628 (73%)	457 (100%)	0	100	100
1	N	457/628 (73%)	457 (100%)	0	100	100
1	O	457/628 (73%)	457 (100%)	0	100	100
1	P	457/628 (73%)	457 (100%)	0	100	100
1	Q	457/628 (73%)	457 (100%)	0	100	100
1	R	457/628 (73%)	457 (100%)	0	100	100
1	S	457/628 (73%)	457 (100%)	0	100	100
1	T	457/628 (73%)	457 (100%)	0	100	100
1	U	457/628 (73%)	457 (100%)	0	100	100
1	V	457/628 (73%)	457 (100%)	0	100	100
1	W	457/628 (73%)	457 (100%)	0	100	100
1	X	457/628 (73%)	457 (100%)	0	100	100
1	Y	457/628 (73%)	457 (100%)	0	100	100
1	Z	457/628 (73%)	457 (100%)	0	100	100
1	a	457/628 (73%)	457 (100%)	0	100	100
1	b	457/628 (73%)	457 (100%)	0	100	100
1	c	457/628 (73%)	457 (100%)	0	100	100
1	d	457/628 (73%)	457 (100%)	0	100	100
1	e	457/628 (73%)	457 (100%)	0	100	100
1	f	457/628 (73%)	457 (100%)	0	100	100
1	g	457/628 (73%)	457 (100%)	0	100	100
1	h	457/628 (73%)	457 (100%)	0	100	100
1	i	457/628 (73%)	457 (100%)	0	100	100
1	j	457/628 (73%)	457 (100%)	0	100	100
1	k	457/628 (73%)	457 (100%)	0	100	100
1	l	457/628 (73%)	457 (100%)	0	100	100
1	m	457/628 (73%)	457 (100%)	0	100	100
1	n	457/628 (73%)	457 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	o	457/628 (73%)	457 (100%)	0	100	100
1	p	457/628 (73%)	457 (100%)	0	100	100
1	q	457/628 (73%)	457 (100%)	0	100	100
1	r	457/628 (73%)	457 (100%)	0	100	100
1	s	457/628 (73%)	457 (100%)	0	100	100
1	t	457/628 (73%)	457 (100%)	0	100	100
1	u	457/628 (73%)	457 (100%)	0	100	100
1	v	457/628 (73%)	457 (100%)	0	100	100
1	w	457/628 (73%)	457 (100%)	0	100	100
1	x	457/628 (73%)	457 (100%)	0	100	100
1	y	457/628 (73%)	457 (100%)	0	100	100
1	z	457/628 (73%)	457 (100%)	0	100	100
All	All	27420/37680 (73%)	27420 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (855) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	289	HIS
1	A	298	GLN
1	A	335	ASN
1	A	342	GLN
1	A	383	ASN
1	A	408	ASN
1	A	458	GLN
1	A	462	GLN
1	A	519	ASN
1	A	552	ASN
1	A	599	GLN
1	A	608	GLN
1	A	628	HIS
1	A	646	GLN
1	B	289	HIS
1	B	298	GLN
1	B	335	ASN
1	B	342	GLN
1	B	383	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	408	ASN
1	B	458	GLN
1	B	462	GLN
1	B	519	ASN
1	B	552	ASN
1	B	599	GLN
1	B	608	GLN
1	B	628	HIS
1	B	646	GLN
1	C	289	HIS
1	C	298	GLN
1	C	335	ASN
1	C	342	GLN
1	C	383	ASN
1	C	408	ASN
1	C	458	GLN
1	C	462	GLN
1	C	519	ASN
1	C	552	ASN
1	C	585	GLN
1	C	599	GLN
1	C	608	GLN
1	C	628	HIS
1	C	646	GLN
1	D	289	HIS
1	D	298	GLN
1	D	335	ASN
1	D	342	GLN
1	D	383	ASN
1	D	408	ASN
1	D	458	GLN
1	D	462	GLN
1	D	519	ASN
1	D	552	ASN
1	D	585	GLN
1	D	599	GLN
1	D	608	GLN
1	D	628	HIS
1	D	646	GLN
1	E	289	HIS
1	E	298	GLN
1	E	335	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	E	342	GLN
1	E	383	ASN
1	E	408	ASN
1	E	458	GLN
1	E	462	GLN
1	E	519	ASN
1	E	552	ASN
1	E	585	GLN
1	E	599	GLN
1	E	608	GLN
1	E	628	HIS
1	E	646	GLN
1	F	289	HIS
1	F	298	GLN
1	F	335	ASN
1	F	342	GLN
1	F	383	ASN
1	F	408	ASN
1	F	458	GLN
1	F	462	GLN
1	F	519	ASN
1	F	552	ASN
1	F	599	GLN
1	F	608	GLN
1	F	628	HIS
1	F	646	GLN
1	G	289	HIS
1	G	298	GLN
1	G	335	ASN
1	G	342	GLN
1	G	383	ASN
1	G	408	ASN
1	G	458	GLN
1	G	462	GLN
1	G	519	ASN
1	G	552	ASN
1	G	599	GLN
1	G	608	GLN
1	G	628	HIS
1	G	646	GLN
1	H	289	HIS
1	H	298	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	H	335	ASN
1	H	383	ASN
1	H	408	ASN
1	H	458	GLN
1	H	462	GLN
1	H	519	ASN
1	H	552	ASN
1	H	599	GLN
1	H	608	GLN
1	H	628	HIS
1	H	646	GLN
1	I	289	HIS
1	I	298	GLN
1	I	335	ASN
1	I	342	GLN
1	I	383	ASN
1	I	408	ASN
1	I	458	GLN
1	I	462	GLN
1	I	519	ASN
1	I	552	ASN
1	I	599	GLN
1	I	608	GLN
1	I	628	HIS
1	I	646	GLN
1	J	289	HIS
1	J	298	GLN
1	J	335	ASN
1	J	342	GLN
1	J	383	ASN
1	J	408	ASN
1	J	458	GLN
1	J	462	GLN
1	J	519	ASN
1	J	552	ASN
1	J	599	GLN
1	J	608	GLN
1	J	628	HIS
1	J	646	GLN
1	K	289	HIS
1	K	298	GLN
1	K	335	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	K	342	GLN
1	K	383	ASN
1	K	408	ASN
1	K	458	GLN
1	K	462	GLN
1	K	519	ASN
1	K	552	ASN
1	K	599	GLN
1	K	608	GLN
1	K	628	HIS
1	K	646	GLN
1	L	289	HIS
1	L	298	GLN
1	L	335	ASN
1	L	342	GLN
1	L	383	ASN
1	L	408	ASN
1	L	458	GLN
1	L	462	GLN
1	L	519	ASN
1	L	552	ASN
1	L	599	GLN
1	L	608	GLN
1	L	628	HIS
1	L	646	GLN
1	M	289	HIS
1	M	298	GLN
1	M	335	ASN
1	M	342	GLN
1	M	383	ASN
1	M	408	ASN
1	M	458	GLN
1	M	462	GLN
1	M	519	ASN
1	M	552	ASN
1	M	599	GLN
1	M	608	GLN
1	M	628	HIS
1	M	646	GLN
1	N	289	HIS
1	N	298	GLN
1	N	335	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	N	342	GLN
1	N	383	ASN
1	N	408	ASN
1	N	458	GLN
1	N	462	GLN
1	N	519	ASN
1	N	552	ASN
1	N	599	GLN
1	N	608	GLN
1	N	628	HIS
1	N	646	GLN
1	O	289	HIS
1	O	298	GLN
1	O	335	ASN
1	O	342	GLN
1	O	383	ASN
1	O	408	ASN
1	O	458	GLN
1	O	462	GLN
1	O	519	ASN
1	O	552	ASN
1	O	599	GLN
1	O	608	GLN
1	O	628	HIS
1	O	646	GLN
1	P	289	HIS
1	P	298	GLN
1	P	335	ASN
1	P	342	GLN
1	P	383	ASN
1	P	408	ASN
1	P	458	GLN
1	P	462	GLN
1	P	519	ASN
1	P	552	ASN
1	P	585	GLN
1	P	599	GLN
1	P	608	GLN
1	P	628	HIS
1	P	646	GLN
1	Q	289	HIS
1	Q	298	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	Q	335	ASN
1	Q	342	GLN
1	Q	383	ASN
1	Q	408	ASN
1	Q	458	GLN
1	Q	462	GLN
1	Q	519	ASN
1	Q	552	ASN
1	Q	599	GLN
1	Q	608	GLN
1	Q	628	HIS
1	Q	646	GLN
1	R	289	HIS
1	R	298	GLN
1	R	335	ASN
1	R	342	GLN
1	R	383	ASN
1	R	408	ASN
1	R	458	GLN
1	R	462	GLN
1	R	519	ASN
1	R	552	ASN
1	R	599	GLN
1	R	608	GLN
1	R	628	HIS
1	R	646	GLN
1	S	289	HIS
1	S	298	GLN
1	S	335	ASN
1	S	342	GLN
1	S	383	ASN
1	S	408	ASN
1	S	458	GLN
1	S	462	GLN
1	S	519	ASN
1	S	552	ASN
1	S	585	GLN
1	S	599	GLN
1	S	608	GLN
1	S	628	HIS
1	S	646	GLN
1	T	289	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	T	298	GLN
1	T	335	ASN
1	T	342	GLN
1	T	383	ASN
1	T	408	ASN
1	T	458	GLN
1	T	462	GLN
1	T	519	ASN
1	T	552	ASN
1	T	599	GLN
1	T	608	GLN
1	T	628	HIS
1	T	646	GLN
1	U	289	HIS
1	U	298	GLN
1	U	335	ASN
1	U	342	GLN
1	U	383	ASN
1	U	408	ASN
1	U	458	GLN
1	U	462	GLN
1	U	519	ASN
1	U	552	ASN
1	U	599	GLN
1	U	608	GLN
1	U	628	HIS
1	U	646	GLN
1	V	289	HIS
1	V	298	GLN
1	V	335	ASN
1	V	342	GLN
1	V	383	ASN
1	V	408	ASN
1	V	458	GLN
1	V	462	GLN
1	V	519	ASN
1	V	552	ASN
1	V	599	GLN
1	V	608	GLN
1	V	628	HIS
1	V	646	GLN
1	W	289	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	W	298	GLN
1	W	335	ASN
1	W	342	GLN
1	W	383	ASN
1	W	408	ASN
1	W	458	GLN
1	W	462	GLN
1	W	519	ASN
1	W	552	ASN
1	W	599	GLN
1	W	608	GLN
1	W	628	HIS
1	W	646	GLN
1	X	289	HIS
1	X	298	GLN
1	X	335	ASN
1	X	342	GLN
1	X	383	ASN
1	X	408	ASN
1	X	458	GLN
1	X	462	GLN
1	X	519	ASN
1	X	552	ASN
1	X	599	GLN
1	X	608	GLN
1	X	628	HIS
1	X	646	GLN
1	Y	289	HIS
1	Y	298	GLN
1	Y	335	ASN
1	Y	342	GLN
1	Y	383	ASN
1	Y	408	ASN
1	Y	458	GLN
1	Y	462	GLN
1	Y	519	ASN
1	Y	552	ASN
1	Y	599	GLN
1	Y	608	GLN
1	Y	628	HIS
1	Y	646	GLN
1	Z	289	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	Z	298	GLN
1	Z	335	ASN
1	Z	342	GLN
1	Z	383	ASN
1	Z	408	ASN
1	Z	458	GLN
1	Z	462	GLN
1	Z	519	ASN
1	Z	552	ASN
1	Z	599	GLN
1	Z	608	GLN
1	Z	628	HIS
1	Z	646	GLN
1	0	289	HIS
1	0	298	GLN
1	0	335	ASN
1	0	342	GLN
1	0	383	ASN
1	0	408	ASN
1	0	458	GLN
1	0	462	GLN
1	0	519	ASN
1	0	552	ASN
1	0	599	GLN
1	0	608	GLN
1	0	628	HIS
1	0	646	GLN
1	1	289	HIS
1	1	298	GLN
1	1	335	ASN
1	1	342	GLN
1	1	383	ASN
1	1	408	ASN
1	1	458	GLN
1	1	462	GLN
1	1	519	ASN
1	1	552	ASN
1	1	599	GLN
1	1	608	GLN
1	1	628	HIS
1	1	646	GLN
1	2	289	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	2	298	GLN
1	2	335	ASN
1	2	342	GLN
1	2	383	ASN
1	2	408	ASN
1	2	458	GLN
1	2	462	GLN
1	2	519	ASN
1	2	552	ASN
1	2	585	GLN
1	2	599	GLN
1	2	608	GLN
1	2	628	HIS
1	2	646	GLN
1	3	289	HIS
1	3	298	GLN
1	3	335	ASN
1	3	342	GLN
1	3	383	ASN
1	3	408	ASN
1	3	458	GLN
1	3	462	GLN
1	3	519	ASN
1	3	552	ASN
1	3	599	GLN
1	3	608	GLN
1	3	628	HIS
1	3	646	GLN
1	4	289	HIS
1	4	298	GLN
1	4	335	ASN
1	4	342	GLN
1	4	383	ASN
1	4	408	ASN
1	4	458	GLN
1	4	462	GLN
1	4	519	ASN
1	4	552	ASN
1	4	599	GLN
1	4	608	GLN
1	4	628	HIS
1	4	646	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	5	289	HIS
1	5	298	GLN
1	5	335	ASN
1	5	342	GLN
1	5	383	ASN
1	5	408	ASN
1	5	458	GLN
1	5	462	GLN
1	5	519	ASN
1	5	552	ASN
1	5	599	GLN
1	5	608	GLN
1	5	628	HIS
1	5	646	GLN
1	a	289	HIS
1	a	298	GLN
1	a	335	ASN
1	a	342	GLN
1	a	383	ASN
1	a	408	ASN
1	a	458	GLN
1	a	462	GLN
1	a	519	ASN
1	a	552	ASN
1	a	599	GLN
1	a	608	GLN
1	a	628	HIS
1	a	646	GLN
1	b	289	HIS
1	b	298	GLN
1	b	335	ASN
1	b	342	GLN
1	b	383	ASN
1	b	408	ASN
1	b	458	GLN
1	b	462	GLN
1	b	519	ASN
1	b	552	ASN
1	b	585	GLN
1	b	599	GLN
1	b	608	GLN
1	b	628	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	b	646	GLN
1	c	289	HIS
1	c	298	GLN
1	c	335	ASN
1	c	342	GLN
1	c	383	ASN
1	c	408	ASN
1	c	458	GLN
1	c	462	GLN
1	c	519	ASN
1	c	552	ASN
1	c	599	GLN
1	c	608	GLN
1	c	628	HIS
1	c	646	GLN
1	d	289	HIS
1	d	298	GLN
1	d	335	ASN
1	d	342	GLN
1	d	383	ASN
1	d	408	ASN
1	d	458	GLN
1	d	462	GLN
1	d	519	ASN
1	d	552	ASN
1	d	599	GLN
1	d	608	GLN
1	d	628	HIS
1	d	646	GLN
1	e	289	HIS
1	e	298	GLN
1	e	335	ASN
1	e	342	GLN
1	e	383	ASN
1	e	408	ASN
1	e	458	GLN
1	e	462	GLN
1	e	519	ASN
1	e	552	ASN
1	e	585	GLN
1	e	599	GLN
1	e	608	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	e	628	HIS
1	e	646	GLN
1	f	289	HIS
1	f	298	GLN
1	f	335	ASN
1	f	342	GLN
1	f	383	ASN
1	f	408	ASN
1	f	458	GLN
1	f	462	GLN
1	f	519	ASN
1	f	552	ASN
1	f	599	GLN
1	f	608	GLN
1	f	628	HIS
1	f	646	GLN
1	g	289	HIS
1	g	298	GLN
1	g	335	ASN
1	g	342	GLN
1	g	383	ASN
1	g	408	ASN
1	g	458	GLN
1	g	462	GLN
1	g	519	ASN
1	g	552	ASN
1	g	599	GLN
1	g	608	GLN
1	g	628	HIS
1	g	646	GLN
1	h	289	HIS
1	h	298	GLN
1	h	335	ASN
1	h	342	GLN
1	h	383	ASN
1	h	408	ASN
1	h	458	GLN
1	h	462	GLN
1	h	519	ASN
1	h	552	ASN
1	h	599	GLN
1	h	608	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	h	628	HIS
1	h	646	GLN
1	i	289	HIS
1	i	298	GLN
1	i	335	ASN
1	i	342	GLN
1	i	383	ASN
1	i	408	ASN
1	i	458	GLN
1	i	462	GLN
1	i	519	ASN
1	i	552	ASN
1	i	585	GLN
1	i	599	GLN
1	i	608	GLN
1	i	628	HIS
1	i	646	GLN
1	j	289	HIS
1	j	298	GLN
1	j	335	ASN
1	j	342	GLN
1	j	383	ASN
1	j	408	ASN
1	j	458	GLN
1	j	462	GLN
1	j	519	ASN
1	j	552	ASN
1	j	599	GLN
1	j	608	GLN
1	j	628	HIS
1	j	646	GLN
1	k	289	HIS
1	k	298	GLN
1	k	335	ASN
1	k	342	GLN
1	k	383	ASN
1	k	408	ASN
1	k	458	GLN
1	k	462	GLN
1	k	519	ASN
1	k	552	ASN
1	k	585	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	k	599	GLN
1	k	608	GLN
1	k	628	HIS
1	k	646	GLN
1	l	289	HIS
1	l	298	GLN
1	l	335	ASN
1	l	342	GLN
1	l	383	ASN
1	l	408	ASN
1	l	458	GLN
1	l	462	GLN
1	l	519	ASN
1	l	552	ASN
1	l	599	GLN
1	l	608	GLN
1	l	628	HIS
1	l	646	GLN
1	m	289	HIS
1	m	298	GLN
1	m	335	ASN
1	m	342	GLN
1	m	383	ASN
1	m	408	ASN
1	m	458	GLN
1	m	462	GLN
1	m	519	ASN
1	m	552	ASN
1	m	599	GLN
1	m	608	GLN
1	m	628	HIS
1	m	646	GLN
1	n	289	HIS
1	n	298	GLN
1	n	335	ASN
1	n	342	GLN
1	n	383	ASN
1	n	408	ASN
1	n	458	GLN
1	n	462	GLN
1	n	519	ASN
1	n	552	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	n	599	GLN
1	n	608	GLN
1	n	628	HIS
1	n	646	GLN
1	o	289	HIS
1	o	298	GLN
1	o	335	ASN
1	o	342	GLN
1	o	383	ASN
1	o	408	ASN
1	o	458	GLN
1	o	462	GLN
1	o	519	ASN
1	o	552	ASN
1	o	599	GLN
1	o	608	GLN
1	o	628	HIS
1	o	646	GLN
1	p	289	HIS
1	p	298	GLN
1	p	335	ASN
1	p	342	GLN
1	p	383	ASN
1	p	408	ASN
1	p	458	GLN
1	p	462	GLN
1	p	519	ASN
1	p	552	ASN
1	p	599	GLN
1	p	608	GLN
1	p	628	HIS
1	p	646	GLN
1	q	289	HIS
1	q	298	GLN
1	q	335	ASN
1	q	342	GLN
1	q	383	ASN
1	q	408	ASN
1	q	458	GLN
1	q	462	GLN
1	q	519	ASN
1	q	552	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	q	599	GLN
1	q	608	GLN
1	q	628	HIS
1	q	646	GLN
1	r	289	HIS
1	r	298	GLN
1	r	335	ASN
1	r	342	GLN
1	r	383	ASN
1	r	408	ASN
1	r	458	GLN
1	r	462	GLN
1	r	519	ASN
1	r	552	ASN
1	r	585	GLN
1	r	599	GLN
1	r	608	GLN
1	r	628	HIS
1	r	646	GLN
1	s	289	HIS
1	s	298	GLN
1	s	335	ASN
1	s	342	GLN
1	s	383	ASN
1	s	408	ASN
1	s	458	GLN
1	s	462	GLN
1	s	519	ASN
1	s	552	ASN
1	s	599	GLN
1	s	608	GLN
1	s	628	HIS
1	s	646	GLN
1	t	289	HIS
1	t	298	GLN
1	t	335	ASN
1	t	342	GLN
1	t	383	ASN
1	t	408	ASN
1	t	458	GLN
1	t	462	GLN
1	t	519	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	t	552	ASN
1	t	585	GLN
1	t	599	GLN
1	t	608	GLN
1	t	628	HIS
1	t	646	GLN
1	u	289	HIS
1	u	298	GLN
1	u	335	ASN
1	u	342	GLN
1	u	383	ASN
1	u	408	ASN
1	u	458	GLN
1	u	462	GLN
1	u	519	ASN
1	u	552	ASN
1	u	585	GLN
1	u	599	GLN
1	u	608	GLN
1	u	628	HIS
1	u	646	GLN
1	v	289	HIS
1	v	298	GLN
1	v	335	ASN
1	v	342	GLN
1	v	383	ASN
1	v	408	ASN
1	v	458	GLN
1	v	519	ASN
1	v	552	ASN
1	v	585	GLN
1	v	599	GLN
1	v	608	GLN
1	v	628	HIS
1	v	646	GLN
1	w	289	HIS
1	w	298	GLN
1	w	335	ASN
1	w	342	GLN
1	w	383	ASN
1	w	408	ASN
1	w	458	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	w	462	GLN
1	w	519	ASN
1	w	552	ASN
1	w	599	GLN
1	w	608	GLN
1	w	628	HIS
1	w	646	GLN
1	x	289	HIS
1	x	298	GLN
1	x	335	ASN
1	x	342	GLN
1	x	383	ASN
1	x	408	ASN
1	x	458	GLN
1	x	462	GLN
1	x	519	ASN
1	x	552	ASN
1	x	585	GLN
1	x	599	GLN
1	x	608	GLN
1	x	628	HIS
1	x	646	GLN
1	y	289	HIS
1	y	298	GLN
1	y	335	ASN
1	y	342	GLN
1	y	383	ASN
1	y	408	ASN
1	y	458	GLN
1	y	462	GLN
1	y	519	ASN
1	y	552	ASN
1	y	599	GLN
1	y	608	GLN
1	y	628	HIS
1	y	646	GLN
1	z	289	HIS
1	z	298	GLN
1	z	335	ASN
1	z	342	GLN
1	z	383	ASN
1	z	408	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	z	458	GLN
1	z	462	GLN
1	z	519	ASN
1	z	552	ASN
1	z	585	GLN
1	z	599	GLN
1	z	608	GLN
1	z	628	HIS
1	z	646	GLN
1	6	289	HIS
1	6	298	GLN
1	6	335	ASN
1	6	342	GLN
1	6	383	ASN
1	6	408	ASN
1	6	458	GLN
1	6	462	GLN
1	6	519	ASN
1	6	552	ASN
1	6	599	GLN
1	6	608	GLN
1	6	628	HIS
1	6	646	GLN
1	7	289	HIS
1	7	298	GLN
1	7	335	ASN
1	7	342	GLN
1	7	383	ASN
1	7	408	ASN
1	7	458	GLN
1	7	462	GLN
1	7	519	ASN
1	7	552	ASN
1	7	585	GLN
1	7	599	GLN
1	7	608	GLN
1	7	628	HIS
1	7	646	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no 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.

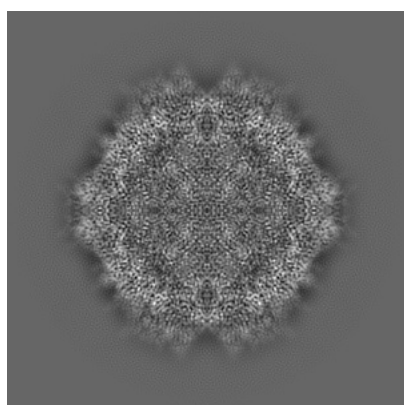
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-7452. These allow visual inspection of the internal detail of the map and identification of artifacts.

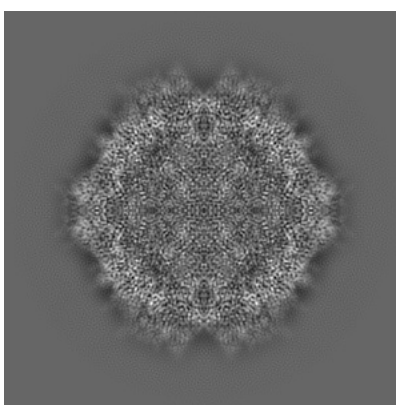
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

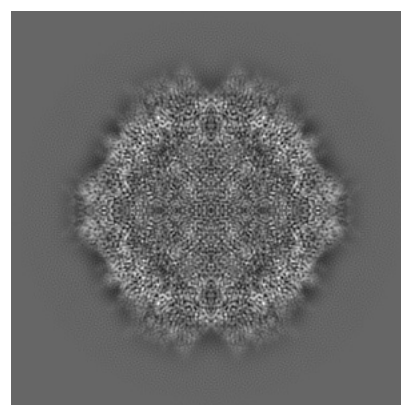
6.1.1 Primary map



X



Y

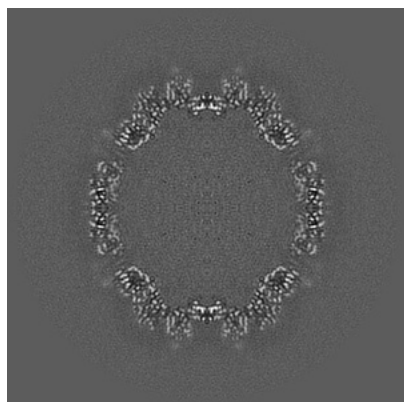


Z

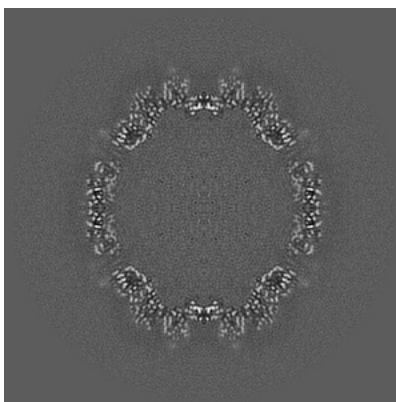
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

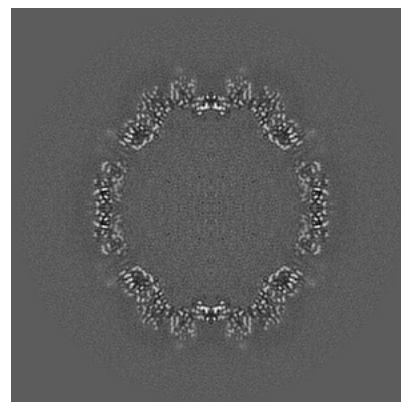
6.2.1 Primary map



X Index: 199



Y Index: 199

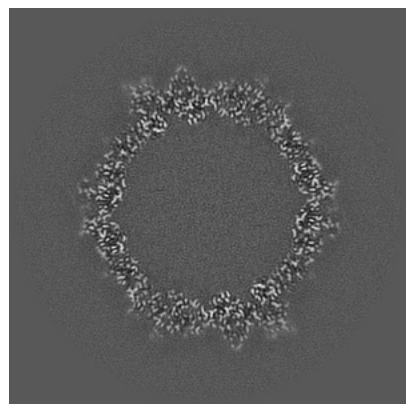


Z Index: 199

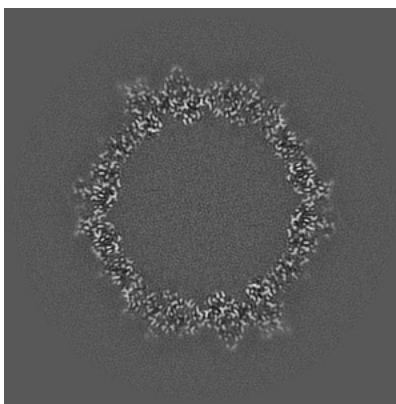
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

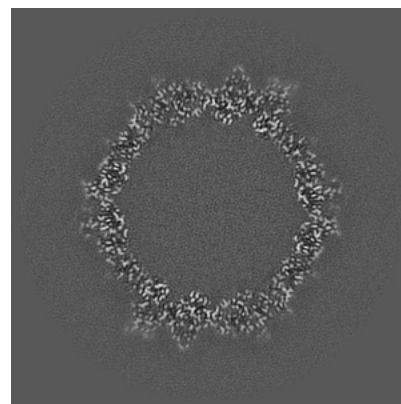
6.3.1 Primary map



X Index: 214



Y Index: 214

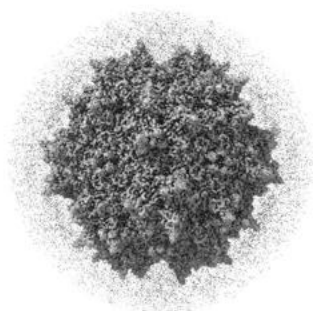


Z Index: 184

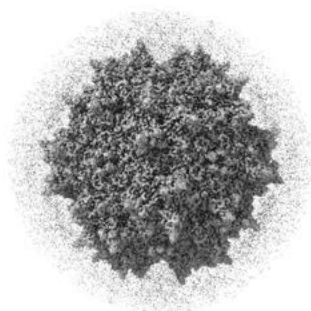
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views [i](#)

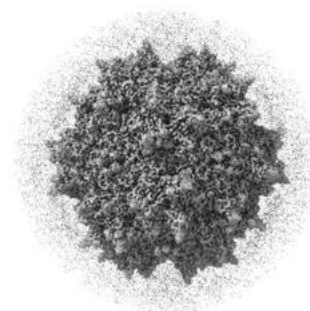
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 1.0. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

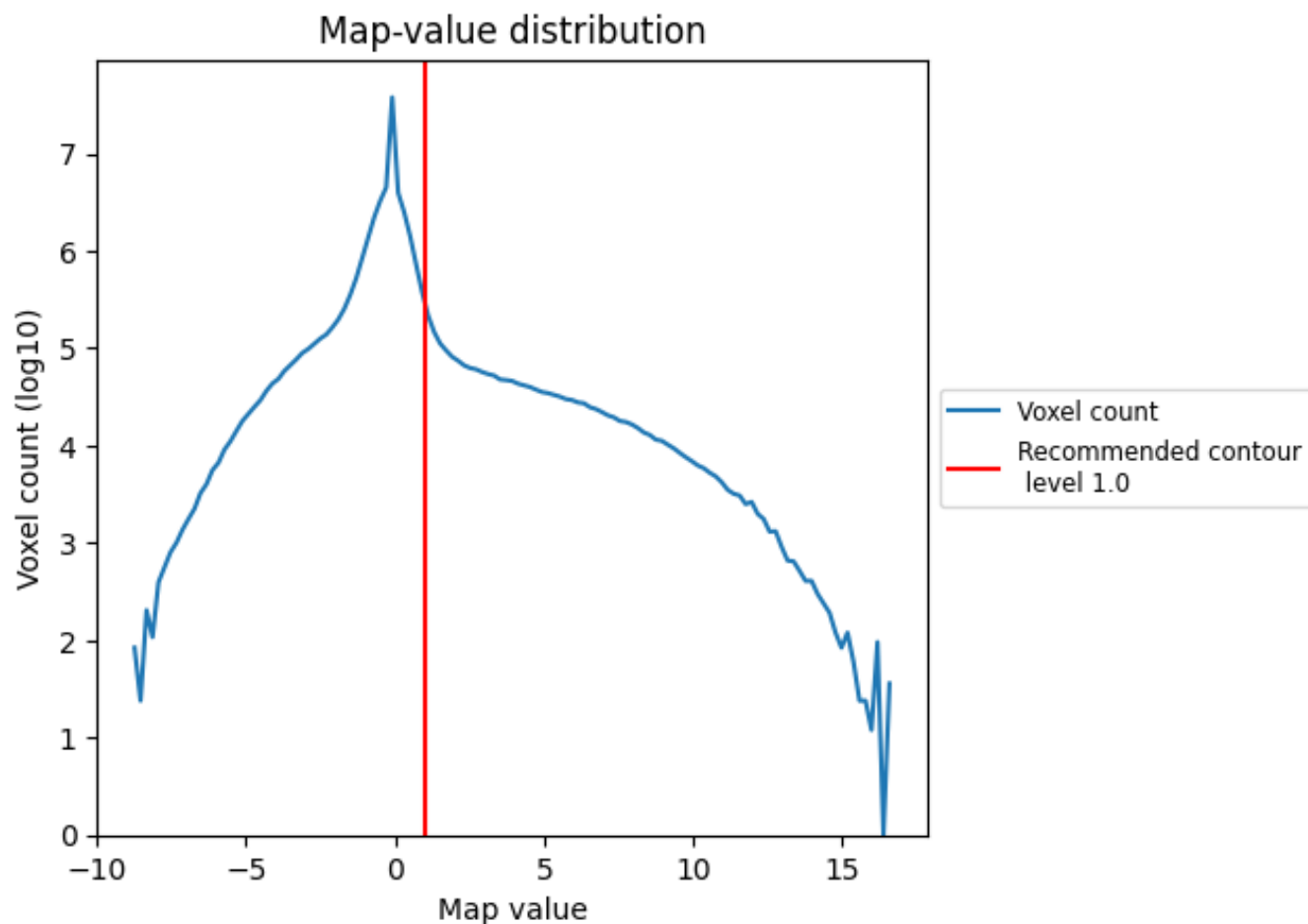
6.5 Mask visualisation

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

7 Map analysis [i](#)

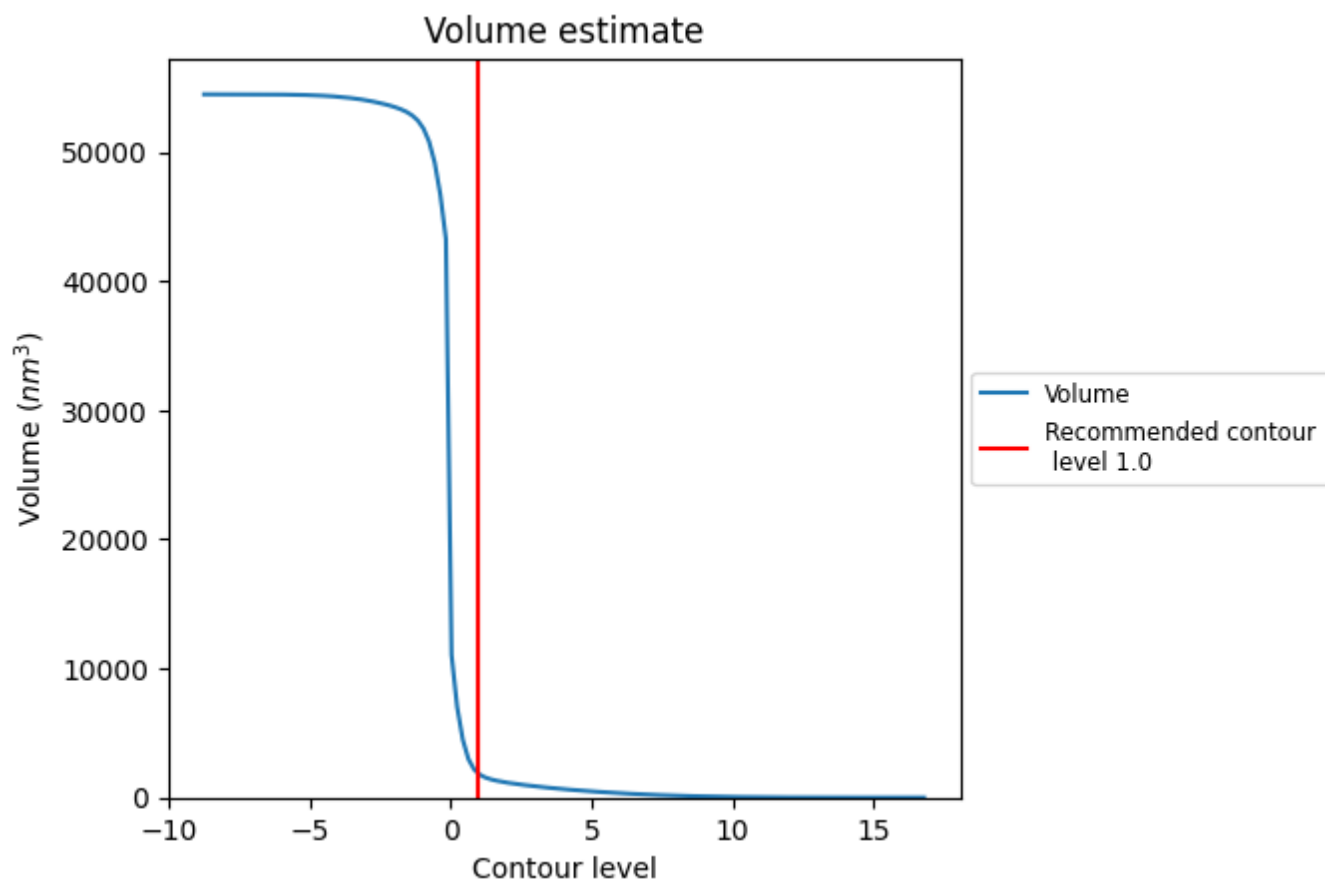
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

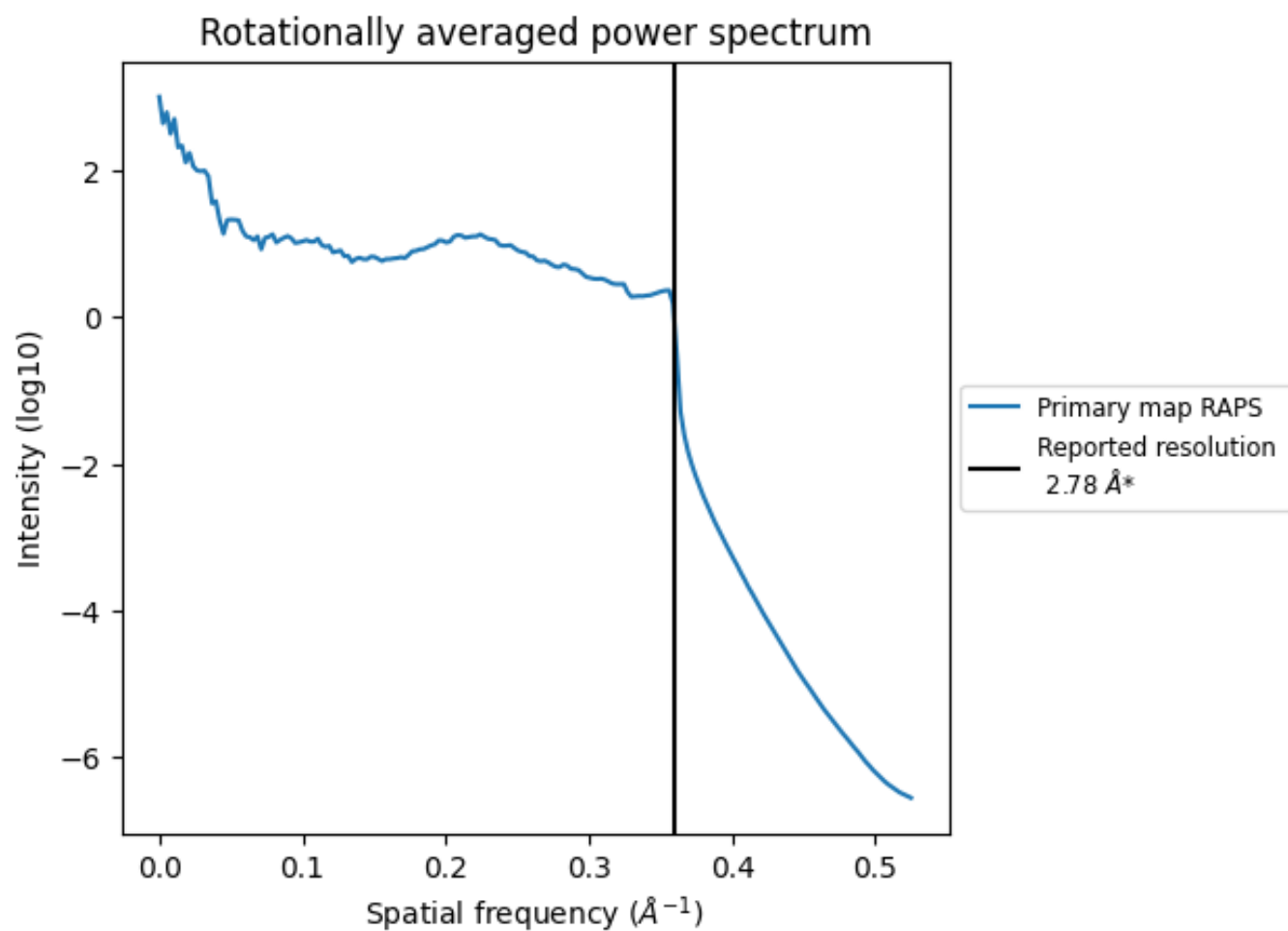
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1837 nm³; this corresponds to an approximate mass of 1660 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ



*Reported resolution corresponds to spatial frequency of 0.360 Å⁻¹

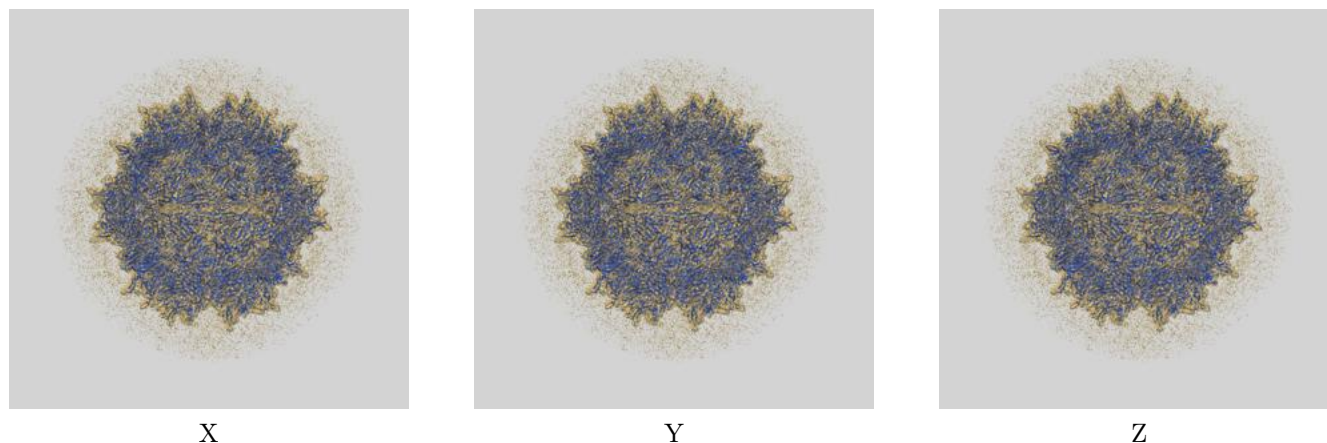
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

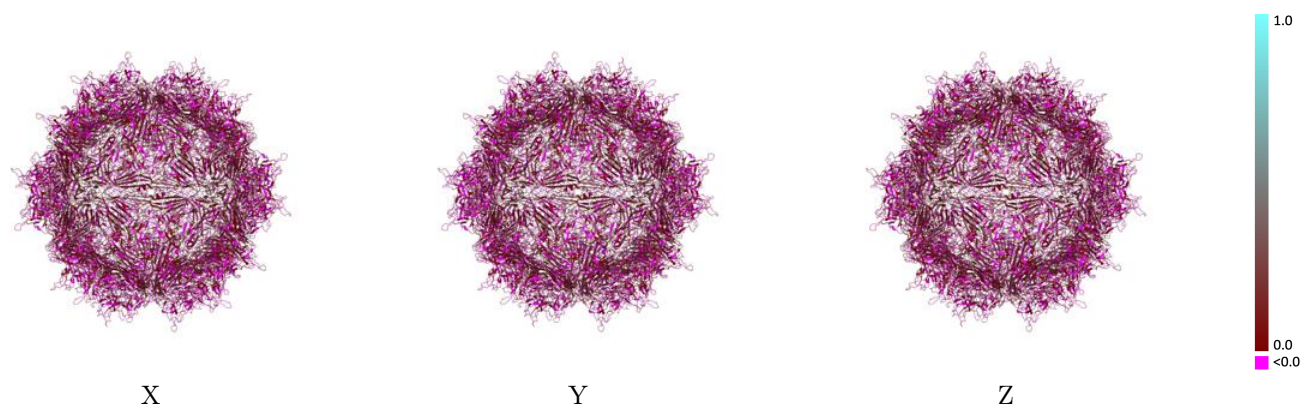
This section contains information regarding the fit between EMDB map EMD-7452 and PDB model 6CBE. Per-residue inclusion information can be found in section 3 on page 17.

9.1 Map-model overlay [i](#)



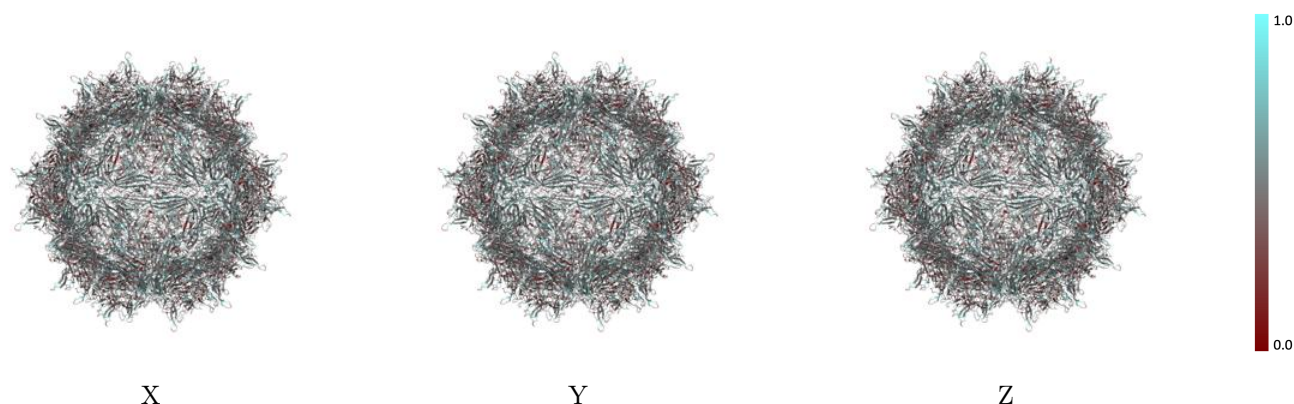
The images above show the 3D surface view of the map at the recommended contour level 1.0 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



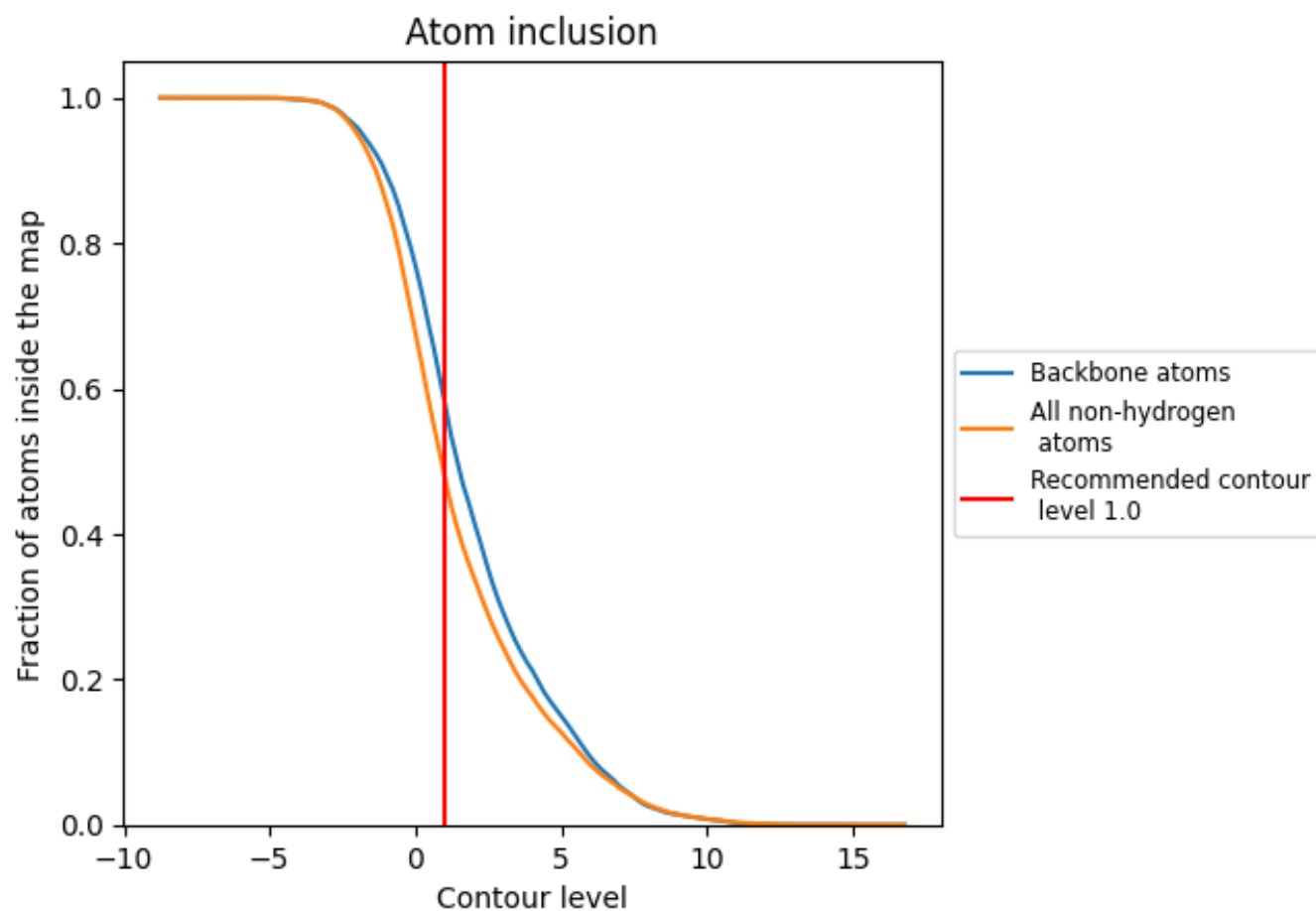
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (1.0).

9.4 Atom inclusion [i](#)



At the recommended contour level, 58% of all backbone atoms, 48% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ





















































The table lists the average atom inclusion at the recommended contour level (1.0) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	■ 0.4803	■ 0.0960
0	■ 0.4810	■ 0.0980
1	■ 0.4813	■ 0.0960
2	■ 0.4837	■ 0.1060
3	■ 0.4817	■ 0.1020
4	■ 0.4766	■ 0.0940
5	■ 0.4827	■ 0.0820
6	■ 0.4780	■ 0.0990
7	■ 0.4780	■ 0.0970
A	■ 0.4813	■ 0.0930
B	■ 0.4766	■ 0.0910
C	■ 0.4827	■ 0.0880
D	■ 0.4780	■ 0.0870
E	■ 0.4835	■ 0.0890
F	■ 0.4837	■ 0.0970
G	■ 0.4780	■ 0.1000
H	■ 0.4778	■ 0.1000
I	■ 0.4822	■ 0.0970
J	■ 0.4768	■ 0.0990
K	■ 0.4822	■ 0.0990
L	■ 0.4763	■ 0.0930
M	■ 0.4780	■ 0.0940
N	■ 0.4825	■ 0.0970
O	■ 0.4756	■ 0.1040
P	■ 0.4813	■ 0.0920
Q	■ 0.4835	■ 0.0980
R	■ 0.4813	■ 0.1000
S	■ 0.4778	■ 0.1010
T	■ 0.4783	■ 0.1000
U	■ 0.4825	■ 0.1020
V	■ 0.4771	■ 0.1000
W	■ 0.4822	■ 0.1000
X	■ 0.4763	■ 0.0920
Y	■ 0.4813	■ 0.0950
Z	■ 0.4837	■ 0.0980



Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
a	 0.4778	 0.0790
b	 0.4813	 0.0850
c	 0.4837	 0.0940
d	 0.4837	 0.0950
e	 0.4835	 0.0890
f	 0.4810	 0.1000
g	 0.4771	 0.1080
h	 0.4761	 0.1070
i	 0.4835	 0.1020
j	 0.4837	 0.1050
k	 0.4780	 0.1040
l	 0.4822	 0.1050
m	 0.4813	 0.1070
n	 0.4763	 0.0960
o	 0.4761	 0.0870
p	 0.4773	 0.0900
q	 0.4813	 0.0910
r	 0.4780	 0.0980
s	 0.4825	 0.0950
t	 0.4778	 0.0780
u	 0.4825	 0.0780
v	 0.4813	 0.0830
w	 0.4835	 0.0950
x	 0.4835	 0.0900
y	 0.4822	 0.0960
z	 0.4810	 0.0980