



wwPDB EM Validation Summary Report ⓘ

Mar 27, 2026 – 06:05 AM UTC

PDB ID : 6NXE / pdb_00006nxe
EMDB ID : EMD-0535
Title : Cryo-EM Reconstruction of Protease-Activateable Adeno-Associated Virus 9 (AAV9-L001)
Authors : Bennett, A.B.; Agbandje-Mckenna, M.
Deposited on : 2019-02-08
Resolution : 3.16 Å(reported)
Based on initial model : 3UX1

This is a wwPDB EM Validation Summary 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.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDb archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

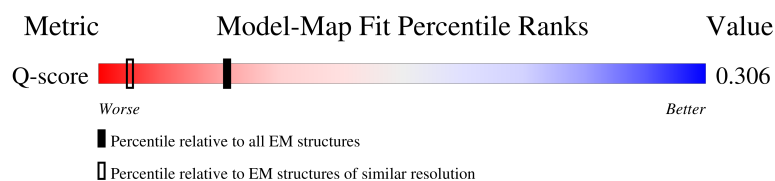
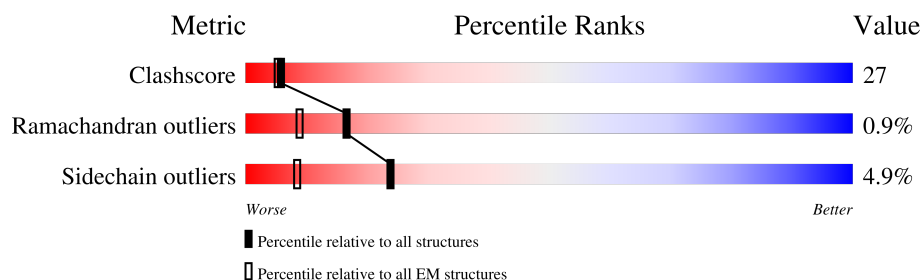
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.16 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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	14474 (2.66 - 3.66)

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	1	544	
1	2	544	
1	3	544	
1	4	544	

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Mol	Chain	Length	Quality of chain
1	5	544	
1	6	544	
1	7	544	
1	8	544	
1	A	544	
1	B	544	
1	C	544	
1	D	544	
1	E	544	
1	F	544	
1	G	544	
1	H	544	
1	I	544	
1	J	544	
1	K	544	
1	L	544	
1	M	544	
1	N	544	
1	O	544	
1	P	544	
1	Q	544	
1	R	544	
1	S	544	
1	T	544	
1	U	544	

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Mol	Chain	Length	Quality of chain
1	V	544	
1	W	544	
1	X	544	
1	Y	544	
1	Z	544	
1	a	544	
1	b	544	
1	c	544	
1	d	544	
1	e	544	
1	f	544	
1	g	544	
1	h	544	
1	i	544	
1	j	544	
1	k	544	
1	l	544	
1	m	544	
1	n	544	
1	o	544	
1	p	544	
1	q	544	
1	r	544	
1	s	544	
1	t	544	

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Mol	Chain	Length	Quality of chain
1	u	544	8% 59% 36% 5%
1	v	544	12% 59% 36% 5%
1	w	544	17% 59% 36% 5%
1	x	544	17% 60% 35% 5%
1	y	544	13% 59% 35% 5%
1	z	544	10% 59% 35% 5%

2 Entry composition [i](#)

There is only 1 type of molecule in this entry. The entry contains 258000 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	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	B	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	C	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	D	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	E	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	F	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	G	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	H	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	I	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	J	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	K	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	L	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	M	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	N	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	O	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	P	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		
1	Q	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	R	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	S	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	T	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	U	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	V	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	W	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	X	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	Y	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	Z	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	a	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	b	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	c	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	d	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	e	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	f	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	g	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	h	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	i	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	j	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	k	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	l	544	Total 4300	C 2704	N 750	O 828	S 18	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	m	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	n	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	o	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	p	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	q	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	r	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	s	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	t	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	u	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	v	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	w	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	x	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	y	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	z	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	1	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	2	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	3	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	4	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	5	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	6	544	Total 4300	C 2704	N 750	O 828	S 18	0	0
1	7	544	Total 4300	C 2704	N 750	O 828	S 18	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
1	8	544	Total	C	N	O	S	0	0
			4300	2704	750	828	18		

There are 1560 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	454	ALA	-	insertion	UNP Q6JC22
A	455	GLY	-	insertion	UNP Q6JC22
A	456	VAL	-	insertion	UNP Q6JC22
A	457	PRO	-	insertion	UNP Q6JC22
A	458	MET	-	insertion	UNP Q6JC22
A	459	SER	-	insertion	UNP Q6JC22
A	460	MET	-	insertion	UNP Q6JC22
A	461	ARG	-	insertion	UNP Q6JC22
A	462	GLY	-	insertion	UNP Q6JC22
A	463	GLY	-	insertion	UNP Q6JC22
A	464	GLY	-	insertion	UNP Q6JC22
A	465	ASP	-	insertion	UNP Q6JC22
A	466	ASP	-	insertion	UNP Q6JC22
A	467	ASP	-	insertion	UNP Q6JC22
A	468	ASP	-	insertion	UNP Q6JC22
A	469	GLY	-	insertion	UNP Q6JC22
A	470	VAL	-	insertion	UNP Q6JC22
A	471	PRO	-	insertion	UNP Q6JC22
A	472	MET	-	insertion	UNP Q6JC22
A	473	SER	-	insertion	UNP Q6JC22
A	474	MET	-	insertion	UNP Q6JC22
A	475	ARG	-	insertion	UNP Q6JC22
A	476	GLY	-	insertion	UNP Q6JC22
A	477	GLY	-	insertion	UNP Q6JC22
A	478	GLY	-	insertion	UNP Q6JC22
A	479	ALA	-	insertion	UNP Q6JC22
B	454	ALA	-	insertion	UNP Q6JC22
B	455	GLY	-	insertion	UNP Q6JC22
B	456	VAL	-	insertion	UNP Q6JC22
B	457	PRO	-	insertion	UNP Q6JC22
B	458	MET	-	insertion	UNP Q6JC22
B	459	SER	-	insertion	UNP Q6JC22
B	460	MET	-	insertion	UNP Q6JC22
B	461	ARG	-	insertion	UNP Q6JC22
B	462	GLY	-	insertion	UNP Q6JC22
B	463	GLY	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
B	464	GLY	-	insertion	UNP Q6JC22
B	465	ASP	-	insertion	UNP Q6JC22
B	466	ASP	-	insertion	UNP Q6JC22
B	467	ASP	-	insertion	UNP Q6JC22
B	468	ASP	-	insertion	UNP Q6JC22
B	469	GLY	-	insertion	UNP Q6JC22
B	470	VAL	-	insertion	UNP Q6JC22
B	471	PRO	-	insertion	UNP Q6JC22
B	472	MET	-	insertion	UNP Q6JC22
B	473	SER	-	insertion	UNP Q6JC22
B	474	MET	-	insertion	UNP Q6JC22
B	475	ARG	-	insertion	UNP Q6JC22
B	476	GLY	-	insertion	UNP Q6JC22
B	477	GLY	-	insertion	UNP Q6JC22
B	478	GLY	-	insertion	UNP Q6JC22
B	479	ALA	-	insertion	UNP Q6JC22
C	454	ALA	-	insertion	UNP Q6JC22
C	455	GLY	-	insertion	UNP Q6JC22
C	456	VAL	-	insertion	UNP Q6JC22
C	457	PRO	-	insertion	UNP Q6JC22
C	458	MET	-	insertion	UNP Q6JC22
C	459	SER	-	insertion	UNP Q6JC22
C	460	MET	-	insertion	UNP Q6JC22
C	461	ARG	-	insertion	UNP Q6JC22
C	462	GLY	-	insertion	UNP Q6JC22
C	463	GLY	-	insertion	UNP Q6JC22
C	464	GLY	-	insertion	UNP Q6JC22
C	465	ASP	-	insertion	UNP Q6JC22
C	466	ASP	-	insertion	UNP Q6JC22
C	467	ASP	-	insertion	UNP Q6JC22
C	468	ASP	-	insertion	UNP Q6JC22
C	469	GLY	-	insertion	UNP Q6JC22
C	470	VAL	-	insertion	UNP Q6JC22
C	471	PRO	-	insertion	UNP Q6JC22
C	472	MET	-	insertion	UNP Q6JC22
C	473	SER	-	insertion	UNP Q6JC22
C	474	MET	-	insertion	UNP Q6JC22
C	475	ARG	-	insertion	UNP Q6JC22
C	476	GLY	-	insertion	UNP Q6JC22
C	477	GLY	-	insertion	UNP Q6JC22
C	478	GLY	-	insertion	UNP Q6JC22
C	479	ALA	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
D	454	ALA	-	insertion	UNP Q6JC22
D	455	GLY	-	insertion	UNP Q6JC22
D	456	VAL	-	insertion	UNP Q6JC22
D	457	PRO	-	insertion	UNP Q6JC22
D	458	MET	-	insertion	UNP Q6JC22
D	459	SER	-	insertion	UNP Q6JC22
D	460	MET	-	insertion	UNP Q6JC22
D	461	ARG	-	insertion	UNP Q6JC22
D	462	GLY	-	insertion	UNP Q6JC22
D	463	GLY	-	insertion	UNP Q6JC22
D	464	GLY	-	insertion	UNP Q6JC22
D	465	ASP	-	insertion	UNP Q6JC22
D	466	ASP	-	insertion	UNP Q6JC22
D	467	ASP	-	insertion	UNP Q6JC22
D	468	ASP	-	insertion	UNP Q6JC22
D	469	GLY	-	insertion	UNP Q6JC22
D	470	VAL	-	insertion	UNP Q6JC22
D	471	PRO	-	insertion	UNP Q6JC22
D	472	MET	-	insertion	UNP Q6JC22
D	473	SER	-	insertion	UNP Q6JC22
D	474	MET	-	insertion	UNP Q6JC22
D	475	ARG	-	insertion	UNP Q6JC22
D	476	GLY	-	insertion	UNP Q6JC22
D	477	GLY	-	insertion	UNP Q6JC22
D	478	GLY	-	insertion	UNP Q6JC22
D	479	ALA	-	insertion	UNP Q6JC22
E	454	ALA	-	insertion	UNP Q6JC22
E	455	GLY	-	insertion	UNP Q6JC22
E	456	VAL	-	insertion	UNP Q6JC22
E	457	PRO	-	insertion	UNP Q6JC22
E	458	MET	-	insertion	UNP Q6JC22
E	459	SER	-	insertion	UNP Q6JC22
E	460	MET	-	insertion	UNP Q6JC22
E	461	ARG	-	insertion	UNP Q6JC22
E	462	GLY	-	insertion	UNP Q6JC22
E	463	GLY	-	insertion	UNP Q6JC22
E	464	GLY	-	insertion	UNP Q6JC22
E	465	ASP	-	insertion	UNP Q6JC22
E	466	ASP	-	insertion	UNP Q6JC22
E	467	ASP	-	insertion	UNP Q6JC22
E	468	ASP	-	insertion	UNP Q6JC22
E	469	GLY	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
E	470	VAL	-	insertion	UNP Q6JC22
E	471	PRO	-	insertion	UNP Q6JC22
E	472	MET	-	insertion	UNP Q6JC22
E	473	SER	-	insertion	UNP Q6JC22
E	474	MET	-	insertion	UNP Q6JC22
E	475	ARG	-	insertion	UNP Q6JC22
E	476	GLY	-	insertion	UNP Q6JC22
E	477	GLY	-	insertion	UNP Q6JC22
E	478	GLY	-	insertion	UNP Q6JC22
E	479	ALA	-	insertion	UNP Q6JC22
F	454	ALA	-	insertion	UNP Q6JC22
F	455	GLY	-	insertion	UNP Q6JC22
F	456	VAL	-	insertion	UNP Q6JC22
F	457	PRO	-	insertion	UNP Q6JC22
F	458	MET	-	insertion	UNP Q6JC22
F	459	SER	-	insertion	UNP Q6JC22
F	460	MET	-	insertion	UNP Q6JC22
F	461	ARG	-	insertion	UNP Q6JC22
F	462	GLY	-	insertion	UNP Q6JC22
F	463	GLY	-	insertion	UNP Q6JC22
F	464	GLY	-	insertion	UNP Q6JC22
F	465	ASP	-	insertion	UNP Q6JC22
F	466	ASP	-	insertion	UNP Q6JC22
F	467	ASP	-	insertion	UNP Q6JC22
F	468	ASP	-	insertion	UNP Q6JC22
F	469	GLY	-	insertion	UNP Q6JC22
F	470	VAL	-	insertion	UNP Q6JC22
F	471	PRO	-	insertion	UNP Q6JC22
F	472	MET	-	insertion	UNP Q6JC22
F	473	SER	-	insertion	UNP Q6JC22
F	474	MET	-	insertion	UNP Q6JC22
F	475	ARG	-	insertion	UNP Q6JC22
F	476	GLY	-	insertion	UNP Q6JC22
F	477	GLY	-	insertion	UNP Q6JC22
F	478	GLY	-	insertion	UNP Q6JC22
F	479	ALA	-	insertion	UNP Q6JC22
G	454	ALA	-	insertion	UNP Q6JC22
G	455	GLY	-	insertion	UNP Q6JC22
G	456	VAL	-	insertion	UNP Q6JC22
G	457	PRO	-	insertion	UNP Q6JC22
G	458	MET	-	insertion	UNP Q6JC22
G	459	SER	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
G	460	MET	-	insertion	UNP Q6JC22
G	461	ARG	-	insertion	UNP Q6JC22
G	462	GLY	-	insertion	UNP Q6JC22
G	463	GLY	-	insertion	UNP Q6JC22
G	464	GLY	-	insertion	UNP Q6JC22
G	465	ASP	-	insertion	UNP Q6JC22
G	466	ASP	-	insertion	UNP Q6JC22
G	467	ASP	-	insertion	UNP Q6JC22
G	468	ASP	-	insertion	UNP Q6JC22
G	469	GLY	-	insertion	UNP Q6JC22
G	470	VAL	-	insertion	UNP Q6JC22
G	471	PRO	-	insertion	UNP Q6JC22
G	472	MET	-	insertion	UNP Q6JC22
G	473	SER	-	insertion	UNP Q6JC22
G	474	MET	-	insertion	UNP Q6JC22
G	475	ARG	-	insertion	UNP Q6JC22
G	476	GLY	-	insertion	UNP Q6JC22
G	477	GLY	-	insertion	UNP Q6JC22
G	478	GLY	-	insertion	UNP Q6JC22
G	479	ALA	-	insertion	UNP Q6JC22
H	454	ALA	-	insertion	UNP Q6JC22
H	455	GLY	-	insertion	UNP Q6JC22
H	456	VAL	-	insertion	UNP Q6JC22
H	457	PRO	-	insertion	UNP Q6JC22
H	458	MET	-	insertion	UNP Q6JC22
H	459	SER	-	insertion	UNP Q6JC22
H	460	MET	-	insertion	UNP Q6JC22
H	461	ARG	-	insertion	UNP Q6JC22
H	462	GLY	-	insertion	UNP Q6JC22
H	463	GLY	-	insertion	UNP Q6JC22
H	464	GLY	-	insertion	UNP Q6JC22
H	465	ASP	-	insertion	UNP Q6JC22
H	466	ASP	-	insertion	UNP Q6JC22
H	467	ASP	-	insertion	UNP Q6JC22
H	468	ASP	-	insertion	UNP Q6JC22
H	469	GLY	-	insertion	UNP Q6JC22
H	470	VAL	-	insertion	UNP Q6JC22
H	471	PRO	-	insertion	UNP Q6JC22
H	472	MET	-	insertion	UNP Q6JC22
H	473	SER	-	insertion	UNP Q6JC22
H	474	MET	-	insertion	UNP Q6JC22
H	475	ARG	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
H	476	GLY	-	insertion	UNP Q6JC22
H	477	GLY	-	insertion	UNP Q6JC22
H	478	GLY	-	insertion	UNP Q6JC22
H	479	ALA	-	insertion	UNP Q6JC22
I	454	ALA	-	insertion	UNP Q6JC22
I	455	GLY	-	insertion	UNP Q6JC22
I	456	VAL	-	insertion	UNP Q6JC22
I	457	PRO	-	insertion	UNP Q6JC22
I	458	MET	-	insertion	UNP Q6JC22
I	459	SER	-	insertion	UNP Q6JC22
I	460	MET	-	insertion	UNP Q6JC22
I	461	ARG	-	insertion	UNP Q6JC22
I	462	GLY	-	insertion	UNP Q6JC22
I	463	GLY	-	insertion	UNP Q6JC22
I	464	GLY	-	insertion	UNP Q6JC22
I	465	ASP	-	insertion	UNP Q6JC22
I	466	ASP	-	insertion	UNP Q6JC22
I	467	ASP	-	insertion	UNP Q6JC22
I	468	ASP	-	insertion	UNP Q6JC22
I	469	GLY	-	insertion	UNP Q6JC22
I	470	VAL	-	insertion	UNP Q6JC22
I	471	PRO	-	insertion	UNP Q6JC22
I	472	MET	-	insertion	UNP Q6JC22
I	473	SER	-	insertion	UNP Q6JC22
I	474	MET	-	insertion	UNP Q6JC22
I	475	ARG	-	insertion	UNP Q6JC22
I	476	GLY	-	insertion	UNP Q6JC22
I	477	GLY	-	insertion	UNP Q6JC22
I	478	GLY	-	insertion	UNP Q6JC22
I	479	ALA	-	insertion	UNP Q6JC22
J	454	ALA	-	insertion	UNP Q6JC22
J	455	GLY	-	insertion	UNP Q6JC22
J	456	VAL	-	insertion	UNP Q6JC22
J	457	PRO	-	insertion	UNP Q6JC22
J	458	MET	-	insertion	UNP Q6JC22
J	459	SER	-	insertion	UNP Q6JC22
J	460	MET	-	insertion	UNP Q6JC22
J	461	ARG	-	insertion	UNP Q6JC22
J	462	GLY	-	insertion	UNP Q6JC22
J	463	GLY	-	insertion	UNP Q6JC22
J	464	GLY	-	insertion	UNP Q6JC22
J	465	ASP	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
J	466	ASP	-	insertion	UNP Q6JC22
J	467	ASP	-	insertion	UNP Q6JC22
J	468	ASP	-	insertion	UNP Q6JC22
J	469	GLY	-	insertion	UNP Q6JC22
J	470	VAL	-	insertion	UNP Q6JC22
J	471	PRO	-	insertion	UNP Q6JC22
J	472	MET	-	insertion	UNP Q6JC22
J	473	SER	-	insertion	UNP Q6JC22
J	474	MET	-	insertion	UNP Q6JC22
J	475	ARG	-	insertion	UNP Q6JC22
J	476	GLY	-	insertion	UNP Q6JC22
J	477	GLY	-	insertion	UNP Q6JC22
J	478	GLY	-	insertion	UNP Q6JC22
J	479	ALA	-	insertion	UNP Q6JC22
K	454	ALA	-	insertion	UNP Q6JC22
K	455	GLY	-	insertion	UNP Q6JC22
K	456	VAL	-	insertion	UNP Q6JC22
K	457	PRO	-	insertion	UNP Q6JC22
K	458	MET	-	insertion	UNP Q6JC22
K	459	SER	-	insertion	UNP Q6JC22
K	460	MET	-	insertion	UNP Q6JC22
K	461	ARG	-	insertion	UNP Q6JC22
K	462	GLY	-	insertion	UNP Q6JC22
K	463	GLY	-	insertion	UNP Q6JC22
K	464	GLY	-	insertion	UNP Q6JC22
K	465	ASP	-	insertion	UNP Q6JC22
K	466	ASP	-	insertion	UNP Q6JC22
K	467	ASP	-	insertion	UNP Q6JC22
K	468	ASP	-	insertion	UNP Q6JC22
K	469	GLY	-	insertion	UNP Q6JC22
K	470	VAL	-	insertion	UNP Q6JC22
K	471	PRO	-	insertion	UNP Q6JC22
K	472	MET	-	insertion	UNP Q6JC22
K	473	SER	-	insertion	UNP Q6JC22
K	474	MET	-	insertion	UNP Q6JC22
K	475	ARG	-	insertion	UNP Q6JC22
K	476	GLY	-	insertion	UNP Q6JC22
K	477	GLY	-	insertion	UNP Q6JC22
K	478	GLY	-	insertion	UNP Q6JC22
K	479	ALA	-	insertion	UNP Q6JC22
L	454	ALA	-	insertion	UNP Q6JC22
L	455	GLY	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
L	456	VAL	-	insertion	UNP Q6JC22
L	457	PRO	-	insertion	UNP Q6JC22
L	458	MET	-	insertion	UNP Q6JC22
L	459	SER	-	insertion	UNP Q6JC22
L	460	MET	-	insertion	UNP Q6JC22
L	461	ARG	-	insertion	UNP Q6JC22
L	462	GLY	-	insertion	UNP Q6JC22
L	463	GLY	-	insertion	UNP Q6JC22
L	464	GLY	-	insertion	UNP Q6JC22
L	465	ASP	-	insertion	UNP Q6JC22
L	466	ASP	-	insertion	UNP Q6JC22
L	467	ASP	-	insertion	UNP Q6JC22
L	468	ASP	-	insertion	UNP Q6JC22
L	469	GLY	-	insertion	UNP Q6JC22
L	470	VAL	-	insertion	UNP Q6JC22
L	471	PRO	-	insertion	UNP Q6JC22
L	472	MET	-	insertion	UNP Q6JC22
L	473	SER	-	insertion	UNP Q6JC22
L	474	MET	-	insertion	UNP Q6JC22
L	475	ARG	-	insertion	UNP Q6JC22
L	476	GLY	-	insertion	UNP Q6JC22
L	477	GLY	-	insertion	UNP Q6JC22
L	478	GLY	-	insertion	UNP Q6JC22
L	479	ALA	-	insertion	UNP Q6JC22
M	454	ALA	-	insertion	UNP Q6JC22
M	455	GLY	-	insertion	UNP Q6JC22
M	456	VAL	-	insertion	UNP Q6JC22
M	457	PRO	-	insertion	UNP Q6JC22
M	458	MET	-	insertion	UNP Q6JC22
M	459	SER	-	insertion	UNP Q6JC22
M	460	MET	-	insertion	UNP Q6JC22
M	461	ARG	-	insertion	UNP Q6JC22
M	462	GLY	-	insertion	UNP Q6JC22
M	463	GLY	-	insertion	UNP Q6JC22
M	464	GLY	-	insertion	UNP Q6JC22
M	465	ASP	-	insertion	UNP Q6JC22
M	466	ASP	-	insertion	UNP Q6JC22
M	467	ASP	-	insertion	UNP Q6JC22
M	468	ASP	-	insertion	UNP Q6JC22
M	469	GLY	-	insertion	UNP Q6JC22
M	470	VAL	-	insertion	UNP Q6JC22
M	471	PRO	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
M	472	MET	-	insertion	UNP Q6JC22
M	473	SER	-	insertion	UNP Q6JC22
M	474	MET	-	insertion	UNP Q6JC22
M	475	ARG	-	insertion	UNP Q6JC22
M	476	GLY	-	insertion	UNP Q6JC22
M	477	GLY	-	insertion	UNP Q6JC22
M	478	GLY	-	insertion	UNP Q6JC22
M	479	ALA	-	insertion	UNP Q6JC22
N	454	ALA	-	insertion	UNP Q6JC22
N	455	GLY	-	insertion	UNP Q6JC22
N	456	VAL	-	insertion	UNP Q6JC22
N	457	PRO	-	insertion	UNP Q6JC22
N	458	MET	-	insertion	UNP Q6JC22
N	459	SER	-	insertion	UNP Q6JC22
N	460	MET	-	insertion	UNP Q6JC22
N	461	ARG	-	insertion	UNP Q6JC22
N	462	GLY	-	insertion	UNP Q6JC22
N	463	GLY	-	insertion	UNP Q6JC22
N	464	GLY	-	insertion	UNP Q6JC22
N	465	ASP	-	insertion	UNP Q6JC22
N	466	ASP	-	insertion	UNP Q6JC22
N	467	ASP	-	insertion	UNP Q6JC22
N	468	ASP	-	insertion	UNP Q6JC22
N	469	GLY	-	insertion	UNP Q6JC22
N	470	VAL	-	insertion	UNP Q6JC22
N	471	PRO	-	insertion	UNP Q6JC22
N	472	MET	-	insertion	UNP Q6JC22
N	473	SER	-	insertion	UNP Q6JC22
N	474	MET	-	insertion	UNP Q6JC22
N	475	ARG	-	insertion	UNP Q6JC22
N	476	GLY	-	insertion	UNP Q6JC22
N	477	GLY	-	insertion	UNP Q6JC22
N	478	GLY	-	insertion	UNP Q6JC22
N	479	ALA	-	insertion	UNP Q6JC22
O	454	ALA	-	insertion	UNP Q6JC22
O	455	GLY	-	insertion	UNP Q6JC22
O	456	VAL	-	insertion	UNP Q6JC22
O	457	PRO	-	insertion	UNP Q6JC22
O	458	MET	-	insertion	UNP Q6JC22
O	459	SER	-	insertion	UNP Q6JC22
O	460	MET	-	insertion	UNP Q6JC22
O	461	ARG	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
O	462	GLY	-	insertion	UNP Q6JC22
O	463	GLY	-	insertion	UNP Q6JC22
O	464	GLY	-	insertion	UNP Q6JC22
O	465	ASP	-	insertion	UNP Q6JC22
O	466	ASP	-	insertion	UNP Q6JC22
O	467	ASP	-	insertion	UNP Q6JC22
O	468	ASP	-	insertion	UNP Q6JC22
O	469	GLY	-	insertion	UNP Q6JC22
O	470	VAL	-	insertion	UNP Q6JC22
O	471	PRO	-	insertion	UNP Q6JC22
O	472	MET	-	insertion	UNP Q6JC22
O	473	SER	-	insertion	UNP Q6JC22
O	474	MET	-	insertion	UNP Q6JC22
O	475	ARG	-	insertion	UNP Q6JC22
O	476	GLY	-	insertion	UNP Q6JC22
O	477	GLY	-	insertion	UNP Q6JC22
O	478	GLY	-	insertion	UNP Q6JC22
O	479	ALA	-	insertion	UNP Q6JC22
P	454	ALA	-	insertion	UNP Q6JC22
P	455	GLY	-	insertion	UNP Q6JC22
P	456	VAL	-	insertion	UNP Q6JC22
P	457	PRO	-	insertion	UNP Q6JC22
P	458	MET	-	insertion	UNP Q6JC22
P	459	SER	-	insertion	UNP Q6JC22
P	460	MET	-	insertion	UNP Q6JC22
P	461	ARG	-	insertion	UNP Q6JC22
P	462	GLY	-	insertion	UNP Q6JC22
P	463	GLY	-	insertion	UNP Q6JC22
P	464	GLY	-	insertion	UNP Q6JC22
P	465	ASP	-	insertion	UNP Q6JC22
P	466	ASP	-	insertion	UNP Q6JC22
P	467	ASP	-	insertion	UNP Q6JC22
P	468	ASP	-	insertion	UNP Q6JC22
P	469	GLY	-	insertion	UNP Q6JC22
P	470	VAL	-	insertion	UNP Q6JC22
P	471	PRO	-	insertion	UNP Q6JC22
P	472	MET	-	insertion	UNP Q6JC22
P	473	SER	-	insertion	UNP Q6JC22
P	474	MET	-	insertion	UNP Q6JC22
P	475	ARG	-	insertion	UNP Q6JC22
P	476	GLY	-	insertion	UNP Q6JC22
P	477	GLY	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
P	478	GLY	-	insertion	UNP Q6JC22
P	479	ALA	-	insertion	UNP Q6JC22
Q	454	ALA	-	insertion	UNP Q6JC22
Q	455	GLY	-	insertion	UNP Q6JC22
Q	456	VAL	-	insertion	UNP Q6JC22
Q	457	PRO	-	insertion	UNP Q6JC22
Q	458	MET	-	insertion	UNP Q6JC22
Q	459	SER	-	insertion	UNP Q6JC22
Q	460	MET	-	insertion	UNP Q6JC22
Q	461	ARG	-	insertion	UNP Q6JC22
Q	462	GLY	-	insertion	UNP Q6JC22
Q	463	GLY	-	insertion	UNP Q6JC22
Q	464	GLY	-	insertion	UNP Q6JC22
Q	465	ASP	-	insertion	UNP Q6JC22
Q	466	ASP	-	insertion	UNP Q6JC22
Q	467	ASP	-	insertion	UNP Q6JC22
Q	468	ASP	-	insertion	UNP Q6JC22
Q	469	GLY	-	insertion	UNP Q6JC22
Q	470	VAL	-	insertion	UNP Q6JC22
Q	471	PRO	-	insertion	UNP Q6JC22
Q	472	MET	-	insertion	UNP Q6JC22
Q	473	SER	-	insertion	UNP Q6JC22
Q	474	MET	-	insertion	UNP Q6JC22
Q	475	ARG	-	insertion	UNP Q6JC22
Q	476	GLY	-	insertion	UNP Q6JC22
Q	477	GLY	-	insertion	UNP Q6JC22
Q	478	GLY	-	insertion	UNP Q6JC22
Q	479	ALA	-	insertion	UNP Q6JC22
R	454	ALA	-	insertion	UNP Q6JC22
R	455	GLY	-	insertion	UNP Q6JC22
R	456	VAL	-	insertion	UNP Q6JC22
R	457	PRO	-	insertion	UNP Q6JC22
R	458	MET	-	insertion	UNP Q6JC22
R	459	SER	-	insertion	UNP Q6JC22
R	460	MET	-	insertion	UNP Q6JC22
R	461	ARG	-	insertion	UNP Q6JC22
R	462	GLY	-	insertion	UNP Q6JC22
R	463	GLY	-	insertion	UNP Q6JC22
R	464	GLY	-	insertion	UNP Q6JC22
R	465	ASP	-	insertion	UNP Q6JC22
R	466	ASP	-	insertion	UNP Q6JC22
R	467	ASP	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
R	468	ASP	-	insertion	UNP Q6JC22
R	469	GLY	-	insertion	UNP Q6JC22
R	470	VAL	-	insertion	UNP Q6JC22
R	471	PRO	-	insertion	UNP Q6JC22
R	472	MET	-	insertion	UNP Q6JC22
R	473	SER	-	insertion	UNP Q6JC22
R	474	MET	-	insertion	UNP Q6JC22
R	475	ARG	-	insertion	UNP Q6JC22
R	476	GLY	-	insertion	UNP Q6JC22
R	477	GLY	-	insertion	UNP Q6JC22
R	478	GLY	-	insertion	UNP Q6JC22
R	479	ALA	-	insertion	UNP Q6JC22
S	454	ALA	-	insertion	UNP Q6JC22
S	455	GLY	-	insertion	UNP Q6JC22
S	456	VAL	-	insertion	UNP Q6JC22
S	457	PRO	-	insertion	UNP Q6JC22
S	458	MET	-	insertion	UNP Q6JC22
S	459	SER	-	insertion	UNP Q6JC22
S	460	MET	-	insertion	UNP Q6JC22
S	461	ARG	-	insertion	UNP Q6JC22
S	462	GLY	-	insertion	UNP Q6JC22
S	463	GLY	-	insertion	UNP Q6JC22
S	464	GLY	-	insertion	UNP Q6JC22
S	465	ASP	-	insertion	UNP Q6JC22
S	466	ASP	-	insertion	UNP Q6JC22
S	467	ASP	-	insertion	UNP Q6JC22
S	468	ASP	-	insertion	UNP Q6JC22
S	469	GLY	-	insertion	UNP Q6JC22
S	470	VAL	-	insertion	UNP Q6JC22
S	471	PRO	-	insertion	UNP Q6JC22
S	472	MET	-	insertion	UNP Q6JC22
S	473	SER	-	insertion	UNP Q6JC22
S	474	MET	-	insertion	UNP Q6JC22
S	475	ARG	-	insertion	UNP Q6JC22
S	476	GLY	-	insertion	UNP Q6JC22
S	477	GLY	-	insertion	UNP Q6JC22
S	478	GLY	-	insertion	UNP Q6JC22
S	479	ALA	-	insertion	UNP Q6JC22
T	454	ALA	-	insertion	UNP Q6JC22
T	455	GLY	-	insertion	UNP Q6JC22
T	456	VAL	-	insertion	UNP Q6JC22
T	457	PRO	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
T	458	MET	-	insertion	UNP Q6JC22
T	459	SER	-	insertion	UNP Q6JC22
T	460	MET	-	insertion	UNP Q6JC22
T	461	ARG	-	insertion	UNP Q6JC22
T	462	GLY	-	insertion	UNP Q6JC22
T	463	GLY	-	insertion	UNP Q6JC22
T	464	GLY	-	insertion	UNP Q6JC22
T	465	ASP	-	insertion	UNP Q6JC22
T	466	ASP	-	insertion	UNP Q6JC22
T	467	ASP	-	insertion	UNP Q6JC22
T	468	ASP	-	insertion	UNP Q6JC22
T	469	GLY	-	insertion	UNP Q6JC22
T	470	VAL	-	insertion	UNP Q6JC22
T	471	PRO	-	insertion	UNP Q6JC22
T	472	MET	-	insertion	UNP Q6JC22
T	473	SER	-	insertion	UNP Q6JC22
T	474	MET	-	insertion	UNP Q6JC22
T	475	ARG	-	insertion	UNP Q6JC22
T	476	GLY	-	insertion	UNP Q6JC22
T	477	GLY	-	insertion	UNP Q6JC22
T	478	GLY	-	insertion	UNP Q6JC22
T	479	ALA	-	insertion	UNP Q6JC22
U	454	ALA	-	insertion	UNP Q6JC22
U	455	GLY	-	insertion	UNP Q6JC22
U	456	VAL	-	insertion	UNP Q6JC22
U	457	PRO	-	insertion	UNP Q6JC22
U	458	MET	-	insertion	UNP Q6JC22
U	459	SER	-	insertion	UNP Q6JC22
U	460	MET	-	insertion	UNP Q6JC22
U	461	ARG	-	insertion	UNP Q6JC22
U	462	GLY	-	insertion	UNP Q6JC22
U	463	GLY	-	insertion	UNP Q6JC22
U	464	GLY	-	insertion	UNP Q6JC22
U	465	ASP	-	insertion	UNP Q6JC22
U	466	ASP	-	insertion	UNP Q6JC22
U	467	ASP	-	insertion	UNP Q6JC22
U	468	ASP	-	insertion	UNP Q6JC22
U	469	GLY	-	insertion	UNP Q6JC22
U	470	VAL	-	insertion	UNP Q6JC22
U	471	PRO	-	insertion	UNP Q6JC22
U	472	MET	-	insertion	UNP Q6JC22
U	473	SER	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
U	474	MET	-	insertion	UNP Q6JC22
U	475	ARG	-	insertion	UNP Q6JC22
U	476	GLY	-	insertion	UNP Q6JC22
U	477	GLY	-	insertion	UNP Q6JC22
U	478	GLY	-	insertion	UNP Q6JC22
U	479	ALA	-	insertion	UNP Q6JC22
V	454	ALA	-	insertion	UNP Q6JC22
V	455	GLY	-	insertion	UNP Q6JC22
V	456	VAL	-	insertion	UNP Q6JC22
V	457	PRO	-	insertion	UNP Q6JC22
V	458	MET	-	insertion	UNP Q6JC22
V	459	SER	-	insertion	UNP Q6JC22
V	460	MET	-	insertion	UNP Q6JC22
V	461	ARG	-	insertion	UNP Q6JC22
V	462	GLY	-	insertion	UNP Q6JC22
V	463	GLY	-	insertion	UNP Q6JC22
V	464	GLY	-	insertion	UNP Q6JC22
V	465	ASP	-	insertion	UNP Q6JC22
V	466	ASP	-	insertion	UNP Q6JC22
V	467	ASP	-	insertion	UNP Q6JC22
V	468	ASP	-	insertion	UNP Q6JC22
V	469	GLY	-	insertion	UNP Q6JC22
V	470	VAL	-	insertion	UNP Q6JC22
V	471	PRO	-	insertion	UNP Q6JC22
V	472	MET	-	insertion	UNP Q6JC22
V	473	SER	-	insertion	UNP Q6JC22
V	474	MET	-	insertion	UNP Q6JC22
V	475	ARG	-	insertion	UNP Q6JC22
V	476	GLY	-	insertion	UNP Q6JC22
V	477	GLY	-	insertion	UNP Q6JC22
V	478	GLY	-	insertion	UNP Q6JC22
V	479	ALA	-	insertion	UNP Q6JC22
W	454	ALA	-	insertion	UNP Q6JC22
W	455	GLY	-	insertion	UNP Q6JC22
W	456	VAL	-	insertion	UNP Q6JC22
W	457	PRO	-	insertion	UNP Q6JC22
W	458	MET	-	insertion	UNP Q6JC22
W	459	SER	-	insertion	UNP Q6JC22
W	460	MET	-	insertion	UNP Q6JC22
W	461	ARG	-	insertion	UNP Q6JC22
W	462	GLY	-	insertion	UNP Q6JC22
W	463	GLY	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
W	464	GLY	-	insertion	UNP Q6JC22
W	465	ASP	-	insertion	UNP Q6JC22
W	466	ASP	-	insertion	UNP Q6JC22
W	467	ASP	-	insertion	UNP Q6JC22
W	468	ASP	-	insertion	UNP Q6JC22
W	469	GLY	-	insertion	UNP Q6JC22
W	470	VAL	-	insertion	UNP Q6JC22
W	471	PRO	-	insertion	UNP Q6JC22
W	472	MET	-	insertion	UNP Q6JC22
W	473	SER	-	insertion	UNP Q6JC22
W	474	MET	-	insertion	UNP Q6JC22
W	475	ARG	-	insertion	UNP Q6JC22
W	476	GLY	-	insertion	UNP Q6JC22
W	477	GLY	-	insertion	UNP Q6JC22
W	478	GLY	-	insertion	UNP Q6JC22
W	479	ALA	-	insertion	UNP Q6JC22
X	454	ALA	-	insertion	UNP Q6JC22
X	455	GLY	-	insertion	UNP Q6JC22
X	456	VAL	-	insertion	UNP Q6JC22
X	457	PRO	-	insertion	UNP Q6JC22
X	458	MET	-	insertion	UNP Q6JC22
X	459	SER	-	insertion	UNP Q6JC22
X	460	MET	-	insertion	UNP Q6JC22
X	461	ARG	-	insertion	UNP Q6JC22
X	462	GLY	-	insertion	UNP Q6JC22
X	463	GLY	-	insertion	UNP Q6JC22
X	464	GLY	-	insertion	UNP Q6JC22
X	465	ASP	-	insertion	UNP Q6JC22
X	466	ASP	-	insertion	UNP Q6JC22
X	467	ASP	-	insertion	UNP Q6JC22
X	468	ASP	-	insertion	UNP Q6JC22
X	469	GLY	-	insertion	UNP Q6JC22
X	470	VAL	-	insertion	UNP Q6JC22
X	471	PRO	-	insertion	UNP Q6JC22
X	472	MET	-	insertion	UNP Q6JC22
X	473	SER	-	insertion	UNP Q6JC22
X	474	MET	-	insertion	UNP Q6JC22
X	475	ARG	-	insertion	UNP Q6JC22
X	476	GLY	-	insertion	UNP Q6JC22
X	477	GLY	-	insertion	UNP Q6JC22
X	478	GLY	-	insertion	UNP Q6JC22
X	479	ALA	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
Y	454	ALA	-	insertion	UNP Q6JC22
Y	455	GLY	-	insertion	UNP Q6JC22
Y	456	VAL	-	insertion	UNP Q6JC22
Y	457	PRO	-	insertion	UNP Q6JC22
Y	458	MET	-	insertion	UNP Q6JC22
Y	459	SER	-	insertion	UNP Q6JC22
Y	460	MET	-	insertion	UNP Q6JC22
Y	461	ARG	-	insertion	UNP Q6JC22
Y	462	GLY	-	insertion	UNP Q6JC22
Y	463	GLY	-	insertion	UNP Q6JC22
Y	464	GLY	-	insertion	UNP Q6JC22
Y	465	ASP	-	insertion	UNP Q6JC22
Y	466	ASP	-	insertion	UNP Q6JC22
Y	467	ASP	-	insertion	UNP Q6JC22
Y	468	ASP	-	insertion	UNP Q6JC22
Y	469	GLY	-	insertion	UNP Q6JC22
Y	470	VAL	-	insertion	UNP Q6JC22
Y	471	PRO	-	insertion	UNP Q6JC22
Y	472	MET	-	insertion	UNP Q6JC22
Y	473	SER	-	insertion	UNP Q6JC22
Y	474	MET	-	insertion	UNP Q6JC22
Y	475	ARG	-	insertion	UNP Q6JC22
Y	476	GLY	-	insertion	UNP Q6JC22
Y	477	GLY	-	insertion	UNP Q6JC22
Y	478	GLY	-	insertion	UNP Q6JC22
Y	479	ALA	-	insertion	UNP Q6JC22
Z	454	ALA	-	insertion	UNP Q6JC22
Z	455	GLY	-	insertion	UNP Q6JC22
Z	456	VAL	-	insertion	UNP Q6JC22
Z	457	PRO	-	insertion	UNP Q6JC22
Z	458	MET	-	insertion	UNP Q6JC22
Z	459	SER	-	insertion	UNP Q6JC22
Z	460	MET	-	insertion	UNP Q6JC22
Z	461	ARG	-	insertion	UNP Q6JC22
Z	462	GLY	-	insertion	UNP Q6JC22
Z	463	GLY	-	insertion	UNP Q6JC22
Z	464	GLY	-	insertion	UNP Q6JC22
Z	465	ASP	-	insertion	UNP Q6JC22
Z	466	ASP	-	insertion	UNP Q6JC22
Z	467	ASP	-	insertion	UNP Q6JC22
Z	468	ASP	-	insertion	UNP Q6JC22
Z	469	GLY	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
Z	470	VAL	-	insertion	UNP Q6JC22
Z	471	PRO	-	insertion	UNP Q6JC22
Z	472	MET	-	insertion	UNP Q6JC22
Z	473	SER	-	insertion	UNP Q6JC22
Z	474	MET	-	insertion	UNP Q6JC22
Z	475	ARG	-	insertion	UNP Q6JC22
Z	476	GLY	-	insertion	UNP Q6JC22
Z	477	GLY	-	insertion	UNP Q6JC22
Z	478	GLY	-	insertion	UNP Q6JC22
Z	479	ALA	-	insertion	UNP Q6JC22
a	454	ALA	-	insertion	UNP Q6JC22
a	455	GLY	-	insertion	UNP Q6JC22
a	456	VAL	-	insertion	UNP Q6JC22
a	457	PRO	-	insertion	UNP Q6JC22
a	458	MET	-	insertion	UNP Q6JC22
a	459	SER	-	insertion	UNP Q6JC22
a	460	MET	-	insertion	UNP Q6JC22
a	461	ARG	-	insertion	UNP Q6JC22
a	462	GLY	-	insertion	UNP Q6JC22
a	463	GLY	-	insertion	UNP Q6JC22
a	464	GLY	-	insertion	UNP Q6JC22
a	465	ASP	-	insertion	UNP Q6JC22
a	466	ASP	-	insertion	UNP Q6JC22
a	467	ASP	-	insertion	UNP Q6JC22
a	468	ASP	-	insertion	UNP Q6JC22
a	469	GLY	-	insertion	UNP Q6JC22
a	470	VAL	-	insertion	UNP Q6JC22
a	471	PRO	-	insertion	UNP Q6JC22
a	472	MET	-	insertion	UNP Q6JC22
a	473	SER	-	insertion	UNP Q6JC22
a	474	MET	-	insertion	UNP Q6JC22
a	475	ARG	-	insertion	UNP Q6JC22
a	476	GLY	-	insertion	UNP Q6JC22
a	477	GLY	-	insertion	UNP Q6JC22
a	478	GLY	-	insertion	UNP Q6JC22
a	479	ALA	-	insertion	UNP Q6JC22
b	454	ALA	-	insertion	UNP Q6JC22
b	455	GLY	-	insertion	UNP Q6JC22
b	456	VAL	-	insertion	UNP Q6JC22
b	457	PRO	-	insertion	UNP Q6JC22
b	458	MET	-	insertion	UNP Q6JC22
b	459	SER	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
b	460	MET	-	insertion	UNP Q6JC22
b	461	ARG	-	insertion	UNP Q6JC22
b	462	GLY	-	insertion	UNP Q6JC22
b	463	GLY	-	insertion	UNP Q6JC22
b	464	GLY	-	insertion	UNP Q6JC22
b	465	ASP	-	insertion	UNP Q6JC22
b	466	ASP	-	insertion	UNP Q6JC22
b	467	ASP	-	insertion	UNP Q6JC22
b	468	ASP	-	insertion	UNP Q6JC22
b	469	GLY	-	insertion	UNP Q6JC22
b	470	VAL	-	insertion	UNP Q6JC22
b	471	PRO	-	insertion	UNP Q6JC22
b	472	MET	-	insertion	UNP Q6JC22
b	473	SER	-	insertion	UNP Q6JC22
b	474	MET	-	insertion	UNP Q6JC22
b	475	ARG	-	insertion	UNP Q6JC22
b	476	GLY	-	insertion	UNP Q6JC22
b	477	GLY	-	insertion	UNP Q6JC22
b	478	GLY	-	insertion	UNP Q6JC22
b	479	ALA	-	insertion	UNP Q6JC22
c	454	ALA	-	insertion	UNP Q6JC22
c	455	GLY	-	insertion	UNP Q6JC22
c	456	VAL	-	insertion	UNP Q6JC22
c	457	PRO	-	insertion	UNP Q6JC22
c	458	MET	-	insertion	UNP Q6JC22
c	459	SER	-	insertion	UNP Q6JC22
c	460	MET	-	insertion	UNP Q6JC22
c	461	ARG	-	insertion	UNP Q6JC22
c	462	GLY	-	insertion	UNP Q6JC22
c	463	GLY	-	insertion	UNP Q6JC22
c	464	GLY	-	insertion	UNP Q6JC22
c	465	ASP	-	insertion	UNP Q6JC22
c	466	ASP	-	insertion	UNP Q6JC22
c	467	ASP	-	insertion	UNP Q6JC22
c	468	ASP	-	insertion	UNP Q6JC22
c	469	GLY	-	insertion	UNP Q6JC22
c	470	VAL	-	insertion	UNP Q6JC22
c	471	PRO	-	insertion	UNP Q6JC22
c	472	MET	-	insertion	UNP Q6JC22
c	473	SER	-	insertion	UNP Q6JC22
c	474	MET	-	insertion	UNP Q6JC22
c	475	ARG	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
c	476	GLY	-	insertion	UNP Q6JC22
c	477	GLY	-	insertion	UNP Q6JC22
c	478	GLY	-	insertion	UNP Q6JC22
c	479	ALA	-	insertion	UNP Q6JC22
d	454	ALA	-	insertion	UNP Q6JC22
d	455	GLY	-	insertion	UNP Q6JC22
d	456	VAL	-	insertion	UNP Q6JC22
d	457	PRO	-	insertion	UNP Q6JC22
d	458	MET	-	insertion	UNP Q6JC22
d	459	SER	-	insertion	UNP Q6JC22
d	460	MET	-	insertion	UNP Q6JC22
d	461	ARG	-	insertion	UNP Q6JC22
d	462	GLY	-	insertion	UNP Q6JC22
d	463	GLY	-	insertion	UNP Q6JC22
d	464	GLY	-	insertion	UNP Q6JC22
d	465	ASP	-	insertion	UNP Q6JC22
d	466	ASP	-	insertion	UNP Q6JC22
d	467	ASP	-	insertion	UNP Q6JC22
d	468	ASP	-	insertion	UNP Q6JC22
d	469	GLY	-	insertion	UNP Q6JC22
d	470	VAL	-	insertion	UNP Q6JC22
d	471	PRO	-	insertion	UNP Q6JC22
d	472	MET	-	insertion	UNP Q6JC22
d	473	SER	-	insertion	UNP Q6JC22
d	474	MET	-	insertion	UNP Q6JC22
d	475	ARG	-	insertion	UNP Q6JC22
d	476	GLY	-	insertion	UNP Q6JC22
d	477	GLY	-	insertion	UNP Q6JC22
d	478	GLY	-	insertion	UNP Q6JC22
d	479	ALA	-	insertion	UNP Q6JC22
e	454	ALA	-	insertion	UNP Q6JC22
e	455	GLY	-	insertion	UNP Q6JC22
e	456	VAL	-	insertion	UNP Q6JC22
e	457	PRO	-	insertion	UNP Q6JC22
e	458	MET	-	insertion	UNP Q6JC22
e	459	SER	-	insertion	UNP Q6JC22
e	460	MET	-	insertion	UNP Q6JC22
e	461	ARG	-	insertion	UNP Q6JC22
e	462	GLY	-	insertion	UNP Q6JC22
e	463	GLY	-	insertion	UNP Q6JC22
e	464	GLY	-	insertion	UNP Q6JC22
e	465	ASP	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
e	466	ASP	-	insertion	UNP Q6JC22
e	467	ASP	-	insertion	UNP Q6JC22
e	468	ASP	-	insertion	UNP Q6JC22
e	469	GLY	-	insertion	UNP Q6JC22
e	470	VAL	-	insertion	UNP Q6JC22
e	471	PRO	-	insertion	UNP Q6JC22
e	472	MET	-	insertion	UNP Q6JC22
e	473	SER	-	insertion	UNP Q6JC22
e	474	MET	-	insertion	UNP Q6JC22
e	475	ARG	-	insertion	UNP Q6JC22
e	476	GLY	-	insertion	UNP Q6JC22
e	477	GLY	-	insertion	UNP Q6JC22
e	478	GLY	-	insertion	UNP Q6JC22
e	479	ALA	-	insertion	UNP Q6JC22
f	454	ALA	-	insertion	UNP Q6JC22
f	455	GLY	-	insertion	UNP Q6JC22
f	456	VAL	-	insertion	UNP Q6JC22
f	457	PRO	-	insertion	UNP Q6JC22
f	458	MET	-	insertion	UNP Q6JC22
f	459	SER	-	insertion	UNP Q6JC22
f	460	MET	-	insertion	UNP Q6JC22
f	461	ARG	-	insertion	UNP Q6JC22
f	462	GLY	-	insertion	UNP Q6JC22
f	463	GLY	-	insertion	UNP Q6JC22
f	464	GLY	-	insertion	UNP Q6JC22
f	465	ASP	-	insertion	UNP Q6JC22
f	466	ASP	-	insertion	UNP Q6JC22
f	467	ASP	-	insertion	UNP Q6JC22
f	468	ASP	-	insertion	UNP Q6JC22
f	469	GLY	-	insertion	UNP Q6JC22
f	470	VAL	-	insertion	UNP Q6JC22
f	471	PRO	-	insertion	UNP Q6JC22
f	472	MET	-	insertion	UNP Q6JC22
f	473	SER	-	insertion	UNP Q6JC22
f	474	MET	-	insertion	UNP Q6JC22
f	475	ARG	-	insertion	UNP Q6JC22
f	476	GLY	-	insertion	UNP Q6JC22
f	477	GLY	-	insertion	UNP Q6JC22
f	478	GLY	-	insertion	UNP Q6JC22
f	479	ALA	-	insertion	UNP Q6JC22
g	454	ALA	-	insertion	UNP Q6JC22
g	455	GLY	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
g	456	VAL	-	insertion	UNP Q6JC22
g	457	PRO	-	insertion	UNP Q6JC22
g	458	MET	-	insertion	UNP Q6JC22
g	459	SER	-	insertion	UNP Q6JC22
g	460	MET	-	insertion	UNP Q6JC22
g	461	ARG	-	insertion	UNP Q6JC22
g	462	GLY	-	insertion	UNP Q6JC22
g	463	GLY	-	insertion	UNP Q6JC22
g	464	GLY	-	insertion	UNP Q6JC22
g	465	ASP	-	insertion	UNP Q6JC22
g	466	ASP	-	insertion	UNP Q6JC22
g	467	ASP	-	insertion	UNP Q6JC22
g	468	ASP	-	insertion	UNP Q6JC22
g	469	GLY	-	insertion	UNP Q6JC22
g	470	VAL	-	insertion	UNP Q6JC22
g	471	PRO	-	insertion	UNP Q6JC22
g	472	MET	-	insertion	UNP Q6JC22
g	473	SER	-	insertion	UNP Q6JC22
g	474	MET	-	insertion	UNP Q6JC22
g	475	ARG	-	insertion	UNP Q6JC22
g	476	GLY	-	insertion	UNP Q6JC22
g	477	GLY	-	insertion	UNP Q6JC22
g	478	GLY	-	insertion	UNP Q6JC22
g	479	ALA	-	insertion	UNP Q6JC22
h	454	ALA	-	insertion	UNP Q6JC22
h	455	GLY	-	insertion	UNP Q6JC22
h	456	VAL	-	insertion	UNP Q6JC22
h	457	PRO	-	insertion	UNP Q6JC22
h	458	MET	-	insertion	UNP Q6JC22
h	459	SER	-	insertion	UNP Q6JC22
h	460	MET	-	insertion	UNP Q6JC22
h	461	ARG	-	insertion	UNP Q6JC22
h	462	GLY	-	insertion	UNP Q6JC22
h	463	GLY	-	insertion	UNP Q6JC22
h	464	GLY	-	insertion	UNP Q6JC22
h	465	ASP	-	insertion	UNP Q6JC22
h	466	ASP	-	insertion	UNP Q6JC22
h	467	ASP	-	insertion	UNP Q6JC22
h	468	ASP	-	insertion	UNP Q6JC22
h	469	GLY	-	insertion	UNP Q6JC22
h	470	VAL	-	insertion	UNP Q6JC22
h	471	PRO	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
h	472	MET	-	insertion	UNP Q6JC22
h	473	SER	-	insertion	UNP Q6JC22
h	474	MET	-	insertion	UNP Q6JC22
h	475	ARG	-	insertion	UNP Q6JC22
h	476	GLY	-	insertion	UNP Q6JC22
h	477	GLY	-	insertion	UNP Q6JC22
h	478	GLY	-	insertion	UNP Q6JC22
h	479	ALA	-	insertion	UNP Q6JC22
i	454	ALA	-	insertion	UNP Q6JC22
i	455	GLY	-	insertion	UNP Q6JC22
i	456	VAL	-	insertion	UNP Q6JC22
i	457	PRO	-	insertion	UNP Q6JC22
i	458	MET	-	insertion	UNP Q6JC22
i	459	SER	-	insertion	UNP Q6JC22
i	460	MET	-	insertion	UNP Q6JC22
i	461	ARG	-	insertion	UNP Q6JC22
i	462	GLY	-	insertion	UNP Q6JC22
i	463	GLY	-	insertion	UNP Q6JC22
i	464	GLY	-	insertion	UNP Q6JC22
i	465	ASP	-	insertion	UNP Q6JC22
i	466	ASP	-	insertion	UNP Q6JC22
i	467	ASP	-	insertion	UNP Q6JC22
i	468	ASP	-	insertion	UNP Q6JC22
i	469	GLY	-	insertion	UNP Q6JC22
i	470	VAL	-	insertion	UNP Q6JC22
i	471	PRO	-	insertion	UNP Q6JC22
i	472	MET	-	insertion	UNP Q6JC22
i	473	SER	-	insertion	UNP Q6JC22
i	474	MET	-	insertion	UNP Q6JC22
i	475	ARG	-	insertion	UNP Q6JC22
i	476	GLY	-	insertion	UNP Q6JC22
i	477	GLY	-	insertion	UNP Q6JC22
i	478	GLY	-	insertion	UNP Q6JC22
i	479	ALA	-	insertion	UNP Q6JC22
j	454	ALA	-	insertion	UNP Q6JC22
j	455	GLY	-	insertion	UNP Q6JC22
j	456	VAL	-	insertion	UNP Q6JC22
j	457	PRO	-	insertion	UNP Q6JC22
j	458	MET	-	insertion	UNP Q6JC22
j	459	SER	-	insertion	UNP Q6JC22
j	460	MET	-	insertion	UNP Q6JC22
j	461	ARG	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
j	462	GLY	-	insertion	UNP Q6JC22
j	463	GLY	-	insertion	UNP Q6JC22
j	464	GLY	-	insertion	UNP Q6JC22
j	465	ASP	-	insertion	UNP Q6JC22
j	466	ASP	-	insertion	UNP Q6JC22
j	467	ASP	-	insertion	UNP Q6JC22
j	468	ASP	-	insertion	UNP Q6JC22
j	469	GLY	-	insertion	UNP Q6JC22
j	470	VAL	-	insertion	UNP Q6JC22
j	471	PRO	-	insertion	UNP Q6JC22
j	472	MET	-	insertion	UNP Q6JC22
j	473	SER	-	insertion	UNP Q6JC22
j	474	MET	-	insertion	UNP Q6JC22
j	475	ARG	-	insertion	UNP Q6JC22
j	476	GLY	-	insertion	UNP Q6JC22
j	477	GLY	-	insertion	UNP Q6JC22
j	478	GLY	-	insertion	UNP Q6JC22
j	479	ALA	-	insertion	UNP Q6JC22
k	454	ALA	-	insertion	UNP Q6JC22
k	455	GLY	-	insertion	UNP Q6JC22
k	456	VAL	-	insertion	UNP Q6JC22
k	457	PRO	-	insertion	UNP Q6JC22
k	458	MET	-	insertion	UNP Q6JC22
k	459	SER	-	insertion	UNP Q6JC22
k	460	MET	-	insertion	UNP Q6JC22
k	461	ARG	-	insertion	UNP Q6JC22
k	462	GLY	-	insertion	UNP Q6JC22
k	463	GLY	-	insertion	UNP Q6JC22
k	464	GLY	-	insertion	UNP Q6JC22
k	465	ASP	-	insertion	UNP Q6JC22
k	466	ASP	-	insertion	UNP Q6JC22
k	467	ASP	-	insertion	UNP Q6JC22
k	468	ASP	-	insertion	UNP Q6JC22
k	469	GLY	-	insertion	UNP Q6JC22
k	470	VAL	-	insertion	UNP Q6JC22
k	471	PRO	-	insertion	UNP Q6JC22
k	472	MET	-	insertion	UNP Q6JC22
k	473	SER	-	insertion	UNP Q6JC22
k	474	MET	-	insertion	UNP Q6JC22
k	475	ARG	-	insertion	UNP Q6JC22
k	476	GLY	-	insertion	UNP Q6JC22
k	477	GLY	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
k	478	GLY	-	insertion	UNP Q6JC22
k	479	ALA	-	insertion	UNP Q6JC22
l	454	ALA	-	insertion	UNP Q6JC22
l	455	GLY	-	insertion	UNP Q6JC22
l	456	VAL	-	insertion	UNP Q6JC22
l	457	PRO	-	insertion	UNP Q6JC22
l	458	MET	-	insertion	UNP Q6JC22
l	459	SER	-	insertion	UNP Q6JC22
l	460	MET	-	insertion	UNP Q6JC22
l	461	ARG	-	insertion	UNP Q6JC22
l	462	GLY	-	insertion	UNP Q6JC22
l	463	GLY	-	insertion	UNP Q6JC22
l	464	GLY	-	insertion	UNP Q6JC22
l	465	ASP	-	insertion	UNP Q6JC22
l	466	ASP	-	insertion	UNP Q6JC22
l	467	ASP	-	insertion	UNP Q6JC22
l	468	ASP	-	insertion	UNP Q6JC22
l	469	GLY	-	insertion	UNP Q6JC22
l	470	VAL	-	insertion	UNP Q6JC22
l	471	PRO	-	insertion	UNP Q6JC22
l	472	MET	-	insertion	UNP Q6JC22
l	473	SER	-	insertion	UNP Q6JC22
l	474	MET	-	insertion	UNP Q6JC22
l	475	ARG	-	insertion	UNP Q6JC22
l	476	GLY	-	insertion	UNP Q6JC22
l	477	GLY	-	insertion	UNP Q6JC22
l	478	GLY	-	insertion	UNP Q6JC22
l	479	ALA	-	insertion	UNP Q6JC22
m	454	ALA	-	insertion	UNP Q6JC22
m	455	GLY	-	insertion	UNP Q6JC22
m	456	VAL	-	insertion	UNP Q6JC22
m	457	PRO	-	insertion	UNP Q6JC22
m	458	MET	-	insertion	UNP Q6JC22
m	459	SER	-	insertion	UNP Q6JC22
m	460	MET	-	insertion	UNP Q6JC22
m	461	ARG	-	insertion	UNP Q6JC22
m	462	GLY	-	insertion	UNP Q6JC22
m	463	GLY	-	insertion	UNP Q6JC22
m	464	GLY	-	insertion	UNP Q6JC22
m	465	ASP	-	insertion	UNP Q6JC22
m	466	ASP	-	insertion	UNP Q6JC22
m	467	ASP	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
m	468	ASP	-	insertion	UNP Q6JC22
m	469	GLY	-	insertion	UNP Q6JC22
m	470	VAL	-	insertion	UNP Q6JC22
m	471	PRO	-	insertion	UNP Q6JC22
m	472	MET	-	insertion	UNP Q6JC22
m	473	SER	-	insertion	UNP Q6JC22
m	474	MET	-	insertion	UNP Q6JC22
m	475	ARG	-	insertion	UNP Q6JC22
m	476	GLY	-	insertion	UNP Q6JC22
m	477	GLY	-	insertion	UNP Q6JC22
m	478	GLY	-	insertion	UNP Q6JC22
m	479	ALA	-	insertion	UNP Q6JC22
n	454	ALA	-	insertion	UNP Q6JC22
n	455	GLY	-	insertion	UNP Q6JC22
n	456	VAL	-	insertion	UNP Q6JC22
n	457	PRO	-	insertion	UNP Q6JC22
n	458	MET	-	insertion	UNP Q6JC22
n	459	SER	-	insertion	UNP Q6JC22
n	460	MET	-	insertion	UNP Q6JC22
n	461	ARG	-	insertion	UNP Q6JC22
n	462	GLY	-	insertion	UNP Q6JC22
n	463	GLY	-	insertion	UNP Q6JC22
n	464	GLY	-	insertion	UNP Q6JC22
n	465	ASP	-	insertion	UNP Q6JC22
n	466	ASP	-	insertion	UNP Q6JC22
n	467	ASP	-	insertion	UNP Q6JC22
n	468	ASP	-	insertion	UNP Q6JC22
n	469	GLY	-	insertion	UNP Q6JC22
n	470	VAL	-	insertion	UNP Q6JC22
n	471	PRO	-	insertion	UNP Q6JC22
n	472	MET	-	insertion	UNP Q6JC22
n	473	SER	-	insertion	UNP Q6JC22
n	474	MET	-	insertion	UNP Q6JC22
n	475	ARG	-	insertion	UNP Q6JC22
n	476	GLY	-	insertion	UNP Q6JC22
n	477	GLY	-	insertion	UNP Q6JC22
n	478	GLY	-	insertion	UNP Q6JC22
n	479	ALA	-	insertion	UNP Q6JC22
o	454	ALA	-	insertion	UNP Q6JC22
o	455	GLY	-	insertion	UNP Q6JC22
o	456	VAL	-	insertion	UNP Q6JC22
o	457	PRO	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
o	458	MET	-	insertion	UNP Q6JC22
o	459	SER	-	insertion	UNP Q6JC22
o	460	MET	-	insertion	UNP Q6JC22
o	461	ARG	-	insertion	UNP Q6JC22
o	462	GLY	-	insertion	UNP Q6JC22
o	463	GLY	-	insertion	UNP Q6JC22
o	464	GLY	-	insertion	UNP Q6JC22
o	465	ASP	-	insertion	UNP Q6JC22
o	466	ASP	-	insertion	UNP Q6JC22
o	467	ASP	-	insertion	UNP Q6JC22
o	468	ASP	-	insertion	UNP Q6JC22
o	469	GLY	-	insertion	UNP Q6JC22
o	470	VAL	-	insertion	UNP Q6JC22
o	471	PRO	-	insertion	UNP Q6JC22
o	472	MET	-	insertion	UNP Q6JC22
o	473	SER	-	insertion	UNP Q6JC22
o	474	MET	-	insertion	UNP Q6JC22
o	475	ARG	-	insertion	UNP Q6JC22
o	476	GLY	-	insertion	UNP Q6JC22
o	477	GLY	-	insertion	UNP Q6JC22
o	478	GLY	-	insertion	UNP Q6JC22
o	479	ALA	-	insertion	UNP Q6JC22
p	454	ALA	-	insertion	UNP Q6JC22
p	455	GLY	-	insertion	UNP Q6JC22
p	456	VAL	-	insertion	UNP Q6JC22
p	457	PRO	-	insertion	UNP Q6JC22
p	458	MET	-	insertion	UNP Q6JC22
p	459	SER	-	insertion	UNP Q6JC22
p	460	MET	-	insertion	UNP Q6JC22
p	461	ARG	-	insertion	UNP Q6JC22
p	462	GLY	-	insertion	UNP Q6JC22
p	463	GLY	-	insertion	UNP Q6JC22
p	464	GLY	-	insertion	UNP Q6JC22
p	465	ASP	-	insertion	UNP Q6JC22
p	466	ASP	-	insertion	UNP Q6JC22
p	467	ASP	-	insertion	UNP Q6JC22
p	468	ASP	-	insertion	UNP Q6JC22
p	469	GLY	-	insertion	UNP Q6JC22
p	470	VAL	-	insertion	UNP Q6JC22
p	471	PRO	-	insertion	UNP Q6JC22
p	472	MET	-	insertion	UNP Q6JC22
p	473	SER	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
p	474	MET	-	insertion	UNP Q6JC22
p	475	ARG	-	insertion	UNP Q6JC22
p	476	GLY	-	insertion	UNP Q6JC22
p	477	GLY	-	insertion	UNP Q6JC22
p	478	GLY	-	insertion	UNP Q6JC22
p	479	ALA	-	insertion	UNP Q6JC22
q	454	ALA	-	insertion	UNP Q6JC22
q	455	GLY	-	insertion	UNP Q6JC22
q	456	VAL	-	insertion	UNP Q6JC22
q	457	PRO	-	insertion	UNP Q6JC22
q	458	MET	-	insertion	UNP Q6JC22
q	459	SER	-	insertion	UNP Q6JC22
q	460	MET	-	insertion	UNP Q6JC22
q	461	ARG	-	insertion	UNP Q6JC22
q	462	GLY	-	insertion	UNP Q6JC22
q	463	GLY	-	insertion	UNP Q6JC22
q	464	GLY	-	insertion	UNP Q6JC22
q	465	ASP	-	insertion	UNP Q6JC22
q	466	ASP	-	insertion	UNP Q6JC22
q	467	ASP	-	insertion	UNP Q6JC22
q	468	ASP	-	insertion	UNP Q6JC22
q	469	GLY	-	insertion	UNP Q6JC22
q	470	VAL	-	insertion	UNP Q6JC22
q	471	PRO	-	insertion	UNP Q6JC22
q	472	MET	-	insertion	UNP Q6JC22
q	473	SER	-	insertion	UNP Q6JC22
q	474	MET	-	insertion	UNP Q6JC22
q	475	ARG	-	insertion	UNP Q6JC22
q	476	GLY	-	insertion	UNP Q6JC22
q	477	GLY	-	insertion	UNP Q6JC22
q	478	GLY	-	insertion	UNP Q6JC22
q	479	ALA	-	insertion	UNP Q6JC22
r	454	ALA	-	insertion	UNP Q6JC22
r	455	GLY	-	insertion	UNP Q6JC22
r	456	VAL	-	insertion	UNP Q6JC22
r	457	PRO	-	insertion	UNP Q6JC22
r	458	MET	-	insertion	UNP Q6JC22
r	459	SER	-	insertion	UNP Q6JC22
r	460	MET	-	insertion	UNP Q6JC22
r	461	ARG	-	insertion	UNP Q6JC22
r	462	GLY	-	insertion	UNP Q6JC22
r	463	GLY	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
r	464	GLY	-	insertion	UNP Q6JC22
r	465	ASP	-	insertion	UNP Q6JC22
r	466	ASP	-	insertion	UNP Q6JC22
r	467	ASP	-	insertion	UNP Q6JC22
r	468	ASP	-	insertion	UNP Q6JC22
r	469	GLY	-	insertion	UNP Q6JC22
r	470	VAL	-	insertion	UNP Q6JC22
r	471	PRO	-	insertion	UNP Q6JC22
r	472	MET	-	insertion	UNP Q6JC22
r	473	SER	-	insertion	UNP Q6JC22
r	474	MET	-	insertion	UNP Q6JC22
r	475	ARG	-	insertion	UNP Q6JC22
r	476	GLY	-	insertion	UNP Q6JC22
r	477	GLY	-	insertion	UNP Q6JC22
r	478	GLY	-	insertion	UNP Q6JC22
r	479	ALA	-	insertion	UNP Q6JC22
s	454	ALA	-	insertion	UNP Q6JC22
s	455	GLY	-	insertion	UNP Q6JC22
s	456	VAL	-	insertion	UNP Q6JC22
s	457	PRO	-	insertion	UNP Q6JC22
s	458	MET	-	insertion	UNP Q6JC22
s	459	SER	-	insertion	UNP Q6JC22
s	460	MET	-	insertion	UNP Q6JC22
s	461	ARG	-	insertion	UNP Q6JC22
s	462	GLY	-	insertion	UNP Q6JC22
s	463	GLY	-	insertion	UNP Q6JC22
s	464	GLY	-	insertion	UNP Q6JC22
s	465	ASP	-	insertion	UNP Q6JC22
s	466	ASP	-	insertion	UNP Q6JC22
s	467	ASP	-	insertion	UNP Q6JC22
s	468	ASP	-	insertion	UNP Q6JC22
s	469	GLY	-	insertion	UNP Q6JC22
s	470	VAL	-	insertion	UNP Q6JC22
s	471	PRO	-	insertion	UNP Q6JC22
s	472	MET	-	insertion	UNP Q6JC22
s	473	SER	-	insertion	UNP Q6JC22
s	474	MET	-	insertion	UNP Q6JC22
s	475	ARG	-	insertion	UNP Q6JC22
s	476	GLY	-	insertion	UNP Q6JC22
s	477	GLY	-	insertion	UNP Q6JC22
s	478	GLY	-	insertion	UNP Q6JC22
s	479	ALA	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
t	454	ALA	-	insertion	UNP Q6JC22
t	455	GLY	-	insertion	UNP Q6JC22
t	456	VAL	-	insertion	UNP Q6JC22
t	457	PRO	-	insertion	UNP Q6JC22
t	458	MET	-	insertion	UNP Q6JC22
t	459	SER	-	insertion	UNP Q6JC22
t	460	MET	-	insertion	UNP Q6JC22
t	461	ARG	-	insertion	UNP Q6JC22
t	462	GLY	-	insertion	UNP Q6JC22
t	463	GLY	-	insertion	UNP Q6JC22
t	464	GLY	-	insertion	UNP Q6JC22
t	465	ASP	-	insertion	UNP Q6JC22
t	466	ASP	-	insertion	UNP Q6JC22
t	467	ASP	-	insertion	UNP Q6JC22
t	468	ASP	-	insertion	UNP Q6JC22
t	469	GLY	-	insertion	UNP Q6JC22
t	470	VAL	-	insertion	UNP Q6JC22
t	471	PRO	-	insertion	UNP Q6JC22
t	472	MET	-	insertion	UNP Q6JC22
t	473	SER	-	insertion	UNP Q6JC22
t	474	MET	-	insertion	UNP Q6JC22
t	475	ARG	-	insertion	UNP Q6JC22
t	476	GLY	-	insertion	UNP Q6JC22
t	477	GLY	-	insertion	UNP Q6JC22
t	478	GLY	-	insertion	UNP Q6JC22
t	479	ALA	-	insertion	UNP Q6JC22
u	454	ALA	-	insertion	UNP Q6JC22
u	455	GLY	-	insertion	UNP Q6JC22
u	456	VAL	-	insertion	UNP Q6JC22
u	457	PRO	-	insertion	UNP Q6JC22
u	458	MET	-	insertion	UNP Q6JC22
u	459	SER	-	insertion	UNP Q6JC22
u	460	MET	-	insertion	UNP Q6JC22
u	461	ARG	-	insertion	UNP Q6JC22
u	462	GLY	-	insertion	UNP Q6JC22
u	463	GLY	-	insertion	UNP Q6JC22
u	464	GLY	-	insertion	UNP Q6JC22
u	465	ASP	-	insertion	UNP Q6JC22
u	466	ASP	-	insertion	UNP Q6JC22
u	467	ASP	-	insertion	UNP Q6JC22
u	468	ASP	-	insertion	UNP Q6JC22
u	469	GLY	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
u	470	VAL	-	insertion	UNP Q6JC22
u	471	PRO	-	insertion	UNP Q6JC22
u	472	MET	-	insertion	UNP Q6JC22
u	473	SER	-	insertion	UNP Q6JC22
u	474	MET	-	insertion	UNP Q6JC22
u	475	ARG	-	insertion	UNP Q6JC22
u	476	GLY	-	insertion	UNP Q6JC22
u	477	GLY	-	insertion	UNP Q6JC22
u	478	GLY	-	insertion	UNP Q6JC22
u	479	ALA	-	insertion	UNP Q6JC22
v	454	ALA	-	insertion	UNP Q6JC22
v	455	GLY	-	insertion	UNP Q6JC22
v	456	VAL	-	insertion	UNP Q6JC22
v	457	PRO	-	insertion	UNP Q6JC22
v	458	MET	-	insertion	UNP Q6JC22
v	459	SER	-	insertion	UNP Q6JC22
v	460	MET	-	insertion	UNP Q6JC22
v	461	ARG	-	insertion	UNP Q6JC22
v	462	GLY	-	insertion	UNP Q6JC22
v	463	GLY	-	insertion	UNP Q6JC22
v	464	GLY	-	insertion	UNP Q6JC22
v	465	ASP	-	insertion	UNP Q6JC22
v	466	ASP	-	insertion	UNP Q6JC22
v	467	ASP	-	insertion	UNP Q6JC22
v	468	ASP	-	insertion	UNP Q6JC22
v	469	GLY	-	insertion	UNP Q6JC22
v	470	VAL	-	insertion	UNP Q6JC22
v	471	PRO	-	insertion	UNP Q6JC22
v	472	MET	-	insertion	UNP Q6JC22
v	473	SER	-	insertion	UNP Q6JC22
v	474	MET	-	insertion	UNP Q6JC22
v	475	ARG	-	insertion	UNP Q6JC22
v	476	GLY	-	insertion	UNP Q6JC22
v	477	GLY	-	insertion	UNP Q6JC22
v	478	GLY	-	insertion	UNP Q6JC22
v	479	ALA	-	insertion	UNP Q6JC22
w	454	ALA	-	insertion	UNP Q6JC22
w	455	GLY	-	insertion	UNP Q6JC22
w	456	VAL	-	insertion	UNP Q6JC22
w	457	PRO	-	insertion	UNP Q6JC22
w	458	MET	-	insertion	UNP Q6JC22
w	459	SER	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
w	460	MET	-	insertion	UNP Q6JC22
w	461	ARG	-	insertion	UNP Q6JC22
w	462	GLY	-	insertion	UNP Q6JC22
w	463	GLY	-	insertion	UNP Q6JC22
w	464	GLY	-	insertion	UNP Q6JC22
w	465	ASP	-	insertion	UNP Q6JC22
w	466	ASP	-	insertion	UNP Q6JC22
w	467	ASP	-	insertion	UNP Q6JC22
w	468	ASP	-	insertion	UNP Q6JC22
w	469	GLY	-	insertion	UNP Q6JC22
w	470	VAL	-	insertion	UNP Q6JC22
w	471	PRO	-	insertion	UNP Q6JC22
w	472	MET	-	insertion	UNP Q6JC22
w	473	SER	-	insertion	UNP Q6JC22
w	474	MET	-	insertion	UNP Q6JC22
w	475	ARG	-	insertion	UNP Q6JC22
w	476	GLY	-	insertion	UNP Q6JC22
w	477	GLY	-	insertion	UNP Q6JC22
w	478	GLY	-	insertion	UNP Q6JC22
w	479	ALA	-	insertion	UNP Q6JC22
x	454	ALA	-	insertion	UNP Q6JC22
x	455	GLY	-	insertion	UNP Q6JC22
x	456	VAL	-	insertion	UNP Q6JC22
x	457	PRO	-	insertion	UNP Q6JC22
x	458	MET	-	insertion	UNP Q6JC22
x	459	SER	-	insertion	UNP Q6JC22
x	460	MET	-	insertion	UNP Q6JC22
x	461	ARG	-	insertion	UNP Q6JC22
x	462	GLY	-	insertion	UNP Q6JC22
x	463	GLY	-	insertion	UNP Q6JC22
x	464	GLY	-	insertion	UNP Q6JC22
x	465	ASP	-	insertion	UNP Q6JC22
x	466	ASP	-	insertion	UNP Q6JC22
x	467	ASP	-	insertion	UNP Q6JC22
x	468	ASP	-	insertion	UNP Q6JC22
x	469	GLY	-	insertion	UNP Q6JC22
x	470	VAL	-	insertion	UNP Q6JC22
x	471	PRO	-	insertion	UNP Q6JC22
x	472	MET	-	insertion	UNP Q6JC22
x	473	SER	-	insertion	UNP Q6JC22
x	474	MET	-	insertion	UNP Q6JC22
x	475	ARG	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
x	476	GLY	-	insertion	UNP Q6JC22
x	477	GLY	-	insertion	UNP Q6JC22
x	478	GLY	-	insertion	UNP Q6JC22
x	479	ALA	-	insertion	UNP Q6JC22
y	454	ALA	-	insertion	UNP Q6JC22
y	455	GLY	-	insertion	UNP Q6JC22
y	456	VAL	-	insertion	UNP Q6JC22
y	457	PRO	-	insertion	UNP Q6JC22
y	458	MET	-	insertion	UNP Q6JC22
y	459	SER	-	insertion	UNP Q6JC22
y	460	MET	-	insertion	UNP Q6JC22
y	461	ARG	-	insertion	UNP Q6JC22
y	462	GLY	-	insertion	UNP Q6JC22
y	463	GLY	-	insertion	UNP Q6JC22
y	464	GLY	-	insertion	UNP Q6JC22
y	465	ASP	-	insertion	UNP Q6JC22
y	466	ASP	-	insertion	UNP Q6JC22
y	467	ASP	-	insertion	UNP Q6JC22
y	468	ASP	-	insertion	UNP Q6JC22
y	469	GLY	-	insertion	UNP Q6JC22
y	470	VAL	-	insertion	UNP Q6JC22
y	471	PRO	-	insertion	UNP Q6JC22
y	472	MET	-	insertion	UNP Q6JC22
y	473	SER	-	insertion	UNP Q6JC22
y	474	MET	-	insertion	UNP Q6JC22
y	475	ARG	-	insertion	UNP Q6JC22
y	476	GLY	-	insertion	UNP Q6JC22
y	477	GLY	-	insertion	UNP Q6JC22
y	478	GLY	-	insertion	UNP Q6JC22
y	479	ALA	-	insertion	UNP Q6JC22
z	454	ALA	-	insertion	UNP Q6JC22
z	455	GLY	-	insertion	UNP Q6JC22
z	456	VAL	-	insertion	UNP Q6JC22
z	457	PRO	-	insertion	UNP Q6JC22
z	458	MET	-	insertion	UNP Q6JC22
z	459	SER	-	insertion	UNP Q6JC22
z	460	MET	-	insertion	UNP Q6JC22
z	461	ARG	-	insertion	UNP Q6JC22
z	462	GLY	-	insertion	UNP Q6JC22
z	463	GLY	-	insertion	UNP Q6JC22
z	464	GLY	-	insertion	UNP Q6JC22
z	465	ASP	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
z	466	ASP	-	insertion	UNP Q6JC22
z	467	ASP	-	insertion	UNP Q6JC22
z	468	ASP	-	insertion	UNP Q6JC22
z	469	GLY	-	insertion	UNP Q6JC22
z	470	VAL	-	insertion	UNP Q6JC22
z	471	PRO	-	insertion	UNP Q6JC22
z	472	MET	-	insertion	UNP Q6JC22
z	473	SER	-	insertion	UNP Q6JC22
z	474	MET	-	insertion	UNP Q6JC22
z	475	ARG	-	insertion	UNP Q6JC22
z	476	GLY	-	insertion	UNP Q6JC22
z	477	GLY	-	insertion	UNP Q6JC22
z	478	GLY	-	insertion	UNP Q6JC22
z	479	ALA	-	insertion	UNP Q6JC22
1	454	ALA	-	insertion	UNP Q6JC22
1	455	GLY	-	insertion	UNP Q6JC22
1	456	VAL	-	insertion	UNP Q6JC22
1	457	PRO	-	insertion	UNP Q6JC22
1	458	MET	-	insertion	UNP Q6JC22
1	459	SER	-	insertion	UNP Q6JC22
1	460	MET	-	insertion	UNP Q6JC22
1	461	ARG	-	insertion	UNP Q6JC22
1	462	GLY	-	insertion	UNP Q6JC22
1	463	GLY	-	insertion	UNP Q6JC22
1	464	GLY	-	insertion	UNP Q6JC22
1	465	ASP	-	insertion	UNP Q6JC22
1	466	ASP	-	insertion	UNP Q6JC22
1	467	ASP	-	insertion	UNP Q6JC22
1	468	ASP	-	insertion	UNP Q6JC22
1	469	GLY	-	insertion	UNP Q6JC22
1	470	VAL	-	insertion	UNP Q6JC22
1	471	PRO	-	insertion	UNP Q6JC22
1	472	MET	-	insertion	UNP Q6JC22
1	473	SER	-	insertion	UNP Q6JC22
1	474	MET	-	insertion	UNP Q6JC22
1	475	ARG	-	insertion	UNP Q6JC22
1	476	GLY	-	insertion	UNP Q6JC22
1	477	GLY	-	insertion	UNP Q6JC22
1	478	GLY	-	insertion	UNP Q6JC22
1	479	ALA	-	insertion	UNP Q6JC22
2	454	ALA	-	insertion	UNP Q6JC22
2	455	GLY	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
2	456	VAL	-	insertion	UNP Q6JC22
2	457	PRO	-	insertion	UNP Q6JC22
2	458	MET	-	insertion	UNP Q6JC22
2	459	SER	-	insertion	UNP Q6JC22
2	460	MET	-	insertion	UNP Q6JC22
2	461	ARG	-	insertion	UNP Q6JC22
2	462	GLY	-	insertion	UNP Q6JC22
2	463	GLY	-	insertion	UNP Q6JC22
2	464	GLY	-	insertion	UNP Q6JC22
2	465	ASP	-	insertion	UNP Q6JC22
2	466	ASP	-	insertion	UNP Q6JC22
2	467	ASP	-	insertion	UNP Q6JC22
2	468	ASP	-	insertion	UNP Q6JC22
2	469	GLY	-	insertion	UNP Q6JC22
2	470	VAL	-	insertion	UNP Q6JC22
2	471	PRO	-	insertion	UNP Q6JC22
2	472	MET	-	insertion	UNP Q6JC22
2	473	SER	-	insertion	UNP Q6JC22
2	474	MET	-	insertion	UNP Q6JC22
2	475	ARG	-	insertion	UNP Q6JC22
2	476	GLY	-	insertion	UNP Q6JC22
2	477	GLY	-	insertion	UNP Q6JC22
2	478	GLY	-	insertion	UNP Q6JC22
2	479	ALA	-	insertion	UNP Q6JC22
3	454	ALA	-	insertion	UNP Q6JC22
3	455	GLY	-	insertion	UNP Q6JC22
3	456	VAL	-	insertion	UNP Q6JC22
3	457	PRO	-	insertion	UNP Q6JC22
3	458	MET	-	insertion	UNP Q6JC22
3	459	SER	-	insertion	UNP Q6JC22
3	460	MET	-	insertion	UNP Q6JC22
3	461	ARG	-	insertion	UNP Q6JC22
3	462	GLY	-	insertion	UNP Q6JC22
3	463	GLY	-	insertion	UNP Q6JC22
3	464	GLY	-	insertion	UNP Q6JC22
3	465	ASP	-	insertion	UNP Q6JC22
3	466	ASP	-	insertion	UNP Q6JC22
3	467	ASP	-	insertion	UNP Q6JC22
3	468	ASP	-	insertion	UNP Q6JC22
3	469	GLY	-	insertion	UNP Q6JC22
3	470	VAL	-	insertion	UNP Q6JC22
3	471	PRO	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
3	472	MET	-	insertion	UNP Q6JC22
3	473	SER	-	insertion	UNP Q6JC22
3	474	MET	-	insertion	UNP Q6JC22
3	475	ARG	-	insertion	UNP Q6JC22
3	476	GLY	-	insertion	UNP Q6JC22
3	477	GLY	-	insertion	UNP Q6JC22
3	478	GLY	-	insertion	UNP Q6JC22
3	479	ALA	-	insertion	UNP Q6JC22
4	454	ALA	-	insertion	UNP Q6JC22
4	455	GLY	-	insertion	UNP Q6JC22
4	456	VAL	-	insertion	UNP Q6JC22
4	457	PRO	-	insertion	UNP Q6JC22
4	458	MET	-	insertion	UNP Q6JC22
4	459	SER	-	insertion	UNP Q6JC22
4	460	MET	-	insertion	UNP Q6JC22
4	461	ARG	-	insertion	UNP Q6JC22
4	462	GLY	-	insertion	UNP Q6JC22
4	463	GLY	-	insertion	UNP Q6JC22
4	464	GLY	-	insertion	UNP Q6JC22
4	465	ASP	-	insertion	UNP Q6JC22
4	466	ASP	-	insertion	UNP Q6JC22
4	467	ASP	-	insertion	UNP Q6JC22
4	468	ASP	-	insertion	UNP Q6JC22
4	469	GLY	-	insertion	UNP Q6JC22
4	470	VAL	-	insertion	UNP Q6JC22
4	471	PRO	-	insertion	UNP Q6JC22
4	472	MET	-	insertion	UNP Q6JC22
4	473	SER	-	insertion	UNP Q6JC22
4	474	MET	-	insertion	UNP Q6JC22
4	475	ARG	-	insertion	UNP Q6JC22
4	476	GLY	-	insertion	UNP Q6JC22
4	477	GLY	-	insertion	UNP Q6JC22
4	478	GLY	-	insertion	UNP Q6JC22
4	479	ALA	-	insertion	UNP Q6JC22
5	454	ALA	-	insertion	UNP Q6JC22
5	455	GLY	-	insertion	UNP Q6JC22
5	456	VAL	-	insertion	UNP Q6JC22
5	457	PRO	-	insertion	UNP Q6JC22
5	458	MET	-	insertion	UNP Q6JC22
5	459	SER	-	insertion	UNP Q6JC22
5	460	MET	-	insertion	UNP Q6JC22
5	461	ARG	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
5	462	GLY	-	insertion	UNP Q6JC22
5	463	GLY	-	insertion	UNP Q6JC22
5	464	GLY	-	insertion	UNP Q6JC22
5	465	ASP	-	insertion	UNP Q6JC22
5	466	ASP	-	insertion	UNP Q6JC22
5	467	ASP	-	insertion	UNP Q6JC22
5	468	ASP	-	insertion	UNP Q6JC22
5	469	GLY	-	insertion	UNP Q6JC22
5	470	VAL	-	insertion	UNP Q6JC22
5	471	PRO	-	insertion	UNP Q6JC22
5	472	MET	-	insertion	UNP Q6JC22
5	473	SER	-	insertion	UNP Q6JC22
5	474	MET	-	insertion	UNP Q6JC22
5	475	ARG	-	insertion	UNP Q6JC22
5	476	GLY	-	insertion	UNP Q6JC22
5	477	GLY	-	insertion	UNP Q6JC22
5	478	GLY	-	insertion	UNP Q6JC22
5	479	ALA	-	insertion	UNP Q6JC22
6	454	ALA	-	insertion	UNP Q6JC22
6	455	GLY	-	insertion	UNP Q6JC22
6	456	VAL	-	insertion	UNP Q6JC22
6	457	PRO	-	insertion	UNP Q6JC22
6	458	MET	-	insertion	UNP Q6JC22
6	459	SER	-	insertion	UNP Q6JC22
6	460	MET	-	insertion	UNP Q6JC22
6	461	ARG	-	insertion	UNP Q6JC22
6	462	GLY	-	insertion	UNP Q6JC22
6	463	GLY	-	insertion	UNP Q6JC22
6	464	GLY	-	insertion	UNP Q6JC22
6	465	ASP	-	insertion	UNP Q6JC22
6	466	ASP	-	insertion	UNP Q6JC22
6	467	ASP	-	insertion	UNP Q6JC22
6	468	ASP	-	insertion	UNP Q6JC22
6	469	GLY	-	insertion	UNP Q6JC22
6	470	VAL	-	insertion	UNP Q6JC22
6	471	PRO	-	insertion	UNP Q6JC22
6	472	MET	-	insertion	UNP Q6JC22
6	473	SER	-	insertion	UNP Q6JC22
6	474	MET	-	insertion	UNP Q6JC22
6	475	ARG	-	insertion	UNP Q6JC22
6	476	GLY	-	insertion	UNP Q6JC22
6	477	GLY	-	insertion	UNP Q6JC22

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Chain	Residue	Modelled	Actual	Comment	Reference
6	478	GLY	-	insertion	UNP Q6JC22
6	479	ALA	-	insertion	UNP Q6JC22
7	454	ALA	-	insertion	UNP Q6JC22
7	455	GLY	-	insertion	UNP Q6JC22
7	456	VAL	-	insertion	UNP Q6JC22
7	457	PRO	-	insertion	UNP Q6JC22
7	458	MET	-	insertion	UNP Q6JC22
7	459	SER	-	insertion	UNP Q6JC22
7	460	MET	-	insertion	UNP Q6JC22
7	461	ARG	-	insertion	UNP Q6JC22
7	462	GLY	-	insertion	UNP Q6JC22
7	463	GLY	-	insertion	UNP Q6JC22
7	464	GLY	-	insertion	UNP Q6JC22
7	465	ASP	-	insertion	UNP Q6JC22
7	466	ASP	-	insertion	UNP Q6JC22
7	467	ASP	-	insertion	UNP Q6JC22
7	468	ASP	-	insertion	UNP Q6JC22
7	469	GLY	-	insertion	UNP Q6JC22
7	470	VAL	-	insertion	UNP Q6JC22
7	471	PRO	-	insertion	UNP Q6JC22
7	472	MET	-	insertion	UNP Q6JC22
7	473	SER	-	insertion	UNP Q6JC22
7	474	MET	-	insertion	UNP Q6JC22
7	475	ARG	-	insertion	UNP Q6JC22
7	476	GLY	-	insertion	UNP Q6JC22
7	477	GLY	-	insertion	UNP Q6JC22
7	478	GLY	-	insertion	UNP Q6JC22
7	479	ALA	-	insertion	UNP Q6JC22
8	454	ALA	-	insertion	UNP Q6JC22
8	455	GLY	-	insertion	UNP Q6JC22
8	456	VAL	-	insertion	UNP Q6JC22
8	457	PRO	-	insertion	UNP Q6JC22
8	458	MET	-	insertion	UNP Q6JC22
8	459	SER	-	insertion	UNP Q6JC22
8	460	MET	-	insertion	UNP Q6JC22
8	461	ARG	-	insertion	UNP Q6JC22
8	462	GLY	-	insertion	UNP Q6JC22
8	463	GLY	-	insertion	UNP Q6JC22
8	464	GLY	-	insertion	UNP Q6JC22
8	465	ASP	-	insertion	UNP Q6JC22
8	466	ASP	-	insertion	UNP Q6JC22
8	467	ASP	-	insertion	UNP Q6JC22

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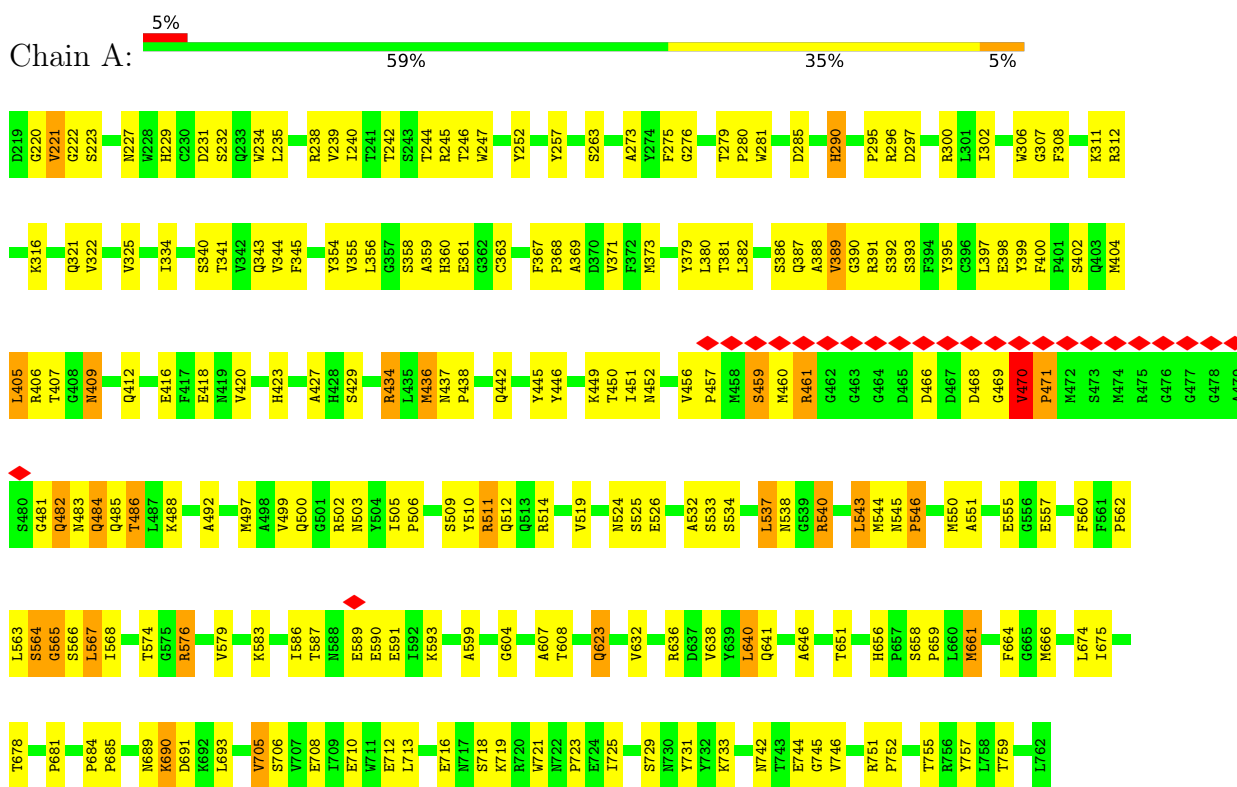
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Chain	Residue	Modelled	Actual	Comment	Reference
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8	469	GLY	-	insertion	UNP Q6JC22
8	470	VAL	-	insertion	UNP Q6JC22
8	471	PRO	-	insertion	UNP Q6JC22
8	472	MET	-	insertion	UNP Q6JC22
8	473	SER	-	insertion	UNP Q6JC22
8	474	MET	-	insertion	UNP Q6JC22
8	475	ARG	-	insertion	UNP Q6JC22
8	476	GLY	-	insertion	UNP Q6JC22
8	477	GLY	-	insertion	UNP Q6JC22
8	478	GLY	-	insertion	UNP Q6JC22
8	479	ALA	-	insertion	UNP Q6JC22

3 Residue-property plots

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

• Molecule 1: Capsid protein VP1

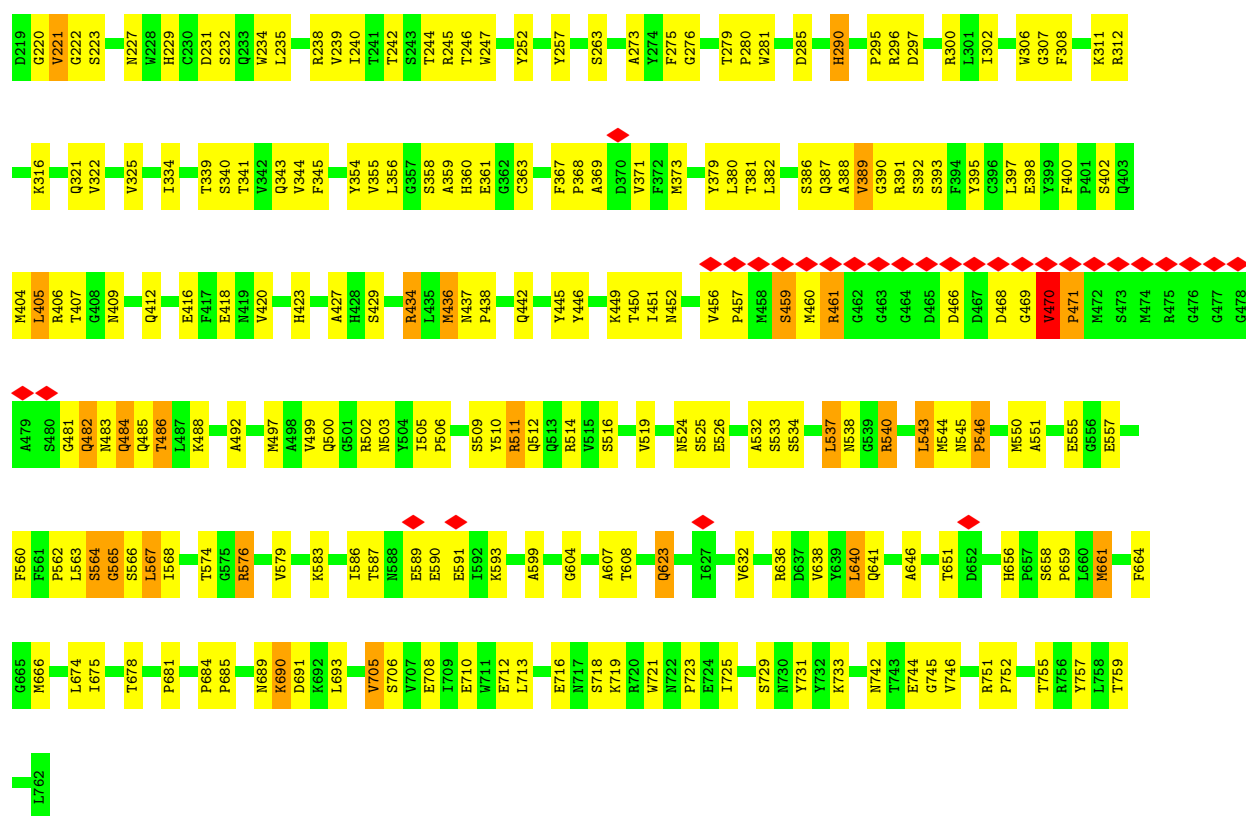


• Molecule 1: Capsid protein VP1

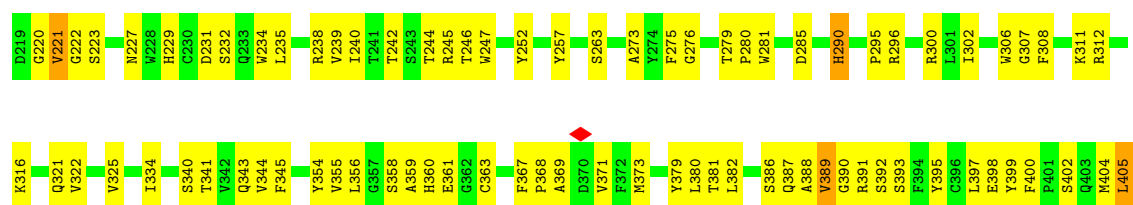


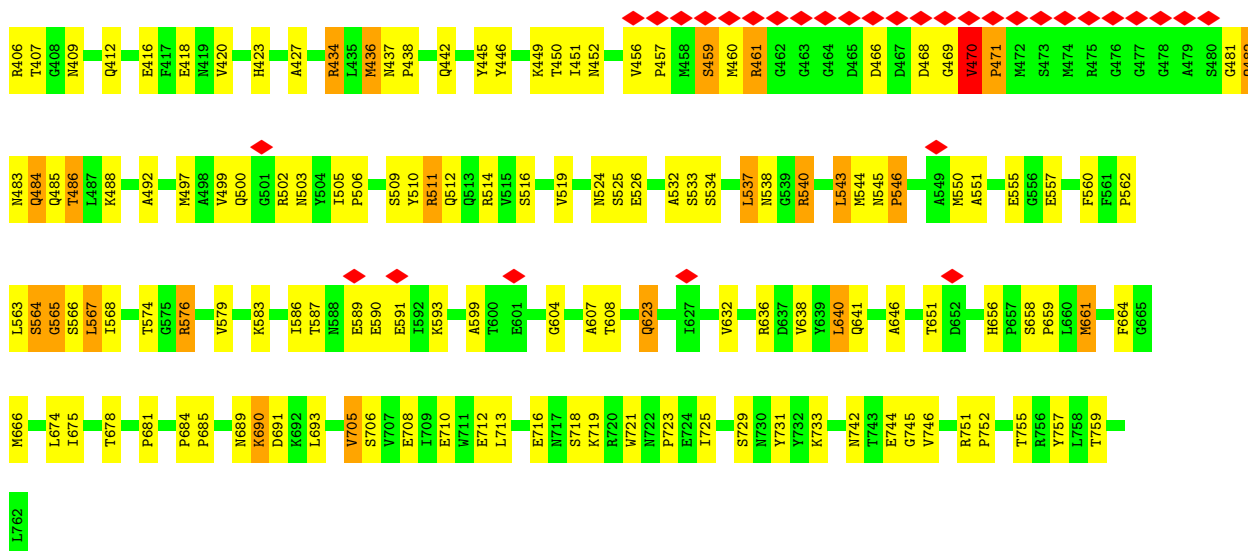


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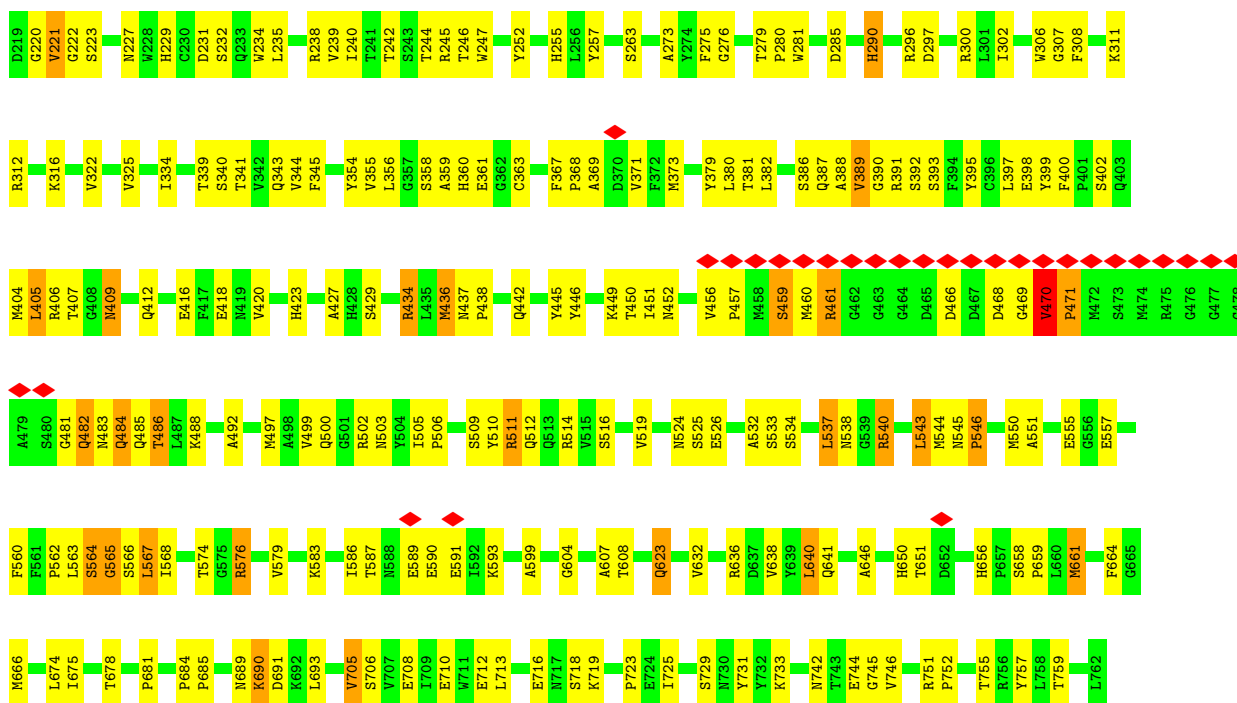


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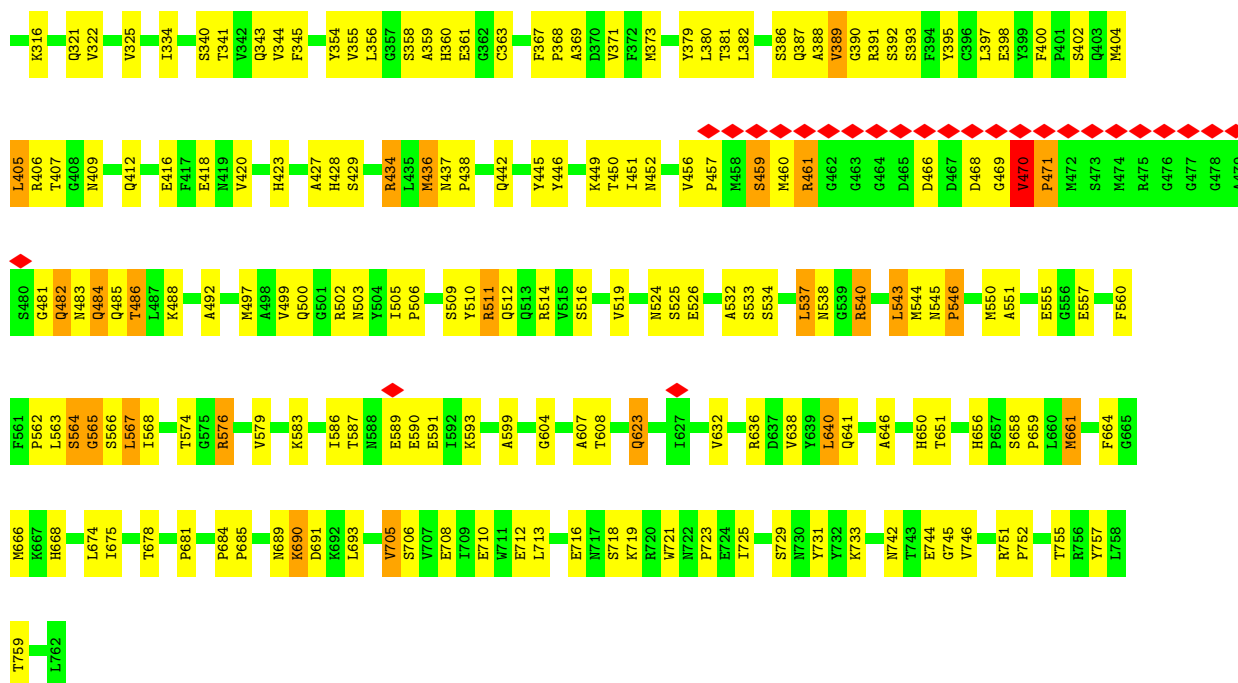


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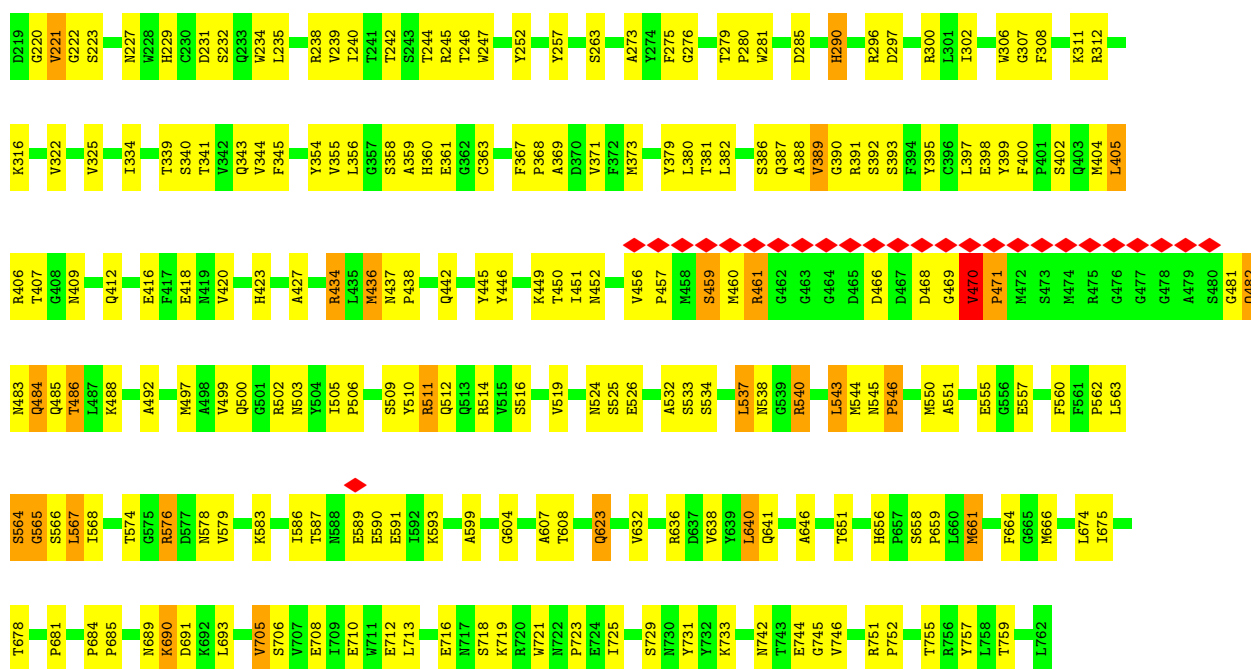


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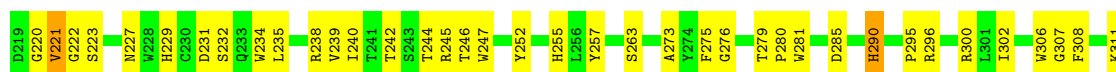




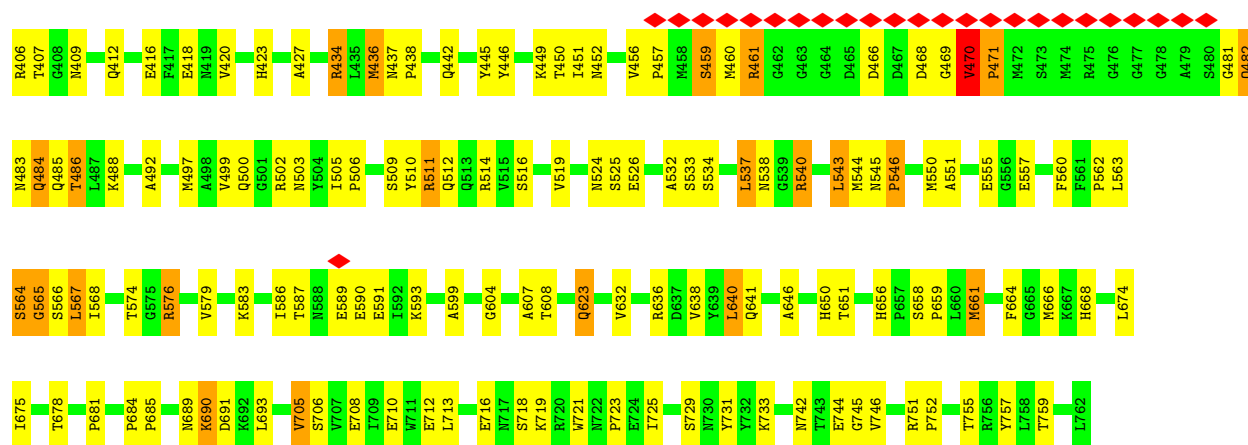
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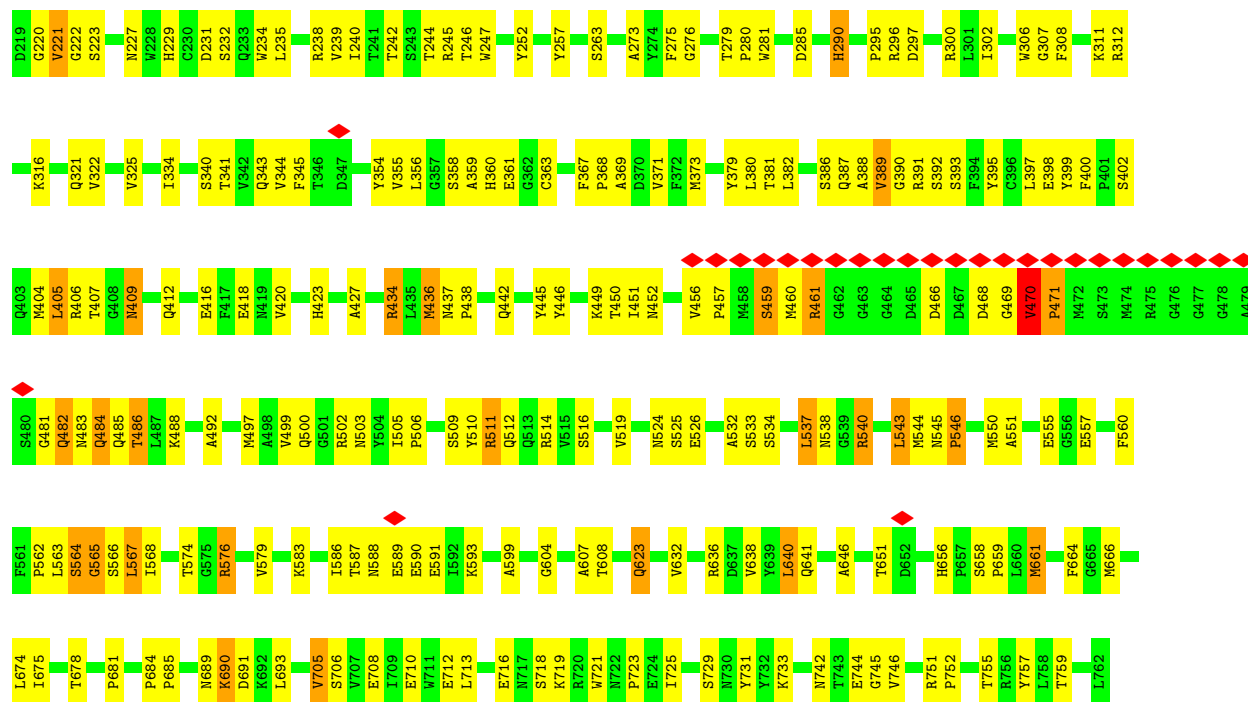
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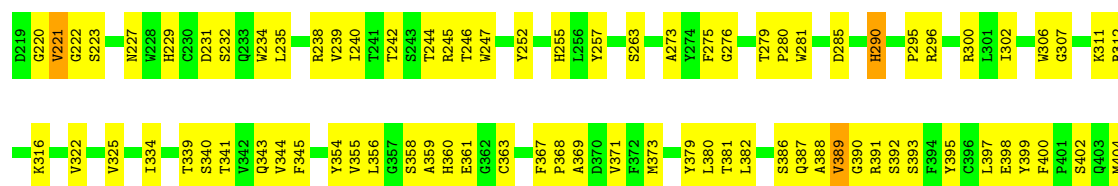




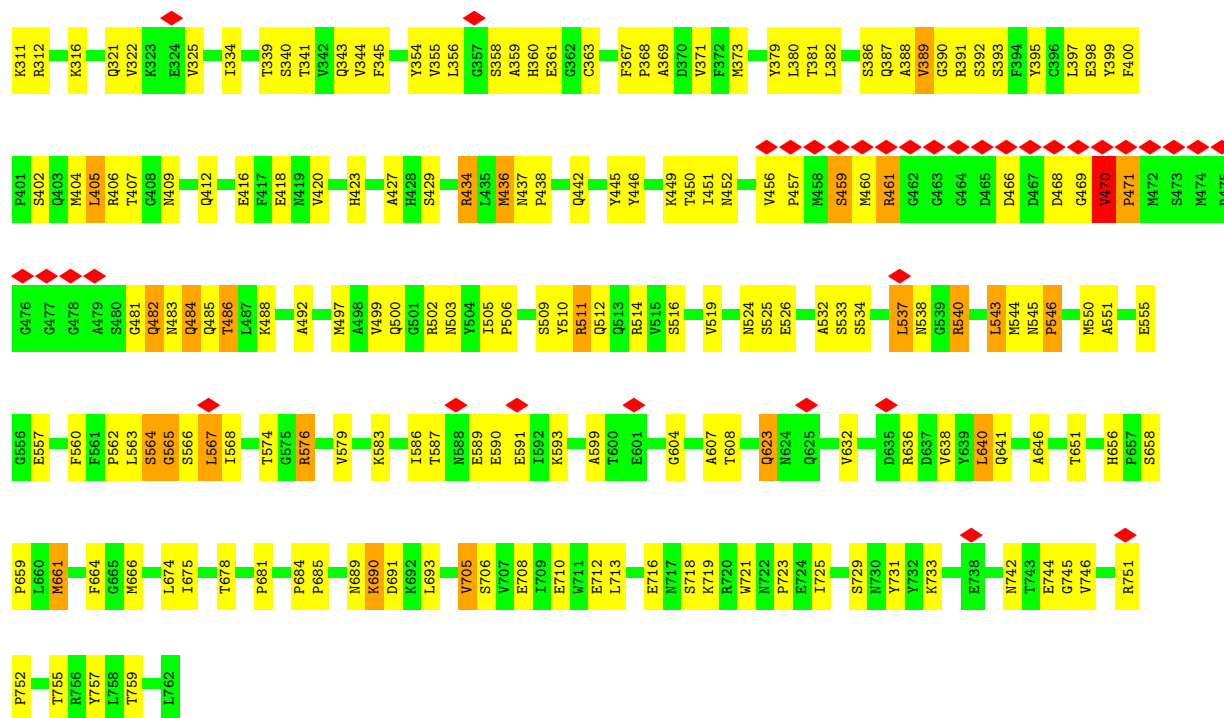
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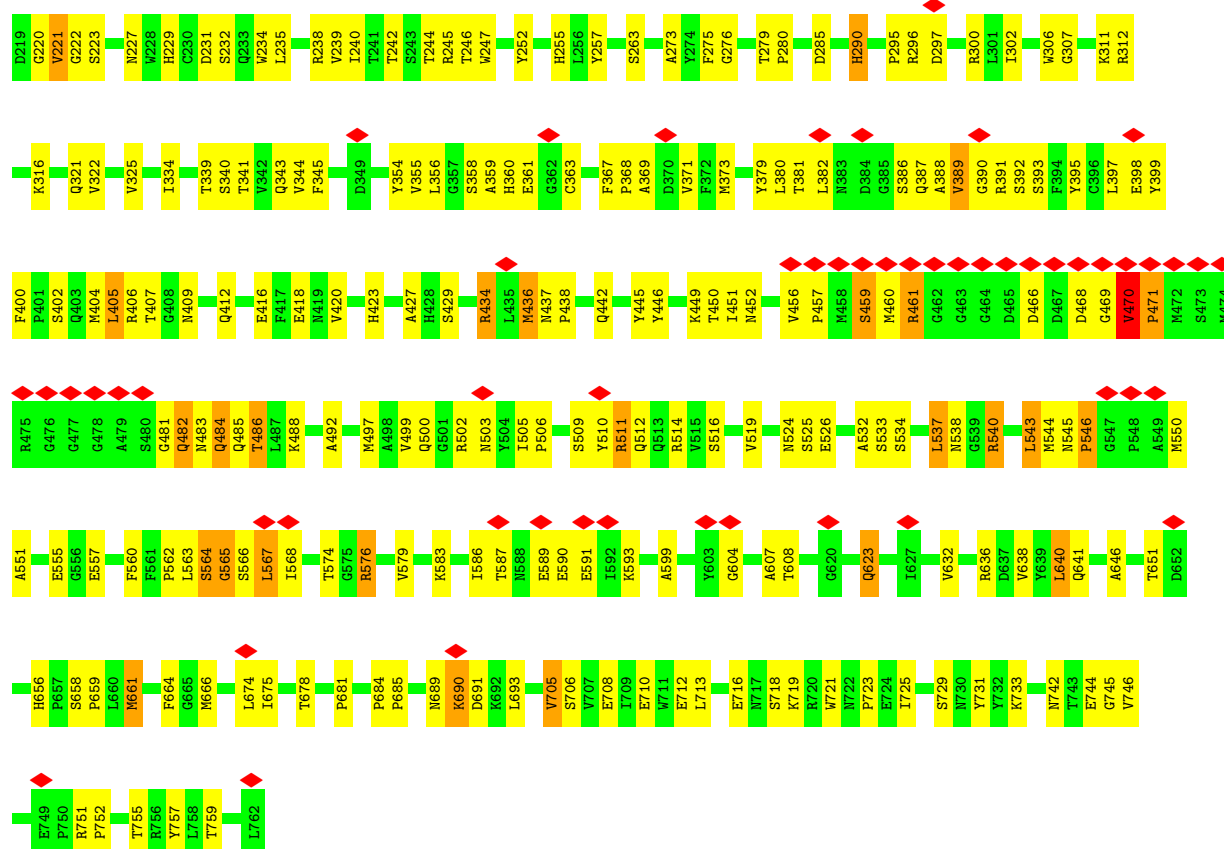
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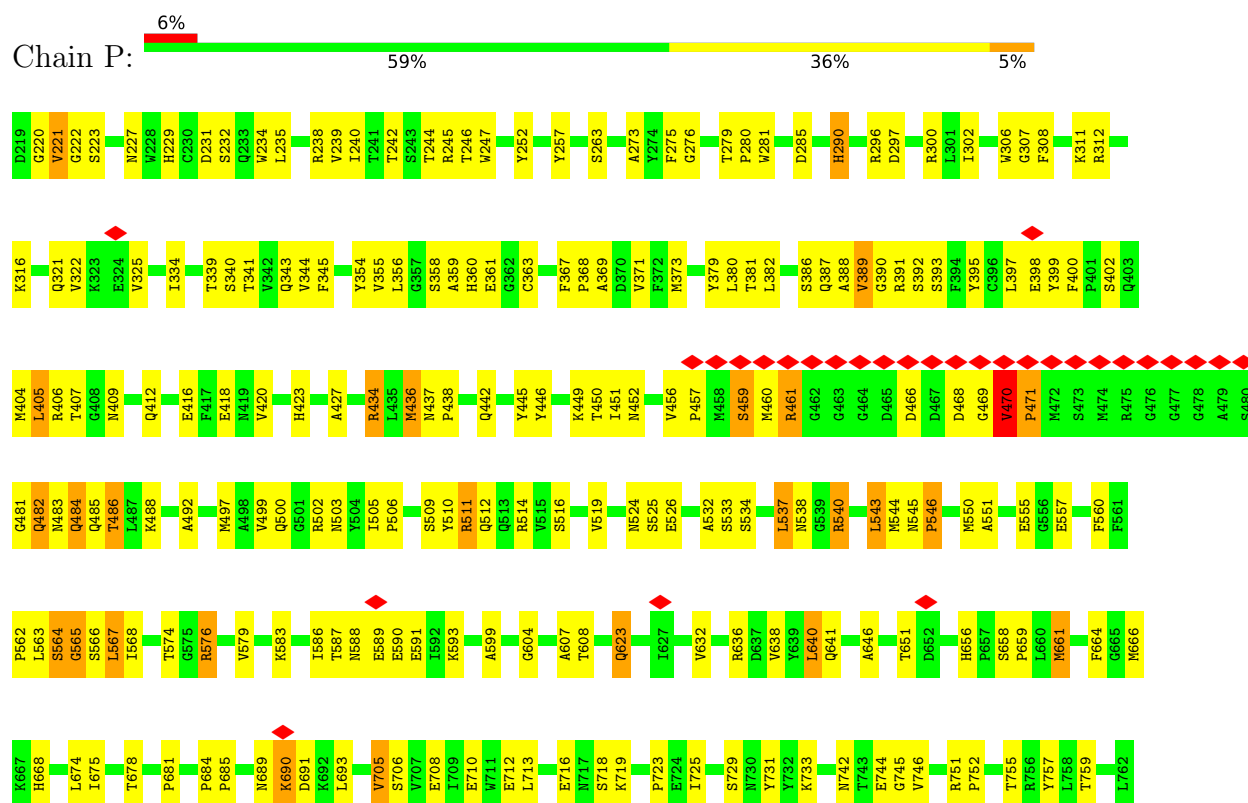




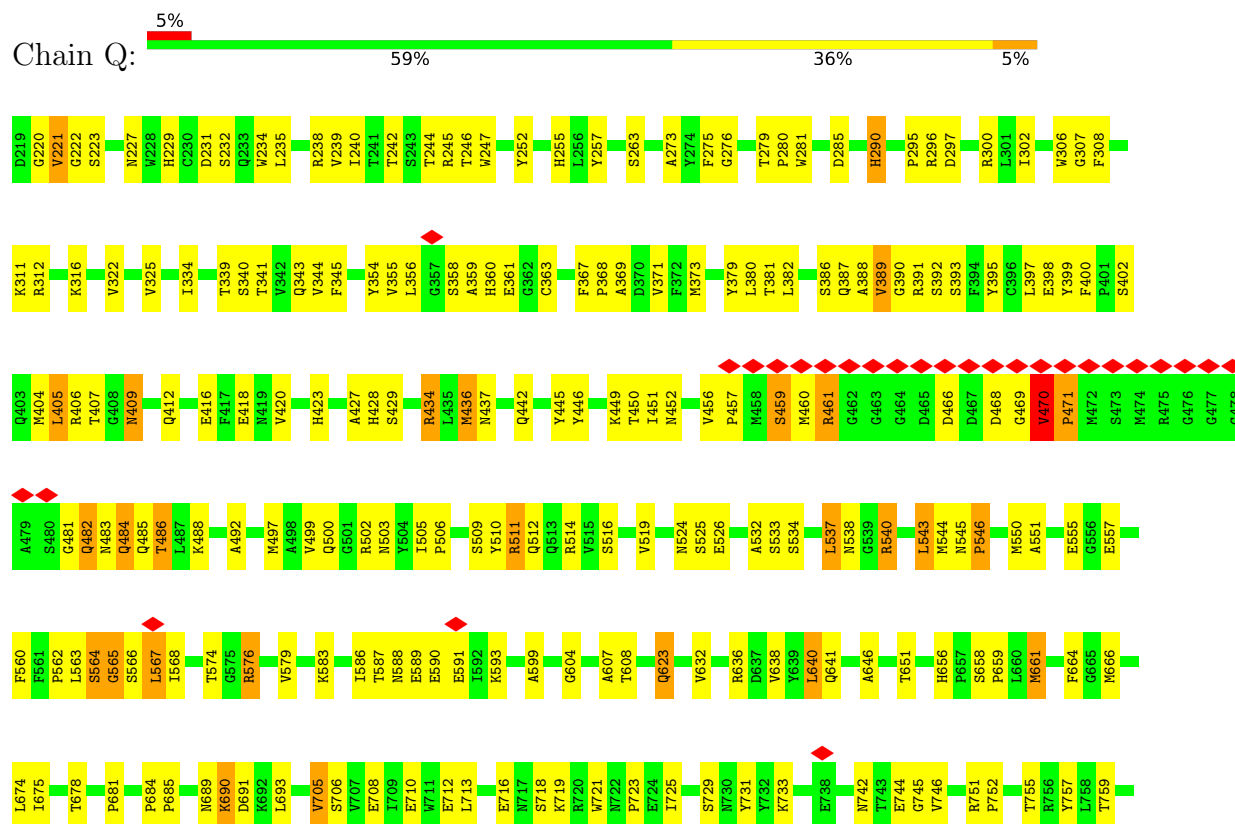
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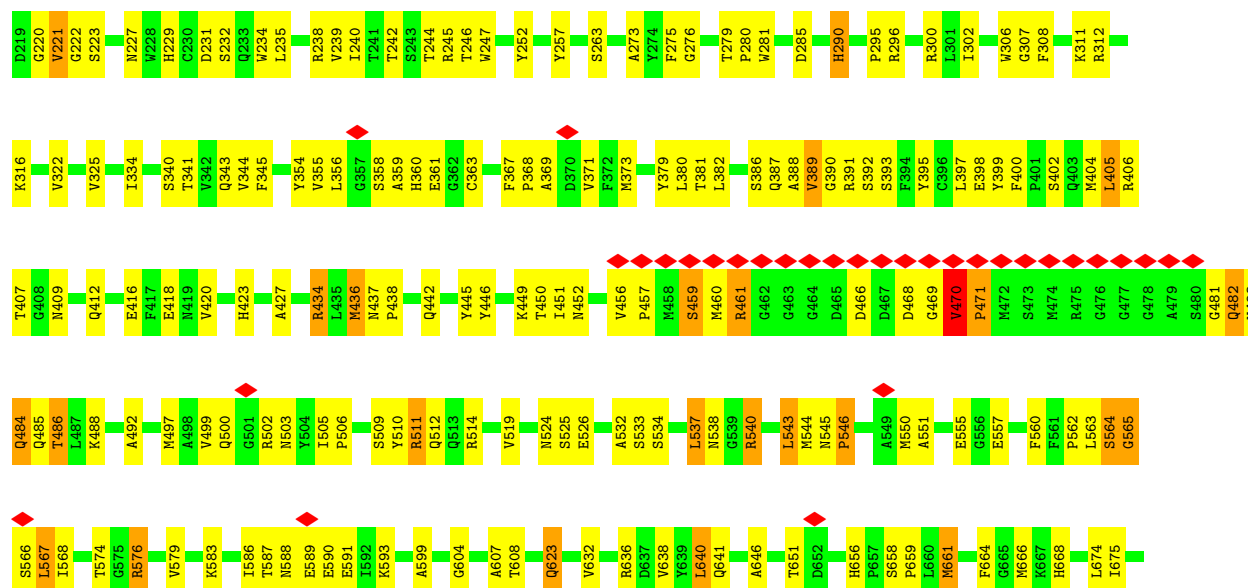


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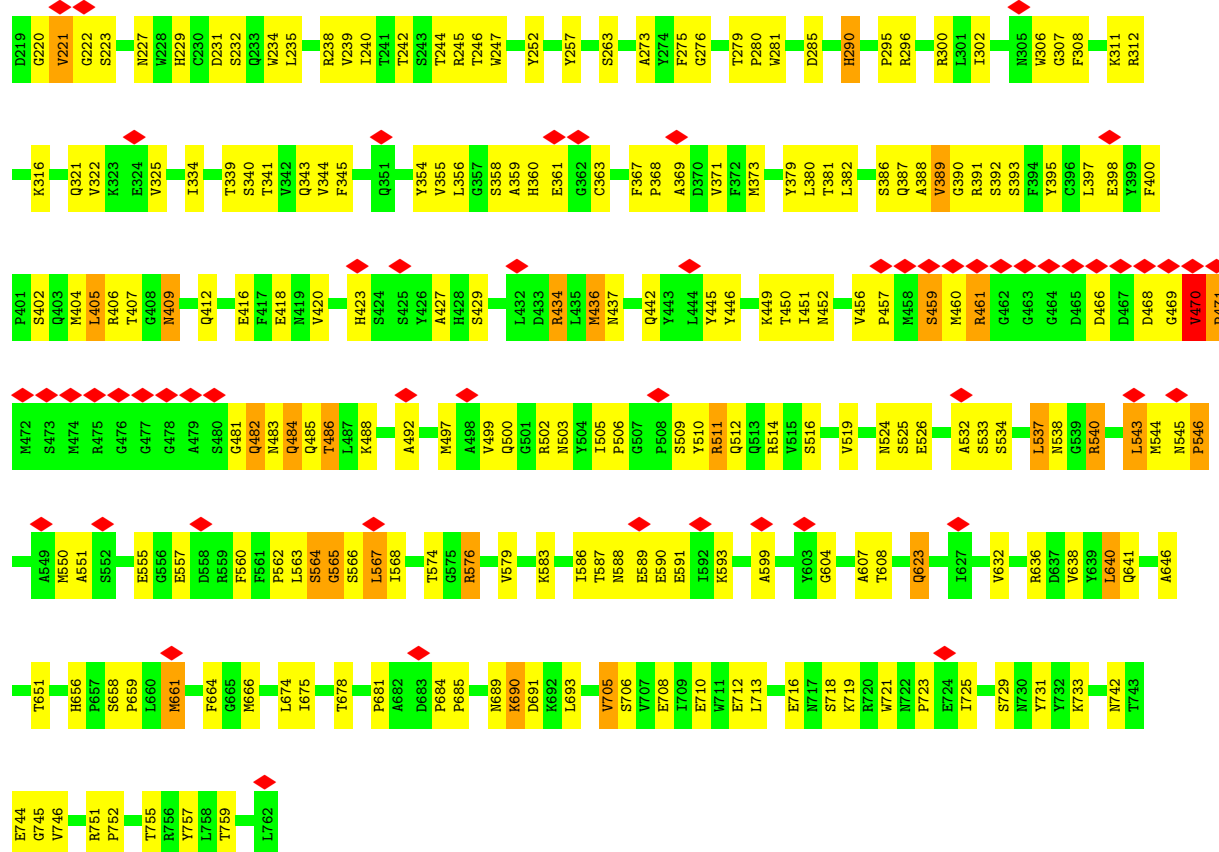
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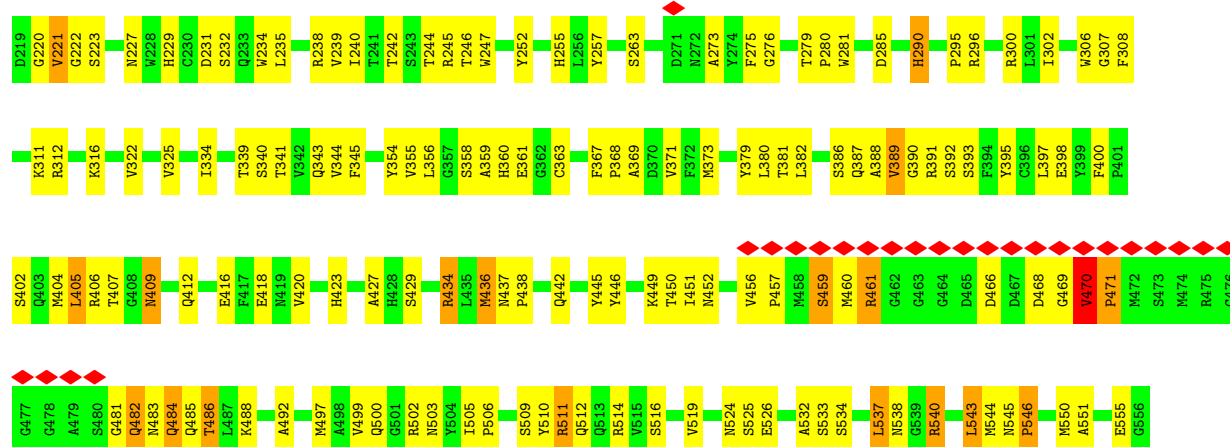




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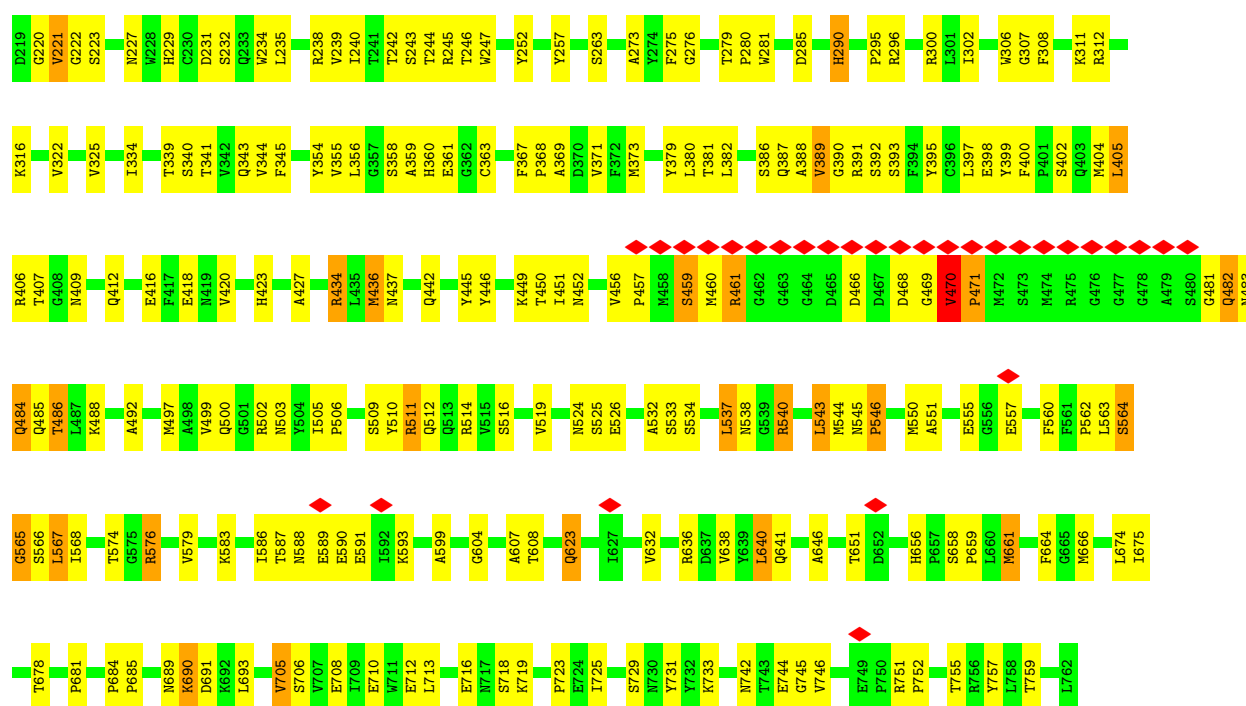


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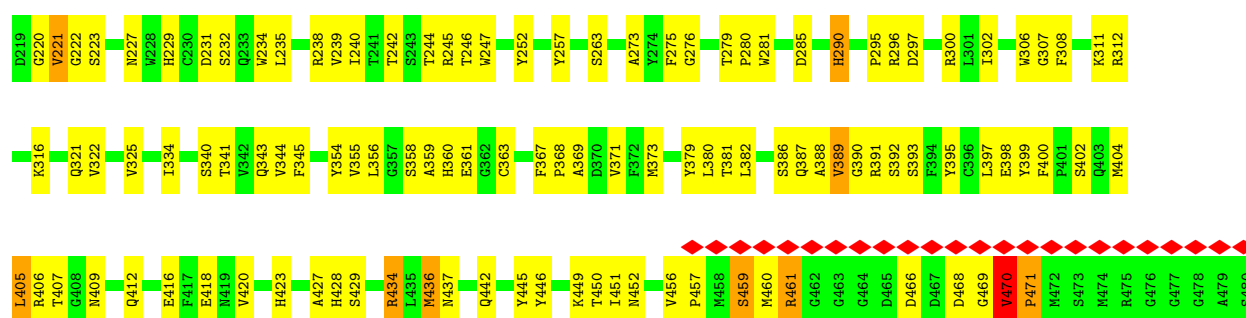


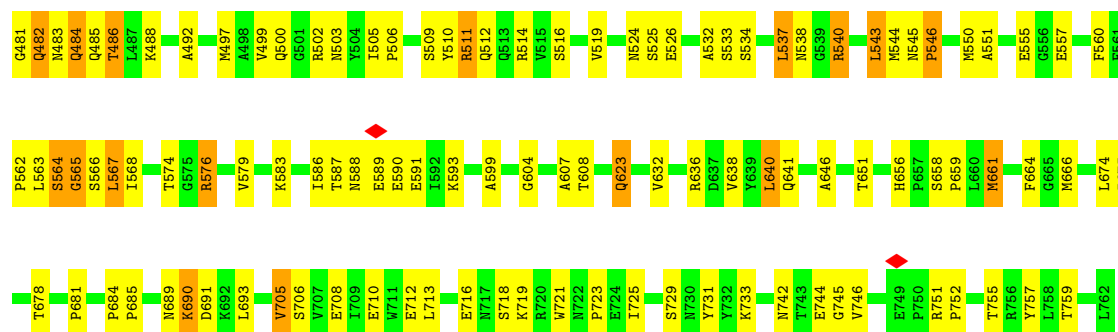


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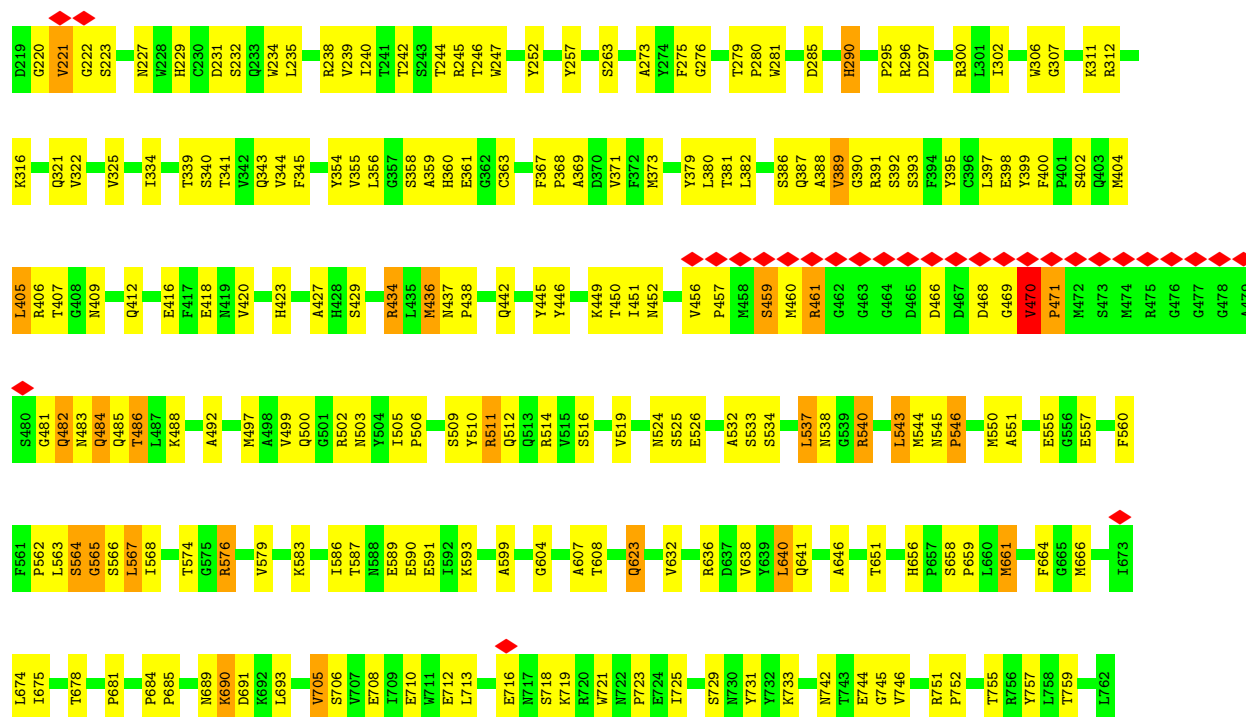


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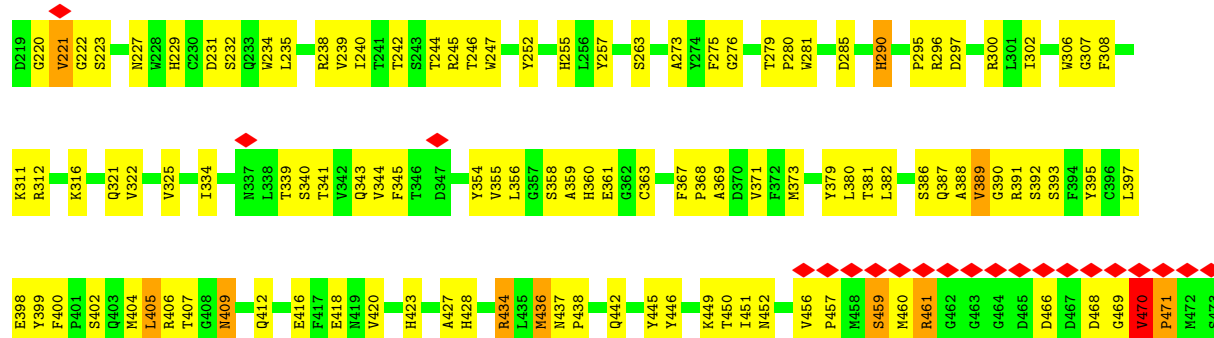


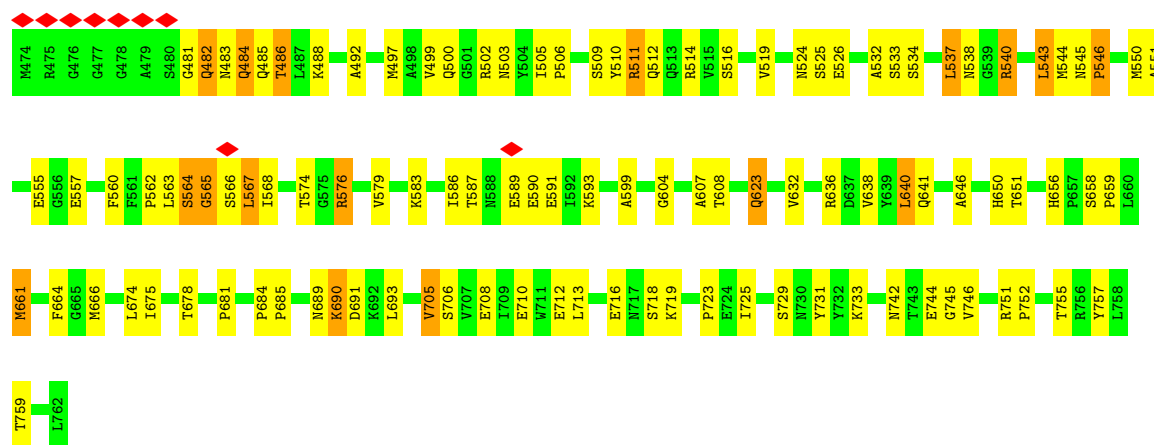


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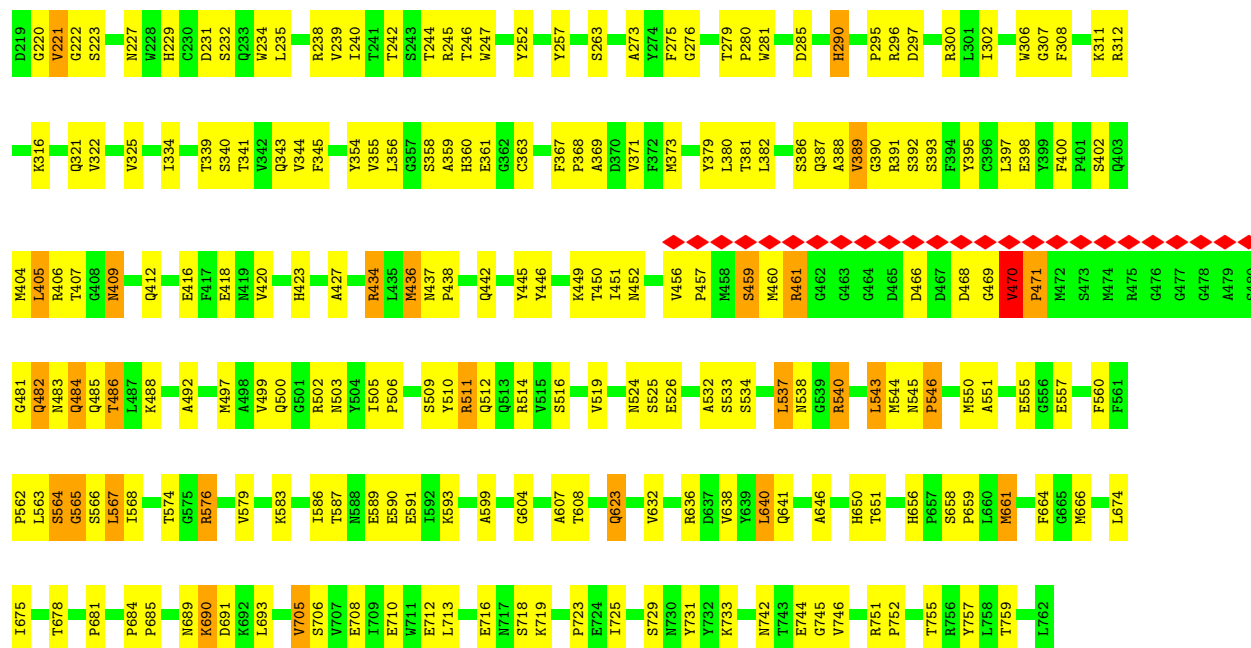


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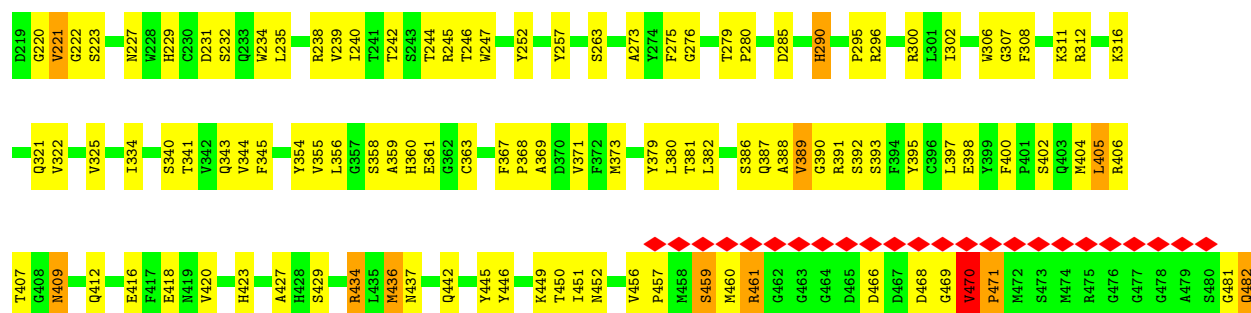


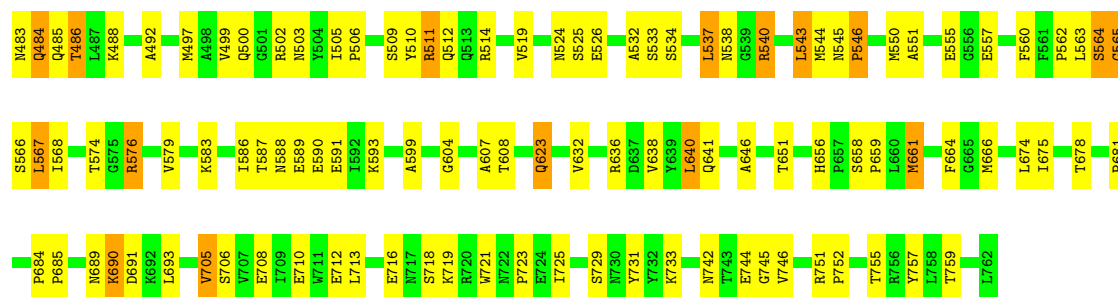


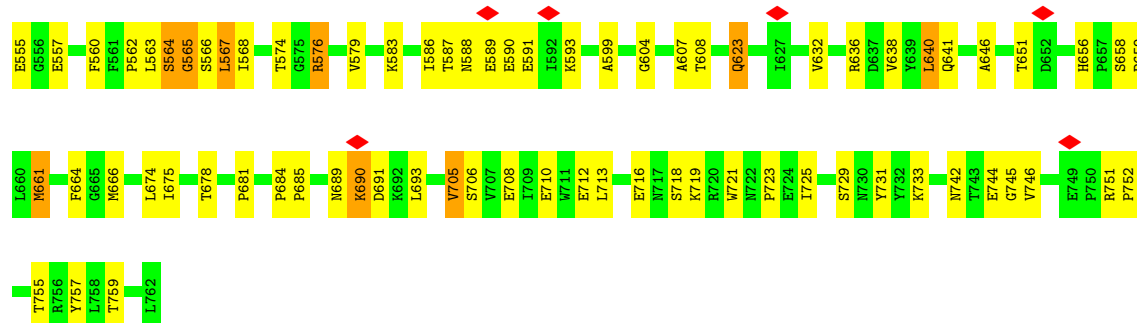
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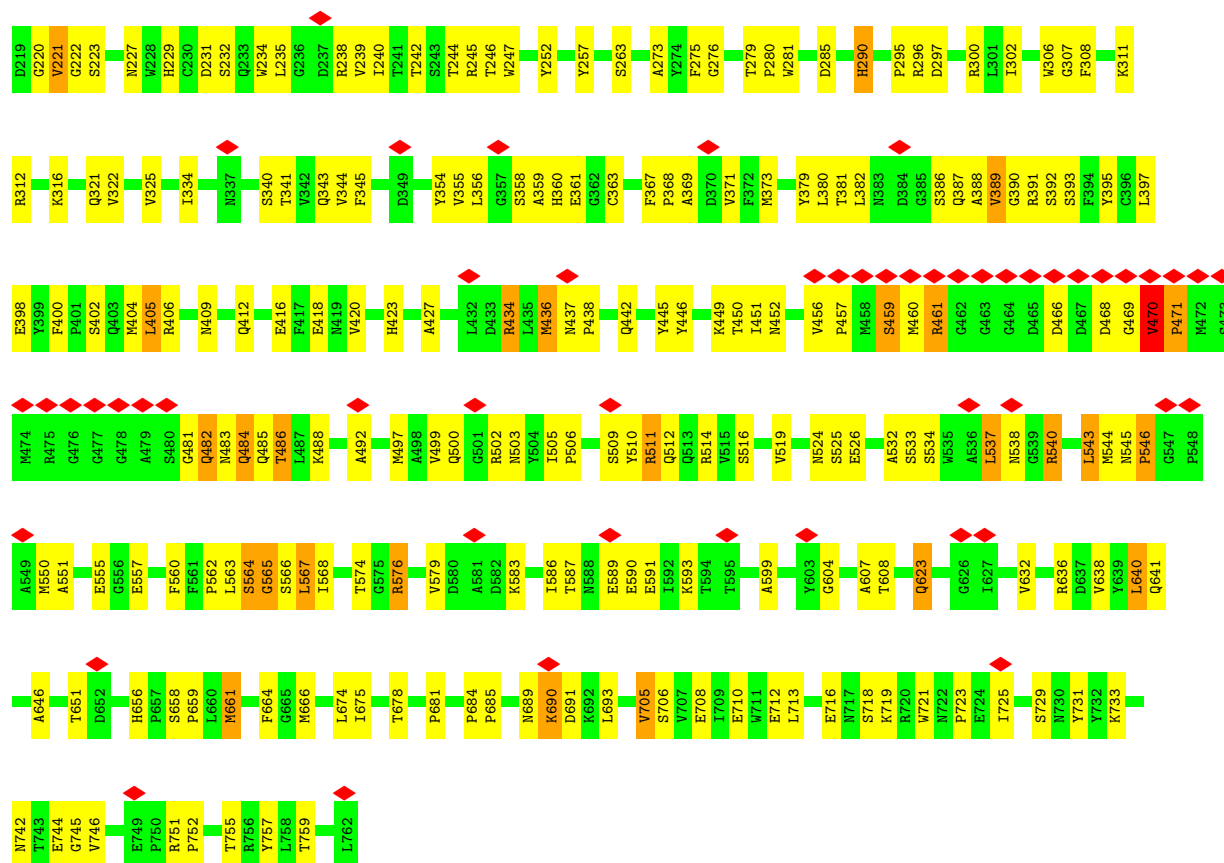
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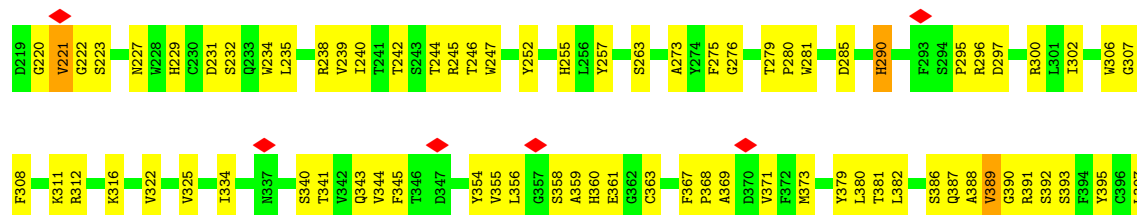




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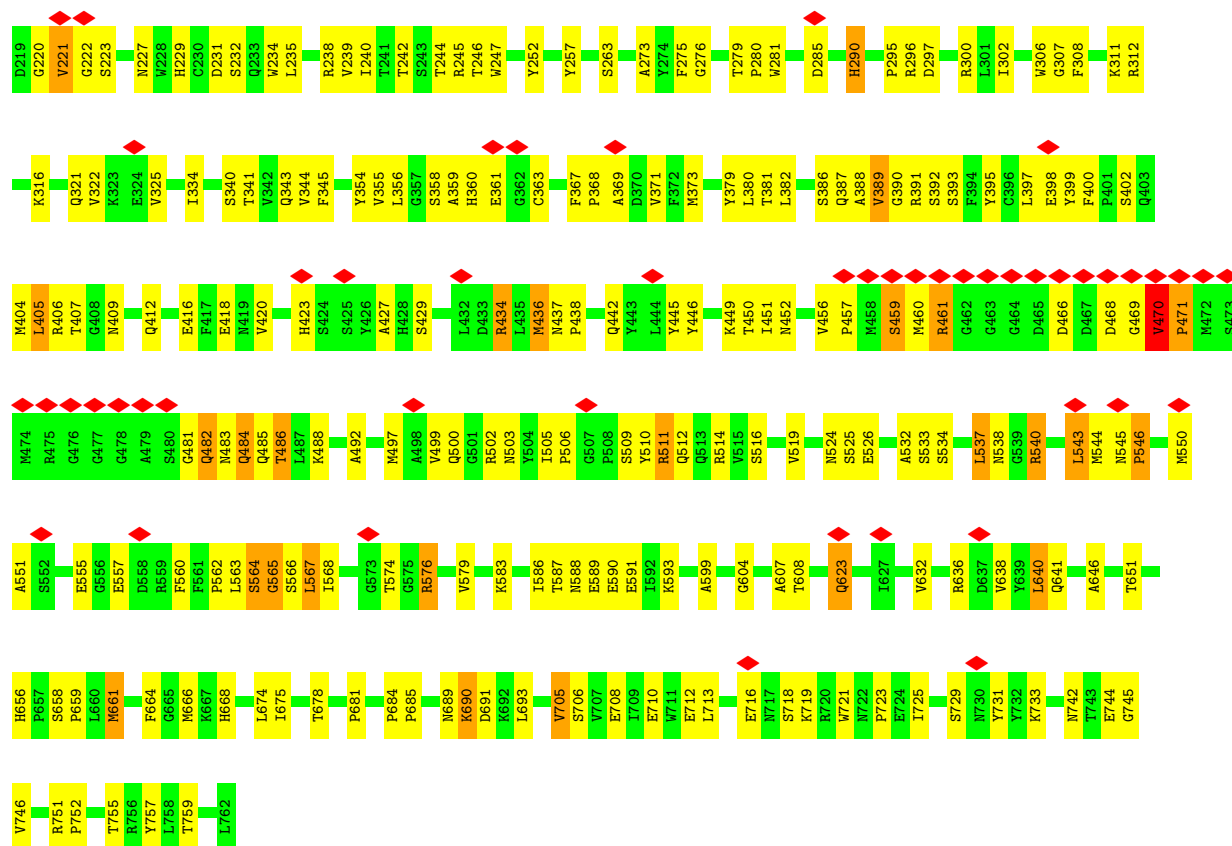


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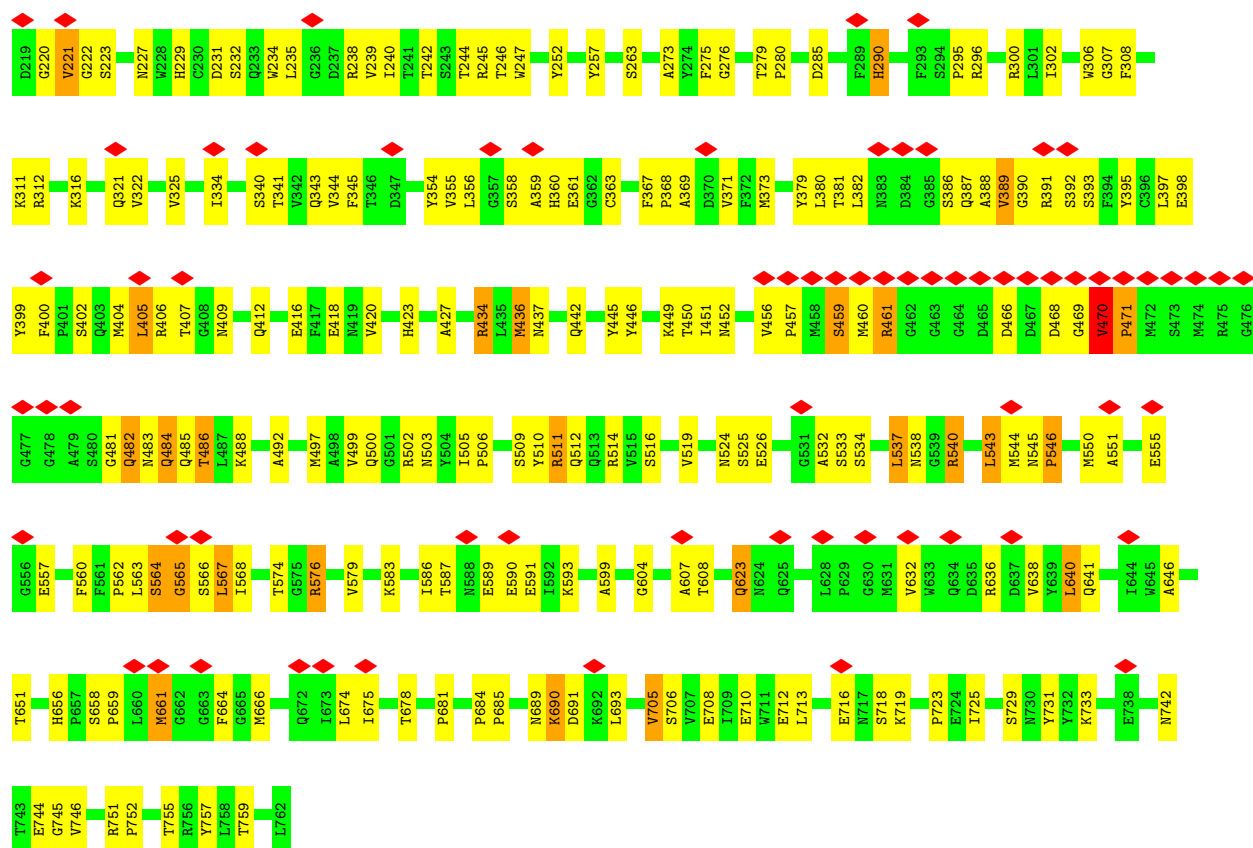


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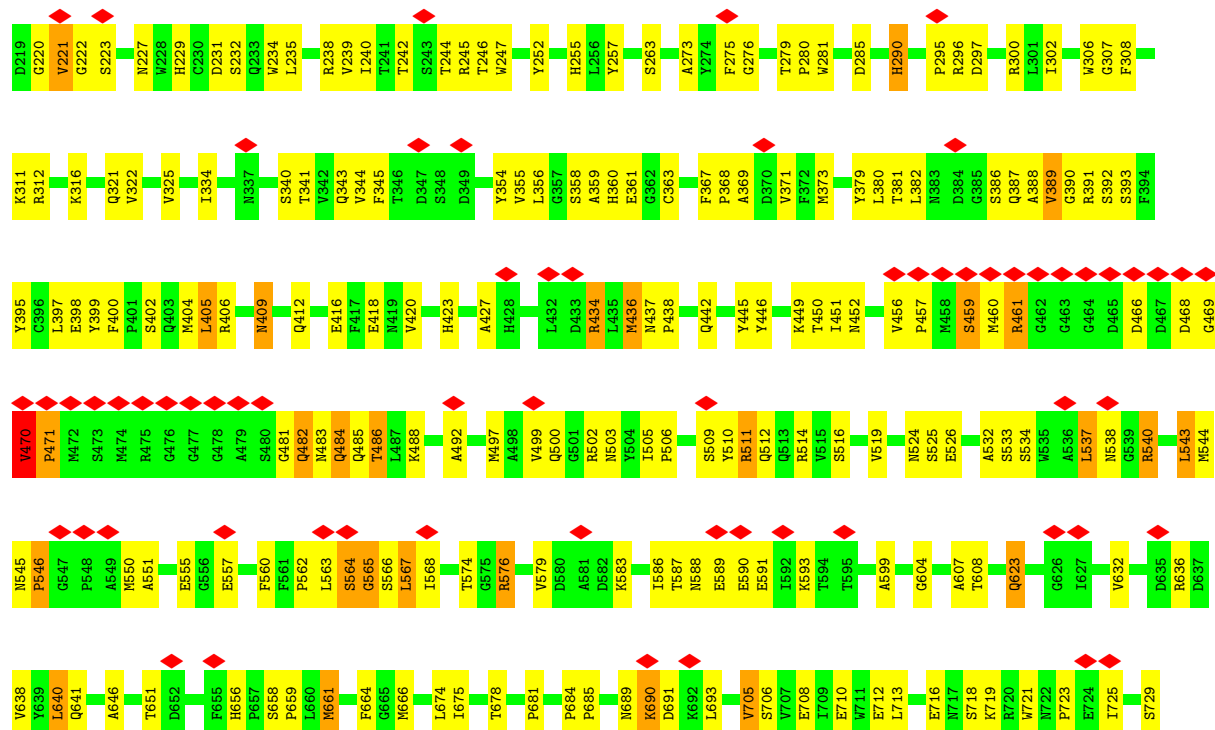


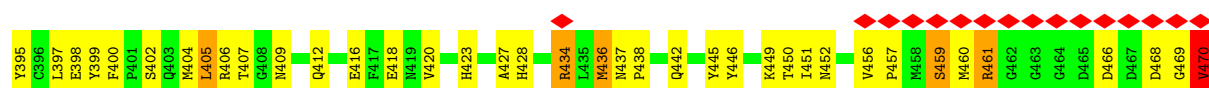
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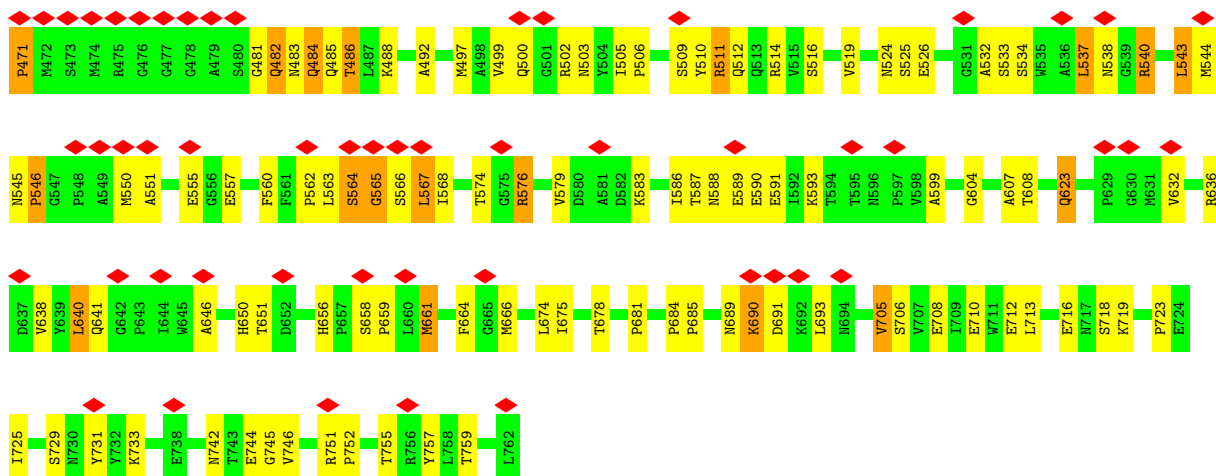




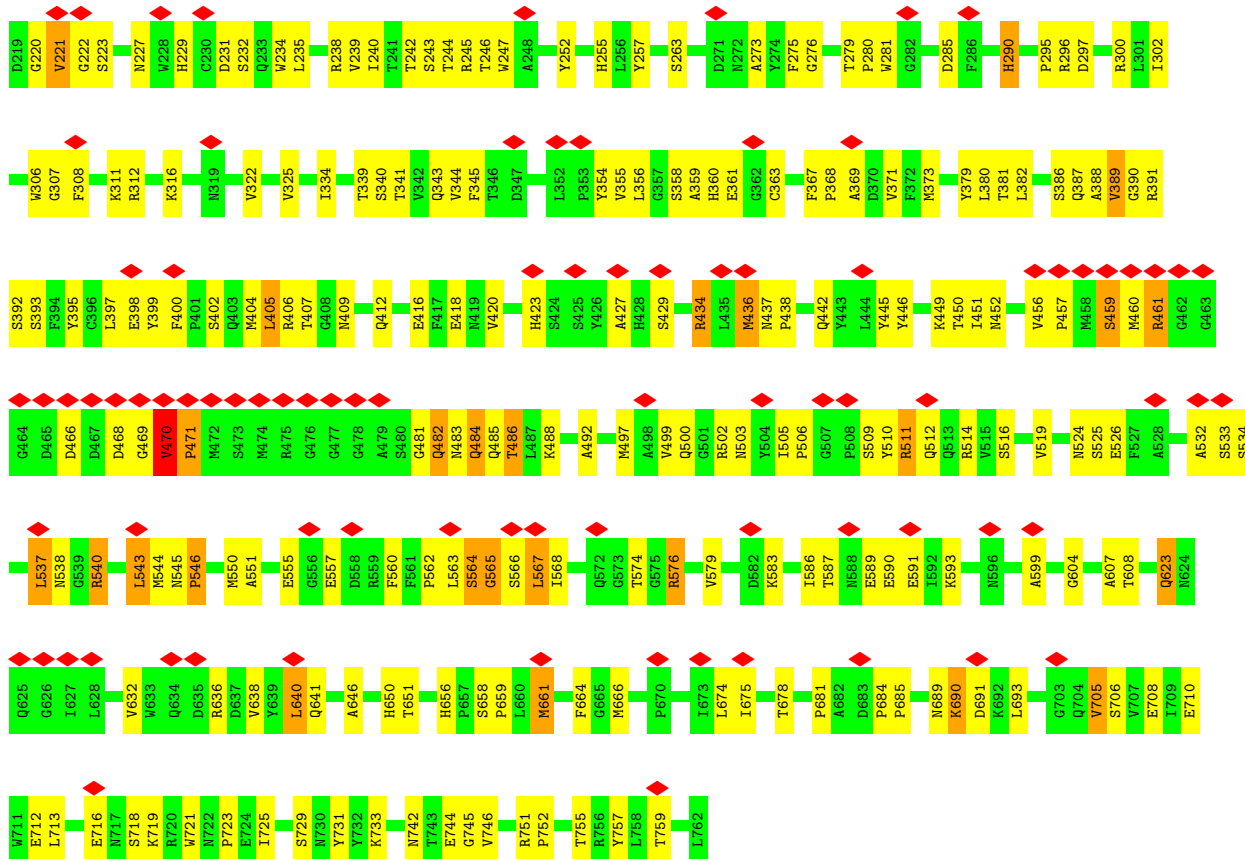
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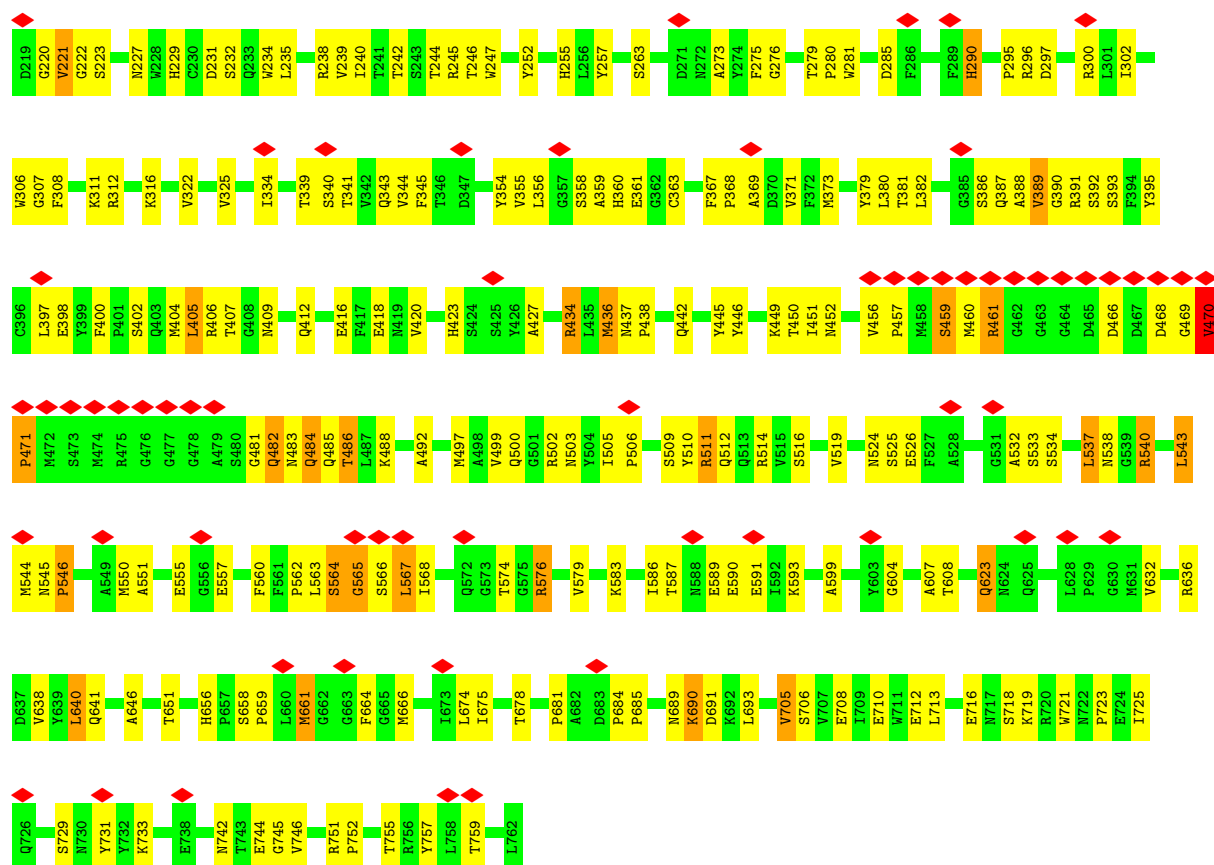


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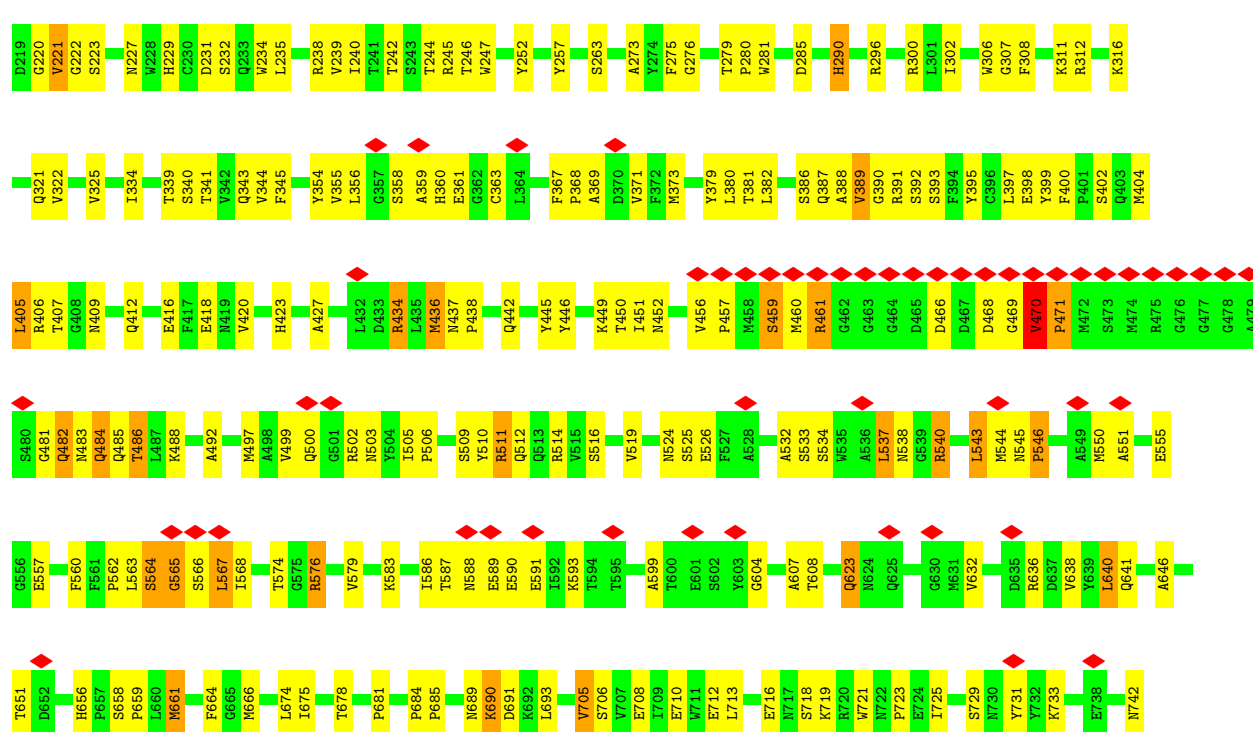


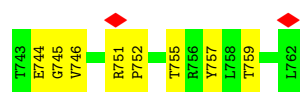
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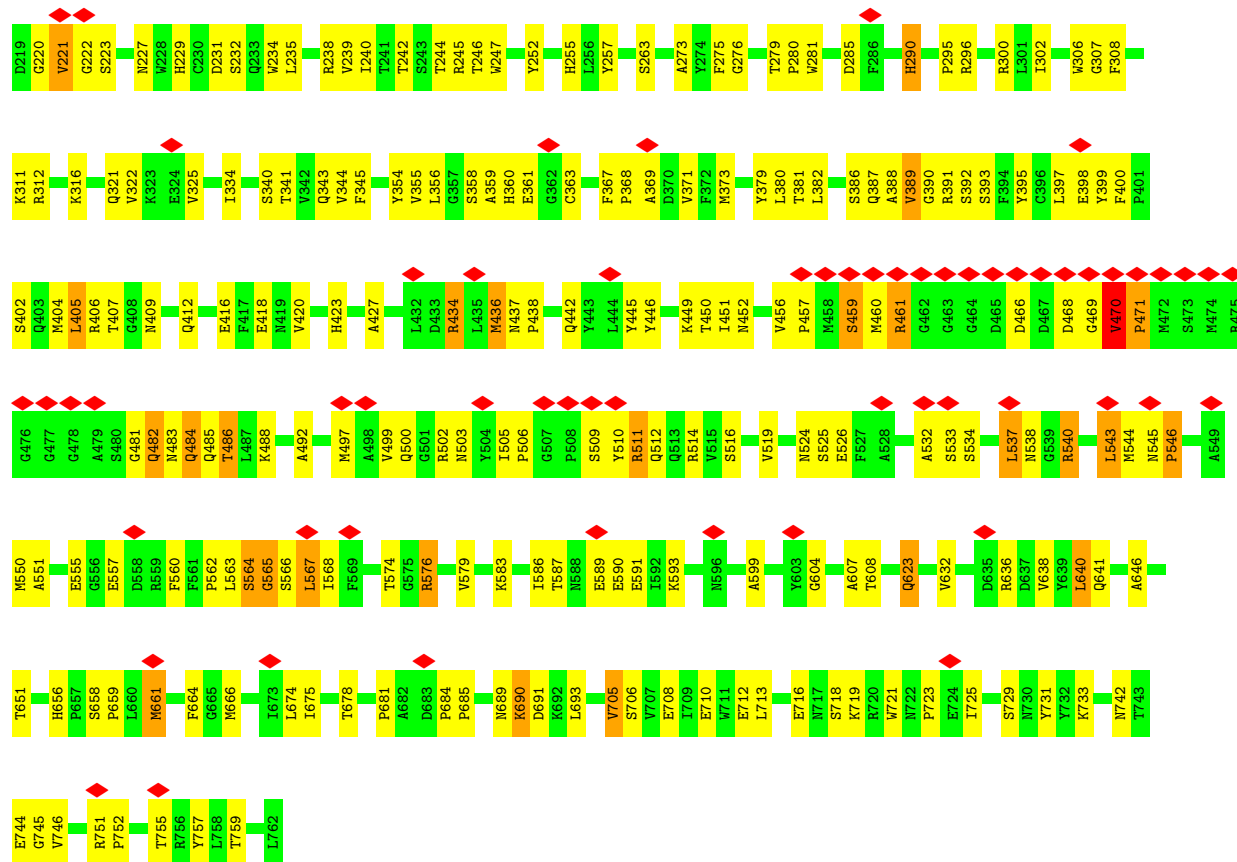


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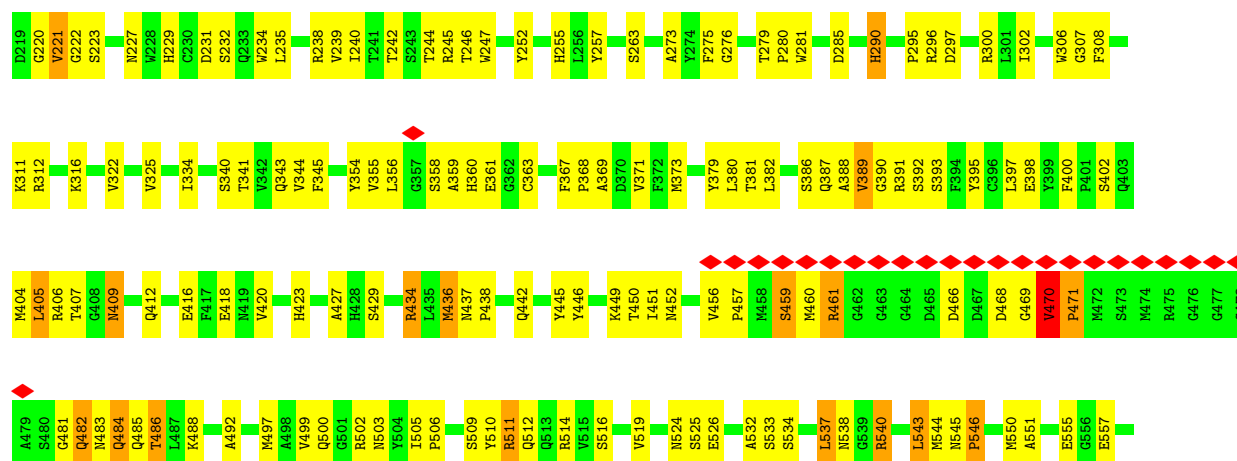


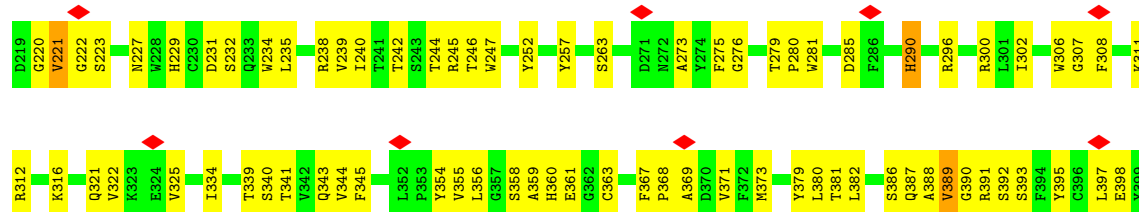


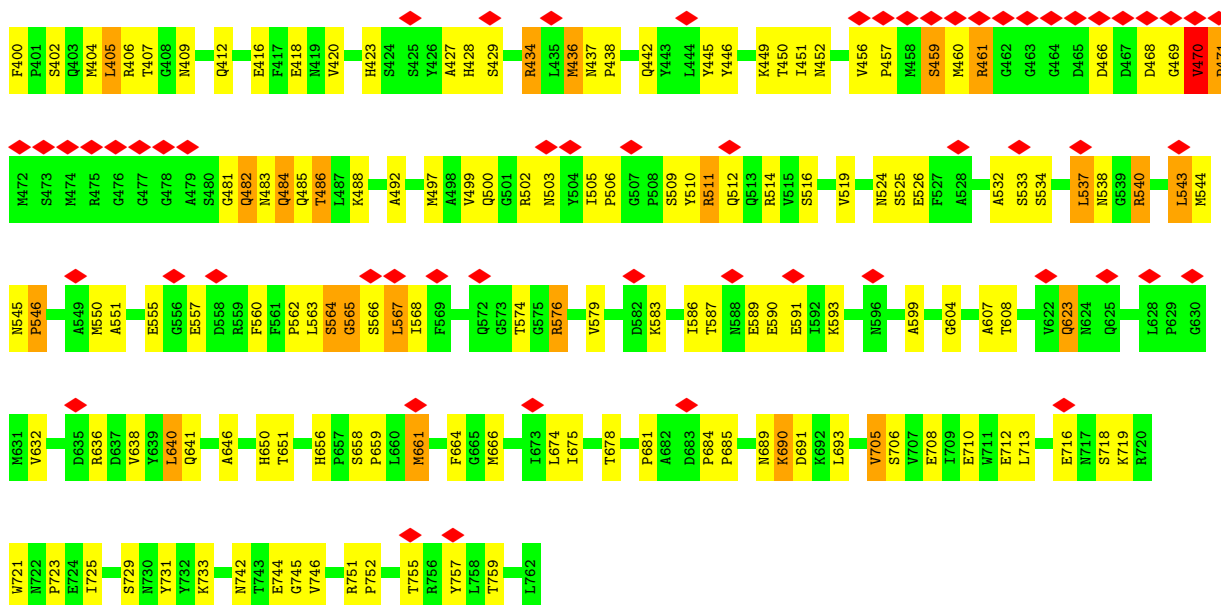
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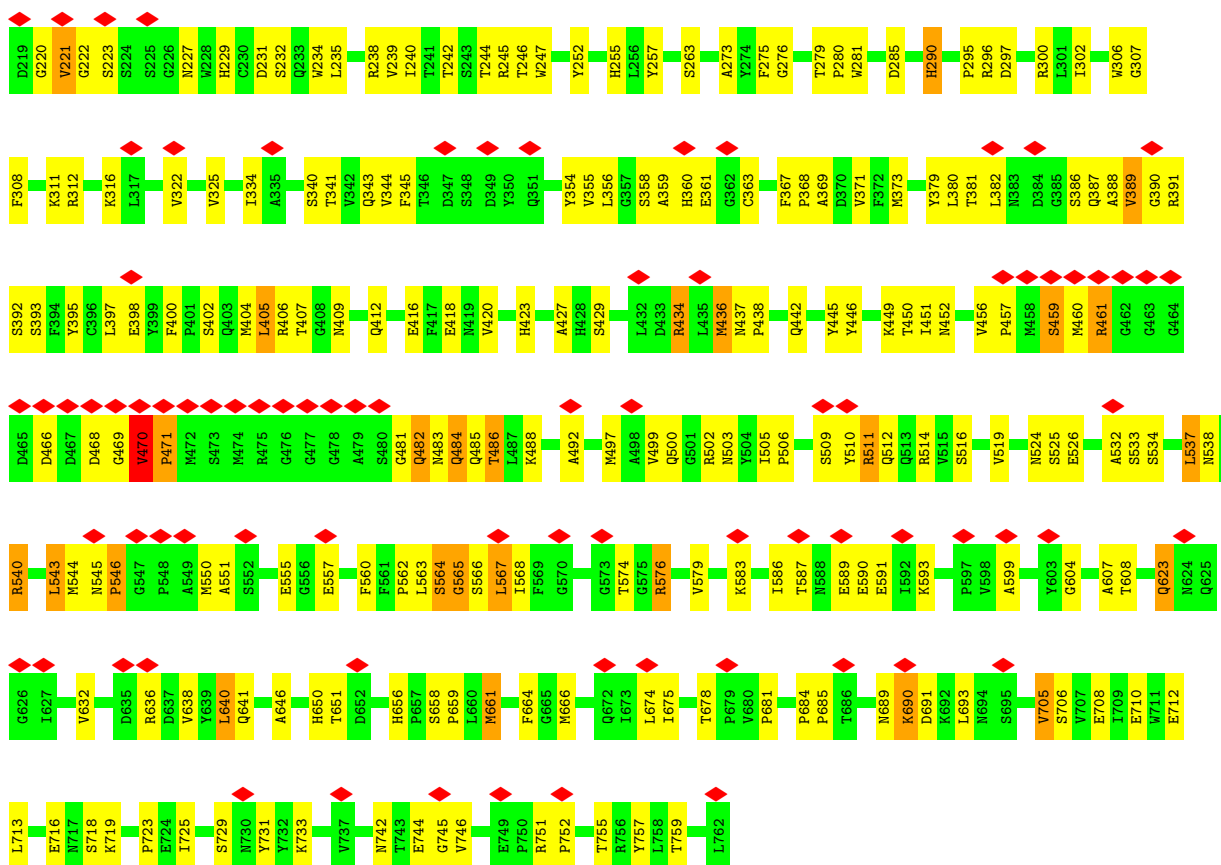
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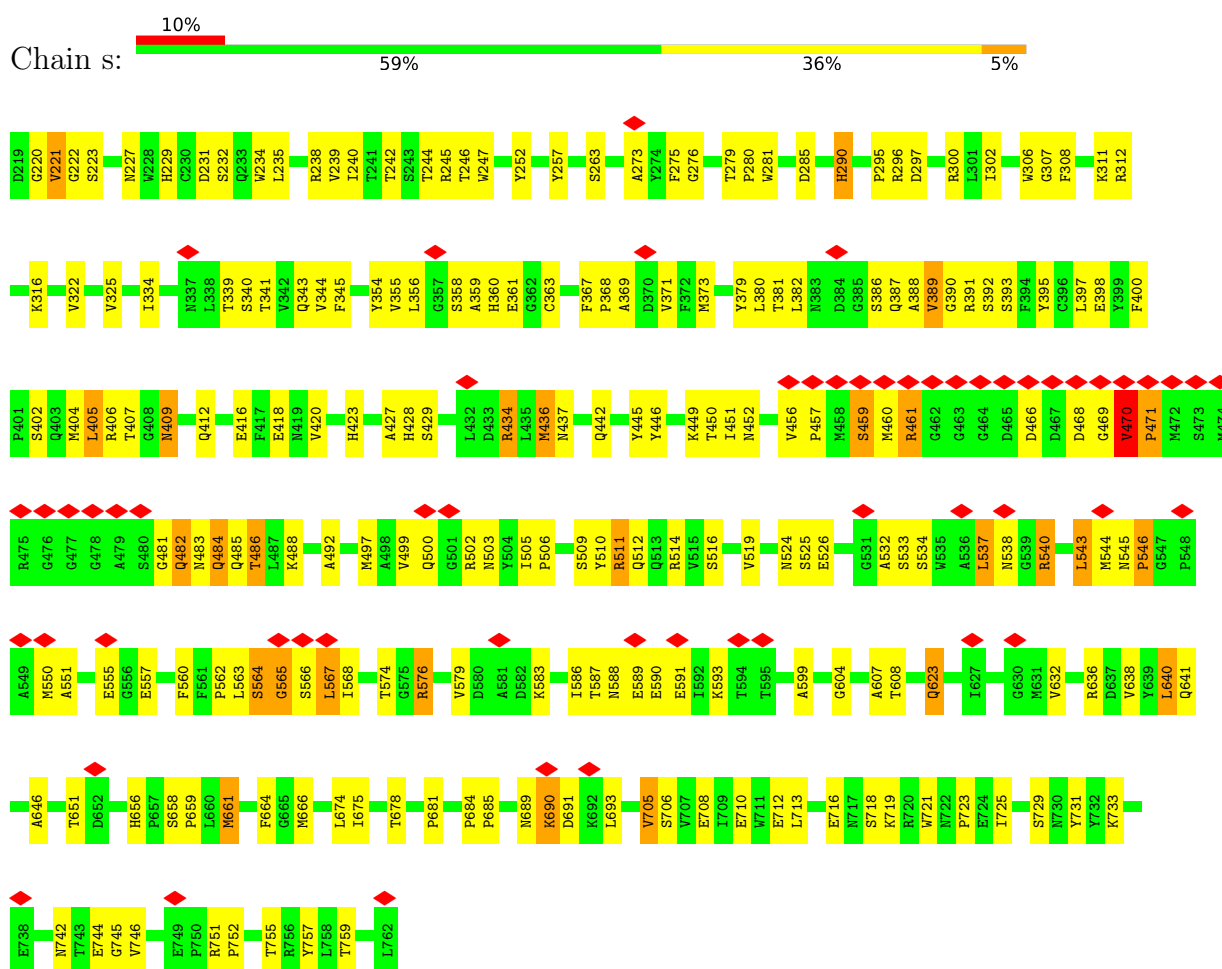




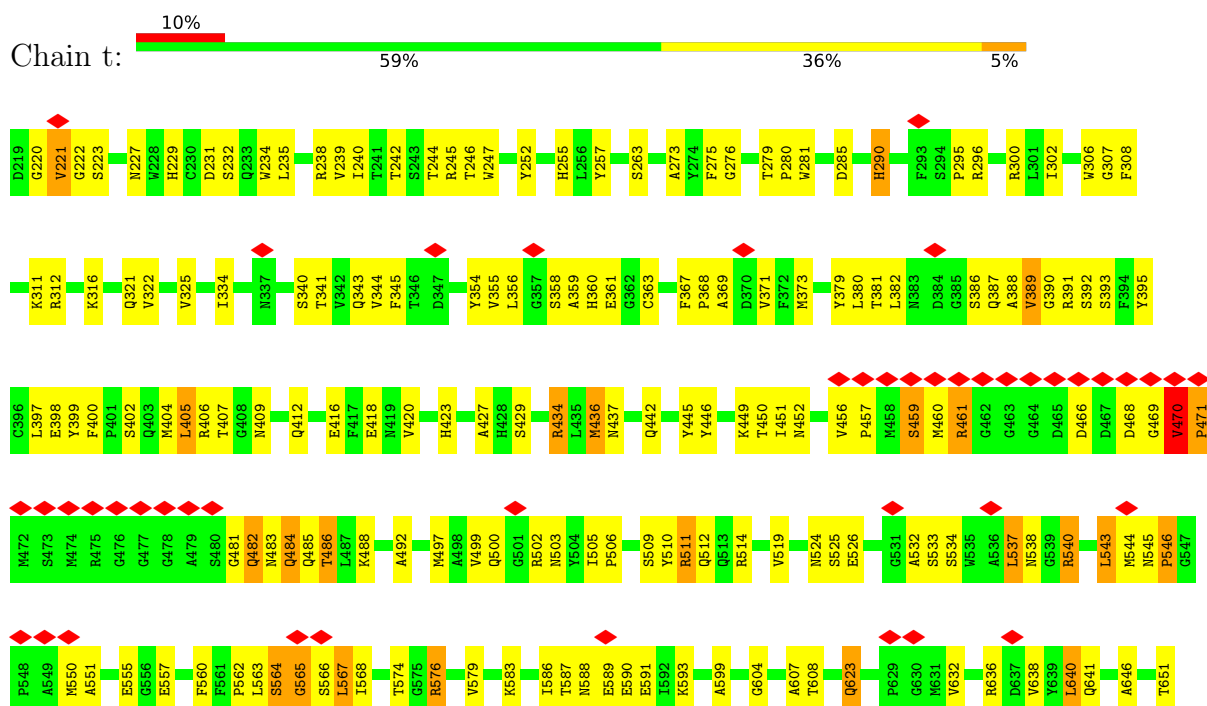
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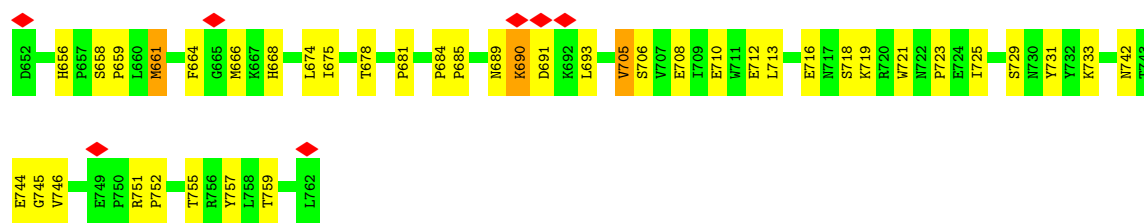


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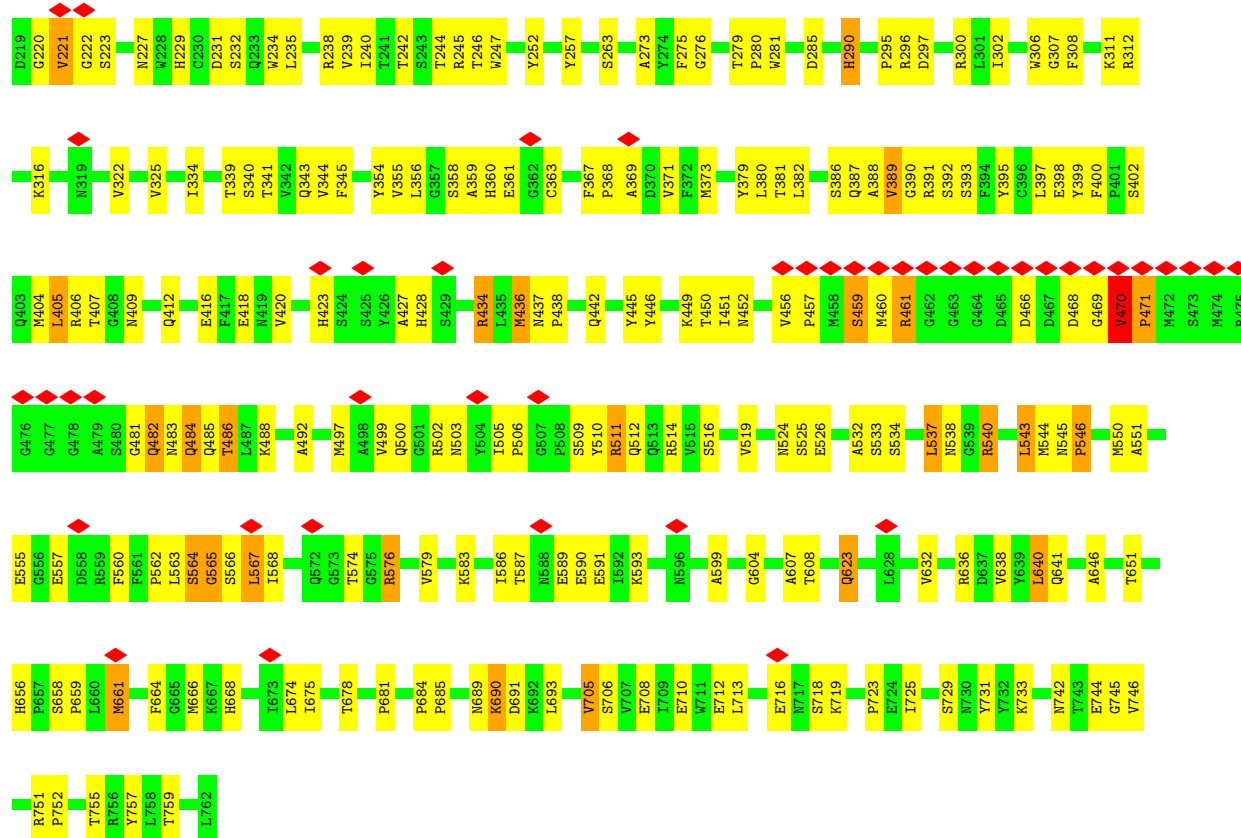


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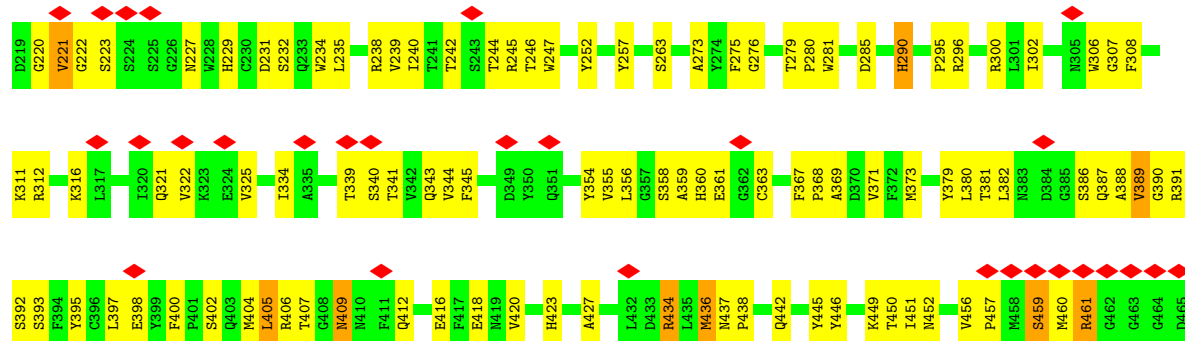


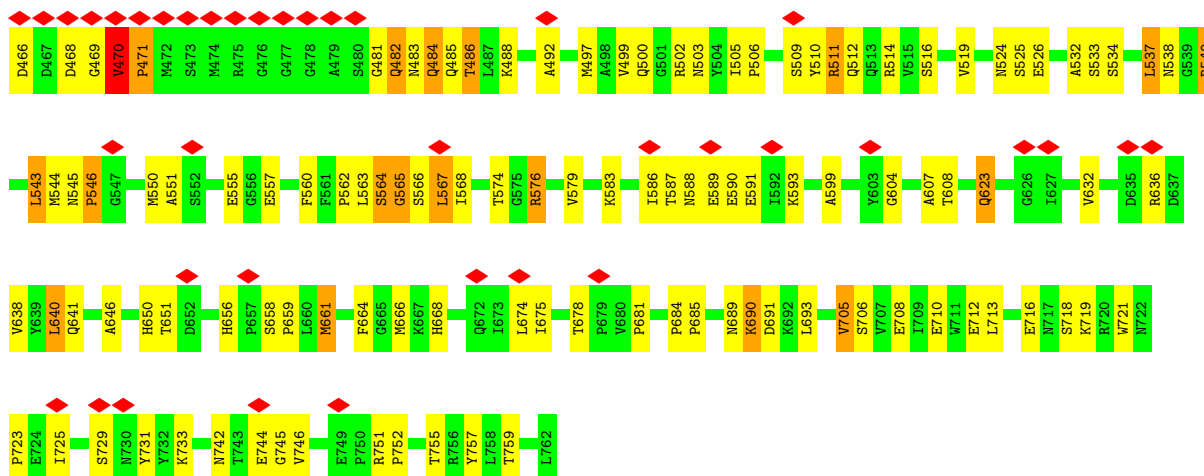


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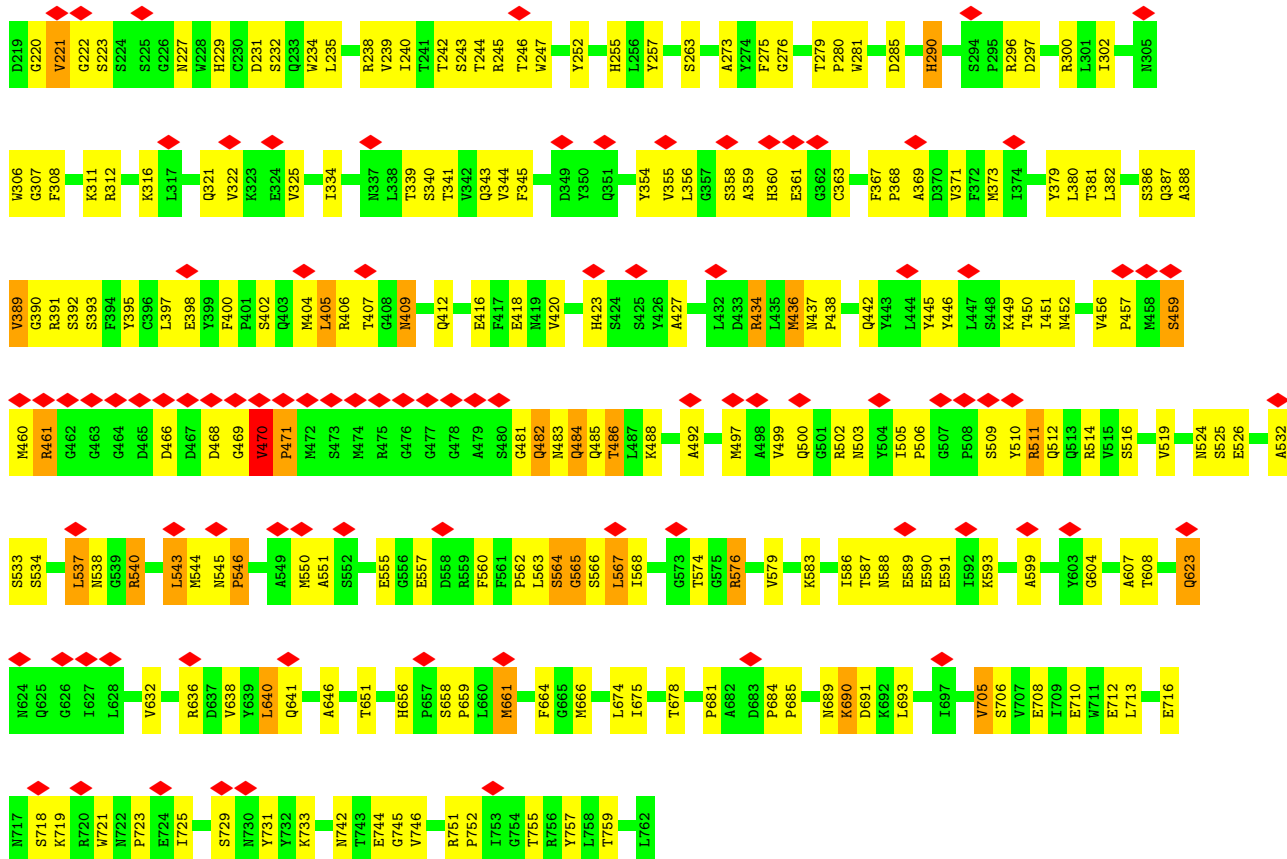


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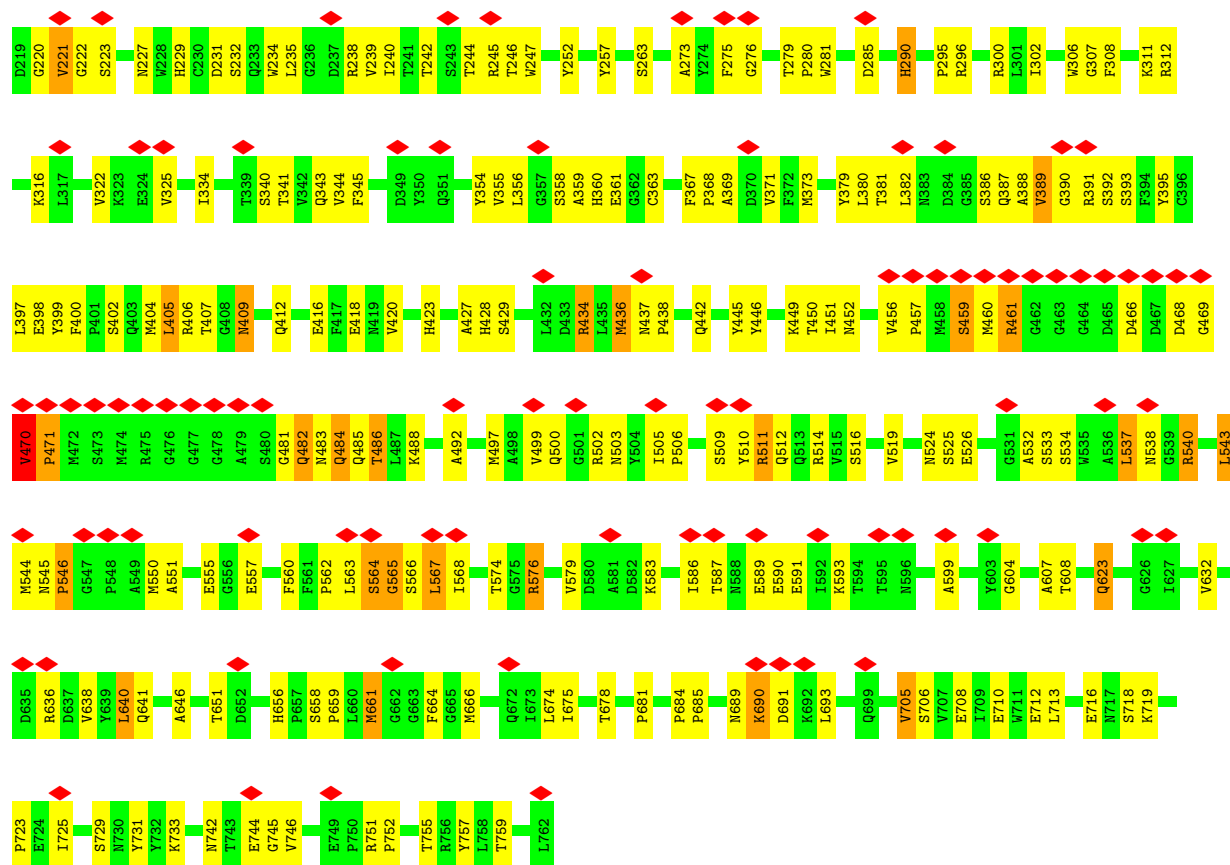


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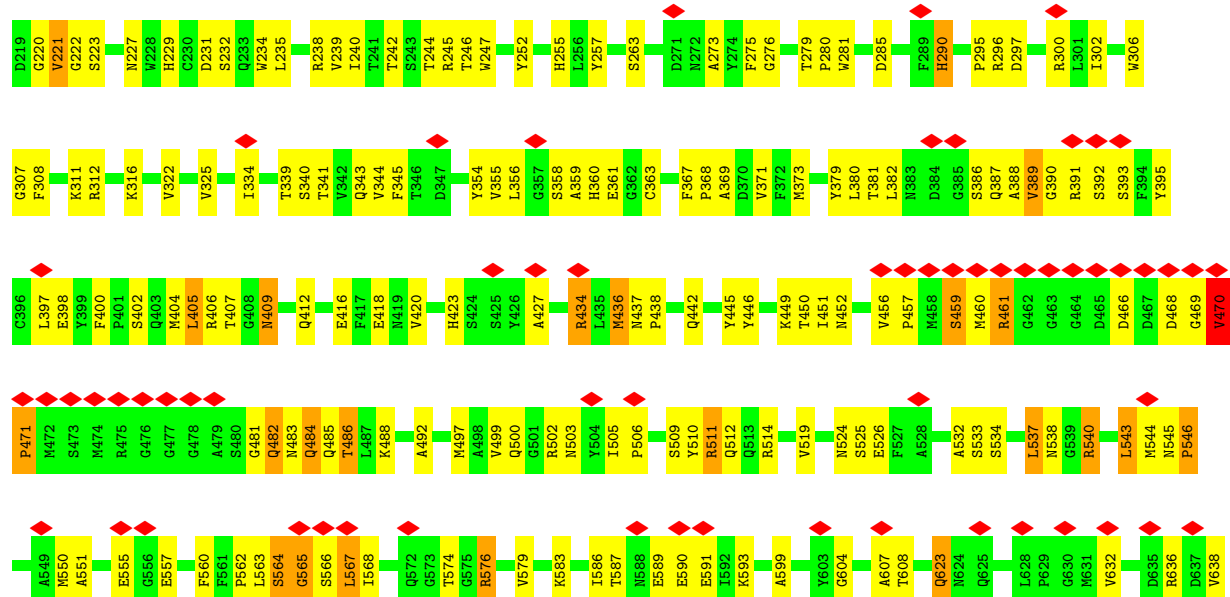


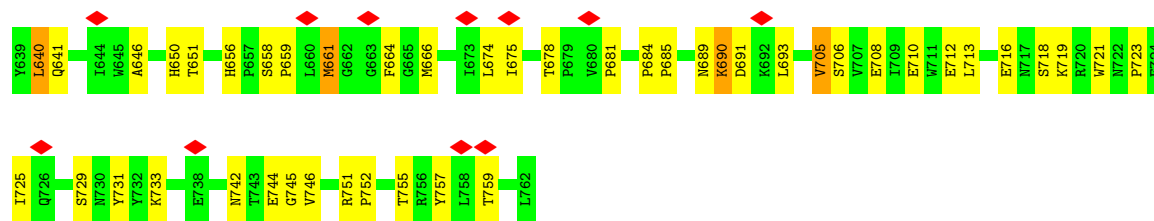
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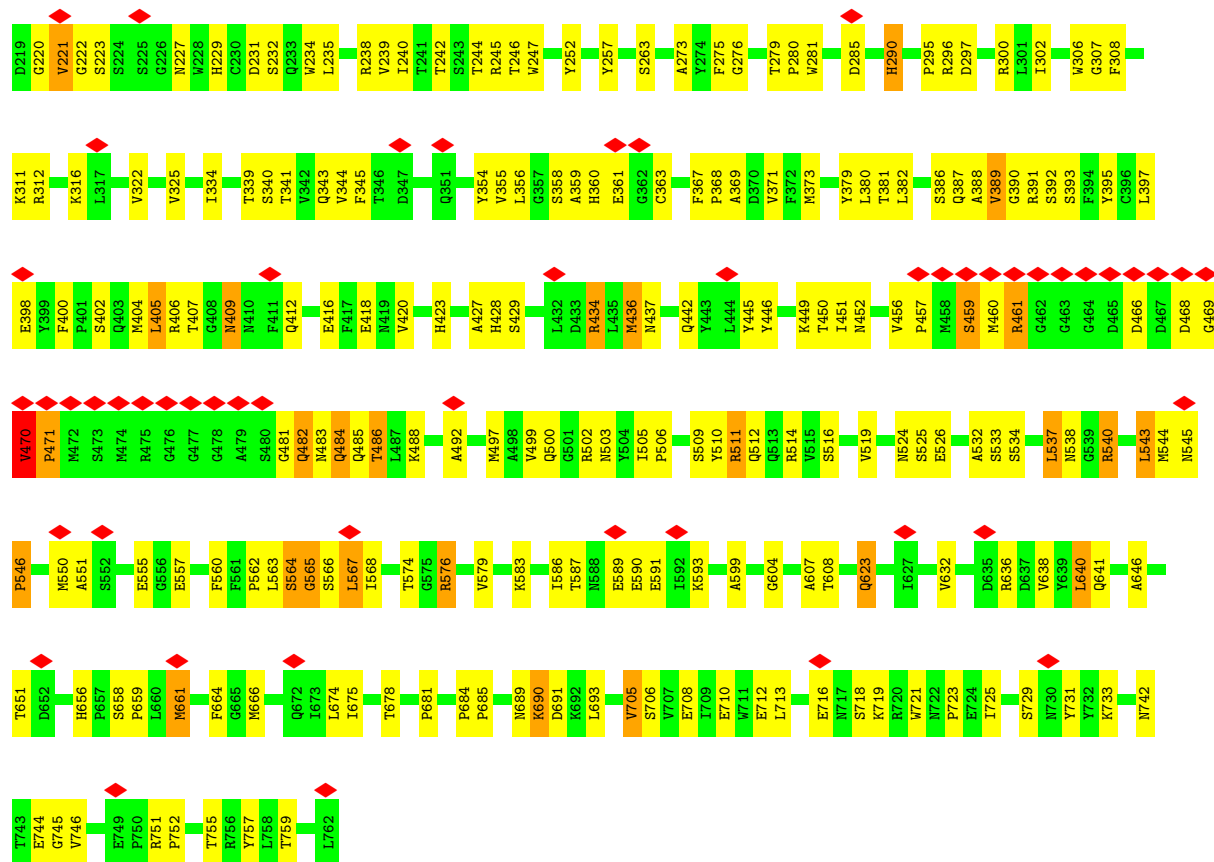


• Molecule 1: Capsid protein VP1

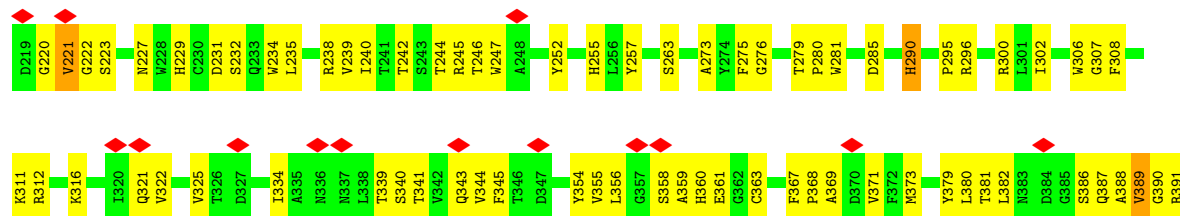


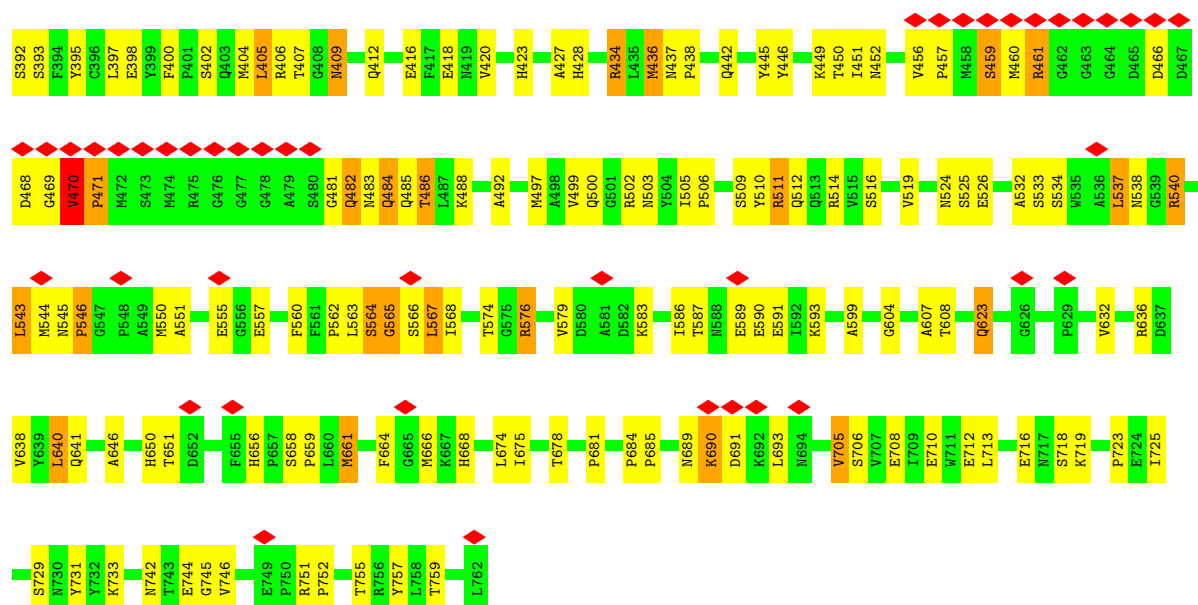


• Molecule 1: Capsid protein VP1

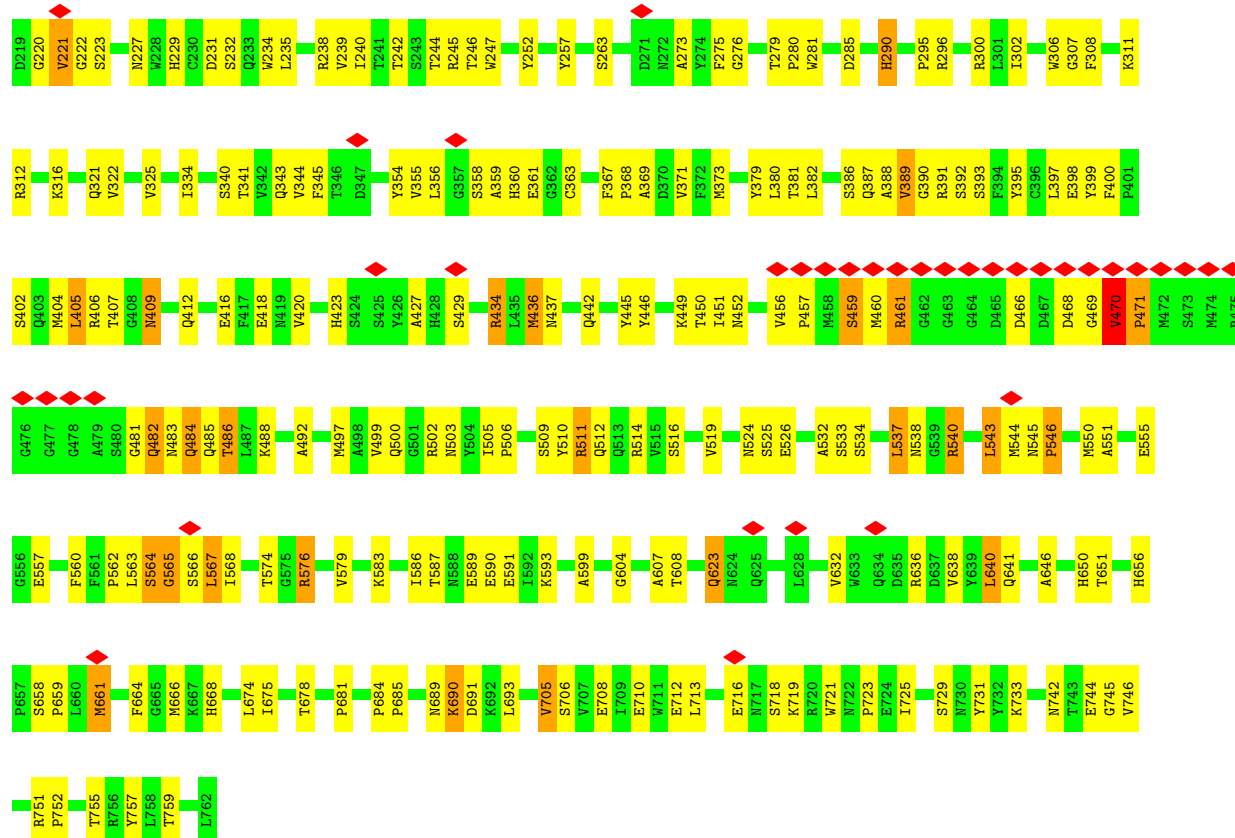


• Molecule 1: Capsid protein VP1



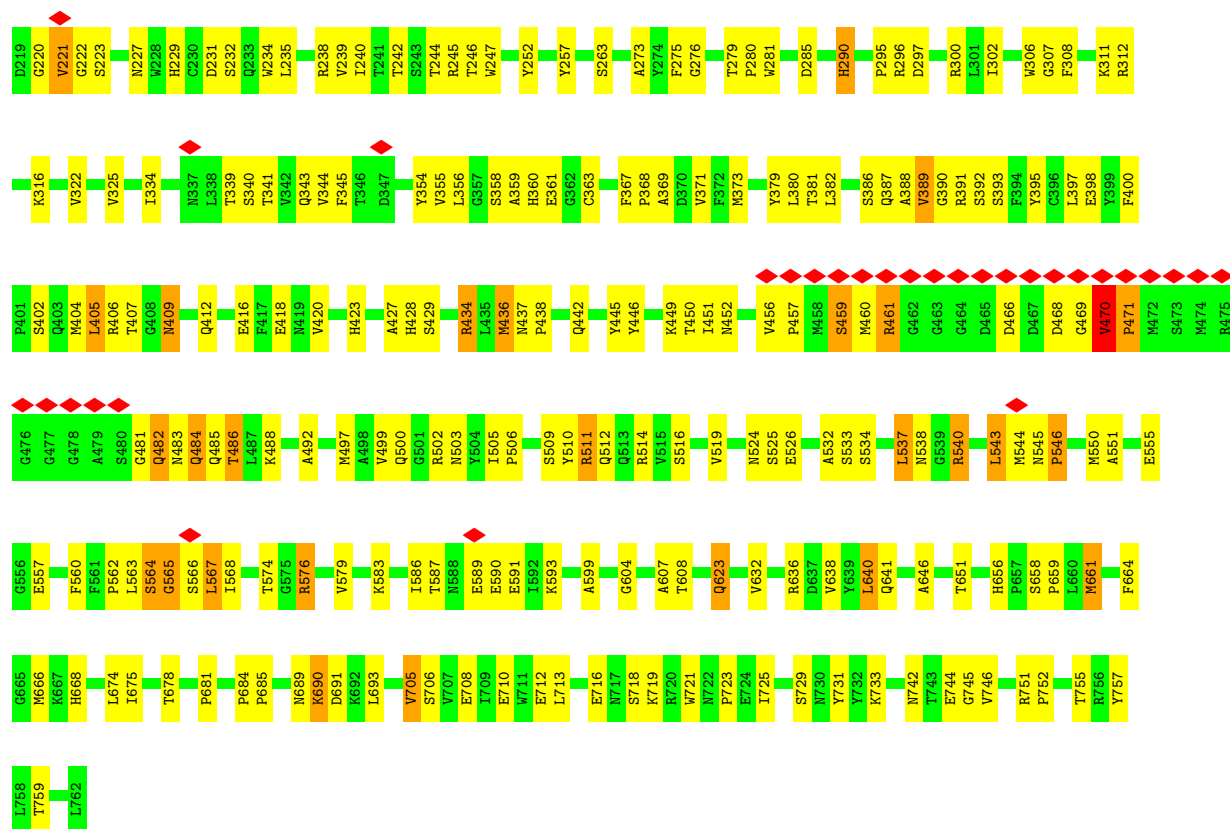


• Molecule 1: Capsid protein VP1

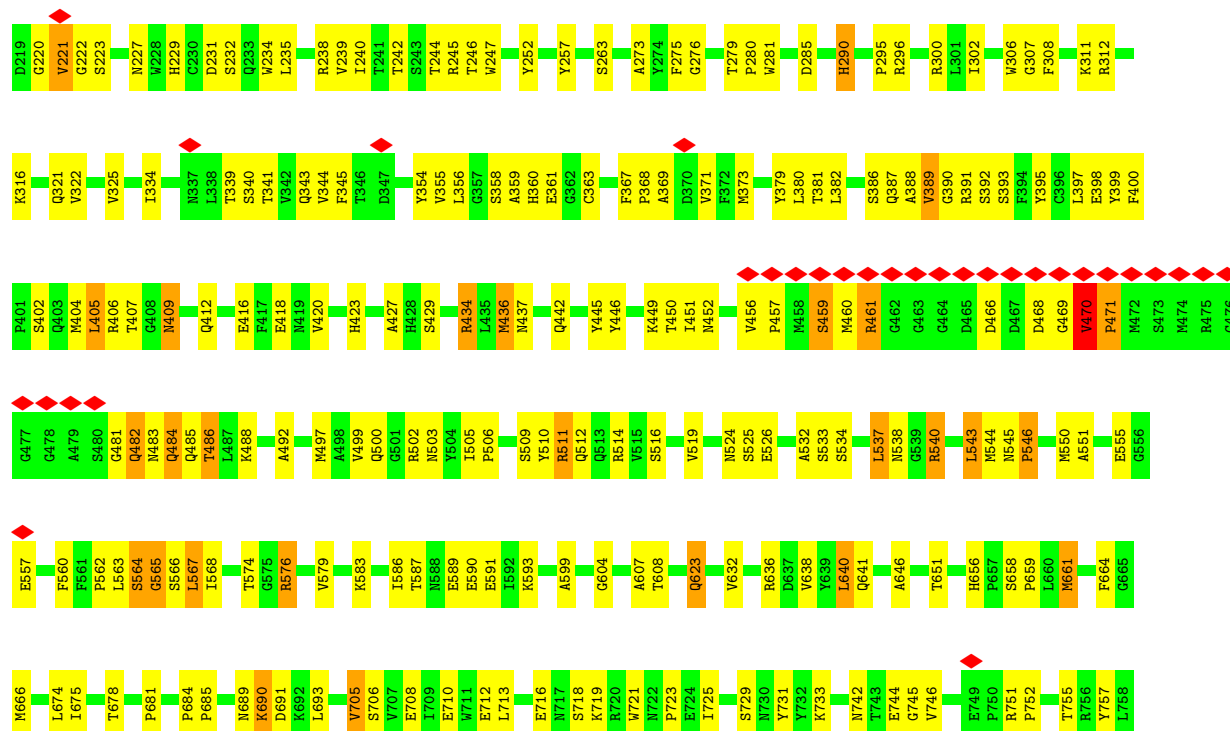


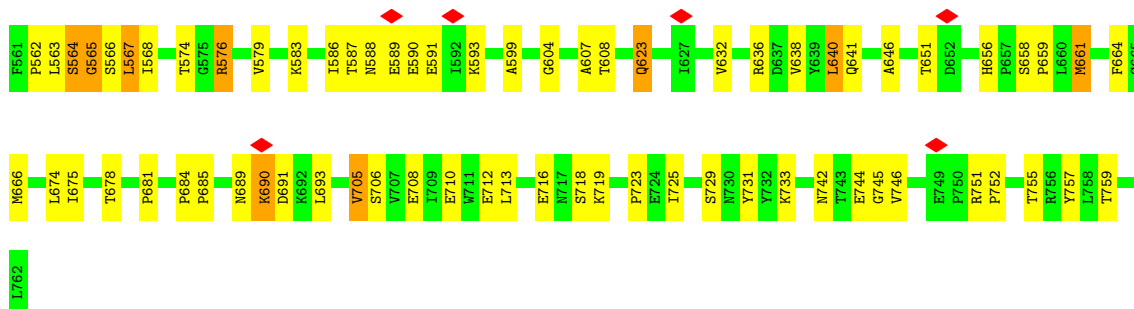
• Molecule 1: Capsid protein VP1



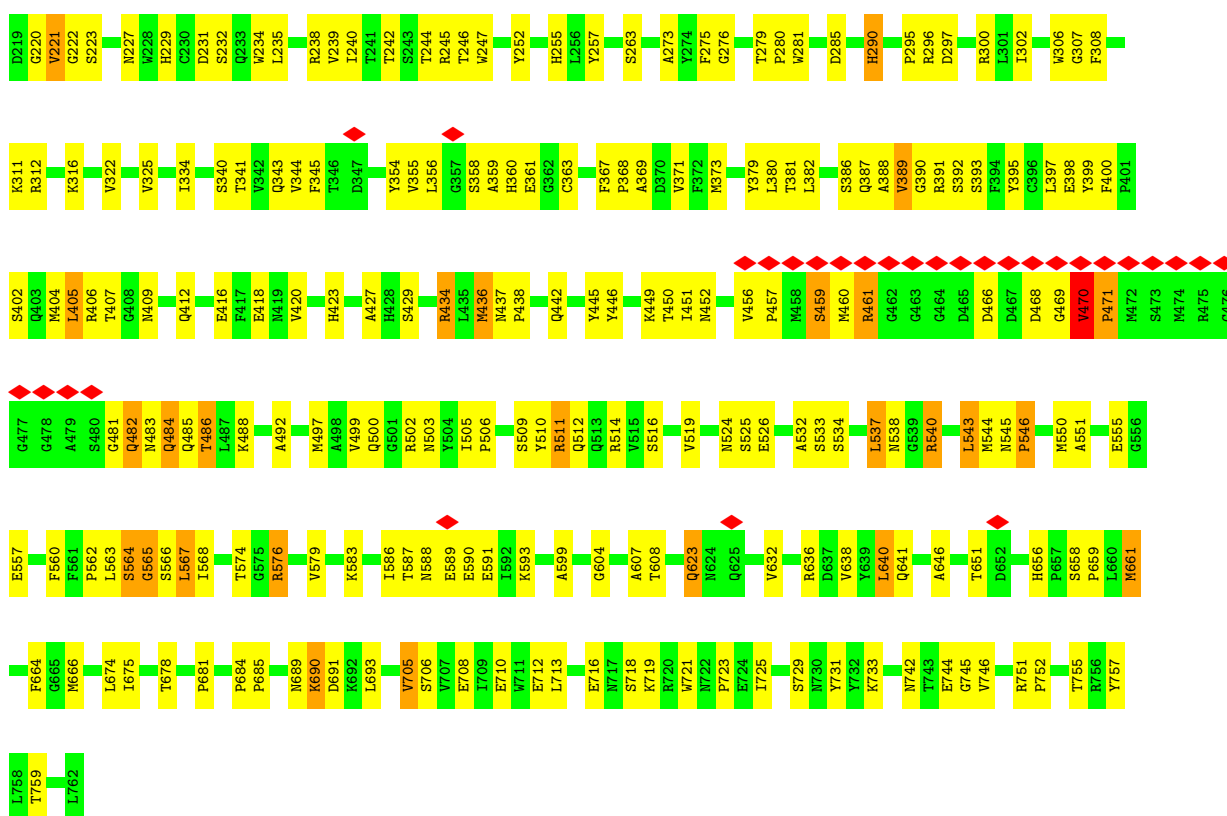


• Molecule 1: Capsid protein VP1

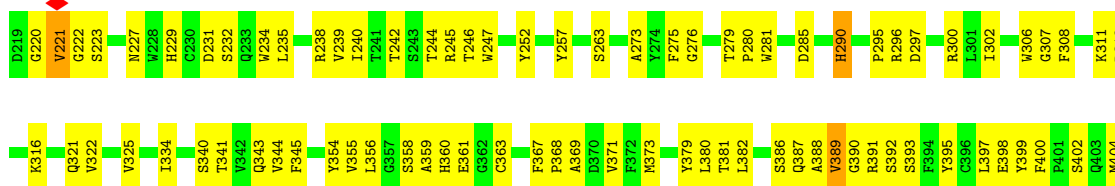


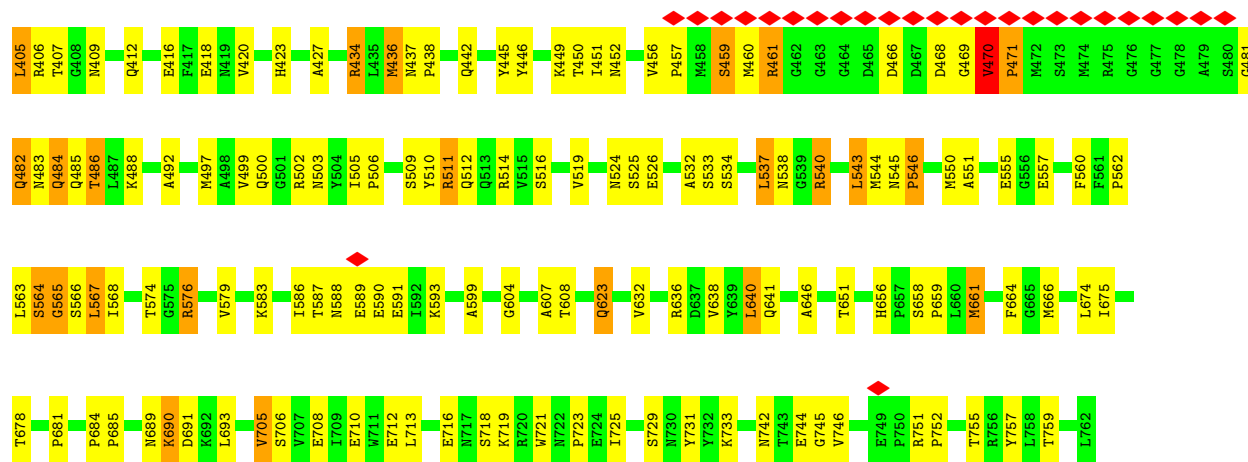


• Molecule 1: Capsid protein VP1



• 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	114044	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 ($e^-/\text{\AA}^2$)	20	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	17.407	Depositor
Minimum map value	-6.826	Depositor
Average map value	0.000	Depositor
Map value standard deviation	1.000	Depositor
Recommended contour level	1	Depositor
Map size (Å)	400.314, 400.314, 400.314	wwPDB
Map dimensions	411, 411, 411	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.974, 0.974, 0.974	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	1	0.84	1/4427 (0.0%)	1.10	13/6026 (0.2%)
1	2	0.84	0/4427	1.10	13/6026 (0.2%)
1	3	0.84	0/4427	1.10	13/6026 (0.2%)
1	4	0.84	0/4427	1.10	12/6026 (0.2%)
1	5	0.84	0/4427	1.10	12/6026 (0.2%)
1	6	0.84	0/4427	1.10	12/6026 (0.2%)
1	7	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	8	0.84	0/4427	1.10	12/6026 (0.2%)
1	A	0.84	0/4427	1.10	12/6026 (0.2%)
1	B	0.84	0/4427	1.10	13/6026 (0.2%)
1	C	0.84	0/4427	1.10	12/6026 (0.2%)
1	D	0.84	0/4427	1.10	12/6026 (0.2%)
1	E	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	F	0.84	0/4427	1.10	13/6026 (0.2%)
1	G	0.84	0/4427	1.10	12/6026 (0.2%)
1	H	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	I	0.84	0/4427	1.10	13/6026 (0.2%)
1	J	0.84	0/4427	1.10	13/6026 (0.2%)
1	K	0.84	0/4427	1.10	12/6026 (0.2%)
1	L	0.84	1/4427 (0.0%)	1.10	13/6026 (0.2%)
1	M	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	N	0.84	0/4427	1.10	12/6026 (0.2%)
1	O	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	P	0.84	0/4427	1.10	13/6026 (0.2%)
1	Q	0.83	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	R	0.84	0/4427	1.10	13/6026 (0.2%)
1	S	0.84	0/4427	1.10	13/6026 (0.2%)
1	T	0.84	0/4427	1.10	12/6026 (0.2%)
1	U	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	V	0.84	0/4427	1.10	12/6026 (0.2%)
1	W	0.83	0/4427	1.10	12/6026 (0.2%)
1	X	0.84	0/4427	1.10	12/6026 (0.2%)
1	Y	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	Z	0.84	0/4427	1.10	12/6026 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	a	0.84	0/4427	1.10	12/6026 (0.2%)
1	b	0.84	0/4427	1.10	13/6026 (0.2%)
1	c	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	d	0.84	0/4427	1.10	12/6026 (0.2%)
1	e	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	f	0.84	0/4427	1.10	13/6026 (0.2%)
1	g	0.84	0/4427	1.10	12/6026 (0.2%)
1	h	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	i	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	j	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	k	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	l	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	m	0.84	0/4427	1.10	12/6026 (0.2%)
1	n	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	o	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	p	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	q	0.84	0/4427	1.10	12/6026 (0.2%)
1	r	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	s	0.84	0/4427	1.10	12/6026 (0.2%)
1	t	0.84	1/4427 (0.0%)	1.10	13/6026 (0.2%)
1	u	0.84	0/4427	1.10	13/6026 (0.2%)
1	v	0.84	0/4427	1.10	13/6026 (0.2%)
1	w	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	x	0.84	0/4427	1.10	12/6026 (0.2%)
1	y	0.84	1/4427 (0.0%)	1.10	12/6026 (0.2%)
1	z	0.83	0/4427	1.10	12/6026 (0.2%)
All	All	0.84	24/265620 (0.0%)	1.10	736/361560 (0.2%)

The worst 5 of 24 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	w	255	HIS	CG-ND1	-5.10	1.32	1.38
1	j	255	HIS	CG-ND1	-5.07	1.32	1.38
1	1	255	HIS	CG-ND1	-5.06	1.32	1.38
1	Y	255	HIS	CG-ND1	-5.05	1.32	1.38
1	Q	255	HIS	CG-ND1	-5.04	1.32	1.38

The worst 5 of 736 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	F	481	GLY	N-CA-C	9.92	124.01	112.50
1	3	481	GLY	N-CA-C	9.92	124.01	112.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	Y	481	GLY	N-CA-C	9.92	124.01	112.50
1	a	481	GLY	N-CA-C	9.92	124.01	112.50
1	q	481	GLY	N-CA-C	9.92	124.01	112.50

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1	4300	0	4039	291	0
1	2	4300	0	4039	293	0
1	3	4300	0	4039	296	0
1	4	4300	0	4039	291	0
1	5	4300	0	4039	295	0
1	6	4300	0	4039	291	0
1	7	4300	0	4039	294	0
1	8	4300	0	4039	294	0
1	A	4300	0	4039	293	0
1	B	4300	0	4039	293	0
1	C	4300	0	4039	293	0
1	D	4300	0	4039	293	0
1	E	4300	0	4039	292	0
1	F	4300	0	4039	293	0
1	G	4300	0	4039	292	0
1	H	4300	0	4039	294	0
1	I	4300	0	4039	291	0
1	J	4300	0	4039	293	0
1	K	4300	0	4039	298	0
1	L	4300	0	4039	292	0
1	M	4300	0	4039	285	0
1	N	4300	0	4039	294	0
1	O	4300	0	4039	292	0
1	P	4300	0	4039	290	0
1	Q	4300	0	4039	296	0
1	R	4300	0	4039	286	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	S	4300	0	4039	288	0
1	T	4300	0	4039	295	0
1	U	4300	0	4039	292	0
1	V	4300	0	4039	293	0
1	W	4300	0	4039	294	0
1	X	4300	0	4039	292	0
1	Y	4300	0	4039	295	0
1	Z	4300	0	4039	291	0
1	a	4300	0	4039	289	0
1	b	4300	0	4039	291	0
1	c	4300	0	4039	295	0
1	d	4300	0	4039	289	0
1	e	4300	0	4039	293	0
1	f	4300	0	4039	296	0
1	g	4300	0	4039	287	0
1	h	4300	0	4039	299	0
1	i	4300	0	4039	294	0
1	j	4300	0	4039	293	0
1	k	4300	0	4039	296	0
1	l	4300	0	4039	291	0
1	m	4300	0	4039	290	0
1	n	4300	0	4039	292	0
1	o	4300	0	4039	291	0
1	p	4300	0	4039	289	0
1	q	4300	0	4039	291	0
1	r	4300	0	4039	289	0
1	s	4300	0	4039	295	0
1	t	4300	0	4039	292	0
1	u	4300	0	4039	294	0
1	v	4300	0	4039	293	0
1	w	4300	0	4039	294	0
1	x	4300	0	4039	292	0
1	y	4300	0	4039	294	0
1	z	4300	0	4039	291	0
All	All	258000	0	242340	13479	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 27.

The worst 5 of 13479 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:r:468:ASP:O	1:r:471:PRO:HD2	1.69	0.93
1:S:468:ASP:O	1:S:471:PRO:HD2	1.69	0.93
1:m:468:ASP:O	1:m:471:PRO:HD2	1.69	0.93
1:E:468:ASP:O	1:E:471:PRO:HD2	1.69	0.93
1:U:468:ASP:O	1:U:471:PRO:HD2	1.69	0.93

There are no symmetry-related clashes.

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	1	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	2	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	3	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	4	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	5	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	6	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	7	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	8	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	A	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	B	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	C	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	D	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	E	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	F	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	G	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	H	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	I	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	J	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	K	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	L	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	M	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	N	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	O	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	P	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	Q	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	R	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	S	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	T	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	U	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	V	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	W	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	X	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	Y	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	Z	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	a	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	b	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	c	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	d	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	e	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	f	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	g	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	h	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	i	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	j	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	k	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	l	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	m	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	n	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	o	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	p	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	q	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	r	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	s	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	t	542/544 (100%)	505 (93%)	32 (6%)	5 (1%)	14	43
1	u	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	v	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	w	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	x	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	y	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
1	z	542/544 (100%)	506 (93%)	31 (6%)	5 (1%)	14	43
All	All	32520/32640 (100%)	30337 (93%)	1883 (6%)	300 (1%)	16	43

5 of 300 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	461	ARG
1	A	470	VAL
1	A	567	LEU
1	B	461	ARG
1	B	470	VAL

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	1	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	2	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	3	469/469 (100%)	446 (95%)	23 (5%)	22	51

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	4	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	5	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	6	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	7	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	8	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	A	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	B	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	C	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	D	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	E	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	F	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	G	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	H	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	I	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	J	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	K	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	L	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	M	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	N	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	O	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	P	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	Q	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	R	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	S	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	T	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	U	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	V	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	W	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	X	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	Y	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	Z	469/469 (100%)	446 (95%)	23 (5%)	22	51

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	a	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	b	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	c	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	d	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	e	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	f	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	g	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	h	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	i	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	j	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	k	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	l	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	m	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	n	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	o	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	p	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	q	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	r	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	s	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	t	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	u	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	v	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	w	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	x	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	y	469/469 (100%)	446 (95%)	23 (5%)	22	51
1	z	469/469 (100%)	446 (95%)	23 (5%)	22	51
All	All	28140/28140 (100%)	26760 (95%)	1380 (5%)	24	51

5 of 1380 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	o	434	ARG
1	x	640	LEU

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Mol	Chain	Res	Type
1	p	486	THR
1	o	412	GLN
1	t	412	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 1093 such sidechains are listed below:

Mol	Chain	Res	Type
1	y	668	HIS
1	1	409	ASN
1	y	634	GLN
1	5	736	ASN
1	V	403	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides 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.

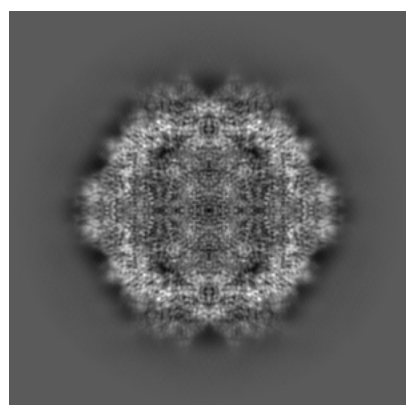
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-0535. These allow visual inspection of the internal detail of the map and identification of artifacts.

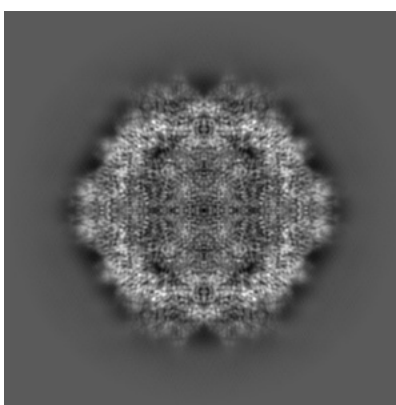
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

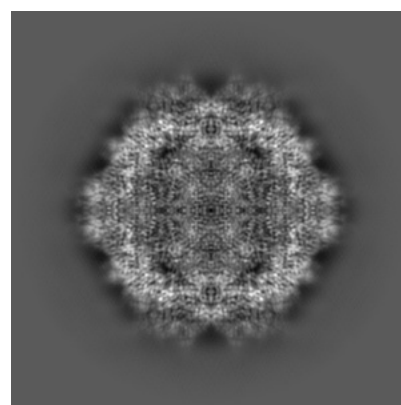
6.1.1 Primary map



X



Y

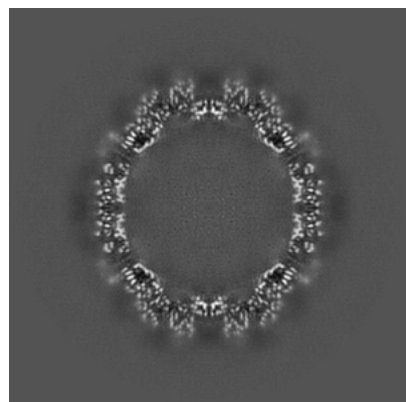


Z

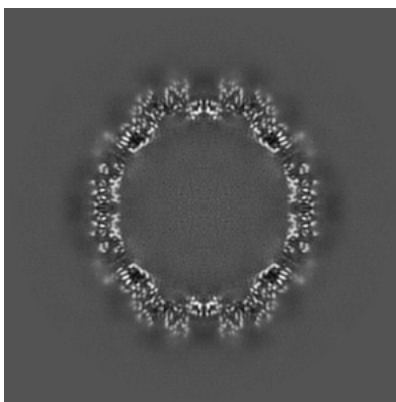
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

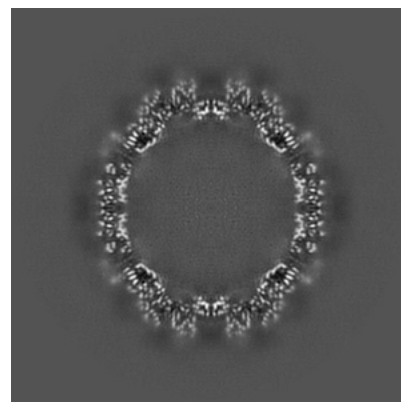
6.2.1 Primary map



X Index: 205



Y Index: 205

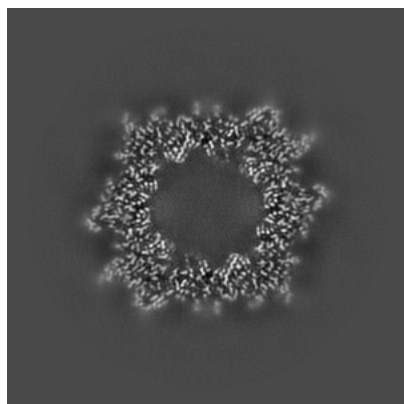


Z Index: 205

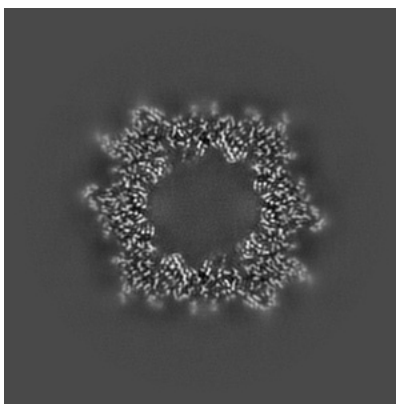
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

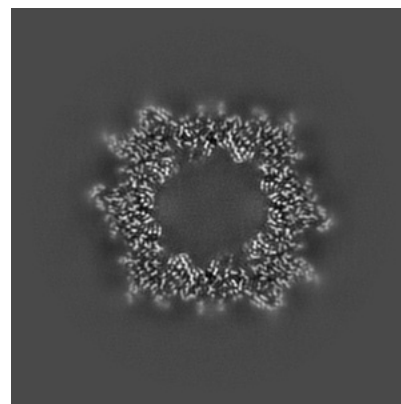
6.3.1 Primary map



X Index: 138



Y Index: 272

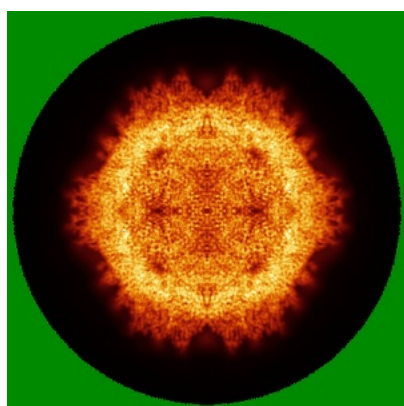


Z Index: 272

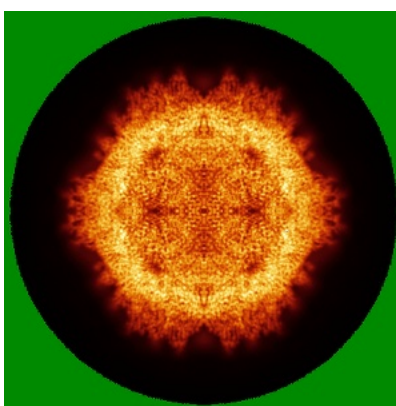
The images above show the largest variance slices of the map in three orthogonal directions.

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

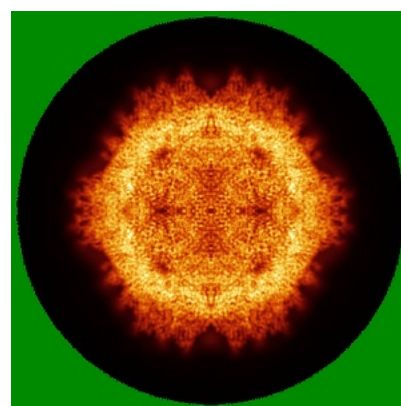
6.4.1 Primary map



X



Y

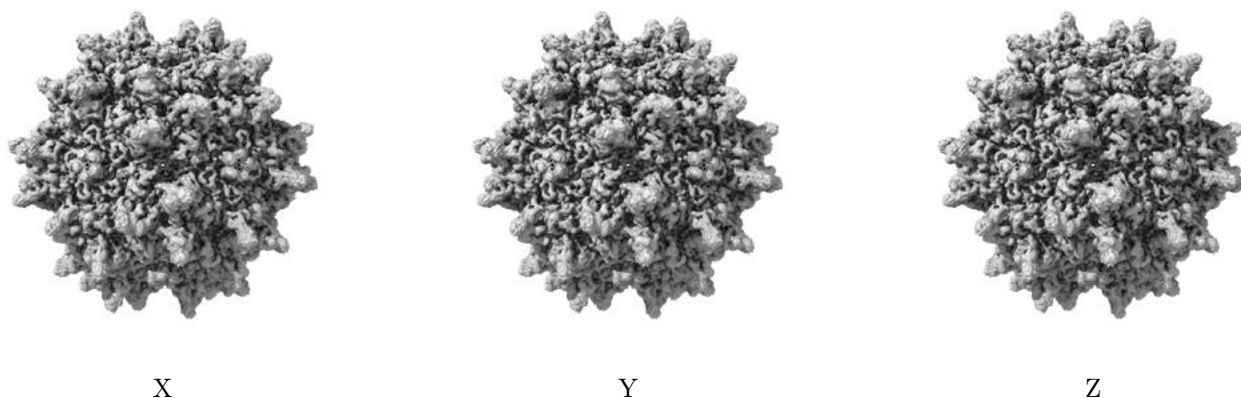


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



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

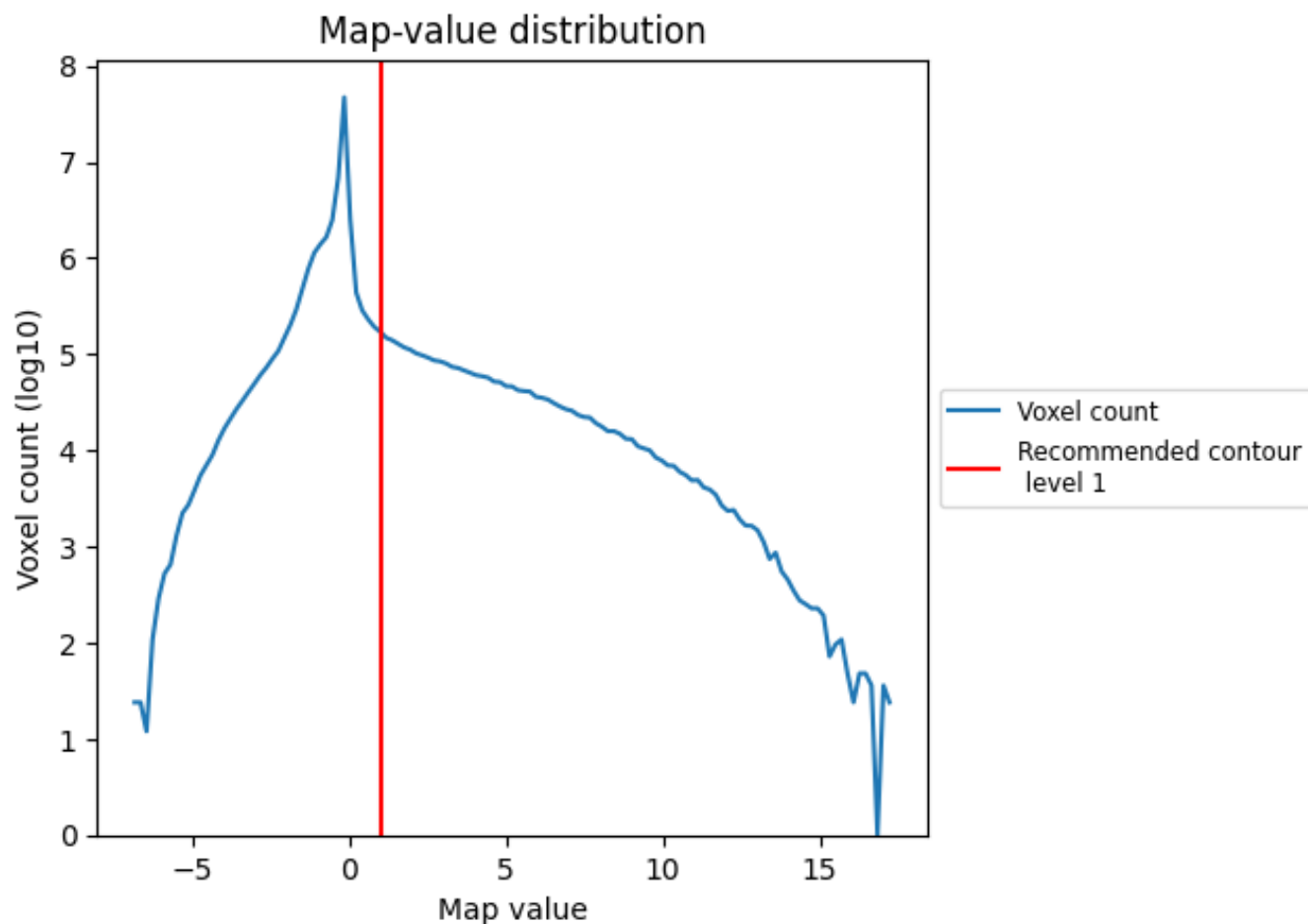
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

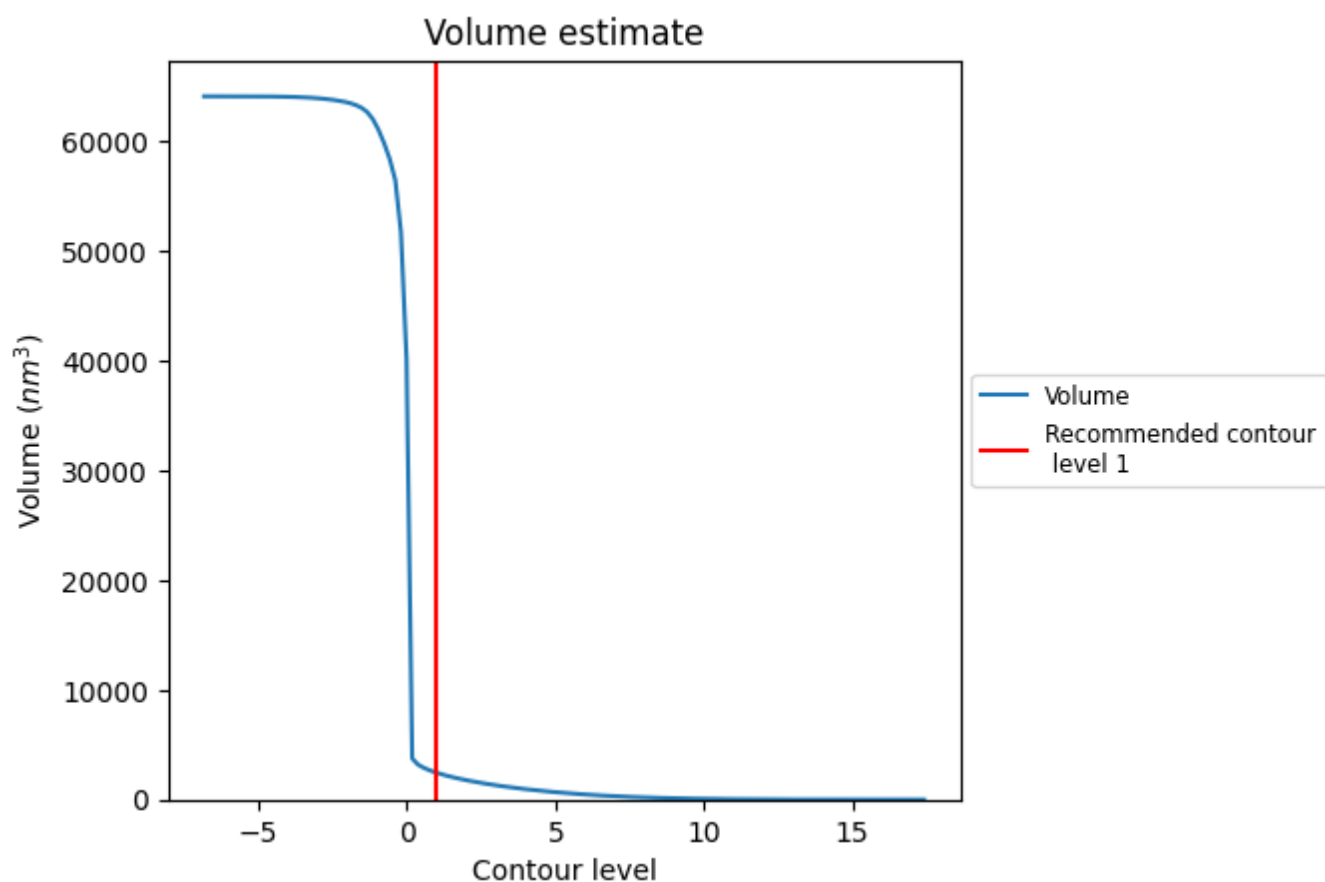
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

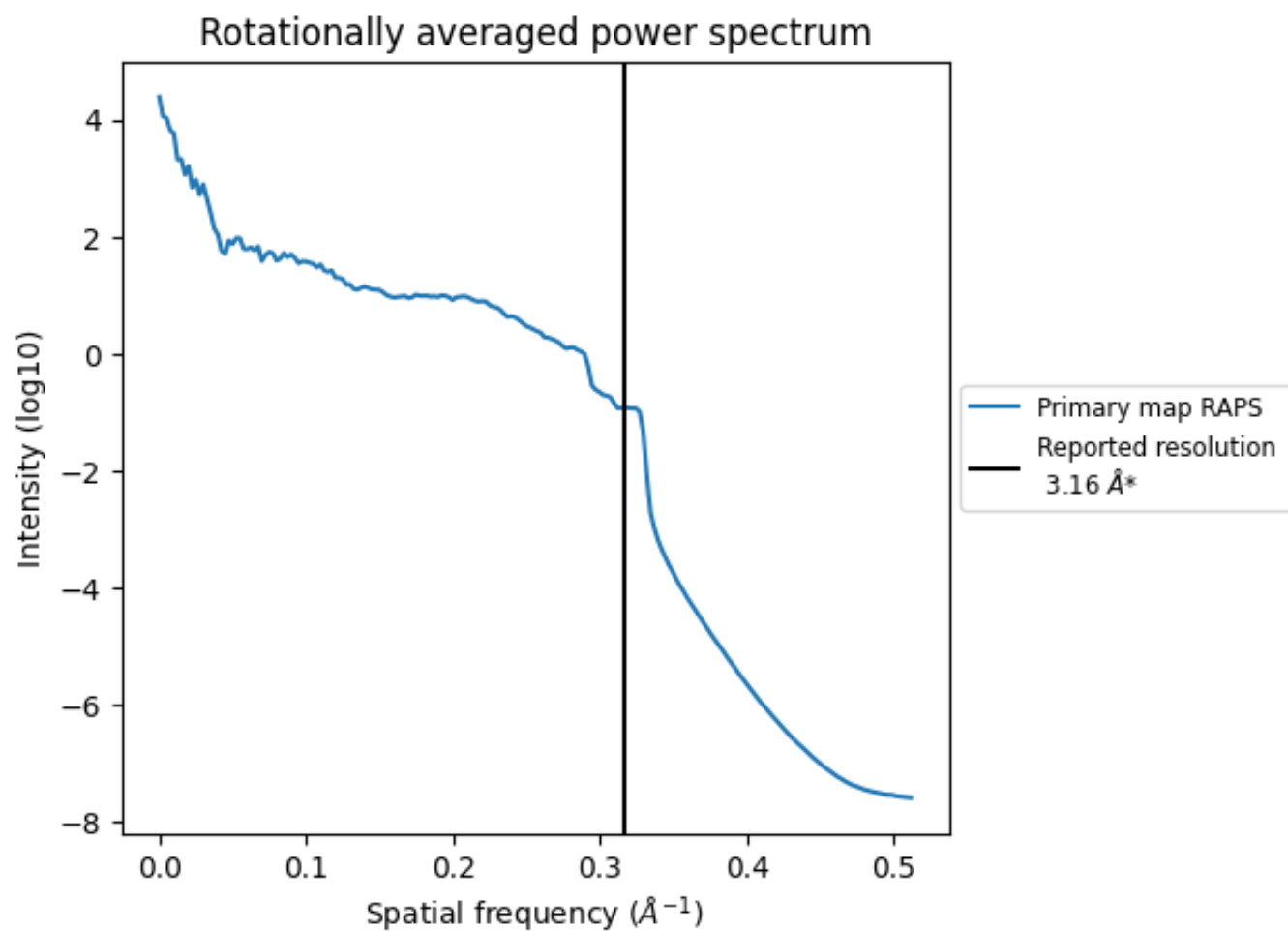
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2447 nm³; this corresponds to an approximate mass of 2210 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 0.316 Å⁻¹

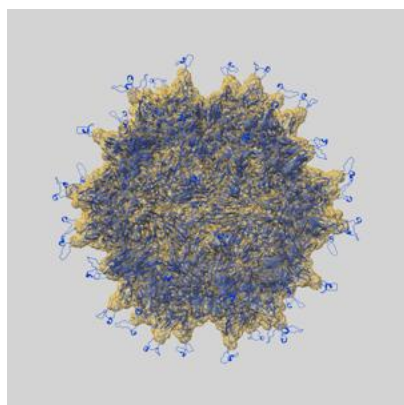
8 Fourier-Shell correlation ⓘ

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

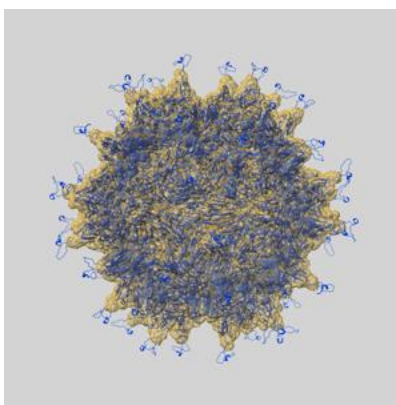
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-0535 and PDB model 6NXE. Per-residue inclusion information can be found in section [3](#) on page [47](#).

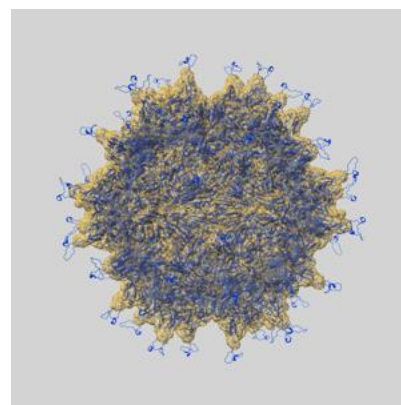
9.1 Map-model overlay [i](#)



X



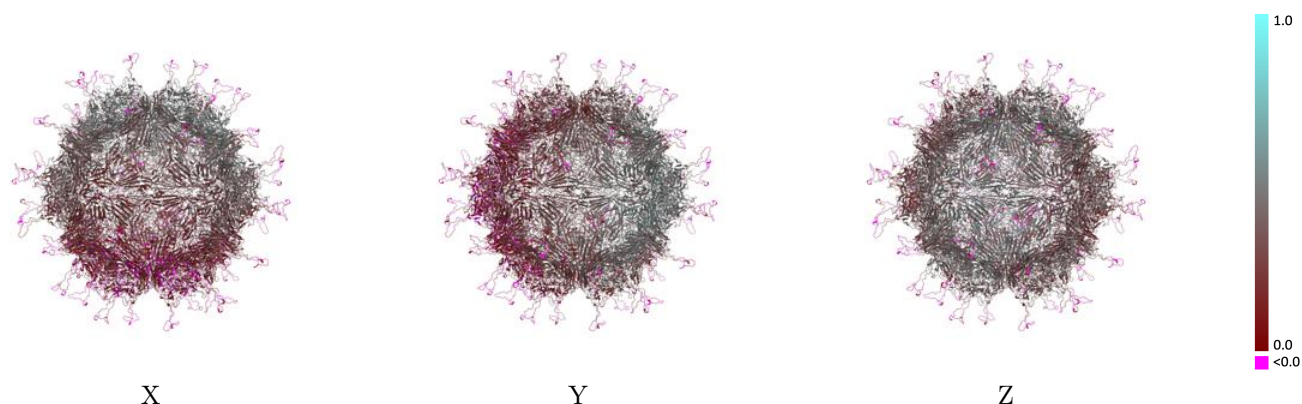
Y



Z

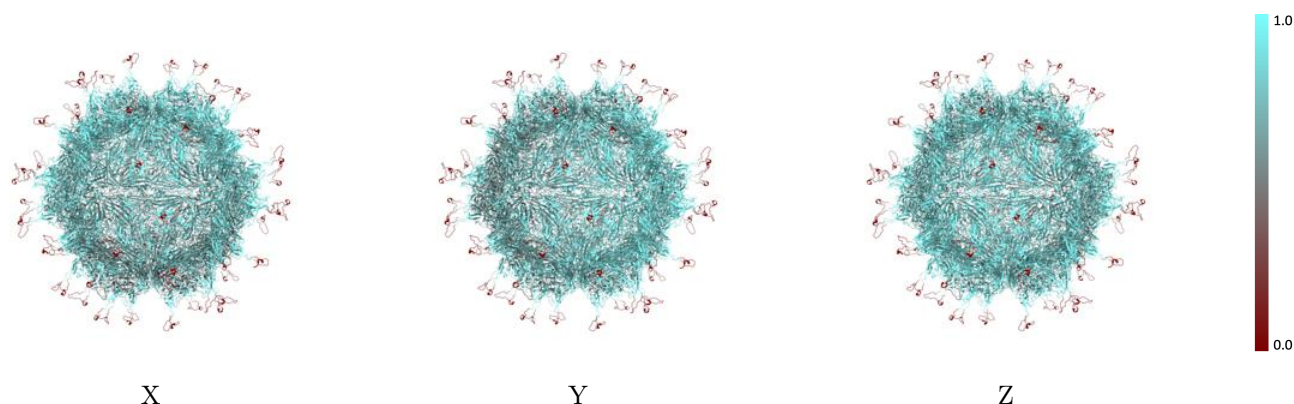
The images above show the 3D surface view of the map at the recommended contour level 1.0 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



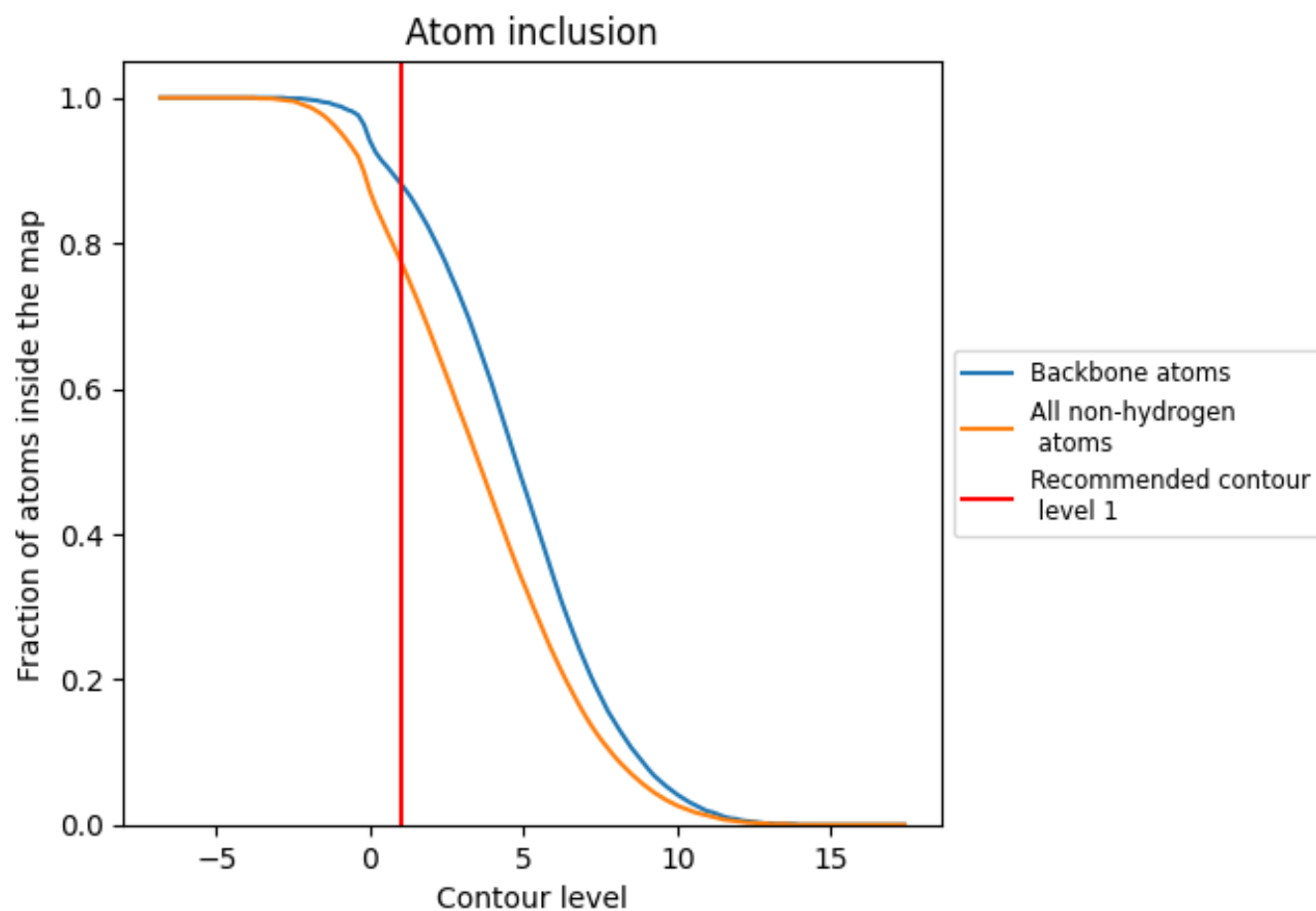
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.4 Atom inclusion [i](#)



At the recommended contour level, 88% of all backbone atoms, 78% 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) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7750	 0.3060
1	 0.7010	 0.1790
2	 0.7550	 0.2550
3	 0.7940	 0.3370
4	 0.7690	 0.2870
5	 0.7910	 0.3300
6	 0.7860	 0.3240
7	 0.8290	 0.4020
8	 0.8190	 0.3850
A	 0.8630	 0.4680
B	 0.8610	 0.4610
C	 0.8390	 0.4230
D	 0.8230	 0.3890
E	 0.8470	 0.4400
F	 0.8490	 0.4410
G	 0.8540	 0.4410
H	 0.8330	 0.4050
I	 0.8520	 0.4460
J	 0.8510	 0.4440
K	 0.8560	 0.4430
L	 0.8570	 0.4540
M	 0.8090	 0.3720
N	 0.7960	 0.3410
O	 0.7490	 0.2570
P	 0.8020	 0.3590
Q	 0.8350	 0.4190
R	 0.8140	 0.3870
S	 0.8030	 0.3430
T	 0.7310	 0.2280
U	 0.7830	 0.3260
V	 0.7960	 0.3430
W	 0.8270	 0.3800
X	 0.7840	 0.3070
Y	 0.7980	 0.3350
Z	 0.8140	 0.3640



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Chain	Atom inclusion	Q-score
a	 0.8380	 0.4100
b	 0.8320	 0.4120
c	 0.7930	 0.3280
d	 0.7420	 0.2380
e	 0.7620	 0.2680
f	 0.7290	 0.2130
g	 0.6920	 0.1680
h	 0.7000	 0.1690
i	 0.6800	 0.1450
j	 0.6680	 0.1300
k	 0.6690	 0.1350
l	 0.7100	 0.1910
m	 0.7450	 0.2500
n	 0.7120	 0.2030
o	 0.8140	 0.3760
p	 0.7630	 0.2890
q	 0.7110	 0.2040
r	 0.6870	 0.1670
s	 0.7420	 0.2410
t	 0.7450	 0.2390
u	 0.7390	 0.2390
v	 0.7000	 0.1690
w	 0.6580	 0.1250
x	 0.6670	 0.1310
y	 0.6950	 0.1730
z	 0.7210	 0.2130