wwPDB EM Validation Summary Report

Nov 28, 2022 – 11:02 PM EST

PDB ID	:	7TBM
EMDB ID	:	EMD-11967
Title	:	Composite structure of the dilated human nuclear pore complex (NPC) generated with a 37A in situ cryo-ET map of CD4+ T cell NPC
Authors	:	Bley, C.J.; Nie, S.; Mobbs, G.W.; Petrovic, S.; Gres, A.T.; Liu, X.; Mukherjee, S.; Harvey, S.; Huber, F.M.; Lin, D.H.; Brown, B.; Tang, A.W.; Rundlet, E.J.; Correia, A.R.; Chen, S.; Regmi, S.G.; Stevens, T.A.; Jette, C.A.; Dasso, M.; Patke, A.; Palazzo, A.F.; Kossiakoff, A.A.; Hoelz, A.
Deposited on	:	2021-12-22
Resolution	:	37.00 Å(reported)

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 (i) 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 (i)) were used in the production of this report:

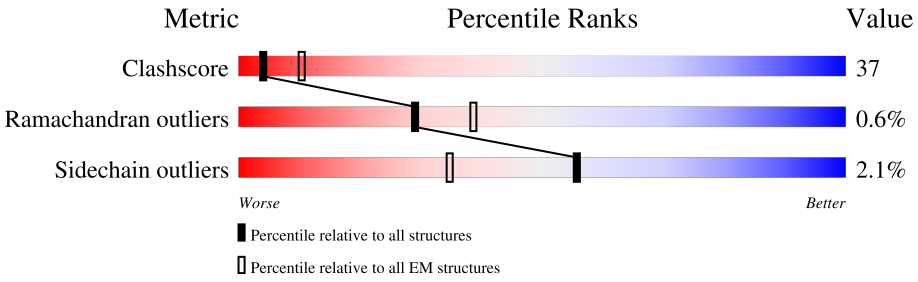
EMDB validation analysis	:	0.0.1.dev43
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.2

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 37.00 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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	A1	1316	36% 87% 7% 6%
1	A3	1316	78% 79% 14% 6%
2	A2	1328	53% 73% 20%
2	A4	1328	86% 60% 32%
3	A5	1330	50% 81% 14%
3	A6	1330	85% 61% 35%
4	B1	14	79% 93% 7%
4	B2	14	57% 43%

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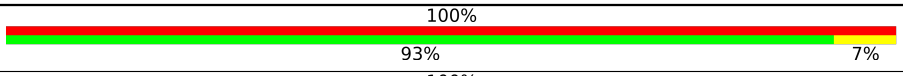
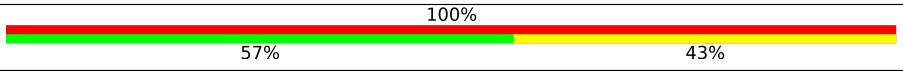
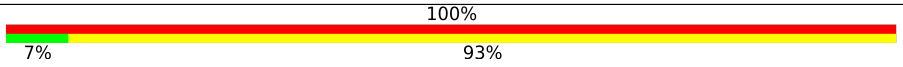
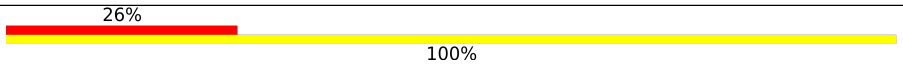
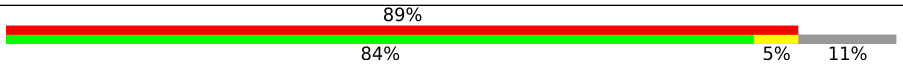
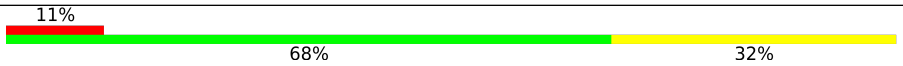
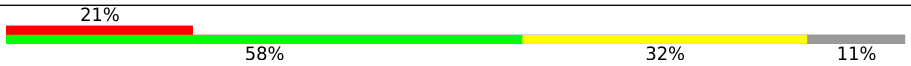
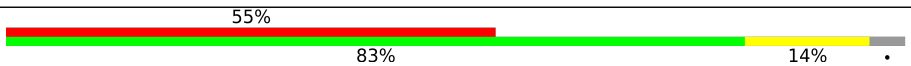
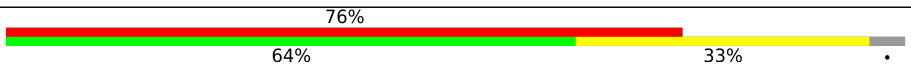
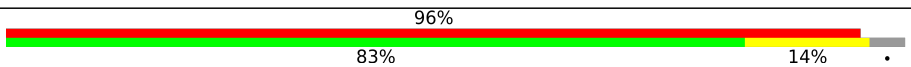
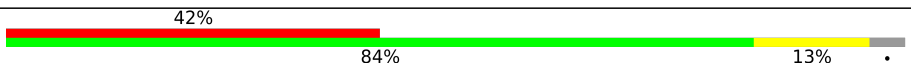
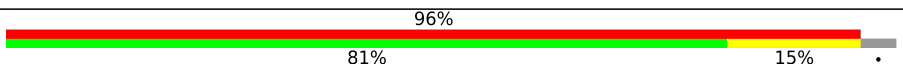
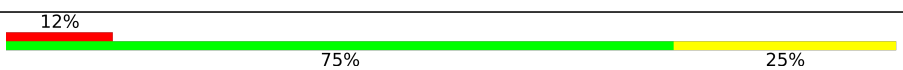
Mol	Chain	Length	Quality of chain
4	B3	14	
4	B4	14	
4	B5	14	
4	B6	14	
5	C1	19	
5	C2	19	
5	C3	19	
5	C4	19	
5	C5	19	
5	C6	19	
6	D1	644	
6	D2	644	
6	D3	644	
6	D4	644	
6	D5	644	
6	D6	644	
6	D7	644	
7	E1	8	
7	E2	8	
7	E3	8	
7	E4	8	
7	E5	8	
7	E6	8	
7	E7	8	
8	F1	1858	

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Mol	Chain	Length	Quality of chain
8	F2	1858	84% 81% 7% 12%
9	G1	53	91% 68% 32%
9	G2	53	100% 85% 15%
10	H1	13	92% 100%
10	H2	13	100% 100%
11	I1	1756	49% 68% 20% 12%
11	I2	1756	73% 68% 20% 12%
11	I3	1756	67% 79% 9% 12%
11	I4	1756	35% 80% 8% 12%
11	I5	1756	88% 78% 10% 12%
12	J1	63	70% 71% 29%
12	J2	63	65% 73% 27%
12	J3	63	46% 78% 22%
12	J4	63	76% 79% 21%
12	J5	63	100% 79% 21%
13	K1	9	100% 100%
13	K2	9	100% 100%
13	K3	9	100% 100%
13	K4	9	100%
13	K5	9	100% 100%
14	L1	2	100%
14	L2	2	100% 100%
14	L3	2	100% 100%
14	L4	2	100%
14	L5	2	100% 100%

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Mol	Chain	Length	Quality of chain
15	M1	183	41% 63% 29% 8%
15	M2	183	56% 87% 5% 8%
15	M3	183	77% 64% 28% 8%
15	M4	183	81% 90% 8%
16	N1	222	36% 59% 22% 19%
16	N2	222	44% 74% 7% 19%
16	N3	222	55% 61% 20% 19%
16	N4	222	61% 78% 19%
17	O1	241	54% 68% 32%
17	O2	241	66% 79% 21%
17	O3	241	82% 65% 35%
17	O4	241	98% 81% 19%
18	P1	116	80% 91% 9%
18	P2	116	100% 94% 6%
18	P3	116	100% 91% 9%
18	P4	116	100% 91% 9%
19	Q1	84	95% 93% 6%
19	Q2	84	65% 87% 8% 5%
19	Q3	84	50% 93% 6%
19	Q4	84	21% 87% 8% 5%
20	R1	40	72% 35% 65%
20	R2	40	55% 92% 8%
20	R3	40	60% 30% 70%
20	R4	40	62% 92% 8%
21	S1	1156	70% 58% 18% 22%

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Mol	Chain	Length	Quality of chain
21	S2	1156	59% 59% 17% 22%
21	S3	1156	67% 59% 16% 22%
21	S4	1156	78% 60% 16% 22%
22	T1	258	45% 64% 30%
22	T2	258	69% 63% 31%
22	T3	258	76% 62% 32%
22	T4	258	72% 62% 31%
23	U1	436	61% 71% 22%
23	U2	436	96% 71% 22%
23	U3	436	96% 70% 22%
23	U4	436	60% 70% 22%
24	V1	621	35% 59% 20% 18%
24	V2	621	82% 59% 21% 18%
24	V3	621	80% 58% 21% 18%
24	V4	621	31% 58% 21% 18%
25	W1	286	63% 65% 27%
25	W2	286	96% 64% 29%
25	W3	286	88% 66% 26%
25	W4	286	89% 61% 32%
26	X1	698	61% 65% 22% 11%
26	X2	698	89% 66% 21% 11%
26	X3	698	86% 66% 22% 11%
26	X4	698	88% 66% 22% 11%
27	Y1	346	7% 62% 26% 11%
27	Y2	346	80% 63% 25% 11%

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Mol	Chain	Length	Quality of chain
27	Y3	346	89% 63% 25% 11%
27	Y4	346	89% 61% 27% 11%
28	Z1	1037	31% 71% 15% 14%
28	Z2	1037	80% 66% 20% 14%
28	Z3	1037	73% 71% 15% 14%
28	Z4	1037	45% 67% 18% 14%
29	a1	380	64% 82% 17%
29	a2	380	23% 82% 17%
29	a3	380	83% 82% 17%
29	a4	380	83% 82% 17%
30	b1	385	58% 83% 6% 11%
30	b2	385	85% 83% 6% 11%
30	b3	385	89% 83% 6% 11%
30	b4	385	31% 83% 6% 11%
31	c1	750	45% 99%
31	c2	750	84% 99%
31	c3	750	45% 99%
31	c4	750	68% 99%
31	c5	750	55% 99%
32	g	421	100% 95% 5%
33	h	232	100% 94% 5%
34	i	481	44% 85% 15%
35	j	150	92% 99%
36	k1	85	58% 87% 13%
37	k2	37	32% 97%

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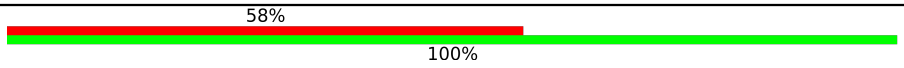
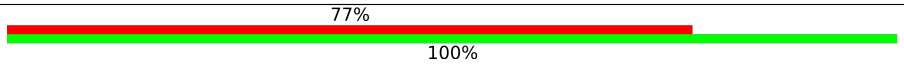
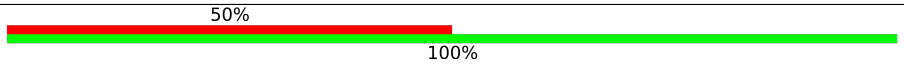
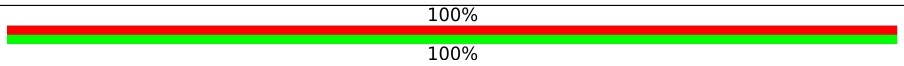
Mol	Chain	Length	Quality of chain
38	l1	92	
39	l2	39	
40	m1	88	
41	m2	20	

2 Entry composition (i)

There are 41 unique types of molecules in this entry. The entry contains 400581 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 NUP155.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A1	1231	Total	C	N	O	S	1	0
			9730	6152	1707	1843	28		
1	A3	1231	Total	C	N	O	S	1	0
			9730	6152	1707	1843	28		

- Molecule 2 is a protein called NUP155.

Mol	Chain	Residues	Atoms						AltConf	Trace
2	A2	1269	Total	C	N	O	S	Se	0	0
			9946	6277	1745	1890	22	12		
2	A4	1269	Total	C	N	O	S	Se	0	0
			9946	6277	1745	1890	22	12		

- Molecule 3 is a protein called NUP155.

Mol	Chain	Residues	Atoms						AltConf	Trace
3	A5	1276	Total	C	N	O	S	Se	1	0
			10030	6331	1762	1901	24	12		
3	A6	1276	Total	C	N	O	S	Se	1	0
			10030	6331	1762	1901	24	12		

- Molecule 4 is a protein called NUP53 R3.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	B1	14	Total	C	N	O	S	0	0
			111	73	19	18	1		
4	B2	14	Total	C	N	O	S	0	0
			111	73	19	18	1		
4	B3	14	Total	C	N	O	S	0	0
			111	73	19	18	1		
4	B4	14	Total	C	N	O	S	0	0
			111	73	19	18	1		

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Mol	Chain	Residues	Atoms					AltConf	Trace
4	B5	14	Total	C	N	O	S	0	0
			111	73	19	18	1		
4	B6	14	Total	C	N	O	S	0	0
			111	73	19	18	1		

- Molecule 5 is a protein called NUP98 R3.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	C1	17	Total	C	N	O	S	0	0
			138	88	24	25	1		
5	C2	19	Total	C	N	O	S	0	0
			157	100	29	27	1		
5	C3	17	Total	C	N	O	S	0	0
			138	88	24	25	1		
5	C4	19	Total	C	N	O	S	0	0
			157	100	29	27	1		
5	C5	17	Total	C	N	O	S	0	0
			138	88	24	25	1		
5	C6	17	Total	C	N	O	S	0	0
			138	88	24	25	1		

- Molecule 6 is a protein called NUP93 SOL.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	D1	621	Total	C	N	O	S	0	0
			5034	3200	874	934	26		
6	D2	621	Total	C	N	O	S	0	0
			5034	3200	874	934	26		
6	D3	621	Total	C	N	O	S	0	0
			5034	3200	874	934	26		
6	D4	621	Total	C	N	O	S	0	0
			5034	3200	874	934	26		
6	D5	621	Total	C	N	O	S	0	0
			5034	3200	874	934	26		
6	D6	621	Total	C	N	O	S	0	0
			5034	3200	874	934	26		
6	D7	621	Total	C	N	O	S	0	0
			5034	3200	874	934	26		

- Molecule 7 is a protein called NUP53 R2.

Mol	Chain	Residues	Atoms				AltConf	Trace
7	E1	8	Total	C	N	O	0	0
			63	42	11	10		
7	E2	8	Total	C	N	O	0	0
			63	42	11	10		
7	E3	8	Total	C	N	O	0	0
			63	42	11	10		
7	E4	8	Total	C	N	O	0	0
			63	42	11	10		
7	E5	8	Total	C	N	O	0	0
			63	42	11	10		
7	E6	8	Total	C	N	O	0	0
			63	42	11	10		
7	E7	8	Total	C	N	O	0	0
			63	42	11	10		

- Molecule 8 is a protein called NUP188.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	F1	1641	Total	C	N	O	S	0	0
			12779	8190	2201	2333	55		
8	F2	1641	Total	C	N	O	S	0	0
			12779	8190	2201	2333	55		

- Molecule 9 is a protein called NUP93 R2.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	G1	53	Total	C	N	O	S	0	0
			438	274	75	88	1		
9	G2	53	Total	C	N	O	S	0	0
			438	274	75	88	1		

- Molecule 10 is a protein called NUP98 R2.

Mol	Chain	Residues	Atoms				AltConf	Trace
10	H1	13	Total	C	N	O	0	0
			94	58	15	21		
10	H2	13	Total	C	N	O	0	0
			94	58	15	21		

- Molecule 11 is a protein called NUP205.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	I1	1542	Total	C	N	O	S	0	0
			12307	7880	2084	2278	65		
11	I2	1542	Total	C	N	O	S	0	0
			12307	7880	2084	2278	65		
11	I3	1542	Total	C	N	O	S	0	0
			12307	7880	2084	2278	65		
11	I4	1542	Total	C	N	O	S	0	0
			12307	7880	2084	2278	65		
11	I5	1542	Total	C	N	O	S	0	0
			12307	7880	2084	2278	65		

- Molecule 12 is a protein called NUP93 R2.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	J1	63	Total	C	N	O	S	0	0
			504	315	86	102	1		
12	J2	63	Total	C	N	O	S	0	0
			504	315	86	102	1		
12	J3	63	Total	C	N	O	S	0	0
			504	315	86	102	1		
12	J4	63	Total	C	N	O	S	0	0
			504	315	86	102	1		
12	J5	63	Total	C	N	O	S	0	0
			504	315	86	102	1		

- Molecule 13 is a protein called NUP98 R1.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	K1	9	Total	C	N	O	S	0	0
			73	51	10	11	1		
13	K2	9	Total	C	N	O	S	0	0
			73	51	10	11	1		
13	K3	9	Total	C	N	O	S	0	0
			73	51	10	11	1		
13	K4	9	Total	C	N	O	S	0	0
			73	51	10	11	1		
13	K5	9	Total	C	N	O	S	0	0
			73	51	10	11	1		

- Molecule 14 is a protein called NUP53 R1.

Mol	Chain	Residues	Atoms				AltConf	Trace
14	L1	2	Total	C	N	O	0	0
			15	11	2	2		
14	L2	2	Total	C	N	O	0	0
			15	11	2	2		
14	L3	2	Total	C	N	O	0	0
			15	11	2	2		
14	L4	2	Total	C	N	O	0	0
			15	11	2	2		
14	L5	2	Total	C	N	O	0	0
			15	11	2	2		

- Molecule 15 is a protein called NUP62.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	M1	169	Total	C	N	O	S	0	0
			1372	855	235	276	6		
15	M2	169	Total	C	N	O	S	0	0
			1372	855	235	276	6		
15	M3	169	Total	C	N	O	S	0	0
			1372	855	235	276	6		
15	M4	169	Total	C	N	O	S	0	0
			1372	855	235	276	6		

- Molecule 16 is a protein called NUP58.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	N1	180	Total	C	N	O	S	0	0
			1401	876	236	282	7		
16	N2	180	Total	C	N	O	S	0	0
			1401	876	236	282	7		
16	N3	180	Total	C	N	O	S	0	0
			1401	876	236	282	7		
16	N4	180	Total	C	N	O	S	0	0
			1401	876	236	282	7		

- Molecule 17 is a protein called NUP54.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	O1	241	Total	C	N	O	S	0	0
			1971	1239	360	368	4		
17	O2	241	Total	C	N	O	S	0	0
			1971	1239	360	368	4		

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Mol	Chain	Residues	Atoms					AltConf	Trace
17	O3	241	Total 1971	C 1239	N 360	O 368	S 4	0	0
17	O4	241	Total 1971	C 1239	N 360	O 368	S 4	0	0

- Molecule 18 is a protein called NUP54 Ferrodoxin-like domain.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	P1	116	Total 900	C 560	N 160	O 178	S 2	1	0
18	P2	116	Total 900	C 560	N 160	O 178	S 2	1	0
18	P3	116	Total 900	C 560	N 160	O 178	S 2	1	0
18	P4	116	Total 900	C 560	N 160	O 178	S 2	1	0

- Molecule 19 is a protein called NUP53 RRM.

Mol	Chain	Residues	Atoms						AltConf	Trace
19	Q1	84	Total 658	C 421	N 114	O 117	S 1	Se 5	1	0
19	Q2	80	Total 616	C 399	N 103	O 108	S 1	Se 5	1	0
19	Q3	84	Total 658	C 421	N 114	O 117	S 1	Se 5	1	0
19	Q4	80	Total 616	C 399	N 103	O 108	S 1	Se 5	1	0

- Molecule 20 is a protein called NUP93 R1.

Mol	Chain	Residues	Atoms				AltConf	Trace
20	R1	40	Total 311	C 195	N 59	O 57	0	0
20	R2	40	Total 311	C 195	N 59	O 57	0	0
20	R3	40	Total 311	C 195	N 59	O 57	0	0
20	R4	40	Total 311	C 195	N 59	O 57	0	0

- Molecule 21 is a protein called NUP133.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	S1	902	Total	C	N	O	S	0	0
			6013	3738	1046	1210	19		
21	S2	902	Total	C	N	O	S	0	0
			6013	3738	1046	1210	19		
21	S3	902	Total	C	N	O	S	0	0
			6013	3738	1046	1210	19		
21	S4	902	Total	C	N	O	S	0	0
			6013	3738	1046	1210	19		

- Molecule 22 is a protein called NUP107 CTD.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	T1	247	Total	C	N	O	S	0	0
			1993	1282	343	355	13		
22	T2	247	Total	C	N	O	S	0	0
			1993	1282	343	355	13		
22	T3	247	Total	C	N	O	S	0	0
			1993	1282	343	355	13		
22	T4	247	Total	C	N	O	S	0	0
			1993	1282	343	355	13		

- Molecule 23 is a protein called NUP107 NTD.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	U1	418	Total	C	N	O	S	0	0
			3396	2174	555	655	12		
23	U2	419	Total	C	N	O	S	0	0
			3404	2178	557	657	12		
23	U3	419	Total	C	N	O	S	0	0
			3404	2178	557	657	12		
23	U4	419	Total	C	N	O	S	0	0
			3404	2178	557	657	12		

- Molecule 24 is a protein called NUP96.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	V1	511	Total	C	N	O	S	0	0
			3805	2417	648	730	10		
24	V2	511	Total	C	N	O	S	0	0
			3805	2417	648	730	10		
24	V3	511	Total	C	N	O	S	0	0
			3805	2417	648	730	10		

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Mol	Chain	Residues	Atoms					AltConf	Trace
24	V4	511	Total	C	N	O	S	0	0
			3805	2417	648	730	10		

- Molecule 25 is a protein called SEC13.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	W1	274	Total	C	N	O	S	0	0
			2160	1379	369	409	3		
25	W2	274	Total	C	N	O	S	0	0
			2160	1379	369	409	3		
25	W3	274	Total	C	N	O	S	0	0
			2160	1379	369	409	3		
25	W4	274	Total	C	N	O	S	0	0
			2160	1379	369	409	3		

- Molecule 26 is a protein called NUP75.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	X1	620	Total	C	N	O	S	0	0
			4535	2884	753	877	21		
26	X2	620	Total	C	N	O	S	0	0
			4535	2884	753	877	21		
26	X3	620	Total	C	N	O	S	0	0
			4535	2884	753	877	21		
26	X4	620	Total	C	N	O	S	0	0
			4535	2884	753	877	21		

- Molecule 27 is a protein called SEH1.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	Y1	307	Total	C	N	O	S	0	0
			2438	1543	422	462	11		
27	Y2	307	Total	C	N	O	S	0	0
			2438	1543	422	462	11		
27	Y3	307	Total	C	N	O	S	0	0
			2438	1543	422	462	11		
27	Y4	307	Total	C	N	O	S	0	0
			2438	1543	422	462	11		

- Molecule 28 is a protein called NUP160.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	Z1	896	Total	C	N	O	S	0	0
			6622	4232	1099	1275	16		
28	Z2	896	Total	C	N	O	S	0	0
			6622	4232	1099	1275	16		
28	Z3	896	Total	C	N	O	S	0	0
			6622	4232	1099	1275	16		
28	Z4	896	Total	C	N	O	S	0	0
			6622	4232	1099	1275	16		

- Molecule 29 is a protein called NUP43.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	a1	316	Total	C	N	O	S	33	1
			2587	1639	447	488	13		
29	a2	316	Total	C	N	O	S	33	1
			2587	1639	447	488	13		
29	a3	316	Total	C	N	O	S	33	1
			2587	1639	447	488	13		
29	a4	316	Total	C	N	O	S	33	1
			2587	1639	447	488	13		

- Molecule 30 is a protein called NUP37.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	b1	343	Total	C	N	O	S	0	0
			2638	1676	447	500	15		
30	b2	343	Total	C	N	O	S	0	0
			2638	1676	447	500	15		
30	b3	343	Total	C	N	O	S	0	0
			2638	1676	447	500	15		
30	b4	343	Total	C	N	O	S	0	0
			2638	1676	447	500	15		

- Molecule 31 is a protein called NUP358.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	c1	743	Total	C	N	O	S	0	0
			5980	3802	1033	1117	28		
31	c2	742	Total	C	N	O	S	0	0
			5976	3800	1032	1116	28		
31	c3	742	Total	C	N	O	S	0	0
			5976	3800	1032	1116	28		

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Mol	Chain	Residues	Atoms					AltConf	Trace
31	c4	742	Total 5976	C 3800	N 1032	O 1116	S 28	0	0
31	c5	742	Total 5976	C 3800	N 1032	O 1116	S 28	0	0

- Molecule 32 is a protein called NUP214 NTD.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	g	421	Total 3282	C 2106	N 535	O 619	S 22	0	0

- Molecule 33 is a protein called DDX19.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	h	232	Total 1836	C 1174	N 313	O 338	S 11	0	0

- Molecule 34 is a protein called NUP88 NTD.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	i	409	Total 3280	C 2134	N 540	O 583	S 23	13	0

- Molecule 35 is a protein called NUP98 APD.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	j	150	Total 1197	C 760	N 205	O 228	S 4	1	0

- Molecule 36 is a protein called NUP62 CCS1.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	k1	85	Total 719	C 448	N 124	O 145	S 2	0	0

- Molecule 37 is a protein called NUP62 CCS2.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	k2	37	Total 308	C 188	N 56	O 63	S 1	0	0

- Molecule 38 is a protein called NUP214 CCS1.

Mol	Chain	Residues	Atoms				AltConf	Trace
38	l1	92	Total	C	N	O	0	0
			460	276	92	92		

- Molecule 39 is a protein called NUP214 CCS2.

Mol	Chain	Residues	Atoms				AltConf	Trace
39	l2	39	Total	C	N	O	0	0
			195	117	39	39		

- Molecule 40 is a protein called NUP88 CCS1.

Mol	Chain	Residues	Atoms				AltConf	Trace
40	m1	88	Total	C	N	O	0	0
			440	264	88	88		

- Molecule 41 is a protein called NUP88 CCS2.

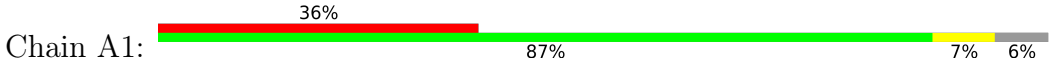
Mol	Chain	Residues	Atoms				AltConf	Trace
41	m2	20	Total	C	N	O	0	0
			100	60	20	20		

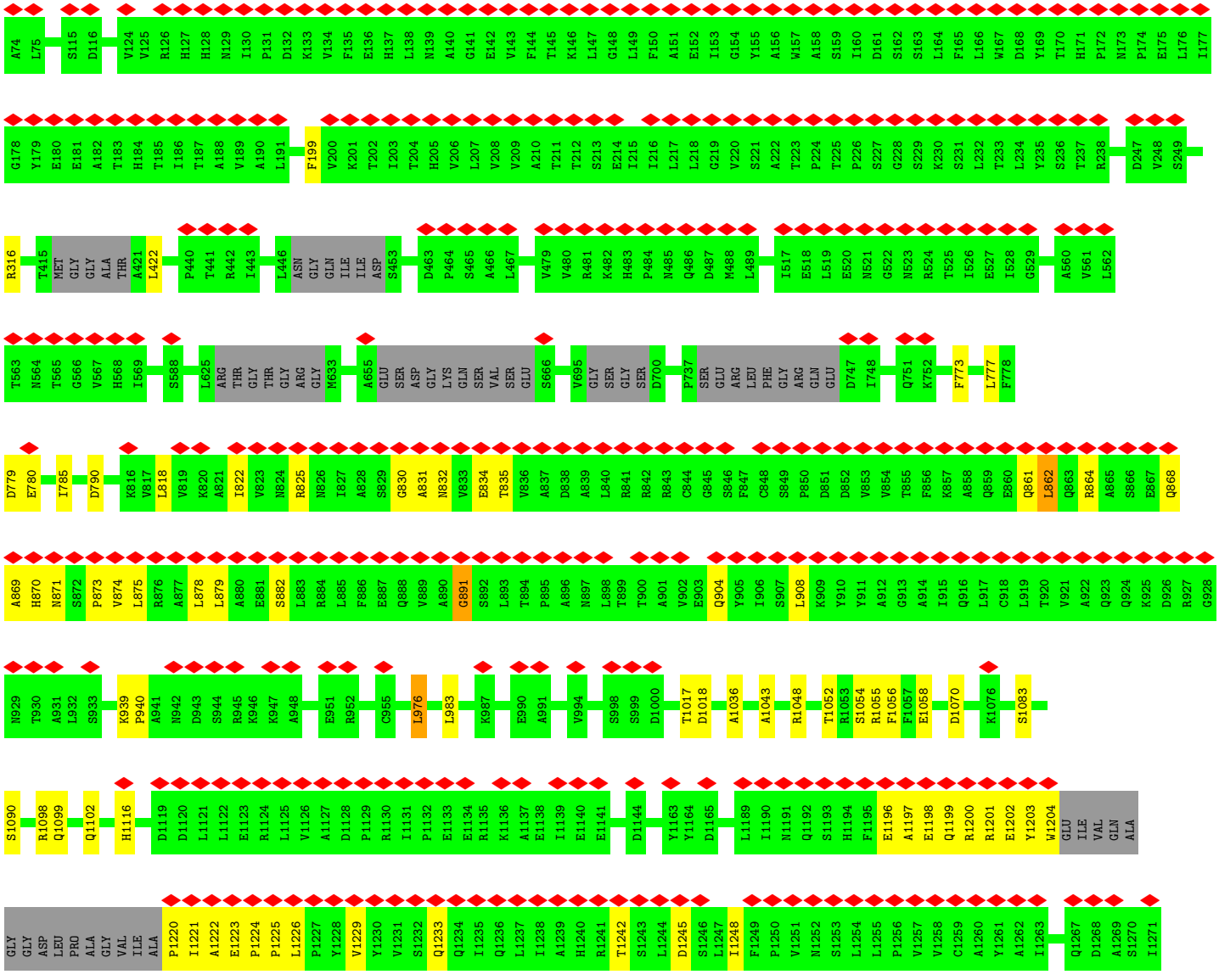
3 Residue-property plots (i)

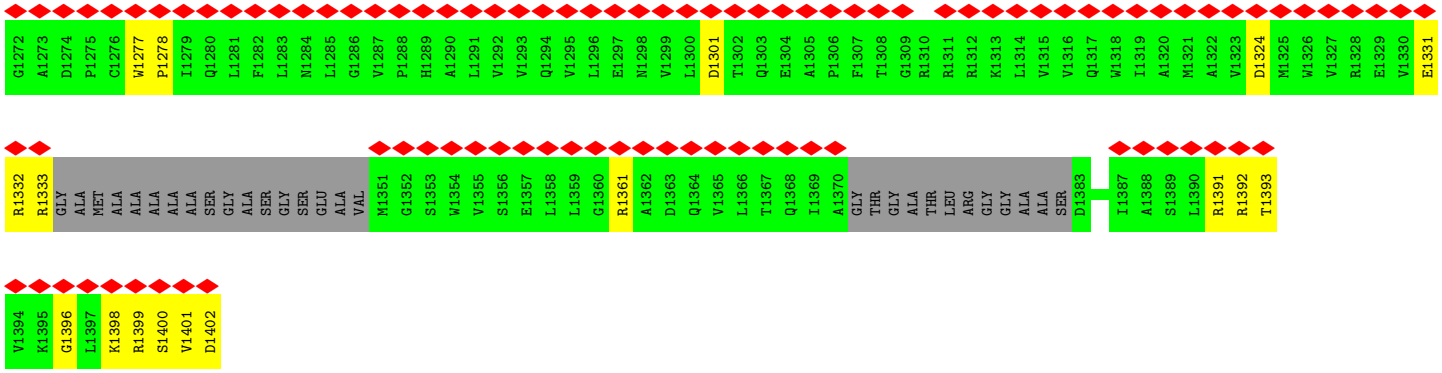
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

- Molecule 1: NUP155

Chain A1:

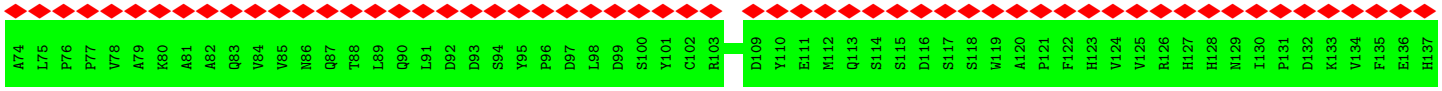


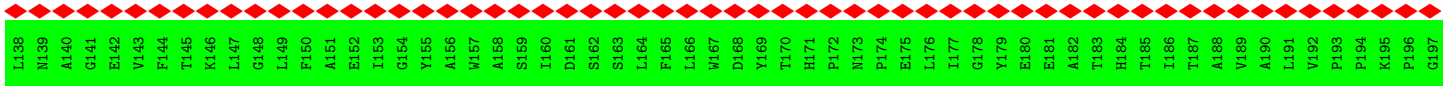


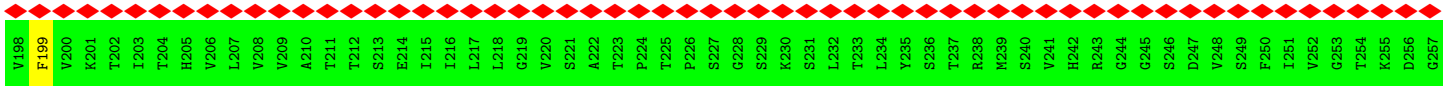


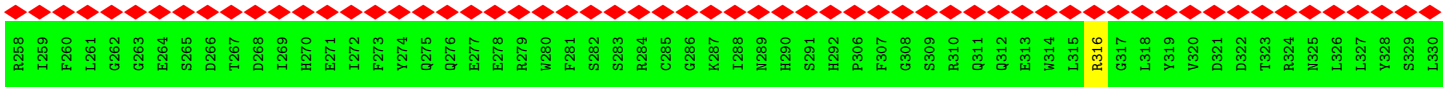
- Molecule 1: NUP155

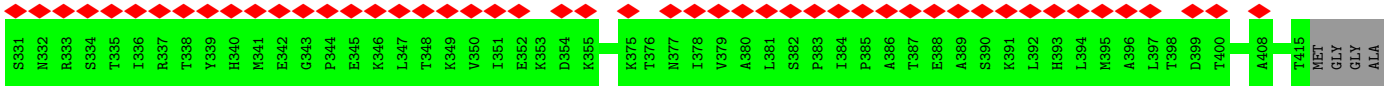
Chain A3:

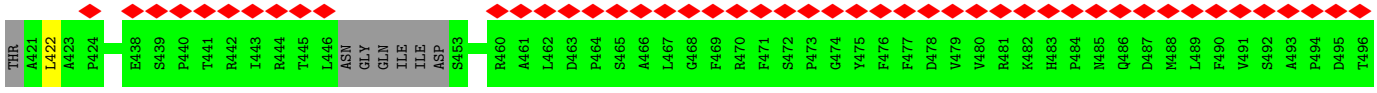


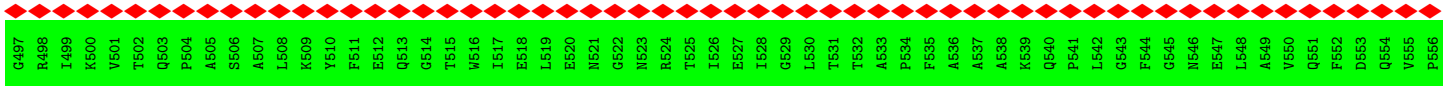


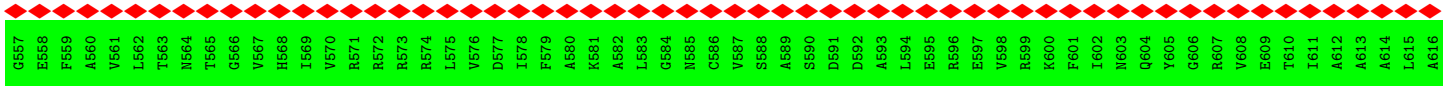


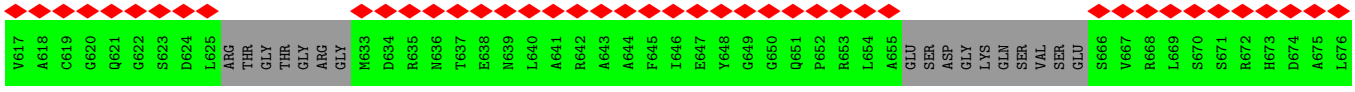


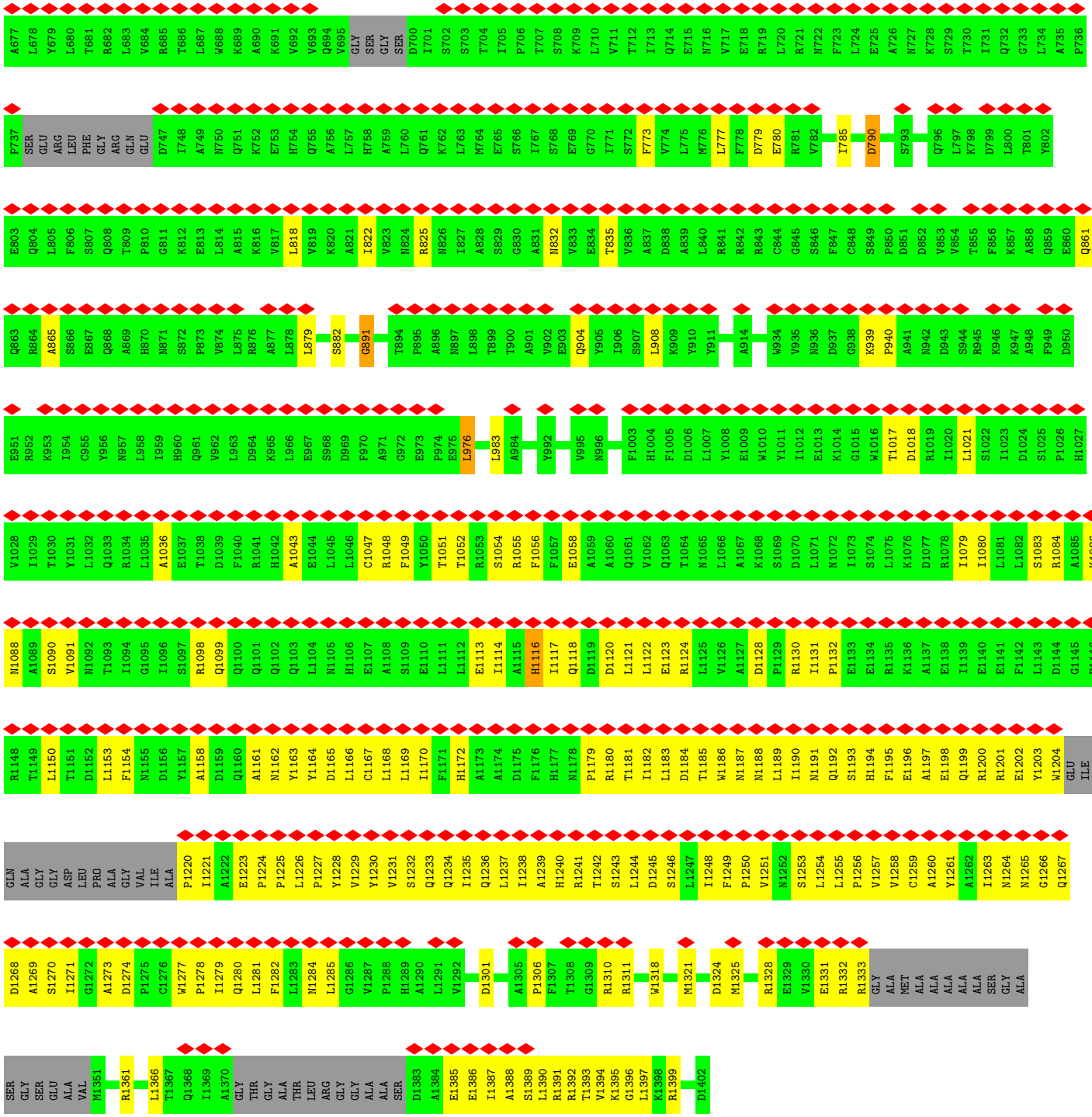






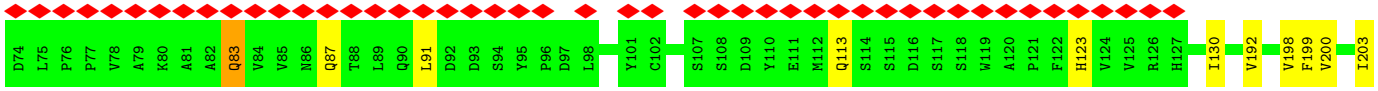


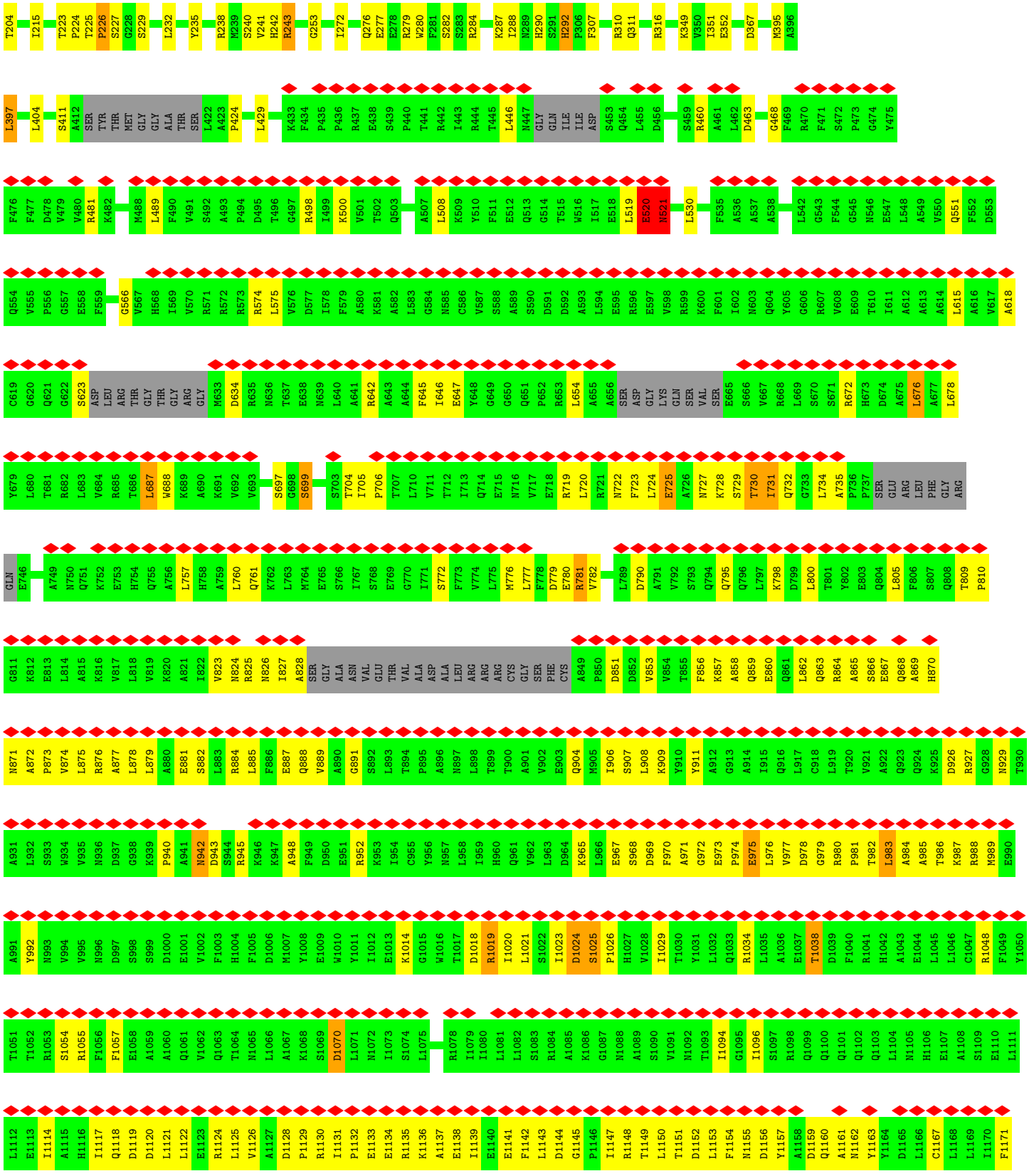




- Molecule 2: NUP155

Chain A2:

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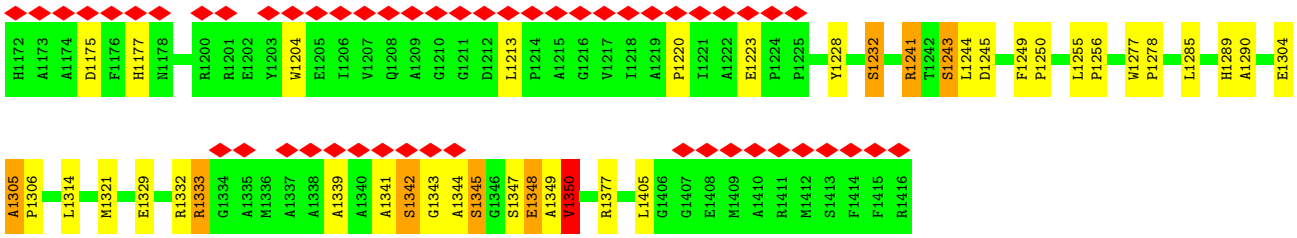
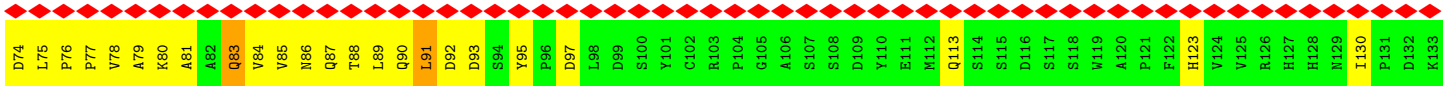
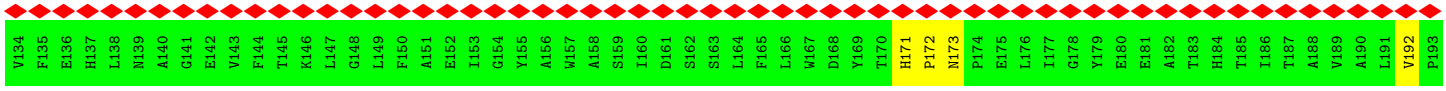
L397 L404 S411 A412 SER TYR THR MET GLY GLY ALA THR SER L422 A423 P424 L429 K433 F434 P435 P436 R437 E438 S439 P440 T441 R442 I443 R444 T445 L446 N447 GLY GLN ILE ASP S453 Q454 L455 D456 S459 R460 A461 L462 D463 G468 F469 R470 F471 S472 P473 G474 Y475
F476 F477 D478 V479 Y480 R481 K482 M488 L489 F490 V491 S492 A493 P494 D495 T496 G497 R498 T499 K500 V501 T502 Q503 A507 L508 K509 Y510 F511 E512 Q513 G514 T515 W516 I517 E518 L519 E520 N521 L530 F535 A536 A537 A538 L542 G543 F544 G545 N546 E547 L548 A549 V550 Q551 F552 D553
Q554 V555 P556 G557 E558 F559 G566 V567 H568 I569 V570 R571 R572 R573 R574 L575 V576 D577 I578 F579 A580 K581 A582 L583 G584 N585 C586 V587 S588 A589 S590 D591 D592 A593 L594 E595 R596 E597 V598 R599 K600 F601 I602 N603 Q604 Y605 G606 R607 V608 E609 T610 I611 A612 A613 A614 L615 A616 V617 A618
C619 G620 Q621 G622 S623 ASP LEU ARG THR GLY THR GLY ARG GLY M633 D634 R635 N636 T637 E638 N639 L640 A641 R642 A643 A644 F645 I646 E647 Y648 G649 G650 Q651 P652 R653 L654 A655 A656 SER ASP GLY LYS GLN SER VAL SER E665 S666 V667 R668 L669 S670 S671 R672 H673 D674 A675 L676 A677 L678
Y679 L680 T681 R682 L683 V684 R685 T686 L687 W688 K689 A690 K691 V692 V693 S697 G698 S699 S703 T704 I705 P706 T707 L710 V711 T712 I713 Q714 E715 N716 V717 E718 R719 L720 R721 N722 F723 L724 E725 A726 N727 K728 S729 T730 I731 Q732 G733 L734 A735 P736 P737 SER GLU ARG LEU PHE GLY ARG
GLN E746 A749 N750 Q751 K752 E753 H754 Q755 A756 L757 H758 A759 L760 Q761 K762 L763 M764 E765 S766 I767 S768 E769 G770 I771 S772 F773 V774 L775 M776 L777 F778 D779 E780 R781 V782 L789 D790 A791 V792 S793 Q794 Q795 Q796 L797 K798 D799 L800 T801 Y802 E803 Q804 L805 F606 S807 Q808 T809 P810
G811 K812 E813 L814 A815 K816 V817 L818 V819 K820 A821 I822 V823 N824 R825 N826 I827 A828 SER GLY ALA ASN VAL GLU THR VAL ALA ASP ALA LEU ARG ARG ARG CYS GLY SER PHE CYS A849 P850 D851 D852 V853 V854 T855 F856 K857 A858 Q859 E860 Q861 L862 Q863 R864 A865 S866 E867 Q868 A869 H870
N871 A872 P873 V874 L875 R876 A877 L878 L879 A880 E881 S882 L883 R884 L885 F886 E887 Q888 V889 A890 G891 S892 L893 T894 P895 A896 N897 L898 T899 T900 A901 V902 E903 Q904 M905 I906 S907 L908 K909 Y910 Y911 A912 G913 A914 I915 Q916 L917 C918 L919 T920 V921 A922 Q923 Q924 K925 D926 R927 G928 N929 T930
A931 L932 S933 W934 V935 N936 D937 G938 K939 P940 A941 N942 D943 S944 R945 K946 K947 A948 F949 D950 E951 R952 K953 I954 C955 Y956 N957 L958 I959 H960 Q961 V962 L963 D964 K965 L966 E967 S968 D969 F970 A971 G972 E973 P974 E975 L976 V977 D978 G979 R980 P981 T982 L983 A984 A985 T986 K987 R988 M989 E990
A991 Y992 N993 V994 V995 N996 D997 S998 S999 D1000 E1001 V1002 F1003 H1004 F1005 D1006 M1007 Y1008 E1009 E1010 Y1011 I1012 E1013 K1014 G1015 W1016 T1017 D1018 R1019 I1020 L1021 S1022 I1023 D1024 S1025 P1026 H1027 V1028 I1029 T1030 Y1031 L1032 Q1033 R1034 L1035 A1036 E1037 T1038 D1039 F1040 R1041 H1042 A1043 E1044 L1045 L1046 C1047 R1048 F1049 Y1050
T1051 T1052 R1053 S1054 R1055 F1056 F1057 E1058 A1059 A1060 Q1061 V1062 Q1063 T1064 N1065 L1066 A1067 K1068 S1069 D1070 L1071 N1072 I1073 S1074 L1075 R1078 I1079 I1080 L1081 L1082 S1083 R1084 A1085 K1086 G1087 N1088 A1089 S1090 V1091 N1092 T1093 I1094 G1095 I1096 S1097 R1098 Q1099 Q1100 Q1101 Q1102 Q1103 L1104 N1105 H1106 E1107 A1108 S1109 E1110 L1111
L1112 E1113 I1114 A1115 H1116 I1117 Q1118 D1119 D1120 L1121 L1122 E1123 R1124 L1125 V1126 A1127 D1128 P1129 R1130 I1131 P1132 E1133 E1134 R1135 K1136 A1137 E1138 I1139 E1140 E1141 F1142 L1143 D1144 G1145 P1146 I1147 R1148 T1149 L1150 T1151 D1152 L1153 F1154 N1155 D1156 Y1157 A1158 D1159 Q1160 A1161 N1162 Y1163 Y1164 D1165 L1166 C1167 L1168 L1169 I1170 F1171

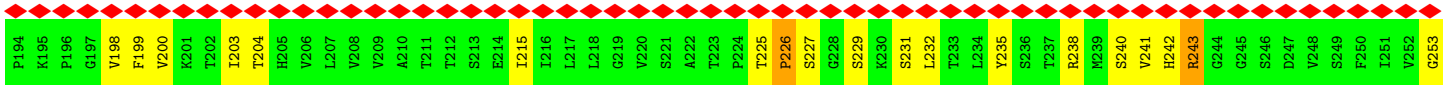


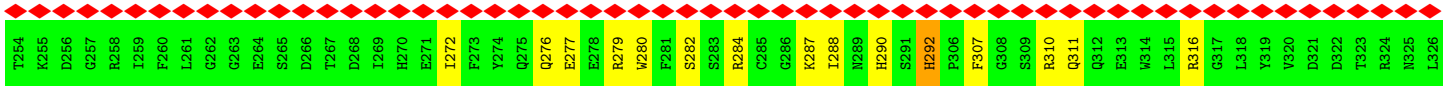
• Molecule 2: NUP155

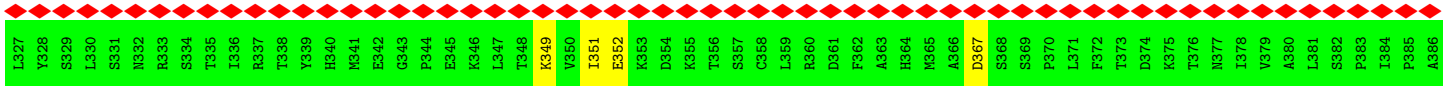
Chain A4:

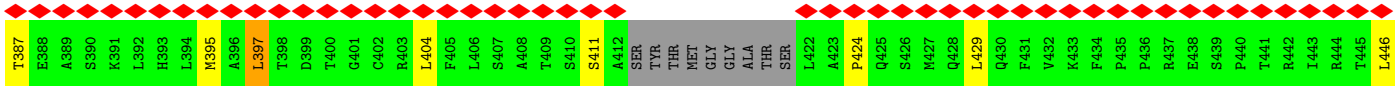


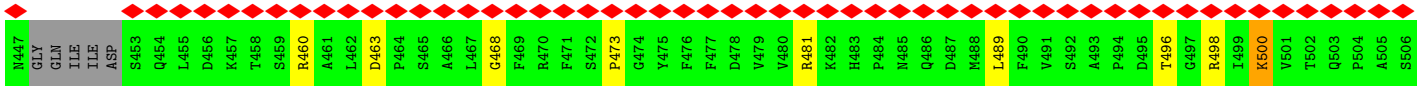


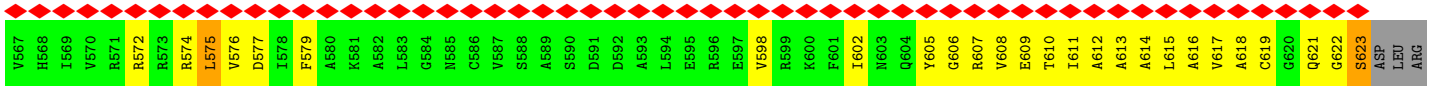


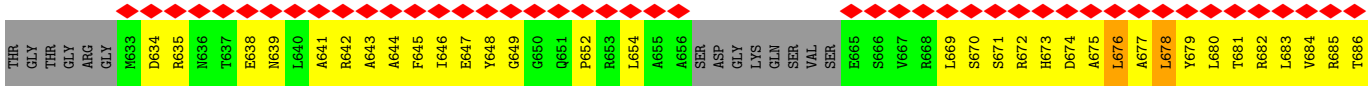


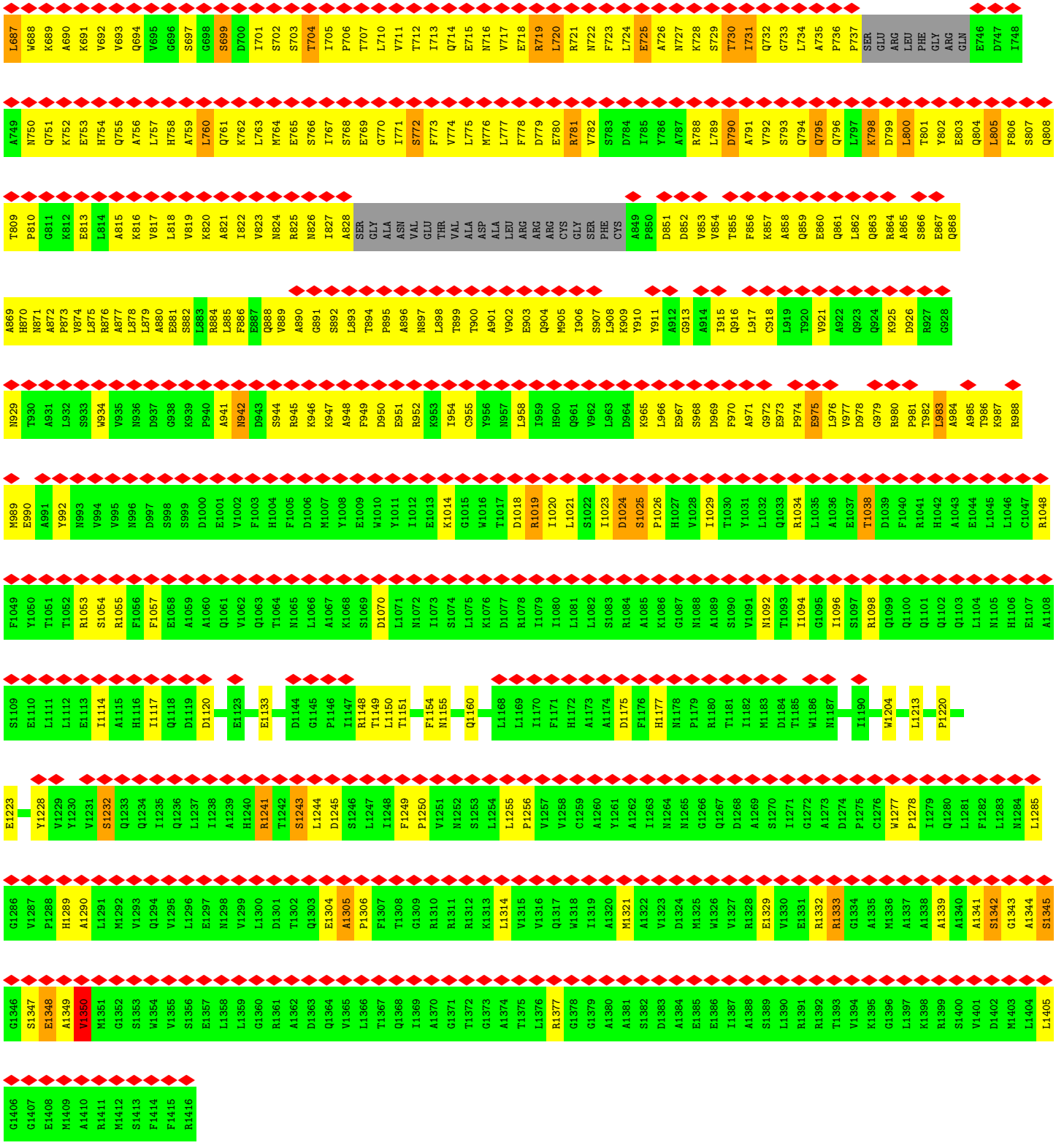






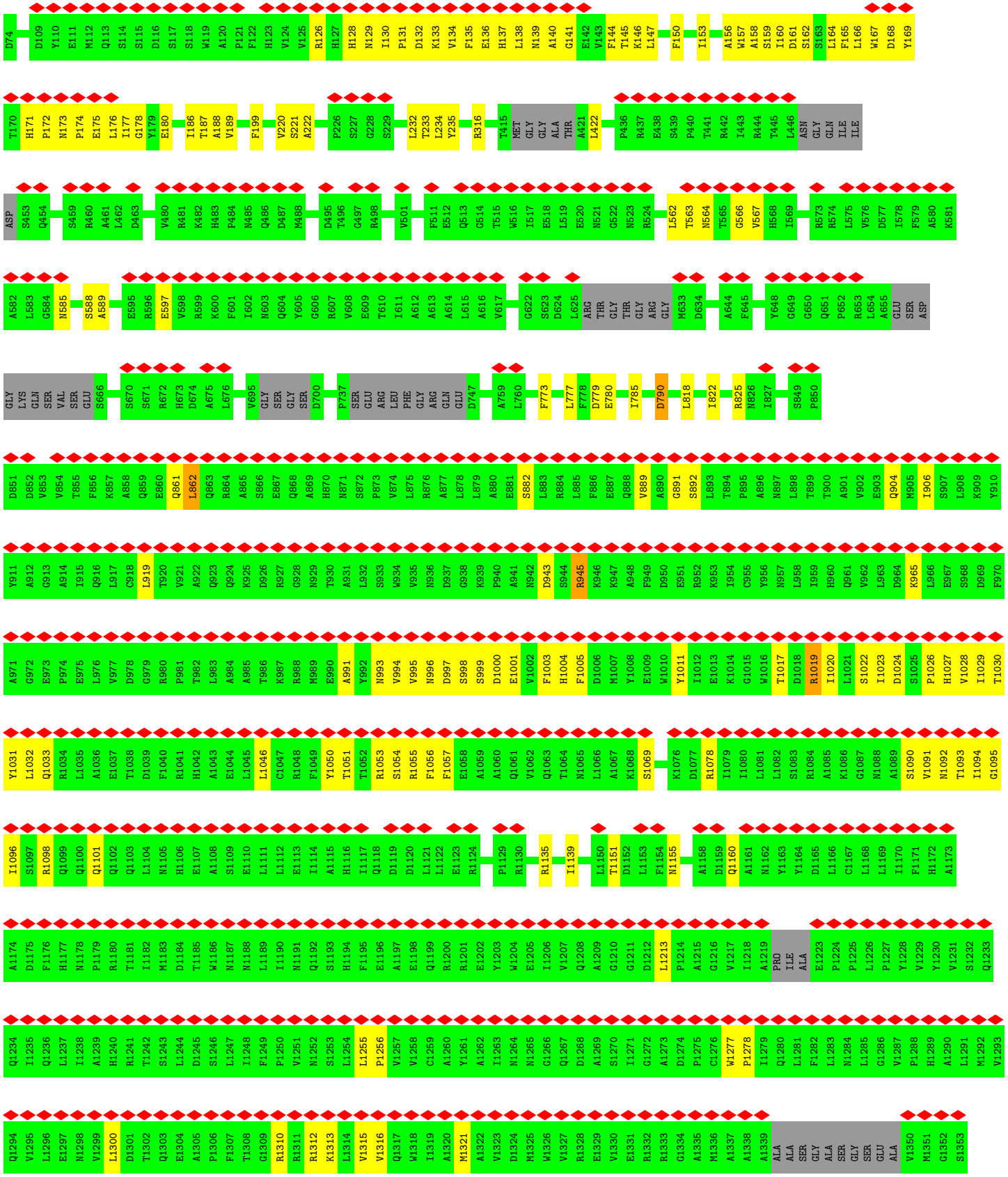






• Molecule 3: NUP155

Chain A5: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T170 H171 P172 N173 P174 E175 L176 I177 G178 Y179 E180 I186 T187 A188 V189 F199 V220 S221 A222 P226 S227 G228 S229 L232 T233 L234 Y235 R316 T415 MET GLY GLY ALA THR A421 L422 P436 R437 E438 S439 P440 T441 R442 I443 R444 T445 L446 ASN GLY GLN ILE ILE
ASP S453 Q454 S459 R460 A461 L462 D463 V480 R481 K482 H483 P484 N485 Q486 D487 M488 D495 T496 G497 R498 V501 F511 E512 Q513 G514 T515 W516 I517 E518 L519 E520 N521 G522 N523 R524 L562 T563 N564 T565 G566 V567 H568 I569 R573 R574 L575 V576 D577 I578 F579 A580 K581
A582 L583 G584 N585 S588 A589 E595 R596 E597 V598 R599 K600 F601 I602 N603 Q604 Y605 G606 R607 V608 E609 T610 I611 A612 A613 A614 L615 A616 V617 G622 S623 D624 L625 ARG THR GLY THR GLY ARG GLY M633 D634 A644 F645 Y648 G649 G650 Q651 P652 R653 L654 A655 GLU SER ASP
GLY LYS GLN SER VAL SER GLU S666 S670 S671 R672 H673 D674 A675 L676 V695 GLY SER GLY SER D700 P737 SER GLU ARG LEU PHE GLY ARG GLN GLU D747 A759 L760 F773 L777 F778 D779 E780 I785 D790 L818 I822 R825 N826 I827 S849 P850
D851 D852 V853 V854 T855 F856 K857 A858 Q859 E860 Q861 L862 Q863 R864 A865 S866 E867 Q868 A869 H870 N871 S872 P873 V874 L875 R876 A877 L878 L879 A880 E881 S882 L883 R884 L885 F886 E887 Q888 V889 A890 G891 S892 L893 T894 P895 A896 N897 L898 T899 T900 A901 V902 E903 Q904 M905 I906 S907 L908 K909 Y910
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A971 G972 E973 P974 E975 L976 V977 D978 G979 R980 P981 T982 L983 A984 A985 T986 K987 R988 N989 E990 A991 Y992 N993 V994 V995 N996 D997 S998 S999 D1000 E1001 V1002 F1003 H1004 F1005 D1006 M1007 Y1008 E1009 W1010 Y1011 I1012 E1013 K1014 G1015 W1016 T1017 D1018 R1019 I1020 L1021 S1022 I1023 D1024 S1025 P1026 H1027 V1028 I1029 T1030
Y1031 L1032 Q1033 R1034 L1035 A1036 E1037 T1038 D1039 F1040 R1041 H1042 A1043 E1044 L1045 L1046 C1047 R1048 F1049 Y1050 T1051 T1052 R1053 S1054 R1055 F1056 F1057 E1058 A1059 A1060 Q1061 V1062 Q1063 T1064 N1065 L1066 A1067 K1068 S1069 K1076 D1077 R1078 I1079 I1080 L1081 L1082 S1083 R1084 A1085 K1086 G1087 N1088 A1089 S1090 V1091 N1092 T1093 I1094 G1095
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Q1294 V1295 L1296 E1297 N1298 V1299 L1300 D1301 T1302 Q1303 E1304 A1305 P1306 F1307 T1308 G1309 R1310 R1311 R1312 K1313 L1314 V1315 V1316 Q1317 W1318 I1319 A1320 M1321 A1322 V1323 D1324 M1325 W1326 V1327 R1328 E1329 V1330 E1331 R1332 R1333 G1334 A1335 M1336 A1337 A1338 A1339 ALA ALA SER GLY ALA SER GLY SER GLU ALA V1350 M1351 G1352 S1353

W1354 V1355 S1356 E1357 L1358 L1359 G1360 R1361 A1362 D1363 Q1364 V1365 L1366 T1367 Q1368 I1369 A1370 G1371 T1372 G1373 A1374 T1375 L1376 R1377 G1378 G1379 A1380 A1381 S1382 D1383 A1384 E1385 E1386 I1387 A1388 S1389 L1390 R1391 R1392 T1393 V1394 K1395 G1396 L1397 K1398 R1399 S1400 V1401 D1402 M1403 L1404 L1405 G1406 G1407 E1408 M1409 A1410 R1411 M1412 S1413

F1414 F1415 R1416

• Molecule 3: NUP155

Chain A6:

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V134 F135 E136 H137 L138 N139 A140 G141 E142 Y143 F144 T145 K146 L147 G148 L149 F150 A151 E152 I153 G154 Y155 A156 W157 A158 S159 I160 D161 S162 S163 L164 F165 L166 W167 D168 Y169 T170 H171 P172 N173 P174 E175 L176 I177 G178 Y179 E180 E181 A182 T183 H184 T185 I186 T187 A188 Y189 A190 L191 V192 P193

P194 K195 P196 G197 V198 F199 V200 K201 T202 I203 T204 H205 V206 L207 V208 V209 A210 T211 T212 S213 E214 I215 I216 L217 L218 G219 V220 S221 A222 T223 P224 T225 P226 S227 G228 S229 K230 S231 L232 T233 L234 Y235 S236 T237 R238 M239 S240 V241 H242 R243 G244 G245 S246 D247 V248 S249 F250 I251 V252 G253

T254 K255 D256 G257 R258 I259 F260 L261 G262 G263 E264 S265 D266 T267 D268 I269 H270 E271 I272 F273 Y274 Q275 Q276 E277 E278 R279 W280 F281 S282 S283 R284 C285 G286 K287 I288 N289 H290 S291 H292 P306 F307 G308 S309 R310 Q311 Q312 E313 W314 L315 R316 G317 L318 Y319 V320 D321 D322 T323 R324 N325 L326

L327 Y328 S329 L330 S331 N332 R333 S334 T335 I336 R337 T338 Y339 H340 M341 E342 G343 P344 E345 K346 L347 T348 K349 V350 I351 E352 K353 D354 K355 T356 S357 C358 L359 R360 D361 F362 A363 H364 M365 A366 D367 S368 S369 P370 L371 F372 T373 D374 K375 T376 N377 I378 V379 A380 L381 S382 P383 I384 P385 A386

T387 E388 A389 S390 K391 L392 H393 L394 M395 A396 L397 T398 D399 T400 G401 C402 R403 L404 F405 L406 S407 A408 T409 S410 S411 A412 S413 Y414 T415 MET GLY GLY ALA THR A421 L422 A423 P424 Q425 S426 M427 Q428 L429 Q430 F431 V432 K433 F434 P435 P436 R437 E438 S439 P440 T441 R442 I443 R444 T445 L446

ASN GLY GLN ILE ILE ASP S453 Q454 L455 D456 K457 T458 S459 R460 A461 L462 D463 P464 S465 A466 L467 G468 F469 R470 F471 S472 P473 G474 Y475 F476 F477 D478 V479 V480 R481 K482 H483 P484 N485 Q486 D487 M488 L489 F490 V491 S492 A493 P494 D495 T496 G497 R498 I499 K500 V501 T502 Q503 P504 A505 S506

A507 L508 K509 Y510 F511 E512 Q513 G514 T515 W516 I517 E518 L519 E520 N521 G522 N523 R524 T525 I526 E527 I528 G529 L530 T531 T532 A533 P534 F535 A536 A537 A538 K539 Q540 P541 L542 G543 F544 G545 N546 E547 L548 A549 V550 Q551 F552 D553 Q554 V555 P556 G557 E558 F559 A560 V561 L562 T563 N564 T565 G566

V567 H568 I569 V570 R571 R572 R573 R574 L575 V576 D577 I578 F579 A580 K581 A582 L583 G584 N585 C586 V587 S588 A589 S590 D591 D592 A593 L594 E595 R596 E597 V598 R599 K600 F601 I602 N603 Q604 Y605 G606 R607 V608 E609 T610 I611 A612 A613 A614 L615 A616 V617 A618 C619 G620 Q621 G622 S623 D624 L625 ARG

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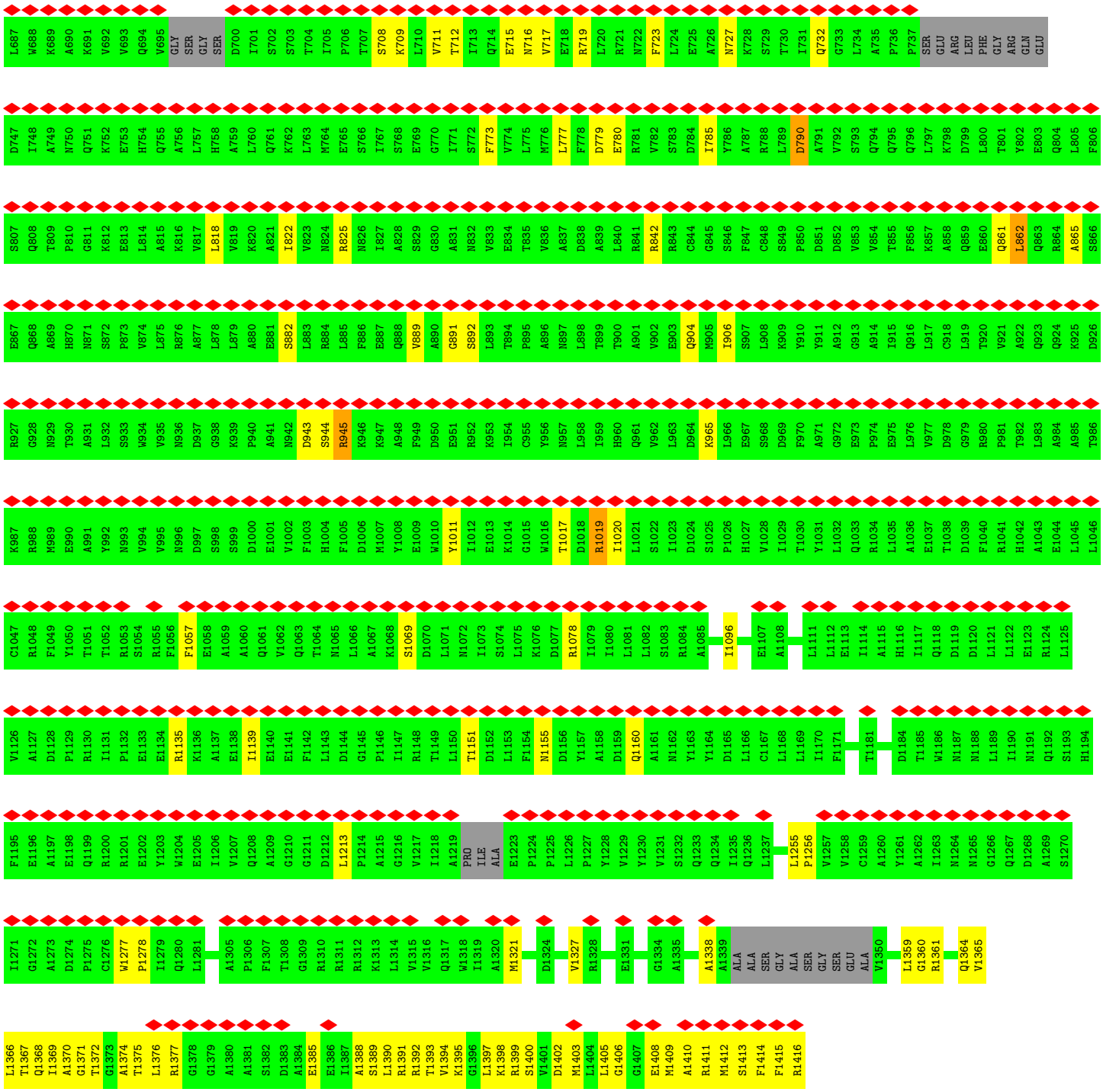
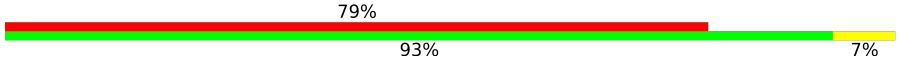
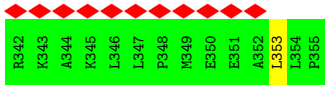


- Molecule 4: NUP53 R3

Chain B1:



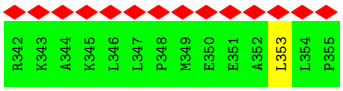


- Molecule 4: NUP53 R3

Chain B2:

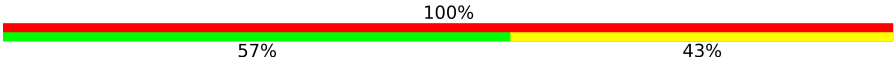
• Molecule 4: NUP53 R3

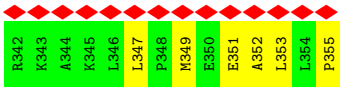
Chain B3:



• Molecule 4: NUP53 R3

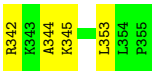
Chain B4:





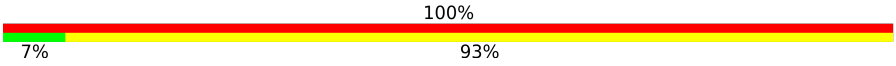
• Molecule 4: NUP53 R3

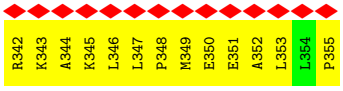
Chain B5:



• Molecule 4: NUP53 R3

Chain B6:



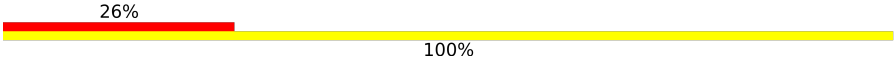


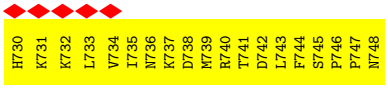
• Molecule 5: NUP98 R3

Chain C1:

• Molecule 5: NUP98 R3

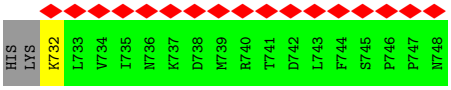
Chain C2:





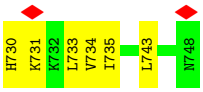
• Molecule 5: NUP98 R3

Chain C3:



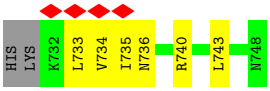
• Molecule 5: NUP98 R3

Chain C4:



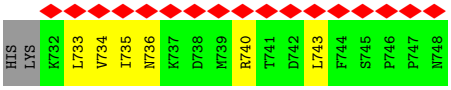
• Molecule 5: NUP98 R3

Chain C5:



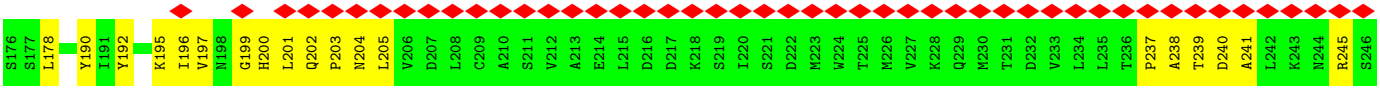
• Molecule 5: NUP98 R3

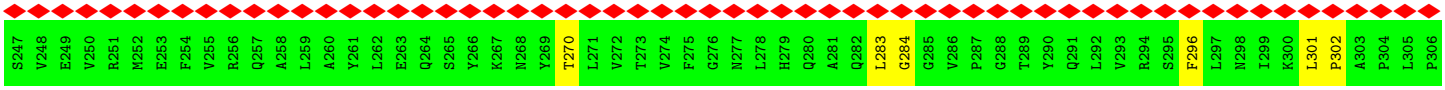
Chain C6:

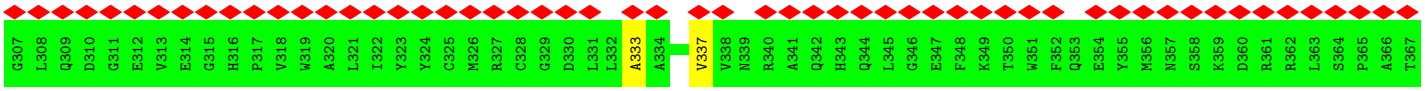


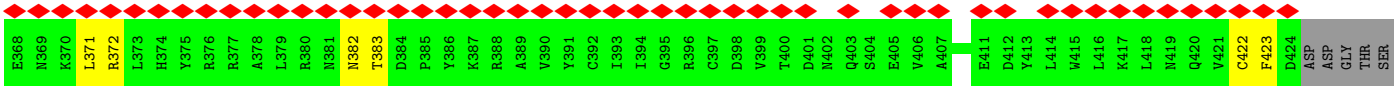
• Molecule 6: NUP93 SOL

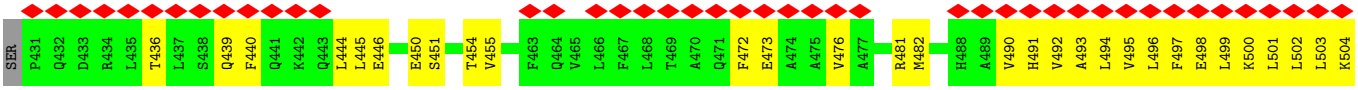
Chain D1:

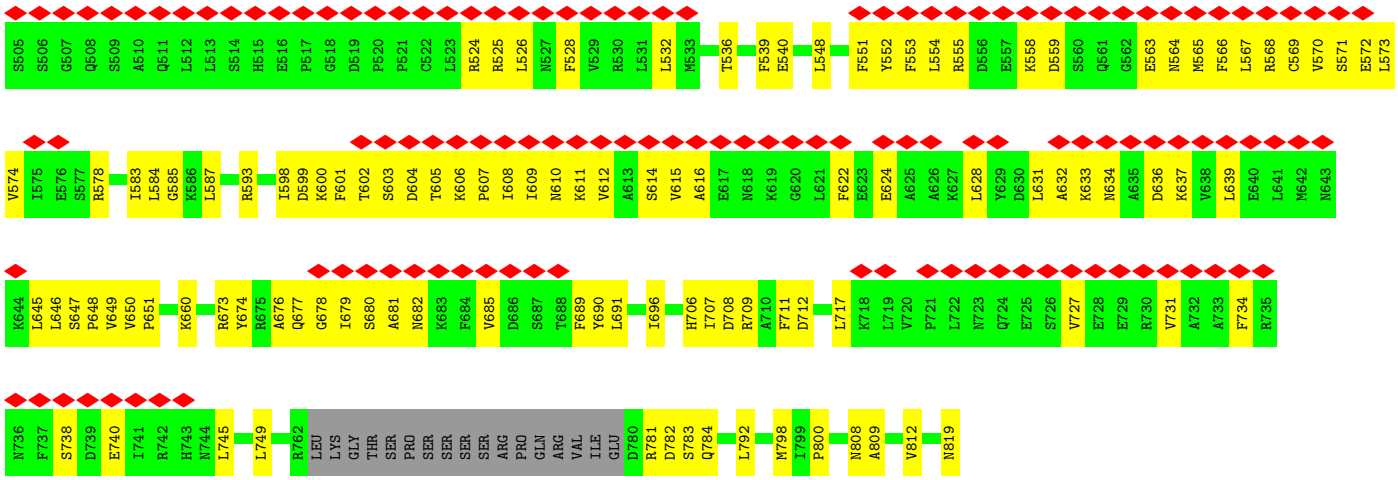






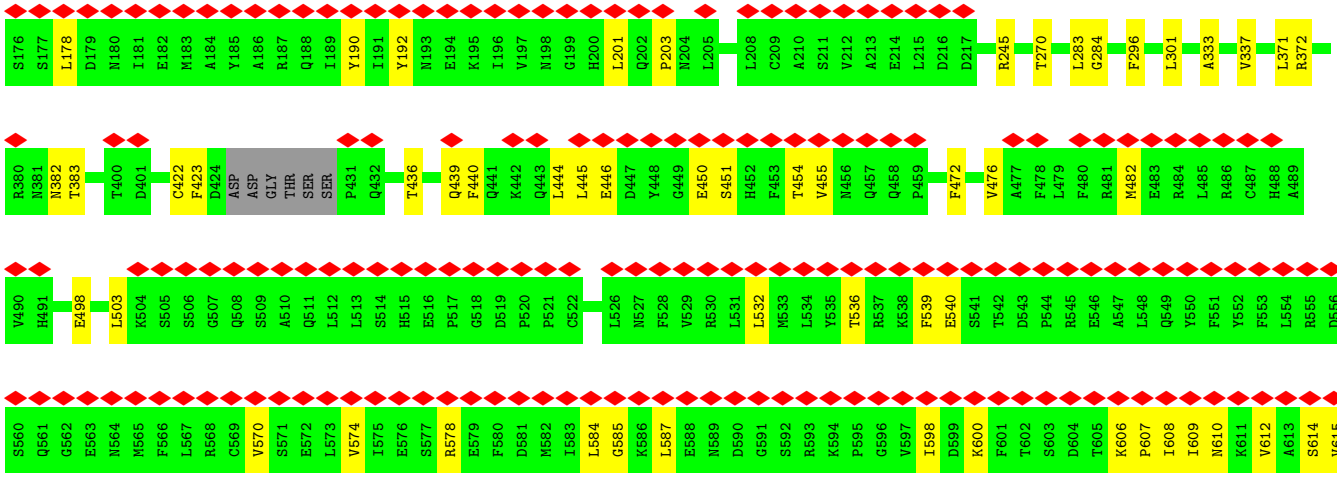






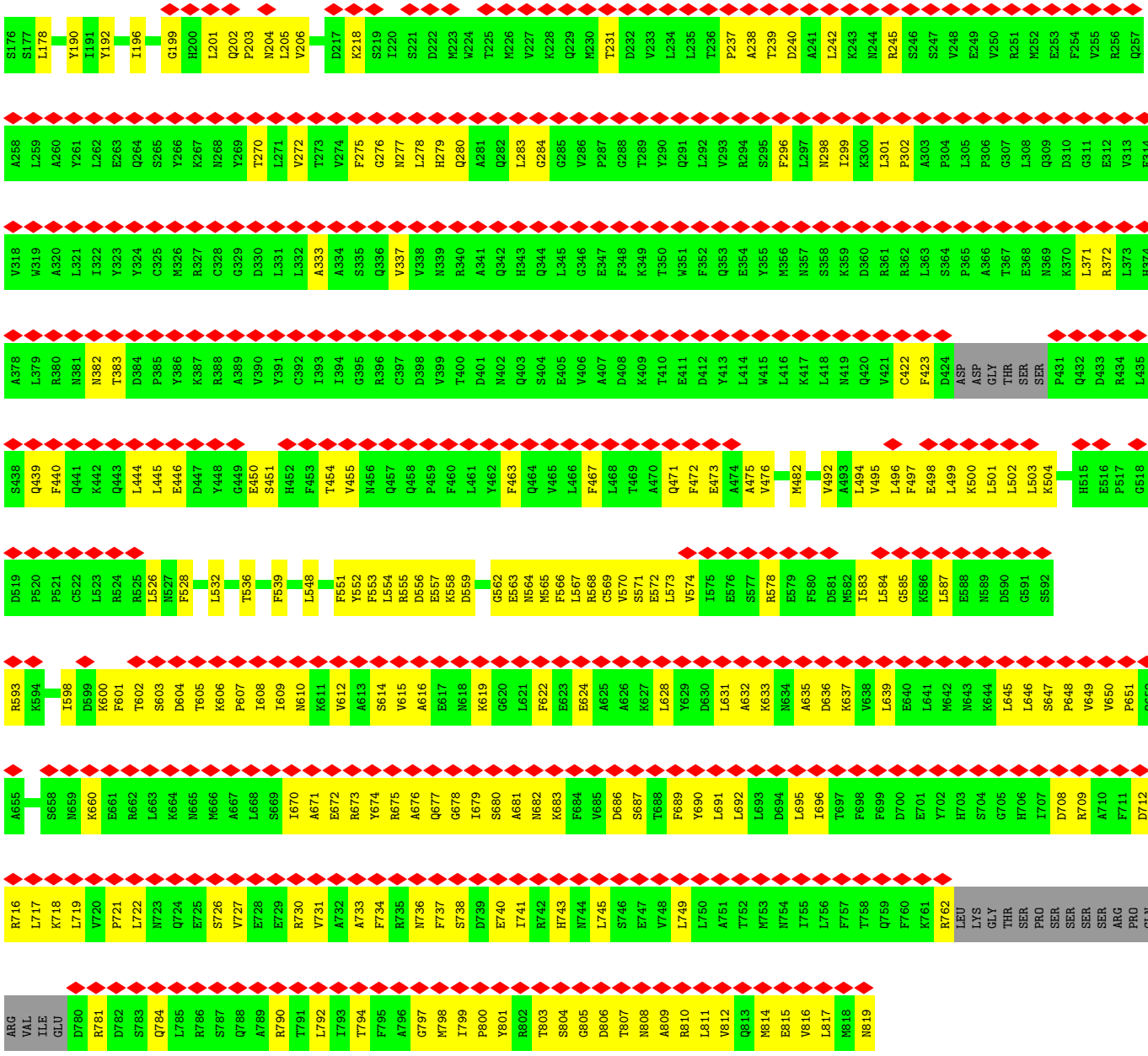
- Molecule 6: NUP93 SOL

Chain D2:



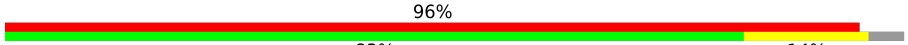
- Molecule 6: NUP93 SOL

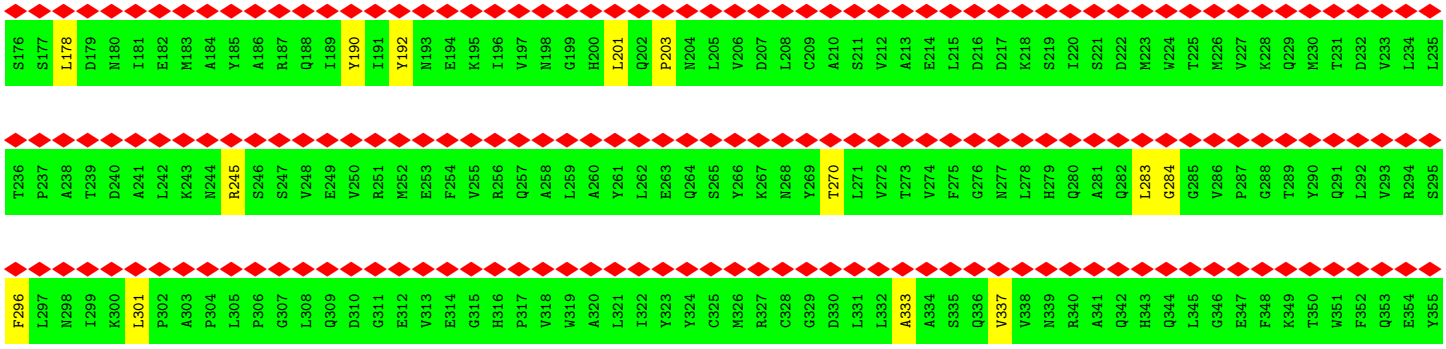
Chain D3:

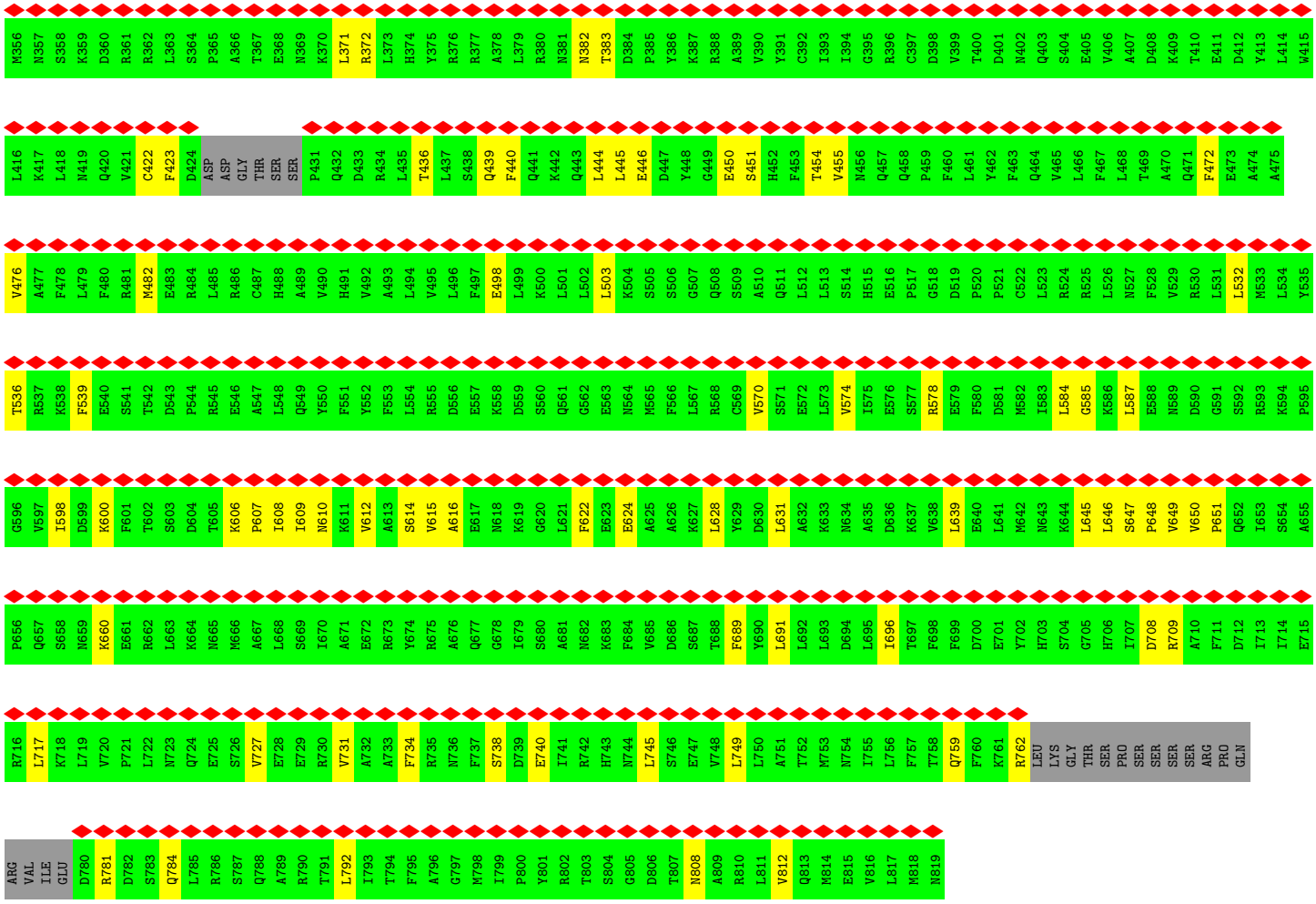


• Molecule 6: NUP93 SOL

Chain D4:

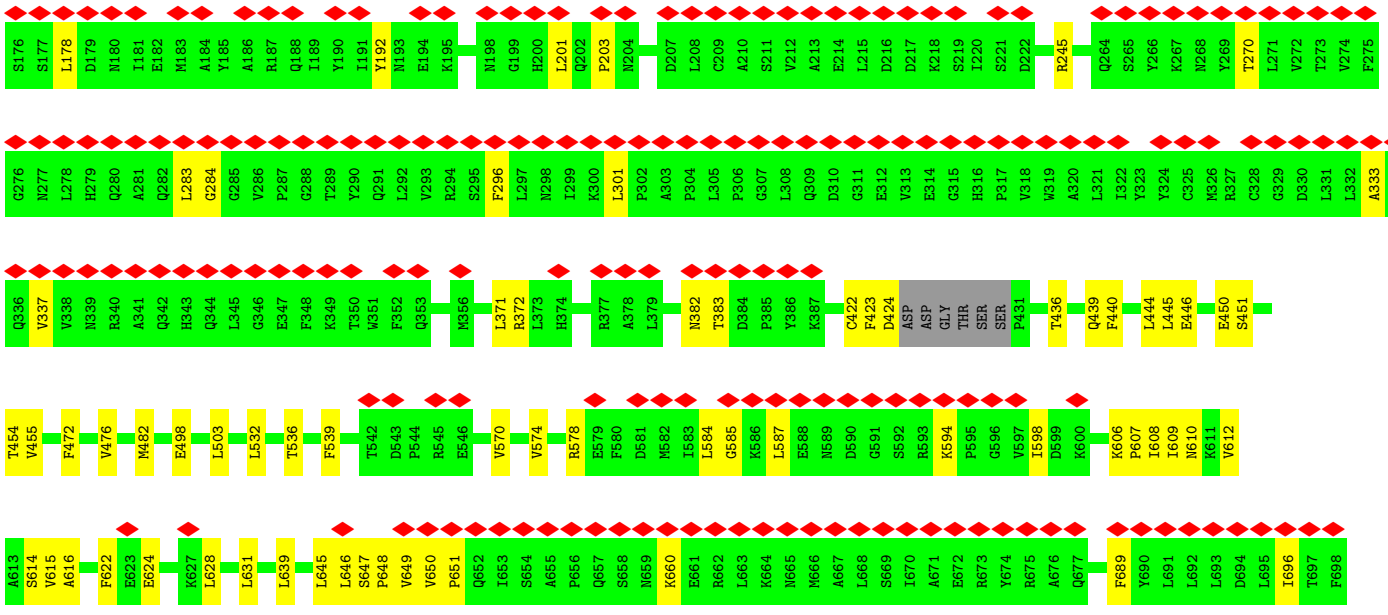


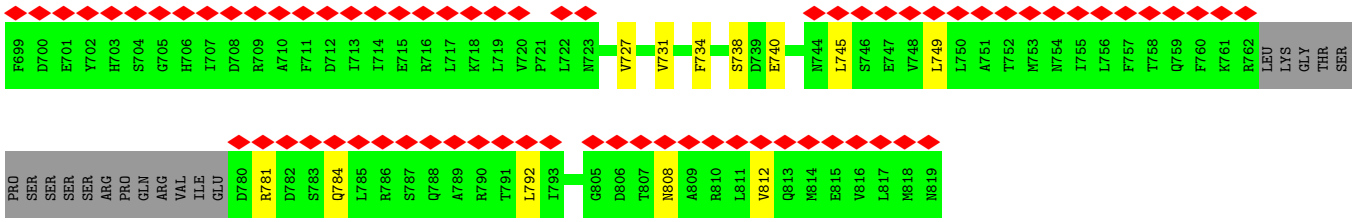




• Molecule 6: NUP93 SOL

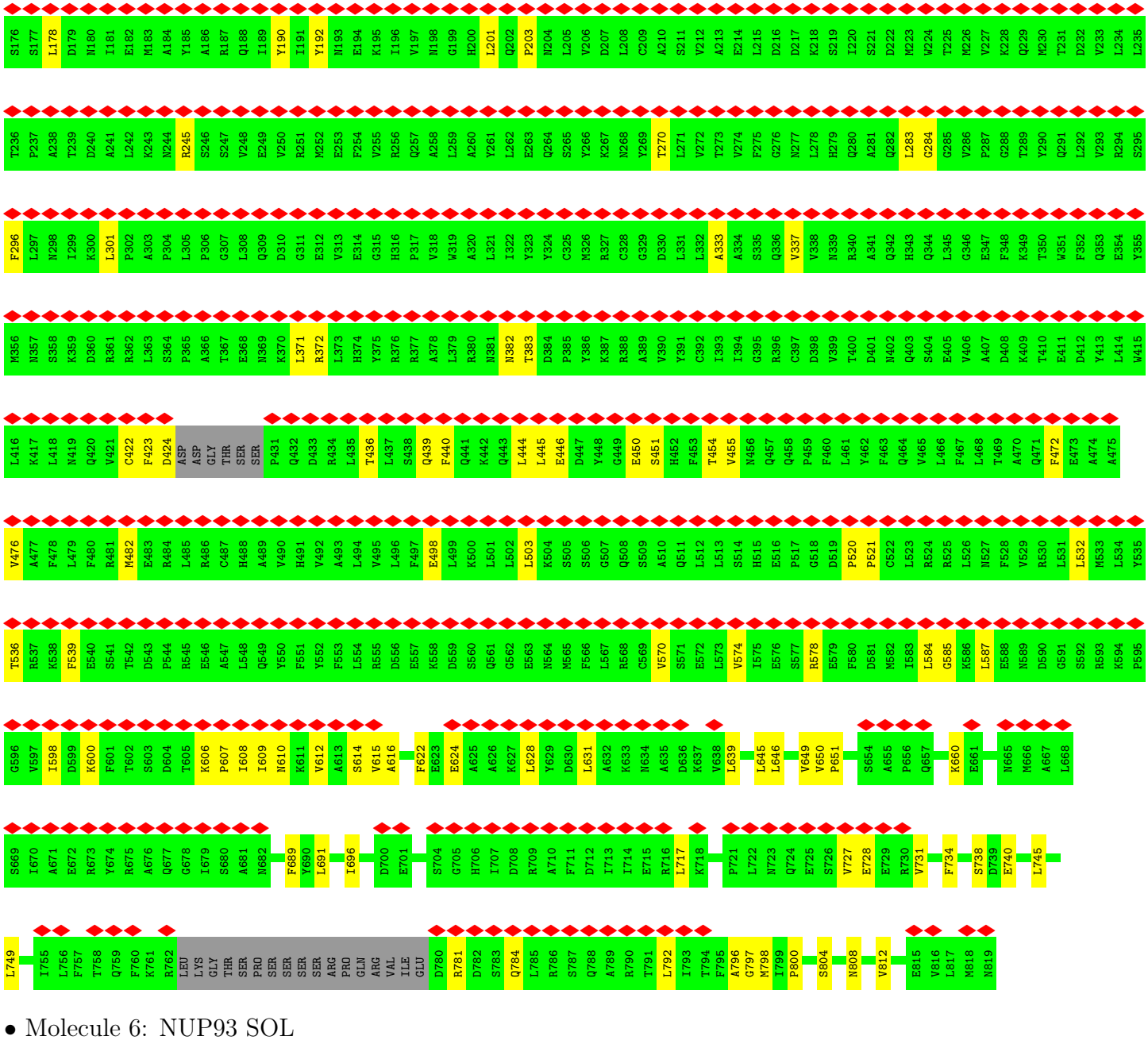
Chain D5:





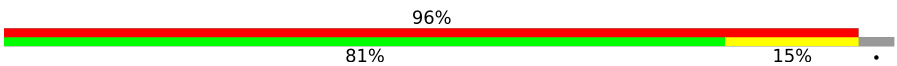
• Molecule 6: NUP93 SOL

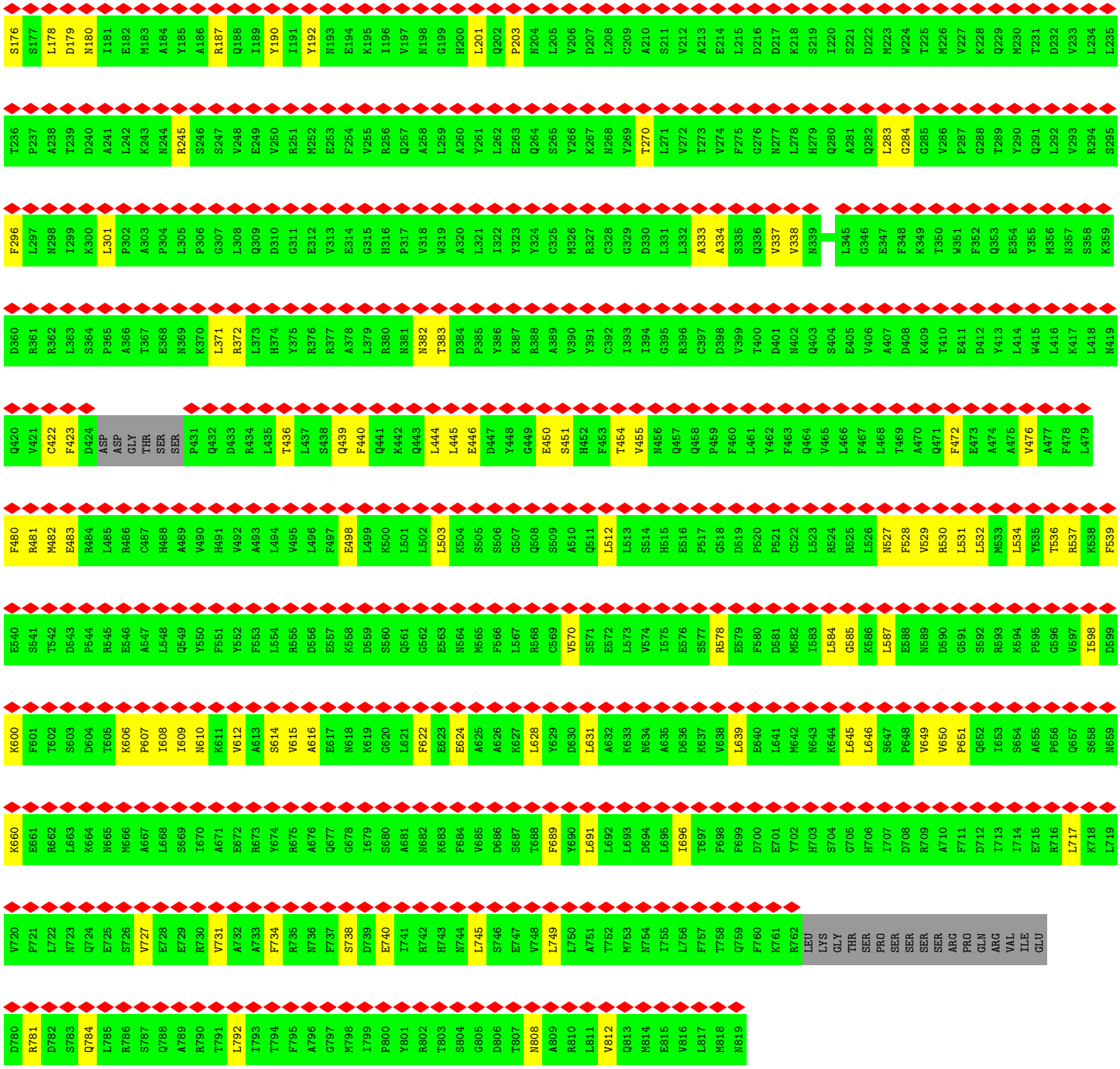
Chain D6:



• Molecule 6: NUP93 SOL

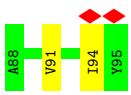
Chain D7:





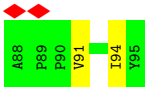
- Molecule 7: NUP53 R2

Chain E1:



- Molecule 7: NUP53 R2

Chain E2:



• Molecule 7: NUP53 R2

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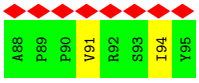
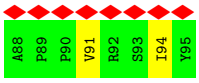


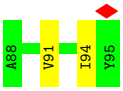
• Molecule 7: NUP53 R2

Chain E4:



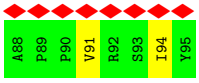
• Molecule 7: NUP53 R2

Chain E5:



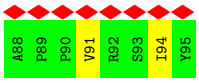
• Molecule 7: NUP53 R2

Chain E6:



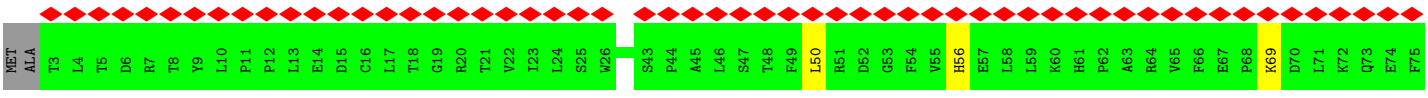
• Molecule 7: NUP53 R2

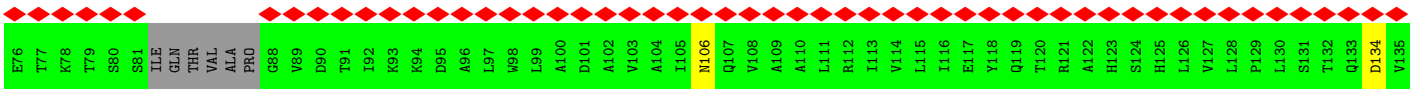
Chain E7:

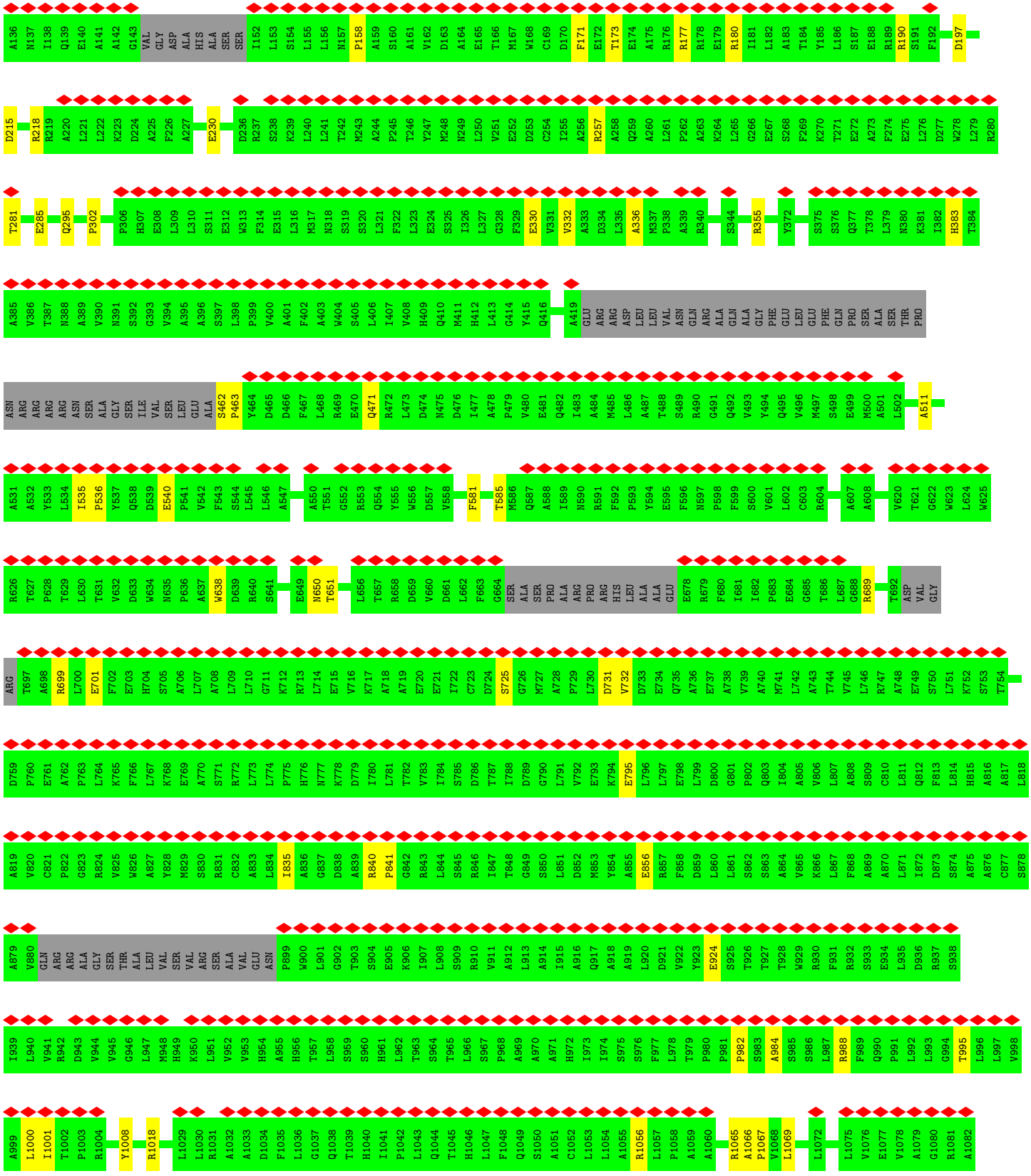


• Molecule 8: NUP188

Chain F1:



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ASN ARG ARG ARG ARG ASN SER ALA GLY SER ILE VAL SER LEU GLU ALA S462 P463 Y464 D465 D466 F467 L468 R469 E470 Q471 R472 L473 D474 N475 D476 I477 A478 P479 V480 E481 Q482 I483 A484 M485 L486 A487 T488 S489 R490 G491 Q492 V493 Y494 Q495 V496 M497 S498 E499 M500 A501 L502 A511
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R626 T627 P628 T629 L630 T631 V632 D633 W634 N635 P636 A637 W638 D639 R640 S641 E649 N650 T651 L656 T657 R658 D659 V660 D661 L662 F663 G664 SER ALA SER PRO ALA ARG PRO ARG HIS LEU ALA ALA GLU E678 R679 F680 I681 I682 P683 E684 G685 T686 L687 G688 R689 T692 ASP VAL GLY
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D759 P760 E761 A762 P763 L764 K765 F766 L767 K768 E769 A770 S771 R772 L773 L774 P775 H776 N777 K778 D779 I780 L781 T782 V783 I784 S785 D786 T787 I788 D789 G790 L791 V792 E793 K794 E795 L796 L797 E798 L799 D800 G801 P802 Q803 I804 A805 V806 L807 A808 S809 C810 L811 Q812 F813 L814 H815 A816 A817 L818
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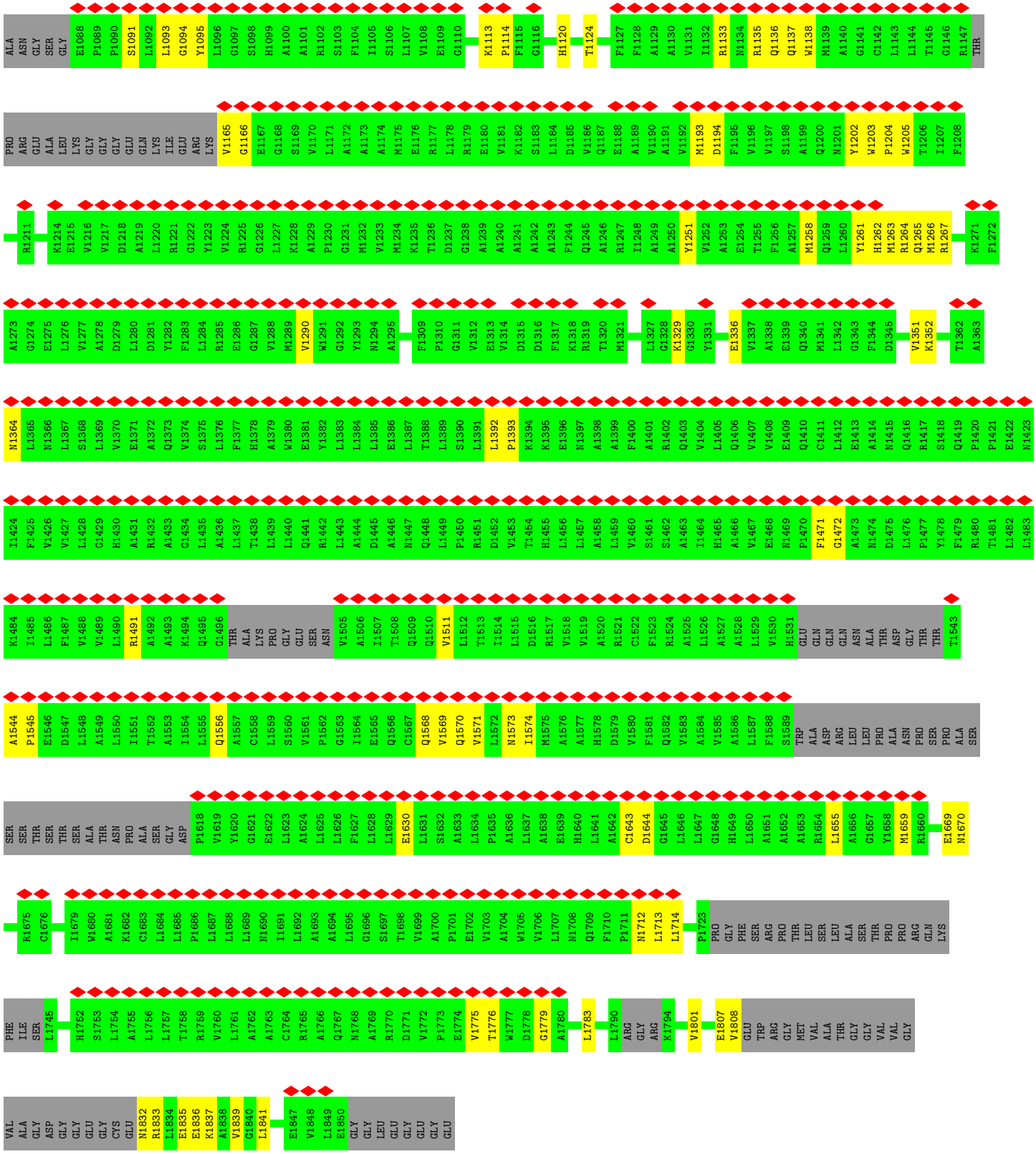
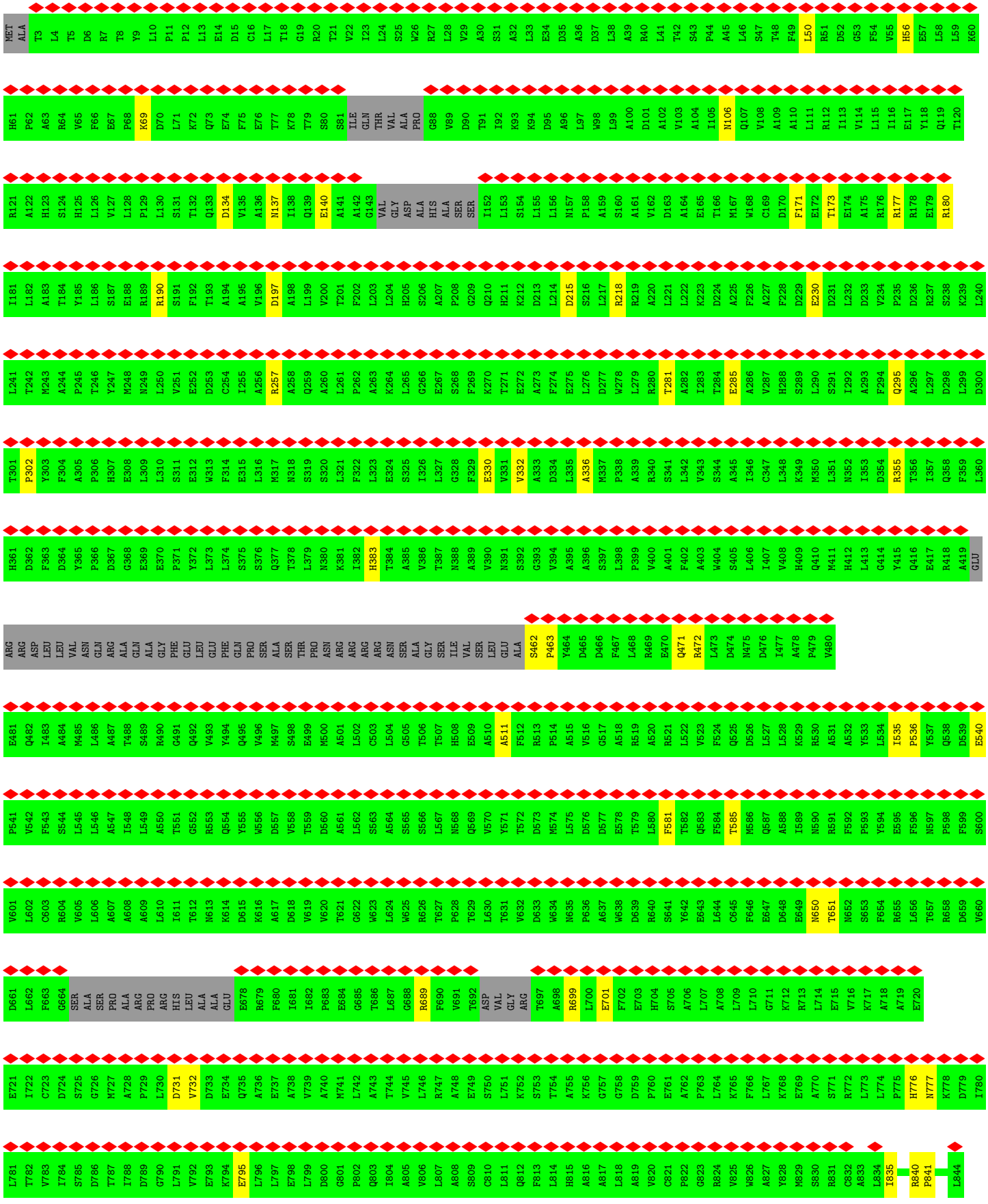


• Molecule 8: NUP188

Chain F2: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H61 P62 A63 R64 V65 F66 E67 P68 K69 D70 L71 K72 Q73 E74 F75 E76 T77 K78 T79 S80 S81 ILE GLN THR VAL ALA PRO G88 V89 D90 T91 I92 K93 K94 D95 A96 L97 W98 L99 A100 D101 A102 V103 A104 I105 N106 Q107 V108 A109 A110 L111 R112 I113 V114 L115 I116 E117 Y118 Q119 T120
R121 A122 H123 S124 H125 L126 V127 L128 P129 L130 S131 T132 Q133 D134 V135 A136 N137 I138 Q139 E140 A141 A142 G143 VAL GLY ASP ALA HIS ALA SER SER I152 L153 S154 L155 L156 N157 P158 A159 S160 A161 V162 D163 A164 E165 T166 M167 W168 C169 D170 F171 E172 T173 E174 A175 R176 R177 R178 E179 R180
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T301 P302 Y303 F304 A305 P306 H307 E308 L309 L310 S311 E312 W313 F314 E315 L316 M317 N318 S319 S320 L321 F322 L323 E324 S325 I326 L327 G328 F329 E330 V331 V332 A333 D334 L335 A336 M337 P338 A339 R340 S341 L342 V343 S344 A345 I346 C347 L348 K349 M350 L351 N352 I353 D354 R355 T356 I357 Q358 F359 L360
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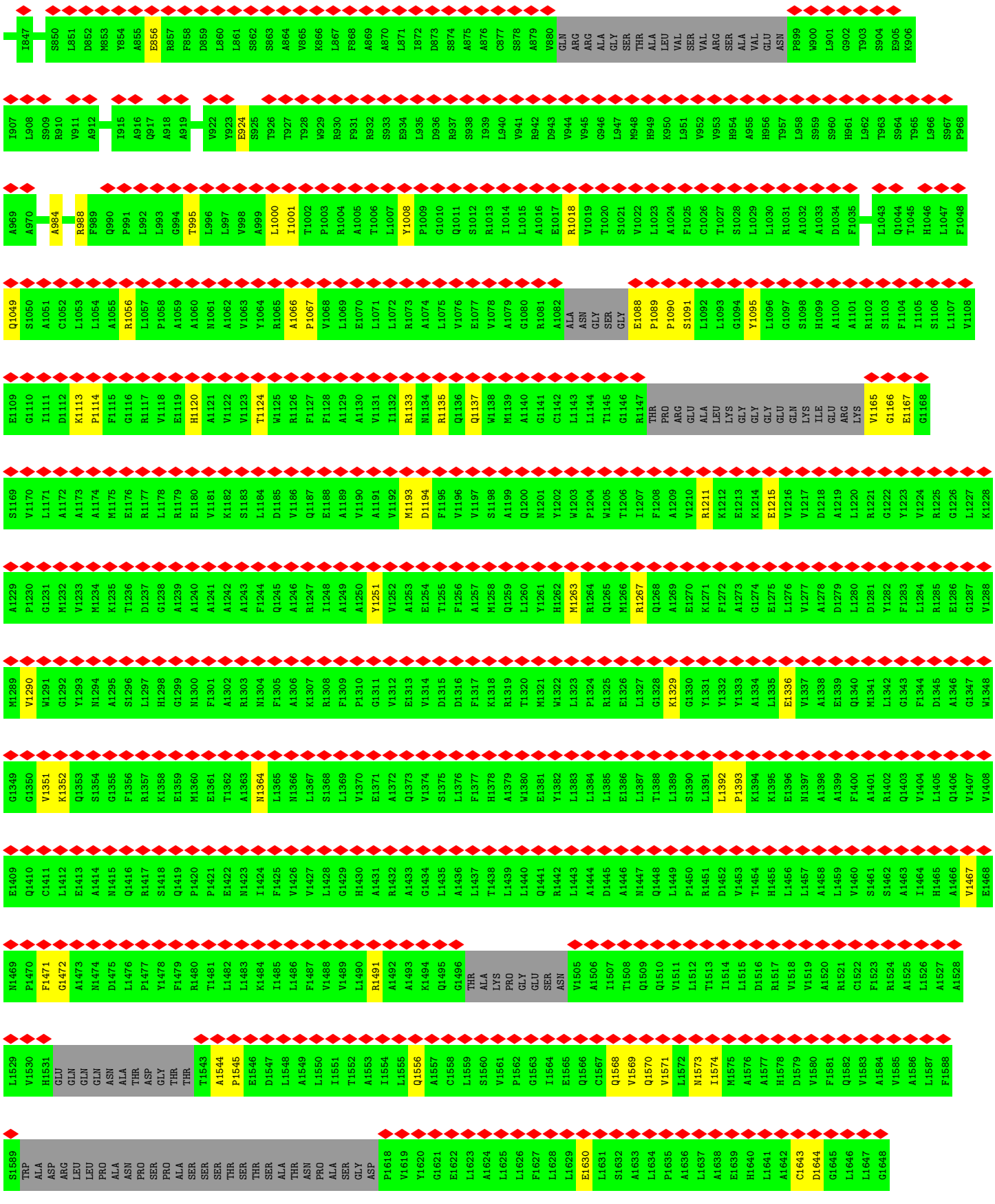
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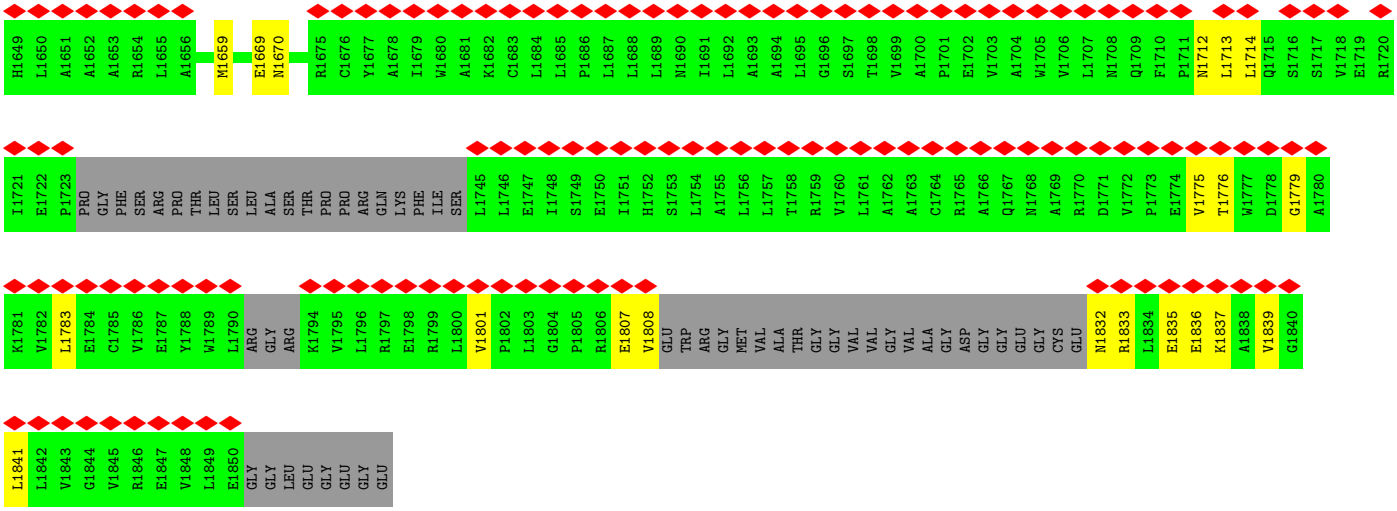
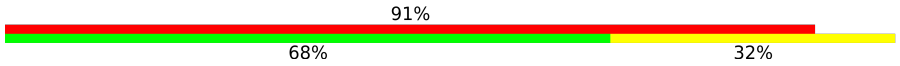


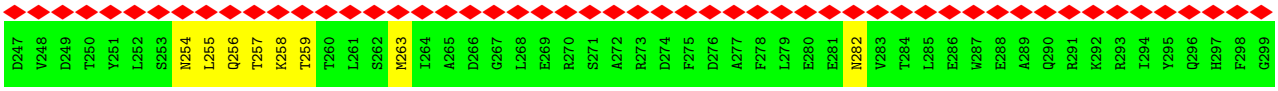
- Molecule 9: NUP93 R2

Chain G1:



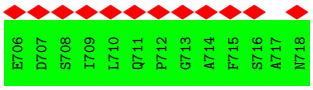
- Molecule 9: NUP93 R2

Chain G2:



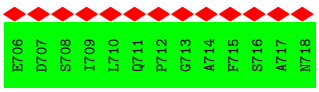
- Molecule 10: NUP98 R2

Chain H1:



- Molecule 10: NUP98 R2

Chain H2:



- Molecule 11: NUP205

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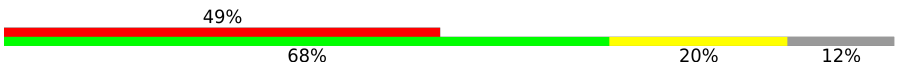

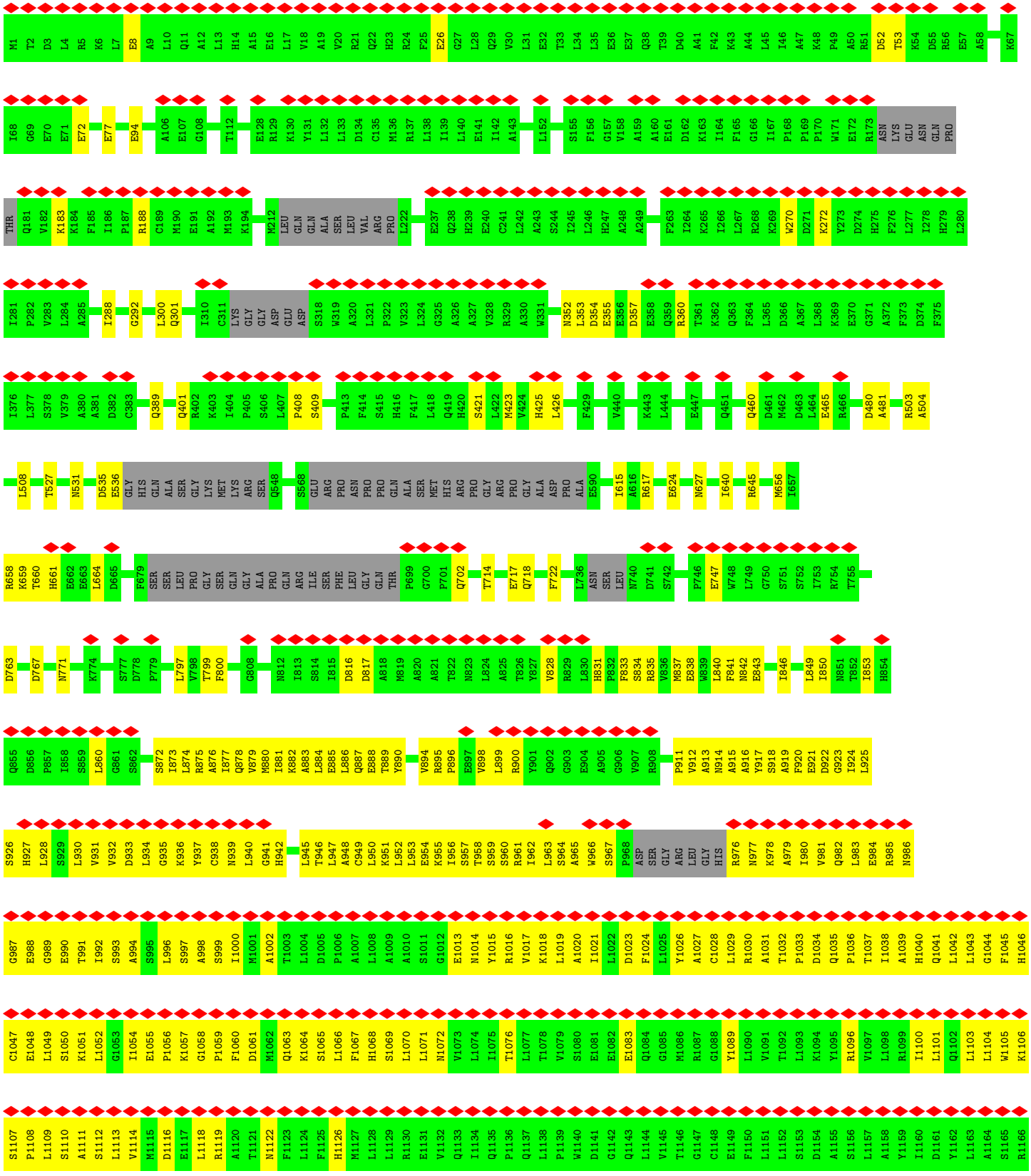
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I68 G69 E70 E71 E72 E77 E94 A106 E107 G108 T112 E128 R129 K130 Y131 L132 L133 D134 C135 M136 R137 L138 I139 L140 E141 I142 A143 L152 S155 F156 G157 V158 A159 A160 E161 D162 K163 I164 F165 G166 I167 P168 P169 P170 W171 E172 R173 ASN LYS GLU ASN GLN PRO
THR Q181 V182 K183 K184 F185 I186 P187 R188 C189 M190 E191 A192 M193 K194 M212 LEU GLN GLN ALA SER LEU VAL ARG PRO L222 E237 Q238 H239 E240 C241 L242 A243 S244 I245 L246 H247 A248 A249 F263 I264 K265 I266 L267 R268 K269 W270 D271 K272 Y273 D274 H275 F276 L277 I278 H279 L280
I281 P282 V283 L284 A285 I288 G292 L300 Q301 I310 C311 LYS GLY GLY ASP GLU ASP S318 W319 A320 L321 P322 V323 L324 G325 A326 A327 V328 R329 A330 W331 N352 L353 D354 E355 E356 D357 E358 Q359 R360 T361 K362 Q363 F364 L365 D366 A367 L368 K369 E370 G371 A372 F373 D374 F375
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L508 T527 N531 D535 E536 GLY HIS GLN ALA SER GLY LYS MET LYS ARG SER Q548 S568 GLU ARG PRO ASN PRO PRO GLN ALA SER MET HIS ARG PRO GLY ARG PRO GLY ALA ASP PRO ALA E590 I615 A616 R617 E624 N627 I640 R645 M656 I657
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Q855 D856 P857 I858 S859 L860 G861 S862 S872 I873 L874 R875 A876 I877 Q878 V879 M880 I881 K882 A883 L884 E885 L886 Q887 E888 T889 Y890 V894 R895 P896 E897 V898 L899 R900 Y901 Q902 G903 E904 A905 G906 V907 R908 P911 V912 A913 N914 A915 A916 Y917 S918 A919 F920 E921 D922 G923 I924 L925
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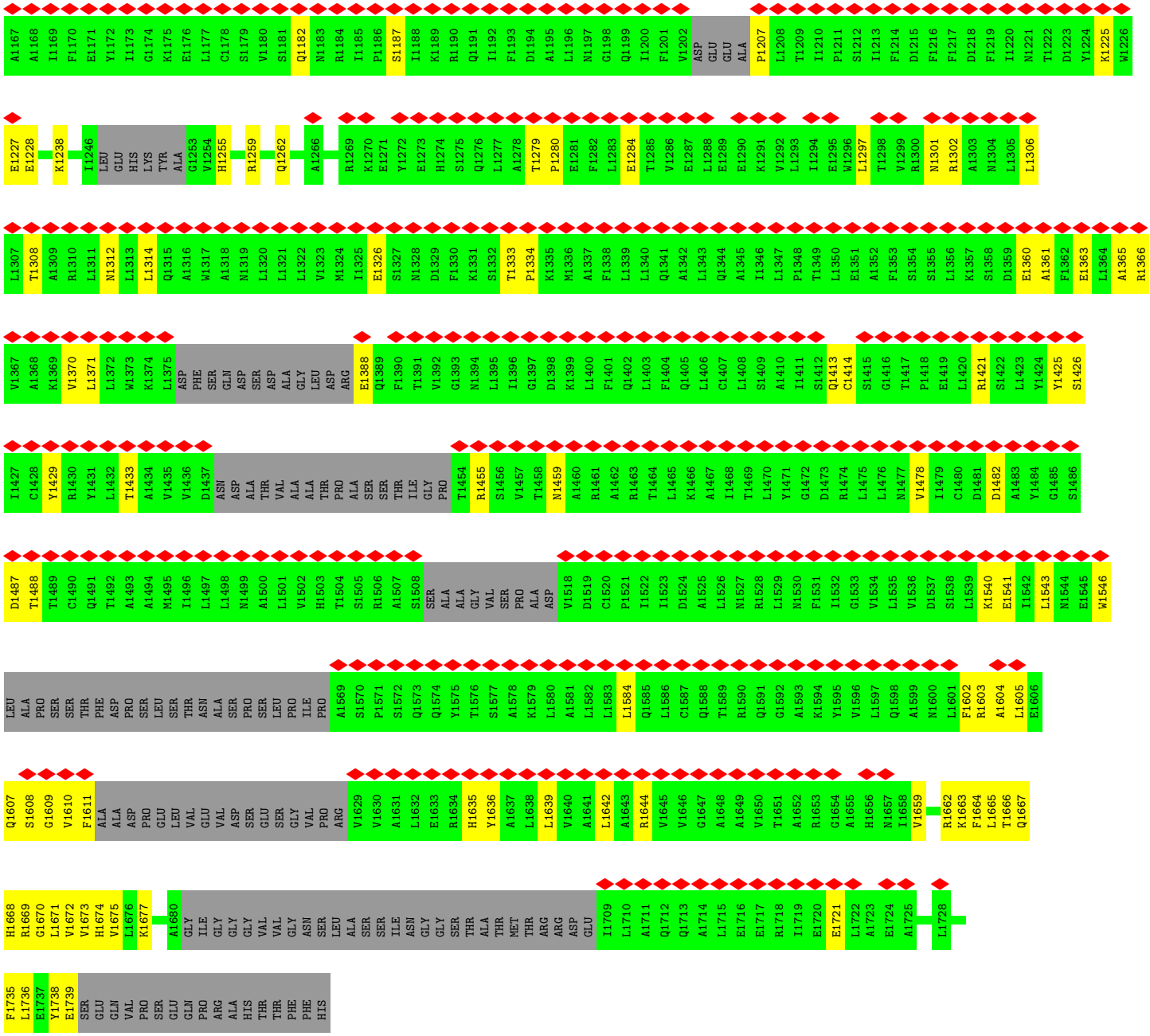
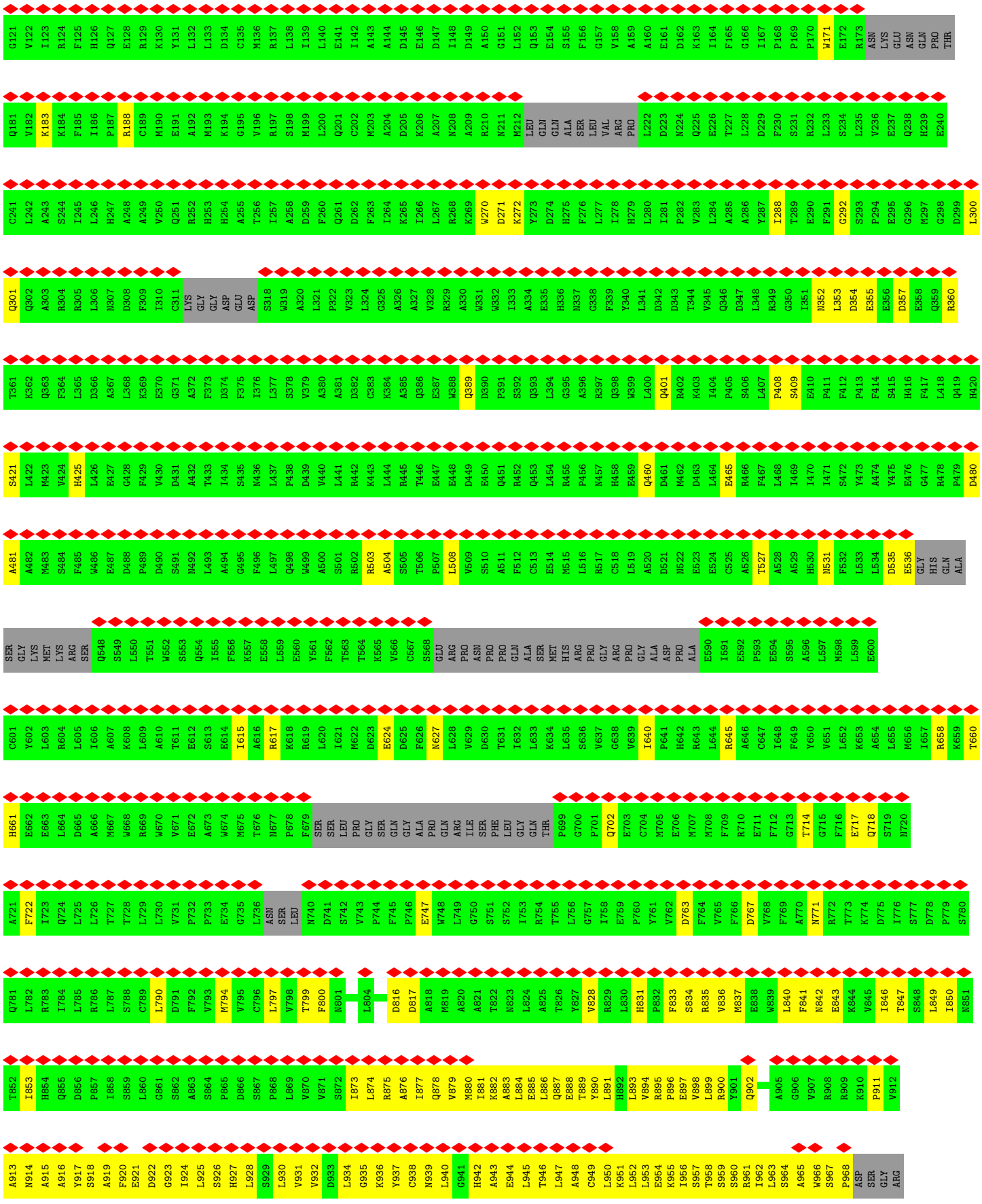


• Molecule 11: NUP205

Chain I2: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Q181 V182 K183 K184 F185 I186 P187 R188 C189 M190 E191 A192 M193 K194 G195 V196 R197 S198 M199 L200 Q201 C202 M203 A204 D205 K206 A207 N208 A209 R210 N211 M212 LEU GLN GLN ALA SER LEU VAL ARG PRO L222 D223 N224 Q225 E226 T227 L228 D229 F230 S231 R232 L233 S234 L235 V236 E237 Q238 H239 E240
C241 L242 A243 S244 I245 L246 H247 A248 A249 V250 Q251 R252 H253 H254 A255 T256 I257 A258 D259 F260 Q261 D262 F263 I264 K265 I266 L267 R268 K269 W270 D271 K272 Y273 D274 H275 F276 L277 I278 H279 L280 I281 P282 V283 L284 A285 A286 Y287 I288 T289 E290 F291 G292 S293 P294 E295 G296 M297 G298 D299 L300
Q301 Q302 A303 R304 R305 L306 N307 D308 F309 I310 C311 LYS GLY GLY ASP GLU ASP S318 W319 A320 L321 P322 V323 L324 G325 A326 A327 V328 R329 A330 W331 W332 I333 A334 E335 H336 N337 G338 F339 Y340 L341 D342 D343 T344 V345 Q346 D347 L348 R349 G350 I351 N352 L353 D354 E355 E356 D357 E358 Q359 R360
T361 K362 Q363 F364 L365 D366 A367 L368 K369 E370 G371 A372 F373 D374 F375 I376 L377 S378 V379 A380 A381 D382 C383 K384 A385 Q386 E387 W388 Q389 D390 P391 S392 Q393 L394 G395 A396 R397 Q398 W399 L400 Q401 R402 K403 I404 P405 S406 L407 P408 S409 E410 P411 F412 P413 F414 S415 H416 F417 L418 Q419 H420
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SER GLY LYS MET LYS ARG SER Q548 S549 L550 T551 W552 S553 Q554 I555 F556 K557 E558 L559 E560 Y561 F562 T563 T564 K565 V566 C567 S568 GLU ARG PRO ASN PRO PRO GLN ALA SER MET HIS ARG PRO GLY ARG PRO GLY ALA ASP PRO ALA E590 I591 E592 P593 E594 S595 A596 L597 M598 L599 E600
C601 Y602 L603 R604 L605 I606 A607 K608 L609 A610 T611 E612 S613 E614 I615 A616 R617 K618 R619 L620 I621 M622 D623 E624 D625 F626 N627 L628 V629 D630 T631 I632 L633 K634 L635 S636 V637 G638 V639 I640 P641 H642 R643 L644 R645 A646 C647 I648 F649 Y650 V651 L652 K653 A654 L655 M656 I657 R658 K659 T660
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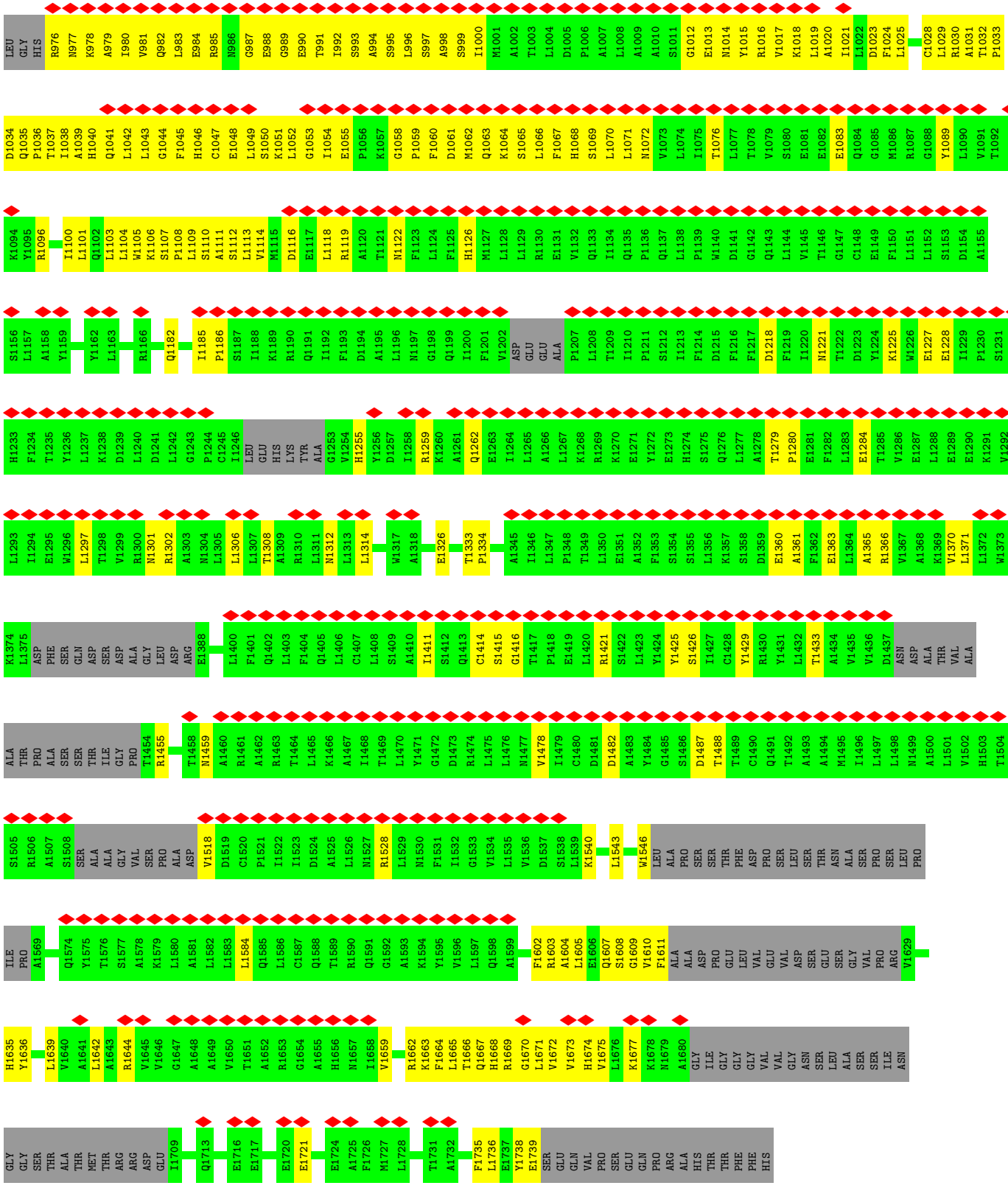
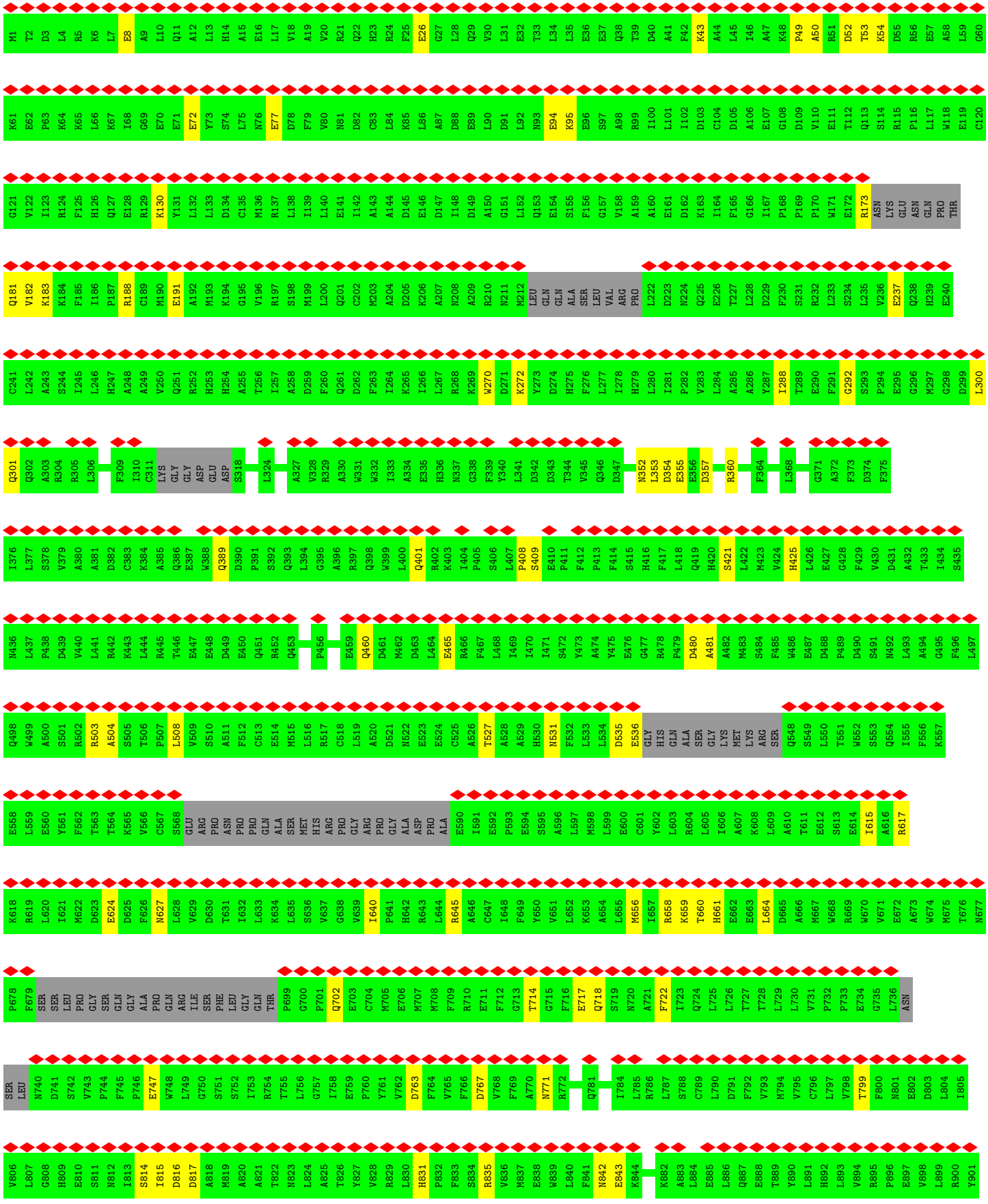


• Molecule 11: NUP205

Chain I3: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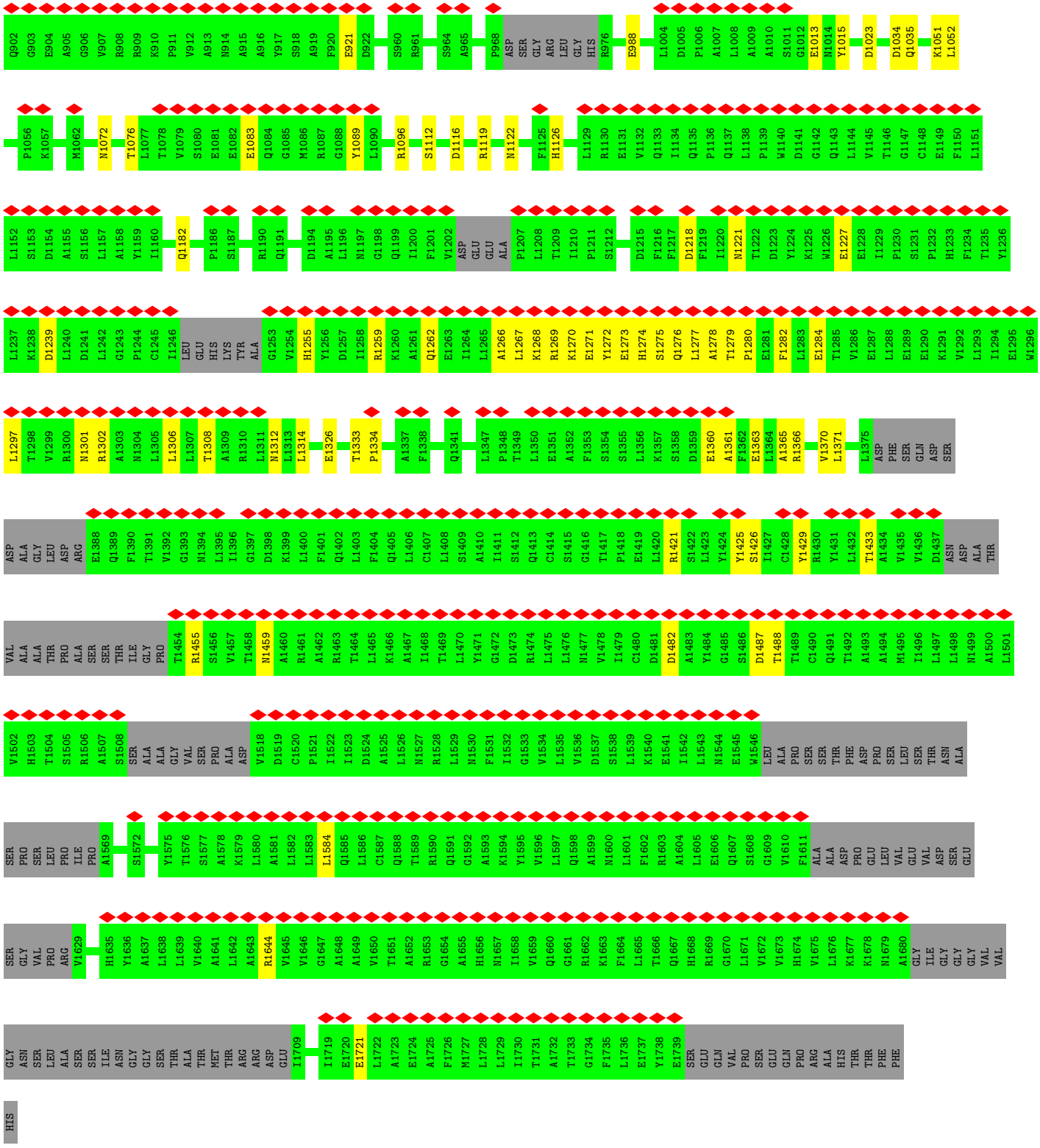
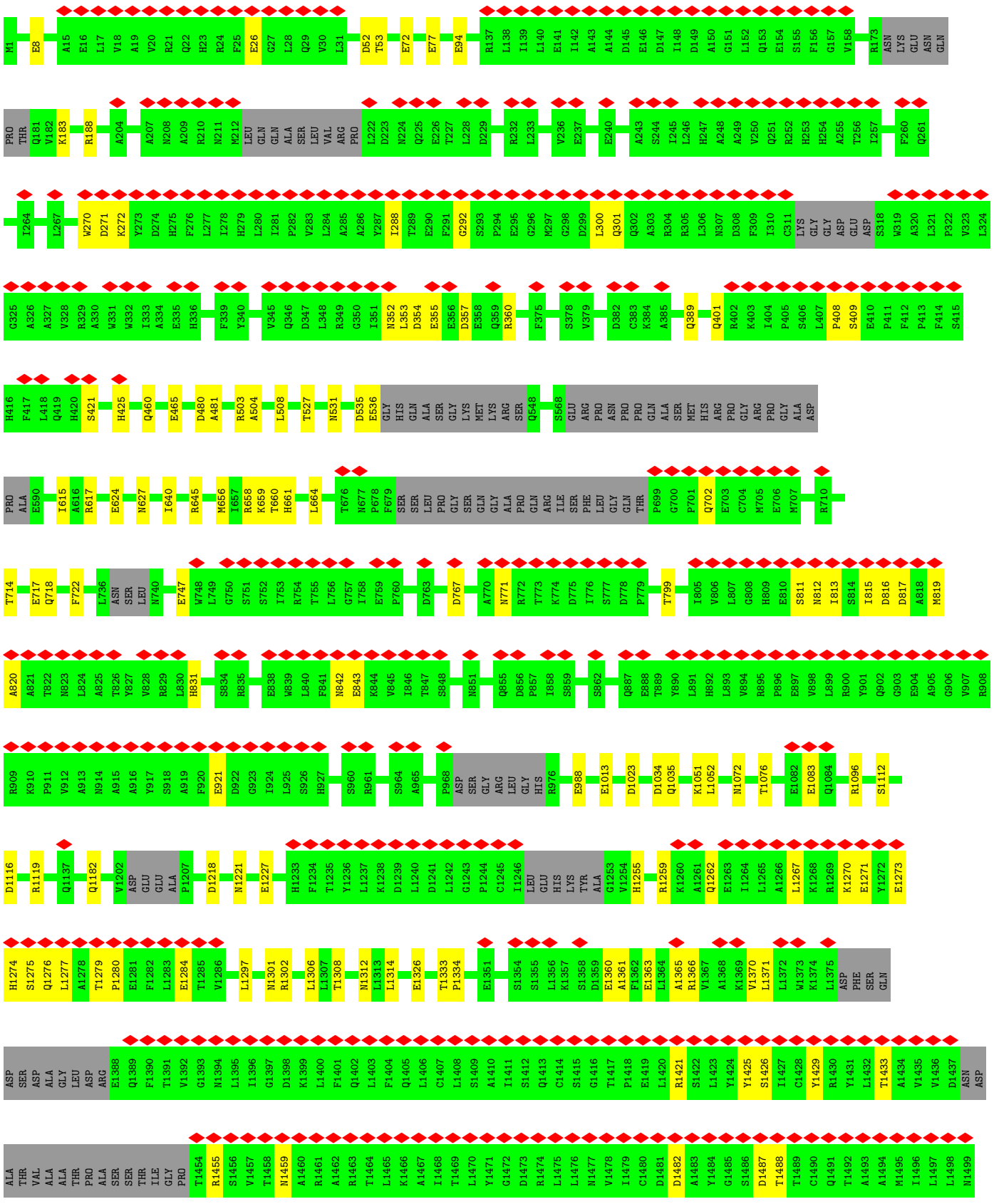
V806 L807 G808 H809 E810 S811 N812 I813 S814 I815 D816 D817 A818 M819 A820 A821 T822 N823 L824 A825 T826 Y827 V828 R829 L830 H831 P832 F833 S834 R835 V836 M837 E838 W839 L840 F841 N842 E843 K844 K882 A883 L884 E885 L886 Q887 E888 T889 Y890 L891 H892 L893 V894 R895 P896 E897 V898 L899 R900 Y901



- Molecule 11: NUP205

Chain I4: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PRO THR Q181 V182 K183 R188 A204 A207 N208 A209 R210 N211 M212 LEU GLN GLN ALA SER LEU VAL ARG PRO L222 D223 N224 Q225 E226 T227 L228 D229 R232 L233 V236 E237 E240 A243 S244 I245 L246 H247 A248 A249 V250 Q251 R252 H253 H254 A255 T256 I257 F260 Q261
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PRO ALA E590 I615 A616 R617 E624 N627 I640 R645 M656 I657 R658 K659 T660 H661 L664 T676 N677 P678 F679 SER SER LEU PRO GLY SER GLN GLY ALA PRO GLN ARG ILE SER PHE LEU GLY GLN THR P699 G700 P701 Q702 E703 C704 M705 E706 M707 R710
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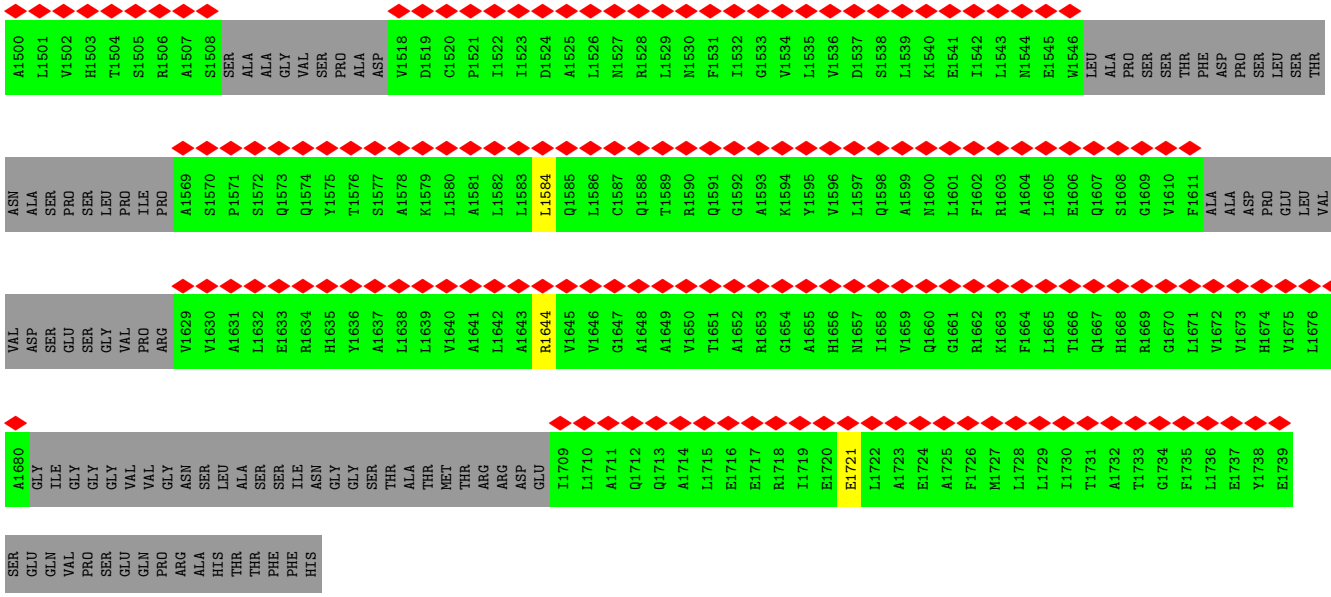
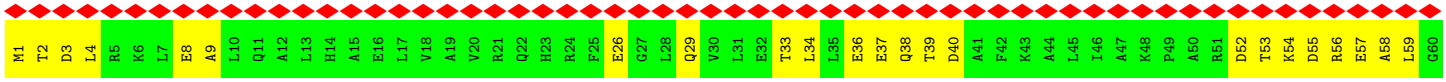
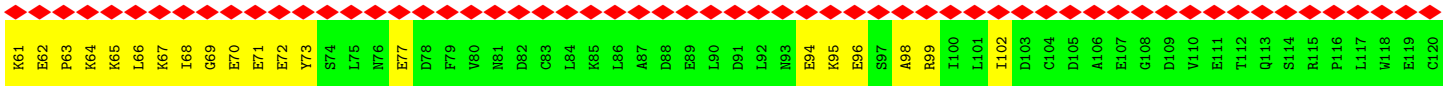
ASP SER ASP ALA GLY LEU ASP ARG E1388 Q1389 F1390 T1391 V1392 G1393 N1394 L1395 I1396 G1397 D1398 K1399 L1400 F1401 Q1402 L1403 F1404 Q1405 L1406 C1407 L1408 S1409 A1410 I1411 S1412 Q1413 C1414 S1415 G1416 T1417 P1418 E1419 L1420 R1421 S1422 L1423 Y1424 Y1425 S1426 I1427 C1428 Y1429 R1430 Y1431 L1432 T1433 A1434 V1435 V1436 D1437 ASN ASP
ALA THR VAL ALA ALA THR PRO ALA SER SER THR THR ILE GLY PRO T1454 R1455 S1456 V1457 T1458 N1459 A1460 R1461 A1462 R1463 T1464 L1465 K1466 A1467 I1468 T1469 L1470 Y1471 G1472 D1473 R1474 L1475 L1476 N1477 V1478 I1479 C1480 D1481 D1482 A1483 Y1484 G1485 S1486 D1487 T1488 T1489 C1490 Q1491 T1492 A1493 A1494 M1495 I1496 L1497 L1498 N1499

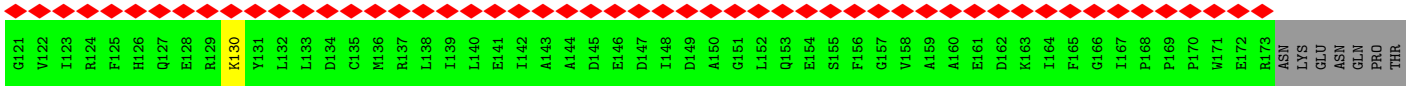


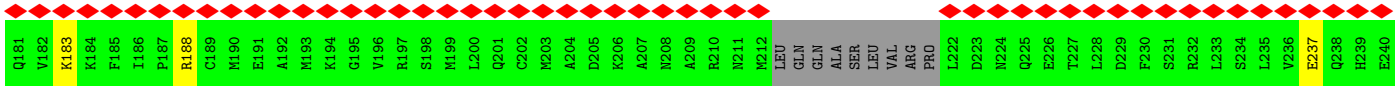
• Molecule 11: NUP205

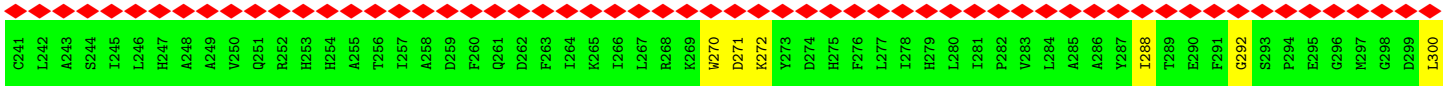
Chain I5:

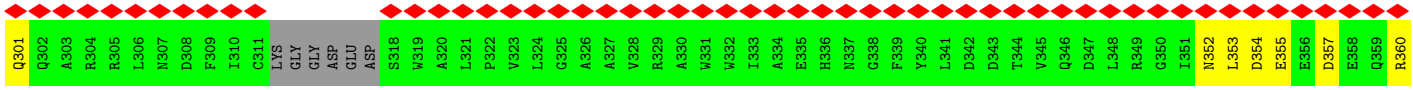


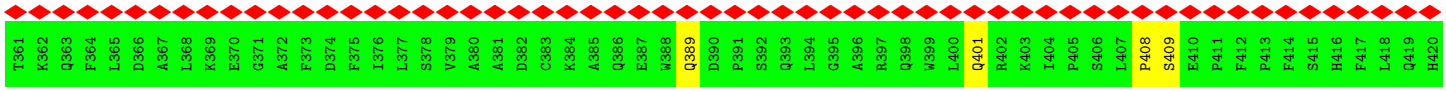


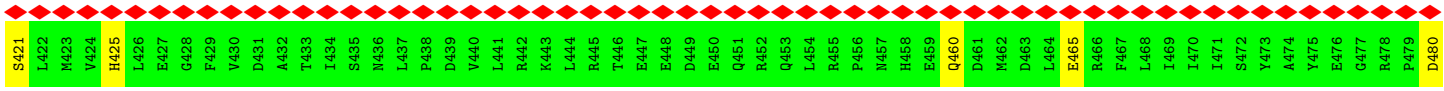


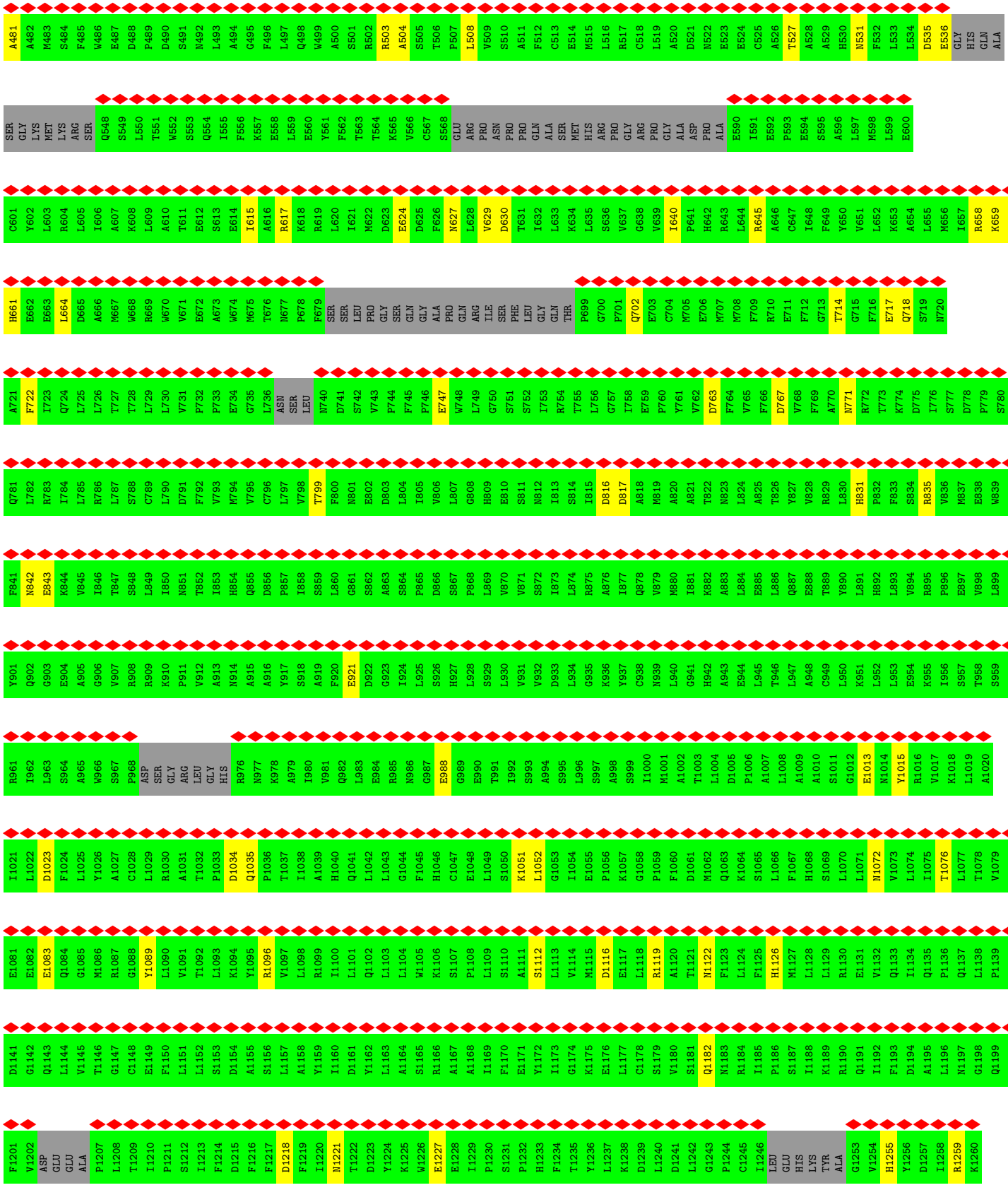








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SER GLY LYS MET LYS ARG SER Q548 S549 L550 T551 W552 S553 Q554 I555 F556 K557 E558 L559 E560 Y561 F562 T563 T564 K565 V566 C567 S568 GLU ARG PRO ASN PRO PRO GLN ALA SER MET HIS ARG PRO GLY ARG PRO GLY ALA ASP PRO ALA E590 I591 E592 P593 E594 S595 A596 L597 M598 L599 E600
C601 Y602 L603 R604 L605 I606 A607 K608 L609 A610 T611 E612 S613 E614 I615 A616 R617 K618 R619 L620 I621 M622 D623 E624 D625 F626 N627 L628 V629 D630 T631 I632 L633 K634 L635 S636 V637 G638 V639 I640 P641 H642 R643 L644 R645 A646 C647 I648 F649 Y650 V651 L652 K653 A654 L655 M656 I657 R658 K659 T660
H661 E662 E663 L664 D665 A666 M667 W668 R669 W670 V671 E672 A673 W674 M675 T676 N677 P678 F679 SER SER LEU PRO GLY SER GLN GLY ALA PRO GLN ARG ILE SER PHE LEU GLY GLN THR P699 G700 F701 Q702 E703 C704 M705 E706 M707 M708 F709 R710 E711 F712 G713 T714 G715 F716 E717 Q718 S719 N720
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Q781 L782 R783 I784 L785 R786 L787 S788 C789 L790 D791 F792 V793 M794 V795 C796 L797 V798 T799 F800 N801 E802 D803 L804 I805 V806 L807 G808 H809 E810 S811 N812 I813 S814 I815 D816 D817 A818 M819 A820 A821 T822 N823 L824 A825 T826 Y827 V828 R829 L830 H831 P832 F833 S834 R835 V836 M837 E838 W839 L840
F841 N842 E843 K844 V845 I846 T847 S848 L849 I850 N851 T852 I853 H854 Q855 D856 P857 I858 S859 L860 G861 S862 A863 S864 P865 D866 S867 P868 L869 V870 V871 S872 I873 L874 R875 A876 I877 Q878 V879 M880 I881 K882 A883 L884 E885 L886 Q887 E888 T889 Y890 L891 H892 L893 V894 R895 P896 E897 V898 L899 R900
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R961 I962 L963 S964 A965 W966 S967 P968 ASP SER GLY ARG LEU GLY HIS R976 N977 K978 A979 I980 V981 Q982 L983 E984 R985 N986 G987 E988 G989 E990 T991 I992 S993 A994 S995 L996 S997 A998 S999 I1000 M1001 A1002 T1003 L1004 D1005 P1006 A1007 L1008 A1009 A1010 S1011 G1012 E1013 N1014 Y1015 R1016 V1017 K1018 L1019 A1020
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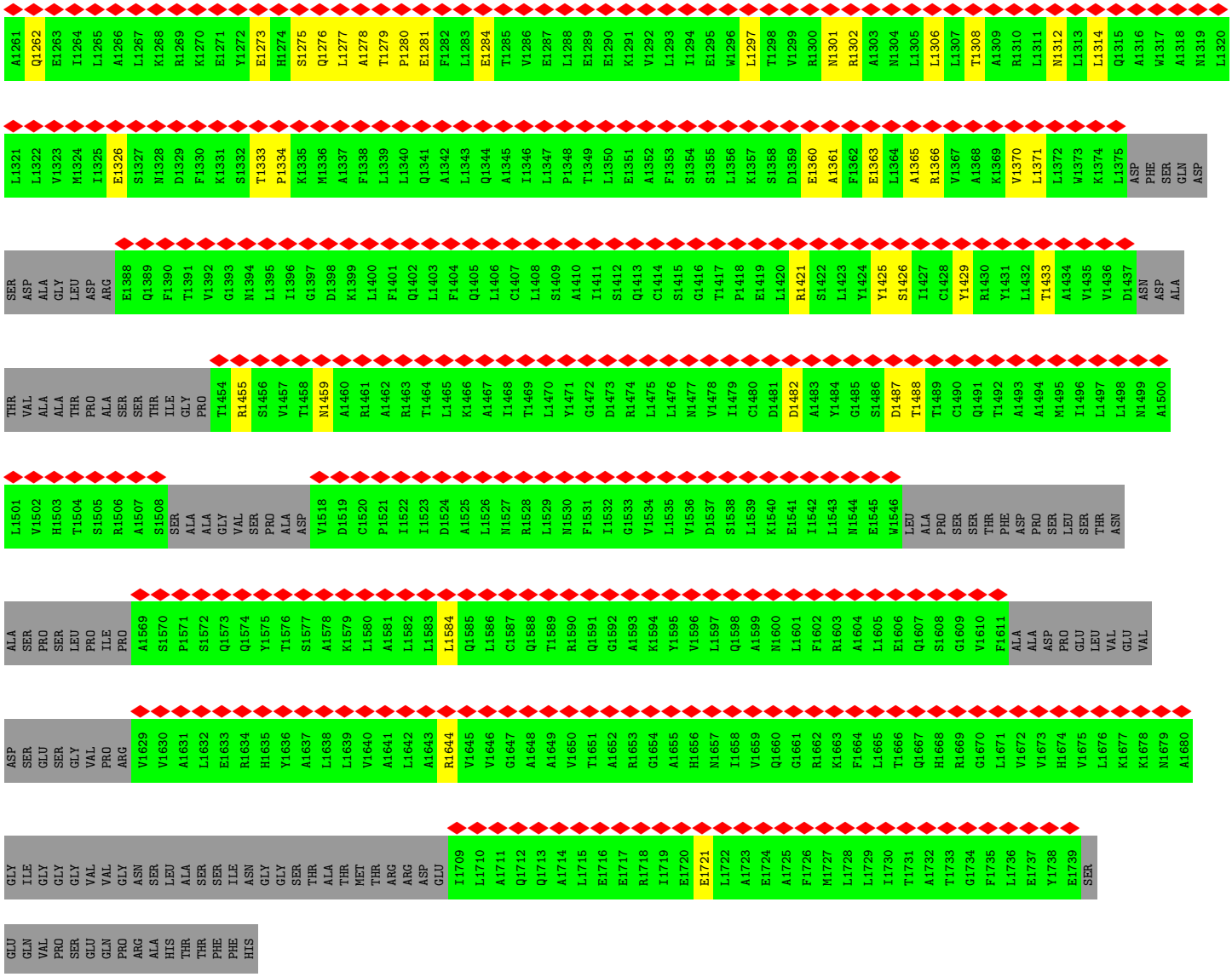
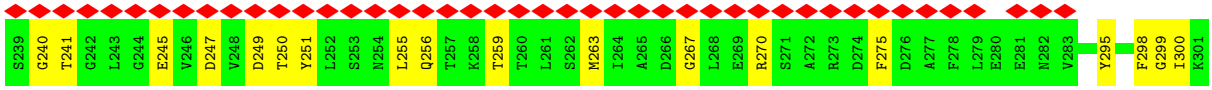


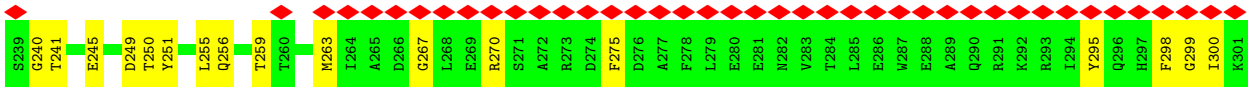
• Molecule 12: NUP93 R2

Chain J1:



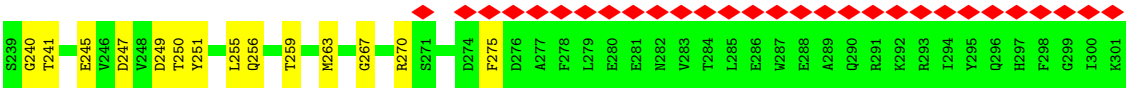
• Molecule 12: NUP93 R2

Chain J2:



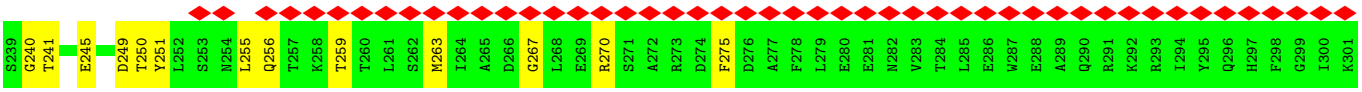
• Molecule 12: NUP93 R2

Chain J3:



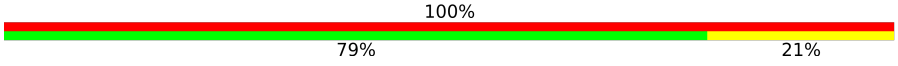
• Molecule 12: NUP93 R2

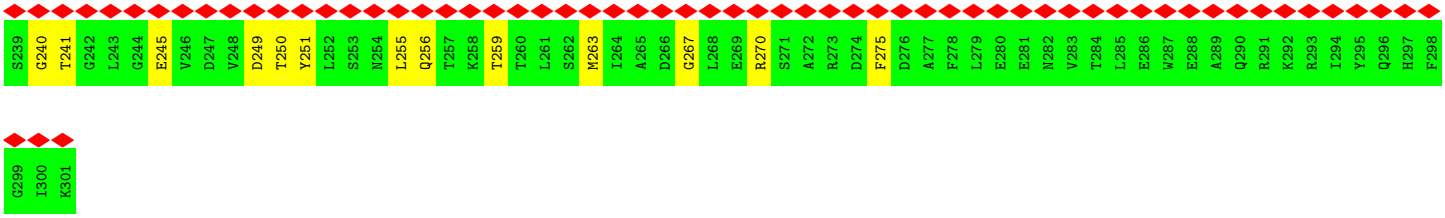
Chain J4:



• Molecule 12: NUP93 R2

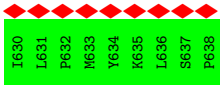
Chain J5:





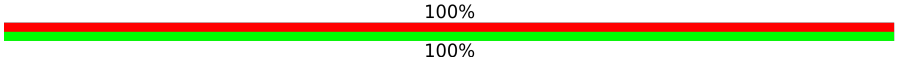
• Molecule 13: NUP98 R1

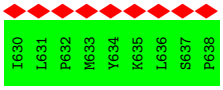
Chain K1:



• Molecule 13: NUP98 R1

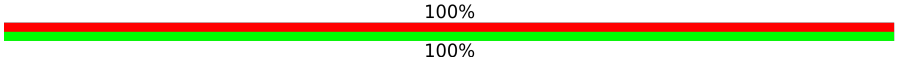
Chain K2:

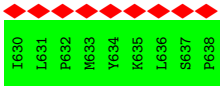




• Molecule 13: NUP98 R1

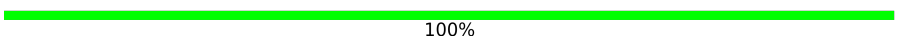
Chain K3:





• Molecule 13: NUP98 R1

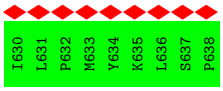
Chain K4:



There are no outlier residues recorded for this chain.

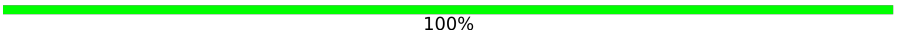
• Molecule 13: NUP98 R1

Chain K5:



• Molecule 14: NUP53 R1

Chain L1:



There are no outlier residues recorded for this chain.

• Molecule 14: NUP53 R1

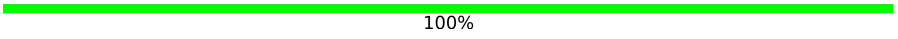
Chain L2:

• Molecule 14: NUP53 R1

Chain L3:

• Molecule 14: NUP53 R1

Chain L4:



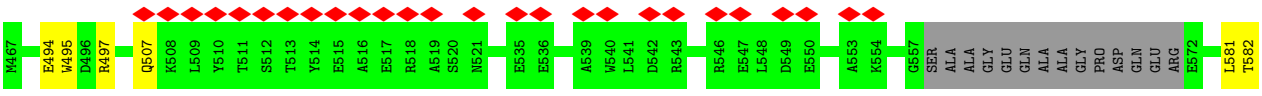
There are no outlier residues recorded for this chain.

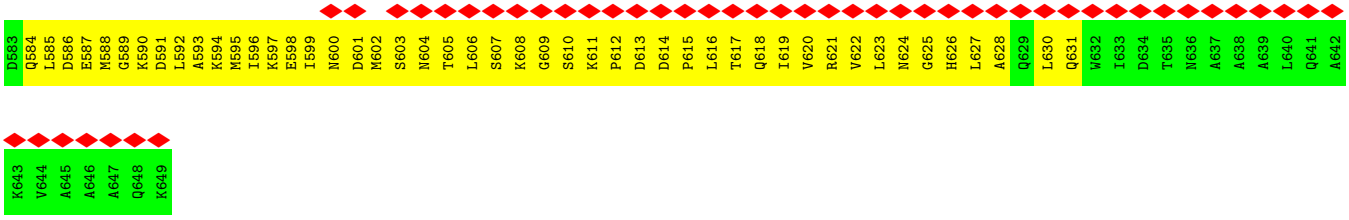
• Molecule 14: NUP53 R1

Chain L5:

• Molecule 15: NUP62

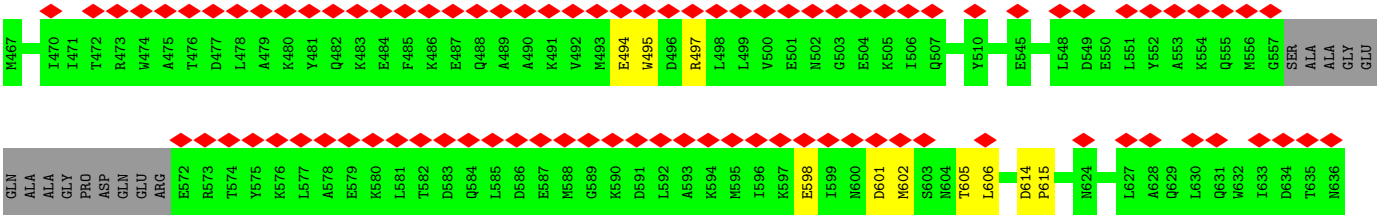
Chain M1:





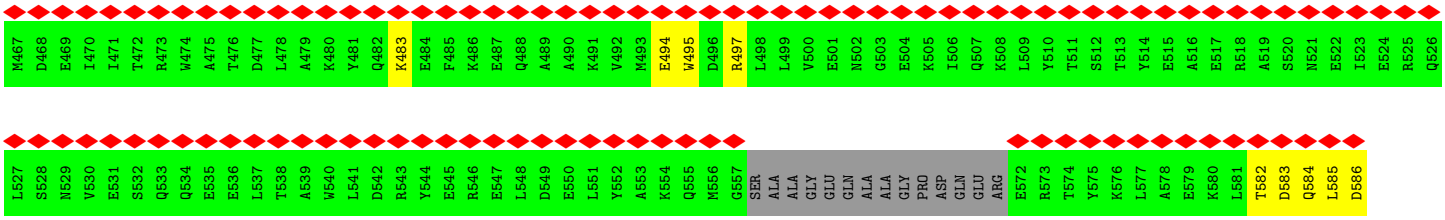
• Molecule 15: NUP62

Chain M2:



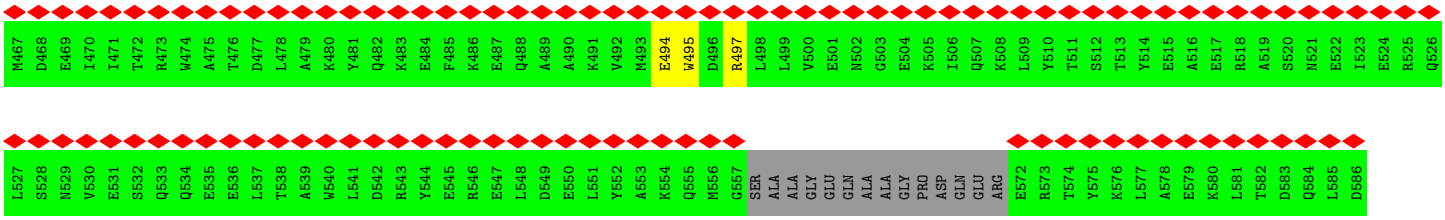
• Molecule 15: NUP62

Chain M3:



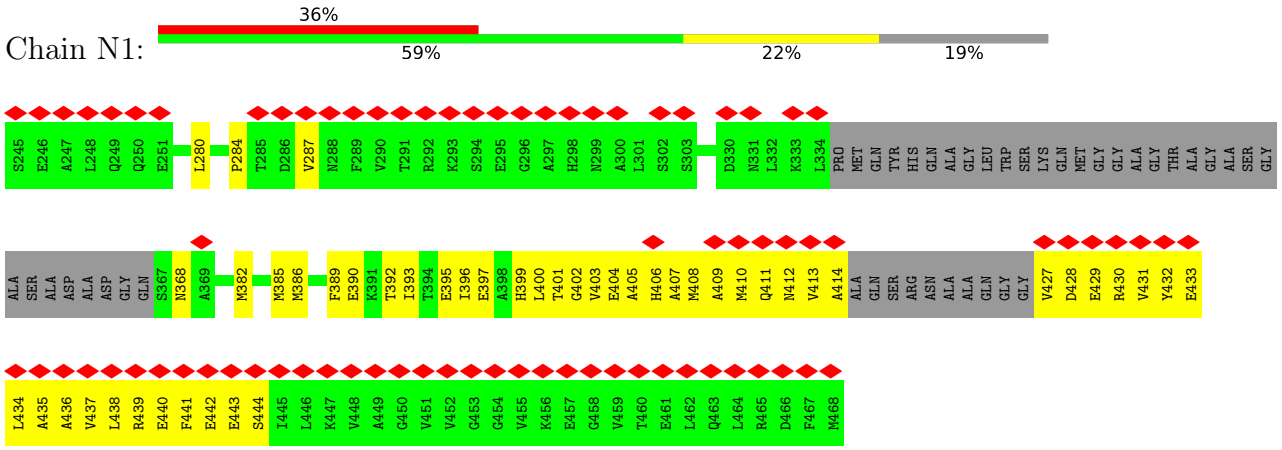
• Molecule 15: NUP62

Chain M4:



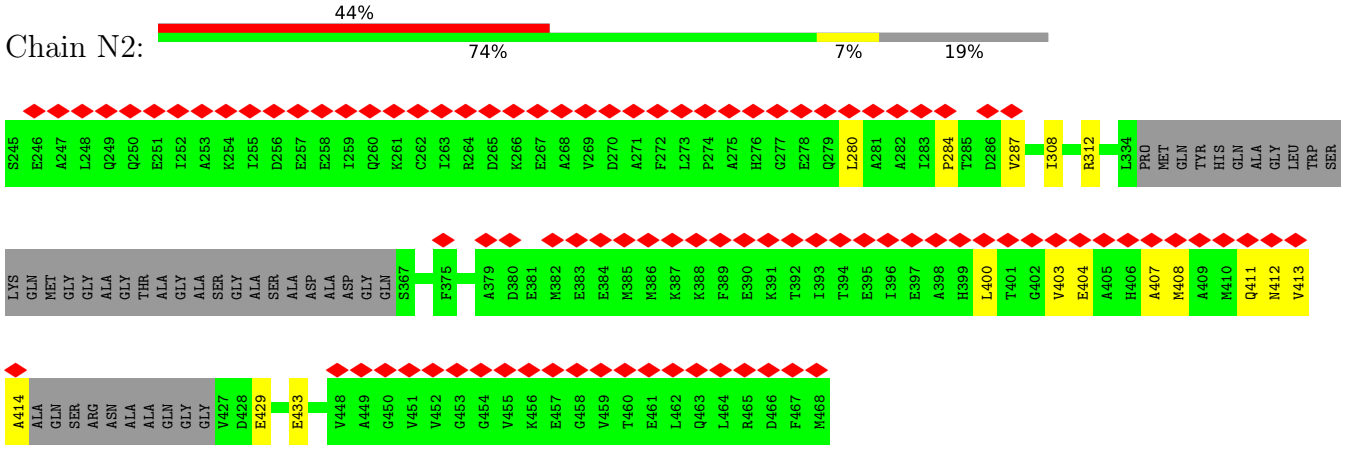
• Molecule 16: NUP58

Chain N1:



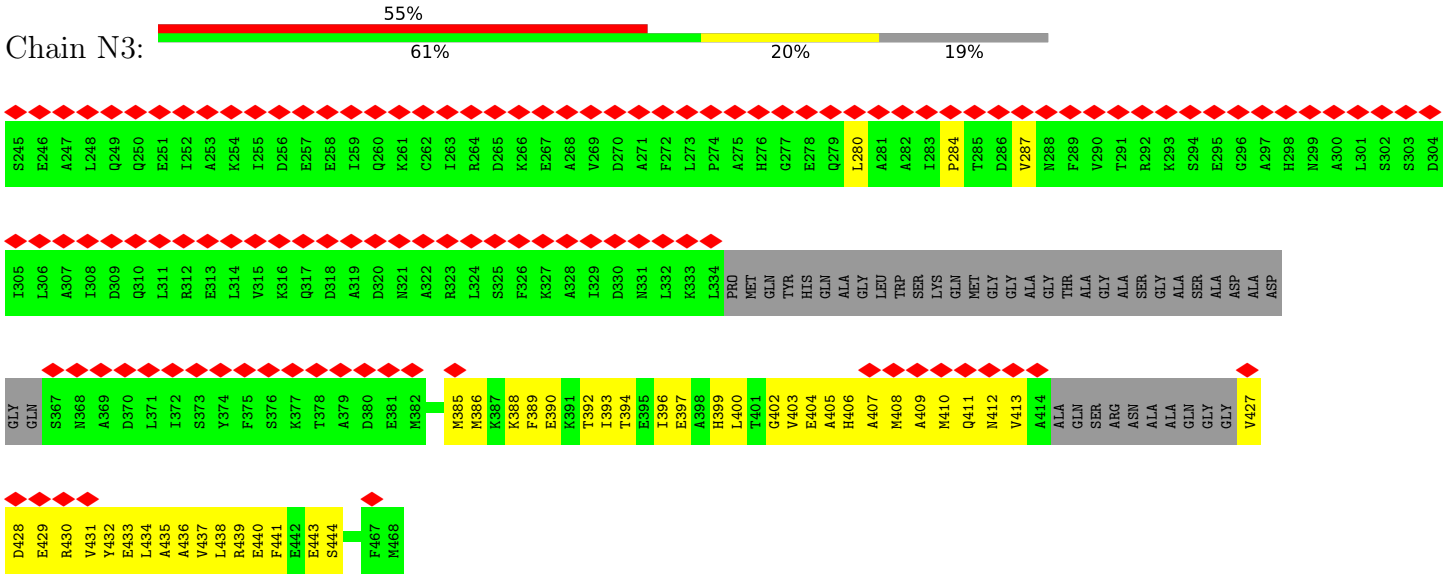
• Molecule 16: NUP58

Chain N2:



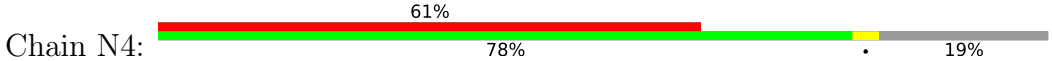
• Molecule 16: NUP58

Chain N3:



• Molecule 16: NUP58

Chain N4:

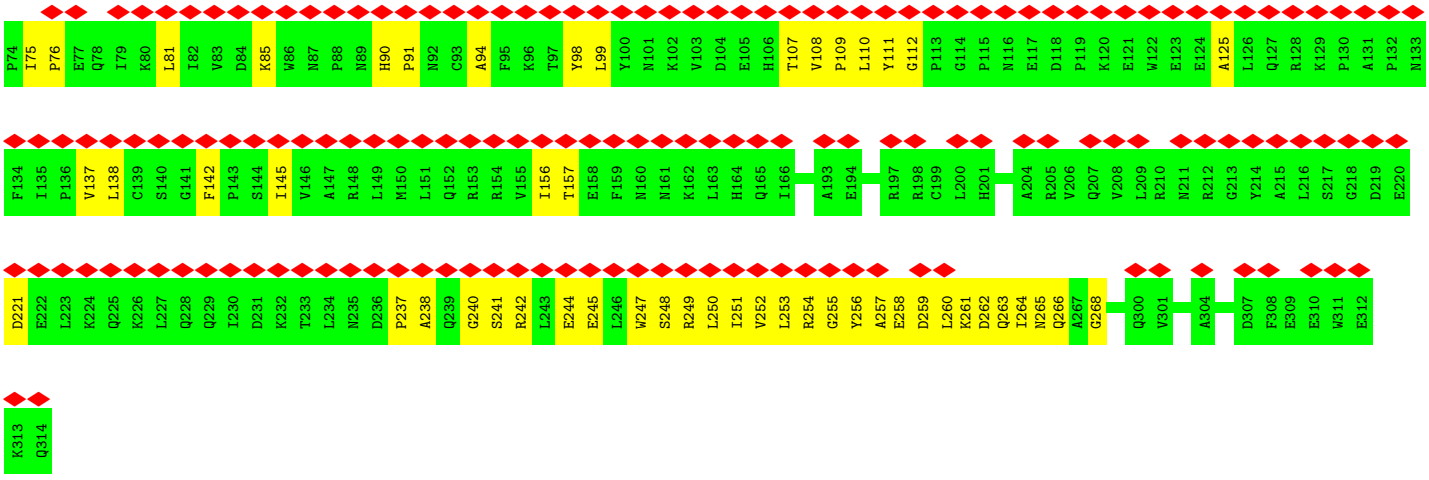


• Molecule 17: NUP54

Chain O1:

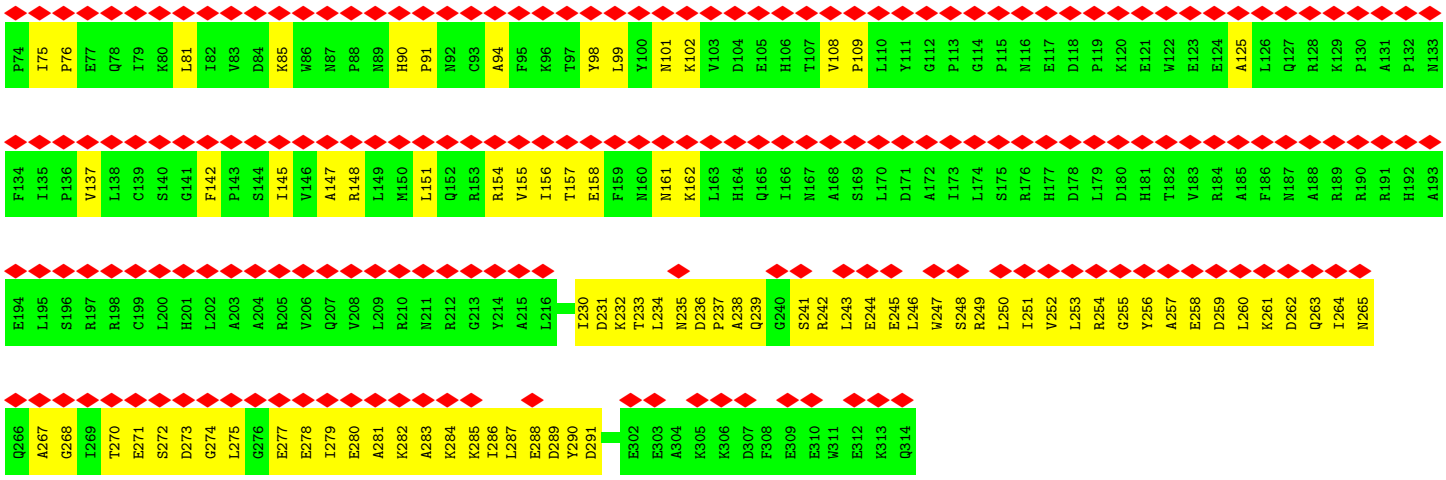
• Molecule 17: NUP54

Chain O2:



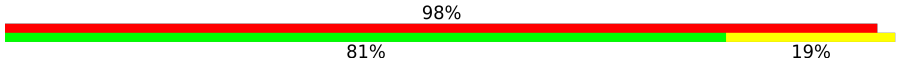
• Molecule 17: NUP54

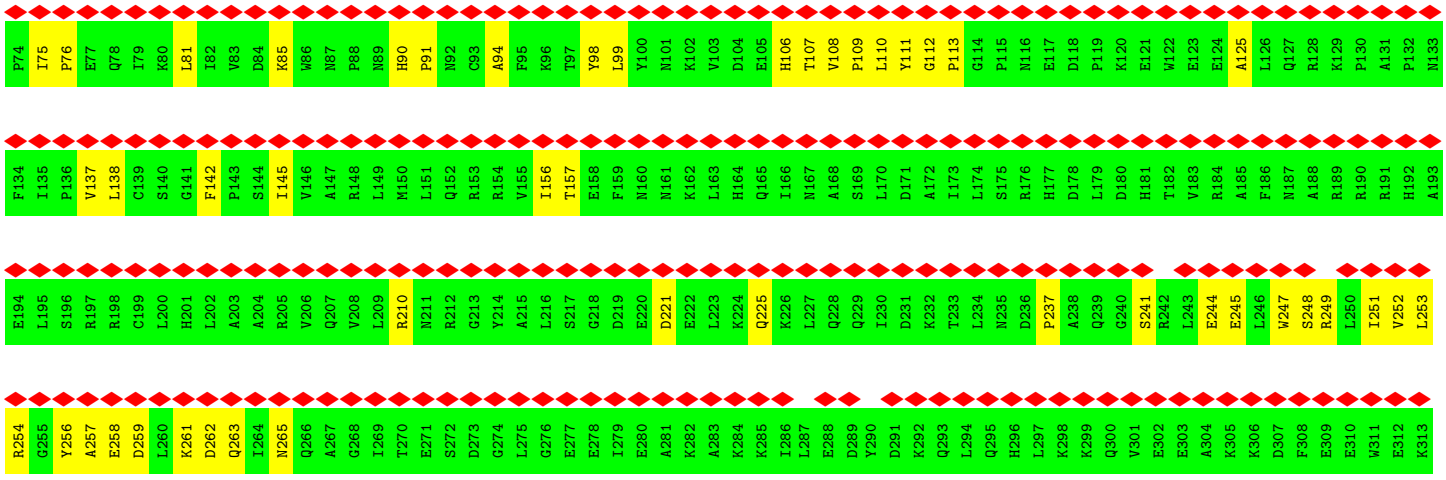
Chain O3:



• Molecule 17: NUP54

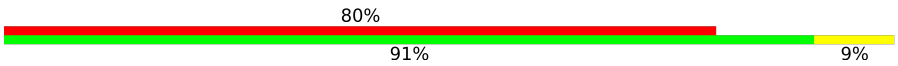
Chain O4:

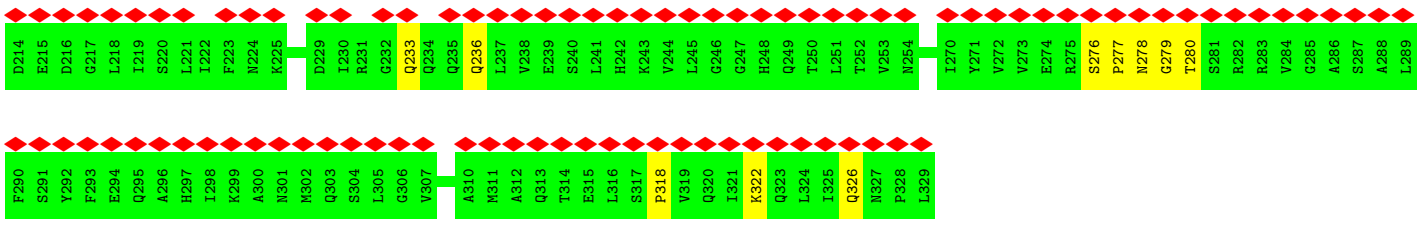




• Molecule 18: NUP54 Ferrodoxin-like domain

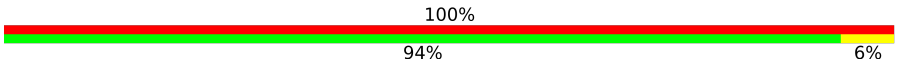
Chain P1:

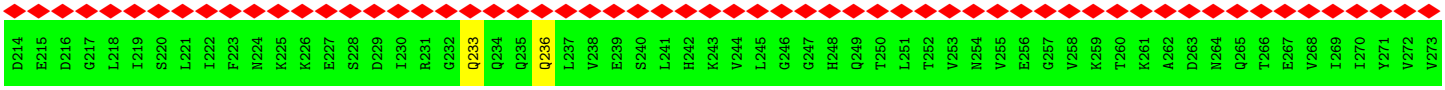


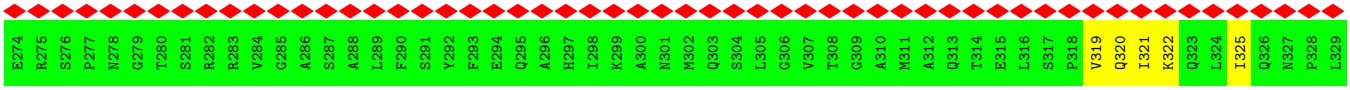


• Molecule 18: NUP54 Ferrodoxin-like domain

Chain P2:

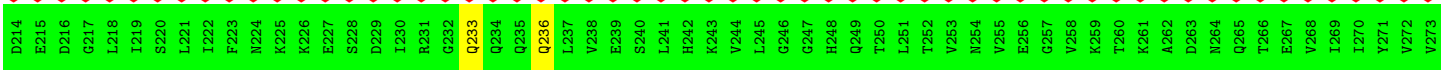


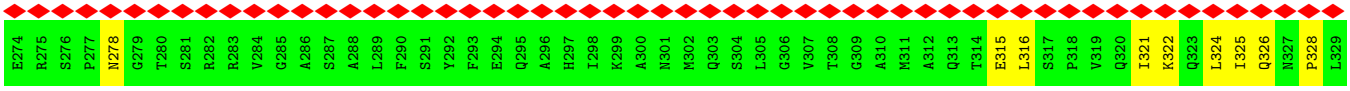




• Molecule 18: NUP54 Ferrodoxin-like domain

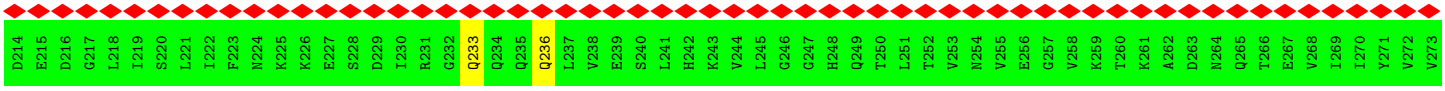
Chain P3:

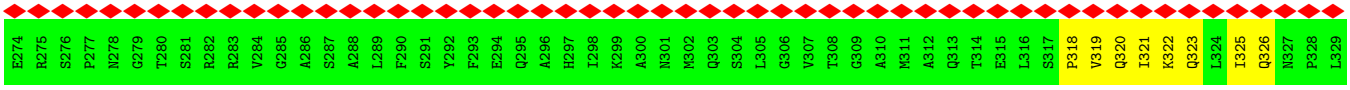




• Molecule 18: NUP54 Ferrodoxin-like domain

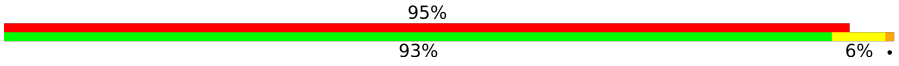
Chain P4:

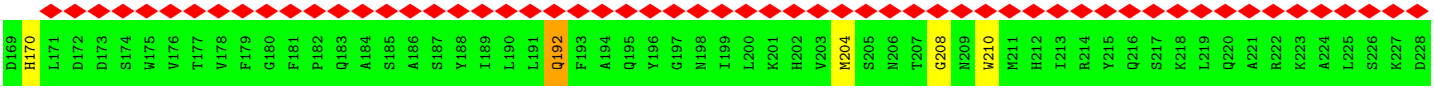


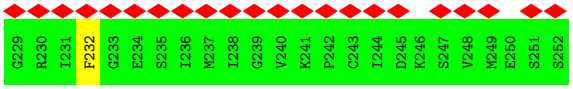


• Molecule 19: NUP53 RRM

Chain Q1:



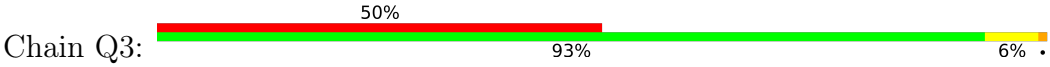


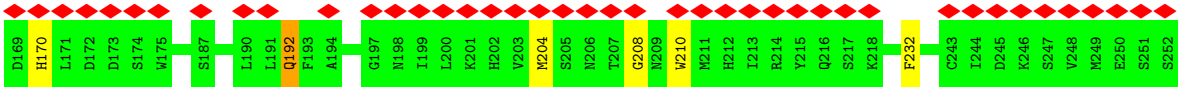


• Molecule 19: NUP53 RRM

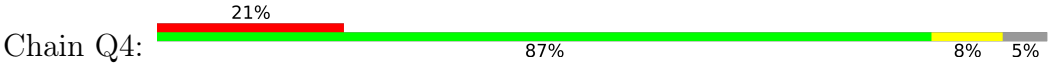
Chain Q2:

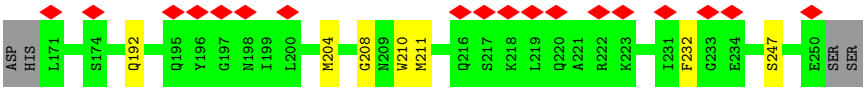
• Molecule 19: NUP53 RRM



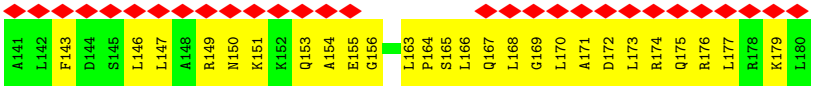


• Molecule 19: NUP53 RRM

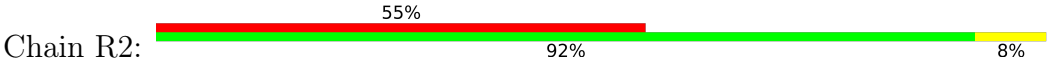


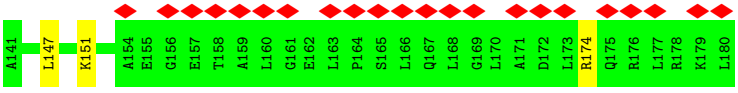


• Molecule 20: NUP93 R1

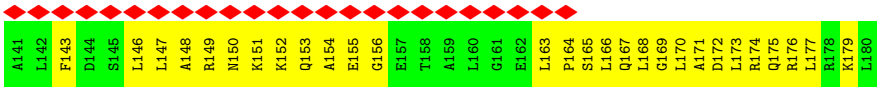


• Molecule 20: NUP93 R1

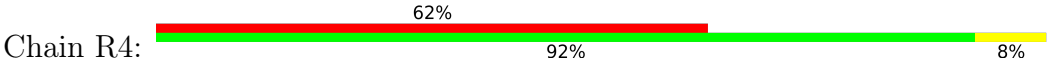


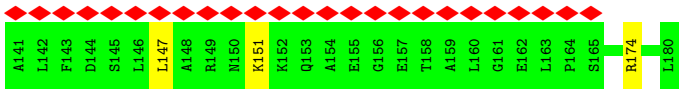


• Molecule 20: NUP93 R1



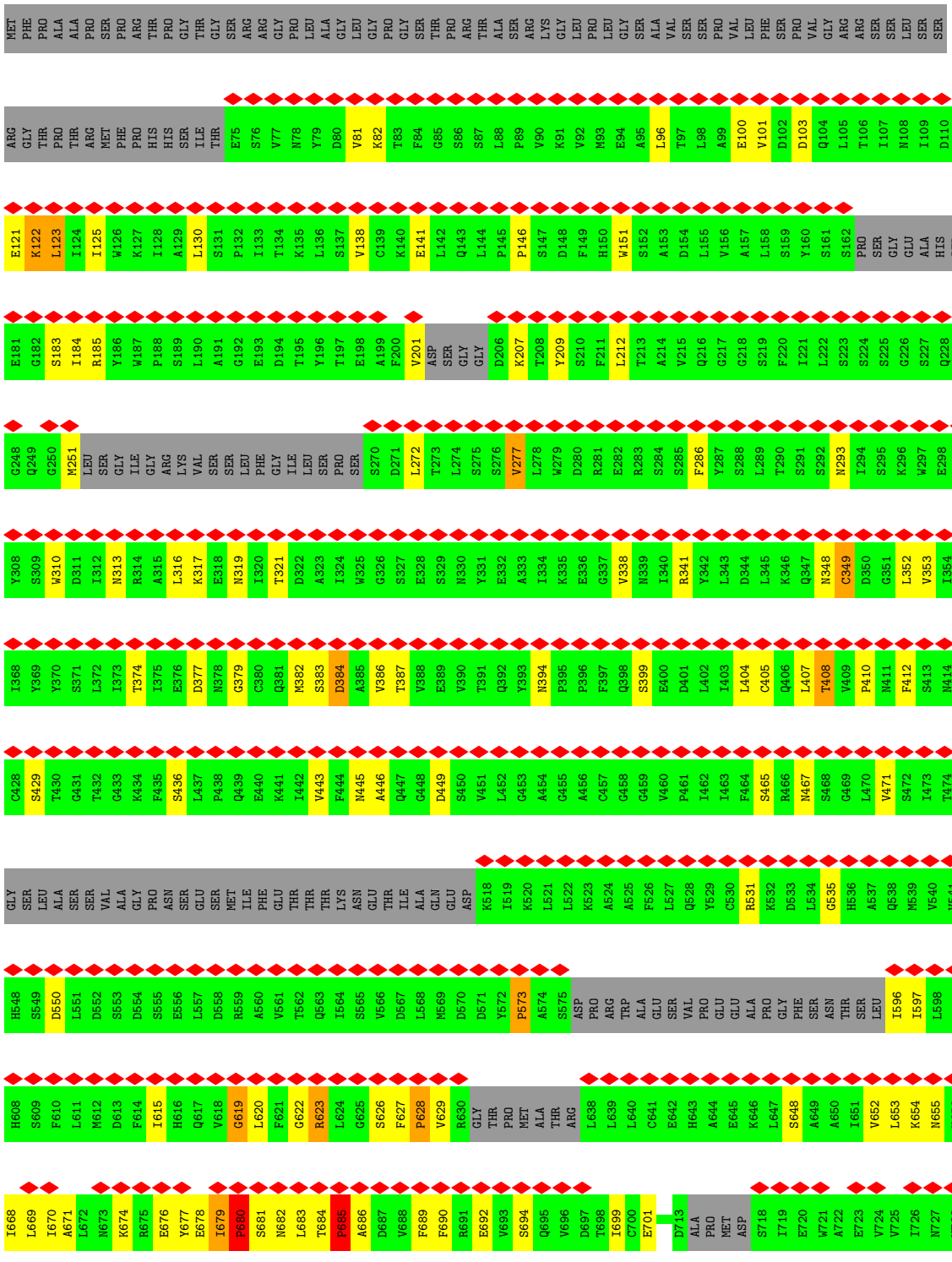
• Molecule 20: NUP93 R1

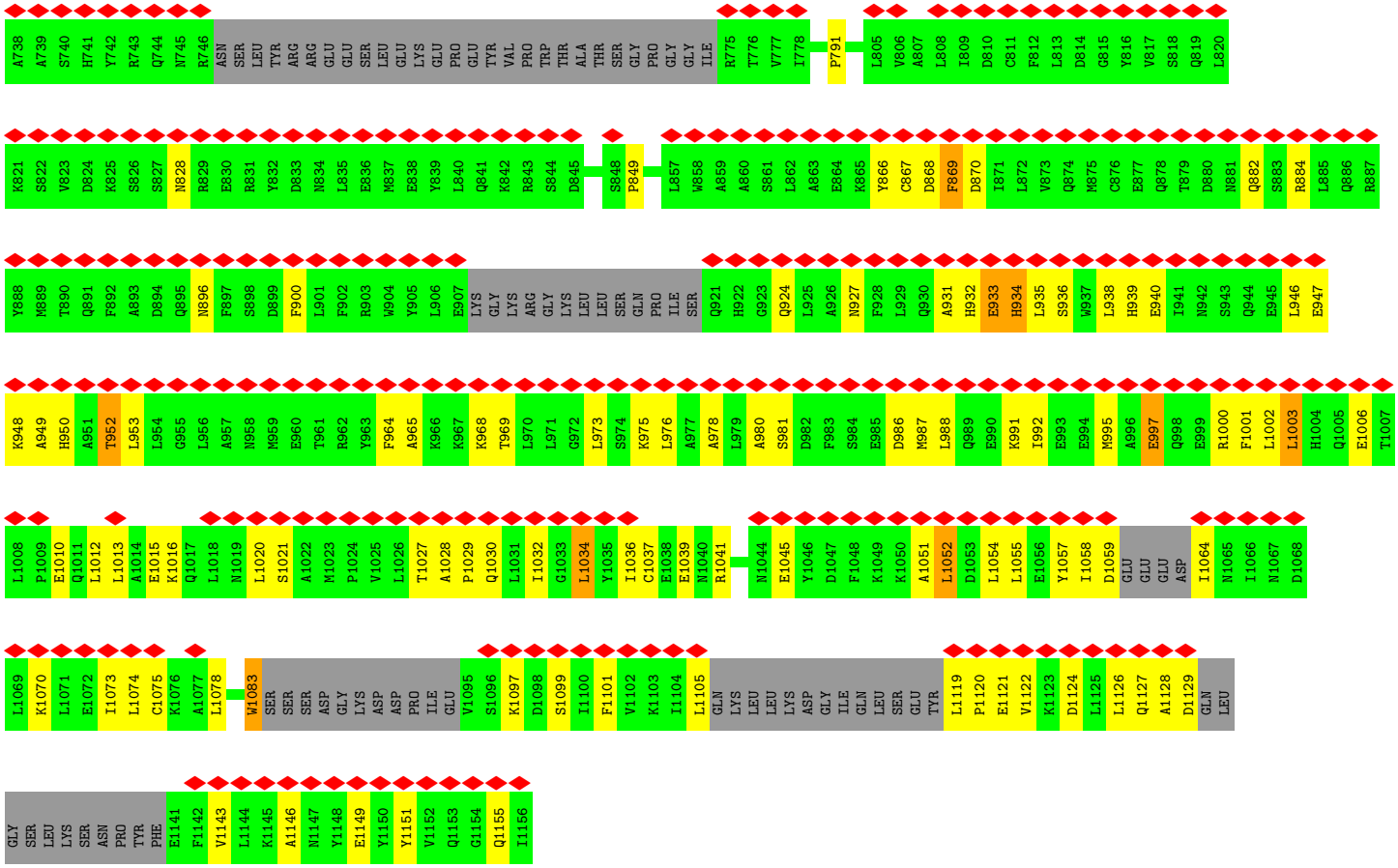




• Molecule 21: NUP133

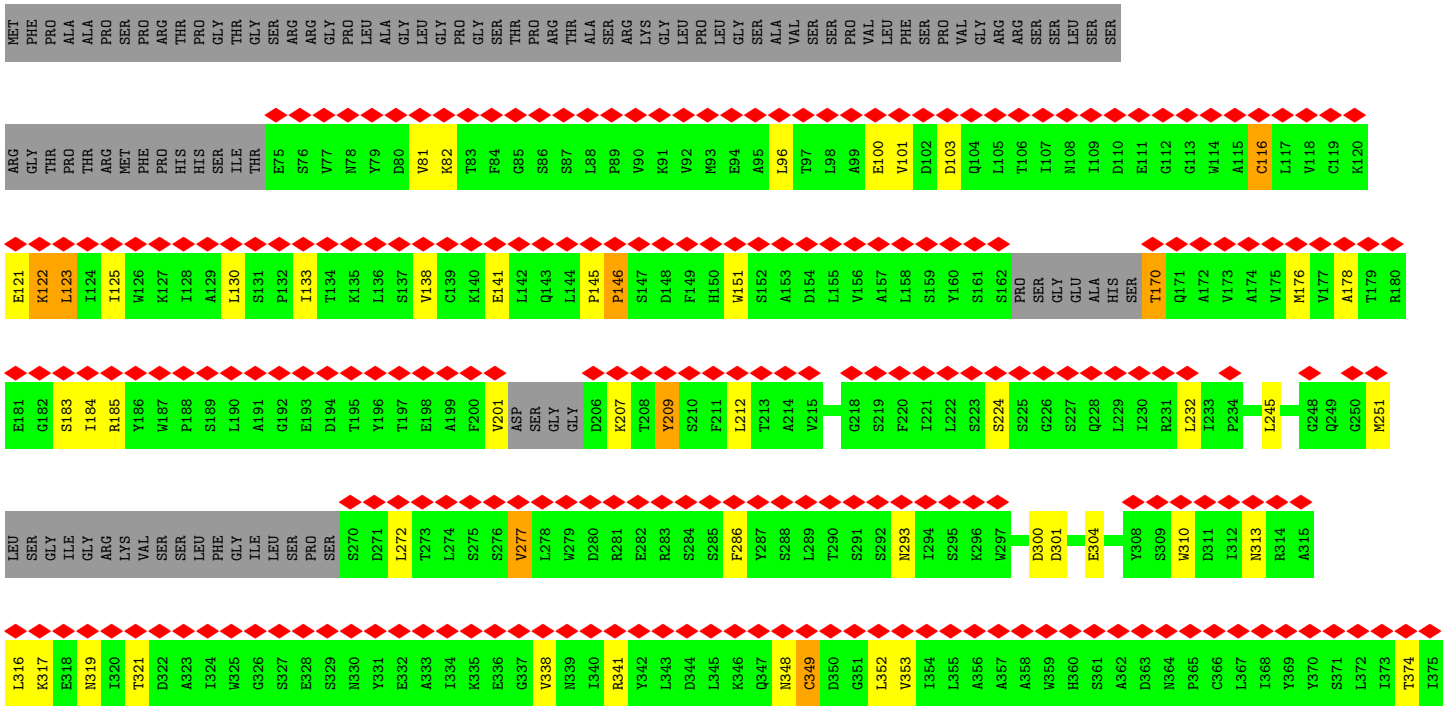
Chain S1:

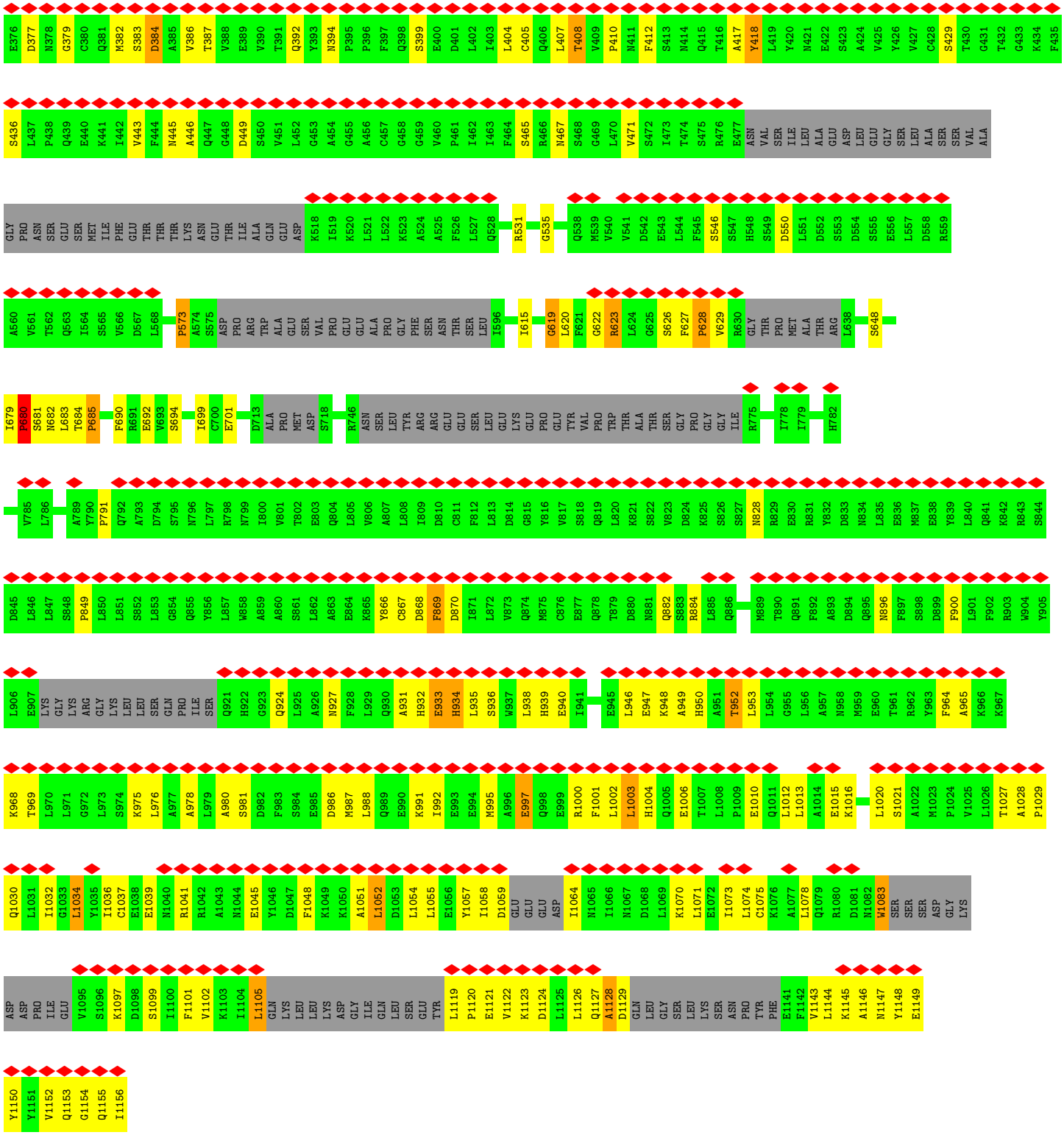




• Molecule 21: NUP133

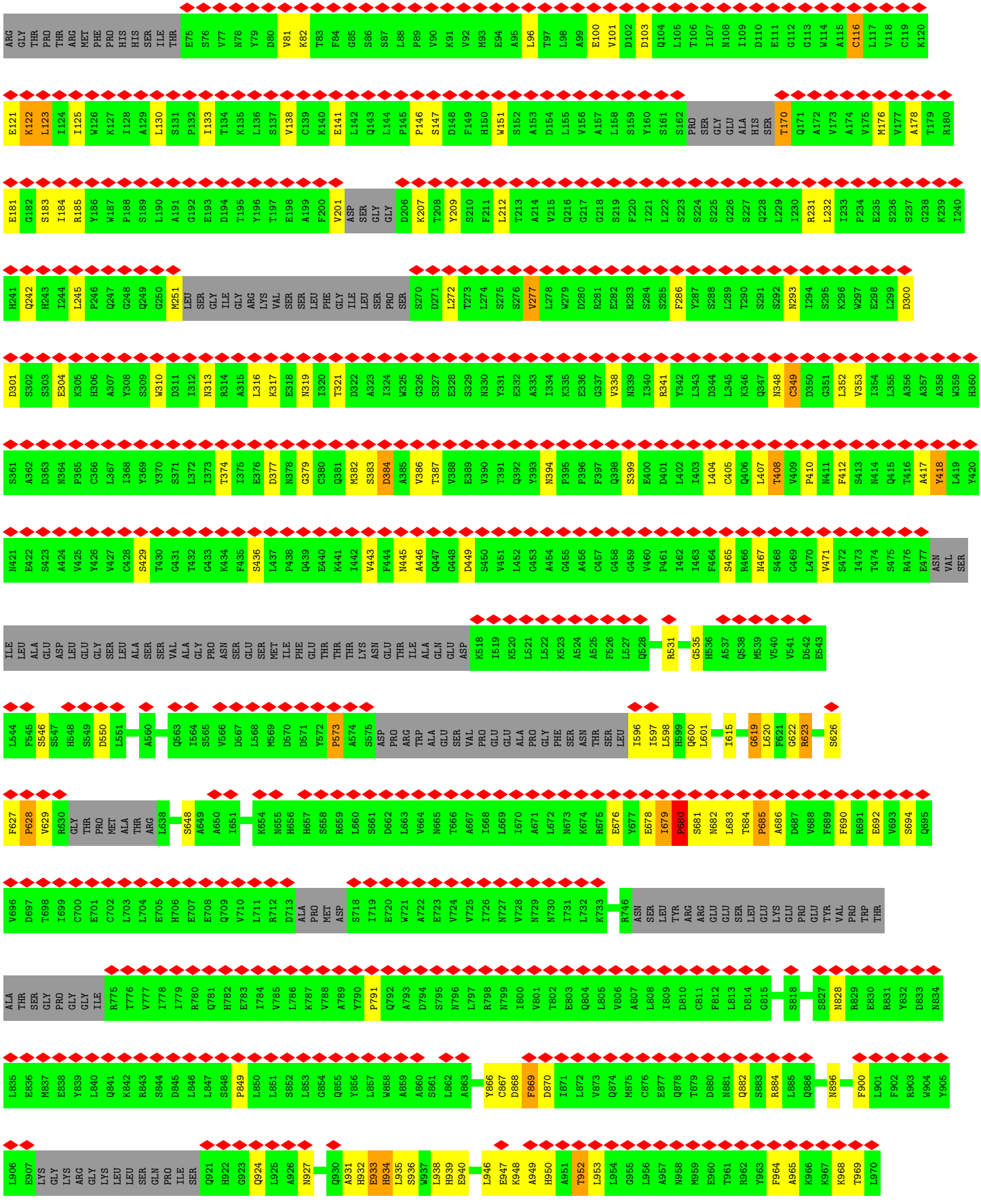
Chain S2:





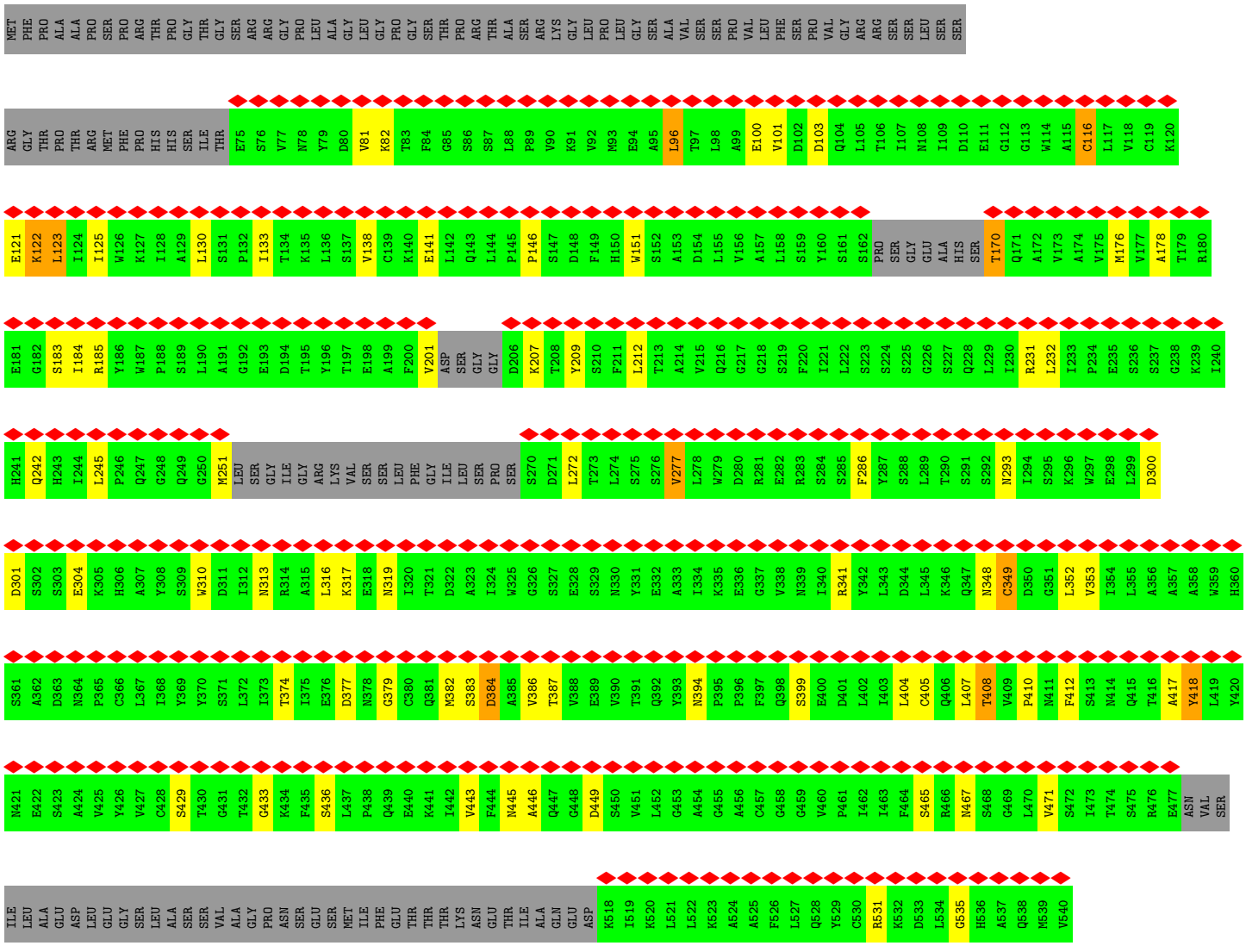
- Molecule 21: NUP133

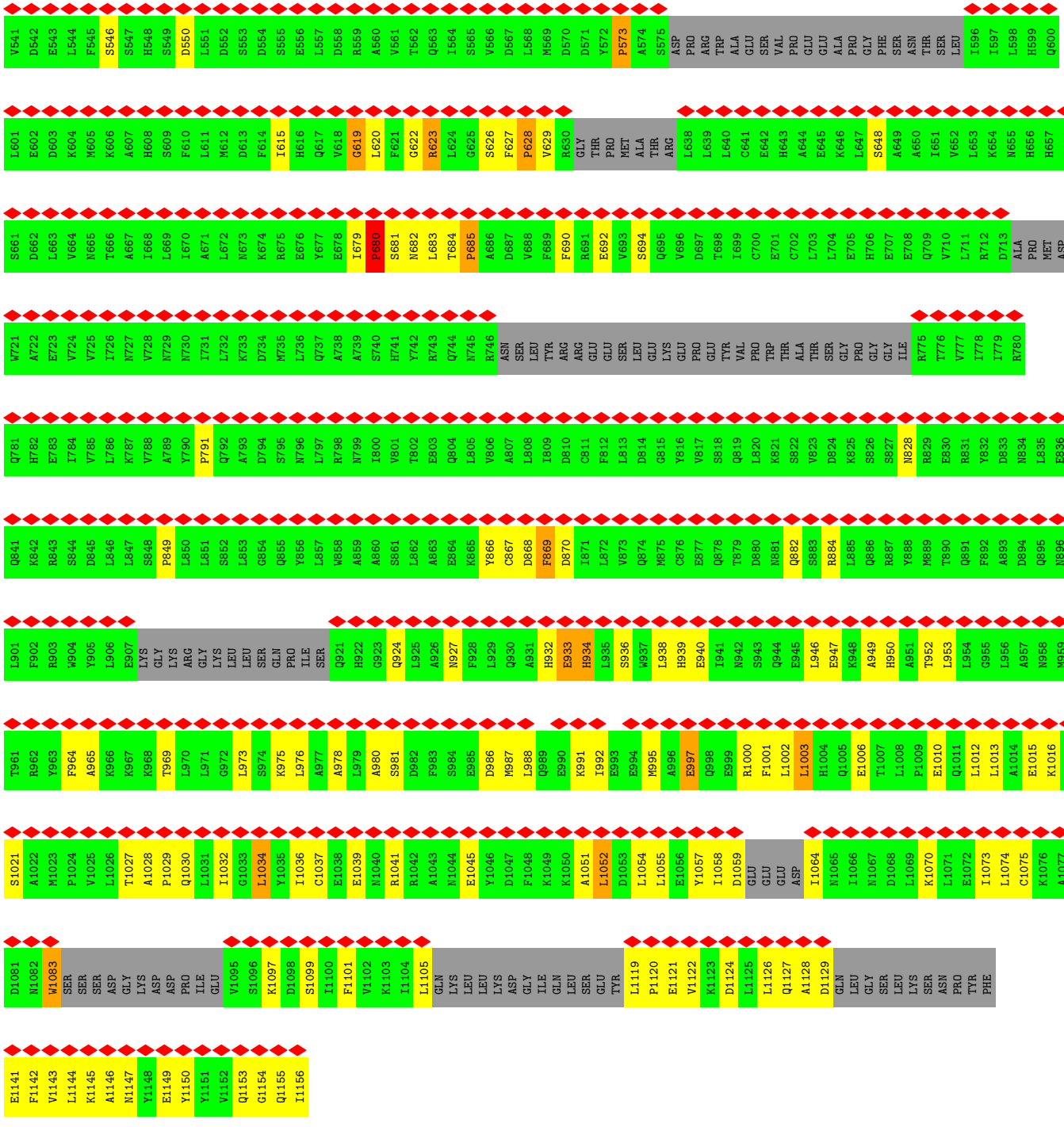
Chain S3:


ARG GLY THR PRO THR ARG MET PHE PRO HIS HIS SER ILE THR E75 S76 V77 N78 Y79 D80 V81 K82 T83 F84 G85 S86 S87 L88 P89 V90 K91 V92 M93 E94 A95 L96 T97 L98 A99 E100 V101 D102 D103 Q104 L105 T106 I107 N108 I109 D110 E111 G112 G113 W114 A115 C116 L117 V118 C119 K120
E121 K122 L123 I124 I125 W126 K127 I128 A129 L130 S131 P132 I133 T134 K135 L136 S137 V138 C139 K140 E141 L142 Q143 L144 P145 P146 S147 D148 F149 H150 W151 S152 A153 D154 L155 V156 A157 L158 S159 Y160 S161 S162 PRO SER GLY GLU ALA HIS SER T170 Q171 A172 V173 A174 V175 M176 V177 A178 T179 R180
E181 G182 S183 I184 R185 Y186 W187 P188 S189 L190 A191 G192 E193 D194 T195 Y196 T197 E198 A199 F200 V201 ASP SER GLY GLY D206 K207 T208 Y209 S210 F211 L212 T213 A214 V215 Q216 G217 G218 S219 F220 I221 L222 S223 S224 S225 G226 S227 Q228 L229 I230 R231 L232 I233 P234 E235 S236 S237 G238 K239 I240
H241 Q242 H243 I244 L245 P246 Q247 G248 Q249 G250 M251 LEU SER GLY ILE GLY ARG LYS VAL SER SER LEU PHE GLY ILE LEU SER PRO SER S270 D271 L272 T273 L274 S275 S276 V277 L278 W279 D280 R281 E282 R283 S284 S285 F286 Y287 S288 L289 T290 S291 S292 N293 I294 S295 K296 W297 E298 L299 D300
D301 S302 S303 E304 K305 H306 A307 Y308 S309 W310 D311 I312 N313 R314 A315 L316 K317 E318 N319 I320 T321 D322 A323 I324 W325 G326 S327 E328 S329 N330 Y331 E332 A333 I334 K335 E336 G337 V338 N339 I340 R341 Y342 L343 D344 L345 K346 Q347 N348 C349 D350 G351 L352 V353 I354 L355 A356 A357 A358 W359 H360
S361 A362 D363 N364 P365 C366 L367 I368 Y369 Y370 S371 L372 I373 T374 I375 E376 D377 N378 G379 C380 Q381 M382 S383 D384 A385 V386 T387 V388 E389 V390 T391 Q392 Y393 N394 P395 P396 F397 Q398 S399 E400 D401 L402 I403 L404 C405 Q406 L407 T408 V409 P410 N411 F412 S413 N414 Q415 T416 A417 Y418 L419 Y420
N421 E422 S423 A424 V425 Y426 V427 C428 S429 T430 G431 T432 G433 K434 F435 S436 L437 P438 Q439 E440 K441 I442 V443 F444 N445 A446 Q447 G448 D449 S450 V451 L452 G453 A454 G455 A456 C457 G458 G459 V460 P461 I462 I463 F464 S465 R466 N467 S468 G469 L470 V471 S472 I473 T474 S475 R476 E477 ASN VAL SER
ILE LEU ALA GLU ASP LEU GLU GLY SER LEU ALA SER SER VAL ALA GLY PRO ASN SER GLU SER MET ILE PHE GLU THR THR THR LYS ASN GLU THR ILE ALA GLN GLU ASP K518 I519 K520 L521 L522 K523 A524 A525 F526 L527 Q528 R531 G535 H536 A537 Q538 M539 V540 V541 D542 E543
L544 F545 S546 S547 H548 S549 D550 L551 A560 Q563 I564 S565 V566 D567 L568 M569 D570 D571 Y572 P573 A574 S575 ASP PRO ARG TRP ALA GLU SER VAL PRO GLU GLU ALA PRO GLY PHE SER ASN THR SER LEU I596 I597 L598 H599 Q600 L601 I615 G619 L620 F621 G622 R623 S626
F627 P628 V629 R630 GLY THR PRO MET ALA THR ARG L638 S648 A649 A650 I651 K654 N655 H656 H657 S658 R659 L660 S661 D662 L663 V664 N665 T666 A667 I668 L669 I670 A671 L672 N673 K674 R675 E676 Y677 E678 I679 P680 S681 N682 L683 T684 P685 A686 D687 V688 F689 F690 R691 E692 V693 S694 Q695
V696 D697 T698 I699 C700 E701 C702 L703 L704 E705 H706 E707 E708 Q709 V710 L711 R712 D713 ALA PRO MET ASP S718 I719 E720 W721 A722 E723 V724 V725 I726 N727 V728 N729 N730 I731 L732 K733 R746 ASN SER LEU TYR ARG ARG GLU GLU SER LEU GLU LYS GLU PRO GLU TYR VAL PRO TRP THR
ALA THR SER GLY PRO GLY GLY ILE R775 T776 V777 I778 I779 R780 Q781 H782 E783 I784 V785 L786 K787 V788 A789 Y790 P791 Q792 A793 D794 S795 N796 L797 R798 N799 I800 V801 T802 E803 Q804 L805 V806 A807 L808 I809 D810 C811 F812 L813 D814 G815 S818 S827 N828 R829 E830 R831 Y832 D833 N834
L835 E836 M837 E838 Y839 L840 Q841 K842 R843 S844 D845 L846 L847 S848 P849 L850 L851 S852 L853 G854 Q855 Y856 L857 W858 A859 A860 S861 L862 A863 Y866 C867 D868 F869 D870 I871 L872 V873 Q874 M875 C876 E877 Q878 T879 D880 N881 Q882 S883 R884 L885 Q886 N896 F900 L901 F902 R903 W904 Y905
L906 E907 LYS GLY LYS ARG GLY LYS LEU LEU SER GLN PRO ILE SER Q921 H922 G923 Q924 L925 A926 N927 Q930 A931 H932 E933 H934 L935 S936 W937 L938 H939 E940 L946 E947 K948 A949 H950 A951 T952 L953 L954 G955 L956 A957 N958 M959 E960 T961 R962 Y963 F964 A965 K966 K967 K968 T969 L970

• Molecule 21: NUP133

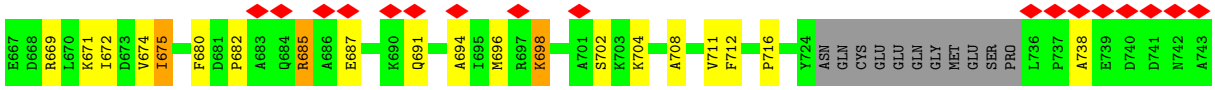
Chain S4:





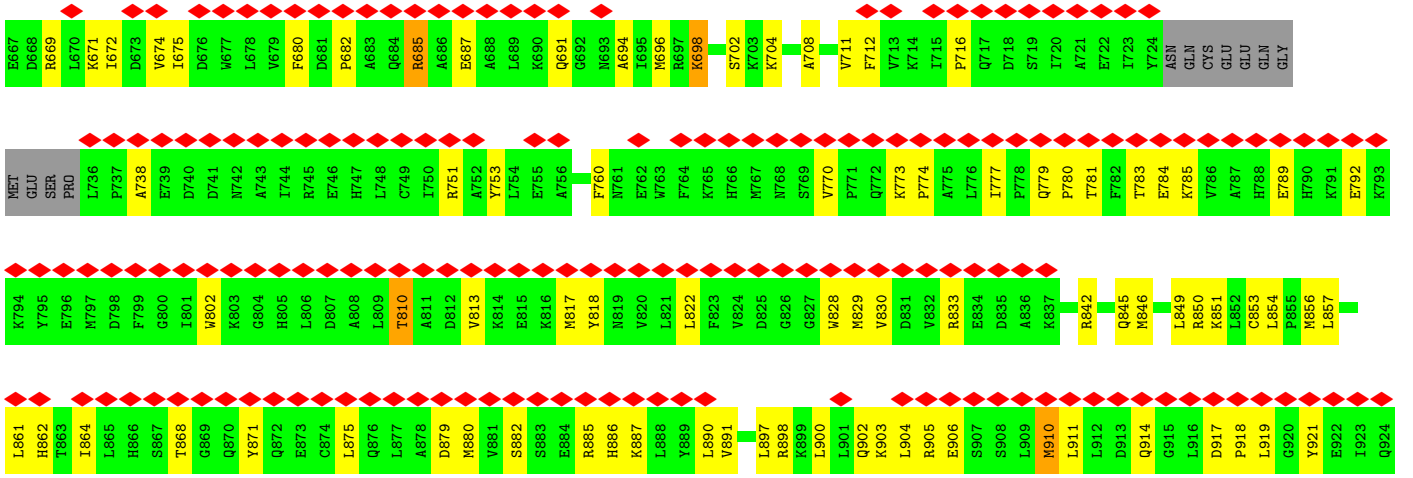
- Molecule 22: NUP107 CTD

Chain T1:



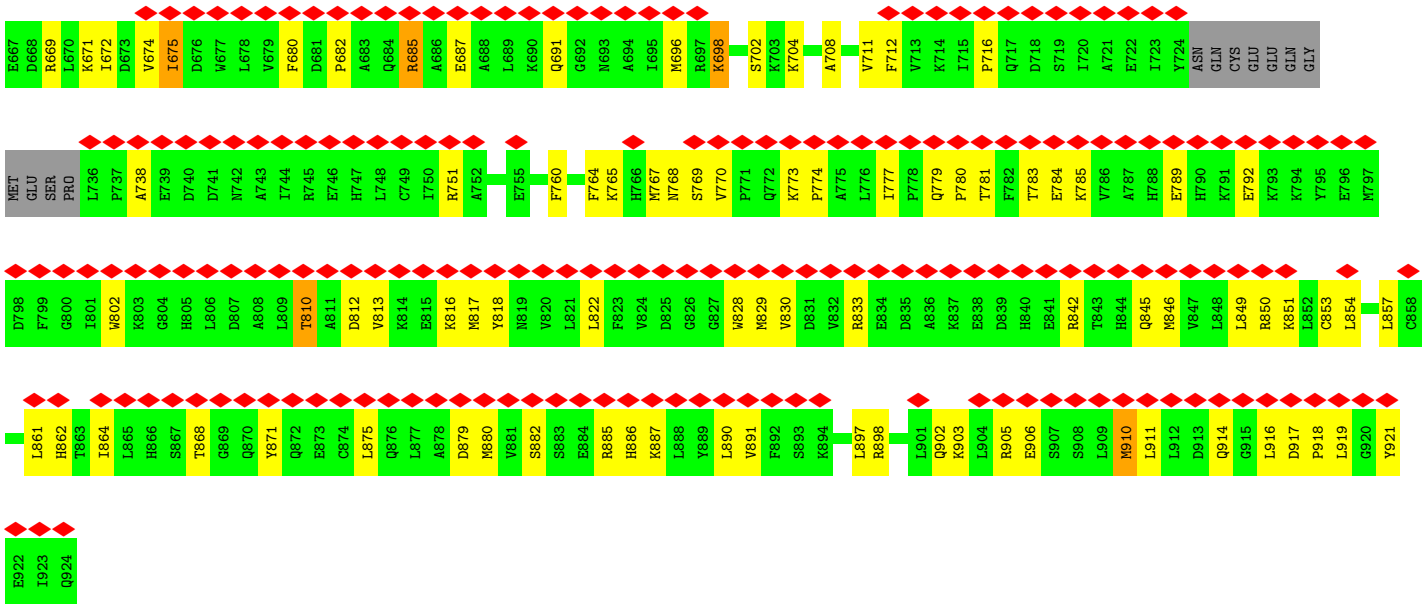
• Molecule 22: NUP107 CTD

Chain T2:



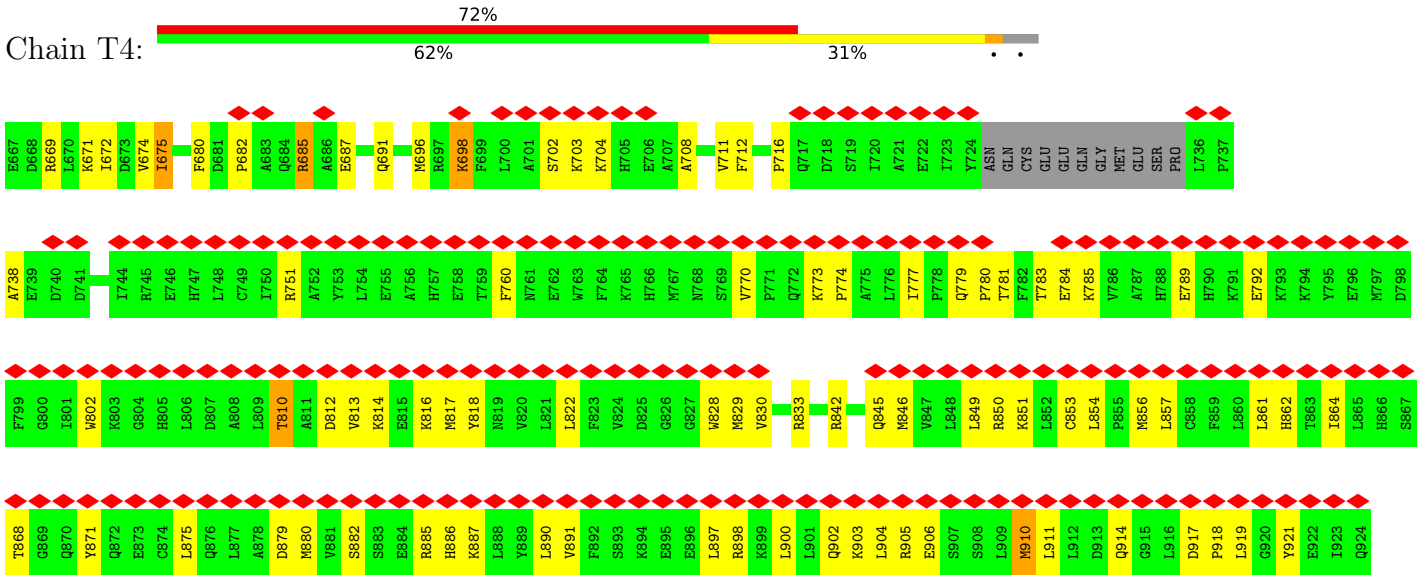
• Molecule 22: NUP107 CTD

Chain T3:



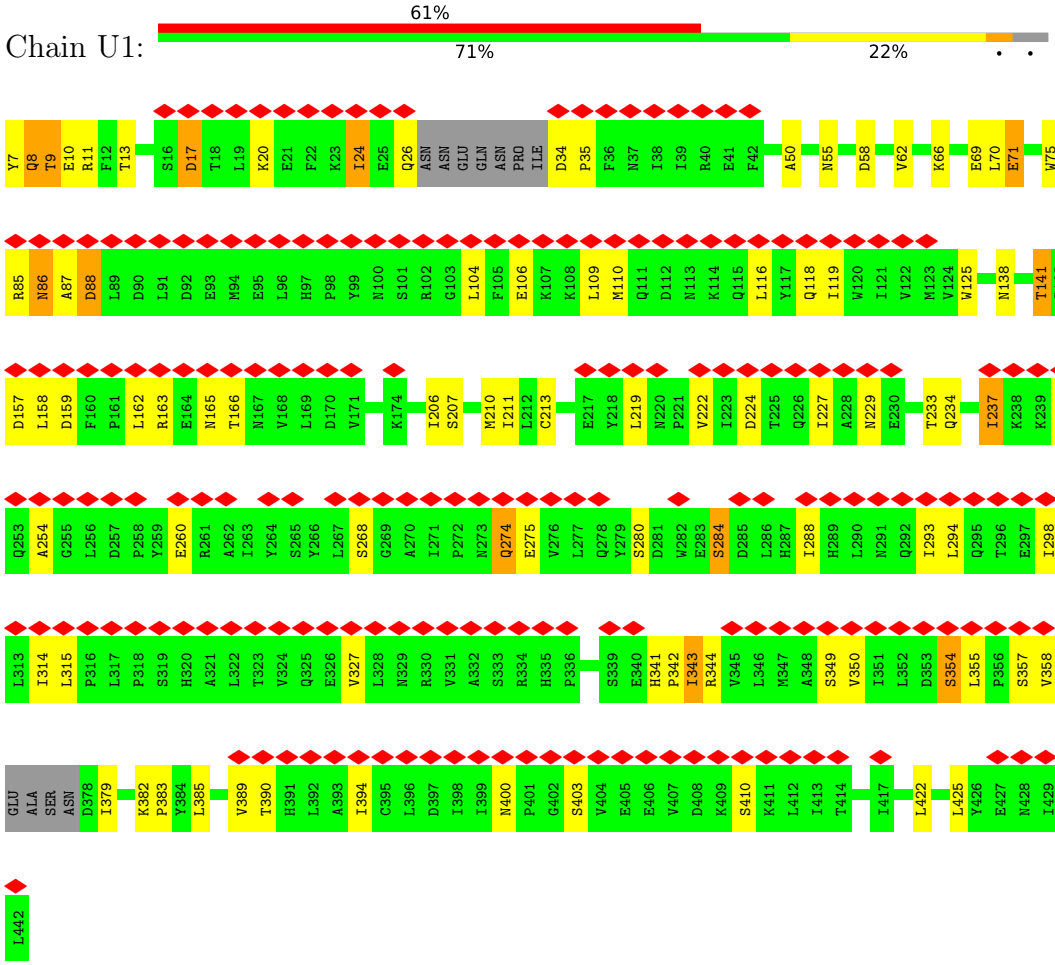
• Molecule 22: NUP107 CTD

Chain T4:



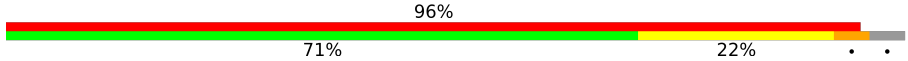
• Molecule 23: NUP107 NTD

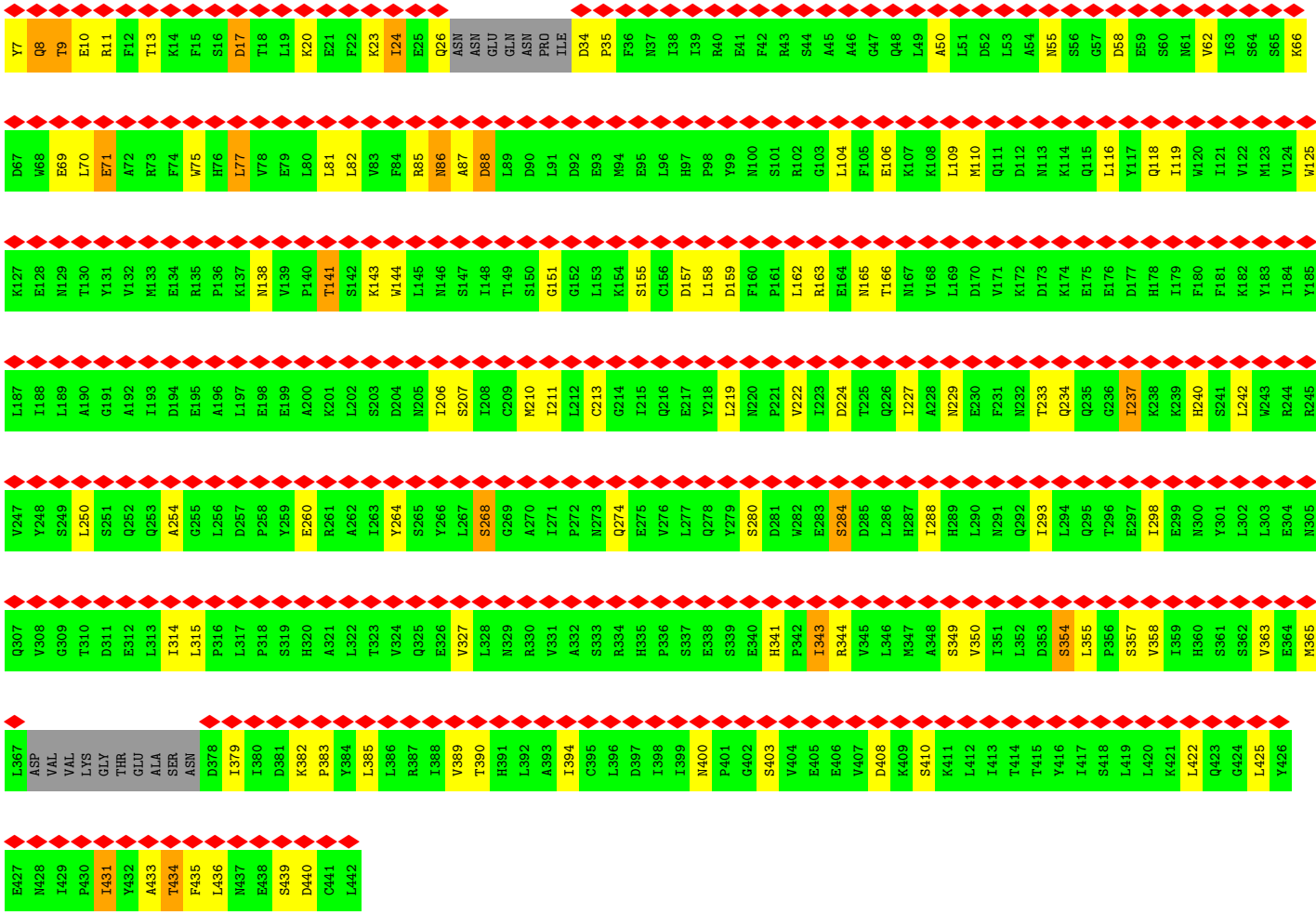
Chain U1:



• Molecule 23: NUP107 NTD

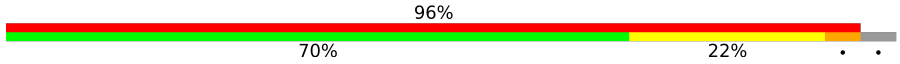
Chain U2:

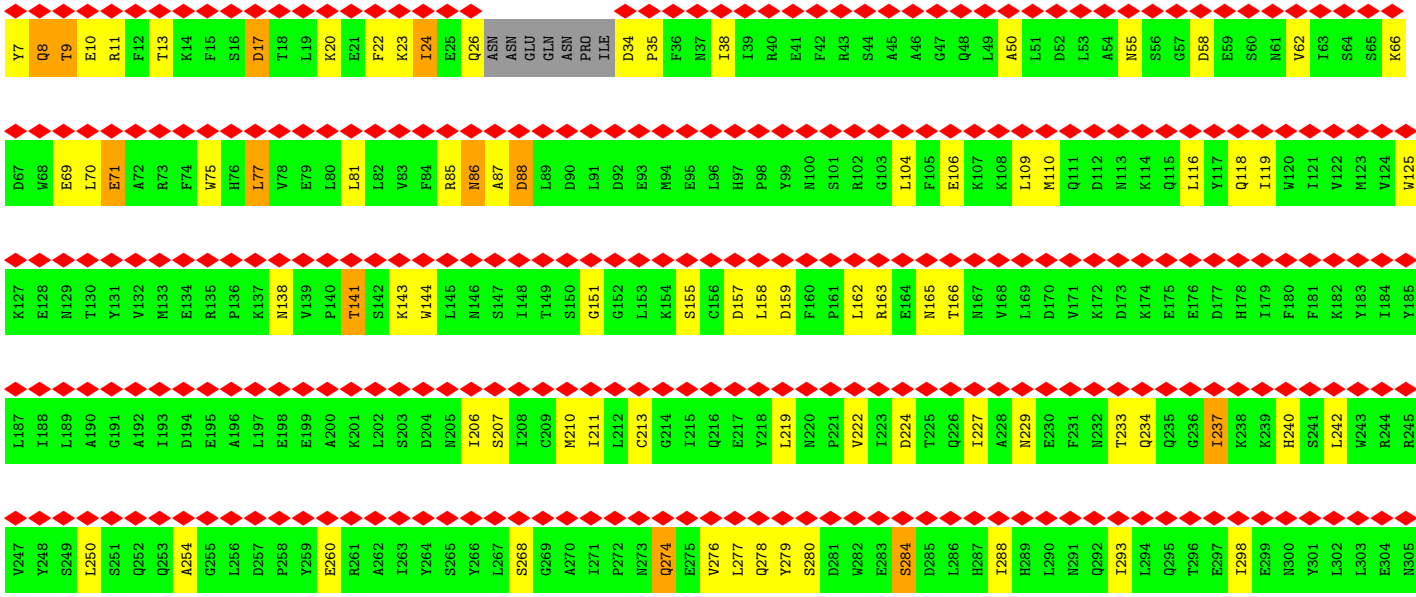


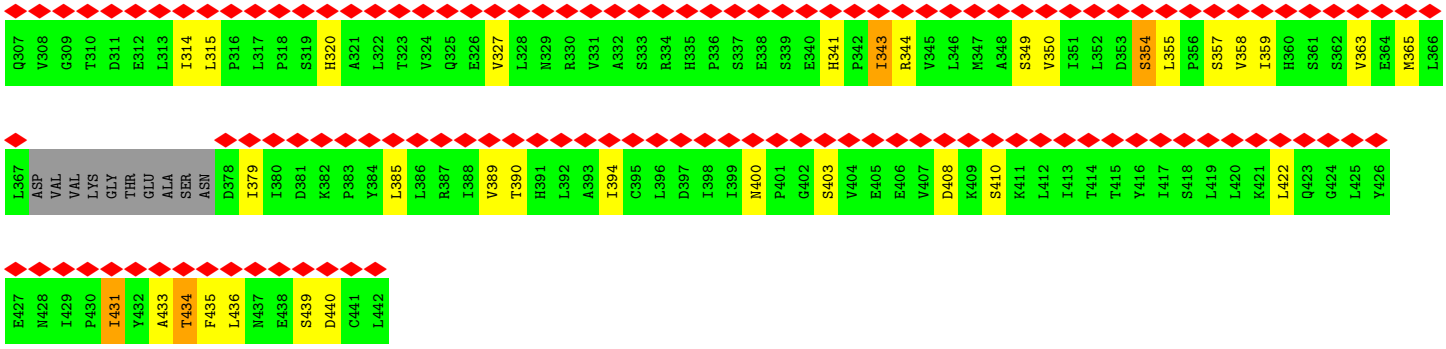


• Molecule 23: NUP107 NTD

Chain U3:

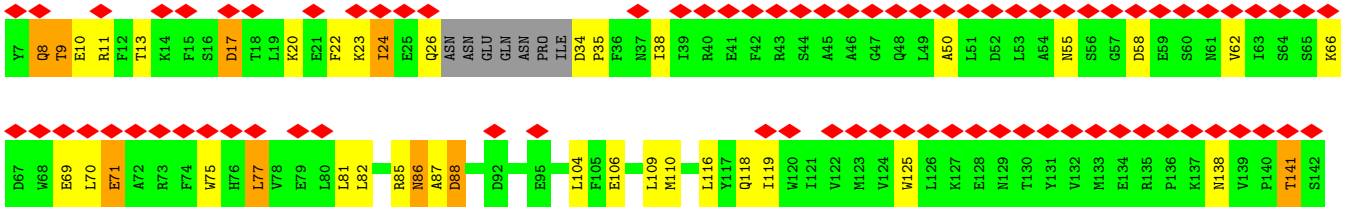






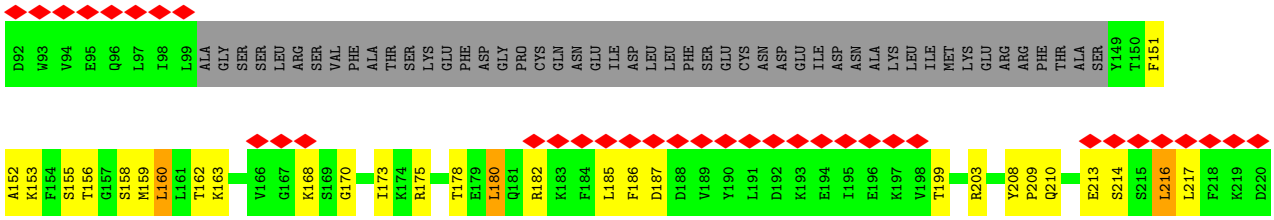
• Molecule 23: NUP107 NTD

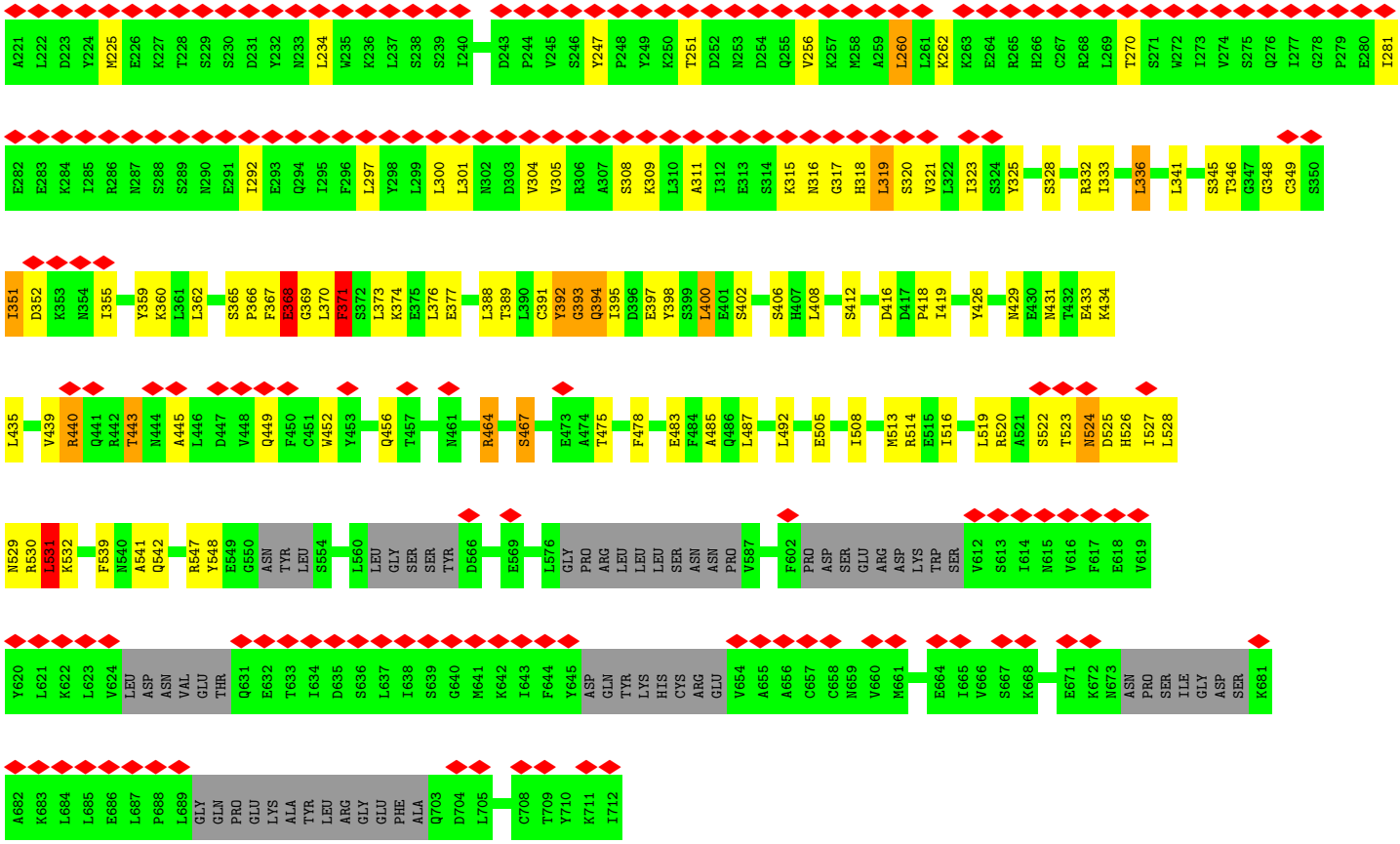
Chain U4:



• Molecule 24: NUP96

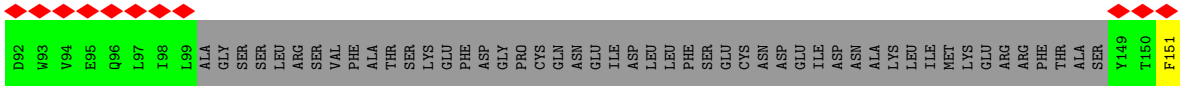
Chain V1:

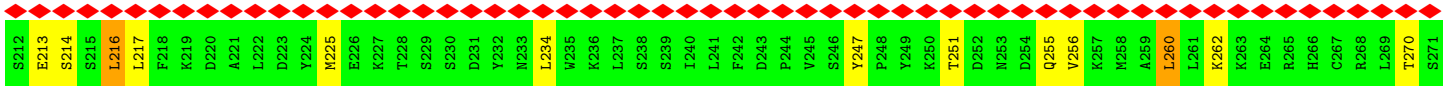


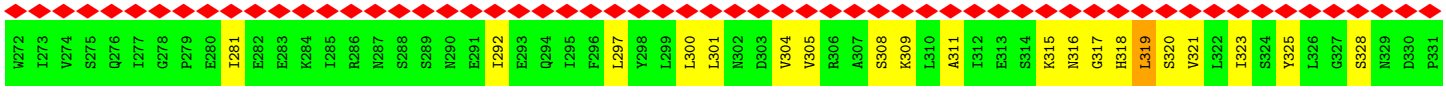


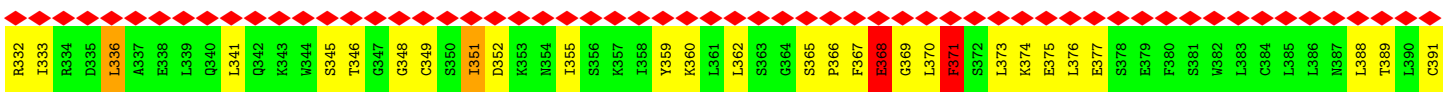
• Molecule 24: NUP96

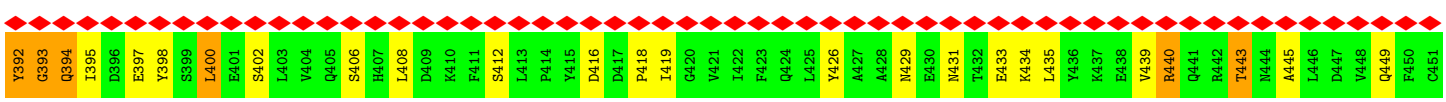
Chain V2:

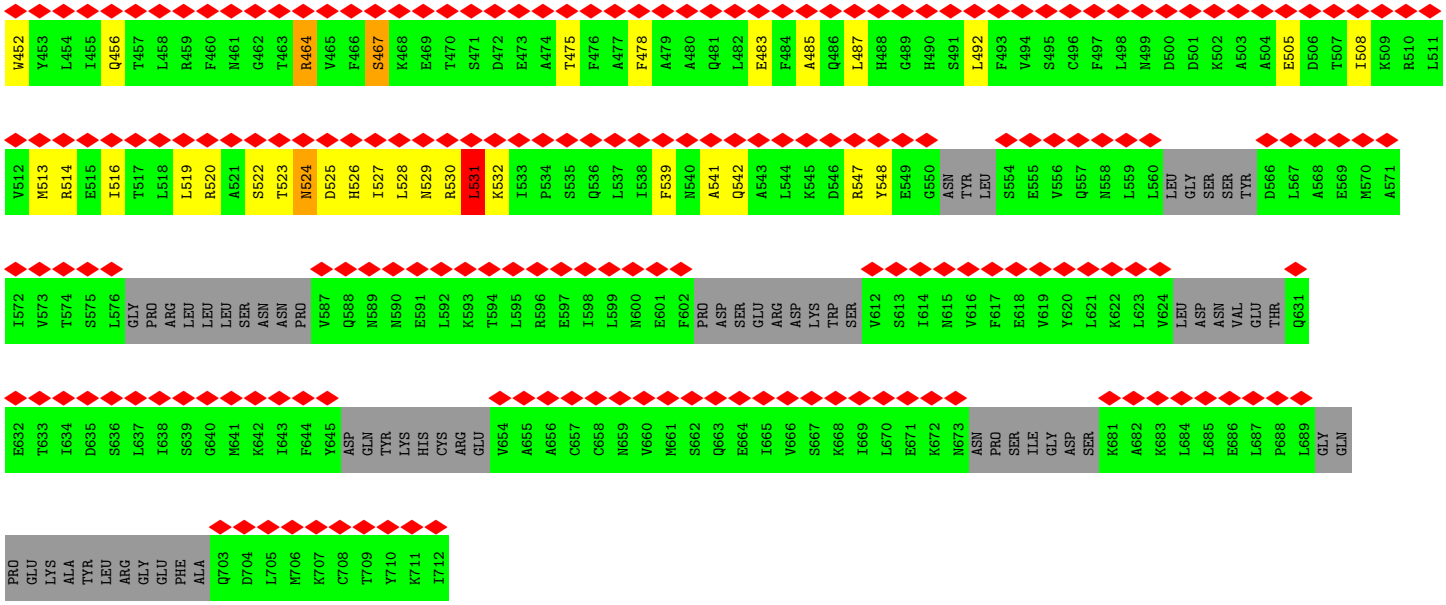






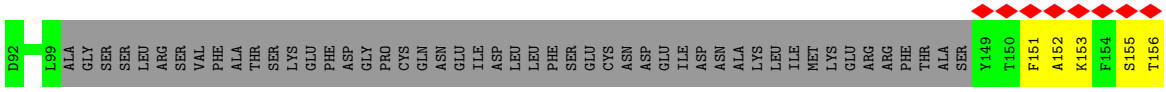


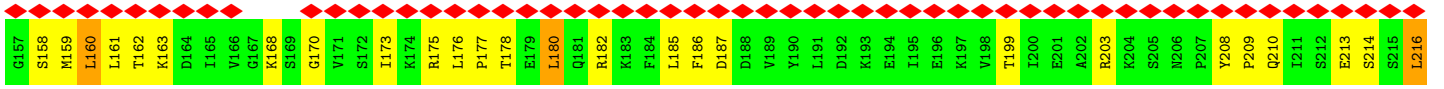


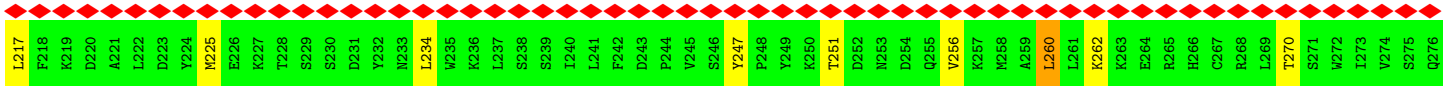


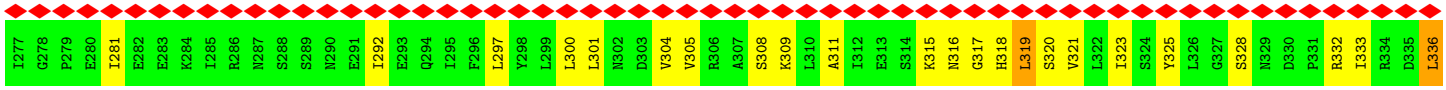
- Molecule 24: NUP96

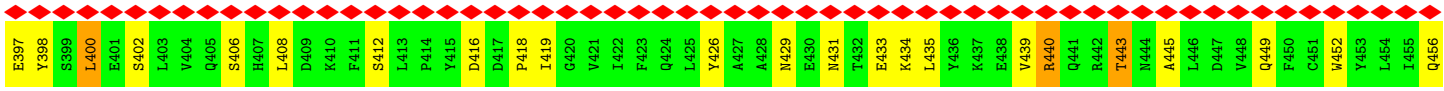
Chain V3:

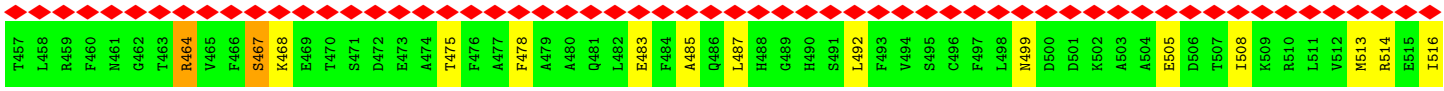


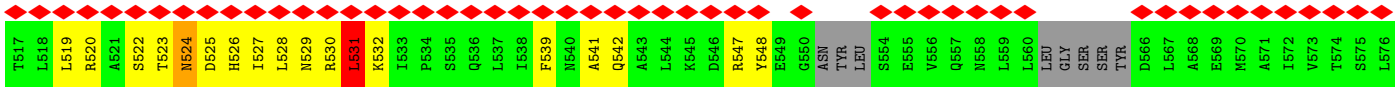


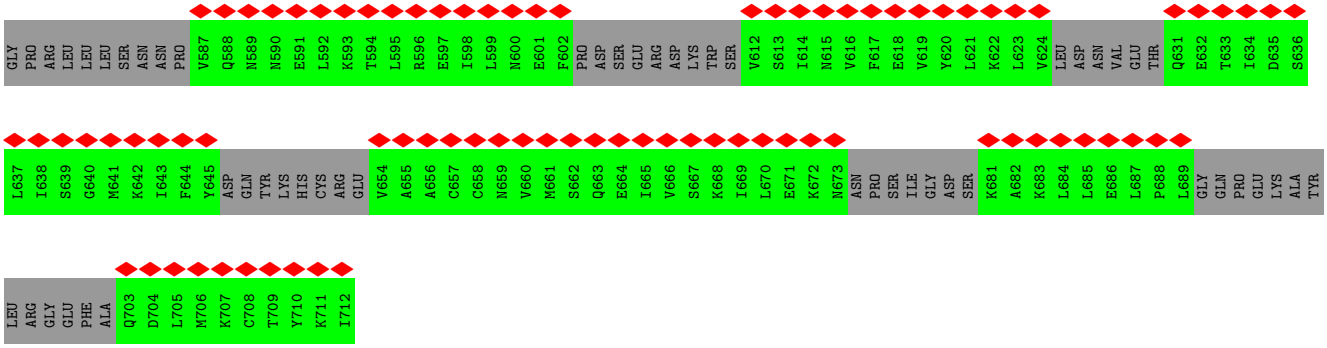






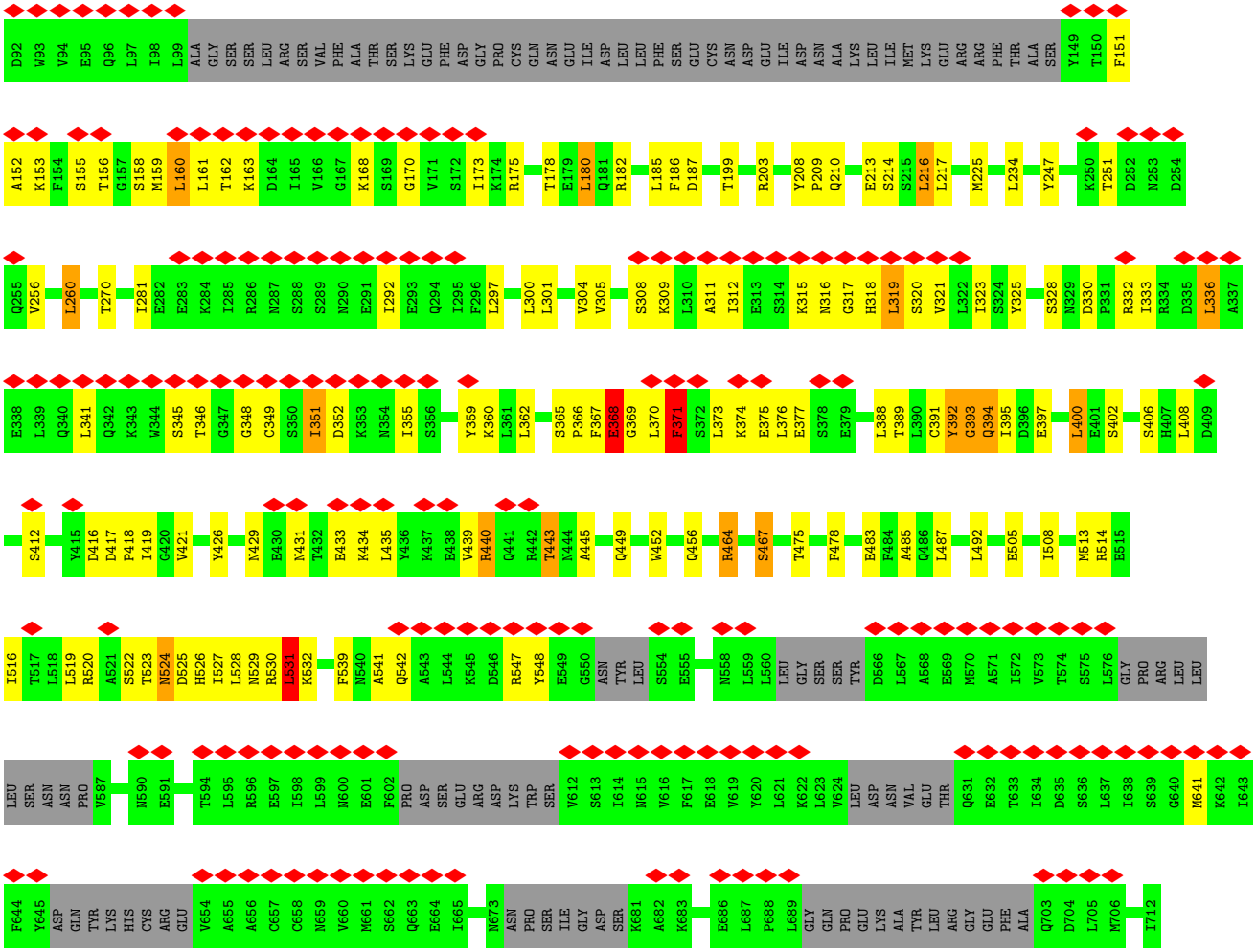






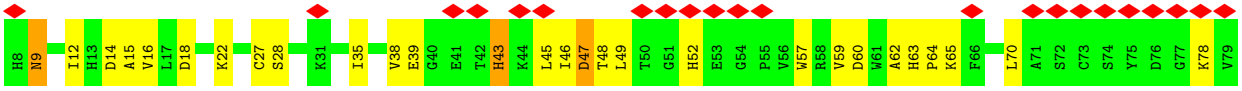
• Molecule 24: NUP96

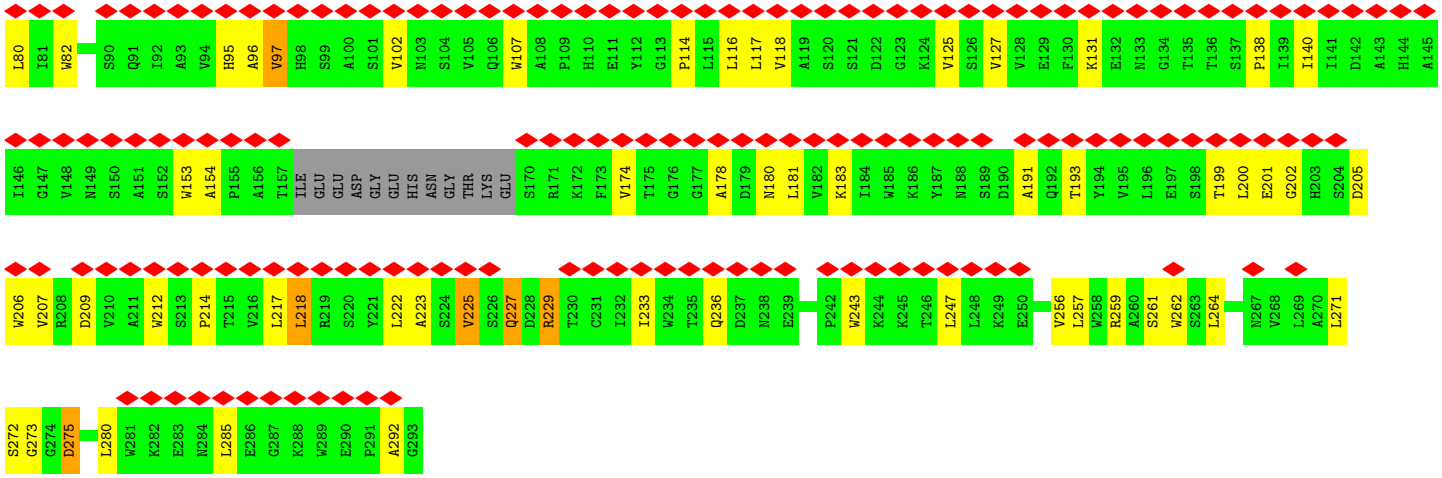
Chain V4:



• Molecule 25: SEC13

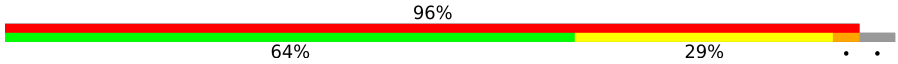
Chain W1:

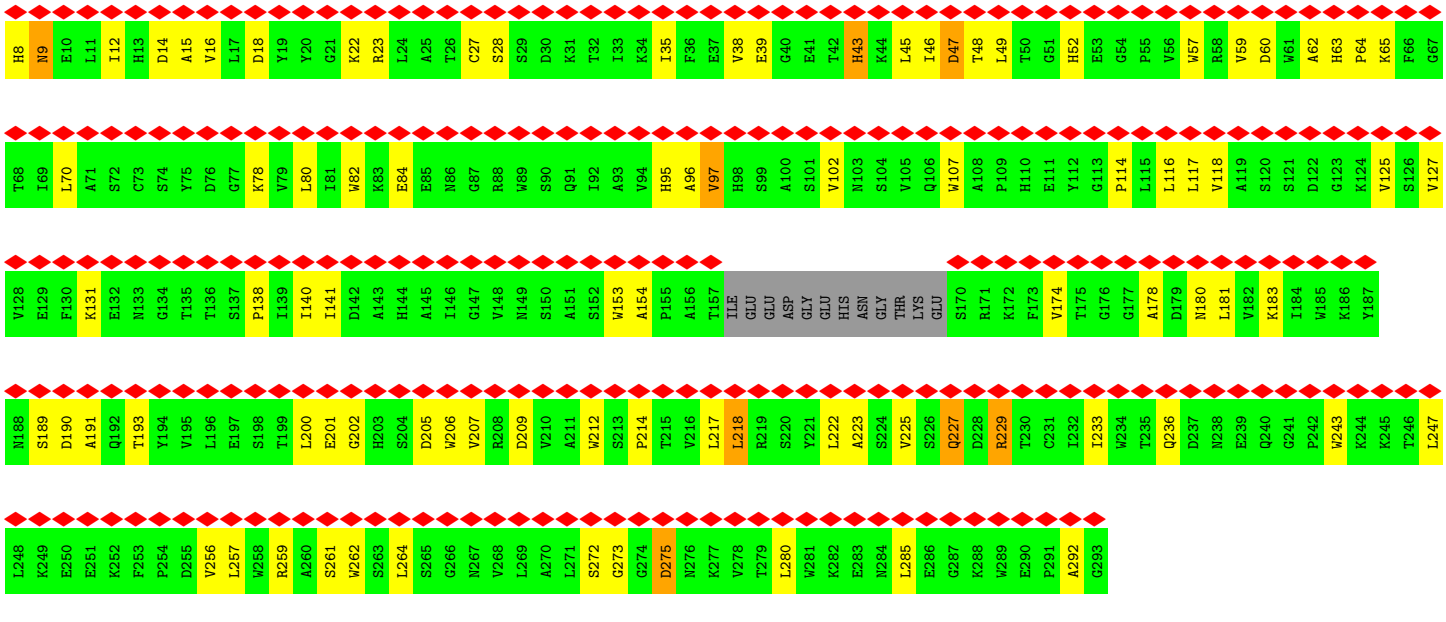




- Molecule 25: SEC13

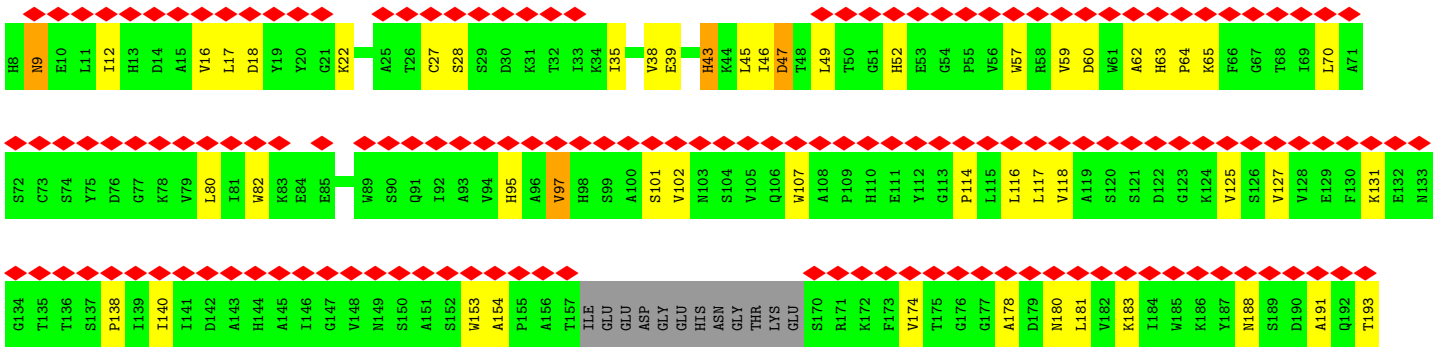
Chain W2:

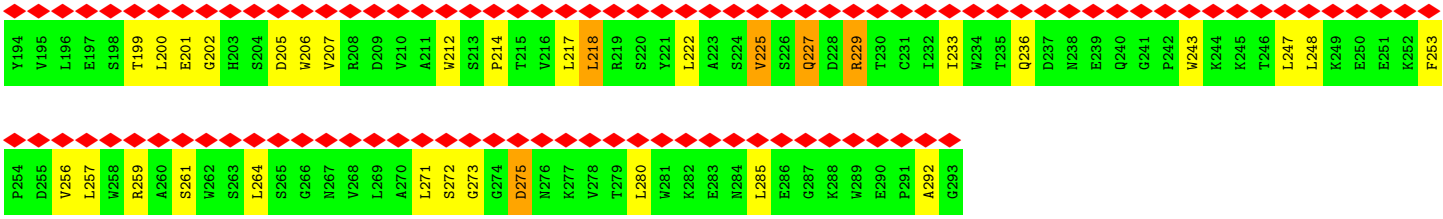




- Molecule 25: SEC13

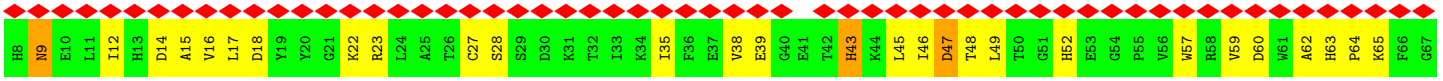
Chain W3:

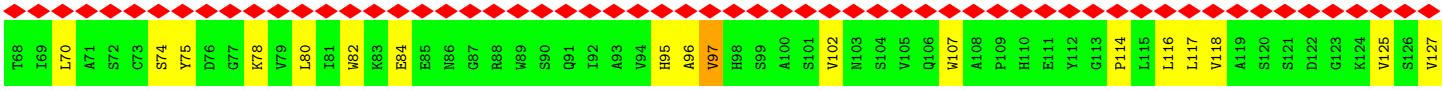


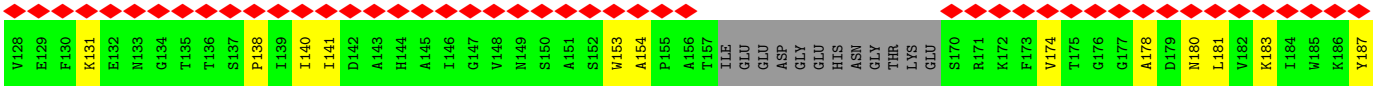


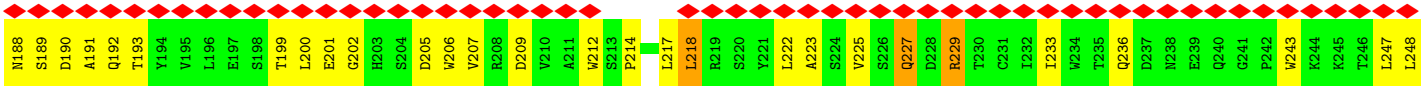
• Molecule 25: SEC13

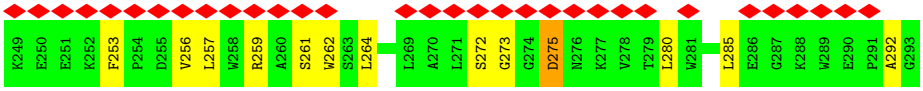
Chain W4:





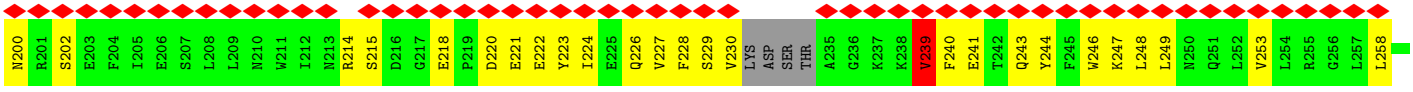


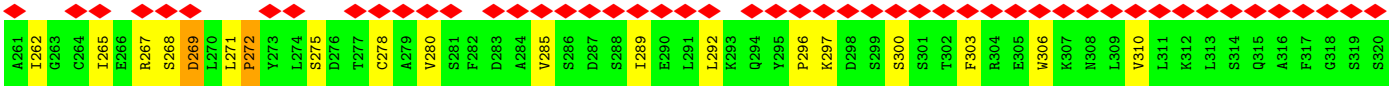


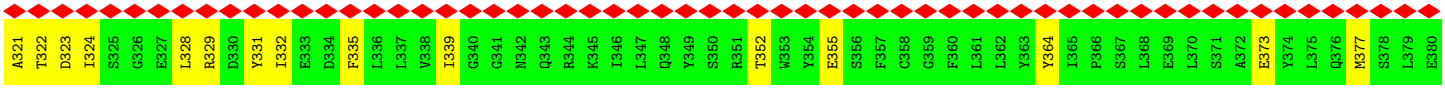


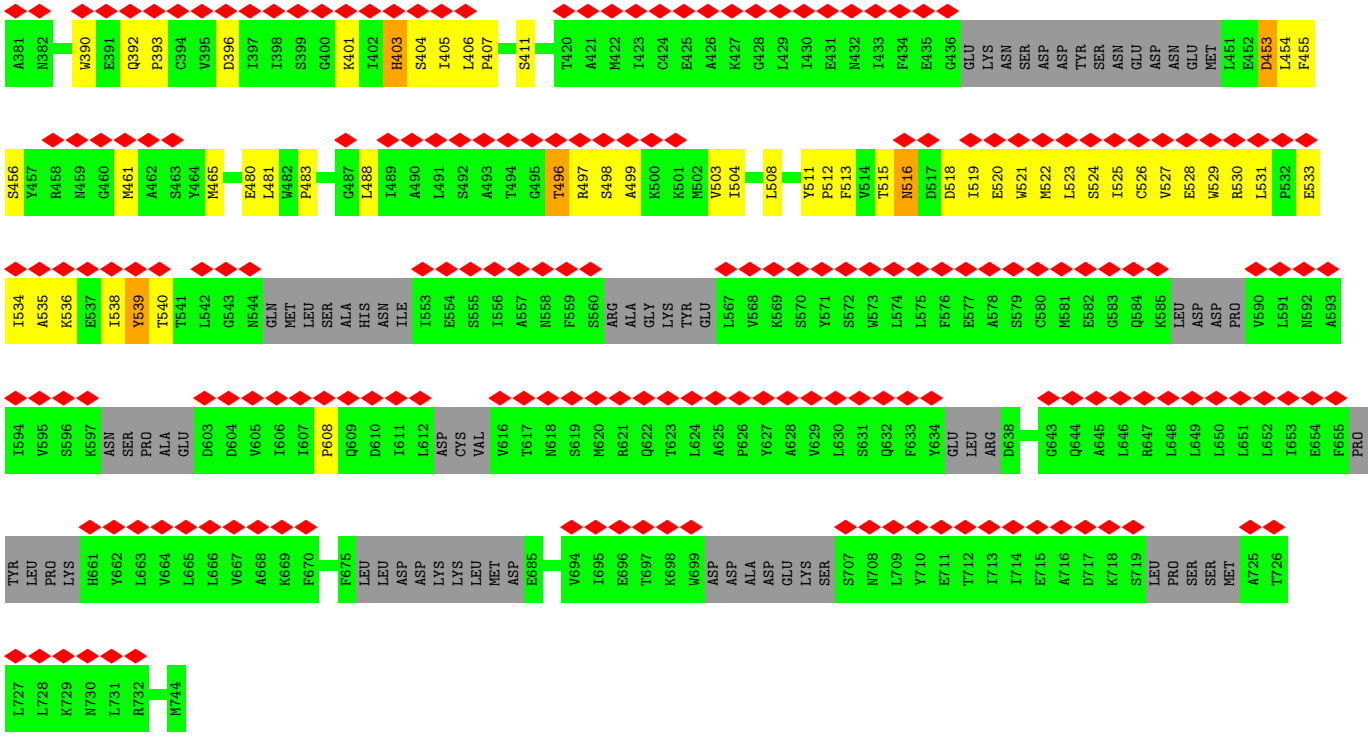
• Molecule 26: NUP75

Chain X1:



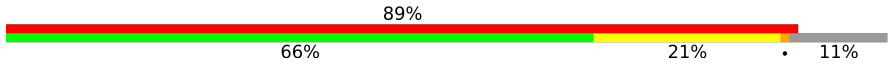


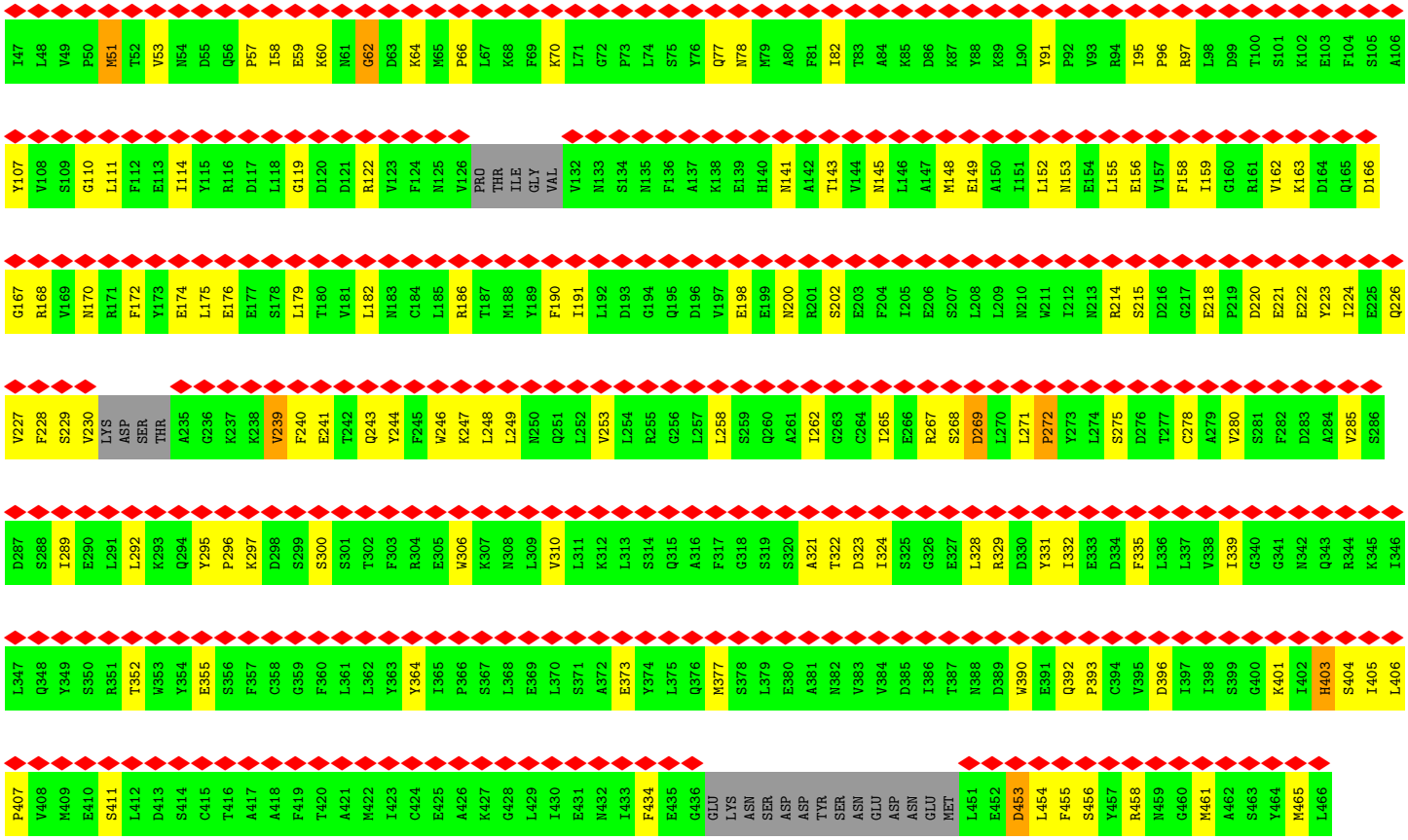


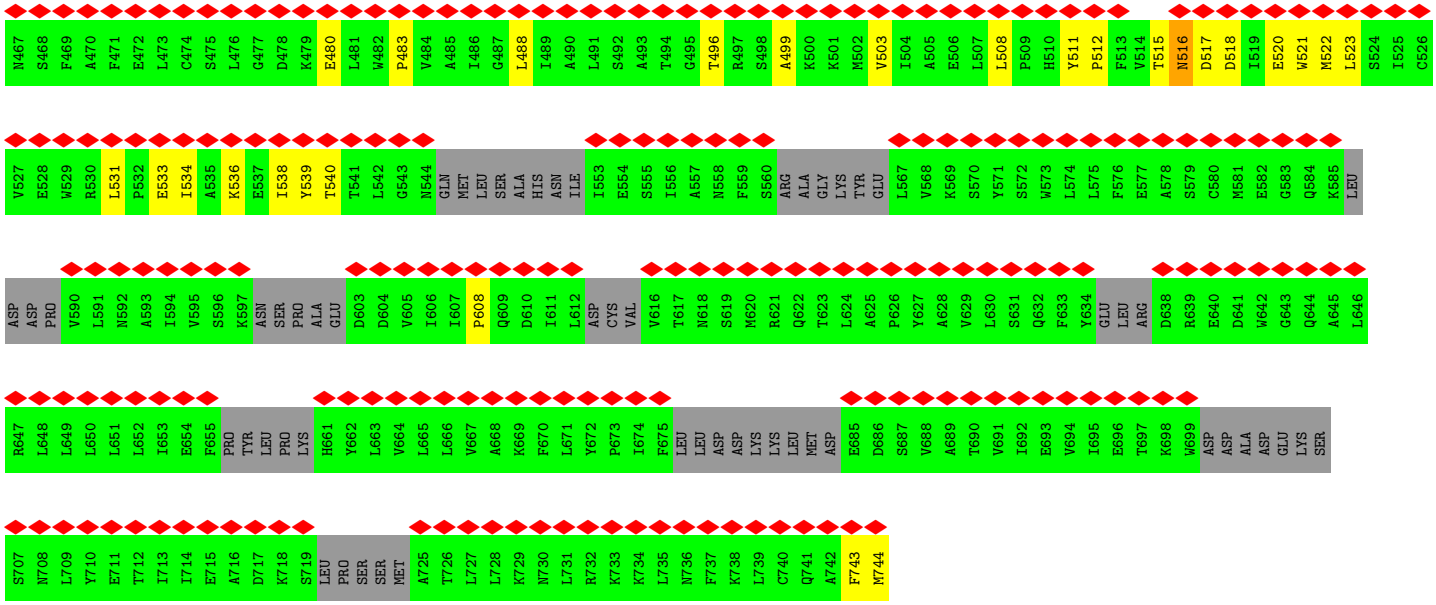


- Molecule 26: NUP75

Chain X2:

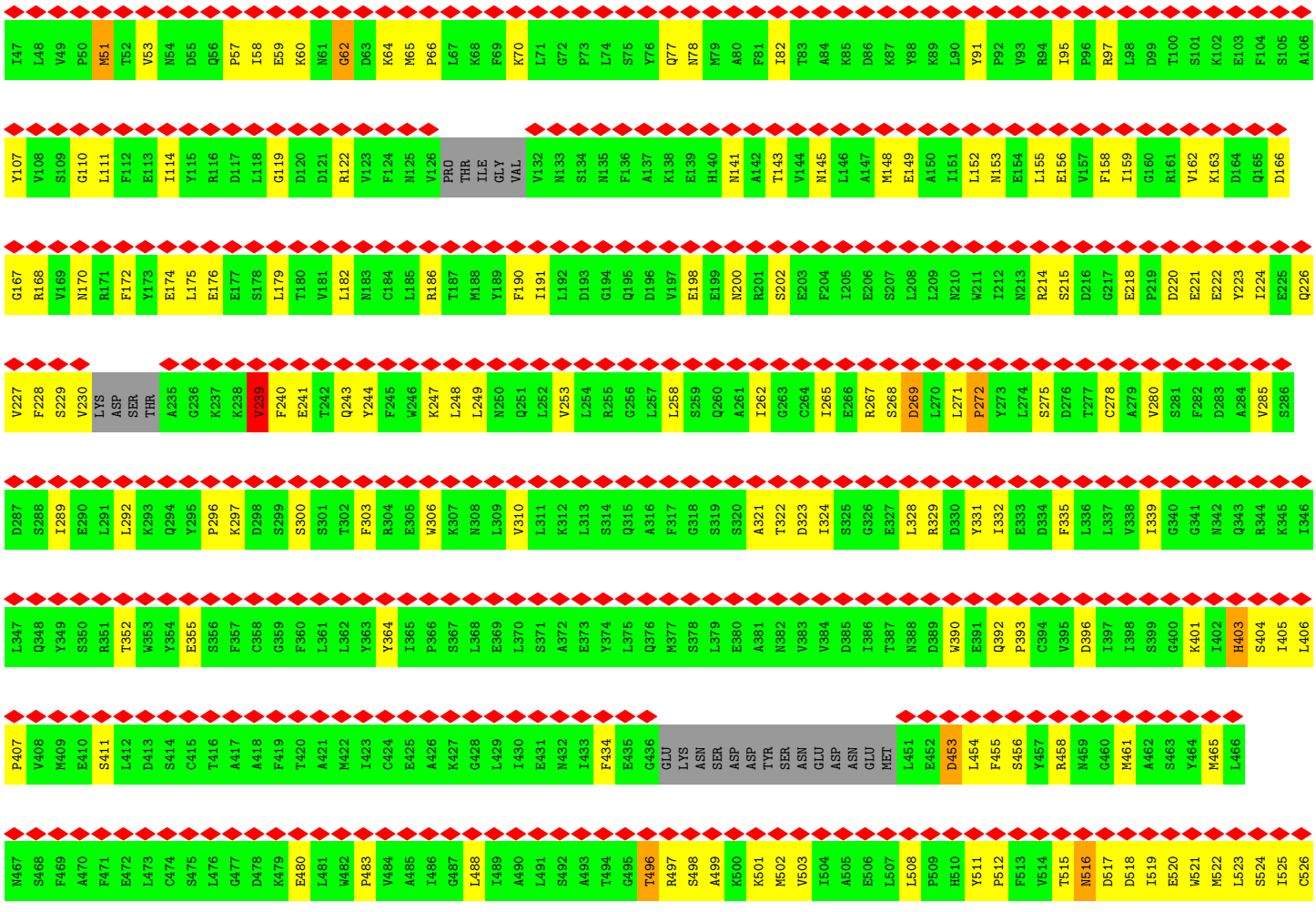


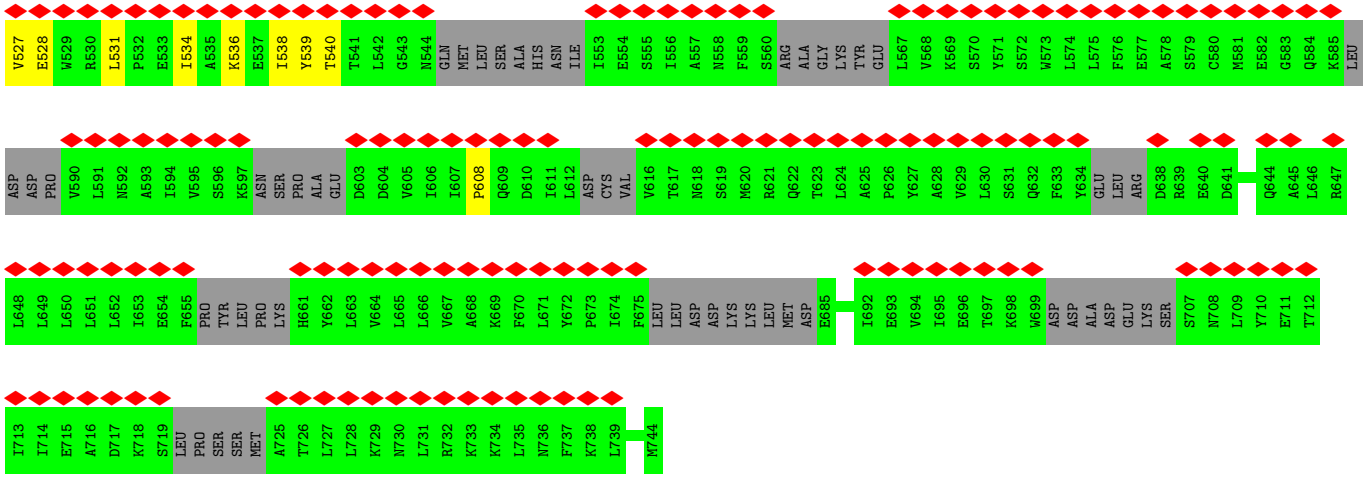




- Molecule 26: NUP75

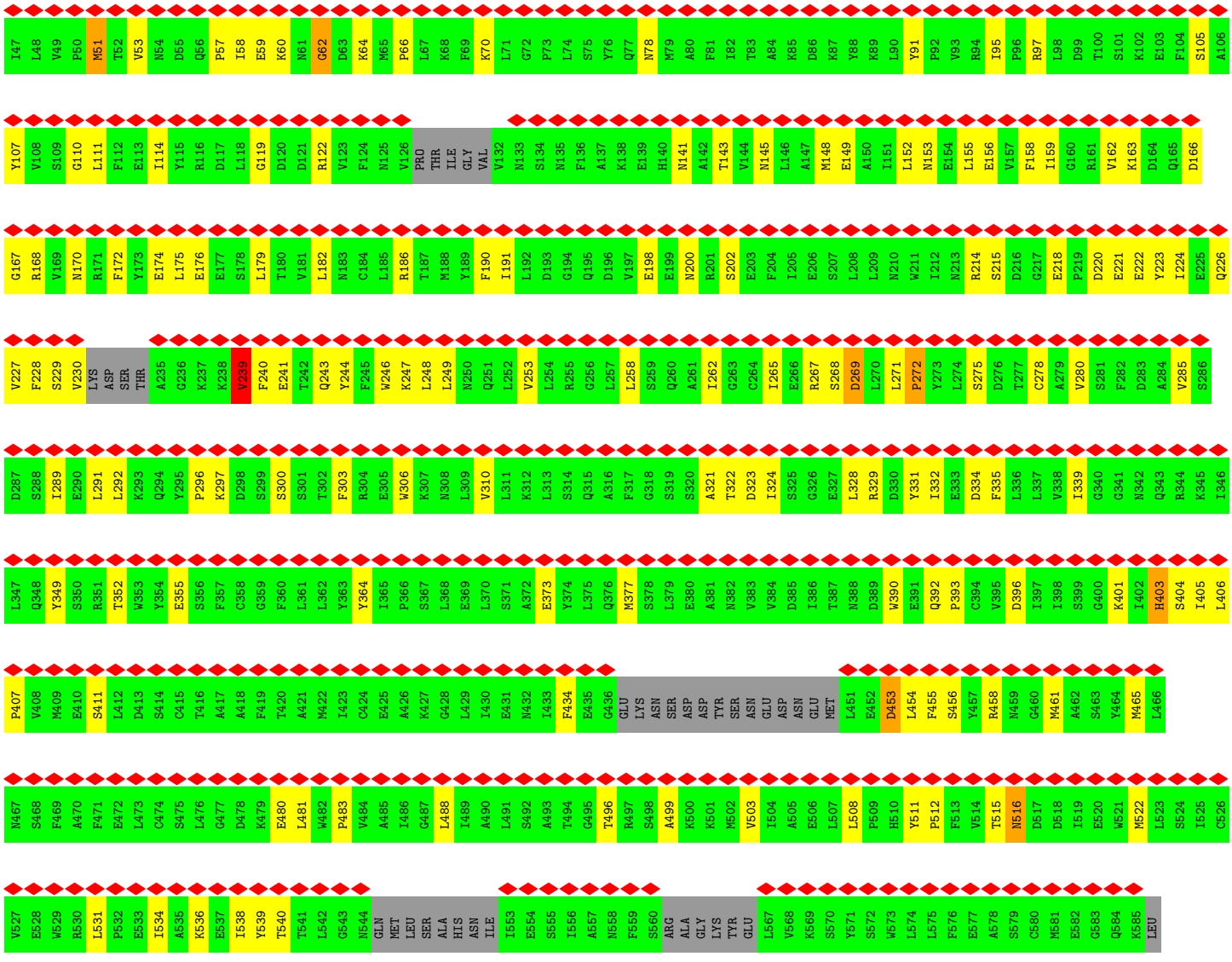
Chain X3:

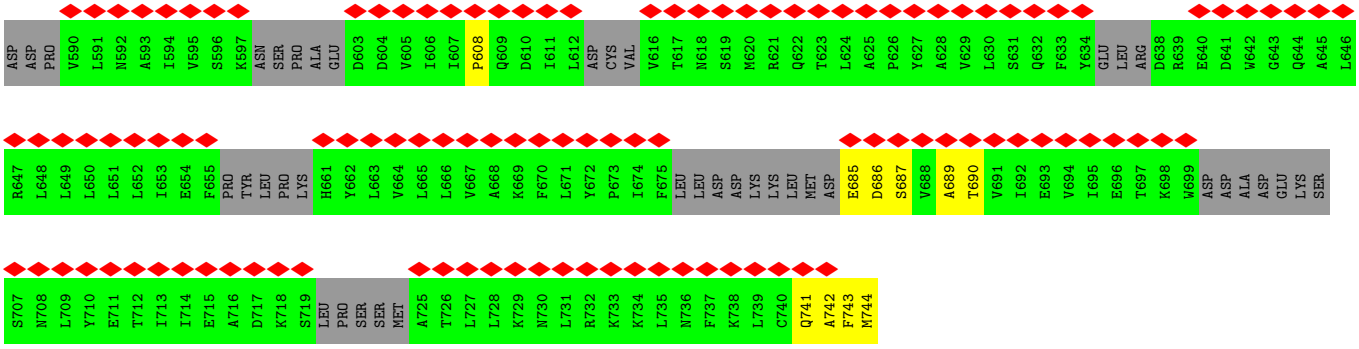




• Molecule 26: NUP75

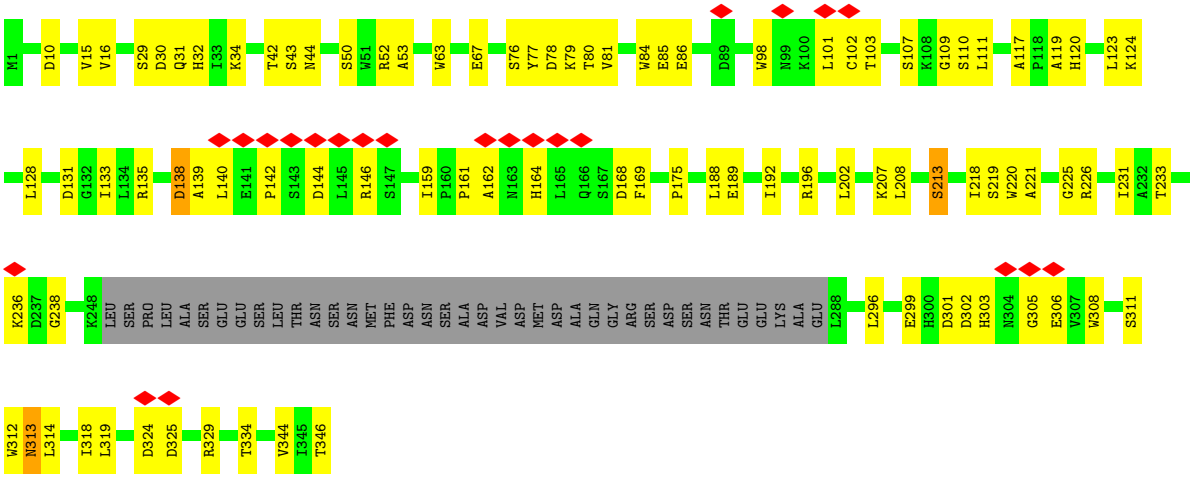
Chain X4:





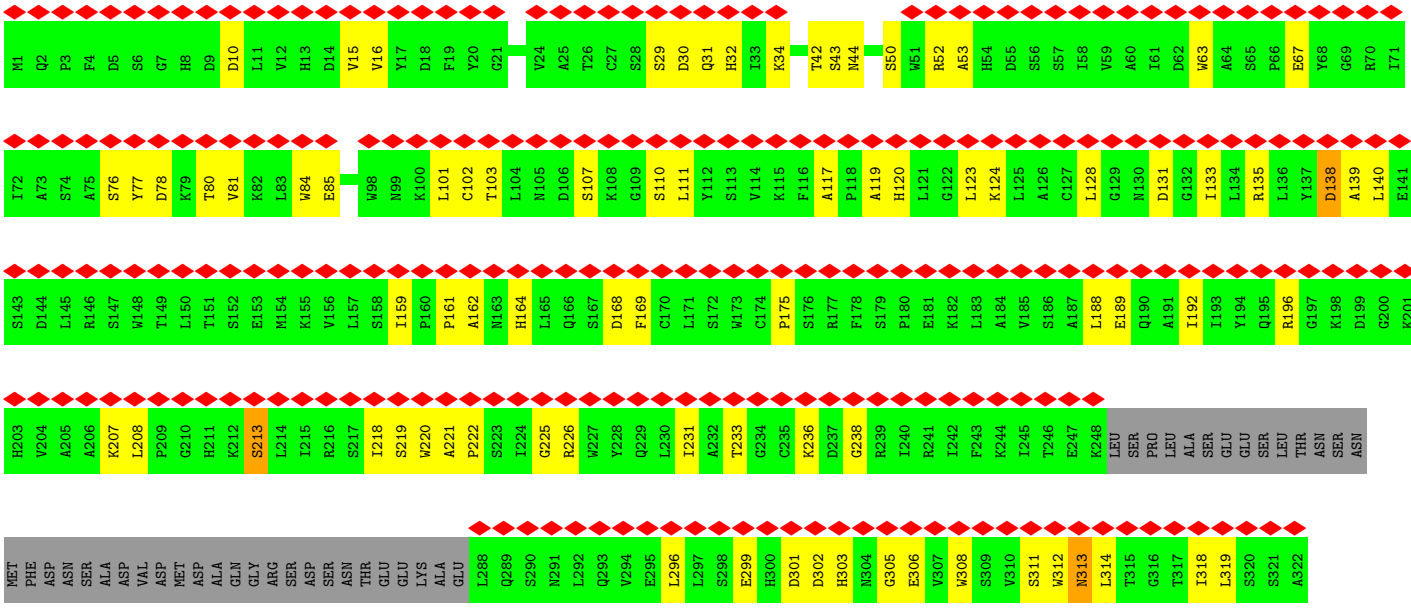
• Molecule 27: SEH1

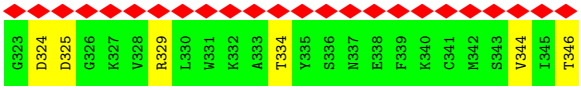
Chain Y1:



• Molecule 27: SEH1

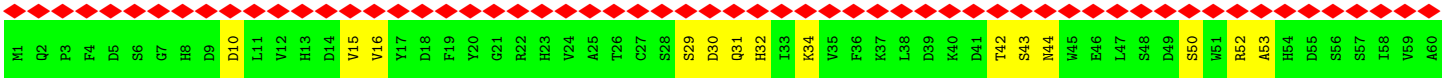
Chain Y2:

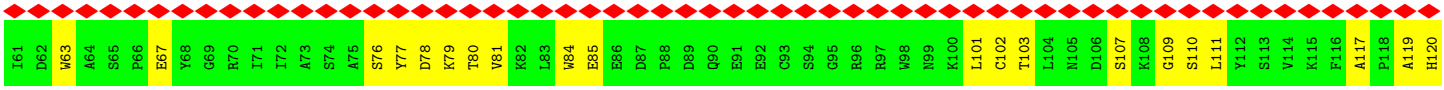


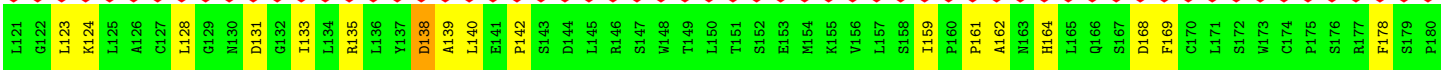


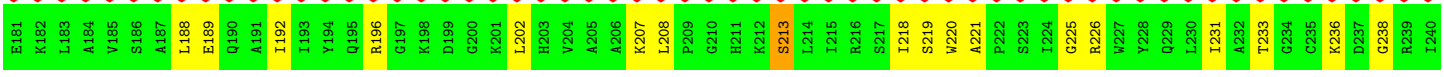
• Molecule 27: SEH1

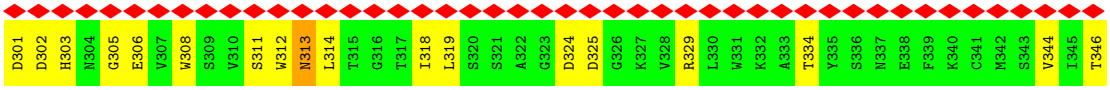
Chain Y3:





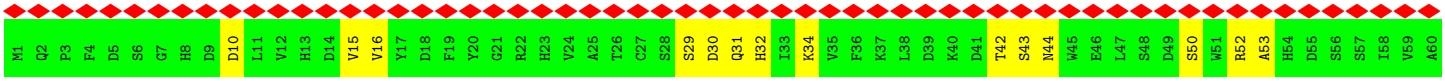


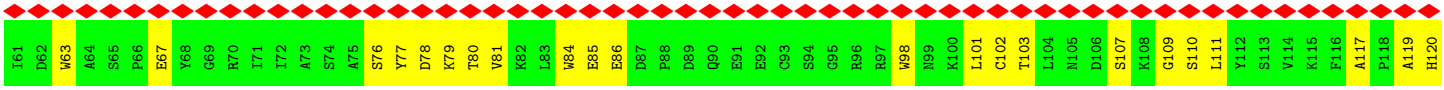


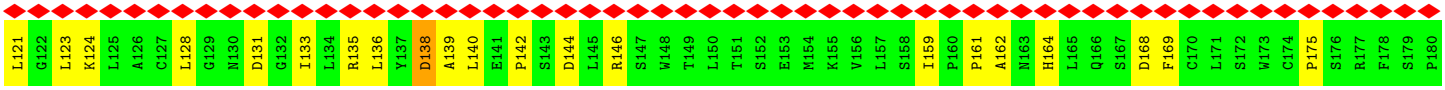


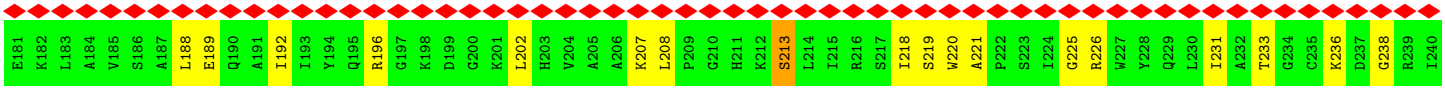
• Molecule 27: SEH1

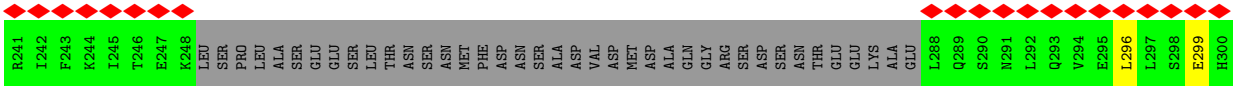
Chain Y4:

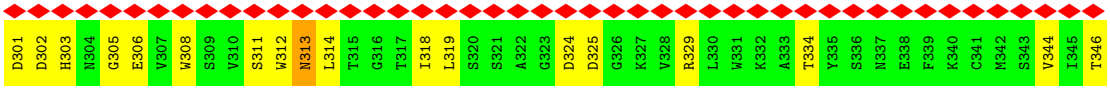






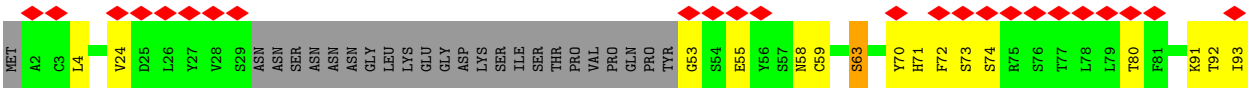


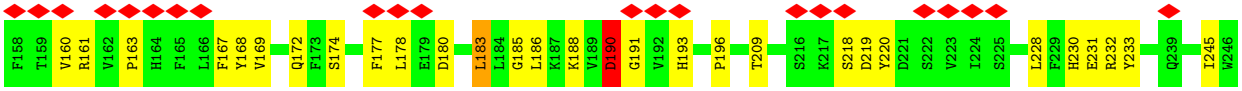


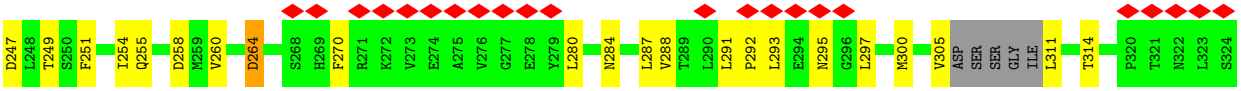


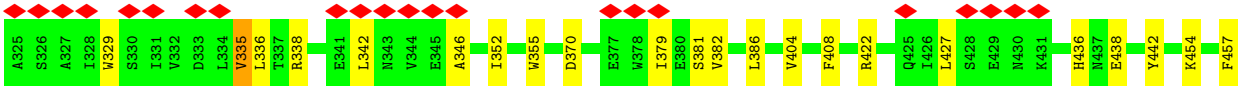
• Molecule 28: NUP160

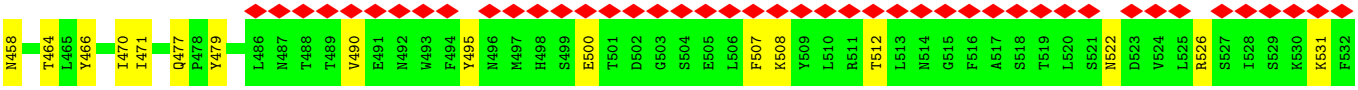
Chain Z1:

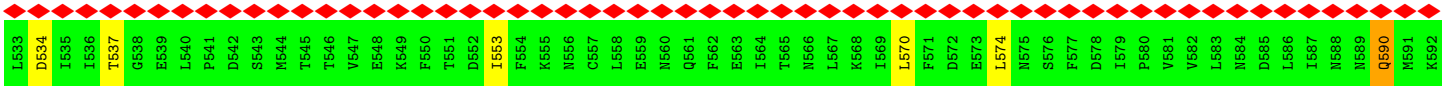


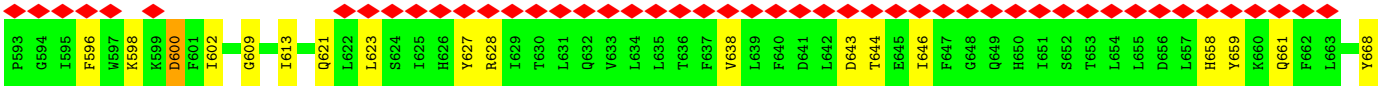


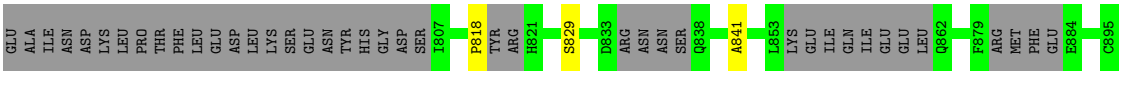


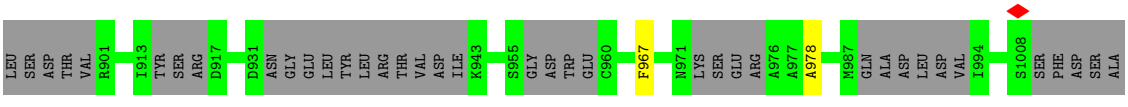


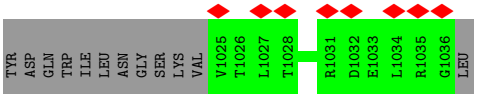






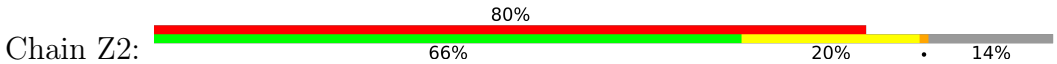


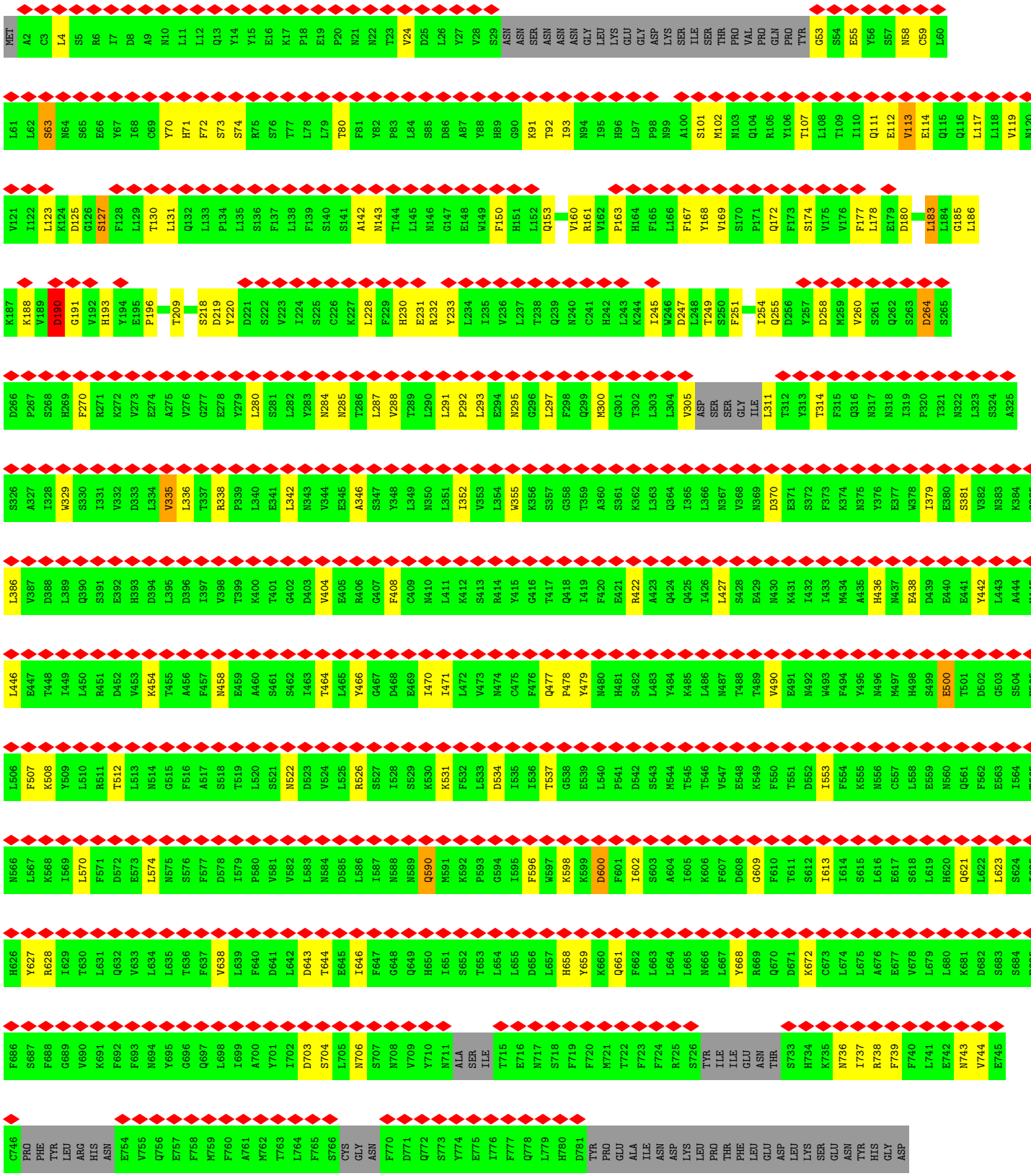


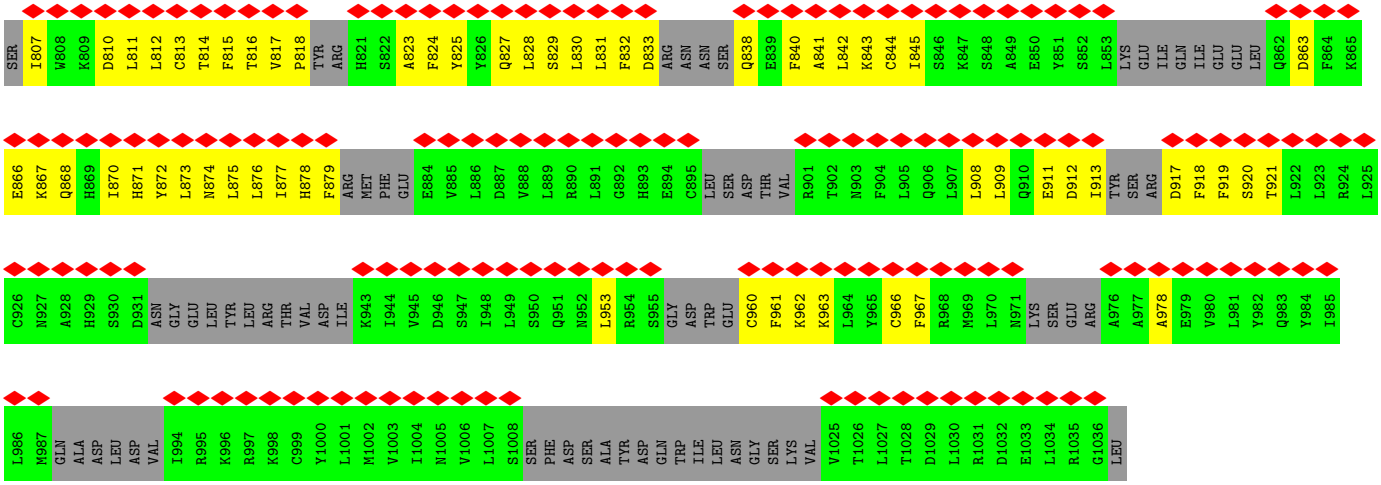


- Molecule 28: NUP160

Chain Z2:

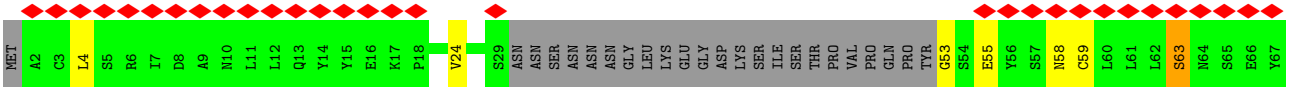


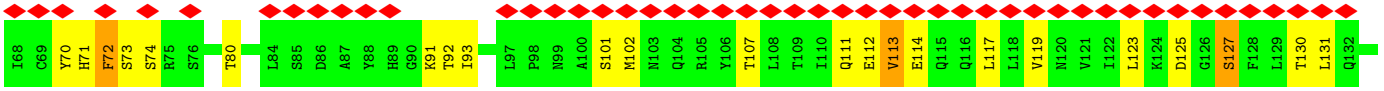


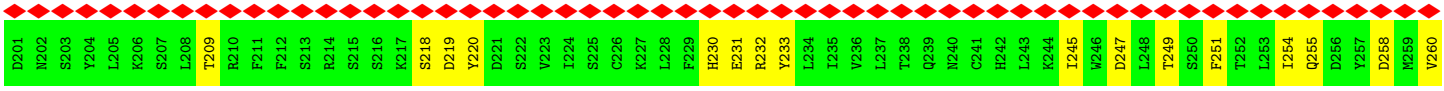


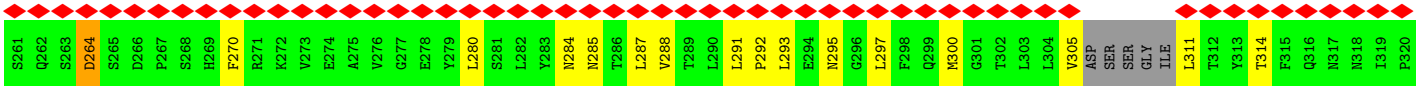
• Molecule 28: NUP160

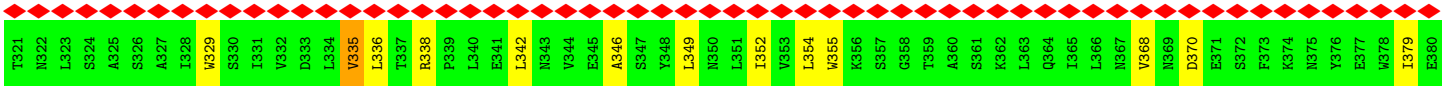
Chain Z3:

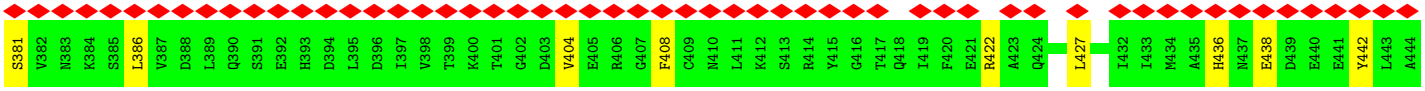


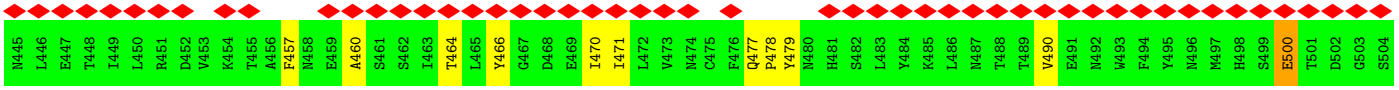


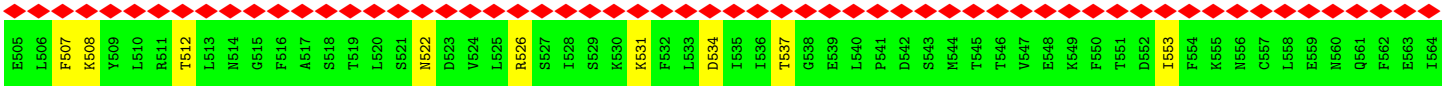


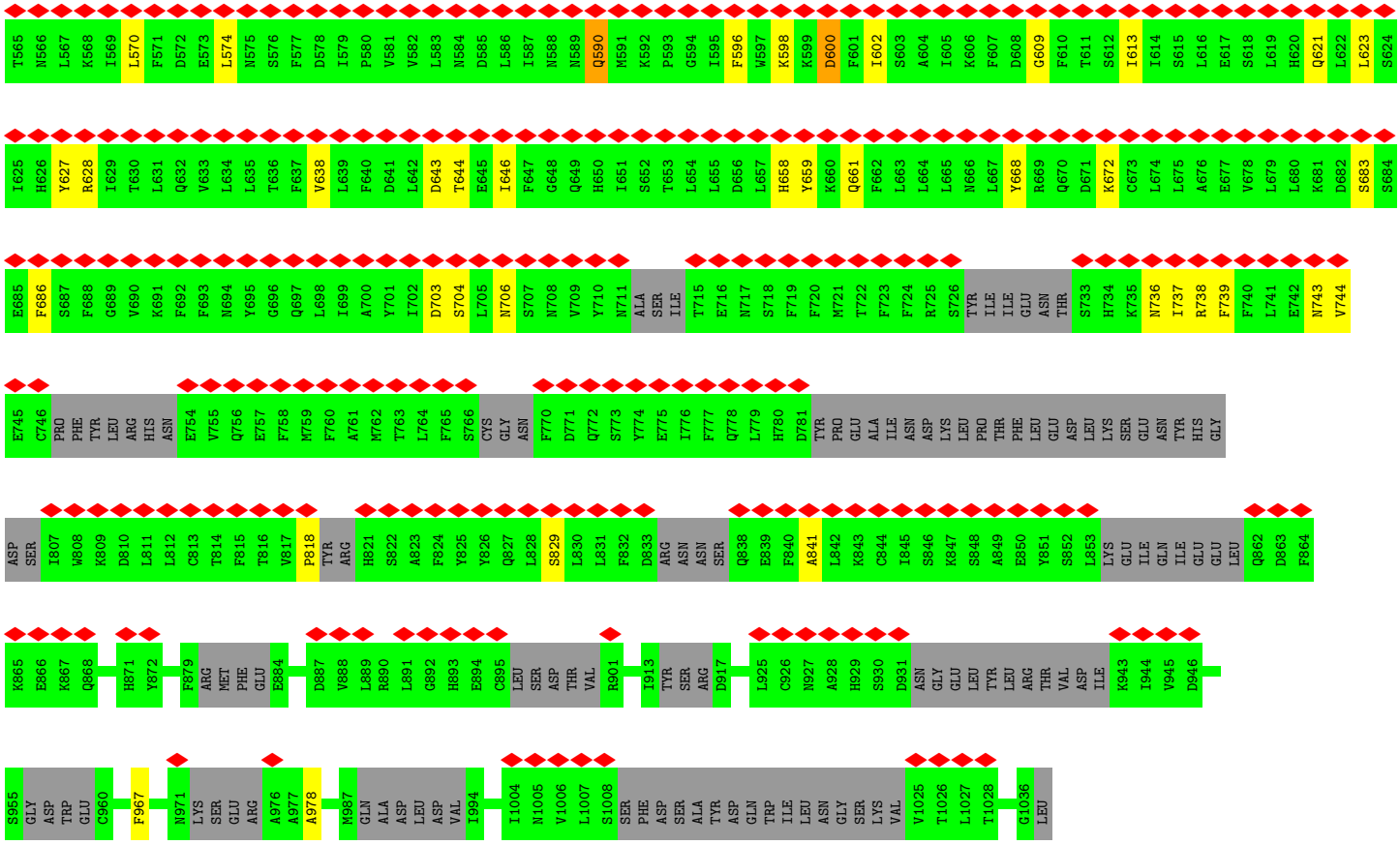






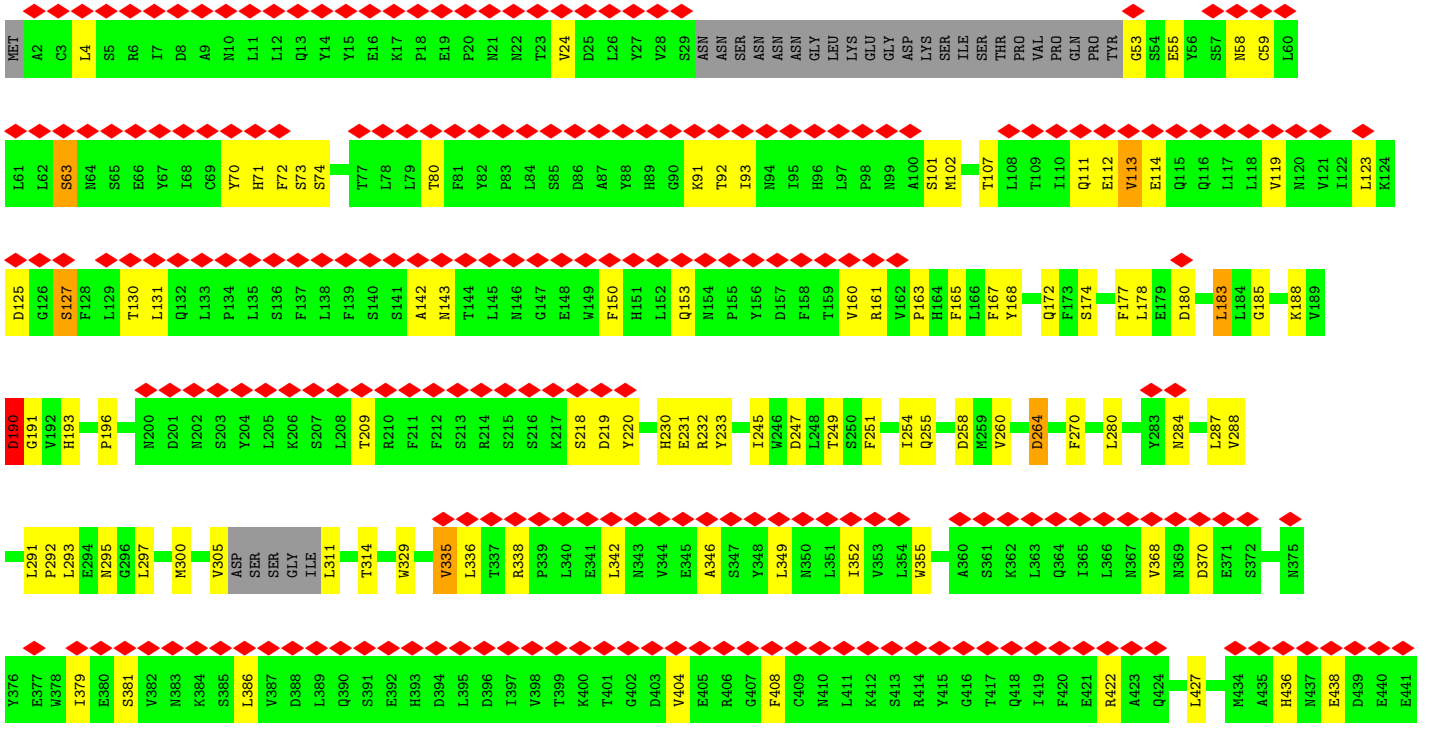


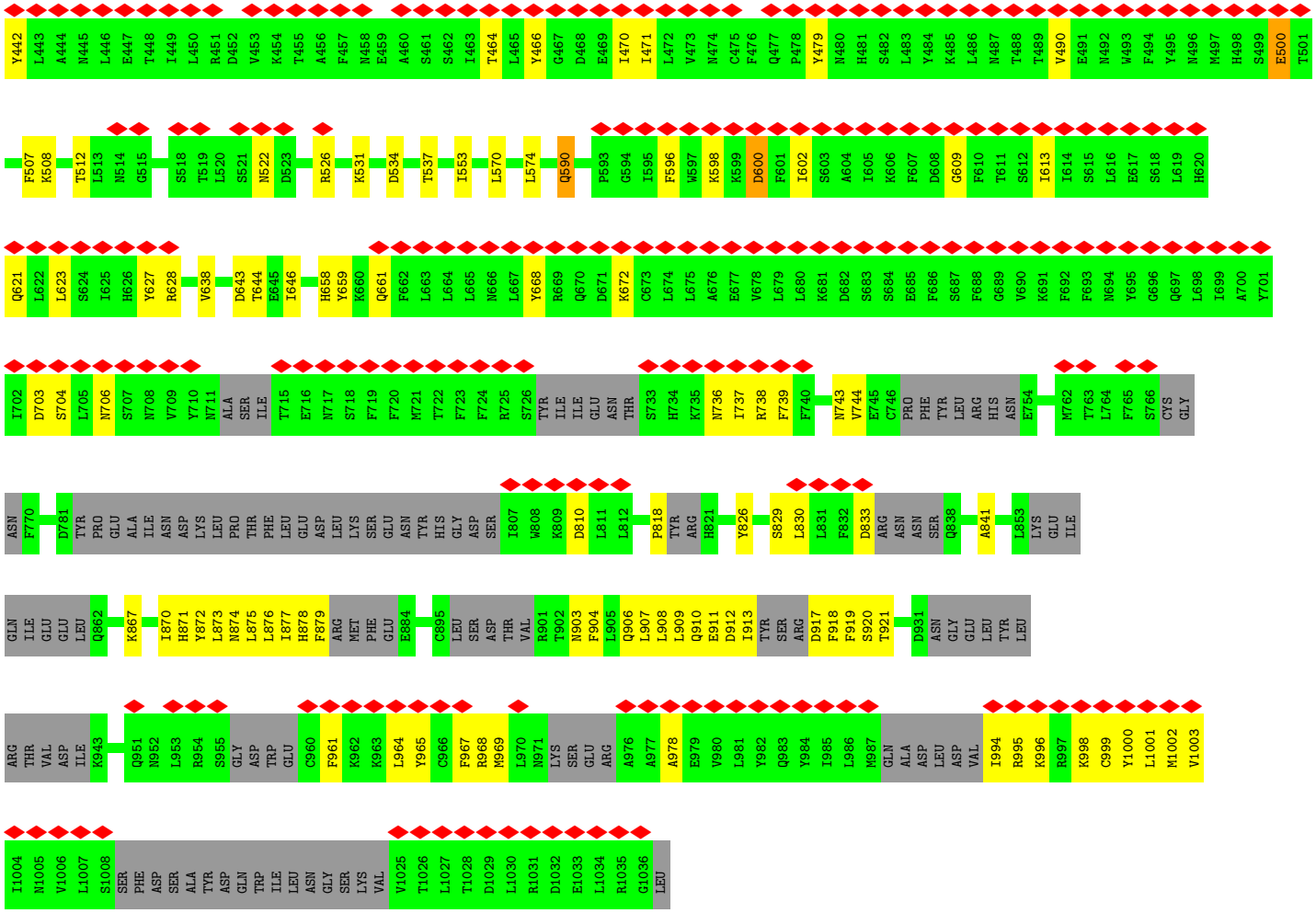




• Molecule 28: NUP160

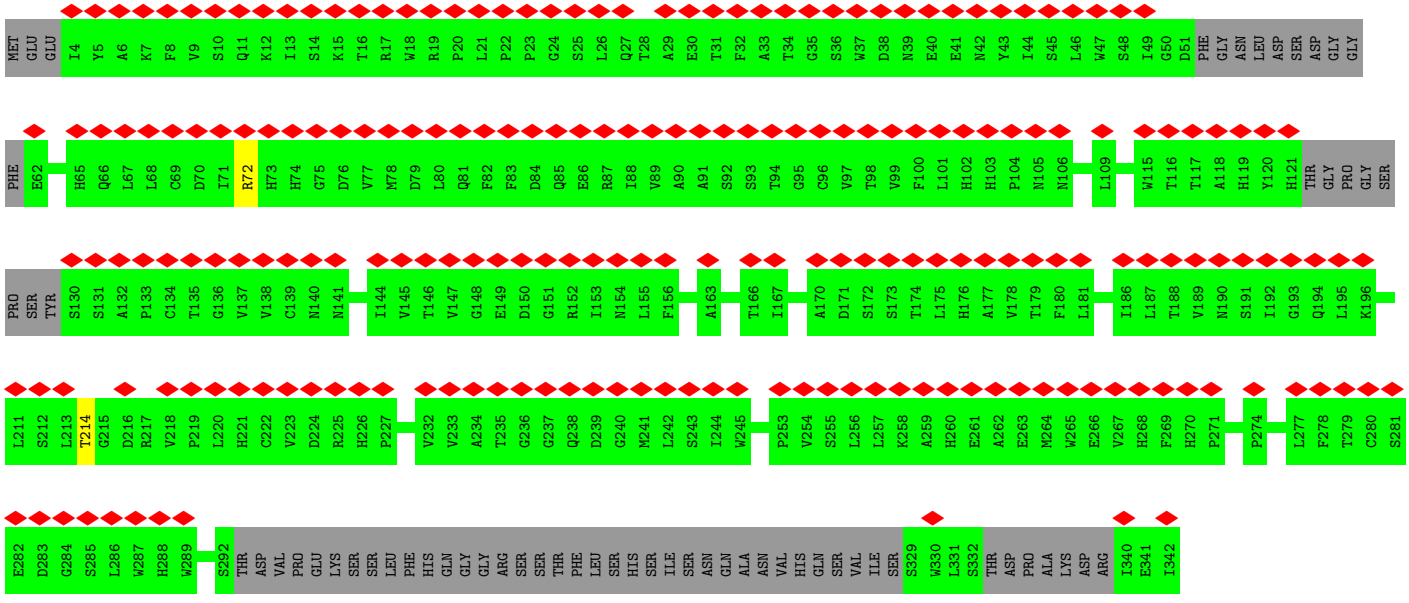
Chain Z4:

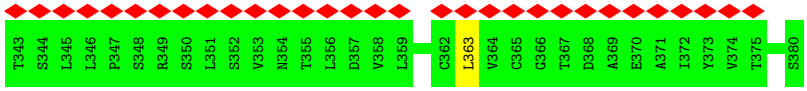




• Molecule 29: NUP43

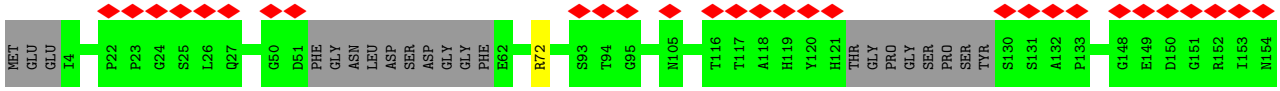
Chain a1:

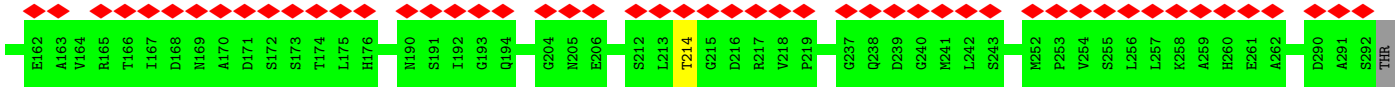


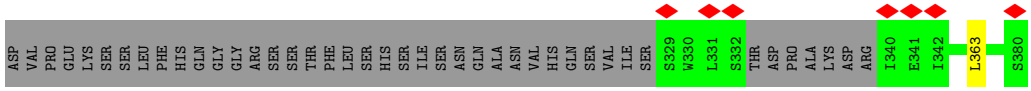


• Molecule 29: NUP43

Chain a2:

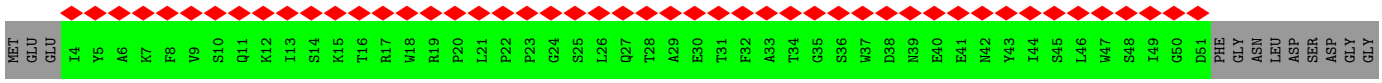


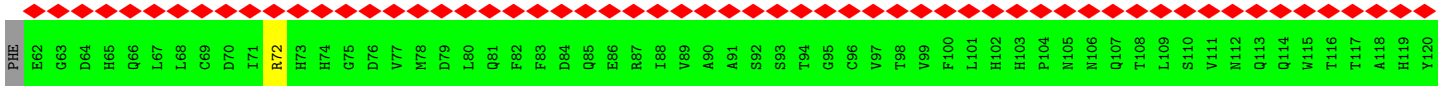


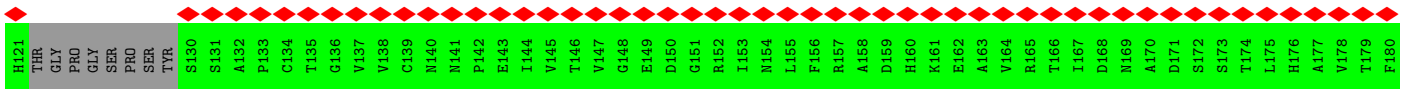


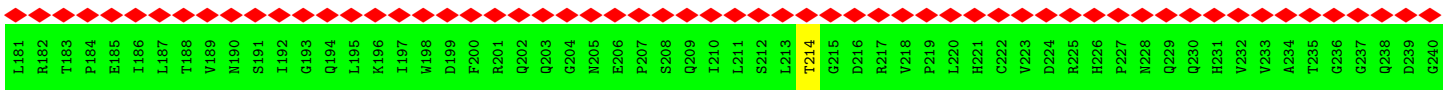
• Molecule 29: NUP43

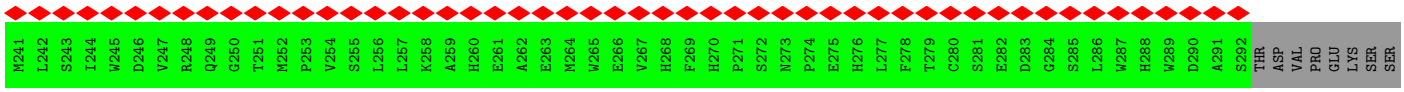
Chain a3:

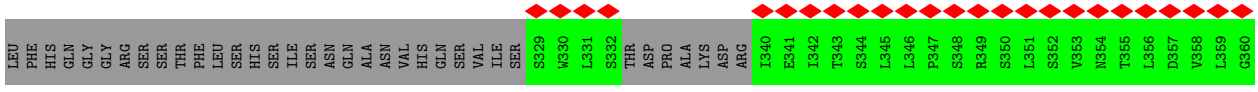


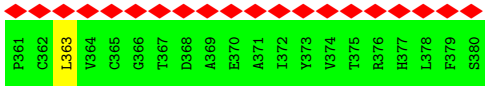






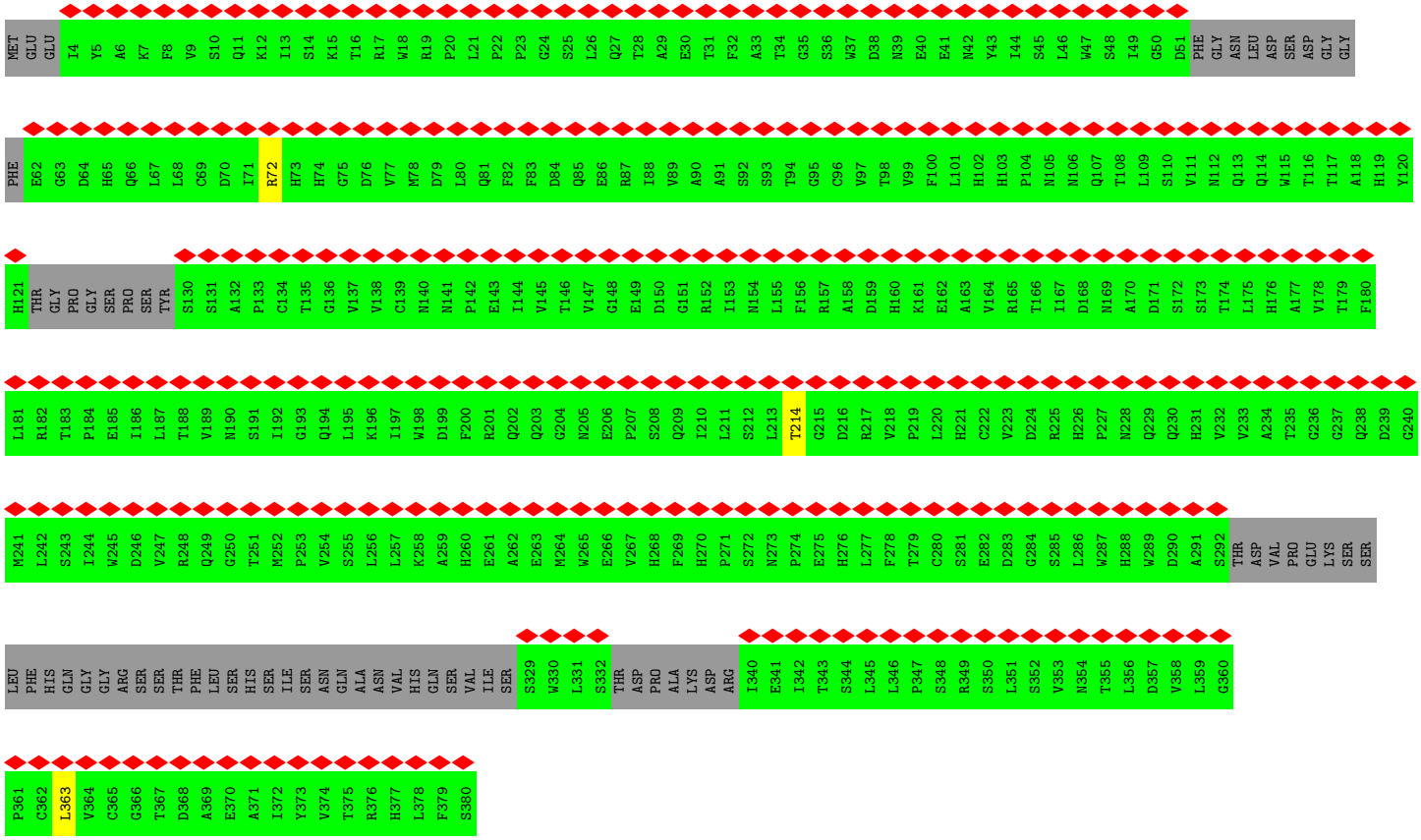






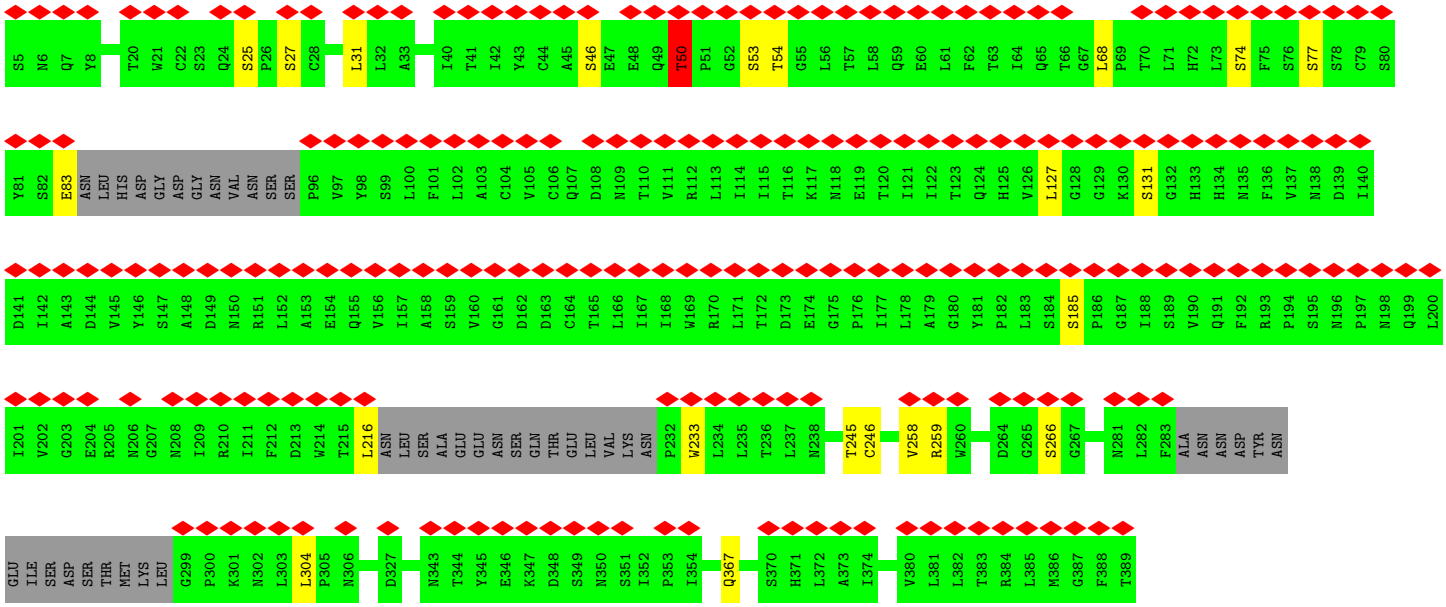
• Molecule 29: NUP43

Chain a4:



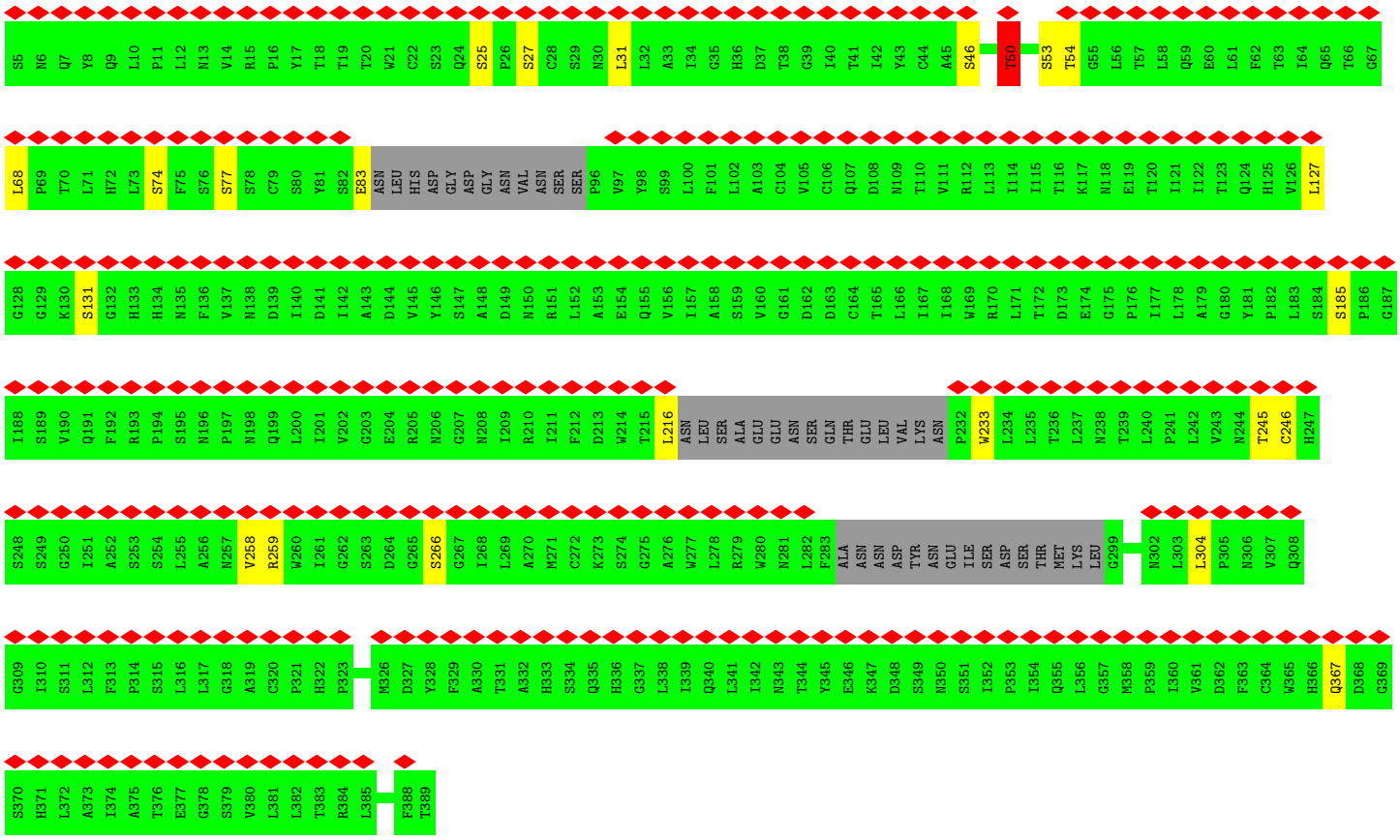
• Molecule 30: NUP37

Chain b1:



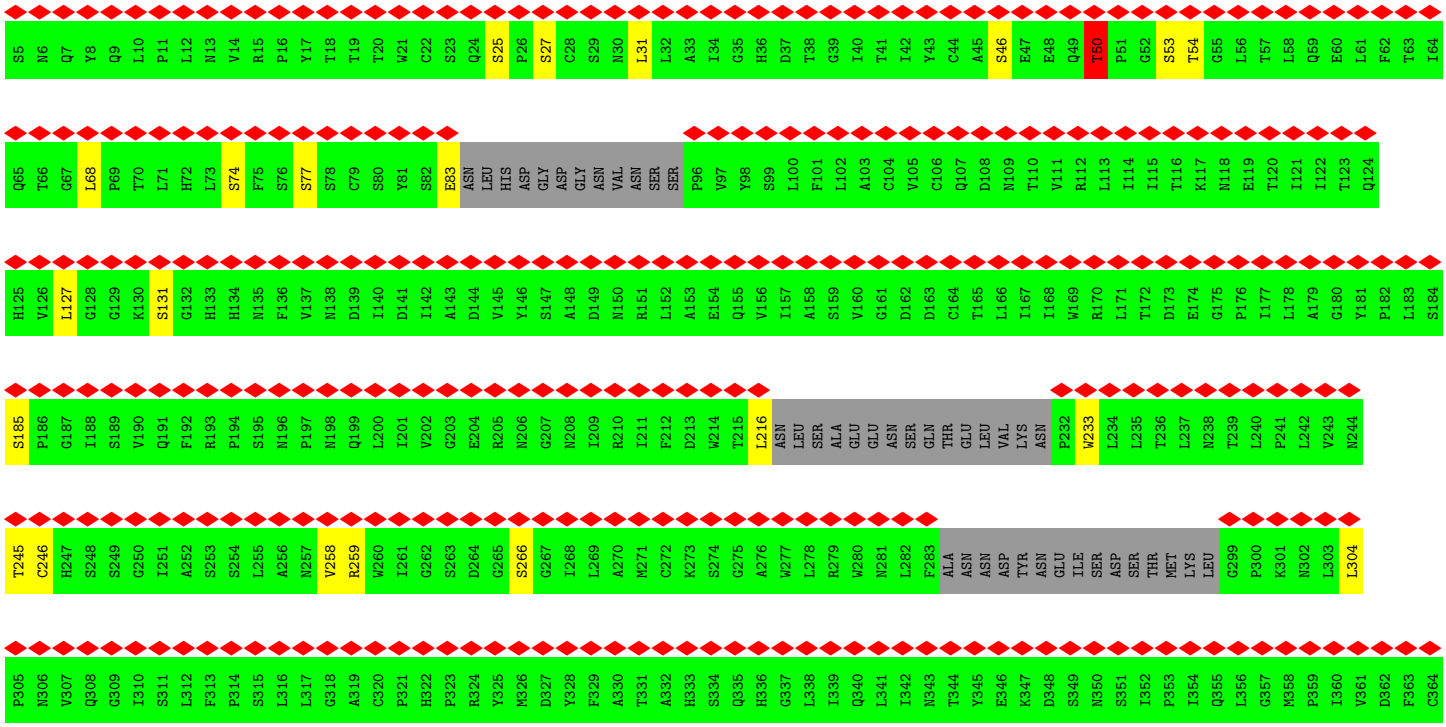
• Molecule 30: NUP37

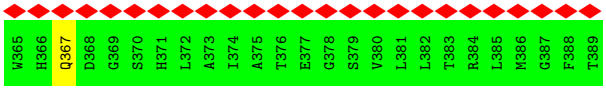
Chain b2:



- Molecule 30: NUP37

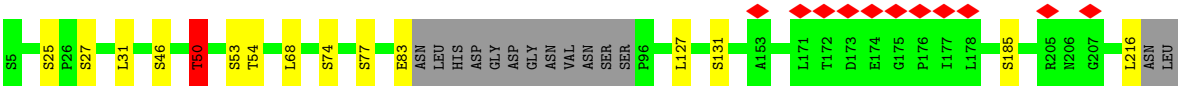
Chain b3:

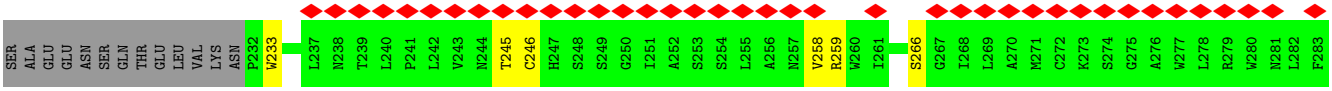


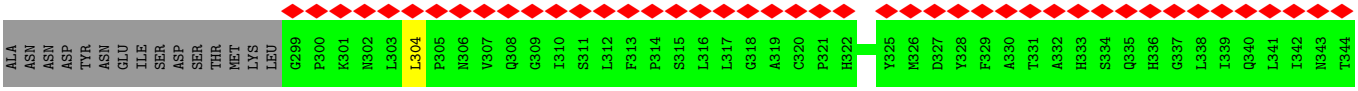


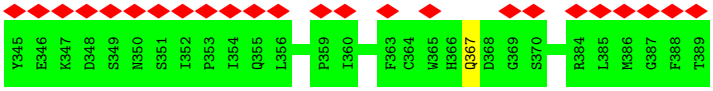
• Molecule 30: NUP37

Chain b4:



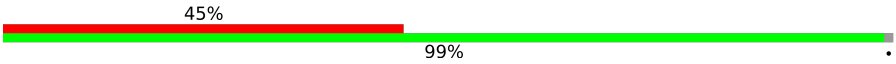


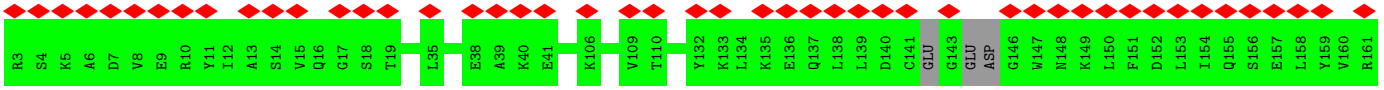


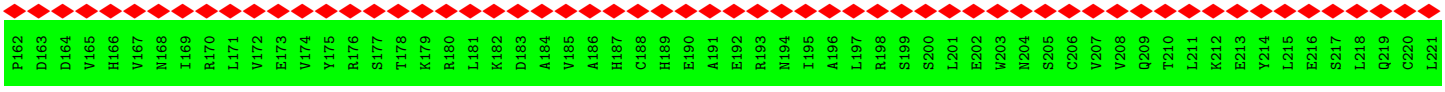


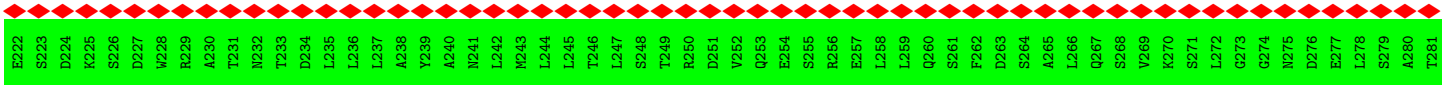
• Molecule 31: NUP358

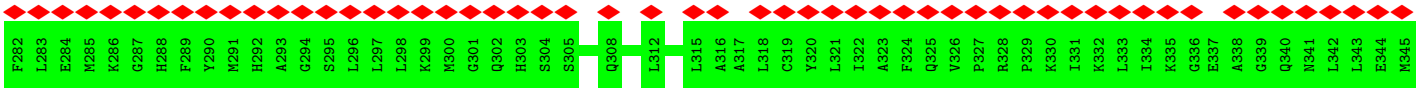
Chain c1:

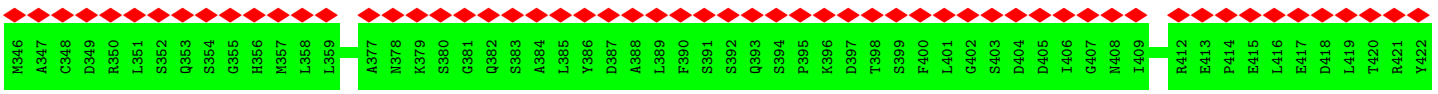


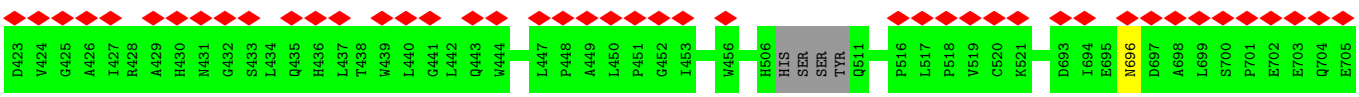


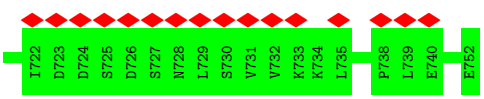






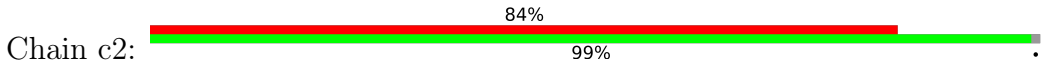


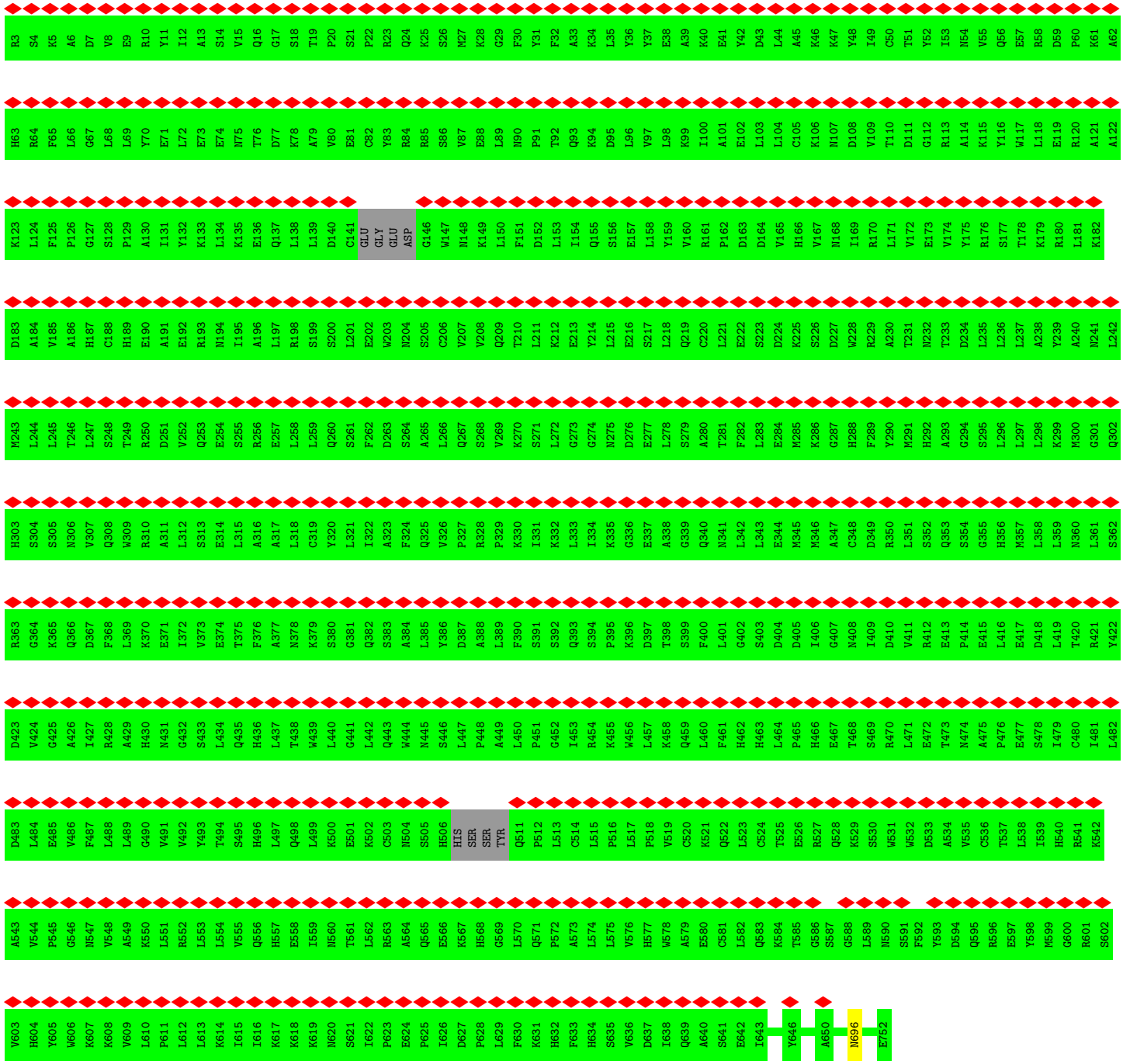




• Molecule 31: NUP358

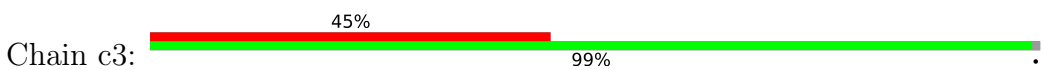
Chain c2:

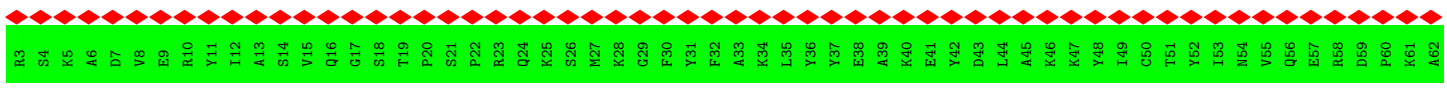


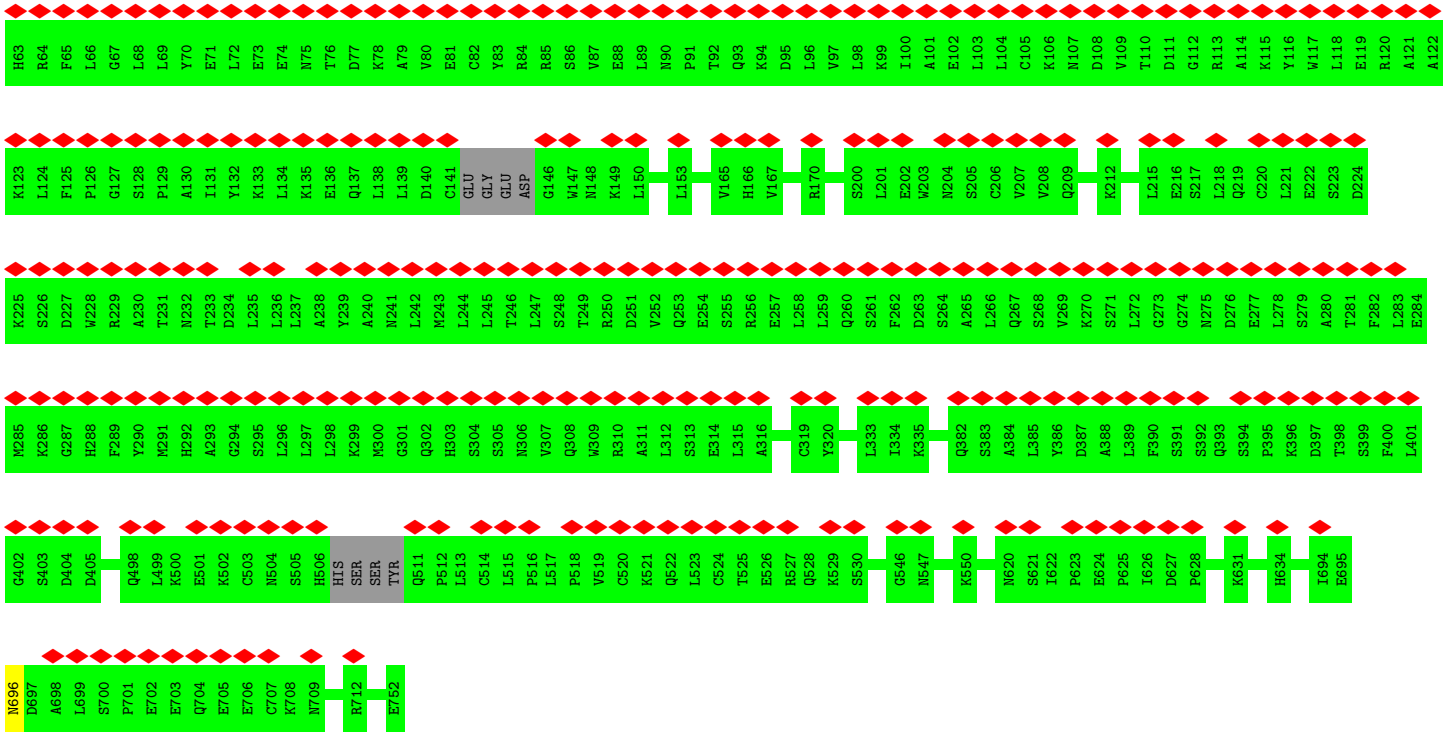


• Molecule 31: NUP358

Chain c3:

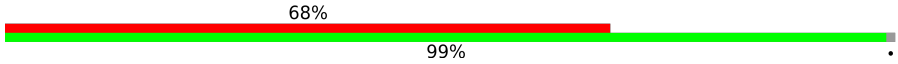


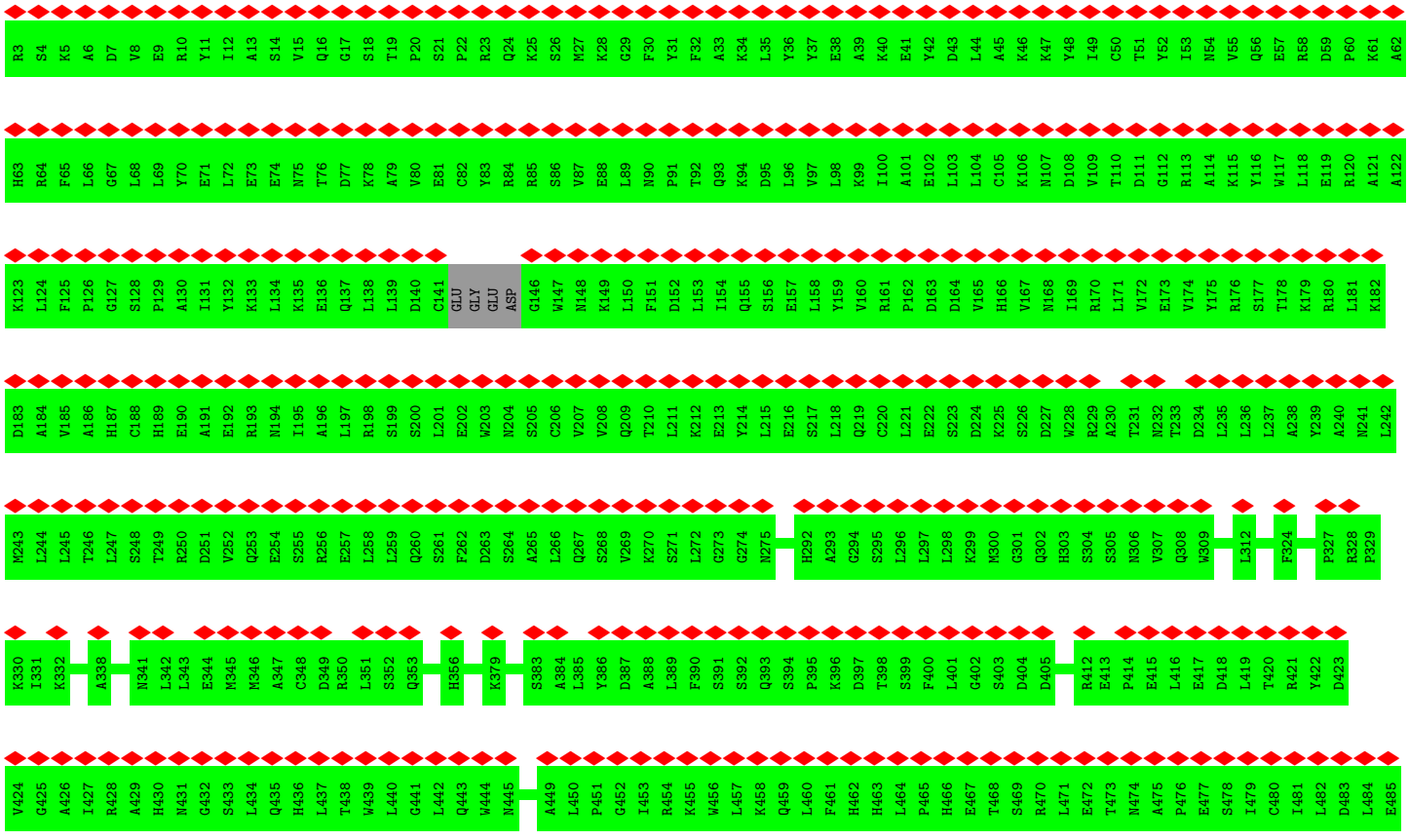


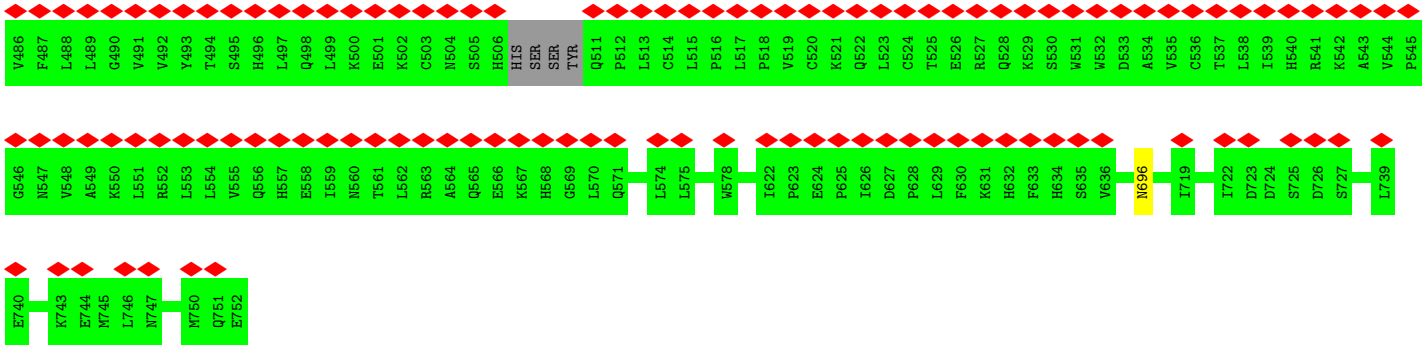


• Molecule 31: NUP358

Chain c4:

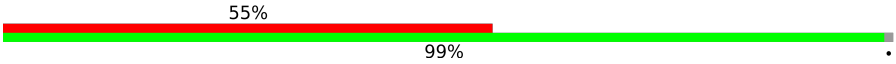


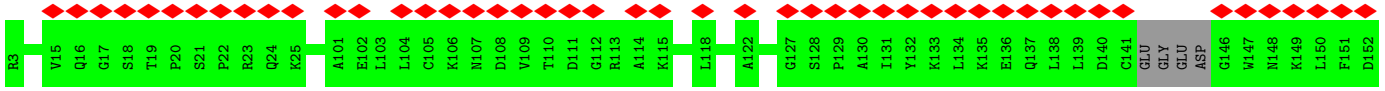


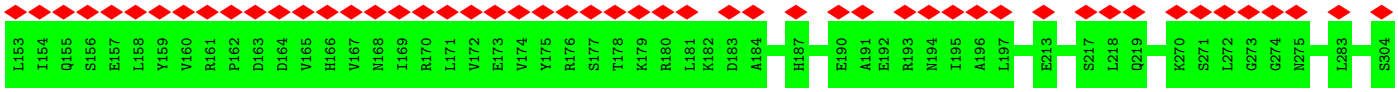


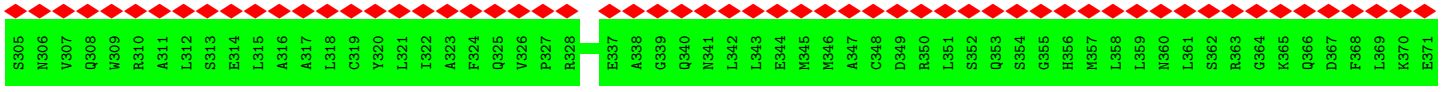
• Molecule 31: NUP358

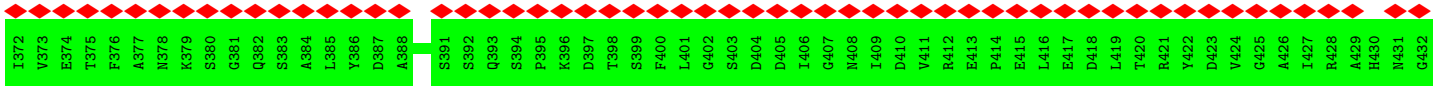
Chain c5:

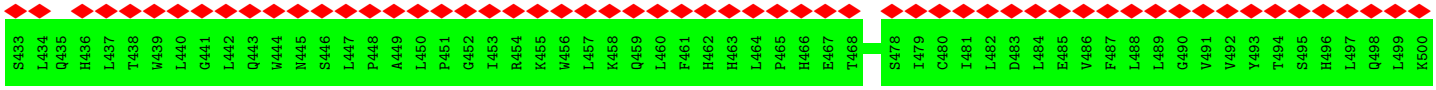


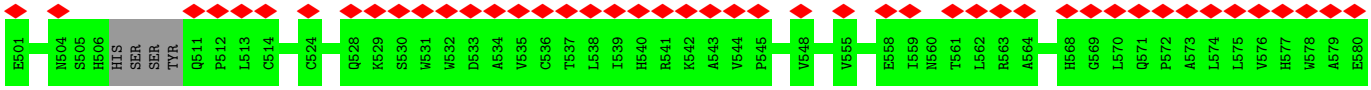


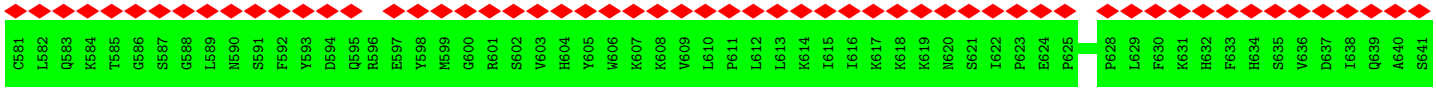


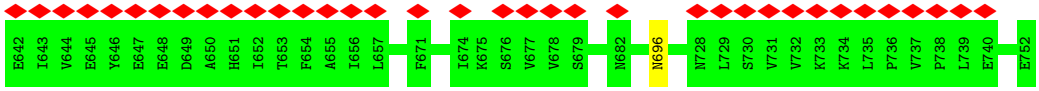






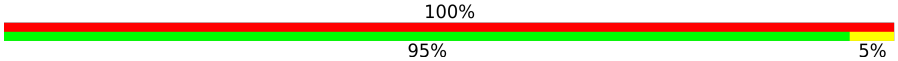


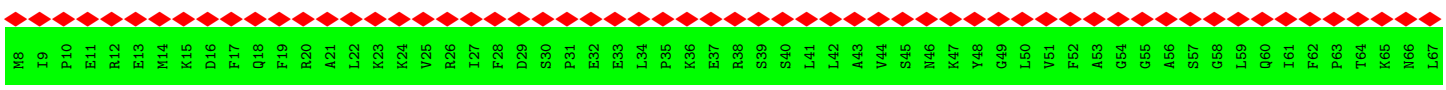


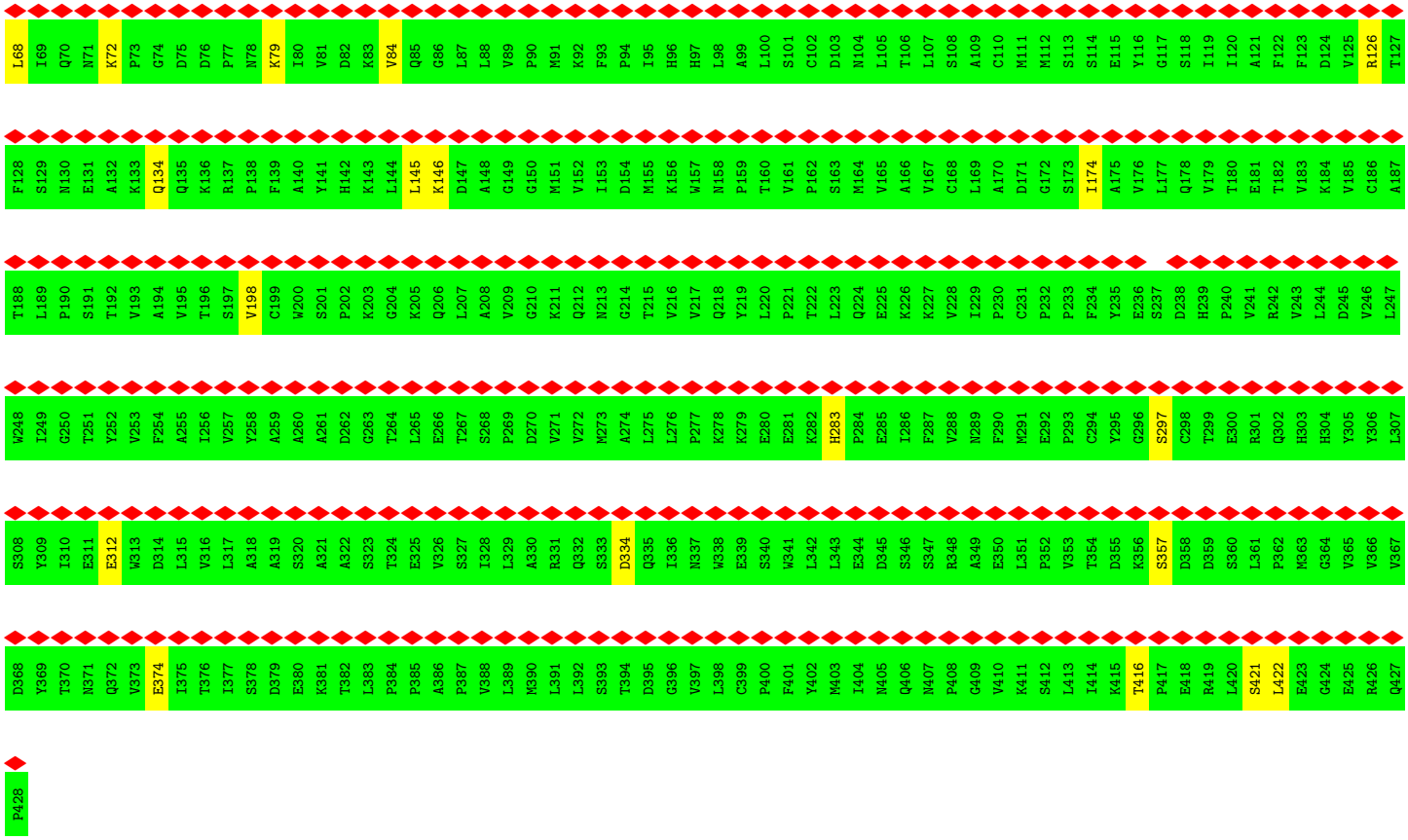


• Molecule 32: NUP214 NTD

Chain g:

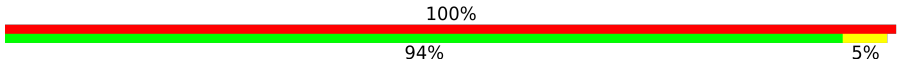


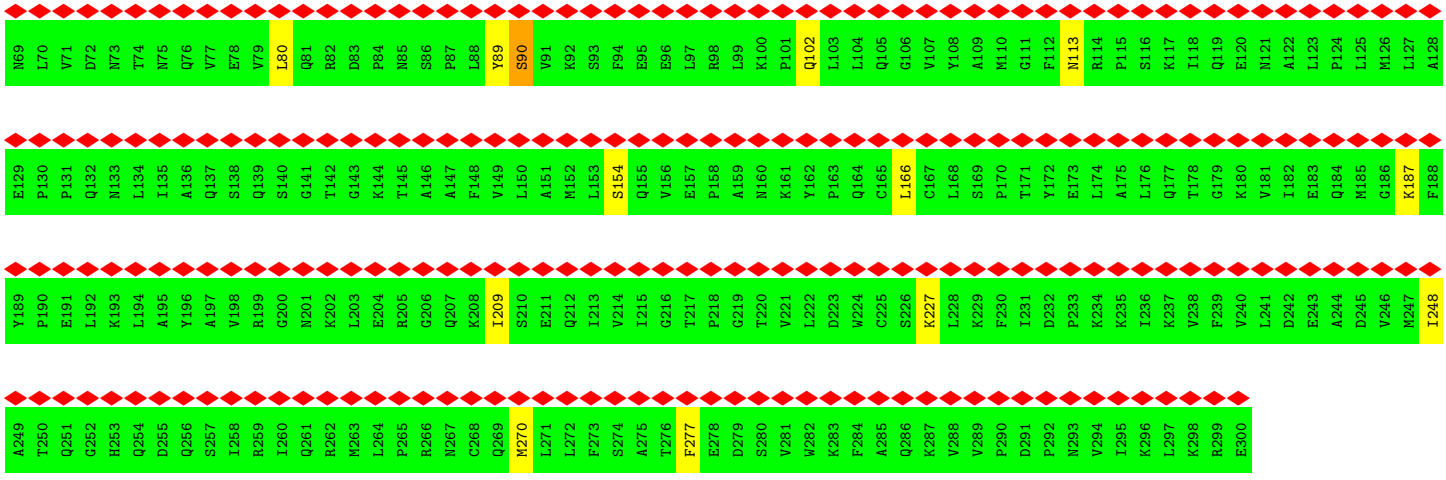




• Molecule 33: DDX19

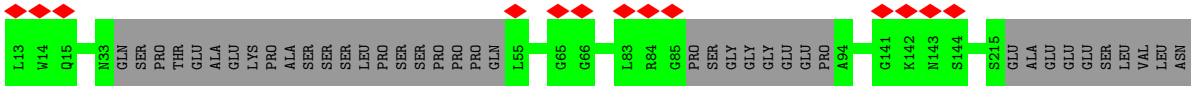
Chain h:

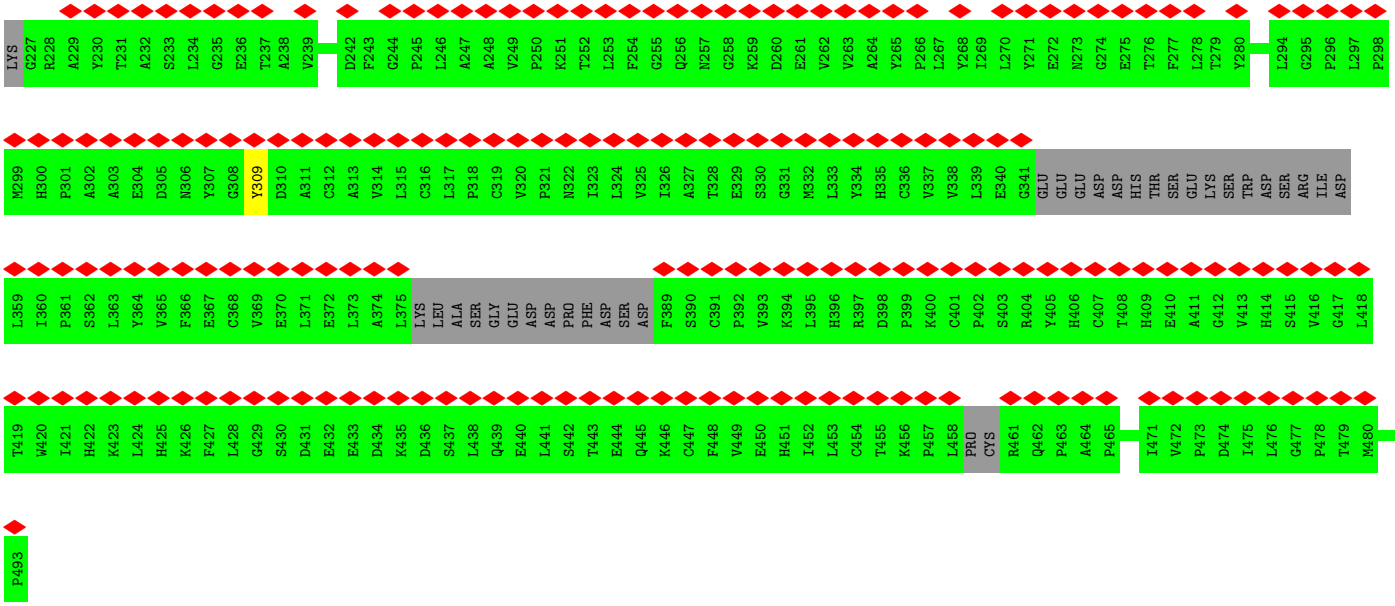




• Molecule 34: NUP88 NTD

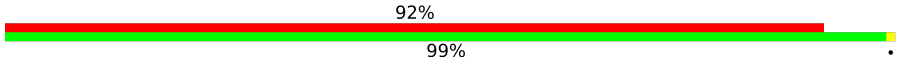
Chain i:

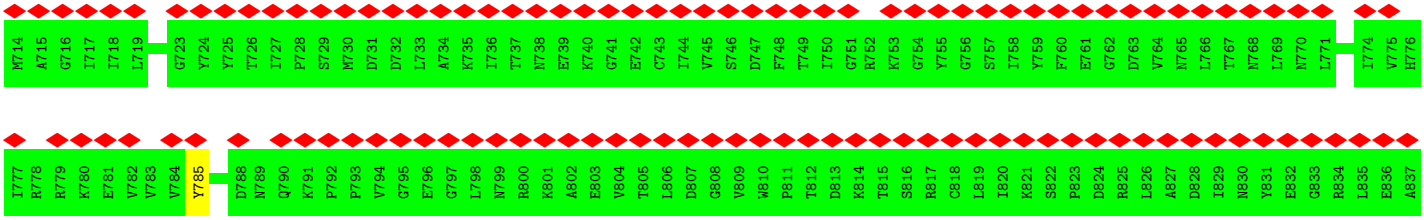




- Molecule 35: NUP98 APD

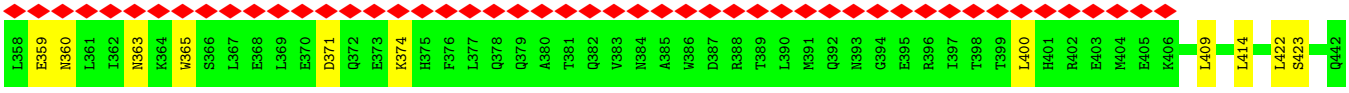
Chain j:





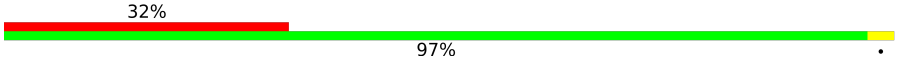
- Molecule 36: NUP62 CCS1

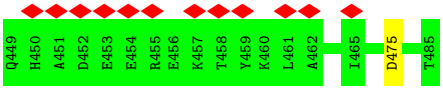
Chain k1:



- Molecule 37: NUP62 CCS2

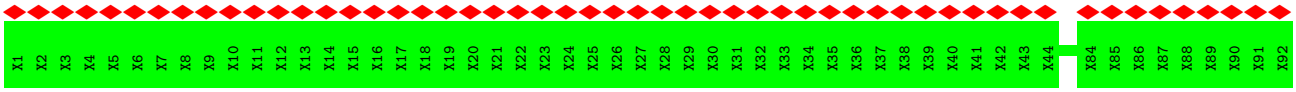
Chain k2:





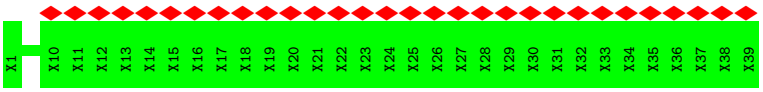
- Molecule 38: NUP214 CCS1

Chain l1:



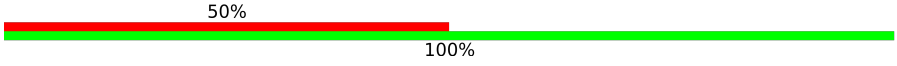
• Molecule 39: NUP214 CCS2

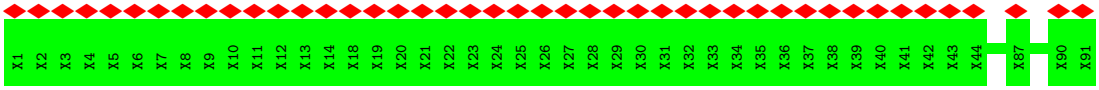
Chain l2:



• Molecule 40: NUP88 CCS1

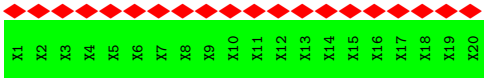
Chain m1:





• Molecule 41: NUP88 CCS2

Chain m2:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	POINT, Not provided	
Number of subtomograms used	792	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	140	Depositor
Minimum defocus (nm)	2000	Depositor
Maximum defocus (nm)	4500	Depositor
Magnification	Not provided	
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor
Maximum map value	0.524	Depositor
Minimum map value	-0.301	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.036	Depositor
Recommended contour level	0.07	Depositor
Map size (Å)	1987.2001, 1987.2001, 1987.2001	wwPDB
Map dimensions	144, 144, 144	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	13.8, 13.8, 13.8	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	A1	0.28	1/9926 (0.0%)	0.44	0/13474
1	A3	0.29	1/9926 (0.0%)	0.44	0/13474
2	A2	0.25	0/10133	0.45	0/13731
2	A4	0.25	0/10133	0.45	0/13731
3	A5	0.26	1/10216 (0.0%)	0.43	0/13838
3	A6	0.26	1/10216 (0.0%)	0.43	0/13838
4	B1	0.25	0/112	0.48	0/149
4	B2	0.25	0/112	0.48	0/149
4	B3	0.25	0/112	0.48	0/149
4	B4	0.25	0/112	0.48	0/149
4	B5	0.26	0/112	0.48	0/149
4	B6	0.26	0/112	0.48	0/149
5	C1	0.39	0/140	0.50	0/188
5	C2	0.30	0/160	0.53	0/214
5	C3	0.39	0/140	0.50	0/188
5	C4	0.31	0/160	0.53	0/214
5	C5	0.39	0/140	0.50	0/188
5	C6	0.39	0/140	0.50	0/188
6	D1	0.27	0/5130	0.43	0/6930
6	D2	0.27	0/5130	0.43	0/6930
6	D3	0.27	0/5130	0.43	0/6930
6	D4	0.27	0/5130	0.43	0/6930
6	D5	0.27	0/5130	0.43	0/6930
6	D6	0.28	0/5130	0.43	0/6930
6	D7	0.27	0/5130	0.43	0/6930
7	E1	0.25	0/65	0.41	0/89
7	E2	0.25	0/65	0.41	0/89
7	E3	0.25	0/65	0.42	0/89
7	E4	0.24	0/65	0.41	0/89
7	E5	0.24	0/65	0.42	0/89
7	E6	0.24	0/65	0.41	0/89
7	E7	0.24	0/65	0.42	0/89
8	F1	0.24	0/13031	0.39	0/17717
8	F2	0.24	0/13031	0.39	0/17717

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
9	G1	0.23	0/445	0.38	0/600
9	G2	0.23	0/445	0.38	0/600
10	H1	0.26	0/95	0.37	0/128
10	H2	0.26	0/95	0.37	0/128
11	I1	0.23	0/12541	0.36	0/16980
11	I2	0.23	0/12541	0.35	0/16980
11	I3	0.23	0/12541	0.36	0/16980
11	I4	0.23	0/12541	0.36	0/16980
11	I5	0.23	0/12541	0.36	0/16980
12	J1	0.23	0/511	0.37	0/688
12	J2	0.24	0/511	0.37	0/688
12	J3	0.23	0/511	0.37	0/688
12	J4	0.23	0/511	0.37	0/688
12	J5	0.23	0/511	0.37	0/688
13	K1	0.23	0/75	0.40	0/101
13	K2	0.23	0/75	0.39	0/101
13	K3	0.23	0/75	0.39	0/101
13	K4	0.24	0/75	0.39	0/101
13	K5	0.24	0/75	0.40	0/101
14	L1	0.29	0/15	0.16	0/18
14	L2	0.29	0/15	0.17	0/18
14	L3	0.26	0/15	0.19	0/18
14	L4	0.28	0/15	0.19	0/18
14	L5	0.30	0/15	0.18	0/18
15	M1	0.26	0/1388	0.39	0/1866
15	M2	0.26	0/1388	0.40	0/1866
15	M3	0.26	0/1388	0.39	0/1866
15	M4	0.26	0/1388	0.39	0/1866
16	N1	0.24	0/1413	0.38	0/1898
16	N2	0.25	0/1413	0.38	0/1898
16	N3	0.24	0/1413	0.38	0/1898
16	N4	0.25	0/1413	0.38	0/1898
17	O1	0.26	0/2011	0.41	0/2715
17	O2	0.26	0/2011	0.41	0/2715
17	O3	0.26	0/2011	0.41	0/2715
17	O4	0.26	0/2011	0.41	0/2715
18	P1	0.37	0/910	0.51	0/1228
18	P2	0.37	0/910	0.51	0/1228
18	P3	0.37	0/910	0.51	0/1228
18	P4	0.37	0/910	0.51	0/1228
19	Q1	0.50	0/672	0.59	0/898
19	Q2	0.49	0/629	0.61	0/842
19	Q3	0.50	0/672	0.59	0/898

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
19	Q4	0.49	0/629	0.61	0/842
20	R1	0.23	0/312	0.38	0/416
20	R2	0.23	0/312	0.38	0/416
20	R3	0.23	0/312	0.38	0/416
20	R4	0.23	0/312	0.38	0/416
21	S1	0.84	6/6081 (0.1%)	0.83	18/8304 (0.2%)
21	S2	0.84	6/6081 (0.1%)	0.83	19/8304 (0.2%)
21	S3	0.84	6/6081 (0.1%)	0.83	18/8304 (0.2%)
21	S4	0.84	6/6081 (0.1%)	0.83	18/8304 (0.2%)
22	T1	0.24	0/2037	0.41	0/2749
22	T2	0.24	0/2037	0.41	0/2749
22	T3	0.24	0/2037	0.41	0/2749
22	T4	0.24	0/2037	0.41	0/2749
23	U1	0.36	0/3463	0.64	2/4700 (0.0%)
23	U2	0.36	0/3472	0.64	2/4714 (0.0%)
23	U3	0.36	0/3472	0.64	2/4714 (0.0%)
23	U4	0.36	0/3472	0.64	2/4714 (0.0%)
24	V1	0.37	0/3860	0.66	2/5224 (0.0%)
24	V2	0.37	0/3860	0.66	2/5224 (0.0%)
24	V3	0.37	0/3860	0.66	2/5224 (0.0%)
24	V4	0.37	0/3860	0.66	2/5224 (0.0%)
25	W1	0.32	0/2220	0.62	0/3028
25	W2	0.32	0/2220	0.62	0/3028
25	W3	0.32	0/2220	0.62	0/3028
25	W4	0.32	0/2220	0.62	0/3028
26	X1	0.31	0/4602	0.58	2/6246 (0.0%)
26	X2	0.31	0/4602	0.58	2/6246 (0.0%)
26	X3	0.31	0/4602	0.58	2/6246 (0.0%)
26	X4	0.31	0/4602	0.58	2/6246 (0.0%)
27	Y1	0.28	0/2499	0.64	0/3388
27	Y2	0.28	0/2499	0.64	0/3388
27	Y3	0.28	0/2499	0.64	0/3388
27	Y4	0.28	0/2499	0.64	0/3388
28	Z1	0.33	0/6730	0.55	1/9158 (0.0%)
28	Z2	0.33	0/6730	0.55	1/9158 (0.0%)
28	Z3	0.33	0/6730	0.55	1/9158 (0.0%)
28	Z4	0.33	0/6730	0.55	1/9158 (0.0%)
29	a1	0.78	0/2723	0.78	0/3715
29	a2	0.78	0/2723	0.78	0/3715
29	a3	0.78	0/2723	0.78	0/3715
29	a4	0.78	0/2723	0.78	0/3715
30	b1	0.33	0/2702	0.65	0/3689
30	b2	0.33	0/2702	0.65	0/3689

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
30	b3	0.33	0/2702	0.65	0/3689
30	b4	0.33	0/2702	0.65	0/3689
31	c1	0.25	0/6101	0.39	0/8248
31	c2	0.25	0/6098	0.39	0/8246
31	c3	0.25	0/6098	0.39	0/8246
31	c4	0.25	0/6098	0.39	0/8246
31	c5	0.25	0/6098	0.39	0/8246
32	g	0.67	0/3359	0.73	0/4572
33	h	0.68	0/1871	0.76	1/2530 (0.0%)
34	i	0.26	0/3398	0.45	0/4629
35	j	0.25	0/1223	0.43	0/1653
36	k1	0.36	0/727	0.47	0/977
37	k2	0.31	0/310	0.46	0/414
All	All	0.37	28/407133 (0.0%)	0.52	102/551943 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A1	0	2
1	A3	0	2
2	A2	0	1
2	A4	0	1
23	U1	0	1
23	U2	0	1
23	U3	0	1
23	U4	0	1
24	V1	0	2
24	V2	0	2
24	V3	0	2
24	V4	0	2
28	Z1	0	2
28	Z2	0	2
28	Z3	0	2
28	Z4	0	2
30	b1	0	3
30	b2	0	3
30	b3	0	3
30	b4	0	3
All	All	0	38

The worst 5 of 28 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A1	891	GLY	C-N	7.13	1.50	1.34
1	A3	891	GLY	C-N	7.09	1.50	1.34
21	S1	151	TRP	CE3-CZ3	7.06	1.50	1.38
21	S2	151	TRP	CE3-CZ3	7.04	1.50	1.38
21	S3	151	TRP	CE3-CZ3	7.04	1.50	1.38

The worst 5 of 102 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	S1	685	PRO	N-CA-CB	8.59	113.61	103.30
21	S2	685	PRO	N-CA-CB	8.59	113.61	103.30
21	S4	685	PRO	N-CA-CB	8.59	113.60	103.30
21	S3	685	PRO	N-CA-CB	8.54	113.55	103.30
21	S3	377	ASP	CB-CG-OD2	8.04	125.53	118.30

There are no chirality outliers.

5 of 38 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A1	891	GLY	Mainchain
1	A1	976	LEU	Peptide
2	A2	699	SER	Peptide
1	A3	891	GLY	Mainchain
1	A3	976	LEU	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A1	9730	0	9629	529	0
1	A3	9730	0	9573	2325	0
2	A2	9946	0	9774	1854	0
2	A4	9946	0	9656	5008	0
3	A5	10030	0	9892	1550	0
3	A6	10030	0	9732	6034	0
4	B1	111	0	127	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	B2	111	0	127	24	0
4	B3	111	0	127	1	0
4	B4	111	0	127	25	0
4	B5	111	0	122	38	0
4	B6	111	0	118	184	0
5	C1	138	0	144	26	0
5	C2	157	0	157	350	0
5	C3	138	0	144	8	0
5	C4	157	0	164	64	0
5	C5	138	0	144	23	0
5	C6	138	0	144	22	0
6	D1	5034	0	4999	1029	0
6	D2	5034	0	5029	82	0
6	D3	5034	0	4965	1769	0
6	D4	5034	0	5030	91	0
6	D5	5034	0	5024	58	0
6	D6	5034	0	5027	85	0
6	D7	5034	0	5027	126	0
7	E1	63	0	65	2	0
7	E2	63	0	65	2	0
7	E3	63	0	65	2	0
7	E4	63	0	65	2	0
7	E5	63	0	65	2	0
7	E6	63	0	65	2	0
7	E7	63	0	65	2	0
8	F1	12779	0	12916	379	0
8	F2	12779	0	12917	133	0
9	G1	438	0	404	211	0
9	G2	438	0	412	73	0
10	H1	94	0	84	0	0
10	H2	94	0	84	0	0
11	I1	12307	0	12271	3172	0
11	I2	12307	0	12280	3234	0
11	I3	12307	0	12354	443	0
11	I4	12307	0	12360	241	0
11	I5	12307	0	12347	527	0
12	J1	504	0	485	54	0
12	J2	504	0	485	55	0
12	J3	504	0	487	32	0
12	J4	504	0	487	30	0
12	J5	504	0	487	31	0
13	K1	73	0	82	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
13	K2	73	0	82	0	0
13	K3	73	0	82	0	0
13	K4	73	0	82	0	0
13	K5	73	0	82	0	0
14	L1	15	0	11	0	0
14	L2	15	0	11	0	0
14	L3	15	0	11	0	0
14	L4	15	0	11	0	0
14	L5	15	0	11	0	0
15	M1	1372	0	1333	715	0
15	M2	1372	0	1361	52	0
15	M3	1372	0	1332	573	0
15	M4	1372	0	1363	4	0
16	N1	1401	0	1375	720	0
16	N2	1401	0	1397	74	0
16	N3	1401	0	1383	611	0
16	N4	1401	0	1398	10	0
17	O1	1971	0	1943	906	0
17	O2	1971	0	1962	418	0
17	O3	1971	0	1935	1232	0
17	O4	1971	0	1961	236	0
18	P1	900	0	910	60	0
18	P2	900	0	910	42	0
18	P3	900	0	908	147	0
18	P4	900	0	907	119	0
19	Q1	658	0	645	3	0
19	Q2	616	0	600	3	0
19	Q3	658	0	645	3	0
19	Q4	616	0	600	3	0
20	R1	311	0	315	348	0
20	R2	311	0	334	2	0
20	R3	311	0	313	463	0
20	R4	311	0	334	2	0
21	S1	6013	0	4977	319	0
21	S2	6013	0	4980	325	0
21	S3	6013	0	4983	236	0
21	S4	6013	0	4979	233	0
22	T1	1993	0	1975	65	0
22	T2	1993	0	1981	68	0
22	T3	1993	0	1981	99	0
22	T4	1993	0	1981	71	0
23	U1	3396	0	3352	82	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
23	U2	3404	0	3326	76	0
23	U3	3404	0	3377	135	0
23	U4	3404	0	3378	79	0
24	V1	3805	0	3499	105	0
24	V2	3805	0	3499	109	0
24	V3	3805	0	3499	106	0
24	V4	3805	0	3499	110	0
25	W1	2160	0	2096	63	0
25	W2	2160	0	2096	75	0
25	W3	2160	0	2096	63	0
25	W4	2160	0	2096	125	0
26	X1	4535	0	4064	370	0
26	X2	4535	0	4032	155	0
26	X3	4535	0	4068	232	0
26	X4	4535	0	4071	146	0
27	Y1	2438	0	2378	55	0
27	Y2	2438	0	2378	52	0
27	Y3	2438	0	2378	63	0
27	Y4	2438	0	2378	56	0
28	Z1	6622	0	5893	80	0
28	Z2	6622	0	5883	487	0
28	Z3	6622	0	5893	83	0
28	Z4	6622	0	5885	305	0
29	a1	2587	0	2488	0	0
29	a2	2587	0	2488	0	0
29	a3	2587	0	2486	0	0
29	a4	2587	0	2488	0	0
30	b1	2638	0	2573	0	0
30	b2	2638	0	2573	0	0
30	b3	2638	0	2573	0	0
30	b4	2638	0	2573	0	0
31	c1	5980	0	5992	0	0
31	c2	5976	0	5981	0	0
31	c3	5976	0	5996	0	0
31	c4	5976	0	5949	0	0
31	c5	5976	0	5997	0	0
32	g	3282	0	3310	0	0
33	h	1836	0	1893	0	0
34	i	3280	0	3277	0	0
35	j	1197	0	1198	0	0
36	k1	719	0	713	0	0
37	k2	308	0	302	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	l1	460	0	94	0	0
39	l2	195	0	41	0	0
40	m1	440	0	93	0	0
41	m2	100	0	21	0	0
All	All	400581	0	386996	22511	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 37.

The worst 5 of 22511 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)
11:I2:950:LEU:HD11	16:N3:410:MET:SD	1.20	1.72
3:A6:444:ARG:HG2	6:D3:737:PHE:CZ	1.21	1.69
2:A4:886:PHE:CZ	3:A6:176:LEU:HG	1.26	1.68
11:I1:833:PHE:CD2	17:O1:238:ALA:HA	1.27	1.68
2:A4:770:GLY:CA	3:A6:469:PHE:CD2	1.74	1.68

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A1	1211/1316 (92%)	1172 (97%)	39 (3%)	0	100 100
1	A3	1211/1316 (92%)	1172 (97%)	39 (3%)	0	100 100
2	A2	1255/1328 (94%)	1183 (94%)	54 (4%)	18 (1%)	11 46
2	A4	1255/1328 (94%)	1182 (94%)	55 (4%)	18 (1%)	11 46
3	A5	1258/1330 (95%)	1224 (97%)	34 (3%)	0	100 100
3	A6	1258/1330 (95%)	1224 (97%)	34 (3%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	B1	12/14 (86%)	11 (92%)	1 (8%)	0	100	100
4	B2	12/14 (86%)	11 (92%)	1 (8%)	0	100	100
4	B3	12/14 (86%)	11 (92%)	1 (8%)	0	100	100
4	B4	12/14 (86%)	11 (92%)	1 (8%)	0	100	100
4	B5	12/14 (86%)	11 (92%)	1 (8%)	0	100	100
4	B6	12/14 (86%)	11 (92%)	1 (8%)	0	100	100
5	C1	15/19 (79%)	11 (73%)	4 (27%)	0	100	100
5	C2	17/19 (90%)	12 (71%)	5 (29%)	0	100	100
5	C3	15/19 (79%)	11 (73%)	4 (27%)	0	100	100
5	C4	17/19 (90%)	12 (71%)	5 (29%)	0	100	100
5	C5	15/19 (79%)	11 (73%)	4 (27%)	0	100	100
5	C6	15/19 (79%)	11 (73%)	4 (27%)	0	100	100
6	D1	615/644 (96%)	604 (98%)	11 (2%)	0	100	100
6	D2	615/644 (96%)	604 (98%)	11 (2%)	0	100	100
6	D3	615/644 (96%)	604 (98%)	11 (2%)	0	100	100
6	D4	615/644 (96%)	604 (98%)	11 (2%)	0	100	100
6	D5	615/644 (96%)	604 (98%)	11 (2%)	0	100	100
6	D6	615/644 (96%)	604 (98%)	11 (2%)	0	100	100
6	D7	615/644 (96%)	604 (98%)	11 (2%)	0	100	100
7	E1	6/8 (75%)	6 (100%)	0	0	100	100
7	E2	6/8 (75%)	6 (100%)	0	0	100	100
7	E3	6/8 (75%)	6 (100%)	0	0	100	100
7	E4	6/8 (75%)	6 (100%)	0	0	100	100
7	E5	6/8 (75%)	6 (100%)	0	0	100	100
7	E6	6/8 (75%)	6 (100%)	0	0	100	100
7	E7	6/8 (75%)	6 (100%)	0	0	100	100
8	F1	1611/1858 (87%)	1589 (99%)	22 (1%)	0	100	100
8	F2	1611/1858 (87%)	1589 (99%)	22 (1%)	0	100	100
9	G1	51/53 (96%)	51 (100%)	0	0	100	100
9	G2	51/53 (96%)	51 (100%)	0	0	100	100
10	H1	11/13 (85%)	7 (64%)	4 (36%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	H2	11/13 (85%)	7 (64%)	4 (36%)	0	100	100
11	I1	1508/1756 (86%)	1491 (99%)	17 (1%)	0	100	100
11	I2	1508/1756 (86%)	1491 (99%)	17 (1%)	0	100	100
11	I3	1508/1756 (86%)	1491 (99%)	17 (1%)	0	100	100
11	I4	1508/1756 (86%)	1491 (99%)	17 (1%)	0	100	100
11	I5	1508/1756 (86%)	1491 (99%)	17 (1%)	0	100	100
12	J1	61/63 (97%)	61 (100%)	0	0	100	100
12	J2	61/63 (97%)	61 (100%)	0	0	100	100
12	J3	61/63 (97%)	61 (100%)	0	0	100	100
12	J4	61/63 (97%)	61 (100%)	0	0	100	100
12	J5	61/63 (97%)	61 (100%)	0	0	100	100
13	K1	7/9 (78%)	5 (71%)	2 (29%)	0	100	100
13	K2	7/9 (78%)	5 (71%)	2 (29%)	0	100	100
13	K3	7/9 (78%)	5 (71%)	2 (29%)	0	100	100
13	K4	7/9 (78%)	5 (71%)	2 (29%)	0	100	100
13	K5	7/9 (78%)	5 (71%)	2 (29%)	0	100	100
15	M1	165/183 (90%)	158 (96%)	7 (4%)	0	100	100
15	M2	165/183 (90%)	158 (96%)	7 (4%)	0	100	100
15	M3	165/183 (90%)	158 (96%)	7 (4%)	0	100	100
15	M4	165/183 (90%)	158 (96%)	7 (4%)	0	100	100
16	N1	174/222 (78%)	172 (99%)	2 (1%)	0	100	100
16	N2	174/222 (78%)	172 (99%)	2 (1%)	0	100	100
16	N3	174/222 (78%)	172 (99%)	2 (1%)	0	100	100
16	N4	174/222 (78%)	172 (99%)	2 (1%)	0	100	100
17	O1	239/241 (99%)	213 (89%)	26 (11%)	0	100	100
17	O2	239/241 (99%)	212 (89%)	27 (11%)	0	100	100
17	O3	239/241 (99%)	213 (89%)	26 (11%)	0	100	100
17	O4	239/241 (99%)	213 (89%)	26 (11%)	0	100	100
18	P1	115/116 (99%)	114 (99%)	1 (1%)	0	100	100
18	P2	115/116 (99%)	114 (99%)	1 (1%)	0	100	100
18	P3	115/116 (99%)	114 (99%)	1 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	P4	115/116 (99%)	114 (99%)	1 (1%)	0	100	100
19	Q1	83/84 (99%)	81 (98%)	2 (2%)	0	100	100
19	Q2	79/84 (94%)	77 (98%)	2 (2%)	0	100	100
19	Q3	83/84 (99%)	81 (98%)	2 (2%)	0	100	100
19	Q4	79/84 (94%)	77 (98%)	2 (2%)	0	100	100
20	R1	38/40 (95%)	31 (82%)	7 (18%)	0	100	100
20	R2	38/40 (95%)	31 (82%)	7 (18%)	0	100	100
20	R3	38/40 (95%)	31 (82%)	7 (18%)	0	100	100
20	R4	38/40 (95%)	31 (82%)	7 (18%)	0	100	100
21	S1	874/1156 (76%)	784 (90%)	74 (8%)	16 (2%)	8	40
21	S2	874/1156 (76%)	784 (90%)	74 (8%)	16 (2%)	8	40
21	S3	874/1156 (76%)	784 (90%)	74 (8%)	16 (2%)	8	40
21	S4	874/1156 (76%)	784 (90%)	74 (8%)	16 (2%)	8	40
22	T1	243/258 (94%)	235 (97%)	8 (3%)	0	100	100
22	T2	243/258 (94%)	234 (96%)	9 (4%)	0	100	100
22	T3	243/258 (94%)	234 (96%)	9 (4%)	0	100	100
22	T4	243/258 (94%)	234 (96%)	9 (4%)	0	100	100
23	U1	410/436 (94%)	365 (89%)	34 (8%)	11 (3%)	5	31
23	U2	413/436 (95%)	368 (89%)	34 (8%)	11 (3%)	5	31
23	U3	413/436 (95%)	368 (89%)	34 (8%)	11 (3%)	5	31
23	U4	413/436 (95%)	368 (89%)	34 (8%)	11 (3%)	5	31
24	V1	491/621 (79%)	451 (92%)	30 (6%)	10 (2%)	7	38
24	V2	491/621 (79%)	451 (92%)	30 (6%)	10 (2%)	7	38
24	V3	491/621 (79%)	451 (92%)	30 (6%)	10 (2%)	7	38
24	V4	491/621 (79%)	451 (92%)	30 (6%)	10 (2%)	7	38
25	W1	270/286 (94%)	228 (84%)	36 (13%)	6 (2%)	6	35
25	W2	270/286 (94%)	228 (84%)	36 (13%)	6 (2%)	6	35
25	W3	270/286 (94%)	228 (84%)	36 (13%)	6 (2%)	6	35
25	W4	270/286 (94%)	228 (84%)	36 (13%)	6 (2%)	6	35
26	X1	592/698 (85%)	531 (90%)	51 (9%)	10 (2%)	9	42
26	X2	592/698 (85%)	531 (90%)	51 (9%)	10 (2%)	9	42

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
26	X3	592/698 (85%)	532 (90%)	50 (8%)	10 (2%)	9	42
26	X4	592/698 (85%)	532 (90%)	50 (8%)	10 (2%)	9	42
27	Y1	303/346 (88%)	266 (88%)	31 (10%)	6 (2%)	7	38
27	Y2	303/346 (88%)	266 (88%)	31 (10%)	6 (2%)	7	38
27	Y3	303/346 (88%)	266 (88%)	31 (10%)	6 (2%)	7	38
27	Y4	303/346 (88%)	266 (88%)	31 (10%)	6 (2%)	7	38
28	Z1	858/1037 (83%)	798 (93%)	50 (6%)	10 (1%)	13	50
28	Z2	858/1037 (83%)	798 (93%)	49 (6%)	11 (1%)	12	48
28	Z3	858/1037 (83%)	798 (93%)	49 (6%)	11 (1%)	12	48
28	Z4	858/1037 (83%)	798 (93%)	49 (6%)	11 (1%)	12	48
29	a1	334/380 (88%)	325 (97%)	9 (3%)	0	100	100
29	a2	334/380 (88%)	325 (97%)	9 (3%)	0	100	100
29	a3	334/380 (88%)	325 (97%)	9 (3%)	0	100	100
29	a4	334/380 (88%)	325 (97%)	9 (3%)	0	100	100
30	b1	335/385 (87%)	315 (94%)	19 (6%)	1 (0%)	41	77
30	b2	335/385 (87%)	315 (94%)	19 (6%)	1 (0%)	41	77
30	b3	335/385 (87%)	315 (94%)	19 (6%)	1 (0%)	41	77
30	b4	335/385 (87%)	315 (94%)	19 (6%)	1 (0%)	41	77
31	c1	736/750 (98%)	727 (99%)	9 (1%)	0	100	100
31	c2	736/750 (98%)	727 (99%)	9 (1%)	0	100	100
31	c3	736/750 (98%)	727 (99%)	9 (1%)	0	100	100
31	c4	736/750 (98%)	727 (99%)	9 (1%)	0	100	100
31	c5	736/750 (98%)	727 (99%)	9 (1%)	0	100	100
32	g	419/421 (100%)	404 (96%)	14 (3%)	1 (0%)	47	81
33	h	230/232 (99%)	217 (94%)	10 (4%)	3 (1%)	12	48
34	i	408/481 (85%)	401 (98%)	7 (2%)	0	100	100
35	j	149/150 (99%)	144 (97%)	4 (3%)	1 (1%)	22	63
36	k1	83/85 (98%)	79 (95%)	4 (5%)	0	100	100
37	k2	35/37 (95%)	35 (100%)	0	0	100	100
All	All	50288/56810 (88%)	47822 (95%)	2142 (4%)	324 (1%)	29	66

5 of 324 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	A2	521	ASN
2	A2	1024	ASP
2	A2	1305	ALA
2	A2	1342	SER
2	A2	1345	SER

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A1	1061/1111 (96%)	1053 (99%)	8 (1%)	81 89
1	A3	1061/1111 (96%)	1053 (99%)	8 (1%)	81 89
2	A2	1073/1107 (97%)	991 (92%)	82 (8%)	13 37
2	A4	1073/1107 (97%)	991 (92%)	82 (8%)	13 37
3	A5	1087/1111 (98%)	1076 (99%)	11 (1%)	76 86
3	A6	1087/1111 (98%)	1076 (99%)	11 (1%)	76 86
4	B1	12/12 (100%)	12 (100%)	0	100 100
4	B2	12/12 (100%)	12 (100%)	0	100 100
4	B3	12/12 (100%)	12 (100%)	0	100 100
4	B4	12/12 (100%)	12 (100%)	0	100 100
4	B5	12/12 (100%)	12 (100%)	0	100 100
4	B6	12/12 (100%)	12 (100%)	0	100 100
5	C1	17/19 (90%)	17 (100%)	0	100 100
5	C2	19/19 (100%)	19 (100%)	0	100 100
5	C3	17/19 (90%)	17 (100%)	0	100 100
5	C4	19/19 (100%)	19 (100%)	0	100 100
5	C5	17/19 (90%)	17 (100%)	0	100 100
5	C6	17/19 (90%)	17 (100%)	0	100 100
6	D1	554/575 (96%)	554 (100%)	0	100 100
6	D2	554/575 (96%)	554 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	D3	554/575 (96%)	554 (100%)	0	100	100
6	D4	554/575 (96%)	554 (100%)	0	100	100
6	D5	554/575 (96%)	554 (100%)	0	100	100
6	D6	554/575 (96%)	554 (100%)	0	100	100
6	D7	554/575 (96%)	554 (100%)	0	100	100
7	E1	7/7 (100%)	7 (100%)	0	100	100
7	E2	7/7 (100%)	7 (100%)	0	100	100
7	E3	7/7 (100%)	7 (100%)	0	100	100
7	E4	7/7 (100%)	7 (100%)	0	100	100
7	E5	7/7 (100%)	7 (100%)	0	100	100
7	E6	7/7 (100%)	7 (100%)	0	100	100
7	E7	7/7 (100%)	7 (100%)	0	100	100
8	F1	1350/1512 (89%)	1350 (100%)	0	100	100
8	F2	1350/1512 (89%)	1350 (100%)	0	100	100
9	G1	47/47 (100%)	47 (100%)	0	100	100
9	G2	47/47 (100%)	47 (100%)	0	100	100
10	H1	10/10 (100%)	10 (100%)	0	100	100
10	H2	10/10 (100%)	10 (100%)	0	100	100
11	I1	1340/1509 (89%)	1339 (100%)	1 (0%)	93	97
11	I2	1340/1509 (89%)	1339 (100%)	1 (0%)	93	97
11	I3	1340/1509 (89%)	1339 (100%)	1 (0%)	93	97
11	I4	1340/1509 (89%)	1339 (100%)	1 (0%)	93	97
11	I5	1340/1509 (89%)	1339 (100%)	1 (0%)	93	97
12	J1	54/54 (100%)	54 (100%)	0	100	100
12	J2	54/54 (100%)	54 (100%)	0	100	100
12	J3	54/54 (100%)	54 (100%)	0	100	100
12	J4	54/54 (100%)	54 (100%)	0	100	100
12	J5	54/54 (100%)	54 (100%)	0	100	100
13	K1	9/9 (100%)	9 (100%)	0	100	100
13	K2	9/9 (100%)	9 (100%)	0	100	100
13	K3	9/9 (100%)	9 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
13	K4	9/9 (100%)	9 (100%)	0	100	100
13	K5	9/9 (100%)	9 (100%)	0	100	100
14	L1	1/1 (100%)	1 (100%)	0	100	100
14	L2	1/1 (100%)	1 (100%)	0	100	100
14	L3	1/1 (100%)	1 (100%)	0	100	100
14	L4	1/1 (100%)	1 (100%)	0	100	100
14	L5	1/1 (100%)	1 (100%)	0	100	100
15	M1	146/154 (95%)	146 (100%)	0	100	100
15	M2	146/154 (95%)	146 (100%)	0	100	100
15	M3	146/154 (95%)	146 (100%)	0	100	100
15	M4	146/154 (95%)	146 (100%)	0	100	100
16	N1	150/173 (87%)	150 (100%)	0	100	100
16	N2	150/173 (87%)	150 (100%)	0	100	100
16	N3	150/173 (87%)	150 (100%)	0	100	100
16	N4	150/173 (87%)	150 (100%)	0	100	100
17	O1	213/213 (100%)	213 (100%)	0	100	100
17	O2	213/213 (100%)	213 (100%)	0	100	100
17	O3	213/213 (100%)	213 (100%)	0	100	100
17	O4	213/213 (100%)	213 (100%)	0	100	100
18	P1	101/100 (101%)	101 (100%)	0	100	100
18	P2	101/100 (101%)	101 (100%)	0	100	100
18	P3	101/100 (101%)	101 (100%)	0	100	100
18	P4	101/100 (101%)	101 (100%)	0	100	100
19	Q1	70/69 (101%)	66 (94%)	4 (6%)	20	45
19	Q2	63/69 (91%)	62 (98%)	1 (2%)	62	79
19	Q3	70/69 (101%)	66 (94%)	4 (6%)	20	45
19	Q4	63/69 (91%)	62 (98%)	1 (2%)	62	79
20	R1	32/32 (100%)	32 (100%)	0	100	100
20	R2	32/32 (100%)	32 (100%)	0	100	100
20	R3	32/32 (100%)	32 (100%)	0	100	100
20	R4	32/32 (100%)	32 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	S1	488/1013 (48%)	463 (95%)	25 (5%)	24	48
21	S2	488/1013 (48%)	463 (95%)	25 (5%)	24	48
21	S3	488/1013 (48%)	463 (95%)	25 (5%)	24	48
21	S4	488/1013 (48%)	463 (95%)	25 (5%)	24	48
22	T1	211/231 (91%)	206 (98%)	5 (2%)	49	69
22	T2	211/231 (91%)	206 (98%)	5 (2%)	49	69
22	T3	211/231 (91%)	206 (98%)	5 (2%)	49	69
22	T4	211/231 (91%)	206 (98%)	5 (2%)	49	69
23	U1	386/402 (96%)	366 (95%)	20 (5%)	23	48
23	U2	387/402 (96%)	367 (95%)	20 (5%)	23	48
23	U3	387/402 (96%)	367 (95%)	20 (5%)	23	48
23	U4	387/402 (96%)	367 (95%)	20 (5%)	23	48
24	V1	367/567 (65%)	332 (90%)	35 (10%)	8	27
24	V2	367/567 (65%)	332 (90%)	35 (10%)	8	27
24	V3	367/567 (65%)	332 (90%)	35 (10%)	8	27
24	V4	367/567 (65%)	332 (90%)	35 (10%)	8	27
25	W1	233/243 (96%)	224 (96%)	9 (4%)	32	56
25	W2	233/243 (96%)	224 (96%)	9 (4%)	32	56
25	W3	233/243 (96%)	223 (96%)	10 (4%)	29	53
25	W4	233/243 (96%)	224 (96%)	9 (4%)	32	56
26	X1	424/628 (68%)	414 (98%)	10 (2%)	49	69
26	X2	424/628 (68%)	414 (98%)	10 (2%)	49	69
26	X3	424/628 (68%)	414 (98%)	10 (2%)	49	69
26	X4	424/628 (68%)	414 (98%)	10 (2%)	49	69
27	Y1	269/303 (89%)	261 (97%)	8 (3%)	41	63
27	Y2	269/303 (89%)	261 (97%)	8 (3%)	41	63
27	Y3	269/303 (89%)	261 (97%)	8 (3%)	41	63
27	Y4	269/303 (89%)	261 (97%)	8 (3%)	41	63
28	Z1	639/972 (66%)	616 (96%)	23 (4%)	35	59
28	Z2	639/972 (66%)	616 (96%)	23 (4%)	35	59
28	Z3	639/972 (66%)	616 (96%)	23 (4%)	35	59

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
28	Z4	639/972 (66%)	616 (96%)	23 (4%)	35 59
29	a1	293/335 (88%)	288 (98%)	5 (2%)	60 78
29	a2	293/335 (88%)	288 (98%)	5 (2%)	60 78
29	a3	293/335 (88%)	288 (98%)	5 (2%)	60 78
29	a4	293/335 (88%)	288 (98%)	5 (2%)	60 78
30	b1	299/337 (89%)	278 (93%)	21 (7%)	15 40
30	b2	299/337 (89%)	278 (93%)	21 (7%)	15 40
30	b3	299/337 (89%)	278 (93%)	21 (7%)	15 40
30	b4	299/337 (89%)	278 (93%)	21 (7%)	15 40
31	c1	663/670 (99%)	662 (100%)	1 (0%)	93 96
31	c2	663/670 (99%)	662 (100%)	1 (0%)	93 96
31	c3	663/670 (99%)	662 (100%)	1 (0%)	93 96
31	c4	663/670 (99%)	662 (100%)	1 (0%)	93 96
31	c5	663/670 (99%)	662 (100%)	1 (0%)	93 96
32	g	373/373 (100%)	355 (95%)	18 (5%)	25 51
33	h	206/206 (100%)	196 (95%)	10 (5%)	25 50
34	i	372/425 (88%)	371 (100%)	1 (0%)	92 95
35	j	132/131 (101%)	132 (100%)	0	100 100
36	k1	82/82 (100%)	71 (87%)	11 (13%)	4 17
37	k2	33/33 (100%)	32 (97%)	1 (3%)	41 63
All	All	42167/49609 (85%)	41259 (98%)	908 (2%)	56 71

5 of 908 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
24	V2	341	LEU
33	h	89	TYR
25	W2	229	ARG
32	g	283	HIS
30	b2	25	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 253 such sidechains are listed below:

Mol	Chain	Res	Type
21	S2	1017	GLN
28	Z4	410	ASN
22	T4	914	GLN
28	Z4	295	ASN
30	b3	333	HIS

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
40	m1	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	m1	14:UNK	C	18:UNK	N	8.65

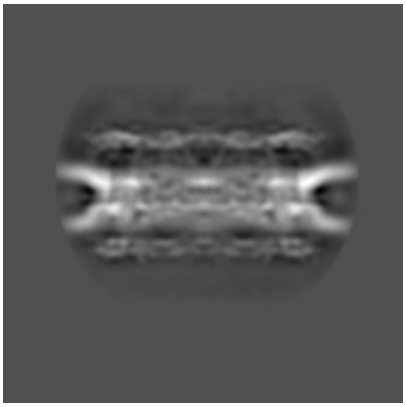
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-11967. These allow visual inspection of the internal detail of the map and identification of artifacts.

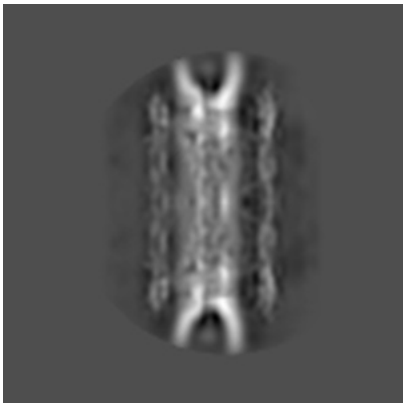
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

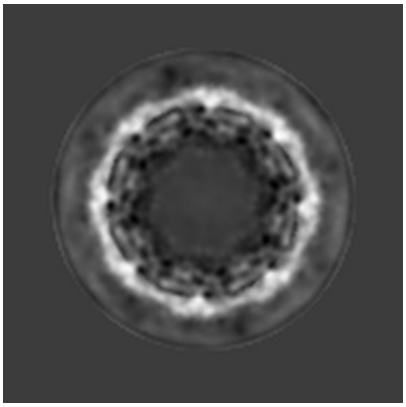
6.1.1 Primary map



X



Y



Z

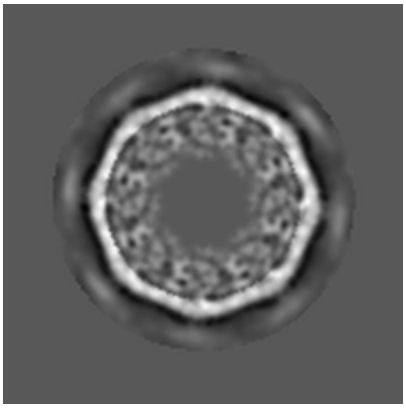
The images above show the map projected in three orthogonal directions.

6.2 Central slices

6.2.1 Primary map

X Index: 72

Y Index: 72

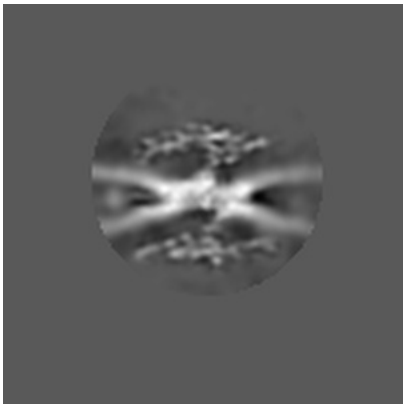


Z Index: 72

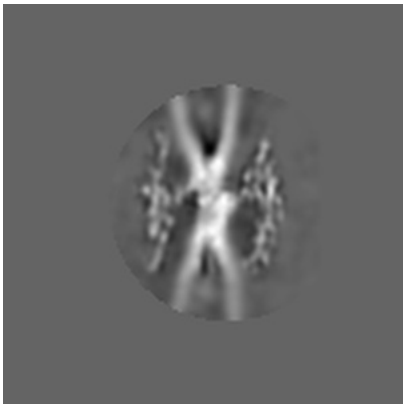
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

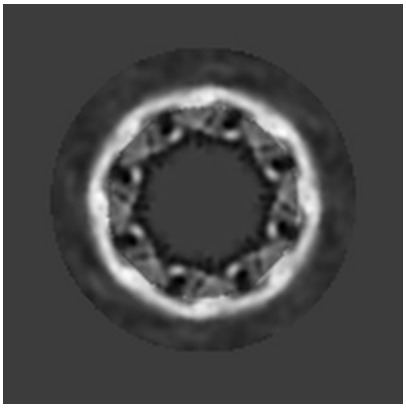
6.3.1 Primary map



X Index: 36



Y Index: 108



Z Index: 78

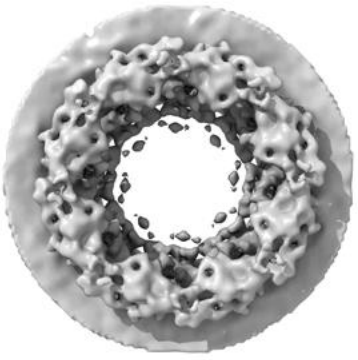
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views (i)

6.4.1 Primary map

X

Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.07. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

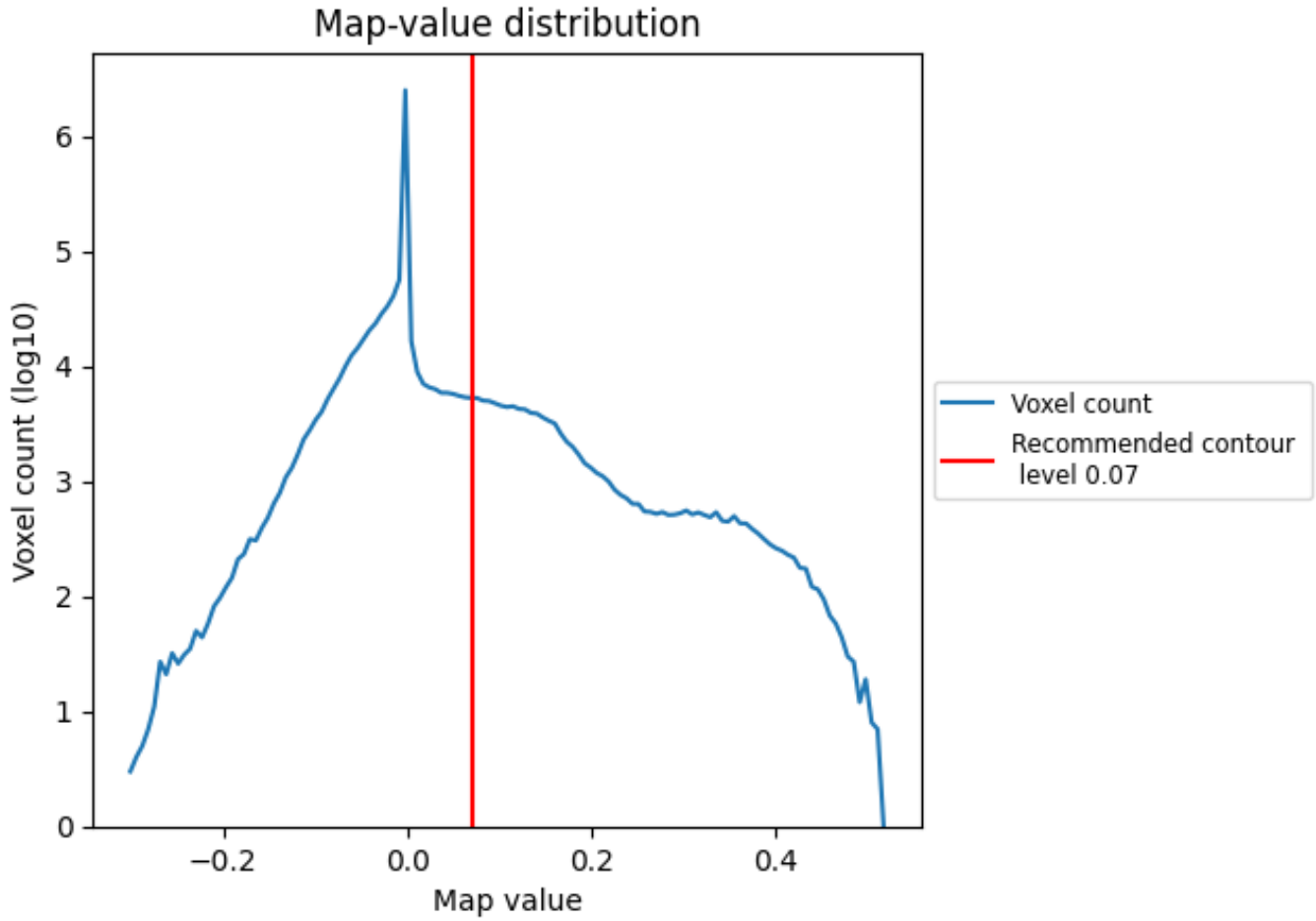
6.5 Mask visualisation (i)

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

7 Map analysis

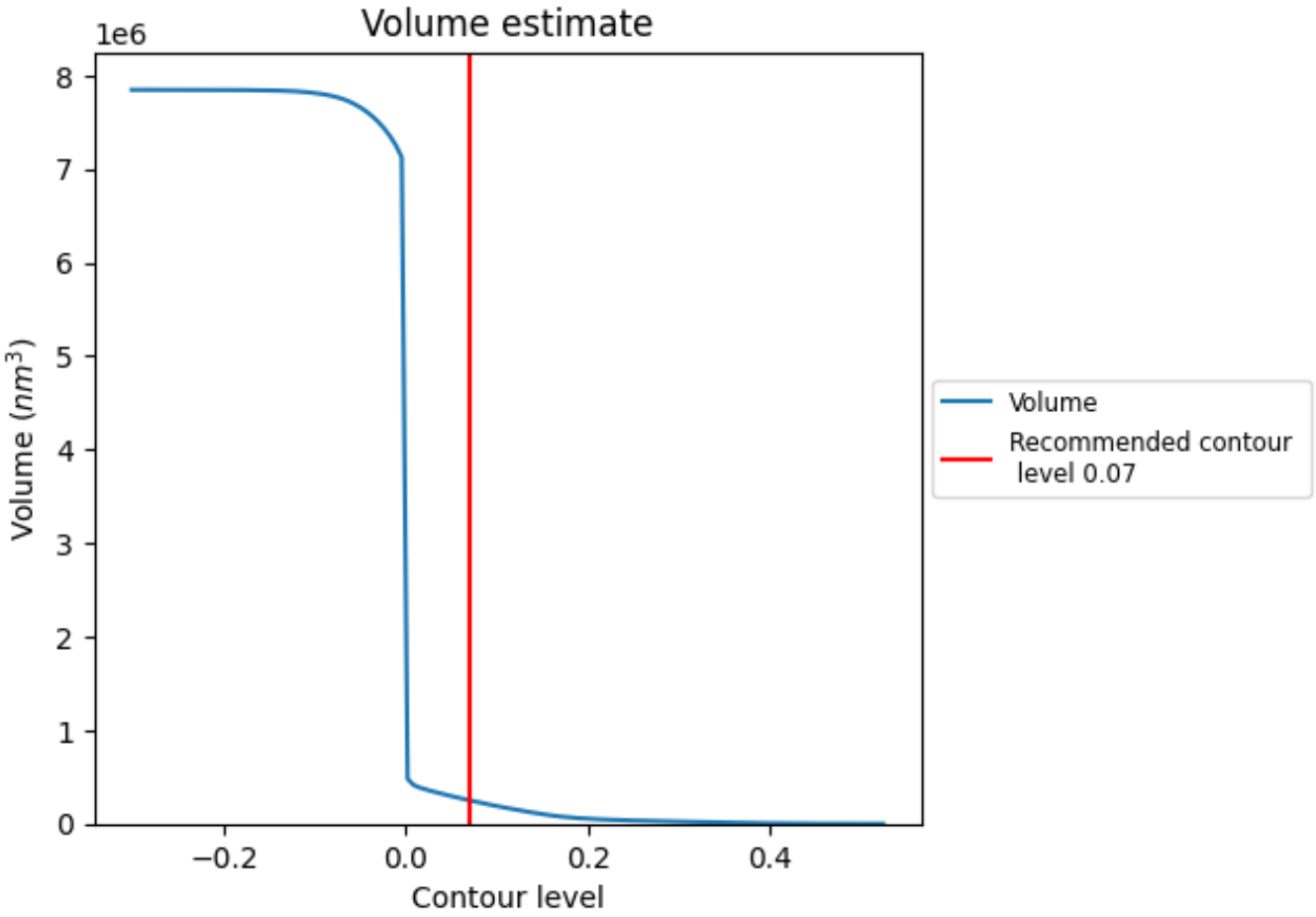
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

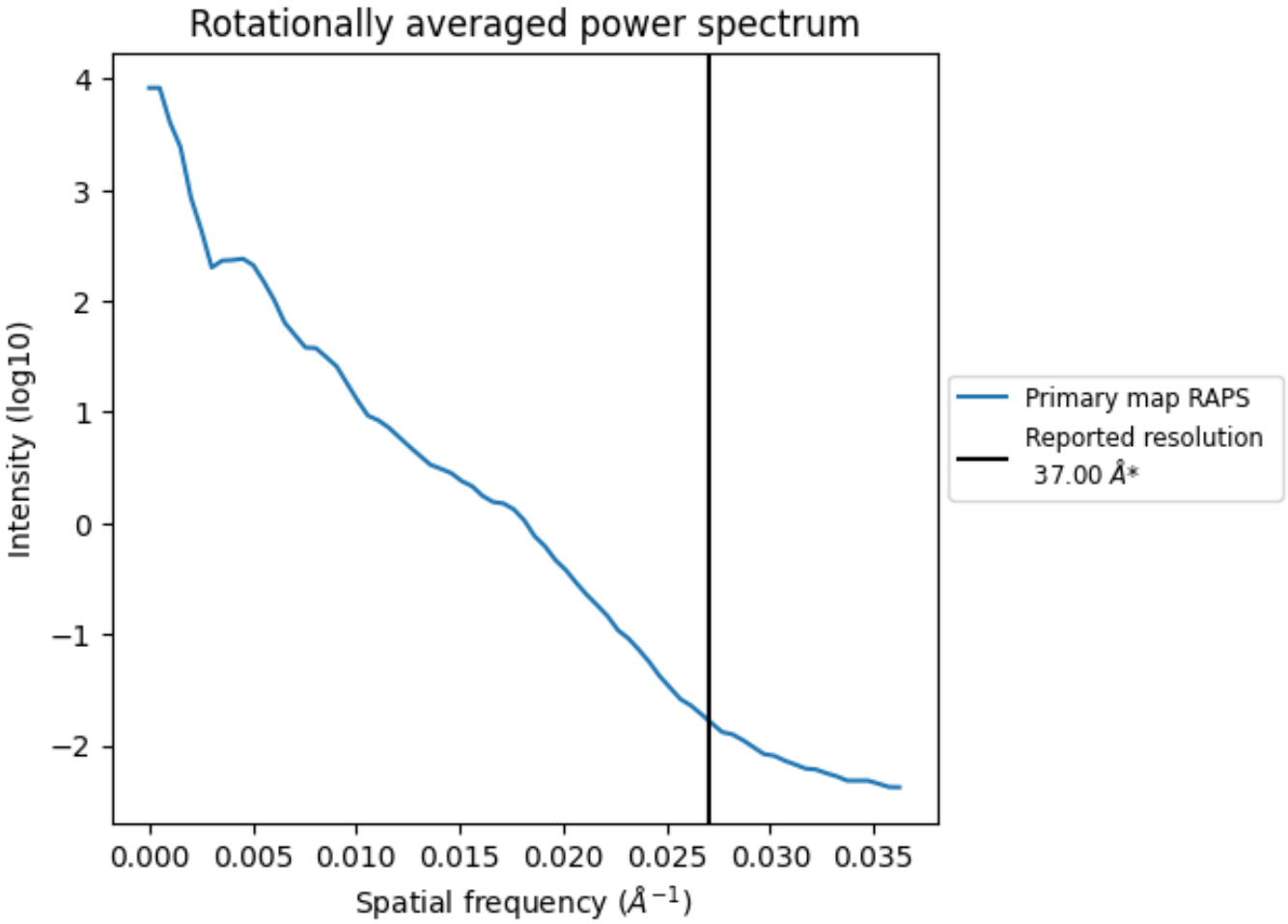
7.2 Volume estimate (i)



The volume at the recommended contour level is 250411 nm^3; this corresponds to an approximate mass of 226203 kDa.

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

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.027 Å^{-1}

8 Fourier-Shell correlation

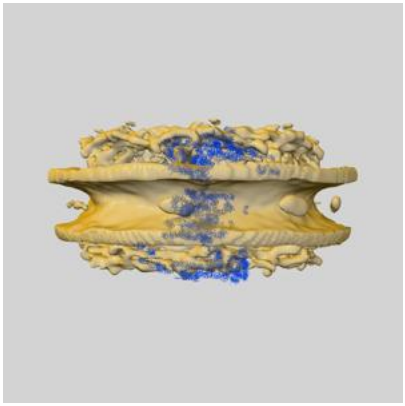
This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit

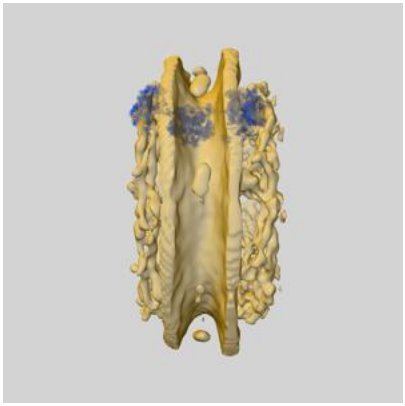
This section contains information regarding the fit between EMDB map EMD-11967 and PDB model 7TBM. Per-residue inclusion information can be found in section 3 on page 20.

9.1 Map-model overlays

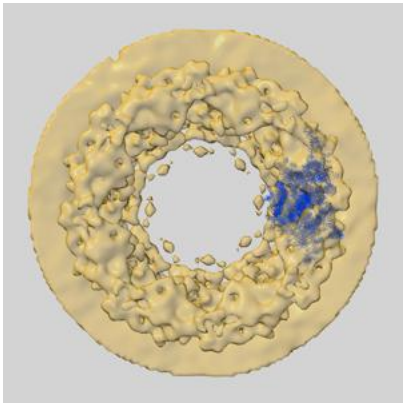
9.1.1 Map-model overlay



X

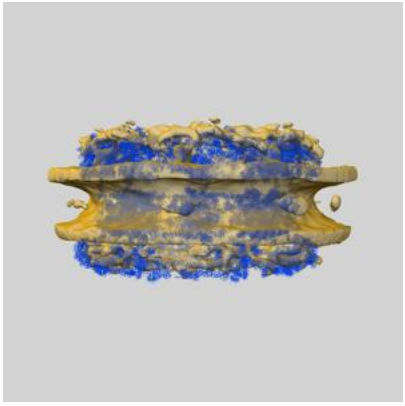


Y

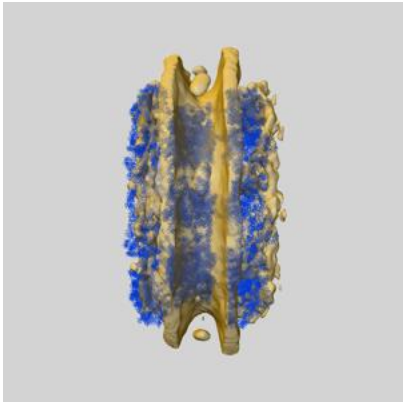


Z

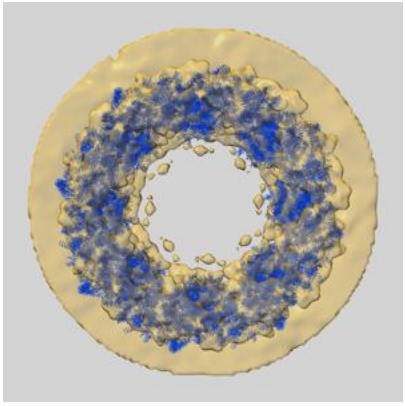
9.1.2 Map-model assembly overlay



X



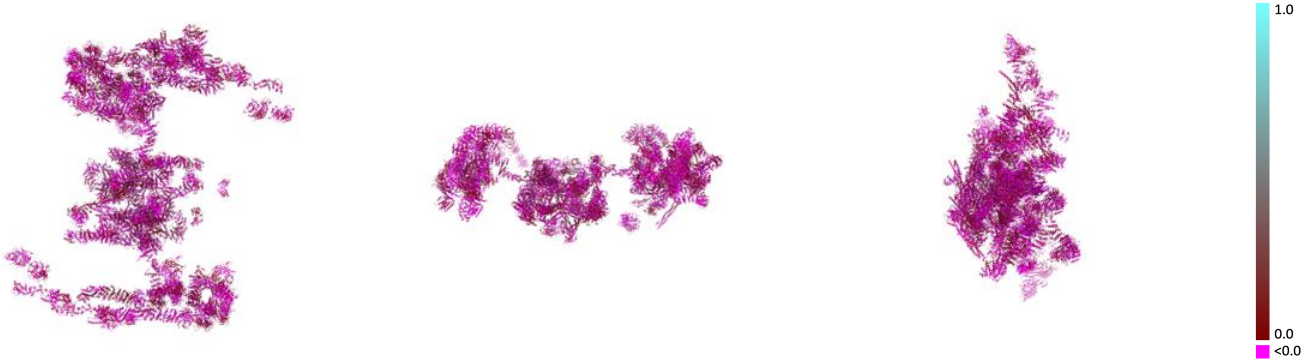
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.07 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.

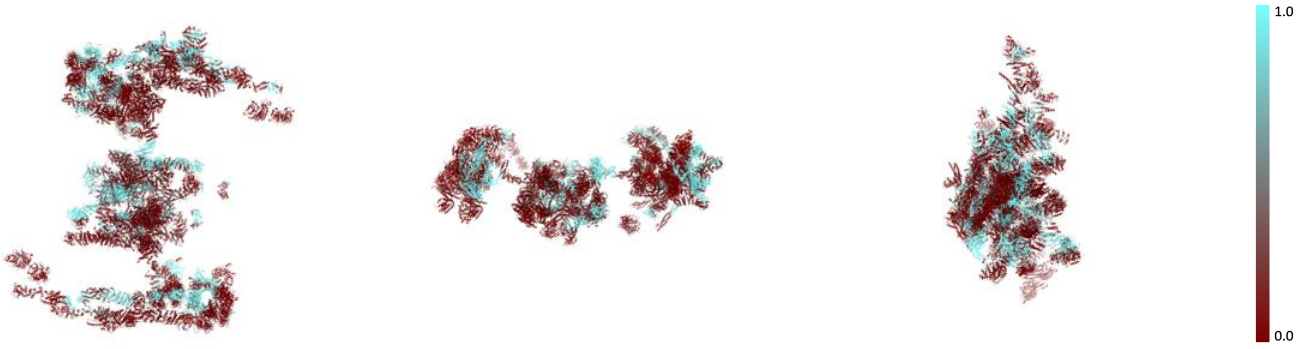
9.2 Q-score mapped to coordinate model



X Y Z

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.

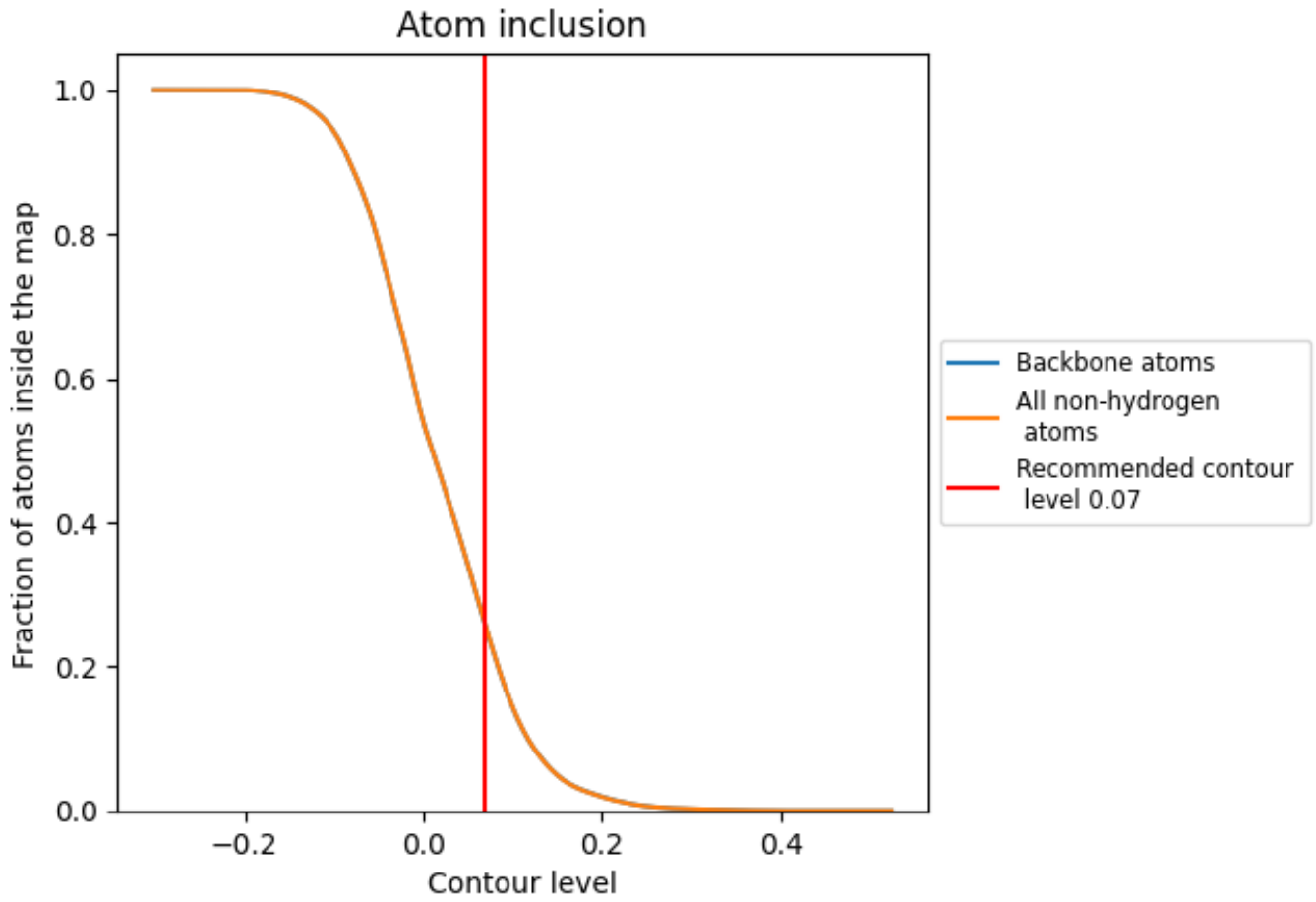
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.07).

9.4 Atom inclusion (i)



At the recommended contour level, 26% of all backbone atoms, 26% 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 (0.07) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.2561	-0.0040
A1	0.6042	0.0060
A2	0.4364	-0.0060
A3	0.1583	-0.0070
A4	0.0936	-0.0080
A5	0.4657	-0.0130
A6	0.1094	0.0020
B1	0.2110	-0.0340
B2	1.0000	0.0600
B3	0.0000	-0.0480
B4	0.0000	-0.0250
B5	0.9817	0.0030
B6	0.0000	0.0230
C1	1.0000	0.0130
C2	0.7226	-0.0560
C3	0.0000	0.0310
C4	0.8258	0.0830
C5	0.7353	0.0160
C6	0.0000	-0.0060
D1	0.3738	0.0130
D2	0.4242	0.0040
D3	0.2123	-0.0180
D4	0.0000	0.0010
D5	0.5656	0.0120
D6	0.1530	-0.0060
D7	0.0089	-0.0410
E1	0.7500	0.0310
E2	0.7000	0.0010
E3	0.0000	-0.0090
E4	0.0000	0.0130
E5	0.8167	0.0230
E6	0.0000	-0.0450
E7	0.0000	-0.0300
F1	0.2335	-0.0000
F2	0.0390	-0.0200

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Chain	Atom inclusion	Q-score
G1	0.1101	-0.0010
G2	0.0000	-0.0520
H1	0.0638	-0.0260
H2	0.0000	-0.0020
I1	0.4411	0.0030
I2	0.1600	0.0050
I3	0.2318	-0.0020
I4	0.6064	0.0080
I5	0.0000	-0.0090
J1	0.3225	-0.0120
J2	0.3205	-0.0080
J3	0.5030	0.0220
J4	0.2211	-0.0060
J5	0.0000	0.0420
K1	0.0000	-0.0460
K2	0.0000	-0.0150
K3	0.0417	-0.0040
K4	1.0000	0.0160
K5	0.0000	-0.0190
L1	1.0000	-0.0560
L2	0.0000	-0.0040
L3	0.0000	0.0010
L4	1.0000	0.0020
L5	0.0000	-0.0120
M1	0.5520	0.0270
M2	0.3886	0.0090
M3	0.1731	-0.0070
M4	0.0973	-0.0020
N1	0.5495	0.0300
N2	0.4513	-0.0000
N3	0.3235	-0.0000
N4	0.2383	0.0000
O1	0.4369	0.0200
O2	0.3108	-0.0040
O3	0.1661	-0.0060
O4	0.0171	-0.0250
P1	0.2002	-0.0060
P2	0.0034	-0.0140
P3	0.0000	-0.0070
P4	0.0000	-0.0010
Q1	0.0343	-0.0260
Q2	0.3239	-0.0100

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Chain	Atom inclusion	Q-score
Q3	0.4782	0.0110
Q4	0.7608	0.0450
R1	0.2409	-0.0060
R2	0.4422	-0.0130
R3	0.4125	0.0460
R4	0.3861	0.0190
S1	0.1021	-0.0130
S2	0.2025	-0.0010
S3	0.1140	-0.0060
S4	0.0029	-0.0200
T1	0.5173	0.0010
T2	0.2740	0.0140
T3	0.2010	-0.0070
T4	0.2240	-0.0020
U1	0.3662	0.0010
U2	0.0000	-0.0210
U3	0.0000	-0.0270
U4	0.3645	0.0110
V1	0.5805	0.0200
V2	0.0000	-0.0260
V3	0.0195	-0.0340
V4	0.6611	0.0360
W1	0.3294	-0.0120
W2	0.0000	-0.0310
W3	0.0895	-0.0130
W4	0.0650	-0.0150
X1	0.3162	-0.0060
X2	0.0034	-0.0210
X3	0.0188	-0.0090
X4	0.0069	-0.0370
Y1	0.9159	0.0300
Y2	0.1017	0.0060
Y3	0.0000	0.0010
Y4	0.0000	0.0210
Z1	0.5984	0.0080
Z2	0.0753	-0.0150
Z3	0.1361	-0.0090
Z4	0.4495	0.0080
a1	0.2026	-0.0150
a2	0.7299	0.0350
a3	0.0000	-0.0130
a4	0.0021	-0.0330

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Chain	Atom inclusion	Q-score
b1	0.3272	0.0130
b2	0.0481	-0.0230
b3	0.0000	-0.0360
b4	0.6493	0.0080
c1	0.5429	0.0160
c2	0.1446	-0.0160
c3	0.5336	-0.0050
c4	0.2998	0.0130
c5	0.4415	0.0000
g	0.0015	-0.0240
h	0.0000	-0.0410
i	0.4803	0.0200
j	0.0755	0.0010
k1	0.4189	-0.0100
k2	0.6337	-0.0110
l1	0.4261	-0.0100
l2	0.2308	-0.0210
m1	0.4932	0.0010
m2	0.0000	-0.0370