

FLP-1 peptide alignment



**Aligned peptide
region:**

1 2 3 4 5 6 7 8 9 10 11 12 13

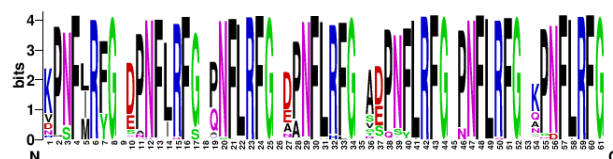
Occupancy
(cutoff = 50 %):

87 3 69 1 9 83 81 40 96 4 93 17 94

Conserved peptide regions:

1 2 3 4 5 6 7

SIGNATURE
WEBLOGO:



**MOTIF
WEBLOGO:**



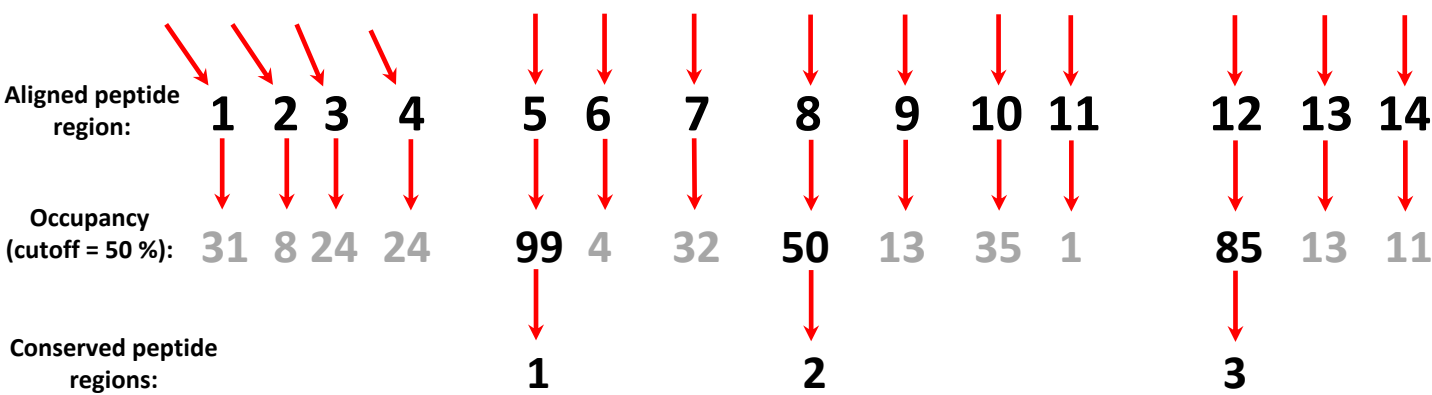
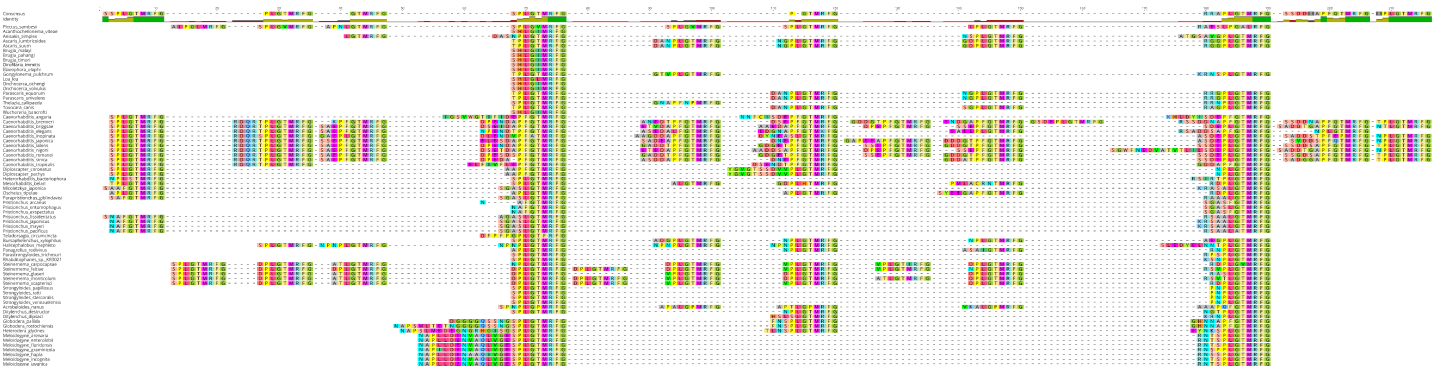
[illegible]

Diagram illustrating the initial state of the array `[1, 2, 3, 4]`. Arrows indicate the sequence of elements to be processed: 1 points to 2, 2 points to 3, 3 points to 4, and 4 points to the next element (implied to be 5).

1 2

Sequence logo for the 10bp motif. The y-axis is 'bits' (0 to 4) and the x-axis is 'Position' (1 to 10). The sequence is approximately N-UBR-GR-EP-K-RF-G. The 'K' at position 5 is highlighted with a downward arrow.

FLP-3 peptide alignment



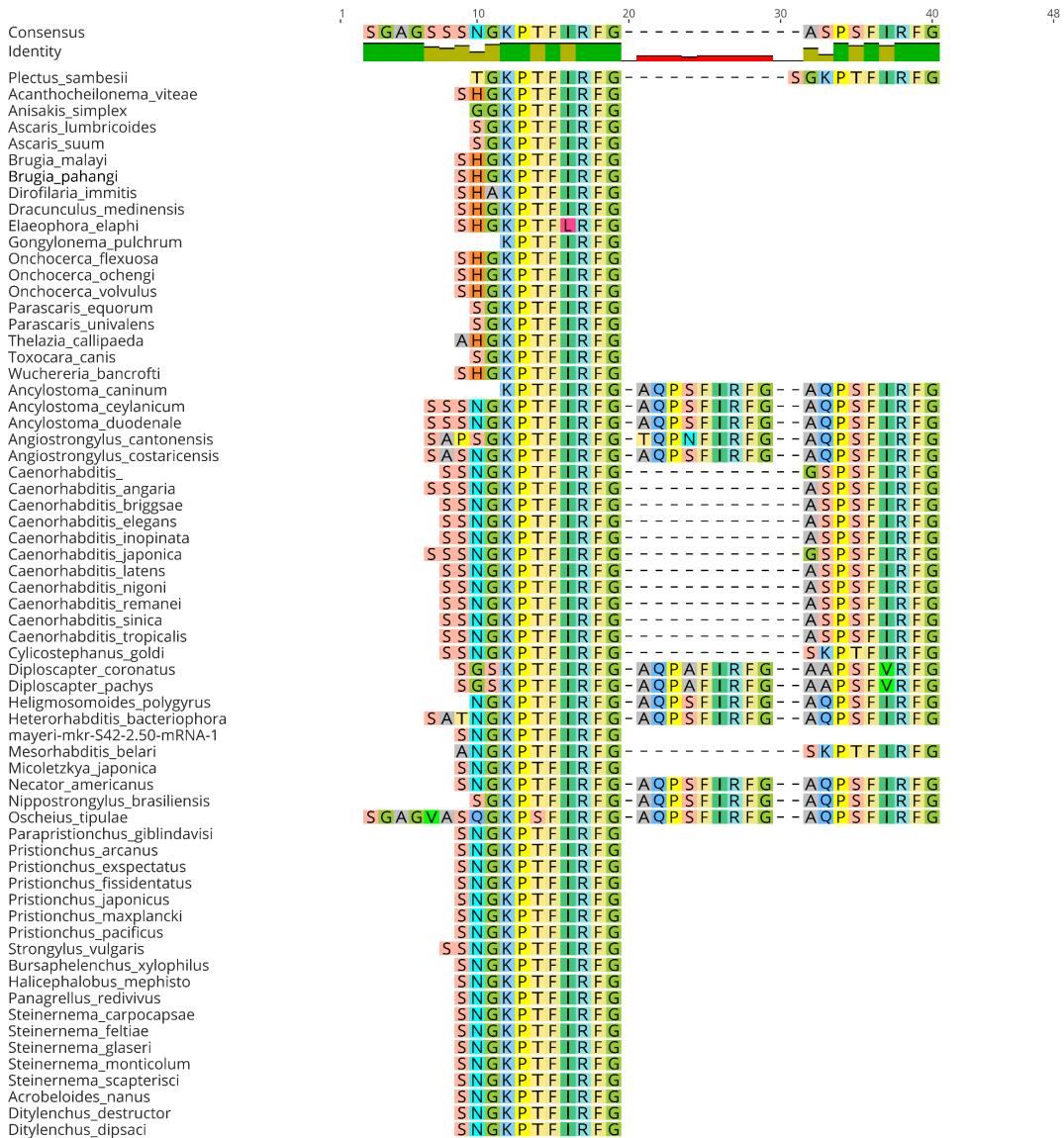
SIGNATURE
WEBLOGO:



MOTIF
WEBLOGO:



FLP-4 peptide alignment



**Aligned peptide
region:**

**Occupancy
(cutoff = 50 %):**

Conserved peptide regions:

SIGNATURE/MOTIF
WEBLOGO:



1 10 20 30 40 47

A Q K F I R F G - S A P K P K F I R F G - - X G A K F I R F G - - G Q K F I R F G

Anisakis simplex
Ascaris lumbricoides
Ascaris suum
Dracunculus medinensis
Gongylonema pulchrum.txt
Parascaris equorum
Parascaris univalens
Thelazia callipaeda
Toxocara canis
Ancylostoma caninum
Ancylostoma ceylanicum
Ancylostoma duodenale
Angiostrongylus costaricensis
Caenorhabditis
Caenorhabditis angaria
Caenorhabditis brenneri
Caenorhabditis briggsae
Caenorhabditis elegans
Caenorhabditis japonica
Caenorhabditis latens
Caenorhabditis nigoni
Caenorhabditis remanei
Caenorhabditis sinica
Caenorhabditis tropicalis
Dictyocaulus viviparus
Diploscaptor coronatus
Diploscaptor pachys
Haemonchus contortus
Haemonchus placei
Heligmosomoides polygyrus
Heterorhabditis bacteriophora
Mesorhabditis belari
Microletkyia japonica
Necator americanus
Nippostrongylus brasiliensis
Oesophagostomum dentatum
Oschiesia tipulae
Pristionchus arcuatus
Pristionchus entomophagus
Pristionchus expectatus
Pristionchus fissidentatus
Pristionchus japonicus
Pristionchus maxplancki
Pristionchus mayeri
Strongyloides vulgaris
Teladorsagia circumcincta
Bursaphelenchus xylophilus
Halicephalobus mephisto
Panagrellus redivivus
Parastrogioides trichosuri
Rhabditophanes_kr3021
Steinernema carpocapsae
Steinernema feltiae
Steinernema glaseri
Steinernema monticolum
Steinernema scaptesicri
Strongyloides papillous
Strongyloides ratti
Strongyloides stercoralis
Strongyloides venezuelensis
Acroboloides nanus
Ditylenchus destructor
Ditylenchus dipsaci
Globodera pallida
Globodera rostochiensis
Heterodera glycines
Meloiodiogyne arenaria
Meloiodiogyne enterolobii
Meloiodiogyne floridensis
Meloiodiogyne graminicola
Meloiodiogyne hapla
Meloiodiogyne incognita

1

1

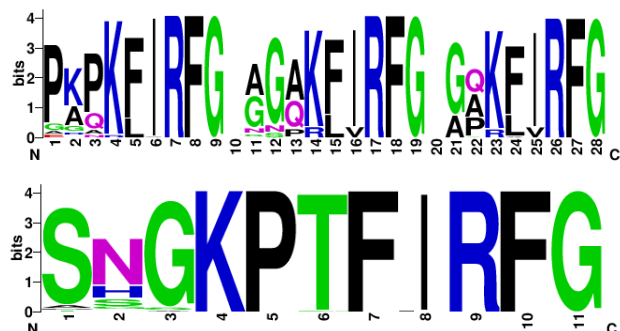
1

(3)

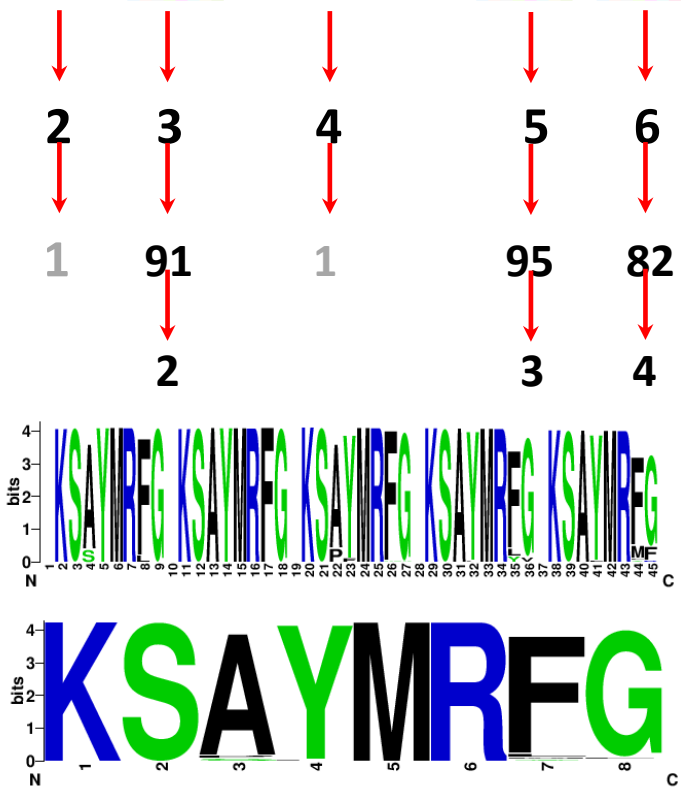
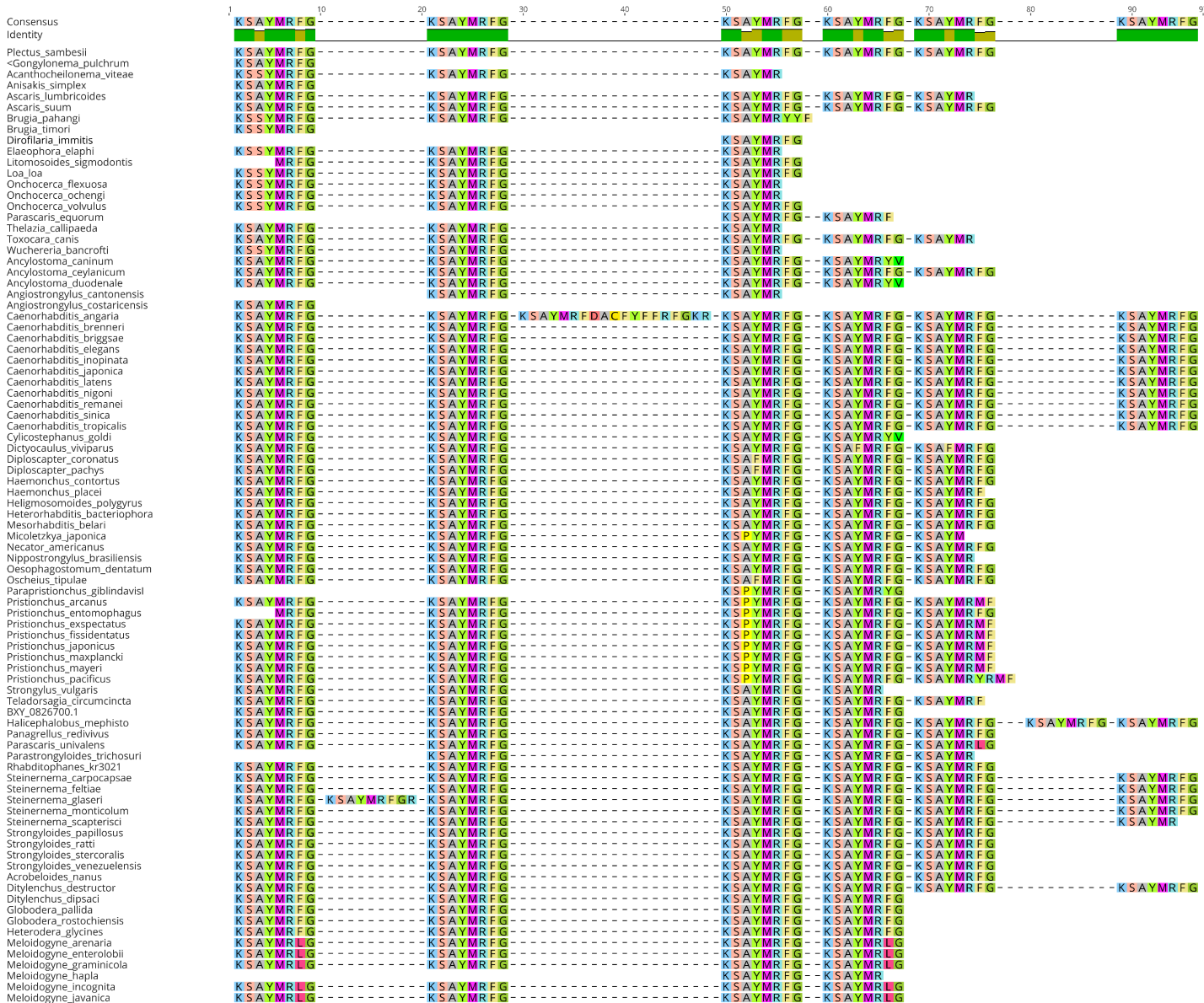
△

9:

65

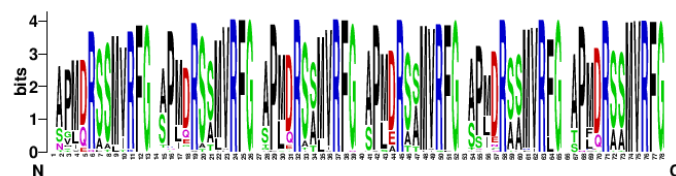
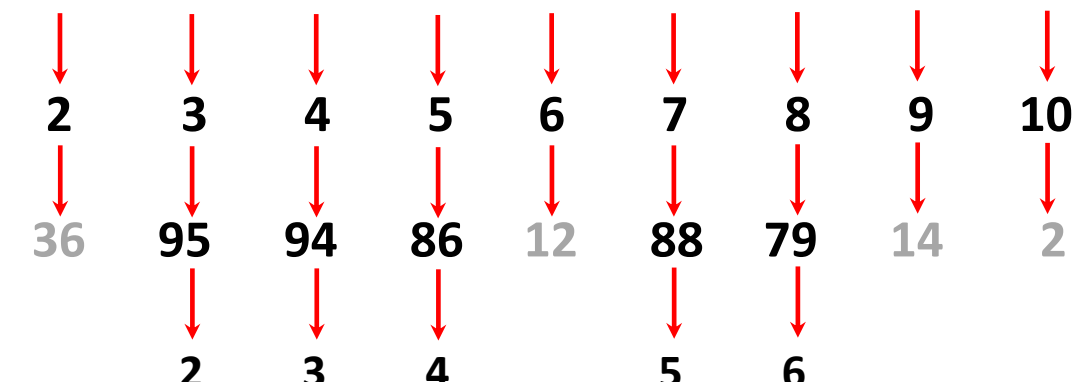


FLP-6 peptide alignment

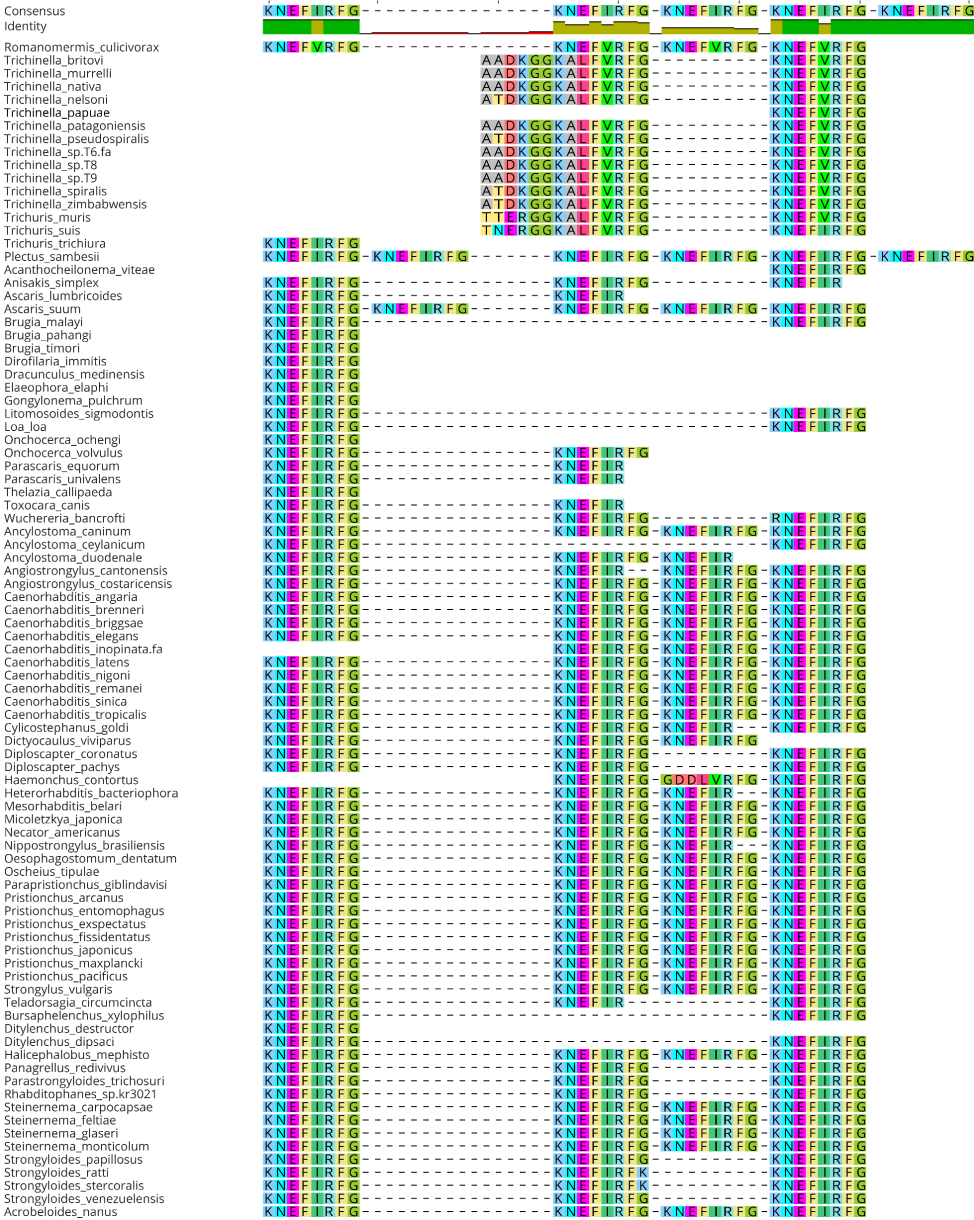


[illegible]

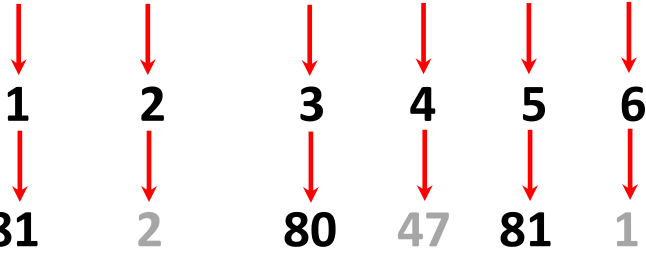
MOTIF
WEBLOGO:



FLP-8 peptide alignment



Aligned peptide
region:



Occupancy
(cutoff = 50 %):

Conserved peptide
regions:



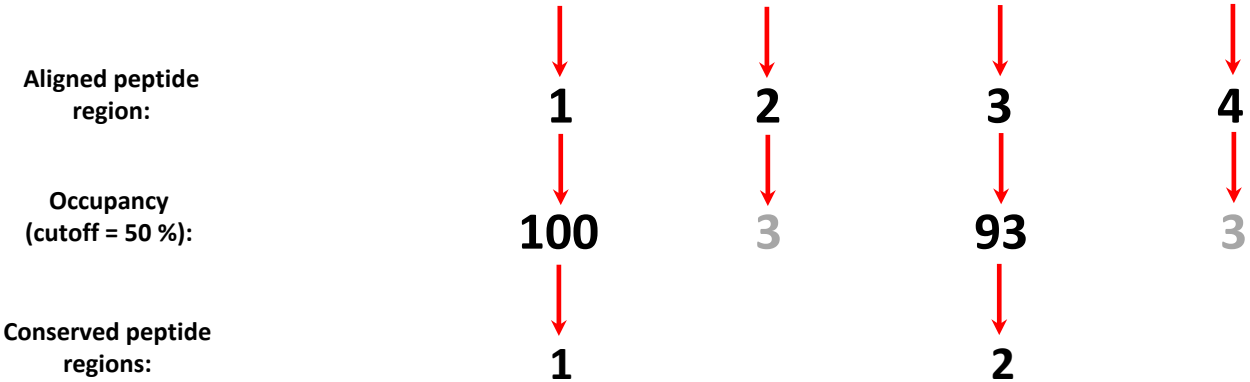
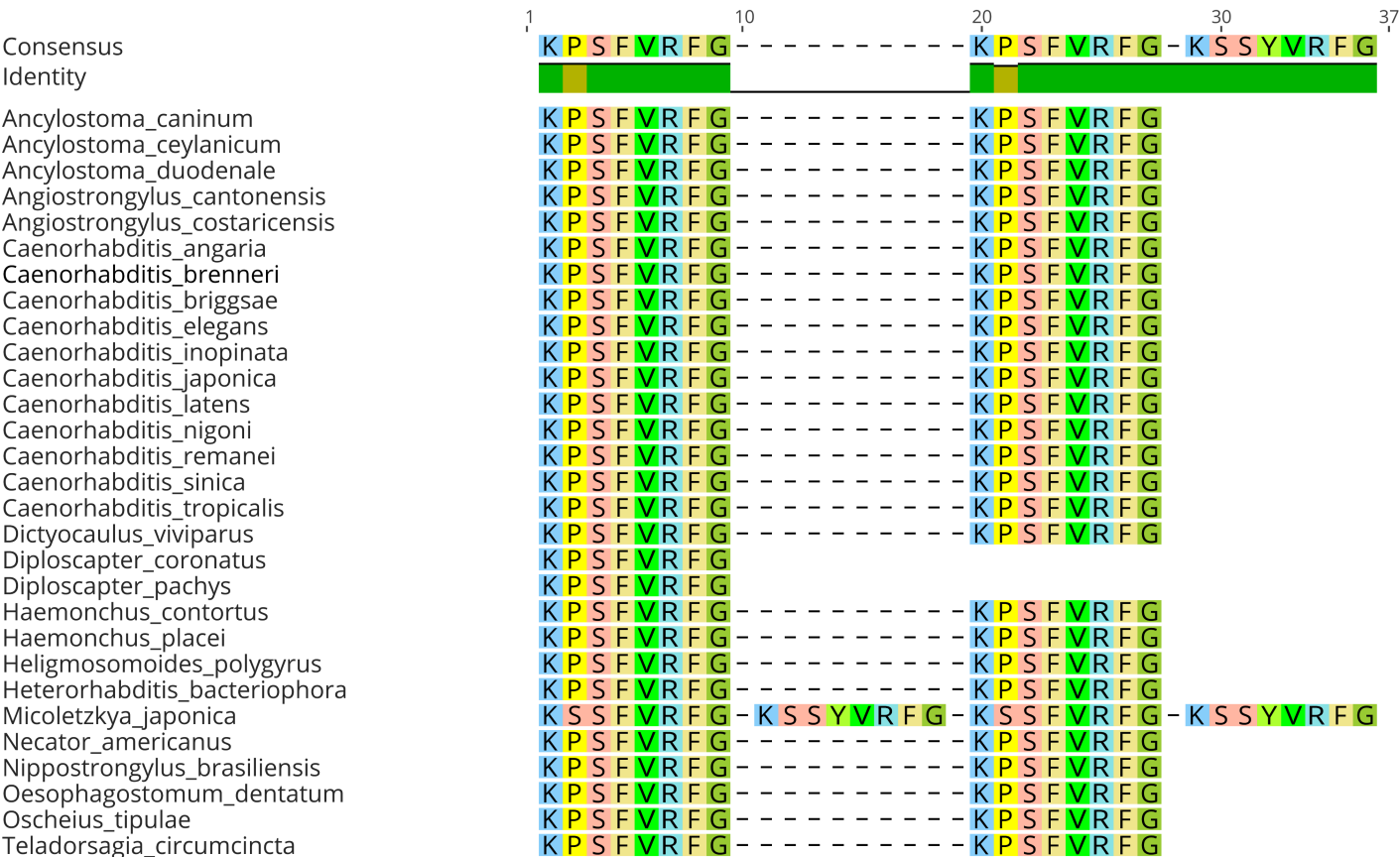
SIGNATURE
WEBLOGO:



MOTIF
WEBLOGO:



FLP-9 peptide alignment



SIGNATURE
WEBLOGO:

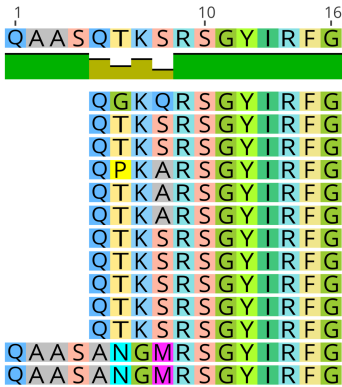


MOTIF
WEBLOGO:



FLP-10 peptide alignment

Consensus
Identity



Aligned peptide
region:

1

Occupancy
(cutoff = 50 %):

100

Conserved peptide
regions:

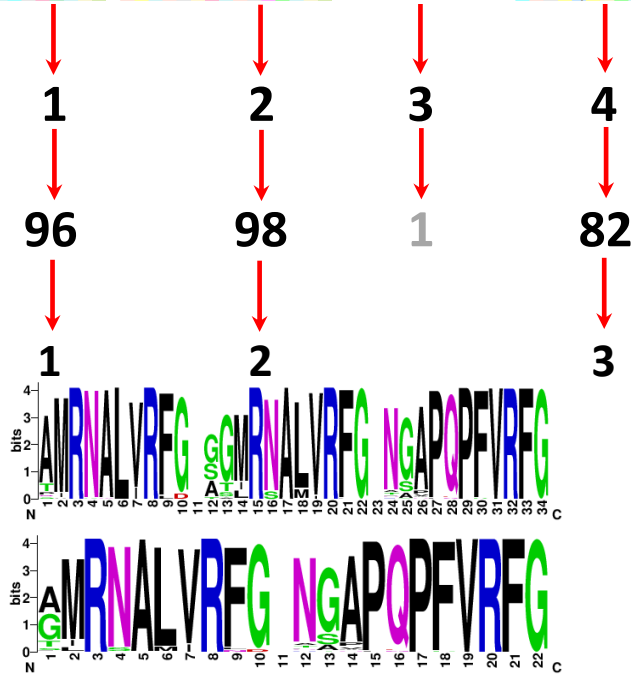
1

SIGNATURE/MOTIF
WEBLOGO:

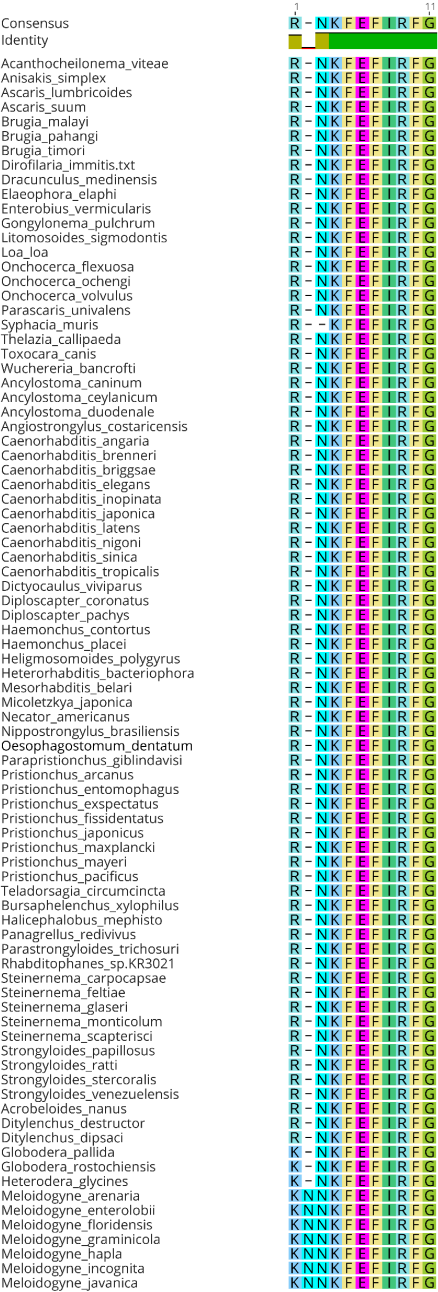


[illegible]

**MOTIF
WEBLOGO:**



FLP-12 peptide alignment



Aligned peptide
region:

1

Occupancy
(cutoff = 50 %):

100

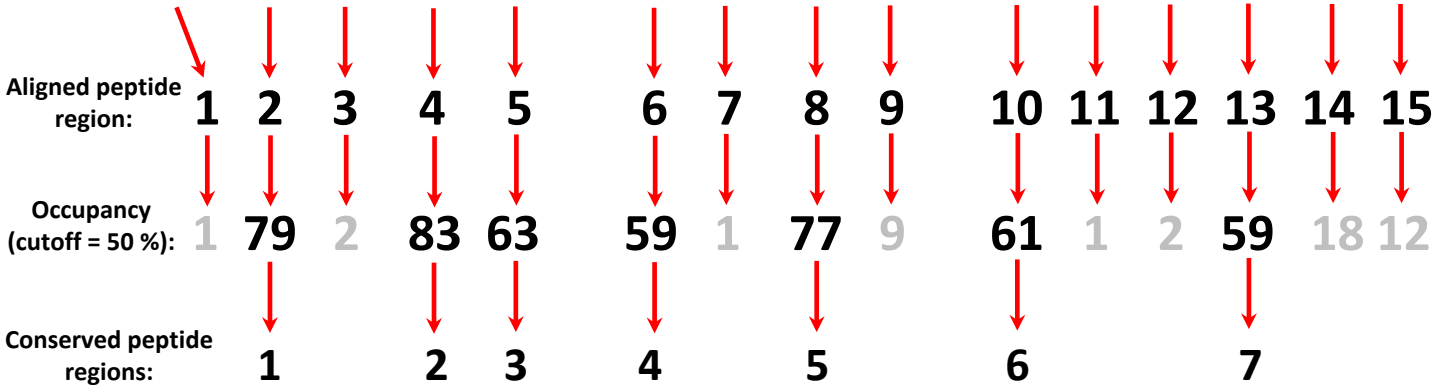
Conserved peptide
regions:

1

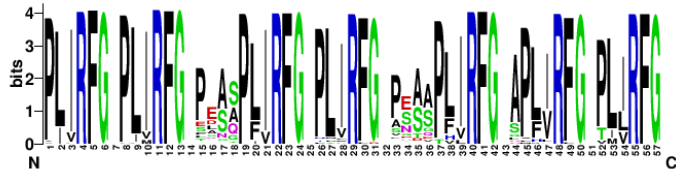
SIGNATURE/MOTIF
WEBLOGO:



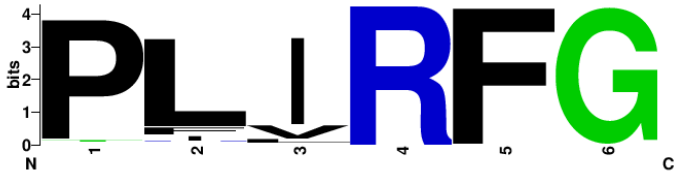
FLP-13 peptide alignment



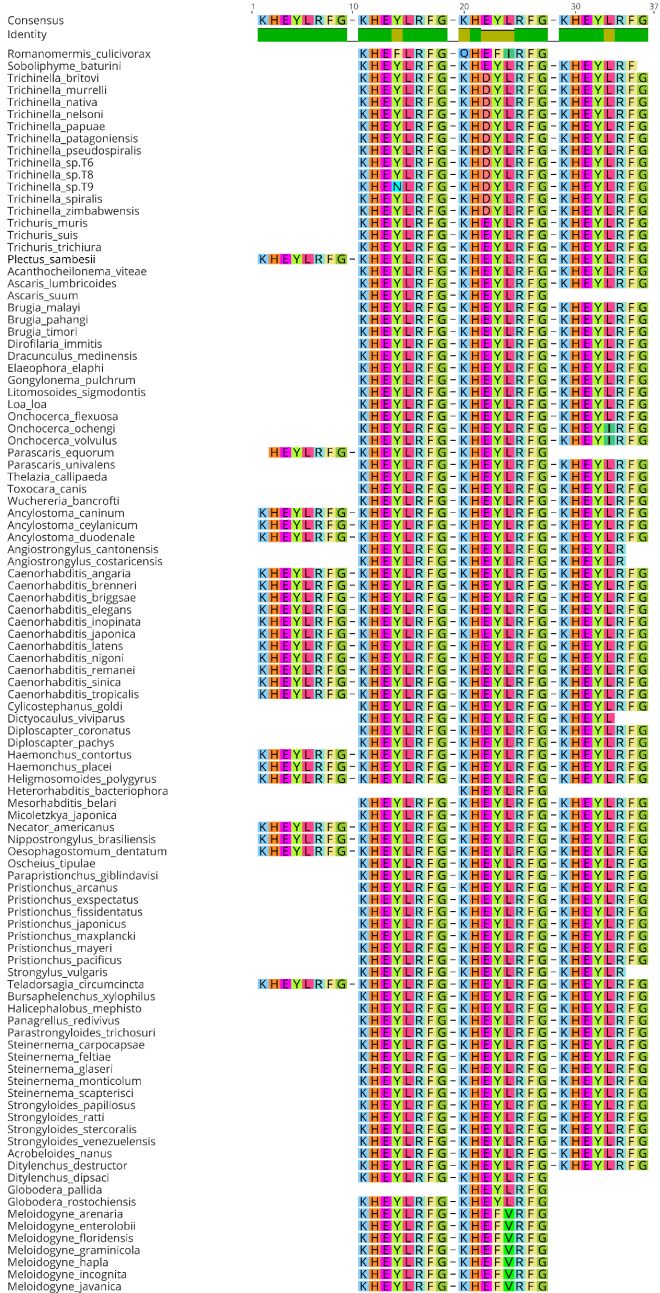
SIGNATURE
WEBLOGO:



MOTIF
WEBLOGO:



FLP-14 peptide alignment



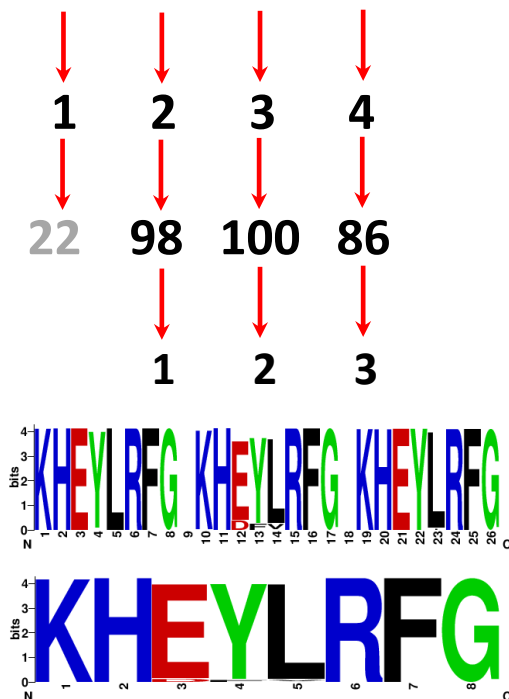
**Aligned peptide
region:**

**Occupancy
(cutoff = 50 %):**

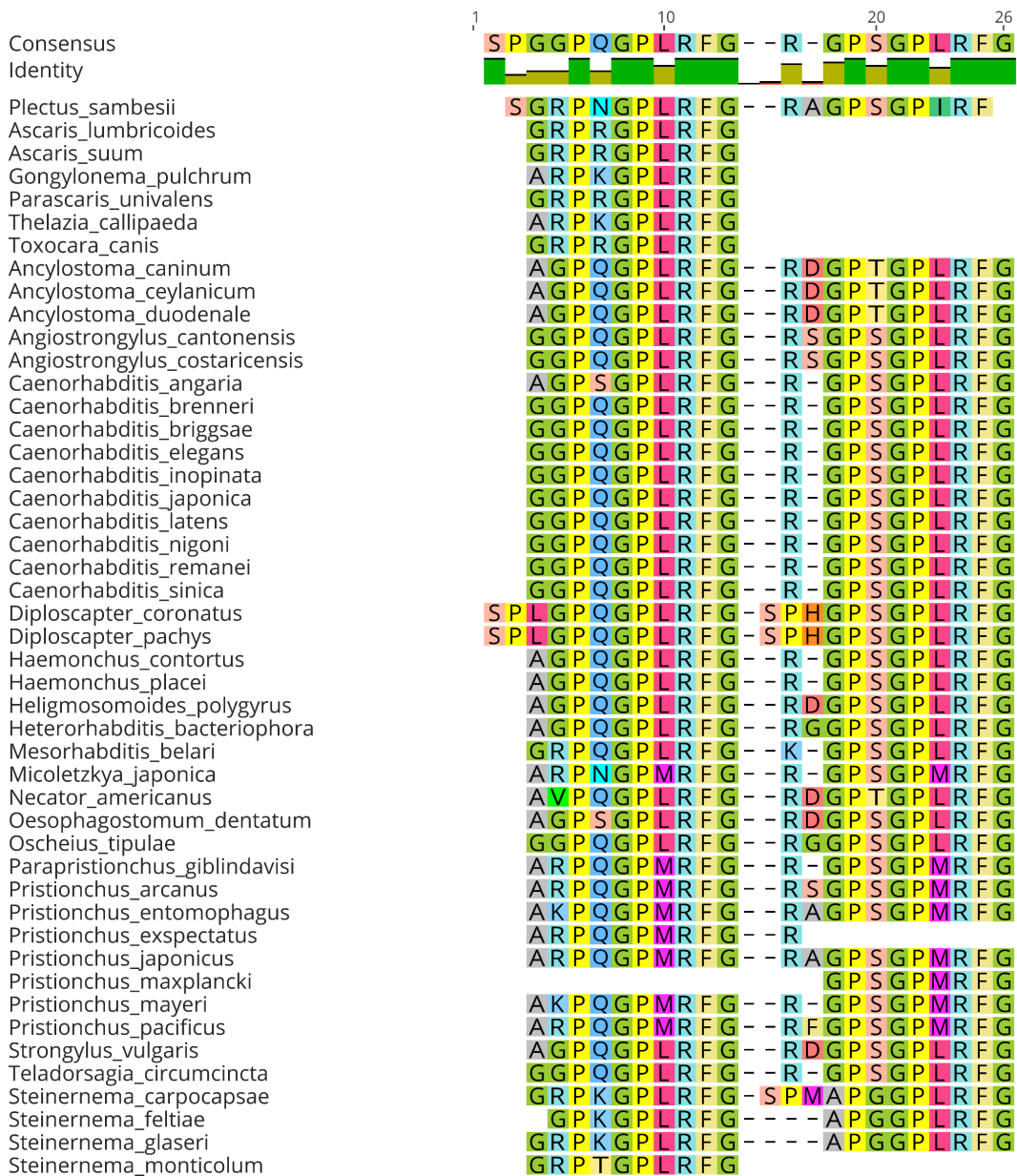
Conserved peptide regions:

SIGNATURE
WEBLOGO:

**MOTIF
WEBLOGO:**



FLP-15 peptide alignment



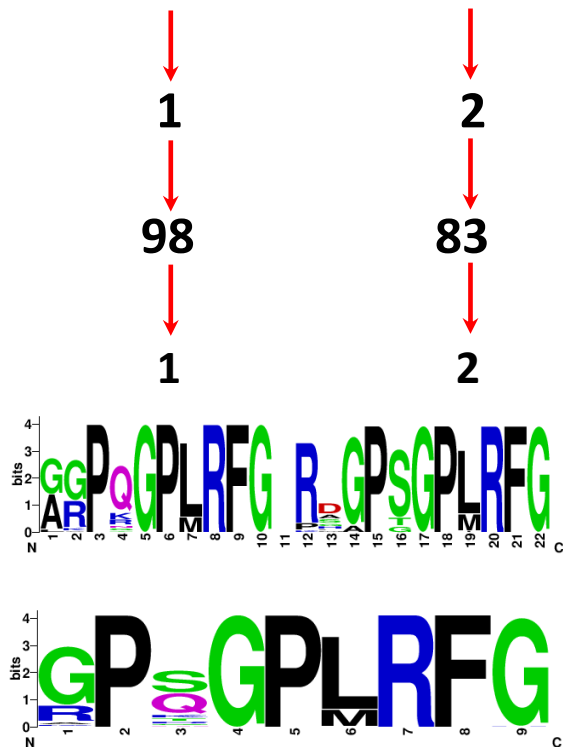
**Aligned peptide
region:**

**Occupancy
(cutoff = 50 %):**

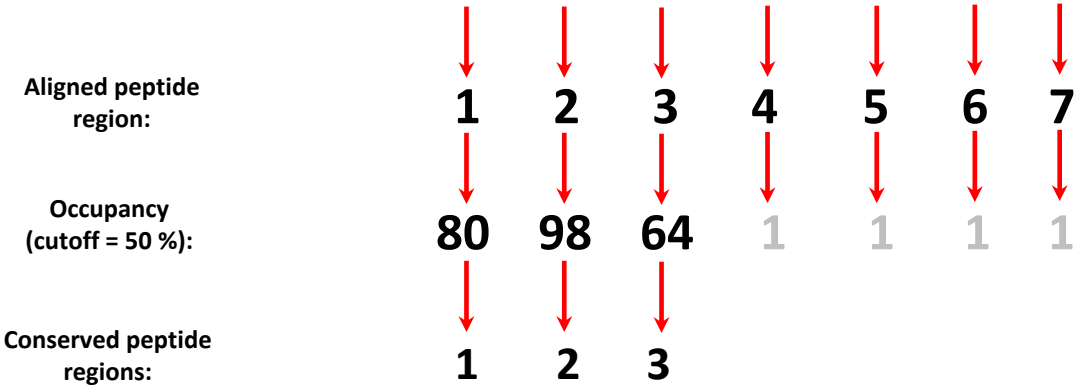
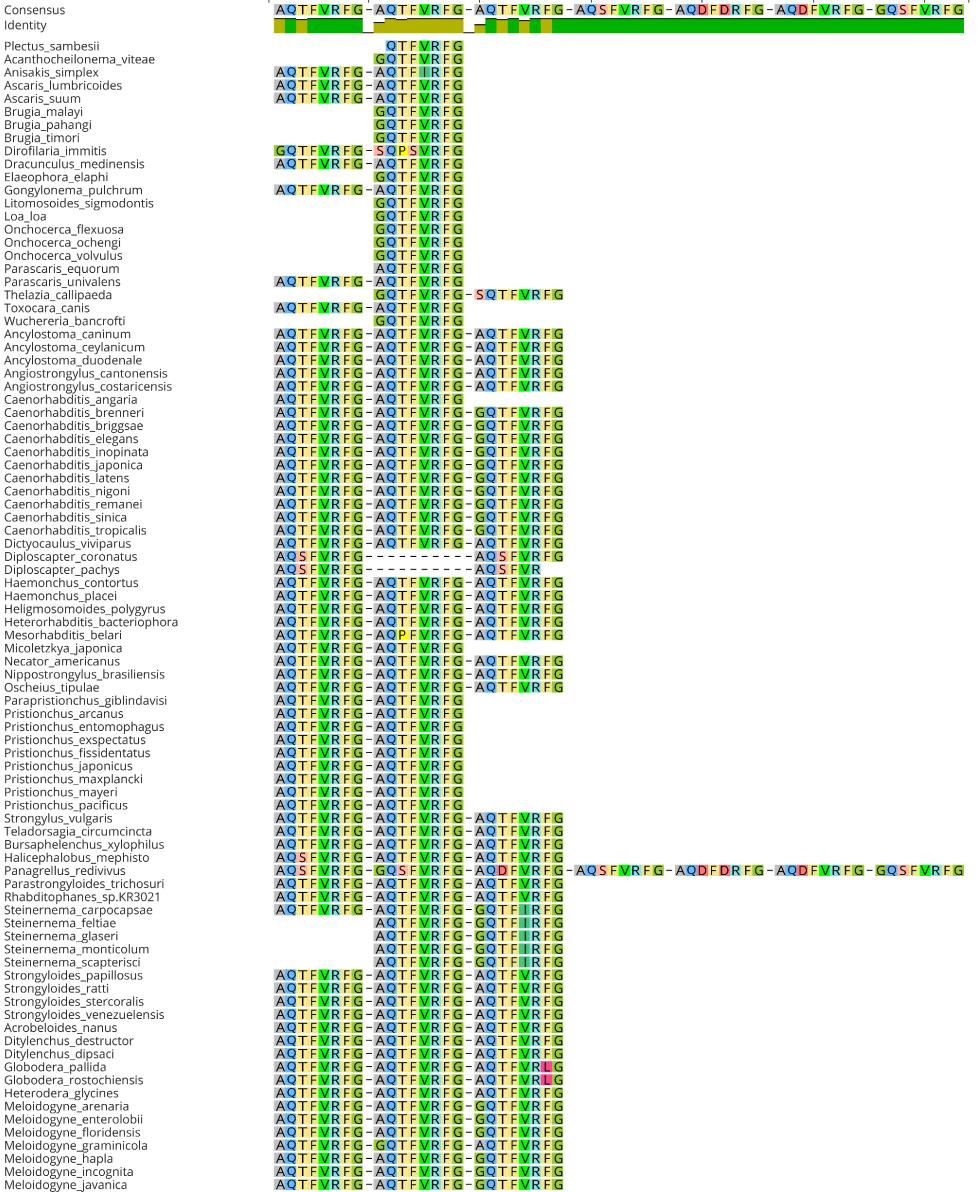
Conserved peptide regions:

SIGNATURE
WEBLOGO:

**MOTIF
WEBLOGO:**



FLP-16 peptide alignment



SIGNATURE
WEBLOGO:



MOTIF
WEBLOGO:



FLP-17 peptide alignment

Consensus	1	10	20	26
Identity	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Plectus_sambesii	K S A F V R F G	K S A F V R F G	K S S Y I R F G	
Ascaris_suum	K S A F V R F G	K S A F V R F G	K S S Y I R F G	
Ascaris_lumbricoides	K S A F V R F G			
Parascaris_univalens	K S A F V R F G			
Toxocara_canis	K S A F V R F G	K S A F V R F G	K S S Y I R F G	
Caenorhabditis_angaria	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Caenorhabditis_elegans	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Caenorhabditis_inopinata	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Caenorhabditis_briggsae	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Caenorhabditis_nigoni	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Caenorhabditis_tropicalis	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Caenorhabditis_brenneri	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Caenorhabditis_latens	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Caenorhabditis_remanei	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Caenorhabditis_sinica	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Angiostrongylus_cantonensis		K S A F V R F G		
Angiostrongylus_costaricensis		K S A F V R F G		
Pristionchus_entomophagus	K S N F V R F G	K S N F V R F G	K S N F V R F G	
Pristionchus_japonicus	K S N F V R F G	K S N F V R F G	K S N F V R F G	
Pristionchus_mayeri	K S N F V R F G	K S N F V R F G	K S N F V R F G	
Pristionchus_fissidentatus	K S N F V R F G	K S N F V R F G	K S N F V R F G	
Pristionchus_maxplancki	K S N F V R F G	K S N F V R F G	K S N F V R F G	
Pristionchus_arcanus	K S N F V R F G	K S N F V R F G	K S N F V R F G	
Pristionchus_expectatus	K S N F V R F G	K S N F V R F G	K S N F V R F G	
Pristionchus_pacificus	K S N F V R F G	K S N F V R F G	K S N F V R F G	
Teladorsagia_circumcincta	K S A F V R F G	K S A F V R F G	K	
Dictyocaulus_viviparus	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Oscheius_tipulae	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Oesophagostomum_dentatum	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Heterorhabditis_bacteriophora	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Nippostrongylus_brasiliensis	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Micoletzkyia_japonica	K S S F V R F G			
Haemonchus_contortus	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Haemonchus_placei	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Heligmosomoides_polygyrus	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Necator_americanus	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Ancylostoma_caninum	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Ancylostoma_duodenale	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Ancylostoma_ceylanicum	K S A F V R F G	K S A F V R F G	K S Q Y I R F G	
Bursaphelenchus_xylophilus	K S A F V R F G		K S S Y I R F G	
Halicephalobus_mephisto	K S A F V R F G		K S S Y V R F G	
Panagrellus_redivivus	K S A F V R F G		K S S Y V R F G	
Diploscapter_coronatus	K S T Y V R F G	K S T Y V R F G	K S A F V R F G	
Diploscapter_pachys	K S T Y V R F G	K S T Y V R F G	K S A F V R F G	
Mesorhabditis_belari	K S A F V R F G	K S A F V R F G	K S T Y V R F G	
Parapristionchus_giblandavisi	K S T F V R F G	K S T F V R F G	K S S Y V R F G	
Strongyloides_ratti	K S A F V R F G	K S A F V R F G	K S S Y V R F G	
Strongyloides_stercoralis	K S A F V R F G	K S A F V R F G	K S S Y V R F G	
Parastrongyloides_trichosuri	K S A F V R F G	K S A F V R F G	K S S Y V R F G	
Strongyloides_papillosus	K S A F V R F G	K S A F V R F G	K S S Y V R F G	
Strongyloides_venezuelensis	K S A F V R F G	K S A F V R F G	K S S Y V R F G	
Rhabditophanes_kr3021	K S A F V R F G	K S A F V R F G	K S S Y V R F G	
Steinernema_glaseri	K S A F V R F G	K S A F V R F G	K S S Y V R F D	
Steinernema_carpcapsae	K S A F V R F G	K S A F V R F G	K S S Y V R F G	
Steinernema_scapterisci	K S A F V R F G	K S A F V R F G	K S S Y V R F G	
Steinernema_feltiae	K S A F V R F G	K S A F V R F G	K S S Y V R F G	
Steinernema_monticolum	K S A F V R F G	K S A F V R F G	K S S Y V R F G	
Acroboloides_nanus	K S A F V R F G			

Aligned peptide
region:

1

2

3

Occupancy
(cutoff = 50 %):

97

88

90

Conserved peptide
regions:

1

2

3

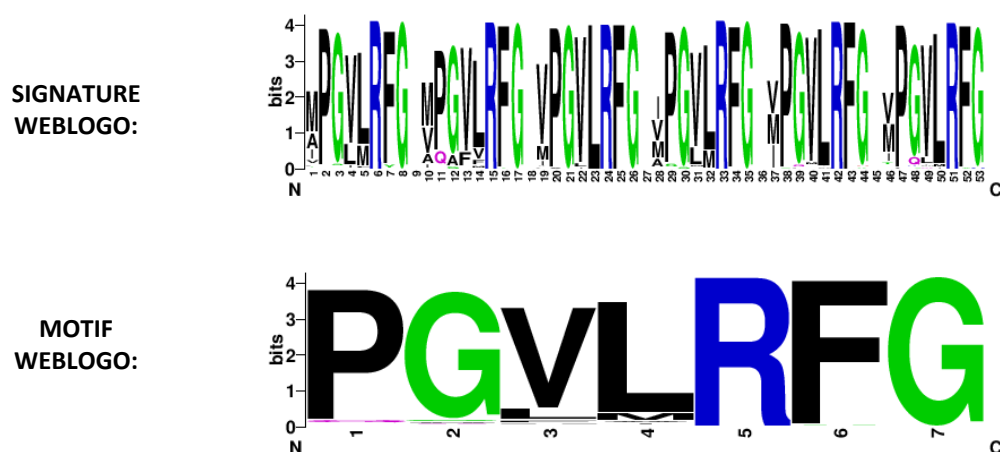
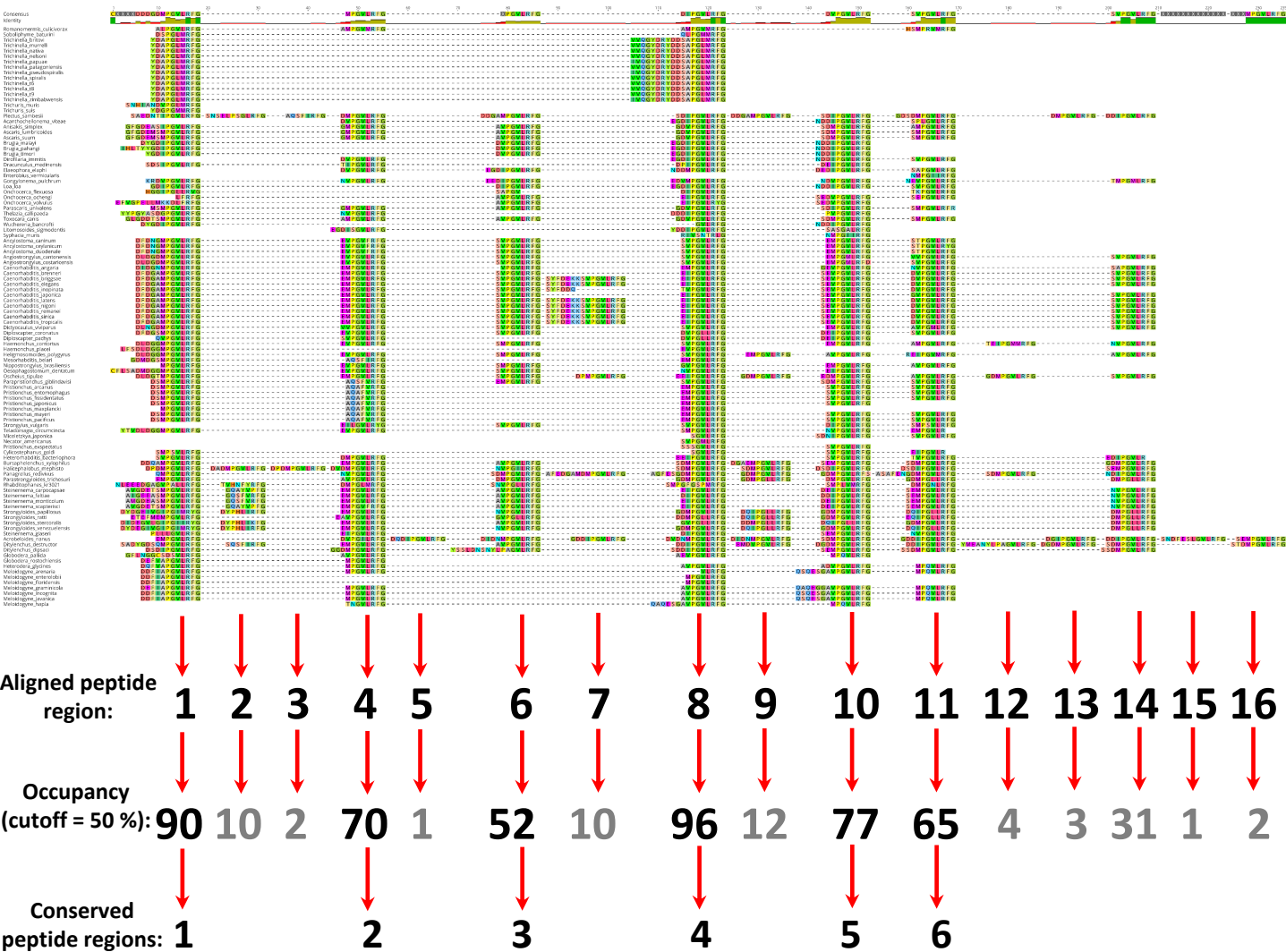
SIGNATURE
WEBLOGO:



MOTIF
WEBLOGO:



FLP-18 peptide alignment

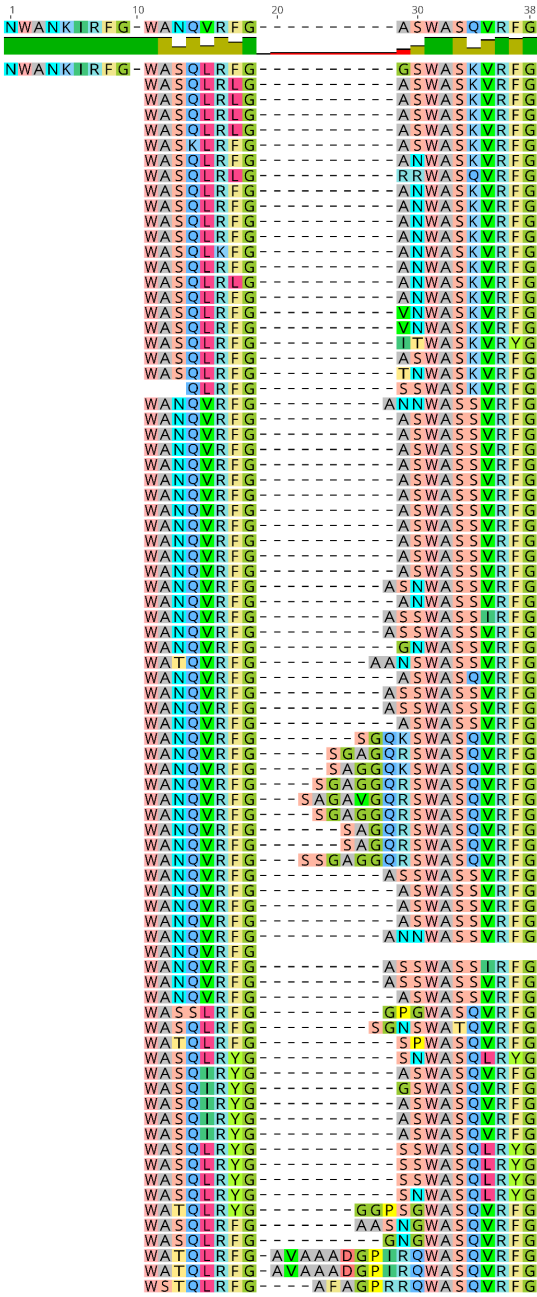


FLP-19 peptide alignment

Consensus

Identity

Plectus_sambesii
Ascaris_suum
Ascaris_lumbricoides
Parascaris_eqorum
Parascaris_univalens
Anisakis_simplex
Acanthocheilonema_viteae
Dracunculus_medinenensis
Brugia_malayi
Brugia_pahangi
Brugia_timori
Dirofilaria_immitis
Elaeophora_elaphi
Litomosoides_sigmodontis
Loa_loa
Onchocerca_flexuosa
Onchocerca_ochengi
Onchocerca_volvulus
Thelazia_callipaeda
Toxocara_canis
Wuchereria_bancrofti
Gongylonema_pulchrum
Angiostrongylus_costaricensis
Caenorhabditis_angaria
Caenorhabditis_brenneri
Caenorhabditis_briggsae
Caenorhabditis_elegans
Caenorhabditis_inopinata
Caenorhabditis_japonica
Caenorhabditis_latens
Caenorhabditis_nigoni
Caenorhabditis_remanei
Caenorhabditis_sinica
Caenorhabditis_tropicalis
Dictyocaulus_viviparus
Diploscapter_coronatus
Haemonchus_contortus
Heligmosomoides_polygyrus
Heterorhabditis_bacteriophora
Mesorhabditis_belari
Micoletzky_japonica
Necator_americanus
Nippostrongylus_brasiliensis
Oesophagostomum_dentatum
Parapristionchus_gibblidavisi
Pristionchus_arcatus
Pristionchus_entomophagus
Pristionchus_exspectatus
Pristionchus_fissidentatus
Pristionchus_japonicus
Pristionchus_maxplancki
Pristionchus_mayeri
Pristionchus_pacificus
Teladorsagia_circumcincta
Ancylostoma_caninum
Ancylostoma_ceilanicum
Ancylostoma_duodenale
Angiostrongylus_cantonensis
Diploscapter_pachys
Haemonchus_placeii
Oscheluis_tipulae
Strongylus_vulgaris
Bursaphelenchus_xylophilus
Halicephalobus_mephisto
Panagrellus_redivivus
Parastrongyloides_trichosuri
Steinernema_carpocapsae
Steinernema_feltiae
Steinernema_glasieri
Steinernema_monticolum
Steinernema_scapterisci
Strongyloides_papillosus
Strongyloides_ratti
Strongyloides_stercoralis
Strongyloides_venezuelensis
Acroboloides_nanus
Ditylenchus_destructor
Ditylenchus_dipsaci
Globodera_pallida
Globodera_rostochiensis
Heterodera_glycines



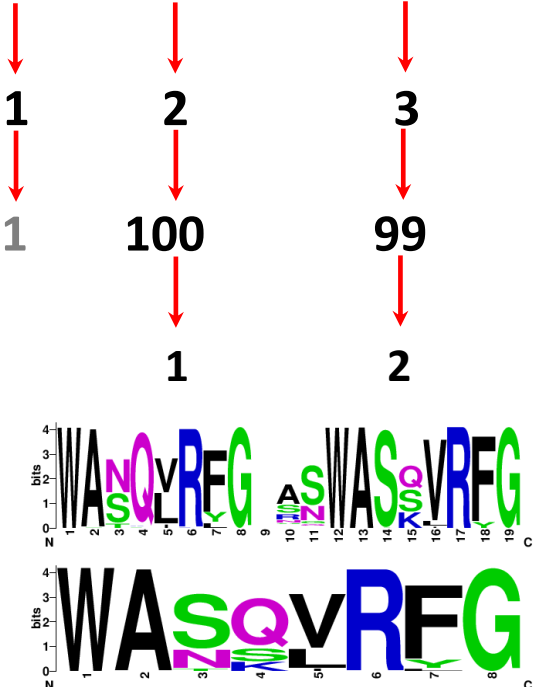
Aligned peptide
region:

Occupancy
(cutoff = 50 %):

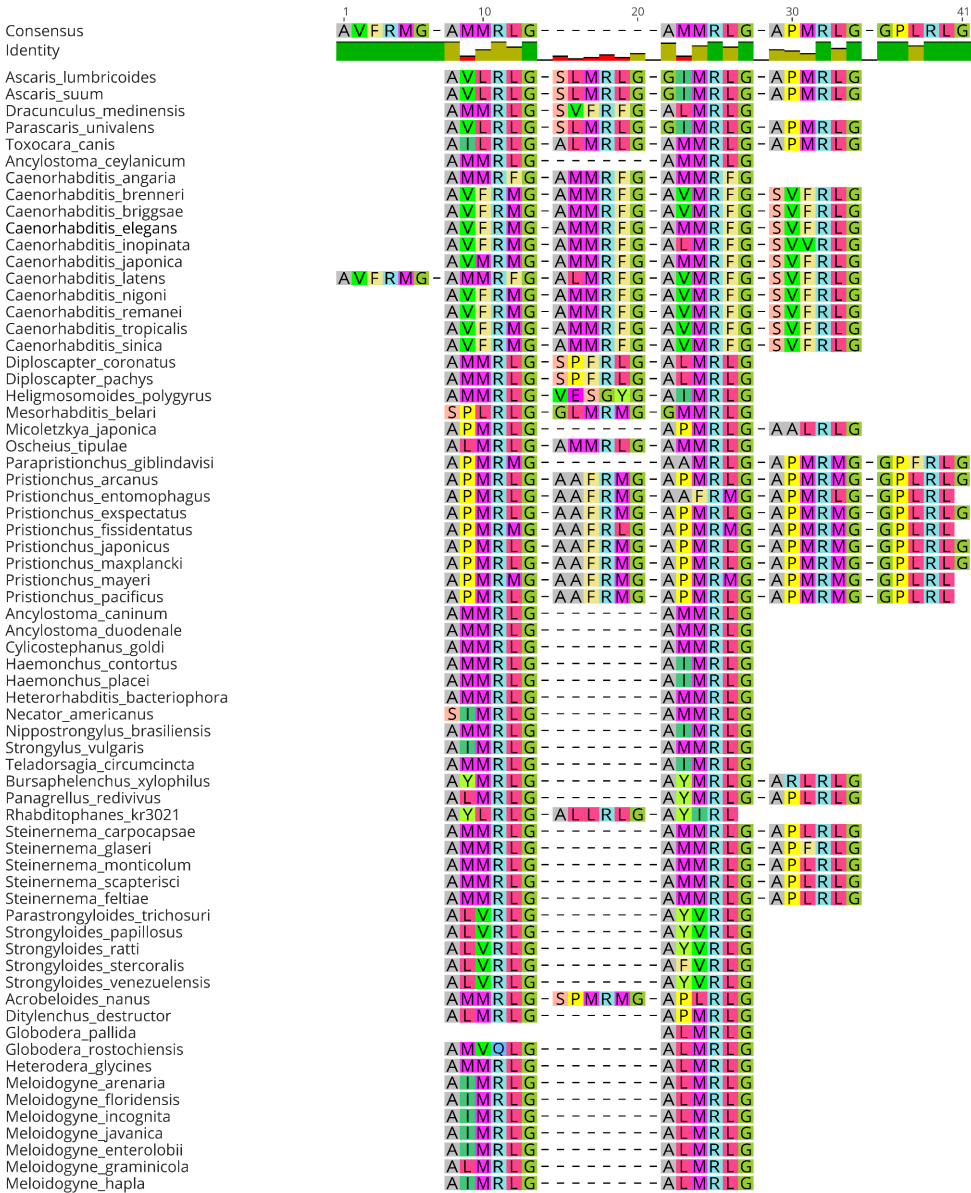
Conserved
peptide regions:

SIGNATURE
WEBLOGO:

MOTIF
WEBLOGO:



FLP-20 peptide alignment



Aligned peptide
region:

1 2 3 4 5 6

Occupancy
(cutoff = 50 %):

1 99 46 100 46 13

Conserved
peptide regions:

1 2

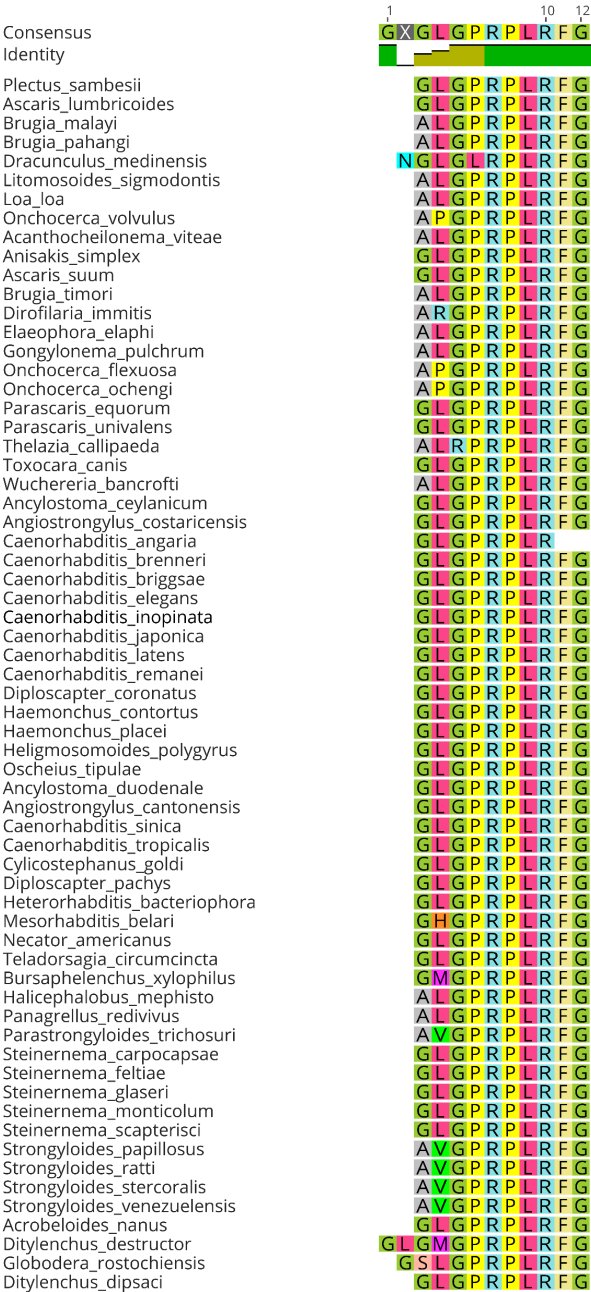
SIGNATURE
WEBLOGO:



MOTIF
WEBLOGO:



FLP-21 peptide alignment



Aligned peptide
region:

1

Occupancy
(cutoff = 50 %):

100

Conserved
peptide regions:

1

SIGNATURE/MOTIF
WEBLOGO:



	10	20	30	40	48
	XL SP	SAKWMRF FG	SPNA	KWMRF FG	APSA KWMRF FG
	AA S	GMKWMRF FG	AQQV	KWMRF FG	AQNV KWMRF FG
	AS	NMKWMRF FG	SPSV	KWMRF FG	APNV KWMRF FG
	AS	NMKWMRF FG	SPNV	KWMRF FG	APNM KWMRF FG
	AS	NMKWMRF FG	SPNV	KWMRF FG	AQTA KWMRF FG
	AP	NAKWMRF FG	LPNA	KWMRF FG	AQTA KWMRF FG
	VP	NAKWMRF FG	LPNA	KWMRF FG	AQTA KWMRF FG
	TP	NTKWMRF FG	LPNT	KWMRF FG	APTA KWMRF FG
	TS	GVKWMRF FG	SPSV	KWMRF FG	APNV KWMRF FG
	AP	NTKWMRF FG	LPNA	KWMRF FG	APTA KWMRF FG
	TP	NTKWMRF FG	LPNA	KWMRF FG	APNA KWMRF FG
	TG	NVKWMRF LG	LPDH	KWMHSG	AQNV KWMK FG
	TV	NTKWMRF FG	LPNT	KWMRF FG	AQTT KWMRF FG
	TV	NTKWMRF FG	LPNT	KWMRF FG	AQTT KWMRF FG
	AS	NVKWMRF FG	SPNV	KWMRF FG	ASNV KWMRF FG
	AS	NVKWMRF FG	SPNV	KWMRF FG	ASNV KWMRF FG
	AP	NAKWMRF FG	TPNA	KWMRF FG	APNA KWMRF FG
	GS	NMKWMRF FG	SPNV	KWMRF FG	APNV KWMRF FG
	T LN H	NAKWMRF FG	LPNA	KWMRF FG	AQTA KWMRF FG
	N L H T	NTKWMRF FG	LPNA	KWMRF FG	APTA KWMRF FG
	AP	NAKWMRF FG	APNA	KWMRF FG	APNA KWMRF FG
	AV	GTKWMRF FG	LPNT	KWMRF FG	AQTT KWMRF FG
	TP	SAKWMRF FG	SPNA	KWMRF FG	SPNA KWMRF FG
	TP	SAKWMRF FG	SPNA	KWMRF FG	SPNA KWMRF FG
	TP	SAKWMRF FG	SPNA	KWMRF FG	SPNA KWMRF FG
	TP	SAKWMRF FG	SPNT	KWMRF FG	SPNA KWMRF FG
		MR FG	SPDA	KWMRF FG	SPNA KWMRF FG
	SP	SAKWMRF FG	SPSA	KWMRF FG	SPSA KWMRF FG
	SP	SAKWMRF FG	SPSA	KWMRF FG	SPSA KWMRF FG
	SP	SAKWMRF FG	SPSA	KWMRF FG	SPSA KWMRF FG
	SP	SAKWMRF FG	SPSA	KWMRF FG	SPSA KWMRF FG
	SP	SAKWMRF FG	SPSA	KWMRF FG	SPSA KWMRF FG
	SP	SAKWMRF FG	SPSA	KWMRF FG	SPSA KWMRF FG
	SP	SAKWMRF FG	SPSA	KWMRF FG	SPSA KWMRF FG
	SP	SAKWMRF FG	SPSA	KWMRF FG	SPSA KWMRF FG
	SP	SAKWMRF FG	SPSA	KWMRF FG	SPSA KWMRF FG
	SP	SAKWMRF FG	TPNA	KWMRF FG	TPDA KWMRF FG
	SP	SAKWMRF FG	SPSA	KWMRF FG	SPSA KWMRF FG
	SP	SAKWMRF FG	SPSA	KWMRF FG	SPSA KWMRF FG
	TP	SAKWMRF FG	SPNA	KWMRF FG	TPDA KWMRF FG
	TP	SAKWMRF FG	SPNA	KWMRF FG	TPDA KWMRF FG
	TP	SAKWMRF FG	SPNA	KWMRF FG	TPDA KWMRF FG
	SP	SAKWMRF FG	SPNA	KWMRF FG	TPDA KWMRF FG
	SP	SAKWMRF FG	SPNA	KWMRF FG	TPDA KWMRF FG
	TP </				

1

2

3

99

99

99

1

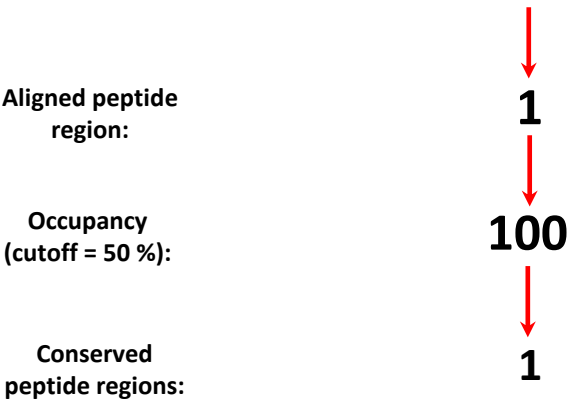
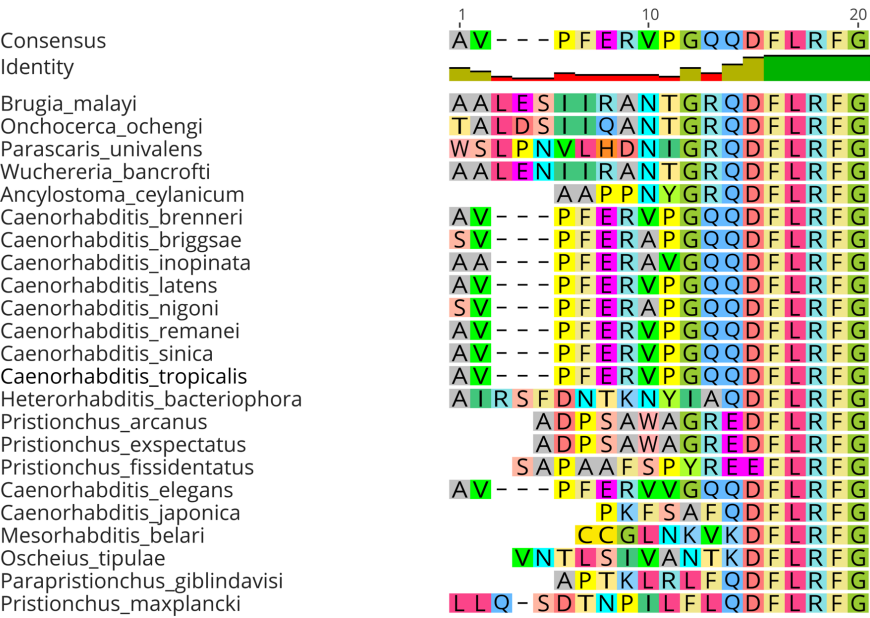
2

3

Detailed description of Figure 6: This bar chart displays the information content (in bits) for each of the 34 positions in the DNA sequence. The vertical axis (y-axis) is labeled 'bits' and ranges from 0 to 4. The horizontal axis (x-axis) lists positions from 1 to 34. Each position is represented by a colored bar. The colors correspond to the four nucleotides: Adenine (A), Guanine (G), Cytosine (C), and Thymine (T). The height of the bar indicates how many bits are needed to specify which nucleotide is present at that position. For example, position 1 requires approximately 3.8 bits, while position 27 requires about 1.5 bits.

Position	Nucleotide(s)	Approximate Bits
1	A, G, C, T	3.8
2	A, G, C, T	3.8
3	A, G, C, T	3.8
4	A, G, C, T	3.8
5	A, G, C, T	3.8
6	A, G, C, T	3.8
7	A, G, C, T	3.8
8	A, G, C, T	3.8
9	A, G, C, T	3.8
10	A, G, C, T	3.8
11	A, G, C, T	3.8
12	A, G, C, T	3.8
13	A, G, C, T	3.8
14	A, G, C, T	3.8
15	A, G, C, T	3.8
16	A, G, C, T	3.8
17	A, G, C, T	3.8
18	A, G, C, T	3.8
19	A, G, C, T	3.8
20	A, G, C, T	3.8
21	A, G, C, T	3.8
22	A, G, C, T	3.8
23	A, G, C, T	3.8
24	A, G, C, T	3.8
25	A, G, C, T	3.8
26	A, G, C, T	3.8
27	A, G, C, T	1.5
28	A, G, C, T	1.5
29	A, G, C, T	1.5
30	A, G, C, T	1.5
31	A, G, C, T	1.5
32	A, G, C, T	1.5
33	A, G, C, T	1.5
34	A, G, C, T	1.5

FLP-23 peptide alignment



SIGNATURE/MOTIF
WEBLOGO:



FLP-24 peptide alignment

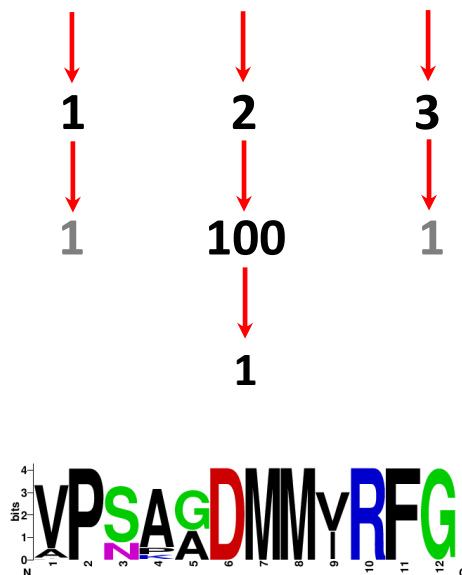
	1	10	20	30	40																															
Consensus	A	G	M	N	A	D	A	L	I	R	F	G	-	V	P	S	A	G	D	M	M	R	F	G	-	S	N	A	D	K	M	L	R	F	G	
Identity	A	G	M	N	A	D	A	L	I	R	F	G	-	V	P	S	A	G	D	M	M	R	F	G	-	S	N	A	D	K	M	L	R	F	G	
Plectus_sambesii	A	G	M	N	A	D	A	L	I	R	F	G	-	A	P	N	R	A	D	M	M	R	F	G	-	S	N	A	D	K	M	L	R	F	G	
Acanthocheilonema_viteae																																				
Ascaris_lumbricoides																																				
Ascaris_suum																																				
Brugia_malayi																																				
Brugia_timori																																				
Diriofilaria_immitis																																				
Elaeophora_elaphi																																				
Enterobius_vermicularis																																				
Litomosoides_sigmodontis																																				
Loa_loa																																				
Onchocerca_ochengi																																				
Onchocerca_volvulus																																				
Toxocara_canis																																				
Wuchereria_bancrofti																																				
Brugia_pahangi																																				
Dracunculus_medinesis																																				
Gongylonema_pulchrum																																				
Onchocerca_flexuosa																																				
Parascaris_univalens																																				
Syphacia_muris																																				
Teladorsia_callipaeda																																				
Ancylostoma_ceylanicum																																				
Angiostrongylus_cantonensis																																				
Angiostrongylus_costaricensis																																				
Caenorhabditis_brenneri																																				
Caenorhabditis_briggsae																																				
Caenorhabditis_elegans																																				
Caenorhabditis_inopinata																																				
Caenorhabditis_japonica																																				
Caenorhabditis_latens																																				
Caenorhabditis_nigoni																																				
Caenorhabditis_remanei																																				
Caenorhabditis_tropicalis																																				
Diploscapter_coronatus																																				
Diploscapter_pachys																																				
Haemonchus_contortus																																				
Haemonchus_placei																																				
Heligmosomoides_polygyrus																																				
Heterorhabditis_bacteriophora																																				
Micoletzky_japonica																																				
Necator_americanus																																				
Nippostrongylus_brasiliensis																																				
Parapristionchus_giblini																																				
Pristionchus_arcanus																																				
Pristionchus_entomophagus																																				
Pristionchus_exspectatus																																				
Pristionchus_fissidentatus																																				
Pristionchus_japonicus																																				
Pristionchus_mayeri																																				
Pristionchus_pacificus																																				
Teladorsagia_circumcincta																																				
Ancylostoma_caninum																																				
Ancylostomaoduodenale																																				
Caenorhabditis_angaria																																				
Caenorhabditis_sinica																																				
Cylicostephanus_goldi																																				
Dictyocaulus_viviparus																																				
Mesorhabditis_belari																																				
Oesophagostomum_dentatum																																				
Oscheius_tipulae																																				
Strongylus_vulgaris																																				
Rhabditophanes_kr3021																																				
Steinernema_carpocapsae																																				
Steinernema_feltiae																																				
Steinernema_glaseri																																				
Steinernema_monticolum																																				
Steinernema_scapterisci																																				
Strongyloides_papillosus																																				
Strongyloides_ratti																																				
Strongyloides_stercoralis																																				
Strongyloides_venezuelensis																																				
Parastrongyloides_trichosuri																																				

**Aligned peptide
region:**

**Occupancy
(cutoff = 50 %):**

**Conserved
peptide regions:**

SIGNATURE/MOTIF
WEBLOGO:



FLP-25 peptide alignment



Aligned peptide
region:

1

2

Occupancy
(cutoff = 50 %):

99

100

Conserved
peptide regions:

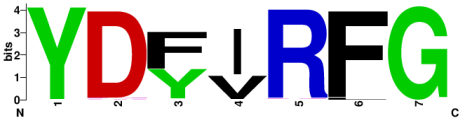
1

2

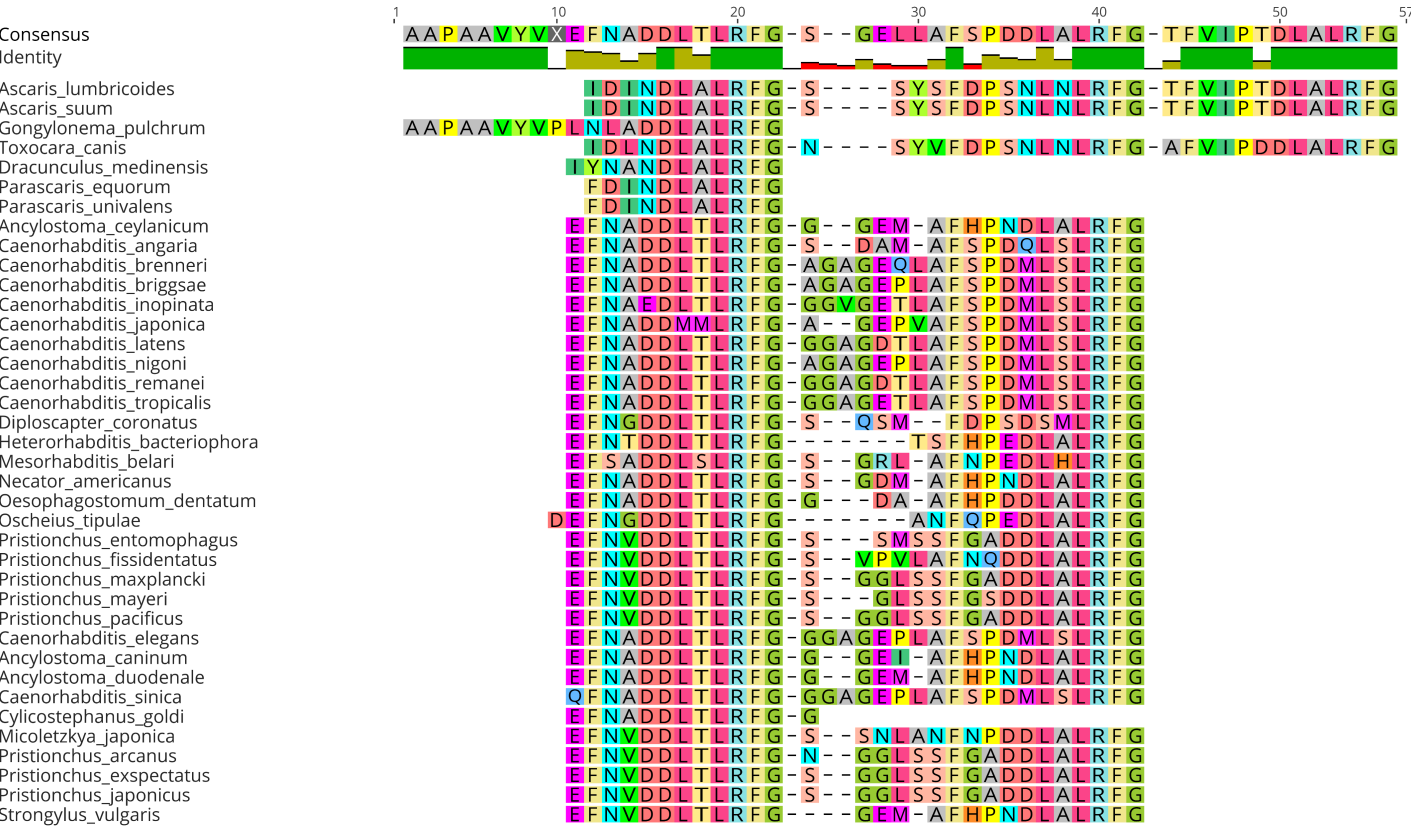
SIGNATURE
WEBLOGO:



MOTIF
WEBLOGO:



FLP-26 peptide alignment



Aligned peptide
region:

1

2

3

Occupancy
(cutoff = 50 %):

100

87

8

Conserved
peptide regions:

1

2

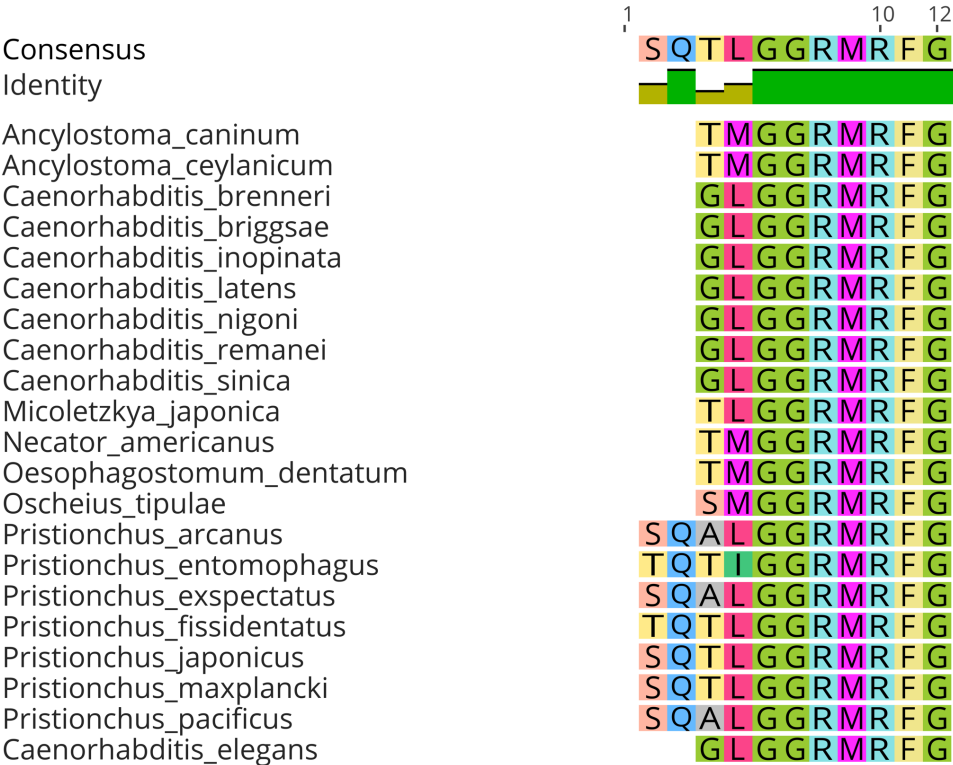
SIGNATURE
WEBLOGO:



MOTIF
WEBLOGO:



FLP-27 peptide alignment



Aligned peptide
region:

1

Occupancy
(cutoff = 50 %):

100

Conserved
peptide regions:

1

SIGNATURE/MOTIF
WEBLOGO:



FLP-28 peptide alignment

Consensus	1	2	3	4	5	6	7	8	9	10
Identity	A	P	N	R	L	M	R	F	G	
Ascaris_lumbricoides	A	P	N	K	L	M	R	F	G	
Ascaris_suum	A	P	N	K	L	M	R	F	G	
Parascaris_equorum	A	P	N	K	L	M	R	F	G	
Toxocara_canis	A	P	N	K	L	M	R	F	G	
Anisakis_simplex	A	P	N	K	L	M	R	F	G	
Dracunculus_medinensis	A	P	N	K	L	M	R	F	G	
Parascaris_univalens	A	P	N	K	L	M	R	F	G	
Ancylostoma_caninum	A	P	N	R	L	M	R	F	G	
Ancylostoma_ceyLANicum	A	P	N	R	L	M	R	F	G	
Ancylostoma_duodenale	A	P	N	R	L	M	R	F	G	
Angiostrongylus_costaricensis	A	P	N	R	L	M	R	F	G	
Caenorhabditis_brenneri	A	P	N	R	V	L	M	R	F	G
Caenorhabditis_elegans	A	P	N	R	V	L	M	R	F	G
Caenorhabditis_briggsae	A	P	N	R	V	L	M	R	F	G
Caenorhabditis_inopinata	A	P	N	R	V	L	M	R	F	G
Caenorhabditis_japonica	A	P	N	R	V	L	M	R	F	G
Caenorhabditis_latens	A	P	N	R	V	L	M	R	F	G
Caenorhabditis_nigoni	A	P	N	R	V	L	M	R	F	G
Caenorhabditis_remanei	A	P	N	R	V	L	M	R	F	G
Caenorhabditis_tropicalis	A	P	N	R	V	L	M	R	F	G
Cylicostephanus_goldi	A	P	N	R	L	M	R	F	G	
Haemonchus_contortus	V	P	N	R	L	M	R	F	G	
Haemonchus_placei	V	P	N	R	L	M	R	F	G	
Heligmosomoides_polygyrus	A	P	N	R	L	M	R	F	G	
Micoletzkyia_japonica	A	P	N	R	V	L	M	R	F	G
Oesophagostomum_dentatum	A	P	N	R	L	M	R	F	G	
Parapristionchus_giblinidavisi	A	P	N	R	V	L	M	R	F	G
Pristionchus_arcanus	A	P	S	R	V	L	M	R	F	G
Pristionchus_entomophagus	A	P	S	R	V	L	M	R	F	G
Pristionchus_expectatus	A	P	S	R	V	L	M	R	F	G
Pristionchus_fissidentatus	A	P	S	R	V	M	M	R	F	G
Pristionchus_japonicus	A	P	S	R	V	L	M	R	F	G
Pristionchus_maxplancki	A	P	S	R	V	L	M	R	F	G
Pristionchus_mayeri	A	P	S	R	V	L	M	R	F	G
Pristionchus_pacificus	A	P	S	R	V	L	M	R	F	G
Strongylus_vulgaris	A	P	N	R	L	M	R	F	G	
Angiostrongylus_cantonensis	A	P	N	R	L	M	R	F	G	
Caenorhabditis_angaria	A	P	N	R	V	L	M	R	F	G
Dictyocaulus_viviparus	A	P	H	R	L	M	R	F	G	
Diploscapter_coronatus	A	S	N	R	V	L	M	R	F	G
Diploscapter_pachys	A	S	N	R	V	L	M	R	F	G
Heterorhabditis_bacteriophora	A	P	N	R	L	M	R	F	G	
Mesorhabditis_belari	A	P	N	R	L	M	R	F	G	
Necator_americanus	A	P	N	R	L	M	R	F	G	
Nippostrongylus_brasiliensis	V	P	N	R	L	M	R	F	G	
Oscheius_tipulae	A	P	N	R	L	M	R	F	G	
Teladorsagia_circumcincta	A	P	N	R	L	M	R	F	G	
Parastrongyloides_trichosuri	A	P	N	R	V	M	M	R	F	G
Rhabditophanes_kr3021	A	P	S	R	V	M	M	R	F	G
Steinernema_carpocapsae	A	P	N	R	L	M	R	F	G	
Steinernema_feltiae	A	P	N	R	L	M	R	F	G	
Steinernema_monticolum	A	P	N	R	L	M	R	F	G	
Steinernema_scapterisci	A	P	N	R	L	M	R	F	G	
Strongyloides_ratti	A	P	N	R	V	M	M	R	F	G
Strongyloides_venezuelensis	A	P	N	R	V	M	M	R	F	G
Steinernema_glaseri	A	P	N	R	L	M	R	F	G	
Strongyloides_papillosus	A	P	N	R	V	M	M	R	F	G
Strongyloides_stercoralis	A	P	N	R	V	M	M	R	F	G

Aligned peptide
region:

1

Occupancy
(cutoff = 50 %):

100

Conserved
peptide regions:

1

SIGNATURE/MOTIF
WEBLOGO:



FLP-31 peptide alignment

Consensus
Identity



Meloidogyne_arenaria
Meloidogyne_javanica
Meloidogyne_enterolobii
Meloidogyne_floridensis
Meloidogyne_graminicola
Meloidogyne_hapla
Meloidogyne_incognita



Aligned peptide
region:

1

Occupancy
(cutoff = 50 %):

100

Conserved
peptide regions:

1

SIGNATURE/MOTIF
WEBLOGO:



FLP-32 peptide alignment

Consensus	110
Identity	AMRNSLVRF
Ancylostoma_caninum	AMRNSLVRF
Angiostrongylus_cantonensis	AMRNSLVRF
Caenorhabditis_sinica	AMRNSLVRF
Caenorhabditis_tropicalis	AMRNSLVRF
Cylicostephanus_goldi	AMRNSLVRF
Diploscapter_pachys	AMRNSLVRF
Heterorhabditis_bacteriophora	AMRNSLVRF
Micoletzky_japonica	AMRNSLVRF
Parapristionchus_gibindavisi	AMRNSLVRF
Pristionchus_arcanus	AMRNSLVRF
Pristionchus_entomophagus	AMRNSLVRF
Pristionchus_expectatus	AMRNSLVRF
Pristionchus_maxplancki	AMRNSLVRF
Pristionchus_mayeri	AMRNSLVRF
Strongylus_vulgaris	AMRNSLVRF
Caenorhabditis_elegans	AMRNSLVRF
Ancylostoma_ceilanicum	AMRNSLVRF
Ancylostoma_duodenale	AMRNSLVRF
Angiostrongylus_costaricensis	AMRNSLVRF
Caenorhabditis_angaria	AMRNSLVRF
Caenorhabditis_brenneri	AMRNSLVRF
Caenorhabditis_briggsae	AMRNSLVRF
Caenorhabditis_inopinata	AMRNSLVRF
Caenorhabditis_japonica	AMRNSLVRF
Caenorhabditis_latens	AMRNSLVRF
Caenorhabditis_nigoni	AMRNSLVRF
Caenorhabditis_remanei	AMRNSLVRF
Dictyocaulus_viviparus	AMRNSLVRF
Diploscapter_coronatus	AMRNSLVRF
Heligmosomoides_polygyrus	AMRNSLVRF
Mesorhabditis_belari	AMRNSLVRF
Necator_americanus	AMRNSLVRF
Nippostrongylus_brasiliensis	AMRNSLVRF
Oesophagostomum_dentatum	AMRNSLVRF
Oscheius_tipulae	AMRNSLVRF
Pristionchus_fissidentatus	AMRNSLVRF
Pristionchus_japonicus	AMRNSLVRF
Pristionchus_pacificus	AMRNSLVRF
Bursaphelenchus_xylophilus	AMRNSLVRF
Panagrellus_redivivus	AMRNSLVRF
Parastrongyloides_trichosuri	AMRNSLVRF
Steinernema_carpocapsae	AMRNSLVRF
Steinernema_feltiae	AMRNSLVRF
Steinernema_glaseri	AMRNSLVRF
Steinernema_monticolum	AMRNSLVRF
Steinernema_scapterisci	AMRNSLVRF
Strongyloides_papillosus	AMRNSLVRF
Strongyloides_ratti	AMRNSLVRF
Strongyloides_stercoralis	AMRNSLVRF
Strongyloides_venezuelensis	AMRNSLVRF
Halicephalobus_mephisto	AMRNSLVRF
Acrobeloides_nanus	AMRNSLVRF
Ditylenchus_destructor	AMRNSLVRF
Ditylenchus_dipsaci	AMRNSLVRF
Globodera_pallida	AMRNSLVRF
Globodera_rostochiensis	AMRNSLVRF
Heterodera_glycines	AMRNSLVRF
Meloidogyne_arenaria	AMRNSLVRF
Meloidogyne_enterolobii	AMRNSLVRF
Meloidogyne_floridensis	AMRNSLVRF
Meloidogyne_hapla	AMRNSLVRF
Meloidogyne_incognita	AMRNSLVRF
Meloidogyne_javanica	AMRNSLVRF
Meloidogyne_graminicola	AMRNSLVRF

Aligned peptide
region:

1

Occupancy
(cutoff = 50 %):

100

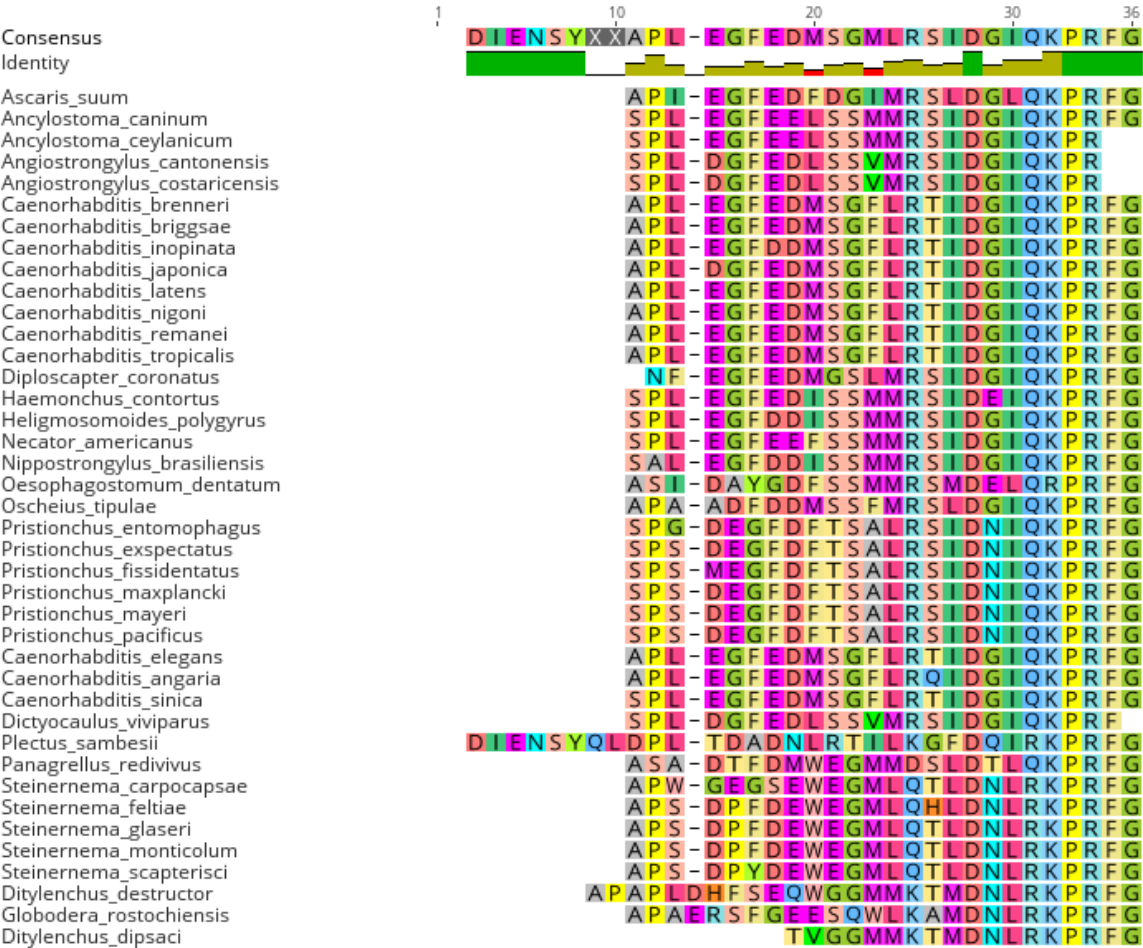
Conserved
peptide regions:

1

SIGNATURE/MOTIF
WEBLOGO:



FLP-33 peptide alignment



Aligned peptide
region:

1

Occupancy
(cutoff = 50 %):

100

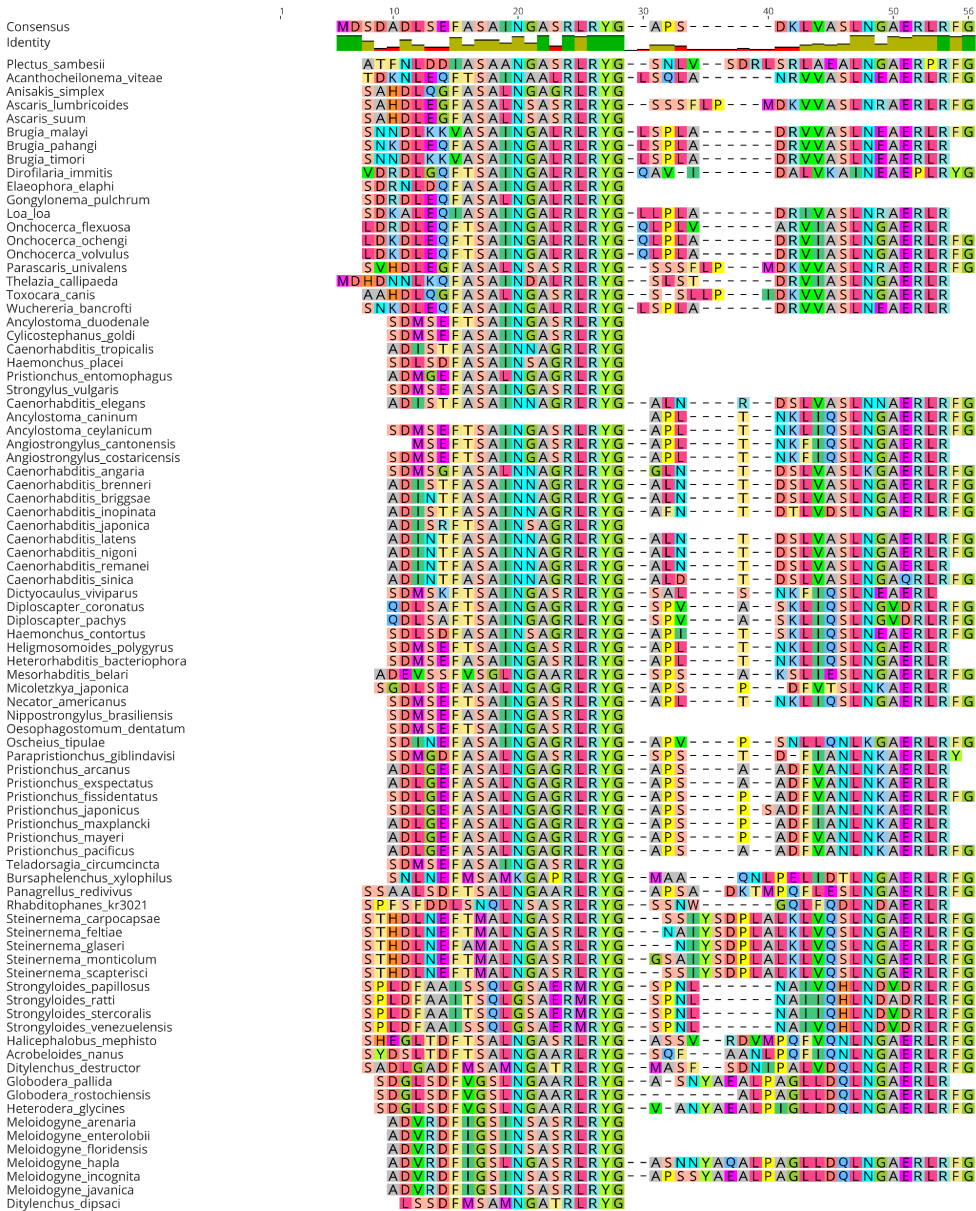
Conserved
peptide regions:

1

SIGNATURE/MOTIF
WEBLOGO:



FLP-34 peptide alignment



Aligned peptide
region:

1

2

Occupancy
(cutoff = 50 %):

99

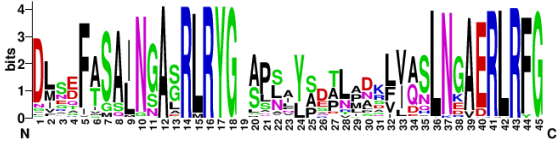
78

Conserved
peptide regions:

1

2

SIGNATURE
WEBLOGO:



MOTIF
WEBLOGO:

