SUPPLEMENTARY INFORMATION

Domain analysis of the *Nematostella vectensis* SNAIL ortholog reveals unique nucleolar localization that depends on the zinc-finger domains

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Supplemental TABLE S1

Experiment performed	Microscope used	Excitation wavelenght	1st Dichroic mirror (Chroma)	Pinhole	Objective used	Colors detected	Filter
Co-Localization (HeLa cells)	Nikon A1	447nm (mTq2)	440/514	~30µm	60x, VC Plan-Apo (N.A. 1.4)	Cyan	482/35 BP
		514.5nm (sYFP2)				Yellow	550/40 BP
Co-Localization (quantification and DRB assay)	Nikon A1	447nm (mTq2)	457/514/561	~30µm	60x, VC Plan-Apo (N.A. 1.4)	Cyan	482/35 BP
		514.5nm (sYFP2)				Yellow	550/40 BP
		561nm (mCherry)				Red	585 LP
Co-Localization DRB assay	Nikon A1	488nm (mTq2)	405/488/561	~30µm	60x, VC Plan-Apo (N.A. 1.4)	Green	525/30 BP
		561nm (mCherry)				Red	585 LP
Co-Localization (*Nemve* embryos)	LSM 510	514.5nm (sYFP2)	514/561	~30µm	100x, VC Plan-NeoFluar (N.A. 1.3)	Yellow	525/30 BP
		561nm (mCherry)				Red	585 LP
Co-Localization (*Nemve* embryos)	LSM 510	351nm (Hoechst)	UV/488/543/633	~30µm	100x, Zeiss Plan-NeoFluar (N.A. 1.3)	Blue	385 LP

Confocal Microscopy settings.

Supplemental TABLE S2

Construct/ratio	adj. $R_{nu\text{-}np}$	raw $R_{nu\text{-}np}$	adj. $R_{cp\text{-}np}$
***Hs*FIB**	11.06 ± 1.41 (152)	5.21 ± 0.62 (152)	
***Hs*SNAIL1**	0.27 ± 0.09 (31)	0.72 ± 0.03 (31)	0.17 ± 0.04 (31)
***Hs*SNAIL2**	0.52 ± 0.09 (32)	0.82 ± 0.03 (32)	0.22 ± 0.05 (31)
***Nv*SNAILA**	2.46 ± 0.25 (27)	1.59 ± 0.10 (27)	0.13 ± 0.05 (27)
***Nv*SNAILA-Δ5SNAG**	0.45 ± 0.09 (12)	0.77 ± 0.04 (12)	0.25 ± 0.12 (12)
***Nv*SNAILA-Δ20pNLS**	0.44 ± 0.09 (14)	0.77 ± 0.04 (14)	0.08 ± 0.03 (14)
***Nv*SNAILA-ΔZnf**	0.32 ± 0.04 (13)	0.72 ± 0.02 (13)	0.96 ± 0.04 (13)
***Nv*SNAILB**	0.90 ± 0.15 (14)	0.96 ± 0.07 (14)	0.07 ± 0.03 (14)
***Nv*SNAILB-Δ5SNAG**	0.63 ± 0.10 (14)	0.83 ± 0.05 (14)	0.05 ± 0.02 (14)
***Nv*SNAILB-Δ20pNLS**	0.59 ± 0.08 (14)	0.83 ± 0.03 (14)	0.16 ± 0.12 (14)
***Nv*SNAILB-ΔZnf**	0.29 ± 0.03 (16)	0.68 ± 0.03 (16)	1.00 ± 0.04 (16)
***Nv*SNAILBNt-*Nv*SNAILAZnf**	0.92 ± 0.12 (15)	0.97 ± 0.05 (15)	0.04 ± 0.02 (15)
***Nv*SNAILANt-*Nv*SNAILBZnf**	2.53 ± 0.25 (14)	1.65 ± 0.10 (14)	0.07 ± 0.03 (14)
mCherry*		0.62 ± 0.01 (275)	0.89 ± 0.01 (275)

Nucleolus/nucleoplasm ratios and normalized cytoplasm/nucleoplasm ratios measured in HeLa cells for different SNAIL proteins and SNAIL mutants.

*mCherry nucleolus/nucleoplasm and cytoplasm/nucleoplasm ratios are raw unadjusted ratios

Supplemental TABLE S3

Diffusion coefficients (μm²/s)	Nucleoplasm	Nucleolus	Cytoplasm
mTq2	22.56 ± 5.68 (11)	8.92 ± 2.17 (12)	17.66 ± 4.26 (10)
***Hs*SNAIL1**	1.82 ± 0.60 (9)	-	-
***Hs*SNAIL2**	1.77 ± 0.59 (9)	-	-
***Nv*SNAILA**	1.40 ± 0.21 (12)	0.31 ± 0.04 (19)	-
***Nv*SNAILB**	1.35 ± 0.35 (15)	0.39 ± 0.15 (7)	-
***Nv*SNAILA-Δ5SNAG**	1.38 ± 0.36 (10)	0.33 ± 0.13 (11)	-
***Nv*SNAILB-Δ5SNAG**	2.05 ± 0.39 (12)	0.26 ± 0.13 (10)	-
***Nv*SNAILA-Δ20pNLS**	1.35 ± 0.60 (11)	0.31 ± 0.12 (13)	-
***Nv*SNAILB-Δ20pNLS**	2.05 ± 0.21 (8)	0.24 ± 0.10 (11)	-
***Nv*SNAILA-ΔZnf**	3.48 ± 1.03 (9)	2.58 ± 0.30 (13)	4.48 ± 1.90 (9)
***Nv*SNAILB-ΔZnf**	4.70 ± 1.90 (11)	3.20 ± 0.54 (11)	6.50 ± 1.80 (11)

Diffusion coefficients for different SNAIL proteins and SNAIL mutants measured in different cellular compartments of HeLa cells.

Supplemental FIGURE S1

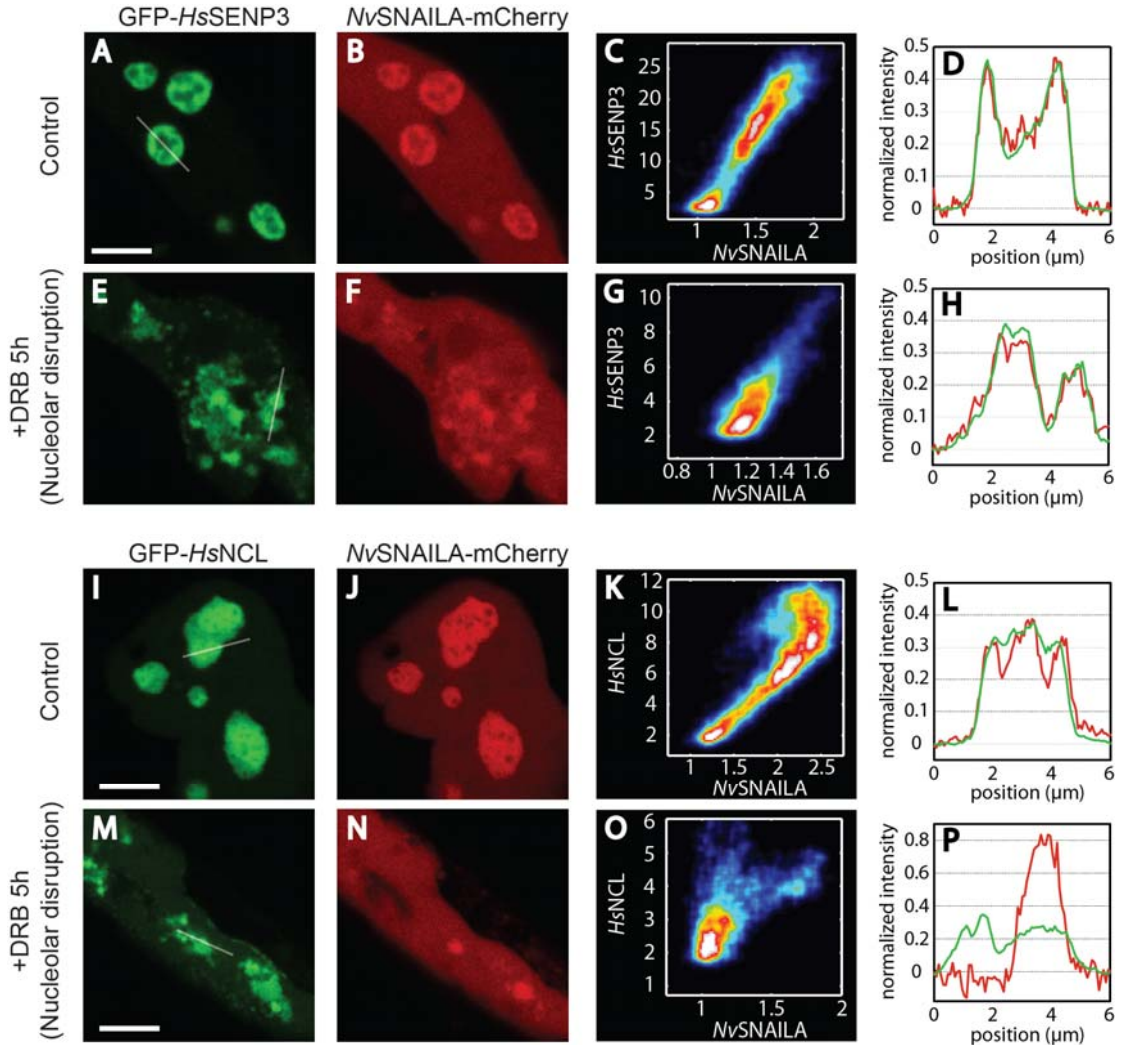

Figure S1. Localisation analysis of *Nv*SNAILA in combination with *Hs*SENP3 and *Hs*NCL nucleolar markers after DRB-induced nucleolar disruption. A-B) Control HeLa cells showing the specific nucleolar localization of *Hs*SENP3 and *Nv*SNAILA. **C**) Smooth Scatter-Plot for the couple *Nv*SNAILA- *Hs*SENP3 obtained by plotting the pixel intensity of each point from both channel in a region defined by a line in **A**. **D**). Plot of the fluorescence intensity of the two protein cosidered obtained in a nucleolar sub-region (white line in **A**). **E-F**) Separation of the DFC from the GC due to 5h DRB treatment. **G**) Smooth Scatter-Plot for the couple *Nv*SNAILA-*Hs*SENP3 obtained by plotting the pixel intensity of each point from both channel in a region defined by a line in **E**. **H**). Plot of the fluorescence intensity of the three protein cosidered obtained in a nucleolar sub-region (white line in **E**). **I-J**) Control HeLa cells showing the specific nucleolar localization of *Hs*NCL and *Nv*SNAILA. **K**) Smooth Scatter-Plot for the couple *Nv*SNAILA- *Hs*NCL obtained by plotting the pixel intensity of each point from both channel in a region defined by a line in **I**. **L**). Plot of the fluorescence intensity of the two protein cosidered obtained in a nucleolar sub-region (white line in **I**). **M-N**) Separation of the DFC from the GC due to 5h DRB

treatment. **O**) Smooth Scatter-Plot for the couple *Nv*SNAILA- *Hs*NCL obtained by plotting the pixel intensity of each point from both channel in a region defined by a line in **M**. **H**). Plot of the fluorescence intensity of the three protein cosidered obtained in a nucleolar sub-region (white line in **M**). Scale bar 10 μm.

Supplemental FIGURE S2

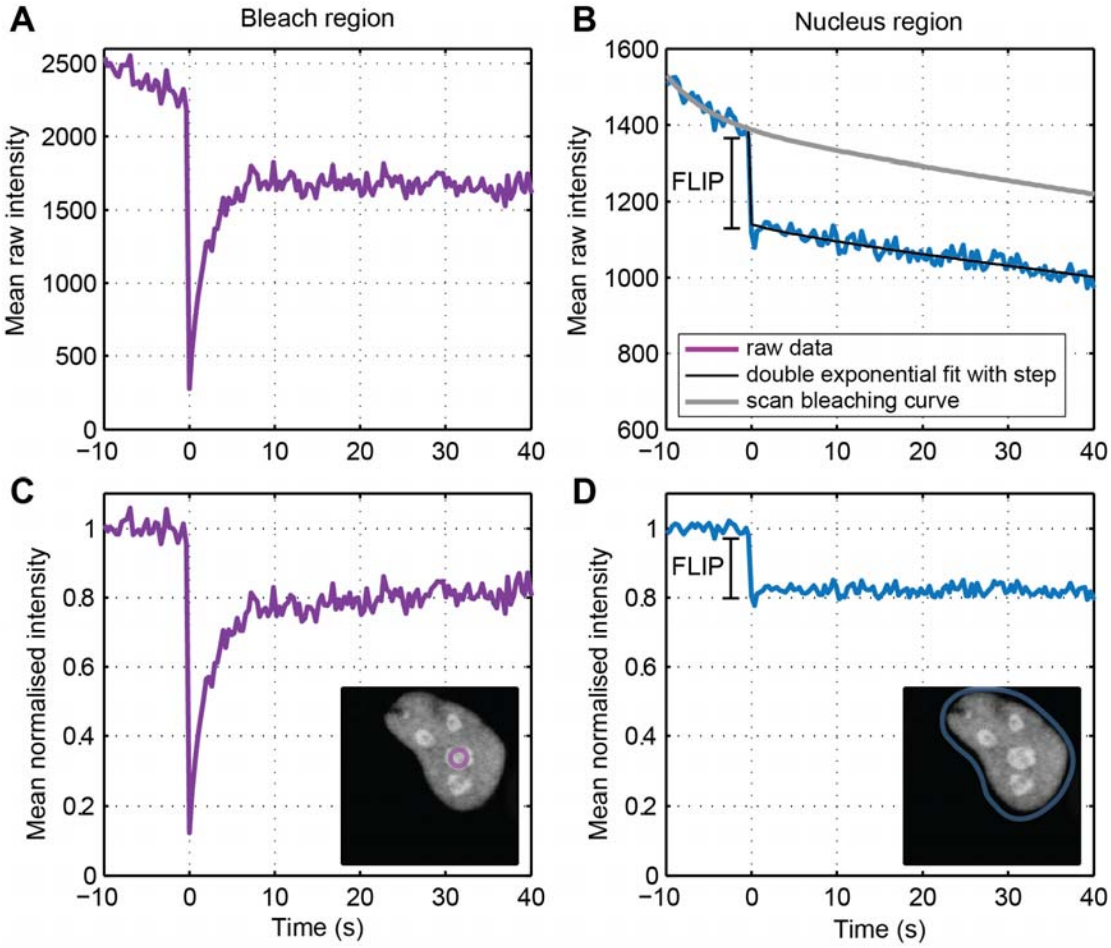

Figure S2. Normalization used in FRAP analysis. **A**) Raw trace of the mean fluorescence in the circular region that bleached a nucleolus. **B**) Raw trace of the mean fluorescence in the region that encompasses the whole nucleus. Because the nucleus is a confined region, loss of total fluorescence is apparent as a step (FLIP). A double exponential with a step was fitted (solid black line) to this trace and by removing the step after the fit an estimate was obtained for scan bleaching (solid grey line). **C-D**) In order to correct for scan bleaching, the raw traces of the circular region and the nucleus region were divided by the estimated scan bleaching curve and were subsequently normalized to unity using the mean pre-bleach values.

DATASET 1: Primer sequences

Constructs used in this study

Construct	Forward	Reverse
*Nv*SnailA	ATGCCCCGCTCGTTTCT	TCCTTGTGACGGGCAGCCCG
*Nv*SnailA-Δ5SNAG	ATGCTAGTCAAGAAAAC	TCCTTGTGACGGGCAGCCCG
*Nv*SnailA-Δ20pNLS	ATGGGGCCGGTAATGAC	TCCTTGTGACGGGCAGCCCG
*Nv*SnailA-ΔZnf	ATGCCCCGCTCGTTTCT	TCGCGATTCCTCCGCGGTTA
*Nv*SnailB	ATGCCGAGGTCCTTCCT	CCGCAGAGATTTTGCCGACACA
*Nv*SnailB-Δ5SNAG	ATGCTGGTGAAGACTAAG	CCGCAGAGATTTTGCCGACACA
*Nv*SnailB-Δ20pNLS	ATGATAATCCCTTCAAGA	CCGCAGAGATTTTGCCGACACA
*Nv*SnailB-ΔZnf	ATGCCGAGGTCCTTCCT	CCGGCAGGTGCTTCGCTCGTTA
*Hs*SNAIL1	ATGCCGCGCTCTTTCCT	GCGGGGACATCCTGAGCAGC
*Hs*SNAIL2	ATGCCGCGCTCCTTCCTGGTC	GTGTGCTACACAGCAGCCAGA
*Hs*FIB	ATGAAGCCAGGATTCAGT	TCAGTTCTTCACCTTGGGGGGTG
*Nv*SnailB-ΔZnfI	ATGCCGAGGTCCTTCCT	GTGGAATTGTTGATGTTT

Hybrids were obtained using the following primer pairs named a, b, c, d as indicated in the paper (Heckman & Pease, 2007)

	*Nv*SNAILANt-*Nv*SNAILBZnf	*Nv*SNAILBNt-*Nv*SNAILAZnf
a	ATGCCCCGCTCGTTTCTAGTC	ATGCCGAGGTCCTTCCT
b	TGGGCACTGGTGTTTGGGTC	ATGGCATTGGAGTTTGGCAG
c	GACCCAAACACCAGTGCCCA	CTGCCAAACTCCAATGCCAT
d	CCGCAGAGATTTTGCCGACACA	TCCTTGTGACGGGCAGCCCG

Primers for race PCR of Trichoplax SNAIL

	Forward	Reverse
*Ta*SNAILA-1	CGGTAAAGCGTTCAGTCGGC	CGCATCCAAATGGTTTTTCTCCAG
*Ta*SNAILA-2	CTGGAGAAAAACCATTTGGATGCG	CCGACTGAACGCTTTACCGC

Dataset 2: Accession numbers of SNAIL family members used for phylogenetic tree

Species	Acronym	Common name	Protein name (NCBI)	Name used	Changed name	Accession no.	Database
Caenorhabditis elegans	*Ce*	nematode	ces1	*Ce* SCRATCH	*x*	AAF01678	NCBI
Helobdella robusta	*Hr*	leech	snail1	*Hr* SNAIL1		AAL05564	NCBI
Patella vulgata	*Pv*	limpet	snail1	*Pv* SNAIL1		AAL06240	NCBI
		limpet	snail2	*Pv* SNAIL2		AAL12167	NCBI
Drosophila melanogaster	*Dm*	fruitfly	snail	*Dm* SNAIL		S06222	NCBI
		fruitfly	escargot	*Dm* ESCARGOT		S33639	NCBI
		fruitfly	worniu	*Dm* WORNIU		AAF12733	NCBI
		fruitfly	scratch	*Dm* SCRATCH		AAA91035	NCBI
		fruitfly	scratch-like1	*Dm* SCRATCH1-like		AAF47818	NCBI
		fruitfly	scratch-like2	*Dm* SCRATCH2-like		AAF47394	NCBI
Halocynthia roretzi	*Hr*	ascidia	Snail	*Haro* SNAIL		BAA75811	NCBI
Ciona intestinalis	*Ci*	ascidia	Snail	*Ci* SNAIL		AAB61226	NCBI
Branchiostoma floridae	*Bf*	amphioxus	Snail	*Bf* SNAIL		AAC35351	NCBI
		amphioxus	Snail-like	*Bf* SCRATCH	*x*	XP_002604602	NCBI
Takifugu rubripes	*Tr*	pufferfish	snail1	*Tr* SNAIL1		XP_003973759	NCBI
		pufferfish	snail2	*Tr* SNAIL1-like	*x*	XP_003963401	NCBI
		pufferfish	Snail3	*Tr* SNAIL3		XP_003963682	NCBI
		pufferfish	slug	*Tr* SLUG		XP_003975308	NCBI
Danio rerio	*Dr*	zebrafish	snail1	*Dr* SNAIL1		CAA52795	NCBI
		zebrafish	snail2	*Dr* SNAIL1-like	*x*	AAA87196	NCBI
		zebrafish	slug	*Dr* SLUG		NP_001008581	NCBI
		zebrafish	scratch1	*Dr* SCRATCH1		NP_001014369	NCBI
		zebrafish	scratch2	*Dr* SCRATCH2		NP_998802	NCBI
		zebrafish	Snail3	*Dr* SNAILl3		NP_001070853	NCBI
Xenopus laevis	*Xl*	african toad	Snail1	*Xl* SNAIL1		NP_001079925	NCBI
		african toad	Snail2	*Xl* SNAIL2		NP_001079751	NCBI
Silurana tropicalis	*St*	Western frog	Snail1	*St* SNAIL1-like	*x*	NP_989267	NCBI
		Western frog	Snail3	*St* SNAIL1	*x*	NP_001120305	NCBI
		Western frog	scratch1-like	*St* SCRATCH1-like		XP_002944038	NCBI
Gallus gallus	*Gg*	chicken	Snail1	*Gg* SNAIL1		NP_990473	NCBI
		chicken	Snail2	*Gg* SNAIL2		XP_419196	NCBI
		chicken	Scratch2	*Gg* SCRATCH2		NP_001166993	NCBI
Mus musculus	*Mm*	mouse	Snail	*Mm* SNAIL1		NP_035557	NCBI
		mouse	Slug	*Mm* SNAIL2	*x*	NP_035545	NCBI
		mouse	Smuc	*Mm* SNAIL3	*x*	NP038942	NCBI
		mouse	Scratch	*Mm* SCRATCH1		NP_570963	NCBI
		mouse	Scratch2	*Mm* SCRATCH2		NP_001153882	NCBI
Homo sapiens	*Hs*	human	Snail1	*Hs* SNAIL1		NP_005976	NCBI
		human	Snail2	*Hs* SNAIL2		NP_003059	NCBI
		human	Snail3	*Hs* SNAIL3		NP_840101	NCBI
		human	SCRATCH1	*Hs* SCRATCH1		NP_112599	NCBI
		human	SCRATCH2	*Hs* SCRATCH2		NP_149120	NCBI
Nematostella Vectensis	*Nv*	sea anemone	SnailA	*Nv* SNAILA		AAR24456	NCBI
		sea anemone	SnailB	*Nv* SNAILB		AAR24457	NCBI
		sea anemone	Scratch-like	*Nv* SCRATCH	*x*	XP_001632243	NCBI
Acropora millepora	*Am*	coral	Snail-2	*Am* SNAIL2		ACO55053	NCBI
		coral	znf-like	*Am* SNAIL1	*x*	AAS99630	NCBI
Trichoplax adhaerens	*Ta*	placozoa	Snail	*Ta* SNAIL1		XP_002108251	NCBI
		placozoa	znf-like	*Ta* SCRATCH	*x*	XP_002108252	NCBI
Cupiennius salei	*Cs*	spider	Snail	*Cs* SNAIL1		CAE00182	NCBI
Podocoryna carnea	*Pc*	jellyfish	Snail	*Pc* SNAIL1	*x*	CAD21523	NCBI
Hydra magnipapillata	*Hm*	hydra	zf-like 426	*Hm* SNAIL1	*x*	XP_002162096	NCBI
Strongylocentrotus purpuratus	*Sp*	sea urchin	Snail	*Sp* SNAIL		NP_999825	NCBI
		sea urchin	Snail2-like	*SpS* CRATCH1	*x*	XP_785413	NCBI
		sea urchin	Scratch-2-like	*Sp* SCRATCH2-like		XP_003724407	NCBI
Daphnia pulex	Dp	water flea	Escargot	*Dp* ESCARGOT		EFX80938	NCBI
			Snail-like	*Dp* SCRATCH-LIKE	x	EFX69682.1	NCBI
			Snail-like	*Dp* SCRATCH1	x	EFX77680.1	NCBI
Anolis carolinensis	Ac	anole lizard	Snail2-like	*Ac* SNAIL2-like		XP_003223554	NCBI
Orcinus orca	Oo	killer whale	Snail3	*Oo* SNAIL3		XP_004280112	NCBI
Meleagris gallopavo	Mg	wild Turkey	Snail-like	*Mg* SNAIL1	x	XP_003212214	NCBI
Saccoglossus kowalevskii	Sk	acorn worms	Snail	*Sk* SNAIL		NP_001158460	NCBI
Ornithorhynchus anatinus	Oa	platypus	Snail-like	*Oa* SNAIL1	x	XP_001507897.2	NCBI
Achaearanea tepidariorum	At	common house spider	Snail	*At* SNAIL		BAD44735	NCBI
Crassostrea gigas	Cg	pacific oyster	Escargot	*Cg* ESCARGOT		EKC40170	NCBI
Trichinella spiralis	Ts	pork worm	Escargot	*Ts* ESCARGOT		XP_003371527.1	NCBI
Acropora digitifera	Ad	coral	Snail	*Ad* SNAIL1	x	v1.11963	OSD
		coral	Snail-like2	*Ad* SCRATCH	x	v1.02984	OSD
		coral	Snail-like	*Ad* SNAIL2	x	v1.008519	OSD

*OSD=Organism Specific genome Database

Dataset 3: Alignment of the zinc-finger region used in constructing the phylogenetic tree

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SpSCRATCH1(Sea_urchin)/1-139          GHSCPECRKSYSTSSN--LAR-HRQ-THR------------SVTDQKARKCPHCEKVYVSMPALSMHIRTHKLGCKCHICGKCFSRPWLLQGHIRTHTGERPFSCPQCGKAFADKSNLRAHVQTHSTIKPYVCQKCN-KAFALKSYLYKHVESACY
DmSCRATCH-like2_(Fruitfly)/1-139      EHICPECGKKYSTSSN--LAR-HRQ-THR------------SIMDKKARHCPYCEKVYVSMPAYSMHVRTHNQGCECQFCGKRFSRPWLLQGHIRTHTGEKPFKCGVCEKAFADKSNLRAHIQTHSNTKPHTCARCG-KAFALKSYLYKHEESSCM
DpSCRATCH-like_(Water_flea)/1-139     GHECPDCGKRYSTSSN--LAR-HRQ-THR------------SPADQKARRCPHCDKVYVSVPAFSMHVRTHSQGCKCPYCGKSFSRPWLLQGHIRTHTGEKPFTCQICEKAFADKSNLRAHIQTHSNLKPFTCQRCG-KAFALKSYLYKHEESSCM
CeSCRATCH_(Nematode)/1-138            RCVCDKCGKSYATTSN--LSR-HKQ-THR------------ALDSPHAKQCPHCDRVYVSMPALSMHILTHNASHECNVCGKRFSRLWLLQGHLRSHTGLRPFSCAHCGKSFADRSNLRAHMLTHTGDKRFECDKCG-RRFALRAYLNRHLET-CK
NvSCRATCH_(sea_anemone)/1-139         RYVCAECGKSYATSSN--LSR-HKQ-THR------------SLDGKLAKRCHQCGKAYVSMPALAMHVLTHKLLHKCEICGKSFSRPWLLQGHKRSHTGERPYSCPECNKAFADRSNLRAHLQTHNPLKQYKCERCD-RTFALKSYLNKHLESACS
AdSCRATCH_(Stony_coral)/1-139         RYICAECGKSYATSSN--LSR-HKQ-THR------------SLDSKLAKRCEHCGKAYVSMPALAMHILTHKLHHKCDVCGKAFSRPWLLQGHMRSHTGERPFMCPECNKAFADRSNLRAHMQTHSPLKQFKCNRCD-RTFALKSYLNKHAESACA
TaSCRATCH/1-139                       RYTCAECGKQYATSSN--LSR-HKQ-THR------------SLDGQLARRCKYCDKAYVSMPALAMHVLTHELAHKCNICGKAFSRSWLLQGHMRSHTGEKPYACATCNKRFADRSNLRAHMQTHSSVKSFQCKNCG-KSFALKSYLNKHAESGCC
DpSCRATCH1_(Water_flea)/1-139         RYVCGECGKAYATSSN--LSR-HKQ-THR------------SLESGCARTCPTCGKAYVSMPALSMHLLTHALSHVCPVCSKAFSRPWLLQGHMRSHTGEKPYGCAHCGKAFADRSNLRAHMQTHSATKSHHCGKCH-KAFALKSYLNKHLESSCF
DmSCRATCH_(Fruitfly)/1-137            KYTCSECGKQYATSSN--LSR-HKQ-THV--------------DSQSAKKCHTCGKAYVSMPALAMHLLTHKLSHSCGVCGKLFSRPWLLQGHLRSHTGEKPYGCAHCGKAFADRSNLRAHMQTHSVDKNFECKRCH-KTFALKSYLNKHLESACL
DmSCRATCH1-like_(Fruitfly)/1-139      CYKCCECGKQYATSSN--LSR-HKQ-THR------------SLDSQSAKKCNTCGKAYVSMPALAMHLLTHKLSHSCDICGKLFSRPWLLQGHLRSHTGEKPYACVHCGKAFADRSNLRAHMQTHSGDKNFKCHRCN-KTFALKSYLNKHLESACL
SpSCRATCH-like_(Sea_urchin)/1-139     KYKCNECGKQYATSSN--LSR-HKQ-THR------------SLDSHLAKKCEVCNKVYVSMPALAMHVLTHNLKHKCNVCHKSFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAYKNYKCKRCD-KSFALKSYLNKHYESACF
BfSCRATCH_(Amphioxus)/1-139           RYTCNECGKQYATSSN--LSR-HKQ-THR------------PLDSKLAKTCPTCGKVYVSMPALSMHVLTHQLSHKCDICNKAFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAFKQYKCKRCN-KSFALKSYLNKHYESACF
GgSCRATCH2_(Chicken)/1-139            RHSCPECGKTYATSSN--LSR-HKQ-THR------------SLDSKMARKCPTCGKAYVSMPALAMHVLTHNLKHKCDVCGKAFSRPWLLQGHMRSHTGEKPFGCSHCGKAFADRSNLRAHMQTHSAFKHYKCKQCE-KTFALKSYLNKHYESACF
DrSCRATCH2_(Zebrafish)/1-139          RHTCNECGKTYATSSN--LSR-HKQ-THR------------SLDSKMARKCPTCDKVYVSMPALAMHILTHDLKHKCHVCSKAFSRPWLLQGHMRSHTGEKPFACAHCGKAFADRSNLRAHMQTHSAFKHYSCKRCN-KTFALKSYLNKHYESACF
StSCRATCH1-like_(Western_frog)/1-139  RHSCSECGKSYATSSN--LSR-HKQ-THR------------SLDSKLAKKCPTCGKVYVSMPAMAMHLLTHDLKHKCETCGKAFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAFKHYKCKRCS-KTFALKSYLNKHYESACF
DrSCRATCH1_(Zebrafish)/1-139          RHTCNECGKTYATSSN--LSR-HKQ-THR------------SLDSKMAKKCPTCGKVYVSMPAMAMHLLTHDLKHKCDICGKAFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAFKHFKCKRCN-KTFVLKSYLNKHYESACF
HsSCRATCH1_(Human)/1-139              RHACGECGKTYATSSN--LSR-HKQ-THR------------SLDSQLARRCPTCGKVYVSMPAMAMHLLTHDLRHKCGVCGKAFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAFKHFQCKRCK-KSFALKSYLNKHYESACF
MmSCRATCH1_(Mouse)/1-139              RHACGECGKTYATSSN--LSR-HKQ-THR------------SLDSQLARRCPTCGKVYVSMPAMAMHLLTHDLRHKCGVCGKAFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAFKHFQCKRCK-KSFALKSYLNKHYESACF
HsSCRATCH2_(Human)/1-139              RHACAECGKTYATSSN--LSR-HKQ-THR------------SLDSQLARKCPTCGKAYVSMPALAMHLLTHNLRHKCGVCGKAFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAFKHYRCRQCD-KSFALKSYLHKHCEAACA
MmSCRATCH2_(Mouse)/1-139              RHACAECGKTYATSSN--LSR-HKQ-THR------------SLDSQLARKCPTCGKAYVSMPALAMHVLTHNLRHKCGVCGKAFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAFKHYRCRQCD-KSFALKSYLHKHCEAACV
DmSNAIL_(Fruitfly)/1-143              RFKCDECQKMYSTSMG--LSK-HRQ-FHCP--------AAECNQEKKTHSCEECGKLYTTIGALKMHIRTHTLPCKCPICGKAFSRPWLLQGHIRTHTGEKPFQCPDCPRSFADRSNLRAHQQTHVDVKKYACQVCH-KSFSRMSLLNKHSSSNCT
AtSNAIL_(Common_house_spider)/1-139   RYFCSACSKNYATYSG--LSR-HKQ-FHC------------ITLEKKAFNCKYCDKIYVSLGALKMHIRTHTLPCKCNLCGKAFSRPWLLQGHIRTHTGEKPFACPHCSRAFADRSNLRAHLQTHSDVKKYSCNACS-KTFSRMSLLLKHNDGGCG
CsSNAIL_(Spider)/1-139                RYQCPDCNKSYSTYSG--LSK-HRL-MHC------------ATQAKKSFGCKYCDKVYVSLGALKMHIRTHTLPCKCKLCGKAFSRPWLLQGHIRTHTGEKPFSCPHCSRAFADRSNLRAHLQTHSEVKKYRCKTCS-KTFSRMSLLLKHEDGGCA
DpESCARGOT_(Water_flea)/1-142         RYQCPDCHKSYSTYCG--LTK-HQE-LHC---------AAQQAANKKSFSCKHCEKVYVSLGALKMHIRTHTLPCKCLLCGKAFSRPWLLQGHIRTHTGEKPFSCPHCSRSFADRSNLRAHLQTHSDVKRYSCKSCG-KTFSRMSLLSKHEDGGCG
DmWORNIU_(Fruitfly)/1-143             RYHCQDCGKSYSTYSG--LSK-HQQ-FHCP--------SAEGNQVKKVFSCKNCDKTYVSLGALKMHIRTHTLPCKCPICGKAFSRPWLLQGHIRTHTGEKPFSCQHCNRAFADRSNLRAHMQTHSDVKKYSCPTCT-KSFSRMSLLAKHLQSGCQ
DmESCARGOT_(Fruitfly)/1-143           RYQCPDCQKSYSTFSG--LTK-HQQ-FHCP--------AAEGNQVKKSFSCKDCDKTYVSLGALKMHIRTHTLPCKCNLCGKAFSRPWLLQGHIRTHTGEKPFSCQHCHRAFADRSNLRAHLQTHSDIKKYSCTSCS-KTFSRMSLLTKHSEGGCP
PvSNAIL1_(Limpet)/1-139               RYQCEACQKSYSTFGG--LSK-HRQ-FHC------------SQQVKKEFRCKYCDKSYSSLGALKMHIRTHTLPCKCKLCGKAFSRPWLLQGHIRTHTGEKPFSCQHCGRAFADRSNLRAHLQTHAEIKKYGCKSCS-KTFSRMSLLLKHGESSCM
CgESCARGOT_(Pacific_oyster)/1-139     RYHCDGCTKVYATFSG--LTK-HKQ-FHC------------ASQVKKEFSCKYCDKTYVSLGALKMHIRTHTLPCKCKLCGKAFSRPWLLQGHIRTHTGEKPFRCDHCARAFADRSNLRAHLQTHSDIKKYSCKSCC-KTFSRMSLLLKHEDGCCS
PvSNAIL2_(Limpet)/1-139               RYQCDSCKKSYSTFSG--LSK-HKQ-FHC------------ASQIKKEFNCKYCDKTYVSLGALKMHIRTHTLPCKCKLCGKAFSRPWLLQGHIRTHTGEKPFSCQHCGRAFADRSNLRAHLQTHSDVKKYSCRSCS-KTFSRMSLLLKHEDGCCG
NvSnailA_(Starlet_sea_anemone)/1-139  KHQCHQCNKGYSTPLG--LAK-HQQ-FHC------------NTHRKKSFTCKHCDKIYVSLGALKMHIRTHTLPCKCSICGKAFNRPWLLQGHIRTHTGEKPYQCTNCKRAFADRSNLRAHMQTHAVVKKYSCSRCK-KSFSRMSLLVKHEDSGCP
NvSnailB_(Starlet_sea_anemone)/1-139  KLQCPNCMKGFNALAT--LMR-HQY-FYC-----------PPTQHKRPFHCKYCEKLYDSLGALKMHIRTHTLPCKCKLCGKAFSRPWLLQGHVRTHTGEKPYKCTQCQRAFADRSNLRAHLQTHSDVKKYSCKQCS-KSFSRMSLLLKH-EGSCS
AmSNAIL2_(Stony_coral)/1-139          NYECHDCRKSYSSVTS--LLR-HQQ-YHC------------HPNHKRPFHCKYCDKLYVSLGALKMHIRTHTLPCKCKICGKAFSRPWLFQGHIRTHTGEKPYKCPNCQRAFADRSNLRAHLQTHSEVKKYSCGLCS-KSFSRMSLLLKHEASGCP
AdSNAIL2_(Stony_coral)/1-139          NYECHDCRKSYSSVTS--LLR-HQQ-YHC------------HPNHKRPFHCKYCDKLYVSLGALKMHIRTHTLPCKCKICGKAFSRPWLLQGHIRTHTGEKPYKCPNCQRAFADRSNLRAHLQTHSEVKKYSCGLCS-KSFSRMSLLLKHEASGCP
HrSNAIL1_(Leech)/1-136                ------INNRISTNNGNILNNSNKFIDNN------------NISNNNNNSCNYCGRKYNTTGALKMHIRTHTLPCRCDLCGKSFSRPWLLQGHLRTHSGEKPFKCDFCQRAFADKSNLRAHLQTHAQIKRYCCSHCG-KSFSRLPLLLKH-GASCG
TaSNAIL1_(Placazoa)/1-140             QYNTASIPTNITEENI--SVQ-KDDTKDM------------IYHDGKNFVCKHCNKVYASLGALKMHIRTHTLPCKCKICGKAFSRPWLLQGHIRTHTGEKPFGCEKCNRSFADRSNLRAHMQTHAEIKKYSCYKCR-RTFSRWSSLKKHENSSNC
AmSNAIL1_(Stony_coral)/3-147          RNDVDSPGNLNRAKKP--QKR-ERNASTS------DVSQRKNKRTRKEFACKHCDKNYLSLGALKMHIRTHTLPCKCTICGKAFSRPWLLQGHIRTHTGEKPYQCPKCQRAFADRSNLRAHLQTHSSVKKYSCSQCS-RSFSRMSLLVKH-QYSCG
AdSNAIL1_(Stony_coral)/1-134          RAKKPQKRERNASTSD--VSQ--RK----------------NKRTRKEFACKHCDKNYLSLGALKMHIRTHTLPCKCTICGKAFSRPWLLQGHIRTHTGEKPYQCPKCQRAFADRSNLRAHLQTHSSVKKYSCSQCS-RSFSRMSLLVKH-QYSCG
PcSNAIL1_(Jellyfish)/1-139            IVKPSDFIDKSKEQIN--VPK-KSK-VPR------------KGKNSRHYSCKYCDKDYMSLGALKMHIRTHTLPCQCKICGKSFSRPWLLQGHIRTHTGERPFVCSYCGRAFADRSNLRAHMQTHVDVKKYECRKCM-KSFSRMSLLTKHEEFDCT
HmSNAIL1_(Hydra)/1-146                IFNKIENEKLFSTKQI--IIDASRSQNDT-------LSKSKSGKPPRTFSCKYCVKDYMTLGALKMHIRTHTLPCKCPMCGKAFSRPWLLQGHVRTHTGEKPFKCSHCSRAFADRSNQRAHMQTHFESKKLECSKCC-KTFIRFSQLSKHVLIGCD
SpSNAIL_(sea_urchin)/1-139            KYHCPDCGKEYSTFGG--LSK-HRQ-LHC------------DAQNKKTFNCKYCDKEYMSLGALKMHIRTHTLPCKCKFCGKAFSRPWLLQGHIRTHTGEKPFSCPHCQRAFADRSNLRAHLQTHSEVKKYSCKSCG-KTFSRMSLLNKHEESGCI
TsESCARGOT_(Pork_worm)/1-139          RIQCPDCNRSYSTLGG--LSK-HRQ-FHC------------ISQIKRQFGCKFCEKQYSSLGAMKMHIRTHTLPCKCHICGKAFSRPWLLQGHIRTHTGEKPFCCGHCGRAFADRSNLRAHLQTHTHLKKYSCNLCQ-KTFSRMSLLTKHVTSGCR
CiSNAIL_(Ascidia)/1-138               RIPCTECGRTYATIGA--LAK-HAK-THE------------DPESGSKFNCKICKKECSSLGALRMHIRTHTLPCECHICGKAFSRTWLLQGHIRTHTGEKPYQCTVCSRAFADRSNLRAHMQTHETVKRYSCVTCE-KTFSRISLLKRH-QVHCE
HaroSNAIL_(Ascidia)/1-139             RFHCSECGRTYATVGG--LMK-HSK-YHH------------DPENAMTFKCKTCEKEYTSLGALKMHIRTHTLPCKCHICGKAFSRTWLLQGHIRTHTGEKPYQCSVCLRAFADRSNLRAHMQTHQNVKRYACTGCE-KTFSRTSLLNRHRASGCV
SkSNAIL_(Acorn_worms)/1-139           RYQCTECSKSYSTFSG--LTK-HKQ-FHC------------VTQAKKSFSCKYCEKEYLSLGALKMHIRTHTLPCKCKICGKAFSRPWLLQGHIRTHTGEKPFACTYCNRAFADRSNLRAHLQTHSDVKKYCCKSCS-KTFSRMSLLTKHEEAGCC
BfSNAIL_(Amphioxus)/1-139             RYQCPQCAKSYSTYSG--LTK-HKQ-FHC------------VTQSKKAFNCKYCDKVYVSLGALKMHIRTHTLPCKCKICGKAFSRPWLLQGHVRTHTGEKPFACPHCSRAFADRSNLRAHLQTHSDIKKYSCKNCS-KTFSRMSLLTKHEEAGCC
DrSNAIL3_(Zebrafish)/2-140            SDECFDCQKAYLSFSN--LAN-QRQ-VHC------------QWPCHKYFTCKYCEKEYVSLGALKMHIRTHTLPCVCKLCGKAFSRPWLLQGHIRTHTGEKPFTCPHCSRAFADRSNLRAHLQTHSEIKKYQCRNCF-KTFSRISLLTKHEEAGCC
TrSNAIL3_(Pufferfish)/1-139           RFECLDCHNEHLSFMG--LAK-CRQ-LRC------------EWSSKKYFNCKYCEKEYISLGALKMHIRTHTLPCVCKLCGKAFSRPWLLQGHIRTHTGEKPFSCFHCSRAFADRSNLRAHLQTHSEMKRYQCACCL-KTFSRISLLAKHQEAGCP
OoSNAIL3_(Killer_whale)/1-137         RAPCTPGG--FRTPAA--LAR-HQQ-LQC------------HLQAQRCFTCKFCDKEYGSLGALKMHIRTHTLPCLCTVCGKAFSRPWLLQGHIRTHTGEKPYTCPHCSRAFADRSNLRAHLQTHSDTKKYQCKRCA-KTFSRVALLARHEESGCC
HsSNAIL3_(Human)/1-139                GFECFHCHKPYHTLAG--LAR-HRQ-LHC------------HLQVGRVFTCKYCDKEYTSLGALKMHIRTHTLPCTCKICGKAFSRPWLLQGHVRTHTGEKPYACSHCSRAFADRSNLRAHLQTHSDAKKYRCRRCT-KTFSRMSLLARHEESGCC
MmSNAIL3_(Mouse)/1-139                SFECIHCHRPYHTLAG--LAR-HQQ-LHC------------HLPTGRAFTCRYCDKEYASLGALKMHIRTHTLPCICKVCGKAFSRPWLLQGHIRTHTGEKPYTCSHCSRAFADRSNLRAHLQTHVGTKKYRCAVCP-KAFSRMSLLARHEEAGCC
GgSNAIL2_(Chicken)/1-139              KFQCGLCNKTYSTFSG--LAK-HKQ-LHC------------DAQSRKSFSCKYCDKEYVSLGALKMHIRTHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCPHCNRAFADRSNLRAHLQTHSDVKKYQCKNCS-KTFSRMSLLHKHEESGCC
AcSNAIL2-like_(Anole_lizard)/1-139    KFQCSLCNKTYSTFSG--LAK-HKQ-LHC------------DAQSRKSFSCKYCDKEYVSLGALKMHIRTHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCPHCNRAFADRSNLRAHLQTHSDVKKYQCKNCS-KTFSRMSLLHKHEESGCC
HsSNAIL2_(Human)/1-139                KFQCNLCNKTYSTFSG--LAK-HKQ-LHC------------DAQSRKSFSCKYCDKEYVSLGALKMHIRTHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCPHCNRAFADRSNLRAHLQTHSDVKKYQCKNCS-KTFSRMSLLHKHEESGCC
MmSNAIL2_(Mouse)/1-139                KFQCNLCNKTYSTFSG--LAK-HKQ-LHC------------DAQSRKSFSCKYCDKEYVSLGALKMHIRTHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCPHCNRAFADRSNLRAHLQTHSDVKKYQCKNCS-KTFSRMSLLHKHEESGCC
XlSNAIL2_(African_toad)/1-139         KFQCSLCSKTYSTFSG--LAK-HKQ-LHC------------DAQSRKSFSCKYCEKEYVSLGALKMHIRTHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCPHCNRAFADRSNLRAHLQTHSDVKKYQCKNCS-KTFSRMSLLHKHEESGCC
TrSLUG_(Pufferfish)/1-139             KFQCSLCSKSYSTYSG--LLK-HKQ-LHC------------DAQARKSFSCKYCEKEYVSLGALKMHIRTHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCPHCNRAFADRSNLRAHLQTHSDVKKYQCKNCS-KTFSRMSLLHKHEESGCC
DrSLUG_(Zebrafish)/1-139              KFQCGLCNKSYSTYSG--LMK-HKQ-LHC------------DAQSRKSFSCKYCEKEYVSLGALKMHIRTHTLPCVCKMCGKAFSRPWLLQGHIRTHTGEKPFSCPHCSRAFADRSNLRAHLQTHSDVKKYQCKNCS-KTFSRMSLLHKHEESGCC
XlSNAIL1_(African_toad)/1-139         KFQCNLCSKSYSTFAG--LSK-HKQ-LHC------------DSQTRKSFSCKYCEKEYVSLGALKMHIRSHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCTHCNRAFADRSNLRAHLQTHSDVKKYQCKSCS-RTFSRMSLLHKHEETGCT
StSNAIL1-like_(Western_frog)/1-139    KFQCNQCSKSYSTFAG--LSK-HKQ-LHC------------DSQARKSFSCKYCEKEYVSLGALKMHIRSHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCTHCNRAFADRSNLRAHLQTHSDVKKYQCKNCS-RTFSRMSLLHKHEETGCT
OaSNAIL1_(Platypus)/1-140             KFSCHQCPKAYATFAG--LSK-HRQLLHC------------DAQPRKSFSCKYCEKEYVSLGALKMHIRSHTLPCVCKMCGKAFSRPWLLQGHIRTHTGEKPFSCTHCNRAFADRSNLRAHLQTHSDVKKYQCKSCS-RTFSRMSLLHKHEETGCS
MgSNAIL1_(Wild_Turkey)/1-139          RFRCAQCAKAYSTFAG--LSK-HKQ-LHC------------DAQTRKSFSCKYCEKEYVSLGALKMHIRSHTLPCVCKMCGKAFSRPWLLQGHIRTHTGEKPFSCTHCNRAFADRSNLRAHLQTHSDVKKYQCKTCS-RTFSRMSLLHKHEETGCS
GgSNAIL1_(Chicken)/1-139              RFRCAQCAKAYSTFAG--LSK-HKQ-LHC------------DAQTRKSFSCKYCEKEYVSLGALKMHIRSHTLPCVCKMCGKAFSRPWLLQGHIRTHTGEKPFSCTHCNRAFADRSNLRAHLQTHSDVKKYQCKTCS-RTFSRMSLLHKHEETGCS
HsSNAIL1_(Human)/3-147                TSVSSLEAEAYAAFPG--LGQVPKQ-LAQ-------LSEAKDLQARKAFNCKYCNKEYLSLGALKMHIRSHTLPCVCGTCGKAFSRPWLLQGHVRTHTGEKPFSCPHCSRAFADRSNLRAHLQTHSDVKKYQCQACA-RTFSRMSLLHKHQESGCS
MmSNAIL1_(Mouse)/3-147                TSASSLEAEAFIAFPG--LGQLPKQ-LAR-------LSVAKDPQSRKIFNCKYCNKEYLSLGALKMHIRSHTLPCVCTTCGKAFSRPWLLQGHVRTHTGEKPFSCSHCNRAFADRSNLRAHLQTHSDVKRYQCQACA-RTFSRMSLLHKHQESGCS
DrSNAIL1-like_(Zebrafish)/1-152       RFQCAHCGKSCSSPAC--LSR-HQL-AHCSPQDGISGRTSSSPAPGPPFHCKHCPKEYNSLGALKMHIRSHTLPCVCSTCGKAFSRPWLLRGHIRTHTGERPFSCPHCNRAFADRSNLRAHLQTHSEVKKYQCGSCSRRTFSRMSLLKHTLSGCC
TrSNAIL2_(Pufferfish)/1-150           IYHCLHCSNSYSSLSA--LSH-HQL-SHF-PQTQHTSSLPTEVSARPAFHCKHCPKEYTSLGALKMHIRSHTLPCVCPTCGKAFSRPWLLRGHIRTHTGERPFACQLCNRAFADRSNLRAHLQTHSEVKKYQCGSCA-RTFSRMSLLHKHNASGCC
TrSNAIL1_(Pufferfish)/1-140           PRQRMKCTGVMARSSP--PEE-EEEREAP------------ATAARPAFLCKHCPKEYTSLGALKMHIRSHTLPCVCTTCGKAFSRPWLLRGHIRTHTGERPFSCPHCNRAFADRSNLRAHLQTHAEVKKYQCGICS-RTFSRMSLLQKHSSSGCC
StSNAIL1_(Western_frog)/1-140         PQQTSRPRRSNKSRAG--QRE-DKSEAAV------------TAASRPAFFCKHCPKEYNSLGALKMHIRSHTLPCVCPTCGKAFSRPWLLRGHIRTHTGERPFSCPHCNRAFADRSNLRAHLQTHADVKKYQCSTCS-RTFSRMSLLQKHSAAGCC
DrSNAIL1_(Zebrafish)/1-140            PQQTSRPRRSNKSRAG--QRE-DKSEAAV------------TAASRPAFFCKHCPKEYNSLGALKMHIRSHTLPCVCPTCGKAFSRPWLLRGHIRTHTGERPFSCPHCNRAFADRSNLRAHLQTHADVKKYQCSTCS-RTFSRMSLLQKHSAAGCC
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Dataset 4: SMART predictions of the zinc-finger domain region applied to the sequence file that was used for the phylogenteic tree

gene	domain	start	end	E-value	domain	start	end	E-value	domain	start	end	E-value	domain	start	end	E-value	domain	start	end	E-value
Am SNAIL1_coral					ZnF_C2H2	40	62	3.50E-05	ZnF_C2H2	66	88	1.30E-05	ZnF_C2H2	94	116	2.10E-07	ZnF_C2H2	122	142	0.061
Dr SNAIL1_Zebrafish					ZnF_C2H2	34	56	7.80E-06	ZnF_C2H2	60	82	4.00E-05	ZnF_C2H2	88	110	3.60E-07	ZnF_C2H2	116	136	0.069
St SNAIL1_frog					ZnF_C2H2	34	56	7.80E-06	ZnF_C2H2	60	82	4.00E-05	ZnF_C2H2	88	110	3.60E-07	ZnF_C2H2	116	136	0.069
Tr SNAIL1_Pufferfish					ZnF_C2H2	34	56	1.60E-05	ZnF_C2H2	60	82	0.00011	ZnF_C2H2	88	110	3.60E-07	ZnF_C2H2	116	136	0.079
Hm SNAIL1_Hydra					ZnF_C2H2	40	62	0.00011	ZnF_C2H2	66	88	8.90E-06	ZnF_C2H2	94	116	8.70E-06	ZnF_C2H2	122	142	0.25
Mm SNAIL1_Mouse					ZnF_C2H2	39	61	1.20E-05	ZnF_C2H2	65	87	0.00011	ZnF_C2H2	93	115	1.00E-06	ZnF_C2H2	121	141	0.2
Hs SNAIL1_Human					ZnF_C2H2	39	61	1.20E-05	ZnF_C2H2	65	87	0.00043	ZnF_C2H2	93	115	7.60E-07	ZnF_C2H2	121	141	0.2
Nv SNAILIB_sea_anemone	ZnF_C2H2	2	30	0.25	ZnF_C2H2	34	56	2.20E-05	ZnF_C2H2	60	82	1.80E-05	ZnF_C2H2	88	110	5.00E-07	ZnF_C2H2	116	136	0.11
Ad SNAIL1_coral					ZnF_C2H2	29	51	3.50E-05	ZnF_C2H2	55	77	1.30E-05	ZnF_C2H2	83	105	2.10E-07	ZnF_C2H2	111	131	0.061
Hr SNAIL1_Leech					ZnF_C2H2	31	53	3.30E-05	ZnF_C2H2	57	79	1.90E-05	ZnF_C2H2	85	107	8.80E-07	ZnF_C2H2	113	133	0.36
Tr SNAIL3_Pufferfish					ZnF_C2H2	33	55	1.30E-05	ZnF_C2H2	59	81	4.80E-05	ZnF_C2H2	87	109	1.30E-05	ZnF_C2H2	115	135	0.5
Dr SNAIL3_Zebrafish					ZnF_C2H2	33	55	3.80E-06	ZnF_C2H2	59	81	4.80E-05	ZnF_C2H2	87	109	4.80E-07	ZnF_C2H2	115	135	0.24
Haro SNAIL_Ascidia	ZnF_C2H2	2	24	3.20E-05	ZnF_C2H2	33	55	3.70E-06	ZnF_C2H2	59	81	0.0001	ZnF_C2H2	87	109	5.70E-07	ZnF_C2H2	115	135	0.17
Ci SNAIL_Ascidia	ZnF_C2H2	2	24	8.50E-05	ZnF_C2H2	33	55	3.80E-06	ZnF_C2H2	59	81	0.00016	ZnF_C2H2	87	109	1.10E-07	ZnF_C2H2	115	136	0.024
Oo SNAIL3_Killer_whale					ZnF_C2H2	31	53	1.70E-06	ZnF_C2H2	57	79	0.00018	ZnF_C2H2	85	107	2.70E-07	ZnF_C2H2	113	133	0.15
Mm SNAIL3_Mouse	ZnF_C2H2	2	24	0.0038	ZnF_C2H2	33	55	1.70E-06	ZnF_C2H2	59	81	3.90E-05	ZnF_C2H2	87	109	7.90E-07	ZnF_C2H2	115	135	0.13
Hs SNAIL3_Human	ZnF_C2H2	2	24	0.0093	ZnF_C2H2	33	55	6.80E-07	ZnF_C2H2	59	81	2.70E-05	ZnF_C2H2	87	109	1.60E-06	ZnF_C2H2	115	135	0.16
Ce SCRATCH1_Nematode	ZnF_C2H2	2	24	0.00019	ZnF_C2H2	33	55	0.00012	ZnF_C2H2	59	81	6.40E-06	ZnF_C2H2	87	109	5.90E-07	ZnF_C2H2	115	135	0.064
Sp SCRATCH2-like_Sea_urchir	ZnF_C2H2	2	24	1.70E-06	ZnF_C2H2	33	55	0.00019	ZnF_C2H2	59	81	3.20E-06	ZnF_C2H2	87	109	2.90E-06	ZnF_C2H2	115	135	0.069
Dm SCRATCH1-like_Fruitfly	ZnF_C2H2	2	24	2.60E-05	ZnF_C2H2	33	55	0.00082	ZnF_C2H2	59	81	1.80E-05	ZnF_C2H2	87	109	4.50E-07	ZnF_C2H2	115	135	0.083
Dm SCRATCH2-like_Fruitfly	ZnF_C2H2	2	24	2.10E-06	ZnF_C2H2	31	53	0.00084	ZnF_C2H2	57	79	6.80E-05	ZnF_C2H2	85	107	1.60E-06	ZnF_C2H2	113	133	0.13
Ta SCRATCH_Placazoa	ZnF_C2H2	2	24	1.10E-05	ZnF_C2H2	33	55	0.0003	ZnF_C2H2	59	81	1.10E-06	ZnF_C2H2	87	109	1.00E-06	ZnF_C2H2	115	135	0.086
Bf SCRATCH_Amphioxus	ZnF_C2H2	2	24	2.50E-06	ZnF_C2H2	33	55	0.00031	ZnF_C2H2	59	81	9.40E-07	ZnF_C2H2	87	109	2.90E-06	ZnF_C2H2	115	135	0.071
Ad SCRATCH_Stony_coral	ZnF_C2H2	2	24	1.00E-05	ZnF_C2H2	33	55	0.00023	ZnF_C2H2	59	81	7.30E-07	ZnF_C2H2	87	109	7.50E-08	ZnF_C2H2	115	135	0.14
Nv SCRATCH_sea_anemone	ZnF_C2H2	2	24	8.00E-06	ZnF_C2H2	33	55	0.00047	ZnF_C2H2	59	81	2.50E-06	ZnF_C2H2	87	109	1.30E-07	ZnF_C2H2	115	135	0.066
Dp SCRATCH1_Water_flea	ZnF_C2H2	2	24	1.30E-05	ZnF_C2H2	33	55	0.00039	ZnF_C2H2	59	81	1.30E-06	ZnF_C2H2	87	109	1.60E-06	ZnF_C2H2	115	135	0.22
Mm SCRATCH2_Mouse	ZnF_C2H2	2	24	4.50E-05	ZnF_C2H2	33	55	0.00023	ZnF_C2H2	59	81	2.30E-06	ZnF_C2H2	87	109	2.90E-06	ZnF_C2H2	115	135	0.19
Hs SCRATCH2_Human	ZnF_C2H2	2	24	4.50E-05	ZnF_C2H2	33	55	0.0002	ZnF_C2H2	59	81	2.30E-06	ZnF_C2H2	87	109	2.90E-06	ZnF_C2H2	115	135	0.19
Mm SCRATCH1_Mouse	ZnF_C2H2	2	24	3.40E-05	ZnF_C2H2	33	55	0.00018	ZnF_C2H2	59	81	2.30E-06	ZnF_C2H2	87	109	2.90E-06	ZnF_C2H2	115	135	0.13
Hs SCRATCH1_Human	ZnF_C2H2	2	24	3.40E-05	ZnF_C2H2	33	55	0.00018	ZnF_C2H2	59	81	2.30E-06	ZnF_C2H2	87	109	2.90E-06	ZnF_C2H2	115	135	0.13
Dr SCRATCH2_Zebrafish	ZnF_C2H2	2	24	5.80E-06	ZnF_C2H2	33	55	0.00013	ZnF_C2H2	59	81	6.40E-06	ZnF_C2H2	87	109	6.40E-07	ZnF_C2H2	115	135	0.092
Dr SCRATCH1_Zebrafish	ZnF_C2H2	2	24	5.80E-06	ZnF_C2H2	33	55	0.00022	ZnF_C2H2	59	81	6.10E-07	ZnF_C2H2	87	109	2.90E-06	ZnF_C2H2	115	135	0.1
St SCRATCH1-like_frog	ZnF_C2H2	2	24	8.70E-06	ZnF_C2H2	33	55	0.00022	ZnF_C2H2	59	81	2.00E-06	ZnF_C2H2	87	109	2.90E-06	ZnF_C2H2	115	135	0.09
Gg SCRATCH2_Chicken	ZnF_C2H2	2	24	2.50E-06	ZnF_C2H2	33	55	0.00023	ZnF_C2H2	59	81	7.30E-07	ZnF_C2H2	87	109	5.70E-07	ZnF_C2H2	115	135	0.053
Sp SCRATCH1_Sea_urchin	ZnF_C2H2	2	24	1.20E-05	ZnF_C2H2	33	55	3.20E-05	ZnF_C2H2	59	81	0.00011	ZnF_C2H2	87	109	2.10E-07	ZnF_C2H2	115	135	0.1
Dp SCRATCH-like_Water_flea	ZnF_C2H2	2	24	2.70E-06	ZnF_C2H2	33	55	3.20E-05	ZnF_C2H2	59	81	2.50E-06	ZnF_C2H2	87	109	8.30E-07	ZnF_C2H2	115	135	0.24
Dm SCRATCH2_Fruitfly	ZnF_C2H2	2	24	2.10E-06	ZnF_C2H2	33	55	0.00025	ZnF_C2H2	59	81	3.00E-05	ZnF_C2H2	87	109	2.00E-06	ZnF_C2H2	115	135	0.47
Nv SNAILA_sea_anemone	ZnF_C2H2	2	24	0.00026	ZnF_C2H2	33	55	2.70E-06	ZnF_C2H2	59	81	1.20E-05	ZnF_C2H2	87	109	4.40E-07	ZnF_C2H2	115	135	0.16
Dr SLUG_Zebrafish	ZnF_C2H2	2	24	3.20E-05	ZnF_C2H2	33	55	6.00E-06	ZnF_C2H2	59	81	4.10E-05	ZnF_C2H2	87	109	7.60E-07	ZnF_C2H2	115	135	0.14
Tr SLUG_Pufferfish	ZnF_C2H2	2	24	1.70E-05	ZnF_C2H2	33	55	6.00E-06	ZnF_C2H2	59	81	2.60E-05	ZnF_C2H2	87	109	3.60E-07	ZnF_C2H2	115	135	0.14
Xl SNAIL2_toad	ZnF_C2H2	2	24	2.90E-05	ZnF_C2H2	33	55	6.00E-06	ZnF_C2H2	59	81	2.60E-05	ZnF_C2H2	87	109	3.60E-07	ZnF_C2H2	115	135	0.14
Ac SNAIL2-like_Anole_lizard	ZnF_C2H2	2	24	1.30E-05	ZnF_C2H2	33	55	2.40E-06	ZnF_C2H2	59	81	2.60E-05	ZnF_C2H2	87	109	3.60E-07	ZnF_C2H2	115	135	0.14
Gg SNAIL2_Chicken	ZnF_C2H2	2	24	4.90E-05	ZnF_C2H2	33	55	2.40E-06	ZnF_C2H2	59	81	2.60E-05	ZnF_C2H2	87	109	3.60E-07	ZnF_C2H2	115	135	0.14
Mm SNAIL2_Mouse	ZnF_C2H2	2	24	1.60E-05	ZnF_C2H2	33	55	2.40E-06	ZnF_C2H2	59	81	2.60E-05	ZnF_C2H2	87	109	3.60E-07	ZnF_C2H2	115	135	0.14
Hs SNAIL2_Human	ZnF_C2H2	2	24	1.60E-05	ZnF_C2H2	33	55	2.40E-06	ZnF_C2H2	59	81	2.60E-05	ZnF_C2H2	87	109	3.60E-07	ZnF_C2H2	115	135	0.14
Xl SNAIL1_toad	ZnF_C2H2	2	24	6.30E-05	ZnF_C2H2	33	55	7.50E-06	ZnF_C2H2	59	81	2.60E-05	ZnF_C2H2	87	109	1.20E-06	ZnF_C2H2	115	137	0.2
St SNAIL1-like_frog	ZnF_C2H2	2	24	5.70E-05	ZnF_C2H2	33	55	7.50E-06	ZnF_C2H2	59	81	2.60E-05	ZnF_C2H2	87	109	1.20E-06	ZnF_C2H2	115	137	0.14
Oa Snail1_Platypus	ZnF_C2H2	2	25	0.00076	ZnF_C2H2	34	56	7.50E-06	ZnF_C2H2	60	82	4.10E-05	ZnF_C2H2	88	110	1.20E-06	ZnF_C2H2	116	138	0.2
Gg Snail1_Chicken	ZnF_C2H2	2	24	0.0013	ZnF_C2H2	33	55	7.50E-06	ZnF_C2H2	59	81	4.10E-05	ZnF_C2H2	87	109	1.20E-06	ZnF_C2H2	115	137	0.13
Mg Snail1_Wild_Turkey	ZnF_C2H2	2	24	0.0013	ZnF_C2H2	33	55	7.50E-06	ZnF_C2H2	59	81	4.10E-05	ZnF_C2H2	87	109	1.20E-06	ZnF_C2H2	115	137	0.13
Sp SNAIL_sea_urchin	ZnF_C2H2	2	24	1.20E-05	ZnF_C2H2	33	55	5.40E-06	ZnF_C2H2	59	81	1.90E-05	ZnF_C2H2	87	109	7.10E-07	ZnF_C2H2	115	135	0.096
Ts ESCARGOT_Pork_worm	ZnF_C2H2	2	24	0.00015	ZnF_C2H2	33	55	3.10E-05	ZnF_C2H2	59	81	2.20E-05	ZnF_C2H2	87	109	1.10E-05	ZnF_C2H2	115	135	0.054
Dp ESCARGOT_Water_flea	ZnF_C2H2	2	24	8.40E-05	ZnF_C2H2	36	58	4.90E-06	ZnF_C2H2	62	84	0.00012	ZnF_C2H2	90	112	4.30E-07	ZnF_C2H2	118	138	0.15
Cs SNAIL_Spider	ZnF_C2H2	2	24	3.70E-06	ZnF_C2H2	33	55	8.90E-06	ZnF_C2H2	59	81	2.60E-05	ZnF_C2H2	87	109	7.60E-07	ZnF_C2H2	115	135	0.1
Dm WORNIU_Fruitfly	ZnF_C2H2	2	24	5.30E-05	ZnF_C2H2	37	59	4.60E-06	ZnF_C2H2	63	85	4.60E-06	ZnF_C2H2	91	113	4.80E-07	ZnF_C2H2	119	139	0.044

Pv SNAIL1_Limpet	ZnF_C2H2	2	24	0.00016	ZnF_C2H2	33	55	2.90E-07	ZnF_C2H2	59	81	2.60E-05	ZnF_C2H2	87	109	9.00E-07					
Dm ESCARGOT_Fruitfly	ZnF_C2H2	2	24	1.20E-05	ZnF_C2H2	37	59	2.90E-06	ZnF_C2H2	63	85	2.60E-05	ZnF_C2H2	91	113	9.10E-06	ZnF_C2H2	119	139	0.18	
Bf SNAIL_Amphioxus	ZnF_C2H2	2	24	1.90E-05	ZnF_C2H2	33	55	2.10E-06	ZnF_C2H2	59	81	1.80E-05	ZnF_C2H2	87	109	1.00E-06	ZnF_C2H2	115	135	0.12	
Sk SNAIL_Acorn_worms	ZnF_C2H2	2	24	4.60E-05	ZnF_C2H2	33	55	1.50E-05	ZnF_C2H2	59	81	1.40E-05	ZnF_C2H2	87	109	1.20E-06	ZnF_C2H2	115	135	0.35	
Pv SNAIL2_Limpet	ZnF_C2H2	2	24	0.00077	ZnF_C2H2	33	55	1.80E-06	ZnF_C2H2	59	81	2.60E-05	ZnF_C2H2	87	109	9.00E-07	ZnF_C2H2	115	135	0.25	
Cg ESCARGOT_Pacific_oyster	ZnF_C2H2	2	24	0.0023	ZnF_C2H2	33	55	1.10E-06	ZnF_C2H2	59	81	2.60E-05	ZnF_C2H2	87	109	3.30E-06	ZnF_C2H2	115	135	0.48	
At SNAIL_spider	ZnF_C2H2	2	24	0.0029	ZnF_C2H2	33	55	5.10E-06	ZnF_C2H2	59	81	2.60E-05	ZnF_C2H2	87	109	1.00E-06	ZnF_C2H2	115	135	0.21	
Dm SNAIL_Fruitfly	ZnF_C2H2	2	24	0.00047	ZnF_C2H2	37	59	6.80E-06	ZnF_C2H2	63	85	4.60E-06	ZnF_C2H2	91	113	3.90E-07	ZnF_C2H2	119	139	0.093	
Tr SNAIL1-like_Pufferfish	ZnF_C2H2	2	24	0.0075	ZnF_C2H2	44	66	7.00E-06	ZnF_C2H2	70	92	4.00E-05	ZnF_C2H2	98	120	2.90E-06	ZnF_C2H2	126	146	0.56	
Dr SNAIL1-like_Zebrafish	ZnF_C2H2	2	24	0.00024	ZnF_C2H2	45	67	6.60E-06	ZnF_C2H2	71	93	9.80E-05	ZnF_C2H2	99	121	3.60E-07					
Ad SNAIL2_coral	ZnF_C2H2	2	24	5.30E-05	ZnF_C2H2	33	55	8.70E-06	ZnF_C2H2	59	81	1.40E-05	ZnF_C2H2	87	109	5.00E-07	ZnF_C2H2	115	135	0.14	
Am SNAIL2_Stony_coral	ZnF_C2H2	2	24	5.30E-05	ZnF_C2H2	33	55	8.70E-06	ZnF_C2H2	59	81	2.90E-05	ZnF_C2H2	87	109	5.00E-07	ZnF_C2H2	115	135	0.14	
Ta SNAIL1_Placazoa					ZnF_C2H2	34	56	8.30E-07	ZnF_C2H2	60	82	1.40E-05	ZnF_C2H2	88	110	1.30E-06	ZnF_C2H2	116	136	0.14	
Pc SNAIL1_Jellyfish					ZnF_C2H2	33	55	4.70E-06	ZnF_C2H2	59	81	7.10E-06	ZnF_C2H2	87	109	9.90E-08	ZnF_C2H2	115	135	0.2	

Dataset 4 continued: Sequences used for SMART prediction

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AmSnail-like Stony cora RNDVDSPGNLNRAKKPQKRERNASTSDVSQRKNKRTRKEFACKHCDKNYLSLGALKMHIRTHTLPCKCTICGKAFSRPWLLQGHIRTHTGEKPYQCPKCQRAFADRSNLRAHLQTHSSVKKYSCSQCSRSFSRMSLLVKHQYSCG
DrSnail1_Zebrafish      PQQTSRPRRSNKSRAGQREDKSEAAVTAASRPAFFCKHCPKEYNSLGALKMHIRSHTLPCVCPTCGKAFSRPWLLRGHIRTHTGERPFSCPHCNRAFADRSNLRAHLQTHADVKKYQCSTCSRTFSRMSLLQKHSAAGCC
StSnail3_frog           PQQTSRPRRSNKSRAGQREDKSEAAVTAASRPAFFCKHCPKEYNSLGALKMHIRSHTLPCVCPTCGKAFSRPWLLRGHIRTHTGERPFSCPHCNRAFADRSNLRAHLQTHADVKKYQCSTCSRTFSRMSLLQKHSAAGCC
TrSnail1_Pufferfish     PRQRMKCTGVMARSSPPEEEEEREAPATAARPAFLCKHCPKEYTSLGALKMHIRSHTLPCVCTTCGKAFSRPWLLRGHIRTHTGERPFSCPHCNRAFADRSNLRAHLQTHAEVKKYQCGICSRTFSRMSLLQKHSSSGCC
HmSnail-like426_Hydra   IFNKIENEKLFSTKQIIIDASRSQNDTLSKSKSGKPPRTFSCKYCVKDYMTLGALKMHIRTHTLPCKCPMCGKAFSRPWLLQGHVRTHTGEKPFKCSHCSRAFADRSNQRAHMQTHFESKKLECSKCCKTFIRFSQLSKHVLIGCD
MmSnail1_Mouse          TSASSLEAEAFIAFPGLGQLPKQLARLSVAKDPQSRKIFNCKYCNKEYLSLGALKMHIRSHTLPCVCTTCGKAFSRPWLLQGHVRTHTGEKPFSCSHCNRAFADRSNLRAHLQTHSDVKRYQCQACARTFSRMSLLHKHQESGCS
HsSnail1_Human           TSVSSLEAEAYAAFPGLGQVPKQLAQLSEAKDLQARKAFNCKYCNKEYLSLGALKMHIRSHTLPCVCGTCGKAFSRPWLLQGHVRTHTGEKPFSCPHCSRAFADRSNLRAHLQTHSDVKKYQCQACARTFSRMSLLHKHQESGCS
NvSnailB_sea_anemone    KLQCPNCMKGFNALATLMRHQYFYCPPTQHKRPFHCKYCEKLYDSLGALKMHIRTHTLPCKCKICGKAFSRPWLLQGHVRTHTGEKPYKCTQCQRAFADRSNLRAHLQTHSDVKKYSCKQCSKSFSRMSLLLKHEGSCS
Ad111963_Stony_coral    RAKKPQKRERNASTSDVSQRKNKRTRKEFACKHCDKNYLSLGALKMHIRTHTLPCKCTICGKAFSRPWLLQGHIRTHTGEKPYQCPKCQRAFADRSNLRAHLQTHSSVKKYSCSQCSRSFSRMSLLVKHQYSCG
HrSnail1_Leech          INNRISTNNGNILNNSNKFIDNNNISNNNNNSCNYCGRKYNTTGALKMHIRTHTLPCRCDLCGKSFSRPWLLQGHLRTHSGEKPFKCDFCQRAFADKSNLRAHLQTHAQIKRYCCSHCGKSFSRLPLLLKHGASCG
TrSnail3_Pufferfish     RFECLDCHNEHLSFMGLAKCRQLRCEWSSKKYFNCKYCEKEYISLGALKMHIRTHTLPCVCKLCGKAFSRPWLLQGHIRTHTGEKPFSCFHCSRAFADRSNLRAHLQTHSEMKRYQCACCLKTFSRISLLAKHQEAGCP
DrSnail3_Zebrafish      SDECFDCQKAYLSFSNLANQRQVHCQWPCHKYFTCKYCEKEYVSLGALKMHIRTHTLPCVCKLCGKAFSRPWLLQGHIRTHTGEKPFTCPHCSRAFADRSNLRAHLQTHSEIKKYQCRNCFKTFSRISLLTKHEEAGCC
HaroSnail_Ascidia       RFHCSECGRTYATVGGLMKHSKYHHDPENAMTFKCKTCEKEYTSLGALKMHIRTHTLPCKCHICGKAFSRTWLLQGHIRTHTGEKPYQCSVCLRAFADRSNLRAHMQTHQNVKRYACTGCEKTFSRTSLLNRHRASGCV
CiSnail_Ascidia         RIPCTECGRTYATIGALAKHAKTHEDPESGSKFNCKICKKECSSLGALRMHIRTHTLPCECHICGKAFSRTWLLQGHIRTHTGEKPYQCTVCSRAFADRSNLRAHMQTHETVKRYSCVTCEKTFSRISLLKRHQVHCE
OoSnail3_Killer_whale   RAPCTPGGFRTPAALARHQQLQCHLQAQRCFTCKFCDKEYGSLGALKMHIRTHTLPCLCTVCGKAFSRPWLLQGHIRTHTGEKPYTCPHCSRAFADRSNLRAHLQTHSDTKKYQCKRCAKTFSRVALLARHEESGCC
MmSnail3_Mouse          SFECIHCHRPYHTLAGLARHQQLHCHLPTGRAFTCRYCDKEYASLGALKMHIRTHTLPCICKVCGKAFSRPWLLQGHIRTHTGEKPYTCSHCSRAFADRSNLRAHLQTHVGTKKYRCAVCPKAFSRMSLLARHEEAGCC
HsSnail3_Human           GFECFHCHKPYHTLAGLARHRQLHCHLQVGRVFTCKYCDKEYTSLGALKMHIRTHTLPCTCKICGKAFSRPWLLQGHVRTHTGEKPYACSHCSRAFADRSNLRAHLQTHSDAKKYRCRRCTKTFSRMSLLARHEESGCC
CeCes1_Nematode         RCVCDKCGKSYATTSNLSRHKQTHRALDSPHAKQCPHCDRVYVSMPALSMHILTHNASHECNVCGKRFSRLWLLQGHLRSHTGLRPFSCAHCGKSFADRSNLRAHMLTHTGDKRFECDKCGRRFALRAYLNRHLETCK
SpScratch2-like Sea urcl KYKCNECGKQYATSSNLSRHKQTHRSLDSHLAKKCEVCNKVYVSMPALAMHVLTHNLKHKCNVCHKSFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAYKNYKCKRCDKSFALKSYLNKHYESACF
DmScratch-like1 Fruitfl CYKCCECGKQYATSSNLSRHKQTHRSLDSQSAKKCNTCGKAYVSMPALAMHLLTHKLSHSCDICGKLFSRPWLLQGHLRSHTGEKPYACVHCGKAFADRSNLRAHMQTHSGDKNFKCHRCNKTFALKSYLNKHLESACL
DmScratch_Fruitfly       KYTCSECGKQYATSSNLSRHKQTHVDSQSAKKCHTCGKAYVSMPALAMHLLTHKLSHSCGVCGKLFSRPWLLQGHLRSHTGEKPYGCAHCGKAFADRSNLRAHMQTHSVDKNFECKRCHKTFALKSYLNKHLESACL
Taznf-like_Placazoa      RYTCAECGKQYATSSNLSRHKQTHRSLDGQLARRCKYCDKAYVSMPALAMHVLTHELAHKCNICGKAFSRSWLLQGHMRSHTGEKPYACATCNKRFADRSNLRAHMQTHSSVKSFQCKNCGKSFALKSYLNKHAESGCC
BfSnail-like_Amphioxus   RYTCNECGKQYATSSNLSRHKQTHRPLDSKLAKTCPTCGKVYVSMPALSMHVLTHQLSHKCDICNKAFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAFKQYKCKRCNKSFALKSYLNKHYESACF
Adv102984_Stony_coral    RYICAECGKSYATSSNLSRHKQTHRSLDSKLAKRCEHCGKAYVSMPALAMHILTHKLHHKCDVCGKAFSRPWLLQGHMRSHTGERPFMCPECNKAFADRSNLRAHMQTHSPLKQFKCNRCDRTFALKSYLNKHAESACA
NvScratch-like sea anem RYVCAECGKSYATSSNLSRHKQTHRSLDGKLAKRCHQCGKAYVSMPALAMHVLTHKLLHKCEICGKSFSRPWLLQGHKRSHTGERPYSCPECNKAFADRSNLRAHLQTHNPLKQYKCERCDRTFALKSYLNKHLESACS
Dp114328_Water_flea      RYVCGECGKAYATSSNLSRHKQTHRSLESGCARTCPTCGKAYVSMPALSMHLLTHALSHVCPVCSKAFSRPWLLQGHMRSHTGEKPYGCAHCGKAFADRSNLRAHMQTHSATKSHHCGKCHKAFALKSYLNKHLESSCF
MmScratch2_Mouse        RHACAECGKTYATSSNLSRHKQTHRSLDSQLARKCPTCGKAYVSMPALAMHVLTHNLRHKCGVCGKAFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAFKHYRCRQCDKSFALKSYLHKHCEAACV
HsScratch_Human          RHACAECGKTYATSSNLSRHKQTHRSLDSQLARKCPTCGKAYVSMPALAMHLLTHNLRHKCGVCGKAFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAFKHYRCRQCDKSFALKSYLHKHCEAACA
MmScratch1_Mouse        RHACGECGKTYATSSNLSRHKQTHRSLDSQLARRCPTCGKVYVSMPAMAMHLLTHDLRHKCGVCGKAFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAFKHFQCKRCKKSFALKSYLNKHYESACF
HsScratch1_Human         RHACGECGKTYATSSNLSRHKQTHRSLDSQLARRCPTCGKVYVSMPAMAMHLLTHDLRHKCGVCGKAFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAFKHFQCKRCKKSFALKSYLNKHYESACF
DrScratch2_Zebrafish     RHTCNECGKTYATSSNLSRHKQTHRSLDSKMARKCPTCDKVYVSMPALAMHILTHDLKHKCHVCSKAFSRPWLLQGHMRSHTGEKPFACAHCGKAFADRSNLRAHMQTHSAFKHYSCKRCNKTFALKSYLNKHYESACF
DrScratch1_Zebrafish     RHTCNECGKTYATSSNLSRHKQTHRSLDSKMAKKCPTCGKVYVSMPAMAMHLLTHDLKHKCDICGKAFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAFKHFKCKRCNKTFVLKSYLNKHYESACF
StScratch1-like_frog     RHSCSECGKSYATSSNLSRHKQTHRSLDSKLAKKCPTCGKVYVSMPAMAMHLLTHDLKHKCETCGKAFSRPWLLQGHMRSHTGEKPFGCAHCGKAFADRSNLRAHMQTHSAFKHYKCKRCSKTFALKSYLNKHYESACF
GgScratch2_Chicken       RHSCPECGKTYATSSNLSRHKQTHRSLDSKMARKCPTCGKAYVSMPALAMHVLTHNLKHKCDVCGKAFSRPWLLQGHMRSHTGEKPFGCSHCGKAFADRSNLRAHMQTHSAFKHYKCKQCEKTFALKSYLNKHYESACF
SpSnail2-like Sea urchi GHSCPECRKSYSTSSNLARHRQTHRSVTDQKARKCPHCEKVYVSMPALSMHIRTHKLGCKCHICGKCFSRPWLLQGHIRTHTGERPFSCPQCGKAFADKSNLRAHVQTHSTIKPYVCQKCNKAFALKSYLYKHVESACY
Dp153927_Water_flea      GHECPDCGKRYSTSSNLARHRQTHRSPADQKARRCPHCDKVYVSVPAFSMHVRTHSQGCKCPYCGKSFSRPWLLQGHIRTHTGEKPFTCQICEKAFADKSNLRAHIQTHSNLKPFTCQRCGKAFALKSYLYKHEESSCM
DmScratch-like2 Fruitfl EHICPECGKKYSTSSNLARHRQTHRSIMDKKARHCPYCEKVYVSMPAYSMHVRTHNQGCECQFCGKRFSRPWLLQGHIRTHTGEKPFKCGVCEKAFADKSNLRAHIQTHSNTKPHTCARCGKAFALKSYLYKHEESSCM
NvSnailA_sea_anemone     KHQCHQCNKGYSTPLGLAKHQQFHCNTHRKKSFTCKHCDKIYVSLGALKMHIRTHTLPCKCSICGKAFNRPWLLQGHIRTHTGEKPYQCTNCKRAFADRSNLRAHMQTHAVVKKYSCSRCKKSFSRMSLLVKHEDSGCP
DrSlug_Zebrafish        KFQCGLCNKSYSTYSGLMKHKQLHCDAQSRKSFSCKYCEKEYVSLGALKMHIRTHTLPCVCKMCGKAFSRPWLLQGHIRTHTGEKPFSCPHCSRAFADRSNLRAHLQTHSDVKKYQCKNCSKTFSRMSLLHKHEESGCC
TrSlug_Pufferfish        KFQCSLCSKSYSTYSGLLKHKQLHCDAQARKSFSCKYCEKEYVSLGALKMHIRTHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCPHCNRAFADRSNLRAHLQTHSDVKKYQCKNCSKTFSRMSLLHKHEESGCC
XlSnail2_toad            KFQCSLCSKTYSTFSGLAKHKQLHCDAQSRKSFSCKYCEKEYVSLGALKMHIRTHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCPHCNRAFADRSNLRAHLQTHSDVKKYQCKNCSKTFSRMSLLHKHEESGCC
AcSnail2-like Anole liz KFQCSLCNKTYSTFSGLAKHKQLHCDAQSRKSFSCKYCDKEYVSLGALKMHIRTHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCPHCNRAFADRSNLRAHLQTHSDVKKYQCKNCSKTFSRMSLLHKHEESGCC
GgSnail2_Chicken         KFQCGLCNKTYSTFSGLAKHKQLHCDAQSRKSFSCKYCDKEYVSLGALKMHIRTHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCPHCNRAFADRSNLRAHLQTHSDVKKYQCKNCSKTFSRMSLLHKHEESGCC
MmSnail2_Mouse           KFQCNLCNKTYSTFSGLAKHKQLHCDAQSRKSFSCKYCDKEYVSLGALKMHIRTHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCPHCNRAFADRSNLRAHLQTHSDVKKYQCKNCSKTFSRMSLLHKHEESGCC
HsSnail2_Human           KFQCNLCNKTYSTFSGLAKHKQLHCDAQSRKSFSCKYCDKEYVSLGALKMHIRTHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCPHCNRAFADRSNLRAHLQTHSDVKKYQCKNCSKTFSRMSLLHKHEESGCC
XlSnail1_toad            KFQCNLCSKSYSTFAGLSKHKQLHCDSQTRKSFSCKYCEKEYVSLGALKMHIRSHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCTHCNRAFADRSNLRAHLQTHSDVKKYQCKSCSRTFSRMSLLHKHEETGCT
StSnail1_frog            KFQCNQCSKSYSTFAGLSKHKQLHCDSQARKSFSCKYCEKEYVSLGALKMHIRSHTLPCVCKICGKAFSRPWLLQGHIRTHTGEKPFSCTHCNRAFADRSNLRAHLQTHSDVKKYQCKNCSRTFSRMSLLHKHEETGCT
OaSnail-like_Platypus    KFSCHQCPKAYATFAGLSKHRQLLHCDAQPRKSFSCKYCEKEYVSLGALKMHIRSHTLPCVCKMCGKAFSRPWLLQGHIRTHTGEKPFSCTHCNRAFADRSNLRAHLQTHSDVKKYQCKSCSRTFSRMSLLHKHEETGCS
GgSnail1_Chicken         RFRCAQCAKAYSTFAGLSKHKQLHCDAQTRKSFSCKYCEKEYVSLGALKMHIRSHTLPCVCKMCGKAFSRPWLLQGHIRTHTGEKPFSCTHCNRAFADRSNLRAHLQTHSDVKKYQCKTCSRTFSRMSLLHKHEETGCS
MgSnail-like Wild Turke RFRCAQCAKAYSTFAGLSKHKQLHCDAQTRKSFSCKYCEKEYVSLGALKMHIRSHTLPCVCKMCGKAFSRPWLLQGHIRTHTGEKPFSCTHCNRAFADRSNLRAHLQTHSDVKKYQCKTCSRTFSRMSLLHKHEETGCS
LvSnail Green sea urchi KYHCPDCGKEYSTFGGLSKHRQLHCDAQNKKTFNCKYCDKEYMSLGALKMHIRTHTLPCKCKFCGKAFSRPWLLQGHIRTHTGEKPFSCPHCQRAFADRSNLRAHLQTHSEVKKYSCKSCGKTFSRMSLLNKHEESGCI
TsEscargot_Pork_worm     RIQCPDCNRSYSTLGGLSKHRQFHCISQIKRQFGCKFCEKQYSSLGAMKMHIRTHTLPCKCHICGKAFSRPWLLQGHIRTHTGEKPFCCGHCGRAFADRSNLRAHLQTHTHLKKYSCNLCQKTFSRMSLLTKHVTSGCR
DpEscargot_Water_flea    RYQCPDCHKSYSTYCGLTKHQELHCAAQQAANKKSFSCKHCEKVYVSLGALKMHIRTHTLPCKCLLCGKAFSRPWLLQGHIRTHTGEKPFSCPHCSRSFADRSNLRAHLQTHSDVKRYSCKSCGKTFSRMSLLSKHEDGGCG
CsSnail_Spider           RYQCPDCNKSYSTYSGLSKHRLMHCATQAKKSFGCKYCDKVYVSLGALKMHIRTHTLPCKCKLCGKAFSRPWLLQGHIRTHTGEKPFSCPHCSRAFADRSNLRAHLQTHSEVKKYRCKTCSKTFSRMSLLLKHEDGGCA
DmWorniu_Fruitfly        RYHCQDCGKSYSTYSGLSKHQQFHCPSAEGNQVKKVFSCKNCDKTYVSLGALKMHIRTHTLPCKCPICGKAFSRPWLLQGHIRTHTGEKPFSCQHCNRAFADRSNLRAHMQTHSDVKKYSCPTCTKSFSRMSLLAKHLQSGCQ
PvSnail1_Limpet          RYQCEACQKSYSTFGGLSKHRQFHCSQQVKKEFRCKYCDKSYSSLGALKMHIRTHTLPCKCKLCGKAFSRPWLLQGHIRTHTGEKPFSCQHCGRAFADRSNLRAHLQTHAEIKKYGCKSCSKTFSRMSLLLKHGESSCM
DmEscargot_Fruitfly      RYQCPDCQKSYSTFSGLTKHQQFHCPAAEGNQVKKSFSCKDCDKTYVSLGALKMHIRTHTLPCKCNLCGKAFSRPWLLQGHIRTHTGEKPFSCQHCHRAFADRSNLRAHLQTHSDIKKYSCTSCSKTFSRMSLLTKHSEGGCP
BfSnail_Amphioxus        RYQCPQCAKSYSTYSGLTKHKQFHCVTQSKKAFNCKYCDKVYVSLGALKMHIRTHTLPCKCKICGKAFSRPWLLQGHVRTHTGEKPFACPHCSRAFADRSNLRAHLQTHSDIKKYSCKNCSKTFSRMSLLTKHEEAGCC
SkSNail_Acorn_worms      RYQCTECSKSYSTFSGLTKHKQFHCVTQAKKSFSCKYCEKEYLSLGALKMHIRTHTLPCKCKICGKAFSRPWLLQGHIRTHTGEKPFACTYCNRAFADRSNLRAHLQTHSDVKKYCCKSCSKTFSRMSLLTKHEEAGCC
PvSnail2_Limpet          RYQCDSCKKSYSTFSGLSKHKQFHCASQIKKEFNCKYCDKTYVSLGALKMHIRTHTLPCKCKLCGKAFSRPWLLQGHIRTHTGEKPFSCQHCGRAFADRSNLRAHLQTHSDVKKYSCRSCSKTFSRMSLLLKHEDGCCG
CgEscargot Pacific oyst RYHCDGCTKVYATFSGLTKHKQFHCASQVKKEFSCKYCDKTYVSLGALKMHIRTHTLPCKCKLCGKAFSRPWLLQGHIRTHTGEKPFRCDHCARAFADRSNLRAHLQTHSDIKKYSCKSCCKTFSRMSLLLKHEDGCCS
AtSnail_spider           RYFCSACSKNYATYSGLSRHKQFHCITLEKKAFNCKYCDKIYVSLGALKMHIRTHTLPCKCNLCGKAFSRPWLLQGHIRTHTGEKPFACPHCSRAFADRSNLRAHLQTHSDVKKYSCNACSKTFSRMSLLLKHNDGGCG
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DmSnail_Fruitfly         RFKCDECQKMYSTSMGLSKHRQFHCPAAECNQEKKTHSCEECGKLYTTIGALKMHIRTHTLPCKCPICGKAFSRPWLLQGHIRTHTGEKPFQCPDCPRSFADRSNLRAHQQTHVDVKKYACQVCHKSFSRMSLLNKHSSSNCT
TrSnail2_Pufferfish      IYHCLHCSNSYSSLSALSHHQLSHFPQTQHTSSLPTEVSARPAFHCKHCPKEYTSLGALKMHIRSHTLPCVCPTCGKAFSRPWLLRGHIRTHTGERPFACQLCNRAFADRSNLRAHLQTHSEVKKYQCGSCARTFSRMSLLHKHNASGCC
DrSnail2_Zebrafish       RFQCAHCGKSCSSPACLSRHQLAHCSPQDGISGRTSSSPAPGPPFHCKHCPKEYNSLGALKMHIRSHTLPCVCSTCGKAFSRPWLLRGHIRTHTGERPFSCPHCNRAFADRSNLRAHLQTHSEVKKYQCGSCSRRTFSRMSLLHKHTLSGCC
Adv1008519_Stony_coral   NYECHDCRKSYSSVTSLLRHQQYHCHPNHKRPFHCKYCDKLYVSLGALKMHIRTHTLPCKCKICGKAFSRPWLLQGHIRTHTGEKPYKCPNCQRAFADRSNLRAHLQTHSEVKKYSCGLCSKSFSRMSLLLKHEASGCP
AmSnail2_Stony_coral     NYECHDCRKSYSSVTSLLRHQQYHCHPNHKRPFHCKYCDKLYVSLGALKMHIRTHTLPCKCKICGKAFSRPWLFQGHIRTHTGEKPYKCPNCQRAFADRSNLRAHLQTHSEVKKYSCGLCSKSFSRMSLLLKHEASGCP
TaSnail_Placazoa         QYNTASIPTNITEENISVQKDDTKDMIYHDGKNFVCKHCNKVYASLGALKMHIRTHTLPCKCKICGKAFSRPWLLQGHIRTHTGEKPFGCEKCNRSFADRSNLRAHMQTHAEIKKYSCYKCRRTFSRWSSLKKHENSSNC
PcSnail_Jellyfish        IVKPSDFIDKSKEQINVPKKSKVPRKGKNSRHYSCKYCDKDYMSLGALKMHIRTHTLPCQCKICGKSFSRPWLLQGHIRTHTGERPFVCSYCGRAFADRSNLRAHMQTHVDVKKYECRKCMKSFSRMSLLTKHEEFDCT
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