

Supplementary Data

List of sequences used to generate alignment of mature Wamide consensus sequences in Figure 2.

Annelida

>XP_009012861.1 hypothetical protein HELRODRAFT_168750 [Helobdella robusta]
MIGQNITITLTFIIISLLHLSINNSLASAASTKNVDNDDNQQYSKLYNDVEENGDNNDVTFE
SDKRKWSSNNMGMWGGKRSSELDLTPKRAWSSNKMAMWGRKKKSPKIENNGGNDVDVI
NDGSSNDNYHNLDEKDLGENAEKREWASNYMGMWGGKRSQMMPPDNLHFPFYIISGN
KRKVIDAGSWMNQPAIQRRSKWGS GMMM WGGKRSKQGT FNSDDD VIPAPDDV
Eukaryota; Metazoa; Lophotrochozoa; Annelida; Clitellata; Hirudinea; Rhynchobdellida;
Glossiphoniidae; Helobdella.

>ELU01469.1 hypothetical protein CAPTEDRAFT_197880 [Capitella teleta]
MASCRLLLTVITLVICSLVVLADDPETEEQAQDLVPHDMDQDLMDKRK WGSNSMRVW
GKR DGDDEMEMDGGAEKRK WGGNNMRVW GKRK WGANSMRVW GKRSELPEEEKR
KWGGSNTMRTW GKRADDNEEDELAKRK WGSNSMRVW GKRADDNKRK WGSNSMRV
W GKRADDDMDESKRGWKNNMRVW GKRADDEIDEDKRK WGSNSMRVW GKR SADD
DAELAAAVPHAIVKRSLDSEFTDDMEKRR WGGNDMRVW GKR RSRADGPKRSWKTN
VMRVW GKR GWADNNMRVW GKRADEGAEKRAWVGDKSLSWGKRSDNEVIRNLLAE
QVMMSIISPTKYLRDVAICVGGVLGGFSRDPLSE
Eukaryota; Metazoa; Lophotrochozoa; Annelida; Polychaeta; Scolecida; Capitellida;
Capitellidae; Capitella.

>AFV92893.1 MIP/allatostatin B neuropeptide precursor [Platynereis dumerilii]
MDRVTITCFSLCLASVLIPLVHSEENVLDLDEDKRAWMKNNIAW GKR GWKQGASYSWG
KRDSEGDGLMSDEEKRAWNKNNMRVW GKR SDEDDKRGWKDSSMRVW GKRAGEDD
NNKRW GKNL RVW GKRADDDLEVLDEKRAWGDNNMRVW GKRSDLEDDKRAWNKNS
MRVW GKR DMEEDDNKRAWKGQSARVW GKRADEDDKRGWNGNSMRVW GKR GWH
GNGVRQW GKR LHLDDVEPILDDEESKRAWAKNNMRVW GKR STDNVRNMKAVVAEP
AEVAADAESA KSS
Eukaryota; Metazoa; Lophotrochozoa; Annelida; Polychaeta; Palpata; Aciculata; Phyllodocida;
Nereididae; Platynereis.

Brachiopoda

>XP_013388469.1 protein RNA-directed DNA methylation 3 [Lingula anatina]
MAAITADSLTITFFLTLMVLSSPLVHCVINSQMLRDAQNLDAQPYGRYIEEDIVIPNDSQE
EENSHRYQSQA VSLKRLEYLFNKLENNIMRNEPLKRQWSKSMTMWGKRSPYFYSEDM
EDPHALRLRRRSLEKTDDNNKTKEKTDFQLTNNVIRSWKSGGMKLWGKRPFDKEMEES
RDADLKKLGENMDWKQKERDLKRSWSGNAMKLWGKRDNFTDDQHDKKSWSKSNM
KLWGKREDDKRSWNSKSLKVW GKR DVDQADEENNKRSWSSKNMKLWGKRNEQKDG
LEYEKRPWSSSKMKLWGKRDN SVEADINEKRQWNSNGMKVW GKRMDGEIIDELSNKR
KWNSEKMKLWGKRDSIQHNALNEKRGWNAKG MKLWGKRSEKRPWNGKGMKLWGK
RDSSGYESESNNYPYLYRKRSIDVDSKRSWKS GGIKLWGKRDMADGDVDLVSNLRPAG

GVKRPWNSGMKLWGKKRASDSLRFDSA KSDSWIQDGKRSWIGKNPWATKIGFDPSK
RWRSMKLWGKRDSGQSQHDYEDALNKWNSMKLWGKDLTSLIKAEIGNNSNTKSLSNE
FEEKVFDHGV DNETNTETGSSPLNKEISNEHVTTTRHTLSKRSGWMPREGLRNMWG
Eukaryota; Metazoa; Lophotrochozoa; Brachiopoda; Linguliformea; Lingulata; Lingulida;
Linguloidea; Lingulidae; Lingula.

Mollusca

>NP_001191611.1 PTSP-like peptide neurotransmitter precursor [*Aplysia californica*]
MTLHLASPFILLFTIAYSLTSAVQGLEPLPAASLSDSPASGADVPLPSSAATNAAVDKE
WLRQKLEEGQFLPQQDKRWGGINSWMTHRLGGPSE RDSSQDSL KQLLVNNVQNYDD
SSKRKWSKFSSWGKR DASEETPEGGE GEDGLGAVKKWKNMAVWGKRAEDGLDKRW
KQMATWVGKREDGDVLGLGTDKRWKQMASWGKRLDDSDRDKKWKQMSVWGKRED
NGEPLDKKWKEMSVWGKRDTLDDPEKRWKQMAVWGKRQGLDDRNDKRWKQMAT
WGKRNSSEN YDKRWKQMSVWGKR DGDGDLDKRWKQMSVWGKR DGDGDLDKRWK
QMSVWGKRNGDGDLDKRWKQMSVWGKR DGEDVEKRWKQMSVWGKR DGDADLD
KRWKQMSVWGKRDE DGNLDKRWKQMSVWGKRDE DGNLDKRWKQMSVWGKR DGD
DNLDKRWKQMSVWEREREREWV
Eukaryota; Metazoa; Lophotrochozoa; Mollusca; Gastropoda; Heterobranchia; Euthyneura;
Euopisthobranchia; Aplysiida; Aplysioidea; Aplysiidae; Aplysia.

>XP_009051899.1 hypothetical protein LOTGIDRAFT_231501 [*Lottia gigantea*]
MDLKTILCLIIYSLLLQISHAE EQLANDIELSNSLN PVDKRAWKSSYLNTWGKRWNPRYN
LRGYQRMPIWAKRWTNSGLITWGKR SADTEIPIHKRKWNQFITWGKRSGVPSIVKRSVG
DELVPWGKNKDTLPELNTSSDNL DNKLIDLETPSTDKLSLDEKRASDKGWN GFTTWG
KRANKDWSSLSTWGKR GQNKDWSSLTTWGKR GHDRDWN SLTTWGKRANKDWSSLS
TWGKRARENDWSALSTWGKR ANNKDWASLTTWGKR ANDRDWN SLTTWGKR AKGN
NWSGLTTWGKRANKDWN SLTTWGKRANKDW SGLTTWGKR GNKDW SGLTTWGKR G
NKDW SGLTTWGKR GNKDW SGLTTWGKR GNKDW SGLTTWGKR GNKDW SGLTTWGKR
RGNKDW SGLTTWGKR GNNDW SGLTTWGKR GNKDW SGLTTWGKR SPDATSEDSGELS
TLDKKDIKGWNG LTTWGKR FAGDKNK WSSLTTWGKR DDNNKQDDKKWAQLSTWGK
RSPEDAAELWKIYDSNGD GIMDK EEMVSFLRSAASQKDSQQDEKS
Eukaryota; Metazoa; Lophotrochozoa; Mollusca; Gastropoda; Patellogastropoda; Lottioidea;
Lottiidae; Lottia.

>XP_011417556.1 PREDICTED: uncharacterized protein LOC105321065 [*Crassostrea gigas*]
MLCHLEQ LLLSCIVLCLVKV CASLKAQDEASVNDH DIVRRQAMGHSFGDELEGFDLDP
KRVNNWNQFPAWGKRLSKRRWSSLGAWGKR SWLDRLISANNNWGKRWKSMSNSWG
KRQAPSEFDGLSDDYINIKRSVDSKF SHNSRNKR SIPTELSPEQNEEKRRWSSLSAWGK
RSDDDEKRRWSSLSAWGKR SNPEAIDDNDSDNISKRWSSFS SWGKR GDPVDLSKRLY
SYWQNRLMTNNP WMERRGWN AFSSWGKR SMD
Eukaryota; Metazoa; Lophotrochozoa; Mollusca; Bivalvia; Pteriomorphia; Ostreoida; Ostreoidea;
Ostreidae; Crassostrea.

>XP_014775853.1 PREDICTED: uncharacterized protein LOC106873140 [*Octopus bimaculoides*]

MATFLNFLLFVTVLALTKFSTLSAELNELSNKQSAIKVARSMMPAKFLESDLEAWDEKI
GDQRNWEDRLNMKRNWDELSSWGKRSAFDNNAIDNEFGNSLRRALNSHNLKLSSLLN
GAELQKRWDSLQAWGKRNANGNEAAYGKNVKRDHMKASDGTWKKVGSADGDKR
GNGWDEMNGWGKRNAVQHKIRSRNWDSLQAWGKRSPSDDSALEYENNQRQKRSTGK
IL

Eukaryota; Metazoa; Lophotrochozoa; Mollusca; Cephalopoda; Coleoidea; Neocoleoidea;
Octopodiformes; Octopoda; Incirrata; Octopodidae; Octopus.

Arthropoda

>KZS20495.1 AST-B/myoinhibitory peptide-like protein [Daphnia magna]

MQLWQCPLLLMVSLIAAINTQQTPSQQRFEPNQVAELVELHQQLGPSREQQEQPAQAD
NKDHQLAASPAALLQLTPSDWRSSDKRNWNRMQGMWGKRSQQQSDESATLHDMTP
QRMVKRAWSDLSQQGWGKRSWTQLHGVWGKRRWDQLHGAWGKRTVDGQVDSQED
QSAETEREDVSDSDELETSKRSGWNKMQGVWGKRSDTPNLDGIGNNDLLLMLSGDQL
YLKDDDQPTAKLVEDDENGESTNKRAWNQMQGVWGKRALSAMAAGYKRNWNNLRG
AWGKREIPAAVAKGMEWSRKRESGWNNLKGLWG

Eukaryota; Metazoa; Ecdysozoa; Arthropoda; Crustacea; Branchiopoda; Diplostraca; Cladocera;
Anomopoda; Daphniidae; Daphnia.

>XP_018024231.1 PREDICTED: prothoracicostatic peptide-like [Hyaella azteca]

MGWVRIRENISIVRFMVILSLVWTSASEQSIHKSTNNFGPANQSFLSRVTSEKSAVADG
GELNVYGTSSSEHVAQEAEPEPNLLIDDELRTKRDGEKWSSLRGSWGKRNPALDRG
WNNFRGTWGKKADWSSLRGSWGKRGSADAMADKRADWSNFRGSWGKRRTSAPEASLD
DSVSDLDQFDHDYDAFNEDPSSALSPDDATRLNNDALFLETVKLLSQRAQNKEDFADQ
EILNSGDDEEQNLVQKRSTAAYSGWLKRPVGTLLLAPRSVNWSSLRGSWGKRSGPTNW
SSLRGTWGKRPAKDSNWAGLRGTWGKRPAKDSNWADLRGTWGKRPAKDSNWANLR
GTWGKRPAKDSNWANLRGTWGKRPAKDSNWADLRGTWGKKSGGQKWSSLRGTWG
KRSDQVDELDLGDE

Eukaryota; Metazoa; Ecdysozoa; Arthropoda; Crustacea; Malacostraca; Eumalacostraca;
Peracarida; Amphipoda; Senticaudata; Talitrida; Talitroidea; Hyalellidae; Hyalella.

>ATQ64324.1 B-type allatostatin [Megabalanus volcano]

MWTRCLLLSWACLLLLLTVRAGSAEAEQPQAVTAGKRDWDALHGNWGKRQPSEVIDD
PEDDRELMREVAGDLVLSGYEPEDKRKWNSTFTGSWGKRAKWNNFSGSWGKRKWNNS
MGPSWGKRAKWDNFGGSWGKRKGWENFGGSWGKRKNWDFNGAWGKRKGWDSFS
GGWGKRAAWNNFGGSWGKRDAASLPTLQEASDPLETFIKNNYKLLQARVPASSGQTQA
RKRKDWTQLNGMWGKRSPAKELLLV

Eukaryota; Metazoa; Ecdysozoa; Arthropoda; Crustacea; Maxillopoda; Cirripedia; Thoracica;
Sessilia; Balanidae; Megabalanus.

>NP_001137202.1 allatostatin type b precursor [Tribolium castaneum]

MMSFAAAIMRDAVAPVLGAVLLTCYSLQATLALSDETPLKSSNDNPQIEDEMSKRDWN
KDLHIWGKRGWNNLHEGWGRKRSVPAWEEQQEKRAWQSLQSGWGKRFAPEDEYAIR
QLAAMLDSQYDDYNPEIETNDDEKRNWGGQFHGGWGKRKWDNFRGSWGKREPAWSN
LKGIWGKRSGEK

Eukaryota; Metazoa; Ecdysozoa; Arthropoda; Hexapoda; Insecta; Pterygota; Neoptera; Holometabola; Coleoptera; Polyphaga; Cucujiformia; Tenebrionidae; Tenebrionidae incertae sedis; Tribolium.

>NP_001036890.1 prothoracicostatic peptide precursor [*Bombyx mori*]
MRWCLFALWVFGVATVVTAAEEPHHDAAPQTDNEVDLTEDDKRAWSSLHSGWAKRA
WQDMSSAWGKRAWQDLNSAWGKRGWQDLNSAWGKRAWQDLNSAWGKRGWQDLN
SAWGKRDDDEAMEKKSQDLNSVWGKRAWQDLNSAWGKRAWQDLNSAWGKRGW
NDISSVWGKRAWQDLNSAWGKRAWQDMSSAWGKRAPEKWA AFHGSWGKRSSIEPD
YEEIDAVEQLVPYQQAPNEEHIDAPEKKAWSALHGTWGKRPVKPMFNNEHSATTNEA
Eukaryota; Metazoa; Ecdysozoa; Arthropoda; Hexapoda; Insecta; Pterygota; Neoptera;
Holometabola; Lepidoptera; Glossata; Ditrysia; Bombycoidea; Bombycidae; Bombycinae;
Bombyx.

>XP_021915053.1 prothoracicostatic peptide [Zootermopsis nevadensis]
MEYFAIPGVILWLLLLAVSPSSQGDPISDPARVPPGSGPSGGTLSRAQDVPTQVQGPEED
KRGWRDLQGGWGKRGWQDLQIPYSHSPEEM EYFAIPGVILWLLLLAVSPSSQGDPISDP
ARVPPGSGPSGGTLSRAQDVPTQVQGPEEDKRGWRDLQGGWGKRGWQDLQGGWGKR
GWQDLQGGWGKRGWQDLQGGWGKRGWQDLQGGWGKRGWQDLQGGWGKRGWQD
LQGGWGKRGWQDLQGGWGKRGWQDLQGGWGKRGWQDLQGGWGKRGWQDLQGG
WGKRGWQDLQGGWGKRGWDKFHGSWGKRDSLDLDFDVNSLDNDVADEELVDEESGE
DLKRAWSSLKGGWGKRAADWANFRGSWGKRDPGWNNLKGLWGKRADTNWNRLSA
AWGKRSIGGETGIKEDPARVMSSSEE

Eukaryota; Metazoa; Ecdysozoa; Arthropoda; Hexapoda; Insecta; Pterygota; Neoptera;
Polyneoptera; Dictyoptera; Blattodea; Blattoidea; Termitoidae; Termopsidae; Zootermopsis.

>XP_014260688.1 prothoracicostatic peptide isoform X2 [*Cimex lectularius*]
MSWRTLFLAWVAVAINCEVPDFVGPQSPLDEETNSALNLPEDSPNKKAWKDLTTAWG
KRGWKDLPATGWGKRGWQDLQSAWGKRGWTDLNSGGWGKRGWQDLNSGGWGKR
GWQDLNSGGWGKRGWQDLQAPAWGKREEKSLDEKESEGEDAKRSWVSLHSGWGKR
AADWGSFRGSWGKKDPAWQNLKGLWGKRNYNGFMEPYDPGYNTLDEEGRRAK
Eukaryota; Metazoa; Ecdysozoa; Arthropoda; Hexapoda; Insecta; Pterygota; Neoptera;
Paraneoptera; Hemiptera; Heteroptera; Panheteroptera; Cimicomorpha; Cimicidae; Cimex.

>AAF49354.1 myoinhibiting peptide precursor [*Drosophila melanogaster*]
MAHTKTRRTYGFLMVLILGSACGNLVASGSAGSPPSNEPGGGGLSEQVVLDQLSESDL
YGNNKRAWQSLQSSWGKRSSSGDVSDPDYMTGHFVPLVITDGTNTIDWDTFERLASG
QSAQQQQQQPLQQSQSGEDFDDLAGEPDVEKRAWKSMNVAWGKRRQAQGWNKFR
GAWGKREPTWNNLKGMWGKRDQWQKLHGGWGKRSQPSN
Eukaryota; Metazoa; Ecdysozoa; Arthropoda; Hexapoda; Insecta; Pterygota; Neoptera;
Holometabola; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; *Drosophila*;
Sophophora.

>XP_021196035.1 prothoracicostatic peptide-like isoform X1 [*Helicoverpa armigera*]

MRYCVAALWLSALITLVVAAADDAHHDVAPAQNDNEIELTEEEKRAWSSLHGGGGWG
KRGWQDMSSAWGKRGWNDMSSAWGKRGWNDMSSAWGKRAWQDLNSAWGKRGW
QDLNSAWGKRAWRDMSQSPWGKRGWQDMSSAWGKRGWNDMSSAWGKRGWNDMS
SAWGKRGWNDMSSAWGKRGPEKWANFHGSWGKRSEDPDYEEIDAAIEQLIPIQLSES
ERMDTPEKKAWSALHGAWGKRPVKQAQYNSGSYYWKREPAWTNLRGMWGKRSGQV
DADAVIDDDHESSARDEA

Eukaryota; Metazoa; Ecdysozoa; Arthropoda; Hexapoda; Insecta; Pterygota; Neoptera;
Holometabola; Lepidoptera; Glossata; Ditrysia; Noctuoidea; Noctuidae; Heliothinae;
Helicoverpa.

>AKN21242.1 allatostatin-B precursor, partial [Locusta migratoria]

AWQDLGSAWGKRAWQDLGSAWGKRAWQDLNAGWGKRAWQDLGSAWGKRAWQDL
NAGWGKRGWRDLQSAWGKRAWNLNGAWGKRGGDDEATWPELPDQTITEDEDGDH
DLMQMOMPLPLAMQLQGDEGEPGDEQKRAWSSLHGAWGKRAADWRAFHGSWGKRE
PGWTNLKGLWGKRAGPSNWNRLPAVWGKRSEDE

Eukaryota; Metazoa; Ecdysozoa; Arthropoda; Hexapoda; Insecta; Pterygota; Neoptera;
Polyneoptera; Orthoptera; Caelifera; Acrididea; Acridomorpha; Acridoidea; Acrididae;
Oedipodinae; Locusta.

>XP_013784813.1 prothoracicostatic peptide-like [Limulus polyphemus]

MKFPTYGFCILFIFHVVIQIQSKPTDMDTLDDALANVENEAGDKRGWNNLSGMWGKR
GWNNLSGMWGKRGSSWNLDSGMWGKRGWNNLSEILGKRSSGWNNLSGMWGKRGW
NNLSGMWGKRSSKWNNLKGLWGKRAISPLDEERIAWDIVESDNFSPVNHQLLANILSE
D

Eukaryota; Metazoa; Ecdysozoa; Arthropoda; Chelicerata; Merostomata; Xiphosura; Limulidae;
Limulus.

>XP_030023380.1 prothoracicostatic peptide-like [Manduca sexta]

MRCCVAVLWAFFATWAVAAAEPPHDAAPQTDNELDLTDEDKRAWTSLRGGWAKRG
WQDMSSAWGKRAWQDLNSAWGKRAWQDLNSAWGKRAWQDLNSAWGKRGWQDLN
SAWGKRSDDEAMDKRAWQDLNSAWGKRGWQDMSSAWGKRAWQDLNSAWGKRGW
NDMSSAWGKRAWQDLNSAWGKRGWQDMSSAWGKRAPEKWAAFHGSWGKRAAEPD
YEELDAAIEQLVPIHQMDDEDRMDAPEKKAWSALHGAWGKRPVKQAQFNSGAYYWKR
EPGWTNLRGMWGKRSAPEEALTDHESSEARDEA

Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota;
Lepidoptera; Glossata; Ditrysia; Bombycoidea; Sphingidae; Sphinginae; Sphingini; Manduca.

Tardigrada

>OWA51718.1 hypothetical protein BV898_16190 [Hypsibius dujardini]

MNYLMAFVCIALVAFLGSVLCVPAAVAPAKDSVALKAADEPSEHNDIIVKRDWNGMR
AAWGKRADDYADLEEELPERQRRGPSSSWQSGMGAWGKRANDWGSMAAWGKRTP
TEWNPEYIQTQLQRQMEAVKNRRAGTWQLASWGRRR

Eukaryota; Metazoa; Ecdysozoa; Tardigrada; Eutardigrada; Parachela; Hypsibiidae; Hypsibius.

>GAU98064.1 hypothetical protein RvY_09262 [Ramazzottius varieornatus]

MEKIVSLSGLLCLLGFVLLGSFAPKTSAQSTAAISTGMDKAEKRDWADMKSSWGKRSQE
PDDITVEDLQLAEIPTRSIREAAGWRDGMRASWGKRADRDVSNGWTSGLKAWGKRG
WSQNLRAWGKRTPVEWTDEYVRSLQRQIAAAKNRRASNWQLASWGK
Eukaryota; Metazoa; Ecdysozoa; Tardigrada; Eutardigrada; Parachela; Hypsibiidae;
Ramazzottius.

Nematoda

>NP_001252155.1 Neuropeptide-Like Protein [Caenorhabditis elegans]
MQLIHFIIVGLAMLISLSLAASDDRVLGWNKAHGLWGKRSVQEASQDKRTPQNWNKLN
SLWGKRSASSFDDDDYTTENGDDDDVTMLYKRSPAQWQRANGLWGR
Eukaryota; Metazoa; Ecdysozoa; Nematoda; Chromadorea; Rhabditida; Rhabditina;
Rhabditomorpha; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.

>KHN83875.1 hypothetical protein Tcan_11366 [Toxocara canis]
MMCSQSSLALQMLRAGIVLLVVIVSLSPSTLAYEIDKRNNWNKAVGLWGKRIPSQLL
DSGLEKRPQNQWNKLNLSLWGKRSSWQTANGLWGKRSSWQTANGLWGKRSLRFEELD
GYH
Eukaryota; Metazoa; Ecdysozoa; Nematoda; Chromadorea; Ascaridida;
Ascaridoidea; Toxocaridae; Toxocara.

Priapulida

>XP_014663362.1 PREDICTED: prothoracicostatic peptide-like [Priapulus caudatus]
MQMTCCHCYLLLLAGLAALALAEDTNELGNAVDIDAPHDDKRGWHDLDGHAYGKR
AGWHDLDQTSWGKRDNDADADEQEKRGWHDLDTAFGKRGWRDLNTAFGKRGWRDLNTA
FGKRGWRDLRMAFGKRDAVDTAEDQLVADEEKRGWHDLDNTAFGKRGWRSLNSAFGK
RGDNSAAIIEDLITEQLFDDIDSDGDKCIDRKELRLLVKKLLAGEL
Eukaryota; Metazoa; Ecdysozoa; Scalidophora; Priapulida; Priapulidae; Priapulus.

Cnidaria

>AYD75757.1 GLWamide precursor [Nematostella vectensis]
MALFGHTLVAVLFLCLALCHAETKRKAADTTDTENELDASPNVNDDDDNDIKRMPTDTK
RQAGAPGLWGKRDAGPPGLWGKRDAGPPGLWGKRSPKPPGLWGKRQAGAPGLWGK
RSAGPPGLWGKRDAGPPGLWGKRVAGPPGLWGKRQAGAPGLWGREAGAPGLWGKR
QAGAPGLWGKREAGAPGLWGREANAPGLWGKRRAAGAPGLWGKREANAPGLWGKRQ
AGPPGLWGKREANAPGLWGKRQAGPPGLWGKREANAPGLWGKRQAGPPGLWGKRD
EDEDEDMDDETNGDPLWGRSADAGPPGLWGRKKRAASPQRDLYGIGLWGRNAALMTA
EELDLSFKNEEQS
Eukaryota; Metazoa; Cnidaria; Anthozoa; Hexacorallia; Actiniaria; Edwardsiidae; Nematostella.

>XP_002164748.1 PREDICTED: LWamide neuropeptides [Hydra vulgaris]
MGMFERKKIVLLVSLICVSQQATNVQDANSKSTSTELKVVKPQKRVTVPKDAEKLILR
TQDNSLDLNTNGEEVWDELTHNIPLEYIEKIYNELNQLAQNENRKPRLWGATAAINTDN
LNPEVENELNKKNPVIEKFERPIGLWHKDIETKNPENRLPLGLWGKDSEPLPIGLWGK
DADVNDLLKKEPLPIGLWGKDTDSTRGDNKPNAKYGKLPGLWGKDNLALNDLGGKN
NGKDSGPPPLWGKDSKPIPLWGKDNGPMTGLWGKKDVGPPPPLWGKKDQPPIGM

WGRAGKRDSNPYPGLWGKKEELENVDKEIEEDSLEEFACLLNPPCEIQEKRYNIDKS
GPPPGLWGKRSEKYQMKNPPWRGGMWGRSEILENSVHDSKKTNTIDMEHAEN
Eukaryota; Metazoa; Cnidaria; Hydrozoa; Hydroidolina; Anthoathecata; Aplanulata; Hydridae;
Hydra.

>ALY05321.1 peptide precursor 2 [Clytia hemisphaerica]
MKIYFGCLFVILSVNQIGCYPSSNQNSERELVRRYKTVHPNPHYQVNEIQRVKEALKRR
VLENVHRVDSLKASLKRVLGQDAGNGFHLSSSKIFQKKRSKARLPHSYMFRKRQNSPG
ALGLWGREVEAPGDIGPPGIWGDVVPDETRKDKPGAVQGLWGKDERVIRALLKTLKR
Eukaryota; Metazoa; Cnidaria; Hydrozoa; Hydroidolina; Leptothecata; Campanulariidae; Clytia.

>ARN59429.1 pp11 precursor [Clytia hemisphaerica]
MDQSLSSILLCCWVALTTCMSVQRKEAGDALSDKENAKKSANSITEELARNLME
HLYDEIRKRSNSNEETISNFRASSDTHRQQQAPKGLWGRELQPGNPPGLWGREASEAE
NTDSNDGPIPGMWGRREADDKNAHEKFQ
Eukaryota; Metazoa; Cnidaria; Hydrozoa; Hydroidolina; Leptothecata; Campanulariidae; Clytia.

>sp|Q16992.1|LWA_ ANTEL RecName: Full=LWamide neuropeptides; Contains: RecName:
Full=LWamide I; Contains: RecName: Full=Metamorphosin A; Short=MMA; AltName:
Full=LWamide II; Contains: RecName: Full=LWamide III; Contains: RecName: Full=LWamide
IV; Contains: RecName: Full=LWamide V; Contains: RecName: Full=LWamide VI; Contains:
RecName: Full=LWamide VII; Contains: RecName: Full=LWamide VIII; Contains: RecName:
Full=LWamide IX; Flags: Precursor
MALKCHLVLLAITLLLAQCSGSVDKKDSTTNHLDEKKTDS TEAHIVQETDALKENSYLG
AEEESKEEDKKRSAAPQQPGLWGKRQKIGLWGRSADAGQPGLWGKRQSPGLWGRSAD
AGQPGLWGKRQNPGLWGRSADAGQPGLWGKRQNPGLWGRSADAGQPGLWGKRQNP
GLWGRSADARQPGLWGKREIYALWGGKRQNPGLWGRSADPGQPGLWGKRELVGLW
GGKRQNPGLWGRSAEAGQPGLWGKRQKIGLWGRSADPLQPGLWGKRQNPGLWGR
SADPQQPGLWGKRQNPGLWGRSADPQQPGLWGKRQNPGLWGRSADPQQPGLWGKRQ
NPGLWGRSADPQQPGLWGKSPGLWGRSADPQQPGLWGKRQNPGLWGRSADPQQPGL
WGKRQNPGLWGRSADPQQPGLWGKRQNPGLWGRSADPQQPGLWGKRQNPGLWGRS
ADPQQPGLWGKRQNPGLWGRSAGSGQLGLWGKRQSRIGLWGRSAEPPQFEDLEDLKK
KSAIPQPKGQ
Eukaryota; Metazoa; Cnidaria; Anthozoa; Hexacorallia; Actiniaria; Actiniidae; Anthopleura.

Placozoa

>RDD46844.1 Antho-RFamide neuropeptides type 2 [Trichoplax sp. H2]
MLTNRFIWILFLGITTAQNVAKGKAQIGNHKS VFLKNEATRPERDQPPRWGRDQPTRW
GRDQPPRWGRDQPPRWGRDQPSRWGRDQPPRWGRDQPPRWGRDQPPRWGRDQPPRW
GRDQPPRWGRDQPPRWGRDQPPRWGRDQPPRWGRDQPPRWGGDQLPEIEKNYAPPR
WGRDQYSWWNQEQYPSRWGREYSTPDNTAEKLLDSLTHQSENAKKNNFQEINSDSNS
GNESAVHRLFSNKLKNQKAKSDSNKLMNSFSGSEISRPREKSLKRSETLDNMRIDLI
Eukaryota; Metazoa; Placozoa; Trichoplax.