>Human\_ALPI\_Hsa2:233,320\_NP\_001622\_[Homosapiens]\_ENSG00000163295]

MQGPWVLLLLGLRLQLSLGVIPAEEENPAFWNRQAAEALDAAKKLQPIQKVAKNLILFLGDGLGVPTVTATRILKGQKNGKLGPETPLAMDRFPYLALSKTYNVDRQVPDSAATATAYLCGVKANFQTIGLSAAARFNQCNTTRGNEVISVMNRAKQAGKSVGVVTTTRVQHASPAGTYAHTVNRNWYSDADMPASARQEGCQDIATQLISNMDIDVILGGGRKYMFPMGTPDPEYPADASQNGIRLDGKNLVQEWLAKHQGAWYVWNRTELMQASLDQSVTHLMGLFEPGDTKYEIHRDPTLDPSLMEMTEAALRLLSRNPRGFYLFVEGGRIDHGHHEGVAYQALTEAVMFDDAIERAGQLTSEEDTLTLVTADHSHVFSFGGYTLRGSSIFGLAPSKAQDSKAYTSILYGNGPGYVFNSGVRPDVNESESGSPDYQQQAAVPLSSETHGGEDVAVFARGPQAHLVHGVQEQSFVAHVMAFAACLEPYTACDLAPPACTTDAAHPVAASLPLLAGTLLLLGASAAP

>Human\_ALPL\_Hsa1:21,835,858\_NP\_000469\_ENSG00000162551]

MISPFLVLAIGTCLTNSLVPEKEKDPKYWRDQAQETLKYALELQKLNTNVAKNVIMFLGDGMGVSTVTAARILKGQLHHNPGEETRLEMDKFPFVALSKTYNTNAQVPDSAGTATAYLCGVKANEGTVGVSAATERSRCNTTQGNEVTSILRWAKDAGKSVGIVTTTRVNHATPSAAYAHSADRDWYSDNEMPPEALSQGCKDIAYQLMHNIRDIDVIMGGGRKYMYPKNKTDVEYESDEKARGTRLDGLDLVDTWKSFKPRYKHSHFIWNRTELLTLDPHNVDYLLGLFEPGDMQYELNRNNVTDPSLSEMVVVAIQILRKNPKGFFLLVEGGRIDHGHHEGKAKQALHEAVEMDRAIGQAGSLTSSEDTLTVVTADHSHVFTFGGYTPRGNSIFGLAPMLSDTDKKPFTAILYGNGPGYKVVGGERENVSMVDYAHNNYQAQSAVPLRHETHGGEDVAVFSKGPMAHLLHGVHEQNYVPHVMAYAACIGANLGHCAPASSAGSLAAGPLLLALALYPLSVLF

>Human\_ALPP\_Hsa2:233,243,244\_NP\_001623\_[Homosapiens]\_ENST00000392027]

MLGPCMLLLLLLLGLRLQLSLGIIPVEEENPDFWNREAAEALGAAKKLQPAQTAAKNLIIFLGDGMGVSTVTAARILKGQKKDKLGPEIPLAMDRFPYVALSKTYNVDKHVPDSGATATAYLCGVKGNFQTIGLSAAARFNQCNTTRGNEVISVMNRAKKAGKSVGVVTTTRVQHASPAGTYAHTVNRNWYSDADVPASARQEGCQDIATQLISNMDIDVILGGGRKYMFRMGTPDPEYPDDYSQGGTRLDGKNLVQEWLAKRQGARYVWNRTELMQASLDPSVTHLMGLFEPGDMKYEIHRDSTLDPSLMEMTEAALRLLSRNPRGFFLFVEGGRIDHGHHESRAYRALTETIMFDDAIERAGQLTSEEDTLSLVTADHSHVFSFGGYPLRGSSIFGLAPGKARDRKAYTVLLYGNGPGYVLKDGARPDVTESESGSPEYRQQSAVPLDEETHAGEDVAVFARGPQAHLVHGVQEQTFIAHVMAFAACLEPYTACDLAPPAGTTDAAHPGRSVVPALLPLLAGTLLLLETATAP

>Human\_ALPPL2\_Hsa2:233,271,553\_NP\_112603\_ENST00000295453\_[Homosapiens]

MQGPWVLLLLGLRLQLSLGIIPVEEENPDFWNRQAAEALGAAKKLQPAQTAAKNLIIFLGDGMGVSTVTAARILKGQKKDKLGPETFLAMDRFPYVALSKTYSVDKHVPDSGATATAYLCGVKGNFQTIGLSAAARFNQCNTTRGNEVISVMNRAKKAGKSVGVVTTTRVQHASPAGAYAHTVNRNWYSDADVPASARQEGCQDIATQLISNMDIDVILGGGRKYMFPMGTPDPEYPDDYSQGGTRLDGKNLVQEWLAKHQGARYVWNRTELLQASLDPSVTHLMGLFEPGDMKYEIHRDSTLDPSLMEMTEAALLLLSRNPRGFFLFVEGGRIDHGHHESRAYRALTETIMFDDAIERAGQLTSEEDTLSLVTADHSHVFSFGGYPLRGSSIFGLAPGKARDRKAYTVLLYGNGPGYVLKDGARPDVTESESGSPEYRQQSAVPLDGETHAGEDVAVFARGPQAHLVHGVQEQTFIAHVMAFAACLEPYTACDLAPRAGTTDAAHPGPSVVPALLPLLAGTLLLLGTATAP

>Mouse\_Alppl2\_Mmu1:88,983,265\_ENSMUST00000027455[Mouse]

MWGACLLLLGLSLQVCPSVIPVEEENPAFWNRKAAEALDAAKKLKPIQTSAKNLVILMGDGMGVSTVTATRILKGQQQGHLGPETQLAMDRFPHMALSKTYNTDKQIPDSAGTGTAFLCGVKTNMKVIGLSAAARFNQCNTTWGNEVVSVMHRAKKAGKSVGVVTTTSVQHASPAGTYAHTVNRGWYSDAQMPASALQDGCKDISTQLISNMDIDVILGGGRKFMFPKGTPDQEYPTDTKQAGTRLDGRNLVQEWLAKHQGARYVWNRSELIQASLNRSVTHLMGLFEPNDMKYEIHRDPAQDPSLAEMTEVAVRMLSRNPKGFYLFVEGGRIDHGHHETVAYRALTEAVMFDSAVDKADKLTSEQDTMILVTADHSHVFSFGGYTQRGASIFGLAPFKAEDGKSFTSILYGNGPGYKLHNGARADVTEEESSNPTYQQQAAVPLSSETHSGEDVAIFARGPQAHLVHGVQEQNYIAHVMAFAACLEPYTDCGLASPAGQSSAVSPGYMSTLLCLLAGKMLMLMAAAEP

>Mouse\_Alpi\_Mmu1:88,994,579\_ENSMUST00000113270[mouse]

MQGDWVLLLFLGLRIHLSFGIIPAEEENPAFWNKKAAEALDAAKKLQPIQTSAKNLIIFLGDGMGVPTVTATRILKGQLEGHLGPETPLAMDLFPYMALSKTYNVDRQVPDSAGTATAYLCGVKANYKTIGLSAAARLDQCNTTFGNEVFSVMYRAKKAGKSVGVVTTTRVQHASPAGTYAHTVNRNWYSDAEMPASALQDGCKDIATQLISNMDIDVILGGGRKFMFPKGTPDPEYPSDSNQSGTRLDDQNLVQTWLSKHQGARYVWNRSELIQASQDPAVTHLMGLFEPTEMKYDANRNPSVDPSLAEMTEVAVRMLSRNPQGFYLFVEGGRIDQGHHAGTAYLALTEAVMFDSAIEKASQLTNEKDTLILITADHSHVFAFGGYTLRGTSIFGLAPLKALDDKSYTSILYGNGPGYELKSGNRPNVTEAQSVDPNYKQQAAVPLSSETHGGEDVAIFARGPQAHLVHGVQEQNYIAHVMAFAGCLEPYTDCGLAPPAGQSPVITPGQATTTNNAAGQATTTNNAAGQATVLLSLQLLVSMLLLVGTAMVVS

>Mouse\_Akp3\_Mmu1:89,021,583\_ENSMUST00000044878[mouse]

MQGTWVLLLLGLRLQLSLSVIPVEEENPAFWNKKAAEALDAAKKLQPIQTSAKNLIIFLGDGMGVPTVTATRILKGQLEGHLGPETPLAMDRFPYMALSKTYSVDRQVPDSASTATAYLCGVKTNYKTIGVSAAARFDQCNTTFGNEVFSVMYRAKKAGKSVGVVTTTRVQHASPSGTYVHTVNRNWYGDADMPASALREGCKDIATQLISNMDINVILGGGRKYMFPAGTPDPEYPNDANETGTRLDGRNLVQEWLSKHQGSQYVWNREQLIQKAQDPSVTYLMGLFEPVDTKFDIQRDPLMDPSLKDMTEAAVKVLSRNPKGFYLFVEGGRIDRGHHLGTAYLALTEAVMFDLAIERASQLTSERDTLTIVTADHSHVFSFGGYTLRGTSIFGLAPLNALDGKPYTSILYGNGPGYVGTGERPNVTAAESSGSSYRQQAAVPVKSETHGGEDVAIFARGPQAHLLHGVQEQNYIAHVMAFAGCLEPYTDCGLAPPADESQTTTTTRQTTITTTTTTTTTTTTPVHNSARSLGPATAPLALALLAGMLMLLLGAPAES

>Mouse\_Alpl\_Mmu4:137,297,648\_ENSMUST00000030551]

MISPFLVLAIGTCLTNSFVPEKERDPSYWRQQAQETLKNALKLQKLNTNVAKNVIMFLGDGMGVSTVTAARILKGQLHHNTGEETRLEMDKFPFVALSKTYNTNAQVPDSAGTATAYLCGVKANEGTVGVSAATERTRCNTTQGNEVTSILRWAKDAGKSVGIVTTTRVNHATPSAAYAHSADRDWYSDNEMPPEALSQGCKDIAYQLMHNIKDIDVIMGGGRKYMYPKNRTDVEYELDEKARGTRLDGLDLISIWKSFKPRHKHSHYVWNRTELLALDPSRVDYLLGLFEPGDMQYELNRNNLTDPSLSEMVEVALRILTKNLKGFFLLVEGGRIDHGHHEGKAKQALHEAVEMDQAIGKAGAMTSQKDTLTVVTADHSHVFTFGGYTPRGNSIFGLAPMVSDTDKKPFTAILYGNGPGYKVVDGERENVSMVDYAHNNYQAQSAVPLRHETHGGEDVAVFAKGPMAHLLHGVHEQNYIPHVMAYASCIGANLDHCAWAGSGSAPSPGALLLPLAVLSLRTLF

>Amphioxus\_Alp2\_XP\_002598196\_BRAFLDRAFT\_119115[Branchiostomafloridae]

MARASIDEALRLQTLNTNVAKNVVLFLGDGMGVSTVTTARILKGQKAGNPGEETVLAMDSLPYTAMSKTYNIDKQVPDSAACATAFLCGVKTNLGLLGLDGRATYKNCSSAKGHEVESIIEHAEKAGKSTGIVTTTRVTHATPAAGYAHTASRNWEADSDLTAEARENNCTDIAFQLVEEAPDIEVILGGGRRAFLTNNMTDPEDGSKGTRKDGRDLIQRWLDRKTGPARYVWNETEFNSVDPESVDYLLGLFEPSSMQYSVDRLNDTAGEPSLAAMTRKAIQVLQKNRNGFFLLVEGGRIDQAHHASKAVKALEETVVFDDAVQVANDMLDTSDSLIVVTADHSHTLTFAGYPDRGHPIFGQNVYTSSTPDYDWDKLPYTTLLYGNGPGYTLVETTNGNDTQVTRQNITDVNTADKEYKQQSAAPLRSETHGGEDVIIMADGPMAHLFHGVQEQHYIAHVMMYAACLGEYTEHCDKPGTPKPVRDAGPAARGSYYTVALTTVLSGLLMTTATHF

>Fly\_Aph-4-RA\_Dmel3R:26,874,654\_FBtr0085733\_brain&MalpighianTubules]

MHCLVILGFLLGSLVAFSWAGVTTQPPPLIRTLSAGGDIGPQFDVGKTKEPEDAEFWHNVGLRQLEKTIKQAQRVKEDSYQKKARNIIIFIGDGMGISTISAGRIYKGQYLKHGYGEEETLVFDDFPNTGMAKTYNVDKQVPDSAGTATAIFSGSKTHYGAIGMDATRSKKNGQQGRVQSVMEWAQKEGKRTGVVTTTRITHATPAATYAHIYDRDWECDTEVPAESVGFHVDIARQLVENAPGNRFNVILGGGMSPMGILNASEVKTTIFEGPTETICTRGDNRNLPAEWLAHHANDTVPPALVHNRKDLLNVNVKKVDHLMGLFRNNHITYSIAREAGEPSLQEMTETALGILERGDESNGFVLLVEGGRIDQGHHMNYARAALHELYEFDLAIQAAVNNTDPDETLILVTADHSHAVTFNGYALRGADILGTANSHEKNDPMFYETISYANGPGYWDHLANDSRPQNSSNMWMPLKHFTAEERAAPTYRHLATVPRKDETHGGEDVAVFAYGPGSSLIRGVFEQNYLAYVMSYAGCLGPAKDFDDSCEDHKDGQKDRPLDKPNPKRNGATVVGASLIPILTAATAAILRGRGL

>Fly\_CG8105-RA\_DmelX:15,481,766\_FBtr0074048]

MLLQLRRLAILFLLHALIPILALSVPMVEQVQPADELLSSHWLRQAQSQLRERLARTKDSIADVRQAKNVVMLLGDGLSITTLTAARILKGQRRGGRGEDAQLAVEQFPFSGLSKTYCIDEQTPDSACTATAYFGGVKTHSGTVGQSGSGERVDSVLQWAQRAGKATGVVTTTRLTDASPAGAYAHVSRRGEELEIARQLVEEEPGRNLNVILGGGLGKFADERRDGKDLLAQWRESNPNGCFSRSLKELRNCTDATGTLLGIFSDSHMSYHLAASKELPRLCDMAAAAIEKLERKSQEDGNGYFVFIEGGRIDHGHHETRVGYALDEMVEFDAAVETVIQMTDPRDTLVVVTADHSHTLSMSGYAKRGTPILGMDAQQRDVNGVPYSTLNYAIGKWQSLDKDGRRESPSKTLSPTSYTPSYIHGRKGVHSGEDVVVFAMGPQSHLFGGVMEQNLLPHIMGYAACLGNGLTLCNQDKDADMIA

>Fly\_CG1809-RA\_Dmel2R:5,449,154\_FBtr0088520]

MARRFILLLVLAVCLSGSASGQRDHPRGRSFDAESHPIKYAEEQQTQYWVDKAQAKLLSKLAEQESATTNKAKNVILFLGDGMSVHTVTATRNLLGDSAEQVYFEGFPYTGLSKTYCVNRQVADSACTATAYLGGVKANYGTIGVNANVSRYSCDGAANEEDRVLSIAHWAQAAGKDAGLVTTARVTHASPAGVYAHIADRNWENDWEVANRECDPEQTIDIARQLVEQPVGQQLKVILGGGRKNFIDATVNDEEGYPGKRTDGRHLIRSWLDQKKEANVSAKYVWSRKGLSLVDLENTDYLLGLFANDHLPYNGDRDRKRSQLADPSLSELTEAAITVLSRNDKGFFLFVEGARIDMAHHDTFAKRSLEDTAEFARAVQKARELTSEDDTLIVVTADHAHVMSINGYPYRDQEITGLAQLADDNLPYTILSYANGPGYYSGYNRAEGRALLKEKLVADSDYQYPTLAPLDAETHGGDDVAVYASGPYAQYFSGNYEQSNIPALMARAAGIGPYA

>Fly\_CG3292-RA\_Dmel2R:18,091,199\_FBtr0071783]

MKTFVAISLVLCTLVATSLAASIDMPEIHNQFQLVGGSVSTAKTREGNLIDPNAMAKGKPGPEEEKNAQFWYDLAYEEIAKRLEQPQLDKRKAKNVILFLGDGMSLSTVAAARIHKGQLKGNTGEEDSLSFEKFPYTGLSRTYCSNAQVPDSACTATAYLCGVKTNIVALGITAAVSFNNCSGSEDPANQVDSIAAWAQAAGKATGIVTTTTLTHASPSGAYAKTTNRFFESDTDILTYGEGQNDPATCTDIATQLITQAPGKNFDVMLGGGIGKFLPNTITDPFNKKGERSDGVNLLSRWQGLHPGGVLAYNRNQLLSVNVSKITNLIGTFRSGVMSFNKMADPKEEPTLAEMTRKAIEVVSKRDGGYFLFVEGGLIDYGNHFNSPTYSLSETLQFEQAVQEALDITDPEETLIVVTSDHAHPLTISGYPGRGTPILGLNQDDTDVNGVKYATLNYAVGTNQYLDEHGQRIDLTDQIGAEDFIHPSYIHGTIGVHAGDDVGIFATGPQSHLFTGVMQQSTIPHLMAYASCIGNGPTLCDNED

>Fly\_CG3290-RA\_Dmel2R:18,093,510\_FBtr0071782]

MHISQRRCLYPIFLFLLAFVGTALGRVQEVHNVLELTGQKASKLRFSTDVATGKYTPPEEMDPQFWYKLADEEIAKRLQLPQPNSDRAKNVIMFLGDGMPISTVTAARILKGQRQGNTGEESSLSFEKFPYSGLSRTYCANAQVPDSACTATAYLCGVKTNIINIGVSAAVNFNNCTASQDPANRLTSIAEWAQNAGKSTGFVTTTTLTHASPSGAYAKTANRMWQSDTDVTSYGVDASTCVDMATQLVTQTPGKNFEVMFGGGMGKFLPKTTKDSHGKYGERSDGVNLLSRWQGLHDKGVLVTNRKQLLNLDVSAASSIIGTFQSGLMDFHMDADPTYQPTLSELTEVAIKKLSHNENGYFVFIEGGLIDYGNHYTQAGYALDEALEFEKAIQLAREMTNISDTLIVVTADHGHAVSIAGYPGRGTPILGLNQHDTDINGVKYSVLNYAAGPNQYLDEHGQRIPLDDILGPDDAISPSYIDKEIGVHSGEDVGIWASGPQSHLFTGVMQQSTIPHLMAYASCVGSGKQVCGSSGRKT

>Fly\_CG3264-RA\_Dmel2R:18,096,412\_FBtr0071781]

MGSSQRQLVLPILLLLALAGTALCGVQEVHNVLELTGQAANKLKFSTDVATEKYTPPEEMDPQYWYNIADEEITKRLQLPQPNSQKAKNIIMFLGDGMPLSTVAAARILKGQRQGNTGEESSLSFERFPYTGLSRTYCSNAQVPDSACTATAYLCGVKTNIVNIGVSAAVEYNNCTASQDPANRLTSIAEWAQNAGKSTGIVTTTTLTHASPSGAYAKTANRMWECDTDVTSYGVDANSCIDMATQLVTQTPGKNFEVMFGGGMGKFLPNSIVDSHGNPGERSDGVNLLSRWQGLHDGGVLVTNRNQLLKLNVSAVSSVIGLFQSKLMNFHLEADDTYQPTLSELTEVTIKKLSQNKEHGYFAFIEGGLIDYGNHYTKAGYALDEALEFEKAIQLARDMTDIEDTLIVVTADHGHAVSIAGYPGRGTPILGINQHDTDINGVQYSVLNYAAGPNQYLDENGQRIPLDDILGSDDAITPSYIPKDQGVHSGEDVGIFASGPQSHLFTGVMQQSTIPHLMAYAACIGSGKQVCDN

>Fly\_CG5150-RA\_Dmel3L:5,588,646\_FBtr0077086]

MLSLKFWIRLGLLTVVWGAAVPGRAPVDEERMHPHLPTSPRLRTISGEETQEFWHSASKKLIREKLEFVRNTKKAKNIILFLGDGMGLATLAAARSYIGGEELKLSFEEFPFTGLSKTYSVDKIVPDSACTSTSYLCGVKANYGTIGVNAHVKRGDCAAMANETNHVFSLGKWAMDAGKAAGLVTTTRVTHASPSGVYAHVADREWENNAVLEEACGELSDGLQDIAVQLIHGEVGSKLKVMLGGGKRSFYSPEHYDKGRRTDGRNLVEEFEALDAGNTFVKTQKKLLNVNATETGRLLGLFSKSHMHYHLEQLADPDNNEPTLEEMTQKAIEVLETEEQGYFLFVEGGKIDISHHETMARIALDETAELSKAVKKAREMTNPEETLIVVTSDHSHTFSVSGYQPRGSDIFGAAKANGKDGKPYLALSYANGKSFQDYYNTETHERVDPTSLPTIGDFDQLFPAMVPLESETHGGEDVGVFASGPWAHLFTGVYEQNTIPHMMAFAACVGDGLTACD

>Fly\_CG10827-RA\_Dmel3R:16,830,882\_FBtr0084048]

MFRLLNALLIAIVLVAHPAWSAPECGRTPEECREHRMHPDMPEPERHGKAFRVVDGEDTNAYWRQQGVQFVQQKLASEPNKRQAKNVILFLGDGMGVTTTSAARNLLGGEEKSLSFENFPFTGLSKTYSVDKIVPDSACTATAYLCGVKGQEGTIGVNGQVPRTDCKVMLDESTHVDSIAKWAMEAGKWAGLVTTTRVTHASPSGVYAHIAERDWENDAEVATDCGAGSGINDIAYQLARGEVGSKLKVIMGGGRKHFVDSSLESWGKRTDGLNLIDEFKSASENNVYVTTAAELAAVDVTKTDRLLGLFNDDHLQYLMETTTESSQPTLEQMTRKAIEYMSQNEQGYFLFIEGGRIDQAHHINQARMALNETIEFSKAIAAAQELTSEDDTLLVVTADHSHVFTYAGYSYRGSDVFGKTPVNGHDGKPYMVLSYANGPSYENFYDAETMERKDPTTVVKGDHDDEFPSGVPIDMDSHGGDDVPVYALGPWAHLFTGVYEQSTIPHMMAYASCLGDGHTMCK

>Fly\_CG8147-RA\_Dmel3R:5,320,525\_FBtr0082060]

MRLQLFFFLGLSVLVSGGESSHDAERRMHPVFSLMGTGSNPIGGGRYKRAMPQIVFDAVRSEERYAEYWQGLAAQTLDQQLESKLRLNTQLARNVMLFIGDGMSIPTITAGRVYLGGEEKQFAFEQFPYVGLSKTYCANMQVADSACTATAYLGGVKANYGTIGVSAAVQFKDCQAQAQAAHHVSSIAAWAQKQGMATGLVTTTSVTHASPAGVYAHLANRNWENDAEVVGDNGDPDLCPDAAAQLINSPVGQKLNVIMGGGRENFLPKGVTDSSGAPGRRLDGRNLIDEWKNQHTNSAQYVENRRELLNLSNHTSRVLGLFAPYHMAYHLDASPAEQPTLEEMVQSAMEILERQSAGRGYFLFVEGGRIDHGHHDTLALRAIDETAEFDKAVRFARSHTSTDDTLIVVSSDHSHTMSLAGYSSRKNDIFGINDGQLAADDLPYATLSYANGPGYDSNYLREGGAVRRKNLRAINMKNKDFMFPSTVPLESETHGGDDVAVFASGPYAQLFTGVFEQHFIPHALGYASCLSDRNMCVDGGVARRPR

>Ciona intestinalis\_Alp1\_CinHT000075.1:5,734\_Alp\_Q9NL48\_CIOIN\_ENSCINT00000000365\_NP\_001027596]

MLDIMFHQGLLLLCVSVAVIGQDLTEKSAAYWEQVSEAELLETLQYQKLNIKKAKNVIIFIGDGMGVTTVTAGRILKGQNSGASGEETKLAMDKLPYTGVSRTYSVNRQVSDSASTATAFLTGVKTNDYVLGLNGNSVKGICAGSINESNLLTSVLLEAKMAGMSAGIVTTTTINHATPAAAYANSPDRLWYSDAEMTAEAKENGCKDIAQQFIDKSDQFTVVLGGGRQYFKPNTTFDVEYTDRANLRLDGQDLIEVWKAKQSDRNSAYVWNKEQFDQVDVAKTDSLLGLFEPSHMNYEAHRAQDGAGEPSLKDMTTKAIRMLKKNDQGFILLVEGGKIDHGHHAGKAYLALHDLVALDDAIEAAVEMTSDDETMIIVTADHSHVFTIGGYSHRGNPIFGAAPNVNNPKLVDDGKPFTTLLYGNGPGHSTLNGAGSCERENITLITTDDPGYKQQSAVPLPSETHGGEDVVIMARGPMAHLFEGVHEQSYIAHVIRYATCIGKKSKNCAAQLEQSTDLIFVSFLGFRLSSGQAQLALYITFGLLMAACIIAIAANLQLCRMARQSARKHEDPKVLNEKV

>Ciona intestinalis\_Alp3\_Cin9:6,188,305\_F6U0P5\_CIOINENSCINT00000013633]

FQMIHQILRTCVCLIVLSAQIFTAREETAEYWNEAAEKTLHKIYGKENIKRNPAKNVILLIGDGMGLSTATAGRILKGQNEGRPGEETVSALDKFPNVGLSKVYCVDKQSPDSASTATAILSGVKTKFGVLGLNGRAVHKKCSSAAGNEVESILTRSANLGKSTGIVTTTEVQHATPAAAYAHSASRGWYVDSAMNSTTKSEGCKDISLQLLAMGRKINVVLGGGRAYMRPDGAYDEEYFSRRPGMRDDGRDLIREWKNLQPSSKARYVWRRSALNAVNADNTDYLLGLFQPKELRYDHDRNNDIAGEPSLEEMTEKAIQILRKNPSGYFLLVEGGKMDHAHHYNQANIALREFLVFEKAVQKAMDMTSTEDALIVVTADHGHVFTLGGYADRGNPIHGYARNHNEPRKAVDKHQYTSIAYANGPGYTLDTATGKRKGITGDTTRDIAYRYQAAVPLTSETHSAEDTVVFARGPMSYLFNGVYEQNYIAHALMFASCVG

>Ciona intestinalis\_Alp4\_Cin1:7,085,341\_F6W9Y0\_CIOINENSCINT00000014537]

AENTKEFWYRNGLQGIESSVDTFAQLNPTRAKNVVMMIGDGMNIATLTAGRIAIGQKSGASGEEHVTAIDQLPHTGIAKTYSVDYQTPDSAATATAFLTGVKTKQGTLGVRAGATNCDTDAVTSALEHAISQGKSTGIVTTTRVQQATPGAGYAHSLQRSAYTDRLLTMNGRGCKDISMQLYEKRRQIQVILGGGRSHMRPPSVFDEEGLGNRGDRGDNRDLIQMWRNDMERMNGSYVWNKRAFDQVNPLTTDYLLGLFSPLDMEFIINKPRNQRYDEPTLEEMTRKAIQILSKNPNGFFLLVEGGMIDKGHHHGRAKFALEEFHEFDKAVAAVKSMTSEQDTLLIVTADHGHMFTFGGGAVRGNSVYGLAKNNSRPDIALDGRPFTSILYGNGPGYSMYKGQRRYPGPWVANSKFYKAQSAVPLRAETHSAEDVAVYASGPWSHFISGVHEQSYLAHVMFYSACLGPLYTTYPHCATSLNTIQPIPNPGRIKHDEPPTPNASTQDKKR

>Ciona intestinalis\_Alp5\_Cin1:7,079,871\_F6W9J4\_CIOINENSCINT00000014541]

MKYRDRANNCIDISLQLLKKRRDIQVLLGGGRSYMRSMDARDEEGYKGDRKDGRDLIQEWKEDMERRGGRYVWNISSLNDINPSSTNYLLGMFNARHMIYSVRRKNEPTLAQMTAKAIQILSKNQKGFILLVEAGLIDVAHHQGRARFALEEFHELERAVEVAKTATTEEDTLLIVTADHGQMFMFGSGSVRGNPVYGLAPDNDNPGEAADGKRYTSLLYGTGPGNAAVQKSLSRQEVSTRVSRWKNYVVQSAVPMRGATHSAEDVVVFGRGPMAHMISGVHEQSYIGHVMMYAACLGPQYQHFSHCKDNGPTKR

>Ciona intestinalis\_Alp7\_Cin11:2,941,162\_ENSCINT00000032115]

MHPPPVSRDSKKEKSAQRQALAGENTAQFWYDSAAKELDEALLLEKRNKNVAKNVILFLGDGMGIPSITSGRILKGQNNGQSGEETKLMMDTFPHAGLSKTYNVDHQVPDSAGTGTAYMTGVKTDMAVLGYNAAITPGVCSTTPGNEVSSVLEDSHKEGKAVGVVTTTRLNHATPGSAYAHSAYRYWYSDADLPDEAKINGCKDIAYQLYAALPNIQVALGGGRGYFRPNTTLDEEYKTNNFRTDGQELIEKWKNNMEDMGRNAKYVWNKQQFDAVDASSVDHLWGMFEPKDMNYETDRSTDGAGEPSLAEMTQKAIEILQKDEDGFFLLVEGGRIDHAHHESNAYRSLHEVISFDDAIAKAVELTSESDTLLVVTADHSHTFTLGGYTIRGNPLFGKARDDANPRTGLDGLPYTALNYGNGEGFQGGDSYSSPNEPVVREDLNTVDTGAKDYLQQSGVPLYSESHGGEDVAILARGPMSHLFHGVHQQSYVAHVMRYASCVGENKAHCENQPQTSVATEENVTFLGYNLNPSEAAGALYALFALELTFSIVIIGIGVYTVK

>Ciona savignyi\_Alp1\_Csareftig\_194:404007\_ENSCSAVT00000012048]

MHPLLKTSKKPAGRAGNPAENSPEFWHQSAAAELSEALSIEKRNKNVAKNVILFLGDGMGVASITTGRILRGQNAGSSGEETKLTMDTFPHFGFSKTYNVDAQVADSAGTATAYMTGVKTDLGVLGYNAAITPGVCNTTYGNEVSTVLEDSHKLGKAVGVVTTTRLNHATPASAYAHSAYRYWYGDADLTEEARINGCKDIAYQLYNALPNIQVALGGGRRYFKPNGIKDDEYPTLDNYRNDGQDLIQKWKNNMVDLGRNAQYVWNSAQFHGVDASQVDHLWGMFEPGDMNYEVDRSSDGAGEPSLAEMTSKAIEILQKDDDGFFLLVEGGRIDHSHHGGNAYKALHEVLAFDDAIAKGVEMTSESDTLIVVTADHSHTFTFGGYTLRGNPLFGLARDDANPKNALDGRPYTSLNYGNGKGFQGGDSFSTGGSVVRENLTNVNTKSKDYLQQTGVPKSSETHGGEDVAIFARGPMAHLFHGVHEQSYIAHVMRYASCVGSNKLHCENQPTEEVVVPPEIVSFLGYNLSKSSAEGALYALFALEMIFSLVILAFSAFYFKRK

>Ciona savignyi\_Alp2\_Csareftig\_30:2,127,570\_ENSCSAVT00000012778]

MTKIMLLYVSCILLGMTDQTLSVHPSENTKDFWFDQGTGSIEESVATFSRLKLNKAKNVVMMIGDGMNIATLTAGRVSIGQKSGASGEEHVTAIDQLRHAGIVKTYSVDYQTPDSAATATAILAGVKTNQGSLGVRAGATNCDTDKVTSVLEYAISQGKSTGIVTTTRVQQATPGAAYAHAINRMAYTDRRNTGGGRGCKDIATQLYEKRRGIQVILGGGRSHMRPYTVLDEEGYGKRGDRGDNKDLIQMWRNDMGPLNGVYTWNKRQFDMVDANSTDYLLGLFSDLDMNFVTNKPTNERYEEPSLEEMTRKAIQILSKNPNGYFLLVEGGMIDKGHHQGRARFALEEFHELDKAVAMVKSMTSEDDTLLIVTADHGHMFTFGGGSIRGNPVYGGSSKNLYVHGRPFTSILYGNGPGYSLYGGRRSSPGSWVARTRYYKQSSAVPLRAETHSAEDVPVYASGPWSHFVTGVHEQNYLAHIMMYSACLGE

>Ciona savignyi\_Alp3\_Csareftig\_77:3,122,833\_ENSCSAVT00000014770\_BAA92180]

MSMICFVTMMCVCSLGTAQVLNERSAHFWELRNQAELDEAITKQSLNMRKAKNVIILVGDGMGITTITSGRILKGQVSGTSGEETKLAMDKFPFSGISKTYSVNKQVSDSASTATAFLTGVKTNDFILGLTGSAQRGICKGSIDENNIVTSVLIEAKNAGKSAGFVTTTRINHATPGATYAHTPERMWYGDADLTEEAKENGCKDVAQQFIDNSHLFTVALGGGRQYFRPNTTYDEEYPNNTNARLDGQDLIKQWKKIQLQQGNRAAYVWNATEFAAINPDNTDSLLGLFQPKDMHYEAHRSGDVAGEPSLSEMTAKAISLLKKNEEGYILLVEGGRIDHGHHEGNAYLALHDLVAFDDAIDTAVQMTSDDETMLIVTADHSHVFTIGGYSDRGNPIFGLAPNAIKPTLGDDNKTFTTLLYGNGPGYAFESCERENVTGVPTDVSTYLQQSAVPLSYETHGGEDVIIMSRGPMAHLFEGVHEQTYIAHVIRYATCIGKLSKDCNERFNPPKENGVILYFLGISMTSSKAVLALYVTLALLIITSIVAIAANIHIYRMVSSKPSEQMQKV

>Ciona savignyi\_Alp4\_Csareftig\_14:183,717\_ENSCSAVT00000016054]

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>Ciona savignyi\_Alp5\_Csareftig\_58:1,653,485\_ENSCSAVT00000016106]

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>Silkmoth\_Alp\_NP\_001036856[Bombyxmori]

MVRLLTLLSLLAAGSCGRRYGLDKDGYHRDDVGSRRSLQTPSTPAPELESEYWSRDAQSELGERAWYDGSSGYARNVVMFLGDGMSVATLTAARTLLGQRRGQTGEESRLSFEHFPTVGLSKTYCLDAQVADSACSASAYLCGAKANLGTIGVSGHVARHHCTAATDAAHQLASIASWALDADRDAGIVTTTRVTHASPAGAYAHTADRNWESDGDVTAGCSGHAQLDIAQQLVHARPGKDFKVILGGGRREFLPNTMTDEEGSRGRRYDGRNLISEWLTEKDSRGVTHEYVWNRQQLMEVSEELPEYLLGLFEPSHLQYHMEANHTTEPTLAELTEVAIKSLSRNKEGFFLFVEGGRIDHAHHENLAHLALDETIELSAAVEKARELLSEQDSLIVVTADHAHVMSISGYTQRGGDILGPSDALGDDGIPYMTLSYGNGPGYREPRGGQRVDPTRQDYRGSEYVYPAAVPLDSETHGGDDVAVFAWGPHHALFSGLYEQSHIPHRMAYAACIGPGKHACQHSPHSTT

>Budworm\_Alp\_ACP39714[HeliothisvirescensTobaccoBudworm]

MMSLYQCLLAVLCCAACARAHWFHPAATAGRAAATTRVETSANYWVQDAQAAIDARLAQVESVKKARNVIMFLGDGMSVPTLAAARTLLGQRQGNTGEETKLHFETFPTIGLVKTYCVDAQIADSACTATAYLCGVKNNYGAIGVDATVRRGDCQTASNTATHVESIAEWALADGRDVGIVTTTRITHASPAGTYAKTANRTWENDGEVSQMGFDAKDCPDIAHQLVHHHPGNKFKVILGGGRRAFLPNTVQDDEGSYGRRIDNRDLIKEWEDDKVARNVSHQYVWNREQLMSLNDDLPEYMLGLFGSSHMKYHMKSNPQSDPTLAELTEVAIRSLRRNEKGFFLFVEGGRIDHAHHDNLVELAPDETLEMDKAVATATQLLSEDDSLIVVTADHAHVMTINGSSGRGNDILGPSRDLGRDSMPYMTLSYTNGPGFRPHVNGIRPDVTAEPNFRTLDWESHVDVPLGDETHGGDDVAVFARGPHHSMFTGLYEQSQLPHLMAYAACIGPGRHACVSAAHLPSAHFLIALLALFTSILLR

>Beetle\_Alp\_EFA08950\_TcasGA2\_TC006657[Triboliumcastaneum]

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>MosquitoAedes\_XP\_001659699[Aedesaegypti]

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>MosquitoCulex\_XP\_001843363[Culexquinquefasciatus]

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>Zebrafish\_alpi\_Dre22:41,820,800\_NP\_001014375\_ENSDARG00000015273\_intestinal-alkalinephosphatase[Daniorerio]

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>Hydra\_Alpl\_XP\_002166181alkalinephosphatase,liver/bone/kidney[Hydramagnipapillata]

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>SeaAnemone\_Alp\_XP\_001637718[Nematostellavectensis]

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