>Human

MNGYAEFPPSPSNPTKEPVEPQPSQVPLQEDVDMSSGSSGHETNENCSTGRDSQGSDCDDSGKELGMLVE PPDARQSPDTFSLMMAKSEHNPSTSGCSSDQSSKVDTHKELIKTLKELKVHLPADKKAKGKASTLATLKY ALRSVKQVKANEEYYQLLMSSEGHPCGADVPSYTVEEMESVTSEHIVKNADMFAVAVSLVSGKILYISDQ VASIFHCKRDAFSDAKFVEFLAPHDVGVFHSFTSPYKLPLWSMCSGADSFTQECMEEKSFFCRVSVRKSH ENEIRYHPFRMTPYLVKVRDQQGAESQLCCLLLAERVHSGYEAPRIPPEKRIFTTTHTPNCLFQDVDERA VPLLGYLPQDLIETPVLVQLHPSDRPLMLAIHKKILQSGGQPFDYSPIRFRARNGEYITLDTSWSSFINP WSRKISFIIGRHKVRVGPLNEDVFAAHPCTEEKALHPSIQELTEQIHRLLLQPVPHSGSSGYGSLGSNGS HEHLMSQTSSSDSNGHEDSRRRRAEICKNGNKTKNRSHYSHESGEQKKKSVTEMQTNPPAEKKAVPAMEK DSLGVSFPEELACKNQPTCSYQQISCLDSVIRYLESCNEAATLKRKCEFPANVPALRSSDKRKATVSPGP HAGEAEPPSRVNSRTGVGTHLTSLALPGKAESVASLTSQCSYSSTIVHVGDKKPQPELEMVEDAASGPES LDCLAGPALACGLSQEKEPFKKLGLTKEVLAAHTQKEEQSFLQKFKEIRKLSIFQSHCHYYLQERSKGQP SERTAPGLRNTSGIDSPWKKTGKNRKLKSKRVKPRDSSESTGSGGPVSARPPLVGLNATAWSPSDTSQSS CPAVPFPAPVPAAYSLPVFPAPGTVAAPPAPPHASFTVPAVPVDLQHQFAVQPPPFPAPLAPVMAFMLPS YSFPSGTPNLPQAFFPSQPQFPSHPTLTSEMASASQPEFPSRTSIPRQPCACPATRATPPSAMGRASPPL FQSRSSSPLQLNLLQLEEAPEGGTGAMGTTGATETAAVGADCKPGTSRDQQPKAPLTRDEPSDTQNSDAL STSSGLLNLLLNEDLCSASGSAASESLGSGSLGCDASPSGAGSSDTSHTSKYFGSIDSSENNHKAKMNTG MEESEHFIKCVLQDPIWLLMADADSSVMMTYQLPSRNLEAVLKEDREKLKLLQKLQPRFTESQKQELREV HQWMQTGGLPAAIDVAECVYCENKEKGNICIPYEEDIPSLGLSEVSDTKEDENGSPLNHRIEEQT

>Chimp

MNGYAEFPPSPSNPTKEPVEPQPSQVPLQEDVDMSSGSSGHETNENCSTGRDSQGSDCDDSGKELGMLVE PPDARQSPDTFSLMMAKSEHNPSTSGCSSDQSSKVDTHKELIKTLKELKVHLPADKKAKGKASTLATLKY ALRSVKQVKANEEYYQLLMSSEGHPCGADVPSYTVEEMESVTSEHIVKNARNPQAAPNPEPRGPASRAGF GYTDCEIPGQMPLAPEALQAKCAALWMAAFLAAGPAPLVCLQQCTMSVLSCRLVGVFAAVHRECAQLQQC TVSVLSYRLVGVFAAVHRECAQLSVGVFAAVHHSFTQECMEEKSFFCRVSVRKSHENEIRYHPFRMTPYL VKVRDQQGAESQLCCLLLAERVHSGYEAPRIPPEKRIFTTTHTPNCLFQDVDERAVPLLGYLPQDLIETP VLVQLHPSDRPLMLAIHKKILQSGGQPFDYSPIRFRARNGEYITLDTSWSSFINPWSRKISFIIGRHKVR VGPLNEDVFAAHPCTEEKALHPSIQELTEQIHRLLLQPVPHSGSSGYGSLGSNGSHEHLMSQTSSSDSNG HEDSRRRRAEICKNGNKTKNRSHYSHESGEQKKKSVAEMQTNPPAEKKAVPAMEKDSLGVSFPEELACKN QPTCSYQQISCLDSVIRYLESCNEAATLKRKCEFPANVPALRSSDKRKATVSPGPHAGEAEPPSRVNSRT GVGTHLTSLALPGKAESVASLTSQCSYSSTIVHVGDKKPQPELEMVEDAASGPESLDCLAGPALACGLSQ EKEPFKKLGLTKEVLAAHTQKEEQSFLQKFKEIRKLSIFQSHCHYYLQERSKGQPSERTAPGLRNTSGID SPWKKTGKNRKLKSKRVKPRDSSESTGSGGPVSARPPLVGLNATAWSPSDTSQSSCPAVPFPAPVPAAYS LPVFPAPGTVAAPPAPPHASFTVPAVPVDLQHQFAVQPPPFPAPLAPVMAFMLPSYSFPSGTPNLPQAFF PSQPQFPSHPTLTSEMASASQPEFPSRTSIPRQPCACPATQATPPSAMGRASPPLFQSRSSSPLQLNLLQ LEEAPEGGTGAMGTTGATETAAVGADCKPGTSRDQQPKAPLTRDEPSDTQNSDALSTSSGLLNLLLNEDL CSASGSAASESLGSGSLGCDASPSGAGSSDTSHTSKYFGSIDSSENNHKAKMNTGMEESEHFIKCVLQDP IWLLMADADSSVMMTYQLPSRNLEAVLKEDREKLKLLQKLQPRFTESQKQELREVHQWMQTGGLPAAIDV AECVYCENKEKGNICIPYEEDIPSLGLSEVLDTKEDENGSPLNHRIEEQT

>Fly

MEGESTESTQNTKVSDSAYSNSCSNSQSQRSGSSKSMLSGSHSSGSSGYGGKPSIQTSSSDMAIKRNKEK SRKKKKAKCTQAQATISSSLEGAEEQPHSSGTTCDQKILHVLATTQQLGDQPSSLDHKLGEQLEARHNCG VGKAEQSQSFSLPCPLSVSTLMPGIGVCHGGNAPGGKWEKTFESCKLETGPAKTERVKEDSFCCVISMHD GIVLYTTPSITDVLGFPRDMWLGRSFIDFVHTKDRATFASQITTGIPIAESRCSMPKDARSTFCVMLRQY RGLQTSGYGVIGRSVNYEPFRLGMSFREAPEEERSDNYMVANSSNMLLVICATPIKSSYRVPEEIHSQRS PKFAIRHTAAGIISHVDSAAVSALGYLPQDLMGRSIMDLYHHDDLPVIKEIYESVMKKGQTAGASFCSKP YRFLIQNGCYILLETEWSSFVNPWSRKLEFVVGHHRVFQGPKICNVFETPPNSEPKIAEELQNKNTRIKE EIVNLLAEKVSRPSDTVKQEVSRRCQALASFMETLMDEVSRADLKLDVPHENELTVSERDSVMLGEISPH HDYYDSKSSIETPPSYNQLNYNENLLRFFNSKPVTAPVEVDPPKVGSSDVSSTREDARSTLSPLNGFEGS GASGSSGHLTSGSNIHMSSATNTSNAGTGTGTVTGTGTIIATSGTGTVTCASGNMDANTSAAFNIAANTS AADNFGADTSAADTSGADTSAADNYGPGNFGAENSCADNSGAENSCADNSGVDNSRPDNSGADNSAADNF GPDNSGADNSGPDNTGPDNSGAENSRAENSRADNSRPDHPRPDISGASNSRPDKTGPDKSGAENSASGSG SGTSGNEGPSSGGQDTRTTAGTADAPPVSLTESLLNKHNDEMEKFMLKKHRESRGDRRTVEKNKNKTTNT IDSLKILEYSSTGPGHGTKRGGSYSWEGEGNKPKQQPTLNSVGVGTGAPEAPIPPVHPTHTTHTAIAQSS FSAQQSLFPTFYYIPATPLAASTPAPGALSPTPRNQKHHHHAHQHAPKVPDQASTSQQAAGPAAIPLQYV AGVMYPHPSLFYTHPAAAAATAMMYQPMPFPGIANAMQLPEQPNTSQSNYSKTVFSGAFHSITPAQLQRP SSQDTSVKTEPASNTTPSHSSNKKKANSPIASGIGDYNSNQACSRNRANVKKYTDSNGNSDDMDGSSFSS FYSSFIKTTDGSESPPDNDKEAKHRKLKNITRLSSKIMEHPEEDQTQHGDG

>Rhesus\_Monkey

MGACTFRVCCMGACKLLPVLFIPEPNMNGYAEFPPSPSNPTKEPMEPQPSQVPLQEDVDMSSGSSGHETN ENCSTGRDSQGSDCDDSGKELGMLVEPPDAHQSPDAFSLMITKSEHNPSTSGCSSDQSSKVDTHKELIKT LKELKVHLPADKKAKGKASTLATLKYALRSVKQVKANEEYYQLLMSSEGHPCGSDVPSYTVEEMESVTSE HIVKNADMFAVAVSLVSGKILYISDQVASIFHYKRDAFSDTKFVEFLAPHDVGVFHSFTSPYKLPLWSVC NGADSFTQECMEEKSFFCRVRVQAAPEKGCGAFPLVASQLCCLLLAERVHSGYEAPRIPPEKRIFTTTHT PNCLFQDVDERAVPLLGYLPQDLIETPVLVQLHPSDRPLMLAIHKKILQSGGQPFDYSPIRFRTRNGEYI TLDTSWSSFINPWSRKISFIIGRHKVRVGPLNEDVFAAHPCTEEKALHPSVQELTEQIHRLLLQPVPHSG SSGYGSLGSNGSHEHLMSQTSSSDSNGHEDSRRRRAEIYKNGNKTKNRSLYSLESGEQKKNSVTEMQTNP SAEMKAVPAVEKDSLGASFPEELACKDQPTCSYQQISCLDSVIRYLESCNEAATLKRKCEFPANVPTLRS SDKRKATVSPGPHAREAEPPSRVNSHTGVSTHLTSLALPGKAESVASLTSQCSYSSTIVHVGDKKPQPEL EMVEDAVSGPESLDCLVGPALACGLSQEKEPFKKLGLTKEVLAAHTQKEEQSFLQKFKEIRKLSIFQSHC HYYLQERSKGQPSERTAPGLRNTSGIDSPWRKPGKNRKLKSKRVKPRDSSESTGSGGPLPARPPLVGLNA TAWSPSDTSQSSCPAVPFPAPVPAYSLPVFPAPGTVAASPAPPHASFAVPAVPVDLQHQFAVQPPPFPAP LAPVMAFMLPGYSFPSGTPNLPQAFFPSQPQFPSHPTITSEMASALQPEFPSRTSIPRQPCACPGTRATP PSAMGRASPPLFQSRSSSPLQLNLLQLEEAPEGGTGAMGTTGATETAVVGADCKPGTSRDQQPKAPLTRD EPSDTQNSDALSTSSGFLNLLLNEDLCSASGSAASESLGSGSLGCDTSPSRAGSSDTSHTSKYFGSIDSS ENNHKAKMNTGMEESEHFIKCVLQDPIWLLMADADSSVMMTYQLPSRNLEAVLKEDREKLKLLQKLQPRF TESQKQELREVHQWMQTGGLPAAIDVAECVYCENKEKGNICIPYEEDTPSLGLSEVLDTKEDENGPPLNH RMEEQT

>Dog

MGLHCGTNMNRYTEYPPSPSHPAQEPVEAEPSGAPLQEDVHMSSGSSGNEANENHSPGRDSQGSEELGML VGPPVVHPSPGAFGLMMAKSEHSTSASGCSEQSAKADAHKELIKTLKELKVHLPVDKKAKGKASTLATLK YALRSVKQVKANEEYYQLLMSSENHPCSAYVPSYTVEEIESVTSEFTVKNAGMFAAAVSLATGKILYISD QVASIFHCKRDAFYGARFVEFLAPHDVSVFHASTTPYKLPPWSVGRGADSFTQECMEEKSFFCRVSVGKN HENEIGYHAFSMTPYLVKVREQQCAGSQLCCVLLAERVHSAYEAPRIPPEKRIFTTTHTPNCLFQDVDER AVPLLGYLPQDLIETPVLVRLHPGDRPLMVTVHKKIVQSGGQPFDYSPIRFRARNGEYVTLDTSWSSFIN PWSRKISFIIGRHRVRVGPLNEDVFSAPSLVEEKDQHPSIQELTEQIHRLLLQPVPHSGSSGYGSLGSNG SHEHLMSQTSSSDSNGHEDSRRRRTEICKNGSSVKNKSHPGESGEQKEKSVAEMHSSSPAQMKAVPVEKD SSGTSLPAGSSPEELGCKNPPAGSYQQISCLDSVIRYLESCSEAATLKRKCEFLGNMATQKASDKRKAVA SPGLHSTDTTLPTKVNSHAEVSAHLPPLTLPCKAESVVSLTSQCSYSSTIVHVGDKKPQPELELVEDAVS GPESPDGRPCSLGPEKEPLRTLGLTKEVLAAHTQKEEQSFLLRFKEMRKLSIFQSRCHHYLQEKSKGQLS ERTTPGLRNASGIDSSWKKTGKNRKLKSKRAKPRDSSESTGSGGPAPLRPPLLGLNATAWSPSDTSQSSC PTTPFPASVPAYPLPVFPAPGILPTPGAVAAAPVAPHASFAVPPLPVDARHEFGLQPSPFAVPLAPVMAL VLPNYPLPAVPPGLPQAFFPGQPDFLSHVIPASQPELAGRTSPPKQPCACPQAERGPAASRAATPASPAP ASGPTGRASPPLFQSRGSSPLQLNLLQLEEAPEGSSAAAATAGSSGTAGPDCKPGTSWDRQPKTAPIRED PADAQNSDALSTSSGLLDLLLHEDLCSATGSALSRSGASATSDSLGSGSLGCDTSRSGTGSSDTSHTSKY FGSIDSSENNHQAKMKADMEESKHFIKYVLQDPVWLLMADTDDSVMMTYQMPSRNLETVLKEDREKLKAM QKSQPRFTEGQRQELQDVHPWLRAGGLPTALDLTECVYCENQGPDSICVPYEEDSPTLGPSEATDTQEKE RGAPSGCSREERT

>Cattle

MDGCADHTPSPSAPSKEPAEPWASQAALQEDVDMSGGSSGNETSENGSTGRDSQGSDCGDSGRELGLLVG PPGSLQGPETFGLMMAKSEHHLSTSGCSSEQSTKADAHKELIKTLKELKVHLPADRKAKGKASTLATLKY ALRSVKQVKANEEYYQLLMSSENHPCRTHVPSYTVHEIEGITSEFIMKNVDMFVAAVSLVTGKTLYISDQ VASIFHCKRDAFYNAKFVEFLAPHDVSVFHSSTTPYKLPPWSDRRQADSFTQECMEEKSFFCRVSVGKSH ESEIHYHPFRMTPYLAQVCERQGAESQLCCVLLAERVHSGYEAPRIPPEKRIFTTTHSPNCLFQDVDQRA VPLLGYLPQDLIETPVLVQLHPSDRPLMLAIHKKIVQSGGQPFDYSPLRFRARNGEYITLDTSWSSFINP WSRKISFIIGRHRVRLGPLNEDVFSAPPGLEEKAPQPGVQELTEQIHRLLLQPVPHSGSSGYGSLGSNGS HEHLMSQTSSSDSTGQEDPRRRRAETCKNGNKAKSKSHYPDESGEQKSNPASEMQSGSPTPMKAAAAVEK DSSGASLPEATPPEELACRDPPAGSYQQISCLDSVIRYLESCSEAATLKRKCEFPASLPTPQASDKRQAL AGPGPHATEAASPSPVKSRTDASARLLSPPLPGRAQSVASLGSQCSYSSTIVHVGDKKLPPELEPLGDAA ASRPESLECPAGPALPCGLSQDQEAFRKLGLTKEVLAAHTQKEEQSFLLRFREIRKLHVFQSRCHHYLQE RSKGHLSNRTAPGLRNTPGIDSSWKKNGKNRKLKSKRVKPRDSSGSTGSGGPAPQRPPLVGLNTTAWSLS DTSQSSCPAMPFPGPVPAYSLPLFPAPGIVTAPGTVATGSGAAHTDLAVPVDAQQVLRVHPPPFASPLAP VMALVLPSCSFSPVTPALPPAFFPGQLNFVSEMPPASQPEFFPDRTSTPKQPCPCAPAERGPPALRMATP GTPPLAAGPPDRTSPALFQSRGSSPLQLNLMQLEEAPEGTAAATGAVGTVGAGADCKPGSSWDWQPKSPP TCKEPADAPNSDALSSSSGLLRLLLHGDLCSATGSALSRSQASATSCSLGSGSLGCDASGSRPGSSHTSH TSRYFGSSDSSENNPGAAVRAAVGGPERLLRCVLQDPVWLLAADTDDSVRMTYQMPARDLDTVLQEDREK LKALQRLQPRFTDAQKQELQDVHPWMRLGGMPTAIDVAGCVYCENEGEDNLCVSYEEDIPTPGLSEVTET KEEESRPPQGPETNGRCNPLPQGSSAASEVR

>Mouse

MNGYVDFSPSPTSPTKEPGAPQPTQAVLQEDVDMSSGSSGNENCSTGRDSQGSDCDDNGKELRMLVESSN THPSPDDAFRLMMTEAEHNPSTSGCSSEQSAKADAHKELIRTLKELKVHLPADKKAKGKASTLATLKYAL RSVKQVKANEEYYQLLMSSESQPCSVDVPSYTMEQVEGITSEYIVKNADMFAVAVSLVSGKILYISNQVA SIFHCKKDAFSDAKFVEFLAPHDVSVFHSYTTPYKLPPWSVCSGLDSFTQECMEEKSFFCRVSVGKHHEN EIRYQPFRMTPYLVKVQEQQGAESQLCCLLLAERVHSGYEAPRIPPEKRIFTTTHTPNCLFQAVDERAVP LLGYLPQDLIETPVLVQLHPSDRPLMLAIHKKILQAGGQPFDYSPIRFRTRNGEYITLDTSWSSFINPWS RKISFIIGRHKVRVGPLNEDVFAASPCPEEKTPHPSVQELTEQIHRLLMQPVPHSGSSGYGSLGSNGSHE HLMSQTSSSDSNGQEESHRRRSGIFKTSGKIQTKSHVSHESGGQKEASVAEMQSSPPAQVKAVTTIERDS SGASLPKASFPEELAYKNQPPCSYQQISCLDSVIRYLESCSEAATLKRKCEFPANIPSRKATVSPGLHSG EAARPSKVTSHTEVSAHLSSLTLPGKAESVVSLTSQCSYSSTIVHVGDKKPQPELETVEDMASGPESLDG AAGGLSQEKGPLQKLGLTKEVLAAHTQREEQGFLQRFREVSRLSALQAHCQNYLQERSRAQASDRGLRNT SGLESSWKKTGKNRKLKSKRVKTRDSSESTGSGGPVSHRPPLMGLNATAWSPSDTSQSSCPSAPFPTAVP AYPLPVFQAPGIVSTPGTVVAPPAATHTGFTMPVVPMGTQPEFAVQPLPFAAPLAPVMAFMLPSYPFPPA TPNLPQAFLPSQPHFPAHPTLASEITPASQAEFPSRTSTLRQPCACPVTPPAGTVALGRASPPLFQSRGS SPLQLNLLQLEEAPEGSTGAAGTLGTTGTAASGLDCTSGTSRDRQPKAPPTCNEPSDTQNSDAISTSSDL LNLLLGEDLCSATGSALSRSGASATSDSLGSSSLGFGTSQSGAGSSDTSHTSKYFGSIDSSENNHKAKMI PDTEESEQFIKYVLQDPIWLLMANTDDSIMMTYQLPSRDLQAVLKEDQEKLKLLQRSQPRFTEGQRRELR EVHPWVHTGGLPTAIDVTGCVYCESEEKGNICLPYEEDSPSPGLCDTSEAKEEEGEQLTGPRIEAQT

>Rat

MNGYVDFSPSPTSPTQEPGEPQPTQAVLQEDVDMSSGSSGNENCSTGRDSQGSDCDDSGKELRMLVESSN THPSPDDTFRLMMTEAEHNPSTSGCSSEQSAKADAHKELIRTLRELKVHLPADKKAKGKASTLATLKYAL RSVKQVKANEEYYQLLMSSESQPCSVDVPSYTMEQVEGITSEYIVKNSDMFAVAVSLVSGKILYISNQVA PIFHCKKDAFSDAKFVEFLAPHDVSVFHSYTTPYKLPPWSVSSGLDSFTQECMEEKSFFCRVSVGKHHEN EIRYQPFRMTPYLVKVQEQKGAASQLCCLLLAERVHSGYEAPRIPPEKRIFTTTHTPNCLFQDVDERAVP LLGYLPQDLIETPVLVQLHPSDRPLMLAIHKKILQASGQPFDYSPIRFRTRNGEYITLDTSWSSFINPWS RKISFIIGRHKVRVGPLNEDVFAASPCPEEKTPHPSVQELTEQIHRLLMQPVPHSGSSGYGSLGSNGSHE HLMSQTSSSDSNGQEESHWRRSGIFKTSGKSQSKSHFSPESGGQKEASVAEMQSSPPAQVRSVTTMERDS SGASLPKASFPEELTYKSQPPCSYQQISCLDSVIRYLESCNEAATLKRKCEFPANIPSRKATVSPGLHSG EAARSSKVTSHTEVSAHLSSLALPGKAESVVSLTSQCSYSSTIVHVGDKKPQPELETVEDVASGPESQDD AAGGLSQEKGSLQKLGLTKEVLAAHTQREEQGFLQRFREVSRLGALQAHCQNYLQERSRAPASDRGLRNA SGIESSWKKTGKNRKLKSKRVKTRDSSESTGSGGPVSHRPPLVGLNATAWSPSDTSQSSCPSAPFPAPVP AYPLPVFPAPGIVSTPGTVVAPPAAAHTGFTMPVVPMGTQPEFAVQPLPFAAPLAPVMAFMLPSYPFPPA TPNLPQAFFPSQPHFPAHPTLASEITPASQAEFPSRTSMLRQPCACPVTPPAGTVALGRASPPLFQSRGS SPLQLNLLQLEEAPESSTGAAGTLGTTGTAASGLDCTSGASRDRQPKAPPTCSEPSDTQNSDAISTSSDL LNLLLGEDLCSATGSALSRSGASATSDSLGSSSLGCDTSRSGAGSSDTSHTSKYFGSIDSSENNHKAKMI TDTEESEQFIKYVLQDPIWLLMANTDDNIMMTYQLPSRDLQAVLKEDQEKLKLLQRSQPHFTEGQRRELR EVHPWVHTGGLPTAIDVTGCVYCESEEKGNLCLPYEEDSPSLGLCDTSEAKEEESGQLANPRKEAQT

>Fowl

MDCIEVRGFYSSTEEQNPEQQADISENISSLFSLKEQQKMSEYSGLASNHSQMIAEDSEIQPKPEHSPEV LQEDIEMSSGSSGNDFSGNETNENYSSGHDSHGHESDENGKDSAMLMESSDCHKSSSSNAFSLMIANSEH NQSSSGCSSEQSTKAKTQKELLKTLQELKAHLPAEKRIKGKSSVLTTLKYALKSIKQVKANEEYYQLLMI NESQPSGLNVSSYTVEEVETITSEYIMKNADMFAVAVSLITGKIVYISDQAAAILRCKRSYFKNAKFVEL LAPQDVSVFYTSTTPYRLPSWNICSRAESSTQDCMEEKSFFCRISAGKERENEICYHPFRMTPYLIKVQD PEVAEDQLCCVLLAEKVHSGYEAPRIPPDKRIFTTTHTPTCLFQDVDERAVPLLGYLPQDLIGTPVLVHL HPNDRPLMLAIHKKILQYGGQPFDYSPIRFCTRNGDYITMDTSWSSFINPWSRKVSFIIGRHKVRTGPLN EDVFAAPNYTEDRILHPSVQEITEQIYRLLLQPVHNSGSSGYGSLGSNGSHEHLMSVASSSDSTGNNNDD TQKDKTISQDARKVKTKGQHIFTENKGKLEYKREPSAEKQNGPGGQVKDVIGKDTTATAAPKNVATEELA WKEQPVYSYQQISCLDSVIRYLESCNVPGTAKRKCEPSSSVNSSVHEQKASVNAIQPLGDSTVLKSSGKS SGPPVVGAHLTSLALPGKPESVVSLTSQCSYSSTIVHVGDKKPQPELEMIEDGPSGAEVLDTQLPAPPPS STHVNQEKESFKKLGLTKEVLAVHTQKEEQSFLNKFKEIKRFNIFQSHCNYYLQDKPKGRPGERGGRGQR NGTSGMDQPWKKSGKNRKSKRIKPQESSDSTTSGTKFPHRFPLQGLNTTAWSPSDTSQASYSAMSFPTVM PAYPLPVFPAAAGTVPPAPETSVSGFNQLPDSGNTCSMQPSQFSAPLMTPVVALVLPNYVYPEMNNSLPQ TLYHSQANFPTHPAFSSQTVFPAQPPFTTPSPFPQQAFFPMQPFHYNPPAEIEKVPVTETRNEPSRSCTP QSVGPQDQASPPLFQSRCSSPLNLLQLEENTKTVESGAPAGLHGALNEEGTIGKIMTTDAGSGKGSLPAE SPMDAQNSDALSMSSVLLDILLQEDACSGTGSASSGSGVSAAAESLGSGSNGCDMSGSRTGSSETSHTSK YFGSIDSSENHHKTKMKAEIEESEHFIKYVLQDPIWLLMANTDDTVMMTYQLPSRDLETVLKEDKLKLKQ MQKLQPKFTEDQKRELIEVHPWIQQGGLPKTVANSECIFCEDNIQSNFYTSYDEEIHEMDLNEMIEDSGE NNLVPLSQVNEEQT

>Zebrafish

MSEDLDSKPYLFSSLEGQDGAIGCSSMATLHRMASFAEGTELGLASEGSDSSQDRPTSGHNTRKMSHSLH EDVEMKSSSGSSGSGTESHGNESHGNESHGNESHGNESSGSSNSRSKDSALLVSSGSNKSSNSHSPSPPS STNAFSLLSASSEQDNPSTSGCSSEESAKAKTQKELIKTLKELKLHLPAEKRNKGSKSTTLNTLKYALRC VRQVEANEEYYQLLMINDSQPSGLDVSSYTIEEIDSITSEYTLKNTDIFAVAVSLITGKIVYISDQAASI LNCKRDVFKNAKFVEFLTPQDVSVFYSFTTPYRLPSWSMCTGADSSPSDCMQEKSFFCRISGGKECEADL QYYPFRMTPYLMKVQDVEHSEDQFCCLLLAERVHSGYEAPRIPTDKRIFTTTHTPSCVFQDVDERAVPLL GYLPQDLIGTPVLLHLHPNDRPTMLGIHRKILQCAGQPFDHSIRFCARNGEYITIDTSWSSFVNPWSRKV SFVIGRHKVRMGPVNEDVFAAPATAEGKCVDSDIQDITEQIHRLLLQPVHNNGSSGYGSLGSNDHLLSVA SSSESNGNGTRQRHEEEDIRKAKPRSFQEICKGVHMQKNQELQSKKSPTKFVQKSPVVRPKDSAYPVNWR ESQEEQRAAVQEELAFKDQTVYSYQQISCLDSVIRYLESCNVPITVKRKCQSSSNTTSSNSDEDKQRNAD SSMQVSEEPAHLKEQSGLSTLEVSKKPPGSGVVSPSLTPLALPSKPESVVSITSQCSYSSTIVHVGDKKE IIEDVPSAEGTDVQGLAVPPAAVSPQNQEREAYKKLGLTKQVLAAHTQKEEQAFLSRFRELRGVHAFKAD CSLYLERQKGQVTSEAVPAARSCKAGGGGAQETTTTRRGRNKKTKSKRVKPNESSDSTPSGRRPAHRPQL QGLNQTSWSPSDTSQSTFPIAYPAVMPAYPLQMYPGAGGMQPRVDPPMPGFGESQCAPDPRIPMQPIQTP YSAPLVTPMVALVLPNYMFPQVGSAPRQAFYPPKQGPFPTQPTFQTQPGFTPQASFPPQSTFTIQTQFTS QNPFSSQPTFQPQPFPFACPEDPPKAPEPELREEQSRSPTPQSMGGGGPPSPPLFQSRCSSPLQLNLLQL EETQRSADRQENTAPSAVPLNNCSTGVEKAGSVTAQSKPVKDVVQDEGSPVDGQHSDALSSSSDLLDILP EDSRSGTGSATSGSMGSGSNRCGTSASGGSASRTESSNKSNNSSNYFGSVDSSQKSHKAKAQGSGVLALD RSENLIKYVLQDPLWLLMANVDEDVMMSYQLPSRDIQKVLREDREKLRQMQKSQPRFTDEQKRELADVHP WMRRGGLPKAIDIKACMGCEELSEALNEDDPPDLHMGEAENSDVTAAPNSQELQEPPNSPTHSCPGPDT

>Gorilla

MNGYAEFPPSPSNPTKEPVEPQPSQVPLQEDVDMSSGSSGHETNENCSTGRDSQGSDCDDSGKELGMLVE PPDARQSPDTFSLMMAKSEHNPSTSGCSSDQSSKVDTHKELIKTLKELKVHLPADKKAKGKASTLATLKY ALRSVKQVKANEEYYQLLMSSEGHPCGADVPSYTVEEMESVTSEHIVKNADMFAVAVSLVSGKILYISDQ VASIFHCKRDAFSDAKFVEFLAPHDVGVFHSFTSPYKLPLWSMCSGADSFTQECMEEKSFFCRVSVGKSH ENEIRYHPFRMTPYLVKVQDQQGAESQLCCLLLAERVHSGYEAPRIPPEKRIFTTTHTPNCLFQDVDERA VPLLGYLPQDLIETPVLVQLHPSDRPLMLAIHKKILQSGGQPFDYSPIRFRARNGEYITLDTSWSSFINP WSRKISFIIGRHKVRVGPLNEDVFAAHPCTEEKALHPSIQELTEQIHRLLLQPVPHSGSSGYGSLGSNGS HEHLMSQTSSSDSNGHEDSRRRRAEICKNGNKTKNRSHYSHESGEQKKKSVTEMQTNPPAEKKAVPAMEK DSLGVSFPEELACKNQPTCSYQQISCLDSVIRYLESCNEAATLKRKCEFPANVPALRSSDKRKATVSPGP HAGEAEPPSRVNSRTGGGTHLTSLALPGKAESVASLTSQCSYSSTIVHVGDKKPQPELEMVEDAASGPES LDCLAGPALACGLSQEKEPFKKLGLTKEVLAAHTQKEEQSFLQKFKEIRKLSIFQSHCHYYLQERSKGQP SERTAPGLRNTSGIDSSWKKTGKNRKLKSKRVKPRESSESTGSGGPVSARPPLVGLNATAWSPSDTSQSS CPAVPFPAPVPAAYSLPVFPAPGTVAAPPAPPHASFTVPAVPVDLQHQFAVQPPPFPAPLAPVMAFMLPS YSFPSGTPNLPQAFFPSQPQFPSHPTLTSEVASASQPEFPSRTSIPRQPCACPATRATPPSAMGRASPPL FQSRSSSPLQLNLLQLEEAPEGGTGAMGTTGATETAAVGADCKPGTSRDQQPKAPLTRDEPSDTQNSDAL STSSGLLNLLLNEDLCSASGSAASESLGSGSLGCDASPSGAGSSDTSHTSKYFGSIDSSENNHKAKMNTG MEESEHFIKCVLQDPIWLLMADADSSVMMTYQLPSRNLEAVLKEDREKLKLLQKLQPRFTESQKQELREV HQWMQTGSLPAAIDVAECVYCENKEKGNICIPYEEDIPSLGLSEVSDTKEDENGSPLNHRIEEQT

>Tick

MYVEIEIVPHSMGPTSAKSPSAASGTEPASQTMKSLHPEVCPDPLRELSPIIYYVQSMRDQPDDSSNASK KPHIKSSAFKDLKNESCVKSGDGFCLAVSLQDGTIIYVSSTITPILGYSKDMLLGQCIMNFLYPRDRITF ANHLSQGLNSRFNEDAKGMCHNRSQSTFLCRLRQYQSLKFGYGISDKKVQYKPFQMSVYIKDVIVDDVSV ENASTAMCLIVTAVSIQTAYRVPNEIPAMTCFSTRHTASCHFSHVDLSAAVYLGYLPQDMLGHSVFDFYC MEDLSQLKDIYELVIKEQGHSFRSKPYRFKAFNGSFVILETEWSCFINPWTRKLEFVVGQHRVLKGPKIP NVFMEASRDNPEIRPPSEEVLNNNRHLQEQIKDILSQPVKPRESNHLRQRSNKRRKELASFVSTLVDEMS HKRIDKASELLIREIFHYRTKDLWSWEKFRRIKSFTTRTHRHNRMAHKHVKHPAPEEFCAAKDNYRFKRS GSPPVNSVLHKHTKPSRDGVDGSTAASAPFTPLMHAASLVTSQPDNVAAFMPNLAIPTYTYVPLNSTQTP ANTPFLIPVMYVGGVPLYPSLSTMEGTQSKGMWQCGALPLMPMWQQTSVGSQELSKQEKASSGGNVCSDK LTEDGLRKETSDKTLPNLKDGGGAPCGDVDGSGRAFKQYATKYSVGAVPGLTGSKDKKAEDLNNHEGSDK DTQQDDSVSLSFESSFFGKSENSESQFSSEKSSEDTDTEMKIRRRKHPMRGTLREPHWTEGVNLSADLVY RYQLRAADLADVLKSDMDKLQRLQQPRLVNEQLSVLQHELEDREDLDEATAGGDDLRPKDQDIASSQGLT AAQNCACMYAMEEDLTEEMEELERRMLSSIDPDY

>Frog

MNGGCEPPPPLGERARRTRAPREMEGTQQDETDTNSHGSSGNESNGNESRQSRSSHSSTSGNGKDSAMLE ATESSKSTNSHSPSPPSSSIAYSLLSGSSEQDNPSTSGCSSEQSAREKNQKELMKALKELKIRLPSEKRL KGKSGTLASLQYALSCVKQVRANQEYYQQWPIDDSQPCCPDMSSYTIAEVESVTSEYTLKNPDTFSVAVS FISGRIVYISDQASLILHCKKEVFKGATFAEFLAPQDVSVFYGSTAPYHLPSWSNCTSGDPALMDYTQEK SVFCRISGGRERDMNIRYHPFRLTPYLMKVRDSDTAEGQPCCLLIAEKIHSGYEAPRIPPDKRTFTTRHT PSCMFQEVDERAVPLLGYLPQDLIGMPVLLFIHPEDRPLMLAIHKKVLQQAGQPFDHSPIRLCARSGEYV TIDTSWTSFVNPWSRKVSFILGRHKVRTSPLNEDVFTAPKGVELKPLDFDTQELSEQIHRILLQPVHSTT SGGNGSGGSNMSQEPFHCNASSSDSNAMVTEEGADRKPMTFQEFCQNVNMVKNQGQQGYLGSRGIRTSQR APFQAPPRPVAPQVTDSTTSEPPPPRIPCIGDELGRKESTNYSYQQINCLDSIIRYLESCNLPSTVKRKC RSSSFTSSTSEEEKQRTGESDKEDPSGGTPQQQELPPATAVGSAPLAPLPPLPPSKAESVVSITSQGSFS STIVHVGDKKPPDSEMVLMEESSCPAAPAPPPRPLGLTKEVLSAHTQREEQAFLTRVHGLSRLRVFDPLP AGAWEEHNQHPQRGSKPSRASQHHHASSCNPPSPSKGESNSGRRRGKSGKSKAKRPKQGKSPSFSSMQTP NLLDVNLLPPPPPVIPGYPLPIYPTLAPDPTPPVPRYPLVTPIVALVMPNYLFQPPPVAPSFFPGVNGFQ NFVPSTEPPPTAPEAPPAAPAPPPPPASAASCPPPSRSSTPPQRLFPSRCSSPLQLDLLQMEELPQPGAG GGGEWELEEEIKGGKGGASPGTSGGGGGTNTETGNGEENSQPENCMGDPNDSSSHNDALSSSSDLLDLLL QEDSFSGTGSAASGSMGSNGGSTSACGTRSSESSNTSKYFGSIDSSETDLRVKKAERDAERKVIRYVMQD PLWLLMANTDHDVMMSYQIPPRDIERVLQEDREKLRQLQRHQPKFSEEQKRELGEVHSWARRGRIPHVIN ITSCTGCSPDGPPYDEDLDLSIMMEEGGDCTVVGEEGGGDVMSG

>Blind\_cavefish

ISDQAAGILHCKKDEFKDRKFVEFLTPQDVSVFYSFTTPYRLPAWSMCTGAESSSTEFMQEKSFFCRISG GKEKDGGLQYYPFRMTPYLMKVQDAELSEEHFCCLILAERVHSGYEAPRIPPDKRIFTTTHTPNCMFQDV DERAVPLLGYLPQDLIGTPV