

>Homo sapiens (Human)

MSRSRASIHRGSIPAMSYAPFRDVRGPMHRTQYVHSPYDRPGWNPRFCIISGNQLLMLDEDEIHPLLR
DRRSESSRNKLLRRTVSVPEGRPHGEHEYHLGRSRRKSVPGGKQYSMEGAPAAPFRPSQGFLSRRLKSS
IKRTKSQPKLDRDTSFRQILPRFRSADHDRARLMQSFKESHSHESLLSPSSAAEALNLDSDSIKPVH
SSILGQEFCEVTTSSGKTCFACRSAERDKWIENLQRAVKPNKDNSRRVDNVLKLWIIARELPPKKRY
YCELCLDDMLYARTTSKPRSASGDTVFWGEHFEFNNLPAVRALRLHLYRSDKKRKKDKAGYVGLVTPV
ATLAGRHFEQWYPVTLPTGSGGSGGMGSGGGGGSGGGSGGKKGKGGCPAVRLKARYQTMSILPMELYKEF
AEYVTNHYRMLCAVLEPALNVKGKEEVASALVHILQSTGKAKDFLSDMAMSEVDRFMEREHLIFRENTLA
TKAIEEYMRIGQKYLKDAIGEFIRALYESEENCEVDPIKCTASSLAEHQANLRMCCELALCKVVNSHCV
FPRELKEVFASWRLRCAERGREDIADRLISASLFLRFLCPAIMSPSLFGLMQEYPDEQTSRTLTLIAKVI
QNLANSKFTSKEDFLGFMNEFLELEWGSQQFLYEISNLDTLTNSSFEGYIDLGRELSTLHALLWEVL
PQLSKEALLKLGPLRLLNDISTALRNPNIQRQPSRQSERPRQPVVLRGSAEMQGYMMRDLNSSIDLQ
SFMARGLNSSMDMARLPSPTKEKPPPPPPGGGKDLFYVSRPPLARSSPAYCTSSSDITEPEQKMLSVNKS
VSMLDLQGDGPGGRLNSSSVSNLAAVGDLLHSSQASLTAALGLRPAPAGRLSQSGSSITAAGMRLSQMG
VTTDGVPAQQLRIPLSFQNPFLHMAADGPGPPGGHGGGGGGHGGPPSSHHHHHHHHHHHRGGEPPGDTFAPFH
GYSKSEDLSSGVPKPPAASILHSHSYSDEFGPSGDTFTRRQLSLQDNLQHMLSPQQITIGPQRPAAPSGPG
GGSGGGSGGGGGQPPPLQRGKSQQLTVSAAQKPRPSSGNLLQSPEPSYGPAPRQQLSKEGSIGGGG
SGGGGGGGLKPSITKQHSQTPSTLNPTMPASERTVAWVSNMPLSADIESAHIEREEYKLKEYSKSMDES
RLDRVKEYEEEEIHSKERLHMSNRKLEEYERRLLSQEEQTSKILMQYQARLEQSEKRLRQQQAQEKDSQIK
SIIGRLMLVEEELRRDHPAMAEPLPEPKRLLDAQERQLPPLGPTNPRVTLAPPWNGLAPPAPPPPPRLQ
ITENGEFRNTADH

>Rattus norvegicus (Rat)

MSRSRASIHRGSIPAMSYAPFRDVRGPPMHRTQYVHSPYDRPGWNPRFCIISGNQLLMLDEDEIHPLLR
DRRSESSRNKLLRRTVSVPEGRPHGEHEYHLGRSRRKSVPGGKQYSMEAAPAAPFRPSQGFLSRRLKSS
IKRTKSQPKLDRDTSFRQILPRFRSADHDRARLMQSFKESHSHESLLSPSSAAEALNLDSDSIKPVH
SSILGQEFCEVTTSSGKTCFACRSAERDKWIENLQRAVKPNKDNSRRVDNVLKLWIIARELPPKKRY
YCELCLDDMLYARTTSKPRSASGDTVFWGEHFEFNNLPAVRALRLHLYRSDKKRKKDKAGYVGLVTPV
ATLAGRHFEQWYPVTLPTGSGGSGGMGSGGGGGSGGGSGGKKGKGGCPAVRLKARYQTMSILPMELYKEF
AEYVTNHYRMLCAVLEPALNVKGKEEVASALVHILQSTGKAKDFLSDMAMSEVDRFMEREHLIFRENTLA
TKAIEEYMRIGQKYLKDAIGEFIRALYESEENCEVDPIKCTASSLAEHQANLRMCCELALCKVVNSHCV
FPGELKEVFASWRLRCAERGREDIADRLISASLFLRFLCPAIMSPSLFGLMQEYPDEQTSRTLTLIAKVI
QNLANSKFTSKEDFLGFMNEFLELEWGSQQFLYEISNLDTLTNSSFEGYIDLGRELSTLHALLWEVL
PQLSKEALLKLGPLRLLSDISTALRNPNIQRQPSRQSERARSQPMVLRGSAEMQGYMMRDLNSSIDLQ
SFMARGLNSSMDMARLPSPTKEKPPPPPPGGGKDLFYVSRPPLARSSPAYCTSSSDITEPEQKMLSVNKS
VSMLDLQGDGPGGRLNSSSVSNLAAVGDLLHSSQASLTAALGLRPAPAGRLSQSGSSITAAGMRLSQMG
VTTDGVPAQQLRIPLSFQNPFLHMAADGPGPPAGHGGSSGHGPPSSHHHHHHHHHHHRGGEPPGDTFAPFH
GYSKSEDLSTGVPKPPAASILHSHSYSDEFGPSGDTFTRRQLSLQDNLQHMLSPQQITIGPQRPAAPSGPG
GGSGGGSGGGGGQPPPLQRGKSQQLTVSAAQKPRPSSGNLLQSPEPSYGPAPRQQLSKEGSIGGGG
SGGGGGGGLKPSITKQHSQTPSTLNPTMPASERTVAWVSNMPLSADIESAHIEREEYKLKEYSKSMDES
RLDRVKEYEEEEIHSKERLHMSNRKLEEYERRLLSQEEQTSKILMQYQARLEQSEKRLRQQQVEKDSQIK
SIIGRLMLVEEELRRDHPAMAEPLPEPKRLLDAQRGSFPPWVQQTRV

>Mus musculus (Mouse)

MSRSRASIHRGSIPAMSYAPFRDVRGPPMHRTQYVHSPYDRPGWNPRFCIISGNQLLMLDEDEIHPLLR
DRRSESSRNKLLRRTVSVPEGRPHGEHEYHLGRSRRKSVPGGKQYSMEAAPAAPFRPSQGFLSRRLKSS
IKRTKSQPKLDRDTSFRQILPRFRSADHDRARLMQSFKESHSHESLLSPSSAAEALNLDSDSIKPVH
SSILGQEFCEVTTSSGKTCFACRSAERDKWIENLQRAVKPNKDNSRRVDNVLKLWIIARELPPKKRY
YCELCLDDMLYARTTSKPRSASGDTVFWGEHFEFNNLPAVRALRLHLYRSDKKRKKDKAGYVGLVTPV
ATLAGRHFEQWYPVTLPTGSGGSGGMGSGGGGGSGGGSGGKKGKGGCPAVRLKARYQTMSILPMELYKEF
AEYVTNHYRMLCAVLEPALNVKGKEEVASALVHILQSTGKAKDFLSDMAMSEVDRFMEREHLIFRENTLA
TKAIEEYMRIGQKYLKDAIGEFIRALYESEENCEVDPIKCTASSLAEHQANLRMCCELALCKVVNSHCV

FPRELKEVFASWRLRCAERGREDIADRLISASLFLRFLCPAIMSPSLFGLMQEYPDEQTSRTLTLIAKVI
QNLANFSKFTSKEDFLGFMNEFLELEWGSQQFLYEISNLDLTLNSSFEGYIDLGRELSTLHALLWEVL
PQLSKEALLKLGPLPRLNDISTALRNPNIQRQPSRQSERTRSQPMVLRGSAEMQGYMMRDLNSSIDLQ
SFMARGLNSSMDMARLPSPTKEKPPPPPPGGGKDLFYVSRPPLARSSPAYCTSSSDITEPEQKMLSVNKS
VSMLDLQGDGPGGRLNSSSVSNLAAVGDLLHSSQASLTAALGLRPAPAGRLSQSGSSITAAGMRLSQMG
VTTDGVPAQQLRIPLSFQNPFLHMAADGPGPPAGHGGSSGHGPPSSHHHHHHHHHHRGGEPPGDTFAPFH
GYSKSEDLSSGVPKPPAASILHSHSYSDEFGPSGTDFTRRQLSLQDSLQHMLSPQITIGPQRPAFSGPG
GGSGGGSGGGQPPPLQRGKSQQLTVSAAQKPRPSSGNLLQSPEPSYGPAPRQQLSKEGSIGGSGGGSGG
GGGGGLKPSITKQHSQTPSTLNPTMPASERTVAWVSNMPLHSADIESAHIREEYKLKEYSKSMDESRLD
RVKEYEEEIHSLKERLHMSNRKLEEYERRLLSQEEQTSKILMQYQARLEQSEKRLRQQQVEKDSQIKSII
GRLMLVEEELRRDHPAMAEPLEPKRLLDAQERQLPPLGPTNPRVTLAPPWGLAPPAPPPPPRLQITE
NGEFRNTADH

>*Xenopus tropicalis* (Frog)

MMFYAPFRDARGPPMHRMPYVTSPYDRPAWNPRYCVLSGNQLMLDEEEVHPLLIRERRTDPTRTKFLRR
TVSVPVEGKQPDEHDYHLARSRRKSVPGGKQPSMDAPPTAPFRPSQGFLSRRLKSSIKRTKSQPKLDRTS
SFRQILPRFRSADHDRARLMQAFKESHSHESLLSPSSAAEALDLNLDSDSVVKPVHSSILGQEFCEVTT
SSGTKCFACRSAERDKWIENLQRAVKPNKDNSRRVDNVLKLWII EARDLPPKKRYYCELCLDDIYART
TSKPRNDTVFWGEHFEFNNLPVRNLRHLHYKDTDKRRKEKSNYVGMVNVPIASISGRHFVEQWYPVSQ
PTSYKKGSSCPSIRLKSRYQTMILPMELYKEFAEYVTNNYRMLCAVLEPVL SVKSKEEVACALVHILQS
TGKAKDFLSDMAMTEVDRFLDREHLILRENTLATKAIEEYLKLI GORYLKEAIGEFIRALYESEEDCEVD
PMRCPPSALPDHQANLRMCCCELALCKVFNHCVFPRELKEVFASWRMCAERGREDIADRLISASLFLRF
LCPAIMSPSLFSLMQEYPDEQTSRTLTLIAKVIQNLANFNKYFSSKEEYMSFMNEFLETLANMQNFLYE
ISNLDLTLNINFEYIDLGRELSTLHALLWEVIPQLSKDALIKLGPLPRLNDISLALRNPHIQRQPSH
QERLPPPKPVILRGPSAELQSYLVRDLNSSIDMTRLPSPTKDKPSKDMFFVSRRLPTRSSPAYCTSSSDI
TEPDQKMLSVNKSVMMDLQDSRMNSVTNLQAVGDLLNSSQASISGGLRPGGRLSQSGSSIAAGLRLSQ
MGVTTDGLSAQQLRIPLSFQNPFLHMAPDGGGPPSHPAPHRPDPGADAFAPFHGYSKSEDLSSGKMLH
SHSYSDEF SRQGRQLSLQDNLQHMLSPQITIGPGVPRRQDSQPPPLQRGKSQQLTVQAAHKPRPSSGN
LLQSPEPMYGAARIRQQSVEKDAGGLKPSITKQHSQAATLNPTVTPASERTVAWVSNMPLHSADIESAHI
REEYKLKEYSKSMDESRLERVKEYEEEIYSLKERLLMSNRKLEEYERRLLTQEEQTNKMMQYQSRLDQ
SEKRLRQQQVEKDTQIKSILNRLEMVDAGGGGDQEGSLTRTNRYEEETYRGSGGNVIVRLCVTSSSHP
VPVFHLKRERRKKKTRIQRNLGLNEEIGGRRSFPPWVQQTRV

>*Danio rerio* (Zebrafish)

MSYVSSQDGRVSPCSRPHPLNGHAHDSPGWSRQLRVRDGDQFYLLDQEEVHPLL MNDHRPVSHRHKLL
RRTVSPADSRPHPESEHARARRKS FATSRQSMETPPTAPTQPFQPSFLSRRLKGSIKRAKSQPKLDR
TGSFRHMILPRFRSADQERTRLMQSFKESHSHESLLSPSSAAEALDLTDEDAIKPVHSSILGQEYCFE
VTTASGTKCFACRSAERDKWIENLQRAVKPNKDNSRRVDNVLKLWII EARDLPPKKRYYCELCLDDMLY
ARTTSKPRD TVFWGEHFEFNNLPAIRSLRHLHYKENDKKRRKEKSTYLGLVSIPIPSVTGRQFVEQWYP
LIQPSVLAKGGGGGKIINASLRLKSRFQSMNIPMELYKEFAEYVTNNYRTL CGVLEPLLSAKSKEEVA
CALVHILQSTGKAKDFLSDMAMCEVDRFMDREHLIFRENTLATKAIEEFLKLI AHRYLKDTIGEFIRALY
ESEENCEVDPMRTPPSVLADHQANLRMCCCELALCKI INSHCVFPRELKEVFASWRVCAERGREDIADRL
ISSSLFLRFLCPAIMSPSLFNL TQEYPSERTSRTLTLIAKVVQSLASF SKFSGKEDYLGFMNEFLEMEWG
SMQQFLYEISNLECVSNAGAFEGYIDLGRELSILHLLWEVMAQLSKDAILKLGPLPRLNDISVALRNP
QLHRQASHQPPERHL SRPAFSRLATNDFQSLMMRD LNSSIDISRLPSPTAGLSGSGVL SHPGMAAFSERD
PRGNKDV FVYVTRPPLARSSPAYCTSSSDITEPDKVL SVNKSVMMDLQDSRINSVSNLH SVNDLLNSSQ
GSLAGFGPLGGAPLAGGRVSAGSGGSSMSGGLRLTTDSL SQQQQQAAAAMHVPLSFQNPFLH LASDGPO
YHTPPHGPTAVPPPLLLAPEPENGVGFGVPTFAHSGFSRSEDLSALRTQNSLVQPNIVHSHSYSDDFTR
HNQADYARRQLSLQVQENLQQQVLMGMTPQTATGTGTPASLATPPTTIHPVRQASMAPPQQRAKQPAPAH
QLSVSSAVNSTPPKTRPQSGNLLQSPESSFGGRQLTRQQLSVKDSPAPGLPHQSSNASENPAPQSAANES
TENTPTNQSAKNTQQSNQQHLLKPSGNKQGSKSPSTLNPTSAASERTVAWVSNMPLHSADIESLRVDREE
FKLKEHSKSMDESRLDRVREYEEEINSLKERLMMSHRKL EEEYERRLLHSQEQTSKILLQYQSRLDSDSERR

LRQQVEKDSQIKGIINRLMAVEDELRGSGMPDLKTRIFTEQPIYGAHSGT

>Bos taurus (Cow)

MSRSRASIHRGSIPAMSYAPFRDVRGPPMHRQTQYVHSPYDRPGWNPRFCIISGNQLLMLDEDEIHPLLIR
DRRSESSRNKLLRRTVSVPEGRPHGEHEYHLGRSRRKSVPGGKQYSMEAAPAAPFRPSQGFLSRRLKSS
IKRTKSQPKLDRSFRQILPRFRSADHDRARLMQSFKESHSHESLLSPSSAAEALNLDSDSIKPVH
SSILGQEFCEVTTSSGKTCFACRSAAERDKWIENLQRAVKPNKDNSRRVDNVLKWLWIEARELPPKKRY
YCELCLDDMLYARTTSKPRSASGDTVFWGEHFEFNNLPAVRALRLHLYRSDKRRKKDKAGYVGLVTPV
ATLAGRHFTEQWYPVTLPTGSGGSGMGGSGGGGGSGGGSGGKGGGCPAVRLKARYQTMSILPMELYKE
FAEYVTNHYRMLCAVLEPALNVKGKEEVASALVHILQSTGKAKDFLSDMAMSEVDRFMEREHLIFRENTL
ATKAIIEYMRLIGQKYLKDAIGEFIRALYESEENCEVDPIKCTASSLAEHQANLRMCCELALCKVVNSHC
VFPRELKEVFASWRLRCAERGREDIADRLISASLFLRFLCPAIMSPSLFGLMQEYPDEQTSRTLTLIAKV
IQNLANFSKFTSKEDFLGFMNEFLELEWGSQQFLYEISNLDTLTNSSSFEGYIDLGRELSTLHALLWEV
LPQLSKEALLKGLPLRLLNDISTALRNPNIQRQPSRQSERPRPQPMVLRGSAEMQGYMMRDLNSSIDL
QSFMARGLNSSMDMARLPSPTKEKPPPPPPGGGKDLFYVSRPPLARSSPAYCTSSSDITEPEQKMLSVNK
SVSMLDLQGDGPGGRLNSSSVSNLAAVGDLLHSSQASLTAALGLRPAPAGRLSQSGSSITAAGMRLSQM
GVTTDGVPAQQLRIPLSFQNPFLHMAADGPGPPGGHAGGGGHAPPSSHHHHHHHHHRGGEPGDTFAPF
HGYSKSEDLSSGVPKPPAASILHSHSYSDEFGPSGTDFTRRQLSLQDNLQHMLSPQITIGPQRPVPSGP
AGGSGGGGGGGGGQPPPLQRGKSQQLTVSAAQKPRPSSGNLLQSPEPSYGPAPRQQLSKEGSIGGG
GGSGGGGGGGLKPSITKQHSQTPSTLNPTMPASERTVAWVSNMPHLSADIESAHIEREYKLKEYSKSM
DESRLDRVKEYEEEEIHSLKERLHMSNRKLEEYERRLLSQEEQTSKILMQYQARLEQSEKRLRQQVEKDS
QIKSIIIGRLMLVEEELRRDHPTMAEPLPEPKRLLDAQERQLPPLGPTNPRVTLAPPWNLAPPAPPPPP
RLQITENGEFRNTADH

>Pan troglodytes (Chimpanzee)

MSRSRASIHRGSIPAMSYAPFRDVRGPPMHRQTQYVHSPYDRPGWNPRFCIISGNQLLMLDEDEIHPLLIR
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IKRTKSQPKLDRSFRQILPRFRSADHDRARLMQSFKESHSHESLLSPSSAAEALNLDSDSIKPVH
SSILGQEFCEVTTSSGKTCFACRSAAERDKWIENLQRAVKPNKDNSRRVDNVLKWLWIEARELPPKKRY
YCELCLDDMLYARTTSKPRSASGDTVFWGEHFEFNNLPAVRALRLHLYRSDKRRKKDKAGYVGLVTPV
ATLAGRHFTEQWYPVTLPTGSGGSGMGGSGGGGGSGGGSGGKGGGCPAVRLKARYQTMSILPMELYKEF
AEYVTNHYRMLCAVLEPALNVKGKEEVASALVHILQSTGKAKDFLSDMAMSEVDRFMEREHLIFRENTLA
TKAIEEYMRLIGQKYLKDAIGEFIRALYESEENCEVDPIKCTASSLAEHQANLRMCCELALCKVVNSHCV
FPRELKEVFASWRLRCAERGREDIADRLISASLFLRFLCPAIMSPSLFGLMQEYPDEQTSRTLTLIAKVI
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SFMARGLNSSMDMARLPSPTKEKPPPPPPGGGKDLFYVSRPPLARSSPAYCTSSSDITEPEQKMLSVNKS
VSMLDLQGDGPGGRLNSSSVSNLAAVGDLLHSSQASLTAALGLRPAPAGRLSQSGSSITAAGMRLSQM
VTTDGVPAQQLRIPLSFQNPFLHMAADGPGPPGGHGGGGGHGPPSSHHHHHHHHHRGGEPGDTFAPFH
GYSKSEDLSSGVPKPPAASILHSHSYSDEFGPSGTDFTRRQLSLQDNLQHMLSPQITIGPQRPAPSGPG
GGSGGGGGGGGGQPPPLQRGKSQQLTVSAAQKPRPSSGNLLQSPEPSYGPAPRQQLSKEGSIGGGG
SGGGGGGGLKPSITKQHSQTPSTLNPTMPASERTVAWVSNMPHLSADIESAHIEREYKLKEYSKSMDES
RLDRVKEYEEEEIHSLKERLHMSNRKLEEYERRLLSQEEQTSKILMQYQARLEQSEKRLRQQAEKDSQIK
SIIIGRLMLVEEELRRDHPMAEPLPEPKRLLDAQVEITMSFIFSVSHPHPSHCLSCHTYTSHLAPSPSV
SHSLLFVHWLLLAAP

>Macaca mulatta (Rhesus Monkey)

MSRSRASIHRGSIPAMSYAPFRDVRGPPMHRQTQYVHSPYDRPGWNPRFCIISGNQLLMLDEDEIHPLLIR
DRRSESSRNKLLRRTVSVPEGRPHGEHEYHLGRSRRKSVPGGKQYSMEGAPAAPFRPSQGFLSRRLKSS
IKRTKSQPKLDRSFRQILPRFRSADHDRARLMQSFKESHSHESLLSPSSAAEALNLDSDSIKPVH
SSILGQEFCEVTTSSGKTCFACRSAAERDKWIENLQRAVKPNKDNSRRVDNVLKWLWIEARELPPKKRY
YCELCLDDMLYARTTSKPRSASGDTVFWGEHFEFNNLPAVRALRLHLYRSDKRRKKDKAGYVGLVTPV
ATLAGRHFTEQWYPVTLPTGSGGSGMGGSGGGGGSGGGSGGKGGGCPAVRLKARYQTMSILPMELYKEF

AEYVTNHYRMLCAVLEPALNVKGKEEVASALVHILQSTGKAKDFLSDMAMSEVDRFMEREHLIFRENTLA
TKAIEEYMRLIGQKYLKDAIGEFIRALYESEENCEVDPIKCTASSLAEHQANLRMCCELALCKVVNSHCV
FPRELKEVFASWRLRCAERGREDIADRLISASLFLRFLCPAIMSPSLFGLMQEYQDEQTSRTLTLIAKVI
QNLANFSKFTSKEDFLGFMNEFLELEWGSQQFLYEISNLDTLTNSSFEGYIDLGRELSTLHALLWEVL
PQLSKEALLKLGPLPRLNLDISTALRNPNIQRQPSRQSERPRPQPVVLRGSAEMQGYMMRDLNSSIDLQ
SFMARGLNSSMDMARLPSPTKEKPPPPPPGGGKDLFVSRPPLARSSPAYCTSSSDITEPEQKMLSVNKS
VSMIDLQGDGPGGRLNSSSVSNLAAVGDLLHSSQASLTAALGLRPAPAGRLSQSGSSITAAGMRLSQMG
VTTDGVPAQQLRIPLSFQNPFLHMAADGPGPPGGHGGGGGGHGGPPSSHHHHHHHHHHHRGGEPPGDTFAPFH
GYSKSEDLSSGVPKPPAASILHSHSYSEDFGPGSGTDFTRRQLSLQDNLQHMLSPQQITIGPQRPAPSGPG
GGSGGGSGGGGGGQPPPLQRGKSQQLTVSAAQKPRPSSGNLLQSPEPSYGPAPRQQLSKEGSISSGGG
SGGGGGGGLKPSITKQHSQTPSTLNPTMPASERTVAWVSNMPLSADIESAHIREEYKLKEYSKSMDES
RLDRVKEYEEEEIHSLKERLHMSNRKLEEYERRLLSQEEQTSKILMQYQARLEQSEKRLRQQQAEKDSQIK
SIIGRLMLVEEELRRDHPAMAPELPEPKRLLDAQVERQLPPLGPTNPRVTLAPPWNLAPPAPPPPRL
QITENGEFRNTADH

>*Canis lupus familiaris* (Dog)

MSCARRPITGQPRRPRDERPGARKGGWRPRRLDASDVRGPPMHRTOYVHSPYDRPGWNPRFCIISGNQLL
MLDEDEIHPLLRDRRSESSRNKLLRRTVSVPEGRPHGEHEYHLGRSRRKSVPGGKQYSMEAAPAAPFR
PSQGFSLRRLKSSIKRTKSQPKLDRSSFRQILPRFRSADHDRARLMQSFKESHSHESLLSPSSAAEAL
LNLDEDSIIPVHSSILGQEFCEVTTSSGKCFACRSAAERDKWIENLQRAVKPNKDNSRRVDNLKLV
IIEARELPPKRYCYCELCLDDMLYARTTSKPRSASGDTVFWGEHFEFNNLPAVRALRLHLYRSDKRRKK
DKAGYVGLVTPVATLAGRHFTEQWYPVTLPTGSGGGSGMGSGGGGGSGSGSGGKGGGCPAVRLKARY
QTMSILPMELYKEFAEYVTNHYRMLCAVLEPALNVKGKEEVASALVHILQSTGKAKDFLSDMAMSEVDRF
MEREHLIFRENTLATKAIEEYMRLIGQKYLKDAIGEFIRALYESEENCEVDPIKCTASSLAEHQANLRMC
CELALCKVVNSHCVFPRELKEVFASWRLRCAERGREDIADRLISASLFLRFLCPAIMSPSLFGLMQEYQD
EQTSRTLTLIAKVIQNLANFSKFTSKEDFLGFMNEFLELEWGSQQFLYEISNLDTLTNSSFEGYIDL
RELSTLHALLWEVLPQLSKEALLKLGPLPRLNLDISTALRNPNIQRQPSRQSERPRPQPVVLRGSAEMQ
GYMMRDLNSSIDLQSFMARGLNRLNLDTAGVRGDGPPSSHHHHHHHHHHHRGGEPPGDTFAPFHGYSKSE
LSSGVPKPPAASILHSHSNSDFGPGSGTDFTRRQLSLQDNLQHMLSPQQITIGPQRPAPSGPGGGSSGGG
SGGGGGGQPPPLQRGKSQQLTVSAAQKPRPSSGNLLQSPEPSYGPAPRQQLSKEGSISSGGGSGGGG
GGLKPSITKQHSQAPSTLNPTMPASERTVAWVSNMPLSADIESAHIREEYKLKEYSKSMDESRLDRV
EYEEEEIHSLKERLHMSNRKLEEYERRLLSQEEQTSKILMQYQARLEQSEKRLRQQQVEKDSQIKSIIGR
MLVEEELRRDHPAMPELPEPKRLLDAQERQLPPLGPTNPRVTLAPPWNLAPPAPPPPRLQITENGE
FRNTADH

>*Saccharomyces cerevisiae* (Yeast)

MSSNNEPAQSRYSYFKLNEFLSNVKHYKNTFKGEIQWCNNLSLNDWKTHYLQITSTGALTHSIDELTADS
TNIQPIIKHLQQCRIEIHKDKHSSFKDINANCNFIQVNTSGKDNKVYLRVKSWSDFKLLTCLIWSSM
KTNGIFNKQVSRPLEFKSKMAKPESLLVYKLVNFGPIVKNIVLPPATNILESPDIINDDNSVGFSA
MGVLKSNGLDLLLLQSDGSLIYSLNISQLLRSEIRILDSSVLQSENSLFLGELPLLRSQLGLEKFRIENI
ASAATNSSDISQEIIVEFPLRIDLEDCFIALQSFARSEYLSITGSDKSNMNRISNSFKISILEANFQIN
LNDKNNTPWSIFTDITAWGHTWARTSMVSNSSNPFWREEFQFNELLRLTNSYLEIKQLFHDLNKKRRLR
IGKIKITQEIINDTRYNKETRLPIMVDNKNFQIGTICIKISSNLNFIPLSTNFVKLEKLLMNANLSMVS
NLIYKSSSSMENDNKLTQTSIIFLDIFQSLSRIEWFHVLIDKELAKIDGTVSRINQKNLDSKHFVNSLF
RGNSILTQSIEQYFFRVGNEYLSKALSAILKEIIESNKSCELDPARVKEKDEVKRRKIIADNYKRLYSWV
TKIWKRLYATSNLPIEIRNVLKIIFRQKLEIICIDDTLQIILNGISGLLFLRFFCPVILNPKLFKYVSQN
LNETARRNLTLISKVLLNLSTLTQFANKEPWLKMNFIKDRHNDLLDYIDKMTQKKLDFNSKILNLSST
ISRPKLAIQTMDDLPQIPYLLDKNLRETEFVNLIVNFSQEDMTKMEKYNHMDNGGKELIEEGLLSG
SSLNLSVDKDLDSPIEVKPEIGELEFEKITENNTEIFGDDLMNLLKSDDVGSRSRDLNNGANSKIFNS
IIPKAEEEKHAMKELEQESCLLYNRINHIRKRLSGYECASSTLFEDKKYSISLSHKIFYEEIKEGKEIVL
KLLNKPTNENSSARLQKFFTKGVSSKSNNTVGDYCKFLTIDVSDENPKSSNKTSVHGTSSENGAKDDYL
TLPNSQKGNLGNRFSPKLSRIMRKPANADVPKEQNSRKLTRWFKKKKKTGGS

>*Oryctolagus cuniculus* (Rabbit)

MSRSRASIHRGSIPAMSYAPFRDVRGPPMHRTOYVHSPYDRPGWNPFCIISGNQLLMLDEDEIHPLLR
DRRSESSRNKLLRRTVSVPEGRPHGEHEYHLGRSRRKSVPGGKQYSMEAAPAAPFRPSQGFLSRRLKSS
IKRTKSQPKLDRSFRQILPRFRSADHDRARLMQSFKESHSHESLLSPSSAAEALNLDDEDSIIKPVH
SSILGQEFCEVTTSSGKTCFACRSAAERDKWIENLQRAVKPNKDNSRRVDNVLKLWIIARELPPKKRY
YCELCLDDMLYARTTSKPRSASGDTVFWGEHFEFNNLPAVRALRLHLYRSDSKRKKDKAGYVGLVTPV
ATLAGRHFTEQWYPVTLPTGSGGSGMGSGGGGGSGGGSGGKGGGCPAVRLKARYQTM SILPMELYKEF
AEYVTNHYRMLCAVLEPALNVKGKEEVASALVHILQSTGKAKDFLSDMAMSEVDRFMEREHLIFRENTLA
TKAIEEYMRIGQKYLKDAIGEFIRALYESEENCEVDPIKCTASSLAEHQANLRMCCELALCKVVNSHCV
FPRELKEVFASWRLRCAERGREDIADRLISASLFLRFLCPAIMSPSLFGLMQEYPDEQTSRTLTLIAKVI
QNLANSKFTSKEDFLGFMNEFLELEWGSQQFLYEISNLDLTLNSSFEGYIDLGRELSTLHALLWEVL
PQLSKEALLKGLPLRLLNDISTALRNPNIQRQPSRQSERPRPQPVVLRGSAEMQGYMMRDLNSSIDLQ
SFMARGLNSSMDMACLPSPTKEKPPPPPPGGGKDLFYVSRPPLARSSPAYCTSSSDITEPEQKMLSVNKS
VSMLDLQGDGPGGRLNSSSVSNLAAVGDLLHSSQASLTAALGLRPAPPGRLSQSGSSITAAGMRLSQMG
VTTDGVPAQQLRIPLSFQNPFLHMAADGPGPPAGHGGGGGHAPPSSHHHHHHHHHRRGGEPPGDTFAPFH
GYSKSEDLSSGVPKPLAASILHSHSYSDEFGPSGDTFTRRQLSLQDNLQHMLSPQQITIGPQRPAQSGPG
GGGSGGSGGGGSGPPPLQRGKSQQLTVSAAQKPRPSSGNLLQSPEPSYGPAPRQQLSKEGSIGGSGG
SGGGGGGGLKPSITKQHSQTPSTLNPTMPASERTVAWVSNMPLSADIESAHIEREEYKLKEYSKSMDES
RLDRVKEYEEEEIHSKERLHMSNRKLEEYERRLLSQEEQTSKILMQYQARLEQSEKRLRQQQVEKDSQIK
SIIGRLMLVEEELRRDHPAMAEPLDPRRGMLDAQERQLPPLGPTNPRVTLAPPWNGLAPPAPPPPPRLQ
ITENGEFRNTADH

>*Drosophila melanogaster* (Fruit Fly)

MLLKKKRYMFDERDDNNINSPVAVEPSSNNNKMATDREVRIEEQLKVKIGEAKNLSRNAANTSCSTQGT
RDVYCTIALDQEEICRTPTIERTLTPFFGEEHQFKIPRRFRYLTIYLWDRDMKQDKPIGKIAIKREELHM
YNHKDHWFSLRPVDQDSEVQGMVNVEVAFTEAQQTQSLSEGIDLGHQTLRHHQNLPHHSHQRAHLNDYK
ENSELSNIQRASAAAASSSSAAMTLKTRAAGLFGHVHPPSQTQHFPIINTTSTSSDQLSNWKSHGRFVG
VTIKVPACVDLAKKQGTCDPFVCTAHYSNKHQVTRRTKQRKKTVDPEFDEAMYFDLHIDADAGSTNTTG
SNKSAGSLESSANKGYSIYPVGGADLVEIVVSVWHAHAGMSDKVFLGEVRLPMLNKQEQAVNPSAWYY
LQPRSMTHSSRSLNATPRSCATPPGTRLSVDSTIGSLRLNLNYTADHVFLATYDDLMLLLESVDQRP
TVSAVSILGELVSGKTEVAQPLVRLFTHTERIAPIIKALADHEISHLTDPTTIFRGNTLVSKMMDEAMRL
SGLHYLHQTLRPVLSQIVAEKKPCEIDPSKIKDRSAVDNLHNLQDYVERVFEAITKSADRCPKVLCQIF
HDLRECAQEHFSPNREVRYSVVSGFIFLRFAPAILGPKLFDLTTTERLDAQTSRTLTLISKTIQSLGNLV
SSRSSQQTCKEEFTVELYKKFCTEQHVDVAVKHFLVISTPSHASSSVHPAAAAATPLEPVLLKEGLMTKY
PTSRKRFGRQFKQRHFRLTTHSLYAKSKGKQPICDIPLQEIASVEQLKDKSFKMQNCFKIVHNDRSLIV
QTTNCVEEREWFLLHKICLMNSIRMQYFHPSAFVSGFYSCGRSDENSPGCKKVLDTMDYFQMDLVTA
LDPALDLQRIHTLIMSNSVLESLLDPLTYHQSLSQTHQHNPLVPLATDLQKHSPQAFAEFKRTIEKL
REKAYAI DRDHRDYKQGITRQLKYGSRQAPIGDDNYWHMMRAAGQLNQQHHQQQQHQQQQQQQQQLQ
FQPQVLPQMQRVAYPYQPATSNMAYCLHNMQYQQQLPFHQQQQQHHQQLQQQQSQFQPLRSHQLQR
HNNNLNNNNCNGSSSSPSSTSSVVAAPPSTTSSSQPAPPIY

>*Caenorhabditis elegans* (Roundworm)

MHRQGVHPNALHLLLANKKRSNTTCAHSTSSTPRSTYSSGSATSSLPLYVNTHAVTEQPKAEKRVSEFK
DLDMSGRLPVTAQQPSSSSNHLRTGGGLHARKLHRCDTGNMSLLERYLSRENMHTPSPPIQEQYQPQANYS
SRHVHFAQSQRPRPFQDQRNENASIRKRLSRSCDHLSDHNFSPRLPPIRRKPTKHVPSTLSLVIHDAIH
DETNSGGAQVGGESLDRRGWVGASTGNRTTLASVHNNLMNGRMSSSSHNLSTRLSGSTQNLNQPTNAYG
FPIVPPANPSSASGRIANLLSRPFRSNPLKRTKSVSKMEKSLAEANQHSLHRVDASNTPSRDSLYA
QPPARRHLSQPAREGLRACRSHESLLSSAHSTHMIELNEDNRLHPVHPSIFEVPCFRLASTYYSCTP
LERAKWMENLRKTMNPRRDQQRRTENSMLIWILEAKGLPAKRKYCEMTLDKTLYAKTSSKARTDNVFWG
ENFEFMMPLKIDEVCVSLFRESDSKKKCDTLIGYVTIGIDQLSSRSPVERWYTVNTSHSDSGTSRIASAL
GGKSSSQESPSLRIKARWQSVHILPLRAYDNLLETLCYNYLPLCEQLEPVLNVRDKEDLATSLVRVYKX
NLAKEFLCDLIMKEVEKLDNDHLMFRGNTLATKAMESFMKLVADDYLDSTLSDFIKTVLQCEDSCEVDPO

KLGNVSNSSLEKNRALLMRYVEVAWTKILNNVHQLPKNLRDVFSALRCRLEAQNREALADTLISSSIFLR
FLCPAILSPSLFNLVSEYPSPTNARNLTLIAKTLQNLANFSKFGGKEPHMEFMNEFVDREWHRMKDFLLR
ISSEKSGPEKNADAIVDAGKELSLIATYLEEAWTPLLQEKNGNKHPLSNVKSVLSELAECKRRSDNGVF
HSPMVQQPSSDYENSPQQHVPRHENVPAYRSTPPTGQATVLGRSTNRPATHLLTSDDYVLSSAFQTPSL
RPGGTRLSDETGTSSSRTSDKTTSSAEIRDDTDSDFELREDRGRGGRNRKRLPRTDASPSSSQASSGYL
SNNPSRSSYSNSSSSPVERMAALSIANPVFGPGSSGYAIPAEPKEIVYQKRASPPPYDPDVHNYHYQP
MQVYAVPPDCQVSPRTQATGGVNAQNRLSLPRTNPRASRNSTLLRPSVVNVPDDWDRTSDYWRDRGENNY
RSQLESQVESQAREIERLMRENIELKSKMMSSTKTVDSKRSDSGASEDSYDSLSSLDPRSRQSLVVVVPN