

> Homo sapiens

MSNSHPLRPFTAVGEIDHVVHILSEHIGALLIGEEYGDVTFVVEKKRFPAPHRVILAARCQYFRALLYGGMRES
QPEAEIPLQDTTAEAFMMLLKYYITGRATLTDEKEEVLLDFLSLAHKYGFPELEDSTSEYLCTILNIQNV
MTFDVASLYSLPKLTCMCCMFMDRNAQEVLSSEGFLSLSKTALLNIVLRDSFAAPEKDIFLALLNWCKHNS
KENHAEIMQAVRLPLMSLTELLNVVRPSGLLSPDAILDAIKVRSESRDMDLNYRGMLIPEENIATMKYGA
QVVKGELKSALLDGDQTQNYDLDHGFSRHPIDDDCRSGIEIKLGQPSIINHIRILLWDRDSRSYSYFIEVSMD
ELDWVRVIDHSQYLCRSWQKLYFPARVCRYIRIVGTHNTVKNKIFHIVAFECMFTNKTFTLEKGLIVPMEN
VATIADCASVIEGVSRSRNALLNGDTKNYDWDSGYTCHQLGSGAIVVQLAQPYMIGSIRLLLWDCDDRSYS
YYVEVSTNQQWMTMVADRTKVSCSWQSVTFERQPASFIRIVGTHNTANEFHCVHFECPEQQSSQKEE
NSEESGTGDTSLAGQQLDSHALRAPSGSSLPSSPGSNSRSPNRQH

>Pan troglodytes

MCRALLYGGMRESQPEAEIPLQDTTAEAFMMLLKYYITGRATLTDEKEEVLLDFLSLAHKYGFPELEDSTS
EYLCTILNIQNVCMFTFDVASLYSLPKLTCMCCMFMDRNAQEVLSSEGFLSLSKTALLNIVLRDSFAAPEKDI
FLALLNWCKHNSKENHAEIMQAVRLPLMSLTELLNVVRPSGLLSPDAILDAIKVRSESRDMDLNYRGMLI
PEENIATMKYGAQVVKGELKSALLDGDQTQNYDLDHGFSRHPIDDDCRSGIEIKLGQPSIINHIRILLWDRDS
RSYSYFIEVSMDDELWVRVIDHSQYLCRSWQKLYFPARVCSGDVSLWCPLWSRTPELKQSSLLGLPKCR
YIRIVGTHNTVKNKIFHIVAFECMFTNKTFTLEKGLIVPMENVATIADCASVIEGVSRSRNALLNGDTKNYD
WDSGYTCHQLGSGAIVVQLAQPYMIGSIRLLLWDCDDRSYSYYVEVSTNQQWMTMVADRTKVSCSWQS
VTFERQPASFIRIVGTHNTANEFHCVHFECPEQQSSQKEENSEESGTGDTSLAGQQLDSHALRAPSGSSL
PSSPGSNSRSPNRQH

>Macaca mulatta

MCRALLYGGMRESQPEAEIPLQDTTAEAFMMLLKYYITGRATLTDEKEEVLLDFLSLAHKYGFPELEDSTS
EYLCTILNIQNVCMFTFDVASLYSLPKLTCMCCMFMDRNAQEVLSSEGFLSLSKTALLNIVLRDSFAAPEKDI
FLALLNWCKHNSKENHAEIMQAVRLPLMSLTELLNVVRPSGLLSPDAILDAIKVRSESRDMDLNYRGMLI
PEENIATMKYGAQVVKGELKSALLDGDQTQNYDLDHGFSRHPIDDDCRSGIEIKLGQPSIINHVRILLWDRD
RSYSYFIEVSMDDELWVRVIDHSQYLCRSWQKLYFPARVCSGDRVSRWCPLWSRTPELKQSSLFGLPKC
RYIRIVGTHNTVKNKIFHIVAFECMFTNKTFTLEKGLIVPMENVATIADCASVIEGVSRSRNALLNGDTKNYD
WDSGYTCHQLGSGAIVVQLAQPYMIGSIRLLLWDCDDRSYSYYVEVSTNQQWMTMVADRTKVSCSWQS
VTFERQPASFIRIVGTHNTANEFHCVHFECPEQQSSQKEENSEESGTGDTSLAGQQLDSHALRAPSGSSLP
SSPGSNSRSPNRQH

>Canis lupus familiaris

MRESQPEAEIPLQDTTAEAFMMLLKYYITGRATLTDEKEEVLLDFLSLAHKYGFPELEDSTSEYLCTILNIQ
NVCMFTFDVASLYSLPKLTCMCCMFMDRNAQEVLSSEGFLSLSKTALLNIVLRDSFAAPEKDI
FLALLNWCKHNSKENHAEIMQAVRLPLMSLTELLNVVRPSGLLSPDAILDAIKVRSESRDMDLNYRGMLIPEENIATMKY
GAQVVKGELKSALLDGDQTQNYDLDHGFSRHPIDDDCRSGIEIKLGQPSIINHIRILLWDRDSRSYSYFIEVSM
DELWIRVIDHSQYLCRSWQKLYFPARVCRYIRIVGTHNTVKNKIFHIVAFECMFTNKTFTLEKGLIVPMEN
VATIADCASVIEGVSRSRNALLNGDTKNYDWDSGYTCHQLGSGAIVVQLAQPYMIGSIRLLLWDCDDRSYS
YYVEVSTNQQWMTMVADRTKVSCSWQSVTFERQPASFIRIVGTHNTANEFHCVHFECPEQQSSHKED

SSEESGPGEPPGQQLDPHALQAPSGSSLPSSPGSASRSPNRQH

>[Bos taurus]

MSNSHPLRPFTAVGEIDHVHILSEHIGALLIGEEYGDVTFVVEKKRFP AHRVILAARCQYFRALLYGGMRES
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MTFDVASLYSLPKLTCMCCMFMDRNAQEVLSSEGFLSLSKTALLNIVLRDSFAAPEKDIFLALLNWCKHNS
NENHAEIMQAVRLPLMSL TELLNVVRPSGLLSPDAILDAIKVRSESRDMDLN YRGMLIPEENIATMKYGA
QVVKGELKSALLDGD TQNYDLDHGFSRHPIDDDCRSGIEIKLGQPSIINHIRILLWDRDRSRSYSYFIEVSMD
ELDWIRVIDHSQYL CRSWQKLYFPARVCRYIRIVGTHNTV NKIFHIVAFECMFTNKTFTLEKGLIVPMENV
ATIADCASVIEGVSRSRN ALLNGDTKNYDWDSSYTCHQLGSGAIVVQLAQPYMIGSIRLLLWDCDDRSYSY
YVEVSTNQQQW TMVADR TKVSKSWQSVTFERRPASFIRIVGTHNTAN EVFHCVHFECPEQQAQKSS
DEPGTGGASAAGQQLDPHALQAPSGSSLPSSPGSNSRSPNRQH

>Mus musculus

MSNSHPLRPFTAVGEIDHVHILSEHIGALLIGEEYGDVTFVVEKKHFP AHRVILAARCQYFRALLYGGMRES
QPEAEIPLQDTTAEAF TMLLRYIYTGRATLTDEKEEVLLDFLSLAHKYGFPELEDSTSEYLCTILNIQNVC
MTFDVASLYSLPKLTCMCCMFMDRNAQEVLASDGFSLSKTALLNIVLRDSFAAPEKDIFLALLNWCKHN
AKENHAEIMQAVRLPLMSL TELLNVVRPSGLLSPDAILDAIKVRSESRDMDLN YRGMLIPEENIATMKYGA
QVVKGELKSALLDGD TQNYDLDHGFSRHPIDDDCRSGIEIKLGQPSIINHIRLLLWDRDRSRSYSYFIEVSMD
ELDWIRVIDHSHYLCRSWQKLYFPARVCRYIRIVGTHNTV NKIFHIVAFECMFTNKAFTLEKGLIVPLENV
ATIADCASVIEGVSRSRN ALLNGDTKNYDWDSGYTCHQLGSGAIVVQLAQPYIIGSIRLLLWDCDDRSYSY
VEVSTNQQQW TMVADR TKVSKSWQSVTFERQPASFIRIVGTHNTAN EVFHCVHFECPEQQSNQKEDSS
EPPGTGDPSTPNQQLDPHAPRAPSASSLPPSPGPNRSRPNQQNQ

>Rattus norvegicus

MSNSHPLRPFTAVGEIDHVHILSEHIGALLIGEEYGDVTFVVEKKRFP AHRVILAARCQYFRALLYGGMRES
QPEAEIPLQDTTAEAF TMLLRYIYTGRATLTDEKEEVLLDFLSLAHKYGFPELEDSTSEYLCTILNIQNVC
MTFDVASLYSLPKLTCMCCMFMDRNAQEVLASDGFSLSKTALLNIVLRDSFAAPEKDIFLALLNWCKHN
AKENHAEIMQAVRLPLMSL TELLNVVRPSGLLSPDAILDAIKVRSESRDMDLN YRGMLIPEENIATMKYGA
QVVKGELKSALLDGD TQNYDLDHGFSRHPIDDDCRSGIEIKLGQPSIINHIRLLLWDRDRSRSYSYFIEVSMD
ELDWIRVIDHSHYLCRSWQKLYFPARVCRYIRIVGTHNTV NKIFHIVAFECMFTNKAFTLEKGLIAPMENV
ATIADCASVIEGVSRSRN ALLNGDTKNYDWDSGYTCHQLGSGAIVVQLAQPYMIGSIRLLLWDCDDRSYSY
YVEVSTNQQQW TMVADR TKVSKSWQSVTFERQPASFIRIVGTHNTAN EVFHCVHFECPEQQSTQKEDS
SEEPGTGDLSTPSQQLDPHAPRAPSASSLPPSPGPNLHSPNQQNQ

>Gallus gallus

MAKNPNFQEVGHLPTGYIHCRPSESFTGYQYHHP SKMSNSHPLRPYTA VGEIDHVHILSEHIGALMNGEE
YSDVTFIVEKKRFP AHRVILAARCHYFRALLYGGMRESQPEAEIPLQDTTAEAF TMLMKYYITGRATLRDE
KEEVLLDFLSLAHKYGFPELEDSTSEYLCTILNIQNVCMTFDVASLYSLPKLTCMCCMFMDRNAQEVLSSE
GFLSLSKAALLSIVLRDSFAAPEKDIFQALMNWCKHNPKENHAEIMQAVRLPLMSL TELLNVVRPSGLLSP
DAILDAIKIRSESRDMDLN YRGMLIPGENIATMKYGAQVVKGELKSALLDGD TQNYDLDHGFSRHPIDDD

CRSGIEIKLGQPSIINHIRILLWDRDRSRSYSYIEVSMDELWIRVIDHISKYLCRSWQNLVYFPARVCRYIRIV
GTHNTVNVKVFHIVAFECMFTNKTFALEKGLIVPTENVATIADCASVIEGVSRSRNALLNGDTKNYDWDSDG
YTCHQLGSGAIVVQLAQPYMIGSIRLLLWDCDDRSYSYIEVSTNQQTWVADRTKVSCSWQTITFDK
QPASFIRIVGTQNTANEFHCVHFECPAQSGTHKDEGCKEVATTEVGTGEQQLVSRPVRAASTSSLHSPPG
STLRSHAHQP

>Danio rerio

MSDSHPLRPMNSASEIDHLHLLSEQLGALVPGEEYSVTFVVEEKRFPAHRVILAARCQYFRALLYGGLRE
SRAQAEVRLEETRAEAFSMLLRYLTYGRATLSEAREETLLDFLGLAHRYGLQPLEVSICEFLRTLSTRNVC
LVFDVASLYCLNGLAEACMAYMDRNAVAVLKSDFLTLKSALLTVVRRDSFASSEREIFQALCHWCHHN
GDGPEAKEVMSAVRLPLMTLSEMLNVVRPSGLLSPDLDLDAIQTRSESMDLNYRGMPLIPEENIATMK
HGAVVVKGELKSALLDGDQNYDLHGFSRHPIEEGRAAGIQVRLGQPSIVNHIRLLLWDKDSRSYSYV
EVSMDELWVRVVDHFKFLCRSWQQLYFPARVCRFIRVVGTHNTVNVKVFHLVALECMYTLRPFLEKGL
LVPTENVATVQACASVVEGVSRSRNALLNGDTSYDWDSDGYTCHQLGSGAIVVQLAQPYMLGSMRLLLW
DCDERSYSYVELSTNQNWVKIVDRTKDECRSWQTLTFDRQPASFIRIVGTHNTANEFHCVHFECPA
QMDTVVKEGSPGPDQPKPETSSQNSYSQSLMAQKPPSSSSHT

>Drosophila melanogaster

MSSQGHKMSGGGKKGAMEQDYTDVVDLGDGRFSADMARLCMNEQYADVEFIVEEERIPAHRVILAARSE
YFRALLYGGMAETTQRQIPLEVPLEAFKVLRLRYIYSGTLLLSTLDEDSTIDVLGMANQYGFQDLEMAISNY
LRQYLALDNVCMILDAARLYNLEELTEVCLMFMDRNAGDLLHNSFNTLSKESLEEVLRRDCFFAPEVQI
FLAVWKWSRFNSNVDFKSVVSYVRLPLMNLEHLLQVVRPSGILDPDKILDAIDERSTSKALPYRAALWPE
ENVAEETFLSRCIQGECRDALLDGDVTTYDMENGYTRHCITDSKDAGIVVELGTFCMINHIRMLLWDRDS
RAYSYYVEVSGDQQHWDRVVDYSDYHCRSWQYLYFEARPVRFIRLVGTQNTVNRVHFVVGLEAMHTAK
VPRLVNHVAPKTNVATVEMSAIVTDGVSRTNRNALINGDYVRYDWDSDGYTCHQLGSGEIVVRLGQPYLG
SMRLLLWDCDDRTYSFYIEISTNRKEWQMVVDRNRDRSWQNFHFTPRPVVYIRIVGTRNTANEIFHC
VHLECPQDKNYLKKIADMEKEREKREKKTAKTDDDNIASTSGSSLASGHAESPSTSSSSSQSVLRSIHV
PPQTREAVAVPLTPPALSPGTPALPAPLTPATSSPHNNHEQNQPSNISADASHHTSPSSRSNPSPSLRSR
SQSAELEPVPLVELDTRETL

>Anopheles gambiae str. PEST

MSSQSSGMAGSQHTSSALARNHEIELTARFSEQMAQLCMSADYSVTFIVEGQRIPAHRVILAARSEYFRAL
LYGGLQETKQHEITLNIPLMAFRCLLKYYISGMSMLMQMKEEHLDTLGLANQYGFADLEMAISDYLRQV
LSLGNVCAILDAARLFALDGLTAVCHSFMDRNAADILQHESFRHLSLDSLCSLLLRDSSFFAREVEIFQAVFD
WCRCNADTVPNVDVVVGKRVFELMSLEELLTVVRPSGILDPDRLLDAIGEKISSKQLPYRPEENVATPKF
NSRTIHGELRSALLDGDVSYDMEKGYTRHSISETGDSSGIIVELGKLFIIHNIKVLLWDRDTRSYSYVEVS
VNQRNWERIVDHTKYYCRSWQYLYFPAQAVRYIRLVGTHNTVNVKVFHVVALEAMFTESTTPVVDGILQP
AYNVATVERSANVMGVSRTNRVLLNGDVKNYDWDSDGYTCHQIGTGVLILQLGQPYWIDSLRLLLWDCD
NRSYSFYIEVSANMTDWEVVVDKQSDHLKSWQHFAFQPKVVVYIRIVGTHNTANEMFHCVHFECPSQEP
EFLRRERAIPIEASGEESAEEVVDVDEAPLRQESVTD

>Caenorhabditis elegans

MSDNHAFGRPIQEDGRGIVETMRTESAAISNNFNNAVNSVNKSVVQHLDLSQSFDEIFTSTDHSDVTLVLD
DGTEFAAHLRLILAVRSSFFRAMLYTGFQESHQQLVTLQETNSVAFRAVLRMYTSKIDFAGVELDILLEYS
LAHRYDLIQLMTAISEYFKEILKNENLCSIFNAAYFFQFTDLIDYCMQYSDKHADQLLEDPSFNRLSGDSLK
ELLARDSFFALELKIFNAVRSWHQNNPTMKEASKVLELVRPLITQTELLNCVRPTGLVSADTLLDAIEV
QTQRPHEIPFRGCKSLDTNIIPHYPHAQPLSRELSRYTNDENISVFQIDLGKPFINTIMMDFNWKNEVQ
AFTYQVHVSMDNRVDAHWNLVADYSEYDCRGTQRLFFTDVVRHILIRVNNNSMSCKLEGSRIEAMFSTET
MPVEPVHKVIVPHRNITTENHARVVEGVSRNALINGDSSSYDWDTGTYCHQIGSGLIMIQLAQPYIIS
MRILLWNCDDRFYSYYVAVSKNQDEWVTIVDRTNEECHGWQELIFDPLPVVYIRLVGTRNSINEVFHVV
HLEAPSNVPIAIK