

|               | 5          | 15         | 25          | 35          | 45          | 55          | 65         | 75         | 85          | 95         |
|---------------|------------|------------|-------------|-------------|-------------|-------------|------------|------------|-------------|------------|
| Q13554        | DEYQLYEDGK | GAFSVVRRCV | KLCTGEYAAK  | IINKHQKLER  | EARICRLLKH  | SNIVRLHSIS  | EEGFHYLVFD | LVTGELFEDI | VCIQQILEAV  | LHCHQMGGVH |
| TGTT1_321650  | TIFTQMEKVQ | AHRPEIWSTL | SKASQEAQAS  | KYAIWSLPLA  | RVLVLDVKHW  | ALLIELFDLQ  | PKTDKYSLDG | WNAKVVLREI | FLTSKLVKPF  | VVMQNYSLGH |
| PF3D7_0424500 | KKVPASIWKQ | YIILNEHKG  | YSLGENFVME  | AISAPGIAPK  | FYGILYDKPF  | DNVLKXFMFLI | NQLQLIMISE | LYGEDVFKYV | KILHESLKLI  | TTLHETGLSH |
| PF3D7_1016400 | KKIPVDIWKQ | FELMNAYNGE | YVLCGNYVME  | ATTAPGITPK  | LYKILYNTPD  | CMFLNVFILS  | ARLKCVIISE | LFGEDITYYL | TILFECLNVL  | RKLHDAGLCH |
| PF3D7_1200800 | KRIPVEWVKQ | FNLMEKYDGE | YLVKANYVME  | GVASPGIAPK  | LLKILYNVNH  | DIMYKFKIYE  | FNNMLVMVSE | LFGEDLDFDN | KLLYKCLRLL  | VRLHSAGLSH |
| PF3D7_0902100 | KKVPLNSWEL | YNKMDIYHGE | FLDGANFVME  | AMVLPGITPK  | FYNLLYSEL   | KGLLMFCIDI  | FKNELVMIWE | FFGQNLKEFL | HILFECLKLI  | NKLHKAGLTH |
| PF3D7_0902400 | KKIPIDIWKQ | FEMMQMYNGE | FIENGNFVME  | AIVSPNICPK  | FYRLLYISCF  | ENIINIFLLR  | EHLKMVMISE | FFGEDLENYI | YIMLECLKLI  | NKLHQVGICH |
| TGME49_205250 | TRLVRGAPGS | GGFATVYEAT | DVETNELAVK  | VFMEESFCYR  | NFSLAKFMVP  | SDVVMLEPAS  | TEVVIFLLMM | RAETKVISWV | FLSSQAIRLV  | ANVQAQGIVH |
| TGME49_308090 | ERLKLVEPRV | GDRSVVFLVR | DVERLDFALK  | VFTGHEATFA  | AARLLGLLLP  | SDAVAVQQLS  | PGQSDFFLMP | AASVDLELLF | RLLAQLIRLA  | ANLQSKGLVH |
| TGME49_215775 | YAYLEATDET | GESFEVHPY  | FTERPSNAIK  | QMKEQKQAKV  | HLRFIFLVKD  | PQKKKMIVRL  | DERDMFFLYP | RMQSTFGEVL | LLTLQVIRLL  | ASLHHYGLVH |
| TGME49_295110 | GLLFQATDAT | GEPMTVLVGS | TWNKPGKDL   | KLRQPYLANR  | YLRFLALVTI  | PGMPLVQKAK  | SHNEVLLLLP | AIERFVEEL  | YLTVQAVRLV  | AHLQDEGVVH |
| TGME49_289050 | QSFGVGARGS | GGSSSTPSAK | LSGGSRVQLK  | VCDANHSPPR  | LPPCILSGQE  | TPVSTAPFL   | SCEPTVAKGP | YMPPECWRIV | YILRALGITA  | PFAQVEPLLT |
| TGME49_262730 | PILYNRGHGS | GHFHAVIKAS | DDGTLYAAK   | VPYQAEISSA  | RAELVKLVAK  | GLTLTETVVR  | RGSRVMLLP  | LIDGSLVQSQ | PVAREAIIAL  | AKLHELGFH  |
| TGME49_262050 | SRGQSGREGR | REPQMVSLRI | RVGGAQVANE  | MQAEQKCVSE  | ADRMHVSFR   | RFVAVPLYRIR | HRSALYALLN | YMDVMLCDFL | AAIKQLELVL  | AHLQALGVVH |
| TGME49_258580 | GRYILLKKG  | GGFGLVYHVE | HPTTGFPAFK  | IFVRSDLIED  | EFVGMKYSEL  | RFMVLLRVL   | GKPEFYSCVA | LFPKDLBBAV | VCTIQMVKLL  | ARFHAFELVH |
| TGME49_286470 | DDFLFHETGT | GSFGRVCIVD | LRGAAPMALK  | ILSHVEHVKD  | EKRILLSSIEH | PFIVNLLAFV  | DEKRLFILME | YVNGELFSLH | RYAAEITLAF  | QYLHQRHIVY |
| Q13976        | SDFNIIDTGV | GGFGRVELVQ | LKSEETFAMK  | ILKRQEHIRS  | EKQIMQGAHS  | DFIVRLYTFK  | DSKYLMLME  | ACLGELWTL  | RYTACVVEAF  | AYLHSGKIIY |
| P17612        | DQFERIKTGT | GSFGRVMLVK | HKETGHYAMK  | ILDQIEHTLN  | EKRILQAVNF  | PFLVKLESFK  | DNSNLYMVME | YVPGEMFSLH | RYAAQIVLTF  | EYLHSLDLIY |
| TGME49_228420 | EAFEFPGTGT | GSFGRVKSAS | YLKSTRVAVK  | LLKAVDHIIN  | EKKILLALDH  | PLTVRCFSFQ  | DSRYLYLVME | LVPGEFFTHL | RYAAQIVDIF  | DYLHSONIY  |
| P31749        | NEFEYLKLGK | GTFGKVILVK | EKATGYAMK   | ILKEVAHTLT  | ENRVLQNSRH  | PFLTALKSFQ  | THDRLCFVME | YANGELFFHL | SYGAEIVSAL  | DYLHSONVY  |
| P17252        | TDFNFLMVGK | GSFGKVMLAD | RKGTELYAIK  | ILKDVECTMV  | EKRVLALDKP  | PFLTQLHCFQ  | TVDRLYFVME | YVNGDLMYHI | QYAAEISIGL  | FFLHKGRIY  |
| P05771        | TDFNFLMVGK | GSFGKVMLSE | RKGTDLYAVK  | ILKDVECTMV  | EKRVLAPGKP  | PFLTQLHCFQ  | TMDRLYFVME | YVNGDLMYHI | QYAAEITAIGL | FFLQSKGIIY |
| Q15418        | DGYVVKETGV | GSYSECKRCV | HKATNEYAVK  | VIDSKRDPS   | EIEILLYGQH  | PNITLKVYD   | DGKHVYLVT  | LMRGLLDKIL | RVLHTIGKT   | EYLHSDGVVH |
| Q14012        | RDYDFRDVGT | GAFSEVILAE | DKRTQLVAIK  | CIAEEGSMEN  | EIAVLHKIKH  | PNIVALDIYE  | GSGHLYLIMQ | LVSSELFDRI | VLIFQVLDAV  | YLHDLGIVH  |
| P43405        | KSYSPFKPGS | GNFGTVKKGY | YQMKKTAVK   | ILKEKDELLA  | EANVMQQLDN  | PYIVRMIGIC  | EAESWMLVME | MAELPLNKYL | QLVHQVSMGM  | KYLEESNFVH |
| P00519        | TDITMKHKG  | GQYGEVYEGV | WKKYSTVAVK  | TLKDVEEFLK  | EAAVMKEIKH  | PNLVQLLVC   | REPFFYIITE | FMTYNLLDYL | RMATQISSAM  | EYLEKKNFIH |
| P12931        | ESLRLEVKGQ | GCFGEVVMGT | WNGTTRVAIK  | TLKGPFAFLQ  | EAQVMKKLRH  | EKLVLQYAVV  | SEEPYIIVTE | YMSKSLDFL  | KMAAQIASGM  | AYVERMNYVH |
| P06239        | ETLKLVERGA | GQFGEVVMGY | YNGHTKVAVK  | SLKGPDAFLA  | EANLMLKQLQ  | QRLVRLYAVV  | TQEPYIYITE | YMENSLVDFL | KMAAQIAEGM  | AFIEERNYIH |
| P07948        | ESIKLVKRG  | GQFGEVVMGY | YNNSTKVAVK  | TLKGVQAFLE  | EANLMLKQLQ  | DKLVLRYVVT  | REEPIYIITE | YMAKSLDFL  | KFSAQIAEGM  | AYIERKNYIH |
| P68400        | DDYQLVRKGR | GKYSEVFIAI | NITNNKVAVK  | ILKVKKIKR   | EIKILELRG   | PNITLAIVK   | DPVSRALVFE | HVNNTDFKQL | YYMYEILKAL  | DYCHSMGIMH |
| P49841        | VSYTDTKVG  | GSFGVYQAK  | LCDISGLVAIK | KVLDRKRFKNR | ELQIMRKLDF  | CNIVRLRFYS  | SGEKKNLVLD | YVPETVYRVA | RYMYQLFRSL  | AYIHSFGICH |
| P27361        | PRYTQLQYGE | GAYGMVSSAY | DHVRKRVAIK  | KISPCQRTL   | EIQILLRFRH  | ENVIGIRDIL  | RASTLYIVQD | LMETDLYKLL | KFLYQILRGL  | KYIHSANVLH |
| Q16539        | ERYQNLSPGS | GAYGSVCAAF | DTKTGRVAVK  | KLSPAKRTYR  | ELRLLKHKH   | ENVIGLLVFT  | PARSLYLVTH | LMGADLNNIV | KLIYQILRGL  | KYIHSADIIH |
| Q15759        | QRLQGLRPGS | GAYGSVCSAY | DARLRKVAVK  | KLSPAKRTYR  | ELRLLKHLK   | ENVIGLLVFT  | PATSIYLVTT | LMGADLNNIV | KLVYQLRGL   | KYIHSAGIIH |
| O15264        | KTYVSPTHGS | GAYGSVCSAI | DKRSGKVAIK  | KLSPAKRAYR  | ELRLLKHMQH  | ENVIGLLVFT  | PASSLYLVMP | FMQTDLQKIM | GLVYQMLKGL  | KYIHSAGVH  |
| P53778        | AVYRDLQPGS | GAYGAVCSAV | DGRGTGKVAIK | KLYPAKRAYR  | ELRLLKHMQR  | ENVIGLLVFT  | PDETLYLVMP | FMQTDLQKIM | GLVYQMLKGL  | KYIHAAGIIH |
| P24941        | ENFQKVEKEG | GTYGVVYKAR | NKLTGVVAIK  | KIRDPSTAIR  | EISLLKELNH  | PNIVKLLVIH  | TENKLYLVFE | FLHQDLKFKM | DYLFQLLQGL  | AFCHSHRVLH |
| P20794        | NRYTTMRQGD | GTYGSVLMGK | SNESGLVAIK  | RMKKECMNLR  | EVKSLKLLNH  | ANVIKLVIR   | ENDHLYFIFE | YMKENLYQLM | KIMYQILQGL  | AFIHKHGFH  |

|               | 105        | 115        | 125         | 135        | 145        | 155         | 165          | 175        | 185         |   |
|---------------|------------|------------|-------------|------------|------------|-------------|--------------|------------|-------------|---|
| Q13554        | RDLKPENLLL | ASKCKGALAF | AIGFAGPEVR  | EDIWACGVIL | YILLVGYPPF | WDEDQHKLYV  | TPEAKNLINQ   | MLTINPAKRI | TAHEALKHPW  | V |
| TGGT1_321650  | FDIKPPNLLF | PGEKGASVAF | AGILRGPEMA  | PDVYALALTL | ASFWTAAPTL | KKAFEFFTFLM | PLLIRLKLKLSQ | MADPEPLARV | SMARFVFKAY  | A |
| PF3D7_0424500 | LDISPENILI | GNNCELKLCF | SASYQPPECE  | KDKFMLGIF  | IWVWNNYIWL | EKFNDRKFWR  | PDDLKDIINQ   | LLPLENRAQL | SLKELCKHPW  | W |
| PF3D7_1016400 | LDISPQNILM | SYNFEIRLCL | STSCVPPECE  | ADKFMLGVLF | IWIWNNDYLW | KSEQDIDFLW  | PYELKKIIQK   | LLQTEGRKNL | NLHELCAHPW  | W |
| PF3D7_1200800 | LDLTAENVLI | TDYDIRLCF  | STSCVPIECF  | KDYFMLGVLF | IWIWNCGHMW | KTSESVNFTW  | PSDFKFIVKE   | LMNEECCRKL | NLKNLMTHPW  | F |
| PF3D7_0902100 | LDISPENILI | GENYEMRLCF | TTSYIPPECY  | DDIYMLGILF | IWISSNRYLW | GNSQNSNFKW  | PEGLKYIIRK   | LLDYESRKS  | DLNELIEHPW  | W |
| PF3D7_0902400 | LDFSIDNILI | SKNGDMRLCF | STSCIPPECE  | KDKYMLGILF | IAIWNNGYLW | YKLQDKDYLW  | PKELKIIILRQ  | LLDLECRKNL | NLNDLISHPW  | F |
| TGME49_205250 | TDIKPANFLL | LKDGRLFLGF | YRPAIGPERT  | IDAWQLGITL | YCIWCKERPT | PAWDYLHFAT  | PELVQDLIRN   | LLNREPQKRM | LPLQALETAA  | F |
| TGME49_308090 | GRFTPENLFI | MPDGRLLMGV | LRPVPTREFN  | ANAWQLGLSI | YRVWCLVLPF | GLGIKRTWKV  | PDFVQTLTRR   | FLNFDRRRRL | LPLEAMETPE  | F |
| TGME49_215775 | TYLRPVDIVL | DQRGGVFLTF | VRARVVPELR  | TDAWALGLVI | YWIWCADLPI | TKLGGSEWII  | PQPVRALLEG   | FLRYPKEDRL | LPLQAMETPE  | Y |
| TGME49_295110 | GKILPDSFCL | KREGGLYLR  | VRTKVVPEVF  | PDAWGLGATI | FFIWCFKAPT | TGELYSIEFLA | PENVKLLVYK   | LINPSEARL  | LALQATETPE  | Y |
| TGME49_289050 | TGRPPPLYL  | KDPSQTAQLF | HVWSAGAE    | RDVYMLGVLL | FWIWAEGAIW | TCRQDAQYNW  | PPELRHLLKG   | ALDPDPTRRV | TLPEILQHPW  | W |
| TGME49_262730 | GDVKLNMMI  | DVHGFHMLM  | VRKYYPPELT  | QDVWALGLAI | FEFVCFNLPI | SLPSSLWSRS  | DPVAVGIVAQ   | FLNPNPEER  | ELKFVSSYTF  | F |
| TGME49_262050 | SDLKPENVLV | DEAGNLFALF | AHVRCSPTQ   | VDAWALGMLM | YDTFCRNWPF | MGNNSDTSV   | ESBKDLISR    | LLDIDPENRL | DVLSFYMHS   | F |
| TGME49_258580 | GDVKLQNFLV | DKSGLLLS   | TQPVVTPPEIN | IDSWLGLSIL | YRLWCGNFPP | GMATALQVAI  | PEQFREMIVG   | FLRKTGVR   | SPQQALEQFS  | L |
| TGME49_286470 | RDLKPENLLI | DSQGHKITF  | ARTLCGPEST  | RDWWALGILL | FEMLAGHPPF | VDLGIYRKIF  | DYAAKSLVKR   | LLTHDPLKRY | GCEDVKNHFK  | F |
| Q13976        | RDLKPENLIL | DHRGYAKLVF | AKTFCGPEIL  | KDYWSLGLM  | YELTGSPPP  | SGMKTYNII   | AKNAANLIK    | LCRDNPSERL | GNKDIQKHKW  | F |
| P17612        | RDLKPENLLI | DQQGYIQVTF | AKTLCGPEIL  | KDWWALGVLI | YEMAAGYPPF | FAIQIYKIF   | SSDLKDLLRN   | LLQVDLTKRF | GNNDIKNHKKW | F |
| TGME49_228420 | RDLKPENMLL | DKDGYVKLTF | AKTLCGPEVN  | KDWWTLGILI | YEMMGVYPPF | LDLGIYQKIF  | DKDAKVLVKK   | LLQADLSKRW | GNRDIKECRW  | F |
| P31749        | RDLKLENLML | DKDGHKITF  | CKTFCGPEVE  | NDWWGLGVVM | YEMMCGRLPF | YNEKLFELIL  | GPEAKSLLSG   | LLKKDPKQRL | GGKEIMQHRF  | F |
| P17252        | RDLKLDNVML | DSEGHKIAF  | CKTFCGPEIA  | QDWWAYGVLL | YEMLAGQPPF | DGDELQFQIL  | SKEAVSVCKG   | LMTKHPAKRL | GCRDVRHAF   | F |
| P05771        | RDLKLDNVML | DSEGHKIAF  | CKTFCGPEIA  | QDWWAFGVLL | YEMLAGQAPF | EGDELQFSIM  | SKEAVAICKG   | LMTKHPGKRL | GCRDIKEHAF  | F |
| Q15418        | RDLKPSNILE | SGNPELRICF | AKTPCYPEVK  | QDIWSLGLL  | YTMLAGYTPF | ANDTPEEILV  | SETAKDLVSK   | MLHVDPHQRL | TAKQVLQHPW  | V |
| Q14012        | RDLKPENLLL | DEDSKIMISF | SKTACGPEVA  | KDCWSIGVIA | YILLCGYPPF | YDAKLFEQII  | SDSAKDFIRH   | LMEKDPEKRF | TCEQALQHPW  | I |
| P43405        | RDLAARNVLL | VTQHYAKISF | SKAQTHPECN  | YDVWSFGVLM | WEAFSYGKPY | RGMKGSEVTC  | PREMYDLMNL   | CWTYDVENRP | GFVELRLRNY  | Y |
| P00519        | RDLAARNCLV | GENHLVKVAF | SRAHAGPESA  | NDVWAFGVLL | WEIATYGSPI | PGSQVYELLC  | PEKVYELMRA   | CWQWNPSDRP | SFHQAFETMF  | Q |
| P12931        | RDLRAANILV | GENLVCKVAF | ARARQGPEAL  | GDVWSFGILL | TELTTKGVPI | PGREVLDQVC  | PESLHDLMCQ   | CWRKEPEER  | TFLQAFLEDY  | F |
| P06239        | RDLRAANILV | SDTLSCKIAF | ARAREGPEAN  | GDVWSFGILL | TEIVTHGIPY | PGPEVIQNL   | PEELYQLMRL   | CWKERPEDRP | TFLRSVLEDF  | F |
| P07948        | RDLRAANVLV | SESLMCKIAF | ARAREGPEAN  | GDVWSFGILL | YEIVTYGIPY | PGADVMTALC  | PDELYDIMKM   | CWKEKAEER  | TFLQSVLDDF  | Y |
| P68400        | RDVKPHNVM  | DHEHRLRLIW | AEVVRAPELD  | QDMWSLGCML | ASMIFRKPFF | HGYDQLVRIV  | SPEALDFLDK   | LLRYDHQSRL | TAREAMEHPY  | F |
| P49841        | RDIKPNLLL  | DPDTALKLCF | AKSYICPELG  | TDVWSAGCVL | AELLLGQPIF | PGVDQLVEIT  | PPEAIALCSR   | LLEYTPARL  | TPEACAHSF   | F |
| P27361        | RDLKPSNLLI | NTTCDLKICF | AREYVAPEIN  | KDIWSVGCIM | AEMLSNRPIF | PGDQLNHIS   | DSKALDLLDR   | MLTFNPNKRI | TVEEALAHPY  | L |
| Q16539        | RDLKPSNLAV | NEDCELKILF | ARGYVAPEIN  | MDIWSVGCIM | AELLTGRTLF | PGIDQLKLI   | NPLAVDLEK    | MLVLDSDKRI | TAAQALAHAY  | F |
| Q15759        | RDLKPSNVAV | NEDCELRLIF | ARGYVAPEIN  | MDIWSVGCIM | AELLQKALF  | PGIDQLKRIA  | NPLAIDLGR    | MLVLDSDQRV | SAAEALAHAY  | F |
| O15264        | RDLKPGNLAV | NEDCELKILF | ARGYVVPEVS  | MDIWSVGCIM | AEMLTGKTLF | KGLDQLTQIA  | SPQAADLLEK   | MLELDVDKRL | TAAQALTHPF  | F |
| P53778        | RDLKPGNLAV | NEDCELKILF | ARGYVVPEVN  | MDIWSVGCIM | AEMITGKTLF | KGLDQLKEIA  | SPLAVNLEK    | MLVLDQAEQV | TAGEALAHPY  | F |
| P24941        | RDLKPNLLI  | NTEGAIKLAF | ARHEVVPEIG  | KDIWSLGCIF | AEMVTRRALF | PGIDQLFRIL  | DEDGRSLLSQ   | MLHYDPNKRI | SAKAALAHPF  | F |
| P20794        | RDMKPENLLC | MGPELVKIAF | ARDYVSPPEVR | SDVWAVGSIM | AELYMLRPLF | PGVDEIFKIA  | SNEAIQLMTE   | MLNWDPKKRP | TASQALKHPY  | F |