

Numbering is for the alignment, not for FV sequence

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      10      20      30      40      50      60      70      80      90     100
FV_Human   MFPGCPRLWVLVVLGTSWVGWGSQGTEAAQLRQFYVAAQGISWS-YRPEPTNSSLNLSVTSFKKIVYREYEPYFKKEKPQSTISGLLGPTLYAEVGDIIK
FV_Chimpanzee MFPGCPRLWVLVVLGTSWVGWGSQGTEAAQLRQFYVAAQGISWS-YRPEPTNSSLNLSVTSFKKIVYREYEPYFKKEKPQSTISGLLGPTLYAEVGDIIK
FV_Gorilla   MFPGCPRLWVLVVLGTSWVGWGSQGTEAAQLRQFYVAAQGISWS-YRPEPTNSSLNLSVTSFKKIVYREYEPYFKKEKPQSTISGLLGPTLYAEVGDIIK
FV_Gibbon    MFPGCPRLWVLVVLGTSWVGWGSQGTEAAQLRQFYVAAQGISWS-YRPEPTNSSLNLSATSFKKIVYREYEPYFKKEKPQSTISGLLGPTLYAEVGDIIK
FV_Macaque   MFPRCCPRLWVLVVLGTSWVGWGRQGTEAVQLRQFYVAAQGISWS-YRPESTNSSLNLSATSFKKIVYREYEPYFKKEKPQSSISGLLGPTLYAEVGDTIK
FV_Baboon    MLPRCPRLWVLVVLGTSWVGWGRQGTEAVQLRQFYVAAQGISWS-YRPESTNSSLNLSATSFKKIVYREYEPYFKKEKPQSSISGLLGPTLYAEVGDTIK
FV_Marmoset  MFPGCPQVWVLVVLGTSWVGWGSQGTEAAQLRQFYVAAQGISWS-YRPEPTNASLNHSATSFKKIVYREYEPYFKKEKPRSSISGLLGPTLYAEVGDIVK
FV_Bushbaby  MFPGCPPVWVLVVLGTSWAGGSSPGADAAQLRQFYVAAQHVSWSYYPEPANLSLNPFATSFKKIVYREYDAYFKKEKPRSSISGLLGPTLYAEVGDTMK

      110     120     130     140     150     160     170     180     190     200
FV_Human   VHFKNKADKPLSIHPQGIRYSKLSEGASYLDHTFFPAEKMDDAVAPGREYTYEWSISEDSSGPTHDDPPCLTHIYYSHENLIEDFNSGLIGPLLICKKGTLT
FV_Chimpanzee VHFKNKADKPLSIHPQGIRYSKLSEGASYLDHTFFPAEKMDDAVAPGREYTYEWSISEDSSGPTHDDPPCLTHIYYSHENLIEDFNSGLIGPLLICKKGTLT
FV_Gorilla   VHFKNKADKPLSIHPQGIRYSKLSEGASYLDHTFFPAEKMDDAVAPGREYTYEWSISEDSSGPTHDDPPCLTHIYYSHENLIEDFNSGLIGPLLICKKGTLT
FV_Gibbon    VHFKNKADKPLSIHPQGIRYSKLSEGASYLDHTFFVEKMDDAVAPGREYTYEWSIGEDSSGPTHDDPPCLTHIYYSHENLIKDFNSGLIGPLLICKKGTLT
FV_Macaque   VHFKNKADKPLSIHPQGIRYSKLSEGASYLDHTFFVEKMDDAVAPGREYTYEWSISEDSSGPTHDDPPCLTHIYYSHENLIEDFNSGLIGPLLICKKGTILT
FV_Baboon    VHFKNKADKPLSIHPQGIRYSKLSEGASYLDHTFFVEKMDDAVAPGREYTYEWSISEDSSGPTHDDPPCLTHIYYSHENLIEDFNSGLIGPLLICKKGTILT
FV_Marmoset  VHFKNKADKPLSIHPQGIKYSKLSEGASYLDHTFFVEKMDDAVAPGQEYTYEWSISEDSGPTHDDPPCLTHIYYSHENLIEDFNSGLVGPLLICKKGTILT
FV_Bushbaby  IHFKNKADKPVSIHPQGIKYSKLSEGASYADHTYPVERMDDAIAPGQEYTYEWIISEDSSGPTPDDPPCLTHIYYSHENLIQDFNSGLIGPLLICKKGTLS

      210     220     230     240     250     260     270     280     290     300
FV_Human   EGGTQKTFDKQIVLLFAVFDESKSWSQSSSLMYTVNGYVNGTMPDITVCAHDHISWHLLGMSGPELFSIHFNQVLEQNHHKVSAILTVSATSTTANMT
FV_Chimpanzee EGGTQKTFDKQIVLLFAVFDESKSWSQSSSLMYTVNGYVNGTMPDITVCAHDHISWHLLGMSGPELFSIHFNQVLEQNHHKVSAILTVSATSTTANMT
FV_Gorilla   EDGTQKTFDKQIVLLFAVFDESKSWSQSSSLMYTVNGYVNGTMPDVTVCAHDHISWHLLGMSGPELFSIHFNQVLEQNHHKVSAILTVSATSTTANMT
FV_Gibbon    EDGTQKMFDKQIVLLFAVFDESKSWSQSSSLMYTVNGYVNGTMPDITVCAHDHISWHLLGMSGPELFSIHFNQVLEQNHHKVSAILTVSATSTTANMT
FV_Macaque   EDGKQKTFDKQIVLLFAVFDESKSWSQSSSLMYTVNGYVNGTMPDITVCAHDHISWHLLGMSGPELFSIHFNQVLEQNHHKVSAILTVSATSTTANMT
FV_Baboon    EDGKQKTFDKQIVLLFAVFDESKSWSQSSSLMYTVNGYVNGTMPDITVCAHDHISWHLLGMSGPELFSIHFNQVLEQNHHKVSAILTVSATSTTANMT
FV_Marmoset  EDGTQKMFDKQIVLLFAVFDESKSWSPSSSLMYTVNGYANGTMPDITVCAYEHISWHLLGMSGPELFSIHFNQVLEENHHKVSAILTVSATSTTANMT
FV_Bushbaby  EDGTQKMVDKQHVLLFAVFDESKSWSQSSSLMYTVNGYVNGTMPDIMLCAYDHVSWHLIGMSGPEMFSIHFNQVLEQNHHKVSAILTVSATSTTANMT

      310     320     330     340     350     360     370     380     390     400
FV_Human   VGPEGKWIISSLTPKHLQAGMQAYIDIKNCPKKTRNLKKITREQRRHMKRWEYFIAAEEVIWDYAPVIPANMDKKYRSQHLDNFSNQIGKHYKKVMTQY
FV_Chimpanzee VGPEGKWIISSLTPKHLQAGMQAYIDIKNCPKKTRNLKKITREQRRHMKRWEYFIAAEEVIWDYAPVIPANMDKKYRSQHLDNFSNQIGKHYKKVMTQY
FV_Gorilla   VGPEGKWIISSLTPKHLQAGMQAYIDIKNCPKKTRNLKKITREQRRHMKRWEYFIAAEEVIWDYAPVIPANMDKKYRSQHLDNFSNQIGKHYKKVMTQY
FV_Gibbon    VGPEGKWIISSLTPKHLQAGMQAYIDIKNCPKKTRNLKKITREQRRHMKRWEYFIAAEEVIWDYAPVIPANMDKKYRSQHLDNFSNQIGKHYKKVMTQY
FV_Macaque   VGPEGKWIISSLTPKHLQAGMQAYIDIKNCPKKTRNLKKITREQRRHMKRWEYFIAAEEVIWDYAPVIPANMDKKYRSQHLDNFSNQIGKLYKKVMTQY
FV_Baboon    VGPEGKWIISSLTPKHLQAGMQAYIDIKNCPKKTRNLKKITREQRRHMKRWEYFIAAEEVIWDYAPVIPANMDKKYRSQHLDNFSNQIGKLYKKVMTQY
FV_Marmoset  VSPEGKWIISSLTPKHLQAGMQAYIDIKNCPKETRRLKKITREQRRHMKRWEYFIAAEEIMWDYAPVIPANMDKKYRSQHLDNFSNRIGKHYKKVIYTQY
FV_Bushbaby  VSTGGRWTVSSSLTPKHLQAGMQAYINIENCPKKTRNLKKITVEQRRHMKRWEYFIAAEEVIWDYAPVIPANMDKKYRSQHLDNFSNQIGKHYKKVVYKQY
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410 420 430 440 450 460 470 480 490 500
FV_Human EDESFTKHTVNPNMKEDGILGPIIRAQVRDTLKIIVFKNMASRPSIYPHGVTFFSPYEDEVNSSFTSGRNNTMIRAVQPGETYTYKWNILEFDEPTENDAQ
FV_Chimpanzee EDESFTKHTVNPNMKEDGILGPIIRAQVRDTLKIIVFKNMASRPSIYPHGVTFFSPYEDEVNSSFTSGRNNTMIRAVQPGETYTYKWNILEFDEPTENDAQ
FV_Gorilla EDESFTKHTVNPNMKEDGILGPIIRAQVRDTLKIIVFKNMASRPSIYPHGVTFFSPYEDEVNSSFTSGRNNTMIRAVQPGETYTYKWNILEFDEPTENDAQ
FV_Gibbon EDESFTKHTVNPNMKEDGILGPIIRAQVRDTLKIIVFKNMASRPSIYPHGVTFFSPYEDEVNSSFTSGRNNTMIRAVQPGETYTYKWNILEFDEPTENDAQ
FV_Macaque EDESFTKRTVNPNMKEDGILGPIIRAQVRDTLKIIVFKNMASRPSIYPHGVTFFSPYEDEVNSTFTSGRNNTMIRAVQPGETYTYKWNILEFDEPTENDAQ
FV_Baboon EDESFTKRTVNPNMKEDGILGPIIRAQVRDTLKIIVFKNMASRPSIYPHGVTFFSPYEDEVNSTFTSGRNNTMIRAVQPGEIYTYKWNILEFDEPTENDAQ
FV_Marmoset EDESFTKHIQNPHMKEDGILGPIIRAQVRDTLKIIVFRNMASRPSIYPHGVTFFSPYEDEGNSSFTSG-SNTMIRAVQPGETYTYKWNILELDEPTENDAQ
FV_Bushbaby QDESFTKREENLNLIKEDGILGPVIRAQVRDTLKITFKNMASRPSIYPHGVTFFSPYEEVVVNSSNSGSHTMIRAVQPGETYTYKWNILEFDEPTENDAQ

510 520 530 540 550 560 570 580 590 600
FV_Human CLTRPYYSDVDIMRDIASGLIGLLLIICKSRSLDRRGIQRAADIEQQAVFAVFDENKSWYLEDNINKFCENPDEVKRDDPKFYESNMIMSTINGYVPESITT
FV_Chimpanzee CLTRPYYSDVDIMRDIASGLIGLLLIICKSRSLDRRGIQRAADIEQQAVFAVFDENKSWYLEDNINKFCENPDEVKRDDPKFYESNMIMSTINGYVPESITT
FV_Gorilla CLTRPYYSDVDIVRDIASGLIGLLLIICKSRSLDRRGIQRAADIEQQAVFAVFDENKSWYLEDNINKFCENPDEVKRDDPKFYESNMIMSTINGYVPESITT
FV_Gibbon CLTRPYYSDVDIMRDIASGLIGLLLIICKSRSLDRRGIQRAADIEQQAVFAVFDENKSWYLEDNINKFCENPDEVKRDDPKFYESNMIMSTINGYVPESITT
FV_Macaque CLTRPYYSDVDIMRDIASGLIGLLLIICKSRSLDRRGIQRAADIEQQAVFAVFDENKSWYLEDNINKFCENPDEVKRDDPKFYESNMIMSTINGYVPESITT
FV_Baboon CLTRPYYSDVDIMRDIASGLIGLLLIICKSRSLDRRGIQRAADIEQQAVFAVFDENKSWYLEDNINKFCENPDEVKRDDPKFYESNMIMSTINGYVPESITT
FV_Marmoset CLTRPYYSNVDIMRDIASGLIGLLLIICKTRSLDKRGIQRAADIEQRAVFAVFDENKSWYLEDNINKFCENPDEVKRDDPKFYESNMVIMSTINGYVPESIPT
FV_Bushbaby CLTRPYYSDVDITRDIASGLIGLLLIICKSRSLDKRGIQRTVTITISYPSIALCGNIYSYGFSL---CLFSSGPS-LQKASLQSNVCGFSLDSRLTPHEIFF

610 620 630 640 650 660 670 680 690 700
FV_Human LGF-CFDDTVQWHFCSVGTQNEILTIHFTGHSFIYG-KRHEDTLTLFPMRGE SVTVTMDNVGTWMLTSMNSSPRSKKLRLKFRDVKCIPDDDEDSEYEIFE
FV_Chimpanzee LGF-CFDDTVQWHFCSVGTQNEILTIHFTGHSFIYG-KRHEDTLTLFPMRGE SVTVTMDNVGTWMLTSMNSSPRSKKLRLKFRDVKCIPDDDEDSEYEIFE
FV_Gorilla LGF-CFDDTVQWHFCSVGTQNEILTIHFTGHSFIYG-KRHEDTLTLFPMRGE SVTVTMDNVGTWMLTSMNSSPRSKKLRLKFRDVKCIPDDDEDSEYEIFE
FV_Gibbon LGF-CFDDTVQWHFCSVGTQNEILTIHFTGHSFIYG-KRHEDTLTLFPMRGE SVTVTMDNVGTWMLTSMNSSPRSKKLRLKFRDVKCIPDDDEDSEYEIFE
FV_Macaque LGF-CFDDTVQWHFCSVGTQNEILTIHFTGHSFIYG-KRHEDTLTLFPMRGE SVTVTMDNVGTWMLTSMNSSPRSKKLRLKFRDVKCITDDDEDSEYEIFE
FV_Baboon LGF-CFDDTVQWHFCSVGTQNEILTIHFTGHSFIYG-KRHEDTLTLFPMRGE SVTVTMDNVGTWMLTSMNSSPRSKKLRLKFRDVKCITDDDEDSEYEIFE
FV_Marmoset LGF-CFDDTVQWHFCSVGTQNDILTIHFTGHSFIYG-KRHEDTLTLFPMRGE SVTVTMDNVGTWILTTMNSSPRSKKLRLKFRDVKCIRDDEYEDSEYIYE
FV_Bushbaby SSFQVFLNSVRYHLVKVYSSVSIFVIKVNVTGLLSLSPLKNNSLILIIKANKNTWLEKSDMGIWKILTYQTRKGNRQERHKTFLLPSSVLSFAIWLIFS

710 720 730 740 750 760 770 780 790 800
FV_Human PPESTVMATRKMHDRLEPEDEESDADYDYQNRLAAALG--IRSFNSSLNQE EEEFNLTALALENGTEFVSSNTDIIVGSNYSSPSNISKFTVNNLAEPQ
FV_Chimpanzee PPESTVMATRKMHDRLEPEVEESDADYDYQNRLAAALG--IRSFNSSLNQE EEEFNLTALALENGTEFVSSNTDIIVGSNYSSPSNISKFTVNNLAEPQ
FV_Gorilla PPESTVMATRKMHDRLEPEDEESDADYDYQNRLAAALG--IRSFNSSLNQE EEEFNLTALALENGTEFVSSNTDIIVGSNYSSPSNISKFTVNSLAEPQ
FV_Gibbon PPESTVMATRKMHDRLEPEDEESDADYDYQSRLAAALG--IRSFNSSLNQE EEEFNLTALVLENGAEFISNTDIIVGSNYSSPSNISKLTVNSLAEPQ
FV_Macaque PPESTVIATRKMHDRLETEDEESDADYDYQSRLAAALG--IRSFNSSLNQE EEEFNLTALVLENGTEFISNTDIIVGSNYSSPNNISRLTVNNFAEPQ
FV_Baboon PPESTVIATRKMHDRLETEDEESDADYDYQSRLAAALG--IRSFNSSLNQE EEEFNLTALVLENGTEFISNTDIIVGSNYSSPNNISRLTVNNFAEPQ
FV_Marmoset PLESSVTATRKMHTPSENEDEESDADYDYQTRLASALG--IRSLRNSSLNQE EEEFNLTALALENGSEFISPNTAITVGSNYSSPTNISKLAVNNLLEPQ
FV_Bushbaby P-----SFMLNDINRFVAMVKQDFSYEDILVSKFSDLLRIGFHPPCSQTHPRKSATCLIPYHHLAKKKS-----PSQTVLCELLHCCDARAM

810 820 830 840 850 860 870 880 890 900
FV_Human KAPSHQQATTAGSPLRHLIGKNSVLNSSTA~~EHSSPYSE~~PIEDPLQPDVTGIRLLSLGAGEFRSQEHAKRKGPKVERDQA~~AKH~~RF~~S~~W~~M~~K~~L~~L~~A~~H~~K~~V~~G~~R~~H~~L~~S~~
FV_Chimpanzee KAPSHQQATTAGSPLRHLIGKNSVLNSSTA~~EHSSPYSE~~PIEDPLQPDVTGIRLLSLGAGEFKSQEHAKHKGPKVERDQA~~AKH~~RF~~S~~W~~M~~K~~L~~L~~A~~H~~K~~V~~G~~R~~H~~L~~S~~
FV_Gorilla KAPSHQQATTAGSPLRHLIGKNSVLNSSTA~~EHSSPYSE~~PIEDPLQPDVTGIRLLSLGAGEFKSQEHAKHKGPKVERDQA~~AKH~~RF~~S~~W~~M~~K~~L~~L~~A~~H~~K~~V~~G~~R~~H~~L~~S~~
FV_Gibbon KTPSHQQATTASSPLRHLIGKNSVLNSSTA~~EHSSPYSE~~PIEDPLQPDVTGIRLLSLGAGEFKSQEHAKRKGPKVERDQA~~AKH~~RF~~S~~R~~M~~K~~L~~L~~A~~H~~K~~F~~G~~R~~H~~L~~S~~
FV_Macaque KTPSHQQATTAGSPLRHLIGKNSVLNSSTA~~EHSSPYSE~~PIEDPLQPDVTGIHLLSLGAREFKNQEHAHKGPKVERDQA~~AKH~~RF~~S~~R~~M~~K~~L~~L~~A~~H~~K~~V~~G~~R~~H~~L~~S~~
FV_Baboon KTPSHRQATTAGSPLRHLIGKNSVLNSSTA~~EHSSPYSE~~PIEDPLQPDVTGIHLLSLGARELKNQEHAHKGPKVERDQA~~AKH~~RF~~S~~R~~M~~K~~L~~L~~A~~H~~K~~V~~G~~R~~H~~L~~S~~
FV_Marmoset KTPSHQQATAAGSPQRHLIGKNSV~~F~~HSSSTA~~EHSSPYSE~~NP~~I~~EDPLQSDVTGIHLLSLGAGEFRSQEHPKHKEPKVKRDQA~~AKH~~M~~F~~S~~W~~M~~K~~S~~P~~A~~D~~K~~I~~G~~R~~H~~L~~S
FV_Bushbaby SCWPRFSVKIFLFLYRCLLG-LLCFSQSANDFNTQFDEF~~L~~QCFQHSHDATQKHATIMNATQDDTTTHRQEHSGEILTYQGYETLLSCLFSAANTSACWRV

910 920 930 940 950 960 970 980 990 1000
FV_Human QDTGSPSGMRPWEDLPSQDTGSPSRMRPWEDPPSDLLLLLKQSNSSKILVGRWHLASEKGSYEIIQD~~T~~DED~~T~~AVNNWLI~~S~~PQNASRAWGESTPLANKPGKQ
FV_Chimpanzee QDTGSPSRMKPWEDLPSQDTGSPSRMRPWEDPPSDLLLLLKQNNPSKILVGRWHLASEKGSYEIIQD~~T~~DED~~T~~AVNNWLI~~S~~PQNASRAWGESTPLANKPGKQ
FV_Gorilla QDTGSPSGMKPWEDLPSQDTGSPSRMRPWEDPPSDLLLLLKQNNPSKILVGRWHLASEKGSYEIIQD~~T~~DED~~T~~AVNNWLI~~S~~PQNASRAWGESTPLANKPGKQ
FV_Gibbon QDTRSPSGMRPWEDLPSQDTGSPSRMRPWEDPPSDLLLLLKQNNPSKILVGRWHLASEKGSYEIIQD~~T~~DED~~T~~AVNNRLI~~S~~PQNASRAWGESTPLV~~N~~KPGKQ
FV_Macaque RDTGSPSRVRPWEDLP-----SDLLLLLKQNNSSKILVGRWHLASEKGSYEIIQD~~T~~DED~~T~~AVNNRLI~~S~~PQNASRAWGESTPLANKPGKQ
FV_Baboon RDTGSPSRVRPWEDLP-----SDLLLLLKQNNSSKILVGRWHLASEKGSYEIIQD~~T~~DED~~T~~AVNNRLI~~S~~PQNASRAWGESTPLANKPGKQ
FV_Marmoset QDNSSSSRMRPRKDLP-----SDLLLLLKQNNPSKILV~~G~~KWHLASEKGGYEVIQD~~T~~DED~~T~~AVNNQLI~~S~~PQNAS~~H~~AWGESTPV~~T~~NKPGKP
FV_Bushbaby HERGSYD-----PEDCASLVSENS----VLQNAFMKPIYNYSHFLVKGREVEGDRRGGGKFN~~R~~GTANGGTT~~P~~VEHIVRVQ

1010 1020 1030 1040 1050 1060 1070 1080 1090 1100
FV_Human S--GHPKFPRVRHKS~~L~~QVRQDGGKSRLKKSQFLIKTRKKKKEKHTHHA~~P~~LS~~P~~R~~T~~FH~~P~~LRSEAYNT~~F~~SER~~R~~LKHS~~L~~VLHKSNETSLPTDLNQTLP~~S~~MD~~F~~GW
FV_Chimpanzee S--GHPKFPRVRHKS~~L~~QVRQDGGKSRLKKSQFLIKTRKKKKEKHTHHA~~P~~LS~~P~~R~~T~~FH~~P~~LRSEAYNT~~F~~SER~~R~~LKHS~~L~~MLHKSNETSLPTDLNQTLP~~S~~MD~~F~~GW
FV_Gorilla S--GHPKFPRVRHKS~~L~~QVRQDGGKSRLKKSQFLIKTRKKKKEKHTHHA~~P~~LS~~P~~R~~T~~FH~~P~~LRSEAYNT~~F~~PER~~R~~LKHS~~L~~VLHKSNETSLPTDLNQTLP~~S~~MD~~F~~GW
FV_Gibbon S--GHPKFPRVRHKS~~L~~QVRQDGGKSRLKKSQFLIKTRKKKKEKHTYHHA~~P~~LS~~P~~R~~T~~FH~~P~~LRSEAYNT~~F~~SER~~T~~LKHS~~L~~LLHKSNETSLPTDLNQTLP~~S~~V~~D~~FGW
FV_Macaque S--GHPRFPRVRHKS~~L~~QVRQDGGKSG~~L~~LKKSQFLIKTRKKKKEKRTHHA~~P~~LS~~P~~R~~T~~FH~~P~~LRTEAYNT~~F~~SER~~R~~LNHS~~L~~LLHKSNETSLPKDLNQTLP~~S~~MD~~F~~SW
FV_Baboon S--GHPRFPRVRHKS~~L~~QVRQDGGKSELKKSQFLIKTRKKKKEKRTHHA~~P~~LS~~P~~R~~T~~FH~~P~~LRTEAYNT~~F~~SER~~R~~LNHS~~L~~LLHKSSE~~T~~SLPKDLNQTLP~~S~~MD~~F~~SW
FV_Marmoset S--GHPEFPRVRHK~~I~~LQVRQDGGNSGLKKS~~H~~LLIKTRKKRKEKQTHHT~~P~~LS~~P~~RAF~~H~~SLGSEAYNT~~F~~SEIIFNH~~S~~LLHNSNKTSLPIDLNQTLP~~S~~V~~D~~FGW
FV_Bushbaby IYQVYNH~~F~~PLQRAADMEQQVVFVAVDENKSWYIEDNINKFCENPEEVNRDDPKFYESN---IMSNFSL~~L~~WLKYDCALEA--EMWVRIHSLKSIAYPHFQY

1110 1120 1130 1140 1150 1160 1170 1180 1190 1200
FV_Human IASLPDHNQNSSNDTGQASCPP-----GLYQTV~~P~~PEEHYQTFPIQDPDQMHSTSDPSHRSSSP~~E~~LSEMLEYDRSHKSFPTDISQMS~~P~~SSSEHEVWQT
FV_Chimpanzee IASLPDHNQNSSNDTGQTS~~C~~PP-----GLYQTV~~P~~PEEHYQTFPIQDPDQMHSTSDPSH~~I~~SSSP~~E~~LSEMLEYDRSHKSFPTDISQMS~~P~~SSSEHEVWQT
FV_Gorilla IASLPDHNQNSSNDTGQTS~~C~~PP-----GLYQTV~~P~~PEEHYQTFPIQDPDQMHSTSDPSH~~I~~SSSP~~E~~LSEMLEYDRSHKSFPTDISQMS~~P~~SSSEHEVWQT
FV_Gibbon IASLPDHNQNSSNDTGQTS~~S~~PRGLYQTS~~S~~PRGLYQTV~~P~~PEEHYQTFPIQDPDQMHSTSDPSHRSSSP~~E~~LSEMLEYDQSHKSFPTDISQMS~~P~~SSSEHEVWQT
FV_Macaque IASLPDHNQNSSNDTRIQTS~~S~~PP-----DLYQTV~~P~~PEEHYETTFPIQDPDEM~~H~~STSDPSHRSSAP~~L~~SEMLEYDRSHKSFPTDISQMS~~P~~SSSEHEVWQT
FV_Baboon IASLPDHNQNSSNDTGQTS~~S~~PP-----GLYQTV~~P~~PEEHYETTFPIQDPDEM~~H~~STSDPSHRSSAP~~E~~LSEMLEYDRSHKSFPTDISQMS~~P~~SSSEREVWQT
FV_Marmoset IPSLPDHNQNSLNDTGQTS~~N~~SPP-----DLYEPV~~P~~PEEHYEA~~F~~PIQDPDQMN~~S~~TSDPSHRSSS~~E~~LSEMLD~~Y~~DQNHKSFPTDISQTSLSSEHEVWQT
FV_Bushbaby RHVVMKFLTSGSAPVAQVAKAP-----ATCTPGLTNNFFRVSLPSNLN~~Q~~KNG---LVIFLNATNRRILGKPHCYFS~~L~~KL~~T~~FLCNV~~N~~PE---KS

1210 1220 1230 1240 1250 1260 1270 1280 1290 1300
FV_Human VISPDLSQVTLSP~~EL~~SQTNLSP-----DLSHTTTLSP~~EL~~IQRNLSPALGQMPISPDL--SHTTTLSPDLSHTTTLSDLSQTNLSP~~EL~~SQ
FV_Chimpanzee VTSPDLSQVTLSPDLSQTNPSP-----DLSHTTTLSP~~EL~~IQTNLSPALSQMPISPDL--SHTTTLSPDLSHATLSDLSQTNLSP~~EL~~SQ
FV_Gorilla ITSPDLSQVTLSP~~EL~~SQTNPSP-----DLSHTTTLSP~~EL~~IQTNLSPALGQMPISPDL--SHTTTLSPDLSHTTTLSPDLSHTTTLSPDLSH
FV_Gibbon ITSPDLSQVTLSP~~EL~~SQTNLSP-----DLSHTTTLSP~~EL~~SQTNLSPALGQMPISPDLNLSHTTTLSPDLSHTTTLSPDLSHTTTLSPDLSH
FV_Macaque VPSVDLSQVTLSPQLSQTNFSP-----DLSHTTTLSP~~EL~~SQTNLSPALSQMPMSPDL--SHTTTLSPDLSHTTTLSPDLSPTTLSPDLSH
FV_Baboon VTSPDLSQVTLSPQLSQTNFSP-----DLSHTTVSP~~EL~~SQTNLSPALGQMPMSPDL--SHTTTLSPDLSHTTTLSPDLS-----
FV_Marmoset ITSPDLSQVTLSPDLSQTNLSP~~EL~~GQIPLSADLSYTTLSVDLSQTNLSPDLSQTNLSP~~EL~~GQIPLSADL--SQTTVSPDLSQTNLSP~~EL~~GQIPLSADLSQ
FV_Bushbaby IPSSGALQPSGDSGEGSNSSL-----EISPG-FFFFFKESKYSPCPGHIFGSLVS----SFRPVANRAYTIVGFYNKVYFPHLLP

1310 1320 1330 1340 1350 1360 1370 1380 1390 1400
FV_Human TNLSPALGQMP~~PL~~SPDLSHTTTLSDLSQTNLSP~~EL~~SHMTLSP~~EL~~SQTNLSPALGQMPISPDL~~SHTTTL~~--LDFSQTNLSP~~EL~~SQTNLSPALGQMP~~PL~~SPDPS
FV_Chimpanzee TNLSPALGQMP~~PL~~SPDLSHTTTLSDLSQTNLSP~~EL~~SHMTLSP~~EL~~SQTNLSPALGQMPISPDL~~SHTTTL~~--LDFSQTNLSP~~EL~~SQTNLSPALGQMP~~PL~~SPDPS
FV_Gorilla TTLS-----PDL~~SHTTTL~~--LDFSQTNLSP~~EL~~SQTNLSPALGQMP~~PL~~SPDPS
FV_Gibbon TTLSPDLSHTTTLSPDLSHTTTLSDLSQTNLSP~~EL~~SHMTLSP~~EL~~SQTNLSPALGQMPISPDL~~SHTTTL~~SPDLKLSHTTTLSP~~EL~~SQTNLSPALGQMPISP~~DF~~S
FV_Macaque TTLSPDLSPTTLSPDLSHTTTL-----PDL~~SPTTL~~--PDL~~SH~~TTLSPDLSPTTLSPDLSHTNLSPDLS
FV_Baboon -----
FV_Marmoset TTVSPDLSQTNLSP~~EL~~GQIPLSPDISQTTVSPDLSQVTL~~SA~~EL~~SQ~~TNLSPDLSQMP~~PL~~SPDLSYTTLS--LDLSQTNLSLELN~~ET~~NLSP~~EL~~GQIPLSPDLS
FV_Bushbaby PILSN-----FSLTKTKDLELTICSFLKNLAIYTEADG--

1410 1420 1430 1440 1450 1460 1470 1480 1490 1500
FV_Human HTTTL-----LDLSQTNLSP~~EL~~SQTNLSPDLSEMP~~LF~~ADLSQIPLTPDL~~DQ~~MTLSPDLGETDLS~~PN~~FGQMSLSPDLSQVTLSPDISDTTLLPDL~~SQ~~
FV_Chimpanzee HTTTL-----LDHSQTNLSP~~EL~~SQTNLSPDLSEMP~~LF~~ADLSQIPLTPDL~~DQ~~MTLSPDLGETDLS~~PN~~FG~~RM~~SLSPDLSQVTLSPDISDTTLLPDL~~SQ~~
FV_Gorilla HTTTL-----LDHSQTNLSP~~EL~~SQTNLSPDLSEMP~~LF~~ADLSQIPLTPDL~~DQ~~MTLSPDLGETDLS~~PN~~FGQMSLSPDLSQVTLSPDISDTTLLPDL~~SQ~~
FV_Gibbon HTTTL-----LDFSQTNLSP~~EL~~SQTNPSP-----ALGQMP~~PL~~TPDL~~DQ~~MTLSPDLGETDLS~~PD~~FGQMSLSPDLSQVTLSPDISDTTLLPDL~~SQ~~
FV_Macaque HTTTL-----PDL~~SQ~~TNLSPALGQMPMSPDLSQTTLSPDLSHTTTLSPDLSQTNLSP~~EL~~SHTNLSPALGQMP~~PL~~SPDLSQVTVSPDISETTLLPDL~~SQ~~
FV_Baboon -----QTNLSPDLSHTNLSPALGQMP~~PL~~SPDLSQVTVSPDISETTLLPDL~~SQ~~
FV_Marmoset HMTV~~SEL~~NETNLSLDLSHMNLSDDL~~SQ~~TNLSP~~EL~~SEMP~~VF~~V~~D~~LSQIPLSPDL~~DQ~~MMLSPDLGETDLS~~PD~~FGQISLSPDLTQVTLSPDLSETILLPDL~~SQ~~
FV_Bushbaby -----LQPSLDLLNND-----KLHMLCGDTGGNNLLSFMIRE~~SAN~~TELKRRIRG-RFLDLLLLGRRLE

1510 1520 1530 1540 1550 1560 1570 1580 1590 1600
FV_Human ISPPDLDQIFYPSESSQSLLLQEFNESFPYPDLGQMPSPSSPTLN~~DT~~FLSKEFNPLVIVGLSKDG-TDYIEIIPKEEVQ~~SS~~EDDYAEIDYV~~PY~~DDPYKT
FV_Chimpanzee ISPPDLDQIFYPSESSQSLLLQEFNESFPYPDLGQMPSPSSPTLN~~DT~~FLSKEFNPLVIVGLSKDG-TDYIEIIPKEEVQ~~SS~~EDDYAEIDYV~~PY~~DDPYKT
FV_Gorilla ISPPDLDQIFYPSESSQSLLLQEFNESFPYPDLGQMPSPSSPTLN~~DT~~FLSKEFNPLVIVGLSKDG-TDYIEIIPKEEVQ~~SS~~EDDYAEIDYV~~PY~~DDPYKT
FV_Gibbon VSPPPDLDQIFYPSESNQSLLLPEFNETFFYPDLGQMPSPSSPTLN~~DT~~FLSKEFNPLVIVGLSKDG-TDYIEIIPKEEVQ~~SS~~EDDYAEIDYV~~PY~~DDPYKT
FV_Macaque ISPPDLDQTFYPSESSQSLHLPEFNETFFYPDLGQMPSPSSPTLN~~DT~~FLSKEFNPLVIVGLSKDG-TDYIEIIPKEEVQ~~SS~~EDDYAEIDYV~~PY~~DDPYKT
FV_Baboon ISPPDLDQTFYPSESSQSLHLPEFNETFFYPDLGQMPSPSSPTLN~~DT~~FLSKEFNPLVIVGLSKDG-TDYIEIIPKEEVQ~~SS~~EDDYAEIDYV~~PY~~DDPYKT
FV_Marmoset ISPPDLDQIFYPSESSQSLLIPEFNETFFYSDLGH~~T~~SPSSPTLN~~DT~~FRLKEFNPLVIVGLSKDG-TDYIEIIPREEVQ~~SS~~EDDYTETDYV~~SY~~DDPYKT
FV_Bushbaby LARAD~~FYN~~NPLFSPILSNMSQPGFPASLSPGFTAQPH~~PD~~HCCPS-NSSFTPPSFQLFLPLPSSCSFRKDQSHFPPGNLPYFFQPLLNLV~~LG~~NCPSRASRLT

1610 1620 1630 1640 1650 1660 1670 1680 1690 1700
FV_Human DVRTNINSSRDPDNIAAWYLR-SNNGNRRNYYIAAEEISWDYSEFVQRETDIEDSDDIPEETTYKKVVFVKYLDSTFTKRDPRGEYEEHLGILGPIIRAE
FV_Chimpanzee DVRTNINSSRDPDNIAAWYLR-SNNGNRRNYYIAAEEISWDYSEFVQRETDIEDSDDIPEETTYKKVVFVKYLDSTFTKRDPRGEYEEHLGILGPIIRAE
FV_Gorilla DVRTNINSSRDPDNIAAWYLR-SNNGNRRNYYIAAEEISWDYSEFVQRETDIEDSDDIPEETTYKKVVFVKYLDSTFTKRDPRGEYEEHLGILGPIIRAE
FV_Gibbon DVRTNINSSRDPDNIAAWYLR-SNNGNRRNYYIAAEEISWDYSEFVQRETDIEDSDDIPEETTYKKVVFVKYLDSTFTKRDPRGEYEEHLGILGPIIRAE
FV_Macaque DVRTNINSSRDPDNIAAWYLR-SNNGNRRNYYIAAEEISWDYSEFVQRETDIEDSDDIPEETTYKKVVFVKYLDSTFTKRDPRGEYEEHLGILGPIIRAE
FV_Baboon DVRTNINSSRDPDNIAAWYLR-SNNGNRRNYYIAAEEISWDYSEFVQRETDIEDSDDIPEETTYKKVVFVKYLDSTFTKRDPRGEYEEHLGILGPIIRAE
FV_Marmoset DVRTNINSSRDPDNIAAWYLR-SNNGNRRNYYIAAEEISWDYSEFVQRETDIEDSDDIPEETTYKKVVFVKYLDSTFTKRDPRGEYEEHLGILGPIIRAE
FV_Bushbaby HTQQHLLS---PDVYLDLQVYVSLRLEQPPHLFHLQISS-----ADHNHFTGSREPRNKHGVVFLMVKIKMVCPSYSAIVSKLSSHNLWPI

1710 1720 1730 1740 1750 1760 1770 1780 1790 1800
FV_Human VDDVIQVRFKNLASRPYSLHAHGLSYEKSSEGKTYEDDSPEWFKEDNAVQPNSSYTYVWHATERSGPESPGSACRAWAYYSAVNPEKDIHSGLIGPLLIC
FV_Chimpanzee VDDVIQVRFKNLASRPYSLHAHGLSYEKSSEGKTYEDDSPEWFKEDNAVQPNSSYTYVWHATERSGPESPGSACRAWAYYSAVNPEKDIHSGLIGPLLIC
FV_Gorilla VDDVIQVRFKNLASRPYSLHAHGLSYEKSSEGKTYEDDSPEWFKEDNAVQPNSSYTYVWHATERSGPESPGSACRAWAYYSAVNPEKDIHSGLIGPLLIC
FV_Gibbon VDDVIQVRFKNLASRPYSLHAHGLSYEKSSEGKTYEDDSPEWFKEDNAVQPNSSYTYVWHATERSGPESPGSACRAWAYYSAVNPEKDIHSGLIGPLLIC
FV_Macaque VDDVIQVRFKNLASRPYSLHAHGLSYEKSSEGKTYEDDSPEWFKEDNAVQPNSSYTYVWHATERSGPESPGSACRAWAYYSAVNPEKDIHSGLIGPLLIC
FV_Baboon VDDVIQVRFKNLASRPYSLHAHGLSYEKSSEGKTYEDDSPEWFKEDNAVQPNSSYTYVWHATERSGPESPGSACRAWAYYSAVNPEKDIHSGLIGPLLIC
FV_Marmoset VDDVIQVRFKNLASRPYSLHAHGLSYEKSSEGKTYEDDSPEWFKEDNAVQPNSSYTYVWHATERSGPESPGSACRAWAYYSAVNPEKDIHSGLIGPLLIC
FV_Bushbaby NADMLGVRFKNLASRPYSLHAHGLSYEKSSEGKTYEDDSPEWFKEDNAVQPNSSYTYVWHATERSGPESPGSACRAWAYYSAVNPEKDIHSGLIGPLLIC

1810 1820 1830 1840 1850 1860 1870 1880 1890 1900
FV_Human QKGILHKDSNMPVDMREFVLLFMTFDEKKSQWYIEKKSRSWRLTSSEMKSHEFHAINGMIYSLPGLRMYEQEWVRLHLLNIGGSQDIHVVFHFGQTLLE
FV_Chimpanzee QKGILHKDSNMPVDMREFVLLFMTFDEKKSQWYIEKKSRSWRLTSSEMKSHEFHAINGMIYSLPGLRMYEQEWVRLHLLNIGGSQDIHVVFHFGQTLLE
FV_Gorilla QKGILHKDSNMPVDMREFVLLFMTFDEKKSQWYIEKKSRSWRLTSSEMKSHEFHAINGMIYSLPGLRMYEQEWVRLHLLNIGGSQDIHVVFHFGQTLLE
FV_Gibbon QKGILHKDSNMPVDMREFVLLFMTFDEKKSQWYIEKKSRSWRLTSSEMKSHEFHAINGMIYSLPGLRMYEQEWVRLHLLNIGGSQDIHVVFHFGQTLLE
FV_Macaque QKGILHKDSNMPVDMREFVLLFMTFDEKKSQWYIEKKSRSWRLTSSEMKSHEFHAINGMIYSLPGLRMYEQEWVRLHLLNIGGSQDIHVVFHFGQTLLE
FV_Baboon QKGILHKDSNMPVDMREFVLLFMTFDEKKSQWYIEKKSRSWRLTSSEMKSHEFHAINGMIYSLPGLRMYEQEWVRLHLLNIGGSQDIHVVFHFGQTLLE
FV_Marmoset QKGILHKDSNMPVDMREFVLLFMTFDEKKSQWYIEKKSRSWRLTSSEMKSHEFHAINGMIYSLPGLRMYEQEWVRLHLLNIGGSQDIHVVFHFGQTLLE
FV_Bushbaby RKGTLDK-SNMPVDMREFVLLFMTFDEKKSQWYIEKKSRSWRLTSSEMKSHEFHAINGMIYSLPGLRMYEQEWVRLHLLNIGGSQDIHVVFHFGQTLLE

1910 1920 1930 1940 1950 1960 1970 1980 1990 2000
FV_Human NGNKQHQLGVWPLLPGSFKTLEMKASKPGWLLNTEVGENQRAGMQTPFLIMDRDCRMPMGLSTGIISDSQIKASEFLG-YWEPRLARLNNGGSYNAWSV
FV_Chimpanzee NGNKQHQLGVWPLLPGSFKTLEMKASKPGWLLNTEVGENQRAGMQTPFLIMDRDCRMPMGLSTGIISDSQIKASEFLG-YWEPRLARLNNGGSYNAWSV
FV_Gorilla NGNKQHQLGVWPLLPGSFKTLEMKASKPGWLLNTEVGENQRAGMQTPFLIMDRDCRMPMGLSTGIISDSQIKASEFLG-YWEPRLARLNNGGSYNAWSV
FV_Gibbon NGNKQHQLGVWPLLPGSFKTLEMKASKPGWLLNTEVGENQRAGMQTPFLIMDRDCRMPMGLSTGIISDSQIKASEFLG-YWEPRLARLNNGGSYNAWSV
FV_Macaque NGNKQHQLGVWPLLPGSFKTLEMKASKPGWLLNTEVGENQRAGMQTPFLIMDRDCRMPMGLSTGIISDSQIKASEFLG-YWEPRLARLNNGGSYNAWSV
FV_Baboon NGNKQHQLGVWPLLPGSFKTLEMKASKPGWLLNTEVGENQRAGMQTPFLIMDRDCRMPMGLSTGIISDSQIKASEFLG-YWEPRLARLNNGGSYNAWSV
FV_Marmoset NGNKQHQLGVWPLLPGSFKTLEMKASKPGWLLNTEVGENQRAGMQTPFLIMDRDCRMPMGLSTGIISDSQIKASEFLG-YWEPRLARLNNGGSYNAWSV
FV_Bushbaby NGNKQHQLGVWPLLPGSFKTLEMKASKPGWLLNTEVGENQRAGMQTPFLIMDRDCRMPMGLSTGIISDSQIKASEFLG-YWEPRLARLNNGGSYNAWSV

2010 2020 2030 2040 2050 2060 2070 2080 2090 2100
FV_Human EKLAAEFASKPWIQVDMQKEVIITGIQTQGAHLYLKSCTTTEFYVAYSSNQINWQIFKGNSTRNVMYFNGNSDASTIKENQFDPPIVARYIRISPTRAYN
FV_Chimpanzee EKLAAEFASKPWIQVDMQKEVIITGIQTQGAHLYLKSCTTTEFYVAYSSNQINWQIFKGNSTRNVMYFNGNSDASAIAIKENQFDPPIVARYIRISPTRAYN
FV_Gorilla EKLAAEFASKPWIQVDMQKEVIITGIQTQGAHLYLKSCTTTEFYVAYSSNQINWQIFKGNSTRNVMYFNGNSDASTIKENQFDPPIVARYIRISPTRAYN
FV_Gibbon EKLPAEFASKPWIQVDMQKEVIITGIQTQGAHLYLKSCTTTEFYVAYSSSQINWQIFKGNSTRNVMYFNGNSDASTIKENQFDPPIVARYIRISPTRAYN
FV_Macaque EKLAAEFASKPWIQVDMQKEVVIITGIQTQGAHLYLKSCTTTEFYVAYSSNQINWQIFKGNSTRNVMYFNGNSDASTIKENQFDPPIVARYIRISPTRAYN
FV_Baboon EKLAAEFASKPWIQVDMQKEVVIITGIQTQGAHLYLKSCTTTEFYVAYSSNQINWQIFKGNSTRNVMYFNGNSDASTIKENQFDPPIVARYIRISPTRAYN
FV_Marmoset EKLAAEFASKPWIQVDMQKEVIITGIQTQGAHLYLKSCTTTEFYVAYSSNQINWQIFKGNSTRNVMYFNGNSDASTIKENQFDPPIVARYIRISPTRAYN
FV_Bushbaby EKHATESDSTPWIQVDMQKEVVIITGIQTQGAHLYLKSCTTTFYVAYSSDRINWQTFKGNSTKNVMYFDGNSDASSIKTNQFDPPIVARFIRISPTRSYN

2110 2120 2130 2140 2150 2160 2170 2180 2190 2200
FV_Human RPTLRLELQGCSEVNGCSTPLGMENKGIENKQITASSFKKSWWGDYWEPPFRARLNAQGRVNAWQAKANNKQWLEIDLLKIKKITAIIITQGCKSLSEMYV
FV_Chimpanzee RPTLRLELQGCSEVNGCSTPLGMENKGIENKQITASSFKKSWWGDYWEPPFRARLNAQGRVNAWQAKANNKQWLEIDLLKIKKITAIIITQGCKSLSEMYV
FV_Gorilla RPTLRLELQGCSEVNGCSTPLGMENKGIENKQITASSFKKSWWGDYWEPPFRARLNAQGRVNAWQAKANNKQWLEIDLLKIKKITAIIITQGCKSLSEMYV
FV_Gibbon RPTLRLELQGCSEVNGCSTPLGMENKGIENKQITASSFKKSWWGDYWEPPFRARLNAQGRVNAWQAKANNKQWLEIDLLKIKKITAIIITQGCKSLSEMYV
FV_Macaque RPTLRLELQGCSEVNGCSTPLGMENKIGNKQITASSFKKSWWGDYWEPPFRARLNAQGRVNAWQAKANNKQWLEIDLLKIKKITAIIITQGCKSLSEMYV
FV_Baboon RPTLRLELQGCSEVNGCSTPLGMENKIGNKQITASSFKKSWWGDYWEPPFRARLNAQGRVNAWQAKANNKQWLEIDLLKIKKITAIIITQGCKSLSEMYV
FV_Marmoset RPTLRLELQGCSEVNGCSTPLGMESGKIENKQITASSFKKSWWGDYWEPPFCACLNAQGRVNAWQAKANNKQWLQIDLLKIKKITAIIITQGCKSLSEMYV
FV_Bushbaby RPTLRLELQGCSEVNGCSTPLGMESGKIENKQITASSFKKSWWGDYWEPPYRARLNAQGRVNAWQAKANNKQWLQIDLLKIKKITAIIITQGCTSLSEMYV

2210 2220 2230 2240 2250 2260 2270
FV_Human KSYTIHYSEQGVEWKPYRLKSSMVDKIFEGNTNTKGHVKNFFNPPIISRFIRVVPKTWNQSIARLELFGCDIY
FV_Chimpanzee KSYTIHYSDQGVWPKPYRLKSSMVDKIFEGNTNTKGHVKNFFNPPIISRFIRVVPKTWNQSIARLELFGCDIY
FV_Gorilla KSYTIHYSDQGVWPKPYRLKSSMVDKIFEGNTNTKGHVKNFFNPPIISRFIRVVPKTWNQSIARLELFGCDIY
FV_Gibbon KSYTIHYSDQGMWPKPYRLKSSMVDKIFEGNTNTKGHVKNFFNPPIISRFIRVVPKTWNQSIARLELFGCDIY
FV_Macaque KSYTIHYSDQGVWPKPYRLKSSMVDKIFEGNTNTKGHVKNFFNPPIISRFIRVVPKTWNQSIARLELFGCDVY
FV_Baboon KSYTIHYSDQGVWPKPYRLKSSMVDKIFEGNTNTKGHVKNFFNPPIISRFIRVVPKTWNQSIARLELFGCDVY
FV_Marmoset KSYSIHYSDQGVWPKPYRLKSSMVDKIFEGNTNTRGHVKNFFNPPIISRFIRVVPKTWNQSIARLELFGCDI-
FV_Bushbaby KSYTIYSDQGVWPKPYRQRSSMVDKLFEGNVNTKGHMKNIFNPPIISRFIRIIPKTWNQSIARLELFGCDIY