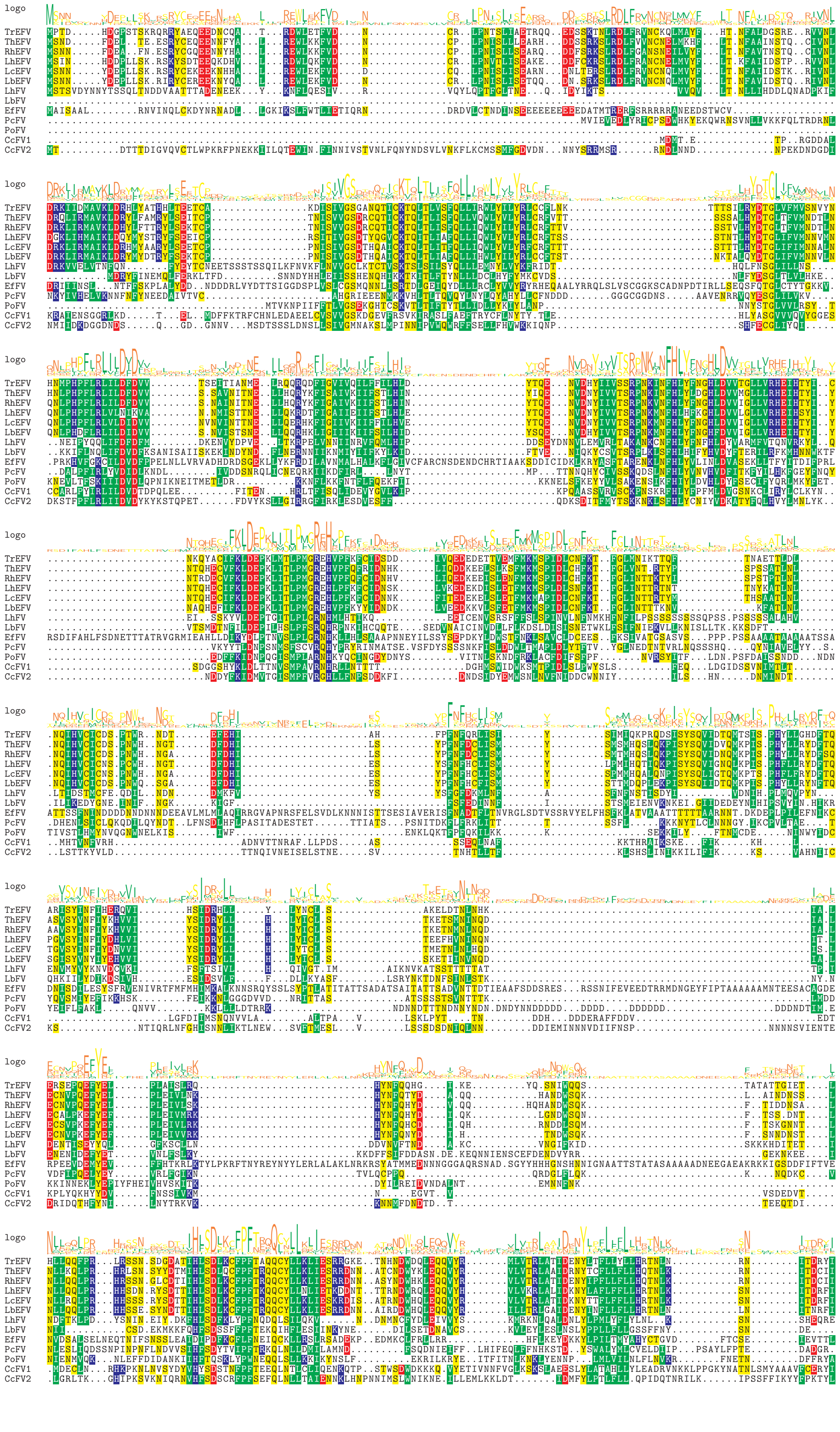
logo
TrEFV
ThEFV
RhEFV
LhEFV
LcEFV
LbEFV
LhFV
LbFV
EfFV
PcFV
PoFV
CcFV1
CcFV2

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logo
TrEFV   RRAIQQLHGNASFLRQ...RNGNG........TGG....GSHIRIEQVTSRARQQDPATKITNKRQETTMH.GRHVTNGYEDYIGCVDYQWLKT.........IVQICFNCGAVTSTISAIYRYT.DFDS
ThEFV   GKVIQQLQVNARFLRH...RNGNN........TCGGIG.NSHIRIEHAIDRSEERQQSARMVN.QQETTIN.EIQKNNKFEDYIKYHDYGWLKM.........IIQICFNCGAVTSTISAFYRYT.EFDS
RhEFV   GNVIQQLQVNARFLRH...RNGNI........SSGGVG.N..IRYEHTTNRGEEHRKSATMGHYQQKTIMN.RLHGTSKYEDYIVCHDYMWLKM.........IIQICFNCGAVTSTISAFYRYT.EFDS
LhEFV   HKVVQQLQLNARFVRQ...RNNI........TCGGIG.NAHIRIERSINRDREYQRSSNTVNQLKIMSE..QTMEINNYEDYIASHDYLWLKT.........IVQICFNCGAVTSTISAFYRYT.EFDS
LcEFV   RRAIQQLQVNARFVRQ...RNGN........NYGGIG.NTQVRIENAANRDGEHQRLSNIVKQPQKMMNEPFQMEIGNYEDVM.GNDYLWLKT.........VVQICFNCGAVTSTISAFYRFT.EFDS
LbEFV   RKVIQQLQVNARFLRQ...RNGN........T..GTS.NSRVRIEHTNQKSTK................NHQQNTIGQLETNHYEEDYMWLKT.........IVQICFNSGAVTSTISAFYRYT.EFNS
LhFV    ......KQFIAKFLRD...ASTFYSNKKKKKTDYSDTSSSSSYPLPNKRRRTQQQQ......QQPFE.MENSEDLQS....RVFEDECHIWLKE.........CIQISFSMGFVTSTLAMMYNNT.SFDS
LbFV    .....DLQLISMYINN...VDVN.......................LPKIQTNKKRKLT...........T...SKVDKND.IQRILKMDYKWIKE.........ILNYIINCGCVTSSVYLLSRIG.VFQS
EfFV    RRLILV...DDEAVAATTTVAGVVAQRHADAAAYENVDDFNIFDVPDVPTGTGAAA...........TIND...DEEDNAELYVL..YETMLEI.........LILFAFNCGAVTSTLALFLQLE.DVNS
PcFV    .....QKKSSSNWLQMMPSTSGSG......GGGSGGDGGGDDHQPPA.PKR...KKKNSSNAQQPLAAIQLTGKLMKDLFEKVSTADRCLIVQN.........LLERVINVGSVTSTLKFLYELN.VFKH
PoFV    RIYV.LFK...................................INLLTLPQNAMN...RDR..........NIN....IDYDNNDEGYVARNFGWLSE.........IILICLNSGCVSSVISMIYRYK.FFKS
CcFV1   SSLSELKT.............KLSNPKWRHKAEYGLLSR..............................VA...EGKDDLTPLQIFQTDYEWLHQ.........SIEIILNLGNVSTMIAFFAVYNAYYTR
CcFV2   NNLIA.....................KNSKNPAIGIILS..............................II...EKHDNEIELQYSQTNKPWYEQQMYIDLFGRIIENIFNIGNVSAMIACIALNNQTYNH

logo
TrEFV   FFDCVHFVLQT..LHLTTHAKYILSKWALMSPTPS.NFLSTSFRYTDWPFC.LFHYV.NIADNVTAVQNK...............Q....FVHGRD.YISCLLGLFQKLLN...................
ThEFV   FFDCVHFVLQT..FHLTTHAKYILSKWALMSPTPS.NFMSMSFRYTDWPFC.IFHYA.TISDNVTAIQSK...............Q....FIHARD.YVSNLFSLFQQLLN...................
RhEFV   FFDCVHFVLQT..FHLTTHAKYILSKWALMSPTPS.NFMSMSFRYTDWPFC.LFHYS.TIADNVSAIQTK...............Q....FIHARD.YVSSLFSLFQQLLN...................
LhEFV   FFDCVNFVLQT..FDLTTHAKYILSKWALMSPTPS.NFMSMSFRYTDWPFC.LFHYA.NIADNVSAMQNK...............Q....FIHARD.YISSLFMLFQQLLN...................
LcEFV   FFDCVHFVLQT..FHLTTHAKYILSKWALMSPTPS.NFMSTSFRYTDWPFC.LFHYA.NIADNVSAVQNK...............E....FTHTRD.YISSLFSLFQQLLN...................
LbEFV   FFDCVHFVLQT..FQLTIHAKYILSKWALMSPSPS.NLMSMSFRYTDWPYC.LFHYA.TIADNFSAMQNK...............Q....FIHARD.YISNLFHLFQQLLI...................
LhFV    VVDCINFIMNT..FELSNYCKYILTKWALYGDYATTLFTSSCFRNTDLPFA.IFQYI.IMETNNTDVPSSLDAD.......LCKKD....YAFGETLSLIVLHATFSNLFD...................
LbFV    LFDNIYYILSS..MSLTLHAQYILSKWIQIVPEPI.TFFSSSFYNSDIAYMCLILFD.FN........EKSREH.......KEKKN....FLSGDNLNIKFIYSLFIKILS...................
EfFV    VKQLALMLLKYYDERLTNHAKYIITKWITLDANPK.NLFSSAFYRNDFAFL.LFHKFENTKDYLKPILSESRSL...........Q....F......DIDALQKAFENTIVT..................
PcFV    FIYYICFLIKH..CKLSLHAQYILTYYALLPDVPN.SYFNESLYQNDILST.L.FYI.CCDNNHSD...............GKKK....FIHLYR.EFPETWTEFGNLIY...................
PoFV    ITDIIMYLLKIYENCLNDHAKYILSYWAFIDTPSPEGHFENDYVQHDLPYV.MMLYAYDV...LQKRLEN............NKKI....FS.MAHFNFNRMYQEYLNIFQVENFFHANEIRNSIASSSS
CcFV1   VPDIILFMLYN..FKLSLHAKYILTRWYHINLDQNTNHFARETVFNNTDFL.LFGLLQAAKVEYTPGGEKCLTAAFKTFKKLCTDV...VVILNQV.LYNL....FE.QND...................
CcFV2   MEDVILFILYN..FNLSLHAKYILTKWYEVNVNNFREHFVEGTAFNNNDFL.LFSVIQLNGIEKKPYTYRSESTG..MFYKLVEKQLKYSFLSAKT.LFNVSMQLIEKSIN...................

logo
TrEFV   ..........................AESI..PFADNYQDFFFRHICGLQSLGNQRFIIFFAGKFHSIYENELK.NACSYSGSSSADHYEIDGNALNYFTFHEAIGLLNPLFNVYELAAPSIQTLVGIKLHPSI
ThEFV   ..........................AESI..PFADNYQDFFFRHICGLQSLGNQRLIIFYAGRYHSVYENELK.NSCIYSGSSSADHHEIDSNALNYFTFHEVVGLLNPLFNVYELAAPSIQTLVGIKLHPSI
RhEFV   ..........................AESI..PFADNYQDFFFRHICGLQSLGNQRLIIFYAGRYHSIYENELK.NSCTYNGSSSADHHEIDSNALNYFTFHEVIGLLNPLFNVYELAAPSIQTLVGIKLHPSM
LhEFV   ..........................AESI..PFADSFQDFFFRHICGLQSLGNQRLIIFYAGKYHSIYENELK.NACAYNGSSSADHYEIDNNSLNYFTFHEVVGLLNPLFNVYELAAPSIQTLVGIRLHSSI
LcEFV   ..........................ADSI..PFADSYQDFFFRHICGLQSLGNQRFIIFYAGRYHSIYENELK.NSCAYNGSSSADHYEIDNNALNYFTFHEVIGLLNPLFNVYEFAAPSIQTLVGIRLHPSI
LbEFV   ..........................TESI..PFADSYQDFFFRHICGLQSLGNQRFIVFYAGKYHSIYENELK.NSCTYNGGSSADHYEIDSNAFNYFTFHEVVGLLNPLFNVYELAAPSIQTLIGIKLHPSI
LhFV    ..........................KASI..PFADNINGFFFLHICGIRFMAGNKYIIFNCRKYRLVTSEYLS.QICSFVSQFNCHKYEVENVAFNYFTFNEEIGLFNPYFNVFEFAGPSMQILVALKVNSSI
LbFV    ..........................KFEI..EYNSELEVFFITQILMCRSLGYRAIYFNGHGHVISQDTSFLK.DFCEKKSTLMLPKYKATDDVLNSFVYIENVGIFNTLFNVYEFPSPSLNSLVTHKLPSVL
EfFV    ....................FLATDVQTK..KLPSGIVDYFLLNICHTQWHC.NKIISFAQGKYNDFLVADFK.KKY...KNSSYPVHKVDGCVSTYFLY.TDLGIRNFLFNVYECIGPSLKSFVTLRLPLEV
PcFV    ........................YYKH..LSFD.SIKVFLNYICGIQSLKNNEYTLFHKGYYSLVEVSKLR.LYFDYKYGFE.ELYNEKYTEFSFFTNHVDVGLFNSPLNIYEFPGPSFRTLVSFKKVDTL
PoFV    SSASSSSKRGGRKNQSDNNNKKKNES..NYNDELLEFFINNVILVQKMGSNYFLVFEEQSFIQTTENKLLQKHCS.......LKYCSEGMVYSFFTLHKDIGLYNPMFNVYELATPSYKVLITFTNKAHS
CcFV1   ...............IPLTKNDKLGLLFDNSEDFEHMLVMRLLGTKSMNEKQILIFSEGGYRQMQKETLHIDFKTMTTVT.PPTYVPESSAFSYEWANSRIGLFNAMLQVFELNSPAWKTKVVMTQETGC
CcFV2   ...............ISFNLSKDDTILMYHFNAFVYFFITHALGAKNINDKMVLIFSEGCWRDMTKHTLDGDFPTMKNINIAPIHTPETSSFCYEWAHTQIGLYNTSFQVFELNTPSWKNRVYIKQPVST

logo
TrEFV   ..FFDCVHFVLQT..LHLTTHAKYILSKWALMSPTPS.NFLSTSFRYTDWPFC.LFHYV.NIADNVTAVQNK...............Q....FVHGRD.YISCLLGLFQKLLN...................
ThEFV   ..FFDCVHFVLQT..FHLTTHAKYILSKWALMSPTPS.NFMSMSFRYTDWPFC.IFHYA.TISDNVTAIQSK...............Q....FIHARD.YVSNLFSLFQQLLN...................
RhEFV   ..FFDCVHFVLQT..FHLTTHAKYILSKWALMSPTPS.NFMSMSFRYTDWPFC.LFHYS.TIADNVSAIQTK...............Q....FIHARD.YVSSLFSLFQQLLN...................
LhEFV   ..FFDCVNFVLQT..FDLTTHAKYILSKWALMSPTPS.NFMSMSFRYTDWPFC.LFHYA.NIADNVSAMQNK...............Q....FIHARD.YISSLFMLFQQLLN...................
LcEFV   ..FFDCVHFVLQT..FHLTTHAKYILSKWALMSPTPS.NFMSTSFRYTDWPFC.LFHYA.NIADNVSAVQNK...............E....FTHTRD.YISSLFSLFQQLLN...................
LbEFV   ..FFDCVHFVLQT..FQLTIHAKYILSKWALMSPSPS.NLMSMSFRYTDWPYC.LFHYA.TIADNFSAMQNK...............Q....FIHARD.YISNLFHLFQQLLI...................
LhFV    ..VVDCINFIMNT..FELSNYCKYILTKWALYGDYATTLFTSSCFRNTDLPFA.IFQYI.IMETNNTDVPSSLDAD.......LCKKD....YAFGETLSLIVLHATFSNLFD...................
LbFV    ..LFDNIYYILSS..MSLTLHAQYILSKWIQIVPEPI.TFFSSSFYNSDIAYMCLILFD.FN........EKSREH.......KEKKN....FLSGDNLNIKFIYSLFIKILS...................
EfFV    ..VKQLALMLLKYYDERLTNHAKYIITKWITLDANPK.NLFSSAFYRNDFAFL.LFHKFENTKDYLKPILSESRSL...........Q....F......DIDALQKAFENTIVT..................
PcFV    ..FIYYICFLIKH..CKLSLHAQYILTYYALLPDVPN.SYFNESLYQNDILST.L.FYI.CCDNNHSD...............GKKK....FIHLYR.EFPETWTEFGNLIY...................
PoFV    ..ITDIIMYLLKIYENCLNDHAKYILSYWAFIDTPSPEGHFENDYVQHDLPYV.MMLYAYDV...LQKRLEN............NKKI....FS.MAHFNFNRMYQEYLNIFQVENFFHANEIRNSIASSSS
CcFV1   ..VPDIILFMLYN..FKLSLHAKYILTRWYHINLDQNTNHFARETVFNNTDFL.LFGLLQAAKVEYTPGGEKCLTAAFKTFKKLCTDV...VVILNQV.LYNL....FE.QND...................
CcFV2   ..MEDVILFILYN..FNLSLHAKYILTKWYEVNVNNFREHFVEGTAFNNNDFL.LFSVIQLNGIEKKPYTYRSESTG..MFYKLVEKQLKYSFLSAKT.LFNVSMQLIEKSIN...................

logo
TrEFV   ..FIKKIIRISKRREKFLQQEQHKIIH..TVMKKHAKEALFQRGITN.QEGESTA.N.KNDL...................FR...NQY........CRLLGRDFSKIV.........LPV.
ThEFV   ..FIKKLIQVSKRREKLLHQEQQKIID..IVIQKNAKETLWQQEISK.GEKRTIL.E.DDNL...................FT...NQY........CQLLGRDFPKIV.........LPV.
RhEFV   ..FIKKINQVSKRREKLLQQEQQKIID..KVTRQNAKETLWQQATTK.SETNSIL.E.DDNL...................FT...NQY........CQLFGREFSKIV.........LPV.
LhEFV   ..FIKKITKISKLREKSIRQKQQSIID..MVTQKNLKGSLWQHTITN.QE.KFIS.A.NDDL...................FA...NQY........CQLHRCDFSKII.........LTV.
LcEFV   ..FIKKIIKVSKRREKLLHQEQQKIIN..MVTQKNAKETLWQYAITN.QE.ELIL.E.NNNL...................FA...NQY........CQLHGGDFSKIV.........LTV.
LbEFV   ..FIKKITRVSKQREKLLHQEQEKIIN..IVTQKSAKEALWQ..ITD.QE.ELIL.E.NDHL...................FR...NQY........CQLLGRDFSKII.........LPV.
LhFV    ..FFKQMMNIAQQKYTYFLQKKQEITS..SVLNNQRCDNIGGNSSSS.SSSNICISS.GDEVNDCNGGGGGGGGGGGAVNVDFELN...IIY........EK..MKKQVAIT.........PPL.
LbFV    ..FFNDIR...K.RINSVLYEQHELKK..KIINE....TILTTKIIKPSLLSKCEEQ.NNYMNFC...................LS...DYY........E.....NVDDII.........LPF.
EfFV    ..SENATTFYRQILDYANF.......RKTKMMD..KA.......FLKTLETTK........ETLSQDL..TNGGGGGGGGGGRSGGAGDVNGSGMYY.AEDNLLLNKFLGIDKDEASDRATATTNILSLL
PcFV    ..QRQQQLEYDNIFNADKKNTFFYQYLCDKIRS..........DDVAAATTTDTTTSTIFVEQVLDQVL.ESGSGGGDVGSGDAAAATSIN...LL............TSATKDKIRM........LNI.
PoFV    ......TKFINNLK........ILIDNCEEKNEYLNELNKHVEENFNNFQIYD....HCTNNNNNNNNITEGYC.....N.........NDTGKEY.NIE..........DLQNI..........LSEW
CcFV1   ..DEQNDAPIAGEEVAMEIDCPA.....................................................AGAS...............VSLSTVFSLC...............LYETKLLSKW
CcFV2   IDKDNNDTVINNI...TKFHCLLEKYKKCKINK........IQDLL...NTTLPQQNDLIDNN.N.....TTANTIEDGGVGVMNTSNTANNTDDLESLSSNLSIN..........NDTNVVSHNDIEKY

logo
TrEFV   ..........C.TVNHDY..RIT.......QRD.VLVVLNFDDAYCDSE..TYNQSIDE..IDLRQQYGQVLKFCIILVSWCMRMGRRHPLSETRLFAQLFDDAPHVYEQLS.EMLYASI.......GP
ThEFV   ..........Y.NNNHDY..EIS.......QRD.VLIVMLNFDNLYCDNE..TYDRLINE..INLQQQHNKVLKFFILLLSWCIRIGRHHPFSETKLFVKLFNDAPHVYQQLK.EMLYSSI.......GP
RhEFV   ..........Y.NTNHDY..QIT.......QRD.VLIVLLNFDNLYCNDE..TYDQFINQ..INLNQQHSQVLKFFIMLISWCTRIGRHHPFSETRLFAQLFNDAPHVYQQLN.EMLYASI.......GP
LhEFV   ..........C.NTNHDY..QLT.......QRD.VLIVMLNFDNLYCDNE..AYDQLINQ..INLHRQHREVLKFLILLLSWCIRMGRHHPLSETKLFAQMFKDAPRVYDQLK.EMLLCSI.......GP
LcEFV   ..........C.NTNHDY..QLT.......QRD.FLIVLLNFDNLYCDNE..AYDQLISQ..INLQQQHTQVLKFLILLVSWCIRMGRHHPLSETRLFAQLFKDAPHVYEQLN.EMLYTSI.......GP
LbEFV   ..........G.NINHDY..QVT.......QRD.VLIVLLNFDNVYSDSE..AYDQLINQ..INLHQQHSKVLKFFIMLVSWCIRMGRHHTLSETKLFSQLFKDAPRVYEQLN.EMIYTSI.......GP
LhFV    ..........I.VTNNEH..RLS.......QTD.FLIFFQNFDNVLYNCP..EYNKCIQS..IDLNQQDDQVLLFAVSLLSWLIRMSNHHIFNNSKFLKHLFVNAQNLYDSLNLEIVQKSN.......GP
LbFV    ..........D.KNDKSLFNTKI.......KNH.FLNVLLNIDNS..ENN..DYIELISS..IDLTKQFKKNLYFLVLLLNWFLKMGNIHAYSNTSFFKDIQKYRQEIYNLMT.NHVLKSF.......GP
EfFV    ERRLRSAGVVNSVDKDCMENNFT.......SDF.FLEILTSVDDVLYNKYKSKYVDALKA..INPANFSIEYLKFSIMFTNWILKMGSAHKYMHTALFAYMHATSDDIYKDMTVLLVDDSYTNKRGEIFP
PcFV    ..........A.ANTNTNTHSFN.......KNA.FLIILNNFSLD.......TLNELIECVDIGKSQQDIAVVQFLVVFASWIIRIGPAHIYKDTPLFQYINECRNEIYQDLR.QLIIETS.......GP
PoFV    KNRCSKR...RIKIKNCIGNNFL.......NSIKISTYIQNFNMEFTDDI..IYNE.......SFFTNNIMFLKFTIMFIAWIVRMGPCHLFSETLLFKWINAHRRECYNELS.TLCLETI.......GT
CcFV1   ...........LKMDECRGATLSS......KLAEIVLRQQPFDENIL...........A..RVSLDNVHRYNMAFAVLVVSWFIRMGPRHRHTDSAYFTYIYRQRRLLFKQLR.RLCLSLNDG.....ED
CcFV2   F..........SHIKEKRKHVLSFTRNKIKDSLNIVSKQQN.....W...........S..NINLNKIDEIFLRFALLFTSWLIRMGDLHDFSNCNFFKDIRFNRRKLYLELR.NFIYVINGE.......
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logo
TrEFV   VLKYSKIDKLAQLLEAYCENTAVDFIQLRET.......SIEHLQ..TPELC..........T.LIDG...I.DRDT..........................................
ThEFV   ILKFRKIDQLAELLKEYCENTVVDFQQLRR........TMEHLQ..IPDLC..........I.RIDG...I.DQES..........................................
RhEFV   VLKFSKIEKLAELLKVYCENTVVDFQQLCKA.......TTEYFQ..MPDLC..........I.LTDG...M.DQES..........................................
LhEFV   ILKFSKIDALAELLKAYCENTIVDLQQLHET.......KLKHLH..IPDLC..........I.LTDG...L.NHET..........................................
LcEFV   VLKFFKIDGLAELLKAYCENTVVDFQQLHRT.......KTKHLQ..MPDLC..........I.LTDG...I.DQET..........................................
LbEFV   VLKFTKIDRLAKLLKAYCENTVVDFQQLYKT.......KIKHLQ..IPDLC..........I.LTAG...I.DQET..........................................
LhFV    LLSFNDLDEFTVLLKHFCENTKINYAKLHES.......FPDIQ....TNLG..........I.LSDP...V.HSNLNS.......................................
LbFV    LLKFSSSFHLANIIQKFNENTELDFDFVLEK.......FSH.....................LKHP...F.YEKNNN.......................................
EfFV    GLNFDCFETYLSSMKDFF....NDYFQVHPD.......WERCQD..................V.KSNG...VYA.......FPSN...............................
PcFV    LLKCETLDELTNLFDLFVKQTTSEQHFNFNN.......DVDSNTTTTGNGG..........G.GGGG...VIDSDDRPLTFYYD...........................
PoFV    PMRFESLEQLTNLFTKYTENTNISYDDAKKFSLPLPKIWNLSIDDLNDDGNDNNDDNKNNNIGDDDGDDDFMRNNEKN..LYATLDESITSIVPITTTTNTTTTTIIISTTTNTDNNHDVITTAAADDN
CcFV1   FCHFYGMSELVQSFQEYFEKRTFSPHPEF.........TTRPIFAPLPQMC...........................N.......................................
CcFV2   PLQYKNTTEYVKKFETFMDSYDFIPNDKF.........TKTPLMPLDLDDN...........................N.......................................

logo
TrEFV   ..............QQLRQ........EYP..QYF....EVTNTERNIDRDLAHKLRRHMYQTFALLIVLSEFNFDILLDYLKFVLYLLYKGNNLRICLYIYGVTQSCKSRFAEMCESIMQTG.TSMSFN
ThEFV   ..............HLIKK........DYP..NYF....EISDIERNIDRDMIEKWQQHIYKTFALLIILSEFNFDVLLDYLKFVIYLLYKGNNLRICLYIYGVTQSCKSRFAEMCESIMQTG.TSMSFN
RhEFV   ..............QLLKK........DYP..NYF....EISDIERSIDRDMVDKWQQHIYQTFTLLIVLSEFNFDVLLDYLKFVIYLLYKGNNLRICLYIYGVTQSCKSRFAEMCESIMQTG.TSMSFN
LhEFV   ..............QLLKR........DYS..KYF....EITDIEKIIDQDMIEKLQQHIYQIFSLLIVLSEFNFDVMLDYLKFVLYLLFKGNNLRICLYIYGVTQSCKSRFAEMCESIMQTG.TSMSFN
LcEFV   ..............QLLKK........DYP..KYF....EISDTEQSIDQDMVEKLQPHLYQIFALLIVLSEFNFDVLLDYLKFVIYLLFKGNNLRICLYIYGVTQSCKSRFAEMCESIMQTG.TSMSFN
LbEFV   ..............QLLKK........DYP..NYF....EITDTEHTIDQDMVEKLQLHIYQIFSLLIVLSEFNFDVLLDYLKFVIYLLYKGNNLRICLYIYGVTQSCKSRFAEMCESIMQTG.TSMSFN
LhFV    ............RDQIND........TFALYNLS....PVSVAEEKCDVDFWDNCNDKIYNVFALMVLWSEFNYDTFNDLIKYILYLLHKGNNLRICLYLTGVTQSCKSSFANLCEQLLMTD.HAMSFN
LbFV    ............KKLLNN........ENIKKKYF....SISDRDIIADNEMLR.SKNHIYHAMAVLLMFSEFNFDTLTDVIKFMIYILYKGNMLRICLYLFGVTESLKSRFTEILANLTQTD.QTQSFN
EfFV    ............VAELQR........EYP..EFY....ETTELEKAYDERLLKIFQDLIFDSLASKTIIGEFDTGTIIDILKFGASFFCQKNPNRMGVVIRGVTNSGKTHLASLLQQVCRTD.TDSSLP
PcFV    ............FDKLADKLKKYNRVVIDSGRYH....EITTQLQEMDNQMCAKYYYPVLRTMSLLMLFSELNFDVIEDLIKFLMSLQFRGNMHRTCTYMLGVTSSLKTQFALMLANIHMSL.ESSTIQ
PoFV    NNNNNNNNNTDNNNDFLPNIQCNFMD.DKIKVRFYDDKNVIINIIKNNEREIMEKFTRDINKALCYLLLFSEFNYDTITDVFRLLLLLAIKGNIDRLCYILYGKSKSLKTRFATILQELFSTIGDNNSAQ
CcFV1   ............VAIRHT...D..IKDERT......VRATFELEKNNSLRLWRLIQRETIVTLLVLVCFSEYNYGVFQDLFKVLMLGTIKGNPTRIFAMIVGITGSGKSTLIRMLESYFTTANSSPKLT
CcFV2   ............ISFLHNSAMS..CVDSPV......VKATIEMESNIVNMLINIYKNEIFKVFTSYMAFAEYHPHVFIDIIKYLMTAMFKGNVTRQYMFIVGVTGCGKSTLIQALQQLFRGLHSCLLHG

logo
TrEFV   AANISKNPTQDYDTIVVPGAFNNLLIFDEIDK.ISISRFKTIINTATMSTRDIRGNDSLNLKLACTPLLTSNKTFSADEATCSRLHLIKKFMQFCPPIS..TSINEPGTSRYNCRTSI............
ThEFV   AVNMSKNPTQDYDSIVVPGAFNNLLIFDEIDK.ISISRFKTIINTATMSTRDIRGNDSLNLKLACTPLLTSNKTFSADEATFSRLHLIKKFMQFCPPIT..VPINNEETSFLNVRTSI............
RhEFV   AVNMSKNPTQDYDSIVVPGAFNNLLIFDEIDK.ISISRFKTIINTATMSTRDIRGNDSLNLKLACTPLLTSNKTFSADEATFSRLHLIKKFMQFCPPCT..VTTNNTGTSFLNVRTSI............
LhEFV   SVNMSKNPTQDYDSIVVPGAFNNLLIFDEIDK.ISISRFKTIINTATMSTRDIRGNDSLNLKLSCTPLLTSNKTFSADEATCTRLHLIKKFMQFCPPTV..TSA..TDTSHFSIQNSI............
LcEFV   SVNMSKNPTQDYDSIVVPGAFNNLLIFDEIDK.ISISRFKTIINTATMSTRDIRGNDSLNLKLSCTPLLTSNKTFSADEATCSRLHLIKKFMQFCPPST..VTTTETGTNNFNIRTSI............
LbEFV   SVNMSKNPTQDYDSIVVPGAFNNLLIFDEIDK.ISISRFKTIINTATMSTRDIRGNDSLNLKLACTPLLTSNRTFSADEATCSRLHLIKKFMQFCPPST..VTKSEPETSHFNVRTSI............
LhFV    STELANSPKNDLDNIVVPGAFNTLLIFDEISKKVCGTRLKTLINLATMASRDIKASDCVNLKLSSSLILTSNVTFSVDDAVAARLRIIKKRMQFLPIAT..S...............V...........
LbFV    NANISRSAVQDFDSIVISGASNTFIFFDEVEK.VCITRFKTIVNSIAMSSRDIKNSEAINLKLACTPLMSSNSPFVVDNASCARLRPIRKKMQFCETFS..G..............ET..........
EfFV    ANTISKPVSGDFDIAFRPITTNSLVVIDEVIS.LNSGRVKTLINVAPMTSRDIKSNDPSTQSITAKIIMTTNHVLHGDKATLERLIFINKQMQQHKIYH..NPC.............I...........
PcFV    NTNISRMPSQDLDGVAKTASFNSLIIFDEVNI.INPTRIKQIANLGNLVTRPIMGNSLISFPINAKTLITSNKEVGADYAAMVRFKIFEKKIQFSSIED..TSM.............M...........
PoFV    TKCLEKTQSQDYNALLTQLSQNTIIVLDEVTN.MKSKFLKEYVNTAQKSQRNLYSNEMISLRSNAILLLTSNVNFAIDEATFTRIHTFYKSFQLTEQMI..RN.........NCTDFL...........
CcFV1   TLMISTPPKQDLDAAALPLSSCLLCVSDETKS.LTNRRINSLCDEGRIGTRSIRVSEATALRLTAALLLAGNSGFPIDDATANRMLVFIKNYRLASP..CTAPIVG......LLSSEERRGVMDNIREC.
CcFV2   HAFDKHTKADVLDPSAEKIASSLLCVTDEVIN.PDCTRLNTLCSDGESSSRAIHANITSQFKISASLLLAGNKGFMINDATEDRILYIHKDFLLSKYLLCHDSYIDETIIIDNCPEKRAKRLLKKFQNSI

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TrEFV   .FDRYILDHTSEKRAPIQI..........GAMILTRKLPEWIPH.DEAIGLYMLQHYLLPFFFYHPTTPISSHVSNTMRTTLRKYIVQNYPLSNFLENVRIDS..SSEFVSNKKLYDIVNVWWNNN..RE
ThEFV   .FDRYILDHTSEKRSPVQI..........GAMILTRKLPEWIPH.DEAIGLYMLQHYLLPFFFYHPTTPISSHVSNTMRSTLKRYIVQNYPLSNFLENVRIDS..SSEFVSNKKLYDIVSVWWNNS..RE
RhEFV   .FDRYVLDHTSEKRSPTQI..........GAMILTRKLPEWIPH.DEAIGLYMLQHYLLPFFFYHPTTPISSHVSNTMRSTLKRYIVQNYPLSNFLQNVRIDS..SSEFVSNKKLYDIVNVWWNNS..RE
LhEFV   .FDRYILDHTSEKRAPIQI..........GAMILTRKLPEWIPH.NEAIGLYILQHYLLPLFFHHPTTPISSHVSNTMRLTLKRYIVQNYPLSNFLENVRIDS..SSEFISAKKLYDIVNVWWNNS..RE
LcEFV   .FDRYILDHTSEKRAPIQI..........GAMILTRKLPEWIPH.NEAIGLYMLQHYLLPFFFYHPNTPISSHVSNTMRSTLKRYIVQNYPLSNFLENVRIDS..SSEFVSXXXXXXXXMTF.......
LbEFV   .FDRYILDHTSEKRAPIQI..........GAMILTRKLPEWIPH.DEAIGLYMLQHYLLPFFFYHPTTPISSHVSNTMRLTLKRYIVQNYPLSNFLENVRIDS..SSEFVSSKKLYDIVNIWWNNS..RE
LhFV    .YNR..FNNTDEKRSPTNI..........GAILITNKIPQWSPS.NEILGMYLLQHYIFPFFINNFIMPITDNPSLTMKYAMKYHVTQNHPFANFLESVNIRP..SKDFISNGQIYEIVLVWWQQN..KA
LbFV    .FDRFSIDSLKEYISTPNI..........GGIFLINRIPMWHDNSASIIGFLLIQRYLYPYFFKSYTSPISKKMSKTMKNELRIYMSNNHPVAFFLNTVKISV..DHNFISEQDFYKLIDKWWLAY..KD
EfFV    .IDRLSCV..HDDKVPATI..........GFCQIFKRAFEYP.LSLEIFPLYLLLSYAAVFFVHSFKAPISKKLSKSLERQQQKYRARNDPIEVFKKNIKFVETNGRDVLTKNNLFSIVEQWWAVANKNN
PcFV    .INRLLLQ..DYKGTSSIL..........GASVLIQRFINWKPASIELHGLKLIQQYLLPLFFFQCYTPISNNNSETMKITHRKYLIRNYPVYNFINTIKIVP..SETIMSQAFFIEILSRWWKEN..SS
PoFV    .IRNTIKKHKYADQISSHV..........GAMILLKKIPNITD..NVHTGLKLLNSYLFPFWYYKPYKPIPSYKSSTMNNELIAYATRNQPIRKFIASHSIKSH.ASLKMSIKELDEYIYKWWNEN..KD
CcFV1   ....Y...LNGGDAATLSAAATSAASRFAGFQCVNQKLPYV..FEESIAGLYNNLMNGRAFFLNTNTLPVDKDFSLATKQSKREYERKYSPRVCFKAEFKIEPS.DYETVTKQEFDNTVRLWWTANKHRL
CcFV2   NIDNFKSDNNKTNNNNRQIGEIVTTSNFAGLQFIKRSLPYL..FSFPVCGQYITFMYGKLIFYNSYTLPISKDLTPTSMRYKYEFSKANNPVQRFLSTFIIDTN.YAGVTPRHEFHDIVFGWWNQVKRQC

logo
TrEFV   KFK.NSDTDCNILFSELQDHIAKFKATKNRIEGYNIVVQLR...
ThEFV   KFK.NSDTDCNILFNELQDHLSKFKGMKNGLDGYNIIVRLR...
RhEFV   KFR.NSDTDCNILFNELQDHLSKFKGVKNGLDGYNIIVRLR...
LhEFV   KFR.NSDTDCNILFNELQDYLSKFKGSKNGLDGYNIIIRLK...
LcEFV   ....................................................
LbEFV   KFK.NSDTDSNTLFNELQDHLSKFKGTKNGLDGYNIIVRLR...
LhFV    KFK.KSEIDENTIYQDLQDYLVKYKSRQSNTDGYACTIEV....
LbFV    RFK.NSDFDSKSLVKEISQYLTQYKSTLNNVKGYNIKIVLE...
EfFV    KFG.QTGLSVDSIFQELSPYFEKYKVGT...DAYSVYLQTSDS.
PcFV    HFN.IVDYKEKCFITDVCNYFAYFKQPCN...GYKFTIENIDNF
PoFV    KFA.GASLTNYQFAYEIHCALSDYKDVSNK..HYNISLTCKI..
CcFV1   FM...PDFDANALLQQLEHELLPNLTEDK...NYYRIKMTKN..
CcFV2   LYQNPGDFNGSSLVTLLEHRLNKYRSPDG...GYKFKILLK...
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X acidic (−)
X basic (+)
X polar uncharged
X hydrophobic nonpolar