

logo

LbEFV	MPINSSQKVTWVPEMNSPHFSSYSPIQLKKNYFTGLMSPSLIEECKYSKNITYQNQQHEEITITSNTVISNTTIDFKKLLELENDPVIDPASTLSFSCDFLISEKAVVKTSKRYERRHDYDDDDDEEDKNFQR
LhEFV	.....
LcEFV	.....
RhEFV1	.....
RhEFV2	.....
TryEFV	.....
LhFV	.....
LbFV1	.....
LbFV2	.....
EffV1	.....
EffV2	.....
CcFV21	MPINSSQKVTWVPEMNSPHFSSYSPIQLKKNYFTGLMSPSLIEECKYSKNITYQNQQHEEITITSNTVISNTTIDFKKLLELENDPVIDPASTLSFSCDFLISEKAVVKTSKRYERRHDYDDDDDEEDKNFQR
CcFV22	.....
CcFV11	.....
CcFV12	.....
PoFV	.....
PcFV	.....

logo

LbEFV	LTEYLQRELENVDFDEIPQQHSVENEELIDKQSQEHHEDISDILHVQNNDELSQQKHTIEHMEIEGEIEEQYENLNDVLFTTDQNNNDMRQQQYDEAFSNNWNIEDTEIEVTAQ.....ERITSL
LhEFV	.....
LcEFV	.....
RhEFV1	.....
RhEFV2	.....
TryEFV	.....
LhFV	.....
LbFV1	.....
LbFV2	.....MQNEEILMENVSSSSFMKEK.....
EffV1	.....
EffV2	.....
CcFV21	LTEYLQRELENVDFDEIPQQHSVENEELIDKQSQEHHEDISDILHVQNNDELSQQKHTIEHMEIEGEIEEQYENLNDVLFTTDQNNNDMRQQQYDEAFSNNWNIEDTEIEVTAQ.....ERITSL
CcFV22	.....
CcFV11	.....
CcFV12	.....
PoFV	.....MNVDQSFLSDEATNTYPSNDVPSLNNLLSPFSPQWLQQNHHHQ
PcFV	.....

logo

LbEFV	EEQDQQRINTSIEGQDQQQINTTLHEQDH.....QQIN.....TSIEGQDQQRINTSIEGQDQQQINTTLHEQDHQQINTSIEGQDHHQIITLTEEQIPQLIILNQEQQVPEHQQINTSIEE.
LhEFV	.....
LcEFV	.....
RhEFV1	.....
RhEFV2	.....
TryEFV	.....
LhFV	.....
LbFV1	.....
LbFV2	ENTVNQKIDTNISTPMS.EVLSIMHNTSM.....YLMN.....TDIGNYSNIEII.....PSS.....MELDISSNGTNTV.....VIPPPSIIDDYH..NGLNTELSY.
EffV1	.....MAVASYLNNYVVSPSDY.....
EffV2	.....
CcFV21	EEQDQQRINTSIEGQDQQQINTTLHEQDH.....QQIN.....TSIEGQDQQRINTSIEGQDQQQINTTLHEQDHQQINTSIEGQDHHQIITLTEEQIPQLIILNQEQQVPEHQQINTSIEE.
CcFV22	.....
CcFV11	.....MNTDRELSMAIASVVGDISTNDNGA.....
CcFV12	.....
PoFV	QQQQQQQQVLLYSPMPQSVSSTLNTPQPDFSEISEENQYKYQH HHQH QHEHHHHHHHTQQELQNQ.....YCASPLHQQQQQQ.....QQQQQQQQQIPEAIYMTPNIEPTY.LFSPSFS..
PcFV	.....MTTCFDIY

logo

LbEFV	.....MSRENS.....SF.....LS.....DCEEN.YIEWDYLLKLKTK..ES
LhEFV	.....MSSNSECS.....SYLSLPI.LS.....P.....ENV.....EEDST.KVEWDYLLPLKAK..QES
LcEFV	.....
RhEFV1	.....KTSPLT.....I...TD
RhEFV2	.....PLT.....I...TD
TryEFV	.....MSTSCKDS.....SSSLKSS.SS.....S.....TYS.....AINST.TIEWDYLLQLKNT..QET
LhFV	.....MEFPFLAQ.....RS
LbFV1	.....ENSHLIN.NNDNSPSTIIDKNSTTPSITTTNIINP....N.....NTITESNIASQVN.LNDE....N....NFIVIDNIL..YKQKNFFINNPP.....L...TI
LbFV2	..DDDTIIAAEKEQA...ICTAGATT..TTITTAVAA.....AVAASAIP.ENDYR...IP.....EVL.YRMSG...AKNKI.....FTG.....ET
EffV1	.....
EffV2	.....
CcFV21	QEQQQIITLTTEEQIPQLIILNQEQQVPEHQQINTSIEEQQQQI.....ITLTEEQIPQLII.LNQE...VP....QFIIQTNS..FLQKN..EVRTPNIS...L...L.
CcFV22	.....
CcFV11	.....AAATYEAVA.....AATIENE.....VAIEETPLKETNEEAAVI.EADHTES..AQEPV.PNNERSVENE.....NTSNNE.....PEIHPTIVSVEKAAGNEE
CcFV12	.....
PoFV	...PVTTINNNAS...IQLQQQQQQQQQQQQQLEEQRRQQQQQQQMEESTLAVENVNNEITTVAELTEVCCDKIII.NNQKELQLPSQQSVEYCVA..KK...YENSNTFNAFY.....
PcFV	DDDGGRINNSNDDT.....DDITLEIFEQLLQQSERDTDAAQSLYSTSTEPMVI.DCDETETVAAAATFANNVNVDAD.DDDDIFMYPVIETMVNQPTTKLSHFNNNTNIT...CT..KVS

logo

LbEFV	KPKSIRSTRSSLVCCETIQSIQLDEAISTFLNCTKSN.....MNVSINDMDAFIIE.....TMYINLQDLKRINITLNEFDGIIN.REINLQTIKYKCSSL.....
LhEFV	KPRSIRSTRSSLVCCETIQSIQLDEAITTFNCTKNN.....INVSMNDMDVFIIE.....RMYINLHDLRRTNATLDELFDAIVT.RQINLQAVKYKCTTL.....
LcEFV	.....
RhEFV1	KKTSLRATHYGFMGVDCIEKVYVFDVLKTLIDNTISK...TKTSVTDSDGILLE.....RVLISTENYKKNINEIFNKTSSLR.QDYKDKF.....LVTEFSVEKFLPHKNI.T
RhEFV2	KKTSLRATHYGFMGVDCIEKVYVFDVLKTLIDNTISK...NKTSVTDSDGILLE.....RVLISTENYKKNINEIFNKLSSLR.QDYKDKF.....LVTEFSVEKFLPHKNI.T
TryEFV	KPRTIRSTRSSLVCCETIQSIQLDEAISIFFNCAKSN...MNTAMNDMDAFIIE.....SLYINFHDLKRINQTVDQLFEAMVT.GKINLQAVKYKCTSL.....
LhFV	KEKKSSGTFSNIGMCMCASKYSIDDIAYFINNLKNC...IEFNTTDCNALILE.....NVILGEKHYKITKTLEHIVKILKK.NNSAFHNIKYEIVEQK..STITKDLQQ.....
LbFV1	KLTKKINIKYGFLEIECVENHEIENLISLLINNTISN...TSVTVSNSDGILIE.....KVKVNLINSLKIEKSFQQTYNELVK.KSVTKNL.....YISKRVCKQFLQNSTDVY
LbFV2	YKNSKFLLNYSFKGVLVKKNFTLAKTITDIFNNTKSN...SKLVLHDCSAFFLE.....NIHFENNYKDLVLKVFDIKKLFQS.DTFSKLTSNKIHPLSRMDVTNCVIEQIEPSQRNVK
EffV1	BSDNNRLLRYNFRVF..VEKYLMRA.....SAKNT..A.....FDFFYIR.....DCFIS...DRDSTFRILFKKATK.SSNG..
EffV2	.....MI.....RVKSNF...SNNLQGFLEHFDTYDENEFVDPD.....LGAIGFLAKGVFEC.....
CcFV21	KAKKRKSFNDNDTDNDVKNY...KRIKTTIDNNKNM..YFKKPIV.TDNLLLTEP.....RTLMEPLNESQALNIHKKIIPKPK..KQYNELITLNNFLHYRKETINQFLEENYKRKNNSNL
CcFV22	.....MSEAIKILHGTGFSH.....G.....SVEIYNVDLTNRNSKNLYSSYILWKGFEE.KSITP.....KEHTLEYNKNDNVRT
CcFV11	VWTRLFKTKHSFRNMTIYKKIEL.....
CcFV12	.....DTFINTIYKRSTNITL
PoFV	..TASLIDSFNFKCNBYLQYQS..HIGRIITSQKKN...DITANDVVVAATTSTTTTTTDETSNIQHPLLNLTMCKNLTHNYDLRKH...GKLISAFQRGWHKKQRVKDEKIEQYFNLKMYMV
PcFV	AKDAKQKMNPLHTIMCISNYTIDALEILNLSWQKGGSHDKLMRQTSNCIVIE.....NCIFNQSVLKEINTLKYSLLSDLT....NPQSTALQSHSWTYRQITDSAHEIQ.....SQL

logo

LbEFV	.....YNKMDIF.....QIYN.IDE..NLININ..ENHNFLKQKQKFGKYLQ.....ILLQQT.....SSSSL.....LN
LhEFV	.....YNKMDIF.....QTYN.IDT..SVLNNIECENSMWMRQRKLFCKYLQ.....ILFKQIS.....SSSSL.....LR
LcEFV	.....
RhEFV1	LUN...SLK.....R..ESND.IES..DVLLNNECNIVDKIN.....EIINV.NV.....
RhEFV2	LUN...SLK.....R..ESND.IES..DVSLNNECNIVDKIN.....EIINV.NVCCP.....SLQIDS.....A.....
TryEFV	.....YNKMDIF.....ELYN.IDT..CVLMNAGNETFDWCRQRKRFGTYLQ.....TFLQESSS.....SSSSL.....LR
LhFV	.....VKQSRLF.....NEYN.DIE..SSSP.....LQNSITDNDYVG DIN.SESLKLINEILLKSILK.....LNESMM.....QKMKMR
LbFV1	LTY...KEKKK...LNNFLIAK..NLNN.IS...SQSPKDELLIEKQIN...NLMNV.NLNPT...QKDILI.....K.....
LbFV2	MI F...KENES...SSLS..LC.....NNSANDNDGIFKELA.....KIIND.T..F...SKNVI.....Q.....
EffV1	.....RMELENDCMVGKYSDDLVS.RRSEVVYKEFPVVLPEK.....SSDGNL..VGSYDDD...DDDDDD..DVTILYNFMR
EffV2	.....ENANVILEQVRGILYRDRPSYLSNKNEDNLNLVRELQLRPLSNYKDC.....M....ADCSKIFHIIPTCNFNV.....SKDFGL.....TIDEYR
CcFV21	GLV...KKNKS...YHHSFIEKC...HPY...EC..KKSHSNNRNLVKTLT.....
CcFV22	CHV...IDIKDI...YKSKS...TYNDITE..NSVINISNDLENDCQNH...DIDMNIETLNKYFNDILBNFYQYESIFYSLEYKNYLMSLNEKYNPIDKIHKIIRDYLTEQQIDVGFFS
CcFV11	SFA...KKNYPVKRWAVENLNNVEAK...SVMG...AFPDR.IFKFNDD.....NRVNMVSLTQPRV.....TGECVDLTYSTQSAIKPVNLEELNKLSSVV.SMEK
CcFV12	.....VHNFF...KYIKQSDR.SLTDGSVVTCSVLVAQIEQNPLLNFNLN.....
PoFV	MTA...IDENKY...ANIS.....DIVKFINESKFYFFYDI.....SYDNR...NLDYAYFLKVKKQIDFSI
PcFV	AIAYDFVDVPTI.....SKENINIAK...AIYD..HA..ITSHNVAESKRKKTHLRVFFGYIDQ.....LAVTAEQ..

Logo

Sequence logo showing conservation of amino acids across 15 protein sequences. The y-axis represents the log-odds of an amino acid being at a position. The x-axis shows positions from 1 to 100. The sequences are: LbEFV, LhEFV, LcEFV, RhEFV1, RnEFV2, TryEFV, LhFV, LbFV1, LbFV2, EfFV1, EfFV2, CcFV21, CcFV22, CcFV11, CcFV12, PoFV, and PcFV. The logo highlights conserved regions with high information content, such as the first 10 positions and the last 10 positions.

Conserved regions (high information content) are highlighted in yellow and green boxes:

- Positions 1-10: LbEFV, LhEFV, LcEFV, RhEFV1, RnEFV2, TryEFV, LhFV, LbFV1, LbFV2, EfFV1, EfFV2, CcFV21, CcFV22, CcFV11, CcFV12, PoFV, PcFV.
- Positions 11-20: LbEFV, LhEFV, LcEFV, RhEFV1, RnEFV2, TryEFV, LhFV, LbFV1, LbFV2, EfFV1, EfFV2, CcFV21, CcFV22, CcFV11, CcFV12, PoFV, PcFV.
- Positions 21-30: LbEFV, LhEFV, LcEFV, RhEFV1, RnEFV2, TryEFV, LhFV, LbFV1, LbFV2, EfFV1, EfFV2, CcFV21, CcFV22, CcFV11, CcFV12, PoFV, PcFV.
- Positions 31-40: LbEFV, LhEFV, LcEFV, RhEFV1, RnEFV2, TryEFV, LhFV, LbFV1, LbFV2, EfFV1, EfFV2, CcFV21, CcFV22, CcFV11, CcFV12, PoFV, PcFV.
- Positions 41-50: LbEFV, LhEFV, LcEFV, RhEFV1, RnEFV2, TryEFV, LhFV, LbFV1, LbFV2, EfFV1, EfFV2, CcFV21, CcFV22, CcFV11, CcFV12, PoFV, PcFV.
- Positions 51-60: LbEFV, LhEFV, LcEFV, RhEFV1, RnEFV2, TryEFV, LhFV, LbFV1, LbFV2, EfFV1, EfFV2, CcFV21, CcFV22, CcFV11, CcFV12, PoFV, PcFV.
- Positions 61-70: LbEFV, LhEFV, LcEFV, RhEFV1, RnEFV2, TryEFV, LhFV, LbFV1, LbFV2, EfFV1, EfFV2, CcFV21, CcFV22, CcFV11, CcFV12, PoFV, PcFV.
- Positions 71-80: LbEFV, LhEFV, LcEFV, RhEFV1, RnEFV2, TryEFV, LhFV, LbFV1, LbFV2, EfFV1, EfFV2, CcFV21, CcFV22, CcFV11, CcFV12, PoFV, PcFV.
- Positions 81-90: LbEFV, LhEFV, LcEFV, RhEFV1, RnEFV2, TryEFV, LhFV, LbFV1, LbFV2, EfFV1, EfFV2, CcFV21, CcFV22, CcFV11, CcFV12, PoFV, PcFV.
- Positions 91-100: LbEFV, LhEFV, LcEFV, RhEFV1, RnEFV2, TryEFV, LhFV, LbFV1, LbFV2, EfFV1, EfFV2, CcFV21, CcFV22, CcFV11, CcFV12, PoFV, PcFV.

Logo

VE...KMFSNFRIVKSC...TFQLKCS...TCSS...GKNFN...PAELRYHFVAHHLSSQ...EKTYQC...DKCKFETT...SLIEFRKHIRAKH...
VE...KMYPNFRIVKSN...NRQLKCS...MCPKINEKYFN...PAELRYHFVVHHLTK...EKVYRCREIATGPGADNCQFETS...SMLEFRKHVRAKH...
VE...KMYINFRVVKSS...SRQLKCS...MCPKINEKYFN...PAELRYHFVVHHLTQ...EKIVYRCREIATGPGVDECKFETT...SLLEFRKHIRAOH...
RheFV1
RheFV2
TryEFV
LhFV
LbFV1
LbFV2
EfFV1
EfFV2
CcFV21
CcFV22
CcFV11
CcFV12
PoFV
PcFV

Q...A...KDFRYSQSGS...KNKKTCR...YCKQ...EFIS...LVNFKTHLRDKH...L...NIMKMKCP...YCNFSTIV...EKKITQLHTRREKHSN...
NE...RTCSNFRIVKSS...SRQLKCS...MCPKTSTQIFN...PAELRYHFVIGHHLTE...EKVYRCREIATGPGAEVCNFETT...SSIEFRKHVRAQH...
...NRPAFRILTNS...KILLKQ...ICSGVNNKLFN...ANELKQHIINEHSTK...SRVYNTCK...NMFSTF...NMTVLKAHLTE...
ET...STHSGFRFVNNNI...LKTNVCH...ICQK...NIMGSSNLKKHTRIEHSTL...SYNTFQCDR...NRCTFKAS...SLEENLNLHVQK...H...
KE...LFSNSYKYVAGN...KSIKSC...ICNL...TFSG...PATLKKHVAKDH...YY...NVNDLFKCP...YTCSFNIT...NFKKLQKHLVHQI...
...KLDYRVVCAK...TNFFECK...KCHK...KFAS...AANLSEHNNYCT...EKLSCDVCNR...NFYPADLRNHVQSR...
D...DKFTLVVRKP...VRKNLYSCVASNCNE...VFTA...KELKLHITQKHDTS...PPNFVCLQCTET...QVFTT...KSNLRIHIKTKH...
KLSTQGNINIAYNFSSRVKSV...CYVKSCK...YKSH...DCFA...LANHFRIHETSLISNDGKEYFESKNPNKKKQMKNDNVRYCNK...ER...FIKDNRSD...KFTTIA...QSMKNHSDK...
...KNINITYTSCAPIKVTQSKRITTYCKDEN...CV...STFTTWELESHIRLIHNSNV...PPNFVCLQCTET...QVFTT...KSNLRIHIKTKH...
EA...GVQNVYTIRRYNP...ELRTVCS...VCNK...RFLT...NQLNNHITRLHSDR...TQACRYCDS...QFS...DANKLLIHE...LRHQ...
D...ILTSRKI...SNRKVVYCE...HCPV...KFLN...KFLGWKHYVEHKVE...KPFICDLCKKKFKTYSGLHEHFCETLIEKAAKADVSIIILKDLKDK...
...LSTNFTINLKR...KKSKKCP...YCS...SFED...NFHFAEHTICAHVDE...NDPISNNTFPKCSRHKK...I...KLENLQHQH...AQHRE...
DL...NPLNRNCTHVEVMLKQSRKKLS...CM...ICKKF...HTMDNAILKHLKEMHYNV...KVEFQCTP...TGCHATFI...NRHVRHERLCHQE...

logo

MLLEYINLIRKESPSYVLIQLNKEGLDVSEFVIEKNILCFHTCRNYKAPHSMSTDIFRFSFYSKNVYLYGKSYKHLHLLEELWKLAVAVTRESIGSKIDSSSTYQNGSSSIDLRVKK

LbEFV .LLY.....

LhEFV .LLFFLTIVY.....I.....

LcEFVI.....

RhEFV1I.....

RhEFV2I.....

TryEFVI.....

LhFVI.....

LbFV1I.....

LbFV2I.....

EfFV1I.....

EfFV2 AMLKSVLNIRWKESPSYVLIQLNKEGLDVSEFVIE.....KNILCFHTCRNYKAPHSMSTDIFRFSFYSKNVYLYGKSYKHLHLLEELWKLAVAVTAEISHFRIQSDSDSTWQNVDSKGI..NKLK

CcFV21I.....

CcFV22I.....

CcFV11AAASDDDE..EEEEP.....

CcFV12I.....

PoFV QMLLFVKNII.....ITAFEHNNNESDDEYYTEEFKKLPLKKRLRTHVAA..AAAANIKSNIFITSAANS.....TTFTSITDTIDTTTTTTTTTNNDTTIDLKTMK

PcFV KIYKWLNTNNI.....KMIENET.LTEHPQLVESLKE.....QLLQHNNKKK.....TT.....

