

TtSpastin	LQT-DPLVQQ	INLT-MLEKK	NTIKFEDIAG	LKEVKEALYE	SIIYPNLRPD	IFQGIRAPPR
TtFign	LKGMDOQLID	LIENEIVENA	ANVKWEDIAG	LSSAKESVKE	TIVWPMLNPQ	IFTGIRAPPK
HsFign	LKNLEPKMIE	LIMNEIMDHG	PPVNWEDIAG	VEFAKATIKE	IVVWPMLRPD	IFTGLRGPPK
XlFign	LKNIEPKMIE	LIMSEIMDHG	PPLNWDDIAG	LEFAKTTIKE	IVVWPMLRPD	IFTGLRGPPK
DrFign	LKNFEPKIE	LIMSEIMDHG	PPVAWDDIAG	LEFAKATIKE	IVVWPMLRPD	IFTGLRGPPK
GgFign	LKNTDTHLID	LVTNEIINQG	PPVDWDDIAG	LDLVKAVIKE	EVLWPVLRSD	AFNGLTALPR
AtFind	LRNLEPLRIE	HVSNEIMDRD	PNVRWDDIAG	LEHAKKCVTE	MVIWPLLRPD	IFKGCRSPGK
DmFingCG33	LAHLDSKMVD	HILGESMHDF	KPVAWEDIAG	LESAKSTFLE	AIIMPLRRPD	LFTGVRCPDR
CeFign	LKHFDENIIS	LIESEIMSVN	NEIGWADVAG	LEGAKKALRE	IVVLPFKRPD	VFTGIRAPPK
HsSpastin	FRNVDSNLAN	LIMNEIVDNG	TAVKFDDIAG	QDLAKQALQE	IVILPSLRPE	LFTGLRAPAR
GgSpastin	FRNVDSNLAN	LILNEIVDSG	PAVKFDDIAG	QELAKQALQE	IVILPSLRPE	LFTGLRAPAR
XlSpastin	LRNVDSNLAN	LILNEIVDSG	PSVKFADIAG	QDLAKQALQE	IVILPSIRPE	LFTGLRAPAR
DrSpastin	FKNVDSKLAS	LILNEIVDSG	SVVRFDDIAG	QDLAKQALQE	IVILPALRPE	LFTGLRAPAR
DmSpastin	VKGVQKLQV	LILDEIVEGG	AKVEWTDIAG	QDVAKQALQE	MVILPSVRPE	LFTGLRAPAK
OsSpastin	GANYDDKLVE	MINTTIVDRS	PAVKWEDVAG	LDKAKQALME	MVILPTKRRD	LFTGLRRPAR
AtSpastin	GNVYDDKLVE	MINTTIVDRS	PSVKWDDVAG	LNGAKQALLE	MVILPAKRRD	LFTGLRRPAR
CeSpastin	LNGVDKVICE	RLLDEVLDNT	G-VRMDDVAG	CHSAKAALRE	AVILPALNPN	LFKGLRQPVK
Sc	VQGVDRNACE	QILNEILVTD	EKVYWEDIAG	LRNAKNSLKE	AVVYPFLRPD	LFKGLREPVR
Sp	QTPSSDFEY	AIMNEIISNH	EPVYWSDIAG	LDDAKNSLKE	AVIYPFLRPE	LFQGLREPVO
HsVPS	DNPEKKKLQE	QLMGAVVMEK	PNIRWWDVAG	LEGAKEALKE	AVILPIKFPH	LFTGKRTPWR
XlVPS	ENPEKKKLQE	QLMGAVVMEK	PNVRWWDVAG	LEGAKEALKE	AVILPIKFPH	LFTGKRTPWR
GgVPS	EDPEKKKLQN	QLQGAIVMER	PNVKWSDVAG	LEGAKEALKE	AVILPIKFPH	LFTGKRTPWR
DrVPS	EDPEKKKFQN	QLSGAIVMEK	PNIKWWDVAG	LEGAKEALKE	AVILPIKFPD	LFTGKRTPWR
DmVPS	DDPEKKKLQS	KLEDAIVIEK	PKVQWSDVAG	LDAAKEALKE	AVILPIKFPQ	LFTGKRIPWK
CeVPS	EDEDKKKFQD	KLSGAIVMEK	PNVKWTDIAG	LEGAKEALKE	AVILPIKFPQ	LFTGNRKPWQ
ScVPS	GGEDNKKLRG	ALSSAILSEK	PNVKWEDVAG	LEGAKEALKE	AVILPVKFPH	LFKGNRKPWS
SpVSP	LDSDAKKLRS	ALTSAILVEK	PNVRWDDIAG	LENAKEALKE	TVLLPIKLPQ	LFSHGRKPWS
AtVSP	EDPEQSKLRA	GLNSAIVREK	PNIKWSDVAG	LESAKQALQE	AVILPVKFPQ	FFTGKRRPWR
TtVSP1	NKDENTKFKE	ALQETIVPEK	PNIKWDDIAG	LVKAKESLKE	AVILPIRFPE	IFKGARKPWK
TtVSP2	GDKDNAKFEQ	ALGEAIVTEK	PNVHWSVAG	LENAKALNE	AVILPIRFPH	IFQGMIPKWR
TtVSP3	TLKYIQDLKR	SLKNCIVKKK	PNVTFNDIAG	NEYAKKQIQQ	SFKLPLLYPN	LFSGQPSPWR
TtVSP4	QKYLKDLKS	QLKSCILTCK	PPIKFKDIAG	NDYAKKCIIE	NFILPSVLPN	LFQGKPKPFN
AtKat1	YEGPDEDLAA	MLERDVLDST	PGVRWDDVAG	LSEAKRLLE	AVVLPPLWMPD	YFQGIIRPWK
OsKat1	YEGPDMDLAA	MLERDVLDST	PGVRWDDVAG	LSEAKRLLE	AVVLPPLWMPD	YFQGIIRPWK
HsKat1	STGYDKDLVE	ALERDIISON	PNVRWDDIAD	LVEAKKLLKE	AVVLPMLWMPD	FFKGIRRPWK
MmKat1	GTGYDKDLVE	ALERDIISON	PNVRWYDIAD	LVEAKKLLQE	AVVLPMLWMPD	FFKGIRRPWK
GgKat1	STGYDKDLVE	ALERDIISON	PNIRWDDIAD	LVEAKKLLKE	AVVLPMLWMPD	FFKGIRRPWK
XlKat1	SGGYDKDLIE	ALERDIISON	PNIRWDDIAD	LEEAKKLLKE	AVVLPMLWMPD	FFKGIRRPWK
DrKat1	RGGEDKDLID	ALERDIISON	PNVTWDDIAD	LEEAKKLLKE	AVVLPMLWMPD	FFKGIRRPWK
HsKat1L	GAGYDKDLVE	ALERDIVSRN	PSIHWDDIAD	LEEAKKLLRE	AVVLPMLWMPD	FFKGIRRPWK
MmKat1L	GAGYDKDLVE	ALERDIVSRN	PSIHWDDIAD	LEEAKKLLRE	AVVLPMLWMPD	FFKGIRRPWK
GgKat1L	GAGYDKDLVE	ALERDIVSRN	PSIHWDDIAD	LEEAKKLLRE	AVVLPMLWMPD	FFKGIRRPWK
DrKat1L	GTGYDSDLVD	ALERDIVSRN	PSIHWDDIAD	LEDAKLLRE	AVVLPMLWMPD	FFKGIRRPWK
DmKat1LCG1	NNHIEAELVD	ILERDILQKD	PKVRWSDIAD	LHDAKRLLE	AVVLPMLMPD	YFKGIIRPWK
CrKat1	YSGPDQELAA	MLERDIVDQG	TSVKWDDIAG	LEEAKRVLNE	ALVLPMLMPD	FFTGIIRPVK
TbKat1	PRSGEEELVA	LIEADMHVGS	LSVGWEDVAG	LQDAKGLLE	AVVYPVLMPE	YYQGIIRPWK
TcKat1	ARAGEEELVS	LIESDMNAGP	MKVSWDDIAG	LEEAKGLLE	AVVYPVLMPE	YFQGIIRPWK

LmKat1	GRAGEEELVQ	LIEADMHV GK	LPVTWDDIAG	LEEAKRLLEE	AVVYPVLM PD	YYQGIRRPWK
DmKat1CG11	PLGYEVHLVD	TLEKDILQRH	PCIKWTDVAG	LNEAKTILQE	AVVLPVIMPE	FFKGIRRPWR
TbKat3	PPGIAPELLE	RIEAEIERS	PNVEWDDIAG	IPEAKRLLKE	AIILPLLVE	LFTGVVQPWK
TcKat3	PSGINAEFAD	RIESEIERS	PNVQWEDIAG	IPDAKRLLKE	AVILPLLVE	LFTGVVQPWK
OsKat2	-SAEMRNLA E	TLLRDIIRGS	PDVKWESIKG	LENAKRLLKE	AVVMPIKYPK	YFTGLLSPWK
OsKat3	-SAEMRNLA E	TLLRDIIRGS	PDVKWESIKG	LENAKRLLKE	AVVMPIKYPK	YFKGLLSPWK
AtKat2	-SAETRTLAE	SLSRDIIRGN	PNIKWESIKG	LENAKLLKE	AVVMPIKYPT	YFNGLLTPWK
HsKat2	MNSEMRELA A	VVSRDIYLHN	PNIKWNDIIG	LDAAKQLVKE	AVVYPIRYPQ	LFTGILSPWK
MmKat2	MNSEMRELA A	VVSRDIYLHN	PNIKWNDIIG	LDAAKQLVKE	AVVYPIRYPQ	LFTGILSPWK
GgKat2	MNGEMRELAT	VVSKDIYLHN	PNVKWDDIIG	LDAAKRLVKE	AVVYPIRYPQ	LFTGILSPWK
XlKat2	GNSEMRELA A	VISRDIYLQN	PNVRWDDIIG	LDAAKRLVKE	AVVYPIRYPQ	LFTGILSPWK
DrKat2	MNSDMKELAA	VISRDIYLHN	PNVRWDDIIG	LEAAKRLVKE	AVVYPIKYPQ	LFTGILSPWK
CrKat2	LQGELRELGA	AITRDIFTDS	PNVRWEDIAG	LDSAKRLIKE	AVVMPIKYPQ	LFTGLLAPWK
TbKat2	PTVELQELAM	TIQRDILDSN	PNVRWGSIAA	LDEVKRLLE	AVVMPVKYPE	LFAGIVRPWK
TcKat2	LSVEQQELAM	TIQRDILDVN	PNVRWSAIAE	LDQAKQLLE	AVVMPVKYPE	LFSGILRPWK
LmKat2	PTSELSELAA	TILREILDVD	PSVRWRDIAD	LENAKHLLE	AVVMPVKYPG	LFQGILRPWK
TtKat2	DVQELKELAA	YLQRDILVEN	PNVKFKDIVG	LDDAKRLLKE	AVQIPLKYPH	FFTGILEPWR
PtKat2	DVPEFQQLAA	YLQRDICSEN	PNVKFSDIAG	LDQAKRLLKE	AVLVPLKYPH	FFQGILEPWK
DmKat2	SSLEWQSLAE	LVKTSILQEN	IKIKWSDVCG	NQRAIELIKE	AVLTPIEFPQ	LFAGHLKPWR
TtKat1	GQGPDSDLIA	MLERDVVDQN	PNISFDQIAE	LDKAKDMLQE	AVLLPILIPQ	YFRGIRRP LK
PtKat1	GRGPDSDLIQ	MIEREVL DLT	PNVSFEQIAE	LELAKDTLQE	AVLLPIFMPQ	IFTGIRRPCK
CeKalmei1	SAYDAYIVQA	VRGTMATNTE	NTMSLDDIIG	MHDVKQVLHE	AVTLPLLVE	FFQGLRSPWK

GILLFGPPGN	GKTLIAKAVA	TESNATFYNI	SASNLMSKNL	GEGEKLVKAL	FQCAYVNQPS
GLLLFGPPGT	GKTMIGKAIA	NQSGSTFFSI	SASSLTSKYI	GEGEKMVKIL	FKLAEMRQPS
GILLFGPPGT	GKTLIGKCIA	SQSGATFFSI	SASSLTSKWV	GEGEKMVRAL	FAVARCQOPA
GILLFGPPGT	GKTLIGKCIA	CQSGATFFSI	SASSLTSKWV	GEGEKMVRAL	FTVARCHQPA
GILLFGPPGT	GKTLIGKCIA	CQSGATFFSI	SASSLTSKWV	GEGEKMVRAL	FAIARCHQPA
SILLFGPRGT	GKTLMGRCIA	SQLGATFFKI	TGSGLVTKWL	GEGEKIVHAS	FLVARCRQPS
GLLLFGPPGT	GKTMIGKAIA	GEAKATFFYI	SASSLTSKWI	GEGEKLVRAL	FGVASCROPA
GVLLFGPPGT	GKTLIAKSIA	SQAKAKFFSI	NPSSLTSKWV	GDAEKLVKTL	FAVAAAHQPA
GVLLFGPPGT	GKTMIGRCVA	SQCKATFFNI	SASSLTSKWV	GEGEKLVRAL	FVARLKLPS
GLLLFGPPGN	GKTMLAKAVA	AESNATFFNI	SAASLTSKYV	GEGEKLVRAL	FAVARELQPS
GLLLFGPPGN	GKTMLAKAVA	AESNATFFNI	SAASLTSKYV	GEGEKLVRAL	FAVARELQPS
GLLLFGPPGN	GKTMLAKAVA	AESNATFFNI	SAASLTSKYV	GEGEKLVRAL	FVARELQPS
GLLLFGPPGN	GKTMLAKAVA	MESNATFFNI	SAATLTSKYV	GEGEKLVRAL	FAVARELQPS
GLLLFGPPGN	GKTLLARAVA	TECSATFLNI	SAASLTSKYV	GDGEKLVRAL	FAVARHMQPS
GLLLFGPPGN	GKTMLAKAVA	SESEATFFNV	SASSLTSKWV	GAEKLVRTL	FMVAVDRQPS
GLLLFGPPGN	GKTMLAKAVA	SESQATFFNV	SASSLTSKWV	GAEKLVKTL	FQVAISRQPS
GILLFGPPGN	GKTLLAKAVA	GESKQMF FNI	SASSLTSKWV	GDSEKTIRGL	FQIARNAQPS
GMLLFGPPGT	GKTMIAKAVA	TESNSTFFSV	SASSLLSKYL	GESEKLVRAL	FYMAKKLSPS
GMLLFGPPGT	GKTMLARAVA	TEAKATFFSI	SASSLTSKYL	GDSEKLVRAL	FEVAKROTCS
GILLFGPPGT	GKSYLAKAVA	TEANSTFFSV	SSSDLMSKWL	GESEKLVKNL	FELARQHKPS
GILLFGPPGT	GKSYLAKAVA	TEANSTFFSV	SSSDLMSKWL	GESEKLVKNL	FELARQHKPS
GILLFGPPGT	GKSYLAKAVA	TEANSTFFSV	SSSDLVSKWL	GESEKLVKNL	FQLARENKPS
GILLFGPPGT	GKSYLAKAVA	TEANSTFFSI	SSSDLVSKWL	GESEKLVKSL	FTLAREHKPS
GILLFGPPGT	GKSYLAKAVA	TEANSTFFSV	SSSDLMSKWL	GESEKLVKNL	FELARQHKPS
GILLFGPPGT	GKSYIAKAVA	TEAGSTFFSI	SSSDLMSKWL	GESEKLVKNL	FALAREHKPS

GILLYGPPGT	GKSYLAKAVA	TEANSTFFSV	SSSDLVSKWM	GESEKLVKQL	FAMARENKPS
GILLYGPPGT	GKSYLAKAVA	TEAGSTFFSI	SSSDLVSKWM	GESERLVRQL	FEMAREQKPS
AFLLYGPPGT	GKSYLAKAVA	TEADSTFFSV	SSSDLVSKWM	GESEKLVSNL	FEMARESAPS
GILLYGPPGT	GKTYLAKACA	TETEGTFFSV	SSADLVSKYV	GESEKLIKNL	FALAREKKPS
GILLYGPPGT	GKTFLAKACA	TECDATFFSI	SSSDLISKWV	GESEKLIKTL	FKMAREKKPS
KILLYGPPGV	GKTMLAQAIC	NEFYFTILQV	SLVDITSKFV	GESEKLLRML	MDLAREHSPS
KILLYGPPGV	GKTMICHAVC	NELQATPFVW	SLADITSKFI	GESEKLLKML	FDLARENSPS
GVLVFGPPGT	GKTLLAKAVA	TECGTTFNFV	SSATLASKWR	GESERMVRCL	FDLARAYAPS
GVLVFGPPGT	GKTLLAKAVA	TECGTTFNFV	SSATLASKWR	GESERMVRCL	FDLARFYAPS
GVLVVGPPGT	GKTLLAKAVA	TECKTTFNFV	SSSTLTSKYR	GESEKLVRL	FEMARFYSPA
GVLVVGPPGT	GKTLLAKAVA	TECKTTFNFV	SSSTLTSKYR	GESEKLVRL	FEMARFYSPA
GVLVVGPPGT	GKTLLAKAVA	TECKTTFNFV	SSSTLTSKYR	GESEKLVRL	FEMARFYAPT
GVLVVGPPGT	GKTLLAKAVA	TECKTTFNFI	SSSTLTSKYR	GESEKLVRL	FEMARFYAPT
GVLVVGPPGT	GKTLLAKAVA	TECRTTFNFV	SSSTLTSKYR	GESEKLVRL	FEMARFYAPT
GVLVVGPPGT	GKTMLAKAVA	TECGTTFNFV	SSSTLTSKYR	GESEKLVRL	FEMARFYAPT
GVLVVGPPGT	GKTMLAKAVA	TECGTTFNFV	SSSTLTSKYR	GESEKLVRL	FEMARFYAPT
GVLVVGPPGT	GKTMLAKAVA	TECGTTFNFV	SSSTLTSKYR	GESEKLVRL	FEMARFYAPA
GVLVVGPPGT	GKTMLAKAVA	TECGTTFNFV	SSSTLTSKYR	GESEKLVRL	FEMARFYAPT
GVLVVGPPGT	GKTMLAKAVA	TECGTTFNFV	SSATLTSKYR	GESEKLVRL	FEMARFYAPS
GVLVVGPPGT	GKTMLAKAAA	TETSCTFNFV	SSATLASKYR	GESERMVRIL	FEMARDLAPS
GVLVVGPPGT	GKTMLAKAVA	AECNTTFNFI	SPATLTSKWR	GDSEKLIRVL	FEMARHYAPS
GVLVVGPPGT	GKTMLAKAVA	SECSTTFNFI	SPATLTSKWR	GDSEKLIRVL	FEMARHYAPS
GVLVVGPPGT	GKTMLAKAVA	SECNTTFNFI	SPATLTSKWR	GDSEKLIRVL	FEMARHYAPS
GVLVVGPPGT	GKTMLAKAVA	TECGTTFNFV	SSSTLTSKYR	GESEKLVRL	FEMARFYAPS
GVLVVGPPGT	GKTMLARAVA	TSAKTTFNFI	SASSLISKYF	GESEKIVRSL	FHLARHYAPS
GVLVVGPPGT	GKTMLARAVA	TSAKTTFNFI	SASTLISRYF	GESEKIVRSL	FQLARHYAPS
GILLFGPPGT	GKTMLAKAVA	TECKTTFNFI	SASSIVSKWR	GDSEKLVKVL	FELARHHAPS
GILLFGPPGT	GKTMLAKAVA	TECKTTFNFI	SASSIVSKWR	GDSEKLVKVL	FELARHHAPS
GILLFGPPGT	GKTMLAKAVA	TECNTTFNFI	SASSVSKWR	GDSEKLIRVL	FDLARHHAPS
GILLYGPPGT	GKTLLAKAVA	TECKTTFNFI	SASTIVSKWR	GDSEKLVRL	FELARYHAPS
GILLYGPPGT	GKTLLAKAVA	TECKTTFNFI	SASTIVSKWR	GDSEKLVRL	FELARYHAPS
GILLYGPPGT	GKTLLAKAVA	TECNTTFNFI	SASTIVSKWR	GDSEKLVRL	FELARYHAPS
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GILLYGPPGT	GKTMLAKAVA	TECNTTFNFI	SASSIVSKWR	GDSEKLVRL	FELARYHAPS
GVLVVGPPGT	GKTLLAKAVA	TECRTTFNFI	SASSIISKWR	GDSEKLVRL	FELARYHAPS
GILLFGPPGT	GKTLLAKAVA	TECRTTFNFI	SASSVSKWR	GDSEKLVRL	FDIAVHYAPS
GILLFGPPGT	GKTLLAKAVA	TECRTTFNFI	SASSVSKWR	GDSEKLVRL	FDLAVHYAPS
GILLFGPPGT	GKTLLAKAVA	TECRTTFNFI	AASSVSKWR	GDSEKLVRL	FDLAVHYAPS
GVLVVGPPGT	GKTMLAKAVA	TECGTTFNFI	SASSVSKWR	GESEKLIRVL	FELARHYQPS
GVLVVGPPGT	GKTMLAKAVA	TECRTTFNFV	QASSVSKWR	GESEKLIRVL	FDLARHYEPS
SLLHGGPPGS	GKTLLAKALY	SETQVTFNFI	TASIMVSKWR	GESEKILRVL	FHMAAKRAPS
GVLVFGPPGT	GKTMLAKAVA	TTGKTTFNFV	SASSLASKWR	GDSEKLVRL	FEMARYYAPS
GVLVVGPPGT	GKTMLAKAVA	TTGKTTFNFV	SACTLASKWK	GESEKLVRL	FEMAKFYAPS
AMVLGPPGT	GKTLIARIAI	SESSSTFFTV	SSTDLSKWR	GDSEKIVRLL	FELARFYAPS
IIFIDEIDSI	LKARCEN-EH	EASRLKTEF	LIQFDGANSS	DDRVIVIGAT	NRPQEIDSAA
VIFIDEIDSL	LCARQEN-EN	EASRRIKTEF	LVQMEGATSR	EVRLLLIGAT	NRPQELDDAV
VIFIDEIDSL	LSQRGDG-EH	ESSRRIKTEF	LVQLDGATTS	SDRILVVGAT	NRPQEIDEAA

VIFIDEIDSL LSQRGEG-EH ESSRRIKTEF LVQLDGATTS SDRILVVGAT NRPQEIDEAA
VIFIDEIDSL LSQRTDG-EH DSSRRIKTEF LVQLDGAATS ADRILVVGAT NRPQEIDEAA
VIFVSDIDML LSSQVSE-EH SPVSRMRTEF LMQLDVTULTS ADQIVVICAT SKPEEIDESL
VIFVDEIDSL LSQRKSDGEH ESSRRLKTQF LIEMEGFDSG S-QILLIGAT NRPQELDEAA
IIFIDEVDSL LSKRSAN-EN ESTLRLKNEF LIHLDDGAASN EIRVLVIGAT NRPQELDEAV
VIFIDEIDSL LSSRSES-EH ESSRRIKTEF LVQLDGVNTA PERLLVLGAT NRPQELDEAA
IIFIDEVDSL LCERREG-EH DASRRLKTEF LIEFDGVQSA GDRVLVMGAT NRPQELDEAV
IIFIDEVDSL LCERREG-EH DASRRLKTEF LIEFDGVQSS GDRILVMGAT NRPQELDDAV
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IIFIDEVDSL LSERSSS-EH EASRRLKTEF LVEFDGLPGN PDRIVVLAAT NRPQELDEAA
VIFMDEIDSV MSARLAN-EN DASRRLKSEF LIQFDGVTSN PDLVIVIGAT NKPQELDDAV
VIFMDEIDSI MSTRSTS-EN EASRRLKSEF LIQFDGVTSN PDLVIIIGAT NKPQELDDAV
IIFIDEIDSI LCERSEK-DA EVSRMKTEF LVQFDGATSS ADRILVIGAT NRPHELDDAV
IIFIDEIDSM LTARSDN-EN ESSRRIKTEL LIQWSSLSSA TSRVLVLGAT NLPWAIDDAA
VIFVDEIDSI LSARNDGGEH ESSRRLKTEF LIQWSSLTNA APRVLVLAAT NLPWCIDEAA
IIFIDEVDSL CGSRNEN-ES EAARRIKTEF LVQMQGVGNN NDGTLVLGAT NIPWVLDSAI
IIFIDEVDSL CGSRNEN-ES EAARRIKTEF LVQMQGVGNN NDGILVLGAT NIPWVLDSAI
IIFIDEIDSL CGSRSEN-ES EAARRIKTEF LVQMQGVGVD NEGILVLGAT NIPWVLDSAI
IIFIDEIDSL CGSRSEN-ES EAARRIKTEF LVQMQGVGND NEGILVLGAT NIPWTLDSAI
IIFIDEIDSM CSARSDN-EN DSVRRIKTEF LVQMQGVGND TDGILVLGAT NIPWVLDSAI
IIFIDEIDSL CSARSDN-ES ESARRIKTEF MVQMQGVGLN NDGILVLGAT NIPWILDSAI
IIFIDEVDAL TGTRGEG-ES EASRRIKTEL LVQMNGVGND SQGVLVLGAT NIPWQLDSAI
IIFIDEIDSL CGSRSEG-ES ESSRRIKTEF LVQMNGVGKD ESGVLVLGAT NIPWTLDSAI
IIFVDEIDSL CGTRGEGNES EASRRIKTEL LVQMQGVGHN DEKVLVLAAT NTPYALDQAI
IIFIDEVDSL CGNRSDG-EN DASRRVKTEF LVQMQGVGND DQGVLVLGAT NLPWALDPAI
IIFIDEIDSM TGNRSEG-EN EASRRVKTEF LVQMQGVGND DTGVLVLGAT NVPWGLDPAI
IIILDEMDSI GRKRND-EN ETERRIKTEF LKQLDDIQND KKNVNIVAIT NMPWELDIIV
IIIFDEMDSI GRKRNGS-ES ETERRIKTEF LKQLDEINSL DK-VYILATT NMPWELDVAV
TIFIDEIDSL CNSRGGSGEH ESSRRVKSEL LVQVDGVSNT AKIVMVLAAT NFPWDIDEAL
TIFIDEIDSL CTSRGASGEH ESSRRVKSEL LVQIDGVNNS SKIVMVLAAT NFPWDIDEAL
TIFIDEIDSI CSRRGTSEEH EASRRVKAEL LVQMDGVGGT SKMVMVLAAT NFPWDIDEAL
TIFIDEIDSI CSRRGTSEEH EASRRMKAEL LVQMDGVGGA SKMVMVLAAT NFPWDIDEAL
TIFIDEIDSI CSRRGTSEEH EASRRVKAEL LVQMDGVGGA TKMVMVLAAT NFPWDIDEAL
TIFIDEIDSI CSRRGTSEEH EASRRVKAEL LVQMDGVGGA SKMVMVLAAT NFPWDIDEAL
TIFIDEIDSI CSRRGTSEEH EASRRVKAEL LVQMDGVGGT SKMVMVLAAT NFPWDIDEAL
TIFIDEIDSI CSRRGTSDEH EASRRVKSEL LIQMDGVGGA LKMVMVLAAT NFPWDIDEAL
TIFIDEIDSI CSRRGTSDEH EASRRVKSEL LIQMDGVGGA LKMVMVLAAT NFPWDIDEAL
TIFIDEIDSI CSRRGTSDEH EASRRVKSEL LVQMDGVGGA LKMVMVLAAT NFPWDIDEAL
TIFIDEIDSI CGRRGTSDEH EASRRVKSEL LVQMDGVGGA QKMVMVLAAT NFPWDIDEAL
TIFIDEIDSL CSRRGSESEH EASRRVKSEL LVQMDGVGGG EKVMVLAAT NFPWDIDEAL
MIFIDEVDSL CSQRGTANEH EASRRVKTEL LTQVDGVHGS EKHFVLAAT NFPWDIDEAL
TIFVDEIDAV CSQRGESSEH EASRRAKGTL LAQMDGLSVD PKTVMVLGAT NHPWSIDEAM
TIFIDEIESL CGHRGDGGEH EASRRAKGTL LTQMDGVGVD TKIVMVLAAT NHPWSIDEAM
TIFIDEIDSL CGQRGGGNEH EASRRAKGTL LAQMDGVGVD TKIVMVLAAT NHPWDIDEAM
TIFIDEIDAL CASRGSSEH EASRRFKAEL LIQMDGLNAS -KVIMVLAAT NHPWDIDEAF
TIFFDEVDAL MSARGGN-EH EASRRIKSEM LQQFDGLCTE NKRVLVLATT NRPWDLDEAM
TIFFDEVDAL MSSRGGN-EH EASRRVKSEM LQQIDGLSTE SRRVMVLATT NRPWDLDEAM

TIFLDEIDAI	ISQGEAREH	EASRRLKTEL	LIQMDGLTKT	NDLVFVLAAT	NLPWELDAAM
TIFLDEIDAI	ISQGEAREH	EASRRLKTEL	LIQMDGLTKT	DDLVFVLAAT	NLPWELDAAM
TIFLDEIDAI	ISQGGEGEH	EASRRLKTEL	LIQMDGLQKT	NELVFVLAAT	NLPWELDAAM
TIFLDELESV	MSQRTASEH	EGSLRMKTEL	LVQMDGLARS	EDLVFVLAAS	NLPWELDCAM
TIFLDELESV	MSQRGMVPEH	EGSLRMKTEL	LVQMDGLARS	EDLVFVLAAS	NLPWELDCAM
TIFLDELESV	MSQRGTISEH	EGSRRMKTEL	LVQMDGLARS	DDLVFVLAAS	NLPWELDSAM
TIFLDELESV	MSQRGTGP--	-----	-----	-----	----ELDYAM
TIFLDELESV	MSQRGVGQDH	EGSRRMKTEL	LVQMDGLARS	NDLVFVLAAS	NLPWELDHAM
TVFLDEIDAL	MAARGEGEH	EASRRMKTEL	LIQMDGLARG	GELVFVLAAT	NLPWELDMAL
TIFIDEIDSL	MSARGGEGTH	EGSRRMKTEL	LIQMDGLSKR	REVVFVLAAS	NTPWDLDSAM
TIFIDEIDSL	MSSRSGEGMH	EGSRRMKTEL	LIQMDGLSKR	RDVVFVLAAS	NVPWDLDTAM
TIFIDEIDSL	MSARSSDGEH	EGSRRMKTEL	LTQMDGLSKR	REVVFVLAAS	NVPWDLDTAM
TIFLDELDSI	MSQRKGGDEH	EGSRRMKTEL	LIQLDGLMKN	KERVFLAAS	NLPWDLDVAM
TIFIDEMDSI	MGQRGSAGEH	EGGRRMKTEL	LIQLDGLLKS	KKRVFLAAS	NLPWDLDIAM
VIFFDEIESL	TSKRDRATDH	ESSKRFKNEL	LQLLDGMEHS	LNGVFVLAAS	NLPWDIDEAF
TIFFDEIDAI	GSKRVDG-EC	EANRKMKAEM	LIQIDGVSSS	SKQVMVLAAT	NRPWDLDEAL
TIFFDEIDAL	GSKRVDG-DG	DSARKVKTQM	LIEMDGVSGA	AKTVMCLAAT	NRPWDLDEAL
IIFIDEIDTL	GGQRGNSGEH	EASRRVKSEF	LVQMDGSQNK	FRRVFVLAAT	NIPWELDEAL

LRRFTKRILI	DVPDENTRLH	LIKYYTKDAV	TSLNEKQIK-	-ELVKKIDGY	SCSDIKALVK
RRRFVKKLYI	PLPNMVAREQ	LIRRVIERES	FDMSDQDIL-	-EVVQATKGF	SGADMTNLCK
RRRLVKRLYI	PLPEASARKQ	IVINLMSKEQ	CCLSEEEIE-	-QIVQOSDAF	SGADMTQLCR
RRRLVKRLYI	PLPEASARKQ	IVVSLMSKEH	CSLTEQEVE-	-AIVLOADGF	SGADMTQLCR
RRRLAKRLYI	PLPEAEARRQ	IVTNLMSHEK	SQLGVDEME-	-KVVQGTGEF	SGADMTQLCR
RRYFMKRLLI	PLPDSTARHQ	IIVQLLSQHN	YCLNDKEVA-	-LLVQRTGEF	SGLDVAHLCO
RRRLTKRLYI	PLPSSEARAW	IIONLLKKDG	FTLSDDDMN-	-IICNLTEGY	SGSDMKNLVK
RRRFVRRLYV	PLPTREARQK	IEKLIHQVK	HNLDVRQVI-	-ELAELTDGY	SGADVDTLCR
RRRFQKRLYI	ALPEPESRTQ	IVQNLLVGTR	HDITNHNLE-	-RIRELTDGY	SGADMRQLCT
LRRFIKRVYV	SLPNEETRLI	LLKNLLCKQG	SPLTQKELA-	-QLARMTDGY	SGSDLTALAK
LRRFTKRIVYV	SLPNEETRLI	LLKNLLSKQG	SPLTQKELA-	-QLARMTDGY	SGSDLTALVK
LRRFTKRIVYV	ALPNEETRLV	LLKNLLSKQG	NPLSEKELT-	-QLSRLTEGY	SGSDITALAK
LRRFAKRIYV	ALPTEETRLK	LLKNLLSKHR	NPLSQKELS-	-QLARLTDGY	SGSDLTSLAK
LRRFTKRIVYV	SLPDEQTREL	LLNRLLOKQG	SPLDTEALR-	-RLAKITDGY	SGSDLTALAK
LRRLVKRIYV	PLPDPNVRRL	LLKTQLKGQS	FKLSSHDL-	-RLAADTEGY	SGSDLRALCE
LRRLVKRIYV	PLPDSNVRKL	LFKTKLKCQP	HSLSDGDID-	-KIVKETEGY	SGSDLQALCE
LRRFPKRIML	NLPDEEARKE	LITKTLKKHN	DGLISSDIR-	-YIASNTSGF	SNSDLVALCK
RRRFSRKLYI	PLPDYETRLY	HLKRLMAKQK	NSLQDLDYE-	-LITEMTEGF	SGSDLTSLAK
RRRFVKRTYI	PLPEKETRYK	HLSHLLHNQV	HCLTEEDLE-	-ELVNLTEGY	SGSDITALAK
RRRFKRIYI	PLPEEAARAQ	MFRHLHGSTP	HNLTDANIH-	-ELARKTEGY	SGADISIIVR
RRRFKRIYI	PLPEEAARAQ	MFRHLHGNTP	RNLSEENV-	-ELAKKTDGY	SGADISIIVR
RRRFKRIYI	PLPEDHARAA	MFKLHLHGSTP	NLLTEADYR-	-ELGKRTDGY	SGADISIIVR
RRRFKRIYI	PLPEEHARSF	MFKLNLGTTT	NSLTESDFM-	-TLGKKT DGY	SGADISIIVR
RRRFKRIYI	PLPEAHARLV	MFKIHLGNTT	HVLTEQDLK-	-ELAGKTEGY	SGADISIVVR
RRRFKRIYI	PLPDIHARKE	MFRIDVGKNY	NTLTDQDFK-	-VLAERCEGY	SGYDISILVK
RRRFERRIYI	PLPDLAARTT	MFEINVGDTT	CVLTKEDYR-	-TLGAMTEGY	SGSDIAVVVK
RRRFKRIYI	PLPNAHARAR	MFEINVGKIP	SELTSQDFK-	-ELAKMTDGY	SGSDISIVVR
RRRFDKRIYI	PLPEAKARQH	MFKVHLGDTT	HNLTEPDFE-	-YLGOKTEGF	SGSDVSVVVK
RRRFKRIYI	PLPDQPARKF	LLKHNLKNTT	NTLKEEDFE-	-RLSQLTDGF	SGADMSIFVR

RRRFEKRIMI	PLPEKEARFQ	LIDNLLNKTP	NCITQEERL-	-YIAERTEGF	SGSDISILVR
LRRFEKRVLV	PMPNQKFREE	ILTLILGDKV	LTKEQR--K-	-EIAELTLGY	SGADISTVIN
LRRFERRVLL	PLPKKQARLE	IFQNFTESKN	HGLKQQDFD-	-YLSDLTDGY	SGSDIVTIIN
RRRLEKRIYI	PLPDFESRKA	LININLRTV-	EVASDVNIE-	-DVARRTEGY	SGDDLTVNCR
RRRLEKRIYI	PLPNFESRKA	LININLKTV-	EVATDVDID-	-EVARRTEGY	SGDDLTVNCR
RRRLEKRIYI	PLPSAKGREE	LLRISLREL-	ELADDVDLA-	-SIAENMEGY	SGADITNVCR
RRRLEKRIYI	PLPSAKGREE	LLRISLREL-	ELADDVNLA-	-SIAENMEGY	SGADITNVCR
RRRLEKRIYI	PLPSAKGREE	LLRINLREL-	ELADDVDLA-	-NIAEKMEGY	SGADITNVCR
RRRLEKRIYI	PLPSAKGREE	LLRINLREL-	ELADDVNIE-	-CIAENMDGY	SGADITNVCR
RRRLEKRIYI	PLPSAKGRVD	LLKINLREL-	DLANDVNMD-	-KIAEQMEGY	SGADITNVCR
RRRLEKRIYI	PLPTAKGRAE	LLKINLREV-	ELDPDIQLE-	-DIAEKIEGY	SGADITNVCR
RRRLEKRIYI	PLPTAKGRAE	LLKISLREV-	ELDPDVHLE-	-DIADKTEGY	SGADITNICR
RRRLEKRIYI	PLPTAKGRAE	LLKINLREV-	ELDPDISLE-	-EIAEKIEGY	SGADITNVCR
RRRLEKRIYI	PLPTAKGRAE	LLKINLREV-	DVASDVDLT-	-VFAEKIEGY	SGADITNVCR
RRRLEKRIYI	PLPSDEGREA	LLKINLREV-	KVDDSVDLT-	-YVANELKGY	SGADITNVCR
RRRLEKRVYI	PLPGQAQRLQ	LLKINLRDV-	AVAPDVNLE-	-AVAGQMDGY	SGDDITNVCR
RRRLEKRIYI	PLPDYKDRLE	LFRINTKTL-	KLSPDVDFD-	-KLSKMLEGY	SCADLTNLVR
RRRLEKRIYI	PLPDFNDRVE	LFRINSKSL-	KLSPDVDFE-	-HLSKKLEGY	SCADITNLVR
RRRLEKRIYI	PLPDAADRVE	LFKINTKSI-	KLGSVDVDFV-	-KLSQLEGY	SGADITNLVR
RRRFEKRIYI	PLPNEGTRSA	LLKLCLKDV-	CLSPSLNTG-	-IIGDELQGY	SGSDISNVCR
RRRLEKRIYI	PLPKKAGRLS	LLKKQTATL-	SLDPSVDLE-	-EISDRTEGF	SGADMNLVVR
RRRLEKRIYI	PLPDAEGRME	LLKKQTSSM-	SLDPSVDLG-	-IIAKKTGFG	SGADLNLVVR
LRRLEKRILV	PLPEAEARHA	MFEELLPST-	TSKLEVPYD-	-TLVEKTEGY	SGSDIRLVCK
LRRLEKRILV	PLPEQEARHA	MFEELLPSV-	PGTMNIPYD-	-VLVEKTEGY	SGSDIRLVCK
LRRLEKRILV	PLPDPEARRG	MFEMLIPSQ-	PGDEPLPHD-	-VLVEKSEGY	SGSDIRILCK
LRRLEKRILV	DLPSREARQA	MIYHWLPPVS	ALELHTELEY	SVLSQETEGY	SGSDIKLVCR
LRRLEKRILV	DLPSQEARQA	MIYHVLPPVS	ALELHTQLEY	SVLSQETEGY	SGSDIKLVCR
LRRLEKRILV	DLPNQEARQA	MIRHWLPPLS	GVELRTDLDY	SLVLLETGDY	SGSDIKLVCK
LRRLEKRILV	DLPSKEARQA	MIQHWPPIIS	GVELRMDLDY	STLGEETGDY	SGSDIRLVCK
LRRLEKRILV	SLPSAPARQA	MISHWLPPVS	GVELRTELDL	SSVFQETGGY	SGSDIRLVCK
LRRLEKRILV	PLPNTAARRA	MFATLL----	VGRCAPDVSP	DMLAERTEGY	SGSDVAVVAK
LRRLEKRILV	GLPTHEARAT	MFRQILT---	ASAASADIDW	NACAAATDGM	SGADIDVICR
LRRLEKRILV	GLPSHKARAV	MFRQILT---	PSASAPDLDW	NLCAELTEGM	SGADIDVPCR
LRRLEKRILV	SLPTRDARVL	MFRLLP---	NSFAS-DADY	EACAALTEGM	SGADIDVPCR
LRRLEKRILV	PLPSKEARQN	MIEQFLP---	E-GIAQDLNY	QEISEALENY	SGSDIKLLCK
LRRLEKRIYI	PLPDQESRES	MIRRYIP---	Q-EMSENLY	PQFAEALKNY	SGSDIKLVCK
LRRFEKLLV	QLPNAAERSC	LINRLLG---	SSISLNPRL	EQLVEISDHF	TGDEIRLACK
RRRLEKRILI	PLPSTTEGRKQ	LFELNMR---	GIKCSDIDW	VELVGKTDGY	SGADIASLCR
IRRLERRIYI	PLPSDTGRKL	LFEINLN---	SLKLSPNI IW	DQLVKKCDGY	SGADIANVCR
RRRFEKRIFI	PLPDIDARKK	LIEKSME---	GTPKSDEINY	DDLAARTEGF	SGADVVS LCR
EACMLPLRKL	KKNELLSVDS	TKIKPVSIDD	FTEAVKKVPP	SLQK KELLYF	KNLVKEYNKQ
EAALPIRQC	T--DITNIQS	S DIRPINKSD	FVKSLKQVKA	TVTSKDLAGY	FDWNNQFGSF
EASLGPIRSL	QTADIATITP	DQVRPIAYID	FENAFRTVRP	SVSPKDLELY	ENWNKTFGCG
EAALGPIRSI	QLMDISTITA	EQVRPIAYID	FQSAFLVVRP	SVSQKDLELY	ENWNKTFGCG
EAALGPIRSI	SLSDIATIMA	EQVRPILYSD	FQEALKTVRP	SVSSKDLELY	EEWNKTFGCG
EAVVGPLHAM	PATDLSAIMP	SQLRPVTYQD	FENAFCKIQP	SISQKELDTY	VEWNKMF GCS
DATMGPLREA	LKRGIDILTK	DDMRLVTLQD	FKDALQEV RP	SVSQNELGIY	ENWNNQFGSL

YASMAPLRSL	TPDQMEVIET	HQLPAVTMDD	FKQALRVISK	SVSSEDCKQF	EAWNEIYGVR
EAAMGPIRDI	G-DDIETIDK	DDIRAVTVMD	FAEAARVVRP	TVDDSQLDAY	AAWDKKFGCL
DAALGPIREL	KPEQVKNMSA	SEMRNIRLSD	FTESLKKIKR	SVSPQMLEAY	IRWNKDFGDT
DAALGPIREL	KPEQVKNMSA	SEMRNIKLSL	FTESLKKIKR	SLSPQMLEAY	IRWNKDFGDT
DAALGPIREL	KPEQVKNMAA	SEMRNMKYSD	FLGSLKKIKC	SVSHSTLESY	IRWNQDFGDT
DAALGPIREL	KPEQVRNMSA	HEMRDIRISD	FLESCLKRIK	SVSPQMLDQY	VRWNREYGDT
DAALEPIREL	NVEQVKCLDI	SAMRAITEQD	FHSSLKRIRR	SVAPQSLNSY	EKWSQDYGDI
EAAMMPIREL	GPQNILTIKA	NQLRPLKYED	FKKAMTVIRP	SLQKSKWDEL	EKWNEEFGSS
EAAMMPIREL	G-ANILTIQA	NKVRSLRYDD	FRKSMAVIRP	SLSKSKWEEL	ERWNSEFGSN
EAAMVPIREI	DRSKLSMTDG	EKIRKIRASD	FDTALRTIRP	STSQKIMSKL	SDFSRSFGC-
EAAMEPIRDL	G-DKLMFADF	DKIRGIEIKD	FQNALLTIKK	SVSSESLQKY	EEWSSKFGSN
DAAMGPLRNL	G-DALLTISA	EMIPPISLNH	FKASLRTIRP	SVSQEGIHRY	EEWNKQFGSQ
DALMOPVRKV	QSATHFKGDK	LLEPVVCMDS	MLRSLATTRP	TVNADDLLKV	KKFSEDFGQE
DALMOPVRKV	QSATHFKSDK	LQEPVVCMDS	MLRSLATTRP	TVNADDLLKV	KKFTDDFGQE
DALMOPVRKV	QSATHFKGDK	LLEPKVSMAD	MLRSLASTKP	TVNEQDLEKL	KKFTEDFGQE
DALMOPVRKV	QSATHFKGDK	LLEPIVSMDS	MLRSLSNTKP	TVNEQDLEKL	KKFTEDFGQE
DALMEPVRKV	QTATHFKSDK	LFEPVVTMRD	MLKSLSRTPK	TVNEDDLKKL	RKFTEDFGQE
DALMOPVRRV	QSATHFKGDK	LANPPLSMQD	ISRSLASVKP	TVNNTDLRL	EAFKNDFGQD
DALMOPIRKI	QSATHFKADE	LKEPDLTIKD	FLKAIKSTRP	TVNEDDLLKQ	EQFTRDFGQE
DAIMEPVRRV	HTATHFKPED	IMEPKLTVRD	FYSAVRKVKP	TLNAGDIEKH	TQFTKDFGAE
DVLFEPVRKT	QDAMFFFAEK	IIPPPITRTD	FEKVLARQRP	TVSKSDLVDH	ERFTQEFGEE
DAVLEPVRRV	QIATKFKQQQ	LELPQISAQD	FEIAIKKAKG	TVGKDQLKDY	EKWTTEFGQD
EASYEPLRIA	QRATKFKGSM	LKLQDVSIKH	FELALQSKCP	SVSEKDIERQ	IETKKEFGQD
DAFMRPLKDL	RNAKYFKAQQ	IILREVTYKD	FKASVKNCKP	TVPSNWQQLY	KKFLLKYGHS
DAFMRPIQEL	QTTKKFQPKQ	IILRKAIEKD	FKESIKNCKP	TVSKKFLDYY	NKFLEKCGHV
DASMNGMRRK	IAGKTRDSKD	DISDPVAMCD	FEEAIRKVQP	SVSSSDIEKH	EKWLSEFGSA
DASMNGMRRK	IAGKTRDSKD	EISDPVAMCD	FEEALAKVQK	SVSPADIEKH	EKWQAEFGSA
DASLMAMRRR	IEGLTPESKE	EMHMPPTMED	FEMALKKVKP	SVSAADIERY	EKWIFEFGSC
DASLMAMRRR	IEGLTPESRE	AMHMPPTMED	FEMALKKISK	SVSAADIERY	EKWIFEFGSC
DASLMAMRRR	IEGLTPESRD	EMHMPPTMED	FEIALKKVSK	SVSAADIEKY	EKWIFEFGSC
DASLMAMRRR	IEGLTPESRD	DMHMPPTMED	FEMALKKVKP	SVSASDIEKY	EKWIFEFG--
DASLMAMRRR	IEGLTPEPKD	EMHMPPTMED	FETALKKVKP	SVSAADLEKY	EKWIAEFGSC
DASLMAMRRR	INGLSPESKE	ELQMPVTKGD	FELALKKIAK	SVSAADLEKY	EKWMVEFGSA
DASLMAMRRR	INGLSPESKE	ELQMPVTRGD	LELALKKIAK	SVSAADLEKY	EKWMVEFGSA
DASLMAMRRR	INGLTPESKE	ELQMPVTKGD	FELALKKISK	SVSAADLEKY	EKWMVEFGSA
DASMMAMRRR	IQGLSPESKD	ELQMPVTMED	FELALKKISK	SVSAADLEKY	ESWMSEFGSV
EASMMSMRRK	IAGLTPEATE	EVDLPVSNKD	FNEAMSRCKP	SVSRADLDKY	EKWMREFGSS
DAAMNGMRRV	VAGKTPAREA	GMTEPITSDD	FREALRKINP	SVSKEDIKRH	EEWLSVFGST
DAAMMTMRRF	MEEMDKTAAE	IGKQPITMDD	FLNAVRNVPS	SINVEQIKKF	EKWKKEFEVN
DAAMMTMRRV	MEEMDKSAAE	ISKQPITMND	FLSAVKNVPS	SINVEQIQKF	EAWKKEFETN
DAAMMTMRRF	MKEADKTAAE	IGRQPINMSD	FLAAMTKVPS	SINADNIKKF	EAWKKEFELN
DASMMAMRRV	ISGRTPDRRE	EVDQPITLQD	FQDARLRTKK	SVSADDVARF	EKWMEEYGSC
DAAMMPMRRV	IADRSPAKEG	GKMPVTMND	FEDALKKIQP	SVSQSSIKQF	EKWAEELGSV
DAAMMPMRKL	IADRTPAKEG	GKMAVVTMRD	FEEAAKKIQP	SVSQSSLKQF	ERWSEELGSV
EAAMQPLRRL	MSVLEAREEL	PEVGPLKPED	IEVALRNTRP	SAH-LHAHRY	EKFNQDYGSQ
EAAMQPLRRL	MSVLEGRDEL	PEVGPVTTED	IELALRNTRP	SAH-LHVHRY	EKFNQDYGSH
EAAMQPLRRT	LAILEDREDEL	PKIGPILPED	IDRALSNTTRP	SAH-LHAHLY	DKFNDDYGSQ
EAAMRPVRKI	FDALENHLPR	IQLDIVTTAD	FLDVLTHTKP	SAK-NLAQRY	SDWQREFESV

EAAMRPVRKI	FVLENNLPG	IQLDTVTTQD	FLDVLAHTKP	SAK-NLTERY	LAWQEKFESV
EAAMRPVRKV	FDALENHLAA	VHLDMITTAD	FLDVIAHTKP	SAK-KLSQKY	TAWQREFESV
EAAMRPVRKI	FDALENHLPV	ISLETVTTSD	FSEVLAHTKP	SAK-SLAEKY	SAWQNEFESV
EAAMRPVRKI	FDALENHMPV	IELETVTTAD	FLDVIVHTKP	SAR-CLMDRY	TAWKEYESV
EAAMRPLRRL	MSKLELDNIK	VELGPVTVED	ARAALEVTKP	SAR-LHEDKY	RKFNDYDYGQL
EAMMRPIRLM	IEKLEGASGV	VQRPVITMQD	IMASVACTQS	SVQQSDLSKF	EAWARKYGSG
EAVMRPIRLL	IEKLERAGGL	LQRPQVTIED	IMASVACTQS	SVQRSDLEKF	DAWAKKHGSG
EAMMRPVKRL	ISQLEAASEP	LRPPAATLED	VQASVACTRS	SVRVADLDKY	DVWTREHGSG
EAAMKPLRRL	INQIEKSPQE	VKPDPVTNED	IVEALKTTKP	SSF-IKTQAY	EKWAKEHGSV
EAAMKPLRRL	LSQIEDIYDD	VRPGPVTETD	FAEAMNQVKP	SPS-VFENQY	LKWEKESGSC
EISMHRVRCR	TKIGDRSLLA	KESPAAIEAN	VEKAFRQVRP	LGQ-KLLAKH	EQWQQENGSG
EAFMPMRRK	LMKEGGFLAQ	ESDIPLTQKD	FEEALRNVNK	SVSNDDLENF	EKWMAEFGSV
EASMLPMRRK	LKEEGGFYED	ISNVPLEQKD	FDEALKIVNK	SVSTEYLKEY	ENWMKDFGAG
TAAINVLRRY	DTKSLRGMES	LKAELVRNID	FEAALQAVSP	SAGPDTMLKC	KEWCDSFGAM