

Table 2. Amino acid alignment used in the phylogenetic analyses

The alignment was obtained by concatenating the independently obtained alignments of 61 proteins (*rpsT*, *rpsB*, *tsf*, *frr*, *infA*, *rpsA*, *rpmF*, *prfA*, *rplT*, *rpmI*, *infC*, *rplY*, *lepA*, *rplS*, *rpsP*, *rpsU*, *rpsO*, *infB*, *rpmA*, *rplU*, *rpsI*, *rplM*, *rplQ*, *rpsD*, *rpsK*, *rpsM*, *rpmJ*, *rplO*, *rpmD*, *rpsE*, *rplR*, *rplF*, *rpsH*, *rpsN*, *rplE*, *rplX*, *rplN*, *rpsQ*, *rpmC*, *rplP*, *rpsC*, *rplV*, *rpsS*, *rplB*, *rplW*, *rplD*, *rplC*, *rpsJ*, *rpsG*, *rpsL*, *rpmG*, *rpmB*, *rpmH*, *rpmE*, *rplK*, *rplJ*, *rplL*, *esp*, *rpsF*, *rpsR*, and *rplI*) from 19 selected genomes after extraction of their clearly conserved portion by using GBLOCKS (1).

b0170	TYYSNDFRAGLKIIMLDGEPYAVEASEFVKPGKQAFARVKLRLLLTGTRVEKTFKSTDSAEGADVDMNLTLYLNDGEFVH
Bbp214	LCHSNQLKIGLKI IYNNPCIVVSNEFIKPKGQAFVVRVLRLLNKKLIDKTCYSDCFKIANVIEITATYMFDTKKVVT
Bf131	LYNINELKVLKVIQNKPEYVI IKNECIKPKGQSFNRVRFQIKSGKILEKTLKPGDLVESANIVETELIYVYRDRDLWF
bu232	IYHSNNFRSRGRIIFENEPCLIESSEFVKPGKQSFVVRVLRLLTKQLIEKTFKSTDSLEIADIIEYTLSYLNDGRFWY
BUsq22	VYHSNNFRSRGRIIFEKEPCLIESSEFVKPGKQSFVVRVLRLLTKQLIEKTFKSTDSLEIADVSEYTLSYLNDGHFWY
HI0914	TYTTSDFKPKLKFMDGEPVIVENEFVKPGKQAFTRTRIRKLSIGKVLVDVNFKSGTSVEAADVMDLNLTYSYKDDAFWY
PA3655	MKTAQEFQVAVINGAPVVIQKAENFKSGRAAVVKMKLKNLLTGAGTETVFKADDKLEPIILDRKEVTYSYFADPLVY
PM1985	TYTTSDFKPKLKFMDGEPVIVENEFVKPGKQAFTRTRIRKLSIGKVLVDVNFKSGTSVEAADVMDLNLTYSYKDDAFWY
RScl40	LKIAQELRAGNVFMIGNDPMVVLKTEYSRSGRAAVVKMKYKNLLTGAPSESVFKADDKMDQIILDKKECTYSYFADPMYV
STM021	TYYSNDFRSGLKIIMLDGEPYAVESSEFVKPGKQAFARVKLRLLLTGTRVEKTFKSTDSAEGADVDMNLTLYLNDGEFVH
STY024	TYYSNDFRSGLKIIMLDGEPYAVESSEFVKPGKQAFARVKLRLLLTGTRVEKTFKSTDSAEGADVDMNLTLYLNDGEFVH
vc2259	TVSTNEFKGGLKIMLDNEPCVILENEVYKPGKQAFNRVIRKLLTGKVLKTFKSGDTAEVADVDDIDLTYLNDGEFYH
wbr31	YYSANQSKSLKILKNEPCLILENQFVKPGKQPFNRIRIKKLSIGKIFTKIFKSNEKLIYADVLDVKVKSLEYKDKKYWN
XAC142	TVGMNDVKNMGKILVNNPEAVITETEYVVKPGKQAFTRMKYRFIKSGRVVEMTMKATDDVEVADVDDTDMRYLYSDGEYWH
XCC137	TVGMNDVKNMGKILVNNPEAVITETEYVVKPGKQAFTRMKYRFIKSGRVVEMTMKATDDVEVADVDDTDMRYLYSDGEYWH
XF2579	VMKASEMKKGSIVEYNGTYQIRDIRSSPQGRNVRFRFVMSVPPGGSKLEASFDADAEMTLAVELLRREASFSYKDGAEFV
y3135	SYYSNDFRSGLKIIMLDGEPYAVESSEFVKPGKQAFARVKLRLLLTGTRVEKTFKSTDSLEAGADVDMNLTLYLNDGEFVH
YP0104	SYYSNDFRSGLKIIMLDGEPYAVESSEFVKPGKQAFARVKLRLLLTGTRVEKTFKSTDSLEAGADVDMNLTLYLNDGEFVH
Z0181	TYYSNDFRAGLKIIMLDGEPYAVEASEFVKPGKQAFARVKLRLLLTGTRVEKTFKSTDSAEGADVDMNLTLYLNDGEFVH
b0170	FMNNEFQLSADAKAIGDNAKWLDDQACIVTLWNGQPINFVELEIVDTPGLKGDTPATLSTGAVVKVPLFVQIGEVIKV
Bbp214	FMDKFEQIFVEKNI IKNVLPWLLQHYI IISLWNDQPINFIELIVVNTIPNARSGAKLALLNTGVTIKVPIFIQIGQIKV
Bf131	FMNRFDQISVHFIDILGKSVKWMVEQLYVVVFWDDNPIEFIKLKI IKTNLI TKNISKLAVVSTGAVVKVPPFFIQSGELIKV
bu232	FINNFEELSVDKIIIGVHKKWLLLEQDCIVTLWNNQPINFVNLKVIHVQATLKGDTKLATLSTGAVVPLFVQVGSILKV
BUsq22	FINNFEELSVDKIIIGVHKKWLLLEQDCIVTFWNNQAIIFVELKVIDTEIALKSDTKLATLSTGAILKVPFLFIQIGSLIKV
HI0914	FMHPFEQYSADAKAVGDAEKWLDDQACIVTLWNGAPINFVELEIVDTPGLKGDTPATLSTGAVVKVPLFVQIGEVIRV
PA3655	FMDSNQYIEKDDLEGVLTPIEDGMCFAVYNDKVIITTIIVRQIAYTEPAVRGDTKTARLNNGAELQVSAFCEIGDSIEI
PM1985	FMHPFEQYSADAKAIGDAEKWLDDQACIVTLWNGAPINFVELEIIDTDPGLKGDTPATLSTGAVVKVPLFVQIGEVIKV
RScl40	FMDTYNQYVEEADSMGDAIHYLEDMGAEVTFYNEKAITTLVREIEYTEPAVKGDTKMAKIKGGFEIQVPLFCSTGDKIEI
STM021	FMNNEFQLSADAKAIGDNAKWLDDQACIVTLWNGQPINFVELEIVDTPGLKGDTPATLSTGAVVKVPLFVQIGEVIKV
STY024	FMNNEFQLSADAKAIGDNAKWLDDQACIVTLWNGQPINFVELEIVDTPGLKGDTPATLSTGAVVKVPLFVQIGEVIKV
vc2259	FMNNEFQLAADAKAVGENAKWLVNENCMVTLWNGNPINFVELEVTEVTPDGPVKGDTPATLSTGAVVVRPLFVQIGEVIKV
wbr31	FIKKFEQFKISKKNLGEKYYKIIIEQLCYVQVLIIDASPVQHVLEVVDTPELKGDTKPAKLIITGTGAI IKAPIFIRSEI VRV
XAC142	FMDPFEQVQTDKAGMGADKWLKGEECIVTLWNGTPINFVELKITEVTPDGPVGRDTPATLETGAVVVRPLFVNQDEI IKV
XCC137	FMDPFEQVQADKAGMGGAEKWLKGEECIVTLWNGAPINFVELKITEVTPDGPVGRDTPATLETGAVVVRPLFVNQDEVIKV
XF2579	FLDEYTYLTLAEAAIGDNAGYIIEGLCYVQVLIIDASPVQHVLEVVDTPELKGDTKPAKLIITGTGAI IKAPIFIRSEI VRV
y3135	FMNNEFQLQADAKAVGDNKWLIDQACIVTLWNGQPINFVELEIVDTPGLKGDTPATLSTGAVVKVPLFVQVGEI IKV
YP0104	FMNNEFQLQADAKAVGDNKWLIDQACIVTLWNGQPINFVELEIVDTPGLKGDTPATLSTGAVVKVPLFVQVGEI IKV
Z0181	FMNNEFQLSADAKAIGDNAKWLDDQACIVTLWNGQPINFVELEIVDTPGLKGDTPATLSTGAVVKVPLFVQIGEVIKV
b0170	DTRSGEYVSRISDIRKDAEVRMDKVEAFKQIISKIRTGRASPSLLDGI VVEYGTPTPLRQLASVTVEDSRTLKINVFD
Bbp214	DTRTSEYISKMERIKNFTSSKMDHCVMHFVNQLNLTLRSSRASPSILDTILIDYLGQKIQLKKSNI IVENVNTLRITLFD
Bf131	NTHSGSYISRIDDFQKDVITNMQKCIDNFKININKIHVGRISPDILSFIKIEYGGVITPLCQLTNTVVEQPRTLIITVFD
bu232	DTRSGEYVSRINQIDIKTRERMEACIQTFHNNITNKTGRASPTLLHNIYIEYFGSKTPLRQVSNII VEDSHTLKINVFD
BUsq22	DTRSGEYVSRINDIYIKSNEKMKVCINNFQIQVNNVRTGRASPELNSIYVEYFGSKVPLRQISNVVYHTLKINIFD
HI0914	DTRSGEYVSRINQIKKDAQDRMEKSLKALGHISKIRTGRAQPSLLDAIQVEYGGATPLRQLANVAEDARTLAVTVFD
PA3655	DTRTGEYKSRINEIKKEAQERMKGTLEALGHAFAKIRTGRAHPSIILDSVMVSYGGADTPLRQVANVTVEDSRTLALAVFD
PM1985	DTRSGEYVSRINEIKKDTQLRMEKSLKALGHISKIRTGRAHPSIILDSVMVSYGGADTPLRQVANVTVEDSRTLALAVFD
RScl40	DTRTHEYRSRVADIKKSAEQKMQKSIDAFKADLAKVRTGRAHTGLLDHVQVDYGGMVPISQVANLGLADARTISVQPWE
STM021	DTRSGEYVSRISDIRKDAEVRMEKVEAFKQIISKVRTGRASPSLLDGI VVEYGTPTPLRQLASVTVEDSRTLKINVFD
STY024	DTRSGEYVSRISDIRKDAEVRMEKVEAFKQIISKVRTGRASPSLLDGI VVEYGTPTPLRQLANVAEDARTLAVTVFD
vc2259	DTRSAEYVGRINEIKKDAQERMKSVKALNGLSKIRTGRAHPSLLTGISVDYGGATPLNQVANVAEDARTLAVTVFD
wbr31	DTNLGEYVSRINEIYENSNSRMKKSIDFFKKNISKIRTNRVSPSLIENIYINCYGTSVPLSKLSNILSEKSNILKINVFD
XAC142	DTRSGEYSARLTQIKQDAQTRMTKSIDALRHSLTTRTGRASPELLDGIKVKAYGADTPLNQVASISVSEGRSLVLSLFD
XCC137	DTRSGEYSARLTQIKQDAQTRMTKSIDALRHSLTTRTGRASPELLDGIKVKAYGADTPLNQVASISVSEGRSLVLSLFD
XF2579	NTTTGAFGGRLNQIKQDAQDRMTKSIDALRNSLASVRTGRASPSLLDGIKVKAYGADTPLNQVASISVSEGRSLVITVFD
y3135	DTRSGEYVSRINEIRKDAEVRMEKCLEAFQNHISKIRTGRASPSIILDGIQVEYGGATPLRQLANVAEDARTLAVTVFD

YPO104 DTRSGEYVSRINEIRKDAEVRMEKCLEAFQNHISKIRTGRASPSILDGIQVEYYGTATPLRQLANIVVEDSRTLALTVPFD
Z0181 DTRSGEYVSRISDIRKDAEVRMDKCVFAFKTQISKIRTGRASPSLLDGI VVEYYGTPTPLRQLASVTVEDSRTLKINVPD

b0170 RSMSPAVEKAIMASDLGLNPNSSAGSDIRVPLPPLTEERRKDLTKIVRGEAEQARVAVRNVRRDANDKVKALLKDKKIESED
BbP214 PKIKNNVEKAISSKLDLIPFINNYFQIKIPVLTEERRLQIKLAKKMAENSRICIRNIRLSNEKIKLFLKDKIISD
Bf131 SSMIKFIEKAILESNLGCTPVSTGNTIRVTFPTLTERRRYSLIKVMRSESEKSKVLIRNIRRVSNDKLKTFLRNKEINKD
bu232 DSITSLIRKSIILNSNLDLNPVLQGGKDIIPPLRTEERRKQIKVIRGDAESSRIQIRNIRRDANDKVKRLLKDKIISED
BUsg22 DSSTSLIKKAILNSNLDLNPILYKDIIVPPLTEERRTHLKIIVRNNANARIYIRNIRRDANDKIKNYLKSIISED
HI0914 RSLISAVEKAILTSDGLNPNSSAGTTIRVPLPPLTEERRDLIKIVKGEQEGQKQVAVRNVRRDANDKIKALLKDKKIESEN
PA3655 KSMIQAWEKAIMTSDGLNPNPATAGTTIRVPMALTEETRKGYTKQARAEAEQARVSVRNIIRDALAQKDLQKKEKIESED
PM1985 RSLISAVEKAILTSDGLNPNSSAGTTIRVPLPPLTEERRDLIKIVKGEAEQGIQVAVRNVRRDANDKIKALLKDKKIESED
RSc140 KKMVSAVERAIRDADLGLNPNPATMGEVIRVPMPLTEERRKELTKVVKSEGEDAKVAVRNVRRDANEQFKKLVKDKAISED
STM021 RSMGPAVEKAIMASDLGLNPNSSAGTTIRVPLPPLTEERRKDLTKIVRGEAEQARVAVRNVRRDANDKVKALLKDKAISED
STY024 RSMGPAVEKAIMASDLGLNPNSSAGTTIRVPLPPLTEERRKDLTKIVRGEAEQARVAVRNVRRDANDKVKALLKDKAISED
vc2259 RELTQKVEKAILMSDLGLNPNSSAGTTIRVPLPPLTEERRDLVIVRGEAEQGRVAVRNVRRDANDKVKALLKDKKIESED
wbr31 NNIKKIEQALSSDLGVNPQIQENYIRIEFPKLTERRFLIKL INKEAEQNIISIRNIRRDANEKIKKLLKAKTIGKD
XAC142 KGMIKDVEKAIYASDLGLTPTVVGTVIRLNLPLPTEERRKDLTKIVRGEAEQARVAVRNVRRDANDKVKALLKDKAISED
XCC137 KGMIKDVEKAIYASDLGLTPTVVGTVIRLNLPLPTEERRKELSKSVHGEGEDAKVAIRNIRRDANQQVKDLKDKQVTE
XF2579 KNMSKDVEKAIYASDLGLTPTVVGTVIRLNLPLPTEERRKELTKVHSEGEDTKVAIRNIRRDANQQIKDMLKSKEITED
y3135 YP0104 RSLSAAVEKAIMTSDGLNPNSSAGTVIRVPLPALTEERRKDLIKVRAEAEQGRVSVRNVRRDANDKVKALLKDKKIESED
Z0181 RSMSPAVEKAIMASDLGLNPNSSAGSDIRVPLPPLTEERRKDLTKIVRGEAEQARVAVRNVRRDANDKVKALLKDKKIESED

b0170 DRRSQDDVQKLTDAAIKKIEAALADKAEELMMAKEDNIEMQGTVLETLPTMFRVELENGHVVTAHISGKMRKNYIRIL
BbP214 KERRIQHEVQDITNSYMEKINVLISKKEKDLMTKEDCIEMQGVVDTLPTMFRVQLDNKHIVTAHISGKMRKNYIRIL
Bf131 NEHYFQNEIQNLTDIWKIKIILITKEKELEMLMKEEDNIEMQGVVDTLPTMFRVQLENGHKTVAHISGKMRKNYIRIL
bu232 NEHTSQSKIQIMTNEYIKKIDCILEKKEKELMMSKEENIEMQGVVDTLPTMFRVELENKHIVTAHISGKMRKNYIRIL
BUsg22 NEHAAQNKIQMTTDDYIKKIDKILSEKKEKDLMTKEDNIEMQGVVDTLPTMFRVELENKHIVTAHISGKMRKNYIRIL
HI0914 EQHKAEEIQQITDIYIKKIDVDEVLADKEKELMMAKEDCIEMQGTILETLPTMFRVELENGHVVTAHISGKMRKNYIRIL
PA3655 EERRAGDDVQKLTDFIGEIEKALEAKEADLMSKEDSFEMEGTVVDTLPTMFRVELENGHVVTAHISGKMRKNYIRIL
PM1985 EERKAQDEIQQITDIYIKKIDVDEVLADKEKELMMAKEDCIEMQGTILETLPTMFRVELENGHVVTAHISGKMRKNYIRIL
RSc140 DERRGQDEVQKLTDRFVAEVDKLVAEKDEIMLAKLEEIEFEGSVSEALPDNRVQLENGVEVWAYASGKMQKHRIRIL
STM021 DRRSQEEVQKMTDAAIKKVDAAALADKAEELMMAKEDNIEMQGTVLETLPTMFRVELENGHVVTAHISGKMRKNYIRIL
STY024 DRRSQEEVQKMTDAAIKKVDAAALADKAEELMMAKEDNIEMQGTVLETLPTMFRVELENGHVVTAHISGKMRKNYIRIL
vc2259 DERRAQEEIQQLTDAAVKIDDDVLAKEELMMAKEDVIEEMQGTVLDLPTMFRVELENGHVVTAHISGKMRKNYIRIL
wbr31 EDKFKQVEIQNLNRSIEDTKKILKLEKEIKMTKEENIEMQGVLDLPTMFRVELENKHVLAHISGKMRKNYIRIL
XAC142 EARSAEDDIQQLTDKAIAKDVDEVVKGEQELMMSKDDSIIEFEGSVSETLPTNTFRVLENGHEIIAHISGRMRKNYIRIL
XCC137 EARGAEDDIQQLTDKAIAKDVDEVVKGEQELMMSKDDSIIEFEGSVSETLPTNTFRVLENGHEIIAHISGRMRKNYIRIL
XF2579 EVRQGEEDIQQLTDKAIAKDVDEVVKGEQELMMSKDDCIIEFEGTVSETLPTNTFRVLENGHEVTAHISGRMRKNYIRIL
y3135 EDRRSQDDVQKLTDAYIKKVDAAALADKAEELMMAKEDNIEMQGTVLDLPTMFRVELENGHVVTAHISGKMRKNYIRIL
YPO104 EDRRSQDDVQKLTDAYIKKVDAAALADKAEELMMAKEDNIEMQGTVLDLPTMFRVELENGHVVTAHISGKMRKNYIRIL
Z0181 DRRSQDDVQKLTDAAIKKIEAALADKAEELMMAKEDNIEMQGTVLETLPTMFRVELENGHVVTAHISGKMRKNYIRIL

b0170 TGDKVTVELTPYDLSKGRIVFRAQEKLTQKTRSTLKSQVIEVRKRTFVEAQQAQAEKDNAQAEKARRQQGFQKPAQAVNR
BbP214 TGDKVTLELTPYDLSKGRIFRQLEVLMLKKIRSTVKCISIEIRKKNRYSVSHSKKQKEKEDKNINFKQVFKKPLRAINR
Bf131 TGDKVTVELTPYDLSKGRIFRQSEKLFQKTHSTLKKVQVEVRKRVYMNELSSQKETNELVKLDHVSFNKPMQKTVR
bu232 TGDKVTVELTPYDLSKGRIFRQLETLVLQKTRSTLKSQVIEVRKRVYMNELSSQKETNELVKLDHVSFNKPMQKTVR
BUsg22 TGDKVTIELTPYDLSKGRIFRITETFLQKTRSTLKSQVIEIRKKNRMYLAKESNKLTKNEKNKINFPQVFKKPVSVINR
HI0914 TGDKVTVEMTPYDLSKGRIFRDAPKLSIQRTKTTVKEVQVEVRKRTVKAEEAEVDSVSESEKARQQAFKPAQVVKVS
PA3655 TGDKVRVELTPYDLSKGRITYRDESEKILTLQKTRSTLKSQVIEVRKRVYMNELSSQKETNELVKLDHVSFNKPMQKTVR
PM1985 TGDKVTIEMTPYDLNKGRIIFRAAPKLSLQRTKTTVKEVQVEVRKRTVPADEAEVSAAVDVEKARQQAFKPAQAVNR
RSc140 AGDRVKLEMPYDLTKGRINYRESKILTLTRETSEIRTQVQVEVRKRVYMNELSSQKETNELVKLDHVSFNKPMQKTVR
STM021 TGDKVTVELTPYDLSKGRIVFRAQEKLTQKTRSTLKSQVIEVRKRTFVEAQQAQAEKDTAQAEKARRQQGFQKPAQAVNR
STY024 TGDKVTVELTPYDLSKGRIVFRAQEKLTQKTRSTLKSQVIEVRKRTFVEAQQAQAEKDTAQAEKARRQQGFQKPAQAVNR
vc2259 TGDKVTVEMTPYDLSKGRIVFREDERLTLQKTRSTLKNVQVEVRKRTVYAAEEEEKAEKLLQARQHGFDKTAVVAKA
wbr31 DVVINGAITVCDLANKMAIKSSEVINKMMNMGIGTINHVLDQDTAQLIAEEMGHKVIIVHRENALEELIMKDVSAIRAPV
XAC142 TGDRVKVEMTPYDLTKGRITYRSTEKITLNRKLQEVTTVNVVEVRKRTVYVNLDEEQAAAAAASPAAPHGFERPTAPVVR
XCC137 TGDRVKVEMTPYDLTKGRITYRSTEKITLNRKLQEVTTVNVVEVRKRTVYVNLDEEQAAAAAASPAAPHGFERPTAPVVR
XF2579 TGDRVKIEMTAYDLTKGRITYRSTEKITLNRKLQEVTTVNVVEVRKRTVYVNLDEEQAAAAAASPAAPHGFERPTAPVVR
y3135 TGDKVTVELTPYDLSKGRIVFRQEKLTQKTRSTLKSQVIEVRKRTVYVIAEEAEKQPAQTDKTRRQVFNKPVAVNR
YPO104 TGDKVTVELTPYDLSKGRIVFRQEKLTQKTRSTLKSQVIEVRKRTVYVIAEEAEKQPAQTDKTRRQVFNKPVAVNR
Z0181 TGDKVTVELTPYDLSKGRIVFRAQEKLTQKTRSTLKSQVIEVRKRTFVEAQQAQAEKDNAQAEKARRQQGFQKPAQAVNR

b0170 DVVIGETITVDELANKMAVKSQVIKAMMKGAMATINQVLDQETAQLVAEEMGHKVIILRENELEEAVMASAAAEPRAPV
BbP214 NIILSSAISFNLANKMAVKSSEI IKMMARLGYTVTINQI IDQDIAQLVAEEMGHKVTICYENKLEDKIMRGLIKKTRPPI
Bf131 DVVIGETISVAELSNKMSIKSSSMIKMMMLGLMVTINQNLQETAQLVVEEMGHNAILRENALEELIMHMGYKNRAPI
bu232 DVIISNTITVSDLANKMAIKSSEVINKMMNMGIGTINHVLDQDTAQLIAEEMGHKVIIVHRENALEELIMKDVSAIRAPV
BUsg22 DVVINGAITVCDLANKMAIKSSEVINKMMNMGIGTINHVLDQDTAQLIAEEMGHKVIILRENELEELIMKDVSAIRAPV
HI0914 DVVIGETITVAELANKMAVKATEI IKMMKMGEMVTINQVLDQETAQLVAEELGHKVIILRENELEEAVLGAEKVTRAPV
PA3655 EVNIGETITVAELAAQMSVKGAEVVKFMFGMSPVTINQVLDQETAQLVAEELGHKVKLVSENALEEQVLAEGEAVTRAPV
PM1985 DVVIGETITVAELANKMAVKATEV IKTMMKMGAMATINQVLDQETAQLVAEEMGHKVIIRKNELEESVMAELVTRAPV
RSc140 EVHVPEITISVAELAHKMAVKAEEV I KMMKLGQVMTINQVLDQETAQMI VVEEMGHQVAALDDPEALLVEVEAEARPPV
STM021 DVVIGETITVDELANKMAVKSQVIKAMMKGAMATINQVLDQETAQLVAEEMGHKVIILRENELEEAVMASAAAEPRAPV

STY024 DVVIGETITVDELANKMAVKSQVIKAMMKGAMATINQVLDQETAQLVAEEMGHKVIILRENELEEAVMASAAAEPRAPV
vc2259 DVVIGETITVSELAQKMSVKATEV I KMMKMGAMATINQVLDQETAQLVAEEMGHKVIILRENELEEAALSFEEVSRAPV
wbr31 EITIGETISVFEALSANKMAVKSSEVINKMMNMGIGTINHVLDQDTAQLIAEEMGHKVIILRENELEELIMKDVSAIRAPV
XAC142 EVAIGETITVADLAQKLAQKGGDVVKALFKMGVMTITQSIDHDTAALVTEELGHKAVRADNADFEDALLAGEATSRPPV
XCC137 EVAIGETITVADLAQKLAQKGGDVVKALFKMGVMTITQSIDHDTAALVTEELGHKAVRADNADFEDALLAGEATSRPPV
XF2579 EVAVGDITVADLAQKLAQKGGDVVKALFKMGVMTITQSIDHDTAALVTEELGHKAVRADNADFEDALLAGEATSRPPV
y3135 DVVIGETITVDELANKMAVKSQVIKAMMKGAMATINQVLDQETAQLVAEEMGHKVIILRENELEEAALMSAAAEHRAPV
YPO104 DVVIGETITVDELANKMAVKSQVIKAMMKGAMATINQVLDQETAQLVAEEMGHKVIILRENELEEAALMSAAAEHRAPV
Z0181 DVVIGETITVDELANKMAVKSQVIKAMMKGAMATINQVLDQETAQLVAEEMGHKVIILRENELEEAALMSAAAEHRAPV

b0170 VTIMGHVDHGKTSLLDYIRSTKVASGEAGGITQHIGAYHVIITFLDTPGHAAFTSMRARGAQATDIIVVLVVAADDGVMP
BbP214 ITIMGHVDHGKTSLLDKIRLTVRVADESGRITQHIGAYHVIITFLDTPGHAAFTSMRARGAQATDIIVVLVVAADDGVMP
Bf131 VTIMGHVDHGKTSLLDYIRSTNVASSESGGITQHIGAYCVQMVFTIDTPGHAAFTDMRARGIQLTDIIVVLVVAADDGVMP

bu232 VTIMGHVDHGKTSLLDYIRSTKTAFFEYAGGITQNI GAYHVKSITFLDTPGHSAAFTAMRSRGVQITDIVILVVAADDGVMP
BUsg22 VTIMGHVDHGKTSLLDYIRSTKVASSEAGGITQNI GAYHVSITFLDTPGHSAAFTGMRSGVKITDIVLVAADDGVMP
HI0914 VTIMGHVDHGKTSLLDYIRKAKVAAGEAGGITQHI GAYHVEMITFLDTPGHAAFTSMRARGAKATDIVLVAADDGVMP
PA3655 VTMGHVDHGKTSLLDYIRKAKVAAGEAGGITQHI GAYHVEMITFLDTPGHAAFTSMRARGAQATDIVLVAADDGVMP
PM1985 VTIMGHVDHGKTSLLDYIRKAKVAAGEAGGITQHI GAYHVEMITFLDTPGHAAFTSMRARGAKATDIVLVAADDGVMP
RSc140 VTMGHVDHGKTSLLDYIRKAKVAAGEAGGITQHI GAYHVEMITFLDTPGHAAFTSMRARGAKATDIVLVAADDGVMP
STM021 VTIMGHVDHGKTSLLDYIRSTKVASGEAGGITQHI GAYHVEMITFLDTPGHAAFTSMRARGAQATDIVLVAADDGVMP
STY024 VTIMGHVDHGKTSLLDYIRSTKVASGEAGGITQHI GAYHVEMITFLDTPGHAAFTSMRARGAQATDIVLVAADDGVMP
vc2259 VTIMGHVDHGKTSLLDYIRRTHVASGEAGGITQHI GAYHVEMITFLDTPGHAAFTSMRARGAQATDIVLVAADDGVMP
wbr31 VTIMGHVDHGKTSLLDYIRTTKVALKEKGGITQCI GAYYVKLITFDTPGHAAFTSMRIRGSKITDIVLVAADDGIMP
XAC142 VTIMGHVDHGKTSLLDYIRRTKIASGEAGGITQHI GAYHVEMITFLDTPGHAAFTSMRARGAKITDIVLVAADDGVMP
XCC137 VTIMGHVDHGKTSLLDYIRRTKIASGEAGGITQHI GAYHVEMITFLDTPGHAAFTSMRARGAKITDIVLVAADDGVMP
XF2579 VTIMGHVDHGKTSLLDYIRRTKIASGEAGGITQHI GAYHVEMITFLDTPGHAAFTSMRARGAKITDIVLVAADDGVMP
y3135 VTIMGHVDHGKTSLLDYIRSTKVASGEAGGITQHI GAYHVEMITFLDTPGHAAFTSMRARGAQATDIVLVAADDGVMP
YPO104 VTIMGHVDHGKTSLLDYIRSTKVASGEAGGITQHI GAYHVEMITFLDTPGHAAFTSMRARGAQATDIVLVAADDGVMP
Z0181 VTIMGHVDHGKTSLLDYIRSTKVASGEAGGITQHI GAYHVEMITFLDTPGHAAFTSMRARGAQATDIVLVAADDGVMP

b0170 QTIEAIQHAKAAQVPVVAVNKKIDKPEADPDRVKNELSQYGLPEEWGGESQFVHVSAAKAGTGIDELLDAILLQAEVLEL
BBp214 QTIEAIQHAQAASVPIIAINKIDKLTITNEKIKNELTKYNILPEEWGGDNIFVNI SAKSGEGIESLLNAILLTQSEMEL
Bf131 QTVEAIQIRDGNLPIIAINKIDKSVTNVERIKNELNSYGFIPPEEWGGHTQFVNVSAVSGEGVNDLDSILLQSEILEL
bu232 QTIEAIQHAKAANVPVIVAINKIDKTDSDIDKVRNDLMKYNILSEEWGGENIFVSVSAKTGKINKLLNVILLQAEMLLEL
BUsg22 QTIEAIQHAKAANVPVIVAINKIDKVDNSNDIQKNDLTKYVILSEEWGGENIFVLSAKTGGKINDLNAILLQSEILEL
HI0914 QTIEAIQHAKAAGAPLVAVNKKIDKPEANLDRVEQELLQHDVISEKFGGDTQFVVPVSAKKTGVDLDAILLQSEVLEL
PA3655 QTQEAHQHAKAAGVPIVAVNKKIDKPEANPNIDKNGLAALDVIPEEWGGDAPFVVPVSAKLTGVDLLEAVLLQAEVLEL
PM1985 QTIEAIQHAKAAGVPIVAVNKKIDKPEANPERVETELLQHEVVAEKFGGDTQFVVPVSAKKTGVDLLEAVLLQAEVLEL
RSc140 QTKEAIAHAKAAGVPIVAVNKKIDKPEANPDRVKNELVSEVSEPEYGGDSFPVVPVSAKKTGQIENLLENVLLQAEVLEL
STM021 QTIEAIQHAKAAGVPIVAVNKKIDKPEADPDRVKNELSQYGLPEEWGGESQFVHVSAAKAGTGIDELLDAILLQAEVLEL
STY024 QTIEAIQHAKAAGVPIVAVNKKIDKPEADPDRVKNELSQYGLPEEWGGESQFVHVSAAKAGTGIDELLDAILLQAEVLEL
vc2259 QTVEAIQHAKAAGVPLIVAVNKKIDKTDANPDRVKNELSQYGLPEEWGGDNMFVHISAKQGTNIDGLEAILLQAEVLEL
wbr31 QTVEAINHAKIAKVPVPIIAINKIDKITSNPEKVKKELIKHGIFLEEGGDTQCLLISAKSGLGIDFLDAILLQAEILEL
XAC142 QTKEAVAHAKAAGVPLIVAVNKKIDKTAGDPLRVKNELLAENVAEEFGGDTQFIEVSAKLTGVDLTDLDAISLQAEVLEL
XCC137 QTKEAVAHAKAAGVPLIVAVNKKIDKTAGDPLRVKNELLAENVAEEFGGDTQFIEVSAKLTGVDLTDLDAISLQAEVLEL
XF2579 QTKEAVQHARAAGVPLIVAVSKIDKSTADPQRVKNELLTESVVAEEFGGDTQFVVELSAKTGVDLDAISIQAEVLEL
y3135 QTIEAIQHAKAANVPVVAVNKKIDKPEADPDRVKNELSQYGLQPEEWGGESQFINVSAKAGTGIDELLDAILLQAEVLEL
YPO104 QTIEAIQHAKAANVPVVAVNKKIDKPEADPDRVKNELSQYGLQPEEWGGESQFINVSAKAGTGIDELLDAILLQAEVLEL
Z0181 QTIEAIQHAKAAQVPVVAVNKKIDKPEADPDRVKNELSQYGLPEEWGGESQFVHVSAAKAGTGIDELLDAILLQAEVLEL

b0170 KAVRKGMSAGAVIESFLDKGRGPVATVLRVREGTLHKGDIVLCGFYGRVVRAMRNELGQEVLEAGPSIPVEILGLSGVPAA
BBp214 KSISNGMASGLVIESYLDKGRGPTAII LIKEGKLNKGDIVLCGFYGRVVRAMRDSLGFVDTKAGPSIPVEILGLSGVPIA
Bf131 KSMHGLAKAVVIESSLDRSRGPVATVLRVREGTLHKGDIVLCGFYGRVVRAMRDSLGFVDTKAGPSIPVEILGLSGVPIA
bu232 KAVTTGMAEGIVVESFLDKGRGPIATVLRVQKLNKGDIVLCGFYGRVVRAMRDSLGFVDTKAGPSIPVEILGLSGVPIA
BUsg22 KAISTGMAEGVIVVESFLDKGRGPIATVLRVQKLNKGDIVLCGFYGRVVRAMRDSLGFVDTKAGPSIPVEILGLSGVPIA
HI0914 TAVKDGMSAGVIVVESFLDKGRGPIATVLRVQKLNKGDIVLCGFYGRVVRAMRDSLGFVDTKAGPSIPVEILGLSGVPIA
PA3655 KATPSAPGRGVVVESFLDKGRGPIATVLRVQKLNKGDIVLCGFYGRVVRAMRDSLGFVDTKAGPSIPVEILGLSGVPIA
PM1985 TAVKDGMSAGVIVVESFLDKGRGPIATVLRVQKLNKGDIVLCGFYGRVVRAMRDSLGFVDTKAGPSIPVEILGLSGVPIA
RSc140 KAPINAAAKGLVVEAQLDKGKGPVATVLRVQKLNKGDIVLCGFYGRVVRAMRDSLGFVDTKAGPSIPVEILGLSGVPIA
STM021 KAVRKGMSAGAVIESFLDKGRGPIATVLRVREGTLHKGDIVLCGFYGRVVRAMRNELGQEVLEAGPSIPVEILGLSGVPIA
STY024 KAVRKGMSAGAVIESFLDKGRGPIATVLRVREGTLHKGDIVLCGFYGRVVRAMRNELGQEVLEAGPSIPVEILGLSGVPIA
vc2259 KAVKQMSAGVIVVESFLDKGRGPIATVLRVQKLNKGDIVLCGFYGRVVRAMRDSLGFVDTKAGPSIPVEILGLSGVPIA
wbr31 KAMHKMASGTVIESRLEKKGKPVSTIILIQEGRHLQGDVLLCGCEYGRVVRAMRDSLGFVDTKAGPSIPVEILGLSGVPIA
XAC142 KAVAEGRASGTVIESRLEKKGKPVSTIILIQEGRHLQGDVLLCGCEYGRVVRAMRDSLGFVDTKAGPSIPVEILGLSGVPIA
XCC137 KAVADGRASGTVIESRLEKKGKPVSTIILIQEGRHLQGDVLLCGCEYGRVVRAMRDSLGFVDTKAGPSIPVEILGLSGVPIA
XF2579 KAVIEGRATGTVIESRLEKKGKPVSTIILIQEGRHLQGDVLLCGCEYGRVVRAMRDSLGFVDTKAGPSIPVEILGLSGVPIA
y3135 KAVRTGMANGVIVVESFLDKGRGPIATVLRVQKLNKGDIVLCGFYGRVVRAMRDELGRDITSAGPSIPVEILGLSSVPAA
YPO104 KAVRTGMANGVIVVESFLDKGRGPIATVLRVQKLNKGDIVLCGFYGRVVRAMRDELGRDITSAGPSIPVEILGLSSVPAA
Z0181 KAVRKGMSAGAVIESFLDKGRGPIATVLRVREGTLHKGDIVLCGFYGRVVRAMRNELGQEVLEAGPSIPVEILGLSGVPAA

b0170 GDEVTVVRDEKKAREVALYRQKGFREVKLARQKSKLENMFANMTEGVHEVNIIVLKADVQGSVEAIDSLSLLKSTDEVKV
BBp214 GDKIVVVRDEKQAREVATYRQKFKFKQKMSQRQLKSLDIFEDVKNRSNPSLNIIVIKSDVQGSLEAISYSLLLKSNDEIKI
Bf131 GEWLVVVNNKAREVALYRQKFKFKKREIKLARKSEKTIIEFNFSMDIIEIKELNFIKSDTQGSMEVICESLKKLSTNKMMVM
bu232 GDVVTVVRDEKKAREVASYRKEKREKLNQNRINLENMFDDINKNVSELKILKSDIQGSLEAISGALLKSTEVKVI
BUsg22 GEKVTVVRDEKKAREVASYRKNKSREIKLANQRSNLSLENMFNKNFNSELKILKSDVQGSLEAISYSLLLKSTEVKVI
HI0914 GDEATVVRDEKKAREVALYRQKGFREVKLARQKSKLENMFANMTEGVHEVNIIVLKADVQGSVEAIVQALNELSTNEVKV
PA3655 GDEMTVVADEKKAREVALYRQKGFREVKLARAHAGKLENIIFENMGQEKKTLNIVLKADVQGSLEALQGSLSGLGNDEVQV
PM1985 GDEATVVRDEKKAREVALYRQKGFREVKLARQKSKLENMFANMTEGVHEVNIIVLKADVQGSVEAIVQALNELSTNEVKV
RSc140 GEEVIVLPERKAREIALFRQKGFREVKLARQKSKLENMFANMTEGVHEVNIIVLKADVQGSVEAIVQALNELSTNEVKV
STM021 GDEVTVVRDEKKAREVALYRQKGFREVKLARQKSKLENMFANMTEGVHEVNIIVLKADVQGSVEAIDSLSLLKSTDEVKV
STY024 GDEVTVVRDEKKAREVALYRQKGFREVKLARQKSKLENMFANMTEGVHEVNIIVLKADVQGSVEAIDSLSLLKSTDEVKV
vc2259 GDEATVVRDEKKAREVANYRAGKGFREVKLARQKSKLENMFANMTEGVHEVNIIVLKADVQGSVEAIVQALNELSTNEVKV
wbr31 GDKITVVKKEKKAREVAIYRQNKLERESKLRINKKIKIENVFNSLNLSSKKNINIVLKSDAHGSSQAISNALILLSNEETKI
XAC142 GDDFVVVDDERLAKDVAQQRETTRRESRLVASATNRMEDIILAQMKGQQVNLNVIKADVQGSVEALKQSLVALSNDDIRI
XCC137 GDDFVVVDDERLAKDVAQQRETTRRESRLVASATNRMEDIILAQMKGQQVNLNVIKADVQGSVEALKQSLVALSNDDIRI
XF2579 GDDFVVVDDERLAKDVAQQREAKRRESRLVTSAGNRMEDIILAQMKGQQVNLNVIKADVQGSVEALKQSLVALSNDDIRI
y3135 GDEVTVVRDEKKAREVALYRQKGFREVKLARQKSKLENMFANMTEGVHEVNIIVLKADVQGSVEAIDSLSLLKSTDEVKV
YPO104 GDEVTVVRDEKKAREVALYRQKGFREVKLARQKSKLENMFANMTEGVHEVNIIVLKADVQGSVEAIDSLSLLKSTDEVKV
Z0181 GDEVTVVRDEKKAREVALYRQKGFREVKLARQKSKLENMFANMTEGVHEVNIIVLKADVQGSVEAIDSLSLLKSTDEVKV

b0170 KIIGSGVGGITETDATALAASNAIILVGFNVRADASARKVIEAESLDRYYSVIYNLIDEVKAAMSGMSPKQKQIIGLA
BBp214 NIIGKGVGGITETDATALAASNAIILVGFNVRADASARKVIEEFENVDFRYYSVIYQIIDEIKNCICGMLSPKYQKQIIGLA
Bf131 KILSASINVTETDAVALLSSHSRILAFNVKVDLSAKNIIEFNHINIYYSVIVLLEDEKELISSIAPQVDFKVIIGIA
bu232 KIIGLGGITETDATALAASNAIILVGFNVRADTSARKVIESEHLDLRYYSVIYDLLEDEKAAAMTGLLSPYKQKQIIGLA
BUsg22 NIIGSGVGGITETDATALAASNAIILVGFNVRADASARKVIESEHLDLRYYSVIYDLLEDEKAAAMTGLLSPYKQKQIIGLA
HI0914 KVVGSGVGGITETDATALAASNAIILVGFNVRADARRVIEAENIDLRYYSIIEYELNEIKAAAMSGMLPEPKQKQIIGLA
PA3655 RVVGGVGGITESDANLALASNAVLPFGFNVRADAGARKVIEAEGLDMRYYNVIYDIIEEDVKKALTGLMGLSGLRENILGIA
PM1985 KVVGSGVGGITETDATALAASNAIILVGFNVRADARRVIESEHLDLRYYSIIEYELNEIKAAAMSGMLPEPKQKQIIGLA
RSc140 QVVHGAVGGITESDANLALASNAIILVGFNVRADAGARKVIEAEGLDMRYYNVIYDIIEEDVKKAAAMSGMLPEPKQKQIIGLA
STM021 KIIGSGVGGITETDATALAASNAIILVGFNVRADASARKVIESEHLDLRYYSVIYNLIDEVKAAMSGMSPKQKQIIGLA

STY024 KIIIGSGVGGITETDATALAAASNAIIVGFNVRADASARKVIESESLDLRYYSVIYNLIDEVKAAMSGMLSPKQQIIGLA
vc2259 NIVGSGVGGITETDVAFLAAASNAIIVGFNVRADASARRMIEAENIDLRYYSIIYQLIDEVKAAMSGMLSPKQQEIIIGLA
wbr31 NIIYSGVGPITETDVALATSSNAIIIGFNVPDFSNIKNTESIGLNKCCSIIYEIVDFVKQKIYLSCNTKYNKIIIGIL
XAC142 NVIHSGVGGITESDANSAAASKATIIIGFNVRADASARKIVESNGIDLRYFSIIYDVIDQVKQVASGLLGEIREEIIIGIA
XCc137 NVIHSGVGGITESDANSAAASKATIIIGFNVRADASARKIVESNGIDLRYFSIIYDVIDQVKQVASGLLGEIREEIIIGIA
XF2579 NVIHVGVGGITESDANSAVTSKATVIGFNVRADASARKIIEANGVDLRYFSIIYDVIDQVKQVASGLLGEIREEIIIGVA
y3135 RIVGSGVGGITETDATALAAASGAIILGFNVRADASARRVTEGLDLRYYSVIYSLIDEVKAAMSGMLAPEYKQQIIGLA
YPO104 RIVGSGVGGITETDATALAAASGAIILGFNVRADASARRVTEGLDLRYYSVIYSLIDEVKAAMSGMLAPEYKQQIIGLA
Z0181 KIIIGSGVGGITETDATALAAASNAIIVGFNVRADASARKVIEAESLDRYYSVIYNLIDEVKAAMSGMLSPKQQIIGLA

b0170 EVRDVFKSPKFGAIAGCMVTEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKDDVNEVRNGMECGIGVKNYNDVRTGDVIE
BBp214 NVRSIFKSPKIGVIAGCIVMEGIKRNNSIIQILRNNVVIHKGELISLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
Bf131 KVHNIFQSPRYGTIAGCMVTEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
bu232 EVRNIFKSPKFGAIAGCMVTEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
BUsG22 EVRNIFKSPKFGAIAGCMVTEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
HI0914 EVRDVFRHFKFGAIAGCMVTEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
PA3655 EVRDVFRHFKFGAIAGCMVTEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
PM1985 EVRDVFRHFKFGAIAGCMVTEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
RSc140 EVRQVVFHVPKFGAVAGCMVLDGVVKKRSSLVLRVLRNVVIFSGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
STM021 EVRDVFRHFKFGAIAGCMVTEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
STY024 EVRDVFRHFKFGAIAGCMVTEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
vc2259 EVRDVFRHFKFGAIAGCMVTEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
wbr31 EVRDNIFQSPKFGAIAGCMVTEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
XAC142 QVRDVFRRSSKFGAVAGCMVIEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
XCc137 QVRDVFRRSSKFGAVAGCMVIEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
XF2579 EVRDVFRHFKFGAIAGCMVTEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
y3135 EVRDVFRHFKFGAIAGCMVTEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
YPO104 EVRDVFRHFKFGAIAGCMVTEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE
Z0181 EVRDVFRHFKFGAIAGCMVTEGVVKKRHNPIRVLRDNVVIYEGELESLRRFKEDVSEVRGCGVECGIGMKNFNDCIEDIE

b0170 VFEIVSLREALEKAEAGVDLVEISPNAEPPVCRIMDYGKFLYEKSKSSKEQKKKQKVIQVKEIKFRPGTDEGDYQVKLR
BBp214 VFETVTLKSALEYKAEVGMDDLVEISPNAEPPVCRIMDYGKFLYEKSKSSKEQKKKQKVIQVKEIKFRPGTDEGDYQVKLR
Bf131 VLDKVNFNFAIKQAEDLELDLVEISPNSDPPVCKIMNYGKFLYEKSKSTKEQKKKQKVIQVKEIKFRPGTDEGDYQVKLR
bu232 VFEVNLREALEKAEELGLDLVEISPNAEPPVCRIMDYGKFLYEKSKSSKEQKKKQKVIQVKEIKFRPGTDEGDYQVKLR
BUsG22 VFEVNLREALEKAEELGLDLVEISPNAEPPVCRIMDYGKFLYEKSKSSKEQKKKQKVIQVKEIKFRPGTDEGDYQVKLR
HI0914 VFEVNSIQQALEMAEQAEGLDLVEISPNAEPPVCRIMNYGKFLYEKSKSTAKEQKKKQKVIQVKEIKFRPGTDEGDYQVKLR
PA3655 VFEKVSIDEAIRLAEAKLGLDLVEISADAVPPVCRIMDYGKHLFEKKAQAAVAKKNQQAQVKEIKFRPGTDEGDYQVKLR
PM1985 VFEVNSIQQALEMAEQAEGLDLVEISPNAEPPVCRIMNYGKFLYEKSKSTAKEQKKKQKVIQVKEIKFRPGTDEGDYQVKLR
RSc140 IYEVKLFDFALRLAEKDDVLDLVEIAPTAQPPVCRIMDYGKFKYQEQKKAHEAKLQKVIQVKEIKFRPGTDDGDYEVKLR
STM021 VFEIVSLREALEKAEAGVDLVEISPNAEPPVCRIMDYGKFLYEKSKSSKEQKKKQKVIQVKEIKFRPGTDEGDYQVKLR
STY024 VFEIVSLREALEKAEAGVDLVEISPNAEPPVCRIMDYGKFLYEKSKSSKEQKKKQKVIQVKEIKFRPGTDEGDYQVKLR
vc2259 VFEIVSLREALEKAEAGVDLVEISPNAEPPVCRIMDYGKFLYEKSKSSKEQKKKQKVIQVKEIKFRPGTDEGDYQVKLR
wbr31 VFETVSIQEAALATAEESGLDLVEISPNAEPPVCRVMDYGKFLFEKSKATKEQKKKQKVIQVKEIKFRPGTDDGDYEVKLR
XAC142 ILELVPKKEAIFKSLLEMLDLVEISPNSNPPVCKIMNYGKFLYEKSKSSKEQKKKQKVIQVKEIKFRPGTDDGDYEVKLR
XCc137 CFERLSRDEALAKAEELGLDLVEIQPADPPVCKIMDFGKFKFEQKKKANEAKKTKQVEIKELKFRPVTDEGDYQVKLR
XF2579 CFERLSRDEALAKAEELGLDLVEIQPADPPVCKIMDFGKFKFEQKKKANEAKKTKQVEIKELKFRPVTDEGDYQVKLR
y3135 VFEIVSLNEALEKAEAGVDLVEISPNAEPPVCRIMDYGKFLYEKSKSTKEQKKKQKVIQVKEIKFRPGTDDGDYQVKLR
YPO104 VFEIVSLNEALEKAEAGVDLVEISPNAEPPVCRIMDYGKFLYEKSKSTKEQKKKQKVIQVKEIKFRPGTDDGDYQVKLR
Z0181 VFEIVSLREALEKAEAGVDLVEISPNAEPPVCRIMDYGKFLYEKSKSSKEQKKKQKVIQVKEIKFRPGTDEGDYQVKLR

b0170 SLIRFLEEGDKAKITLRFGRGEMAHQQIGMEVLRNVRKDDLQAVVESFKIEGRQMIMVLPAPKMKNIRNFSIIAHIDHGKST
BBp214 NLVRFLEEGDKVKTTLRFGRGEMVHQKLGIDVLRNKSDDLAVVEVFRVEGRQMIMILTSKMETIRNFSIIAHVDHGKST
Bf131 NIIKFLNDGKIKITLRFGRGELIHQQIGVRLHRISQDLHMTVEIFKVEGRQMTMLLAPKMKYIRNFSIIAHVNHGKST
bu232 NLIRFLEDGDKAKITLRFGRGEMAHQKIGVDVLRNVRKNDLIATVEYFKIEGRQMIMVLPAPKMKNIRNFSIIAHIDHGKST
BUsG22 NLIRFLEDGDKVKTTLRFGRGEMAHQKIGIDVLRNVRKNDLIATVEYFKIEGRQMIMVLPAPKMKNIRNFSIIAHIDHGKST
HI0914 SLIRFLEEGDKAKITLRFGRGEMAHQDGLDVLERKNDLASVVE SARLEGRQAVMVLAPKMKNIRNFSIIAHIDHGKST
PA3655 NLVRFLEEGDKAKVSLRFGRGEMAHQELGMELLRVEADLVGTVEQHKLEGRQLMMV IAPKLSHIRNFSIIAHIDHGKST
PM1985 SLIRFLEEGDKAKITLRFGRGEMAHQDGLDVLERKNDLASVVE SARLEGRQAVMVLAPKMKNIRNFSIIAHIDHGKST
RSc140 NLKRFLEDGDRTKITLRFGRGEMAHQDGLDVLERKNDLASVVE SARLEGRQAVMVLAPKMKNIRNFSIIAHIDHGKST
STM021 SLIRFLEEGDKAKITLRFGRGEMAHQQIGMEVLRNVRKDDLQAVVESFKIEGRQMIMVLPAPKMKNIRNFSIIAHIDHGKST
STY024 SLIRFLEEGDKAKITLRFGRGEMAHQQIGMEVLRNVRKDDLQAVVESFKIEGRQMIMVLPAPKMKNIRNFSIIAHIDHGKST
vc2259 NLIRFLEEGDKVKTTLRFGRGEMAHQDGLDVLERKNDLASVVE SARLEGRQAVMVLAPKMKNIRNFSIIAHIDHGKST
wbr31 NLTRFLENGKVKVSLRFGRGEMVHKIGINMLNRICSDLKSSIESFKIEGRQMTLILVPMENIRNFSIIAHINHGKST
XAC142 NMRRFLEEGDKVKNIRFRGEMSHQELGRGEMAAIEADLGVIE SRRLEGRQMVMV IAPKMRNIRNFSIIAHVDHGKST
XCc137 NMRRFLEEGDKVKNIRFRGEMSHQELGRGEMAAIEADLGVIE SRRLEGRQMVMV IAPKMRNIRNFSIIAHVDHGKST
XF2579 NMRRFLEEGDKVKNIRFRGEMSHQELGRQMATRIEMDLGVVIE SRRLEGRQMVMV IAPKMRNIRNFSIIAHVDHGKST
y3135 NLIRFLEDGDKAKITLRFGRGEMAHQQIGMEVLRNVRKDDLQAVVESFKIEGRQMIMVLPAPKMKNIRNFSIIAHIDHGKST
YPO104 NLIRFLEDGDKAKITLRFGRGEMAHQQIGMEVLRNVRKDDLQAVVESFKIEGRQMIMVLPAPKMKNIRNFSIIAHIDHGKST
Z0181 SLIRFLEEGDKAKITLRFGRGEMAHQQIGMEVLRNVRKDDLQAVVESFKIEGRQMIMVLPAPKMKNIRNFSIIAHIDHGKST

b0170 LSDRIIQICGGLSDREMEAQVLDSDMLERERGITIKAQSVTLTDYKADGETYQLNFIDTPGHVDFSYEVSRS LAACEGALL
BBp214 ISDRLIQICGGLSKREMHSQVLDSDMLERERGITIKSQSVTIEYKSNCKIIQMNFIIDTPGHVDFSYEVSRS LAACEGALL
Bf131 LSDRFIQICGGLCDREMSQVLDSDMLERERGITIKSQSVTLNYSNEQFYQLNFIIDTPGHVDFSYEVSRS LAACEGALL
bu232 LSDRLIQICGGLSEREMSNQVLDSDMLERERGITIKAQSVTLNYSNEQFYQLNFIIDTPGHVDFSYEVSRS LAACEGALL
BUsG22 LSDRLIQKCGGLSEREMSDQVLDSDMLERERGITIKAQSVTLNYSNEQFYQLNFIIDTPGHVDFSYEVSRS LAACEGALL
HI0914 LSDRLIQKCGGLSDREMEAQVLDSDMLERERGITIKAQSVTLNYSNEQFYQLNFIIDTPGHVDFSYEVSRS LAACEGALL
PA3655 LADRFIQKCGGLSDREMEAQVLDSDMLERERGITIKAQSVTLNYSNEQFYQLNFIIDTPGHVDFSYEVSRS LAACEGALL
PM1985 LSDRLIQKCGGLSDREMEAQVLDSDMLERERGITIKAQSVTLNYSNEQFYQLNFIIDTPGHVDFSYEVSRS LAACEGALL
RSc140 LADRILQKCGGLSDREMEAQVLDSDMLERERGITIKAQSVTLNYSNEQFYQLNFIIDTPGHVDFSYEVSRS LAACEGALL
STM021 LSDRLIQKCGGLSDREMEAQVLDSDMLERERGITIKAQSVTLNYSNEQFYQLNFIIDTPGHVDFSYEVSRS LAACEGALL
STY024 LSDRIIQICGGLSDREMEAQVLDSDMLERERGITIKAQSVTLNYSNEQFYQLNFIIDTPGHVDFSYEVSRS LAACEGALL
vc2259 LSDRLIQKCGGLSDREMEAQVLDSDMLERERGITIKAQSVTLNYSNEQFYQLNFIIDTPGHVDFSYEVSRS LAACEGALL
wbr31 LSDRLIQKCGGLSDREMEAQVLDSDMLERERGITIKAQSVTLNYSNEQFYQLNFIIDTPGHVDFSYEVSRS LAACEGALL
XAC142 LADRILQKCGGLQAREMEAQVLDSDMLERERGITIKAQSVTLNYSNEQFYQLNFIIDTPGHVDFSYEVSRS LAACEGALL
XCc137 LADRILQKCGGLQAREMEAQVLDSDMLERERGITIKAQSVTLNYSNEQFYQLNFIIDTPGHVDFSYEVSRS LAACEGALL
XF2579 LADRILQKCGGLQAREMEAQVLDSDMLERERGITIKAQSVTLNYSNEQFYQLNFIIDTPGHVDFSYEVSRS LAACEGALL
y3135 LSDRIIQICGGLSEREMAAQVLDSDMLERERGITIKAQSVTLNYSNEQFYQLNFIIDTPGHVDFSYEVSRS LAACEGALL

YPO104 LSDRIIQICGGLSEREMAAQVLDSDMLERERGITIKAQSVTLTDYHSDGQTYQLNFIDTPGHVDFSYEVSRSLAACEGALL
Z0181 LSDRIIQICGGLSDREMAQVLDSDMLERERGITIKAQSVTLTDYKADGETYQLNFIDTPGHVDFSYEVSRSLAACEGALL

b0170 VVDAGQGVEAQTLANCYTAMEMDLEVPVNLKIDLPAADPERVAEEIEDIVGIDATDAVRCSAKTGVGVQDVLRLVRDI
BBp214 I IDATQGV EAQTIANCHTALDMNLKVIPIILNKIDLPTADPQRVKKEIEDI IGLSTNNIILCSAKTGGITNLLETITHNI
Bf131 VVDAAGQIEAQTVANRYIAMERDLKVI IALNKIDLPTADINRVSKETEEIIGINSNDIILCSAKTGLGVLDILERIIDI
bu232 VVDSTQGV EAQTLANCYTAIDMNVIEVPVNLKIDLPSNADKVAKEIEDI IGI PALDAIRCSAKTGGIEEDLIERIINDI
BUsq22 VVDSTQGV EAQTLANCYTAIDMNVIEVPVNLKIDLPSNADKVAKEIEKEI IGI SALDAIRCSAKTGGIEEIELEQI IKKI
HI0914 VVDAGQGVEAQTLANCYTAIEMDLEVPVNLKIDLPAADPERVAEEIEDIVGIDAMEAVRCSAKTGVGIEDVLEEIVAKI
PA3655 VVDAGQGVEAQSVCYTAIEQGLEVPVNLKMDLPAEPERVKKEIESI IGI DATDAVACS AKSGMGLVLEVLRLVTAI
PM1985 VVDAGQGVEAQTLANCYTAIEMNLEVPVNLKIDLPAADPERVAEEIEDIVGIDAMEAVRCSAKTGVGIEDVLEEIVAKI
RSc140 VVDASQGVEAQTVCYTAIELGVEVPVNLKIDLPAADPSAIQIEIEDIVGIDAQDATRCSAKTGVGVDPVLEALIAKV

STM021 VVDAGQGVEAQTLANCYTAMEMDLEVPVNLKIDLPAADPERVAEEIEDIVGIDATDAVRCSAKTGVGVTDVLERLVRDI
STY024 VVDAGQGVEAQTLANCYTAMEMDLEVPVNLKIDLPAADPERVAEEIEDIVGIDATDAVRCSAKTGVGVTDVLERLVRDI
vc2259 VVDAGQGVEAQTLANCYTAIEMDLEVPVNLKIDLPAEPERVAEEIEDIVGIDAIDAVRCSAKTGVGVDEVLEKIVSAI
wbr31 I IDSSQIEAQTIANFYCAIEMKIKI I PVNLKIDLPSNDPK I I SKKEI ESKEI ESKEI ESKEI I ENIVCNL
XAC142 VVDAAGQVEAQSVCYTAIEQGLEVPVNLKIDLPTADVDRAKAEIEAVIGIDAEDAVAVSAKTGLNIDLVEAIVHRI
XCC137 VVDAAGQVEAQSVCYTAIEQGLEVPVNLKIDLPTADI ERAKAEIEAVIGIDAEDAVAVSAKTGLNIDLVEAIVHRI
XF2579 VVDASQGVEAQSVCYTAIEQGLEVPVNLKIDLPTADVDRAKAEIEAVIGIDASEAVAVSAKTGLNIDLVEAIVHRI
y3135 VVDAGQGVEAQTLANCYTAMEMDLEVPVNLKIDLPAADPERVAEEIEDIVGIDATDAIRCSAKTGVGVDPVLERLVRDI
YPO104 VVDAGQGVEAQTLANCYTAMEMDLEVPVNLKIDLPAADPERVAEEIEDIVGIDATDAIRCSAKTGVGVDPVLERLVRDI
Z0181 VVDAGQGVEAQTLANCYTAMEMDLEVPVNLKIDLPAADPERVAEEIEDIVGIDATDAVRCSAKTGVGVQDVLRLVRDI

b0170 PPPEGDPEGLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKVKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
BBp214 PYPKGNPNLPLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKVKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
Bf131 PVPQGNCDAPLQALI IDSWFNLYLVISLIVKNGILHKGDTIQSMNTGQIYIVNQLGIFTPKQVDRTELKCGEVGWLVC
bu232 PYPKGSINSPLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKVKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
BUsq22 PAPEGDPEGLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKIKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
HI0914 PAPEGDPEGLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKIKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
PA3655 PAPEGEIEAPLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKIKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
PM1985 PAPEGDPEGLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKIKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
RSc140 PPKQDPPDAPLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKIKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
STM021 PPPQDPPDAPLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKIKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
STY024 PPKQDPPDAPLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKIKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
vc2259 PPKQDPPDAPLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKIKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
wbr31 TPIIGNINKPLQALI IDSWFDNYLGI IIVLIRKNGTLRKGDKIKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
XAC142 PPKPRDRTDKLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKIKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
XCC137 PPKPRDRTDKLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKIKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
XF2579 PPKPRDRTDKLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKIKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
y3135 PAPEGDPEGLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKIKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
YPO104 PAPEGDPEGLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKIKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC
Z0181 PPPEGDPEGLQALI IDSWFDNYLGVVSLRIRKNGTLRKGDKVKVMSTGQTYNADRLGIFTPKQVDRTELKCGEVGWLVC

b0170 AIKHGAPVGDTLTLARPAEKALPGFKKVKPQVYAGLFPVSSDDYEAFRDALGKLSLNDASLFFYEPSSALGFGFRGCGFL
BBp214 GIRTGAPVGDITIQHPSAKKVLVSGFKKIKPKIYAGLFTIQSNQFSLFRDALGKLSLNDASLFFYEPSSALGFGFRGCGFL
Bf131 TSKMGAPVGDITLTLPAQKSLPNFKKI QPYYAGLFPAGSTSQKGFADALYKLSLNDASLFFYEPSSALGFGFRGCGFL
bu232 GIKIAAPVGDITLTAKPAKNI IGFKKIKPKIYAGLFPVSDQYEMFRDALGKLSLNDASLFFYEPSSALGFGFRGCGFL
BUsq22 GIKSAPVGDITLTAKPAMNMLTGFKKIKPKIYAGLFPVSDQYEMFRDALGKLSLNDASLFFYEPSSALGFGFRGCGFL
HI0914 AIKLGAPVGDITLTHQSATEVLPFGFKKVKPQVYAGLFPVSSDDYEAFRDALGKLSLNDASLFFYEPSSALGFGFRGCGFL
PA3655 GIKHGAPVGDITLTLNPNPDEVLPGFKKVKPQVYAGLFPVSSDDYEAFRDALGKLSLNDASLFFYEPSSALGFGFRGCGFL
PM1985 AIKLGAPVGDITLTSHPASSVLPFGFKKVKPQVYAGLFPVSSDDYEAFRDALGKLSLNDASLFFYEPSSALGFGFRGCGFL
RSc140 GIKKAAKVKPDLTITHVVKADAPLPGFKKVKPQVYAGLFPVSSDDYEAFRDALGKLSLNDASLFFYEPSSALGFGFRGCGFL
STM021 AIKLGAPVGDITLSARPAEKALPGFKKVKPQVYAGLFPVSSDDYEAFRDALGKLSLNDASLFFYEPSSALGFGFRGCGFL
STY024 AIKLGAPVGDITLSARPAEKALPGFKKVKPQVYAGLFPVSSDDYEAFRDALGKLSLNDASLFFYEPSSALGFGFRGCGFL
vc2259 GIKMGAPVGDITLTLAKGCEKALPGFKKVKPQVYAGLFPVSSDDYEAFRDALGKLSLNDASLFFYEPSSALGFGFRGCGFL
wbr31 SIKKGAPVGDITLTLASPSEKMLPGFKKIKPKVFAIFPTISEKYQSLKNGLIKLSLNDASLFFYEPSSALGFGFRGCGFL
XAC142 SIKHGAPVGDITLTLAAGPAPHALPGFQEMQPRVFAGLFPVDAEDYDPLREALDKLRNLDAALRFEPESEAMGFGFRGCGFL
XCC137 SIKHGAPVGDITLTLAAGPAPHALPGFQEMQPRVFAGLFPVDAEDYDPLREALDKLRNLDAALRFEPESEAMGFGFRGCGFL
XF2579 SIKHGAPVGDITLTLANPAPKPLPGFQEVQPRVFAGLFPVDAEDYDPLREALDKLRNLDAALRFEPESEAMGFGFRGCGFL
y3135 AIKLGAPVGDITLTLTRPAEKSLPGFKKVKPQVYAGLFPVSSDDYEAFRDALGKLSLNDASLFFYEPSSALGFGFRGCGFL
YPO104 AIKLGAPVGDITLTLTRPAEKSLPGFKKVKPQVYAGLFPVSSDDYEAFRDALGKLSLNDASLFFYEPSSALGFGFRGCGFL
Z0181 AIKHGAPVGDITLTLARPAEKALPGFKKVKPQVYAGLFPVSSDDYEAFRDALGKLSLNDASLFFYEPSSALGFGFRGCGFL

b0170 GLLHMEIIQERLEREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
BBp214 GILHMEIVQARLEREYNLQI IATSPTVIYKI IMIDNTNYYLDTPHKLSLTLQIKEIREPIAKCLILLP IKYLGNTLLCS
Bf131 GLLHMEIIQERLREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
bu232 GVLHMEIIQARLEREYSIDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
BUsq22 GLLHMEIIQARLEREYSIDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
HI0914 GLLHMEIIQERLEREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
PA3655 GMLHMEIIQERLEREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
PM1985 GLLHMEIIQERLEREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
RSc140 GLLHMEIIQERLEREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
STM021 GLLHMEIIQERLEREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
STY024 GLLHMEIIQERLEREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
vc2259 GMLHMEIIQERLEREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
wbr31 GLLHMEIIQERLEREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
XAC142 GMLHMEIIQERLEREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
XCC137 GMLHMEIIQERLEREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
XF2579 GMLHMEIIQERLEREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
y3135 GLLHMEIIQERLEREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
YPO104 GLLHMEIIQERLEREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV
Z0181 GLLHMEIIQERLEREYDLDLIT TAPTVVYEVETTSREVIYVDSPSKLPVANNIYELREPIAECMMLLPQAYLGNVITLVCV

b0170 EKRGVQNTMVIYHGNQVALTYEIPMAEVVLDFFDRKLSSTRGYASLDYFNKFRQASDMVRVLDLINGERVDLALITHRDN
BBp214 QRRGVQNTMVIYHGNQVALTYEIPMAEVVLDFFDRKLSSTRGYASLDYFNKFRQASDMVRVLDLINGERVDLALITHRDN
Bf131 EKRGVQVSLVYKADQVMLTYELPMSEI I LDFDRMKSISNGYASLEYTFNFRQASDMVCIEI LINGQRVNALAVIHRIT

bu232 KKRGVQINMZYHSHQVLLKYNIPMNEVILNFFDELKSVSSGYASLEYDFKYFQSVKMRVIDILINSEKVDALTILSYHKN
BUsg22 KKRGTINMZYHSHQVLLKYNIPMNEVILNFFDELKSVSSGYASLEYDFKYFQSVKMRVIDILINSEKVDALTIVISYKKN
HI0914 EKRGVQTNMZYHSHQVLLKYNIPMGEVVDLDFDRLKSTSRGYASLDYGFKRFQADMRVVDIMINSERVDALALIVHKDN
PA3655 EKRGVQTNMZYHSHQVLLKYNIPMGEVVDLDFDRLKSTSRGYASLDYGFKRFQADMRVVDLIMINGEVDALALIVHRDN
PM1985 EKRGVQTNMZYHSHQVLLKYNIPMGEVVDLDFDRLKSTSRGYASLDYGFKRFQADMRVVDLIMINGEVDALALIVHKDN
RSc140 QKRGSQINMZYHSHQVLLKYNIPMGEVVDLDFDRLKSTSRGYASLDYGFKRFQADMRVVDLIMINGEVDALALIVHRDN
STM021 EKRGVQTNMZYHSHQVLLKYNIPMGEVVDLDFDRLKSTSRGYASLDYGFKRFQADMRVVDLIMINGEVDALALIVHRDN
STY024 EKRGVQTNMZYHSHQVLLKYNIPMGEVVDLDFDRLKSTSRGYASLDYGFKRFQADMRVVDLIMINGEVDALALIVHRDN
vc2259 EKRGTQVDMZYHSHQVLLKYNIPMGEVVDLDFDRLKSTSRGYASLDYGFKRFQADMRVVDLIMINGEVDALALIVHRDN
wbr31 EKRGIQNNLIYLENKVI I I Y I I P M S E I I L D F F D K L Q S I S N G Y A S L D Y K F C F N K T D S V V I Q T Y I N K K L I D S L T K V I N K N Y
XAC142 EKRGTQIGINYLGSQVQI SYELPMAEVVDLDFDRLKSTSRGYASLDYGFKRFQADMRVVDLIMINGEVDALALIVHRGH
XCC137 EKRGSQIGINYLGSQVQI SYELPMAEVVDLDFDRLKSTSRGYASLDYGFKRFQADMRVVDLIMINGEVDALALIVHRSY
XF2579 EKRGSQIGITYLGNQVQVAYELPMAEVVDLDFDRLKSTSRGYASLDYGFKRFQADMRVVDLIMINGEVDALALIVHRHQ
y3135 EKRGTQTNMZYHSHQVLLKYNIPMGEVVDLDFDRLKSTSRGYASLDYGFKRFQADMRVVDLIMINGEVDALALIVHRDN
YPO104 EKRGTQTNMZYHSHQVLLKYNIPMGEVVDLDFDRLKSTSRGYASLDYGFKRFQADMRVVDLIMINGEVDALALIVHRDN
Z0181 EKRGVQTNMZYHSHQVLLKYNIPMGEVVDLDFDRLKSTSRGYASLDYGFKRFQADMRVVDLIMINGEVDALALIVHRDN

b0170 SQNRGRELVEKMKDLIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
BBp214 ILNQAQNVVEKMKDLIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
Bf131 AEFQGRILGNVNLKSLILRQQFDIVIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
bu232 AQSRREIVDKMKDLIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
BUsg22 AQNRAREIVNKMDELIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
HI0914 SQNRGRELVEKMKDLIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
PA3655 APYKGRQLVEKMKDLIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
PM1985 APYRAREIVNKMDELIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
RSc140 SAYRGREVAAMKREIIPRQMYDVAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
STM021 SQSRGRELVEKMKDLIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
STY024 SQSRGRELVEKMKDLIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
vc2259 SQTGRQLVEKMKDLIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
wbr31 INLYSKTTIENLKKIIPRQQFDIVIHKINNKIISKGIVKQVRKNVLEKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
XAC142 ADDRRELCCEKMKDLIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
XCC137 ADDRRELCCEKMKDLIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
XF2579 AERRGRELVEKMKDLIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
y3135 AQYRGRDLVEKMKDLIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
YPO104 AQYRGRDLVEKMKDLIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL
Z0181 SQNRGRELVEKMKDLIPRQQFDIAIQAAIGTHI IARSTVKQLRKNVLAKCYGGDISRKKKLLQKQKQEGKKRMKQIGNVEL

b0170 PQEAFLAAILHVSIVAKLEALHERHEEVQALLGERFRALSREYAQLSDVSRCTDWQQVQEDIETAQMMDPREMAQDEL
BBp214 PQEAFVFLKILNNSMMKLESLSHRYEEIESMLSEKFRLESQEYKLSLDINFCVQWKNCNHVDIETKLLDSELHDVAEQEL
Bf131 PNTVFMISILNRLINLKLMSLQRFYKLEKLSLNKFEYSLSKHEYTLHEI IKYFEEWLN I QKN I VHTTKMDI DMHDI VQDEL
bu232 PKTVFLSILNLSILNKLKSLRNRYQIEI I LSKNFLLSKYELKLSLSEI IKYFEEWLN I QKN I VHTTKMDI DMHDI VQDEL
BUsg22 PKTAFDLILNLSIFNKLKSLRNRYEEIESMLSEKFRLESQEYKLSLDINFCVQWKNCNHVDIETKLLDSELHDVAEQEL
HI0914 PQEAFLAAILHVSIVAKLEALHERHEEVQALLGERFRALSREYAQLSDVSRCTDWQQVQEDIETAQMMDPREMAQDEL
PA3655 PQEAFLAAILHVSIVAKLEALHERHEEVQALLGERFRALSREYAQLSDVSRCTDWQQVQEDIETAQMMDPREMAQDEL
PM1985 PQEAFLAAILHVSIVAKLEALHERHEEVQALLGERFRALSREYAQLSDVSRCTDWQQVQEDIETAQMMDPREMAQDEL
RSc140 PQEAFLAAILHVSIVAKLEALHERHEEVQALLGERFRALSREYAQLSDVSRCTDWQQVQEDIETAQMMDPREMAQDEL
STM021 PQEAFLAAILHVSIVAKLEALHERHEEVQALLGERFRALSREYAQLSDVSRCTDWQQVQEDIETAQMMDPREMAQDEL
STY024 PQEAFLAAILHVSIVAKLEALHERHEEVQALLGERFRALSREYAQLSDVSRCTDWQQVQEDIETAQMMDPREMAQDEL
vc2259 PQEAFLAAILHVSIVAKLEALHERHEEVQALLGERFRALSREYAQLSDVSRCTDWQQVQEDIETAQMMDPREMAQDEL
wbr31 PQEAFVFLKILNNSMMKLESLSHRYEEIESMLSEKFRLESQEYKLSLDINFCVQWKNCNHVDIETKLLDSELHDVAEQEL
XAC142 PQEAFVFLKILNNSMMKLESLSHRYEEIESMLSEKFRLESQEYKLSLDINFCVQWKNCNHVDIETKLLDSELHDVAEQEL
XCC137 PQEAFVFLKILNNSMMKLESLSHRYEEIESMLSEKFRLESQEYKLSLDINFCVQWKNCNHVDIETKLLDSELHDVAEQEL
XF2579 PQEAFVFLKILNNSMMKLESLSHRYEEIESMLSEKFRLESQEYKLSLDINFCVQWKNCNHVDIETKLLDSELHDVAEQEL
y3135 PQEAFVFLKILNNSMMKLESLSHRYEEIESMLSEKFRLESQEYKLSLDINFCVQWKNCNHVDIETKLLDSELHDVAEQEL
YPO104 PQEAFVFLKILNNSMMKLESLSHRYEEIESMLSEKFRLESQEYKLSLDINFCVQWKNCNHVDIETKLLDSELHDVAEQEL
Z0181 PQEAFVFLKILNNSMMKLESLSHRYEEIESMLSEKFRLESQEYKLSLDINFCVQWKNCNHVDIETKLLDSELHDVAEQEL

b0170 REAKEKSEQLEQQQLVLLPKDPERNAFLVRAGTGGDEAALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
BBp214 QMSKMKKLEIETIQVLLLPDQPCQNCFLERSASGGDEAALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
Bf131 KILNNTSKHNLENKIKILLFSDPQQYCNFIELRAGTGGKEAALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
bu232 YFFNKKKALEKKINQLLPEDPKHSFCFIELRAGTGGDEAALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
BUsg22 FIVKQKLEEKIKILLLPDQPCQNCFLERSASGGDEAALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
HI0914 EESKAEIEEVEQQQLVLLPKDPEYNCYLEIRAGTGGDEAALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
PA3655 AEARGRLAALGDSLQRMLLPKDPNRVFLERAGTGGDEAALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
PM1985 EACKTEIEQVEQQQLVLLPKDPEYNCYLEIRAGTGGDEAALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
RSc140 RAARERMTTLEAELQRLLPKDPHRNIFLEIRAGTGGDESALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
STM021 REAKEKSEQLEQQQLVLLPKDPERNAFLVRAGTGGDEAALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA

STY024 REAKEKSEQLEQQQLVLLPKDPERNAFLVRAGTGGDEAALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
vc2259 KAAKAAIERLTDELQILLLPKDPRNCFLEIRAGGDEAALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
wbr31 NIYKNNKLLIEKKIILYLI PNEDI CNCFIEIRSGTGGKEASLFRVRLCRMYIKYSEIKNWKTDIINYSNSEHGGYKEIIA
XAC142 AAAQARLEQLDAQLASLLVPRDPDGNLFLEVRAGTGGDEAALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
XCC137 LAAQARLDELDAQLALLVPRDPDGNLFLEVRAGTGGDEAALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
XF2579 AIAQAHLTTDEELQRLLIPODPCNLFLEVRAGTGGDEAALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
y3135 KIAKARSEELQQLVLLPKDPERDPCFLEIRAGTGGDEAALFAGDMFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
YPO104 KIAKARSEELQQLVLLPKDPERDPCFLEIRAGTGGDEAALFAGDMFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA
Z0181 REAKEKSEQLEQQQLVLLPKDPERNAFLVRAGTGGDEAALFAGDLFRMYSRYAEARRWRVEIMSSEGEHGGYKEIIA

b0170 KISGDGVYGRLLKFESGGHRVQRPVPTESQGRVHTSCTIVAVIPVPPKKEVGNINDLKIDTFRSSGAGGQHVNTTDSAIRI
BBp214 KITGKSYGKLLKFESGGHRVQRPVPTESQGRVHTSCTIVAVIPVPPKKEVGNINDLKIDTFRSSGAGGQHVNTTDSAIRI
Bf131 KVPVHGSYGQLKFESGGHRVQRPVPTESQGRVHTSCTIVAVIPVPPKKEVGNINDLKIDTFRSSGAGGQHVNTTDSAIRI
bu232 KITGRGACGRLLKFESGGHRVQRPVPTESQGRVHTSCTIVAVIPVPPKKEVGNINDLKIDTFRSSGAGGQHVNTTDSAIRI
BUsg22 KITGKSYGKLLKFESGGHRVQRPVPTESQGRVHTSCTIVAVIPVPPKKEVGNINDLKIDTFRSSGAGGQHVNTTDSAIRI
HI0914 KVTGEGVYGLKFESGGHRVQRPVPTESQGRVHTSCTIVAVIPVPPKKEVGNINDLKIDTFRSSGAGGQHVNTTDSAIRI
PA3655 RVNEDNVYAKLLKFESGHRVQRPVPTESQGRVHTSCTIVAVIPVPPKKEVGNINDLKIDTFRSSGAGGQHVNTTDSAIRI
PM1985 KVNEDNVYGLKFESGGHRVQRPVPTESQGRVHTSCTIVAVIPVPPKKEVGNINDLKIDTFRSSGAGGQHVNTTDSAIRI
RSc140 RLVGEGAYSRLKFESGGHRVQRPVPTESQGRVHTSCTIVAVIPVPPKKEVGNINDLKIDTFRSSGAGGQHVNTTDSAIRI

STM021 KISGDGVYGRLLKFESGGHRVQRPATESQGR IHTSACTVAVMPELPEAEDINPADLRIDTFRSSGAGGQHVTNTDSAIRI
STY024 KISGDGVYGRLLKFESGGHRVQRPATESQGR IHTSACTVAVMPELPEAEDINPADLRIDTFRSSGAGGQHVTNTDSAIRI
vc2259 KVNGDGAYGTLKFESGGHRVQRPATEAQGR IHTSACTVAVMPEIPEAEEIKASDLKIDTFRSSGAGGQHVTNTDSAIRI
wbr31 KICCNKAYNKLKFESGGHRVQRPETESQGR IHTSCTIIVMPEMLDFKKIKTSDLRIDTFRSSGAGGQHVTNTDSAIRI
XAC142 RVVGRGAYSRLKFESGTHRVQRPATESQGR IHTSAAATVAI IPEADDVETINPADLKVDTFRSSGAGGQHVNKTESAIRI
XCC137 RVVGRGAYSRLKFESGTHRVQRPATESQGR IHTSAAATVAI IPEADDVEVINPADLKVDTFRSSGAGGQHVNKTESAIRI
XF2579 RIVGRGAYSRLKFESGTHRVQRPATESQGR IHTSAAATVAI IPEADEIASINPADLKVDTFRSSGAGGQHVNKTESAIRI
y3135 KISGDGVYGRLLKFESGGHRVQRPATESQGR IHTSACTVAVMPEIPEAEEINAGDLRIDTFRSSGAGGQHVTNTDSAIRI
YPO104 KISGDGVYGRLLKFESGGHRVQRPETESQGR IHTSACTVAVMPEIPEAEEINAGDLRIDTFRSSGAGGQHVTNTDSAIRI
Z0181 KISGDGVYGRLLKFESGGHRVQRPATESQGR IHTSACTVAVMPELPEAEDINPADLRIDTFRSSGAGGQHVTNTDSAIRI

b0170 THLPTGIVVECQDERSQHKNKAKALSVLGAR IHAEMAKRQQAEEASTRRNLLGSGDRSDRNR TYNFPQGRVTDHRILTLY
Bbp214 THIPSGVVEVCQDERSQHKNKAKALSVLVSR IKAELYNQRKKNAIQRRLDGLTGMRS DRNR TYNFAQNRVTDHRILVYVY
Bf131 THIPSGLSVVEVCQDERSQHKNKAKALS SVLKSRLYAINIKQKQEEESNVRNRLIGTGDRSDR IRTYNYFPQGRVTDHRIFTSY
bu232 THIPTGNVVEVCQDERSQHKNKAKALS ILSARVYAAKLEKDRQESSMRKILLGTGERSDRNR TYNFPQNRITDHRILSIY
BUsG22 THIPSGNVVEVCQDERSQHKNKAKALS ILSARVYADLAKS QKENS SMRRI LLGTGERSDRNR TYNFAQNRITDHRILTIY
HI0914 THIPGTGIVVECQDERSQHKNKAKAMSVL ASRIVQAEQERQAAEATDMRRNLLGSGDRSDK IRTYNYFPQGRITDHRILTIY
PA3655 THIPSGIVVECQEERSQHKNRAKAMAWLA AKLNDQQQAAAQQAIASTRKLLVGS GDRSER IRTYNYFPQGRVTDHRILTLY
PM1985 THIPGTGIVVECQDERSQHKNKAKAMSVL ASRIVQAEKEREQQAQADTRNLLGSGDRSDK IRTYNYFPQGRVTDHRILTVY
RSc140 THLPTGLVVEVCQDDRSQHRNKDRAMQV LAARLKDROEREQAQEA SARKSLIGSGDRSDR IRTYNYFPQGRITDHRILTLY
STM021 THLPTGIVVECQDERSQHKNKAKALSVL GAR IHAETAKRQQAEEASTRRNLLGSGDRSDRNR TYNFPQGRVTDHRILTLY
STY024 THLPTGIVVECQDERSQHKNKAKALSVL GAR IHAETAKRQQAEEASTRRNLLGSGDRSDRNR TYNFPQGRVTDHRILTLY
vc2259 THLPTGIVVECQDERSQHKNKAKAMSVL LAAR IQAEEASGRAAEISDTRNLLGSGDRSDR IRTYNYFPQGRVTDHRILTVY
wbr31 THIPTNIVVECQDERSQHKNKSKAMLV LKSRLOANLLKNKQKKEE IIRKSLGSGDRSDR IRTYNYFPQGRITDHRILTIY
XAC142 THVPSGVVVEVCQTERSQHANRDKAMKRL KAQLLDTERSKAAAAEAQTRKLQVGS GDRSQR IRTYNYFPQGRITDHRILTLY
XCC137 THVPSGVVVEVCQTERSQHANRDKAMKRL KAQLLVEAERSKAAAAEAQTRKLVGS GDRSQR IRTYNYFPQGRITDHRILTLY
XF2579 THLPTGVVVEVCQTERSQHANRDKAMKRL KAQLIESERSQQAATAEAMTRKLQVGS GDRSQR IRTYNYFPQGRITDHRILTLY
y3135 THIPGTGIVVECQDERSQHKNKAKAMSVL GAR IRAAEMQKRLQAEASERRNLLGTGDRSDRNR TYNFPQGRVTDHRILTLY
YPO104 THIPGTGIVVECQDERSQHKNKAKAMSVL GAR IRAAEMQKRLQAEASERRNLLGTGDRSDRNR TYNFPQGRVTDHRILTLY
Z0181 THLPTGIVVECQDERSQHKNKAKALSVL GAR IHAEMAKRQQAEEASTRRNLLGSGDRSDRNR TYNFPQGRVTDHRILTLY

b0170 RLDEVMGKLDMLIEPI IQEHQADQLAAMA VVKCKPTSPGRRHVVKV VVNP ELHKGKPFAPLLEKNSKSGGRNNGRITTR
Bbp214 CLDEVLDGKLDVLIPI IQEHNADVLSNMA I IKCKPTSPGRRHAIKV VNP SLYKGP ISSLIRKNSKSGGRNNGRITTR
Bf131 KLHDIMNGKLDILIQP IMCKHQATLLDQMS VIKCNP TSPGRRHVVKLVNGGLYKGP YSLLSKKVANSGRNNGRITTR
bu232 KLDEVLQKLDLIDP I IQEYQADMLSSMA VVKCKPTSPGRRHVVKV VVNP ELHKGKPFAPLLEKNSKSGGRNNGRITTR
BUsG22 KLNEVLQKLDLIDP IMQEYQADMLSSMA IVKCKPTSPGRRHVVKV VVNP ELHKGKPFAPLLEKNSKSGGRNNGRITTR
HI0914 RLDEVVMNGKIDELIQP I IQEYQADQLAAMA IVKCKPTSPGRRHVVK I VNP ELHKGKPFAPLLEKNSKSGGRNNGRITTR
PA3655 SLGVEVMGAVEQVIEPLLQEQADQLAAMA IVKCKPTSPGRRHVVKV VVNP ELHKGKPFAPLLEKNSKSGGRNNGRITTR
PM1985 RLDEVVMNGKIDELIQP I IQEYQADQLAAMA IVKCKPTSPGRRHVVK I VNP ELHKGKPFAPLLEKNSKSGGRNNGRITTR
RSc140 KIDALMDGDLGELLGALAAHEQAELAA MVLVKTPTSPGRRSMV VVNP DLHKGKPFAPLLEKNSKSGGRNNGRITTR
STM021 RLDETMGKLDMLIEPI IQEHQADQLAAMA VVKCKPTSPGRRHVVKV VVNP ELHKGKPFAPLLEKNSKSGGRNNGRITTR
STY024 RLDETMGKLDMLIEPI IQEHQADQLAAMA VVKCKPTSPGRRHVVKV VVNP ELHKGKPFAPLLEKNSKSGGRNNGRITTR
vc2259 RLTEVMEGDMQSLIDPVI HEHQADQLAAMA IVKCKPTSPGRRHVVKV VVNP DLHKGKPFAPLLEKNSKSGGRNNGRITTR
wbr31 KIDEVMDGNLILINP ILEKYELEK I KEMTLNKNCP TSPGRRHVTVKV VVNP ELHKGKPFAPLLEKNSKSGGRNNGRITTR
XAC142 DLPNIIEGDLDALIGRLLHEHQADEL ARMP LMKFKPTSPGRRSAVRV VTPDLHKGKPFAPLLEKNSKSGGRNNGRITTR
XCC137 DLPNIIEGDLDALIARLLHEHQADEL ARMP LMKFKPTSPGRRSAVRV VTPDLHKGKPFAPLLEKNSKSGGRNNGRITTR
XF2579 DLPNIIEGDLPLIDRLRQEHQAELARV LDKFKPTSPGRRSAARV VTPDLHKGKPFAPLLEKNSKSGGRNNGRITTR
y3135 RLDEVMEGKLDMLIQP I IQEYQADQLSAMA IVKCKPTSPGRRHVVKV VVNP ELHKGKPFAPLLEKNSKSGGRNNGRITTR
YPO104 RLDEVMEGKLDMLIQP I IQEYQADQLSAMA IVKCKPTSPGRRHVVKV VVNP ELHKGKPFAPLLEKNSKSGGRNNGRITTR
Z0181 RLDEVMEGKLDMLIEPI IQEHQADQLAAMA VVKCKPTSPGRRHVVKV VVNP ELHKGKPFAPLLEKNSKSGGRNNGRITTR

b0170 HIGGGHKQAYRIVDFKRNKDGIPAVVER LEYDPNRSANIALVLYKDGERRY I LAPKGLKAGDQIQSGVDAAIKPGNTLPM
Bbp214 HIGGRHKRFYRIIDFKRNKDNIPAI VERLE YDPNRSANIALVLYKDGERRY I LASKGLMVGSKI VSGFNAEIKI GINALPM
Bf131 HIGSGHKQRYRIIDFKRNKDDVFAVVER MEYDPNRSANIALVLYKDGERRY I LAPRNLNVGNKI IISGLNVP I SPGNSLPL
bu232 HIGGGHKRAYRIVDFKRNKDDIGATVER FEYDPNRSANIALVLYKDGERRY I LAPKGLKAGDQIQSGVDAAIKPGNTLPM
BUsG22 HIGGGHKRIYRIIDFKRNKDNITASIER FEYDPNRSANIALVLYKDGERRY I LAPKGLKAGDQIQSGVDAAIKPGNTLPM
HI0914 HIGGGHKQHYRLIDFKRNKLDIPAVVER LEYDPNRSANIALVLYKDGERRY I LAPKGLSVGDQIQAGINSP I KVGNSLPM
PA3655 HIGGGHKQHYRLVDFFRNKDGP I AVVER LEYDPNR TAHIALLYKADGERRY I IAPKGLVAGDQIQSGVDAAIKAGNSMPL
PM1985 HIGGGHKQHYRLIDFKRNKLDIPAVVER LEYDPNR TAHIALLYKADGERRY I IAPKGLVAGDQIQSGVDAAIKAGNSMPL
RSc140 HKGGGHHKHYRIVDFKRNKDGIPAK I ERLE YDPNRSANIALVLFADGERRY I IAPKGLVAGDQIQSGVDAAIKAGNSMPL
STM021 HIGGGHKQAYRIVDFKRNKDGIPAVVER LEYDPNRSANIALVLYKDGERRY I LAPKGLKAGDQIQSGVDAAIKAGNTLPM
STY024 HIGGGHKQAYRIVDFKRNKDGIPAVVER LEYDPNRSANIALVLYKDGERRY I LAPKGLKAGDQIQSGVDAAIKAGNTLPM
vc2259 HIGGGHKQHYRLVDFKRTKDGIPAK VERLE YDPNRSANIALVLYADGERRY I IAPKGLQAGDQIQSGVDAAIKAGNAMPM
wbr31 HIGGRHKRYRLIDFKRNKDDILAKV KRLE YDPNRSANIALVLYADGEMRY I ILEAKGLKIDKQVQSGINAP I KIGNALPI
XAC142 HVGGGHHKHYRIIDFKRNKEGIPARVER IEYDPNR TAHIALCYVDGERRY I IAPKGLKAGDQIQAGANAP IKTGNLPL
XCC137 HVGGGHHKQHYRIIDFKRNKEGIPARVER IEYDPNR TAHIALCYVDGERRY I IAPKGLKAGDQIQAGANAP IKTGNLPL
XF2579 HIGGGCKQRYRVIDFKRDK EAP I PARVER IEYDPNR TAHIALCYVDGERCY I IAPKGLKEGDK IISGPNVP I KLGNSLPL
y3135 HIGGGHKQHYRLVDFKRNKDGIPAVVER LEYDPNRSANIALVLYKDGERRY I LAPKGLKAGDQIQSGVDAAIKAGNTLPM
YPO104 HIGGGHKQHYRLVDFKRNKDGIPAVVER LEYDPNRSANIALVLYKDGERRY I LAPKGLKAGDQIQSGVDAAIKAGNTLPM
Z0181 HIGGGHKQAYRIVDFKRNKDGIPAVVER LEYDPNRSANIALVLYKDGERRY I LAPKGLKAGDQIQSGVDAAIKPGNTLPM

b0170 RNIPVGVSTVHNEMKPGKGGQLARSAGTYVQ I VARDGAYVTLRLRSGEMRKVEADCRATLGEVGNAEHMLRVLGKAGAAAR
Bbp214 KNIPIGTVIHNVIEIKPGKGGQIARSAGTYVQ I SRENSYVTLRLRSGEMRKVEADCRATLGEVGNSEHMLRVLGKAGASR
Bf131 SNIIPVGS I IHNEMKVGKGGQLARSAGTYVQ I VSRDGEYI I LRLRSGEIRKVRCECRATLGEVGNSEHMLRALGKAGASR
bu232 KNIPVGTFFVHNVELKPGKGGQIARSAGSYVQLVAFDEEYATLRLRSGEMRKTSNCRATLGEVGNSEHMLKVLGKAGASR
BUsG22 KNIPVGSFIHNEMVRPVGKGGQIARSAGSYVQLVADK EYATLRLRSGEMRKTSNCRATLGEVGNSEHMLKVLGKAGASR
HI0914 RNIPVGVSTVHNVELKPGKGGQIARSAGTYVQ I IAREGNYVTLRLRSGEMRKVLAECVATLGEVGNSEHMLRVLGKAGANR
PA3655 RNIPVGVSTVHGIELKPGKGAQ IARSAGASQLVAREGAYVTLRLRSGEMRKVLAECRATLGEVGNSEHMLRVLGKAGATR
PM1985 RNIPVGVSTVHNVELKPGKGGQIARSAGTYVQ I IAREGNYVTLRLRSGEMRKVLAECVATLGEVGNSEHMLRVLGKAGANR
RSc140 RNIPVGTTHIHCVEILKPGKGAQ IARSAGTYVQ I IAREGNYVTLRLRSGEMRKVLAECVATLGEVGNSEHMLRVLGKAGATR
STM021 RNIPVGVSTVHNEMKPGKGGQLARSAGTYVQ I VARDGAYVTLRLRSGEMRKVEADCRATLGEVGNAEHMLRVLGKAGAAAR
STY024 RNIPVGVSTVHNEMKPGKGGQLARSAGTYVQ I VARDGAYVTLRLRSGEMRKVEADCRATLGEVGNAEHMLRVLGKAGAAAR
vc2259 RNIPVGVSTIHNVELKPGKGAQ IARSAGTYVQ I IAREGNYVTLRLRSGEMRKVLAECVATLGEVGNSEHMLRVLGKAGAAAR
wbr31 KMFPFGSILHNI EIKPGKGGQ IARSAGSYAVVTHEKNYV I VKLRSGEIRK I FSECKATFGEVGNSEYMLKSLGKAGANR
XAC142 RNIPVGTTHVHGIELKPGKGAQ IARSAGASQLVAREG IYATLRLRSGEMRKVPVECRATLGEVGNSEHMLRVLGKAGAKR
XCC137 RNIPVGTTHVHGIELKPGKGAQ IARSAGASQLVAREG IYATLRLRSGEMRKVPVECRATLGEVGNSEHMLRVLGKAGAKR
XF2579 RNIPVGTTHVHVELKPSKGAQMARSAGSSVQLVAREG IYATLRLRSGEMRRVLAECRATLGEVGNSEHMLRVLGKAGAKR

y3135 RNIPVSGSTVHNEMKPGKGGQLARSAGAYVQIVARDGSYVTLRLRSSEMRRKQVADCRATLGEVGNAEHMLRVLGKAGASR
YP0104 RNIPVSGSTVHNEMKPGKGGQLARSAGAYVQIVARDGSYVTLRLRSSEMRRKQVADCRATLGEVGNAEHMLRVLGKAGASR
Z0181 RNIPVSGSTVHNEMKPGKGGQLARSAGAYVQIVARDGSYVTLRLRSSEMRRKQVADCRATLGEVGNAEHMLRVLGKAGAA

b0170 WRGVRPTVRGTAMNPDHHPGGGEGRHPVTPWGVQTKGKKTRSNKRTRDKFIVRRRGLVGGKVGMRIFFTEDGVSIPVTVI
BBp214 WRGIRPTVRGTAMNPDHHPGGGEGRHPVSPWGLQTKGKKTRKNKRTEKFIIRHRGLIGQKLGMRIFTEEGTVYPTVIT
Bf131 WRGIRPTVRGTAMNPDHHPGGGEGRHPVSPWGVQTKGKKTRSNKRTRDKFILCRRGLVGRKLGMRIFINEEGIMIAVTMI
bu232 WIGIRPTVRGTAMNPDHHPGGGEGRHPVTPWGIQTKGKKTRKNKRTRDKFILRHRGLVGGKIGMTRIFTEEGTSPVTVI
BUsG22 WIGIRPTVRGTAMNPDHHPGGGEGRHPVTPWGLQTKGKKTRKNKRTEKFIIRHRGLVGGKLGMSRIFTEEGSSIPITVI
HI0914 WRGIRPTVRGTAMNPDHHPGGGEGRHPVTPWGVQTKGKKTRSNKRTRDKYIVRRRGLVGRKVGMRIFNEDGVSVPVTVI
PA3655 WRGVRPTVRGTAMNPDHHPGGGEGRHPVSPWGLQTKGKKTRSNKRTRDKFIVRRRGLVGRKCGMTRIFTEEGVSPVTVI
PM1985 WRGIRPTVRGTAMNPDHHPGGGEGRHPVTPWGVQTKGKKTRSNKRTRDKFIVRRRGLVGRKVGMRIFNEDGVSIPVTVI
RSc140 WRGIRPTVRGTAMNPDHHPGGGEGRHPVTPWGVQTKGKKTRSNKRTRDKFIVRRRGLVGRKVGMRIFNEDGVSIPVTVI
STM021 WRGVRPTVRGTAMNPDHHPGGGEGRHPVTPWGVQTKGKKTRSNKRTRDKFIVRRRGLVGGKVGMRIFTEEGVSPVTVI
STY024 WRGVRPTVRGTAMNPDHHPGGGEGRHPVTPWGVQTKGKKTRSNKRTRDKFIVRRRGLVGGKVGMRIFTEEGVSPVTVI
vc2259 WRGVRPTVRGTAMNPDHHPGGGEGRHPVTPWGVQTKGKKTRSNKRTRDKYIVRRRGLVGRKVGMRIFNEDGVSIPVTVI
wbr31 WRGIRPTVRGTAMNPDHHPGGGEGRHPVSPWGVQTKGKKTRSNKRTRDKFILRHRGLVGGKIGMTRIFNEDGVSIPVTVI
XAC142 WRGVRPTVRGTAMNPDHHPGGGEGRHPVTPWGVQTKGKKTRSNKRTRDKFIVRRRGLVGGKVGMRIFTEEGVSPVTVI
XCC137 WRGVRPTVRGTAMNPDHHPGGGEGRHPVTPWGVQTKGKKTRSNKRTRDKFIVRRRGLVGRKVGMRIFNEDGVSIPVTVI
XF2579 WIGVRPTVRGTAMNPDHHPGGGEGRHPVTPWGVQTKGKKTRSNKRTRDKFIVRRRGLVGGKVGMRIFTEEGVSPVTVI
y3135 WRGIRPTVRGTAMNPDHHPGGGEGRHPVTPWGVQTKGKKTRSNKRTRDKFIVRRRGLVGGKVGMRIFTEEGVSPVTVI
YP0104 WRGIRPTVRGTAMNPDHHPGGGEGRHPVTPWGVQTKGKKTRSNKRTRDKFIVRRRGLVGGKVGMRIFTEEGVSPVTVI
Z0181 WRGVRPTVRGTAMNPDHHPGGGEGRHPVTPWGVQTKGKKTRSNKRTRDKFIVRRRGLVGGKVGMRIFTEEGVSPVTVI

b0170 EVEANRVTQVKDLANDGYRAIQVTTGAKKANRVTKPEAGHFPAKAGVEAGRGLWEFFTVGQSI SVELFADVKKVDVTGTSK
BBp214 KVKENRITQIKTISRDLYHAVQVTTGIIKSNKLLKPEIGHFLKSGVKIGKGLWEFFKIGQSLNLELFSNIIKWDIIGTTSK
Bf131 EILPHYVTVQVKNKEKDGCAVQVTTGNTRDKCLNPKLGLHKLKLGINGYKGLWEFISVGDIFTLKVLKCKINKVDVTGISK
bu232 ELKENRITQVKNINNTDLYCAIQVTTGIIKSNKLLKPEIGHFLKSGVKIGKGLWEFFKIGQSIININIFNNKVDITGTSK
BUsG22 QIQENRITQIRNIIKTDKYAIAQVTTGLKLNKLLKPEIGHFLKSGVKIGKGLWEFFKIGQSIININIFNNKVDITGTSK
HI0914 EIEANRVTQVKTLENDGYTAVQVTTGSKKANRVTKPEAGHFPAKAGVEAGRGLWEFFTLGQEI SVELFADVKKVDVTGTSK
PA3655 EVEANRVTQVKTEETDGYRAVQVTTGERRASRVTKAQAGHPAKANVAAGRWVWFYAAGDQITVDLQAGQVMDVTGTSK
PM1985 EIEANRVTQVKTEETDGYSAIQVTTGSKKANRVTKPEAGHFPAKAGVEAGRGLWEFFTLGQEI SVELFADVKKVDVTGTSK
RSc140 EVGGNRVTQIKTDETDGYTAVQVTTGTRRASRVTKPLAGHLAKAGVEAGEIIVEFLKLGDTIDVDLFSVDQKIDVQGTI
STM021 EVEANRVTQVKDLANDGYRAVQVTTGAKKANRVTKPEAGHFPAKAGVEAGRGLWEFFTVGQSI SVELFADVKKVDVTGTSK
STY024 EVEANRVTQVKDLANDGYRAVQVTTGAKKANRVTKPEAGHFPAKAGVEAGRGLWEFFTVGQSI SVELFADVKKVDVTGTSK
vc2259 EVEANRVSQVKTLETDGYAAIQVTTGSKKANRVTKPEAGHFPAKAGVEAGRGLWEFFAVGSELTVELFNEVKKVDVTGTSK
wbr31 KISDNKIQVKKIKKIKEDGYSSIQVTTGKVKFRRENKSIIGHFKKNKVELGRGLWEFFYVGGVLSINTPINKVNTGTSK
XAC142 QATPNRIAQIKTVEVDGYSAVQVTTGARRAALVNKPAAGHPAKAKVEAGRGLWEFFAVGGEIKADIFEVGQKVDVQGVTK
XCC137 EATPNRIAQIKTVEVDGYSAVQVTTGARRAALVNKPAAGHPAKAKVEAGRGLWEFFAVGGEIKADIFEVGQKVDVQGVTK
XF2579 EATANRVVQIKTSDVDGYDAVQVTTGARRAALVNKPAAGHPAKAKVEAGRGLWEFFYVGGVLSINTPINKVNTGTSK
y3135 EIEANRVTQVKSLENDGYRAVQVTTGAKKANRVTKPEAGHFPAKAGVEAGRGLWEFFTAGQEI SVELFADVKKVDVTGTSK
YP0104 EIEANRVTQVKSLENDGYRAVQVTTGAKKANRVTKPEAGHFPAKAGVEAGRGLWEFFTAGQEI SVELFADVKKVDVTGTSK
Z0181 EVEANRVTQVKDLANDGYRAIQVTTGAKKANRVTKPEAGHFPAKAGVEAGRGLWEFFTVGQSI SVELFADVKKVDVTGTSK

b0170 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGQMGNERVTVQSLDVRVDAERNLLLKVGAVP
BBp214 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
Bf131 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
bu232 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
BUsG22 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
HI0914 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
PA3655 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
PM1985 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
RSc140 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
STM021 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
STY024 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
vc2259 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
wbr31 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
XAC142 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
XCC137 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
XF2579 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
y3135 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
YP0104 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP
Z0181 GKGFAGTVKRWNFRQDATHGNSLSHRVPGSIGQNQTPGKVFKGKMGAGHGNRVTVQNLNIVKIDLNQEIILVKGAVP

b0170 GATGSDLIVKPAVMELVLALTVSETTFGRDFNEALVHQVVVYAAAGARQGTQAQKTRAEVTSKPKPWRQKGTARSGSIK
BBp214 GYSGNIIIIKPAIMELVVLNVSDFTFGRDFNEALVHQVVIISYSSSIRQGTQAQKTRAEVTSKPKPWRQKGTARVGSIR
Bf131 GVI GENVIKRSVMKQLNLSVSDKVFYGFPPNPAIHQIVSSYLINCRQGSKSQKSRSDVSGSNKPKPWRQKGTARSGSVK
bu232 GATGSDLIVKPAIMELVVLNVSDFTFGRDFNEALVHQVVIISYSSSIRQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK
BUsG22 GPTGSDLIVKPAIMELVILLVSEIIFGRDFNEALVHQVVVYAAAGARQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK
HI0914 GAINGDVIKPAVMELVLALTVSETTFGRDFNEALVHQVVVYAAAGARQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK
PA3655 GATGSDLIVKPAIMELVVLNVSDFTFGRDFNEALVHQVVIISYSSSIRQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK
PM1985 GATGSDLIVKPAIMELVVLNVSDFTFGRDFNEALVHQVVIISYSSSIRQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK
RSc140 GATGSDLIVKPAIMELVVLNVSDFTFGRDFNEALVHQVVIISYSSSIRQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK
STM021 GATGSDLIVKPAIMELVVLNVSDFTFGRDFNEALVHQVVIISYSSSIRQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK
STY024 GATGSDLIVKPAIMELVVLNVSDFTFGRDFNEALVHQVVIISYSSSIRQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK
vc2259 GATGSDLIVKPAIMELVVLNVSDFTFGRDFNEALVHQVVIISYSSSIRQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK
wbr31 GATGSDLIVKPAIMELVVLNVSDFTFGRDFNEALVHQVVIISYSSSIRQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK
XAC142 GATGSDLIVKPAIMELVVLNVSDFTFGRDFNEALVHQVVIISYSSSIRQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK
XCC137 GATGSDLIVKPAIMELVVLNVSDFTFGRDFNEALVHQVVIISYSSSIRQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK
XF2579 GATGSDLIVKPAIMELVVLNVSDFTFGRDFNEALVHQVVIISYSSSIRQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK
y3135 GATGSDLIVKPAIMELVVLNVSDFTFGRDFNEALVHQVVIISYSSSIRQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK
YP0104 GATGSDLIVKPAIMELVVLNVSDFTFGRDFNEALVHQVVIISYSSSIRQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK
Z0181 GATGSDLIVKPAIMELVVLNVSDFTFGRDFNEALVHQVVIISYSSSIRQGTQAQKTRAEVTSKPKPWRQKGTARSGSVK

b0170 SPIWRSGGVTFARQDHSQKVNKKMYRGALKSILSELVRQDRLIVVEKFSVEAPKTKLLAQKLDKMALEDVLIITELDEN
BBp214 SPLWRSGGVTFARQDHSQKVNKKMYRGALKSILSELVRQDRLIVVEKFSVEAPKTKLLAQKLDKMALEDVLIITELDEN
Bf131 SPIWRSGGVTFARQDHSQKVNKKMYRGALKSILSELVRQDRLIVVEKFSVEAPKTKLLAQKLDKMALEDVLIITELDEN

bu232 SPIWRSGGVTFAAKQHSQKVNKKMYRGALKSIFSELIRQKRLIVFENFSLDAPKTKLLVQKLDINLKNVLIIVTKIDNN
BUsg22 SPIWRSGGVTFASKQSHSQKINKKMYRGALKSIFSELIRQKRLIIIEFKFSLDLPKTNLLVKKLKEIKLNNVLIITEIENN
HI0914 SPIWRSGGTTFAAKQDHSQKVNKKMYRGAIKSILSELVQRDLVVVEKFFELDAPKTKVLVQKLDLAVEDALIITSLDEN
PA3655 SPIWRGGGTTFAAKRSHEQKLNKKMYRAALRSILAEVLRLDRLVVADFAVDAPKTKGLVAKLDTLGLKDLVITVGDEN
PM1985 SPIWRSGGVTFAAKQDHSQKVNKKMYRGAIKSILSELVQRDLIVVEKFFVEAPKTKVLLQKLELALEDVLIITSLDEN
RSc140 SPLWRGGGRIFPNSENFQKVNKKMYRAGMRSIYQLAREGRINVVDSLSVDAPKTKLLADKFRAMGLDSVLVITNLDEN
STM021 SPIWRSGGVTFAAKQDHSQKVNKKMYRGALKSILSELVQRDLIVVEKFFVEAPKTKLLAQKLDMALEDVLIITELDEN
STY024 SPIWRSGGVTFAAKQDHSQKVNKKMYRGAIKSILSELVQRDLIVVEKFFVEAPKTKLLAQKLDMALEDVLIITELDEN
vc2259 SPIWRSGGVTFAAKQDHSQKVNKKMYRGAIKSILSELVQRDLIVVEKFFVEAPKTKLLAQKLDMALEDVLIITELDEN
wbr31 SPIWRSGGVTFAAKQDHSQKVNKKMYRGAIKSILSELVQRDLIVVEKFFVEAPKTKLLAQKLDMALEDVLIITELDEN
XAC142 APIFVGGGVTFAAKRSFEQKVNKKMYRAAICAFSELNRQGRLLMI VDAFDLEATKTKGLIEKLGKLEGRPLIVTEASEH
XCC137 APIFVGGGVTFAAKRSFEQKVNKKMYRAAICAFSELNRQGRLLMI VDSFDIEATKTKGLIEKLGKMGDKRPLIVTEASEH
XF2579 APIFVGGGVFAAKRSFSQKVNKKMYRGAIKSILSELNRQGRLLMI VDAFDVEVSKTKVFAEKIKSLEGRSLIVSGISEC
Y3135 SPIWRSGGVTFAAKQDHSQKVNKKMYRGAIKSILSELVQRDLIIIEKFFVEAPKTKLLAQKLDMALEDVLIITELDEN
YPO104 SPIWRSGGVTFAAKQDHSQKVNKKMYRGAIKSILSELVQRDLIIIEKFFVEAPKTKLLAQKLDMALEDVLIITELDEN
Z0181 SPIWRSGGVTFAAKQDHSQKVNKKMYRGAIKSILSELVQRDLIIIEKFFVEAPKTKLLAQKLDMALEDVLIITELDEN

b0170 LFLAARNLHKVDVRDATGIDPVSLIAFDKVVMTADAVKQVEEMLAALHLDYKDEVVKKLMTFNFYNSVMQVPRVEKITL
BBp214 LKLASRNLYKVDVQTVNHNMPRLSISFNHVLITSKAIQKVEELLTVALYDYKNSISKKLMNFNYSSVMQVPKIDKITL
Bf131 LILASSNLHTVIYNLNSIDPVSLINFNITLFRITVESLELRLSACLRLDYKSHVYDLMREFFKYKSVMPRIEIKITI
bu232 LFLASRNLYSVDVVDVHSDIDPVSLIAFDHVVITVEAVKRIEELSATLYDYKSKVITQLMHELNYSSVMQVPKIDKITL
BUsg22 LFLASRNLYSVDVVDVCSMDPVSLIAFEHIIITVAALKKVEEMLSSTFFDYDYKSKVVKKLMELNYSSIMQVPKIDKITL
HI0914 LFLAARNLYKVDVDRVQGDIDPVSLIAFDKVVMTADAVKQIEELLAALHLDYKDEVVKKLMTFNFYNSVMQVPRIEIKITL
PA3655 LYLAARNLAHVDRVQGSIDPVSLIAFDKVVMTADAVKQIEELLAALHLDYKDEVVKKLMTFNFYNSVMQVPRIEIKITL
PM1985 LFLAARNLYKVDVDRVQGDIDPVSLIAFDKVVMTADAVKQIEELLAALHLDYKDEVVKKLMTFNFYNSVMQVPRIEIKITL
RSc140 LFLASRNLAHVLVVEPRHADPLSLVHYKVVLTAAVAQIEELKARLQEFYKKEVVAELIKQFGYKSVMEPRITKITL
STM021 LFLAARNLHKVDVRDATGIDPVSLIAFDKVVMTADAVKQVEEMLAALHLDYKDEVVKKLMTFNFYNSVMQVPRVEKITL
STY024 LFLAARNLHKVDVRDATGIDPVSLIAFDKVVMTADAVKQVEEMLAALHLDYKDEVVKKLMTFNFYNSVMQVPRVEKITL
vc2259 LFLAARNLYKVDVDRVQGDIDPVSLIAFDKVVMTADAVKQVEEMLAALHLDYKDEVVKKLMTFNFYNSVMQVPRIEIKITL
wbr31 LVLSSRNLNKVVHVCFFININP INLISFKKTIITIDAIIIEELTMQLYDFYKKNVLIKLNKFNYSIMQVPKIEKITL
XAC142 LYLSARNLPYVQVRDVQGLDPVALVGADTVITADAVKVEEWLARTLEKFKYKDNVVPALMKEFGYTNPMEVPKLVKVTL
XCC137 LYLSARNLPYVQVRDVQGLDPVALVGADTVITADAVKVEEWLARTLEKFKYKDNVVPALMKEFGYTNPMEVPKLVKVTL
XF2579 LLSLRNLPVQVRDVQGLDPVALVGADTVITADAVKVEEWLARTLEKFKYKDNVVPALMKEFGYTNPMEVPKLVKVTL
Y3135 LFLAARNLYKVDVDRVQGDIDPVSLIAFDKVVMTADAVKQVEEMLAALHLDYKDEVVKKLMTFNFYNSVMQVPRVEKITL
YPO104 LFLAARNLYKVDVDRVQGDIDPVSLIAFDKVVMTADAVKQVEEMLAALHLDYKDEVVKKLMTFNFYNSVMQVPRVEKITL
Z0181 LFLAARNLHKVDVRDATGIDPVSLIAFDKVVMTADAVKQVEEMLAALHLDYKDEVVKKLMTFNFYNSVMQVPRVEKITL

b0170 NMGVGEAIADKLLDAAADLAAISGQKPLITKARKSVAGFKIRQGYPIGCKVTLRGERMWEFFERLITIAVPRIRDFRG
BBp214 NIGVGIATIDKKNLDFAIISDLTKISGQKPLITKARKSIASFIRKQGYPIGCKVTLRGNRQWDFFERLIFIVIPRIRDFRG
Bf131 SMGVGKSIINKKFLERAIIDLEMISGQKPVITKARKSIASFIRKQGYPIGCKVTLRGNRQWDFFERLISIAIPRIRDFRG
bu232 NMGVGAASDKKILDNAILDLTAAISGQKPLITKARKSVAGFKIRQGYPIGCKVTLRGRQKWHFFERLITIAVPRIRDFRG
BUsg22 NMGVGAASDKKVLDNAVLDLTAISGQKPLITKARKSVAGFKIRQGYPIGCKVTLRGRQKWHFFERLITIAVPRIRDFRG
HI0914 NMGVGEALTDKLLDNAVADLAAISGQKPLITKARKSVAGFKIRQGYPIGCKVTLRGERMWEFFERLITIAVPRIRDFRG

PA3655 NMGLGEAVGDKKIIENAVADLEKITGQKPVVYARKSIAGFKIREGWPIGVKVTLRSDRMYEFLDRLLSISLPRVRDFRG
PM1985 NMGVGEALTDKLLDNAVADLAAISGQKPLITKARKSVAGFKIRQGYPIGCKVTLRGERMWEFFERLITIAVPRIRDFRG
RSc140 NMGLGEAVNDKVIIEHATGDLTKIAGQKPVVTKARKAIAGFKIRQGYPIGTMVTLRQORMYEFLLRITVSLPRVRDFRG
STM021 NMGVGEAIADKLLDAAADLTAISGQKPLITKARKSVAGFKIRQGYPIGCKVTLRGERMWEFFERLITIAVPRIRDFRG
STY024 NMGVGEAIADKLLDAAADLTAISGQKPLITKARKSVAGFKIRQGYPIGCKVTLRGERMWEFFERLITIAVPRIRDFRG
vc2259 NMGVGEAINDKKLENAASDMAIISGQKPLITKARKSVAGFKIRQGYPIGCKVTLRGERMWFLLRILISLPRVRDFRG
wbr31 NMGVGEAIADKLLDAAADLTAISGQKPLITKARKSVAGFKIRQGYPIGCKVTLRGERMWFLLRILISLPRVRDFRG
XAC142 NMGVGEAATNKKILENAVADMAKISGQKPVVTKSRVSVASFIRKQGYPIGCKVTLRRAKMYEFLDRLLINISLPRVRDFRG
XCC137 NMGVGEAATNKKILENAVADMSKISGQKPVVTKSRVSVASFIRKQGYPIGCKVTLRRAKMYEFLDRLLINISLPRVRDFRG
XF2579 NMGVGEAATNKKVLENAVADMAKISGQKPVVTKSRVSVASFIRKQGYPIGCKVTLRRAKMYEFLDRLLINISLPRVRDFRG
Y3135 NMGVGEAIADKLLDAAADLAAISGQKPLITKARKSVAGFKIRQGYPIGCKVTLRGERMWEFFERLITIAVPRIRDFRG
YPO104 NMGVGEAIADKLLDAAADLAAISGQKPLITKARKSVAGFKIRQGYPIGCKVTLRGERMWEFFERLITIAVPRIRDFRG
Z0181 NMGVGEAIADKLLDAAADLAAISGQKPLITKARKSVAGFKIRQGYPIGCKVTLRGERMWEFFERLITIAVPRIRDFRG

b0170 LSAKSFDRGNYSMGVREQIIFPEIDYDKVDRVRGLDITITTTAKSDEEGRALLAADFPPFRMSRVKAPVVVPAGVDVKI
BBp214 FSNKSFDRGNYSIGIKEQIIFPEIDFDKIDRIRGINITITTTALSDREGYALLSAFNFPFRMSRIKQPIVIPSVDVITL
Bf131 LSIKSFDRGNYSMTGIREQIIFPEINYDITDGRGMINITITTTNAVSDKEAYVLLRAFRFLKMEQIKSIIICIPNEIQITL
bu232 LSHSFDGQGNYSGLIREQIIFPEIDYDKVDRVRGLDITITTTAKSDEEGRALLAADFPPFRMSRVKAPVVVPAGVDVKI
BUsg22 LSTNSFDGKGNYSGLIREQIIFPEIDYDKVDRVRGLDITITTTANSDEHEARLLSSFNFPFRMSRVKRPILIPGKIKIEL
HI0914 LSAKSFDRGNYSMGVREQIIFPEIDYDKVDRVRGLDITITTTAKNDEEGQALLAADFPPFRMSRVKAPVNIIPAGVEVKL
PA3655 LNAKSFDRGNYSMGVKEQIIFPEIDYDKIDALRGLDITITTTARTDDEGRALLRAFKFPFRMSRVKPNVPLPAGVEIKL
PM1985 LSAKSFDRGNYSMGVREQIIFPEIDYDKVDRVRGLDITITTTAKSDEEGQALLAADFPPFRMSRVKAPVSIIPAGVEVKL
RSc140 VSGRAFDRGNYSNIIVGKEQIIFPEIDYDKIDALRGLNISIITTTAKSDEEAKALLAADFPPFRMSRVKAPIALPKGAEVNF
STM021 LSAKSFDRGNYSMGVREQIIFPEIDYDKVDRVRGLDITITTTAKSDEEGRALLAADFPPFRMSRVKAPVVVPAGVDVKI
STY024 LSAKSFDRGNYSMGVREQIIFPEIDYDKVDRVRGLDITITTTAKSDEEGRALLAADFPPFRMSRVKAPVVVPAGVDVKI
vc2259 VNGKSFDRGNYSMGVREQIIFPEIDYDKVDRVRGLDITITTTAGTDEEGRALLAADFPPFRMSRVKAPVNIIPAGVEVKL
wbr31 LPVKSFDGKGNYSGLIREQIIFPEIDYDKIDALRGLDITITTTAKSDEEAKALLAADFPPFRMSRVKAPVNIIPAGVEVKL
XAC142 VSGRSFDRGNYSMGVKEQIIFPEIDFVDAVDAIRGMDIAITTTAKTDAEAKALLAADFPPFRMSRVKPVSLPKGVELNV
XCC137 VSGRSFDRGNYSMGVKEQIIFPEIDFVDAVDAIRGMDIAITTTAKTDAEAKALLAADFPPFRMSRVKPVSLPKGVELNV
XF2579 IPPRSFDRGNYSMGVREQIIFPEIDFVDAVDAIRGMDIAITTTANSDAEAKALLADAFNFPFRMSRVKPVSLPKGVEVSV
Y3135 LSAKSFDRGNYSMGVREQIIFPEIDYDKVDRVRGLDITITTTAKSDEEGRALLAADFPPFRMSRVKAPVNIIPAGVEVKL
YPO104 LSAKSFDRGNYSMGVREQIIFPEIDYDKVDRVRGLDITITTTAKSDEEGRALLAADFPPFRMSRVKAPVNIIPAGVEVKL
Z0181 LSAKSFDRGNYSMGVREQIIFPEIDYDKVDRVRGLDITITTTAKSDEEGRALLAADFPPFRMSRVKAPVVVPAGVDVKI

b0170 NGQVITIKGKNGELTRTLNDAVEVVKHADNTLTFGPRAQAGTARALLNSMIVGTEGFTKKLQLVGVGYRAAVKGNVNL
BBp214 IQGMVIVKGSKGLKRLIHDVSVLKVSKSCLVFSRAQAGTARALLNSMIVGTEGFTKKLQLVGVGYRISINSKNLMS
Bf131 QDCCILVGVGLGNLSYKFNHFGVQFVSNVKNLIVYSALLGTTCSLINSMIVGTEGFTKKLQLVGVGYRISINSKNLMS
bu232 DLQDISIKGYGHLRSITIHQSVKIEFLNNQITFSRAQAGTARALLNSMIVGSEKFKKLLQVGVGYRISITDNIINMS
BUsg22 DLQDISIKGYGHLRSITIHDAVKVECLNNQITFSRAQAGTARALLNSMIVGSKKFKKLLQVGVGYRISITDNIINMS
HI0914 DGQLLTVKGNKNGELSRKIHESVEVKQDNGQFTTTPRAQSGTARALLVAMVIGVTEGFTKKLQLVGVGYRAQLKGNALALS
PA3655 AGQQLSIKGAKGALEKLVHPSVEVIQDSGELRFAARAMAGTTRALVNNMVGVSQGFERKLLQVGVGYRAQAKQVLSLS
PM1985 DGQLLTVKGNKNGELSRITHNAVEVKQDNNELTFSRAQAGTARALLVAMVIGVTEGFTKKLQLVGVGYRAQAKQVLSLS
RSc140 AGGLLTVKGPLGTLTQAIHNLVKKVIDNGTITFSPAALQGTMRALVANMVKGVTTGFERKLLTVGVGYRASLQGAALKLQ

STM021 NGQVITIKGKNGELTRTLNDAVEVKHADNALTFFGPRAQAGTARALLNSMVI GVTEGFTKKLQLVGVGYRAAVKGNVNLS
STY024 NGQVITIKGKNGELTRTLNDAVEVKHADNALTFFGPRAQAGTARALLNSMVI GVTEGFTKKLQLVGVGYRAAVKGNVNLS
vc2259 NGQEITIKGAKGELTRVFNHNGVIAQEDNQLTFGPRAQAGTARALVKNMVGVTGEGFTKKLVKGVGYRAAMKGNVGLT
wbr31 LKKNIIIGQYGEINQLINKNINIKVNNNNIIISFPFAIAGTMRSIINNMIIGVTKKFTKKLIITGVGYRANISQKVLIMS
XAC142 QPGLVSVKPKGKTLTLQPKPAGVEIAIDGGVATLSANALGTVRAILANMIIKGVSEGFERKLELVGVGYRAAMQKGDLSLA
XCC137 QPELISVKGPKGTLTLQPKPAGVEIAIDGGVATLSANALGTVRAILANMIIKGVSEGFERKLELVGVGYRAAMQKGDLSLA
XF2579 RSDMLTVKGVKGLTFPKSDNVNVVVDGDLTLTSLANSAGTTRAILNSMIKGVSI GFERKLELVGVGYRASMGENLNS
y3135 NGQVISIKGKNGELTRTVHSAVEVKQEENTLTFAPRAQAGTTRALLNSMVI GVTEGFTKKLQLVGVGYRAAVKGNVNLA
YPO104 NGQVISIKGKNGELTRTVHSAVEVKQEENTLTFAPRAQAGTTRALLNSMVI GVTEGFTKKLQLVGVGYRAAVKGNVNLA
Z0181 NGQVITIKGKNGELTRTLNDAVEVKHADNALTFFGPRAQAGTARALLNSMVI GVTEGFTKKLQLVGVGYRAAVKGNVNLS

b0170 LGFSPVDHQLPAGITAECTQTEIVLKGADKQVIGQVAADLRAYRRPEPYKKGKGVRYADEVVRTKEAKKMVILLDKVA
Bbp214 LGYSHIIEYVLPFGIFVESISQAEIIVKGINQLVGVQAANLRAYRKSEPYKKGKIRYSNEIVRVKEAKMQIILLEKLD
Bf131 VGFSDIRYTLPIEVKAQCVNQTEIVLTSINKQLIGQVAADLRRAIKPEPEPKGKIRYFDELVYNKDTKKMQVILLDSID
bu232 LGYSHIITYHLPGKINAENLSPTEIIOGIDKQLVGGIAANLRSYRTPPEPYKKGKIRYSNEVVRIEAKKMEVILLSKIK
BUsG22 LGYSHPIVYSLPPYIEAENSPTEIIVKGVKQVIGQVAANLRSYRTPPEPYKKGKIRYSNEVVHMKEAKKMEVILLSKIK
HI0914 LGYSHPVEHTLPVGI TAECPSQTEIVLKGADKQLIGQVAADLRAYRRPEPYKKGKIRYADEVVRTKEAKKMVILLDKIV
PA3655 LGFSPVDYELPAGIVAETPSQTDILIKGIDKQLVGGVAAEIRDFRPPPEPYKKGKGVRYADEVVRTKEAKKMEVILLEKVA
PM1985 LGFSPVHEHALPAGITAECPSQTEIVLKGADKQLIGQVAADLRAYRRPEPYKKGKGVRYADEVVRTKEAKKMVILLDKV
RSc140 LGFSDHVIHEMPEGVKAETPTQTEIIVKGSQKQVIGQVAADLRAYRRPEPYKKGKGVRYANERVILKTKMQIILLEKVV
STM021 LGFSPVDHQLPAGITAECTQTEIVLKGADKQVIGQVAADLRAYRRPEPYKKGKGVRYADEVVRTKEAKKMVILLDKVA
STY024 LGFSPVDHQLPAGITAECTQTEIVLKGADKQVIGQVAADLRAYRRPEPYKKGKGVRYADEVVRTKEAKKMVILLDKVA
vc2259 LGFSPVHEHALPAGITAECPSQTEIIVLTCGDKQVIGQVAADLRAYRRPEPYKKGKIRYADEVVRTKEAKKMVILLDKIG
wbr31 LGFSSHQIKIKIPEAIFAECTNSNEIILSSVDKQKIGQFAANIRNYKISDPYKKGKIRYSYIEIKIKETKMQIILLKKII
XAC142 LGFSHPLVFAPEGITLSTPTQTEIVVQGDQKQVGEVAAKIRGFRPPEPYKKGKGVYAGEVIRKEAKKMDLILLQKVT
XCC137 LGFSHPLVFAPEGITLSTPTQTEIVVQGDQKQVGEVAAKIRGFRPPEPYKKGKGVYAGEVIRKEAKKMDLILLQKVT
XF2579 LGFSHPLVFPPEGITLSTPTQTEIVVQGDQKQVGEVAAKIRGFRPPEPYKKGKGLYAAEAIMRKEAKKMDLILLQKVA
y3135 LGFSPVDHQLPAGITAECTQTEIVLKGADKQVIGQVAADLRAYRRPEPYKKGKGVRYADEVVRTKEAKKMVILLDKVA
YPO104 LGFSPVDHQLPAGITAECTQTEIVLKGADKQVIGQVAADLRAYRRPEPYKKGKGVRYADEVVRTKEAKKMVILLDKVA
Z0181 LGFSPVDHQLPAGITAECTQTEIVLKGADKQVIGQVAADLRAYRRPEPYKKGKGVRYADEVVRTKEAKKMVILLDKVA

b0170 NLGSLGDQVNVKAGYARNFLVPPQKAVPATKKNIEFFEARAELEAKLAEVLAANARAEEKINAVTIASKAGDEGKLFGS
Bbp214 NLGNKGDILFVKSQYARNFLIPYKGAIFATKDNKIFEFINKKEELERELIKKISIAKTKCEKIKNIIVPAQVIEGKLFGS
Bf131 KVGKIGSEIIVKSGYARNFLFPKSKAVLSTKKNLAIFFKQOHILKSNLDSKRLKAEFRAKAINDITITVKSSIHGKLFGS
bu232 KLGDGSAIVHVKSQYARNFLIPKGAAILASKNIESFEAQRVALEKEKINELLIAQSRAEKLKITITLPSKVGKEGKIFGS
BUsG22 KLGDGSAIVHVKSQYARNFLIPKGAAILASKNIESFEAQRVALEKENISKLLIAQSRAEKIKTITITPSKVGKEGKIFGS
HI0914 HLGQVGDQVNVKSGFARNFLIPQKAVMATKANIIEHFEARAELEAKAAEAQARAEEVAVTAVTIASKAGDEGRFLFGA
PA3655 NLGNLGDQVNVKAGYARNFLVPPQKAVPATKKNIEFFEARAELEAKLAEVLAANARAEEKINAVTIASKAGDEGKLFGS
PM1985 HLGNTIGDQVNVKSGFARNFLIPQKAVMATKANIIEHFEARAELEAKAAEAQARAEEVAVTAVTIASKAGDEGRFLFGA
RSc140 NLGNLGDQVNVKAGYARNFLIPKQKARRATASAIQIEFEARAELEAKLAEVLAANARAEEKINAVTIASKAGDEGRFLFGS
STM021 NLGSLGDQVNVKAGYARNFLVPPQKAVPATKKNIEFFEARAELEAKLADVLAANARAEEKINAVTIASKAGDEGKLFGS
STY024 NLGSLGDQVNVKAGYARNFLVPPQKAVPATKKNIEFFEARAELEAKLADVLAANARAEEKINAVTIASKAGDEGKLFGS
vc2259 NLGSLGDQVNVKAGYARNFLIPQKAVMATKANVAMFEARAELEAKVAEQALAAQTRADQVNAVVIASKAGDEGKLFGS
wbr31 NKGNIIDKIKVAGYARNFLFPKKAIAIASEKNLKFPEKRRKILEEQSKYENFKLKERFRNIKSIEIYCKAGSKGKLFGS
XAC142 NLGNLGDQVNVKSGYARNFLVPPQKAVPATKKNIEFFEARAELEAKLAEVLAANARAEEKINAVTIASKAGDEGKLFGS
XCC137 NLGNLGDQVNVKSGYARNFLVPPQKAVPATKKNIEFFEARAELEAKLAEVLAANARAEEKINAVTIASKAGDEGKLFGS
XF2579 NLGALGDQVNVKSGYARNFLVPPQKAVPATKKNIEFFEARAELEAKLAEVLAANARAEEKINAVTIASKAGDEGKLFGS
y3135 NLGSLGDQVNVKAGYARNFLVPPQKAVPATKKNIEFFEARAELEAKLADVLAANARAEEKINAVTIASKAGDEGKLFGS
YPO104 NLGSLGDQVNVKAGYARNFLVPPQKAVPATKKNIEFFEARAELEAKLADVLAANARAEEKINAVTIASKAGDEGKLFGS
Z0181 NLGSLGDQVNVKAGYARNFLVPPQKAVPATKKNIEFFEARAELEAKLAEVLAANARAEEKINAVTIASKAGDEGKLFGS

b0170 IGTRDIADAVTEVAKSEVRLPVLRTTGEHEVVFQVHSEVFAKVIINNVANLQDKQAI VAEVSEVAKGALS AVVADSRGVT
Bbp214 VGSRDIAKLSKIKKHEIYFLALKHVQGHVIFKPHHSVSI TVEINIVSDFKKKKELVTQINLI AKTALSIVVANPQGIK
Bf131 IGSRDIAKLI TEVHKSQIRLPALKSIEGHNVCIHVNEIYANLTVHILNSIKKKEQIVCKIQEVFKISSAVIASLSNIT
bu232 VGVRNIIKEIILKINKKEIRLPLLRQVGEHIVVFPQHSKVSINFIVKLIASIHDKKIVSKINIKSNTALS AVTADSRGVT
BUsG22 IGIRNI IKEMNKVNKKEIKLPVLRQVGEHVI FQPHNEVCEYFIVNIISNLSKKTIVSKINQISNLSAIS IANSQGIS
HI0914 ITTRDVAEAVTKIAKSEVRLPPIRTLGDHDFVFLHGEVFAALDVIVVANLQDKQAI VAEVNEAAKGAALS AVIADSRGVT
PA3655 IGTRDIAEAVSPLEKAEVRLPALRNTGDFVAVHLHTDVE'TTLKLIIVAKLEDKKAIVAEVNEAAKGAALS AVVADSRGVT
PM1985 ITTRDVAEAVTEVAKSEVRLSPIRTLGDHEVFKQLHGEVFATINVIIVANLQDKQAI VAEVNEAAKGAALS AVIADSRGVT
RSc140 VTNHDIAAALTKVEKAQVRMPPLKTVGDDHPVAVSLHTDVSVDVTVSVLGNLEDKKAIVAEVTAQVAKASTIIVVAEYRGIT
STM021 IGTRDIADAVTEVAKSEVRLPVLRTTGEHEVVFQVHSEVFAKVIINNVANLQDKQAI VAEVSEVAKGALS AVVADSRGVT
STY024 IGTRDIADAVTEVAKSEVRLPVLRTTGEHEVVFQVHSEVFAKVIINNVANLQDKQAI VAEVSEVAKGALS AVVADSRGVT
vc2259 IGTRDIADAVTEVAKSEVRLPALRNVGAEVYSVQLHSEVFAKVIINNVANLQDKKAI VAEVNEAAKGAALS AVVADSRGVT
wbr31 IGANHIIEKIKRIMKNEIKLTPKKTIGKHNIKIKVKSNMCTEIVKILKNNRKNKENISKINIKTSLSLILIVDPTGIT
XAC142 VGPRIIAEAFTPLEKSEVILGAFRNVGEYDVVLLHLHADVETTVKVIIVESNLSQKQEVVAELADIAAKAHSLIAAEYAGTT
XCC137 VGPRIIAEAFTPLEKSEVILGAFRNVGEYDVVLLHLHADVETTVKVIIVESNLSQKQEVVAELADIAAKAHSLIAAEYAGIT
XF2579 VGARDIAEAFTPLEKKEVILGFPFRLIGEYDVLLHLHADVETTVKVIIVQGNIFQKQEVVEELAGVAFKHSLIAAEYAGIT
y3135 IGTRDIADAVTEVAKSEVRLPVLRTTAGEHEVHFQVHSDVFAKLVNVVVPNLQKQAI VAEVSEVAKGALS AVVADSRGVT
YPO104 IGTRDIADAVTEVAKSEVRLPVLRTTAGEHEVHFQVHSDVFAKLVNVVVPNLQKQAI VAEVSEVAKGALS AVVADSRGVT
Z0181 IGTRDIADAVTEVAKSEVRLPVLRTTAGEHEVHFQVHSDVFAKLVNVVVPNLQKQAI VAEVSEVAKGALS AVVADSRGVT

b0170 VDKMTELKREAGVYMRVVRNTLLRRVVEGTFPECLKDAFVGP TLIAESEHPGAAARLFKEFAKNAKFEVKA AAFEGE
Bbp214 SNDITQLRKLARKSNVKGLYRNTLLNLGINKTPECLKNLIIIGPTLIIAYSEHPGSAAKLKNFSMNPFKLIGAVFEGK
Bf131 SNSMNLKRESRDCGVYIKVIPNTLLRRALKNSLYECLSNFCIGQNI IAFSNNSPDAARLVNFSKNEYFKIAGAVCEGN
bu232 VNKINELRKS GREVGVKMSIVQNTLLSLAIKNTVFELCKKLLKGSFTIAYS IHPGSGARLFKEFSKNTQFKITGAAFEGK
BUsG22 VNKINELRKS GREIIGVKMSIVRNTLLSLAIKNTVFELCKKLLKGSFTIAYS IHPGSGARLFKEFSKNTQFKITGAAFEGK
HI0914 VEKMTLRLKSAREAGVYMRVVRNTLLRRVVEGTFPECLKDTFVGP TLIAESEHPGAAARLFKEFAKNDKFEIKGA AFEGK
PA3655 VGAMTGLRKEAREAGVYMRVVRNTLLRRVVEGTFPECLKDTFVGP TLIAESEHPGAAARLFKEFAKNDKFEIKGA AFEGK
PM1985 VDKMTELKREAGVYMRVVRNTLLRRVVEGTFPECLKDTFVGP TLIAESEHPGAAARLFKEFAKNDKFEIKGA AFEGK
RSc140 VGDITKLRAQARQQGVYLRVKNLTLARRAVEGTFPECLKDTFVGP TLIAESEHPGAAARLFKEFAKNDKFEIKGA AFEGK
STM021 VDKMTELKREAGVYMRVVRNTLLRRVVEGTFPECLKDTFVGP TLIAESEHPGAAARLFKEFAKNAKFEVKA AAFEGE
STY024 VDKMTELKREAGVYMRVVRNTLLRRVVEGTFPECLKDTFVGP TLIAESEHPGAAARLFKEFAKNAKFEVKA AAFEGE
vc2259 VAMTNLRLKQAREAGVYMRVVRNTLLRRVVEGTFPECLKDTFVGP TLIAESEHPGAAARLFKEFAKNAKFEIKGA AFEGK
wbr31 VSQMNLRKSSRKLNVNIKQVRNTLMRFAIVDTEFDCLEKYIKGSNLIAFSSHPGSAARLIFKNFTKNNKIKIKLAVFERK
XAC142 SNQMTAMRKQARETGVLVVKVNTLARRAVEGTFPECLKDTFVGP TLIAESEHPGAAARLFKEFAKNDKFEIKGA AFEGK
XCC137 VSQMTAMRKQARETGVLVVKVNTLARRAVEGTFPECLKDTFVGP TLIAESEHPGAAARLFKEFAKNDKFEIKGA AFEGK

XF2579 VSQMTAMRRQARESGVYLVKVNKLAARALGDTEYAVIKEKLIQPLLYAFSEDPGAAGRLIKESFKHDKLKSKTIVSLGGV
y3135 VDKMTELRRAGREAGVHMVVRNTLLRRIVEGTPPECLKDTFVGPVTLIAFSEHPGAAARLFKAFAKNAKFEVKAAAFEGE
YPO104 VDKMTELRRAGREAGVHMVVRNTLLRRIVEGTPPECLKDTFVGPVTLIAFSEHPGAAARLFKAFAKNAKFEVKAAAFEGE
Z0181 VDKMTELRRAGREAGVYMRVVRNTLLRRIVEGTPPECLKDAFVGPVTLIAFSEHPGAAARLFKAFAKNAKFEVKAAAFEGE

b0170 LIDRLATLPTYEEA IARLMATMKEASKLVRTLAAVRMAKKVQAYVKLQVAAGMANPSPVPVGPALGQQGVNIMEFCKAFNA
BBp214 AINSLADIPTFNEALRRFII IAKEISKLLRILVSIKMAKTIQAYIKLQVSAGTANPSPVPVGPALGQQGVNIMEFCKAFNT
Bf131 FIDMLSRPLPNYNESLQLILILKVMMSKLVNKLILSVKVKVQSCIKLQIEARSATPSPVPVGPALGQQGVNIMEFCKDFNT
bu232 LINQLADMPYTYEAI IKLLLTWKMLIKLIYTLSAIKMAKKIQSYIKLQVSAGAANPSPVPVGPALGQQGVNIMEFCKLFNK
BUsg22 LINQLADMPYTYEAI IKLLLTWKMLIKLIYTLSAIKMAKKIQSYIKLQVAAGMANPSPVPVGPALGQQGVNIMEFCKLFNK
HI0914 IVEFLATLPTYEEA IARLMGTMKEAASKLVRTLAAVRMAKKVQAYVKLQVAAGMANPSPVPVGPALGQQGVNIMEFCKAFNA
PA3655 FIDVLASLPTYDEAVSOLMSVIQGATKLARTLAAIRMAKKIQAYIKLQVKAGQANPSPVPVGPALGQQHGVNIMEFCKAFNA
PM1985 IVEFLATLPTYDEA IARLMGTMKEAASKLVRTLAAVRMAKKVQAYVKLQVAAGMANPSPVPVGPALGQQGVNIMEFCKAFNA
RSc140 VVKALASIPREELLSKLLFVMQAPVGFARALAAAMAKKIIGFIKLQIPAGKANPSPVPVGPALGQQGVNIMEFCKAFNA
STM021 LIDRLATLPTYEEA IARLMATMKEASKLVRTLAAVRMAKKVQAYVKLQVAAGMANPSPVPVGPALGQQGVNIMEFCKAFNA
STY024 LIDRLATLPTYEEA IARLMATMKEASKLVRTLAAVRMAKKVQAYVKLQVAAGMANPSPVPVGPALGQQGVNIMEFCKAFNA
vc2259 LPEVLATLPTYEEA IARLMCMCKEASKLVRTLAAVRMAKKVQAYVKLQVAAGMANPSPVPVGPALGQQGVNIMEFCKAFNA
wbr31 IIDYLANLP THEESVINI IQEASKLIRILILINMTKKIKAYVKLQIKAGSANPSPVPVGPALGQQGVNIMEFCKSFNA
XAC142 LVDVLASLPTDQALAMLARVLSEPA MFARAVKAVGMAKKITAFIKLQVKAGQANPAPPVGPALGQQGVNIMEFCKAFNA
XCC137 LVDVLASLPTDQALAMLARVLSEPA MFARAVKAVGMAKKITAFIKLQVKAGQANPAPPVGPALGQQGVNIMEFCKAFNA
XF2579 LVDVLASLPTDQALAMLARVLSEPA MFARAVKAVGMAKKITAFIKLQVKAGQANPAPPVGPALGQQGVNIMEFCKAFNA
y3135 LIDRLATLPTYEEA IARLMGTMKEAASKLVRTLAAVRMAKKVQAYVKLQVAAGMANPSPVPVGPALGQQGVNIMEFCKAFNA
YPO104 LIDRLATLPTYEEA IARLMGTMKEAASKLVRTLAAVRMAKKVQAYVKLQVAAGMANPSPVPVGPALGQQGVNIMEFCKAFNA
Z0181 LIDRLATLPTYEEA IARLMATMKEASKLVRTLAAVRMAKKVQAYVKLQVAAGMANPSPVPVGPALGQQGVNIMEFCKAFNA

b0170 KTDSIEKGLPIPVVITVYADRSFTFVTKTPPAAVLLKKAAGIKSGSGKPNKDKVVKI SRAQLQEIAQTKAADMTGADIEA
BBp214 RTNNEKGLPIPTIITVYSDKSFSTFKTTPASVLLKKAAGIKSGSKPNQNKVGTITMQQILIDIAQIKKIDMTGNSIDN
Bf131 RTADFEMGLLIPVVIITVYSDRSFSTFKTTPAVFLKKAAGIKSGSEKPKCVSVGKVLISQIYEIAKIKLIDMTSLNLES
bu232 KTENIEKGLPIPVVITVYSDRSFSTFKTTPASVLLKKAAGIKSGSKPNKDKVVKI INRSQIKIEIAI IKNNDMTGKSIEN
BUsg22 TTENVEKGLPIPVVITVYSDRSFSTFKTTPASVLLKKAAGIKSGSKPKIETTGTIKLQIEEIAKTKNDMTGLNIES
HI0914 RTESLEKGLPIPVVITVYADRSFTFVTKTPPAAVLLKKAAGIKSGSGKPNKDKVVKITLDQVRQIAETKAADMTGAT IET
PA3655 KTQGGEPGLPTPVIITVYSDRSFSTFKTTPPAAVLLKKAAGIKSGSARPNQKVGTVTRAQLEIEIAQTKAADMTGADIEA
PM1985 RTESLEKGLPIPVVITVYADRSFSTFKTTPPAAVLLKKAAGIKSGSGKPNKDKVVKITLQVRQIAETKAADMTGSS IET
RSc140 QTQGMPEGLPVPVITAFADKSFSTFVMKSPATVLIKKAAGVQKGSAPKHTDKVVKITRAQAEIEIAKAKNADLTAADLDA
STM021 KTDSIEKGLPIPVVITVYADRSFTFVTKTPPAAVLLKKAAGIKSGSGKPNKDKVVKI SRAQLQEIAQTKAADMTGADIEA
STY024 KTDSIEKGLPIPVVITVYADRSFTFVTKTPPAAVLLKKAAGIKSGSGKPNKDKVVKI SRAQLQEIAQTKAADMTGADIEA
vc2259 RTESLEKGLPIPVVITVYSDRSFSTFKTTPASVLLKKAAGIKSGSARPNQKVGTVTRAQLEIEIAKTKAADMTGADIEA
wbr31 KTNIDKDTPIPVVITVYSDRSFSTFKTTPASVLLKKAAGIKSGSDNPNKKNKIKGKISIFKINEIAKKSXPDMTGSTLNS
XAC142 ATSKLEPGLPTPVIITAYSDFSTFVTKTPASVLLKKAAGVSSGSKRPNTDKVVKVTRKQLEIEIAKVKADLTAEELEA
XCC137 ATSKLEPGLPTPVIITAYSDFSTFVTKTPASVLLKKAAGVSSGSKRPNTDKVVKVTRKQLEIEIIVKVKADLTAEELEA
XF2579 ATQKVEGLPTPVIITAYSDFSTFVTKTPASVLLKKAAGVSSGSKRPNTDKVVKVTRKQLEIEIAKTKAADMTGADIEA
y3135 KTESIEKGLPIPVVITVYSDRSFSTFVTKTPPAAVLLKKAAGIKSGSGVPNKDKVVKVTSAQVREIAETKAADMTGSDVDA
YPO104 KTESIEKGLPIPVVITVYSDRSFSTFVTKTPPAAVLLKKAAGIKSGSGVPNKDKVVKVTSAQVREIAETKAADMTGSDVDA
Z0181 KTDSIEKGLPIPVVITVYADRSFTFVTKTPPAAVLLKKAAGIKSGSGKPNKDKVVKI SRAQLQEIAQTKAADMTGADIEA

b0170 MTRSIEGTARSMGLVVEITKDQIEAIVAAVMSVMDVVELISAMEEKFVGSAAAVAVAEAEETFDVILKAAGANKVAVIK
BBp214 ISKSIIGTANSIGLIIAITEKQILDIAISEMSVMNIVELISDMKEKFGVSSISSSTIETAETFDVILKKSIGGNKVSIVIK
Bf131 ASKSIMGTARSIGLEVELKKEEVLDAISEMSVMDIMQLISMIKFKVGSAAASHISSVTESETEFTVILSSIGGNKIPVIK
bu232 MMRSEGTARSMGLIIEITKEQILEAISEMSVMNVVDLITAMEEKFVGSASMINSKDLRETFEFDIFLKVIGPNKVSIVIK
BUsg22 MMRSEGTARSMGLIVEITKEQILEAVSEMSVMNVVELISAMEEKFVGSAAAVAVAEAEAEETFDVILKAAGANKVAVIK
HI0914 KMKSIAGTARSMGLVVELTNEQIEAIAASKTVTEIVELIAAMEEKFVGSAAAVAAAAAAAEETFDVILKAGANKVAVIK
PA3655 AVRTIAGSARSMGLVVELTNEQIEAIAASKTVTEIVELIAAMEEKFVGSAAAVAAAAAAAEETFDVILKAGANKVAVIK
PM1985 KMKSIAGTARSMGLVVELTNEQIEAIAASKTVTEIVELIAAMEEKFVGSAAAVAAAAAAAEETFDVILKAGANKVAVIK
RSc140 AVRTIAGSARSMGITVEITKDDILEAVSAMSVMELNDLVKAFEDKFGVSAAAAVAGAAPAEETFDVILKAGANKVAVIK
STM021 MTRSIEGTARSMGLVVEITKDQIEAIVAAVMSVMDVVELISAMEEKFVGSAAAVAVAEAEAEETFDVILKAAGANKVAVIK
STY024 MTRSIEGTARSMGLVVEITKDQIEAIVAAVMSVMDVVELISAMEEKFVGSAAAVAVAEAEAEETFDVILKAAGANKVAVIK
vc2259 MKRSIAGTARSMGLVVEITNEQILDAIAEMSVQVVELISAMEEKFVGSAAAVVSGAAAVETEFVNI LAAAGANKVAVIK
wbr31 ISKSIIGTARSMGLSIEINKQILDIAISEMSVLEI SELVSMMEKFKGVSSINNNINDESVESEFDVILLEIGKNKIVIK
XAC142 AVRTIAGSARSMGLTVELTNEQIVDAIAEKSLMEVMELVKAIIEKFGVSAAAVAAAAAAAVVETEFVNI LKAGANKVAVIK
XCC137 AVRTIAGSARSMGLTVELTNEQIVDAIAEKSLMEVMELVKAIIEKFGVSAAAVAAAAAAAVVETEFVNI LKAGANKVAVIK
XF2579 AVRTIAGSARSMGLVVELTNEQIEAIAEKSIEMVMELVKAIIEKFGVSAAAVMSAAPVETEFVNI LKAGANKVAVIK
y3135 MMRSEGTARSMGLVVEITKDQILEGVAALSVMEIVELISAMEEKFVGSAAVAAAAAGPVEAEETFDVILKAGANKVAVIK
YPO104 MMRSEGTARSMGLVVEITKDQILEGVAALSVMEIVELISAMEEKFVGSAAVAAAAAGPVEAEETFDVILKAGANKVAVIK
Z0181 MTRSIEGTARSMGLVVEITKDQIEAIVAAVMSVMDVVELISAMEEKFVGSAAAVAVAEAEAEETFDVILKAAGANKVAVIK

b0170 AVRGATGLGLKEAKDLVEAALKEGVSKDDAEALKKALEEAGAEVEVAKPETVKRDWYVVDATGKTLGRLATELARRLRGK
BBp214 AVRSATGLGLKEAKDLVETI IKERITQDAAESLKKILNETGAEVE IAKSNDFKMMWYCIDATGKILGRLATLARRLRGK
Bf131 AVRSITGLGLKEAKDLVEVTLKESVSKDDADNKKLTLESGASVE I SRLRIKRLWYIVDAKKNVGLRSLSSIAKYLIIGK
bu232 TVRSATGLGLKEAKDLVETVLKENI SKEDAESLKTLEDVGAIE I I KSSNIKRHWYVVDATNKLGRLASALSFLHRGK
BUsg22 SVRSATGLGLKEAKDLVETVLKENMSKNDAESLKTLEDAGAEIE I LKLNIDKRNWFYVDATNKLGRFASALSIRLRGK
HI0914 AVRGATGLGLKEAKDLVEANLKEGVSKDEAEALKEEAEAGAEVEVAKPETVKRDWYVVDATGKTLGRLATELARRLRGK
PA3655 VVRELTGLGLKEAKAVVDGVVKEGASKEEAEAKKALEEAGAKVELAKPETVQRDWFVVDAGQTLGRLATEIARRLRGK
PM1985 AVRGATGLGLKEAKDLVEAVLKEGISAKEAEALKEEAEAGAEVEVAKPETVKRDWYVVDATGKTLGRLATELARRLRGK
RSc140 AVREITGLGLKEAKDLVVKAMPKADADAACKLIEAGAEVEVAKPHEVKNWFYVDATDKVLRGVAEVLARRLRGK
STM021 AVRGATGLGLKEAKDLVEAALKEGVSKDDAEALKKALEEAGAEVEVAKPETVKRDWYVVDATGKTLGRLATELARRLRGK
STY024 AVRGATGLGLKEAKDLVEAALKEGVSKDDAEALKKALEEAGAEVEVAKPETVKRDWYVVDATGKTLGRLATELARRLRGK
vc2259 AVRGATGLGLKEAKDLVDAVSAVKEAEALKEEAEAGAEVEVAKPETVKRDWYVVDABEGKTLGRLASEIASRLRGK
wbr31 SVRSALSGLKESKDLIEITLKTGLNKKDAESLKEIETSGARIELLKNIARQNWIFDAKKNILGRFSTKLASILKKG
XAC142 AVRAVTGLGLKEAKDLTEGMLKEGASKDEAEKIKKELTEAGATVE IAKSETVQRDWFVVDAGKTLGRLATELARRLRGK
XCC137 AVRGVTLGLGLKEAKDLTEGILKEGVSKDEAEKIKKEMTEAGATVE IAKSETVQRDWFVVDAGKTLGRLATELARRLRGK
XF2579 AVRAVTGLGLKEAKDLTEGILKEAVSKEEAEKVKKLEAAGATVEVAKNETVQRDWFVVDAGKTLGRLATELARRLRGK
y3135 AVRGATGLGLKEAKDLVEAVLKEGVNKEAEETLKKALEEAGASVE IAKPETVKRDWYVVDASGKTLGRLATELARRLRGK
YPO104 AVRGATGLGLKEAKDLVEAVLKEGVNKEAEETLKKALEEAGASVE IAKPETVKRDWYVVDASGKTLGRLATELARRLRGK
Z0181 AVRGATGLGLKEAKDLVEAALKEGVSKDDAEALKKALEEAGAEVEVAKPETVKRDWYVVDATGKTLGRLATELARRLRGK

b0170 HKAEYTPHVDGDIYIIVLNADKVAVTGNKRDVYIYHHTGHIGGKQATFEEMIRRPVRIE IAVKGMPLPKGPLGRAMFRK
BBp214 HKVEYTPHVDIGDYIIVINAKNIKVTGKCKDFYHHTGYVGLKKAIFKDMRYPERIIE IAVRGMPLPKGPLGRSMFRK

Bf131 HKVEYAPYVDVGDYIIVINASKDVCVTGRKYDKIYYRHTGYVGGIKKLTFFKQMI SYPNKVI ESSVRGMLPKNSLGRMMFKR
bu232 HKTEYTPHLDTDGYIIVINASKILVTGNKRNKIYYHTGYVGGIKQSRFEEMI SHPERVIEIAVKGMLPKGALGRSMFKK
BUsg22 HKIEYTPHLDTDGYIIVLNASKILVTGQKKNKVVYHHTGYIGGKQLRFEEIMKNPAKVEIEIAVKGMLPKGSLGRSMFKK
HI0914 HKAETTPHVDTDGYIIVINADKVAVTGNKEDKLYWHHTGYVGGIKQATFKEMIRRP EAVIEIAVKGMLPKGPLGRAMFRK
PA3655 HKPEYTPHVDTDGYIIVINAEQVVRTGAKTDKMYHHSFPGGKIKSINFEKLIKAPERVIEIAVKGMLPKGPLGRDYMRYK
PM1985 HKAETTPHVDTDGYIIVINAEKVAVTGNKEDKLYWHHTGYVGGIKQATFKEMIRRP EAVIEIAVKGMLPKGPLGRAMYRK
RSc140 HKPEYTPHVDTDGYIIVINAAKLRVTGAKTDKMYHHSFPGGKIKSINFEKLIKAPERVIEIAVKGMLPKGPLGYAMIKK
STM021 HKAETTPHVDTDGYIIVLNADKVAVTGNKRDKVYHHTGYVGGIKQATFKEMIRRP EAVIEIAVKGMLPKGPLGRAMFRK
STY024 HKAETTPHVDTDGYIIVLNADKVAVTGNKRDKVYHHTGYVGGIKQATFKEMIRRP EAVIEIAVKGMLPKGPLGRAMFRK
vc2259 HKAETTPHVDTDGYIIVVNAEKVTVTGKANKMYYHRSEFPGLKSFSEKLIKPEMVLAVKGLPKGPLGRAMYRK
wbr31 NDITYTPHVDSDGNYVIVINSKIKITGKLNKVFYHHTGYVGGIKKLSLVNMINNSELVIYKSVKGMPLPKGSLGRVMIKK
XAC142 HKPVYTPHVDTDGYLVVINAEKIVVTGNKLDKYYHRFTGYIGNLKTESLEQALRHPERVIEIAVKGMLPKGPLGRMTYRK
XCC137 HKPVYTPHVDTDGYLVVINAEKIVVTGNKLDKYYHRFTGYIGNLKTESLEQALRHPERVIEIAVKGMLPKGPLGRMTYRK
XF2579 TKPVYTPHVDTDGYLVVINAEKVVVTGKLDKYYHRFTGYIGNLKTESLEQALRHPERVIEIAVKGMLPKGPLGRAMYRK
y3135 HKAETTPHVDTDGYIIVLNAEKVAVTGNKRDKIYYHHTGYVGGIKQATFKEMIRRP EAVIEIAVKGMLPKGPLGRAMYRK
YPO104 HKAETTPHVDTDGYIIVLNAEKVAVTGNKRDKIYYHHTGYVGGIKQATFKEMIRRP EAVIEIAVKGMLPKGPLGRAMYRK
Z0181 HKAETTPHVDTDGYIIVLNADKVAVTGNKRDKVYHHTGYVGGIKQATFKEMIRRP EAVIEIAVKGMLPKGPLGRAMFRK

b0170 LKVYAGNEHNHAAQQPQVLDMIQEQTMLNVADNSGARRVMCIKVLGGSHRRYAGVGDIIKITIKEAIPRGKVKKGDVLA
Bbp214 LKVYANDNHNHSAQNPQILNMIQEQSILNVADNSGARLAMCIKVLGGSRRRYAGIGDIKISIKEAIPRGKVKKGEVFA
Bf131 LKVYSGSIHSHNAQSPKVLVLEIQRTEILNVADNSGARFAMCIKVLGGSKRRYANIGDVIKVTKEAIPKAKVKKGDVLA
bu232 LKVFSENENHEHIAQCPQLNMIQEQTILNVADNSGARSAMCIKVLGGSRRRYAAIGDVIKITIKEAIPRGKVKKGEVLA
BUsg22 LKVFSNENHDHIAQCPQLNMIQEQTILNVADNSGARSAMCIKVLGGSRRRYAAIGDIKISIKEAIPRGKVKKGEVLA
HI0914 LKVYAGGEHQHAAQQPQVLDMIQEQTMLDVADNSGARSVMCIKVLGGSHRRYAAIGDIKITIVKEAIPRGKVKKGDVLA
PA3655 LKVYKGAHPHTAQPPQELKMIQTQSMLDVADNSGARRVMCIKVLGGSHRRYAGIGDIKVTVKEAIPRGKVKKGDVLA
PM1985 LKVYAGSEHNHAAQQPQVLDMIQEQTMLNVADNSGARSVMCIKVLGGSHRRYAAIGDIKITIVKEAIPRGKVKKGDVLA
RSc140 LKVYAGSEHPHAAQQPQVLEMIQTESRLEVDANTGAREVMCIKVLGGSKRRYASVGDIIKVSVKDAAPRGRVKKGDIYNA
STM021 LKVYAGNEHNHAAQQPQVLDMIQEQTMLNVADNSGARRVMCIKVLGGSHRRYAGVGDIIKITIKEAIPRGKVKKGDVLA
STY024 LKVYAGNEHNHAAQQPQVLDMIQEQTMLNVADNSGARRVMCIKVLGGSHRRYAGVGDIIKITIKEAIPRGKVKKGDVLA
vc2259 LKVYAGAEHNHAAQQPKVLDMIQMOTMLDAADNSGARSVMCIKVLGGSHRRYAHVGDIIKVTVKEAIPRGKVKKGDVLA
wbr31 LKIFSGSEHNHAAQPKKLLMIQVQITLSVADNSGARLVMCIKVLGGSRRRYAKISDIKIAVKEAIPRAKVKKGEVLA
XAC142 LKVYSGAEHPHAAQQPQVLDMIQMOSYLDVADNSGAKEVMCIKVLGGSKRRYAHIGDIKVTVKDAIPRGKVKKGEVDA
XCC137 LKVYSGAEHPHAAQQPQVLDMIQMOSYLDVADNSGAKEVMCIKVLGGSKRRYAHIGDIKVTVKDAIPRGKVKKGEVDA
XF2579 LKVYTGSKHPHAAQQPQVLDMIQMOSYLDVADNSGAKEVMCIKVLGGSKRRYASVGDIIKVTVKEAIPRGKVKKGEVDA
y3135 LKVYAGTEHNHAAQQPQVLDMIQEQTMLNVADNSGARRVMCIKVLGGSHRRYAGIGDIKITIKEAIPRGKVKKGDVLA
YPO104 LKVYAGTEHNHAAQQPQVLDMIQEQTMLNVADNSGARRVMCIKVLGGSHRRYAGIGDIKITIKEAIPRGKVKKGDVLA
Z0181 LKVYAGNEHNHAAQQPQVLDMIQEQTMLNVADNSGARRVMCIKVLGGSHRRYAGVGDIIKITIKEAIPRGKVKKGDVLA

b0170 VVVRTKKGVRPDDGSVIRFDGNACVLLNNNSEPIGTRIFGVPVTRLELRSEKFMKIIISLAPEVMRLNLTSPAEGSKKAGKRL
Bbp214 VIIRTKKGVRRSDGSIIRFDTNACVLLNNNDQPIGTRIFGVPVTRLELRNDKFMKIIISLAPEVMYRLNLTSPNSKSHKSKRV
Bf131 VVVRTKKGIRIRIDGSIIRFDNACVLLNDTNMPLGTRIFGVPVTRLELRNDFVRIISLAPEVSLNTLAPALGRVGRV
bu232 VVVRTKKGVRPDDGSVIRFDTNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPANGARHSRKR
BUsg22 VVVRTKKGVRPDDGSVIRFDNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPANGARHSRKR
HI0914 VVVRTKKGVRPDDGSVIRFDNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPANGARHSRKR
PA3655 VVVRTKKGVRPDDGSVIRFDNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPAEGAKHSKR
PM1985 VVVRTKKGVRPDDGSVIRFDNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPAEGAKHSKR
RSc140 VVVRTKKGVRPDDGSVIRFDNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPAEGAKHSKR
STM021 VVVRTKKGVRPDDGSVIRFDNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPAEGSKKAGKRL
STY024 VVVRTKKGVRPDDGSVIRFDNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPAEGSKKAGKRL
vc2259 VVVRTKKGVRPDDGSVIRFDNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPAEGSKKAGKRL
wbr31 VVVRTKKGVRPDDGSVIRFDNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPAEGSKKAGKRL
XAC142 VVVRTKKGVRPDDGSVIRFDNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPAEGSKKAGKRL
XCC137 VVVRTKKGVRPDDGSVIRFDNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPAEGSKKAGKRL
XF2579 VVVRTKKGVRPDDGSVIRFDNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPAEGSKKAGKRL
y3135 VVVRTKKGVRPDDGSVIRFDNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPAEGSKKAGKRL
YPO104 VVVRTKKGVRPDDGSVIRFDNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPAEGSKKAGKRL
Z0181 VVVRTKKGVRPDDGSVIRFDNACVLLNNNEQPIGTRIFGVPVTRLELRTEKFMKIIISLAPEVMRLNLTSPAEGSKKAGKRL

b0170 GRGIGSGLGKTGGRGHKGQKSRSGRRGFEGGQMPLYRRLPKFGFTTAEVRLSDLAKVEGGVVDLNTLKAANIIGIQIEF
Bbp214 GRGIGSGFGKTSRGRGHKGQKSRSGRRGFEGGQMPLYRRLPKFGFVVAEVRLEDLKNFSNCIINLQFLKKTGLIKKNIKY
Bf131 ARGISGFGKTAGRGHKGQKSRSGCKVSFEGGQPLHRRLPKFGFKTQEIITLFDLSRIPENVIDLNLKKYDIVSRKIRY
bu232 GRGIGSGFGKTSRGRGHKGQKSRSGRRGFEGGQMPLYRRLPKFGFNTEVRLSDLSNLSTNIIDLNLKLANINQHVQR
BUsg22 GRGIGSGFGKTSRGRGHKGQKSRSGNRGFEGGQMPYRRIKPFNFNTAEVRLSDISKLSTDIIDLKVLKKEININKIKY
HI0914 GRGIGSGLGKTGGRGHKGQKSRSGRRGFEGGQMPLYRRLPKFGFTTAEVRLNELTKVEGNVLTLETLKAANILTKDIQF
PA3655 GRGIGSGLGKTGGRGHKGQKSRSGGAPGFEGGQPLHRRLPKFGFVRAEVRTSELAKEGVDVSLQTLKLANINQHVQR
PM1985 GRGIGSGLGKTGGRGHKGQKSRSGRRGFEGGQMPLYRRLPKFGFTTAEVRLNDLAKVEGGVVTLESKLANVITKDIQF
RSc140 GRGIGSGLGKTAGRGHKGQKSRSGKVGFEFGGQMPHRRLPKRGFTTAEVRLGDLGALPVAEIDLTLKQAGLVGELVKS
STM021 GRGIGSGLGKTGGRGHKGQKSRSGRRGFEGGQMPLYRRLPKFGFTTAEVRLSDLAKVEGGVVDLNTLKAANIIGIQIEF
STY024 GRGIGSGLGKTGGRGHKGQKSRSGRRGFEGGQMPLYRRLPKFGFTTAEVRLSDLAKVEGGVVDLNTLKAANIIGIQIEF
vc2259 GRGIGSGLGKTGGRGHKGQKSRSGRRGFEGGQMPLYRRLPKFGFTTAEVRLSELAKVTGDVVDLNLKAANLVTKNIEF
wbr31 GRGIGSGKGTSGRGHKGQKSRSGRRGFEGGQMPLYRRLPKFGFTTAEVRLSELAKVTGDVVDLNLKAANLVTKNIEF
XAC142 GRGIGSGLGKTAGRGHKGSFARKGGKAGFEFGGQTPMQRRLPKIGFRTAEVLSYQLDKLDAGDVDFALRAANLVPRAK
XCC137 GRGIGSGLGKTAGRGHKGSFARKGGKAGFEFGGQTPMQRRLPKIGFRSAEVLASYQLDKLEAGIDFAALRAANLVPRAK
XF2579 GRGIGSGLGKTAGRGHKGSFARKGGKAGFEFGGQTPMQRRLPKIGFRSAEVLASYQLDKLEAGIDFAALRAANLVPRAK
y3135 GRGIGSGLGKTAGRGHKQNSRSGRRGFEGGQMPLYRRLPKFGFTTAEVRLSELALVEGDVIDLNTLKAANVVGIQMEF
YPO104 GRGIGSGLGKTAGRGHKQNSRSGRRGFEGGQMPLYRRLPKFGFTTAEVRLSELALVEGDVIDLNTLKAANVVGIQMEF
Z0181 GRGIGSGLGKTAGRGHKQKSRSGRRGFEGGQMPLYRRLPKFGFTTAEVRLSELALVEGDVIDLNTLKAANIIGIQIEF

b0170 AKVILAEVTTPTVTRGLRVTKGAKAAIEAAGGKIMLPKRTKFRKMHKGRNRLGTDVFSFGSLKAVGRRLTARQIEA
Bbp214 VKIISSTITNLIIRNLFVSKSVRNIIESSGKIMLPKRTKFRKMHKGRNRLGTDVFSFGSLKAVGRRLTARQIEA
Bf131 VKIIMSTFDKPVIIIRNLRISKARDLKS VGGRIILQPKRTKFRKMHKGRNRLGTDVFSFGSLKAVGRRLTARQIEA
bu232 AKIILSKLTVPLIIRGLLVSKGARSEIENYGGKIMLPKRTKFRKMHKGRNRLGTDVFSFGSLKAVGRRLTARQIEA
BUsg22 VKIILSKLEVALTLHLGLRVTRGARLAIENYGGKIMLPKRTKFRKMHKGRNRLGTDVFSFGSLKAVGRRLTARQIEA
HI0914 AKVILAEVKSAVTVRGLRVTKGAKAAIEAAGGSIMLPKRTKFRKMHKGRNRLGTDVFSFGSLKAVGRRLTARQIEA
PA3655 VKVMLSEVGRVAVTLKGIATKGAARAAIEAAGGKIMLPKRTKFRKMHKGRNRLGTDVFSFGSLKAVGRRLTARQIEA
PM1985 VKIILAEVKGAVVVRGLRVTKGAKAAIEAAGGSIMLPKRTKFRKMHKGRNRLGTDVFSFGSLKAVGRRLTARQIEA
RSc140 AKVILSSIDKVVTLKGLGATAGAKAAIEAAGGSLMLPKRRKRYRKEQKGRNTGIGNAVSFGFGLKAMGRRLTARQIEA

STM021 AKVILAEVTTPTVTVRGLRVTKGARAIEAAGGKIMLQPKRTKFRKMHKGRNRLGLGADVDFGSLKAVGRGRLTARQIEA
STY024 AKVILAEVTTPTVTVRGLRVTKGARAIEAAGGKIMLQPKRTKFRKMHKGRNRLGLGADVDFGSLKAVGRGRLTARQIEA
vc2259 AKIVLSEINKAVTVKGLRVTKGAKAAIEAAGGKIMLQPKRTKFRKMQKGRNRLNSBINFQGLKAIQHRGLTSRQIES
wbr31 VKIIFSNFNKINIKNLKVSKNAKKIEFFGGTIMLQPKRTKFRKMHKGRNRLNSBINFQGLKAIQHRGLTSRQIES
XAC142 AKIVLSEINKAVTVKGLRVTKGARAIEAAGGKIMLQPKRTKFRKMHKGRNRLGLGADVDFGSLKAVGRGRLTARQIEA
XCC137 AKIVLSEINKAVTVKGLRVTKGARAIEAAGGKIMLQPKRTKFRKMHKGRNRLGLGADVDFGSLKAVGRGRLTARQIEA
XF2579 AKIVKRLTLKVFVFLKGIESTAGARAMIETTGGSFMLQPKRTKFRKMHKGRNRLNSBINFQGLKAIQHRGLTSRQIES
y3135 VKVILSEVNRAVTLRGLRVTKGARAIEAAGGKIMLQPKRTKFRKMHKGRNRLGLGADVDFGSLKAVGRGRLTARQIEA
YPO104 VKVILSEVNRAVTLRGLRVTKGARAIEAAGGKIMLQPKRTKFRKMHKGRNRLGLGADVDFGSLKAVGRGRLTARQIEA
Z0181 AKVILAEVTTPTVTVRGLRVTKGARAIEAAGGKIMLQPKRTKFRKMHKGRNRLGLGADVDFGSLKAVGRGRLTARQIEA

b0170 ARRAMTRAVKRQGGKIWRVFPDKPITEKPLAVRMGKGGKGNVEYVWALIQPGKVLVEMDGVPEELAREAFKLAALKPDKT
BBp214 ARRAITRAIKRQGGKIWRVFPDKPITEKPLEVVRMGKGGKGNVEYVWALVQPGKILYEISGVSEELSRIFAKLAALKPDKT
Bf131 ARRAITRAIKRQGGKIWRVFPDKPITEKPLEVVRMGKGGKGNVEYVWALVQPGKILYEMSGVSEELADHAFKLAALKPDKT
bu232 ARRAITRAIKRQGGKIWRVFPDKPITEKPLEVVRMGKGGKGNVEYVWALVQPGKILYELEGVTEESRAAFKLAALKPDKT
BUs922 ARRAITRYIKRQGGKIWRVFPDKPITEKPLEVVRMGKGGKGNVEYVWALVQPGKILYEMDGVSEELAREAFKLAALKPDKT
HI0914 ARRAMSRAVKRQGGKIWRVFPDKPITEKPLEVVRMGKGGKGNVEYVWALVQPGKVLVEMDGVSEELAREAFKLAALKPDKT
PA3655 ARRALTRHVKRQGGKIWRVFPDKPITEKPLEVVRMGKGGKGNVEYVWALVQPGKVLVEMDGVSEELAREAFKLAALKPDKT
PM1985 ARRAMTRAVKRQGGKIWRVFPDKPITEKPLEVVRMGKGGKGNVEYVWALVQPGKVLVEMDGVSEELAREAFKLAALKPDKT
RSc140 ARRAMTRHIKRQGGKIWRVFPDKPITEKPLEVVRMGKGGKGNVEYVWALVQPGKVLVEMDGVSEELAREAFKLAALKPDKT
STM021 ARRAMTRAVKRQGGKIWRVFPDKPITEKPLAVRMGKGGKGNVEYVWALIQPGKVLVEMDGVPEELAREAFKLAALKPDKT
STY024 ARRAMTRAVKRQGGKIWRVFPDKPITEKPLAVRMGKGGKGNVEYVWALIQPGKVLVEMDGVPEELAREAFKLAALKPDKT
vc2259 ARRAMTRHIKRQGGKIWRVFPDKPITEKPLEVVRMGKGGKGNVEYVWALVQPGKVLVEMDGVPEELAREAFKLAALKPDKT
wbr31 ARRAMSRSIKRQGGKIWRVFPDKPITEKPLEVVRMGKGGKGNVEYVWALVQPGKILYEIDVSETIARYAFKLATAKLPDKT
XAC142 ARRTISRHVKKGGKMWIRVFPDKPITEKPLEVVRMGKGGKGNVEYVWALVQPGKILYEIDVSETIARYAFKLATAKLPDKT
XCC137 ARRTISRHVKKGGKMWIRVFPDKPITEKPLEVVRMGKGGKGNVEYVWALVQPGKILYEIDVSETIARYAFKLATAKLPDKT
XF2579 ARRSISRYVKKGGKLLIRVFPDKPITEKPLEVVRMGKGGKGNVEYVWALVQPGKILYEIDVSETIARYAFKLATAKLPDKT
y3135 ARRAMTRAIKRQGGKIWRVFPDKPITEKPLEVVRMGKGGKGNVEYVWALVQPGKVLVEMAGVPEETAREAFKLAALKPDKT
YPO104 ARRAMTRAIKRQGGKIWRVFPDKPITEKPLEVVRMGKGGKGNVEYVWALVQPGKVLVEMAGVPEETAREAFKLAALKPDKT
Z0181 ARRAMTRAVKRQGGKIWRVFPDKPITEKPLAVRMGKGGKGNVEYVWALIQPGKVLVEMDGVPEELAREAFKLAALKPDKT

b0170 VTKTVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
BBp214 VTKLVMRHRKIGRRFNKSATHVKAMLNKVMCSLFRYEMIKTTVSKAKELRRVVEPLITCAKIDSANRRLAFARTRDNEI
Bf131 VVTGIMKHQKRVLFNRSRSHRDMVKNMMLIALILNHIKTTLSPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
bu232 VTKTVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
BUs922 VTKMVMRHRKIGRKLNCKSDHRNAIFKNMACSLILNEIKTTLAKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
HI0914 VTKTVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
PA3655 VTKTVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
PM1985 VTKTVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
RSc140 VTKTVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
STM021 VTKTVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
STY024 VTKTVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
vc2259 VTKQVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
wbr31 VTKMVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
XAC142 VTRTVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
XCC137 VTRTVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
XF2579 VTRTVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
y3135 VTRTVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
YPO104 VTKTVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI
Z0181 VTKTVMRHRKSGRQLNRNSSHRQAMFRNMAGSLVRHEIKTTLPKAKELRRVVEPLITLAKTDSVANRRLAFARTRDNEI

b0170 VAKLFNDELGRPFASRAGGYTRILKCGFRAGDNAPMAYIELVDRRRATRARRKQLGELGATRLVVHRTPRHIYAQVIAGSEV
BBp214 VFKLFRDLGPHFLGQGGYTRILKCGFRSGDQAPMAYIQLINRRRAARTRFQIKKHLHLIRLVVHRTSKHIYAQVIDNALV
Bf131 VIKLFTQIGPHFYDRPGGYTRILKCGFRKGDNDAPMAYIELVDRRRALKLKKLYLLGSLVRLVVYRSRHRMYAQIVSNCNV
bu232 VAKLFKLLGPFCCFFSRLGGYTRILKCGFRSGDQAPMAYIELVDRRRSMKTRCKIKKLGAILRVVHRTSRHMYAQIISSEAKV
BUs922 IAKLFFKIGPIFYNRSGGYTRILKCGFRSGDQAPMAYIELVDRRRLLKARCKIKSLGAILRVVHRTSRHMYAQIISSEAKV
HI0914 VAKLFNDELGRPFASRAGGYTRILKCGFRAGDNAPMAYIELVDRRRRAARARHMMREQGVTRLVHRTPRHIYAQVIAGSEV
PA3655 VGKLFNDLGRYANRPGGYTRILKCGFRAGDNAPMAYIELVDRRRRAARARHMMREQGVTRLVHRTPRHIYAQVIAGSEV
PM1985 VAKLFNDELGRPFASRAGGYTRILKCGFRAGDNAPMAYIELVDRRRRAARARHMMREQGVTRLVHRTPRHIYAQVIAGSEV
RSc140 VTKLFTLGPYATRPGGYTRILKCGFRAGDNAPMALVELVDRRRARQTRKIAELNVARLAVHRTNLHIYAQVFSGTVK
STM021 VAKLFNDELGRPFASRAGGYTRILKCGFRAGDNAPMAYIELVDRRRATRARRKQLGELGATRLVVHRTPRHIYAQVIAGSEV
STY024 VAKLFNDELGRPFASRAGGYTRILKCGFRAGDNAPMAYIELVDRRRATRARRKQLGELGATRLVVHRTPRHIYAQVIAGSEV
vc2259 VAKLFNDELGRPFASRAGGYTRILKCGFRAGDNAPMAYIELVDRRRATRARRKQLGELGATRLVVHRTPRHIYAQVIAGSEV
wbr31 IHKLFNDIGPRFLKNGGYSILKSGYRKGDNAPMAYIKFTNTIRATRTRKIRSLIEIRLVVYRTSKHVYAQIISCSNV
XAC142 VGKLFVELGPRYATRPGGYTRILKAGFRAGDNAPMAYVELVDRRRRAKSTRAHIRELGVARLSVLRGTQHLHYAQVFTGSKV
XCC137 VGKLFVELGPRYATRPGGYTRILKAGFRAGDNAPMAYVELVDRRRRAKSTRAHIRELGVARLSVLRGTQHLHYAQVFTGSKV
XF2579 VGILFNLGPRYATRPGGYTRILKCGFRAGDNAPMAYVELVDRRRRAKSTRAHIRELGVARLSVLRGTQHLHYAQVFTGSKV
y3135 VAKLFNDELGRPFASRAGGYTRILKCGFRAGDNAPMAYIELVDRRRATRARRKQLGELGATRLVVHRTPRHIYAQVIAGSEI
YPO104 VAKLFNDELGRPFASRAGGYTRILKCGFRAGDNAPMAYIELVDRRRATRARRKQLGELGATRLVVHRTPRHIYAQVIAGSEI
Z0181 VAKLFNDELGRPFASRAGGYTRILKCGFRAGDNAPMAYIELVDRRRATRARRKQLGELGATRLVVHRTPRHIYAQVIAGSEV

b0170 LVAASTVEKAI AEQLGNKDAAAAVGKAVARALEKGIKDVSFDRSGFYHGRVQALADAAREAI IKQLEQEVPSFRPGDT
BBp214 LTSASTVEKAI ELNLVGNIIHASICIGKIAERALMKGI INVSFDRSGFYHGRVQALADAAREAI IQEYKIP I FKS GDT
Bf131 LVAASTTEKLI ASKLGKNEAAAVGQVIAERAFKKGIVHVSFDRSGFYHGRVQALADAAREAI IAEYARQFKIRNFESNIPPLHGDV

bu232 LVFASTLERKINCSLGNKEAAAIKGI I AERALS KGISHSVDFDRSGFYHGRVQALADAAREAI IQEYKIP I FKS GDT
BUs922 LAFASTLESKI KSDLGNKEAAAIKGI I AERALS KGISHSVDFDRSGFYHGRVQALADAAREAI IQEYKIP I FKS GDT
HI0914 LAAASTVEKAI REQVGNKDAAAAVGKAVARALEKGIKDVSFDRSGFYHGRVQALADAAREAI IKQLEQEVPSFRPGDT
PA3655 LASASTLKDLDREGAGNIDAAKVGQVLAERAKAAGVQVAFDRSGFYHGRVQALADAAREAI IQEYKIP I FKS GDT
PM1985 LAAASTVEKAI SEQVGNKDAAAAVGKAVARALEKGIKDVSFDRSGFYHGRVQALADAAREAI IKQLEQEVPSFRPGDT
RSc140 LASASTAEAEVRKELGNTAAATLVGKRIAEKAKAAGIEAVAFDRSGFYHGRVQALADAAREAI IQEYKIP I FKS GDT
STM021 LVAASTVEKAI AEQLGNKDAAAAVGKAVARALEKGIKDVSFDRSGFYHGRVQALADAAREAI IKQLEQEVPSFRPGDT
STY024 LVAASTVEKAI AEQLGNKDAAAAVGKAVARALEKGIKDVSFDRSGFYHGRVQALADAAREAI IKQLEQEVPSFRPGDT
vc2259 IAAASTVEKAI REQVGNIDAAKVGKAVARALEKGIKDVSFDRSGFYHGRVQALADAAREAI IKQLEQEVPSFRPGDT
wbr31 LASASTLEKAI SNKVGKKAALLVGKIIAERALKKIKKIAFDRSGFYHGRVQALADAAREAI IQEYKIP I FKS GDT
XAC142 IAAANTLQADV KDLKNSDAAAKVGKIIAERAKAAGIEKVAFDRSGFYHGRVQALADAAREAI IQEYKIP I FKS GDT
XCC137 IAAANTLQADV KDLKNSDAAAKVGKIIAERAKAAGIEKVAFDRSGFYHGRVQALADAAREAI IQEYKIP I FKS GDT

XF2579 IAAANTLQSQVKDGLKNSLAATKAVGKLI AERAKAVGVDRIFAEDRSGLYHGRIKILADAARDAI IAEFESAVPQFSQDGT
y3135 LVAASTVEKAI NEQLGNKDA AAAVGT I AERALEKGITKVSFDRSGFYHGRVQALADAAREAI IKQIEQEVPAPFRPGDS
YPO104 LVAASTVEKAI NEQLGNKDA AAAVGT I AERALEKGITKVSFDRSGFYHGRVQALADAAREAI IKQIEQEVPAPFRPGDS
Z0181 LVAASTVEKAI NEQLGNKDA AAAVGT I AERALEKGITKVSFDRSGFYHGRVQALADAAREAI IKQIEQEVPAPFRPGDT

b0170 VEKVVVVERLQAFEGVVI A IRNRGLHSAFTVRK I SNNEGVERV F QTHSPV VDS I SVKRRGAVR KAKLYL RERTGKAAR
BbP214 I I I K V W I V E R I Q L F E G I V I A I R N R G L N S S F C V R K V S N G E G I E R V F P K Y S P I I B E I I V K R H G D V K K S K L Y L L R N R I G K S A K
Bf131 V E I S L W I I E R F Q I F E G M I I A I K N R G L N S A F T V R K I S S G E G V E R V F Q I H S P V I K E I N I K K I G V V R R A K L Y L L R N L K G K S A R
bu232 I E V K V W V I E R L Q S F E G I V I A I K N R C L N S S F T V R K I S N G E G V E R V F Q T H S H G I E E I L V K R K G L V R K A K L Y L R T R T G K A A R
BUsG22 V E V K V W V I E R L Q S F E G I V I S I K N R S L N S S F T V R K V S N G E G I E R V F Q T H S Y S I D S I F V K R K G V R K A K L Y L R T R T G K S A R
HI0914 L E V K V W V V E R L Q A F E G V V I A I R N R G L H S A F T L R K V S N G V G V E R V F Q T H S P A V D S I A V K R R G A V R K A K L Y L L R E R S G K S A R
PA3655 V I V Q V K V K E R L Q A F E G V V I A K R N R G L N S A F T V R K I S N G V G V E R T F Q T Y S P I V D S L S V K R R G D V R K A K L Y L R A L S G K A A R
PM1985 L E V K V W V V E R L Q A F E G V V I A I R N R G L H S A F T L R K V S N G V G V E R V F Q T H S P I V D S I T V K R K G A V R Q A K L Y L L R E R S G K S A R
RSc140 V I V N V N V V E R V Q A Y E G V V I A K R N R G L N S S F I V R K I S S G E G V E R T F Q L Y S P L L A S I E V K R R G V R R A K L Y L L R E R S G K S A R
STM021 V E V K V W V V E R L Q A F E G V V I A I R N R G L H S A F T V R K I S N G E G V E R V F Q T H S P V V D S I A V K R R G A V R K A K L Y L R E R T G K A A R
STY024 V E V K V W V V E R L Q A F E G V V I A I R N R G L H S A F T V R K I S N G E G V E R V F Q T H S P V V D S I A V K R R G A V R K A K L Y L R E R T G K A A R
vc2259 V V V Q V K V E R L Q A F E G I V I A I R N R G L H S A F T V R K I S N G E G V E R T F Q T H S P V V D S I E V K R R G A V R R A K L Y L L R D L S G K A A R
wbr31 V K I N I W V L E R I Q I F E G I I I A I K N K G I S S S I T V R K I S N G E G V E R M F P L H S P I I E S I I V N R H S L V R K S K L Y L L R N K K G R S S R

XAC142 V V N V K V K E R V Q A Y E G V V I G T K N A G L N S S F T V R K I S H G F G V E R V F Q T H S A I I D S V E V K R R G K V R A G K L Y L R G L E G K A A R
XCC137 V V N V K V K E R V Q A Y E G V V I G T K N A G L N S A F T V R K I S H G F G V E R V F Q T H S A I I D S V E V K R R G K V R A G K L Y L R G L E G K A A R
XF2579 I V N V K V K E R L Q A Y E G V V I A T K N A G L N S A F T V R K I S H G Y G V E R V F Q T H S P I I E S I E I K R R G K V R A A K L Y L R G L E G K A A R
y3135 V E V K V W V V E R L Q A F E G V V I A I R N R G L H S A F T V R K I S N G E G V E R V F Q T H S P V I D S I T V K R R G A V R K A K L Y L L R E R T G K S A R
YPO104 V E V K V W V V E R L Q A F E G V V I A I R N R G L H S A F T V R K I S N G E G V E R V F Q T H S P V I D S I T V K R R G A V R Q A K L Y L L R E R T G K S A R
Z0181 V E V K V W V V E R L Q A F E G V V I A I R N R G L H S A F T V R K I S N G E G V E R V F Q T H S P V V D S I S V K R R G A V R K A K L Y L L R E R T G K A A R

b0170 I K E R M A R V K R G V I A R A R H K K I L K Q A K G Y Y G A R S R V Y R V A F Q A V I K A G Q Y A Y R D R R Q R K R Q F R Q L W I A R I N A A A R Q N G I S Y
BbP214 I R E L M A H V K R G V I A R A R H K K V L K Q A K G Y Y G A R S R T Y R T A R Q A I I K A G Q Y S Y R D R R Q R K R Y F R K L W I T R I N A A V R E N Q I S Y
Bf131 I K T R M V R V K N S V T A H S R H K K I L K R A T G Y Y G A R S R T Y R V A Y Q A I I K A G Q Y A Y R D R K Q K R I F R Q L W I S H I N A V A R Q Y G L S Y
bu232 I K E R M A R I K R G V I A H A R H K K I L K Q A K G Y Y G A R S R I Y R V A H Q A V I K A G Q Y A Y R D R R Q R K R Q F R Q L W I S R I N A A V R Q S K M S Y
BUsG22 I K E R M A R V K R G V T A H A R H K K V L K Q A K G Y Y G A R S R I Y R V A C Q A V I K A G Q Y A Y R D R R Q R K R Q F R Q L W I T R I N A A A R Q S Q M S Y
HI0914 I K E R M A R V K R G V I A R A R H K K V L K A A K G Y Y G A R S R V Y R V A F Q A V I K A G Q Y A Y R D R R Q R K R Q F R Q L W I A R I N A A A R Q N G L S Y
PA3655 I K E M A R V K R G V I A R R R H K K I L K L A K G Y Y G A R S R V F R V A Q A V I K A G Q Y A Y R D R R Q R K R Q F R A L W I A R I N A G A R Q N G L S Y
PM1985 I K E R M A R V K R G V I A R A R H K K V L K A A K G Y Y G A R S R V Y R V A F Q A V I K A G Q Y A Y R D R R Q R K R Q F R Q L W I A R I N A A A R Q N G L S Y
RSc140 I K E M P R V K R G V T A R A R H K K V I D A A K G Y R G R R N N V Y R I A K Q A V M R A G Q Y A Y R D R R N K R V R F R A L W I A R I N A A G A R H G L S Y
STM021 I K E R M A R V K R G V I A R A R H K K I L K Q A K G Y Y G A R S R V Y R V A F Q A V I K A G Q Y A Y R D R R Q R K R Q F R Q L W I A R I N A A A R Q N G I S Y
STY024 I K E R M A R V K R G V I A R A R H K K I L K Q A K G Y Y G A R S R V Y R V A F Q A V I K A G Q Y A Y R D R R Q R K R Q F R Q L W I A R I N A A A R Q N G I S Y
vc2259 I K E M P R V K R G V Q A R R R H K K I L T L A K G Y Y N A R R K V F R V A Q A V I K A Q Q Y A Y I G R K Q K R N F R S L W I T R I N A A A R I N G L S Y
wbr31 I K Q R M T R I K R G V S S K F R H K K I L K K T K G Y Y G A R S R S Y R I A F Q A F I K A G Q Y A Y R D R K N K R T F R K I W I C R I N S A V R K H G L S Y
XAC142 I K E M A R V K R G V Q A R R R H K K I L T L A K G Y Y N A R R K V F R V A Q A V I K A Q Q Y A Y I G R K Q K R N F R S L W I T R I N A A A R I N G L S Y
XCC137 I K E M A R V K R G V Q A R R R H K K I L T L A K G Y Y N A R R K V F R V A Q A V I K A Q Q Y A Y I G R K Q K R N F R S L W I T R I N A A A R I N G L S Y
XF2579 I K E M A R V K R G V Q A R R R H K K I L S L A K G Y Y N A R R K V F R V A Q A V I K A Q Q Y A Y I G R K Q K R N F R S L W I V R I N A A A R I N G L S Y
y3135 I K E R M A R V K R G V I A R A R H K K I L K Q A K G Y Y G A R S R V Y R V A F Q A V I K A G Q Y A Y R D R R Q R K R Q F R Q L W I A R I N A A A R Q N G L S Y
YPO104 I K E R M A R V K R G V I A R A R H K K I L K Q A K G Y Y G A R S R V Y R V A F Q A V I K A G Q Y A Y R D R R Q R K R Q F R Q L W I A R I N A A A R Q N G L S Y
Z0181 I K E R M A R V K R G V I A R A R H K K I L K Q A K G Y Y G A R S R V Y R V A F Q A V I K A G Q Y A Y R D R R Q R K R Q F R Q L W I A R I N A A A R Q N G I S Y

b0170 S K F I N G L K K A S V E I D R K I L A D I A V F D K V A F T A L V E K A K A M Y A V F Q S G G K Q H R V S E G Q T V R L E K L D I A T G E T V E F A E V L M
BbP214 S K F M Y G L K K A S I A V D R K M L S E L A I F D N V S F C S L I K S S K D A M Y A I F K S G G K Q H K V I K G Q T I R L E K I N Q S I G T Q I K F K K I L M
Bf131 N N L I N N L Y K S S I Y I N R K M L A E L A T S D Q V A F L N L V N N I K I H M Y A V F Q I G S K Q Y Y V R T G Q V I F I D R V K L D I G N Q I E F N Q V L L
bu232 S N F I F G L K K A S I N I D R K I L S D I A I F D L L S F N A L V K K A K E A M Y A V F I S G G K Q Y R V V K N Q I I R L E K L N S P L G T T I E F D K I L M
BUsG22 S S F M Y G L K K A S I N I D R K I L S D I A I F D G F S F N I L I K K A K E A M Y A V F M S G G K Q Y R V V K N Q I I Q L E K L N S P G S I E F D K I L M
HI0914 S K F I N G L K K A S V E I D R K I L A D I A V F D K V A F A A L V E K A K S A M Y A V F Q S G G K Q H R V S E G Q V R L E K L E L A T G A T V E F D S M L M
PA3655 S R L I A G L K K A A I E I D R K V L A D L A V N E K A A F T A I V E K A K A S M Y A V I V T G G K Q H K V T E G E F L K V E G F L R V E K L I D F D R V L L
PM1985 S K F I N G L K K A S V E I D R K I L A D I A V F D K V A F T A L V E K A K S A M Y A V F Q S G G K Q H R V S E G Q V R L E K L E V A T G E T V E F D S V L M
RSc140 S K F M N G L K K A S I E L D R K V L S D M A I H D K V A F A A I V N Q V K A N M Y A V V T G G K Q Y K V A A G E K L K V E Q I P A D V G A B E I T L D Q V L A
STM021 S K F I N G L K K A S V E I D R K I L A D I A V F D K V A F T A L V E K A K A M Y A V F Q S G G K Q H R V S E G Q T V R L E K L D I A T G E T I E F A E V L M
STY024 S K F I N G L K K A S V E I D R K I L A D I A V F D K V A F T A L V E K A K A M Y A V F Q S G G K Q H R V S E G Q T V R L E K L D I A T G E T I E F A E V L M
vc2259 S R F I N G L K K A S I E I D R K I L A D I A V F D K A A F A V L V E K A K G A M Y A V F Q S G G K Q H R V S E G Q T L R L E K L D V E T G A T V E F D K V L L
wbr31 S C F M Y I K K L S I F I D R K I L S D L A V L N E K A A F I S E L I K K V K S I M Y A I F K I N G V Q Y K A K S G V V L N K I S G D I G S T I E I K K I M A
XAC142 S R F M N G L L K A G I T L D R K V L A D I A V H D A A G F A A L A E K A K A M Y A V L V T G G K Q Y R V A Q G E T L R V E K L E V E A G N E I K F D T I L M
XCC137 S R F M N G M L K A G I T L D R K V L A D I A V H D A A G F A A L A E K A K A M Y A V L V T G G K Q Y R V A Q G E T L R V E K L E V E A G N E I K F D T I L M
XF2579 S R F M N G L L K C G I T L D R K V L A D I A V H D P A G F T A L A E K A K S I M Y A V L V T G G K Q Y R V V Q G E T L R V E K L D V E T G S D V T F N S V L L

y3135 S R F I N G L K K A S V E I D R K I L A D I A V F D K V A F S A L V E K A K A M Y A V F Q S G G K Q H R V S E G Q T I R L E K L D I A T G E T I E F D Q V L M
YPO104 S R F I N G L K K A S V E I D R K I L A D I A V F D K V A F S A L V E K A K A M Y A V F Q S G G K Q H R V S E G Q T I R L E K L D I A T G E T I E F D Q V L M
Z0181 S K F I N G L K K A S V E I D R K I L A D I A V F D K V A F T A L V E K A K A M Y A V F Q S G G K Q H R V S E G Q T V R L E K L D I A T G E T V E F A E V L M

b0170 I A G E E V K I G V P F V G V I K A E V V A H G R G E K V I V K F R R R K H Y R K Q Q G H R Q W F T D V K I T G M E T I A K H R H A R S S A Q K V R L V A D L
BbP214 C C G T H I T I G K P H I N F I L A N I I N H G R H K K I K I I K F N R R K H Y K Q Q G H R Q N F T D V L I T N M E T I A R H S Q A R S S A Q K L R L V A D L
Bf131 I R M K N I Y I G N P F I G K I I A D I L D H S L G K K I R I V K F R R R K H F R K F Q G H R Q C M T K I K V V K M E T I A R Y R Y I R S S A Q K I R L V A N M
bu232 L F K D S I K I G T P F V G T I K A H I Q N H G R L G K K I K I I K F N R R K H Y K Q Q G H R Q Y F T D V K I I D M E T L A Q H R Q A R S S A Q K V R L I V D L
BUsG22 I S K K E V K I G E P F L T K I K A H V E N H G R L K K I K I I K F N R R K H Y K K Q G H R Q Y F T N V K I L D M E T L A Q H R Q A R C S A Q K I R L I A D L
HI0914 V V G E D V K I G A P V V A K V V A E V V A Q G R G E K V I V K F R R R K H S R K Q Q G H R Q W F T E V K I T G M E T I A K H R Y A R T S A Q K A R L V A D L
PA3655 V A G E D V K I G L P V V A K V T A E V V S H G R H D K V I I K F R R R K H M K R Q Q G H R Q W F T E I K I T G M E V A A K L S G A I S A Q K A R L V A D Q
PM1985 I V G E D V K I G A P V V G K V V A E V V A H G R G D K V I V K F R R R K H S R K Q Q G H R Q W F T E V K I T G M E T I A K H R Y A R T S A Q K A R L V A D L
RSc140 V G G D Q L K V G A P L V A A V K A T V I S H G R H D K V I F K M R R R K H Y Q K H Q G H R Q N Y T E L R I D S M E V K A I H R G A R I S A Q K T R L V A D Q
STM021 I A G E E V K I G V P F V G V I K A E V V A H G R G E K V I V K F R R R K H Y R K Q Q G H R Q W F T D V K I T G M E T I A K H R H A R S S A Q K V R L V A D L
STY024 I A G E E V K I G V P F V G V I K A E V V A H G R G E K V I V K F R R R K H Y R K Q Q G H R Q W F T D V K I T G M E T I A K H R H A R S S A Q K V R L V A D L
vc2259 V A G E D I K V G A P L V G K V V A E V V Q H G R G D K V I V K F R R R K H S R K Q Q G H R Q W F T E V K I T G M E A I A K H N F A R I S P Q K A R L V A D Q
wbr31 L F D E K I I F G Q P F I S R I I A T I K K H I N G K K I S I V K F S R R K H F K K I T G Y R Q L T N I K I I D M E T V A H R Y A K S S Q K V R L V A D L
XAC142 L G S D G I K L G D A L K A S V T A K V V A H G R A D K V R I I K F R R R K H M K R Q G H R Q H Y T E I E I T G M E A K A I L R T A R I S P Q K A R L V A D Q
XCC137 L G S D G I K L G D A L K A S V T A K V V A H G R A D K V R I I K F R R R K H M K R Q G H R Q Y T E I E I T G M E A K A I L R T A R I S P Q K A R L V A D Q
XF2579 M G S D G I H V G E A L K A S V T A K V V A H G R A K V R I I K F R R R K H M K R Q G H R Q Y T E I Q I T G M E A T A I L R G A R I S P Q K A R L V A A Q
y3135 I A G E E I N I G A P L V G K I K A E I I A H G R G E K I K I V K F R R R K H Y R K Q Q G H R Q W F T D V K I T G M E T I A K H R H A R S S A Q K V R L V A D L
YPO104 I A G E E I N I G A P L V G K I K A E I I A H G R G E K I K I V K F R R R K H Y R K Q Q G H R Q W F T D V K I T G M E T I A K H R H A R S S A Q K V R L V A D L
Z0181 I A G E E V K I G V P F V G V I K A E V V A H G R G E K V I V K F R R R K H Y R K Q Q G H R Q W F T D V K I T G M E T I A K H R H A R S S A Q K V R L V A D L

b0170 IRGKKVQALDILTYTNKKAALVVKVLESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRADRILKRTSHI
BBp214 IRGKNEHALNLTFCNKKASILVKKVLESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRADRILKRTSHI
Bf131 IRKKEVVKAINILNLYVNKKAALLVKKVLESAINAEHNFGLNIDKLRVVKIFVDCGSPKIKRVMMPRAKGRSDRIVKRTSHL
bu232 IRGKKVPQALNLTITYNKKAALVVKVLESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRADRILKRTSHI
BUsg22 IRGKKVVKALNLTITYNKKAALVVKVLESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRADRILKRTSHI
HI0914 IRGKKVAQALEILTFNKKAAALVKKVLESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRADRILKRTSHI
PA3655 IRGKKVGEALNLLAFSSKKAAEIMKKVLESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRADRIVKRSCHI
PM1985 IRGKKVAAALEILTFNKKAAALVVKVLESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRADRILKRTSHI
RSc140 IRGLPIERALNVLAFSPKKAAVIVKKVLESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRADRILKRTSHI
STM021 IRGKKVQALDILTYTNKKAALVVKVLESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRADRILKRTSHI
STY024 IRGKKVQALDILTYTNKKAALVVKVLESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRADRILKRTSHI
vc2259 IRGKSVQALELTLTFNKKAAALVKKVLESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRADRILKRTSHI
wbr31 IRGCDASRAMELNFSNKKAAARLILKLSAISNAEHNENENENLKIKTIVYVNGPSPKIKRIMPRAKGRSDRILKRTSHI
XAC142 VRGLSAERAVNLLKFSKKAHLIKKVVESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRGTRILKRTSHI
XCC137 VRGLSAERAVNLLKFSKKAHLIKKVVESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRGTRILKRTSHI
XF2579 VRGLSAESAVNILRFSSKKAACLILKVVESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRSDRILKRTSHI
y3135 IRGKKVQALETLTYTNKKAALVVKVLESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRADRILKRTSHI
YPO104 IRGKKVQALETLTYTNKKAALVVKVLESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRADRILKRTSHI
Z0181 IRGKKVQALDILTYTNKKAALVVKVLESAINAEHNDGADIDDLKVTKIFVDEGSPMKRIMPRAKGRADRILKRTSHI

b0170 TVVVSCLKVRAPHVSEKASTAMEKSTIVLKVAKDATKAEIKAAVQKLFVEVEVEVNTLVVKGKVKRHHGQIRGRRSDWKA
BBp214 TIVVSLKVLGPHISEKSSITLGNFTVIKIVSICATKLEIKRAVQNMFNVAKNVNTLVVQKCKRKRKSRITCSSNWKA
Bf131 TIVVSLKVRAPHVSEKSSIALDKNVIVLKVYVNTKQDIRHAVCMFLSVKIKKINVLMSVKGSKGQRYLRCNWKA
bu232 TVIVSLKILLSPHVSEKTSISMKEFTVVLKVLNNAATKYEIKYAVKIFDQVDSIKTLKVKGKQKQSNRIIQRSHWKA
BUsg22 TVIVSLKVLSPHISEKSSISMKEFTVVLKVSRTTKNEIKFAVQNLFNIQVESVKTIVYVKGKQKQSNRIIYRSDWKA
HI0914 TVVVSCLKVRAPHVSEKATNNAEKSTIVLKVAKDANKAEIAAQAQLEFVVKVDSVTVVVKGKTRHGMGRSDWKA
PA3655 TVKVAFKVLLGPHISEKATGLADGKQFVFKVATDATKLEIKKAVESLFSVKVQVVTTLNVKGGKTKRTARGLGKRNDWKA
PM1985 TVVVSCLKVRAPHVSEKATNNAEKSTIVFVALDANKVEIANAVEQLFEVVKVDSVTVVVKGKTRHGMGRSDWKA
RSc140 TVTLMQVLLSPVSEKATLVDANKQVVFVARDANKGEIAAQAQLEFVVKVDSVTVVVKGKTRHGMGRSDWKA
STM021 TVVVSCLKVRAPHVSEKASTAMEKSTIVLKVAKDATKAEIKAAVQKLFVEVEVEVNTLVVKGKVKRHHGQIRGRRSDWKA
STY024 TVVVSCLKVRAPHVSEKASTAMEKSTIVLKVAKDATKAEIKAAVQKLFVEVEVEVNTLVVKGKVKRHHGQIRGRRSDWKA
vc2259 TVVVALKVRAPHVSEKATMSAEKSTIVLKVAKDATKAEIKAAVEKLFVEVEVKSNTLIIKGGTKRQGLRQGRSDWKA
wbr31 TIVLSFKILTSSYSSEKSSILSEKNTFTFKVLKNSKSEIKSSIEKFFNVKVKVTRVMLKGGKSKKHNIIGKRKNWKA
XAC142 TVVVGFSVLRAPRVSEKATRLQEISQYVFEVSNKADVKAAVEQLFDVKVAVNVVNVKGGKSKFRNRRAGNRGNWKA
XCC137 TVVVGFSVLRAPRVSEKATRLQEISQYVFEVSNKADVKAAVEQLFDVKVAVNVVNVKGGKSKFRNRRAGNRGNWKA
XF2579 TVVVGFGVLRAPRVSEKSSRLQEISVYVFEVSSDATKVDKNAVERLFDVKVGVVRLNVKGGKSKFRNRRAGNRGNWKA
y3135 TVVVSCLKVRAPHVSEKASAMEKNTIVLKVAKDATKAEIKAAVQKLFVEVEVEVNTLVVKGKSKRHHGQIRGRRSDWKA
YPO104 TVVVSCLKVRAPHVSEKASAMEKNTIVLKVAKDATKAEIKAAVQKLFVEVEVEVNTLVVKGKSKRHHGQIRGRRSDWKA
Z0181 TVVVSCLKVRAPHVSEKASTAMEKSTIVLKVAKDATKAEIKAAVQKLFVEVEVEVNTLVVKGKVKRHHGQIRGRRSDWKA

b0170 YVTLKEGQNLDFVGGAKIRRDDEVIVLTGKDKGKRGKVKVNIIVEGINLVKHKQKPVGGIVEKEAAIQVSNVAIFNAAGKA
BBp214 YVTLKRGQNIINFIGSAKIKKNDQVIVLIGKDKGKIGIVRQVIVEGVNIIVKHKTKPSGGIVEQESSINIENIAILNPTKKS
Bf131 YVILKRGYITVDLMMNKRIRCHDEVVLTGKDKGKIGIRVQFVIVSGINNVKHKQKPVGGIVEKEEAFIHLSNVAIFNAANKA
bu232 YIKVKKGCNLDIFGNLKLRRNDSVLLTGKDKGKGTGIIKKNVIVKGLNLKIKKQKPVGGIVEKEEAPIHSNIAIFNPEKKA
BUsg22 YIKVKKGCNLDIFMNSNLKLRNDEIILTGKDKGKGTGIIKNAIVNGLNLVKKHKQKPLGGILEKEAPIQISNIAIFNPEKKA
HI0914 YVTLAEGQNLDFVDSAKIRQNDDEVIVLTGKDKGKRGKVTQVVEGNIITKHEKPVGGIVKKEAADSNVAIFNPKNKA
PA3655 YIALQPGQDLDFATSQKIRRDDEVIVLTGKDKGKRGKVKVLLVGGVNLKIRHKTNGGIVEKEEAPLHVSNAIFNTESKA
PM1985 YVTLQEGQSLDFVEGAKIRQNDDEVIVLAGKSKGKRGKVTQVIVEGVNIITKHEKPVGGIVKKEAADSNVAIFNPKNKA
RSc140 YVSLKPGQEINFAENKIRKGDVIVRTGKDKGKQGTVLAIVTVEGVNVAKKHVRPNGGVVDKVMPIHISNVALVDANGKP
STM021 YVTLKEGQNLDFVGGAKIRRDDEVIVLTGKDKGKRGKVKVNIIVEGINLVKHKQKPVGGIVEKEAAIQVSNVAIFNAAGKA
STY024 YVTLKEGQNLDFVGGAKIRRDDEVIVLTGKDKGKRGKVKVNIIVEGINLVKHKQKPVGGIVEKEAAIQVSNVAIFNTEGKA
vc2259 YVTLNKGQDLDFVGGAKIRQNDDEVIVLAGKDKGKGVTKVIVEGINLVKHKQKPVGGIVEQEAADSNVAIFNAAGKA
wbr31 YVLLKKNQILNLIKNNKIKLNDIIVRVGKYGKGTGIIKKAIEGINISKKHKKPTGGIFKEQPIISLNSVAIFNIDNKP
XAC142 YVRLVDGQSIDVTAKNRIKKGQVIVINTGKDKGKQGEVVRVIVSNANVIRHHTKPNGGVVEREASIHISNVIIVNPAKGG
XCC137 YVRLVDGQSIDVTAKNRIKKGQVIVINTGKDKGKQGEVVRVIVSNANVIRHHTKPNGGVVEREASIHISNVIIVNPAKGG
XF2579 YVRLIDGQSIDVAANSRIKKGQVIVINTGKDKGKQGEIIRVVSNVNIIVRHTKPNGLIDREAPIHVSNIIVNPAKGG
y3135 YVTLKEGQNLDFIGGAKIRRDDEVIVLTGKDKGKRGKVKVNIIVEGINLVKHKQKPVGGIVEKEAAIQVSNLALFNATGKA
YPO104 YVTLKEGQNLDFIGGAKIRRDDEVIVLTGKDKGKRGKVKVNIIVEGINLVKHKQKPVGGIVEKEAAIQVSNLALFNATGKA
Z0181 YVTLKEGQNLDFVGGAKIRRDDEVIVLTGKDKGKRGKVKVNIIVEGINLVKHKQKPVGGIVEKEAAIQVSNVAIFNAAGKA

b0170 DRVGFVRVFFKSNSSETTINAIEVRKEQKKGASRRLRANKFPALIIYGGKEAAIELDHDQVMNMQAKVLTIVVDKEIKVKAQD
BBp214 DRVGFVRVFFKSNSSETTITTYGIRTEKCGKASRRLRANKFPALIIHVLSLIESLQNDQFNIEMKEVLIIVDKYIVKIQE
Bf131 DRVGFKIRIFKSNGLIIKAILRTEIKKSIIRKIRNGGCPAVIYNKNKSNVQLSNKDLSPENNVKQILINFTITAKIQD
bu232 DRVGFVRVFFKSTGKTTLQAEATREKKGTSRRLRHNKFPALVYGVKKTLLILDHNTTFNLQKKNLLCQVKYKVKVQA
BUsg22 DRVGFVRVFFKSNKKTIVKAEIRDKKGKSF SRKLRREDKQVIVPAIVYGGSEESIILNHDNLVFNLQKKTLLIKKTYTVKVA
HI0914 DRVGFVRVFFKSNSNEIKFNAEVRTAQKKGASRRLRNGQIPAVYGGSEESIILNHDNLVFNLQKKTLLIKKTYTVKVA
PA3655 DRVGFKIRVFKSTQKPIILNAQVRSDLGKASRRLRAGLVPVAVYGGDKESVLELREIALLNENIALLNVGAKETVLLKA
PM1985 DRVGFVRVFFKSNSNEIKFNAEVRQSQKKGASRRLRNGQIPAVYGGSEESIILNHDNLVFNLQKKTLLIKKTYTVKVA
RSc140 SRVGIKTRVLKTTGAAKVFAFERSVQGTGASRRLRAGKTPALIIYGGAEELIELDHNLVFNLQKKTLLIKKTYTVKVA
STM021 DRVGFVRVFFKSNSSETTINAIEVRKEQKKGASRRLRANKFPALIIYGGSEAAIELDHDQVMNMQAKVLTIVVDKEIKVKAQD
STY024 DRVGFVRVFFKSNSSETTINAIEVRKEQKKGASRRLRANKFPALIIYGGSEAAIELDHDQVMNMQAKVLTIVVDKEIKVKAQD
vc2259 DRVGFVRVFFKSNSNEIKFEAVLRTDLGKASRRLRAGYFPAIVYGGSEESIILNHDNLVFNLQKKTLLIKKTYTVKVA
wbr31 DKVKFKYRIFKSNKGIILAEENRCKIGKGFSTRREKIPALIIYGGKGPVLELDQNIIFNLQKKTLLIKKTYTVKVA
XAC142 ERVGFKLVRFRSSGEAEIKVERRADEGKASRRLRAGVIPAIVYGGSEESIILNHDNLVFNLQKKTLLIKKTYTVKVA
XCC137 ERVGFKLVRFRSSGEAEIKVERRADEGKASRRLRAGVIPAIVYGGSEESIILNHDNLVFNLQKKTLLIKKTYTVKVA
XF2579 DRVGFKLVRFRSTGVEQIKAQRRKDEGKASRRLRAGMIPAIIYGGQRSIQLNHEQIWLQKKTLLIKKTYTVKVA
y3135 DRVGFVRVFFKSNSSETTINVEVRNDQKKGASRRLRANKFPALIIYGGSEESIILNHDNLVFNLQKKTLLIKKTYTVKVA
YPO104 DRVGFVRVFFKSTSETTINVEVRNDQKKGASRRLRANKFPALIIYGGSEESIILNHDNLVFNLQKKTLLIKKTYTVKVA
Z0181 DRVGFVRVFFKSNSSETTINAIEVRKEQKKGASRRLRANKFPALIIYGGKEAAIELDHDQVMNMQAKVLTIVVDKEIKVKAQD

b0170 VQRHPYKPKLQHIDFVRMAHKKAGGSTRNGRDSSEAKRLGVKRFGGESVLAGSIVRQRGTFKHAGANVCGCRDHTLFAKA
BBp214 IQRHAFKSKLHIDFLKMAHKKAGGSSRNGRDSHSLKRLGVKHFGGETIRSGSIVRQRGTFKHAGANVCGCRDHTLFAKA
Bf131 VQYHPYKSNLHIDFIHMAHKKAGGSTRNGRDSRGRKLRGVKHFGGELISAGTIVRQRGTFKHAGANVCGCRDHTLFAKA
bu232 IQRHSFKSKLLHIDFLYMAHKKAGGSTRNGRDSNAQRLGVKCFGGQLISAGSIVRQRGTFKHAGANVCGCRDHTLFAKA
BUsg22 IQRHAFKSKLHIDFIYMAHKKAGGSTRNGRDSNAQRLGVKCFGGELIPAGSIVRQRGTFKHAGANVCGCRDHTLFAKA
HI0914 MQRHFFKPKLHIDDFKRMATKAGGSTRNGRDSSEAKRLGVKRFGGESVLAGSIVRQRGTFKHAGANVCGCRDHTLFAKA
PA3655 LQRHPAKGFVMHADFLRMAHKKAGGSTRNGRDSSEAKRLGVKRFGGQAVKAGNIIIVRQRGTFKHAGYVGLGKDHHTLFAKA

PM1985 MQRHPFKPQLVHIDFQRMAHKKAGGSTRNGRDESEAKRLGVKRFGGESVLAGSI IVRQRGRTKPHAGSNVGMGRDHTLFLATA
RSc140 FQLHPFKQLVHIDFQRMAHKKAGGSTRNGRDESEAKRLGVKRFGGESVLAGSI IIRQRGTRTHAGVNVGMGKDHTLFLALV
STM021 VQRHAYKPKLTHIDFVRMAHKKAGGSTRNGRDESEAKRLGVKRFGGESVLAGSI IVRQRGRTKPHAGTNVCGCRDHTLFLAKA
STY024 VQRHAYKPKLTHIDFVRMAHKKAGGSTRNGRDESEAKRLGVKRFGGESVLAGSI IVRQRGRTKPHAGTNVCGCRDHTLFLAKA
vc2259 VQRHAYKPKVEHMDIRMAHKKAGGSTRNGRDESEAKRLGVKRFGGESVLAGSI IVRQRGRTKPHAGTNVIGIKDHTLFLALS
wbr31 IQKHAFLKLI IHIDFIYMAHKKAGGSTRNGRDSIGKRLGVKLFGGQKAYPGNI IVRQRGRTKPHGKPNVCGCKDYSLYALK
XAC142 MQRHPFKQLIMHIDFQRMAHKKAGGSTRNGRDSNPYLVGKIFGGQAI DAGNI IVRQRGTQFHPGAGVGLGRDHTLFLALV
XCc137 MQRHPFKQLIMHIDFQRMAHKKAGGSTRNGRDSNPYLVGKIFGGQAI DAGNI IVRQRGTQFHPGAGVGLGRDHTLFLALV
XF2579 LQRHPYRQLVMHVDVQRMAHKKAGGSTRNGRDSNPYLVGKIFGGQAI EAGNI IIRQRGTQFPHAGDGVGLGRDHTLFLALV
y3135 VQRHAFKPKLTHIDFVRMAHKKAGGSTRNGRDESEAKRLGVKRFGGESVLAGSI IVRQRGRTKPHAGINVCGCKDHTLFLALA
YPO104 VQRHAFKPKLTHIDFVRMAHKKAGGSTRNGRDESEAKRLGVKRFGGESVLAGSI IVRQRGRTKPHAGINVCGCKDHTLFLALA
Z0181 VQRHPYKPKLQHIDFVRMAHKKAGGSTRNGRDESEAKRLGVKRFGGESVLAGSI IVRQRGRTKPHAGANVCGCRDHTLFLAKA

b0170 DGKVKFEVKKNRKFI SIEMSRVCQVTGKRPVGTGNNSHALNATKRRFLPNLHSHRFWVESEKRFVTLRVSAKGMRVIDKK
Bbp214 QGKVKFEKKNRNTYVSI IMSKICQITGKKPITGNNSHAMNATKRRFFPNLHSHRFWNPKTKRFI IIRVSAKGMRNIDKL
Bf131 SKGLLFEKLLQRRVLSI IMSRTCQITRKKPMNGNRSHAMNATKRRFIPNIHSHRFWIENKPKFIKLRISTKGRILVLDKL
bu232 KGKVEFKKKKRTYINI IMSRCQITGKKRMI GNNSHALNATKRRFLPNIQYHRFWIPEEKRFIKLRI SAHGMRCIDKK
BUsg22 KGKVEFKKKKRTYINI IVMSRCQVTRKKRMI GNNSHAMNAKRRQFLPNIQYHRFWIPEEKRFIKLRI SAHGMRCIDKK
HI0914 DGKVKFEVKKNRKYVSI IVMSRVCQVTGKRPVGTGNNSHAMNATKRRFLPNLHSHRFWVESEKRFVTLRLTAKGMRIIDKK
PA3655 DGKVKFEVKKNRKYVSI IVMSRVCQVTGKRPVGTGNNSHALNATKRRFLPNLHSHRFWVESEKRFVTLRVSAKGMRVIDKK
PM1985 DGKVKFEVKKNRKYVSI IMSRVCQVTGKRPVGTGNNSHAMNATKRRFLPNLHSHRFWVESEKRFVTLRLTAKGMRIIDKK
RSc140 DGHVKFATRGGKQFVDDVMMARVCQVTGKAPVGNNSHAMNATKRRFLPNLQNRFFWVESENRWVSLRVSNAGRLRIDKK
STM021 DGKVKFEVKKNRKYVSI IVMSRVCQVTGKRPVGTGNNSHALNATKRRFLPNLHSHRFWVESEKRFVTLRVSAKGMRVIDKK
STY024 DGKVKFEVKKNRKYVSI IVMSRVCQVTGKRPVGTGNNSHALNATKRRFLPNLHSHRFWVESEKRFVTLRVSAKGMRVIDKK
vc2259 DGKVKFEVKKNRKFI SIEMSRVCQVTGKRPVGTGNNSHAMNATKRRFLPNLQNRFFWVESENRWVSLRVSNAGRLRIDKK
wbr31 SGIVFFKKKKRTYINI IMSRCQITGKKRMI GNNSHALNATKRRFLPNIQYHRFWIPEEKRFIKLRI SAHGMRCIDKK
XAC142 DGKVEFSTKKKRTYVSVMSRVCQVSGKRVQVTGNNSHAMNATKRRFLPNLHSHRFWVESENRWVSLRVSAHALRTIDKN
XCc137 NGKVEFTTKKRTYVSVMSRVCQVSGKRVQVTGNNSHAMNATKRRFLPNLHSHRFWVESENRWVSLRVSAHALRTIDKN
XF2579 DGTVAFSIKKKRRTYVSVMSRVCQVSGKRVQVTGNNSHAMNATKRRFLPNLHSHRFWVESENRWVSLRVSAHALRTIDKN
y3135 DGKVKFEVKKNRKFI SIEMSRVCQVTGKRPVGTGNNSHAMNATKRRFLPNLHSHRFWVESEKRFVTLRVSAKGMRVIDKK
YPO104 DGKVKFEVKKNRKFI SIEMSRVCQVTGKRPVGTGNNSHAMNATKRRFLPNLHSHRFWVESEKRFVTLRVSAKGMRVIDKK
Z0181 DGKVKFEVKKNRKFI SIEMSRVCQVTGKRPVGTGNNSHALNATKRRFLPNLHSHRFWVESEKRFVTLRVSAKGMRVIDKK

b0170 IDTVLAEELRAKELREKSVEELNTELLNLLRQFNLRMQAASGQLQSHLLKQVRRDVARVKTLLNETQTRSAIGRLPKHK
Bbp214 LNSLKIKKLHVEIKKTIKELNIELMNLLEQFNLTQLQHSAKKLLQSHLLQVRRNIAQVNTILAETQIKSSIIGRLPKHK
Bf131 IEQFLSIVSFMNYNSNIDNLYVVLHVDLREYCKLRIQLKLGQFKVHLFKKLYEACIKLRLFKTQIRSSIGCIPKHK
bu232 IETVIRKINNVFRRKKNKLDLYTELLQLLREQFNLRMQSASGKLLKQPHLLRKRVRNIAQVNTLLDSTQIKSAIGRLPKHK
BUsg22 IELIIQEGIKFRKKNRQDLNIELLQLLREQFNLRMQSASGKLLKQPHLLRKRVRNIAQVNTLLDSTQIKSSIIGRLPKHK
HI0914 IDAVLAEIRAQDLRTRKSVEELNAELVNLGQFQKLRMQATATGQLQQTHTQAKQVRRDIARVKTTLTETQVRSIARLPKHK
PA3655 IEAVLADLRANELREKSVEELNTELLNLLRQFNLRMQAATGQLQSHLLKQVRRDVARVKTLLNETQTRSAIGRLPKHK
PM1985 IDAVLADIRAQELRTRKSVEELNTELLNLLRQFNLRMQAASGQLQSHLLKQVRRDVARVKTLLNETQTRSAIGRLPKHK
RSc140 IDEVLADLRASELRDKDVAAGLNLQELSELLKAQFGLRMQKATQQLQNTSOLKQVRRDIARVKTTLTETQVRSIARLPKHK
STM021 IETVLSSELRAKELREKSVEELNTELLNLLRQFNLRMQAASGQLQSHLLKQVRRDVARVKTLLNETQTRSAIGRLPKHK
STY024 IETVLSSELRAKELREKSVEELNTELLNLLRQFNLRMQAASGQLQSHLLKQVRRDVARVKTLLNETQTRSAIGRLPKHK
vc2259 IDAVLVEIRAQDLREKSVEELNTELLNLLRQFNLRMQAATGQLQQTHTLKAQVRRDIARVKTTLTETQVRSIARLPKHK
wbr31 IKKVMKIKIKNLRKKNKELNTELLNLLRQFNLRMQAAGNQLQHTHLLKEVRKKNLAYVKMLINETQIKSSIIGRLPKHK
XAC142 IDAVLKELRRAEQLEKSADELKAHLTDLRKEQFSLRMQOVTGQLPKTHETRRVRREIARVKKHLLGSRVLRGLRGTQSRHR
XCc137 IDAVLKELRRAEQLEKSADELKAHLTDLRKEQFSLRMQOVTGQLPKTHETRRVRREIARVKKHLLGSRVLRGLRGTQSRHR
XF2579 IDAVLAEIRAQELREKSVEELNTELLNLLRQFNLRMQAASGQLQSHLLKQVRRNVARVKTLLNETQVRSIARLPKHK
y3135 IETVLAIRAQELREKSVEELNTELLNLLRQFNLRMQAASGQLQSHLLKQVRRNVARVKTLLNETQVRSIARLPKHK
YPO104 IETVLAIRAQELREKSVEELNTELLNLLRQFNLRMQAASGQLQSHLLKQVRRNVARVKTLLNETQVRSIARLPKHK
Z0181 IDTVLAEELRAKELREKSVEELNTELLNLLRQFNLRMQAASGQLQSHLLKQVRRDVARVKTLLNETQTRSAIGRLPKHK

b0170 ATLLGLGLRRI GHTVEREDTPAIRGMINAVSFMVKVEMKDIHPYEEITASCSCNVMIKIRSTVGNLQVSCSKCHPFFGKQR
Bbp214 ATLSGLGLRYI GHTVLRKNTPSVVRGMIKLLSFMLRINMKKIHPYFKINVTSCSCNNINIFSTLSNVQVSCSKCHPFFGQQR
Bf131 ATLRGLGLRRI GHTVSKIDTPSVRGMINLVYMIQVPMKKNLHYPYVNI SASCSNVLIHVRSTLKNLQVSCDACHPFGYGTQR
bu232 KTLIGLGLRYI GHTVIREDTPSIQGMVKKISYILKIQMKKIHPYKSIATATSCSNIIEIFSTINNLDICAKCHPFFGKQR
BUsg22 KTLIGLGLRRI GHTVIRQDTPSIRGMIKIKSYILKIQMKKIHPYKSIATATSCSNIIEIFSTVNNLDICAKCHPFFGKQR
HI0914 ATLRGLGLRRI GHTVIRQDTPSIRGMIKIKSYILKIQMKKIHPYKSIATATSCSNIIEIFSTVNNLDICAKCHPFFGKQR
PA3655 ATLRGLGLRRI GHTVIRQDTPSIRGMIKIKSYILKIQMKKIHPYKSIATATSCSNIIEIFSTVNNLDICAKCHPFFGKQR
PM1985 ACVKGGLGLRRI NHTVEVDTPENRGMINKAYLLRVEMKPGIHPYRVPVLFHDTSDVYFLIGSTATLQVSSASHPVGQR
RSc140 ATLRGLGLRRI NHTVEVDTPENRGMINKAYLLRVEMKPGIHPYRVPVLFHDTSDVYFLIGSTATLQVSSASHPVGQR
STM021 ATVRGLGLRRI NHTVEVDTPAVRGMINKVSYLVKIMKENTHYPYREVVFDQMSDFSFVTRSTIKIEVSSHPFYGTQK
STY024 ATLLGLGLRRI GHTVEREDTPAVRGMVNAV SFMVKVEMKDIHPYRVPVLFHDTSDVYFLIGSTATLQVSSASHPVGQR
vc2259 ATLLGLGLRRI GHTVEREDTPAVRGMVNAV SFMVKVEMKGIHPYEEITATSCSNIKTHSTVGNLQVSCSKCHPFFGKQR
wbr31 ATLRGLGLRRI NHTVEVDTPCVRGMINKVSYLVKIMKENTHYPYRVPVLFHDTSDVYFLIGSTATLQVSSASHPVGQR
XAC142 STLYGLGLRRI GHTVIRQNSPRLGMINISYLVKIKMKKIHPSLDILATSCSNIKIKSTIKLLDVCNKCHPFFGKQR
XCc137 LSVRALGLNKLNDVRELKDSPOVRGLINTVHYLVKVEKMDNVHPYKDVVFDVDFKILTRSTMKVEISSASHPFGKHK
XF2579 LSVHALGLNKLNDVRELKDSPOVRGLINTVHYLVKVEKMDNVHPYKDVVFDVDFKILTRSTMKVEISSASHPFGKHK
y3135 LSVRALGLRKVSDMRKVNDTPQVRGLIKKVHYLVRIQMKPEIHPYREVVFDVDFKILTRSTMKVEISSASHPFGKHK
YPO104 ATLLGLGLRRI GHTVEREDTPAVRGMVNAV SFMVKVEMKQGIHPYEQVTASCSCSNIKINSTVGNLQVSCSKCHPFFGKQR
Z0181 ATLLGLGLRRI GHTVEREDTPAIRGMINAVSFMVKVEMKDIHPYEEITASCSCNVMIKIRSTVGNLQVSCSKCHPFFGKQR

b0170 DVATGGRVDRFNKRFMVAVQNKPTRSKRGMRRSHDALTAVLSVDKTSGEKHLRHHIADGYRGRKVIKLVSSAGTGHPY
Bbp214 TSDTGGRIEKFHFRFMVAVQNKPTRSKRGMRRSHDYLKIPLSKDKLSEIHRHHIKNGYKGGKVIKLISSSGSKHY
Bf131 IIDTGRVNLFRNKRFMVAVQNKPTRSKRGMRRSHALPITISVSKVSEIHRHHIMNGFYRGMVILYFSSTGNGHPY
bu232 VIDTGRVERFVKRFRMVAQNKPTRSKRGMRRSHDSLTAPLSIDKFSGETHRHHIINNGYKGGKVIKLISSAGTGHPY
BUsg22 IIDTGRVERFVKRFRMVAQNKPTRSKRGMRRSHDSLKEIILSKDKFSGEMHIRHHIADGYRGRKVIKLISSAGTGHPY
HI0914 VVDTGGRVERFNRFRMVAQNKPTRSKRGMRRSHDALTAVLSVDKASGETHLRHHIADGYRGRKVIKLVSTAETGHPY
PA3655 KTKSEGRVAGFRNKRFRMVAQNKPTRSKRGMRRSHDALTAVLSVDKASGETHLRHHIADGYRGRKVIKLVSTAETGHPY
PM1985 QIANEGRASDFVNRVMVAVQNKPTRSKRGMRRSHDALTAVLSVDKASGETHLRHHIADGYRGRKVIKLVSTAETGHPY
RSc140 IMDTAGRVEKFRQKFRMVAQNKPTRSKRGMRRSHDALTAVLSVDKASGETHLRHHIADGYRGRKVIKLVSTAETGHPY
STM021 FDSSESAARFQKFRMVAQNKPTRSKRGMRRSHDALTAVLSVDKASGETHLRHHIADGYRGRKVIKLVSTAETGHPY
STY024 VVDTGGRVERFNRFRMVAQNKPTRSKRGMRRSHDALTAVLSVDKTSGEKHLRHHIADGYRGRKVIKLVSSAGTGHPY
vc2259 IVDTGGRVERFNRFRMVAQNKPTRSKRGMRRSHDALTAVLSVDKASGETHLRHHIADGYRGRKVIKLVSSAGTGHPY
wbr31 KLNIIGRVSFKFRMVAQNKPTRSKRGMRRSHDIINHPVSDVSGEIHRLHCLKSGFYRGGKVIKLISSAGTGHPY
XAC142 VIDTGGRIDKFRMVAQNSRVTSPRRGQRSHDALTAKLSTDPSTGEIHLRHHIADGYRGRKVIKLISSAGTGHPY

XCC137 VIDTGGRIDKFQKRYMAVQKSRVTPSRRGQRRSHDALTAKLSTDPSTSGEIHRLRHHIADGYYRGGKVIIRMISSAATGHFYT
XF2579 LVDTSGRIDKFKRKYMAVQKSRVTPSRRGQRRSHDALTAKLSIDPSTSGEVHIRHHVADGYYRGGKVIIRLISADTGHFYT
y3135 DVASGGVRDRFNKRFMVAVQKQNPTRSKRGMRRSHDALTALSVDKTSGETHLRHHIADGFYRGRKVIKLVSSAGTGHFYT
YPO104 DVASGGVRDRFNKRFMVAVQKQNPTRSKRGMRRSHDALTALSVDKTSGETHLRHHIADGFYRGRKVIKLVSSAGTGHFYT
Z0181 DVATGGVRDRFNKRFMVAVQKQNPTRSKRGMRRSHDALTAVLSVDKTSGEKHLRHHIADGYYRGRKVIKLVSSAGTGHFYT

b0170 TTKNKRTKPEKLELKKFDPVVRQHVYIYKEAKMKRTFQPSVLKRNRSHGFRARMATKNGRQVLARRAKGRARLTMPIKT
BbP214 TTKNKKAPSKKIELKKYDPKIRKHVLYKEAKMKRTFQPSVLKRNRSHGFRARMATKNGRQVLARRAKGRARLTMPIKT
Bf131 TTKNKRSHPKIKLKKFDPYIYKHHIYTEKMKRTYQPSVLKRNRSHGFRARMATKNGRQVLARRAKGRARLTMPIKT
bu232 TTKNKRNTPDKLKLKYPVIRKHILYNEGKMKRTFQPSVLKRNRSHGFRARMATKNGRYILSRRRAKLRTRLTMPKIKT
BÜsg22 TTKNKRNTPDKLKLKYPVIRKHILYNEGKMKRTFQPSVLKRNRSHGFRARMATKNGRYILSRRRAKLRTRLTMPKIKT
HI0914 TDKNKRNMPKMEIKKFDPVVRKHVIYKEAKMKRTFQPSVLKRNRSHGFRARMATKNGRQVLARRAKGRKLSMPKIKT
PA3655 TDKNKRTKPEKIEIKKYDPVVRQHVYIYKEAKMKRTFQPSVLKRNRSHGFRARMATKNGRQVLARRAKGRKLSMPKIKT
PM1985 TTKNKRNMPKMEIKKYDPVVRKHVYIYKEAKMKRTFQPSVLKRNRSHGFRARMATKNGRQVLARRAKGRKLSMPKIKT
RSc140 TTKNKRTKPEKMEIMKFDPVARKHVAYKETMKRTYQPSVTRRKRTHGFRVPMKTRGGRAVLNARRAKGRKLSMPKIKT
STM021 TTKNKRTKPEKLELKKFDPVVRQHVYIYKEAKMKRTFQPSVLKRNRSHGFRARMATKNGRQVLARRAKGRARLTMPIKT
TY024 TTKNKRTKPEKLELKKFDPVVRQHVYIYKEAKMKRTFQPSVLKRNRSHGFRARMATKNGRQVLARRAKGRARLTMPIKT
vc2259 TDKNKRNMPKGFIEIKKYDPVVRQHVYIYKEAKMKRTFQPSVLKRNRSHGFRARMATANGRQVLNARRAKGRKLSMPKIKT
wbr31 TTKNKSHNLKIKLKKFDPYIYKHHIYNEAKMKRTFQPSVLKRNRSHGFRARMATKNGRQVLARRAKGRKLSMPKIKT
XAC142 TDKNKRNTPGKMEMMKYDPVVRKHVYIYKEAKMKRTFQPSNLKRNRSHGFRARMATADGRKILARRAKGRKLSMPKIKT
XCC137 TDKNKRNTPGKMEMMKYDPVVRKHVYIYKEAKMKRTFQPSNLKRNRSHGFRARMATADGRKILARRAKGRKLSMPKIKT
XF2579 TDKNKRNTPGKLEFKKYDPVVRHHVIYKEAKMKRTFQPSNLKRNRSHGFRARMATADGRKILARRAKGRKLSMPKIKT
y3135 TTKNKRTKPEKLELKKFDPVVRQHVYIYKEAKMKRTFQPSVLKRNRSHGFRARMATKNGRQVLARRAKGRARLTMPIKT
YPO104 TTKNKRTKPEKLELKKFDPVVRQHVYIYKEAKMKRTFQPSVLKRNRSHGFRARMATKNGRQVLARRAKGRARLTMPIKT
Z0181 TTKNKRTKPEKLELKKFDPVVRQHVYIYKEAKMKRTFQPSVLKRNRSHGFRARMATKNGRQVLARRAKGRARLTMPIKT

b0170 VRGAAKRFFKKGKGFPHKHANLRLHILTKKATKRKRHLRPKAMVSKGDLGLMKVRSVVKLCKCKIVKRDGVIIRVCEPKHK
BbP214 LRSAAKRFFKESGKFKRQAHRLHILTKKNTYKRHLRSPKMISSKDIQKMKVRTSVKLLCCKIVKRNVRVIRVCEPKHK
Bf131 SRSASAKRFRSSNKYKFKHAYARHILTKKSTKHKRHLRISILSKKNRKMVRSVVKMCCFIKRRNVIRVVCTPKHK
bu232 LKSAAKRFFKIASGKFKRQANLRLHILTKKTTTKKRHLRPKILVSTGDMRDMKVQASVVKVLCCKIKRNNVVRVIRVCEPKHK
BÜsg22 LRSAAKRFFKASGKFKRQANLRLHILTKKTTTKKRHLRPKILVSKGDIKSKVKVASVVKVLCCKIVKREGVVRVIRVCEPKHK
HI0914 VRGAAKRFFKASGGFKRQSHLRLHILTKKTTTKKRHLRHLRHSMAKADQVLMKVRASVVKMCCCKIVKREGVVRVIRVCEPKHK
PA3655 KSGAAKRFFKTAGGLKHKHAFKSHILTKMTTKRKRQLRGTSMNLKSDVARMKVLASLQAKQVVRKGRGLVVICNPRFK
PM1985 VRGAAKRFFKASGGFKRQSHLRLHILTKKTTTKKRHLRHLRHSMAKADQVLMKVRASVVKLCKCKIVKREGVVRVIRVCEPKHK
RSc140 KKSASAKRFTAPGGTIKRGQAFKRHLILTKKTTTKNKRLRGTGEGVHETNLKSMKVLASVVKRICKKIVKREGVVRVIRVCEPKHK
STM021 VRGAAKRFFKKGKGFPHKHANLRLHILTKKATKRKRHLRPKAMVSKGDLGLMQVLSLNRNAKQIVKRRKGRGLVVICNPRFK
TY024 VRGAAKRFFKKGKGFPHKHANLRLHILTKKATKRKRHLRPKAMVSKGDLGLMQVLSLNRNAKQIVKRRKGRGLVVICNPRFK
vc2259 NKGAAKRFKKTAGGIKYKHATKRHLILTKRTTKNKRLRPNAILPKCELAAMKVRASVVKICKKIVKREGVVRVIRVCEPKHK
wbr31 IRSVCKRFFKSCNFKYKKNLRLHILTKKSTTKRKRHLRISLFSATKGDKLVKVRTSVRKLCKCKIVKRNVRVIRVCEPKHK
XAC142 NRAAAKRFKASGKYKCGHANRSHILTKKATKRKRHLRHLRHSMAKADQVLMKVRASVVKLCKCKIVKREGVVRVIRVCEPKHK
XCC137 NRAAAKRFKASGKYKCGHANRSHILTKKATKRKRHLRHLRHSMAKADQVLMKVRASVVKLCKCKIVKREGVVRVIRVCEPKHK
XF2579 NRAAAKRFKASGKYKAGHANRSHILTKKATKRKRHLRHLRHSMAKADQVLMKVRASVVKLCKCKIVKREGVVRVIRVCEPKHK
y3135 VRGAAKRFFKANGGFKRKHANLRLHILTKKATKRKRHLRHLRHSMAKADQVLMKVRASVVKLCKCKIVKREGVVRVIRVCEPKHK
YPO104 VRGAAKRFFKANGGFKRKHANLRLHILTKKATKRKRHLRHLRHSMAKADQVLMKVRASVVKLCKCKIVKREGVVRVIRVCEPKHK
Z0181 VRGAAKRFFKKGKGFPHKHANLRLHILTKKATKRKRHLRPKAMVSKGDLGLMKVRSVVKLCKCKIVKRDGVIIRVCEPKHK

b0170 QRQMTESFAQLFEESLKEIETPGSIVRGVVAIDKDVVLVDAGLKSESAIPAEQFKNVAGDEVDAVALDAVEDGFGETLLS
BbP214 QRQMTESFAQLFEESLKNITPGSIIQGTVAITKDTILVDAKLKSESIPIDQFKNSVGDQIDVALDAIEDGFGETLLS
Bf131 QRQMIESFAQLFEESLKKTTQSGSIVQGVVAISKEIIVLVDAGLKSESAIPINQFVNSVDYIDVLDVAIVEDGFGETLLS
bu232 QRQMNESFAQLFEESLKEIETPGSIRGTIVSIEKDMVLVDAGLKSESAIPVEQFQNSVGDQIDVALDAIEDGFGETLLS
BÜsg22 QRQMNESFAQLFEESLKEIETPGSIRGTIVSIEKDIIVLVDAGLKSESAIPVEQFKNVAGDEVDAVALDAIEDGFGETLLS
HI0914 QRQMSQFAQLFEESLKVLETTQGSIVSGTVVAIQKGFVLVDAGLKSESAIPVAEFLNAVGDVTVNVALDAVEDGFGETLLS
PA3655 CVQMSQFAELFEESLSLDMPGAIIITGIVVDIDGDVTVHAGLKSSEGVIPVEQFYNEVGDVHVALDAVEDGFGETLLS
PM1985 QRQMTESFAQLFEESLKELETTQGSIVSGTVVAIQKGFVLVDAGLKSESAIPVEEFLNAVGDVTVNVALDAVEDGFGETLLS
RSc140 QRQTNESFAALFEESLARSINMAGEVISAENVIDHNFVVMVAGLKSSEAFVPEEFLNDVGDVYSVAIDALENGFGETLLS
STM021 AVQMTESFAQLFEESLKEIETPGSIVRGVVAIDKDVVLVDAGLKSESAIPAEQFKNVAGDEVDAVALDAVEDGFGETLLS
TY024 AVQMTESFAQLFEESLKEIETPGSIVRGVVAIDKDVVLVDAGLKSESAIPAEQFKNVAGDEVDAVALDAVEDGFGETLLS
vc2259 QRQMTESFAQLFEESLNETQFQGTIVKGTVVAIENGTVLVDAGLKSESAIPAEQFKNVAGDEVDAVALDAVEDGFGETLLS
wbr31 QRQMTESFARLFEESLKKIQTTPGSLVKGTVIAILKDIIVLVDAGLKSESAIPVEQFLNVDVGDVITVLDVAIEDGFGETLLS
XAC142 ARQMTESFAELFEASQANLAKPGSIVTGTVEVRGDVVVINAGLKSSEGIVPVEQFRNDVGDQVQVALDSIENGFGFETLLS
XCC137 ARQMTESFAELFEASQANLAKPGSIVTGTVEVRGDVVVINAGLKSSEGIVPVEQFRNDVGDQVQVALDSIENGFGFETLLS
XF2579 ARQMTESFAELFEASQANLAKPGSIVTGTVEVRGDVVVINAGLKSSEGIVPVEQFRNDVGDQVQVALDAIEDGFGETLLS
y3135 QRQMIESFAQLFEESLKTIEETPGSIVRGVVVIDKDIIVLVDAGLKSESAIPAEQFKNVAGDEVDAVALDAVEDGFGETLLS
YPO104 QRQMIESFAQLFEESLKTIEETPGSIVRGVVVIDKDIIVLVDAGLKSESAIPAEQFKNVAGDEVDAVALDAVEDGFGETLLS
Z0181 QRQMTESFAQLFEESLKEIETPGSIVRGVVAIDKDVVLVDAGLKSESAIPAEQFKNVAGDEVDAVALDAVEDGFGETLLS

b0170 REKAKRHEAWITLEKAYEDAETVTGVINGKVKGGFTVELNGIRAFPLPGSLVDVVRPVRTLHLEKLEFEKVIKLDQKRN
BbP214 REKAKRHEAWITLEKAYEKDSTVTVGLINGKVKGGFTVELEDIRAFPLPGSLVDVVRPVRTLHLEKLEFEKVIKLDQKRN
Bf131 REKAKRHEAWITLEKAYEQEVTVTVGVINGKVKGGFTVELNGIRAFPLPGSLVDVVRPVRTLHLEKLEFEKVIKLDQKRN
bu232 REKAKRHEAWITLEKAYEKDSTVTVGLINGKVKGGFTVELEDIRAFPLPGSLVDVVRPVRTLHLEKLEFEKVIKLDQKRN
BÜsg22 REKAKRHEAWITLEKAYEKDSTVTVGLINGKVKGGFTVELNEIRAFPLPGSLVDVVRPVRTLHLEKLEFEKVIKLDQKRN
HI0914 REKAVRHESWIELEKAYEEKATVIGLITGKVKGGFTVELNGVRAFPLPGSLVDVTRPAREADHLLGKLEFEKVIKLDQKRN
PA3655 REKAKRAESWIVLEAFAADEVVKGVINGKVKGGFTVDVNGIRAFPLPGSLVDVVRPVRTLHLEKLEFEKVIKLDQKRN
PM1985 REKAVRHESWIELEKAYEEQATVIGLITGKVKGGFTVELNGVRAFPLPGSLVDVTRPAREADHLLGKLEFEKVIKLDQKRN
RSc140 RDKARLASWLNLEKALESEIISGTVTKVKGGLTVMVNGIRAFPLPGSLVDVVRPVRTLHLEKLEFEKVIKLDQKRN
STM021 REKAKRHEAWITLEKAYEDAETVTGVINGKVKGGFTVELNGIRAFPLPGSLVDVVRPVRTLHLEKLEFEKVIKLDQKRN
TY024 REKAKRHEAWITLEKAYEDAETVTGVINGKVKGGFTVELNGIRAFPLPGSLVDVVRPVRTLHLEKLEFEKVIKLDQKRN
vc2259 REKAKRHEAWITLEKAYEEAATVIGLITGKVKGGFTVELNGIRAFPLPGSLVDVVRPVRTLHLEKLEFEKVIKLDQKRN
wbr31 REKAKRHEAWITLEKAYEEAATVIGLITGKVKGGFTVELNGIRAFPLPGSLVDVVRPVRTLHLEKLEFEKVIKLDQKRN
XAC142 REKAKRAMVWDELEEALEKNETITGRISGKVKGGFTVDIKDVRAFPLPGSLVDVVRPVRTPAYLEKLEFEKVIKLDQKRN
XCC137 REKAKRAMVWDELEEALEKNETITGRISGKVKGGFTVDIKDVRAFPLPGSLVDVVRPVRTPAYLEKLEFEKVIKLDQKRN
XF2579 REKAKRSMVWDELEEALEKNETISGRINGKVKGGFTVDIKDVRAFPLPGSLVDVVRPVRTPAYLEKLEFEKVIKLDQKRN
y3135 REKAKRHEAWITLEKAYEEAATVTVGVINGKVKGGFTVELNGIRAFPLPGSLVDVVRPVRTLHLEKLEFEKVIKLDQKRN
YPO104 REKAKRHEAWITLEKAYEEAATVTVGVINGKVKGGFTVELNGIRAFPLPGSLVDVVRPVRTLHLEKLEFEKVIKLDQKRN
Z0181 REKAKRHEAWITLEKAYEDAETVTGVINGKVKGGFTVELNGIRAFPLPGSLVDVVRPVRTLHLEKLEFEKVIKLDQKRN

b0170 VVVSRRAVIESENSAERDQLEENLQEGMEVKGIVKNLTDYGAFVDLGGVDGLLHITDMAWKRVKHPSEIVNVGDEITVKV
BBp214 VVVSRRAVIESEYNAERNLLETQLQEGVIGVKNLTDYGAFVDLGGVDGLLHITDMAWKRVKHPSEIVNI GDEVKIKI
Bf131 VVVSRRAAIEFEHSAERDQLLHKLHEGIIKGVVKNLTDYGAFIDLGGIDGLLHITDIAWKRVKHPSDIISIGDEISVKV
bu232 VVVSRRAVIESENSAERDQLEENLQEGMHVKGIVKNLTDYGAFVDLGGVDGLLHITDMAWKRVKHPSEIVNVGDEINIKI
BUsg22 VVVSRRAVIESENSAERDQLLESLOQEGIEIKGVKNLTDYGAFVDLGGVDGLLHITDMAWKRVKHPSEIVNVGDEINVKI
HI0914 VVVSRRAVIESENSQEREQVLENLVEGSEVKGIVKNLTDYGAFVDLGGVDGLLHITDMAWKRVKHPSEIVNVGDEVTVKV
PA3655 VVVSRRSRLAENSAEREALESLOQEGQVKGIVKNLTDYGAFVDLGGVDGLLHITDMAWKRVKHPSEIVNVGDEIDVKV
PM1985 VVVSRRAVIESENSQEREQILENLQEGSEVKGIVKNLTDYGAFVDLGGVDGLLHITDMAWKRVKHPSEIVNVGDEITVKV
RSc140 VVLSRRAVVEATLGEERQKLMETLKEGAVNGIVKNITDYGAFVDLGGIDGLLHITDLAWRRVRHPSEVLSVQGEITAKI
STM021 VVVSRRAVIESENSAERDQLEENLQEGMEVKGIVKNLTDYGAFVDLGGVDGLLHITDMAWKRVKHPSEIVNVGDEINVKV
STY024 VVVSRRAVIESENSAERDQLEENLQEGMEVKGIVKNLTDYGAFVDLGGVDGLLHITDMAWKRVKHPSEIVNVGDEINVKV
vc2259 VVVSRRAVIESESSVERDELLETQLQEGTEVKGIVKNLTDYGAFVDLGGVDGLLHITDMAWKRVKHPSEIVNVGDEILVKV
wbr31 VVVSRRAVIESENSAERDHLILKILQEGSKAVGVVKNLTDYGAFIDLGGVDGLLHITDMAWKRVKHPNEIVSIGDEITVKI

b0170 LKFDRETRVSLGLKQLGEDPWVAIAKRYPEGTCLTGRVTNLTDYGCFFEIEEGVEGLVHVSEMDWTNKNIHPSKVVNVG
BBp214 LKFDREKIRVSLGLKQLSDDPWTKISERYPEKTKITGRVTNLTDYGCFFEIEEGVEGLVHVSEMDWTNKNIHPSKVMQVN
Bf131 LKFDRETRVSLGLKQLLEDDPWSIVRNYPEKTKITGKVTNLTDYGCFFIEIAGGVEGLVHISEMDWTNKNIHPSKVVVEG
bu232 LKFDRETRVSLGLKQLGEDPWVAIAKRYPEGTCLTGRVTNLTDYGCFFEIEEGVEGLVHVSEMDWTNKNIHPSKVVTVN
BUsg22 LKFDKERTVSLGLKQLGEDPWVAIAISNRYPEGIKLSGRVTNLTDYGCFFEIEEGVEGLVHVSEMDWTNKNIHPSKVVAVN
HI0914 LKFDKDRTRVSLGLKQLGQDPWAAIAENHPVNSKLTGKVTNLTDYGCFFEILDGVEGLVHVSEMDWTNKNIHPSKVVSLG
PA3655 LKFDRETRVSLGLKQLGEDPWVAIAKRYPEGTCLTGRVTNLTDYGCFFAELEEGVEGLVHVSEMDWTNKNIHPSKVVQVG
PM1985 LKFDKDRTRVSLGLKQLGQDPWVAIAENHPVNSKLSGKVTNLTDYGCFFEILDGVEGLVHVSEMDWTNKNIHPSKVVSLG
RSc140 LKFDQEKNRVSLGVKQLGEDPWVGSRRYPQGTCLTGRVTNLTDYGCFFVEIEAGIEGLVHVSEMDWTNKNVAPSKVVQLG
STM021 LKFDRETRVSLGLKQLGEDPWVAIAKRYPEGTCLTGRVTNLTDYGCFFEIEEGVEGLVHVSEMDWTNKNIHPSKVVNVG
STY024 LKFDRETRVSLGLKQLGEDPWVAIAKRYPEGTCLTGRVTNLTDYGCFFEIEEGVEGLVHVSEMDWTNKNIHPSKVVNVG
vc2259 LKFDRETRVSLGLKQLGEDPWVAIAKRYPEGHKLSGRVTNLTDYGCFFEIEEGVEGLVHVSEMDWTNKNIHPSKVVNVG
wbr31 LKFDRETRVSLGLKQLGQDPWVIEISKRYPEBNVKISGKVTNLTDYGCFFEIEEGVEGLVHISEMDWTNKNIHPSKVVNVG
XAC142 LKFDRETRVSLGLKQLGEDPWVNIARRYPANSRVFGKVSNTDYGAFVEIEPGVEGLVHVSEMDWTNKNVNP SKVVQVG
XCC137 LKFDRETRVSLGLKQLGEDPWVNIARRYPANSRVFGKVSNTDYGAFVEIEPGVEGLVHVSEMDWTNKNVNP SKVVQVG
XF2579 LKFDRETRVSLGLKQLGEDPWVNIARRYPANSRVFGKVSNTDYGAFVEIEAGVEGLVHVSEMDWTNKNVNP SKVVQVG
y3135 LKFDRETRVSLGLKQLGEDPWVAIAKRYPESTKLTGRVTNLTDYGCFFEIEEGVEGLVHVSEMDWTNKNIHPSKVVNVG
YPO104 LKFDRETRVSLGLKQLGEDPWVAIAKRYPESTKLTGRVTNLTDYGCFFEIEEGVEGLVHVSEMDWTNKNIHPSKVVNVG
Z0181 LKFDRETRVSLGLKQLGEDPWVAIAKRYPEGTCLTGRVTNLTDYGCFFEIEEGVEGLVHVSEMDWTNKNIHPSKVVNVG

b0170 DVVEVMVLDIDEERRISLGLKQCKANPWQFAETHNKGDREVEGKIKSITDFGIFIGLDGGIDGLVHLSDISWNVAGEEA
BBp214 SVVKMILDDIDEERRISLGLKQCKNPNWMEFSSKYNKGSVVGKIKSITDFGIFIGLEGGIDGLVHLSDISWNVAGEEA
Bf131 ECIEVMVLDIDEERRISLGLKQCKVNPWQRFSSQIYARGDRVTGRKIKSITDFGIFIGLEGGIDGLVHLSDIASVSNNEL
bu232 DVVEVMVLDIDEERRISLGLKQCKINPWQFSETHKKGIVHVGKIKSITDFGIFIGLNGGIDGLVHLSDISWNVAGEEA
BUsg22 NIVDVLDDIDEERRISLGLKQCKINPWQFSETHKKGIVHVGKIKSITDFGIFIGLNGGIDGLVHLSDISWNVAGEEA
HI0914 DTVEVMVLEIDEERRISLGLKQCKANPWQFADTHNKGDVTKGKIKSITDFGIFIGLEGGIDGLVHLSDISWNVAGEEA
PA3655 DEVEVQVLDIDEERRISLGLKQCKSNPWQFSSQFNKGDRIKSGTISITDFGIFIGLDGGIDGLVHLSDISWNVAGEEA
PM1985 DVVEVMVLDIDEERRISLGLKQCKNPNWQFAETHNKGDREVEGKIKSITDFGIFIGLDGGIDGLVHLSDISWNVAGEEA
RSc140 DEVEVMVLDIDEERRISLGMKQCKANPWQFARNHKKGDLAGQIKSITDFGVFGLPGGIDGLVHLSDSLWQETGEEA
STM021 DVVEVMVLDIDEERRISLGLKQCKSNPWQFAETHNKGDREVEGKIKSITDFGIFIGLDGGIDGLVHLSDISWNVAGEEA
STY024 DVVEVMVLDIDEERRISLGLKQCKSNPWQFADTHNKGDREVEGKIKSITDFGIFIGLDGGIDGLVHLSDISWNVAGEEA
vc2259 DEVEVMVLDIDEERRISLGLKQCKANPWQFSAEAQAKGDVTKGKIKSITDFGIFIGLEGGIDGLVHLSDISWNVAGEEA
wbr31 DTNVVLDIDEERRISLGLKQCKPNPWQFSETHKKGIVHVGKIKSITDFGIFIGLEGGIDGLVHLSDISWNVAGEEA
XAC142 DEVEVMVLDIDEERRISLGMKQVAANPWQFALHKKNDKRVSGQIKSITDFGIFIGLDGGIDGLVHLSDISWNTTGEDV
XCC137 DEVEVMVLDIDEERRISLGMKQVAANPWQFALHKKNDKRVSGQIKSITDFGIFIGLDGGIDGLVHLSDISWNTTGEDV
XF2579 DEVEVMVLDIDEERRISLGMKQVAANPWQFALHKKNDKRVSGQIKSITDFGIFIGLDGGIDGLVHLSDISWNTTGEDV
y3135 DVVEVMVLDIDEERRISLGLKQCKSNPWQFAETHNKGDREVEGKIKSITDFGIFIGLDGGIDGLVHLSDISWNVAGEEA
YPO104 DVVEVMVLDIDEERRISLGLKQCKSNPWQFAETHNKNDREVEGKIKSITDFGIFIGLDGGIDGLVHLSDISWNVAGEEA
Z0181 DVVEVMVLDIDEERRISLGLKQCKANPWQFAETHNKGDREVEGKIKSITDFGIFIGLDGGIDGLVHLSDISWNVAGEEA

b0170 VREYKKGDEIAAVVLQVDAERERISLGVKQLAEDPFNNWVALNKKGAIITGKVTAVDAKTVELADEGYLRASEASRSVGD
BBp214 VKYKKGDEIAAVVLQVDPDRERISLGIKQLQEDPFPAKYVSSHKGSLSVGTIKKIDNNVSLSEDGLIKPLNISDKIGE
Bf131 ISQYKKGDEIAAVVLQVDSERERISLGIKQLQEDPFPAKYVSSHKGSLSVGTIKKIDNNVSLSEDGLIKPLNISDKIGE
bu232 VVKYKKNDEIAAVVLQVDAERERISLGIKQLQEDPFNTYIANHKKGAIITGKIKSLDKKIVKLPEEGVIKLTEITRKIED
BUsg22 VKNYKKGDEIAAVVLQVDAERERISLGIKQLQEDPFNNVYVSNHKKGAIITGKIKKDFDKTKVLSDEGNIKRFSDDSRKIDD
HI0914 VRQYKKGDEIAAVVLQVDAVAKERISLGIKQLQEDPFNNFVAIINKKGAVVSAVVEADAKKVELADEGYLRASEASRSVGD
PA3655 VRRFKKGDELETVILSVDPERERISLGIKQLQEDPFNNYASLHEKGSIVRGTVKEVDAKVISLGDGILKASEISRKEGE
PM1985 VRQYKKGDEIAAVVLQVDAVAKERISLGIKQLQEDPFNNFVAIINKKGAVVSAVVEADAKKVELADEGYLRASEASRSVGD
RSc140 VRKYKKGDEIAAVVLQVDAERERISLGIKQLQEDPFNNFVAIINKKGAVVSAVVEADAKKVELADEGYLRASEASRSVGD
STM021 VREYKKGDEIAAVVLQVDAERERISLGVKQLAEDPFNNWVALNKKGAIITGKVTAVDAKTVELADEGYLRASEASRSVGD
STY024 VREYKKGDEIAAVVLQVDAERERISLGVKQLAEDPFNNWVALNKKGAIITGKVTAVDAKTVELADEGYLRASEASRSVGD
vc2259 VREFKKGDEIAAVVLQVDAERERISLGIKQMEDPFNNYVSDNKKGALVNGTVTAVDAKTELEDEGYLRASEASRSVGD
wbr31 VKEYKKGDIISAMVLQVDSRERISLGIKQLQEDPFNNYVYVKNKIGDIVDGTISIIEKSKFVIKLSFVEGYVNIADKISN
XAC142 VRNYKKGDTLEAVVLQVDPERERISLGVKQLQEDPFQYMASNPKGSKVEGVVREVDAKTIDLADEGYVAARDIANKVG
XCC137 VRNYKKGDTLEAVVLQVDPERERISLGVKQLQEDPFQYMASNPKGSKVEGVVREVDAKTIDLADEGYVAARDIANKVG
XF2579 VRNFKKGDTLETVVLAVDPERERISLGVKQLQEDPFQYMATHPKGSKIVGTVEVDAKTELEDEGYVSARDIANKVG
y3135 VREYKKGDEIAAVVLQVDAERERISLGVKQLAEDPFNNYVSNKKGAIITGKVTAVDAKTVELADEGYLRASEASRSVGD
YPO104 VREYKKGDEIAAVVLQVDAERERISLGVKQLAEDPFNNYVSNKKGAIITGKVTAVDAKTVELADEGYLRASEASRSVGD
Z0181 VREYKKGDEIAAVVLQVDAERERISLGVKQLAEDPFNNWVALNKKGAIITGKVTAVDAKTVELADEGYLRASEASRSVGD

b0170 EVEAKFTGVRDKNRAISLSVRAKAMAEAFKVSMDMLKAGVHFGHQTRYWNPCKMPPIFGARNKVHIINLEKTPMNFNA
BBp214 IVEVKLNSIDKKERIIYLSILEKAMTEAFKVSMDMLNAGVHFGHQTRYWNPCKMPPIFGARNKVHIINLEKTPMNFNA
Bf131 IQSKIEGIDRKNRINLSYNDVMI EAFKLSMREMLKAGVHFGHQTRYWNPCKMPPIFGIRNKIHIINLEKTPMNFNA
bu232 KILVKLSSFDKRNRIIYLTIHMI VMTAEAFKVSMDMLKAGVHFGHQTRYWNPCKMPPIFGIRNRHIINLEKTPMNFNA
BUsg22 TILVKISNFDKRNRIINLTFHILVMAEAFKVSMDMLKAGVHFGHQTRYWNPCKMPPIFGSRNKVHIINLEKTPMNFNA

HI0914 VVEAKYTGVDKRSRIVHLSVKAKAMAEAFKVSMDRMINAGVHFHGQTRYWNPQMKPFI FGARNVHI INLEKTLPLFNEA
PA3655 VEAKIISIDRKSRLVLSVSKSITIGDLIRVNMDRMLKAGVHFHGQTRYWNPQMKGKFI FGARNKVI INLEKTLPLFNEA
PM1985 VVEAKYTGVDKRSRIVHLSVRKAKAMAEAFKVSMDRMLQAGVHFHGQTRYWNPQMKPFI YGPRNGVHI INLEKTVPMFNEA
RSc140 TMTAMVNIIDRKSRLNINVSIAKKNLGLALKVITMREMLEAGVHFHGQTRFVWNPQMAPFI FGHRNKIHI INLEKTLPMYLD
STM021 DVEAKFTGVDKRNRAISLSVRKAKAMAEAFKVSMDRMLKAGVHFHGQTRYWNPQMKPFI INLEKTVPMFNEA
STY024 DVEAKFTGVDKRNRAISLSVRKAKAMAEAFKVSMDRMLKAGVHFHGQTRYWNPQMKPFI FGARNKVI INLEKTVPMFNEA
vc2259 KVEAKFTGVDKRNRAISLSVRKAKAMAEAFKVSMDRMLTAGVHFHGQTRYWNPQMKQFI FGARNRVI INLEKTVPMFNEA
wbr31 ILLKLIIGIDRKNRTINLSFIIDVMTFAFKLSMKDMIQSGVHFHGQTRYWNPQMKPFI FCKKNKVI INLEKTLIMFEIA

XAC142 KIEAKFVGMDRKGRTLQLSIAKALLRAQLNVTMRQMLEAGVHFHGQTRYWNPQMAPYIFGARGKIHI INLEKTVPLFNDA
XC137 KIEAKFVGMDRKGRTLQLSIAKALLRAQLNVTMRQMLEAGVHFHGQTRYWNPQMAPYIFGARGKIHI INLEKTVPLFNDA
XF2579 SVEAKFVGMDRKGRTLQLSIAKALLREQLGVTMRQMLEAGVHFHGQTRYRHPKMSPNIFGARGKIHI INLEKTVPLFNDA
y3135 EVEAKYTGVDKRNRAISLSVRKAKAMAEAFKVSMDRMLQAGVHFHGQTRYWNPQMKPFI FGARNKVI INLEKTVPMFNEA
YP0104 EVEAKYTGVDKRNRAISLSVRKAKAMAEAFKVSMDRMLQAGVHFHGQTRYWNPQMKPFI FGARNKVI INLEKTVPMFNEA
Z0181 EVEAKFTGVDKRNRAISLSVRKAKAMAEAFKVSMDRMLKAGVHFHGQTRYWNPQMKPFI FGARNKVI INLEKTVPMFNEA

b0170 LAELNKIASRKGKILFVGTKRAASEAVKDAALSCDQFFVNRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE
Bbp214 LFELKKISLRKGIKILFVGTQKASIKESAILCKQFFVNRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE
Bf131 LVELKKIALKGIKILFVGTKRATRESIKSTALICGQFFVNRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE
bu232 LSELKKIALKGRILFVGTKKAASKGIEVAINCEQFFVNRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE
BUsg22 LSELKKISLRKGIKILFVGTKRAASKIKETALNCNQFFVNRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE
HI0914 LAELTRIASNNGKVLVFGTKRAASEAVKAAALDCQYVNRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE
PA3655 LTFVVERLAAGKNKILFVGTKRASAGKIVREEAARCGMPYVDRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE
PM1985 LVELTRIASNNGKILFVGTKRAATEAVKAAALDCQYVNRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE
RSc140 LKYYVQLAANRGTILFVGTKRQSRILAEAAARAGMPYVDRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE
STM021 LAELNKISARKGKILFVGTKRAASEAVKAAALSCDQFFVNRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE
STY024 LAELNKISARKGKILFVGTKRAASEAVKAAALSCDQFFVNRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE
vc2259 LAELAKVGEKKGKILFVGTKRAASEAVKAAALSCQYVNRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE
wbr31 MNFLSKISKRDGKILFVGTKRAASEAVKAAALSCQYVNRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE
XAC142 MNFLSSIAQRGTVFLVGTKRASAREIKEEAERCNMPFMTQRWLGGLTNWKTVRQSVARLKELEAAETDGTDFDKLVKHE
XC137 MNFLSSIAQRGTVFLVGTKRASAREIKEEAERCNMPFMTQRWLGGLTNWKTVRQSVARLKELEAAETDGTDFDKLVKHE
XF2579 MNFLSAVAQRKRSVFLVGTKRASARDAIKEEAERCMPYMIQRWLGGLTNWKTVRQSVARLKELEAAETDGTDFDKLVKHE
y3135 LAELTKISSRKGKILFVGTKRAASEAVKAAALSCDQFFVNRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE
YP0104 LAELTKISSRKGKILFVGTKRAASEAVKAAALSCDQFFVNRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE
Z0181 LAELNKIASRKGKILFVGTKRAASEAVKDAALSCDQFFVNRHWLGGMLTNWKTVRQSIKRLKDLQTSQDGTDFDKLTKKE

b0170 ALMRTRELEKLENSLGGIKDMGGLPDALFVIDADHEHIAIKEANLGI PVFAIVDTNSDPDGVDFVIPGNDDAIRAVTLY
Bbp214 VLLRMRELSKLENSLGGIKEMGSLPDALFVIDADHEHIAIKEANLGI PVFISIVDTNSDPDGVDFIIPGNDDAIRAVNLY
Bf131 VLILNRELISLENSLGGIKNMGGLPDALFTAGAEQEHIAIKEANSLGIPVFSIVDTNSDPDGI DFIIPGNDDAIRAINLY
bu232 ALIRSTRFLKLENSLGGIKNMGGLPDCLFVIDAAHENIAITFANNLGI PVFISIVDTNSDPDGVDFIIPGNDDAIRAVNLY
BUsg22 ALIRSTRFLKLENSLGGIKNMGGLPDCLFVIDAAHENIAITFANNLGI PVFAIVDTNSDPDGVDFIIPGNDDAIRAVTLY
HI0914 ALMRSREMEKLELSLGGIKDMGGLPDALFVIDADHEHIAIVKEANLGI PVFAIVDTNSTPAGVDFVIPGNDDAIRAVTLY
PA3655 ALMRSRDLEKLELSLGGIKDMGGLPDALFVIDADHEHIAITFANNLGI PVFISIVDTNSDPDGVDFIIPGNDDAIRAVQLY
PM1985 ALMRTRELEKLENSLGGIKEMGGLPDALFVIDADHEHIAIVKEANLGI PVFAIVDTNSDPDGVDFIIPGNDDAIRAVTLY
RSc140 ALMFEREMEKLEKSLGGIKDMGGLPDALFVIDADHEHIAIVTEAAKLGIPVIGVDTNSHSPGIDYVIPGNDDSSKAVALY
STM021 ALMRTRELEKLENSLGGIKDMGGLPDALFVIDADHEHIAIKEANLGI PVFAIVDTNSDPDGVDFIIPGNDDAIRAVSLY
STY024 ALMRTRELEKLENSLGGIKDMGGLPDALFVIDADHEHIAIKEANLGI PVFAIVDTNSDPDGVDFIIPGNDDAIRAVSLY
vc2259 ALMRTREMEKLEKSLGGIKDMGGLPDALFVIDADHEHIAIKEANLGI PVFAIVDTNSDPDGVDFIIPGNDDAIRAVQLY
wbr31 ALIRTRTLNLENSLGGIKNMGGLPDALFVIDVEHEKTSIKEANLGIPIFAIVDTNSNPKDKIFVIPGNDDAIRAVDLY
XAC142 VLGLRREREKLDASLGGIKEMNRLPDALFVIDIGHEDIAIKEAKKLGIPVIAVDTNYDPAVLDYVIPGNDDAIRAVQLY
XC137 VLGLRREREKLDASLGGIKEMNRLPDALFVIDIGHEDIAIKEAKKLGIPVIAVDTNYDPAVLDYVIPGNDDAIRAVQLY
XF2579 VLRLRRESGLQASLGGIKDMNRPDALFVIDIGHEDIAIKEAKKLGIPVIAVDTNYDPSLDYVIPGNDDAIRAVQLY
y3135 ALMRTRELEKLENSLGGIKDMGGLPDALFVIDADHEHIAIKEANLGI PVFISIVDTNSDPDGVDFIIPGNDDAIRAVKLY
YP0104 ALMRTRELEKLENSLGGIKDMGGLPDALFVIDADHEHIAIKEANLGI PVFISIVDTNSDPDGVDFIIPGNDDAIRAVKLY
Z0181 ALMRTRELEKLENSLGGIKDMGGLPDALFVIDADHEHIAIKEANLGI PVFAIVDTNSDPDGVDFIIPGNDDAIRAVTLY

b0170 LGAVAAVREGRMGQKVHPNGIRLGI VPKPNSTWFANEFADNLDSDFKVRQYLTKEKAKASVSRIVIERPKSIRVTIHTA
Bbp214 LNAVSKVIAKKNVMGQKVHPNGMRLGIIKHNWSVWFANDFAKILDSYQVRLFLRKLKFKASVSRIVIERPKSIRVTIHTA
Bf131 LNIVSNVICSDDEMGQKVHPNGMRLGIIKSHWSTWYANNFSNNLNNDFFVRFKLLGQSLKALVSRIVIERPKSIRVTIHTA
bu232 LKSIMLTISKINMGQKVHPNGMRLGIIKHNWSVWFANDFADHLDSYKVRQFLMKTLEKASISRIIVIERPKSIRVTIHTA
BUsg22 LQAVSLIICKNQMGQKVHPNGMRLGIIKHNWSVWFANDFADHLDSYKVRQFLMKTLEKASVSRIVIERPKSIRVTIHTA
HI0914 LVAAAAAALKVGRMGQKVHPNGIRLGI VPKPNSTWFANDFADHLDSYKVRQFLMKTLEKASVSRIVIERPKSIRVTIHTA
PA3655 LNSMAEAVIRGKMGQKVHPNGIRLGI VKEHTSVWYADNYADYLFADLKVREYLQDKLKSASVSRIVIERPKSIRVTIHTA
PM1985 LSAAAAAVKVGRMGQKVHPNGIRLGI VKNWSTWFANDFADNLDGDFKVRQFLMKTLEKASVSRIVIERPKSIRVTIHTA
RSc140 VRGVADAILVGRMGQKVHPNGIRLGI VKNWSTWFANDFADNLDGDFKVRQFLMKTLEKASVSRIVIERPKSIRVTIHTA
STM021 LGAVAAVREGRMGQKVHPNGIRLGI VPKPNSTWFANEFADNLDSDFKVRQYLTKEKAKASVSRIVIERPKSIRVTIHTA
STY024 LGAVAAVREGRMGQKVHPNGIRLGI VPKPNSTWFANEFADNLDSDFKVRQYLTKEKAKASVSRIVIERPKSIRVTIHTA
vc2259 LNAAAQAINEGRMGQKVHPNGIRLGI VPKPNATWFANDFADNLDGDFKVRQYLTKEKAKASVSRIVIERPKSIRVTIHTA
wbr31 LKTVSETIKNSKMGQKVHPNGIRLGI IKSWSSTWYANEFKSNLISDFKVRQFLMKTLEKASVSRIVIERPKSIRVTIHTA
XAC142 ARAAADAVLEKGMGHKVPHTGIRLGI AKDWNKSWYANEFASYLAADLKVREMLRKKLAQAGVSKLIERPKTARVTIHTA
XC137 ARAAADAVLEKGMGHKVPHTGIRLGI AKDWNKSWYASDFAAYLAADLKVREMLRKKLAQAGVSKLIERPKTARVTIHTA
XF2579 ARAAADAVLEKGMGHKVPHTGIRLGI SADWNKSWYANEFAGYLAADLKVREMLRKKLAQAGVSKLIERPNTACVSMHVA
y3135 LGAVATAVREGRMGQKVHPNGIRLGI VKNWSTWYANEFADNLDSDFKVRQYLTKEKAKASVSRIVIERPKSIRVTIHTA
YP0104 LGAVATAVREGRMGQKVHPNGIRLGI VKNWSTWYANEFADNLDSDFKVRQYLTKEKAKASVSRIVIERPKSIRVTIHTA
Z0181 LGAVAAVREGRMGQKVHPNGIRLGI VPKPNSTWFANEFADNLDSDFKVRQYLTKEKAKASVSRIVIERPKSIRVTIHTA

b0170 RPGIVIGKKGEDVEKLRKVVADIAGVPAQINIAEVRKPELDAKLVDASITSQLERRVMFRRAMKRAVQNAMRLGAKGKIKV
Bbp214 RPGIVIGKKGEDVEKLRKLSITNITGVPTQINIAEIRKPELDAKLVDANIVSLERRIMFRRAMKRAVQNAMRQAGKIKV
Bf131 RPGVIGKKGEDIKLRKREKVSISGVTPLNISEIRKPELDAKLVDANIVSLERRIMFRRAMKRAVQNAMRQAGKIKV
bu232 RPGIVIGKKGEDIKLRKREKVSISGVTPLNISEIRKPELDAKLVDANIVSLERRIMFRRAMKRAVQNAMRQAGKIKV
BUsg22 RPGIVIGKKGEDIKLRKREKVSISGVTPLNISEIRKPELDAKLVDANIVSLERRIMFRRAMKRAVQNAMRQAGKIKV
HI0914 RPGIVIGKKGEDIKLRKREKVSISGVTPLNISEIRKPELDAKLVDANIVSLERRIMFRRAMKRAVQNAMRQAGKIKV
PA3655 RPGIVIGKKGEDIKLRKREKVSISGVTPLNISEIRKPELDAKLVDANIVSLERRIMFRRAMKRAVQNAMRQAGKIKV
PM1985 RPGIVIGKKGEDIKLRKREKVSISGVTPLNISEIRKPELDAKLVDANIVSLERRIMFRRAMKRAVQNAMRQAGKIKV
RSc140 RPGVIGKKGEDIKLRKREKVSISGVTPLNISEIRKPELDAKLVDANIVSLERRIMFRRAMKRAVQNAMRQAGKIKV
STM021 RPGIVIGKKGEDIKLRKREKVSISGVTPLNISEIRKPELDAKLVDANIVSLERRIMFRRAMKRAVQNAMRQAGKIKV
STY024 RPGIVIGKKGEDIKLRKREKVSISGVTPLNISEIRKPELDAKLVDANIVSLERRIMFRRAMKRAVQNAMRQAGKIKV

vc2259 R P G V V I G K K G E D V E K L R A A V A K I A G V P A Q I N I A E V R K P E L D Q L V A D S I A S Q L E R R V M F R R A M K R A V Q N A M R L G A K G I K V
wbr31 R P G I V I G R K G E D V D K L R K E I S N I T G V P A Q I S I T E I K R P E L D A K L V S E N I A S Q L E R R I M F R R A M K R A V Q N A I R L G A K G I K V
XAC142 R P G V V I G K R G E D I E K L R K E V S E L M G V P A H I N V T E V R K P E L D A Q L V A E S I A Q Q L E R R I M F R R A M K R S V G N A M R L G A L G I K V
XCC137 R P G V V I G K R G E D I E K L R K E V S E M M G V P A H I N V T E V R K P E L D A Q L V A E S I A Q Q L E R R I M F R R A M K R S V G N A M R L G A L G I K V
XF2579 R P G V V I G K R G E D I E M L R K Q V S D I M G V S H I N V I E V R K P E L D A Q L V A E S V A Q Q L E R R I M F R R A M K R S V G N A M R L G A L G I K I
y3135 R P G I V I G K K G E D V E K L R K V V A D I A G V P A Q I N I A E V R K P E L D A K L V A D S I T S Q L E R R V M F R R A M K R A V Q N A M R L G A K G I K V
YPO104 R P G I V I G K K G E D V E K L R K V V A D I A G V P A Q I N I A E V R K P E L D A K L V A D S I T S Q L E R R V M F R R A M K R A V Q N A M R L G A K G I K V
Z0181 R P G I V I G K K G E D V E K L R K V V A D I A G V P A Q I N I A E V R K P E L D A K L V A D S I T S Q L E R R V M F R R A M K R A V Q N A M R L G A K G I K V

b0170 E V S G R L G G A E I A R T E W Y R E G R V P L H T L R A D I D Y N T S E A H T T Y G V I G V K V W I F K G E I L M A R Y L G P K L K L S R R E G T D L F L K S
Bbp214 E I S G R L G G T E I A R R E W Y R E G R V P L H T L R A D I E Y N V S E A H T T Y G V I G V K V W I F K G E I L M A K Y L G P K L K L C R R E N T D L F F K S
Bf131 E V S G R L S G A E I A R T E W Y R E G R V P L H T F R A D I D Y S L S E A H T S Y G V V G V K V W I F K G E I L M A K Y V G P K L K L S R R E N T D L F L K S
bu232 E V S G R L G G A E I A R R E W Y R E G R V P L H T L R A N I D Y S I S E A H T T Y G V I G V K V W I F K G E I L M A K Y L G P K L K L S R R E G T D L F L K S
BUsG22 E V S G R L G G A E I A R R E W Y R E G R V P L H T L R A N I D Y S I S E A H T T Y G V I G V K V W I F K G E I L M A R Y L G P K L K L S R R E G T D L F L K S
HI0914 E V S G R L G G A E I A R S E W Y R E G R V P L H T L R A D I D Y N T A E A H T T Y G V I G V K V W I F K G E I L M A R Y L G P K L K L S R R E G T D L F L K S
PA3655 Q V S G R L G G A E I A R T E W Y R E G R V P L H T L R A D I D Y A T Y E A H T T Y G V I G V K V W I F K G E I M A R Y I G P C K L S R R E G T D L F L K S
PM1985 E V S G R L G G A E I A R S E W Y R E G R V P L H T L R A D I D Y N T A E A H T T Y G V I G I K V W I F K G E I L M A R Y L G P K L K L S R R E G T D L F L K S
RSc140 M S S G R L N G I E I A R T E W Y R E G R V P L H T L R A D I D Y G F S E A E T T Y G I G I G K V W I Y K G E V F M A R Y I G P T C K L A R R E G A D L S L K S
STM021 E V S G R L G G A E I A R T E W Y R E G R V P L H T L R A D I D Y N T S E A H T T Y G V I G V K V W I F K G E I L M A R Y L G P K L K L S R R E G T D L F L K S
STY024 E V S G R L G G A E I A R T E W Y R E G R V P L H T L R A D I D Y N T S E A H T T Y G V I G V K V W I F K G E I L M A R Y L G P K L K L S R R E G T D L F L K S
vc2259 E V S G R L G G A E I A R S E W Y R E G R V P L H T L R A D I D Y A T S S A H T T Y G V I G V K V W I F K G E I L M A R Y L G P K L K L S R R E G T D L F L K S
wbr31 E V S G R L G G A E I A R K E W Y R E G R V P L H T L R A D I D Y N T S E A H T T Y G I G V K V T I F K G E I L M A K Y L G P K L K L S R R E G T D L F L K S
XAC142 N V A G R L N G A E I A R S E W Y R E G R V P L H T L R A D I D Y G F A E A S T T Y G I I G I K V W I Y K G E V F M A R Y I G P T C K L A R R E G A D L S L K S
XCC137 N V A G R L N G A E I A R S E W Y R E G R V P L H T L R A D I D Y G F A E A S T T Y G I I G I K V W I Y K G E V F M A R Y I G P T C K L A R R E G A D L S L K S
XF2579 S V A G R L N G A E I A R S E W Y R E G R V P L Q T L R A D I G Y G F S E A H T N Y G V T G V K V L I Y H D I F M A R Y I G P S C K L A R R E G A D L S L K S
y3135 E V S G R L G G A E I A R T E W Y R E G R V P L H T L R A D I D Y N T S E A H T T Y G V I G V K V W I F K G E I L M A R Y L G P K L K L S R R E G T D L F L K S
YPO104 E V S G R L G G A E I A R T E W Y R E G R V P L H T L R A D I D Y N T S E A H T T Y G V I G V K V W I F K G E I L M A R Y L G P K L K L S R R E G T D L F L K S
Z0181 E V S G R L G G A E I A R T E W Y R E G R V P L H T L R A D I D Y N T S E A H T T Y G V I G V K V W I F K G E I L M A R Y L G P K L K L S R R E G T D L F L K S

b0170 V R A I D T E Q A P G Q H G A R K P R L S D Y G V Q L R E K Q K V R R I Y G V L E R Q F R N Y Y K E A A R L K G N T G E N L L A L L E G R L D N V V Y R M G F G
Bbp214 I R A I D S D Q P P G Q H G S K R Q R L S D Y G V Q L R E K Q K V R R L Y G I L E A Q F R N Y Y K H A S R L K G N T G E N L L F L L E N R L D N V T Y R I G F G
Bf131 I R S I D S D H A P G Q H S I R K S R L S D Y G V Q L R E K Q K V R M Y G I L E N Q F A N Y Y R K S A S M K G N T G E I L L Q L L E S R L D N V V Y R M G F G
bu232 L R S I E S E Q P P G Q H G I R K P R L S D Y A I Q L R E K Q K V R R L Y G V L E R Q F K I Y Y K L A A S L K G N T G A N L L Q L L E S R L D N V V Y R M G F G
BUsG22 F R S I D S E H P P G Q H G V R K P R L S D Y A I Q L R E K Q K V R R L Y G V L E R Q F R I Y Y K K A S R S K G N T G E N L L Q L L E R L D N V V Y R M G F G
HI0914 V R A I D S D T A P G Q H G A R K P R L S D Y G S Q L R E K Q K V R R I Y G I L E R Q F R N Y Y K E A N R L K G N T G E N L L V L L E G R L D N V V Y R M G F A
PA3655 A R A L D S E N V P G Q H G Q R R G R L S D Y G L Q L R E K Q K V R R I Y G V L E R Q F R G Y Y Q E A S R R K G S T G E N L L Q L L E C R L D N V V Y R M G F G
PM1985 V R A I E S D T A P G Q H G A R K P R L S D Y G S Q L R E K Q K V R R I Y G I L E R Q F R N Y Y K E A N R L K G N T G E N L L V L L E G R L D N V V Y R M G F A
RSc140 R R L A D D S K P G Q H G R T S A R T S D Y G V Q L R E K Q K V R R I Y G V L E R Q F R Y F A E A D R R K G N T G E N L L Q L L E S R L D N V V Y R M G F G
STM021 V R A I D T E Q A P G Q H G A R K P R L S D Y G V Q L R E K Q K V R R I Y G V L E R Q F R N Y Y K E A A R L K G N T G E N L L A L L E G R L D N V V Y R M G F G
STY024 V R A I D T G Q A P G Q H G A R K P R L S D Y G V Q L R E K Q K V R R I Y G V L E R Q F R N Y Y K E A A R L K G N T G E N L L A L L E G R L D N V V Y R M G F G
vc2259 V R A I D T D N A P G V H G A R R G R L S E Y G V Q L R E K Q K V R R I Y G V L E K Q F R N Y Y K E A A R L K G N T G E N L L Q L L E G R L D N V V Y R M G F G
wbr31 V R A I E S D H L P G Q H G S R R S R L S D Y G I Q L R E K Q K L R M Y V I L E R Q F K Y Y K K A V R M K G N T G E N L L I L L E S R L D N V V Y R M G F G
XAC142 A R A L D S E Q K P G Q H G A A R G K L S D Y A T Q L R E K Q K V R I Y G L L E R Q F R N Y Y K K A S T K K G N T G E N L L Q L L E T R L D N V C Y R M G F A
XCC137 A R A L D S E Q K P G Q H G A A R G K L S D Y A T Q L R E K Q K V R I Y G L L E R Q F R N Y Y K K A S T K K G N T G E N L L Q L L E T R L D N V C Y R M G F A
XF2579 S R A L D S E Q R P G Q H G A V R S K L S D Y A S Q L R E K Q K V R I Y G V L E R Q F R N Y Y K N A S T K K G N T G E N L L Q L L E T R L D N V I Y R M G F A
y3135 V R A I D T E Q P P G Q H G A R K P R L S D Y G V Q L R E K Q K V R R I Y G V L E R Q F R N Y Y K E A A R L K G N T G A N L L Q L L E G R L D N V V Y R M G F G
YPO104 V R A I D T E Q P P G Q H G A R K P R L S D Y G V Q L R E K Q K V R R I Y G V L E R Q F R N Y Y K E A A R L K G N T G A N L L Q L L E G R L D N V V Y R M G F G
Z0181 V R A I D T E Q A P G Q H G A R K P R L S D Y G V Q L R E K Q K V R R I Y G V L E R Q F R N Y Y K E A A R L K G N T G E N L L A L L E G R L D N V V Y R M G F G

b0170 A T R A E A R Q L V S H K A I M V N G R V V N I A S Y Q V S P N D V V S I R E K A K Q S R V K A A L E L A E Q E K P T W L E V D A G K M E G T F K R K P E R S
Bbp214 S T R A E A R Q L V S H K S I L V N N C T V N I P S Y Q V S P G D V I S I H K N S K L Q S R I K A A L E L S E Q E T P I W I E V D F N K M Q G I Y K R V P E R S
Bf131 S T R A E S R Q L V S H K S I I V N D C I V N I A S Y Q V V P N T V I Q V Y K K S H N Q S R I Y A A L E I A E Q E S V P W I E V D S A K L K G I F K R R P E R S
bu232 C T R S E S R Q L I N H K S I M V N N K V V N I A S Y Q V S P N D Q I S I R N K S K N Q S R I K A A L E L V E Q E K P I W L E V N T K M E G I F K R F P E R S
BUsG22 C T R S E S R Q L I S H K S I K V N N N I V N I A S Y Q I S P N D R I S V R D K S K N Q S R I K A A L E L T E Q E K L M W I E V N V T K M E G I F K R F P E R S
HI0914 T T R A E A R Q L V S H K A I V V N G R V V N I P S F Q V S V N D V V A I R E K S K Q A R I K A S L E L A E Q E K P T W L E V D S A K M E G V F K R V P E R S
PA3655 S T R S E S R Q L V S H K A I T V N G Q T V N I P S Y Q V K A G D V V A V R E K S K Q A R I K A S L E L A E Q E K P T W L E V D L D A G K M E G T F K R P E R S
PM1985 A T R A E A R Q L V S H K A I V V N G R V V N I P S F Q V S V N D V V A V R E K S K Q A R I K A S L E L A E Q E K P T W L E V D A A K M E G V F K R V P E R S
RSc140 S T R A E A R Q L V S H K A I L V N G Q A L N V P S A Q I K S G D V V A I R E K S K Q V R I A E S L S L A E Q G F P G W I A V D A K M E G T F K Q A P D R G
STM021 A T R A E A R Q L V S H K A I M V N G R V V N I A S Y Q V S P N D V V S I R E K A K Q S R V K A A L E L A E Q E K P T W L E V D A G K M E G T Y K R K P E R S
STY024 A T R A E A R Q L V S H K A I M V N G R V V N I A S Y Q V S P N D V V S I R E K A K Q S R V K A A L E L A E Q E K P T W L E V D A G K M E G T Y K R K P E R S
vc2259 A T R A E A R Q L V S H K A I L V N G K V V N V P S F N V A N D V V A V R E K A K Q S R I K A A L E V A E Q E K P T W I E V D V N T M E G T F K R M P E R S
wbr31 S T R L E S R Q L I S H K S I I I N K K V I N I P S Y Q I K P N D C I E V K E I A K K Q S R I K A A L E I S E Q E K S W I D V N T M E G T F K F F P D R S
XAC142 V T R P A A R Q L V S H R G V L V N G K S V N L A S Y Q I K A G D A I T L S E K A Q K Q L R V Q E A L T V A E Q M T P S W V E V D S K K F S G V F K A V P D R A
XCC137 V T R P A A R Q L V S H R G V L V N G K S V N L A S Y Q I K A G D A I T L S E K A Q K Q L R V Q E A L T V A E Q M T P S W V E V D S K K F S G V F K A V P D R A
XF2579 V T R P A A R Q L V S H R R V L V N G K L V N L P S Y H V K P G D V V A L S Q R A Q K Y L C V Q E S L T I K D Q S A F S W V E V D S E K F S G V F K A F P D R A
y3135 A T R A E S R Q L V S H K A I M V N G R V V N I A S Y Q V S P N D V V S I R E K A K Q S R V K A A L E L A E Q E K P T W L E V D A V K M E G V F K R I P E R T
YPO104 A T R A E S R Q L V S H K A I M V N G R V V N I A S Y Q V S P N D V V S I R E K A K Q S R V K A A L E L A E Q E K P T W L E V D A V K M E G V F K R I P E R T
Z0181 A T R A E A R Q L V S H K A I M V N G R V V N I A S Y Q V S P N D V V S I R E K A K Q S R V K A A L E L A E Q E K P T W L E V D A G K M E G T F K R K P E R S

b0170 D L S D I N E H L I V E L Y S G E L Q E K L I A V N R V S K T V K G G R I F S F T A L T V V G D G N G R V G F G Y G K A R E V P A A I Q K A M E K A R R N M I N
Bbp214 D L S E I N E Y L I I E L Y S G D L K E K L I S V N R V S K T V K G G R I F S F A L T V V G D G K G V G F G Y G K A R E V P A A I Q K A M E K A R R N M I Q
Bf131 E L S N I N E H L I V E L Y S H E L Q E K L I T V N R V S K T V K G G R V F S F A A L T V V G N V N G R V G F G Y G K A R E V P A A I Q K A M E K A R R N M I D

bu232 D L S E I N E Y L I V E L Y S N D L Q E K L I T V N R V S K T V K G G R I F S F T A L T V V G N G D G K V G F G Y G K A R E V P A A I Q K A M E Q A R R N M I T
BUsG22 D L S E I N E H L I V E L Y S S E L Q E K L I T V N R V S K T V K G G R I F S F T A L T V V G N G E G R V G F G Y G K A R E V P A A I Q K A M E K A R R N M V T
HI0914 D L S D I N E H L I V E L Y S G E L Q E K L I A V N R V S K T V K G G R I F S F T A L T V V G D G N G R V G F G Y G K A R E V P A A I Q K A M E K A R R N M I N
PA3655 D L S D I N E H L I V E L Y S E G Y I E K L V Q V N R V A K T V K G G R I F A F T A L T V V G D G K G R V G F G R G K A R E V P A A I Q K A M E A A R R N M I Q
PM1985 D L S D I N E H L I V E L Y S G E L Q E K L I A V N R V S K T V K G G R I M S F T A L T V V G D G N G R V G F G Y G K A R E V P A A I Q K A M E K A R R N M I N
RSc140 D I A D I N E S L I V E L Y S D G L R E K M I A V N R V S K T V K G G R I L G F A A L T V V G D G D G R I G M G K G A K E V P A V A Q K A M D E A R R K M V K
STM021 D L S D I N E H L I V E L Y S G E L Q E K L I A V N R V S K T V K G G R I F S F T A L T V V G D G N G R V G F G Y G K A R E V P A A I Q K A M E K A R R N M I N
STY024 D L S D I N E H L I V E L Y S G E L Q E K L I A V N R V S K T V K G G R I F S F T A L T V V G D G N G R V G F G Y G K A R E V P A A I Q K A M E K A R R N M I N
vc2259 D L S D I N E Q L I V E L Y S N D L Q E K L I A V N R V S K T V K G G R I M S F T A L T V V G D G N G R V G F G Y G K A R E V P A A I Q K A M E K A R R N M V T
wbr31 D L S E I N E H L I I E L Y S N E L Q E K L I S V N R V S K T V K G G R I F S F T A L T V V G D C Q K I G F G Y G K S E V P A A I Q K A M D K A R R N M I I
XAC142 D L P D I N E A L I V E L Y S D G M I E K L V A V N R V S K T V K G G R Q F T F T A L T V V G D G L G K V G F G Y G K A R E V P A A I Q K S M E Q A R K N L A T
XCC137 D L P D I N E A L I V E L Y S D G M I E K L V A V N R V S K T V K G G R Q F T F T A L T V V G D G L G K V G F G Y G K A R E V P A A I Q K S M E Q A R K N L A T
XF2579 D L P D I N E A L I V E L Y S D G M I E K L V A V N R V S K T V K G G R Q F T F T A L T I V G N E G S V G F G Y G K A R E V P A A I Q K S M E Y A R K T M A N
y3135 D L S D I N E H L I V E L Y S G E L Q E K L I A V N R V S K T V K G G R I F S F T A L T V V G D G N G R V G F G Y G K A R E V P A A I Q K A M E K A R R A M I N

YPO104 DLSDINEHLIVELYSGELQEKLI AVNRVSKTVKGGRI FSFTALT VVGDGNGRVGFGY GKAREVPAI QKAMEKARRAMIN
Z0181 DLSDINEHLIVELYSGELQEKLI AVNRVSKTVKGGRI FSFTALT VVGDGNGRVGFGY GKAREVPAI QKAMEKARRNMIN

b0170 VALNNGTLQHPVKGVHTGSRVFMQPA SEGTGI IAGGAMRAVLEVAGVHNV LAKAYGSTNP INVVRATIDGLENMNSPEMV
Bbp214 VPLNNGTLQYSVTGSGYIFMFKPASNGTGI IAGGAMRSVLEVAGVHNV LAKTYGSTNP INVVRATMLVLESMKSPEMI
Bf131 IPLPGRTLQHSIIGIYTGARIYMKPASEGTGI IAGGAMRAILEVVG IHNVLAKAYGSTNP INVVRATVNALKNMKSPEMV
bu232 IPLVNTLQHSLSKGSHTGSNIFMFKPASDGTGI IAGGAMRAVLEVAGIHNVLAKTYGSTNP INVVRATMNGLVNMKSPEMI
BUsG22 IPLVNTLQHSLSKGSHTGSNIFMFKPASDGTGI IAGGAMRAVLEVAGIHNVLAKTYGSTNP INVVRATMNGLVNMKSPEMI
HI0914 VALNEGT LQHPVKGVHTGSRVFMQPA SEGTGI IAGGAMRAVLEVAGVRNVLSKAYGSTNP INVVRATIDALANMKSPEMV
PA3655 VDLNNGTLQYPTKSAHGASKVVMQPA SEGTGI IAGGAMRAVLEVAGVQNV LAKCYGSTNP INVVRATYATFKGLKNMQAPEAV
PM1985 VALNEGT LQHP IKG AHTGSRVFMQPA SEGTGI IAGGAMRAVLEVAGVRNVLSKAYGSTNP INVVRATIDALANMKSPEMV
RSc140 VPLKNGTLQHEVIGKHGA AKVLMAPAKEGTGVI IAGGMPRAIFEVMGVTNI VTKSHGSTNP YNMVRATLDGLRKMSTPAEI
STM021 VALNNGTLQHPVKGVHTGSRVFMQPA SEGTGI IAGGAMRAVLEVAGVHNV LAKAYGSTNP INVVRATIDGLENMNSPEMV
STY024 VALNNGTLQHPVKGVHTGSRVFMQPA SEGTGI IAGGAMRAVLEVAGVHNV LAKAYGSTNP INVVRATIDGLENMNSPEMV
vc2259 IALNEGT LHHPPVKGRHSGSKVVMQPA AEGTGI IAGGAMRAVLEVAGVHNV LSKAYGSTNP INVVRATIDALVDVKSPEMV
wbr31 IPIVCKTLQHEINGYHTGSRVFMQPA SEGTGI IAGGAMRAVLEVAGVHNV LAKVYGSTNP INVVRATVNALKMKRFPMI
XAC142 VALNNGTLQHPVKGVHTGSRVFMQPA SEGTGI IAGGAMRAVLEVAGVHNV LAKAYGSTNP INVVRATIDGLENMNSPEMV
XCC137 VDLNNGTLQHPVKGVHTGSRVFMQPA SEGTGI IAGGAMRAVLEVAGVHNV LAKAYGSTNP INVVRATIDGLENMNSPEMV
XF2579 VDLNNGTLQHPVKGVHTGSRVFMQPA SEGTGI IAGGAMRAVLEVAGVHNV LAKAYGSTNP INVVRATIDGLENMNSPEMV
y3135 VALNNGTLQHPVKGVHTGSRVFMQPA SEGTGI IAGGAMRAVLEVAGVHNV LAKAYGSTNP INVVRATIDGLENMNSPEMV
YPO104 VALNNGTLQHPVKGVHTGSRVFMQPA SEGTGI IAGGAMRAVLEVAGVHNV LAKAYGSTNP INVVRATIDGLENMNSPEMV
Z0181 VALNNGTLQHPVKGVHTGSRVFMQPA SEGTGI IAGGAMRAVLEVAGVHNV LAKAYGSTNP INVVRATIDGLENMNSPEMV

b0170 AAKRGKSV EEMRHYE IVFMVHPDQSE QVPGMIERYTAAITGAEGK IHRLEDWGRRLAYP INKLKHAHYVLMNVEAPQE
Bbp214 ALKRNLKVEIVRHYE IILLIHPDCSEKLP IMIEKFKKLVITYGKGR IHRLEDWGRRLAYP INKLKHAHYVLMNIEVPSN
Bf131 AEKRGKSL EYIMRYE IVLIIHPDSDNQIDNLNYYSEII INSTGKIHRLENWGRRLAYP INKLKHAHYVLMNIEVPSN
bu232 AAKRNKRIKDIMRHYE IIFM VHPDQSDKIPLLIEKYKKI IINDNNGI IHRLEDWGRRLAYP INKLKHAHYVLMNIEVPSN
BUsG22 AAKRNKLI EDIMRHYE IIFM IHPDYSEKVSVI IEKYKKI IHHNSGI IHRLEDWGRRLAYP INKLKHAHYVLMNIEVPSN
HI0914 AAKRGKSV EEMRHYE IVFMVHPDQSE QVPGMIERYTGSVKEAGGQVHRLEDWGRRLAYP INKLKHAHYVLMNVEAPQE
PA3655 AAKRGKSV EEMRHYE IVFLVHPDQSE QVGMVER YTKAIEEDGGK IHRLEDWGRRLAYP INNVHKAHYVLMNVECSAK
PM1985 AAKRGKTV DEIMRHYE IVFMVHPDQSE QVPGMIERYTGSVKEAGGQVHRLEDWGRRLAYP INKLKHAHYVLMNVEAPQE
RSc140 AAKRGKSV EEMRHYE IVFIVHPDQSE QVPGMIERYTGSVKEAGGQVHRLEDWGRRLAYP INKLKHAHYVLMNVEAPQE
STM021 AAKRGKSV EEMRHYE IVFMVHPDQSE QVPGMIERYTAAITGAEGK IHRLEDWGRRLAYP INKLKHAHYVLMNVEAPQE
STY024 AAKRGKSV EEMRHYE IVFMVHPDQSE QVPGMIERYTAAITGAEGK IHRLEDWGRRLAYP INKLKHAHYVLMNVEAPQE
vc2259 AAKRGLTVEA IMRHYE IVFMVHPDQSE QVPGMIERYTGSVKEAGGQVHRLEDWGRRLAYP INKLKHAHYVLMNVEADQA
wbr31 AEKRGKSIDDIMRHYE IVLMIHTDQSDQISNI IEHYTKMIKINKGSIHRLEDWGRRLAYP IKKLNKAHYVLMNIEVPSN
XAC142 AAKRGKVEELSRHYEVVFLVHPDQSE QVPGMIERYTGSVKEAGGQVHRLEDWGRRLAYP IQNLVKAHYVLLNIEVDQA
XCC137 AAKRGKVEELSRHYEVVFLVHPDQSE QVPGMIERYTGSVKEAGGQVHRLEDWGRRLAYP IQNLVKAHYVLLNIEVDQA
XF2579 ALKRGKNVGRFGGRHYE IVLLVHPDQSE QVQAMLER YKALIEGHGKIHRLEDWGRRLAYP IQKLVKAHYVLMNIEVEQS
y3135 AAKRGKSV EEMRHYE IVFMVHPDQSE QVPGMIERYTAAITGAAGT IHRLEDWGRRLAYP INKLKHAHYVLLNVEAPQE
YPO104 AAKRGKSV EEMRHYE IVFMVHPDQSE QVPGMIERYTAAITGAAGT IHRLEDWGRRLAYP INKLKHAHYVLLNVEAPQE
Z0181 AAKRGKSV EEMRHYE IVFMVHPDQSE QVPGMIERYTAAITGAAGT IHRLEDWGRRLAYP INKLKHAHYVLLNVEAPQE

b0170 VIDELETTFRFNDAVIRSMVVRTKHAVTEASP MVKAKDMPRRRVI GQRKILPDPKFGSELLAKFVNI LMVDGKKSTAESI
Bbp214 CIQDLSNTFRYDDLIRNI IMHVKKS VTEI SPMLKSKEMPRRRRIGHRKILSDPKFSSEMVAKLINI IMVDGKKSIAEEI
Bf131 ILDI LDNDFR FNEI IRLYLIMRTKNI IIVDPSAMVKKKDMSPRRRIVTKRVILADPRFKSDLLSKFINILMFDGKKSVAESI
bu232 ITITLLETDFR FNII LRNMIMS SVKKAIVELSP ILKLDMPRRRVI IGT RKILPDPKFGSELLAKFINILMFDGKKSIAEVI
BUsG22 TISLLETDFR FNNAVIRNII ISVKKAINESP VIKL KEMPRRRVI ISTRKILPDPKFGSELLAKFINILMVDGKKSIAEVI
HI0914 VIDELETTFRFNDAVIRSLV IHTKHAVTEASP MVKAKEMPRRRRVEARKILPDPKFGSELLAKFINIMVDGKKSVAESI
PA3655 ALAELEDFR FNDAVIRNLV MRDEAVTEQSEMLKAEEMPRRRRVA AKRELVADPKYGSQILAKFNMHAYVLMNVEADQA
PM1985 VIDELETTFRFNDAVIRNVI IRTKHAVTEASP MVKAKDMPRRRVI EPRKILPDPKFGSELLAKFINILMVDGKKSIAEVI
RSc140 TLAELHAFKFNDAVIRHLIVQT KKAETAPSPMMKEVQMPRRRVEPKREILPDPKFGNVEVAKFMNVLMDGKKSVAERI
STM021 VIDELETTFRFNDAVIRSMVVRTKHAVTEASP MVKAKDMPRRRVI GQRKILPDPKFGSELLAKFVNI LMVDGKKSTAESI
STY024 VIDELETTFRFNDAVIRSMVVRTKHAVTEASP MVKAKDMPRRRVI GQRKILPDPKFGSELLAKFVNI LMVDGKKSTAESI
vc2259 VVDELETTFRFNDAVIRNMI MRTKAAIT EPI SMLKAREMPRRRVI GQRKILPDPKFGSELLAKFVNI LMVDGKKSTAESI
wbr31 VLNLI IQDNLNFI IIRNMI MRVKNAINESP MKKTKEMPRRRRVA AKRELVADPKYGSQILAKFNMHAYVLMNIEVPSN
XAC142 VLSELVESFRFNDAVIRHLVVKRDGADTEQSLIMKSKDMSRKGSTPQRTVLPDPKHGSETIARFINMVMQSGKKSVAEVI
XCC137 VLSELVESFRFNDAVIRHLVVKRDGADTEQSLIMKSKDMSRKGSTPQRTVLPDPKHGSETIARFINMVMQSGKKSVAEVI
XF2579 VLNELVDLFRFNDAVIRHLA IKRSGPDTEQSFIMKSKDMSRKGSTPQRNVLPDPKYGSETIARFINMVMQSGKKSVAEVI

y3135 AIDELETTFRFNDAVIRSMVVRTKHAVTEASP MVKAKDMPRRRVI GQRKILPDPKFGSELLAKFVNI LMVDGKKSTAESI
YPO104 AIDELETTFRFNDAVIRSMVVRTKHAVTEASP MVKAKDMPRRRVI GQRKILPDPKFGSELLAKFVNI LMVDGKKSTAESI
Z0181 AIDELETTFRFNDAVIRSMVVRTKHAVTEASP MVKAKDMPRRRVI GQRKILPDPKFGSELLAKFVNI LMVDGKKSTAESI

b0170 VYSALETLAQEAF EFALEENVRPTVEVKSRRVGGSTYQVPVEVRPVR RNALAMRWI VEAAKRKGDKSMALRLANELSDAAE
Bbp214 VYQALTM LAKEVLELAL ENVRPTVEVKSRRVGGSTYQVPVEVRPVR RNALAMRWI VHSARKRIDKSMI IRLSNELSDAIE
Bf131 IYSALDMVLDELFEALDNVRPVVEVKSRRVGGSTYQVPVEVRPVR RNALAMRWI IESARKRNDKSMEMRLANELSDASE
bu232 VYTALKNLSKEAFE IALENVRPTVEVKSRRVGGSTYQVPVEVRPVR RNALAMRWI VESARKRVDKSM SMLRLANELYDALE
BUsG22 VYTALKNLSKEAFE IALENVRPTVEVKSRRVGGSTYQVPVEVRPVR RNALAMRWI VDSARKRVDKSM SMLRLANELYDAVE
HI0914 VYGALETLAQEAF EFALEENVRPTVEVKSRRVGGSTYQVPVEVRPVR RNALAMRWI VEAAKRKGDKSMALRLANELSDASD
PA3655 VYGALDKVKEETFEKALDAIAPLVEVKSRRVGGSTYQVPVEVRPVR RNALAMRWI VDFARKRGEKSMALRLAGELLDAAE
PM1985 VYSALDTLAQEAF EFAALDNVRPTVEVKSRRVGGSTYQVPVEVRPVR RNALAMRWI VDAARKRGDKSMALRLANELSDASE
RSc140 VYGAFDQIEKEVFTLAIIGNIKPVVEVKSRRVGGANYQVPVEVRPVR RNALAMRWI REAAKRKSEKSMALRLAGELLEASE
STM021 VYSALETLAQEAF EFALEENVRPTVEVKSRRVGGSTYQVPVEVRPVR RNALAMRWI VEAAKRKGDKSMALRLANELSDAAD
STY024 VYSALETLAQEAF EFALEENVRPTVEVKSRRVGGSTYQVPVEVRPVR RNALAMRWI VEAAKRKGDKSMALRLANELSDAAD
vc2259 VYTALDTMAEAVFEAL ENVRPAVEVKSRRVGGSTYQVPVEVRPVR RNALAMRWI VEAAKRKGEKSMARLAEMLDAAE
wbr31 IYTALNNLKTIFDLALEKVRPIVEVKSRRVGGSTYQVPVEVRPVR RNALAMRWI IESARKRVDKSM SMLRLANELYDALE
XAC142 VYGAMDVIGEELVQKALDNVAPAVEVKSRRVGGATYQVPVEVRSSRRMALAMRWI IDSARKRGENTMPRKLAAELLDASE
XCC137 VYGAMDVIGEELVQKALDNVAPAVEVKSRRVGGATYQVPVEVRSSRRMALAMRWI IDSARKRGENTMPRKLAAELLDASE
XF2579 VYGAMDVIGEELVQKALDNVSPAVEVKSRRVGGATYQVPVEVRASRRMALAMRWI IDSARKRGENTMPRKLAAELLDASE
y3135 VYTALETLAQEAF EFALEENVRPTVEVKSRRVGGSTYQVPVEVRPVR RNALAMRWI VDAARKRGDKSMALRLANELSDAAE
YPO104 VYTALETLAQEAF EFALEENVRPTVEVKSRRVGGSTYQVPVEVRPVR RNALAMRWI VDAARKRGDKSMALRLANELSDAAE
Z0181 VYSALETLAQEAF EFALEENVRPTVEVKSRRVGGSTYQVPVEVRPVR RNALAMRWI VEAAKRKGDKSMALRLANELSDAAE

b0170 NKGTA VVKREDVHRMAEANKAF AHYRWMSMQDP IADMLTRIRNGQAAANKAAVTMPSSKLVKVAIANVLKEEGFI EDKFTKP
Bbp214 NKGSAVKKREDVHRMAEANKAF AHYRWMSMQDP IADMLTRIRNGQFASKISVIMPSKLVKVISILLKEEGYIKDFS NKP
Bf131 GKGNAVKKREEVHRLAESNKAF AHYRWMSMQDP IADMLTVIRNGQVAKKDKVYVPSSTIKIAITKVLVEEGFLKDYSIKFI

bu232 NKGTAVKKREEDVHRMAEANKAFAHYRWMSMQDPVADMLTRIRNGQLANKYSVKMPPSSKLLKYSIIQLLKEEGYIKDYNTKL
BUsg22 NKGTAVKKREEDVHRMAEANKAFAHYRWMSMQDPVADMLTRIRNGQSAANKYSVKMPCSKLLKYSIELELKEEGYIKNFNNKL
HI0914 NKGAAVKKREEDVHRMAEANKAFAHYRWMSMQDPVADMLTRIRNGQAANKVA INMPPSSKLLKVA IANVLAEEGYIESVKAKP
PA3655 KGGAAVKKREEDVHRMAEANKAFSHYRFMSMQDPLADMLTRIRNAQMAEKTIVVSMPPSSKLLKAAVAVKLDDEGYIADFFQVQP
PM1985 NKGAAVKKREEDVHRMAEANKAFAHYRWMSMQDPVADMLTRIRNGQAANKVA ISMPPSSKLLKVA IANVLAEEGYIESVKAKP
RSc140 GRGGAMKKREEDVHRMAEANKAFSHFRFMSMQDPIADMLTRIRNAQAVEKASVVMPPSSKLLKVA IAKVLKDEGYIDDFAGKA
STM021 NKGTAVKKREEDVHRMAEANKAFAHYRWMSMQDPIADMLTRIRNGQAANKAAVTMPSSKLLKVA IANVLKEEGFIEDFKTKP
HY024 NKGTAVKKREEDVHRMAEANKAFAHYRWMSMQDPIADMLTRIRNGQAANKAAVTMPSSKLLKVA IANVLKEEGFIEDFKTKP
vc2259 NKGSVKKREEDVHRMAEANKAFAHYRWMSMQDPIADMLTRIRNGQAANKVA AVKMPSSKLLKVA IAALLKAEGYIADFAVKA
wbr31 NKGTAVKKREEDVHRMAEANKAFAHYRWMSMQDPIADMLTRIRNGQSAKKELSMPPSNLKKSIANLLKEEGFILDYKPKP
XAC142 SRGGAIAKKREETHRMAEANKAFAHYRWMSMQDPIADMLTRIRNGQSAKKELSMPPSNLKKSIANLLKEEGFILDYKPKP
XCC137 SRGGAIAKKREETHRMAEANKAFAHYRWMSMQDPIADMLTRIRNGQSAKKELSMPPSNLKKSIANLLKEEGFILDYKPKP
XF2579 SRGGAIAKKREETHRMAEANKAFAHYRWMSMQDPIADMLTRIRNGQSAKKELSMPPSNLKKSIANLLKEEGFILDYKPKP
y3135 NKGSVKKREEDVHRMAEANKAFAHYRWMSMQDPIADMLTRIRNGQAANKAAVTMPSSKLLKVA IANVLKEEGFIEDFKTKP
YPO104 NKGSVKKREEDVHRMAEANKAFAHYRWMSMQDPIADMLTRIRNGQAANKAAVTMPSSKLLKVA IANVLKEEGFIEDFKTKP
Z0181 NKGTAVKKREEDVHRMAEANKAFAHYRWMSMQDPIADMLTRIRNGQAANKAAVTMPSSKLLKVA IANVLKEEGFIEDFKTKP

b0170 ELELTLKYFQKAVVESIQRVSRPGLRIYKRKDELPKVMAGLGIAVSTSGVMTDRAARQAGLGGEEICVYMAENQYYG
Bbp214 ILEIFLKYFRSKPVIENITRVSSPRLRIYARNKLLPQVMSGLGIVISTSQVLTQVARKKGLGGEEICNVMENMYQYG
Bf131 ILEISLKYQNKPVLDHIQRI SRPSLRIVYKNNKMLPKVLSGMGVAVVSTSGVMTDRKARLNQVGEICVYMIQNYYG
bu232 ELEVFLKYFQKGSVVDIMQRI SRPSLRIVYKNNKMLPKVMSGLGIAVISTSGVMTDRMARQEGGLGGEVICVYMIQTQNYG
BUsg22 KIEVILKYFQKGSVIEIETIQRVSRPGLRIYKRKDELPKVMAGLGIAVISTSQGIMTDRKARRLGLGGEVICVYVMVKIQNYG
HI0914 ELELTLKYFQKPVVESIQRVSRPGLRIYKRKDELPKVMAGLGIAVISTSGVMTDRAARQAGLGGEEICVYMAENQYYG
PA3655 QLSIELKYFEGKPVIEEVKRI SRPGLRQYKVEQLPKVRRGLGVSIVSTNKGVMTDRAARAAGVGGVEVLCVMSATQNYG
PM1985 ELELTLKYFQKPVVESIQRVSRPGLRIYKRKDELPKVMAGLGIAVISTSGVMTDRAARQAGLGGEEICVYMAENQYYG
RSc140 SLTIGLKYIYAGRPVIERLERVSKPGLRQYKGRNEIPQVMGLGVAIISTPQGLMTDRRARATGVLGGEVICVYMIQNYG
STM021 ELELTLKYFQKAVVESIQRVSRPGLRIYKRKDELPKVMAGLGIAVSTSGVMTDRAARQAGLGGEEICVYMAENQYYG
STY024 ELELTLKYFQKAVVESIQRVSRPGLRIYKRKDELPKVMAGLGIAVSTSGVMTDRAARQAGLGGEEICVYMAENQYYG
vc2259 ELELTLKYFQKAVVESIQRVSRPGLRIYKRKDELPKVMAGLGIAVSTSGVMTDRAARQAGLGGEEICVYMAENQYYG
wbr31 TLKLNLYKFKNNPVIEKIKRI SRPGLRIYKRKHLPNVMSGMGIAVISTSRGIMTDKLARTYNLGGEEICVYVMNEQYYG
XAC142 ELEIVLKYFEGRPVIEITLKRFRSGLRQYKTELPKVGLGGLGIAIISTSGVMTDAQAREAGVGGVEVLCVMAITQNYG
XCC137 ELEIVLKYFEGRPVIEITLKRFRSGLRQYKTELPKVGLGGLGIAIISTSGVMTDAQAREAGVGGVEVLCVMAITQNYG
XF2579 DIEIVLKYFEGRPVIRILKRVSRGLRKYCGKAEELPKVGLGGLGISIISTSGVMTDAQAREAGVGGVEVLCVMAITQNYG
y3135 VLELALKYFQKAVVESIQRI SRPGLRIYKRKDELPKVMAGLGIAVISTSGVMTDRAARQAGLGGEEICVYMAENQYYG
YPO104 VLELALKYFQKAVVESIQRI SRPGLRIYKRKDELPKVMAGLGIAVISTSGVMTDRAARQAGLGGEEICVYMAENQYYG
Z0181 ELELTLKYFQKAVVESIQRVSRPGLRIYKRKDELPKVMAGLGIAVSTSGVMTDRAARQAGLGGEEICVYMAENQYYG

b0170 TGRKSSAARVFIKPGNGKIVINQRSLQYFGRETARMVVRQPLELVDMEKLDLYITVKGGSISGQAGAIRHGITRALM
Bbp214 TGRKSSAARVFLKTGTGNITINNRLNNYFSRRTARLIILOPIEFVNMSSKCDLYITVKGGSISGQAGAIRHGISRALI
Bf131 TGRKSSAARVFLRFGNGDIVINNLSDKYPFKDNFQI I IKKPLEVTNVLNILDAYITVIGGGVSGQAGAIRHGITRALL
bu232 TGRKSSAARVFLRSGNGEIVVNRKSLDQYFGRETSKCMIVRQPLELVDMMVDFKFNIIYITVKGGSISGQAGAIRHGITRALI
BUsg22 TGRKSSAARVFLRSGDGEITVNRKSLKDYFGRETSKCMVVRQPLELVDMMNFNIIYITVKGGSISGQAGAIRHGITRALI
HI0914 TGRKSSAARVFIKPGSGKITINQRSLDQYFGRETARMVVRQPLELVELTDKLDLYITVKGGSISGQAGAIRHGITRALM
PA3655 TGRKKTATARVFLRPGTGKISINNRGLDQYFGRETARMVVRQPLELVELTETVEKFDIFVTVGGVSGQAGAIRHGITRALI
PM1985 TGRKSSAARVFIKPGSGKITINQRDLVDYFGRETARMIVRQPLELVEVTEKLDLYITVKGGSISGQAGAIRHGITRALI
RSc140 TGRKSSAARVFIKPGSGKITIVNGKPLVADYFARETSLMMVVRQPLELTHGATFDIKVNVVGGGETGQAGAVRHGITRALI
STM021 TGRKSSAARVFIKPGNGKIVINQRSLQYFGRETARMVVRQPLELVDMEKLDLYITVKGGSISGQAGAIRHGITRALM
STY024 TGRKSSAARVFIKPGNGKIVINQRSLQYFGRETARMVVRQPLELVDMEKLDLYITVKGGSISGQAGAIRHGITRALM
vc2259 TGRKSSAARVFIKPGSGNIVINRSLQYFGRETSKCMVVRQPLELVDMEKLDLYITVKGGSISGQAGAIRHGITRALM
wbr31 TGRKKTATARVFIKPGNGKIVINQRSLQYFGRETARMVVRQPLELVELTETVEKFDIFVTVGGVSGQAGAIRHGITRALI
XAC142 TGRKSSSTARVFLRKGSGNITVNNRPLDEFFGRETARMIVRQPLELTKNTESEFDIMVTASGGGTTGQAGAIRLGIARALV
XCC137 TGRKSSSTARVFLRKGSGNITVNNRPLDEFFGRETARMIVRQPLELTKNTESEFDILVVTASGGGTTGQAGAIRLGIARALV
XF2579 TGRKSSKARIFLKRKSGNITVNGRPLDQYFGRETARMIVRQPLELTKNANFDFILITATGGGTTGQAGAIRLGIARALV
y3135 TGRKSSAARVFLKPGSGKIVINQRSLQYFGRETARMVVRQPLELVDMEKLDLYITVKGGSISGQAGAIRHGITRALM
YPO104 TGRKSSAARVFLKPGSGKIVINQRSLQYFGRETARMVVRQPLELVDMEKLDLYITVKGGSISGQAGAIRHGITRALM
Z0181 TGRKSSAARVFIKPGNGKIVINQRSLQYFGRETARMVVRQPLELVDMEKLDLYITVKGGSISGQAGAIRHGITRALM

b0170 EYDESLRSELRKAGFVTRDARQVERKKVGLRKARRRPQFSKRQRIIRLKAQFDHRLIDQATAEIVETAKRTGAQVRGPIP
Bbp214 KYDSSFRNELRKLGFITRDSRQVERKKVGFKARRRPQFSKRQRIIRLKAQFDHRLIDQSTAEIVETAKRTGAQVRGPIP
Bf131 QYNAEFKSVLRATGLMTRDSRMVERKKVGLRKARRSPQFSKRQRIIRLKAQFDHRLIDRSTLDIVETAKRTGAQVHGPIP
bu232 KYNQTLRFELRKAGFVTRDARQVERKKVGFKARRRPQFSKRQRIIRLKAQFDHRLIDQSTAEIVETAKRTGAQVRGPIP
BUsg22 KYNHLLRSELRKAGFVTRDARQVERKKVGLRKARRRPQFSKRQRIIRLKAQFDHRLIDQSTAEIVETAKRTGAQVRGPIP
HI0914 EYDETLRPAALRAAGFVTRDARRVERKKVGLHKARRRPQFSKRQRIIRLKAQFDHRLIDQSTAEIVETAKRTGAQVRGPIP
PA3655 EYDETLRSSLRKAGFVTRDAREVERKKVGLRKARRRPQFSKRQRIIRLKAQFDHRLIDQSTAEIVETAKRTGAQVRGPIP
PM1985 EYDESLRSLRAAGFVTRDARQVERKKVGLRKARRRPQFSKRQRIIRLKAQFDHRLIDQSTAEIVETAKRTGAQVRGPIP
RSc140 DYDATLKPTLKAGLVTDRDAREVERKKVGLHKARRRPQFSKRQRIIRLKAQFDHRLIDQSAEIVETAKRTGAIVKGPV
STM021 EYDESLRSELRKAGFVTRDARQVERKKVGLRKARRRPQFSKRQRIIRLKAQFDHRLIDQSTAEIVETAKRTGAQVRGPIP
STY024 EYDETLRSELRKAGFVTRDARQVERKKVGLRKARRRPQFSKRQRIIRLKAQFDHRLIDQSTAEIVETAKRTGAQVRGPIP
vc2259 EYDESLRPLRAAGFVTRDARRVERKKVGLRKARRRPQFSKRQRIIRLKAQFDHRLIDQSAEIVETAKRTGAQVRGPIP
wbr31 KYDSSLKTTLRDSGFI TRDSRQVERKKVGFKARRRPQFSKRQRIIRLKAQFDHRLIDQSTAEIVETAKRTGAQVRGPIP
XAC142 EYDETLRSELRKAGFVTRDAREVERKKVGLHKARRATQFSKRQRIIRLKAQFDHRLIDRSASEIVETAKRTGAQVRGPIP
XCC137 EYDETLKSELRKAGFVTRDAREVERKKVGLHKARRATQFSKRQRIIRLKAQFDHRLIDRSASEIVETAKRTGAQVRGPIP
XF2579 EYDASLKPSELRKAGFVTRDAREVERKKVGLHKARRATQFSKRQRIIRLKAQFDHRLIDRSASEIVETAKRTGAHVRGPIP
y3135 EYDESLRSELRKAGFVTRDAREVERKKVGLRKARRRPQFSKRQRIIRLKAQFDHRLIDQSTAEIVETAKRTGAQVRGPIP
YPO104 EYDESLRSELRKAGFVTRDAREVERKKVGLRKARRRPQFSKRQRIIRLKAQFDHRLIDQSTAEIVETAKRTGAQVRGPIP
Z0181 EYDESLRSELRKAGFVTRDARQVERKKVGLRKARRRPQFSKRQRIIRLKAQFDHRLIDQATAEIVETAKRTGAQVRGPIP

b0170 LPTRKERFTVILSPHVNKDARDQYERITHRLVDI VEPTKTVDALMRLDLAAGVDVQISLIRARRRKQVSDGVAHIHA
Bbp214 LPTRKERFTVILSPHVNKDARDQYERITHRLVDI VEPTKTVDALMRLDLAAGVDVQISLIRVKKRKKQILDGIAHIHA
Bf131 LPTRKERFTVILSPHVNKDARDQYERITHRLVDI VDPKTDKTVDALMRLDLAAGVDVQISLIRLRKRKKQVVDGIAHIHA
bu232 LPTRKERFTVILSPHVNKDARDQYERITHRLVDI VEPTKTVDALMRLDLAAGVDVQISLIRTRKRKKQILDGIAHIHA
BUsg22 LPTRKERFTVILSPHVNKDARDQYERITHRLVDI VEPTKTVDALMRLDLAAGVDVQISLIRTRKRKKQVVDGIAHIHA
HI0914 LPTRKERFTVILSPHVNKDARDQYERITHRLVDI VEPTKTVDALMRLDLAAGVDVQISLIRVRRKRKKQVVDGIAHIHA
PA3655 LPTRKERFTVILSPHVNKDARDQYERITHRLVDI VQPTDKTVDALMRLDLAAGVDVQISLARPRKKKQVVDGIAHIHA
PM1985 LPTRKERFTVILSPHVNKDARDQYERITHRLVDI VEPTKTVDALMRLDLAAGVDVQISLIRVRRKRKKQVVDGIAHIHA
RSc140 LPTRIQRFVILRSPHVNKTSRDQYERITHRLVDI VDPKTDKTVDALMRLDLAAGVDVQISLIRARRRKQVVDGIAHIHA
STM021 LPTRKERFTVILSPHVNKDARDQYERITHRLVDI VEPTKTVDALMRLDLAAGVDVQISLIRVRRKRKKQVSDGVAHIHA

STY024 LPTRKERFTVLISPHVNDKARDQYEIRTHKRLVDIPEPTEKTVDALMRLDLAAGVDVQISLVCARKRRKQVSDGVAHIHA
vc2259 LPTRKERFTVLISPHVNDKARDQYEIRTHKRLVDIPEPTEKTVDALMRLDLAAGVDVQISLFRARRRKQVADGVAHIHA
wbr31 LPTRKERFTVLISPHVNDKARDQYEIRTHKRLVDIPEPTEKTVDALMRLDLAAGVDVQISLFRARRRKQVADGVAHIHA
XAC142 LPTKIERYTTILVSPHADKARDQYETRTHKRLVDIPEPTEKTVDALMRLDLAAGVDVQIKLKKTKKKRVTIDGVAHVHA
XCC137 LPTKIERYTTILVSPHADKARDQYETRTHKRLVDIPEPTEKTVDALMRLDLAAGVDVQIKLKKTKKKRVTIDGVAHVHA
XF2579 LPTKIERCTILVSPHADKARDQYETCTYKRVLYIPEPTEKTVDALMRLDLAAGVDVQIKLVKIKKKRVTIDGVAHISA
y3135 LPTRKERFTVLISPHVNDKARDQYEIRTHKRLVDIPEPTEKTVDALMRLDLAAGVDVQISLFRARRRKQVSDGVAHIHA
YPO104 LPTRKERFTVLISPHVNDKARDQYEIRTHKRLVDIPEPTEKTVDALMRLDLAAGVDVQISLFRARRRKQVSDGVAHIHA
Z0181 LPTRKERFTVLISPHVNDKARDQYEIRTHKRLVDIPEPTEKTVDALMRLDLAAGVDVQISLFRARRRKQVSDGVAHIHA

b0170 SFNNTIVTITDRQGNALGWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
BBp214 SFNNTIISISDKKGNLWGWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
Bf131 SFNNTIVTITDRQGNALGWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
bu232 SFNNTIVTITDRQGNALGWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
BUsg22 SFNNTIVTITDRQGNALGWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
HI0914 SFNNTIVTITDRQGNALAWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
PA3655 SFNNTIVTITDRQGNALSWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
PM1985 SFNNTIVTITDRQGNALAWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
RSc140 SFNNTIITITDRQGNALSWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
STM021 SFNNTIVTITDRQGNALGWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
STY024 SFNNTIVTITDRQGNALGWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
vc2259 SFNNTIVTITDRQGNALAWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
wbr31 SFNNTIVTITDRQGNALGWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
XAC142 SFNNTIVTITDRQGNALSWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
XCC137 SFNNTIVTITDRQGNALSWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
XF2579 SFNNTIVTITDRQGNALFWCTSGAGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
y3135 SFNNTIVTITDRQGNALGWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
YPO104 SFNNTIVTITDRQGNALGWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF
Z0181 SFNNTIVTITDRQGNALGWATAGGSGFRGSRKSTPFAAQVAERCAEIVKDYGIKNLEVMVKGPPGRESTIRALNAAGF

b0170 RITNITDVTPIPHNGCRPPKRRMATVNLVRKPRARKVAKSNVPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL
BBp214 RIIINITDVTPIPHNGCRSPKRRMATVNLVRKSRSRKLIKNNVPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL
Bf131 HIIISIDVTPIPHNGCRPAKRRMVTINQLVGNARSIRVVKSSVPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL
bu232 RITNITDVTPIPHNGCRPPKRRMATVNLVRKPRVVKVKSNNVPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL
BUsg22 RITNITDVTPIPHNGCRPPKRRMATVNLVRKPRLRKIVKTNVPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL
HI0914 RITNITDVTPIPHNGCRPPKRRMATINQLVRKPRVVKVKSNNVPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL
PA3655 KIAISIDVTPIPHNGCRPPKRRMATINQLVRKPRKRMVKSNNVPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL
PM1985 RITNITDVTPIPHNGCRPPKRRMATINQLVRKPRVVKVKSNNVPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL
RSc140 KIQVIEDVTPVPHNGCRPPKRRMPTINQLVRKPRVSEKLSKSPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL
STM021 RITNITDVTPIPHNGCRPPKRRMATVNLVRKPRARKVAKSNVPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL

STY024 RITNITDVTPIPHNGCRPPKRRMATVNLVRKPRARKVAKSNVPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL
vc2259 RITNITDVTPIPHNGCRPPKRRMATINQLVRKPRARKVAKSNVPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL
wbr31 KITNITDVTPIPHNGCRPPKRRMVTINQLVRKSRNKIKTNVPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL
XAC142 KITNITDVTPIPHNGCRPPKRRMTINQLVRKPRQATTYKASAPALDKCPQRRGVCTRVYTTTPPKPNSALRKVCRVRL
XCC137 KITNITDVTPIPHNGCRPPKRRMATINQLVRKPRQATTYKASAPALDKCPQRRGVCTRVYTTTPPKPNSALRKVCRVRL
XF2579 KITNITDVTPIPHNGCRPPKRRMATINQLVRKPRQATTYKASAPALDKCPQRRGVCTRVYTTTPPKPNSALRKVCRVRL
y3135 RITNITDVTPIPHNGCRPPKRRMATINQLVRKPRSMKVAKSNVPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL
YPO104 RITNITDVTPIPHNGCRPPKRRMATINQLVRKPRSMKVAKSNVPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL
Z0181 RITNITDVTPIPHNGCRPPKRRMATVNLVRKPRARKVAKSNVPALEACPQKRGVCTRVYTTTPPKPNSALRKVCRVRL

b0170 TNGFEVTSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHTVRGALDCSGVKDRKQARSKYGVKPPAR IAGINIPDHKHAV
BBp214 TNGFEVTSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHYVIRGALDCSGVKDRKQARSKYGVKPPAR IAGINIPDHKHAV
Bf131 TNGFEVTCYIGGEGHNLQEHASILIRGGRVKDLPVRYHYVIRGALDCSGVKDRKQARSKYGVKPPAR IAGINIPDHKHAV
bu232 TNGFEVTAYIGGEGHNLQEHSVLIRGGRVKDLPVRYHYVIRGALDCSGVKDRKQARSKYGVKPPAR IAGINIPDHKHAV
BUsg22 TNGFEVTSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHYVIRGALDCSGVKDRKQARSKYGVKPPAR IAGINIPDHKHAV
HI0914 TNGFEVTSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHTVRGALDCAGVKDRKQARSKYGVKPPAR IAGINIPDHKHAV
PA3655 TNGFEVSSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHTVRGALDCSGVKDRKQARSKYGVKPPAR IAGINIPDHKHAV
PM1985 TNGFEVTSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHTVRGALDCAGVKDRKQARSKYGVKPPAR IAGINIPDHKHAV
RSc140 TNGFEVTSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHYVIRGALDCAGVKDRKQARSKYGVKPPAR IAGINIPDHKHAV
STM021 TNGFEVTSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHTVRGALDCSGVKDRKQARSKYGVKPPAR IAGINIPDHKHAV
STY024 TNGFEVTSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHTVRGALDCSGVKDRKQARSKYGVKPPAR IAGINIPDHKHAV
vc2259 TNGFEVTSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHTVRGALDCAGVNDKQARSKYGVKPPAR IAGINIPDHKHAV
wbr31 TNGFEVTSYIGGEGHNLQEHSSVLLIRGGRVKDLPVRYHYVIRGALDCAGVNDKQARSKYGVKPPAR IAGINIPDHKHAV
XAC142 TNQEEVTSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHYVIRGALDCAGVNDKQARSKYGVKPPAR IAGINIPDHKHAV
XCC137 TNQEEVTSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHTVRGALDCAGVNDKQARSKYGVKPPAR IAGINIPDHKHAV
XF2579 TNQEEVTSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHTVRGALDCAGVNDKQARSKYGVKPPAR IAGINIPDHKHAV
y3135 TNGFEVTSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHTVRGALDCSGVKDRKQARSKYGVKPPAR IAGINIPDHKHAV
YPO104 TNGFEVTSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHTVRGALDCSGVKDRKQARSKYGVKPPAR IAGINIPDHKHAV
Z0181 TNGFEVTSYIGGEGHNLQEHSVLIRGGRVKDLPVRYHTVRGALDCSGVKDRKQARSKYGVKPPAR IAGINIPDHKHAV

b0170 IALTSYIGVGKTRSKAILAAAGIAEDVKISELSEEQIDTLRDEVKFFVEGDLRREISMSIKRMLDLCYRGLRHRRLPV
BBp214 IALMDVYIGKTRSKLILCLRTNISSEIKLIDLTQDLELLRCEVFFVEGDLRREVTLSIKRLQDLNCRGSRHRKLPV
Bf131 IALMSIYIGRTRSKLILCLISIGVDEYTKIGQLSDVYIDKMRNEIKYVVEGDLRREVTLSIKRLIDLTGTRGLRHRRLPV
bu232 IALTAIYIGIKKRSKIFICSIANIPEHSHKIVDLNEEQIDLLRTHVYVIEGDLRREVTLSIKRLIDLTGTRGLRHRRLPV
BUsg22 IALTSYIGVGKTRSKAILAAAGIAENVKISELSEEQIDTLRDEVKFFVEGDLRREISMSIKRMLDLCYRGLRHRRLPV
HI0914 IALTAIYIGIKTRSKAICAAAGIAEDVIRELSEEQIDTLRDEVKFFVEGDLRREVTLSIKRLIDLTGTRGLRHRRLPV
PA3655 ISLTYIYGVGRTTAQSICAAATGVNPAKIKDLSDEQIDQLRNEVKITTEGDLRREINMNIKRLMLDLCYRGLRHRRLPV
PM1985 IALTAIYIGIKTRAQAI CAATGIAEDVKISELSEEQIDTLRDEVKFFVEGDLRREVTLSIKRLIDLTGTRGLRHRRLPV
RSc140 IGLTAIYIGRTRSKARKICEATGIPPTDKKVDLTDPPDQDLRKEIKFLVEGDLRREVTLSIKRLIDLTGTRGLRHRRLPV
STM021 IALTSYIGVGKTRSKAILAAAGIAENVKISELSEEQIDTLRDEVKFFVEGDLRREISMSIKRMLDLCYRGLRHRRLPV
STY024 IALTSYIGVGKTRSKAILAAAGIAENVKISELSEEQIDTLRDEVKFFVEGDLRREISMSIKRMLDLCYRGLRHRRLPV
vc2259 IALTAIYIGIKTRSKAILADLGAESVKISELSEEQIDTLRDEVKFFVEGDLRREVTLSIKRLIDLTGTRGLRHRRLPV
wbr31 IALKKIYIGINVLARKICKKTGINFSKKNVSLDSEIELIRNEVKLKEGDLRREVTLSIKRLIDLTGTRGLRHRRLPV
XAC142 VGLQSIYIGRTRSKKLCESAGVTSSTTKIRDLSEPEIERLRAEVKFFVEGDLRREIGIAIKRMLDLCYRGLRHRRLPV
XCC137 VGLQSIYIGRTRSKKLCESAGVTSSTTKIRDLSEPEIERLRAEVKFFVEGDLRREIGIAIKRMLDLCYRGLRHRRLPV
XF2579 IGLQSIYIGRTRSKKLCESAGVTSSTTKIRDLSEPEIERLRAEVKFFVEGDLRREIGIAIKRMLDLCYRGLRHRRLPV

y3135 IALTAIFGIGKTRSQAICVAAGIAEHVKISELSEEQIEKLRDEVKYVVEGDLRREVTLISIKRMLDGTYRGLRHRRLPV
YP0104 IALTAIFGIGKTRSQAICVAAGIAEHVKISELSEEQIEKLRDEVKYVVEGDLRREVTLISIKRMLDGTYRGLRHRRLPV
Z0181 IALTSIYGVGKTRSKAIIAAGIAEDVKISELSEGGQIDTLRDEVKVVVEGDLRREISMSIKRMLDGCYRGLRHRRLPV

b0170 RGQRTKTNARTRKGRPKMAKQSMKAREVVRVALADKYFAKRAELKAIISDVNASDEDRWNAVLKQLTLPDRSSPSRQRNR
BBp214 RGQRTKTNARTRKGRPKMAKQSMKAREVVRKIKLAKKFYSRREHLKSIISDLSVLEQDRWKAVALKQLTLPDRSSPIRQRNR
Bf131 RGQRTKTNARTRKGRPKMPKRSVQEREKRLRLINKYFLLRSLLRKCVVDLKVSSSEERWNAVLKQLTLPDRSSPSRQLNR
bu232 HGQRTKTNARTCKGPRKMAKQSMKAREVVRKLANKFYQRIALKNITINLKLSEERWDAVLKQLIFPRDSSPSRQRNR
BUsg22 RGQRTKTNARTCKGPRKMAKQSMKAREVVRKLANKFYAQRITAKNTITNLKLESEERWDAVLKQLIFPRDSSPSRQRNR
HI0914 RGQRTKTNARTRKGVHSMKQSMKARDVVRKLAEKFYAKRAELKAIISDVNASDEDRWDAVLKQLTLPDRSSPSRQRNR
PA3655 RGQRTKTNARTRKGRPKMAKESMKNRDLKRLQTLVAKYAKRAELKAIISANPNSSAEERWNAVLKQPRDASASRLNR
PM1985 RGQRTKTNARTRKGRPKMAKQSMKARDVVRKLAEKFYAKRAELKQIISDVNASDEDRWNAVLKQLTLPDRSSPSRQRNR
RSc140 RGQRTKTNARTRKGRPKVAKLSLIEREKRAKLVAKYAEKRAALEAIVADQSKSEERYEARLKLQQLPRNANPTQRNR
STM021 RGQRTKTNARTRKGRPKMAKQSMKAREVVRVALADKYFAKRAELKAIISDVNATDEDRWNAVLKQLTLPDRSSPSRQRNR
STY024 RGQRTKTNARTRKGPCKMAKQSMKAREVVRVALADKYFAKRAELKAIISDVNATDEDRWNAVLKQLTLPDRSSPSRQRNR
vc2259 RGQRTKTNARTRKGRPKMAKQSMKAREKRAKLVQFAEKRAATLKAIIISDVNASDEDRWNAVLKQLTLPDRSSPSRQRNR
wbr31 RGQRTKTNARTRKGRPKVTRKSIQEREKRIKLAFLAKFLYKRAELKAIISDPNIGNDIRWNAVLKQLTLPDRSSPSRQRNR
XAC142 RGQRTKTNARTRKGRPKMAKTSMIHRDIKRAKLAFFAGKRDALKKILSSQDASYEEKIDASTKLQKLPDRSSPSRHRNR
XCC137 RGQRTKTNARTRKGRPKMAKTSMIHRDIKRAKLAFFAGKRDALKKILSSQDASYEEKIDASTKLQKLPDRSSPSRHRNR
XF2579 RGQRTKTNARTRKGRPKMAKISMINRDLKRLKAKFADKRLSLKVIISDASSYEEKIEASCCKLQKLPDRSSPSRHLNR
y3135 RGQRTKTNARTRKGRPKMAKQSMKAREVVRVRLANKYRAKREELKAIISGVNSSDEDRWDAVLKQLTLPDRSSPSRQRNR
YP0104 RGQRTKTNARTRKGRPKMAKQSMKAREVVRVRLANKYRAKREELKAIISGVNSSDEDRWDAVLKQLTLPDRSSPSRQRNR
Z0181 RGQRTKTNARTRKGRPKMAKQSMKAREVVRVALADKYFAKRAELKAIISDVNASDEDRWNAVLKQLTLPDRSSPSRQRNR

b0170 CRQTRPHGFLRKFGLSRKIVREAAAMRGEIPLGKASWEATAKIVSEFGRANDTGSTEVQVALLTAQINHLQGHFAEHKK
BBp214 CSQTRPHAFRLKFLSRKIVREAAAMRGEIPLGKSSWNKSKIIITQFVSKDSGKSEVQIALLTNRINYLQNHFLHKK
Bf131 CGRTRPHAFRLKFLSRMKVREAAAMRGEIPLGKSSWEQKSKIIILKFGFIKNTGITTEVQVALLTQRINALKSHFNKHKQ
bu232 CRQTRPHAFRLKFLSRKIVREAAAMRGEIPLGKASWIDTKKIIILKYGKQNSGITTEVQVALLTQINYLQIHFQSHKK
BUsg22 CRQTRPHAFRLKFLSRKIVREAAAMRGEIPLGKASWMTIKETILKYGKQNSGITTEVQIALLTQINHLQGHFSQHKK
HI0914 CRQTRPHGFLRKFGLSRKIVREAAAMRGEIPLGKASWEKAAIVAEFGRAKDTGSSEVQIALLTAQINHLQTHFAEHKK
PA3655 CRLTRPHGFLRKFGLSRKILREAAAMRGEVPLGKASWEKAAQIVNEFYKQEGDTSSEVQVALLSANINKLQDHFKAANG
PM1985 CRQTRPHGFLRKFGLSRKIVREAAAMRGEIPLGKASWEATAKIVSEFGRANDTGSTEVQVALLTAQINHLQGHFAEHKK
RSc140 CSITGRPRGTFRKFGLARNKLEIAFKGEIPLGKASWINKQEVVKQFARTNDTGSSEVQVALLTARINELTPHFKAHMK
STM021 CRQTRPHAFRLKFLSRKIVREAAAMRGEIPLGKASWEATAKIVSEFGRANDTGSTEVQVALLTAQINHLQGHFAEHKK
STY024 CRQTRPHAFRLKFLSRKIVREAAAMRGEIPLGKASWEATAKIVSEFGRANDTGSTEVQVALLTAQINHLQGHFAEHKK
vc2259 CNQTRPHGFLRKFGLSRKIVREAAAMRGEIPLGKASWETKAAIVAEYARENDTGSSEVQIALLTASINHLQGHFAEHKK
wbr31 CSQTRPHAFRLKFLSRKILREAAAMRGEIPLGKSSWKNKNSYKETLHLNLIKEDSEKQITLLTLEIKSLQGHFLENKN
XAC142 CELSGRPRGVYRKFGLGRNMLRKATMNGDVPGLRKASWVDTQKVIEDNKRAQDTGSSEVQVALLTAQINHLQGHFKTHKK
XCC137 CELSGRPRGVYRKFGLGRNMLRKATMNGDVPGLRKASWVDTQKVIEDNKRAQDTGSSEVQVALLTARIELLTHGFKTHKK
XF2579 CEISGRPRGVYRKFGLGRNMLREAAAMRGEVPLGKASWIDTQSIENNKRAHDTGSSEVQVALLTARIELLTHGFKTHKK
y3135 CNQTRPHGFLRKFGLSRKIVREAAAMRGEIPLGKASWEATAKIVSEFGRANDTGSTEVQVALLTAQINHLQGHFSEHKK
YP0104 CNQTRPHGFLRKFGLSRKIVREAAAMRGEIPLGKASWEATAKIVSEFGRANDTGSTEVQVALLTAQINHLQGHFSEHKK
Z0181 CRQTRPHGFLRKFGLSRKIVREAAAMRGEIPLGKASWEATAKIVSEFGRANDTGSTEVQVALLTAQINHLQGHFAEHKK

b0170 DHHSRRGLLRMVSRKRLLDYLKRRKDVARYTQLIERLGLRMVITRLARHGAKKRPFYQVVVADSRNARNRGRFIERVGFNF
BBp214 DHCSRGLLNMVSKRRKLLNLYLKDENISRYTNIINQLKRLMVKIRLVRGAKKRPFYKIVIADSRYPNKGPIEKIGFFN
Bf131 DHHSRRGLLHVTRRRKLLKYLKKSVDLRYNNLIESLALRMVIRLARHGAKKSPFYIIVVTDSSRNRDGRFIERIGFFN
bu232 DHCSRGLLNMVSKRRKLLDYLKKNISRYTNIINQLKRLMVKIRLARYGTKKRPFYKLVVADSRFRNGRFIERLGYFN
BUsg22 DHCSRGLLNMVSKRRKLLNLYLKKNISRYTNIINQLKRLMVIRLALYGTKRPFYKVVVADSRFRDGRFIERLGHFN
HI0914 DHHSRRGLLRMVSRKRLLDYLKRTDLALYQSTIARLGLRMVITRLSRGGAKKRPFYQIVVADSRSPRDGRFIERVGFNF
PA3655 DHHSRRGLLRMVSRKRLLDYLKGGKDVSRYTALIGRLGLRMVITRLARHGAKKRPFYHLLVTNRSNARDGRFVERIGFFN
PM1985 DHHSRRGLLRMVSRKRLLDYLKRTDLALYQSTIARLGLRMVITRLSRGGAKKRPFYQIVVADSRSPRDGRFIERVGFNF
RSc140 DHHSRRGLLRMVSRKRLLDYLKKNADRYRSLIEKLRGLRMVITRLARHGAKKRPFYIIVVADSRSPRDGRFIERVGFNF
STM021 DHHSRRGLLRMVSRKRLLDYLKRRKDVARYTALIERLGLRMVITRLARHGAKKRPFYQVVVTDSSRARNRGRFIERVGFNF
STY024 DHHSRRGLLRMVSRKRLLDYLKRRKDVARYTALIERLGLRMVITRLARHGAKKRPFYQVVVTDSSRARNRGRFIERVGFNF
vc2259 DHHSRRGLLRMVSRKRLLDYLKGGKDVSRYTALIGRLGLRMVITRLARHGAKKRPFYQIVVADSRSPRDGRFIERVGFNF
wbr31 DLHSRRGLLKKVSRKRLNLYLKRKNMRYFDLIEKLRGLRMVITRLSRGKSNKRPFYQIVASDNKRPDGRFIEKLGFFN
XAC142 DHHSRRGLLQMVNRRRSLDYLKKNADRYRSLIEKLRGLRMVITRLTRGGAKKRPFYHIIIVTDVRSARDGRNIERLGYFN
XCC137 DHHSRRGLLQMVNRRRSLDYLKKNADRYRSLIEKLRGLRMVITRLTRGGAKKRPFYHIIIVTDVRSARDGRNIERLGYFN
XF2579 DHHSRRGLLQMVNRRRSLDYLKKNADRYRSLIEKLRGLRMVITRLTRGGAKKRPFYQIVTDSSRNRDGRNIERVGHYN
y3135 DHHSRRGLLRMVSTRKRLLDYLKRRQDVARYASLIERLGLRMVITRLARHGAKKRPFYQVVVTDSSRARNRGRFIERVGFNF
YP0104 DHHSRRGLLRMVSTRKRLLDYLKRRQDVARYASLIERLGLRMVITRLARHGAKKRPFYQVVVTDSSRARNRGRFIERVGFNF
Z0181 DHHSRRGLLRMVSRKRLLDYLKRRKDVARYTRLIERLGLRMVITRLARHGAKKRPFYQVVVADSRNARNRGRFIERVGFNF

b0170 ASEKEEGTRLDLDRIAHWVQGATISDRVAALRTLQGRVVS DKMEKSI VVAIERFVKHPIYKGFIRKRTTKLHVHDENNEC
BBp214 SIKHPPQICINTLRI THWIKNGAIMSKRVKRLRTLSGQVINSKMQKSAIVSIKRLIKHPLYKFKVKTTKLCIH DENNQ
Bf131 ELDIKRLRNLDRVRYWLSNGAQPSDRVFLVHLVQGIIVRSKMQKSI VVSINRIKHSMYKFIINRTTKIYVHDTNNIS

bu232 AKGKSEILKLNLERIEHWTNQAQMSERTKRLTLQGRVINSKMQKSAVVAIERFVKHPIYKGFIRKRTTKLHVHDEKNEC
BUsg22 SKCQNSTLKLNLNRIEYWQGGQAQISKRSQKRLTLQGRVITSNKMNKSAVVAIERFVKHPIYKGFVKTTKLHVHDEKNEC
HI0914 AQGNAERLRINLERVNHVWVQAGASLSDRVASLRSVQGVVSDKMEKSFVVAIERKVKHPLYKGFIRRTTKLHVHDENNEA
PA3655 ATGGEVRLSVDQERATYWLQGAQPSERVAQLRRTLGRVVS DKMDKT VTVLIERVKHPIYKGVKRS TKLHAHDESQC
PM1985 ATGNAERLRLLDRVNAWVEKASLSDRVASLRSVQGVVSDKMDKSFVVAIERKVKHPLYKGFIRRTTKLHVHDENNEA
RSc140 ATEGEEGLRIAQDRLSYWQGVGAQLSPTVARLRTLGRVVS SKMDKT VTVLVENRKHPLYKGVVRSKXYVVAHDEANQY
STM021 ASEKEEGTRLDLDRIAHWVQGATISDRVAALRTLQGRVVS DKMEKSI VVAIERFVKHPIYKGFIRKRTTKMHHVHDENNEC
STY024 ASEKEEGTRLDLDRIAHWVQGATISDRVAALRTLQGRVVS DKMEKSI VVAIERFVKHPIYKGFIRKRTTKMHHVHDENNEC
vc2259 ATGEEGLRLDLDRVNHVWVQAGASLSDRVASLRSVQGVVSDKMDKSI VVAIERMVKHPIYKGFIRRTTKLHVHDENNEC
wbr31 SIEKSKKIFIKTDRINLWMSKGAKLSDRVKNLQILKGSVIKKNMQKSI VVSVERFVKHPIYKFKMKTTKLHVHDENNSS
XAC142 AQGAEPRIIVLDVARVDHWVNGAQLTDKVRNLRVTEGRVVS SKMDKT VTVLVERQVKHALYKGYIKRSTKLHAHADNAC
XCC137 AQGAEPRIIVLDVARVDHWVNGAQLTDKVRNLRVTEGRVVS SKMDKT VTVLVERQVKHALYKGYIKRSTKLHAHADNAC
XF2579 AQGAESRVVNLMARVEHVVKNQAQLTDKVRSLRTIKGRVINSKMQKTVTVLVERQIKHALYKGYIKRSTKLHAHADNAC
y3135 ASGQAEALRLDLDRIEHWIGLGTAVSDRVSVLRTLQGRVVS DKMEKSMVVAIERVVKHPIYKGFIRRTTKLHVHDENNEC
YP0104 ASGQAEALRLDLDRIEHWIGLGTAVSDRVSVLRTLQGRVVS DKMEKSMVVAIERVVKHPIYKGFIRRTTKLHVHDENNEC
Z0181 ASEKEEGTRLDLDRIAHWVQGATISDRVAALRTLQGRVVS DKMEKSI VVAIERFVKHPIYKGFIRKRTTKLHVHDENNEC

b0170 GIGDVEIRECRPLSKTKSWTLVFRFRKFCRFTAEGVQIEIDYKDIATLKNYITESGKIVPSRITGTAKYQRLARAIKR
BBp214 SFGDIVEIRECRPLSKTKSWMLVFRFRKFCRFTVEKIKEIDYKDLMLKNYITESGKIVPSRITGTSARYQRLARAIKR

Bf131 NVGDIVEITECRPI SKTKCWKLTIRHRKFCRFTAADKCIYVDYKDL SKIQHSI IENAKIIPSRITGTRSKYQRLARA IKI
bu232 TVGDLEI ERESRPI SKTKSWLVFRFRKFCRFTAEGVQ EIDYKDIAVLKNYITESGKIVPSRITGTRAKYQRLSRAIKR
BUsg22 SIGDLIEI ERESRPI SKTKSWLVFRFRKFCRFTAEGIQEIDYKDIAMLKNYITENGKIVPSRITGTRAKFQRQLSRAIKK
HI0914 KVGDTV EIRECRPLSKTKSWLVFRFRKFCRFTAENVEIDYKDIA TLKNYISESGKIVPSRITGTRAKYQRLARA IKR
PA3655 RIGDLVTEIRTRPLAKTKAWTLVFRFRKFCRFTAEGVKEIDYKDLNLT LKAYVSETGKIVPSRITGTRAKYQRLATAIKR
PM1985 KLG DIVEI KE CRPLSKTKSWLVFRFRKFCRFTAENVEIDYKDVATLKNYITESGKIVPSRITGTRAKYQRLARA IKR
RSc140 KEGDRVEI VESRPI SRTKAWVVSFKRKKFCRFTAEGVQ EIDYKDLDTL KDFIGENK ITPARLTGTRASHYQRLD LTAIKR
STM021 GIGDVVEI ERECRPLSKTKSWLVFRFRKFCRFTAEGVQ EIDYKDIA TLKNYITESGKIVPSRITGTRAKYQRLARA IKR
STY024 GIGDVVEI ERECRPLSKTKSWLVFRFRKFCRFTAEGVQ EIDYKDIA TLKNYITESGKIVPSRITGTRAKYQRLARA IKR
vc2259 GIGDVVEI ERECRPLSKTKSWLVFRFRKFCRFTAEGVQ EIDYKDVATLKNYITEAGKIVPSRITGTS AKYQRLARA IKR
wbr31 KVGDVVEI QECRPI SKTKSWKLI FRFRKFCRFTLEK INNIDYKDI ILLKNYITENGKIVPSRITGTRAKYQRLSRAVKKR
XAC142 NEG DVVRVTEI APMSKTKNWRVFRFRKFCRFTAEGVKEIDYKDLNLT LRQYLTENGKIVPSRVTGTSKYQRLATAVKKR
XCC137 NEG DVVRVTEI APMSKTKNWRVFRFRKFCRFTAEGVKEIDYKDLNLT LRQYLTENGKIVPSRVTGTSKYQRLATAVKKR
XF2579 NEG DVVTEI VAPISKTKNWRVFRFRKFCRFTAEGVKEIDYKDLNLT LRQYLTENGKIVPSRVTGTSKYQRLATAVKKR
y3135 GIGDVVEI ERECRPLSKTKSWLVFRFRKFCRFTAEGVVEIDYKDIA TLKNYITESGKIVPSRITGTRAKYQRLARCIKR
YPO104 GIGDVVEI ERECRPLSKTKSWLVFRFRKFCRFTAEGVVEIDYKDIA TLKNYITESGKIVPSRITGTRAKYQRLARCIKR
Z0181 GIGDVVEI ERECRPLSKTKSWLVFRFRKFCRFTAEGVQ EIDYEDIA TLKNYITESGKIVPSRITGTRAKYQRLARA IKR

b0170 ARYLSLLPYTDRHMPRSLKKGPFIDLHLLKKEKAVESKPLRTWSRRSTIFPNMIGLTI AVHNGRQHVPVVTDEMVGH
BbP214 ARYLSLLPYTDQHVPRSLKKGPFIDLALLRVEQAVEIKKPI RTWSRRSTIFPKMVGTLMLI HNGRQHIPVITEDMVGH
Bf131 ARFLSLLPYIDQNMSRLRKGPFIDLHLLRKEKVIKTKKPI RTWSRRSTIFPKMIGLTI SVHNGKQHIPVITSDMVGH
bu232 ARYLALLPYTDQHMPRSLKKGPFIDLHLLKKEKSVKIKKPI KTWSSRRSTIFPNMVGLTIS IHNGRSHIPVITTEEMVGH
BUsg22 ARYLALLPYTDQHMPRSLKKGPFIDVSLKKEKAVKIKKPLKTLWSRRSTVFPNMVGLTISVHNGRHHIPIPI TEEMVGH
HI0914 ARYLALLPYTDNHMPRSLKKGPFIDLHLLKKEKAVESKPKI KTWSSRRSMIIPSMIGLTI AVHNGRQHVPVVSDEMIGH
PA3655 ARYLALLPYTDSHVPRSLKKGPFIDLHLLKKEKAVAKRKP IKTWSRRSMILPHMVGLTIAVHNGRQHVPVVLNDEMVGH
PM1985 ARYLALLPYTDNHMPRSLKKGPFIDLHLLKKEKAVESKPKI KTWSSRRSMIIPSMIGLTI AVHNGRQHVPVVSDEMIGH
RSc140 ARFLALMPYTDQHMTSRAKKGPFIDAHLKKEVEAAGGKPKI KTWSSRRSTILPDFIGLTI AVHNGRQHVPVVTENMVGH
STM021 ARYLSLLPYTDRHMPRSLKKGPFIDLHLLKKEKAVESKPLRTWSRRSTIFPNMIGLTI AVHNGRQHVPVVTDEMVGH
STY024 ARYLSLLPYTDRHMPRSLKKGPFIDLHLLKKEKAVESKPKI KTWSSRRSTIFPNMIGLTI AVHNGRQHVPVVSDEMVGH
vc2259 ARYLALLPYTDKHMPSLKKGPFIDLHLLKKEKAVESKPKI KTWSSRRSMIIPMIGLTI AVHNGRQHVPVVTDEMIGH
wbr31 ARYLSLLPYTDHMPRSLKKGPFIDFHLKKEIEEKQTKKLI RTWSRRSTIFPDMIGMTISVHNGKQHIPVITIGDEMVGH
XAC142 ARFLALIPYTDNHMPRSLKKGPFVDHLLKKEVEAAGSKPKI KTWSSRRSMILPEMVGITIAVHNGKNIHIVLVNENMVGH
XCC137 SRFLALIPYTDNHMPRSLKKGPFVDHLLKKEVEAAGSKPKI KTWSSRRSMILPEMVGITIAVHNGKNIHIVLVNENMVGH
XF2579 ARFLALIPYTDNHMPRSTKKGPFVDHLLKKEVEAAGSKPKI KTWSSRRSVILPQMVGHTIAIHNGKNYIPVIVINENMVGH
y3135 ARYLSLLPYTDRHMPRSLKKGPFIDLHLLKKEKAVESKPKI KTWSSRRSTVFPNMIGLTI AVHNGRQHVPVVSDEMVGH
YPO104 ARYLSLLPYTDRHMPRSLKKGPFIDLHLLKKEKAVESKPKI RTWSRRSTVFPNMIGLTI AVHNGRQHVPVVSDEMVGH
Z0181 ARYLSLLPYTDRHMPRSLKKGPFIDLHLLKKEKAVESKPLRTWSRRSTIFPNMIGLTI AVHNGRQHVPVVTDEMVGH

b0170 KLGEFAPTRTYRGHAADKKAKANIKS AKKRAIQSEKARKHNASRRSMMRTF IKKVYAAIEAGDKAAAQKAFNEMQPIVDR
BbP214 KLGEFVLTTRTYRGHTADKKVKANIKSSKDSIKSRKKKLNLSAKKSMIKTLIKKVKI AILSGDKLSELAFSKIQPILDR
Bf131 KLGEFAPTRTYRGHSVDKKIKANTKSAKKFI IKS KNRNRNLSNRSMKLTIFIKKVNIA INSGRSHIPVITAFKNMQCIDR
bu232 KLGEFSLTRTYRGHTADKKVKANIKS AKKDALTSEKRRKKNSSRRSMIRTFVKKVRVAIMSGNKTAEADAFKMQPIIDS
BUsg22 KLGEFSLTRTYRGHTADKKVKANIKS AKKDSI ISEERRKNASQRSKMRTF IKKVRILAISSGDKESYDAFKMQPIIDK
HI0914 KLGEFAPTRTYRGHAADKKAKANIKS AKKRAIQSEKRRQHNASRRSMMRTYIKKVYAAQVAAGEKSAEAFVEMQKVDR
PA3655 KLGEFAATRTYRGHAADKKAKANTPSAKKRAKQAEKRRSHNASLSMVRTYIKNVVKAIDAKDLEKAQAFTAAPVDR
PM1985 KLGEFAPTRTYRGHAADKKAKANIKS AKKRAIQSEKRRQHNASRRSMMRTYIKKVYAAVAAGDKSVAEKAFVEMQKVDR
RSc140 KLGEFALTRTFKGHAADKKAKANTAQAKKRAQAVVQNAHNSALRSRLRTAVKAVRKA IAGDKAAAANVFQAQSTIDS
STM021 KLGEFAPTRTYRGHAADKKAKANIKS AKKRAVQSEKARKHNASRRSMMRTF IKKVYAAIEAGDKAAALKAFNEMQPIVDR
STY024 KLGEFAPTRTYRGHAADKKAKANIKS AKKRAVQSEKARKHNASRRSMMRTF IKKVYAAIEAGDKAAALKAFNEMQPIVDR
vc2259 KLGEFAPTRTYRGHAADKKAKANIKS AKKRAIQSEKRRQHNASRRSMMRTYMKKTVAIA IAGDKAAAANVFQAQSTILDR
wbr31 KLGEFVPTRTYRGHSADKKIKANIKSSKRSIQSEKRRKYNSSKSMIRSF IKKVKN SILKKEKDTINNSF IEMQSI LDR
XAC142 KLGEFVTRTFKGHGDKKSGANIKS AKKRAQTVVNERNTGQRSMRLRTAVKVKI KALDANDAAGAEAAFAVAQPI LDR
XCC137 KLGEFVTRTFKGHGDKKSSANIKS AKKRAQTVVNERNTGQRSMRLRTAVKVKI KALDANDAAGAEAAFAVAQPI LDR
XF2579 KLGEFSITRVFKGHGDKKSGANIKS AKKRVKQTVVNERNTAQRSMRLRTAVKVKI KALS IKDIAGAETAFAVAQPI LDR

y3135 KLGEFAPTRTYRGHAADKKAKANIKS AKKRAVQSEKRRKHNASRRSMMRTF IKKVYAAIAAGDKDAAQKAFNEMQPIVDR
YPO104 KLGEFAPTRTYRGHAADKKAKANIKS AKKRAVQSEKRRKHNASRRSMMRTF IKKVYAAIAAGDKDAAQKAFNEMQPIVDR
Z0181 KLGEFAPTRTYRGHAADKKAKANIKS AKKRAIQSEKARKHNASRRSMMRTF IKKVYAAIEAGDKAAAQKAFNEMQPIVDR

b0170 QAAKGLIHKNAARHKANLTAQINKMPVIK VRENFDVALRRFKRSCEKAGVLA EVRREFYEKPTTERKRAKASAVKRR
BbP214 YSAGL I HKNAARHKS NLCK INAMP I KVRDNFDVALRRFKRSCEKAGILSEIRREFYEKPTTERKRAKASAIKRR
Bf131 QSIKGLIHKNAARCKSIFRRI SLMPIK VRENFDVALRRFKRSCEKAGILSEIRREFYEKPTTERKRAKASAIKRR
bu232 HVNGLIHKNAARYSNLSQLIKKMPIK VRENFDVALRRFKRSCEKAGILAEIRREFYEKPTTERKRAKASAVKRR
BUsg22 YATKGLIHKNAARYSILSFKIAKMPIK VRENFDVALRRFKRSCEKAGILAEIRREFYEKPTTERKRAKASAIKRR
HI0914 MASKGLIHKNAANHSKLAQA I KMPVIK VRENFDVALRRFKRSCEKAGILAEVRAREFYEKPTTERKRENATLAKRR
PA3655 MADKGIHKNAARHSRLSGHIKAMPVVKENFDVALRRFKRSCEKAGVLA EVRREFYEKPTTERKRAKAAA AVKRR
PM1985 MASKGLIHKNAANHSKLAQA I KMPVIK VRENFDVALRRFKRSCEKAGILAEVRSREFYEKPTTERKRENATRKRRE
RSc140 IADKKI VHKNAARAKSRLSAAIKAMT IRLKENVEVALRRFRRE IERTGLIKELRARTAEKPTTERKRAKAAA VSRRS
STM021 QAAKGLIHKNAARHKANLTAQINKMPVIK VRENFDVALRRFKRSCEKAGVLA EVRREFYEKPTTERKRAKASAVKRR
STY024 QAAKGLIHKNAARHKANLTAQINKMPVIK VRENFDVALRRFKRSCEKAGVLA EVRREFYEKPTTERKRAKASAVKRR
vc2259 MATKGLIHKNAARHSRFFA INAMPVVK VRENFDVALRRFKRSCEKAGILSEVRRREFYEKPTTERKRAKAAA QKRR
wbr31 YAKKNIHKNASRLSKSRIKMP I I K VRENFDVALRRFKRSCEKAGILSEVRRREFYEKPTTERKRAKASAIKRR
XAC142 FSARGLIHKNAARHSRLTARIKAMP SVK VRENFEFALRRFKRTCEKAGVLAETRRREFYEKPTQERKRKAAA AVKRR
XCC137 FSARGLIHKNAARHSRLTARIKAMP SVK VRENFEFALRRFKRTCEKAGVLAETRRREFYEKPTQERKRKAAA AVKRR
XF2579 FSSRGLIHKNAARHSRLTARIKAMP SVK VRENFEFALRRFKRI CEKAGILAE TRKREFYEKPTQERKRKAAA AVKRR
y3135 QSCKGLIHKNAARHSNLVAQINAMPVIK VRENFDVALRRFKRSCEKAGVLA EVRREFYEKPTTERKRAKASAVKRR
YPO104 QSCKGLIHKNAARHSNLVAQINAMPVIK VRENFDVALRRFKRSCEKAGVLA EVRREFYEKPTTERKRAKASAVKRR
Z0181 QAAKGLIHKNAARHKANLTAQINKMPVIK VRENFDVALRRFKRSCEKAGVLA EVRREFYEKPTTERKRAKASAVKRR

b0170 NARASLVKELRERTGAGMMDCKALTEANGDIELAIENMRKSGA IKA AKKAGNVADGVIKTKGII LEVNCQTD FVAKDAG
BbP214 NLKAFVKKLRARTGVGIMDCRALMCMKGDIDKSVDFLRKMGQIKAEKKQFLLTNGSIFISGVMLELSSETDFVSKHKD
Bf131 QLKSDLIRELRKRTSVS I KCKQALIDSNQDIELA IDNMRKSGLQTD I QSNRLTSLG IAIKGLMIEINCE TDFVSRNSM
bu232 NARTGLIHKNSRTGAGFLACKRLEENGDIEA IDNLRSGKLTAEKKNINNTQGAIFSKGVLELNCQTD FVSKDNL
BUsg22 NARALLIKELRLRTGAGFMECKRALIEEKGDIELS IDNLRSGQARA EKKIHNITQGLIFAKGAMVELNCQTD FVAKDTL
HI0914 NARASLVKELRERTGAGMMECKALTEANGDIELA IDNMRKSGQAKAAKAGRVAE GVL IARGVLEVMNCETDFVAKDAG
PA3655 QRRAMVKELRERTGLGMECKALTEANGDIEKA IDDMRAAGAIKAAKAGNIAEGS IAVKAVI IEVNSQTD FVAKDAG
PM1985 NARASLVKELRERTGAGMMECKALVEANGDIELA IDNMRKSGQAKAAKAGRVAE GVL IARGVLEVMNCETDFVAKDAG

RSc140 QMLASMVAELRAKTDAPMMECKKALTEAEGNMEKAEIILRVKLGKAGKAAARITEGVIA SFALVELNCETDFVSRNDD
 STM021 NARASLVKELRERTGAGMMDCKKALTEANGDIELA IENMRKSGAIKAAKKAGNVADGVIKTKAFILVNCQTFVAKDAG
 STY024 NARASLVKELRERTGAGMMDCKKALTEANGDIELA IENMRKSGAIKAAKKAGNVADGVIKTKAFILVNCQTFVAKDAG
 vc2259 NARAALVKELRERTGAGMMECKKALVETNGDIELA IENMRKSGAAKAAKAGNIAEGTIMIKAAALVEVNCQTFVAKDSN
 wbr31 NLKSNLIKEMRNRTLGI L ECKKALLENNENIELA IQF IKKSGTLNIEKNVNNLSNGI VLAKGALIELNSETFVAKNKQ
 XAC142 VTKASLVKELRERTGAGMMECKKALVENAGDIDAAA EWLKRSGLAKADKKADRVAEGRIATAAVLVEVNSETDFVAKDEN
 XCC137 VTKASLVKELRERTGAGMMECKKALVENAGDIDAAA EWLKRSGLAKADKKADRVAEGRIATAAVLVEVNSETDFVAKDEN
 XF2579 VTKASLVKELRERTGAGMMECKKALVENAGDIDAAA EWLKRSGLAKADKKADRVAEGRIATAAVLVEVNSETDFVAKDSH
 y3135 NARAALVKELRERTAAGMMECKKALVEANGDIELA IDNMRKSGQAKAAKKAGRIAEIGILAKGVILELNCETDFVAKDAG
 YP0104 NARAALVKELRERTAAGMMECKKALVEANGDIELA IDNMRKSGQAKAAKKAGRIAEIGILAKGVILELNCETDFVAKDAG
 Z0181 NARASLVKELRERTGAGMMDCKKALTEANGDIELA IENMRKSGAIKAAKKAGNVADGVIKTKGILVNCQTFVAKDAG

b0170 FQAFADKVLDAAVAGKIVEVLEEEERVALVAK IGENINIRRVAALEGGSYQARIGVLVKHIAMHVAASKPEFIKPEDVSAE
 BbP214 FLCLGEEKILDYVLTHPMIEFIEDLRTSLVMQVNIENIVIRRIQTLNKTGYLRRIGVLVKEIAMHIAASNPKYLRSDLVPKS
 Bf131 FREFINTVMVTALNESIINAL EEQRLFLMNGIGENIKIRRFVFLIGSSYISRIGVLVKHVAMHIAARNPKYVGVSNISED
 bu232 FICLGEDILVLEALEKRIINQLESRRTELVSXVGENINIRRFHLIEGFSYLVRIGVLVKNIAMHIAASKPEYLHPKKNVSE
 BUsq22 FYSLGKEIILTALSKKIIDDI EIKKTELIVKTGENIKINRFSFIEGYSYIGRIGVLVKNIAMHIAASKPEYLSPNDISDS
 HI0914 FLGLANEVTDFAAANKGIEALEEKRAALVAK IGENMNIRRVAYLDGAQYLAKIGVLVKKVAMHVAASKPEFVNPEDVSAE
 PA3655 FKGFVAESLEKAFNEKLAAPLEEARLALVAKTGENVNIIRRLTRVEGGAYLHRIGVVVKDIAMHVAASNPKYLSASEVSEE
 PM1985 FLGLANEVADYALANKGIEALEEKRAALVAK IGENMNIRRVAYLDGAQYLAKIGVLVKKVAMHVAASKPEFVNPEDVSAE
 RSc140 FLGFANEIAKLIATQNPVAALEAVRTRLIGK IGENMTIRRFQRFEGASYLTRIGVMVKDAMHAAAMKPVALLSSDEVPAE
 STM021 FQAFADKVLDAAVAGKIVEVLEEEERVALVAK IGENINIRRVASLEGGSYQARIGVLVKQLAMHVAASKPEFVKPEDVSAD
 STY024 FQAFADKVLDAAVAGKIVEVLEEEERVALVAK IGENINIRRVASLEGGSYQARIGVLVKQLAMHVAASKPEFVKPEDVSAD
 vc2259 FVAFANQVTDAAALASKAVEELEEARVALVAK IGENINIRRVQYVEGATYRDRIGVVVKHVAMHVAASRPEFLTPDDVPAE
 wbr31 FQNFGEIISIILKEKIIDILKEKISYFSLTFKKEINIKR ICLFYGFNYIKRIGVLVKKIAMHIAASNPKYISVKSIPNI
 XAC142 FLAFTVAVANAALNSDAAEALEERRAAVIAK VGENLQVRRRLVRIIDSAAYVGRIGVLVIRGIAAMHIAAMNPPHVKASDVPAE
 XCC137 FLAFTDVVANAALNSDAADALEERRAAVIAK VGENLQVRRRLVRIIDSAAYVGRIGVLVIRGIAAMHIAAMNPPHVKASDVPAE
 XF2579 FLAFAEAVAQAALVAGAVEALEEARAAVIAK IGENVVRRLARIDSAAYVGRIGVLVIRGIAAMHIAAMNPPYKNAVADSAE
 y3135 FKAFGEVINAALAEKIIDVLEEQANLVAK IGENINIRRVAVLEGGTYLARIGVMVKHIAMHIAASKPEYVKKPDDVPAE
 YP0104 FKAFGEVINAALAEKIIDVLEEQANLVAK IGENINIRRVAVLEGGTYLARIGVMVKHIAMHIAASKPEYVKKPDDVPAE
 Z0181 FQAFADKVLDAAVAGKIVEVLEEEERVALVAK IGENINIRRVAALEGGSYQARIGVLVKHIAMHVAASKPEFIKPEDVSAE

b0170 VVEKEYQVQLDIAMQKPKETAEK MVEGRMKKFTGEVSLTGQPFVMEPSKTVGQ LLEHNAEVTGFI RFEVGE G
 BbP214 IMEREYEQLELAMQKSKPILEKIIKGRMIKFANEISLLGQNFIFD PHRKVSEVIKNNIDV ISFVRYEVGEG
 Bf131 IMIRERHIQMDIAK KKKDPEILEKIVEGRMEKFMSEIVLEKQDFVMDINRTVGSILEYCIKINNFVRF EIGDN
 bu232 VFQREYQIQLELAKNNKPSNLLKKIIDGRMEK FVNNISLTSQSFIMNPIKTVGDILENHAHIESFIRFELGEL
 BUsq22 VFKREYEQLELAKNNKSS EILKKIVQGRMNK FVNDISLVGQKFI MDNTKTVGALLEYNARIISFIRFEIGDK
 HI0914 VVEHERQIQIDIAINGKPKETAEK MVEGRMKKFTGEVSLTGQAFVMDPSVSVGDFLSVNTSVSNFIRLEVGE G
 PA3655 AIAKEKEIFLALNADGKPENIVENMVKGRISKFLAEASLVEQPFVKNPEVKVGD LAQAGAEIVSFVR YEVGEG
 PM1985 VVAKEREIQVAIAMEGKPREIAEK MVEGRMKKFTGEVSLTGQPFVMDPAKSVGEFLESGADVTN FVRFVGE G
 RSc140 LIAKERSIAEQKAAEGKPAEIVAKMVEG SVQYKYLKEVSLLNQPFVKNKQTV EQMLAANTVKGFTL FVVGE G
 STM021 VVEKEYQVQLDIAMQKPKETAEK MVEGRMKKFTGEVSLTGQPFVMEPSKSVGQ LLEHNAEVTGFI RFEVGE G
 STY024 VVEKEYQVQLDIAMQKPKETAEK MVEGRMKKFTGEVSLTGQPFVMEPSKSVGQ LLEHNAEVTGFI RFEVGE G
 vc2259 VVAKEREVQGIAMNGKSKETAEK MVEGRMKKFTGEVSLTGQPFVMEPKKTVGEIILEK GATVS AFIRLEVGE G
 wbr31 IKENEKMIYIKSALKGKTKEIAEK ISNGKMKKFFEKIALEEQFFIFDDTKKIKNI IERNIYIKKFIRFEVGEN
 XAC142 FVAKKEKIELAKMSEAKPAEILEKIIISGKISKIVNEVTLYGQPYV LNTDQTV EQAVAAGAEVIGFQRLAVGEG
 XCC137 FVAKKEKIELAKMSEAKPAEILEKIIISGKISKIVNEVTLYGQPYV LNTDQTV EQAVAAGAEVIGFQRLAVGEG
 XF2579 FLEKEKIEI LSKMSEKPADILEKIIISGKINKIVKEVTLYGQPYV LNTDQTV EQVVAAGADVIGFQRM EVGEG
 y3135 VVAREHQIQLDIAIEGKPREIAEK MVEGRMKKFTGEVSLTGQNFVMDPSKTVGD LLENNADVNFIRFEVGE G
 YP0104 VVAREHQIQLDIAIEGKPREIAEK MVEGRMKKFTGEVSLTGQNFVMDPSKTVGD LLENNADVNFIRFEVGE G
 Z0181 VVEKEYQVQLDIAMQKPKETAEK MVEGRMKKFTGEVSLTGQPFVMEPSKTVGQ LLEHNAEVTGFI RFEVGE G

The alignment was obtained by concatenating the independently obtained alignments of 61 from 19 selected genomes after extraction of their clearly conserved portion.

Reference:

1. Margulis, L. & Fester, R., eds. (1991) *Symbiosis as a Source of Evolutionary Innovation* (MIT Press, Cambridge, MA).