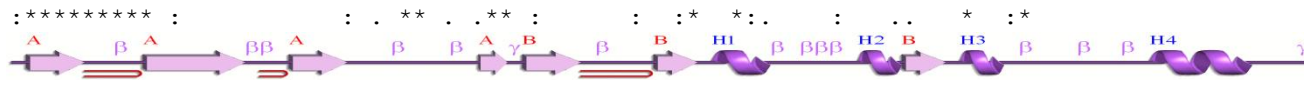
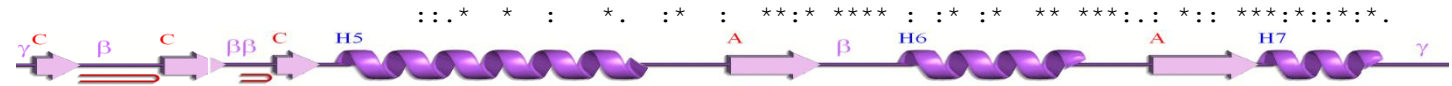


Acinetobacter\_baumannii -----MAKIIIGIDLGTNSCVAVLE-GDKVKVIEAEGARTTPSIIAYK-DGEILVGQSAKRQAVTNPKNTLFAIKRLIGRRYEDQAVQKDIG-LVPYK  
Agrobacterium\_tumefaciens -----MAKVIIGIDLGTNSCVAVMD-GKDTKVIENAEGARTTPSMVAFSDGGERLVGQPAKRQAVTNPTNTLFAVKRLIGRRYEDPTVEKDKA-LVPFE  
Aquifex\_aeolicus ---MAEKKEKIIIGIDLGTNSVSVMM-GDEAVVIQNQEGSRLLTPSVVSWTKEKEILVGEPAKRRAILDPENTVYESKRFIGRKFEE--VKEEAK-RVSYK  
Bacillus\_anthraxis -----MSKIIIGIDLGTNSCVAVME-GGEPKVIIPNPEGNRTPPSVFAFK-NEERQVGEVAKRQAITNPN-TIMSVKRHMGTD-----  
Bacillus\_cereus -----MSKIIIGIDLGTNSCVAVME-GGEPKVIIPNPEGNRTPPSVFAFK-NEERQVGEVAKRQAITNPN-TIMSVKRHMGTD-----  
Bacillus\_subtilis -----MSKVIIGIDLGTNSCVAVLE-GGEPKVIANAEGNRTPPSVFAFK-NGERQVGEVAKRQSAITNPN-TIMSIKRHMGTD-----  
Bacteroides\_thetaiotaomicron -----MGKIIIGIDLGTNSCVAVFE-GNEPVVIANSEGRTPPSVFAFVDGGERKVGDPAKRQAITNPTRTIFSIKRFMGENWDQ--VQKEVT-RVPYK  
Bifidobacterium\_longum -----MARAVGIDLGTNSCIATLE-GGEPVIVNAEGARTTPSVVAFSKSGEILVGEVAKRQAVTNVDRTISSVKRHMGS-----  
Bordetella\_pertussis -----MSKIIIGIDLGTNSCVAVLD-GGQVKIIEAEGARTTPSIVAYMDGETLVGAPAKRQAVANPKNTLYAVKRLIGRKFDEKAVQKID-LMPYS  
Borrelia\_burgdorferi -----MGKIIIGIDLGTNSCVAIME-HGKPVVIQNSEGRTPPSIVAYTNKGERLVGQVAKNQMVNTPENTIYSIKRFMGRRFEE--VASEIK-MVPYK  
Bradyrhizobium\_japonicum -----MGKVIIGIDLGTNSCVAVMD-GKNAKVIENSEGMRTTPSIVAVTDDGERLVGQPAKRQAVTNPERTFFAVKRLIGRRYDDPMVEKDK-LVPYK  
Buchnera\_aphidicola -----MGKIIIGIDLGTNSCVAIMD-GNKPRVLENAEGDRTPSIIAYTQDGEVLVGPAPKRQAITNPKNTLFAIKRLIGRKFDDVEVQDK-IMPYN  
Burkholderia\_pseudomallei -----MGKIIIGIDLGTNSCVAIME-GNQVKVIENSEGARTTPSIIAYMDNEVLVGPAPKRQSAITNPN-TIMSIKRHMGTD-----  
Campylobacter\_jejuni -----MSKVIIGIDLGTNSCVAVYE-RGESKVIIPNKEGKNTTPSVVAFDKEGVLVGSAPKRQAVTNPEKTIYSIKRIMGLMINEDAACEAKN-RLPYH  
Caulobacter\_crescentus -----MSKIIIGIDLGTNSCVAIMD-GKTPKVIENAEGARTTPSVVAFLEDGERLIGQPAKRQAVTNPTNTLFAIKRLIGRTASDPVVEKDKG-MVPYE  
Chlamydia\_trachomatis MSEKRKSNKIIIGIDLGTNSCVSVM-GGQPKVIASSEGRTPPSIVAFK-GGETLVGIAPAKRQAVTNPEKTLASTKRFIGRKFSE--VESEIK-TVPYK  
Chlorobium\_tepidum -----MGKIIIGIDLGTNSCVAVMQ-GTQPTVIENSEGSRTPSMVAFKTKGERLVGQAAKRQAVTNPKNTIFSIKRFMGRKYDE--VPNEKK-LASYD  
Clostridium\_acetobutylicum -----MSKVIIGIDLGTNSCVAVME-GGDPAVIANSEGRTPPSVVSFQKNGERLVGQVAKRQSAITNPKNTIISIKRKMGT-----  
Clostridium\_botulinum -----MAKIIIGIDLGTNSCVSVM-GGEPVVIANAEGSRTPPSVVSFQKNGERLIGQVAKRQSAITNPEKTIISIKRYMGT-----  
Corynebacterium\_glutamicum -----MGRVAVGIDLGTNSVSVLE-GGEPVVIANAEGSRTPPSVFAFKNGEVLVGSAPKNQAVTNVDRTIKRSVKRHIGTD-----  
Coxiella\_burnetii -----MAEIIIGIDLGTNSCVAVME-GGKVRVIEAEGSRTPPSIVAYTKDGEVLVGSAPKRQAVTNADRTLYAIKRLIGRRFDDNVVQKDIK-MVPYK  
Deinococcus\_radiodurans -----MAKAVGIDLGTNSVIAVME-GGREPEVIVNAEGGRTPPSVYAK-GDEILVGIARRQAALNPAATLFEVKRFIARRWDE--VKEEAA-RSPFT  
Desulfovibrio\_vulgaris -----MGKIIIGIDLGTNSCVYVME-GKDPKCIITNPEGGRTPPSVAFD-KERLVGDIAKRQAVTNPERTVFAVKRLMGRRGDAPEVGRWKE-HSPYR  
Dictyoglomus\_turgidum -----MAKIVGIDLGTNSLIAYLE-GRPVVIIPNAEGSRLLTPSIVAFKDGQLLVGEPAKRQAVINAERTIRSIKRHMGTN-----  
Enterococcus\_faecalis -----MSKIIIGIDLGTNSAVALE-GGEAKIIANPEGNRTPPSVVSFK-NGEIQVGEVAKRQAVTNPN-TISSIKRHMGEAG-----  
Escherichia\_coli -----MGKIIIGIDLGTNSCVAIMD-GTTPRVLENAEGDRTPSIIAYTQDGETLVGQPAKRQAVTNPQNTLFAIKRLIGRRFQDEEVQRDVS-IMPYK  
Flavobacterium\_psychrophilum -----MGKIIIGIDLGTNSCVSVM-GQEAVVIIPNAEGKRTTPSIIAFVEGGEIKVGDPAKRQAVTNPTKTVASIKRFMGHSFSE--TTDEAK-RVPYS  
Francisella\_tularensis -----MGKIIIGIDLGTNSCLAIMD-GKTAKVIENAEGHRTTPSVVAYTDSGEILVGAAPKRQAVTNPDNTFFAIKRLIGRKYDDKAVQEDIKKKVPYA  
Fusobacterium\_nucleatum -----MSKIIIGIDLGTNSCVAVME-GGSATIIPNSEGARTTPSVVNIKDNGEVVVGEIAKRQAVTNPTSTVSSIKTHMGS-----  
Geobacter\_sulfurreducens -----MSKVIIGIDLGTNSCVAVME-GGEPVVIANAEGSRTPSMVAFAESGERLVGQQAQRQAVTNPENTLFAIKRLIGRKYDTEVRKDIS-ISPFK  
Gloeobacter\_violaceus -----MGKVVIGIDLGTNSVAVLE-GGQPTVIANEGSRTPPSVVAFTKNHDLVGLQARRQAVLNPENTFYSVKRFIQRKYDE--ITDEAK-QVAYR  
Haemophilus\_influenzae -----MGKIIIGIDLGTNSCVAVMD-GDKARVIEAEGSRTPSIIAYT-DNETLVGQPAKRQAITNPKNTLFAIKRLIGRRFESEEVQRDIK-IMPFE  
Helicobacter\_pylori -----MGKVIIGIDLGTNSAMAVYE-GNEAKIIANKEGKNTTPSIVAFDKEGILVGESAPKRQAVTNPEKTIYSIKRIMGLMFNEDKAKEAEK-RLPYK  
Koribacter\_versatilis -----MAKIIIGIDLGTNSVAVME-GGEPKVIIPNEEGRTTPSVVGFKTKGERLVGQVAKRQAITNPENTIFSIKRFMGRRYNE--VNEEMK-MVPYK  
Lactobacillus\_plantarum ---MASNKIIIGIDLGTNSAVAVLE-GNEPKIITTPEGGRTPPSVFAFK-DGETQVGEVAKRQAITNPN-TVASIKRHMGEAG-----  
Lactococcus\_lactis -----MSKIIIGIDLGTNSAVAVLE-GTESKIIIPNPEGNRTPPSVFAFK-NGEIIVGDAAKRQAVTNPE-TIISIKSKMGT-----  
Leptospira\_interrogans -----MSKEKIIIGIDLGTNSVSVME-GGDPVVIQNSEGARTTPSIVAFKAKGETLIGQFAKNQAITNAVNTIRSAKRFIGRRLNE--CESEMK-HVSYK  
Listeria\_monocytogenes -----MSKIIIGIDLGTNSAVAVLE-GGEAKIIPNPEGARTTPSVVGFK-NGERQVGEVAKRAAITNPN-TISSIKRHMGTN-----  
Mesorplasma\_florum -----MAKERIIGIDLGTNSVVSIME-GGQPIIILENPEGQRTTPSVVAFK-NEDIIVGGAQRQAVTNPN-VVISVKS KMGTN-----  
Moorella\_thermoacetica -----MSKVIIGIDLGTNSCVAVME-GGEAVVIIPNAEGGRTPPSVVAFTKEGERIVGQVAKRQAITNPDRTVISIKRHMGTN-----  
Mycobacterium\_smegmatis -----MARAVGIDLGTNSVAVLE-GGDPVVVANSEGRTPPSVFAFARNGEVLVGPAPKNQAVTNVDRTIKRSVKRHVGT-----  
Mycobacterium\_tuberculosis -----MARAVGIDLGTNSVSVLE-GGDPVVVANSEGRTPPSIVAFARNGEVLVGPAPKNQAVTNVDRTVRSVKRHMGS-----  
Mycoplasma\_mycoides -----MAKEKIIIGIDLGTNSVSVIE-GGQPIIILENPEGQRTTPSVVAFK-NSDIIVGGAQRQAVTNPN-VVQSIKSKMGT-----  
Mycoplasma\_pneumoniae ---MSTDNGLIIGIDLGTNSCVSVM-NGRPVVLENEGKRTTPSIVSYK-NNEIIVGDAAKRQAVTNPN-TIVSIKRLMGTSNKV--T-----  
Neisseria\_gonorrhoeae -----MAKVIIGIDLGTNSCLAISE-NGQTKVIEAEGARTTPSVIAYLDGGEILVGAAPKRQAVTNKNTIYAAKRLIGHKFEDKEVQRDIE-SMPFE  
Neisseria\_meningitidis -----MAKVIIGIDLGTNSCLAISE-NGQTKVIEAEGARTTPSVIAYLDGGEILVGAAPKRQAVTNKNTIYAAKRLIGHKFEDKEVQRDIE-SMPFE  
Pseudomonas\_aeruginosa -----MGKIIIGIDLGTNSCVAILE-NGNVKVIENAEGARTTPSIIAYTNDGETLVGQPAKRQAVTNPQNTLYAVKRLIGRRFEENVVQKDIQ-MVPYS  
Rhodobacter\_sphaeroides -----MAKVIIGIDLGTNSCVAIMD-GAQP RVIENSEGARTTPSIVGFTD-SERLVGQPAKRQAVTNPSNTVFAVKRLIGRRVGDVEKDKK-LVPYS  
Rhodopirellula\_baltica ---MAQGEKIIIGIDLGTNSVVAIME-GSEPKVIIPNPEGRLTPSVVAFDQKQETIVGEPARRQAVTNPKRTVYSAKRFMGRRHNE--VQSEEK-MVPYK  
Rhodospirillum\_rubrum -----MSKVIIGIDLGTNSCVAVMD-GKDVRVIEAEGARTTPSQVAFTESGERLVGQPAKRQAVTNPENTLFAIKRLIGRRYSDPTVEKDKG-LVPYK  
Rickettsia\_prowazekii -----MGKVIIGIDLGTNSCVAVME-GKEPKVIDNAEGERTTPSIIAFAN-SERLVGQPAKRQAVTNPRNTIYAVKRLIGRNFDDPMVRKDQG-LVPYN  
Salinibacter\_ruber -----MGKVIIGIDLGTNSVAVME-GDDEPVIENAEGSRTPSVVAYKDDGERLVGAPAKRQAITNPENTVSSIKRFMGRFYDE--VEDEIE-EVPYE  
Salmonella\_typhimurium -----MGKIIIGIDLGTNSCVAIMD-GTQARVLENAEGDRTPSIIAYTQDGETLVGQPAKRQAVTNPQNTLFAIKRLIGRRFQDEEVQRDVS-IMPYK  
Shewanella\_oneidensis -----MGKIIIGIDLGTNSCVAVLD-GGKARVLENAEGDRTPSIIAYT-DDETIVGQPAKRQAVTNPNNTFFAIKRLIGRRFKDDEVQRDVS-IMPYK  
Shigella\_dysenteriae -----MGKIIIGIDLGTNSCVAIMD-GTTPRVLENAEGDRTPSIIAYTQDGETLVGQPAKRQAVTNPQNTLFAIKRLIGRRFQDEEVQRDVS-IMPYK  
Staphylococcus\_aureus -----MSKIIIGIDLGTNSCVTVLE-GDEPKVIQNPESGRTPPSVFAFK-NGETQVGEVAKRQAITNPN-TVQSIKRMHGT-----  
Streptococcus\_pneumoniae -----MSKIIIGIDLGTNSAVALE-GTESKIIANPEGNRTPPSVVSFK-NGEIIVGDAAKRQAVTNPD-TVISIKSKMGT-----  
Streptomyces\_coelicolor -----MARAVGIDLGTNSVSVLE-GGEPVIVTNAEGARTTPSVVAFKNGEVLVGEVAKRQAVTNVDRTIKRSVKRHMGT-----  
Synechocystis\_sp. -----MGKVVIGIDLGTNSCVAVME-GGKPTVIANAEGRTPPSVVGAKNGDRLVGIQAKRQAVMNPNTFYSVKRFIQRKFDE--ITNEAT-EVAYS  
Thermodesulfovibrio\_yellowstonii -----MGKAIIGIDLGTNSVAVVV-GGEPVVIIPNPEGQRTTPSVVAFDKEGGERLVGQVAKRQAITNPENTIFSIKRLMGRKYSQEVQEA--RLPYK  
Thermotoga\_maritima ---MAEKKEFVIGIDLGTNSVIAWMPDGTVEVIPNAEGSRVTPSVVAFKSGEILVGEPAKRQAVMILNPERTIKSIKRMHGT-----  
Thermus\_thermophilus -----MAKAVGIDLGTNSVIAVLE-GGKPVVLENAEGERTTPSVVAFR-DGETLVGMAKRQAVLNPEGTIFEIKRFIARRFEE--VQEEAK-RVPYK  
Vibrio\_cholerae -----MGKIIIGIDLGTNSCVAVLD-GDKPRVIEAEGERTTPSVIAYT-DGETLVGQPAKRQAVTNPQNTLFAIKRLIGRRFEDEEVQRDIK-IMPYK  
Xanthomonas\_campestris -----MGKIIIGIDLGTNSCVAIMD-GGKARVIEAEGDRTPSIVAYTKDGEVLVGSAPKRQAVTNPKNTFYAVKRLIGRKFDDVEVQKDIS-HVPYK  
Yersinia\_pestis -----MGKIIIGIDLGTNSCVAIMD-GTKARVLENAEGDRTPSIIAYTQDGETLVGQPAKRQAVTNPQNTLFAIKRLIGRRFQDEEAQRDKD-IMPYK



Acinetobacter\_baumannii  
 Agrobacterium\_tumefaciens  
 Aquifex\_aeolicus  
 Bacillus\_anthraxis  
 Bacillus\_cereus  
 Bacillus\_subtilis  
 Bacteroides\_thetaiotaomicron  
 Bifidobacterium\_longum  
 Bordetella\_pertussis  
 Borrelia\_burgdorferi  
 Bradyrhizobium\_japonicum  
 Buchnera\_aphidicola  
 Burkholderia\_pseudomallei  
 Campylobacter\_jejuni  
 Caulobacter\_crescentus  
 Chlamydia\_trachomatis  
 Chlorobium\_tepidum  
 Clostridium\_acetobutylicum  
 Clostridium\_botulinum  
 Corynebacterium\_glutamicum  
 Coxiella\_burnetii  
 Deinococcus\_radiodurans  
 Desulfovibrio\_vulgaris  
 Dictyoglomus\_turgidum  
 Enterococcus\_faecalis  
 Escherichia\_coli  
 Flavobacterium\_psychrophilum  
 Francisella\_tularensis  
 Fusobacterium\_nucleatum  
 Geobacter\_sulfurreducens  
 Gloebacter\_violaceus  
 Haemophilus\_influenzae  
 Helicobacter\_pylori  
 Koribacter\_versatilis  
 Lactobacillus\_plantarum  
 Lactococcus\_lactis  
 Leptospira\_interrogans  
 Listeria\_monocytogenes  
 Mesoplasma\_florum  
 Moorella\_thermoacetica  
 Mycobacterium\_smegmatis  
 Mycobacterium\_tuberculosis  
 Mycoplasma\_mycoides  
 Mycoplasma\_pneumoniae  
 Neisseria\_gonorrhoeae  
 Neisseria\_meningitidis  
 Pseudomonas\_aeruginosa  
 Rhodobacter\_sphaeroides  
 Rhodopirellula\_baltica  
 Rhodospirillum\_rubrum  
 Rickettsia\_prowazekii  
 Salinibacter\_ruber  
 Salmonella\_typhimurium  
 Shewanella\_oneidensis  
 Shigella\_dysenteriae  
 Staphylococcus\_aureus  
 Streptococcus\_pneumoniae  
 Streptomyces\_coelicolor  
 Synechocystis\_sp.  
 Thermodesulfovibrio\_yellowstonii  
 Thermotoga\_maritima  
 Thermus\_thermophilus  
 Vibrio\_cholerae  
 Xanthomonas\_campestris  
 Yersinia\_pestis

I IKADNGDAW--VEVN-----DKKLAPQQISAEILKMKKTAEDYLGETVTEAVITVPAYFNDAQRQATKDAGKIAGLDVKRIINEPTAAALAFGMDKK-  
 IVKGDNGDAW--VKAQ-----DKNYSPSQISAMILQKMKETAESYLGEKVEKAVITVPAYFNDAQRQATKDAGRIAGLDVLRINEPTAAALAYGLDKK-  
 VVPDEKGDAAFDPINA-----GKLVRPPEVGAHVLRKLEAAEAFGLGEPVKKAVITVPAYFNERQRQATKDAGKIAGLEVVRILNEPTAAAMAYGLHKK-  
 -----YKVEVE-----GKDYTPQEISAILQNLKASAEAYLGETVTKAVITVPAYFNDAERQATKDAGRIAGLEVERINEPTAAALAYGLEKQ-  
 -----YKVEVE-----GKDYTPQEISAILQNLKASAEAYLGETVTKAVITVPAYFNDAERQATKDAGRIAGLEVERINEPTAAALAYGLEKQ-  
 -----YKVEIE-----GKDYTPQEVSAILQHLKSYAESYLGETVSKAVITVPAYFNDAERQATKDAGKIAGLEVERINEPTAAALAYGLDKT-  
 VVKGDNNTPR--VDID-----GRLYTPQEISAMILQKMKKTAEDYLGQEVTEAVITVPAYFSDSQRQATKEAGQIAGLEVKRIVNEPTAAALAYGLDKA-  
 -----WTVDID-----GKKWTPQEISAQILMMLKRDAAEAYLGEVPTDAVITCPAYFNDAQRQATKDAGKIAGLNVLRIINEPTAAALAYGLEKG-  
 IVKADNGDAW--VEVR-----GKKLAPPQVSAEVLKMKKTAEDYLGEEVTEAVITVPAYFNDSQRQATKDAGRIAGLEVKRINEPTAAALAFGLDCKTE  
 IEKGLNGDAR--VNISN---IKKQMSPEISAAATLTKMKETAESYLGEKVEAVITVPAYFNDAQRQATKDAGKIAGLEVKRIVNEPTAAALAYGIEKK-  
 IVKASNGDAW--VEAD-----GQYSPSQVSAFYLQKMKETAEAHLGQKVDQAVITVPAYFNDAQRQATKDAGKIAGLEVLRINEPTAAALAYGLDKT-  
 IVNSDNGDAW--IDVK-----KQMAPPQISAEVLKMKKTAEDYLGETIKEAVITVPAYFNDAQRQATKDAGRIAGLEVKRINEPTAAALAYGLDKG-  
 I IKADNGDAW--VEAH-----GKLVRPPEVGAHVLRKLEAAEAFGLGEPVKKAVITVPAYFNDAERQATKDAGKIAGLEVVRILNEPTAAALAYGLDKE-  
 ITE-RNGACA--IEIA-----GKIYTPQEISAKVLMKLEDAEAFGLGESVTEAVITVPAYFNDAQRQATKEAGTIAGLNVLRIINEPTSAALAYGLDCKD  
 IVKGPTGDAW--VKAH-----GKDYSPEVSAFYLQKMKEEAAEHLGEPVTKAVITVPAYFNDAQRQATKDAGKIAGLEVLRINEPTAAALAYGLDKN-  
 VAPNSKGDV--FDVE-----QKLYTPEEIGAQILMMLKETAESYLGETVTEAVITVPAYFNDSQRASATKDAGRIAGLDVKRIIPEPTAAALAYGIDKE-  
 VVNE--GGYAK--VKIG-----DKYSPQEISAMILQKMKQTAEDFLGEPVTEAVITVPAYFNDAQRQATKDAGKIAGLEVKRINEPTAAALAYGLDCK-  
 -----EKVAID-----DKNYTPQEISAMILQKMLKADAAYLGETVTEAVITVPAYFNDSQRQATKDAGKIAGLEVLRINEPTAASLAYGLDKM-  
 -----HKVNID-----STEYTPQOISAMVLQKLLKADAAYLGEKVTQAVITVPAYFNDSQRQATKDAGKIAGLEVLRINEPTAASLAYGLDKM-  
 -----WSVAID-----DKNYTSQEISARTLMMLKRDAAEAYLGEDVTEAVITVPAYFEDSQRQATKEAGQIAGLNVLRIINEPTAAALAYGLEKG-  
 I IKADNGDAW--VEVKDKGKSGKLAPPQISAOVLKMKKTAEDYLGHEVKDAVITVPAYFNDSQRQATKDAGKIAGLNVLRIINEPTAAALAYGMDKK-  
 VKEGPGSVR--IEVN-----GKDLAPEQVSAEVLKLVSDASAKLGNKTDVAVITVPAYFNDSQREATRQAGEIAGLNVLRIINEPTAAALAYGLERK-  
 IVAGANGDAA--VEVQ-----GRPYSAPEISAMILGKLLKADAAYLGETVTEAVITVPAYFNDAQRQATKDAGRIAGLDVKRIINEPTAASLAYGFDRK-  
 -----YKVKID-----DKYTPQEISAMILRKLKRDAAEAYLGEKIEKAVITVPAYFSDAQRQATKDAGAIAGLEVVRINEPTAAALAYGLDKE-  
 -----YKVDVE-----GKSYTPQEVSAMILQYLKGFADYLGKVEKAVITVPAYFNDAQRQATKDAGKIAGLEVLRINEPTAAALAYGLDKT-  
 IIAADNGDAW--VEVK-----GQMAPPQISAEVLKMKKTAEDYLGEVTEAVITVPAYFNDAQRQATKDAGRIAGLEVVRINEPTAAALAYGLDKG-  
 VVKGDNNTPR--VDID-----GRLYTAQELSAMTLQKMKKTAEDYLGQVTEAVITVPAYFNDAQRQATKEAGEIAGLKMRIINEPTAAALAYGLDCK-  
 VIKADNGDAW--VATK-----EGKKMAPPQVSAEVLKMKKTAEDYLGEVTEAVITVPAYFNDSQRQATKDAGKIAGLEVKRINEPTAAALAYGVDSK-  
 -----YKVEIF-----GKKYTPQEISAKTLQKLLKADAAYLGEVVEKAVITVPAYFTDSQRQATKDAGTIAGLDVKRIINEPTAAALAYGLEKK-  
 IVKADNGDAW--VEAR-----GKMSAPEISAMVLQKMKQTAEDYLGETVTEAVITVPAYFNDSQRQATKDAGKIAGLNVLRIINEPTAAALAYGLDCK-  
 VVRDGS--NVKLHSTNE---DKDFAPEEISALVLRKLVDDASKYLGEKVTQAVITVPAYFNDSQRQATKDAGRIAGLEVLRINEPTAAALAYGLDCK-  
 ITRADNGDAW--VNVK-----GDKLAPPQISAEVLKMKKTAEDFLGEPVTEAVITVPAYFNDAQRQATKDAGKIAGLDVKRIINEPTAAALAFGLGSS-  
 IVD-RNGACA--IEIS-----GKVTTPQEISAKILMMLKLEDAESYLGESVTEAVITVPAYFNDSQRQATKEAGTIAGLNVLRIINEPTSAALAYGLDCKE  
 VQQAGD-HVA--VLAQ-----GKEYSPAESAYILQKLLKAAEDYLGETVTEAVITVPAYFNDAQRQATKDAGKIAGLDVKRIINEPTAAALAYGLDCK-  
 -----YKVSIE-----GKDYTPQOISAMILQYIKGFAEDYLGDTVEKAVVITVPAYFNDAQRQATKDAGKIAGLNRIINEPTAAALAYGLDKT-  
 -----EKVSAN-----GKEYTPQEISAMILQNLKATAEAYLGEKVEKAVITVPAYFNDAQRQATKDAGKIAGLEVERINEPTAAALAYGLDKT-  
 VIRSGNEGK--FETS-----AGEFTPQEISARVLMKMKQTAEDYLGQKVTKAVITVPAYFNDEQRQATKDAGRIAGLEVERINEPTAAALAYGFDDK-  
 -----YKETIE-----GKDYSPQEISAILQYLKSYAEDYLGETVTKAVITVPAYFNDAQRQATKDAGKIAGLEVERINEPTAAALAYGMDKT-  
 -----EKIDIN-----GKKYTPQEISAILRYMKKYAEKVGKTKAVITVPAYFNDSQRQATKDAGKIAGLDVERINEPTAAALAYGLEKK-  
 -----YKVKID-----NKEYTPQEISAMILQKLLKADAAYLGEKVTQAVITVPAYFTDSQRQATKDAGRIAGLEVLRINEPTAASLAYGLDKG-  
 -----WNIID-----DKKYTPQEISARVLMMLKRDAAESYLGEDITDAVITVPAYFNDAQRQATKEAGQIAGLNVLRIINEPTAAALAYGLDKG-  
 -----WSIID-----GKKYTAPEISARILMMLKRDAAEAYLGEDITDAVITTPAYFNDAQRQATKDAGQIAGLNVLRIINEPTAAALAYGLDKG-  
 -----SKVNLE-----GKDYSPEQISAEILRYMKNYAEAKLGQVTKAVITVPAYFNDAQRQATKDAGTIAGLQVERINEPTAAALAYGLDKQ-  
 -V-----KNPDGS-----TKELTPEEVSQAQILSYLKYAEKIKGKTSRAVITVPAYFNDAERNATKTAGKIAGLNVERINEPTAAALAYGIDKS-  
 I IKADNGDAW--VKAQ-----GKELSPQOISAEVLKMKKETAESYLGEKVEKAVITVPAYFNDSQRQATKDAGRIAGLDVKRIINEPTAAALAFGMDKGD  
 I IKANNDAW--VKAQ-----GKELSPQOISAEVLKMKKETAESYLGEKVEKAVITVPAYFNDSQRQATKDAGRIAGLDVKRIINEPTAAALAFGMDKGD  
 IVKADNGDAW--VEVK-----GQKMAPPQISAEVLKMKKTAEDYLGEVTEAVITVPAYFNDSQRQATKDAGRIAGLDVKRIINEPTAAALAYGLDKA-  
 IVNGGNGDAW--VEVR-----GKYSPPQISAFYLQKMKETAESYLGESVTEAVITVPAYFNDAQRQATKDAGKIAGLEVLRINEPTAAALAYGLDCK-  
 ITGGPGDY--VKIQVG-----DSEYTPQEISAKVLRKLESAESYLGHKVNKAVITVPAYFNDAQRQATKDAGQIAGLEVARIINEPTAAALAYGLDCK-  
 IVKGDNGDAW--VQTR-----DEKYAPSQLSAFYLQKMKETAEAHLGEPVTEAVITVPAYFNDSQRQATKDAGKIAGLEVLRINEPTAAALAYGMDKK-  
 IVKADNGDAW--VEAD-----NHKYSPPQISAFYLQKMKETAESYLGEKVTQAVITVPAYFNDAQRQATKDAGKIAGLEVLRINEPTAAALAYGFESK-  
 VVRGENDTAR--VQIG-----DRKYTPQEISAVVLQKLLKQTAEDYLGQEVTEAVITVPAYFNDAQRQATKEAGEIAGLNVRINEPTAASLAYGLDDE-  
 IIGADNGDAW--LDVK-----GQKMAPPQISAEVLKMKKTAEDYLGEVTEAVITVPAYFNDAQRQATKDAGRIAGLEVVRINEPTAAALAYGLDKE-  
 IIAADNGDAW--VESR-----GNKMAPPQVSAEILKMKKTAEDFLGEEVTEAVITVPAYFNDSQRQATKDAGRIAGLEVVRINEPTAAALAYGIDKK-  
 IIAADNGDAW--VEVK-----GQKMAPPQISAEVLKMKKTAEDYLGEVTEAVITVPAYFNDAQRQATKDAGRIAGLEVVRINEPTAAALAYGLDKG-  
 -----YKVDIE-----GKSYTPQEISAMILQNLKNTAESYLGEKVDKAVITVPAYFNDAERQATKDAGKIAGLEVERINEPTAAALAYGLDKT-  
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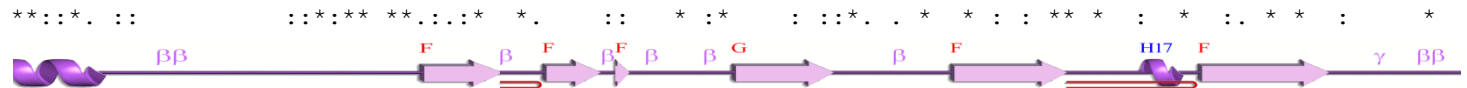






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Bacteroides\_thetaiotaomicron  
Bifidobacterium\_longum  
Bordetella\_pertussis  
Borrelia\_burgdorferi  
Bradyrhizobium\_japonicum  
Buchnera\_aphidicola  
Burkholderia\_pseudomallei  
Campylobacter\_jejuni  
Caulobacter\_crescentus  
Chlamydia\_trachomatis  
Chlorobium\_tepidum  
Clostridium\_acetobutylicum  
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Lactococcus\_lactis  
Leptospira\_interrogans  
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Mycobacterium\_smegmatis  
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Mycoplasma\_mycoides  
Mycoplasma\_pneumoniae  
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Salinibacter\_ruber  
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Yersinia\_pestis

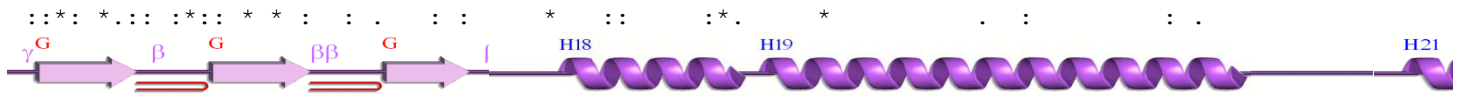
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Acinetobacter\_baumannii  
 Agrobacterium\_tumefaciens  
 Aquifex\_aeolicus  
 Bacillus\_anthraxis  
 Bacillus\_cereus  
 Bacillus\_subtilis  
 Bacteroides\_thetaiotaomicron  
 Bifidobacterium\_longum  
 Bordetella\_pertussis  
 Borrelia\_burgdorferi  
 Bradyrhizobium\_japonicum  
 Buchnera\_aphidicola  
 Burkholderia\_pseudomallei  
 Campylobacter\_jejuni  
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 PQIEVKFDIDANGIVHVSADLGTGKQQAITITSSSGLSEEEIQRMVKEAEASAEADRRRKEEIEETRNQADS LIYQAERTLKEFKDK-----ADQND  
 PQIEVTFDDIDANGIVHVTAKDKGTGKENTIKIQEGSGLSKEEIDRMKIDAEAAHEEDRKRREEDVRNQAESLVYQTEKQVAEQGAASDGGGSKVPEET  
 PQIEVTFDDIDANGIVHVTAKDKGTGKENTIRIQEGSGLSKEEIDRMKIDAEAAHEEDRKRREEDVRNQAE TLVYQTEKQVKEQREA---EGGSKVPEDT  
 PQIEVTFEIDANGIVSVSADKNTNEEKTITISNSGNLSEAEVERMIKAEQENAANDEVKKNIELKNKAENYINIIENSLLQAGDK-----ISAEQ  
 PQIEITFSLDANGILNVAKDLTTQKENSITISDNGLSKEEIQKMRDAEANKERDNVIRELIERLNEGESIVSTIKEILQSPEAK-----DFPKEE  
 PQIEVTFDDIDANGILHVSADKDKGTGKAANITIQGSSGLSEEEIERMVKDAEANAEDKKTTELVSARNQAEALIHVSVKKSLADYGDK-----LDAAE  
 PQIEVTFDDIDANGILHVSADKDKGTGKAANITIQGSSGLSEEEIERMVKDAEANAEDKKTTELVSARNQAEALIHVSVKKSLADYGDK-----LDAAE  
 PQIEVTFDDIDANGILHVSADKATGKQQSIVIKASSGLSEDEIQQMVRDAEANAEDRKFEEELAAARNQGDALVHATRKMI TEAGDK-----ATAED  
 PQIEVTFDDIDANGIVSVSADKDKGTGKSQNIITIQASGGLSDEEIEKMRVDAEANAADKRRRELVEETKNQGESLLHSTRKSLIEHGDK-----VDPST  
 PQIEVKFDIDQNGILSVSAKELKLTGKEANVEIKDSGALSDDIEIQMQKDAEANAEDKRFQELVEARNKVNQVYQLEKLMGENDDK-----LSDDD  
 PQIEVTFDDIDANGIVNVSADKATGKEQAIQIRIQASGGLSDNDIERMVKDAELNAAEDRKRKEAVEARNHADGLIHATEKNLKEYGDK-----IPAED  
 PQIEVTFDDIDANGIVHVSADKASGKEQKVTIQASGGLSDAEIEQMVKDAEANAEDKRRKELIETKNAADS LVYSTEKTLREYGDK-----LSSEE  
 PQIEVTFDINADGILNVAEDKDTGKEQSIQIRVEANSGLSDEEIEKMKEEAEQHAEEEDRKRERADTINEANSMAYSVEQGLEEYGDK-----IPEDK  
 PQIEVTFDDIDADGILHVSADKDKNSGKEQKITIKASSGLNEEIEQKMRVDAEANAESDRKFEEELVQTRNQGDLHLHSTRKQVEEAGDK-----LPADD  
 PQIEVTFDDIDADGILHVSATDKKTKGKQNIITIKASSGLSEEEVQKMRVDAEAAHEEDKRFEEELVQSRNQADGLVHATKKQVEEAGDA-----LPSED  
 PQIEVTFDDIDADGILHVSADKDKNSGKEQKITIKASSGLNEDEIQKMRVDAEANAADKRFEEELVQTRNQGDLHLHSTRKQVEEAGDK-----LPADD  
 PQIEVTFDDIDKNGIVNVTAKDLGTNKEQRITIQSSSSLSDEEIDRMVDAEVNAEADKRRREEVDLRNEADSLVFQVEKTLTDLGEN-----IGEED  
 PQIEVTFDDIDKNGIVSVKAKDLGTQKEQTVIQSNGSLTDEEIDRMKDAEANAADKRRKEEVDLRNEVDQAI FATEKTIKETEKG-----GFDAE  
 PQIEVAFDDIDANGIMHVTAKDLGTGKEQKMTVTGGSSGLPKDEVDRMRQEAKEYAEDLGTREAEVSRNQGEQLVYQTEKFLNENKNDK-----VPGEV  
 PQIEVTFDDIDANGILNVTAKDRGTGKEQSIQITGASTLPDTEVDRMVKEAESNAADKRREREKIDRNQADS LVYQAEKQITELGDK-----VPAAD  
 PQIEVTFDDIDANGILHVSADKDLATGKEQSIQIRITASSGLSEEEIKKMIREAEAAHEEDRKRKQIAEARNEADNMIYTVKTLRDMGDR-----ISEDE  
 PQIEVTFDDIDSGIVHVSADKLGSGKEQSMVVTGRHKLSEDEIKRMIEDAKRYEEQDKRLKEEIELKNRADDLAYSVEKTLKEHGDK-----IPADL  
 PQIEVCFDDIDANGILHVTAKERSTGREASITIQNTTTLSEEEIQRIIEEAKRHAEEEDRRRREHAEKLNALDSARVQAEERVLQERQGA-----PE-A  
 PQIEVIFDLDADGILHVSADKDKTGTGKEQKITIQASGGLSDAEIEKMQVDAEANKAEADKRFEEELATARNQADQMIHATRKQITEAGEA-----LPADE  
 PQVEVFSFDIDANGILHVSADKDKTNEKQKVEIKAGSGLSDEEIQRMVDAEANAEDKRFQELVQTRNQADGLIHATRTAITTEHGSK-----VGGDV  
 AQIEVTFDDIDADGILHVSADKDKNTGREQKITIKASSGLNEEIEQKMRVDAEANAADKRFEEELVQTRNQADHLLHSTRKQLEEAGDK-----LPAED





Acinetobacter\_baumannii  
 Agrobacterium\_tumefaciens  
 Aquifex\_aeolicus  
 Bacillus\_anthraxis  
 Bacillus\_cereus  
 Bacillus\_subtilis  
 Bacteroides\_thetaiotaomicron  
 Bifidobacterium\_longum  
 Bordetella\_pertussis  
 Borrelia\_burgdorferi  
 Bradyrhizobium\_japonicum  
 Buchnera\_aphidicola  
 Burkholderia\_pseudomallei  
 Campylobacter\_jejuni  
 Caulobacter\_crescentus  
 Chlamydia\_trachomatis  
 Chlorobium\_tepidum  
 Clostridium\_acetobutylicum  
 Clostridium\_botulinum  
 Corynebacterium\_glutamicum  
 Coxiella\_burnetii  
 Deinococcus\_radiodurans  
 Desulfovibrio\_vulgaris  
 Dictyoglomus\_turgidum  
 Enterococcus\_faecalis  
 Escherichia\_coli  
 Flavobacterium\_psychrophilum  
 Francisella\_tularensis  
 Fusobacterium\_nucleatum  
 Geobacter\_sulfurreducens  
 Gloebacter\_violaceus  
 Haemophilus\_influenzae  
 Helicobacter\_pylori  
 Koribacter\_versatilis  
 Lactobacillus\_plantarum  
 Lactococcus\_lactis  
 Leptospira\_interrogans  
 Listeria\_monocytogenes  
 Mesoplasma\_florum  
 Moorella\_thermoacetica  
 Mycobacterium\_smegmatis  
 Mycobacterium\_tuberculosis  
 Mycoplasma\_mycoides  
 Mycoplasma\_pneumoniae  
 Neisseria\_gonorrhoeae  
 Neisseria\_meningitidis  
 Pseudomonas\_aeruginosa  
 Rhodobacter\_sphaeroides  
 Rhodopirellula\_baltica  
 Rhodospirillum\_rubrum  
 Rickettsia\_prowazekii  
 Salinibacter\_ruber  
 Salmonella\_typhimurium  
 Shewanella\_oneidensis  
 Shigella\_dysenteriae  
 Staphylococcus\_aureus  
 Streptococcus\_pneumoniae  
 Streptomyces\_coelicolor  
 Synechocystis\_sp.  
 Thermodesulfovibrio\_yellowstonii  
 Thermotoga\_maritima  
 Thermus\_thermophilus  
 Vibrio\_cholerae  
 Xanthomonas\_campestris  
 Yersinia\_pestis

KTAVNTAVSELEAATKE---N--DVEAIKAKTEALQNIIMPITQRAYEQAAQGGGAEGF---DPN-----AFQGGDAGQQKADD  
 RKAIEDIAIASLKTAVEA--AEP--DADDIQAKTQTLMEVSMKLGQAIYEAAQAEAGDASA-----EGKD  
 KSEAEKVIEEAKKTIIETAT-----EIEQVKQVTEKVLQVS--SKMGT---TLYGEA--GK-----QAGGGEKKD  
 VAKATEAKEALQAAIEK---N--ELEEIRAKKDALQEIVQQLTVKLYEQAAAAGQAE--AEGA-----QDAGAKKD  
 VAKATEAKEALQAAIEK---N--ELEEIRAKKDALQEIVQQLTVKLYEQAAAAGQAE--AQGA-----QDAGAKKD  
 VKKANDAKDALKAAIEK---N--EFEEIKAKKDELQTIIVQELSMKLYEBAKAQQA-----QGGA-----NAEGKADD  
 KAPIEAAALQKLG---DAHKSQ--DLAAIDTAMAEINTVFQTSASEMYAQQGAQGG--AQA-----GPDMDAGQNAAGQD-----NSKHGD  
 VKEVTDKVNALKEALKG---D--DTEKVKTAQTELMTAAQKIGQVLYAQQGAEGAAAGAD-----G-----AGASA--GSASGSDD  
 KESIEAAIKDLEDILKT---G--DKAEIDAKVEALSTASQKLGEKMYADMQAQQQAQQQA-----ADNAKPVDD  
 KEAIESKIKELKESLEK---E--DISLIKSRTEELQKASYKIAEMMYKDSQQNANSQQEN--G-----PQSNTSE  
 RRAIEDAVSDLKEALKG---D--DAEAIKAKTQTLAQASMKLGEAMYKQA--EADAKKD---AAK  
 KKDIQLALNKLENALKG---E--DKSDIEKNIQNLKISSKLTETINQKSEKQDK-----DNNMSANKKDE  
 KEKIEAALKELEDVLKN---ASS--DKAAIDAKVEAVTASQKLGEKMYADMQAQQGAAGAA--GAA-----AEGASAQGGQAPAD  
 KENIQKALDDLRETLKN--QNA--SKEEIESKMKALSEVSHKLAENMYKKDEPNTA-----NDKKKKDD  
 KTAIETGITELKTALEG---E--DVEAIQAKTQALIQASMKLGEAMYAAQQGSAAEGGD-----AKADD  
 VKEIEEHIKVRQAIKE--D-A--STTAIKKASDELSTHMOKIGEAMQAQSSAAASSAANAQGGPNINSEDLK-----KHSFSTRPPAGGSASSTD  
 KAAIESALEKLG---EAHKSQ--RVDAIKPAMDELSKVVSDAASNLYGQPGAEPQ--PET-----N-----GHAG-----GSKGGD  
 KSNIEAKKEALSKVKDG---D--DIEAIKKAATEDLTQALYAITTKMYEQSGAQGAP--GADP-----NAGASQKTNGGADD  
 KAQIEEKVAVKDVKDG---E--DLEAIKKAATEDLTQTFYIGISSKIYQANPEGAQ--GAGFD--PNN-----MGGA-----NAGNASAGNDKKDD  
 KAKVEEAAKGVVEALKG---E--DLEAIKAAVEKLNTESEQEMGKAIYEADAAAGATQA-----DAGAEGAADD  
 KSAIEKAVNELKEAMKG---N--DKDAIEAKTKALTEHSSKLAERVYAKKGAAGAPP--GE-----AEGEPQAQAGGKKE  
 KDRLKAAADEAEEAVRSE-----DDSKIADAQKKLEELRFSMTANQASTQGPPE--GT-----QAQANKADD  
 KADIETKVTALRGLLES---E--DVDAIKKASDELAQASHKLAEQLYKQQAQAGGPEGAQ--PEG-----DAGARKQDD  
 VQKVEDKIKNLEELIKP---ERINVEQVRKGMELTQTLGELIGQFMYQSAGSTAGNPGQGGQ--TEN-----PGG  
 VKKAEDARDELKAAIEA---N--DIEQMKAKRDSLNEIVQNLTVKLYEQAAQQAQENP-----EAAQGGAD  
 KTAIESALTALETALKG---E--DKAAIEAKMQELAQVVSQKLMEIAQQQHAQQQT-----AG--ADASANNKDD  
 KTAIEYALTELR---MAHQSQ--DLEAIQKGLDNVNAAWKTATEAMYAQGEQGGQ--A-----QPQ-----AETQGD  
 KEKIEEACKLEAATKG---D--DKQAIESKTKALEEAFAPIAQKAYAEQAQAAVAQ-----GGAKEEPPKKEE  
 KKNIEAAIEELKVKDG---D--DKSAIDSAAMEKLSQASHKFAEELYKEVQAQQA--QQ-----QAGA-----NAGSDKKDEDVAEA  
 KAKIEECLANLRKAMEG---S--DVEVLKKADELTAQASHKLAEEVYAKAQAEGAQPGG---EA-----AGEASAKDE  
 KSKIEGLIKDLREALSR---E--DMDKVASLKADLQAVYDLSSKLYQSSAPSGAAAGP-----DEGA-----PSGSGTSGTRGGD  
 KEKIEAAVAELETAAG---E--DKAEIEAKIEAVIKASEPLMQAVQAKAQAGG---EOPFQQSSAKDD  
 ANEQNAINALKDCVKN---DNA--TKAELEDKTKLLAQAAQKLGEAMANKN---NA-----EQPKKKDD  
 RGDVENALADSKKALET---N--DAKQMNAAERLTAASHKLAEEVYAKAQAAGAPGAP--GPEAA-----GGAQQAQAEPPKDE  
 VKKAKDARDALKKAQDD---N--NIDEMKAKKDDLNKIVQDLSVKLYQQAQEAQGAQGG-----ADSN-----AAGN--ANSAGSDD  
 VKKAAEEAKEELKKALEG---E--DIDDIKAKSEALSEIAQNLAVKLYEQANAAQGEAGQ-----ATDA-----Q--EAPKDD  
 KQLATDEIKRAREAIES---N--DKARIESAKASISKIATDIASKVYSQSPAGAEQAAAGG--PNG--S-----AGSNDQGNSTNNGE  
 VKKAAEARDELQELKLG---E--DFDAIKEKTESLNEIVQNLVSVKLYEQAAAEQAAAGG---AEGQ-----E--APQND  
 KEQAEKMAEVKELIEK---E--DYEALETKVNELQMIQMASQFAQAQTAQPEEGNSD--S--EEN-----K-----  
 VDRIEKAKKELQEVLDSD---K--NNDKIKEKMEALSQALYTLTTKVYQQAQAGA-----QGQGAAGGQKQDG  
 LAKVDSAIADAKKALEG---T--DISAIKSAMEKLGVESQALGQAIYEATQAEQPPAGGSD-----NGAPG--DD  
 LNKVDAVAEAKAALGG---S--DISAIKSAMEKLGQESQALGQAIYEAQAASQATGAA-----H-----PGGPEGGAHPGSAD  
 KEQSQKMVDEIKELVKN---E--NYEALQKMAELEQAMAQAAEFANKQNESDPNNSS--E--QNN-----  
 KEKLDKITGGIDAAIKA---N--DYTKLKAETENFKKWRREEMAKK--YNPNDGQGGPAQ-----  
 KEKIEAALKEAEEAVKG---D--DKTAIDAKAEALGTASQKLGEMVYAQAQAEQA-----GEGAQANASAKKDD  
 KEKIEAALKEAEEAVKG---D--DKAAIDAKTEALGAASQKLGEMVYAQAQAEQA-----GESEQANASAKKDD  
 KATIEKALGELEAVKG---D--DKAEIEAKMNALSQASTPLAQKMYAEQAQGE-----DAPQGEQAKAAD  
 VEAIELAMGALBEALKS---E--DAGKIKGGIQLNTEAMRLGEAIYKASQAEGGATPD--E-----EGPRSVDD  
 KAPMNAIEKVKKAAEG---D--DLAEIKKASDELEAASQAFSKVLYEKTDAAAGEAGD-----A-----AGAAGATAGGGDD  
 KAKVEGLDTALKAVLDS---E--DAESIKAKTDALMQSAMKLGAAAYSAGQSAEGAPHA--A--GAE-----ASAQSRDDD  
 KGTVEEALTSLKAALS---E--DASLIKEKTGNLTANMKIGEAMYKTQTNQHS-----EANTVNE  
 RSTLQEALDALNEELETASADE--DITALEDALEELNAAWSAAGEEIREAQQQQAQGAAGAGA--GAAGAGAAAGAEGPAGGPTGGPASNGAADSDEE  
 KTAIESALNALETALKG---E--DKAAIEAKMQELAQVVSQKLMEIAQQQHAQQQA-----GS--ADASANNKDD  
 KAKIEAAMSAVETAVKG---N--DKEAIEKATQALIEASAKLMEIAQAKAQTTGG-----AQEGAQKSNATAD  
 KTAIESALTALETALKG---E--DKAAIEAKMQELAQVVSQKLMEIAQQQHAQQQT-----AG--ADASANNKDD  
 KKSAAEKKDALKTALEG---Q--DIEDIKSKKEELEKVIQELSAKVYEQAQQQQQAQ--A-----NAGQNNDS  
 RDAAQAALDDLKKAQED---N--NLDDMKAKLEALNEKAQGLAVKLYEQAAAQQAQEG---AEGA-----QATGNAGD  
 KTEVESAVAELEKELKLG---E--DTAEIRTAQEKVAVVSQKLGQAMYADAQAAQAGG--E-----A-----PGDAGAEGKGAADD  
 KIKAEGLIKDLKEAVAQ---E--DDAKIQTVMPQLQVLYSISGNMYQQAQAEAGVGA--GAGP-----EAG-----TSSGGGD  
 RKRIEAAIEKCRRIK--D--TSN--DVNEIKAAVEELAKASHRVAEELYKKGASQGGAG---STTQSKKEE  
 KSRLEDMIRELRDAINR---N--DIPKVKMLFDDLQKESMKIGEYLYKSATGGGETSNQ-----QAASGKGPD  
 RARLEAAIGKAKELVERDA---PDPELKAATEELL-----KAVEEYK--GA-----G--ANAGQSSAKED  
 KAKIETAINLELTAKKG---E--DKAEIDAKVQALMAAAQKLMEIAQQQAQ--A-----DAASGNAQASKAAD  
 IGKVEAALADLETAMKG---D--DKAQIEARSKTLEEAGQSLYAAAAAEEQGN-----A-----G--DAGDTSAKKED  
 KTAIEEAMKGLEAALKG---E--DKAEIEAKTQALVQVSGKLEMAQQQQAAG--G-----G--DAGDTSAKKED



Acinetobacter_baumannii	GV--VDAEFTEVKDDKK---
Agrobacterium_tumefaciens	DV--VDADYEEKDDKSA-
Aquifex_aeolicus	EGGEGEVEAKPVD-----
Bacillus_anthraxis	NV--VDAEFEEVKEDK----
Bacillus_cereus	NV--VDAEFEEVKEDK----
Bacillus_subtilis	NV--VDAEYEEVNDDQNK-
Bacteroides_thetaiotaomicron	NV--QDAEFEEVK-----
Bifidobacterium_longum	DT--VEAEVVDVDDDDKDNK-
Bordetella_pertussis	NV--VDADFKEVKRDQ----
Borrelia_burgdorferi	EG--KEADYEVVDEDDK---
Bradyrhizobium_japonicum	DV--VDAEFTEVDDDKNNKK
Buchnera_aphidicola	NV--VDAEFEEIKDPKK----
Burkholderia_pseudomallei	DV--VDADFKEVKKD-----
Campylobacter_jejuni	DV--IDAEVE-----
Caulobacter_crescentus	GV--VDAEFEEVDDNKPAA-
Chlamydia_trachomatis	NI--EDADVEIVDKPE----
Chlorobium_tepidum	GA--VNAEYEVIDGDDK---
Clostridium_acetobutylicum	NV--VDADFKVDNDK-----
Clostridium_botulinum	NV--VDADFKVEDDK-----
Corynebacterium_glutamicum	NV--VDAEVVEDDAADNGED
Coxiella_burnetii	DV--VDAEFEEVKDEKKKDE
Deinococcus_radiodurans	DV--IDADFKPAE-----
Desulfovibrio_vulgaris	DV--VDADYTEVVK-----
Dictyoglomus_turgidum	KT--IDGDYKVN-----
Enterococcus_faecalis	DV--VDADFEEVNGDDK----
Escherichia_coli	DV--VDAEFEEVKDKK----
Flavobacterium_psychrophilum	DV--QDVEFEEVK-----
Francisella_tularensis	DV--VDADFEDVEDDKK----
Fusobacterium_nucleatum	EV--VD-----
Geobacter_sulfurreducens	KV--VDADFEEVKDDKK----
Gloeobacter_violaceus	DV--IDAEFTEK-----
Haemophilus_influenzae	GV--VDAEFEEVKDNK----
Helicobacter_pylori	DV--IDAEVE-----
Koribacter_versatilis	GV--IDAEYVDVDEKK----
Lactobacillus_plantarum	NT--VDGDFEDLDKDKDKK-
Lactococcus_lactis	NT--FDGDFEESK-----
Leptospira_interrogans	KV--VDADYTVVDDEKK----
Listeria_monocytogenes	DV--VDAEFEEVNDDDKENK
Mesoplasma_florum	-----
Moorella_thermoacetica	NV--YDADYKVVDDDKKE--
Mycobacterium_smegmatis	NV--VDAEVVDDDAGKENK-
Mycobacterium_tuberculosis	DV--VDAEVVDDGREAK----
Mycoplasma_mycoides	-----
Mycoplasma_pneumoniae	-----
Neisseria_gonorrhoeae	DV--VDADFEEVKDDKK----
Neisseria_meningitidis	DV--VDADFEEVKDDKK----
Pseudomonas_aeruginosa	DV--VDAEFEEVKDNK----
Rhodobacter_sphaeroides	DI--VDADFEDLGENKRR--
Rhodopirellula_baltica	DA--IDAEFEVKE-----
Rhodospirillum_rubrum	GV--VDADFEEVDEKKGH--
Rickettsia_prowazekii	KV--VDADFQDVDKK-----
Salinibacter_ruber	DV--QDADYEVVDEGDDE--
Salmonella_typhimurium	DV--VDAEFEEVKDKK----
Shewanella_oneidensis	DV--VDAEFEEVKDDKK----
Shigella_dysenteriae	DV--VDAEFEEVKDKK----
Staphylococcus_aureus	TV--EDAEFKEVKDDDKK--
Streptococcus_pneumoniae	DV--VDGEFTEK-----
Streptomyces_coelicolor	DV--VDAEIVDDERKDGAA-
Synechocystis_sp.	DV--IDAEFSEPEK-----
Thermodesulfovibrio_yellowstonii	DV--IEAEVEDKDNK-----
Thermotoga_maritima	-----
Thermus_thermophilus	DV--IDADYKPAD-----
Vibrio_cholerae	DV--VDAEFEEVNDDKK----
Xanthomonas_campestris	DV--VDAEFTEVKDDKKA--
Yersinia_pestis	DV--VDAEFEEVKDKK----

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