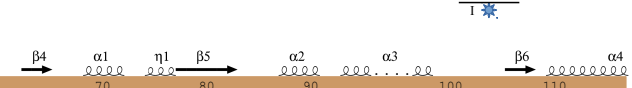
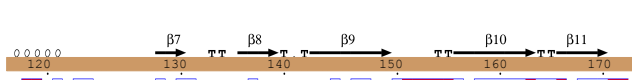


TT 10 20 30 40 50 TT
 1 10 20 30 40 50 60
 S.coelicolor MSHPPELGRPPALPKGGIRTP LGGGCEIGRNNITVFEYGGRLIVDQVLFPEEQFGT
 B.subtilis_J1 MKFVKND.....QAVFALGGGCEIGRNTYAVQFDDEIVLIDAKIFPEDELLEGI
 B.subtilis_J2 MKKKNTE.....NVRHIALGGGCEIGRNLVIEIDSDIFVVDAGLHMPNEMLGI
 T.thermophilus MSHHHHHSQGG.PQDHVEIPLGGGCEIGRNTVFRFRDIEFVLDGGGLAFPEGMFPGV
 D.radiodurans MTNPEQFRPESADLPAPTLEVIPLGGGCEIGRNTVFRVYGDIEVVDGGGLAFPEKAHQMGV

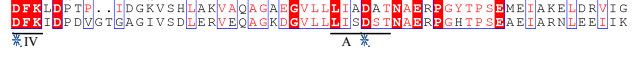


beta4 alpha1 eta1 beta5 alpha2 alpha3 beta6 alpha4
 70 80 90 100 110
 S.coelicolor DHIIPDFTSIRDRLDDEIGVLTTHGHBDHIGGVPE...LLREKPDTPFISGRLLTALIE
 B.subtilis_J1 DVIYDPDYTYLVKNEEDKIKGLFTHGHBDHIGGVPE...LLRQVNIIFYVGGRLAIGLLR
 B.subtilis_J2 DVIYDPDYSYLIERADRVKAIPLTHGHBDHIGGVPE...LLRKLSDVYVGGRLAIGLLR
 T.thermophilus DILFRVYLIEHRKIKAWVLTTHGHBDHIGGVPE...LLFMIFGKESDVFLLGLDR
 D.radiodurans DVIYPRIDVYLLSHQDKIKGWLTHGHBDHIGGVPE...IFARLPRVYVYGLLALVLR



00000 beta7 beta8 beta9 beta10 beta11
 120 130 140 150 160 170
 S.coelicolor AKLQHRIRF...YTLVVAEGHRERVGF.PFDCEVAVNHSTPDAALAVAIRPACMVVHTG
 B.subtilis_J1 NKLDEHGLLR.QTKNIIIGEDDVKFR.KTAVSFRHTSTPDSYGVVKKPFPNIVHTG
 B.subtilis_J2 RKLKQYGHNR.KTDLRRIHKSIVTFE.STKVSFRHTSTPDSYGVVSKTSLGIVHTG
 T.thermophilus CKLRFELRFGAFNLKEISPDRIQVGRYFTLDFRMTSTPDSYGVVIRIHTIVHTG
 D.radiodurans HKLSEFLQD.VDLEVVTYGDEVRFGQSFVVEFCMTHSTPDAAYILKTEVGVVHTG

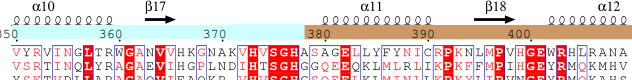
alpha5 beta12 alpha6
 180 190 200 210 220 230
 S.coelicolor DFKMDQLP...LDGRITDHAFAFLSEEGDITLADSTNAEVPGFVFPARDISNVLRQVFA
 B.subtilis_J1 DFKMDQPT...VGEFANLTKMAETGKRGVLCLESDNSNPEFTMSERRVGEIHDIFR
 B.subtilis_J2 DFKMDQPT...ALNQTCDIGETAKIIGSDNSNPEFTMSERRVGEISDALLY
 T.thermophilus DFKMDQPT...FDGKVSHEAKVLAQAGAEGLLADANAEVRFHAKELDRVIG
 D.radiodurans DFKMDPVDVIGAGIVSDLERVEQAGKGVLLISDSTNAEVPHTPSEAEIARNLEDEIK



beta13 alpha7 beta14 alpha8 TT
 240 250 260 270 280 290
 S.coelicolor NARRKTIIVAFASHVHRHQIILDAHEYGRVAVFCRSMVNRNMTIARDQVYLVKPPGLVY
 B.subtilis_J1 KVDGRIFIAVAFASNIHRHQVIEAAVQNGRKYAVFCRSMESALIEIGQTCYINCPKNTFI
 B.subtilis_J2 NSQNRVIAVAFASNIHRHQVIEAAVQNGRKYAVFCRSMESALIEIGQTCYIEADDELFI
 T.thermophilus RAPGRVFTVAFASHVHRHQVIEAAVQNGRKYAVFCRSMELKFSRIALDGLKVKD.RLY
 D.radiodurans GCRGRVFTVAFASHVHRHQVIEAAVQNGRKYAVFCRSMIKYQAQAQATGMLNPFPEFI

eta2 eta3 beta15 alpha9 beta16
 300 310 320 330 340
 S.coelicolor DVKTLDDLPDSBVLVCTGSGQEPMAALRRANRDH.QIRIVNGDVTILASLTPGNENA
 B.subtilis_J1 EHNIEINRMPANKVTLCTGSGQEPMAALRRANRDH.QIRIVNGDVTILASLTPGNENI
 B.subtilis_J2 SVQVVKRKRFRVIAVAFASNIHRHQVIEAAVQNGRKYAVFCRSMELKFSRIALDGLKVKD
 T.thermophilus TLEEVKLDLPHQVLLILASGSGQEPMSVLRHAFEGHAKMALKGDVTILASLTPGNENA
 D.radiodurans TSEVYGLLQDQVLFVCTGSGQEPMAVLRRAFGTHARKLILRRGDVTILASLTPGNENA

alpha10 beta17 alpha11 beta18 alpha12
 350 360 370 380 390 400
 S.coelicolor VYRVINGLTRKCANVYHKKNAKVVHSGHSAAGELLYFYNTCRPKNLMPEVHGWRHIDRANA
 B.subtilis_J1 VSRITINOLYRACAEVYHGLPNDHHTSGHGGQEQKLMRLIKPKFMPHGHCEYRMRQKMHV
 B.subtilis_J2 YSKVTVDLARAQVYFAQKR.VHSGHGSQBELKLMINLLPKYVLPVNGEYRMRQKMS
 T.thermophilus VNRVINRLYALGAVYHPPYTYKVVHSGHSAQBELKLLINLTPRFELPWHGEBRHMNFK
 D.radiodurans VNLIVNRLYELGVDVYPPYTYKVVHSGHSAQBELATLNLTPRFELPWHGEBRHMNFK



410 420 430 440 450 460
 S.coelicolor ELGALTVFHDRIVITARDGVVVDIVVEGKAKITGKVAQGVYVVDGLSVGVDVGEPAKDRRI
 B.subtilis_J1 KLAIDCGIPEENCFIMDNEVLLALKGDEAVVAKIPGGSVYDGLSGIGDIGNIHRDRI
 B.subtilis_J2 WLAESMSRPEKTLIGENAVYRITRETFEKVGEVPHVLYVVDGLGVGDITEEIADRHH
 T.thermophilus KLAQTLREPEKRTLIAKNGLVNLGPDEFVSGTVAAGAVYVVDGLGVGDVNDVLDLDRVN
 D.radiodurans

470 480 490 500 510 520
 S.coelicolor LGDRGISVIVVMSSTGKITGGHVVQARGSGTEDSAFAVLPKRVTEALERSAQDGVVEP
 B.subtilis_J1 LSEHGLVIVVSDMDDFKISAGFDLISRGFVYMRSEGLDINDAQELISNHQKVMERKT
 B.subtilis_J2 LSQDGLIVVITLDKQKHLVSGPEITIRGFVYVRESGLIVQATELVRISVTEATETSN
 T.thermophilus MAERGLVVIITALLAGED.....HVVVVSRGFVAGERLLGVRMALEALRNGVREK
 D.radiodurans LSQDGLLITAVLHPT.....HVVVVSARGFAPNRDLELQIRRVVLEAVEQGLREK

530 540 550 560
 S.coelicolor HQMQQL...TRRTDGNVSDTYRNRPMIHPVVVEV
 B.subtilis_J1 TQWSEIKNEITDITLAPFLYEKTKRRPMIHPIMEV
 B.subtilis_J2 VEWSTLQAMRDALNQFLYEKTKRRPMIHPIMEV
 T.thermophilus KPLERINDDIYYPVKKKATGRDPMIHPVVEG
 D.radiodurans KRLEDVDDMYGAVRRFTRKATGRDPMIHPVVEG