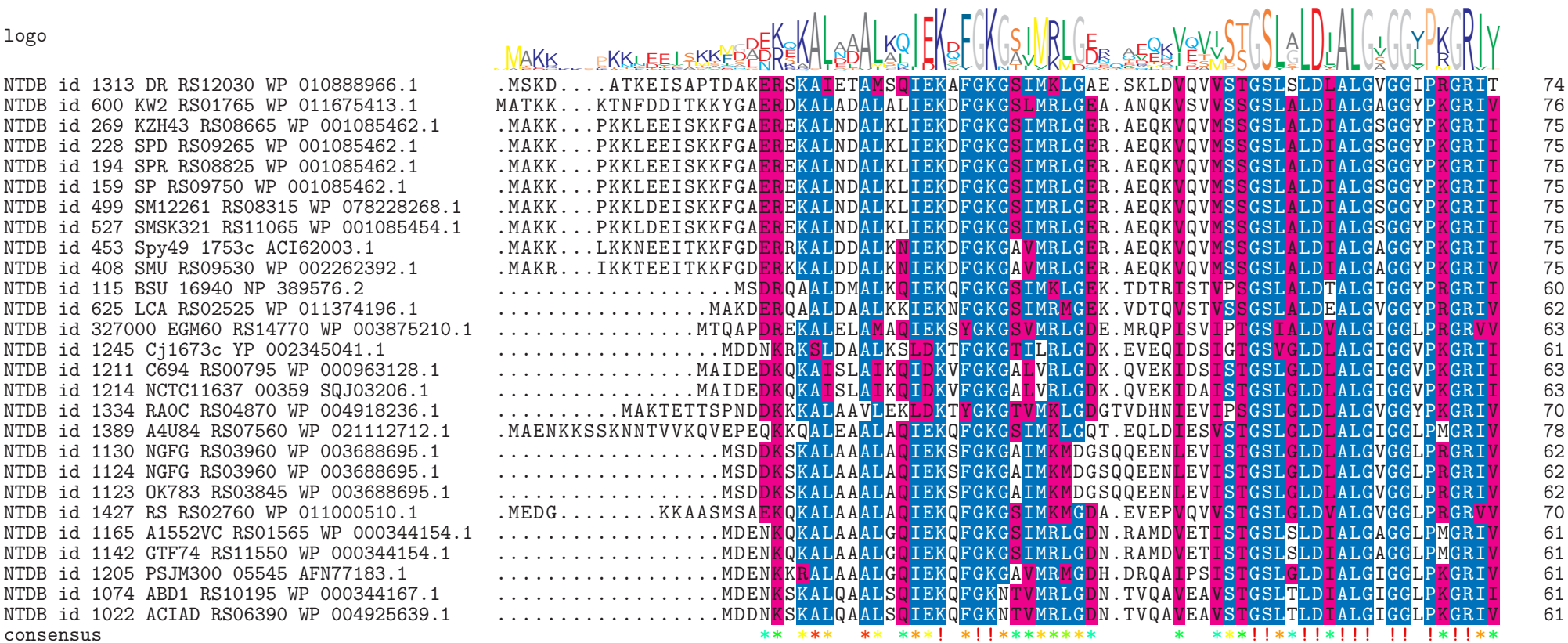
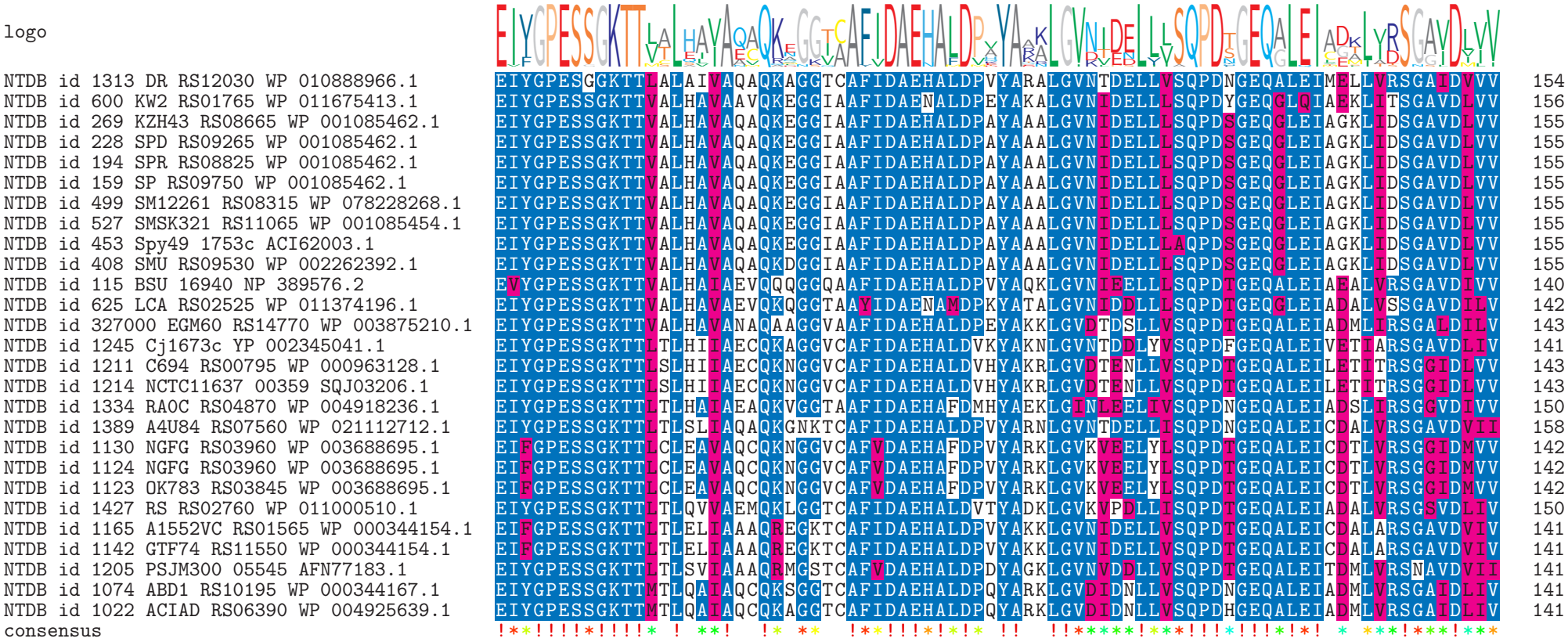
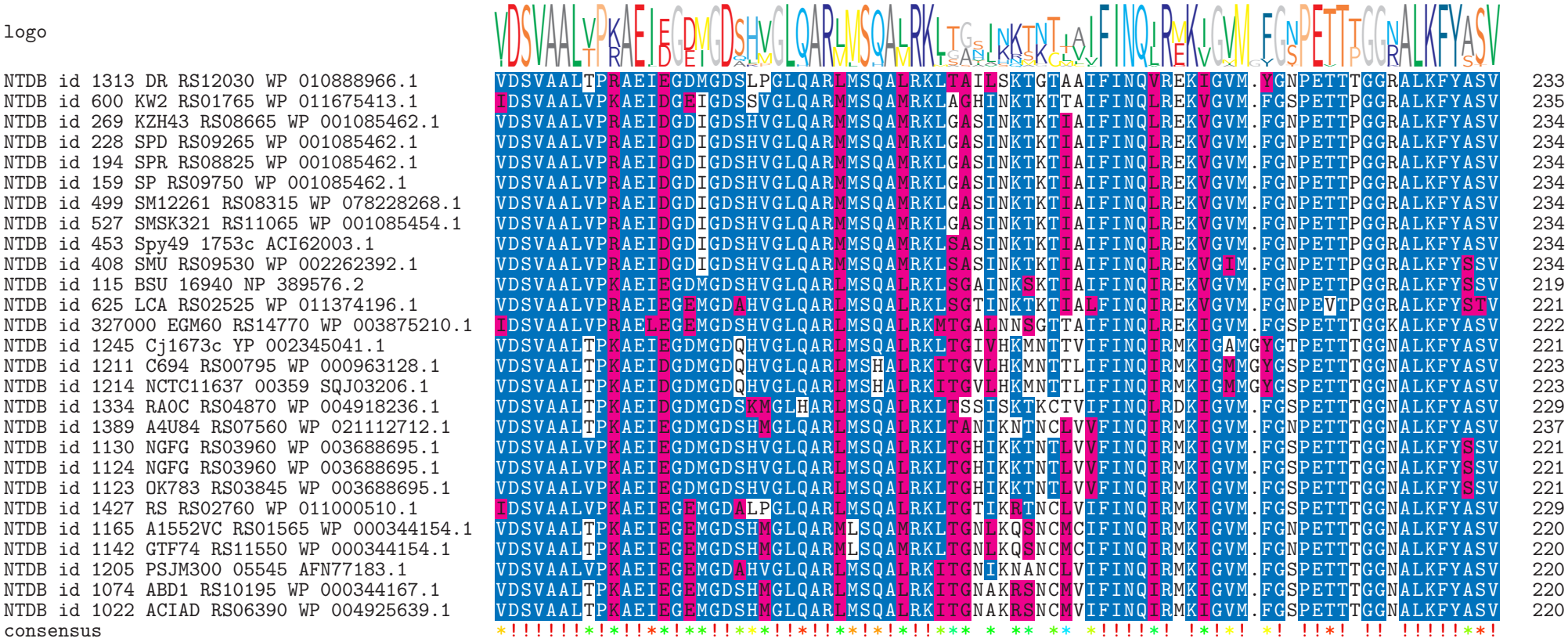
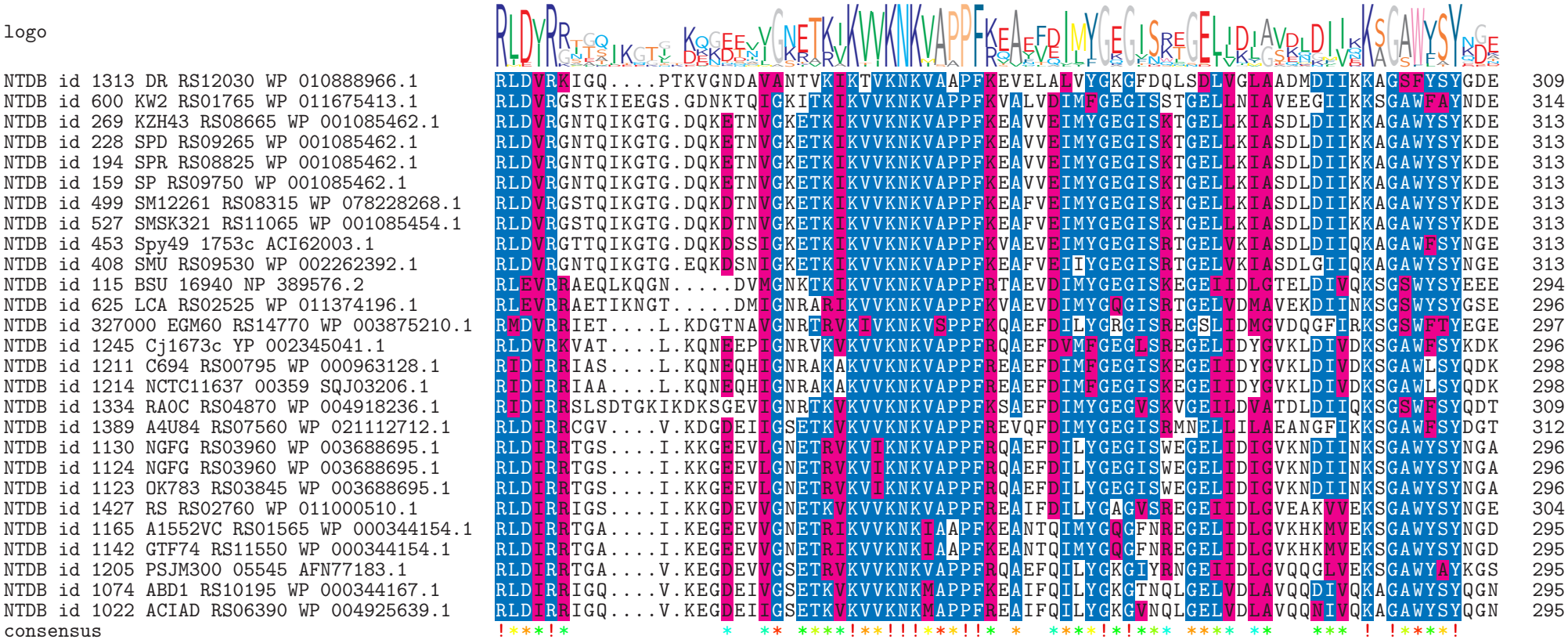

logo
NTDB id 1313 DR RS12030 WP 010888966.1 .MSKD....ATKEISAPTDAKERSKAIETAMSQIEKAFGKGSIMKLGAE.SKLDVQVVSTGSLSLDLALGVGGIPRGRIT 74
NTDB id 600 KW2 RS01765 WP 011675413.1 MATKK...KTNFDDITKKYGAERDKALADALALIEKDFGKGSLMRLGEA.ANQKVSVVSSGSLALDIALGAGGYPKGRIV 76
NTDB id 269 KZH43 RS08665 WP 001085462.1 .MAKK...PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRII 75
NTDB id 228 SPD RS09265 WP 001085462.1 .MAKK...PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRII 75
NTDB id 194 SPR RS08825 WP 001085462.1 .MAKK...PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRII 75
NTDB id 159 SP RS09750 WP 001085462.1 .MAKK...PKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRII 75
NTDB id 499 SM12261 RS08315 WP 078228268.1 .MAKK...PKKLDEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRII 75
NTDB id 527 SMSK321 RS11065 WP 001085454.1 .MAKK...PKKLDEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRII 75
NTDB id 453 Spy49 1753c ACI62003.1 .MAKK...LKKNEEITKKFGDERRKALDDALKNIEKDFGKGAVMRLGER.AEQKVQVMSSGSLALDIALGAGGYPKGRII 75
NTDB id 408 SMU RS09530 WP 002262392.1 .MAKR...IKKTEEITKKFGDERKKALDDALKNIEKDFGKGAVMRLGER.AEQKVQVMSSGSLALDIALGAGGYPKGRIV 75
NTDB id 115 BSU 16940 NP 389576.2 .....MSDRQAALDMALKQIEKQFGKGSIMKLGEK.TDTRISTVPSGSLALDTALGIGGYPRGRII 60
NTDB id 625 LCA RS02525 WP 011374196.1 .....MAKDERQAALDAALKKIEKNFGKGSIMRMGEK.VDTQVSTVSSGSLALDEALGVGGYPRGRIV 62
NTDB id 327000 EGM60 RS14770 WP 003875210.1 .....MTQAPDREKALELAMAQIEKSYGKGSVMRLGDE.MRQPISVIPTGSIALDVALGIGGLPRGRVV 63
NTDB id 1245 Cj1673c YP 002345041.1 .....MDDNKRKSLDAALKSLDKTFGKGTILRLGDK.EVEQIDSIGTGSVGLDLALGIGGVPKGRII 61
NTDB id 1211 C694 RS00795 WP 000963128.1 .....MAIDEDKQKAISLAIKQIDKVFGKGALVRLGDK.QVEKIDSISTGSLGLDLALGIGGVPKGRII 63
NTDB id 1214 NCTC11637 00359 SQJ03206.1 .....MAIDEDKQKAISLAIKQIDKVFGKGALVRLGDK.QVEKIDAISTGSLGLDLALGIGGVPKGRII 63
NTDB id 1334 RAOC RS04870 WP 004918236.1 .....MAKTETTSPNDDKKKALAAVLEKLDKTYGKGTVMKLGDGTVDHNIEVIPSGSLGLDLALGVGGYPKGRIV 70
NTDB id 1389 A4U84 RS07560 WP 021112712.1 .MAENKKSSKNNTVVKQVEPEQKKQALEAALAQIEKQFGKGSIMKLGQT.EQLDIESVSTGSLGLDLALGIGGLPMGRIV 78
NTDB id 1130 NGFG RS03960 WP 003688695.1 .....MSDDKSKALAAALAQIEKSFGKGAIMKMDGSQQEENLEVISTGSLGLDLALGVGGLPRGRIV 62
NTDB id 1124 NGFG RS03960 WP 003688695.1 .....MSDDKSKALAAALAQIEKSFGKGAIMKMDGSQQEENLEVISTGSLGLDLALGVGGLPRGRIV 62
NTDB id 1123 OK783 RS03845 WP 003688695.1 .....MSDDKSKALAAALAQIEKSFGKGAIMKMDGSQQEENLEVISTGSLGLDLALGVGGLPRGRIV 62
NTDB id 1427 RS RS02760 WP 011000510.1 .MEDG.....KKAASMSAEKQKALAAALAQIEKQFGKGSIMKMGDA.EVEPVQVVSTGSLGLDVALGVGGLPRGRVV 70
NTDB id 1165 A1552VC RS01565 WP 000344154.1 .....MDENKQKALAAALGQIEKQFGKGSIMRLGDN.RAMDVETISTGSLSLDIALGAGGLPMGRIV 61
NTDB id 1142 GTF74 RS11550 WP 000344154.1 .....MDENKQKALAAALGQIEKQFGKGSIMRLGDN.RAMDVETISTGSLSLDIALGAGGLPMGRIV 61
NTDB id 1205 PSJM300 05545 AFN77183.1 .....MDENKKRALAAALGQIEKQFGKGAVMRMGDH.DRQAIPSISTGSLGLDIALGIGGLPKGRIV 61
NTDB id 1074 ABD1 RS10195 WP 000344167.1 .....MDENKSKALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGRII 61
NTDB id 1022 ACIAD RS06390 WP 004925639.1 .....MDDNKSKALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGRIV 61
consensus


logo
NTDB id 1313 DR RS12030 WP 010888966.1 EIYGPESGGKTTLALAIVAQAQKAGGTCAFIDAEHALDPVYARALGVNTDELLVSQPDNGEQALEIMELLVRSGAIDVVV 154
NTDB id 600 KW2 RS01765 WP 011675413.1 EIYGPESSGKTTVALHAVAAVQKEGGIAAFIDAENALDPEYAKALGVNIDELLLSQPDYGEQGLQIAEKLITSGAVDLVV 156
NTDB id 269 KZH43 RS08665 WP 001085462.1 EIYGPESSGKTTVALHAVAQAQKEGGIAAFIDAEHALDPAYAAALGVNIDELLLSQPDSGEQGLEIAGKLIDSGAVDLVV 155
NTDB id 228 SPD RS09265 WP 001085462.1 EIYGPESSGKTTVALHAVAQAQKEGGIAAFIDAEHALDPAYAAALGVNIDELLLSQPDSGEQGLEIAGKLIDSGAVDLVV 155
NTDB id 194 SPR RS08825 WP 001085462.1 EIYGPESSGKTTVALHAVAQAQKEGGIAAFIDAEHALDPAYAAALGVNIDELLLSQPDSGEQGLEIAGKLIDSGAVDLVV 155
NTDB id 159 SP RS09750 WP 001085462.1 EIYGPESSGKTTVALHAVAQAQKEGGIAAFIDAEHALDPAYAAALGVNIDELLLSQPDSGEQGLEIAGKLIDSGAVDLVV 155
NTDB id 499 SM12261 RS08315 WP 078228268.1 EIYGPESSGKTTVALHAVAQAQKEGGIAAFIDAEHALDPAYAAALGVNIDELLLSQPDSGEQGLEIAGKLIDSGAVDLVV 155
NTDB id 527 SMSK321 RS11065 WP 001085454.1 EIYGPESSGKTTVALHAVAQAQKEGGIAAFIDAEHALDPAYAAALGVNIDELLLSQPDSGEQGLEIAGKLIDSGAVDLVV 155
NTDB id 453 Spy49 1753c ACI62003.1 EIYGPESSGKTTVALHAVAQAQKEGGIAAFIDAEHALDPAYAAALGVNIDELLLAQPDSGEQGLEIAGKLIDSGAVDLVV 155
NTDB id 408 SMU RS09530 WP 002262392.1 EIYGPESSGKTTVALHAVAQAQKDGGIAAFIDAEHALDPAYAAALGVNIDELLLSQPDSGEQGLEIAGKLIDSGAVDLVV 155
NTDB id 115 BSU 16940 NP 389576.2 EVYGPESSGKTTVALHAIAEVQQQGGQAAFIDAEHALDPVYAQKLGVNIEELLLSQPDTGEQALEIAEALVRSGAVDIVV 140
NTDB id 625 LCA RS02525 WP 011374196.1 EIYGPESSGKTTVALHAVAEVQKQGGTAAYIDAENAMDPKYATALGVNIDDLLLSQPDTGEQGLEIADALVSSGAVDILV 142
NTDB id 327000 EGM60 RS14770 WP 003875210.1 EIYGPESSGKTTVALHAVANAQAAGGVAAFIDAEHALDPEYAKKLGVDTDSLLVSQPDTGEQALEIADMLIRSGALDILV 143
NTDB id 1245 Cj1673c YP 002345041.1 EIYGPESSGKTTLTLHIIAECQKAGGVCAFIDAEHALDVKYAKNLGVNTDDLYVSQPDFGEQALEIVETIARSGAVDLIV 141
NTDB id 1211 C694 RS00795 WP 000963128.1 EIYGPESSGKTTLSLHIIAECQKNGGVCAFIDAEHALDVHYAKRLGVDTENLLVSQPDTGEQALEILETITRSGGIDLVV 143
NTDB id 1214 NCTC11637 00359 SQJ03206.1 EIYGPESSGKTTLSLHIIAECQKNGGVCAFIDAEHALDVHYAKRLGVDTENLLVSQPDTGEQALEILETITRSGGIDLVV 143
NTDB id 1334 RAOC RS04870 WP 004918236.1 EIYGPESSGKTTLTLHAIAEAQKVGGTAAFIDAEHAFDMHYAEKLGINLEELIVSQPDNGEQALEIADSLIRSGGVDIVV 150
NTDB id 1389 A4U84 RS07560 WP 021112712.1 EIYGPESSGKTTLTLSLIAQAQKGNKTCAFIDAEHALDPVYARNLGVNTDELLISQPDNGEQALEICDALVRSGAVDVII 158
NTDB id 1130 NGFG RS03960 WP 003688695.1 EIFGPESSGKTTLCLEAVAQCQKNGGVCAFVDAEHAFDPVYARKLGVKVEELYLSQPDTGEQALEICDTLVRSGGIDMVV 142
NTDB id 1124 NGFG RS03960 WP 003688695.1 EIFGPESSGKTTLCLEAVAQCQKNGGVCAFVDAEHAFDPVYARKLGVKVEELYLSQPDTGEQALEICDTLVRSGGIDMVV 142
NTDB id 1123 OK783 RS03845 WP 003688695.1 EIFGPESSGKTTLCLEAVAQCQKNGGVCAFVDAEHAFDPVYARKLGVKVEELYLSQPDTGEQALEICDTLVRSGGIDMVV 142
NTDB id 1427 RS RS02760 WP 011000510.1 EIYGPESSGKTTLTLQVVAEMQKLGGTCAFIDAEHALDVTYADKLGVKVPDLLISQPDTGEQALEIADALVRSGSVDLIV 150
NTDB id 1165 A1552VC RS01565 WP 000344154.1 EIFGPESSGKTTLTLELIAAAQREGKTCAFIDAEHALDPVYAKKLGVNIDELLVSQPDTGEQALEICDALARSGAVDVIV 141
NTDB id 1142 GTF74 RS11550 WP 000344154.1 EIFGPESSGKTTLTLELIAAAQREGKTCAFIDAEHALDPVYAKKLGVNIDELLVSQPDTGEQALEICDALARSGAVDVIV 141
NTDB id 1205 PSJM300 05545 AFN77183.1 EIYGPESSGKTTLTLSVIAAAQRMGSTCAFVDAEHALDPDYAGKLGVNVDDLLVSQPDTGEQALEITDMLVRSNAVDVII 141
NTDB id 1074 ABD1 RS10195 WP 000344167.1 EIYGPESSGKTTMTLQAIAQCQKSGGTCAFIDAEHALDPQYARKLGVDIDNLLVSQPDNGEQALEIADMLVRSGAIDLIV 141
NTDB id 1022 ACIAD RS06390 WP 004925639.1 EIYGPESSGKTTMTLQAIAQCQKAGGTCAFIDAEHALDPQYARKLGVDIDNLLVSQPDHGEQALEIADMLVRSGAIDLIV 141
consensus


logo
NTDB id 1313 DR RS12030 WP 010888966.1 VDSVAALTPRAEIEGDMGDSLPGLQARLMSQALRKLTAILSKTGTAAIFINQVREKIGVM.YGNPETTTGGRALKFYASV 233
NTDB id 600 KW2 RS01765 WP 011675413.1 IDSVAALVPKAEIDGEIGDSSVGLQARMMSQAMRKLAGHINKTKTTAIFINQLREKVGVM.FGSPETTPGGRALKFYASV 235
NTDB id 269 KZH43 RS08665 WP 001085462.1 VDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTIAIFINQLREKVGVM.FGNPETTPGGRALKFYASV 234
NTDB id 228 SPD RS09265 WP 001085462.1 VDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTIAIFINQLREKVGVM.FGNPETTPGGRALKFYASV 234
NTDB id 194 SPR RS08825 WP 001085462.1 VDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTIAIFINQLREKVGVM.FGNPETTPGGRALKFYASV 234
NTDB id 159 SP RS09750 WP 001085462.1 VDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTIAIFINQLREKVGVM.FGNPETTPGGRALKFYASV 234
NTDB id 499 SM12261 RS08315 WP 078228268.1 VDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTIAIFINQLREKVGVM.FGNPETTPGGRALKFYASV 234
NTDB id 527 SMSK321 RS11065 WP 001085454.1 VDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTIAIFINQLREKVGVM.FGNPETTPGGRALKFYASV 234
NTDB id 453 Spy49 1753c ACI62003.1 VDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLSASINKTKTIAIFINQLREKVGVM.FGNPETTPGGRALKFYASV 234
NTDB id 408 SMU RS09530 WP 002262392.1 VDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLSASINKTKTIAIFINQLREKVGIM.FGNPETTPGGRALKFYSSV 234
NTDB id 115 BSU 16940 NP 389576.2 VDSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLSGAINKSKTIAIFINQIREKVGVM.FGNPETTPGGRALKFYSSV 219
NTDB id 625 LCA RS02525 WP 011374196.1 VDSVAALVPRAEIEGEMGDAHVGLQARLMSQALRKLSGTINKTKTIALFINQIREKVGVM.FGNPEVTPGGRALKFYSTV 221
NTDB id 327000 EGM60 RS14770 WP 003875210.1 IDSVAALVPRAELEGEMGDSHVGLQARLMSQALRKMTGALNNSGTTAIFINQLREKIGVM.FGSPETTTGGKALKFYASV 222
NTDB id 1245 Cj1673c YP 002345041.1 VDSVAALTPKAEIEGDMGDQHVGLQARLMSQALRKLTGIVHKMNTTVIFINQIRMKIGAMGYGTPETTTGGNALKFYASV 221
NTDB id 1211 C694 RS00795 WP 000963128.1 VDSVAALTPKAEIDGDMGDQHVGLQARLMSHALRKITGVLHKMNTTLIFINQIRMKIGMMGYGSPETTTGGNALKFYASV 223
NTDB id 1214 NCTC11637 00359 SQJ03206.1 VDSVAALTPKAEIDGDMGDQHVGLQARLMSHALRKITGVLHKMNTTLIFINQIRMKIGMMGYGSPETTTGGNALKFYASV 223
NTDB id 1334 RA0C RS04870 WP 004918236.1 VDSVAALTPKAEIDGDMGDSKMGLHARLMSQALRKLTSSISKTKCTVIFINQLRDKIGVM.FGSPETTTGGNALKFYASV 229
NTDB id 1389 A4U84 RS07560 WP 021112712.1 VDSVAALTPKAEIEGDMGDSHMGLQARLMSQALRKLTANIKNTNCLVVFINQIRMKIGVM.FGNPETTTGGNALKFYASV 237
NTDB id 1130 NGFG RS03960 WP 003688695.1 VDSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLTGHIKKTNTLVVFINQIRMKIGVM.FGSPETTTGGNALKFYSSV 221
NTDB id 1124 NGFG RS03960 WP 003688695.1 VDSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLTGHIKKTNTLVVFINQIRMKIGVM.FGSPETTTGGNALKFYSSV 221
NTDB id 1123 OK783 RS03845 WP 003688695.1 VDSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLTGHIKKTNTLVVFINQIRMKIGVM.FGSPETTTGGNALKFYSSV 221
NTDB id 1427 RS RS02760 WP 011000510.1 IDSVAALVPKAEIEGEMGDALPGLQARLMSQALRKLTGTIKRTNCLVIFINQIRMKIGVM.FGSPETTTGGNALKFYASV 229
NTDB id 1165 A1552VC RS01565 WP 000344154.1 VDSVAALTPKAEIEGEMGDSHMGLQARMLSQAMRKLTGNLKQSNCMCIFINQIRMKIGVM.FGNPETTTGGNALKFYASV 220
NTDB id 1142 GTF74 RS11550 WP 000344154.1 VDSVAALTPKAEIEGEMGDSHMGLQARMLSQAMRKLTGNLKQSNCMCIFINQIRMKIGVM.FGNPETTTGGNALKFYASV 220
NTDB id 1205 PSJM300 05545 AFN77183.1 VDSVAALVPKAEIEGEMGDAHVGLQARLMSQALRKTTGNIKNANCLVIFINQIRMKIGVM.FGSPETTTGGNALKFYASV 220
NTDB id 1074 ABD1 RS10195 WP 000344167.1 VDSVAALTPKAEIEGEMGDSHMGLQARLMSQALRKITGNAKRSNCMVIFINQIRMKIGVM.FGSPETTTGGNALKFYASV 220
NTDB id 1022 ACIAD RS06390 WP 004925639.1 VDSVAALTPKAEIEGEMGDSHMGLQARLMSQALRKITGNAKRSNCMVIFINQIRMKIGVM.FGSPETTTGGNALKFYASV 220
consensus *!!!!!!*!*!!**!**!!***!!*!!**!*!*!!*** * ** ** *!!!!*! !*!*! *! !!*! !! !!!!!**!


logo
NTDB id 1313 DR RS12030 WP 010888966.1 RLDVRKIGQ....PTKVGNDAVANTVKIKTVKNKVAAPFKEVELALVYGKGFDQLSDLVGLAADMDIIKKAGSFYSYGDE 309
NTDB id 600 KW2 RS01765 WP 011675413.1 RLDVRGSTKIEEGS.GDNKTQIGKITKIKVVKNKVAPPFKVALVDIMFGEGISSTGELLNIAVEEGIIKKSGAWFAYNDE 314
NTDB id 269 KZH43 RS08665 WP 001085462.1 RLDVRGNTQIKGTG.DQKETNVGKETKIKVVKNKVAPPFKEAVVEIMYGEGISKTGELLKIASDLDIIKKAGAWYSYKDE 313
NTDB id 228 SPD RS09265 WP 001085462.1 RLDVRGNTQIKGTG.DQKETNVGKETKIKVVKNKVAPPFKEAVVEIMYGEGISKTGELLKIASDLDIIKKAGAWYSYKDE 313
NTDB id 194 SPR RS08825 WP 001085462.1 RLDVRGNTQIKGTG.DQKETNVGKETKIKVVKNKVAPPFKEAVVEIMYGEGISKTGELLKIASDLDIIKKAGAWYSYKDE 313
NTDB id 159 SP RS09750 WP 001085462.1 RLDVRGNTQIKGTG.DQKETNVGKETKIKVVKNKVAPPFKEAVVEIMYGEGISKTGELLKIASDLDIIKKAGAWYSYKDE 313
NTDB id 499 SM12261 RS08315 WP 078228268.1 RLDVRGSTQIKGTG.DQKDTNVGKETKIKVVKNKVAPPFKEAFVEIMYGEGISKTGELLKIASDLDIIKKAGAWYSYKDE 313
NTDB id 527 SMSK321 RS11065 WP 001085454.1 RLDVRGSTQIKGTG.DQKDTNVGKETKIKVVKNKVAPPFKEAFVEIMYGEGISKTGELLKIASDLDIIKKAGAWYSYKDE 313
NTDB id 453 Spy49 1753c ACI62003.1 RLDVRGTTQIKGTG.DQKDSSIGKETKIKVVKNKVAPPFKVAEVEIMYGEGISRTGELVKIASDLDIIQKAGAWFSYNGE 313
NTDB id 408 SMU RS09530 WP 002262392.1 RLDVRGNTQIKGTG.EQKDSNIGKETKIKVVKNKVAPPFKEAFVEIIYGEGISRTGELVKIASDLGIIQKAGAWYSYNGE 313
NTDB id 115 BSU 16940 NP 389576.2 RLEVRRAEQLKQGN.....DVMGNKTKIKVVKNKVAPPFRTAEVDIMYGEGISKEGEIIDLGTELDIVQKSGSWYSYEEE 294
NTDB id 625 LCA RS02525 WP 011374196.1 RLEVRRAETIKNGT.....DMIGNRARIKVVKNKVAPPFKVAEVDIMYGQGISRTGELVDMAVEKDIINKSGSWYSYGSE 296
NTDB id 327000 EGM60 RS14770 WP 003875210.1 RMDVRRIET....L.KDGTNAVGNRTRVKIVKNKVSPPFKQAEFDILYGRGISREGSLIDMGVDQGFIRKSGSWFTYEGE 297
NTDB id 1245 Cj1673c YP 002345041.1 RLDVRKVAT....L.KQNEEPIGNRVKVKVVKNKVAPPFRQAEFDVMFGEGLSREGELIDYGVKLDIVDKSGAWFSYKDK 296
NTDB id 1211 C694 RS00795 WP 000963128.1 RIDIRRIAS....L.KQNEQHIGNRAKAKVVKNKVAPPFREAEFDIMFGEGISKEGEIIDYGVKLDIVDKSGAWLSYQDK 298
NTDB id 1214 NCTC11637 00359 SQJ03206.1 RIDIRRIAA....L.KQNEQHIGNRAKAKVVKNKVAPPFREAEFDIMFGEGISKEGEIIDYGVKLDIVDKSGAWLSYQDK 298
NTDB id 1334 RA0C RS04870 WP 004918236.1 RIDIRRSLSDTGKIKDKSGEVIGNRTKVKVVKNKVAPPFKSAEFDIMYGEGVSKVGEILDVATDLDIIQKSGSWFSYQDT 309
NTDB id 1389 A4U84 RS07560 WP 021112712.1 RLDIRRCGV....V.KDGDEIIGSETKVKVVKNKVAPPFREVQFDIMYGEGISRMNELLILAEANGFIKKSGAWFSYDGT 312
NTDB id 1130 NGFG RS03960 WP 003688695.1 RLDIRRTGS....I.KKGEEVLGNETRVKVIKNKVAPPFRQAEFDILYGEGISWEGELIDIGVKNDIINKSGAWYSYNGA 296
NTDB id 1124 NGFG RS03960 WP 003688695.1 RLDIRRTGS....I.KKGEEVLGNETRVKVIKNKVAPPFRQAEFDILYGEGISWEGELIDIGVKNDIINKSGAWYSYNGA 296
NTDB id 1123 OK783 RS03845 WP 003688695.1 RLDIRRTGS....I.KKGEEVLGNETRVKVIKNKVAPPFRQAEFDILYGEGISWEGELIDIGVKNDIINKSGAWYSYNGA 296
NTDB id 1427 RS RS02760 WP 011000510.1 RLDIRRIGS....I.KKGDEVVGNETKVKVVKNKVAPPFREAIFDILYGAGVSREGEIIDLGVEAKVVEKSGAWYSYNGE 304
NTDB id 1165 A1552VC RS01565 WP 000344154.1 RLDIRRTGA....I.KEGEEVVGNETRIKVVKNKIAAPFKEANTQIMYGQGFNREGELIDLGVKHKMVEKSGAWYSYNGD 295
NTDB id 1142 GTF74 RS11550 WP 000344154.1 RLDIRRTGA....I.KEGEEVVGNETRIKVVKNKIAAPFKEANTQIMYGQGFNREGELIDLGVKHKMVEKSGAWYSYNGD 295
NTDB id 1205 PSJM300 05545 AFN77183.1 RLDIRRTGA....V.KEGDEVVGSETRVKVVKNKVAPPFRQAEFQILYGKGIYRNGEIIDLGVQQGLVEKSGAWYAYKGS 295
NTDB id 1074 ABD1 RS10195 WP 000344167.1 RLDIRRIGQ....V.KEGDEIVGSETKVKVVKNKMAPPFKEAIFQILYGKGTNQLGELVDLAVQQDIVQKAGAWYSYQGN 295
NTDB id 1022 ACIAD RS06390 WP 004925639.1 RLDIRRIGQ....V.KEGDEIIGSETKVKVVKNKMAPPFREAIFQILYGKGVNQLGELVDLAVQQNIVQKAGAWYSYQGN 295
consensus




```
NTDB id 1313 DR RS12030 WP 010888966.1   RIGQGKEKTIAYIAERPEMEQEIRDRVMAAIRAGNAGEAPALAPAP.......AAPEAAEA.....................   363
NTDB id 600 KW2 RS01765 WP 011675413.1   KIGQGAEKAKNYLKEHQDVFDEIDHKVRAAHGLLDDSEVAETEEETTASKT.KAKAKKEEKAVETEEIELELED.......   387
NTDB id 269 KZH43 RS08665 WP 001085462.1 KIGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE.....PKKEEA..VNEEVPLDLGDELEIEI   386
NTDB id 228 SPD RS09265 WP 001085462.1   KIGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE.....PKKEEA..VNEEVPLDLGDELEIEI   386
NTDB id 194 SPR RS08825 WP 001085462.1   KIGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE.....PKKEEA..VNEEVPLDLGDELEIEI   386
NTDB id 159 SP RS09750 WP 001085462.1    KIGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE.....PKKEEA..VNEEVPLDLGDELEIEI   386
NTDB id 499 SM12261 RS08315 WP 078228268.1 KIGQGSENAKKYLADNPEIFDEIDHQVRVQFGLIDGEEIAES....KKDE.....AAQVDS..VNEEVTLDLGDELEIEI   382
NTDB id 527 SMSK321 RS11065 WP 001085454.1 KIGQGSENAKKYLADNPEVFAEIDHQVRVQFGLIDGEEAAES....KKDE.....VAQVDS..VNEEVTLDLGDELEIEI   382
NTDB id 453 Spy49 1753c ACI62003.1       KIGQGSENAKRYLADHPQLFDEIDRKVRVKFGLLEESEEESAMAVASE........E.......TDDLALDLDNGIEIED   378
NTDB id 408 SMU RS09530 WP 002262392.1   KIGQGSENAKKFLADNPEIFDDIDHKVRVQYGLIEEDNTEEKQSSKEK........ETDEK..ADKNLVLELDDTIELED   383
NTDB id 115 BSU 16940 NP 389576.2        RLGQGRENAKQFLKENKDIMLMIQEQIREHYGLDNNGVVQQQAEETQEEL..EFE.E.....................   348
NTDB id 625 LCA RS02525 WP 011374196.1   RIGQGRENAKNYLADHEDVEDEVRLKVRAAYGISDVPEEDLPTTEDE.QI..NILPDDST.....EE.............   355
NTDB id 327000 EGM60 RS14770 WP 003875210.1 QLGQGKENARTFLMENDEVANEIEKKIKEKLGIGAVVTDDLSDDGVLP......APV........DF.............   350
NTDB id 1245 Cj1673c YP 002345041.1      KLGQGRENSKAFLKENPEIADEITKAIQNSMGIEGMISGSEDDE..GEE.............................   343
NTDB id 1211 C694 RS00795 WP 000963128.1 KLGQGRENAKALLKEDKALADEITLKIKESIGSNEEIMPLPDEP..LEEME.............................   347
NTDB id 1214 NCTC11637 00359 SQJ03206.1  KLGQGRENAKALLKEDKALADEITLKIKESIGSNEEIMPLPDEP..LEEME.............................   347
NTDB id 1334 RAOC RS04870 WP 004918236.1 KLGQGRDTVKELIKDNPELAEELEAKIREKLQAK.....................................................   343
NTDB id 1389 A4U84 RS07560 WP 021112712.1 KIGQGKNNAVKWLKENPEIADKLEQEIRNTLASNPNSVLKATASDSNDESDVEEFSE........EEL.............   372
NTDB id 1130 NGFG RS03960 WP 003688695.1 KIGQGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGTQDET......DGERPE........E.............   348
NTDB id 1124 NGFG RS03960 WP 003688695.1 KIGQGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGTQDET......DGERPE........E.............   348
NTDB id 1123 OK783 RS03845 WP 003688695.1 KIGQGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGTQDET......DGERPE........E.............   348
NTDB id 1427 RS RS02760 WP 011000510.1   RIGQGRDNCREFLRENAELAREIENKVREHLGVTPMGAVTLA.EEVEED.............................   352
NTDB id 1165 A1552VC RS01565 WP 000344154.1 KIGQGKANACKYLKENPEIAKTLDKKLREMLLNPENMQLIAETSSAADDVEFGAVPE........EF.............   354
NTDB id 1142 GTF74 RS11550 WP 000344154.1 KIGQGKANACKYLKENPEIAKTLDKKLREMLLNPENMQLIAETSSAADDVEFGAVPE........EF.............   354
NTDB id 1205 PSJM300 05545 AFN77183.1    KIGQGKANAAKYLEENPEIGQEIEQQIRAKLLVTSANTKATPVAEDLADAD..I.........................   347
NTDB id 1074 ABD1 RS10195 WP 000344167.1 KIGQGKNNVIRYFEENNQIAEEIERNIREQLLTTGTNGAVQ.I.EDEEEPD..LLLE........S.............   349
NTDB id 1022 ACIAD RS06390 WP 004925639.1 KIGQGKNNVIRYLEENPQISTEIEAVIREQLLTKASDQTAA.HDETEEEPD..LLES.....................   349
consensus                                **!!!***** ** ***** **** ** ** *
```

```
logo
                                              EE
NTDB id 1313 DR RS12030 WP 010888966.1        ..   363
NTDB id 600 KW2 RS01765 WP 011675413.1        ..   387
NTDB id 269 KZH43 RS08665 WP 001085462.1      EE   388
NTDB id 228 SPD RS09265 WP 001085462.1        EE   388
NTDB id 194 SPR RS08825 WP 001085462.1        EE   388
NTDB id 159 SP RS09750 WP 001085462.1         EE   388
NTDB id 499 SM12261 RS08315 WP 078228268.1    EE   384
NTDB id 527 SMSK321 RS11065 WP 001085454.1    EE   384
NTDB id 453 Spy49 1753c ACI62003.1            ..   378
NTDB id 408 SMU RS09530 WP 002262392.1        ..   383
NTDB id 115 BSU 16940 NP 389576.2             ..   348
NTDB id 625 LCA RS02525 WP 011374196.1        ..   355
NTDB id 327000 EGM60 RS14770 WP 003875210.1   ..   350
NTDB id 1245 Cj1673c YP 002345041.1           ..   343
NTDB id 1211 C694 RS00795 WP 000963128.1      ..   347
NTDB id 1214 NCTC11637 00359 SQJ03206.1       ..   347
NTDB id 1334 RA0C RS04870 WP 004918236.1      ..   343
NTDB id 1389 A4U84 RS07560 WP 021112712.1     ..   372
NTDB id 1130 NGFG RS03960 WP 003688695.1      ..   348
NTDB id 1124 NGFG RS03960 WP 003688695.1      ..   348
NTDB id 1123 OK783 RS03845 WP 003688695.1     ..   348
NTDB id 1427 RS RS02760 WP 011000510.1        ..   352
NTDB id 1165 A1552VC RS01565 WP 000344154.1   ..   354
NTDB id 1142 GTF74 RS11550 WP 000344154.1     ..   354
NTDB id 1205 PSJM300 05545 AFN77183.1         ..   347
NTDB id 1074 ABD1 RS10195 WP 000344167.1      ..   349
NTDB id 1022 ACIAD RS06390 WP 004925639.1     ..   349
consensus
```

X non conserved
X similar
X $\geq$ 50% conserved