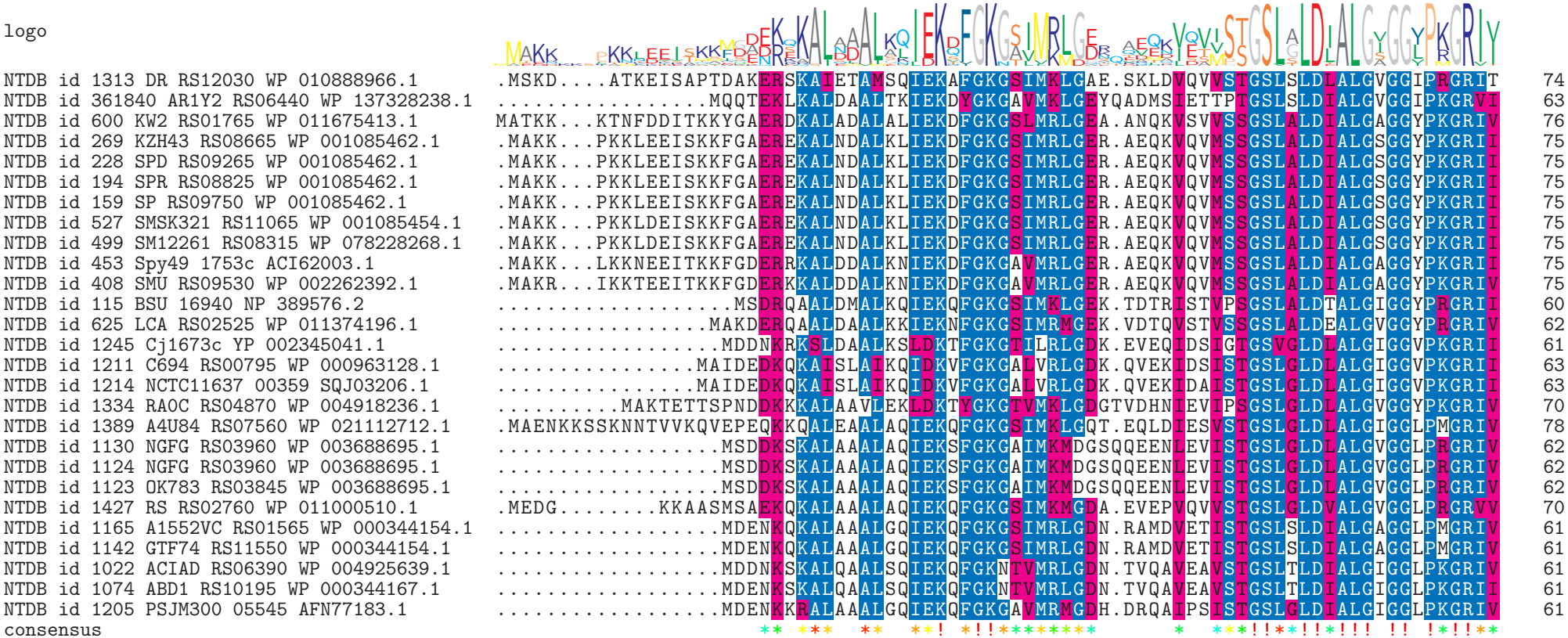
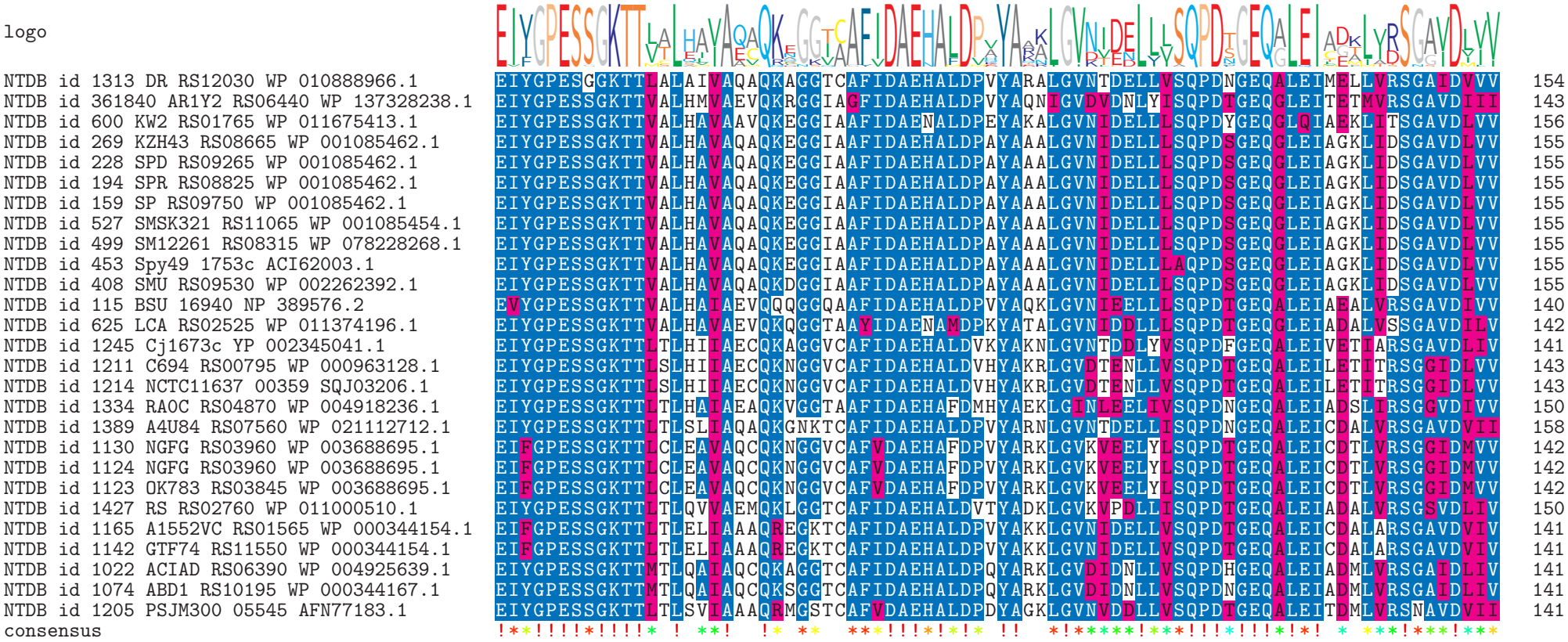
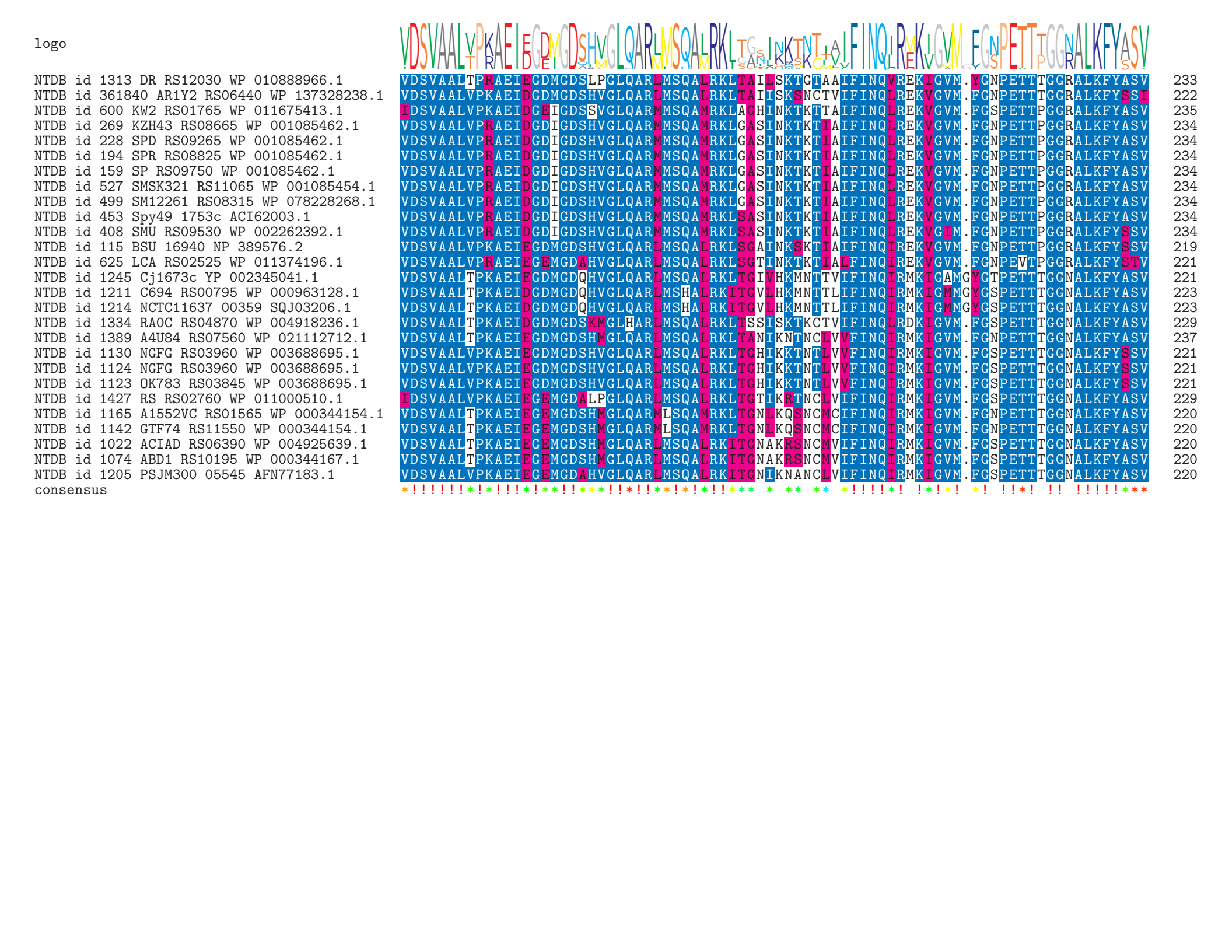
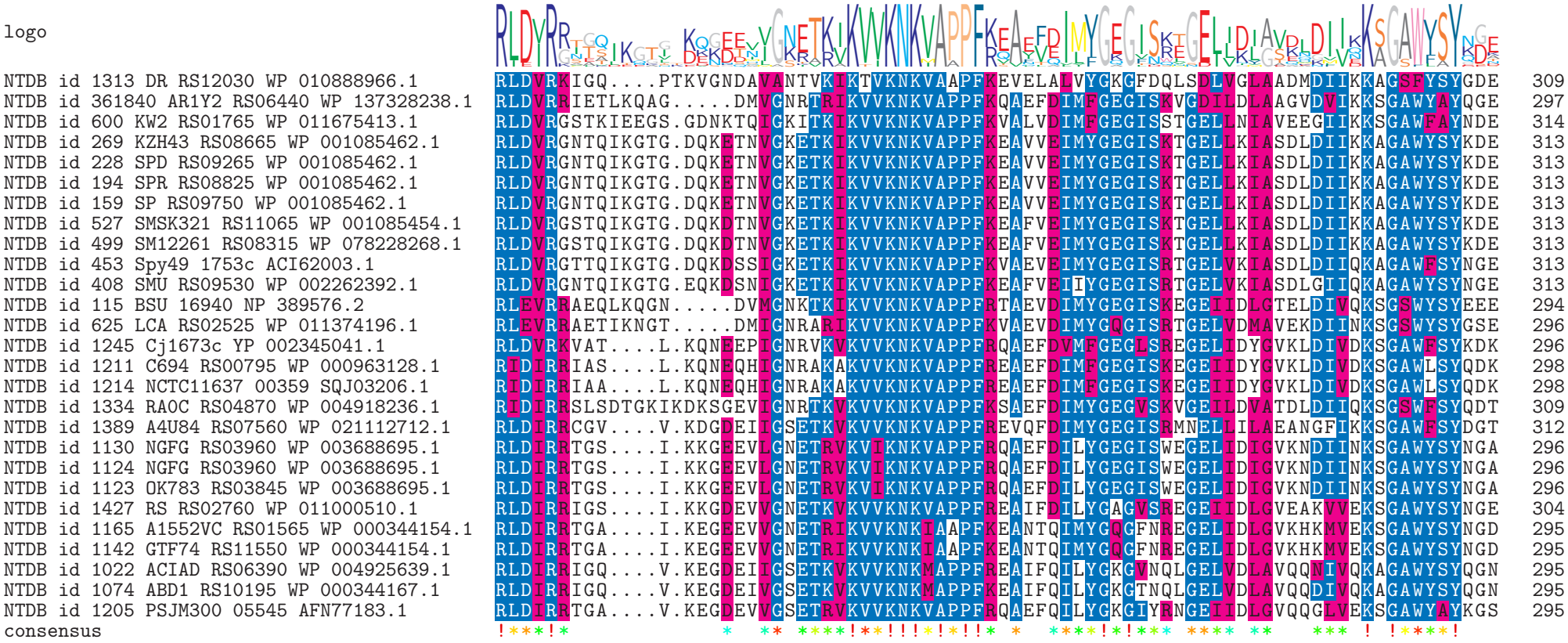

logo
NTDB id 1313 DR RS12030 WP 010888966.1 .MSKD....ATKEISAPTDAKERSKAIETAMSQIEKAFGKGSIMKLGAE.SKLDVQVVSTGSLSLDLALGVGGIPRGRIT 74
NTDB id 361840 AR1Y2 RS06440 WP 137328238.1 ..................MQQTEKLKALDAALTKIEKDYGKGAVMKLGEYQADMSIETTPTGSLSLDIALGVGGIPKGRVI 63
NTDB id 600 KW2 RS01765 WP 011675413.1 MATKK...KTNFDDITKKYGAERDKALADALALIEKDFGKGSLMRLGEA.ANQKVSVVSSGSLALDIALGAGGYPKGRIV 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 527 SMSK321 RS11065 WP 001085454.1 .MAKK...PKKLDEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRII 75
NTDB id 499 SM12261 RS08315 WP 078228268.1 .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 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 1022 ACIAD RS06390 WP 004925639.1 ..................MDDNKSKALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGRIV 61
NTDB id 1074 ABD1 RS10195 WP 000344167.1 ..................MDENKSKALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGRII 61
NTDB id 1205 PSJM300 05545 AFN77183.1 ..................MDENKKRALAAALGQIEKQFGKGAVMRMGDH.DRQAIPSISTGSLGLDIALGIGGLPKGRIV 61
consensus


logo
NTDB id 1313 DR RS12030 WP 010888966.1 EIYGPESGGKTTLALAIVAQAQKAGGTCAFIDAEHALDPVYARALGVNTDELLVSQPDNGEQALEIMELLVRSGAIDVVV 154
NTDB id 361840 AR1Y2 RS06440 WP 137328238.1 EIYGPESSGKTTVALHMVAEVQKRGGIAGFIDAEHALDPVYAQNIGVDVDNLYISQPDTGEQGLEITETMVRSGAVDIII 143
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 527 SMSK321 RS11065 WP 001085454.1 EIYGPESSGKTTVALHAVAQAQKEGGIAAFIDAEHALDPAYAAALGVNIDELLLSQPDSGEQGLEIAGKLIDSGAVDLVV 155
NTDB id 499 SM12261 RS08315 WP 078228268.1 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 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 1022 ACIAD RS06390 WP 004925639.1 EIYGPESSGKTTMTLQAIAQCQKAGGTCAFIDAEHALDPQYARKLGVDIDNLLVSQPDHGEQALEIADMLVRSGAIDLIV 141
NTDB id 1074 ABD1 RS10195 WP 000344167.1 EIYGPESSGKTTMTLQAIAQCQKSGGTCAFIDAEHALDPQYARKLGVDIDNLLVSQPDNGEQALEIADMLVRSGAIDLIV 141
NTDB id 1205 PSJM300 05545 AFN77183.1 EIYGPESSGKTTLTLSVIAAAQRMGSTCAFVDAEHALDPDYAGKLGVNVDDLLVSQPDTGEQALEITDMLVRSNAVDVII 141
consensus


logo
NTDB id 1313 DR RS12030 WP 010888966.1 VDSVAALTPRAEIEGDMGDSLPGLQARLMSQALRKLTAILSKTGTAAIFINQVREKIGVM.YGNPETTTGGRALKFYASV 233
NTDB id 361840 AR1Y2 RS06440 WP 137328238.1 VDSVAALVPKAEIDGDMGDSHVGLQARLMSQALRKLTAIISKSNCTVIFINQLREKVGVM.FGNPETTTGGRALKFYSSI 222
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 527 SMSK321 RS11065 WP 001085454.1 VDSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTIAIFINQLREKVGVM.FGNPETTPGGRALKFYASV 234
NTDB id 499 SM12261 RS08315 WP 078228268.1 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 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 1022 ACIAD RS06390 WP 004925639.1 VDSVAALTPKAEIEGEMGDSHMGLQARLMSQALRKITGNAKRSNCMVIFINQIRMKIGVM.FGSPETTTGGNALKFYASV 220
NTDB id 1074 ABD1 RS10195 WP 000344167.1 VDSVAALTPKAEIEGEMGDSHMGLQARLMSQALRKITGNAKRSNCMVIFINQIRMKIGVM.FGSPETTTGGNALKFYASV 220
NTDB id 1205 PSJM300 05545 AFN77183.1 VDSVAALVPKAEIEGEMGDAHVGLQARLMSQALRKITGNIKNANCLVIFINQIRMKIGVM.FGSPETTTGGNALKFYASV 220
consensus *!!!!!!*!*!!!*!**!!***!!*!!**!*!*!!*** * ** ** *!!!!*! !*!*! *! !!*! !! !!!!!***


logo
NTDB id 1313 DR RS12030 WP 010888966.1 RLDVRKIGQ....PTKVGNDAVANTVKIKTVKNKVAAPFKEVELALVYGKGFDQLSDLVGLAADMDIIKKAGSFYSYGDE 309
NTDB id 361840 AR1Y2 RS06440 WP 137328238.1 RLDVRRIETLKQAG.....DMVGNRTRIKVVKNKVAPPFKQAEFDIMFGEGISKVGDILDLAAGVDVIKKSGAWYAYQGE 297
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 527 SMSK321 RS11065 WP 001085454.1 RLDVRGSTQIKGTG.DQKDTNVGKETKIKVVKNKVAPPFKEAFVEIMYGEGISKTGELLKIASDLDIIKKAGAWYSYKDE 313
NTDB id 499 SM12261 RS08315 WP 078228268.1 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 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 1022 ACIAD RS06390 WP 004925639.1 RLDIRRIGQ....V.KEGDEIIGSETKVKVVKNKMAPPFREAIFQILYGKGVNQLGELVDLAVQQNIVQKAGAWYSYQGN 295
NTDB id 1074 ABD1 RS10195 WP 000344167.1 RLDIRRIGQ....V.KEGDEIVGSETKVKVVKNKMAPPFKEAIFQILYGKGTNQLGELVDLAVQQDIVQKAGAWYSYQGN 295
NTDB id 1205 PSJM300 05545 AFN77183.1 RLDIRRTGA....V.KEGDEVVGSETRVKVVKNKVAPPFRQAEFQILYGKGIYRNGEIIDLGVQQGLVEKSGAWYAYKGS 295
consensus

```
NTDB id 1313 DR RS12030 WP 010888966.1      RIGQGKEKTIAYIAERPEMEQEIRDRVMAAIRAGNAGEAPALAPAPAA......PEAAEA.....................  363
NTDB id 361840 AR1Y2 RS06440 WP 137328238.1 KIGQGRENAKTYLKEHPEVAQEVEAAVREYGLDGGAEAAPEETQPEEPQQ.............................  348
NTDB id 600 KW2 RS01765 WP 011675413.1      KIGQGAEKAKNYLKEHQDVFDEIDHKVRAAHGLLDDSEVAETEEETTASKTKAKAKKEEKAVETEEIELELED.......  387
NTDB id 269 KZH43 RS08665 WP 001085462.1    KIGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE....PKKEEA..VNEEVPLDLGDELEIEIE  387
NTDB id 228 SPD RS09265 WP 001085462.1      KIGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE....PKKEEA..VNEEVPLDLGDELEIEIE  387
NTDB id 194 SPR RS08825 WP 001085462.1      KIGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE....PKKEEA..VNEEVPLDLGDELEIEIE  387
NTDB id 159 SP RS09750 WP 001085462.1       KIGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE....PKKEEA..VNEEVPLDLGDELEIEIE  387
NTDB id 527 SMSK321 RS11065 WP 001085454.1  KIGQGSENAKKYLADNPEVFAEIDHQVRVQFGLIDGEEAAE....SKKDE....VAQVDS..VNEEVTLDLGDELEIEIE  383
NTDB id 499 SM12261 RS08315 WP 078228268.1  KIGQGSENAKKYLADNPEIFDEIDHQVRVQFGLIDGEEIAE....SKKDE....AAQVDS..VNEEVTLDLGDELEIEIE  383
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 1245 Cj1673c YP 002345041.1         KLGQGRENSKAFLKENPEIADEITKAIQNSMGIEGMISGSEDD..EGEE..............................  343
NTDB id 1211 C694 RS00795 WP 000963128.1    KLGQGRENAKALLKEDKALADEITLKIKESIGSNEEIMPLPDE..PLEEM.E............................  347
NTDB id 1214 NCTC11637 00359 SQJ03206.1     KLGQGRENAKALLKEDKALADEITLKIKESIGSNEEIMPLPDE..PLEEM.E............................  347
NTDB id 1334 RAOC RS04870 WP 004918236.1    KLGQGRDTVKELIKDNPELAEELEAKIREKLQAK...............................................  343
NTDB id 1389 A4U84 RS07560 WP 021112712.1   KIGQGKNNAVKWLKENPEIADKLEQEIRNTLASNPNSVLKATASDSNDES.DVEEFS......EEEL.............  372
NTDB id 1130 NGFG RS03960 WP 003688695.1    KIGQGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGTQDETDGER.......P......EE..............  348
NTDB id 1124 NGFG RS03960 WP 003688695.1    KIGQGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGTQDETDGER.......P......EE..............  348
NTDB id 1123 OK783 RS03845 WP 003688695.1   KIGQGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGTQDETDGER.......P......EE..............  348
NTDB id 1427 RS RS02760 WP 011000510.1      RIGQGRDNCREFLRENAELAREIENKVREHLGVTPMGAVTLA.EEVEED.............................  352
NTDB id 1165 A1552VC RS01565 WP 000344154.1 KIGQGKANACKYLKENPEIAKTLDKKLREMLLNPENMQLIAETSSAADDV.EFGAVP......EEF.............  354
NTDB id 1142 GTF74 RS11550 WP 000344154.1   KIGQGKANACKYLKENPEIAKTLDKKLREMLLNPENMQLIAETSSAADDV.EFGAVP......EEF.............  354
NTDB id 1022 ACIAD RS06390 WP 004925639.1   KIGQGKNNVIRYLEENPQISTEIEAVIREQLLTKASDQTAA.HDETEEEP.DLL..E......S...............  349
NTDB id 1074 ABD1 RS10195 WP 000344167.1    KIGQGKNNVIRYFEENNQIAEEIERNIREQLLTTGTNGAVQ.I.EDEEEP.DLL..L......ES..............  349
NTDB id 1205 PSJM300 05545 AFN77183.1       KIGQGKANAAKYLEENPEIGQEIEQQIRAKLLVTSANTKATPVAEDLADA.DI.........................  347
consensus                                   **!!!*****  **  *  ***  ****   **    **              *
```

```
logo
                                                E
NTDB id 1313 DR RS12030 WP 010888966.1          .   363
NTDB id 361840 AR1Y2 RS06440 WP 137328238.1     .   348
NTDB id 600 KW2 RS01765 WP 011675413.1          .   387
NTDB id 269 KZH43 RS08665 WP 001085462.1        E   388
NTDB id 228 SPD RS09265 WP 001085462.1          E   388
NTDB id 194 SPR RS08825 WP 001085462.1          E   388
NTDB id 159 SP RS09750 WP 001085462.1           E   388
NTDB id 527 SMSK321 RS11065 WP 001085454.1      E   384
NTDB id 499 SM12261 RS08315 WP 078228268.1      E   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 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 1022 ACIAD RS06390 WP 004925639.1       .   349
NTDB id 1074 ABD1 RS10195 WP 000344167.1        .   349
NTDB id 1205 PSJM300 05545 AFN77183.1           .   347
consensus


                                                X  non conserved
                                                X  similar
                                                X  ≥ 50% conserved
```