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NTDB id 55522 MYCSM RS12250 WP 015306471.1   ................MVQAPDREKALELALAQIDKNFGKGSVMRLGEE.VRQPISVIPTGSIALDVALGIGGLPRGRVVE    64
NTDB id 600 KW2 RS01765 WP 011675413.1       MA..TKKKTNFDDITKKYGAERDKALADALALIEKDFGKGSLMRLGEA.ANQKVSVVSSGSLALDIALGAGGYPKGRIVE    77
NTDB id 269 KZH43 RS08665 WP 001085462.1     .M..AKKPKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIIE    76
NTDB id 228 SPD RS09265 WP 001085462.1       .M..AKKPKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIIE    76
NTDB id 194 SPR RS08825 WP 001085462.1       .M..AKKPKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIIE    76
NTDB id 159 SP RS09750 WP 001085462.1        .M..AKKPKKLEEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIIE    76
NTDB id 527 SMSK321 RS11065 WP 001085454.1   .M..AKKPKKLDEISKKFGAEREKALNDALKLIEKDFGKGSIMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGRIIE    76
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NTDB id 115 BSU 16940 NP 389576.2            ..................MSDRQAALDMALKQIEKQFGKGSIMKLGEK.TDTRISTVPSGSLALDTALGIGGYPRGRIIE    61
NTDB id 625 LCA RS02525 WP 011374196.1       ................MAKDERQAALDAALKKIEKNFGKGSIMRMGEK.VDTQVSTVSSGSLALDEALGVGGYPRGRIVE    63
NTDB id 1245 Cj1673c YP 002345041.1          ..................MDDNKRKSLDAALKSLDKTFGKGTILRLGDK.EVEQIDSIGTGSVGLDLALGIGGVPKGRIIE    62
NTDB id 1211 C694 RS00795 WP 000963128.1     ...............MAIDEDKQKAISLAIKQIDKVFGKGALVRLGDK.QVEKIDSISTGSLGLDLALGIGGVPKGRIIE    64
NTDB id 1214 NCTC11637 00359 SQJ03206.1      ...............MAIDEDKQKAISLAIKQIDKVFGKGALVRLGDK.QVEKIDAISTGSLGLDLALGIGGVPKGRIIE    64
NTDB id 1334 RA0C RS04870 WP 004918236.1     .........MAKTETTSPNDDKKKALAAVLEKLDKTYGKGTVMKLGDGTVDHNIEVIPSGSLGLDLALGVGGYPKGRIVE    71
NTDB id 1389 A4U84 RS07560 WP 021112712.1    MAENKKSSKNNTVVKQVEPEQKKQALEAALAQIEKQFGKGSIMKLGQT.EQLDIESVSTGSLGLDLALGIGGLPMGRIVE    79
NTDB id 1130 NGFG RS03960 WP 003688695.1     ..................MSDDKSKALAAALAQIEKSFGKGAIMKMDGSQQEENLEVISTGSLGLDLALGVGGLPRGRIVE    63
NTDB id 1124 NGFG RS03960 WP 003688695.1     ..................MSDDKSKALAAALAQIEKSFGKGAIMKMDGSQQEENLEVISTGSLGLDLALGVGGLPRGRIVE    63
NTDB id 1123 OK783 RS03845 WP 003688695.1    ..................MSDDKSKALAAALAQIEKSFGKGAIMKMDGSQQEENLEVISTGSLGLDLALGVGGLPRGRIVE    63
NTDB id 1427 RS RS02760 WP 011000510.1       MEDG........KKAASMSAEKQKALAAALAQIEKQFGKGSIMKMGDA.EVEPVQVVSTGSLGLDVALGVGGLPRGRVVE    71
NTDB id 1165 A1552VC RS01565 WP 000344154.1 ..................MDENKQKALAAALGQIEKQFGKGSIMRLGDN.RAMDVETISTGSLSLDIALGAGGLPMGRIVE    62
NTDB id 1142 GTF74 RS11550 WP 000344154.1    ..................MDENKQKALAAALGQIEKQFGKGSIMRLGDN.RAMDVETISTGSLSLDIALGAGGLPMGRIVE    62
NTDB id 1205 PSJM300 05545 AFN77183.1        ..................MDENKKRALAAALGQIEKQFGKGAVMRMGDH.DRQAIPSISTGSLGLDIALGIGGLPKGRIVE    62
NTDB id 1022 ACIAD RS06390 WP 004925639.1    ..................MDDNKSKALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGRIVE    62
NTDB id 1074 ABD1 RS10195 WP 000344167.1     ..................MDENKSKALQAALSQIEKQFGKNTVMRLGDN.TVQAVEAVSTGSLTLDIALGIGGLPKGRIIE    62
consensus                                                     **  ***   **  ***! *!!********       *   **!!**!!*!!! !! !*!!**!
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NTDB id 600 KW2 RS01765 WP 011675413.1      IYGPESSGKTTVALHAVAAVQKEGGIAAFIDAENALDPEYAKALGVNIDELLLSQPDYGEQGLQIAEKLITSGAVDLVVI  157
NTDB id 269 KZH43 RS08665 WP 001085462.1    IYGPESSGKTTVALHAVAQAQKEGGIAAFIDAEHALDPAYAAALGVNIDELLLSQPDSGEQGLEIAGKLIDSGAVDLVVV  156
NTDB id 228 SPD RS09265 WP 001085462.1      IYGPESSGKTTVALHAVAQAQKEGGIAAFIDAEHALDPAYAAALGVNIDELLLSQPDSGEQGLEIAGKLIDSGAVDLVVV  156
NTDB id 194 SPR RS08825 WP 001085462.1      IYGPESSGKTTVALHAVAQAQKEGGIAAFIDAEHALDPAYAAALGVNIDELLLSQPDSGEQGLEIAGKLIDSGAVDLVVV  156
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NTDB id 527 SMSK321 RS11065 WP 001085454.1  IYGPESSGKTTVALHAVAQAQKEGGIAAFIDAEHALDPAYAAALGVNIDELLLSQPDSGEQGLEIAGKLIDSGAVDLVVV  156
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NTDB id 453 Spy49 1753c ACI62003.1          IYGPESSGKTTVALHAVAQAQKEGGIAAFIDAEHALDPAYAAALGVNIDELLLAQPDSGEQGLEIAGKLIDSGAVDLVVV  156
NTDB id 408 SMU RS09530 WP 002262392.1     IYGPESSGKTTVALHAVAQAQKDGGIAAFIDAEHALDPAYAAALGVNIDELLLSQPDSGEQGLEIAGKLIDSGAVDLVVV  156
NTDB id 115 BSU 16940 NP 389576.2           VYGPESSGKTTVALHAIAEVQQQGGQAAFIDAEHALDPVYAQKLGVNIEELLLSQPDTGEQALEIAEALVRSGAVDIVVV  141
NTDB id 625 LCA RS02525 WP 011374196.1      IYGPESSGKTTVALHAVAEVQKQGGTAAYIDAENAMDPKYATALGVNIDDLLLSQPDTGEQGLEIADALVSSGAVDILVV  143
NTDB id 1245 Cj1673c YP 002345041.1         IYGPESSGKTTLTLHIIAECQKAGGVCAFIDAEHALDVKYAKNLGVNTDDLYVSQPDFGEQALEIVETIARSGAVDLIVV  142
NTDB id 1211 C694 RS00795 WP 000963128.1    IYGPESSGKTTLSLHIIAECQKNGGVCAFIDAEHALDVHYAKRLGVDTENLLVSQPDTGEQALEILETITRSGGIDLVVV  144
NTDB id 1214 NCTC11637 00359 SQJ03206.1     IYGPESSGKTTLSLHIIAECQKNGGVCAFIDAEHALDVHYAKRLGVDTENLLVSQPDTGEQALEILETITRSGGIDLVVV  144
NTDB id 1334 RA0C RS04870 WP 004918236.1    IYGPESSGKTTLTLHAIAEAQKVGGTAAFIDAEHAFDMHYAEKLGINLEELIVSQPDNGEQALEIADSLIRSGGVDIVVV  151
NTDB id 1389 A4U84 RS07560 WP 021112712.1   IYGPESSGKTTLTLSLIAQAQKGNKTCAFIDAEHALDPVYARNLGVNTDELLISQPDNGEQALEICDALVRSGAVDVIIV  159
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NTDB id 1123 OK783 RS03845 WP 003688695.1   IFGPESSGKTTLCLEAVAQCQKNGGVCAFVDAEHAFDPVYARKLGVKVEELYLSQPDTGEQALEICDTLVRSGGIDMVVV  143
NTDB id 1427 RS RS02760 WP 011000510.1      IYGPESSGKTTLTLQVVAEMQKLGGTCAFIDAEHALDVTYADKLGVKVPDLLISQPDTGEQALEIADALVRSGSVDLIVI  151
NTDB id 1165 A1552VC RS01565 WP 000344154.1 IFGPESSGKTTLTLELIAAAQREGKTCAFIDAEHALDPVYAKKLGVNIDELLVSQPDTGEQALEICDALARSGAVDVIVV  142
NTDB id 1142 GTF74 RS11550 WP 000344154.1   IFGPESSGKTTLTLELIAAAQREGKTCAFIDAEHALDPVYAKKLGVNIDELLVSQPDTGEQALEICDALARSGAVDVIVV  142
NTDB id 1205 PSJM300 05545 AFN77183.1       IYGPESSGKTTLTLSVIAAAQRMGSTCAFVDAEHALDPDYAGKLGVNVDDLLVSQPDTGEQALEITDMLVRSNAVDVIIV  142
NTDB id 1022 ACIAD RS06390 WP 004925639.1   IYGPESSGKTTMTLQAIAQCQKAGGTCAFIDAEHALDPQYARKLGVDIDNLLVSQPDHGEQALEIADMLVRSGAIDLIVV  142
NTDB id 1074 ABD1 RS10195 WP 000344167.1    IYGPESSGKTTMTLQAIAQCQKSGGTCAFIDAEHALDPQYARKLGVDIDNLLVSQPDNGEQALEIADMLVRSGAIDLIVV  142
consensus                                   **!!!!*!!!!* ! **!  !* **  !**!!!*!*!* !!  !!*****!***!!!*!!!*!*! * ***!***!*****
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logo
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NTDB id 55522 MYCSM RS12250 WP 015306471.1  DSVAALVPRAEIEGEMGDSHVGLQARLMSQALRKMTGALNNSGTTAIFINQLREKIGVM.FGSPETTTGGKALKFYASVR   223
NTDB id 600 KW2 RS01765 WP 011675413.1      DSVAALVPKAEIDGEIGDSSVGLQARMMSQAMRKLAGHINKTKTTAIFINQLREKVGVM.FGSPETTPGGRALKFYASVR   236
NTDB id 269 KZH43 RS08665 WP 001085462.1    DSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTIAIFINQLREKVGVM.FGNPETTPGGRALKFYASVR   235
NTDB id 228 SPD RS09265 WP 001085462.1      DSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTIAIFINQLREKVGVM.FGNPETTPGGRALKFYASVR   235
NTDB id 194 SPR RS08825 WP 001085462.1      DSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTIAIFINQLREKVGVM.FGNPETTPGGRALKFYASVR   235
NTDB id 159 SP RS09750 WP 001085462.1       DSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTIAIFINQLREKVGVM.FGNPETTPGGRALKFYASVR   235
NTDB id 527 SMSK321 RS11065 WP 001085454.1  DSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTIAIFINQLREKVGVM.FGNPETTPGGRALKFYASVR   235
NTDB id 499 SM12261 RS08315 WP 078228268.1  DSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLGASINKTKTIAIFINQLREKVGVM.FGNPETTPGGRALKFYASVR   235
NTDB id 453 Spy49 1753c ACI62003.1          DSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLSASINKTKTIAIFINQLREKVGVM.FGNPETTPGGRALKFYASVR   235
NTDB id 408 SMU RS09530 WP 002262392.1     DSVAALVPRAEIDGDIGDSHVGLQARMMSQAMRKLSASINKTKTIAIFINQLREKVGIM.FGNPETTPGGRALKFYSSVR   235
NTDB id 115 BSU 16940 NP 389576.2           DSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLSGAINKSKTIAIFINQIREKVGVM.FGNPETTPGGRALKFYSSVR   220
NTDB id 625 LCA RS02525 WP 011374196.1      DSVAALVPRAEIEGEMGDAHVGLQARLMSQALRKLSGTINKTKTIALFINQIREKVGVM.FGNPEVTPGGRALKFYSTVR   222
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NTDB id 1130 NGFG RS03960 WP 003688695.1    DSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLTGHIKKTNTLVVFINQIRMKIGVM.FGSPETTTGGNALKFYSSVR   222
NTDB id 1124 NGFG RS03960 WP 003688695.1    DSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLTGHIKKTNTLVVFINQIRMKIGVM.FGSPETTTGGNALKFYSSVR   222
NTDB id 1123 OK783 RS03845 WP 003688695.1   DSVAALVPKAEIEGDMGDSHVGLQARLMSQALRKLTGHIKKTNTLVVFINQIRMKIGVM.FGSPETTTGGNALKFYSSVR   222
NTDB id 1427 RS RS02760 WP 011000510.1      DSVAALVPKAEIEGEMGDALPGLQARLMSQALRKLTGTIKRTNCLVIFINQIRMKIGVM.FGSPETTTGGNALKFYASVR   230
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NTDB id 1142 GTF74 RS11550 WP 000344154.1   DSVAALTPKAEIEGEMGDSHMGLQARMLSQAMRKLTGNLKQSNCMCIFINQIRMKIGVM.FGNPETTTGGNALKFYASVR   221
NTDB id 1205 PSJM300 05545 AFN77183.1       DSVAALVPKAEIEGEMGDAHVGLQARLMSQALRKITGNIKNANCLVIFINQIRMKIGVM.FGSPETTTGGNALKFYASVR   221
NTDB id 1022 ACIAD RS06390 WP 004925639.1   DSVAALTPKAEIEGEMGDSHMGLQARLMSQALRKITGNAKRSNCMVIFINQIRMKIGVM.FGSPETTTGGNALKFYASVR   221
NTDB id 1074 ABD1 RS10195 WP 000344167.1    DSVAALTPKAEIEGEMGDSHMGLQARLMSQALRKITGNAKRSNCMVIFINQIRMKIGVM.FGSPETTTGGNALKFYASVR   221
consensus                                   !!!!!!*!*!!!*!**!!***!!*!!**!*!*!!*** * ** ** *!!!!*! !*!*! *! !!*! !! !!!!!**!!
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logo
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NTDB id 194 SPR RS08825 WP 001085462.1      LDVRGNTQIKGTG.DQKETNVGKETKIKVVKNKVAPPFKEAVVEIMYGEGISKTGELLKIASDLDIIKKAGAWYSYKDEK   314
NTDB id 159 SP RS09750 WP 001085462.1       LDVRGNTQIKGTG.DQKETNVGKETKIKVVKNKVAPPFKEAVVEIMYGEGISKTGELLKIASDLDIIKKAGAWYSYKDEK   314
NTDB id 527 SMSK321 RS11065 WP 001085454.1  LDVRGSTQIKGTG.DQKDTNVGKETKIKVVKNKVAPPFKEAFVEIMYGEGISKTGELLKIASDLDIIKKAGAWYSYKDEK   314
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NTDB id 625 LCA RS02525 WP 011374196.1      LEVRRAETIKNGT.....DMIGNRARIKVVKNKVAPPFKVAEVDIMYGQGISRTGELVDMAVEKDIINKSGSWYSYGSER   297
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NTDB id 1211 C694 RS00795 WP 000963128.1    IDIRRIAS....L.KQNEQHIGNRAKAKVVKNKVAPPFREAEFDIMFGEGISKEGEIIDYGVKLDIVDKSGAWLSYQDKK   299
NTDB id 1214 NCTC11637 00359 SQJ03206.1     IDIRRIAA....L.KQNEQHIGNRAKAKVVKNKVAPPFREAEFDIMFGEGISKEGEIIDYGVKLDIVDKSGAWLSYQDKK   299
NTDB id 1334 RA0C RS04870 WP 004918236.1    IDIRRSLSDTGKIKDKSGEVIGNRTKVKVVKNKVAPPFKSAEFDIMYGEGVSKVGEILDVATDLDIIQKSGSWFSYQDTK   310
NTDB id 1389 A4U84 RS07560 WP 021112712.1   LDIRRCGV....V.KDGDEIIGSETKVKVVKNKVAPPFREVQFDIMYGEGISRMNELLILAEANGFIKKSGAWFSYDGTK   313
NTDB id 1130 NGFG RS03960 WP 003688695.1    LDIRRTGS....I.KKGEEVLGNETRVKVIKNKVAPPFRQAEFDILYGEGISWEGELIDIGVKNDIINKSGAWYSYNGAK   297
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consensus                                   ***!*            *  ** ****!**!!!**!!* *  ****!*!***  ****  **   *** ! !****!   *
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logo
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NTDB id 228 SPD RS09265 WP 001085462.1        IGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE....PKKEEA..VNEEVPLDLGDELEIEIEE  388
NTDB id 194 SPR RS08825 WP 001085462.1        IGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE....PKKEEA..VNEEVPLDLGDELEIEIEE  388
NTDB id 159 SP RS09750 WP 001085462.1         IGQGSENAKKYLAEHPEIFDEIDKQVRSKFGLIDGEEVSEQDTENKKDE....PKKEEA..VNEEVPLDLGDELEIEIEE  388
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NTDB id 499 SM12261 RS08315 WP 078228268.1    IGQGSENAKKYLADNPEIFDEIDHQVRVQFGLIDGEEIAE....SKKDE....AAQVDS..VNEEVTLDLGDELEIEIEE  384
NTDB id 453 Spy49 1753c ACI62003.1            IGQGSENAKRYLADHPQLFDEIDRKVRVKFGLLEESEEESAMAVASE.......E.......TDDLALDLDNGIEIED..  378
NTDB id 408 SMU RS09530 WP 002262392.1        IGQGSENAKKFLADNPEIFDDIDHKVRVQYGLIEEDNTEEKQSSKEK.......ETDEK..ADKNLVLELDDTIELED..  383
NTDB id 115 BSU 16940 NP 389576.2             LGQGRENAKQFLKENKDIMLMIQEQIREHYGLDNNGVVQQQAEETQEEL.EFE.E........................  348
NTDB id 625 LCA RS02525 WP 011374196.1        IGQGRENAKNYLADHEDVEDEVRLKVRAAYGISDVPEEDLPTTEDE.QI.NILPDDST.....EE...............  355
NTDB id 1245 Cj1673c YP 002345041.1           LGQGRENSKAFLKENPEIADEITKAIQNSMGIEGMISGSEDDE..GEE...............................  343
NTDB id 1211 C694 RS00795 WP 000963128.1      LGQGRENAKALLKEDKALADEITLKIKESIGSNEEIMPLPDEP..LEEM.E............................  347
NTDB id 1214 NCTC11637 00359 SQJ03206.1       LGQGRENAKALLKEDKALADEITLKIKESIGSNEEIMPLPDEP..LEEM.E............................  347
NTDB id 1334 RA0C RS04870 WP 004918236.1      LGQGRDTVKELIKDNPELAEELEAKIREKLQAK..............................................  343
NTDB id 1389 A4U84 RS07560 WP 021112712.1     IGQGKNNAVKWLKENPEIADKLEQEIRNTLASNPNSVLKATASDSNDES.DVEEFSE......EEL..............  372
NTDB id 1130 NGFG RS03960 WP 003688695.1      IGQGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGT......QDE.TDGERPE......E................  348
NTDB id 1124 NGFG RS03960 WP 003688695.1      IGQGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGT......QDE.TDGERPE......E................  348
NTDB id 1123 OK783 RS03845 WP 003688695.1     IGQGKDNVRVWLKENPEISDEIDAKIRALNGVEMHITEGT......QDE.TDGERPE......E................  348
NTDB id 1427 RS RS02760 WP 011000510.1        IGQGRDNCREFLRENAELAREIENKVREHLGVTPMGAV.TLAEEVEED...............................  352
NTDB id 1165 A1552VC RS01565 WP 000344154.1   IGQGKANACKYLKENPEIAKTLDKKLREMLLNPENMQLIAETSSAADDV.EFGAVPE......EF...............  354
NTDB id 1142 GTF74 RS11550 WP 000344154.1     IGQGKANACKYLKENPEIAKTLDKKLREMLLNPENMQLIAETSSAADDV.EFGAVPE......EF...............  354
NTDB id 1205 PSJM300 05545 AFN77183.1         IGQGKANAAKYLEENPEIGQEIEQQIRAKLLVTSANTKATPVAEDLADA.DI...........................  347
NTDB id 1022 ACIAD RS06390 WP 004925639.1     IGQGKNNVIRYLEENPQISTEIEAVIREQLLTKASDQTAA.HDETEEEP.DLL..ES......................  349
NTDB id 1074 ABD1 RS10195 WP 000344167.1      IGQGKNNVIRYFEENNQIAEEIERNIREQLLTTGTNGAVQ.I.EDEEEP.DLL..LE......S................  349
consensus                                     *!!!***** ** ***** ****  **   **              *
```

X non conserved

X similar

X $\geq$ 50% conserved