logo



```
NTDB id 1177 A1552VC RS01165 WP 000422572.1   ....MELNQYLDGMLTHKASDLYITVGAPILYRVDGELRA.QGEAL.SVADVTALLHAMMDDARQAEFKQTREANFAVVR   74
NTDB id 1203 PSJM300 01605 AFN76401.1         ....MEFEKLLRLMVEKGGSDLFITAGVPPSMKVNGKILP.VNKTPMSPEMTRETVHGVMNEQQRREFTENHECNFAISA   75
NTDB id 1019 ACIAD RS04205 WP 004922051.1     ....MDFNDLLNLMAKHKASDLFITAGVEPSLKINGEITP.VSKTKLDGDMIAQLIDSITTQKQRQEFIETHECNFAILN   75
NTDB id 315009 D3790 RS01110 WP 038219869.1   ....MNMEKWVALSVKHNASDLHLCVGQVPVLRINGGLYPQIQSDEIQLDALEEWSKEILSDAQKQQLQEHGHVDFVLVM   76
NTDB id 1307 DR RS10055 WP 010888596.1        MTSGIDITDILRLAADKGASDIILAAGLPPQFKLSGDYDA.QGFEPLSASDTRKLMYSMMNERQQRIFEEKRELDFSFAL   79
NTDB id 1116 NGFG RS10615 WP 003690200.1      ....MQITDLLAFGAKNKASDLHLSSGISPMIRVHGDMRR.INLPEMSAEEVGNMVTSVMNDHQRKIYQQNLEVDFSFEL   75
NTDB id 1086 NMV RS00245 WP 002218487.1       ....MQITDLLAFGAKNKASDLHLSSGISPMIRVHGDMRR.INLPEMSAEEVGNMVTSVMNDHQRKIYQQNLEVDFSFEL   75
NTDB id 1185 GTF74 RS11940 WP 000350195.1     ....MDIAELLEFSVKHNASDLHLSAGVPPMVRIDGEVRK.LGVPAFTHSDVHRLIFEIMNDAQRSEYEEKLEVDFSFEL   75
NTDB id 1176 A1552VC RS01160 WP 000350195.1   ....MDIAELLEFSVKHNASDLHLSAGVPPMVRIDGEVRK.LGVPAFTHSDVHRLIFEIMNDAQRSEYEEKLEVDFSFEL   75
NTDB id 1283 ACE17W RS02630 WP 010947729.1    ....MDIAELLAFSVKNKSSDLHISAGMPPMIRVDGDLRK.INLPPLEHKDVIKIIYDIMNDRQRKEYEEFFETDFSFEI   75
NTDB id 1259 GCO85 RS10305 WP 010947729.1     ....MDIAELLAFSVKNKSSDLHISAGMPPMIRVDGDLRK.INLPPLEHKDVIKIIYDIMNDRQRKEYEEFFETDFSFEI   75
NTDB id 1194 PAKAF RS01995 WP 003084552.1     ....MDITELLAFSAKQGASDLHLSAGLPPMIRVDGDVRR.INLPPLEHKQVHALIYDIMNDKQRKDFEEFLETDFSFEV   75
NTDB id 1202 PSJM300 01600 AFN76400.1         ....MDITELLAFSAKQGASDLHLSSGLPPMIRVDGDVRR.INLPAMDHKQVHALIYDIMNDKQRKDFEEFLETDFSFEV   75
NTDB id 1020 ACIAD RS04210 WP 011182164.1     ....MDITELLAFSVQNRASDLHLSAGIPPMIRVDGEVRR.INLPAMDHSEVHNLIYDIMNDKQRRDYEEKLETDFSFEV   75
NTDB id 1060 ABD1 RS04380 WP 000355489.1      ....MDITELLAFSVKNGASDLHLSAGMPPMIRVDGEVRR.INLPALEHKDVHRLVYDIMNDKQRRDYEEKLETDFSFEV   75
NTDB id 1040 HON27 RS13360 WP 000355489.1     ....MDITELLAFSVKNGASDLHLSAGMPPMIRVDGEVRR.INLPALEHKDVHRLVYDIMNDKQRRDYEEKLETDFSFEV   75
NTDB id 1081 FDQ49 RS05335 WP 006581387.1     ....MDITELLAFSVKNGASDLHLSAGMPPMIRVDGEVRR.INLPALEHKDVHRLVYDIMNDKQRRDYEEKLETDFSFEV   75
consensus                                        *** **********  *!!*****!*********!****  **** * *  **  ********************  **  *!****
```

logo



```
NTDB id 1177 A1552VC RS01165 WP 000422572.1   D..SGRFRVSAFFQRELPGAVIRRIETRIPTFEELKLPEVLQNL.AIAKRGLVLVVGATGSGKSTTMAAMTGYRNQHRTG   151
NTDB id 1203 PSJM300 01605 AFN76401.1         RG.IGRFRVSAFYQRNLAGMVLRRIETNIPTIEDLKLPDVLKKL.ALTKRGLVLFVGATGTGKSTSLAAMIGYRNKNSSG   153
NTDB id 1019 ACIAD RS04205 WP 004922051.1     REKNERFRVSAFQQRDMPGMVIRRIETKIPSPDDLHLPPILKEL.AMSKRGIIIFSGATGTGKSTSLASMIQHRNQHSKG   154
NTDB id 315009 D3790 RS01110 WP 038219869.1   PD.KQRLRGNLFYQQSHLSLVLRLITDKCPTLEQLYAPDIIQHLILQEVSGLILVTGATGSGKSTTLSAMIDAFNSHGSK   155
NTDB id 1307 DR RS10055 WP 010888596.1        GD.KARFRVNAFMQRGNVGGVMRLIPTTVRTIAEMGLPQTVIDI.ANAPRGLVLVTGPTGSGKSTTLASMIDHINTTKKL   157
NTDB id 1116 NGFG RS10615 WP 003690200.1      PN.VARFRVNAFNTGRGPAAVFRTIPSTVLSLEELKAPSIFQKI.AESPRGMVLVTGPTGSGKSTTLAAMINYINETQPA   153
NTDB id 1086 NMV RS00245 WP 002218487.1       PN.VARFRVNAFNIGRGPAAVFRTIPSTVLSLEELKAPSIFQKI.AESPRGMVLVTGPTGSGKSTTLAAMINYINETQPA   153
NTDB id 1185 GTF74 RS11940 WP 000350195.1     PN.VGRFRVNAFHQARGCSAVFRTIPTVIPTLEQLDAPEIFSKI.ANYEKGLVLVTGPTGSGKSTTLAAMVNYVNAHHNK   153
NTDB id 1176 A1552VC RS01160 WP 000350195.1   PN.VGRFRVNAFHQARGCSAVFRTIPTVIPTLEQLDAPEIFSKI.ANYEKGLVLVTGPTGSGKSTTLAAMVNYVNAHHNK   153
NTDB id 1283 ACE17W RS02630 WP 010947729.1    AN.LARFRVNAFNQSRGAAAVFRTIPSEILSMEDLGLPPIFKEM.ASFSRGLVLVTGPTGSGKSTTLAAVIDYINSSRYE   153
NTDB id 1259 GCO85 RS10305 WP 010947729.1     AN.LARFRVNAFNQSRGAAAVFRTIPSEILSMEDLGLPPIFKEM.ASFSRGLVLVTGPTGSGKSTTLAAVIDYINSSRYE   153
NTDB id 1194 PAKAF RS01995 WP 003084552.1     PG.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEELGMGEVFKRV.SDVPRGLVLVTGPTGSGKSTTLAAMLDYLNNTKYH   153
NTDB id 1202 PSJM300 01600 AFN76400.1         PG.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEDLGMGEVFRKI.TDVPRGLVLVTGPTGSGKSTTLAAMLDYLNNTKYH   153
NTDB id 1020 ACIAD RS04210 WP 011182164.1     PN.LARFRVNVFNQNRGAGAVFRTIPSQVLTLEELGLGKIFRDI.CDYPRGLVLVTGPTGSGKSTTLAAMLDYINNHRYD   153
NTDB id 1060 ABD1 RS04380 WP 000355489.1      PN.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEDLGLGQIFKDI.CDYPRGIVLVTGPTGSGKSTTLAAMLDYINENRYD   153
NTDB id 1040 HON27 RS13360 WP 000355489.1     PN.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEDLGLGQIFKDI.CDYPRGIVLVTGPTGSGKSTTLAAMLDYINENRYD   153
NTDB id 1081 FDQ49 RS05335 WP 006581387.1     PN.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEDLGLGQIFKDI.CDYPRGIVLVTGPTGSGKSTTLAAMLDYINENRYD   153
consensus                                     ** **!*!***!**  ** **!*!*!**  *******  **  ***  * *    *!******!*!!*!!!!**********!   *
```

logo



```
NTDB id 1177 A1552VC RS01165 WP 000422572.1  HILTVEDPIEFVHEHKRCIVTQREVGLDTESYEVALKNSLRQAPDMILIGEIRSRETMEYAMTFAETGHLCMATLHANNA  231
NTDB id 1203 PSJM300 01605 AFN76401.1        HILSIEDPIEFIHQHQNCIVTQREVGIDTDSFEVALKNTLRQAPDVILIGEVRTRETMDHAVAFAETGHLCLATLHANNA  233
NTDB id 1019 ACIAD RS04205 WP 004922051.1    HITIEDPIEFIHEHAGCIITQREVGIDTDSFEIALKNTLRQAPDVILIGEIRSREVMDYALAFAETGHLVFATLHANNA  234
NTDB id 315009 D3790 RS01110 WP 038219869.1  HIMLEDPIEFVHQSRNCLIQQRQIGKDVPDYHTALKGALRQDPDVILLGELRDKETIRLALTAAETGHLVLSTLHTRGA  235
NTDB id 1307 DR RS10055 WP 010888596.1       HILTIEDPIEFMHPNKASIINQREVGSDTLSFDDALRAALRQAPDVILVGEMRDYETIKAAVTAAETGHLVMGTLHTNSA  237
NTDB id 1116 NGFG RS10615 WP 003690200.1     HILTIEDPIEFVHQSKKSLINQRELHQHTLSFANALSSALREDPDVILVGEMRDPETIGLALTAAETGHLVFGTLHTTGA  233
NTDB id 1086 NMV RS00245 WP 002218487.1      HILTIEDPIEFVHQSKKSLINQRELHQHTLSFANALRSALREDPDVILVGEMRDPETIGLALTAAETGHLVFGTLHTTGA  233
NTDB id 1185 GTF74 RS11940 WP 000350195.1    HILTIEDPIEFVHSNNKCLINQREVHRDTHSFKNALRSALREDPDVILVGELRDQETISLALTAAETGHLVFGTLHTSSA  233
NTDB id 1176 A1552VC RS01160 WP 000350195.1  HILTIEDPIEFVHSNNKCLINQREVHRDTHSFKNALRSALREDPDVILVGELRDQETISLALTAAETGHLVFGTLHTSSA  233
NTDB id 1283 ACE17W RS02630 WP 010947729.1   HILTVEDPIEFVHQSKKCLVNQREVHKDTLSFNAALRSALREDPDIILVGELRDLETIRLAMTAAETGHLVFGTLHTNSA  233
NTDB id 1259 GCO85 RS10305 WP 010947729.1    HILTVEDPIEFVHQSKKCLVNQREVHKDTLSFNAALRSALREDPDIILVGELRDLETIRLAMTAAETGHLVFGTLHTNSA  233
NTDB id 1194 PAKAF RS01995 WP 003084552.1    HILTIEDPIEFVHESKKCLVNQREVHRDTLGFSEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTSA  233
NTDB id 1202 PSJM300 01600 AFN76400.1        HILTIEDPIEFVHESKKCLVNQREVHRDTLGFSEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTSA  233
NTDB id 1020 ACIAD RS04210 WP 011182164.1    HILTVEDPIEFVHEPKKCLINQREVHRDTLGFNEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTSA  233
NTDB id 1060 ABD1 RS04380 WP 000355489.1     HILTVEDPIEFVHQSKKCLINQREVHRDTHGFNEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTSA  233
NTDB id 1040 HON27 RS13360 WP 000355489.1    HILTVEDPIEFVHQSKKCLINQREVHRDTHGFNEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTSA  233
NTDB id 1081 FDQ49 RS05335 WP 006581387.1    HILTVEDPIEFVHQSKKCLINQREVHRDTHGFNEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTSA  233
consensus                                    !!***!!!!!!*!  *******!!******  **   !!***!!**!!*!!*!!*!* !****!***!!!!!!***!!!***!
```

logo



```
NTDB id 1177 A1552VC RS01165 WP 000422572.1  NQALERILHLVPKEQREQFLLDLSLNLKGVIAQQLLRDKNGKGRHGVFEVLLNSPRIADLIRRGELHELKATMARSQEVG  311
NTDB id 1203 PSJM300 01605 AFN76401.1        NQALDRIINFFPADRQNQVWMDLSLNLKAIVAQQLVPTPDGKGRRAVIEVLINTPLAADLIRKGEVHELKGLMKRSTDLG  313
NTDB id 1019 ACIAD RS04205 WP 004922051.1    NQTLERIIHFFDADRHQQIFMDLSLNLKAVISQQLIPTHDGQSRRAAVEVLINTPLLSDYIRQGEIYKIKELMARSGELG  314
NTDB id 315009 D3790 RS01110 WP 038219869.1  IQAIDRLVDVFSAEEKGWICSQLAGSLKAVVSQQLLPA.KEEGRVAIHEVLVVNQAVSHLIREGKNHQIATLMQTGAACG  314
NTDB id 1307 DR RS10055 WP 010888596.1       PESIDRIVDVFPEEQQFQIRVQLANNLVAVMTQQLLPRADGQGRVLAYEILLANPAVRALIREGKTFQITSVMQTGAREG  317
NTDB id 1116 NGFG RS10615 WP 003690200.1     AKTVDRIVDVFPAGEKEMVRSMLSESLTAVISQNLLKTHDGNGRVASHEILIANPAVRNLIRENKITQINSVLQTGQASG  313
NTDB id 1086 NMV RS00245 WP 002218487.1      AKTVDRIVDVFPAGEKEMVRSMLSESLTAVISQNLLKTHDGNGRVASHEILIANPAVRNLIRENKITQINSVLQTGQASG  313
NTDB id 1185 GTF74 RS11940 WP 000350195.1    AKTIDRIIDVFPGSDKDMVRSMLSESLRAVIAQKLLKR.VGGGRVACHEIMLATPAIRNLIREDKVAQMYSIIQTGAAHG  312
NTDB id 1176 A1552VC RS01160 WP 000350195.1  AKTIDRIIDVFPGSDKDMVRSMLSESLRAVIAQKLLKR.VGGGRVACHEIMLATPAIRNLIREDKVAQMYSIIQTGAAHG  312
NTDB id 1283 ACE17W RS02630 WP 010947729.1   TKTINRIIDVFPAEEKSMVRSMLSESLQAVVAQSLLKK.NKGGRVAALEIMMCTGAIRNLIREDKIAQMYSSIQTGQAKG  312
NTDB id 1259 GCO85 RS10305 WP 010947729.1    TKTINRIIDVFPAEEKSMVRSMLSESLQAVVAQSLLKK.NKGGRVAALEIMMCTGAIRNLIREDKIAQMYSSIQTGQAKG  312
NTDB id 1194 PAKAF RS01995 WP 003084552.1    AKTIDRVVDVFPAEEKAMVRSMLSESLQSVISQTLIKK.IGGGRVAAHEIMIGTPAIRNLIREDKVAQMYSAIQTGGSLG  312
NTDB id 1202 PSJM300 01600 AFN76400.1        AKTIDRVVDVFPAEEKSMVRSMLSESLQAVISQTLLKK.VGGGRVAAHEIMIGTPAIRNLIREDKVAQMYSSIQTGGSLG  312
NTDB id 1020 ACIAD RS04210 WP 011182164.1    AKTIDRIIDVFPAEEKDMVRTMLSESLQAVISQTLLKK.EGGGRVAAHEIMIGIPAIRNLIREGKVAQMYSSIQTGATHG  312
NTDB id 1060 ABD1 RS04380 WP 000355489.1     AKTIDRVIDVFPAEEKDMVRAMLSESLQAVISQTLLKK.NGGGRVAAHEIMIGIPAIRNLIRENKVAQMYSAIQTGANHG  312
NTDB id 1040 HON27 RS13360 WP 000355489.1    AKTIDRVIDVFPAEEKDMVRAMLSESLQAVISQTLLKK.NGGGRVAAHEIMIGIPAIRNLIRENKVAQMYSAIQTGANHG  312
NTDB id 1081 FDQ49 RS05335 WP 006581387.1    AKTIDRVIDVFPAEEKDMVRAMLSESLQAVISQTLLKK.NGGGRVAAHEIMIGIPAIRNLIRENKVAQMYSAIQTGANHG  312
consensus                                    *****!*****************!***!  ****!  !***   ***!****!****  ******!!*  ********  *****   !
```



```
NTDB id 1177 A1552VC RS01165 WP 000422572.1   MQTFDQALYQLVVDDKISEQDALHSADSANDLRLMLKTKRGDDY...GSGSLQNVKI.........DME.............   368
NTDB id 1203 PSJM300 01605 AFN76401.1         MQTFDQALYNLYVVQGEITYEDALLHADSSNDLRLMIKLGSETDGEHLTSVS.QGLTL.........EMSDDDPGRSFR...   381
NTDB id 1019 ACIAD RS04205 WP 004922051.1     MQTFDQALFDLYDHQHISYADALKHADSPNNLRLQIKLSEEANKPLDNRERMSEMER.........KMTFDGQRRNLK...   383
NTDB id 315009 D3790 RS01110 WP 038219869.1   MQTYEQSRQQRKALGLLAEE.....................................................................   334
NTDB id 1307 DR RS10055 WP 010888596.1        MVIMDAYLAGLFRRHLITYDKGLERAID.PKEFARLA..NDASAGL.GGASMTPAAPPVPAYNSASSSSTGRGGDFGRGA   393
NTDB id 1116 NGFG RS10615 WP 003690200.1      MQTMDQSLQSLVRQGLIAPEAARRRAQNSESMSF.....................................................   347
NTDB id 1086 NMV RS00245 WP 002218487.1       MQTMDQSLQSLVRQGLIAPEVARRRAQNSESMSF.....................................................   347
NTDB id 1185 GTF74 RS11940 WP 000350195.1     MQTMEQNAKQLIARGVVDAQEVQSKIELDLKAF.....................................................   345
NTDB id 1176 A1552VC RS01160 WP 000350195.1   MQTMEQNAKQLIARGVVDAQEVQSKIELDLKAF.....................................................   345
NTDB id 1283 ACE17W RS02630 WP 010947729.1    MQTLDQHLTELVNKNIISKHTAHEAALN.KSLF.....................................................   344
NTDB id 1259 GCO85 RS10305 WP 010947729.1     MQTLDQHLTELVNKNIISKHTAHEAALN.KSLF.....................................................   344
NTDB id 1194 PAKAF RS01995 WP 003084552.1     MQTLDMCLKGLVAKGLISRENAREKAKI.PENF.....................................................   344
NTDB id 1202 PSJM300 01600 AFN76400.1         MQTLDSCLKGLLAKGLISRDSAKEKAKQ.PENF.....................................................   344
NTDB id 1020 ACIAD RS04210 WP 011182164.1     MTTLDQSLKQLLAKGIINLPTARAVAKS.PESF.....................................................   344
NTDB id 1060 ABD1 RS04380 WP 000355489.1      MTTLDQSLKGLVARGVISPQTARTAAKQ.PESFL....................................................   345
NTDB id 1040 HON27 RS13360 WP 000355489.1     MTTLDQSLKGLVARGVISPQTARTAAKQ.PESFL....................................................   345
NTDB id 1081 FDQ49 RS05335 WP 006581387.1     MTTLDQSLKGLVSRGVISPQTARTAAKQ.PESFL....................................................   345
consensus                                     !*!**** *  ** ***** *   *      *
```

logo


```
NTDB id 1177 A1552VC RS01165 WP 000422572.1   ..........................   368
NTDB id 1203 PSJM300 01605 AFN76401.1         ..........................   381
NTDB id 1019 ACIAD RS04205 WP 004922051.1     ..........................   383
NTDB id 315009 D3790 RS01110 WP 038219869.1   ..........................   334
NTDB id 1307 DR RS10055 WP 010888596.1        AAPATPAAPAAGRSEPGRAGGFGRR   418
NTDB id 1116 NGFG RS10615 WP 003690200.1      ..........................   347
NTDB id 1086 NMV RS00245 WP 002218487.1       ..........................   347
NTDB id 1185 GTF74 RS11940 WP 000350195.1     ..........................   345
NTDB id 1176 A1552VC RS01160 WP 000350195.1   ..........................   345
NTDB id 1283 ACE17W RS02630 WP 010947729.1    ..........................   344
NTDB id 1259 GCO85 RS10305 WP 010947729.1     ..........................   344
NTDB id 1194 PAKAF RS01995 WP 003084552.1     ..........................   344
NTDB id 1202 PSJM300 01600 AFN76400.1         ..........................   344
NTDB id 1020 ACIAD RS04210 WP 011182164.1     ..........................   344
NTDB id 1060 ABD1 RS04380 WP 000355489.1      ..........................   345
NTDB id 1040 HON27 RS13360 WP 000355489.1     ..........................   345
NTDB id 1081 FDQ49 RS05335 WP 006581387.1     ..........................   345
consensus
```

X non conserved
X similar
X ≥ 50% conserved