```
logo
NTDB id 54484 UC509 RS10555 WP 015082934.1  ..MVQKKAQELIQKAIEMEASDIYLIASGNLYKIYIRQQLGRTLIEELNQEIGLALLTHFKFLAGMNTGERRRVQLGACWYELEG   83
NTDB id 586 KW2 RS10855 WP 011836048.1      ..MVQKKAQELIQKAIEMEASDIYLIASGNLYKIYIRQQLGRTLIEEVNQEIGLALLTHFKFLAGMNTGERRRVQLGACWYELEG   83
NTDB id 584 DLJ51 RS00890 WP 019777327.1    MVEVQELGKELIRQAVEEQAQDIYLLPKPAVYKIYLRFGEKRHLIQTCPPEQAAGLISHFKFLAGMNVGEKRRAQLGACDYAFAD   85
NTDB id 385 SMU RS09035 WP 002263435.1      ..MVQKLGRKIIAEAVQNKAQDIYIIPKKESYELYMRIGNERRFIDVYDHHFMANLISHFKFVAGMNVGEKRRSQLGSCDYSYDE   83
NTDB id 394 FSA28 RS09405 WP 002291652.1    ..MVQKLGRKIIAEAVQNKAQDIYIIPKKESYELYMRIGNERRFIDVYDHHFMANLISHFKFVAGMNVGEKRRSQLGSCDYSYDE   83
NTDB id 429 SGO RS09420 WP 012130942.1      ..MVQKIAQAIVRQAKEECAQDIYFVPKDDCYELYMRIGDERRFIQTYDFDQLAAVISHFKFLAGMNVGEKRRSQLGSCDYRYDD   83
NTDB id 270 KZH43 RS09265 WP 000249564.1    ..MVQEIAQEIIRSARKKGTQDIYFVPKLDAYELHMRVGDERCKIGSYDFEKFAAVISHFKFVAGMNVGEKRRSQLGSCDYAYDH   83
NTDB id 229 SPD RS09895 WP 000249564.1      ..MVQEIAQEIIRSARKKGTQDIYFVPKLDAYELHMRVGDERCKIGSYDFEKFAAVISHFKFVAGMNVGEKRRSQLGSCDYAYDH   83
NTDB id 195 SPR RS09430 WP 000249564.1      ..MVQEIAQEIIRSARKKGTQDIYFVPKLDAYELHMRVGDERCKIGSYDFEKFAAVISHFKFVAGMNVGEKRRSQLGSCDYAYDH   83
NTDB id 160 SP RS10380 WP 000249564.1       ..MVQEIAQEIIRSARKKGTQDIYFVPKLDAYELHMRVGDERCKIGSYDFEKFAAVISHFKFVAGMNVGEKRRSQLGSCDYAYDH   83
NTDB id 500 SM12261 RS00945 WP 000249545.1  ..MVQEIAQEIIRSARKKGAQDIYFVPKLDAYELHMRVGDERCKIGCYDFEKFAAVISHFKFVAGMNVGEKRRSQLGSCDYEYDQ   83
consensus                                   *!!********** !*   **!!!**** * !****!****!  ! *****  *****!!!!*!!!!*!!*!!*!!!*!*! **
```

```
logo
NTDB id 54484 UC509 RS10555 WP 015082934.1  SSAKRLRLSTVGDFEGNESLVIRLLHDQKQELEFWFDDK..LQDFRCKRGLYLFAGPVGSGKTSLMFDLAHRHFSNAQVITIEEP   166
NTDB id 586 KW2 RS10855 WP 011836048.1      SSAKRLRLSTVGDFEGNESLVIRLLHDQKQELEFWFDDK..LQDFRCKRGLYLFAGPVGSGKTSLMFDLAHRHFSNAQVITIEEP   166
NTDB id 584 DLJ51 RS00890 WP 019777327.1    GETAALRLSTVGDYQGRESLVIRLLFDRKRELKFWFDGLNALLPKIIGRGLYLFSGPVGSGKTTLMYELVSRKYPDSQIITIEDP   170
NTDB id 385 SMU RS09035 WP 002263435.1      GKVISLRLSSVGDYRGYESLVIRLLFSGRHDLKFWFNSMDLILNEIKGRGLYLFSGPVGSGKTSLMYQLVKLRFETKQVITIEDP   168
NTDB id 394 FSA28 RS09405 WP 002291652.1    GKVISLRLSSVGDYRGYESLVIRLLFSGRHDLKFWFNSMDLILNEIKGRGLYLFSGPVGSGKTSLMYQLVKLRFETKQVITIEDP   168
NTDB id 429 SGO RS09420 WP 012130942.1      .KETSIRLSTVGDYRGYESLVIRLLHDEETELKFWFTHFPELREKFKDRGLYLFSGPVGSGKTTLMHQLAQLKFKGQQVMSIEDP   167
NTDB id 270 KZH43 RS09265 WP 000249564.1    .KIASLRLSTVGDYRGHESLVIRLLHDEEQDLHFWFQDIEELGKQYRQRGLYLFAGPVGSGKTTLMHELSKSLFKGQQVMSIEDP   167
NTDB id 229 SPD RS09895 WP 000249564.1      .KIASLRLSTVGDYRGHESLVIRLLHDEEQDLHFWFQDIEELGKQYRQRGLYLFAGPVGSGKTTLMHELSKSLFKGQQVMSIEDP   167
NTDB id 195 SPR RS09430 WP 000249564.1      .KIASLRLSTVGDYRGHESLVIRLLHDEEQDLHFWFQDIEELGKQYRQRGLYLFAGPVGSGKTTLMHELSKSLFKGQQVMSIEDP   167
NTDB id 160 SP RS10380 WP 000249564.1       .KIASLRLSTVGDYRGHESLVIRLLHDEEQDLHFWFQDIEELGKQYRQRGLYLFAGPVGSGKTTLMHELSKSLFKGQQVMSIEDP   167
NTDB id 500 SM12261 RS00945 WP 000249545.1  .KMASLRLSTVGDYRGHESLVIRLLHDEEQDLHFWFQDIEELGKQYRQRGLYLFAGPVGSGKTTLMHELAKSLFKGQQVMSIEDP   167
consensus                                   *****!!!*!!!**! !!!!!!!!!******! !!!******   ** !!!!!!*!!!!!!!!*!!**! *  *****!***!!*!
```

```
logo
NTDB id 54484 UC509 RS10555 WP 015082934.1  VELIESDFIQLQVNDVIGNSYDELIKLSLRHRPDLLIVGEIRDQQTARAVLRASLTGYTVFSTIHAASVKGVVQRLLELGLSDWE   251
NTDB id 586 KW2 RS10855 WP 011836048.1      VELIDSDFIQLQVNDVIGNSYDELIKLSLRHRPDLLIVGEIRDQQTARAVLRASLTGYTVFSTIHAASVKGVVQRLLELGLSDWE   251
NTDB id 584 DLJ51 RS00890 WP 019777327.1    VEIKQDNMLQLQLNPSIGMTYDHLIKLSLRHRPDVLIIGEIRDRETAQAVIRASLTGIRVFSTVHAKSIPGVYARILELGVSQDE   255
NTDB id 385 SMU RS09035 WP 002263435.1      VEIKQDNMLQLQLNESIDMTYDNLIKLSLRHRPDILIIGEIRDKETARAVIRASLTGAMVFSTIHAKSIPGVYARMLELGTSSEE   253
NTDB id 394 FSA28 RS09405 WP 002291652.1    VEIKQDNMLQLQLNESIDMTYDNLIKLSLRHRPDILIIGEIRDKETARAVIRASLTGAMVFSTIHAKSIPGVYARMLELGTSSEE   253
NTDB id 429 SGO RS09420 WP 012130942.1      VEIKQEDMLQLQLNETIGLTYESLIKLSLRHRPDLLIIGEIRDSETARAVVRASLTGATVFSTIHAKSIPGVYERLLELGVSEEE   252
NTDB id 270 KZH43 RS09265 WP 000249564.1    VEIKQDDMLQLQLNEAIGLTYENLIKLSLRHRPDLLIIGEIRDSETARAVVRASLTGATVFSTIHAKSIRGVYERLLELGVSEEE   252
NTDB id 229 SPD RS09895 WP 000249564.1      VEIKQDDMLQLQLNEAIGLTYENLIKLSLRHRPDLLIIGEIRDSETARAVVRASLTGATVFSTIHAKSIRGVYERLLELGVSEEE   252
NTDB id 195 SPR RS09430 WP 000249564.1      VEIKQDDMLQLQLNEAIGLTYENLIKLSLRHRPDLLIIGEIRDSETARAVVRASLTGATVFSTIHAKSIRGVYERLLELGVSEEE   252
NTDB id 160 SP RS10380 WP 000249564.1       VEIKQDDMLQLQLNEAIGLTYENLIKLSLRHRPDLLIIGEIRDSETARAVVRASLTGATVFSTIHAKSIRGVYERLLELGVSEEE   252
NTDB id 500 SM12261 RS00945 WP 000249545.1  VEIKQDNMLQLQLNEAIGLTYENLIKLSLRHRPDLLIIGEIRDSETARAVVRASLTGATVFSTIHAKSIRGVYERLLELGVSEEE   252
consensus                                   !!*******!!!*!* !***!**!!!!!!!!!!!!*!!*!!!!!**!!*!!*!!!!!!**!!!!*!!*!**!!**!*!!!!*!**!
```

```
logo
NTDB id 54484 UC509 RS10555 WP 015082934.1   LKNGLEAVVYQRLIAGKGVLDIAKSKFDTWSPKKWNEKIENLYANGHLTAIEAEREKISINQASKIDTTDGESFE   326
NTDB id 586 KW2 RS10855 WP 011836048.1       LKNGLEAVVYQRLIAGKGVLDIAKSKFDTWSPKKWNEKIENLYANGHLTAIEAEREKISINQASKIDTTDGESFE   326
NTDB id 584 DLJ51 RS00890 WP 019777327.1     LDNCLAGIAYQRLIGGGGLIDFAQDHFQNHQAECWNEKIDQLLAAGHLTEEEAAAEKIKD...............   315
NTDB id 385 SMU RS09035 WP 002263435.1       LQNALRGIVYQRLIGGGGIIDFAKGDYQNHSAKKWNKQIYDLFTAGYITEGEAQAEEIED...............   313
NTDB id 394 FSA28 RS09405 WP 002291652.1     LQNALCGIVYQRLIGGGGIIDFAKGDYQNHSAKKWNKQIYDLFTAGYITEGEAQAEEIED...............   313
NTDB id 429 SGO RS09420 WP 012130942.1       LKIVLQGICYQRLIGGGGVIDFASDNYQEHEPTVWNQQIDQLLAAGHIHPEQAEAEKIRNQQAKTSY........   319
NTDB id 270 KZH43 RS09265 WP 000249564.1     LAVVLQGVCYQRLIGGGGIVDFASRDYQEHQAAKWNEQIDQLLKDGHITSLQAETEKISYS...............   313
NTDB id 229 SPD RS09895 WP 000249564.1       LAVVLQGVCYQRLIGGGGIVDFASRDYQEHQAAKWNEQIDQLLKDGHITSLQAETEKISYS...............   313
NTDB id 195 SPR RS09430 WP 000249564.1       LAVVLQGVCYQRLIGGGGIVDFASRDYQEHQAAKWNEQIDQLLKDGHITSLQAETEKISYS...............   313
NTDB id 160 SP RS10380 WP 000249564.1        LAVVLQGVCYQRLIGGGGIVDFASRDYQEHQAAKWNEQIDQLLKDGHITSLQAETEKISYS...............   313
NTDB id 500 SM12261 RS00945 WP 000249545.1   LAVVLQGVCYQRLIGGGGIVDFANKDYQEHQSTSWNAQIDQLLKDGHITSLQAETEKISYS...............   313
consensus                                    ! **!****!!!!!*!*!**!*!  ******* *!!**!**!*  !*** **!* !*!*
```

X non conserved

X similar

X $\geq$ 50% conserved