```
logo
NTDB id 216184 BXU04 RS08110 WP 011258418.1   MAKAKTAYVCGECGAEYTKWQGQCTECGVWNTLSEIVLESATPGGKASPATSRRIGWAGKA.EAPKITALKDVQQSEQAR   79
NTDB id 125 BSU 00870 NP 387968.1             MAKTKSKFICQSCGYESPKWMGKCPGCGAWNTMVEEMIKKAPANRR........AAFSHSVQTVQKPSPITSIETSEEPR   72
NTDB id 509 SM12261 RS00130 WP 078228442.1    MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNAR........VSLTGE...KTKPMKLAEVTSINVNR   69
NTDB id 279 KZH43 RS00140 WP 074017595.1      MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNAR........VSLTGE...KTKPMKLAEVTSINVNR   69
NTDB id 238 SPD RS00140 WP 074017595.1        MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNAR........VSLTGE...KTKPMKLAEVTSINVNR   69
NTDB id 204 SPR RS00140 WP 074017595.1        MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNAR........VSLTGE...KTKPMKLAEVTSINVNR   69
NTDB id 169 SP RS00155 WP 074017595.1         MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNAR........VSLTGE...KTKPMKLAEVTSINVNR   69
NTDB id 537 SMSK321 RS07120 WP 080550752.1   MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNAR........VSLTGE...KTKPMKLAEVTSINVNR   69
consensus                                     !!!*!****!**!!****!**!*!**!!*!****!**********         ******   **!**************!

logo
NTDB id 216184 BXU04 RS08110 WP 011258418.1   VSTGIGEFDRVLGGGLVEGAVVLIGGDPGIGKSTLLLQALASMAST.LPVLYVTGEESLAQVAGRAVRLDLPLDGLNALS   158
NTDB id 125 BSU 00870 NP 387968.1             VKTQLGEFNRVLGGGVVKGSLVLIGGDPGIGKSTLLLQVSAQLSGSSNSVLYISGEESVKQTKLRADRLGINNPSLHVLS   152
NTDB id 509 SM12261 RS00130 WP 078228442.1   TKTEMEEFNRVLGGGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQV.GTVLYVSGEESAQQIKLRAERLGDIDSEFYLYA   148
NTDB id 279 KZH43 RS00140 WP 074017595.1      TKTEMEEFNRVLGGGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQV.GTVLYVSGEESAQQIKLRAERLGDIDSEFYLYA   148
NTDB id 238 SPD RS00140 WP 074017595.1        TKTEMEEFNRVLGGGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQV.GTVLYVSGEESAQQIKLRAERLGDIDSEFYLYA   148
NTDB id 204 SPR RS00140 WP 074017595.1        TKTEMEEFNRVLGGGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQV.GTVLYVSGEESAQQIKLRAERLGDIDSEFYLYA   148
NTDB id 169 SP RS00155 WP 074017595.1         TKTEMEEFNRVLGGGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQV.GTVLYVSGEESAQQIKLRAERLGDIDSEFYLYA   148
NTDB id 537 SMSK321 RS07120 WP 080550752.1   TKTEMEEFNRVLGGGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQV.GTVLYVSGEESAQQIKLRAERLGDIDSEFYLYA   148
consensus                                     **!***!!*!!!!!!*!*!**!!!!!!!!!!!!!!!!!!*******  **!!!**!!!!**!***!!*!!***********

logo
NTDB id 216184 BXU04 RS08110 WP 011258418.1   ETGIEHILQHASVARPRLIVADSVQTLWTESLTAAPGSVSQVRESAARLVRYAKETGTAVFLVGHVTKEGGIAGPRVLEH   238
NTDB id 125 BSU 00870 NP 387968.1             ETDMEYISSAIQEMNPSFVVVDSIQTVYQSDITSAPGSVSQVRECTAELMKIAKTKGIPIFIVGHVTKEGSIAGPRLLEH   232
NTDB id 509 SM12261 RS00130 WP 078228442.1   ETNMQSVRTEVERIQPDFLIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEH   228
NTDB id 279 KZH43 RS00140 WP 074017595.1      ETNMQSVRAEVERIQPDFLIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEH   228
NTDB id 238 SPD RS00140 WP 074017595.1        ETNMQSVRAEVERIQPDFLIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEH   228
NTDB id 204 SPR RS00140 WP 074017595.1        ETNMQSVRAEVERIQPDFLIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEH   228
NTDB id 169 SP RS00155 WP 074017595.1         ETNMQSVRAEVERIQPDFLIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEH   228
NTDB id 537 SMSK321 RS07120 WP 080550752.1   ETNMQSVRAEVERIQPDFLIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEH   228
consensus                                     !!*************!*****!!*!!***********!!!!!!!!**!*!***!!*******!*!!!!!!!!**!!!!*!!!

logo
NTDB id 216184 BXU04 RS08110 WP 011258418.1   MVDAVLYFEGESGSRFRLLRAFKNRFGAVNELGVFAMGEKGLKEVSNPSAIFLSGGSTQQPGSCVMVTREGTRPLMVEVQ   318
NTDB id 125 BSU 00870 NP 387968.1             MVDTVLYFEGERHHTFRILRAVKNRFGSTNEMGIFEMREEGLTEVLNPSEIFLEERSAGSAGSSITASMEGTRPILVEIQ   312
NTDB id 509 SM12261 RS00130 WP 078228442.1   MVDTVLYFEGERHHTFRILRAVKNRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQ   308
NTDB id 279 KZH43 RS00140 WP 074017595.1      MVDTVLYFEGERHHTFRILRAVKNRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQ   308
NTDB id 238 SPD RS00140 WP 074017595.1        MVDTVLYFEGERHHTFRILRAVKNRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQ   308
NTDB id 204 SPR RS00140 WP 074017595.1        MVDTVLYFEGERHHTFRILRAVKNRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQ   308
NTDB id 169 SP RS00155 WP 074017595.1         MVDTVLYFEGERHHTFRILRAVKNRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQ   308
NTDB id 537 SMSK321 RS07120 WP 080550752.1   MVDTVLYFEGERHHTFRILRAVKNRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQ   308
consensus                                     !!!*!!!!!!!*****!!*!!!*!!!!!**!!*!*!*!***!!*!!*!!!**!!********!!******!!!!!***!*!
```

```
logo
NTDB id 216184 BXU04 RS08110 WP 011258418.1   ALVDASPLSNPRRVAVGLEQNRLAMLLAVLHRHGGIVVGDQDVFVNVVGGIRVQETAADLPVLLAVLSSLRDRPLAEKTI   398
NTDB id 125 BSU 00870 NP 387968.1             ALISPTSFGNPRRMATGIDHNRVSLLMAVLEKRVGLLLQNQDAYLKVAGGVKLDEPAIDLAIVISIASSFRDTPPNPADC   392
NTDB id 509 SM12261 RS00130 WP 078228442.1    ALVTPTMFGNAKRTTTGLDFNRASLIMAVLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQEC   388
NTDB id 279 KZH43 RS00140 WP 074017595.1      ALVTPTMFGNAKRTTTGLDFNRASLIMAVLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQEC   388
NTDB id 238 SPD RS00140 WP 074017595.1        ALVTPTMFGNAKRTTTGLDFNRASLIMAVLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQEC   388
NTDB id 204 SPR RS00140 WP 074017595.1        ALVTPTMFGNAKRTTTGLDFNRASLIMAVLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQEC   388
NTDB id 169 SP RS00155 WP 074017595.1         ALVTPTMFGNAKRTTTGLDFNRASLIMAVLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQEC   388
NTDB id 537 SMSK321 RS07120 WP 080550752.1   ALVTPTMFGNAKRTTTGLDFNRASLIMAVLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQEC   388
consensus                                     !!*******!**!***!***!!*****!!!****!*****!!******!!****!*!*!!*******!!**!*!******

logo
NTDB id 216184 BXU04 RS08110 WP 011258418.1   AFGEVGLSGEIRPVPNGEDRLKEAATHGFKRAIVPRANAPKTTSIKGMEIIAVERLRQALEVAAD.   463
NTDB id 125 BSU 00870 NP 387968.1             FIGEVGLTGEVRRVSRIEQRVKEAAKLGFKRMIIPAANLDGWTKPKGIEVIGVANVAEALRTSLGG   458
NTDB id 509 SM12261 RS00130 WP 078228442.1    FVGELGLTGEIRRVNRIEQRINEAAKLGFTKIYVPKNSLTGITPPKEIQVIGVTTIQEVLKKVFA.   453
NTDB id 279 KZH43 RS00140 WP 074017595.1      FVGELGLTGEIRRVNRIEQRINEAAKLGFTKIYVPKNSLTGITLPKEIQVIGVTTIQEVLKKVFA.   453
NTDB id 238 SPD RS00140 WP 074017595.1        FVGELGLTGEIRRVNRIEQRINEAAKLGFTKIYVPKNSLTGITLPKEIQVIGVTTIQEVLKKVFA.   453
NTDB id 204 SPR RS00140 WP 074017595.1        FVGELGLTGEIRRVNRIEQRINEAAKLGFTKIYVPKNSLTGITLPKEIQVIGVTTIQEVLKKVFA.   453
NTDB id 169 SP RS00155 WP 074017595.1         FVGELGLTGEIRRVNRIEQRINEAAKLGFTKIYVPKNSLTGITLPKEIQVIGVTTIQEVLKKVFA.   453
NTDB id 537 SMSK321 RS07120 WP 080550752.1   FVGELGLTGEIRRVNRIEQRINEAAKLGFTKIYVPKNSLTGITPPMEIQVIGVTTIQEVLKKVFA.   453
consensus                                     **!!*!!*!!*!*!***!*!**!!!**!!*****!*******!  ******!*!******!*****
```

X non conserved

X similar

X $\geq$ 50% conserved