```
logo

NTDB id 125 BSU 00870 NP 387968.1        MAKTKSKFICQSCGYESPKWMGKCPGCGAWNTMVEEMIKKAPANRRAAFSHSVQTVQKPSPITSIETSEEPRVKTQLGEFNRVLG   85
NTDB id 20282 DN94 01615 AHX74467.1      MAKKKSVFTCQECGYQSPKYLGRCPNCSAWSSFVEEVEVQEVKNARVSLNGE...KSRPTKLKDVSSINYSRTKTDMDEFNRVLG   82
NTDB id 279 KZH43 RS00140 WP 074017595.1 MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNARVSLTGE...KTKPMKLAEVTSINVNRTKTEMEEFNRVLG   82
NTDB id 238 SPD RS00140 WP 074017595.1   MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNARVSLTGE...KTKPMKLAEVTSINVNRTKTEMEEFNRVLG   82
NTDB id 204 SPR RS00140 WP 074017595.1   MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNARVSLTGE...KTKPMKLAEVTSINVNRTKTEMEEFNRVLG   82
NTDB id 169 SP RS00155 WP 074017595.1    MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNARVSLTGE...KTKPMKLAEVTSINVNRTKTEMEEFNRVLG   82
NTDB id 509 SM12261 RS00130 WP 078228442.1 MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNARVSLTGE...KTKPMKLAEVTSINVNRTKTEMEEFNRVLG   82
NTDB id 537 SMSK321 RS07120 WP 080550752.1 MAKKKATFVCQNCGYNSPKYLGRCPNCGSWSSFVEEVEVAEVKNARVSLTGE...KTKPMKLAEVTSINVNRTKTEMEEFNRVLG   82
consensus                                !!!*!**!*!!*!!!*!!!**!*!!*!**!***!!!********!*!******   ***!*************!*!!***!!!!!!!

logo

NTDB id 125 BSU 00870 NP 387968.1        GGVVKGSLVLIGGDPGIGKSTLLLQVSAQLSGSSNSVLYISGEESVKQTKLRADRLGINNPSLHVLSETDMEYISSAIQEMNPSF   170
NTDB id 20282 DN94 01615 AHX74467.1      GGVVPGSLVLIGGDPGIGKSTLLLQVSTQLANK.GTVLYVSGEESAEQIKLRSERLGDIDNEFYLYAETNMQSIRSEIEKIKPDF   166
NTDB id 279 KZH43 RS00140 WP 074017595.1 GGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQV.GTVLYVSGEESAQQIKLRAERLGDIDSEFYLYAETNMQSVRAEVERIQPDF   166
NTDB id 238 SPD RS00140 WP 074017595.1   GGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQV.GTVLYVSGEESAQQIKLRAERLGDIDSEFYLYAETNMQSVRAEVERIQPDF   166
NTDB id 204 SPR RS00140 WP 074017595.1   GGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQV.GTVLYVSGEESAQQIKLRAERLGDIDSEFYLYAETNMQSVRAEVERIQPDF   166
NTDB id 169 SP RS00155 WP 074017595.1    GGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQV.GTVLYVSGEESAQQIKLRAERLGDIDSEFYLYAETNMQSVRAEVERIQPDF   166
NTDB id 509 SM12261 RS00130 WP 078228442.1 GGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQV.GTVLYVSGEESAQQIKLRAERLGDIDSEFYLYAETNMQSVRTEVERIQPDF   166
NTDB id 537 SMSK321 RS07120 WP 080550752.1 GGVVPGSLVLIGGDPGIGKSTLLLQVSTQLSQV.GTVLYVSGEESAQQIKLRAERLGDIDSEFYLYAETNMQSVRAEVERIQPDF   166
consensus                                !!!!*!!!!!!!!!!!!!!!!!!!!!!!!*!!*** **!!!*!!!!!**!*!!!!**!!!*****!!!!!!!*!*!*********!*!

logo

NTDB id 125 BSU 00870 NP 387968.1        VVVDSIQTVYQSDITSAPGSVSQVRECTAELMKIAKTKGIPIFIVGHVTKEGSIAGPRLLEHMVDTVLYFEGERHHTFRILRAVK   255
NTDB id 20282 DN94 01615 AHX74467.1      LIIDSIQTIMSPEVSSVQGSVSQVREVTAELMQLAKTNNIATFIVGHVTKEGTLAGPRMLEHMVDTVLYFEGERHHTFRILRAVK   251
NTDB id 279 KZH43 RS00140 WP 074017595.1 LIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEHMVDTVLYFEGERHHTFRILRAVK   251
NTDB id 238 SPD RS00140 WP 074017595.1   LIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEHMVDTVLYFEGERHHTFRILRAVK   251
NTDB id 204 SPR RS00140 WP 074017595.1   LIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEHMVDTVLYFEGERHHTFRILRAVK   251
NTDB id 169 SP RS00155 WP 074017595.1    LIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEHMVDTVLYFEGERHHTFRILRAVK   251
NTDB id 509 SM12261 RS00130 WP 078228442.1 LIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEHMVDTVLYFEGERHHTFRILRAVK   251
NTDB id 537 SMSK321 RS07120 WP 080550752.1 LIIDSIQTIMSPEISGVQGSVSQVREVTAELMQLAKTNNIAIFIVGHVTKEGTLAGPRMLEHMVDTVLYFEGERHHTFRILRAVK   251
consensus                                ***!!!!!********!!!!!!!!!*!!!!!**!!!**!**!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

logo

NTDB id 125 BSU 00870 NP 387968.1        NRFGSTNEMGIFEMREEGLTEVLNPSEIFLEERSAGSAGSSITASMEGTRPILVEIQALISPTSFGNPRRMATGIDHNRVSLLMA   340
NTDB id 20282 DN94 01615 AHX74467.1      NRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSAIVVTMEGTRPILAEVQALVTPTVFGNAKRTTTGLDFNRVSLIMA   336
NTDB id 279 KZH43 RS00140 WP 074017595.1 NRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQALVTPTMFGNAKRTTTGLDFNRASLIMA   336
NTDB id 238 SPD RS00140 WP 074017595.1   NRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQALVTPTMFGNAKRTTTGLDFNRASLIMA   336
NTDB id 204 SPR RS00140 WP 074017595.1   NRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQALVTPTMFGNAKRTTTGLDFNRASLIMA   336
NTDB id 169 SP RS00155 WP 074017595.1    NRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQALVTPTMFGNAKRTTTGLDFNRASLIMA   336
NTDB id 509 SM12261 RS00130 WP 078228442.1 NRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQALVTPTMFGNAKRTTTGLDFNRASLIMA   336
NTDB id 537 SMSK321 RS07120 WP 080550752.1 NRFGSTNEIGIFEMQSGGLVEVLNPSQVFLEERLDGATGSSIVVTMEGTRPILAEVQALVTPTMFGNAKRTTTGLDFNRASLIMA   336
consensus                                !!!!!!!!*!!!!!***!!*!!!!!!**!!!!!**!**!!*!***!!!!!!!!*!*!!!!**!!*!!!**!**!!*!*!!*!!*!!
```

```
logo                                      VLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQECFVGELGLTGEIRRVNRIEQRINEAAKLGFTKIY

NTDB id 125 BSU 00870 NP 387968.1         VLEKRVGLLLQNQDAYLKVAGGVKLDEPAIDLAIVISIASSFRDTPPNPADCFIGEVGLTGEVRRVSRIEQRVKEAAKLGFKRMI   425
NTDB id 20282 DN94 01615 AHX74467.1       VLEKRCGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKEKPTNPQESFIGEIGLTGEIRRVTRIEQRINEASKLGFTKIY   421
NTDB id 279 KZH43 RS00140 WP 074017595.1  VLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQECFVGELGLTGEIRRVNRIEQRINEAAKLGFTKIY   421
NTDB id 238 SPD RS00140 WP 074017595.1    VLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQECFVGELGLTGEIRRVNRIEQRINEAAKLGFTKIY   421
NTDB id 204 SPR RS00140 WP 074017595.1    VLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQECFVGELGLTGEIRRVNRIEQRINEAAKLGFTKIY   421
NTDB id 169 SP RS00155 WP 074017595.1     VLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQECFVGELGLTGEIRRVNRIEQRINEAAKLGFTKIY   421
NTDB id 509 SM12261 RS00130 WP 078228442.1 VLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQECFVGELGLTGEIRRVNRIEQRINEAAKLGFTKIY   421
NTDB id 537 SMSK321 RS07120 WP 080550752.1 VLEKRAGLLLQNQDAYLKSAGGVKLDEPAIDLAVAVAIASSYKDKPTNPQECFVGELGLTGEIRRVNRIEQRINEAAKLGFTKIY   421
consensus                                 !!!!!*!!!!!!!!!!!!*!!!!!!!!!!!!!!!****!!!!****!*!!***!*!!*!!!!!*!!!!*!!!!!**!!*!!!!****
```

```
logo                                      VPKNSLTGITLPKEIQVIGVTTIQEVLKKVFA

NTDB id 125 BSU 00870 NP 387968.1         IPAANLDGWTKPKGIEVIGVANVAEALRTSLGG   458
NTDB id 20282 DN94 01615 AHX74467.1       APKNSLAGIEIPKGIDVIGVTTVSQVLKAVFST   454
NTDB id 279 KZH43 RS00140 WP 074017595.1  VPKNSLTGITLPKEIQVIGVTTIQEVLKKVFA.   453
NTDB id 238 SPD RS00140 WP 074017595.1    VPKNSLTGITLPKEIQVIGVTTIQEVLKKVFA.   453
NTDB id 204 SPR RS00140 WP 074017595.1    VPKNSLTGITLPKEIQVIGVTTIQEVLKKVFA.   453
NTDB id 169 SP RS00155 WP 074017595.1     VPKNSLTGITLPKEIQVIGVTTIQEVLKKVFA.   453
NTDB id 509 SM12261 RS00130 WP 078228442.1 VPKNSLTGITPPKEIQVIGVTTIQEVLKKVFA.   453
NTDB id 537 SMSK321 RS07120 WP 080550752.1 VPKNSLTGITPPMEIQVIGVTTIQEVLKKVFA.   453
consensus                                 *!***!*!***!**!*!!!!******!*****
```

X non conserved
X similar
X ≥ 50% conserved