```
logo
```

```
NTDB id 1103 NMB RS07590 WP 002212976.1        MSLNKVILIGRLGRDPEVRYMPN.GEAVCNFSVATSETWNDRNGQRVERTEWHNITMYRKLAEIAGQYLKKGGLVYLEGR   79
NTDB id 1131 NGFG RS05740 WP 003695064.1       MSLNKVILIGRLGRDPEVRYMPN.GEAVCNFSVATSETWNDRNGQRVERTEWHNITMYRKLAEIAGQYLKKGGLVYLEGR   79
NTDB id 498 SM12261 RS01980 WP 000282464.1     .MYNKVIMIGRLTSTPELHKTNN.DKSVARATIAVNRRYKDQNGERE..ADFVNMVLWGKLAESLASYATKGSLISVDGE   76
NTDB id 526 SMSK321 RS08825 WP 000282440.1     .MYNKVILIGRLTSTPELHKTNN.DKSVARATIAVNRRYKDQNGERE..ADFVNMVLWGRLAETLASYATKGSLISVDGE   76
NTDB id 158 SP RS09595 WP 000282442.1          .MYNKVILIGRLTSTPELHKTNN.DKSVARATIAVNRRYKDQNGERE..ADFVNMVLWGRLAETLASYATKGSLISVDGE   76
NTDB id 268 KZH43 RS08520 WP 000282467.1       .MYNKVIMIGRLTSTPELHKTNN.DKSVARATIAVNRRYKDQNGERE..ADFVNMVLWGRLAETLASYATKGSLISVDGE   76
NTDB id 227 SPD RS09110 WP 000282467.1         .MYNKVIMIGRLTSTPELHKTNN.DKSVARATIAVNRRYKDQNGERE..ADFVNMVLWGRLAETLASYATKGSLISVDGE   76
NTDB id 193 SPR RS08685 WP 000282467.1         .MYNKVIMIGRLTSTPELHKTNN.DKSVARATIAVNRRYKDQNGERE..ADFVNMVLWGRLAETLASYATKGSLISVDGE   76
NTDB id 583 DLJ51 RS09560 WP 002962590.1       .MYNKVILIGRLTAAPEMVKTPS.NKSVTHITLAVNRRFKTQDGERQ..ADFVNVVFWGKLAESLVSYAGKGSLVSLDGE   76
NTDB id 409 SMU RS08940 WP 002263454.1         .MYNKVILIGRLVATPEMVKTPK.DKSVTRVTLAVNRRFKSQDGEKQ..ADFVNVVLWGRLAETIASYGSKGSLISLDGE   76
NTDB id 183066 LLUC06 RS04825 WP 081213448.1  .MINNVVLVGRITRDPELRYTPQQNQAVATFNLAVNRQFKNANGERE..ADFISCVIWRQQAENLANWAKKETLIGLTGR   77
NTDB id 624 LCA RS00040 WP 011373726.1         .MINRVVLVGRLTRDVDLRYTSS.GAAVGTFSMAVNRQFTNANGDRE..ADFINCVIWRKSAENFANFTKKGSLVGVDGR   76
NTDB id 113 BSU 40900 NP 391970.1              .MLNRVVLVGRLTKDPELRYTPN.GAAVATFTLAVNRTFTNQSGERE..ADFINCVTWRRQAENVANFLKKGSLAGVDGR   76
NTDB id 112 BSU 36310 NP 391512.2              .MFNQVMLVGRLTKDPDLRYTSA.GAAVAHVTLAVNRSFKNASGEIE..ADYVNCTLWRKTAENTALYCQKGSLVGVSGR   76
consensus                                       **!*!***!!**   *** ** *   **!*  **!*********!***   ************!!******  !**!****!*
```

```
logo
```

```
NTDB id 1103 NMB RS07590 WP 002212976.1        IQSRKYQGKDGIERTAYDIVANEMKMLGGRNENSGGA......PYEE.........GYGQSQEAYQRPAQQSRQPASDAP   144
NTDB id 1131 NGFG RS05740 WP 003695064.1       IQSRKYQGKDGIERTAYDIVANEMKMLGGRNENSGGA......PYDE.........GYGQSQEAYQRPAQQSRQPAPDAP   144
NTDB id 498 SM12261 RS01980 WP 000282464.1     LRTRRFEK.NGQMNYVTEVLVTGFQLLESRAQRAMRENNA.......................................   115
NTDB id 526 SMSK321 RS08825 WP 000282440.1     LRTRRFEK.NGQMNYVAEVLVTGFQLLESRAQRAMRENNA.......................................   115
NTDB id 158 SP RS09595 WP 000282442.1          LRTRRFEK.NGQMNYVTEVLVTGFQLLESRAQRAMRENNA.......................................   115
NTDB id 268 KZH43 RS08520 WP 000282467.1       LRTRRFEK.NGQMNYVTEVLVTGFQLLESRAQRAMRENNA.......................................   115
NTDB id 227 SPD RS09110 WP 000282467.1         LRTRRFEK.NGQMNYVTEVLVTGFQLLESRAQRAMRENNA.......................................   115
NTDB id 193 SPR RS08685 WP 000282467.1         LRTRRFEK.NGQMNYVTEVLVTGFQLLESRAQRAMRENNA.......................................   115
NTDB id 583 DLJ51 RS09560 WP 002962590.1       IRTRHYEK.DGQTHYVTEILAQSFQLLESRAQRALRENNG.......................................   115
NTDB id 409 SMU RS08940 WP 002263454.1         LRTRKYEK.DGVTHFVTEVLGHSFQLLESRAQRAMRENNS.......................................   115
NTDB id 183066 LLUC06 RS04825 WP 081213448.1  IQTRNYENQQGQRVYITEVVADSFQMLESKGGAKQNEESQNN.................................TTP...   122
NTDB id 624 LCA RS00040 WP 011373726.1         LQTRNYENQQGQRVYVTEVVVDNFSLLESRTTTEQRQGDGASQNFNSNQSNGSQ.......QSGFTSPQQTGNAPAA...   146
NTDB id 113 BSU 40900 NP 391970.1              LQTRNYENQQGQRVFVTEVQAESVQFLEPKNGGGSGSG.....GYNEGNSGGGQYFGGGQNDNPFGGNQNNQRRNQG...   148
NTDB id 112 BSU 36310 NP 391512.2              IQTRSYENEEGVNVYVTEVLADTVRFMDPKPREKAAD..........................................   113
consensus                                      ***!**** *!*   ******    *****************
```

```
logo
```

```
NTDB id 1103 NMB RS07590 WP 002212976.1        SHPQEAPAAPRRQPVP.AAAPVEDIDDDIPF   174
NTDB id 1131 NGFG RS05740 WP 003695064.1       SHPQEAPAAPRRQPVP.AAAPVEDIDDDIPF   174
NTDB id 498 SM12261 RS01980 WP 000282464.1     ...............GQDLADLVLEEEELPF   131
NTDB id 526 SMSK321 RS08825 WP 000282440.1     ...............GQDLADLVLEEEELPF   131
NTDB id 158 SP RS09595 WP 000282442.1          ...............GQDLADLVLEEEELPF   131
NTDB id 268 KZH43 RS08520 WP 000282467.1       ...............GQDLADLVLEEEELPF   131
NTDB id 227 SPD RS09110 WP 000282467.1         ...............GQDLADLVLEEEELPF   131
NTDB id 193 SPR RS08685 WP 000282467.1         ...............GQDLADLVLEEEELPF   131
NTDB id 583 DLJ51 RS09560 WP 002962590.1       ...............ASDLTDLVLEEEELPF   131
NTDB id 409 SMU RS08940 WP 002263454.1         ...............ENDLADLVLEEEELPF   131
NTDB id 183066 LLUC06 RS04825 WP 081213448.1  .......NFARDT..PRDIPGTEISDDDLPF   144
NTDB id 624 LCA RS00040 WP 011373726.1         .......NNTQADPFANNGQAIDISDDDLPF   170
NTDB id 113 BSU 40900 NP 391970.1              .......NSFNDDPFANDGKPIDISDDDLPF   172
NTDB id 112 BSU 36310 NP 391512.2              ................................   113
consensus                                                   ***************
```

X non conserved
X similar
X $\geq$ 50% conserved