```
                                          MTSDPNPAQAFENWFEEEEGDDAFTSLIAGEETNSGIEELDFGDLFEGEPTVIQGEGFGSPSSGEEDPPVRMTLDFNSPE
NTDB id 1419 SGL RS12550 WP 010873252.1   MTSDPNPAQAFENWFEEEEGDDAFTSLIAGEETNSGIEELDFGDLFEGEPTVIQGEGFGSPSSGEEDPPVRMTLDFNSPE   80
NTDB id 413 AAK55817.1 141..845( )        ................................................................................    0
NTDB id 374 SMU RS06885 WP 002262930.1    ................................................................................    0
NTDB id 93825 ANS036C RS27970 WP 069073698.1  ................................................................................    0
NTDB id 1417 SGL RS04200 WP 014407071.1   ................................................................................    0
NTDB id 1047 HON27 RS03110 WP 000389061.1 ................................................................................    0
consensus
```

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                                          AELDALFTDEDAPTTAIDPFESSSWLEIDQMMEADPLASIPETNAPAYQTAGGLDDNDLAELQDLLGVGDVEPAITNPGL
NTDB id 1419 SGL RS12550 WP 010873252.1   AELDALFTDEDAPTTAIDPFESSSWLEIDQMMEADPLASIPETNAPAYQTAGGLDDNDLAELQDLLGVGDVEPAITNPGL   160
NTDB id 413 AAK55817.1 141..845( )        ................................................................................    0
NTDB id 374 SMU RS06885 WP 002262930.1    ................................................................................    0
NTDB id 93825 ANS036C RS27970 WP 069073698.1  ................................................................................    0
NTDB id 1417 SGL RS04200 WP 014407071.1   ................................................................................    0
NTDB id 1047 HON27 RS03110 WP 000389061.1 ................................................................................    0
consensus
```

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                                          HSFAGADRVTPLTNEVLLFAAIDDLDGLINAPVLDEEFSFTELETLIDTPAPKSFATISHPFRLPVAMEEDEDEFKDLEA
NTDB id 1419 SGL RS12550 WP 010873252.1   HSFAGADRVTPLTNEVLLFAAIDDLDGLINAPVLDEEFSFTELETLIDTPAPKSFATISHPFRLPVAMEEDEDEFKDLEA   240
NTDB id 413 AAK55817.1 141..845( )        ................................................................................    0
NTDB id 374 SMU RS06885 WP 002262930.1    ................................................................................    0
NTDB id 93825 ANS036C RS27970 WP 069073698.1  ................................................................................    0
NTDB id 1417 SGL RS04200 WP 014407071.1   ................................................................................    0
NTDB id 1047 HON27 RS03110 WP 000389061.1 ................................................................................    0
consensus
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                                          LLEQADSSLGGGIAGMGGARLPARPRQVKSRSFEQTMRVPIKQLDNLSNLIGELVVKRNRLEQDQERLRQFLDNLLNQAQ
NTDB id 1419 SGL RS12550 WP 010873252.1   LLEQADSSLGGGIAGMGGARLPARPRQVKSRSFEQTMRVPIKQLDNLSNLIGELVVKRNRLEQDQERLRQFLDNLLNQAQ   320
NTDB id 413 AAK55817.1 141..845( )        ................................................................................    0
NTDB id 374 SMU RS06885 WP 002262930.1    ................................................................................    0
NTDB id 93825 ANS036C RS27970 WP 069073698.1  ................................................................................    0
NTDB id 1417 SGL RS04200 WP 014407071.1   ................................................................................    0
NTDB id 1047 HON27 RS03110 WP 000389061.1 ................................................................................    0
consensus
```

```
                                          NLSDVGGRMQDLYERTLLEGALLASRSTNSRHHSSKTTYPDARITASSSSTMNDQPLDALEMDRFTGFHLLSQEMIELIV
NTDB id 1419 SGL RS12550 WP 010873252.1   NLSDVGGRMQDLYERTLLEGALLASRSTNSRHHSSKTTYPDARITASSSSTMNDQPLDALEMDRFTGFHLLSQEMIELIV   400
NTDB id 413 AAK55817.1 141..845( )        ................................................................................    0
NTDB id 374 SMU RS06885 WP 002262930.1    ................................................................................    0
NTDB id 93825 ANS036C RS27970 WP 069073698.1  ................................................................................    0
NTDB id 1417 SGL RS04200 WP 014407071.1   ................................................................................    0
NTDB id 1047 HON27 RS03110 WP 000389061.1 ................................................................................    0
consensus
```

logo

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                                          RVRESASDIQYLVDETDQVARTLRQVTTQLQEGMTKSRMVPFTQTADRLPRAIREVSMKLNKKVNLEVEGGDVLIDKMIL
NTDB id 1419 SGL RS12550 WP 010873252.1   RVRESASDIQYLVDETDQVARTLRQVTTQLQEGMTKSRMVPFTQTADRLPRAIREVSMKLNKKVNLEVEGGDVLIDKMIL  480
NTDB id 413 AAK55817.1 141..845( )        ................................................................................    0
NTDB id 374 SMU RS06885 WP 002262930.1    ................................................................................    0
NTDB id 93825 ANS036C RS27970 WP 069073698.1 ................................................................................    0
NTDB id 1417 SGL RS04200 WP 014407071.1   ................................................................................    0
NTDB id 1047 H0N27 RS03110 WP 000389061.1 ................................................................................    0
consensus
```

logo

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                                          EHLYNPMTHLVNNAITHGIETPAERQKLGKSPEGHLAVRAFLQGNQTLITVSDDGAGINTEMVKQKAVEKGLISRMEAQS
NTDB id 1419 SGL RS12550 WP 010873252.1   EHLYNPMTHLVNNAITHGIETPAERQKLGKSPEGHLAVRAFLQGNQTLITVSDDGAGINTEMVKQKAVEKGLISRMEAQS  560
NTDB id 413 AAK55817.1 141..845( )        ................................................................................    0
NTDB id 374 SMU RS06885 WP 002262930.1    ................................................................................    0
NTDB id 93825 ANS036C RS27970 WP 069073698.1 ................................................................................    0
NTDB id 1417 SGL RS04200 WP 014407071.1   ................................................................................    0
NTDB id 1047 H0N27 RS03110 WP 000389061.1 ................................................................................    0
consensus
```

logo

```
                                          LSQSEVYDLLFHAGFSTKDTADDFAGRGVGLDVVRTSLIDIRGAINIESTVGKGTTFTIRLPLTLSICKALCCLSDRARI
NTDB id 1419 SGL RS12550 WP 010873252.1   LSQSEVYDLLFHAGFSTKDTADDFAGRGVGLDVVRTSLIDIRGAINIESTVGKGTTFTIRLPLTLSICKALCCLSDRARI  640
NTDB id 413 AAK55817.1 141..845( )        ................................................................................    0
NTDB id 374 SMU RS06885 WP 002262930.1    ................................................................................    0
NTDB id 93825 ANS036C RS27970 WP 069073698.1 ................................................................................    0
NTDB id 1417 SGL RS04200 WP 014407071.1   ................................................................................    0
NTDB id 1047 H0N27 RS03110 WP 000389061.1 ................................................................................    0
consensus
```

logo

```
                                          AFPMDGVEDTRDYLPKDIVTDEDGQKCVKYGKEALLLPLYPLKDLLNYNRQLSRGSVYGGKQEEDVVRVIIARGSSGNLL
NTDB id 1419 SGL RS12550 WP 010873252.1   AFPMDGVEDTRDYLPKDIVTDEDGQKCVKYGKEALLLPLYPLKDLLNYNRQLSRGSVYGGKQEEDVVRVIIARGSSGNLL  720
NTDB id 413 AAK55817.1 141..845( )        ................................................................................    0
NTDB id 374 SMU RS06885 WP 002262930.1    ................................................................................    0
NTDB id 93825 ANS036C RS27970 WP 069073698.1 ................................................................................    0
NTDB id 1417 SGL RS04200 WP 014407071.1   ................................................................................    0
NTDB id 1047 H0N27 RS03110 WP 000389061.1 ................................................................................    0
consensus
```

logo

```
                                          ALQIDQVLGEEEIVIKQIEGPIPKPPGIAGATVRGDGSIMPIADVLELIEIAQGRLRTDSSGGLWRKTLTPTMEDAFMDN
NTDB id 1419 SGL RS12550 WP 010873252.1   ALQIDQVLGEEEIVIKQIEGPIPKPPGIAGATVRGDGSIMPIADVLELIEIAQGRLRTDSSGGLWRKTLTPTVNEVHMDP  800
NTDB id 413 AAK55817.1 141..845( )        .......................................................................MK    2
NTDB id 374 SMU RS06885 WP 002262930.1    .......................................................................MK    2
NTDB id 93825 ANS036C RS27970 WP 069073698.1 .......................................................................MS    2
NTDB id 1417 SGL RS04200 WP 014407071.1   .......................................................................MN    2
NTDB id 1047 H0N27 RS03110 WP 000389061.1 ...............................................................MEDAFQNL    8
consensus                                                                                                          *
```

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logo
NTDB id 1419 SGL RS12550 WP 010873252.1       TVLIVDDSITVRELLSLSFKKAGFRVEQARDGQEAWDQLKSGLPCDLVFCDIEMPRKNGLELLSELQADEELSSIPVALL   880
NTDB id 413 AAK55817.1 141..845( )             KILIVDDEKPISDIIKFNMTKEGYEVVTAFNGREALEQFEAE.QPDIIILDLMLPEIDGLEVAKTIR...KTSSVPILML   78
NTDB id 374 SMU RS06885 WP 002262930.1         KILIVDDEKPISDIIKFNLAKEGYDTITAFDGREALSKYEEE.NPDLIILDLMLPELDGLEVAKEVR...KNSHVPIIML   78
NTDB id 93825 ANSO36C RS27970 WP 069073698.1   TVLIVEDSIAQREMITDLLKATGLTVTHASDGLEALEAIQIA.PPDLVLDIVMPRMNGYEVCRRLKSDPKTQNVPVMC    81
NTDB id 1417 SGL RS04200 WP 014407071.1        AVLLVEDSSSQREMISGILKDHGWQVTIACDGVEALEKLQNF.SPDLVLDIVMPRMNGYEVCRRIKSDPKTKNVPVIMC   81
NTDB id 1047 HON27 RSO3110 WP 000389061.1      KVMVIDDSKTIRRTAETLLQREGCEVITAVDGFEALSKIAEA.NPDIVFVDIMMPRLDGYQTCALIKNSQNYQNIPVIML   87
consensus                                      *****!* ***** * * !* * ! *! !!** *  *!***!***** *  !  **  *  **    *    *!****

logo
NTDB id 1419 SGL RS12550 WP 010873252.1       TSRGADRHRKVAAKLGATGYFTKPYTEKDILDAANRMLNGEVLLPGSTRKTNSILSRFKKARGNFSEEAPTIVRSNPGTL   960
NTDB id 413 AAK55817.1 141..845( )             SAKDSEFDKVIGLELGADDYVTKPFSNRELQARVKALLRRSQPMPVDGQ.EADSKPQ.PIQIGDLEIVPDAYVAKKYGEE   156
NTDB id 374 SMU RS06885 WP 002262930.1         SAKDSEFDKVIGLEIGADDYVTKPFSNRELLARVKAHLRRTENIESAVAEENASGIP.EIIIGDLQILPDAFVAKKRGTE   157
NTDB id 93825 ANSO36C RS27970 WP 069073698.1   SSKGEEFDRYWGMKQGADAYIAKPFQPTELVGTVKQLLRG...........................................   121
NTDB id 1417 SGL RS04200 WP 014407071.1        SSKGEEFDRFWGMRQGADAYIAKPFQPMELVGTIKQLLRN...........................................   121
NTDB id 1047 HON27 RSO3110 WP 000389061.1      SSKDGLFDQAKGRVVGSDEYLTKPFSKDELLNAIRNHVSS...........................................   127
consensus                                      ***  ****  ** *!** !**!!** **** ** ** ***

logo
NTDB id 1419 SGL RS12550 WP 010873252.1       .....R.....STVLIIDDSVMVREMLSMTFKKADYHTETARDGQDAWEKLKSGLPCDLILCDIEMPRMNGLELLERIQE   1030
NTDB id 413 AAK55817.1 141..845( )             LDLTHREFELLYHLASHTGQVITREHLLETVWGYDYFG...................DVRTVDVTV.....RRLREKIED   212
NTDB id 374 SMU RS06885 WP 002262930.1         VELTHREFELLHHLATHTGQVMTREHLLETVWGYDYFG...................DVRTVDVTV.....RRLREKIED   213
NTDB id 93825 ANSO36C RS27970 WP 069073698.1   ...........................................   121
NTDB id 1417 SGL RS04200 WP 014407071.1        ...........................................   121
NTDB id 1047 HON27 RSO3110 WP 000389061.1      ...........................................   127
consensus

        <0

logo
NTDB id 1419 SGL RS12550 WP 010873252.1       DPNLSRIPVAMITSRGAQKMQRMAAEKGAKGYFVKPYIEETLLEASQRLIRGEVLLDLAALSADE   1095
NTDB id 413 AAK55817.1 141..845( )             TPSR...PEYILT.............RRGVGYYMRNNA*...............................   234
NTDB id 374 SMU RS06885 WP 002262930.1         TPSR...PEYILT.............RRGVGYYMKSYD...............................   235
NTDB id 93825 ANSO36C RS27970 WP 069073698.1   ...........................................   121
NTDB id 1417 SGL RS04200 WP 014407071.1        ...........................................   121
NTDB id 1047 HON27 RSO3110 WP 000389061.1      ...........................................   127
consensus
```

X non conserved
X similar
X ≥ 50% conserved