

logo

|                                             |                                                                                   |    |
|---------------------------------------------|-----------------------------------------------------------------------------------|----|
| NTDB id 1284 ACE17W RS12370 WP 010946666.1  | MRKIIAILII..ISASISMAYSKDNSLISVKVLPENRVRIDFQFSKPLKQLPASFITQKPPRLVLDFISTDMQIPSDQ    | 78 |
| NTDB id 1257 GC085 RS04855 WP 163621000.1   | MRKIIAILIL..ISASISLAYSKDNSLISVKVLPENRVRIDFQFSKPLKQLPASFITQKPPRLVLDFISTDMQIPSDQ    | 78 |
| NTDB id 1408 DSB67 RS13980 WP 010643500.1   | .....                                                                             | 0  |
| NTDB id 32297 VS RS13505 WP 012604945.1     | .....                                                                             | 0  |
| NTDB id 1186 GTF74 RS01320 WP 000788426.1   | .....                                                                             | 0  |
| NTDB id 1175 A1552VC RS12105 WP 000788426.1 | .....                                                                             | 0  |
| NTDB id 1193 PAKAF RS26665 WP 003161249.1   | MNSGLSRLGIALLAA.MFAPALLAADLEKLDVAALPGDRVELKQLQFDEPVA.APRGYTIEQPARIALDLPGVQNKLG..T | 76 |
| NTDB id 1009 ACIAD RS15175 WP 004923730.1   | MKQIIIRQFSIGTVAYAIMQVSAQVAITNVVPMNIPGQGTEIRVMFNGLPP.QPQAYQLEQPARLILDFDKAGQKLA..K  | 77 |
| NTDB id 1052 ABD1 RS15850 WP 001017033.1    | MNHVFRQFSMGAVAIAIMQAAASAQVSMTNIVPMQIAGQGTEIRVMFNGLPP.QPQAYQLENPSRLILDFDKAQGGLK..Q | 77 |
| NTDB id 1039 HON27 RS01460 WP 031993779.1   | MNHVFRQFSMGAVAIAIMQAAASAQVSMTNIVPMQIAGQGTEIRVMFNGLPP.QPQAYQLENPSRLILDFDKAQGGLK..Q | 77 |
| consensus                                   | * * * * *                                                                         |    |

logo

|                                             |                                                                                  |     |
|---------------------------------------------|----------------------------------------------------------------------------------|-----|
| NTDB id 1284 ACE17W RS12370 WP 010946666.1  | KTKTIIQLGSLHSYNIVAVGDRVRAILELDRSVSYSGSTAGSIYSLVLNGKSNDLFENS.KE.....VFITNQV       | 145 |
| NTDB id 1257 GC085 RS04855 WP 163621000.1   | KTKTIIQLGSLHSYNIVAVGDRVRAILELDRSVSYSGSTAGSVYSLVLNGKSNDLFENS.KE.....VFITNQV       | 145 |
| NTDB id 1408 DSB67 RS13980 WP 010643500.1   | .....MKMRHGLTLTPRKLTGLFSLWFS...LLLA...P.....FVA..AE                              | 33  |
| NTDB id 32297 VS RS13505 WP 012604945.1     | .....MIKGISGL..VSKALQGFVVS...VM..LV.VS.....VFS..YA                               | 30  |
| NTDB id 1186 GTF74 RS01320 WP 000788426.1   | .....MKNGLKTY..VAQTWLTWVG...LALCAS.SM.....VFS..AE                                | 32  |
| NTDB id 1175 A1552VC RS12105 WP 000788426.1 | .....MKNGLKTY..VAQTWLTWVG...LALCAS.SM.....VFS..AE                                | 32  |
| NTDB id 1193 PAKAF RS26665 WP 003161249.1   | KNRELISVGNTRSVTVVEAKDRTRLIINLTTLSSYTTTRVEGNNLFVVVGNSPAGASVASTAPVKASPASYAQPIKPKPY | 156 |
| NTDB id 1009 ACIAD RS15175 WP 004923730.1   | SLIPVTTNEASSIDVSSDDKRARVVVNLKDAAGFTTRVEGNVFILKINNIQSTAT.....PVAT..SA.....        | 138 |
| NTDB id 1052 ABD1 RS15850 WP 001017033.1    | SKISVATNEASSVDVTSDDQRSRLTVNLKDAAGFTTRVEGNTFILKINSAQTSNK.....PLPV..VS.....        | 138 |
| NTDB id 1039 HON27 RS01460 WP 031993779.1   | SKISVATNEASSVDVTSDDQRSRLTVNLKDTGAFTTRVEGNTFILKINSAQTSNK.....PLPV..VS.....        | 138 |
| consensus                                   | * * * * *                                                                        |     |

logo

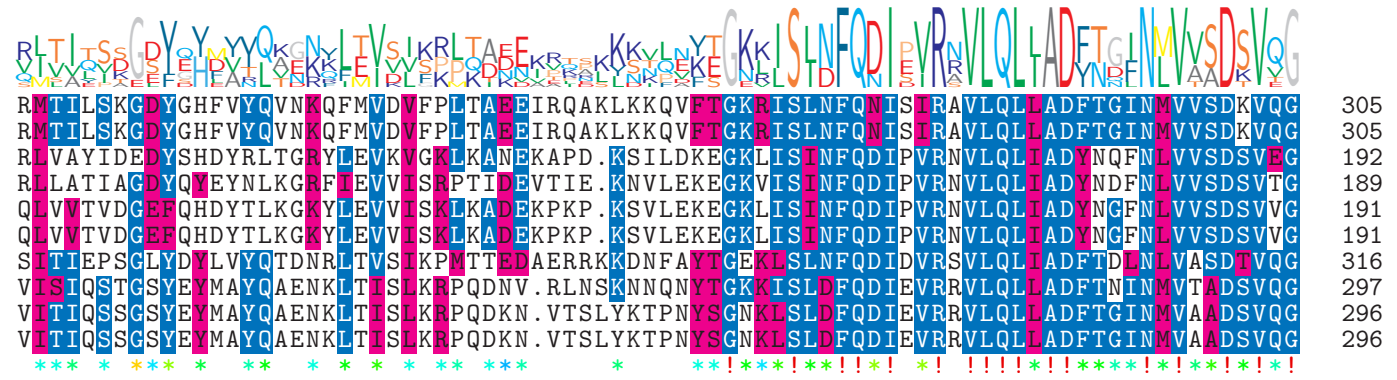
|                                             |                                                                                     |     |
|---------------------------------------------|-------------------------------------------------------------------------------------|-----|
| NTDB id 1284 ACE17W RS12370 WP 010946666.1  | VNAKHEIKRIDFRGIEKQGGRLVIDVSDTGIPIDVTQVGKEIVVNFLNTKIPLNLMKRYDVSDFHSPVQIITMQQEGKKV    | 225 |
| NTDB id 1257 GC085 RS04855 WP 163621000.1   | VNAKHEIKRIDFRGIEKQGGRLVIDVSDTGIPIDVTQVGKEIVVNFLNTKIPLNLMKRYDVSDFHSPVQIITMQQEGKKV    | 225 |
| NTDB id 1408 DSB67 RS13980 WP 010643500.1   | EVQSNLSKSIDFRTNKDKDAVIVVELVSPAIIVDIKRVQEGLSIDLNTSVKDDQLYLVDVKDFSTVVESEVFRDTST       | 113 |
| NTDB id 32297 VS RS13505 WP 012604945.1     | ESLPNQLENIDFRVNKEKDAVITIELATSTAVVDVQRAQEGLSIELLNTQVNDKLYLLDVKDFATSVEGIEVYKETPST     | 110 |
| NTDB id 1186 GTF74 RS01320 WP 000788426.1   | SATANQLENIDFRVNKEKA AVLIVELASPSAVVDVQKQVQEGLSIELLKTVDVADDKLYLLDVKDFSTPVESVEVFRKEPST | 112 |
| NTDB id 1175 A1552VC RS12105 WP 000788426.1 | SATANQLENIDFRVNKEKA AVLIVELASPSAVVDVQKQVQEGLSIELLKTVDVADDKLYLLDVKDFSTPVESVEVFRKEPST | 112 |
| NTDB id 1193 PAKAF RS26665 WP 003161249.1   | VPAGRAIRNIDFQRGEKGEKNVVIDLSDPTLSPDIQEQQGKIRLDFAKTQLPDALRVRLDVKDFATPVQFVNASAQSDRT    | 236 |
| NTDB id 1009 ACIAD RS15175 WP 004923730.1   | PAPQGGIGNIGFQRGAQGEGLVVIDLQGTINTPVDVQQQGSKVVRFPGIKIPHTLARRLNTTDFATPVASIDSYNDGSNG    | 218 |
| NTDB id 1052 ABD1 RS15850 WP 001017033.1    | .AQPQGVSNIGFQRGSQGEGLVVVDLLGSNTPVDVQQQGSKVVIRTIGTKIPHTLARRLNVNDFATPVSSIDAYNDKGVG    | 217 |
| NTDB id 1039 HON27 RS01460 WP 031993779.1   | .AQPQGVSNIGFQRGSQGEGLVVVDLLGSNTPVDVQQQGSKVVIRTIGTKIPHTLARRLNVNDFATPVSSIDAYNDKGVG    | 217 |
| consensus                                   | * * * * *                                                                           |     |

logo

```

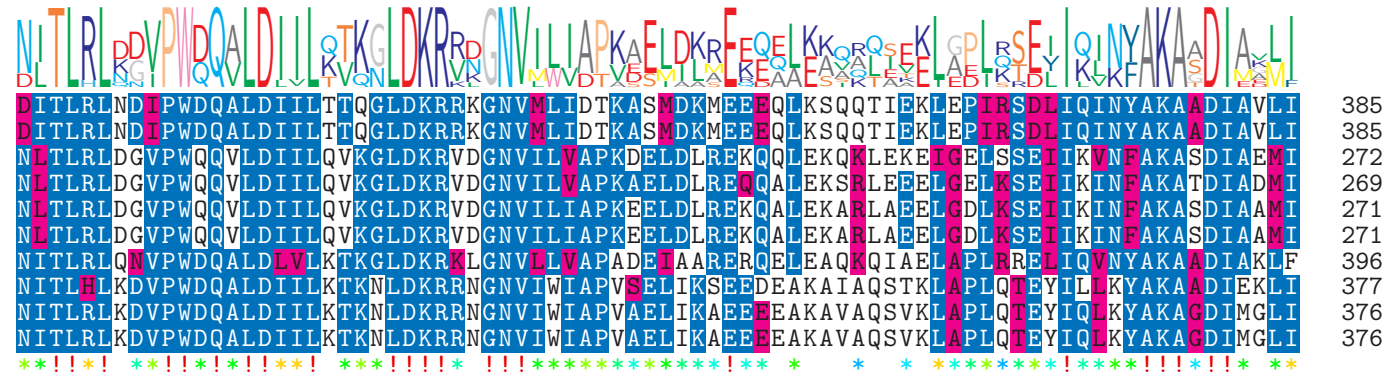
NTDB id 1284 ACE17W RS12370 WP 010946666.1
NTDB id 1257 GC085 RS04855 WP 163621000.1
NTDB id 1408 DSB67 RS13980 WP 010643500.1
NTDB id 32297 VS RS13505 WP 012604945.1
NTDB id 1186 GTF74 RS01320 WP 000788426.1
NTDB id 1175 A1552VC RS12105 WP 000788426.1
NTDB id 1193 PAKAF RS26665 WP 003161249.1
NTDB id 1009 ACIAD RS15175 WP 004923730.1
NTDB id 1052 ABD1 RS15850 WP 001017033.1
NTDB id 1039 HON27 RS01460 WP 031993779.1
consensus

```



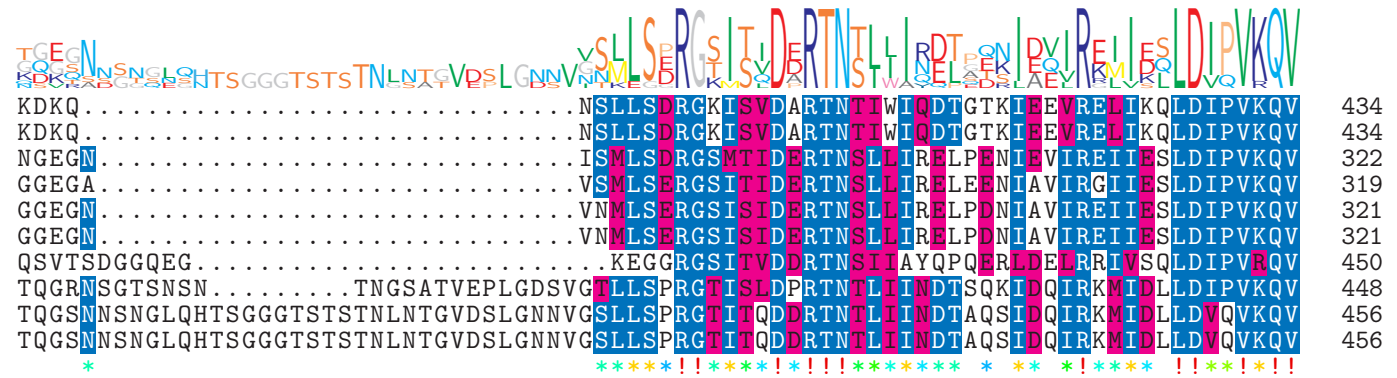
logo

```
NTDB id 1284 ACE17W RS12370 WP 010946666.1
NTDB id 1257 GC085 RS04855 WP 163621000.1
NTDB id 1408 DSB67 RS13980 WP 010643500.1
NTDB id 32297 VS RS13505 WP 012604945.1
NTDB id 1186 GTFT74 RS01320 WP 000788426.1
NTDB id 1175 A1552VC RS12105 WP 000788426.1
NTDB id 1193 PAKAF RS26665 WP 003161249.1
NTDB id 1009 ACIAD RS15175 WP 004923730.1
NTDB id 1052 ABD1 RS15850 WP 001017033.1
NTDB id 1039 HON27 RS01460 WP 031993779.1
consensus
```



logo

```
NTDB id 1284 ACE17W RS12370 WP 010946666.1
NTDB id 1257 GC085 RS04855 WP 163621000.1
NTDB id 1408 DSB67 RS13980 WP 010643500.1
NTDB id 32297 VS RS13505 WP 012604945.1
NTDB id 1186 GTFT74 RS01320 WP 000788426.1
NTDB id 1175 A1552VC RS12105 WP 000788426.1
NTDB id 1193 PAKAF RS26665 WP 003161249.1
NTDB id 1009 ACIAD RS15175 WP 004923730.1
NTDB id 1052 ABD1 RS15850 WP 001017033.1
NTDB id 1039 HON27 RS01460 WP 031993779.1
consensus
```



logo

|           |       |         |         |    |             |                           |                         |                |              |              |                |           |     |
|-----------|-------|---------|---------|----|-------------|---------------------------|-------------------------|----------------|--------------|--------------|----------------|-----------|-----|
| NTDB id   | 1284  | ACE17W  | RS12370 | WP | 010946666.1 | LIEARIVEVTKD              | FSQDIGIRWGVSRPTH.....   | LSGTLEGANE...  | LA....RG.TAP | ANVV.....    | PLERRLNLDLAA   | 495       |     |
| NTDB id   | 1257  | GC085   | RS04855 | WP | 163621000.1 | LIEARIVEVTKD              | FSQDIGIRWGVSRPTH.....   | LSGTLEGANE...  | LA....RG.TAP | ANVV.....    | PLERRLNLDLAA   | 495       |     |
| NTDB id   | 1408  | DSB67   | RS13980 | WP | 010643500.1 | QIEARIVTINEGNMDELGVRWGFTS | SINGSHT...              | VGGSIENNLIATIG | LYDGGGEG     | .DDGSSV..... | GIDDFLNVNLAA   | 393       |     |
| NTDB id   | 32297 | VS      | RS13505 | WP | 012604945.1 | QIEARIVTVIEGNLDELGVRWGV   | VSSTNGSFK...            | VGGSIEGNHPSQIT | ....PY.DDN   | GGNS.....    | AIDDFLNVNLGA   | 385       |     |
| NTDB id   | 1186  | GTF74   | RS01320 | WP | 000788426.1 | QIEARIVTVKEGNLEELGVRWGV   | MSTNGSHS...             | VGGSIESNLWQKGL | .....LA....  | DDEF.....    | PVDEFLNVNLAS   | 384       |     |
| NTDB id   | 1175  | A1552VC | RS12105 | WP | 000788426.1 | QIEARIVTVKEGNLEELGVRWGV   | MSTNGSHS...             | VGGSIESNLWQKGL | .....LA....  | DDEF.....    | PVDEFLNVNLAS   | 384       |     |
| NTDB id   | 1193  | PAKAF   | RS26665 | WP | 003161249.1 | MIEARIVEANVG              | YDKSLGVRWGGAYHKGNWSG... | YGKDGN.IGIK    | DEDMNCGPI    | AGSCTFPTT    | GTSKSPSPFVDLGA | 525       |     |
| NTDB id   | 1009  | ACIAD   | RS15175 | WP | 004923730.1 | MIEARIVRATIS              | FSKEMGVKKGILSQGINQNSNL  | LVGGSETTLWNLR  | NP...SN....  | GT           | YTI...ERP      | DNLNVDLGV | 517 |
| NTDB id   | 1052  | ABD1    | RS15850 | WP | 001017033.1 | MVEARIVRAST               | SFTKELGVKKGILSQGITNNNNL | LVGGSETTLWNLR  | REP...KDETTG | GKYTI...ERP  | DNLNVDLGV      | 530       |     |
| NTDB id   | 1039  | HON27   | RS01460 | WP | 031993779.1 | MVEARIVRAST               | SFTKELGVKKGILSQGITNNNNL | LVGGSETTLWNLR  | REP...KDETTG | GKYTI...ERP  | DNLNVDLGV      | 530       |     |
| consensus |       |         |         |    |             | *****                     | *****                   | *****          | *****        | *****        | *****          | *****     |     |

logo

|                                                                                                                    |       |         |         |    |             |       |                   |                |                                                |                                     |                                     |                        |        |     |
|--------------------------------------------------------------------------------------------------------------------|-------|---------|---------|----|-------------|-------|-------------------|----------------|------------------------------------------------|-------------------------------------|-------------------------------------|------------------------|--------|-----|
| NTDB id                                                                                                            | 1284  | ACE17W  | RS12370 | WP | 010946666.1 | APLTG | ATP               | ASVGI          | ALAKLNDN                                       | ILLDLELSAL                          | ESEGRAELISSPRLITTNQQA               | AVIESGEEIPYQEATSSGA... | TAVAFK | 572 |
| NTDB id                                                                                                            | 1257  | GC085   | RS04855 | WP | 163621000.1 | VPLTG | ATP               | ASVGI          | ALAKLNDN                                       | ILLDLELSAL                          | ESEGRAELISSPRLITTNQQA               | AVIESGEEIPYQEATSSGA... | TAVAFK | 572 |
| NTDB id                                                                                                            | 1408  | DSB67   | RS13980 | WP | 010643500.1 | T...  | SPNAT             | SIAFQVAKLG     | SDTLLDLELSAL                                   | QQESKAEI                            | ISSPRLITTNKKPAYIEQGTEIPYLESSSSGA... | TSVTFK                 | 467    |     |
| NTDB id                                                                                                            | 32297 | VS      | RS13505 | WP | 012604945.1 | T...  | SPSASSIAFQVAKLG   | SDTLLDLELSAL   | QQESKAEI                                       | ISSPRLITTNKKPAYIEQGTEIPYLESSSSGA... | TSVAFK                              | 459                    |        |     |
| NTDB id                                                                                                            | 1186  | GTF74   | RS01320 | WP | 000788426.1 | T...  | SANASSIAFQVAKLG   | SGTLLDLELSAL   | QNESKAEI                                       | ISSPRLITTNKQPAYIEQGTEIPYLESSSSGA... | STVAFK                              | 458                    |        |     |
| NTDB id                                                                                                            | 1175  | A1552VC | RS12105 | WP | 000788426.1 | T...  | SANASSIAFQVAKLG   | SGTLLDLELSAL   | QNESKAEI                                       | ISSPRLITTNKQPAYIEQGTEIPYLESSSSGA... | STVAFK                              | 458                    |        |     |
| NTDB id                                                                                                            | 1193  | PAKAF   | RS26665 | WP | 003161249.1 | K...  | DA.TSGIGIGFI.T.DN | ILDLQLSAMEKTGN | GEIVSQPKVVTSDKETAKILKGSEVPYQEASSSGA...         | TSTSFK                              | 596                                 |                        |        |     |
| NTDB id                                                                                                            | 1009  | ACIAD   | RS15175 | WP | 004923730.1 | T...  | ITGASSIAFGLISL    | .SDFMLDLELSAL  | QADGYGEVISTPKVMSADKQAKVATGVEVPYQSTTNSAAGSTATT  | SFK                                 | 593                                 |                        |        |     |
| NTDB id                                                                                                            | 1052  | ABD1    | RS15850 | WP | 001017033.1 | S...  | NP.AGSIAFGLISM    | .SDFMLDLELSAL  | QADGYGEVISTPKVMTADKQTAKVATGQQVPYQSTTNSAAGSTATT | SFK                                 | 605                                 |                        |        |     |
| NTDB id                                                                                                            | 1039  | HON27   | RS01460 | WP | 031993779.1 | S...  | NP.AGSIAFGLISM    | .SDFMLDLELSAL  | QADGYGEVISTPKVMTADKQTAKVATGQQVPYQSTTNSAAGSTATT | SFK                                 | 605                                 |                        |        |     |
| consensus                                                                                                          |       |         |         |    |             |       |                   |                |                                                |                                     |                                     |                        |        |     |
| *        **        *****        **        *!!!!*!!!!*        *****!*****!*****!        !*****!*****!        *****! |       |         |         |    |             |       |                   |                |                                                |                                     |                                     |                        |        |     |

logo

|           |       |         |         |    |             |                  |                |                       |            |                                  |                        |     |
|-----------|-------|---------|---------|----|-------------|------------------|----------------|-----------------------|------------|----------------------------------|------------------------|-----|
| NTDB id   | 1284  | ACE17W  | RS12370 | WP | 010946666.1 | KAVLSLKVTPQITPDG | KILMDLQ        | INQDTPSPQT.FLGVP...   | AIITKEI    | QTNVLVNNGQTIVLGGIYKQDKNKVINRIPF  | 648                    |     |
| NTDB id   | 1257  | GC085   | RS04855 | WP | 163621000.1 | KAVLSLKVTPQITPDG | KILMDLQ        | INQDTPSPQT.FLGVP...   | AIITKEI    | QTNVLVNNGQTIVLGGIYKQDKNKVINRIPF  | 648                    |     |
| NTDB id   | 1408  | DSB67   | RS13980 | WP | 010643500.1 | KAVLSLKVTPQITPDN | RRLVLDLS       | VTQDRPGQVV.KTGTGEAVA  | IDTQRIGT   | QVLVNNGETTVLGGIFQHSITNSVDKVPL    | 546                    |     |
| NTDB id   | 32297 | VS      | RS13505 | WP | 012604945.1 | KAVLSLKVTPQITPDN | RRLVLDLS       | VTQDRPGQVV.KTGTGEAVA  | IDTQRIGT   | QVLVNNGETTVLGGIFQHSVSSQVDKVPL    | 538                    |     |
| NTDB id   | 1186  | GTF74   | RS01320 | WP | 000788426.1 | KAVLSLKVTPQITPDN | RRLVLDLS       | VTQDRRGETV.KTGTGEAVS  | IDTQRIGT   | QVLVNNGETTVLGGIFQHSINNSVDKVPL    | 537                    |     |
| NTDB id   | 1175  | A1552VC | RS12105 | WP | 000788426.1 | KAVLSLKVTPQITPDN | RRLVLDLS       | VTQDRRGETV.KTGTGEAVS  | IDTQRIGT   | QVLVNNGETTVLGGIFQHSINNSVDKVPL    | 537                    |     |
| NTDB id   | 1193  | PAKAF   | RS26665 | WP | 003161249.1 | EAAALSLEVT       | PNITPDNRIIEV   | EKVTKDAPDYQNMLNGVP... | PINKNEVNAK | ILVNDGETIVIGGVFSNEQSKSVEKVPF     | 673                    |     |
| NTDB id   | 1009  | ACIAD   | RS15175 | WP | 004923730.1 | EALLSLEVT        | PNITPDGKILMELN | IANDSINS.YAQNGEA...   | ILNKNT     | INTNVLVNNGETTVLGGVFEQITNNAVTKVPF | 669                    |     |
| NTDB id   | 1052  | ABD1    | RS15850 | WP | 001017033.1 | DALLSLNVTPS      | ITPDGKIQMKLD   | ISKDSVAG.AAPNGEL...   | ILNKNN     | INTNVLVDNGETVILGGVFEQITMNSQT     | KVPF                   | 681 |
| NTDB id   | 1039  | HON27   | RS01460 | WP | 031993779.1 | DALLSLNVTPS      | ITPDGKIQMKLD   | ISKDSVAG.AAPNGEL...   | ILNKNN     | INTNVLVDNGETVILGGVFEQITMNSQT     | KVPF                   | 681 |
| consensus |       |         |         |    |             | *!!!!!!!!!!!!    | *****          | *****                 | !          | *                                | * ** *****!*****!***!* |     |

logo



- non conserved
- similar
- ≥ 50% conserved