```
logo

NTDB id 150152 NH16 RS05750 WP 048592760.1  MSEKQLLRNQVPENLTWDLSSIFPTDEAWETAFNETRKSAQELSKYAGHVGDSADVLKEALEADLAVERQFEKVYVYAHQIYDQD   85
NTDB id 480 HSISS4 RS02090 WP 002890133.1   ...MSDNRTHLEEKYTWDLTTIFATDADWETEYESTVQDLKKASAYAGHLLDSAKNLLGATELYMSLMRRLEKIYVYASMKNDQD   82
consensus                                   ***    ! ***!  !!!!**!!*!!  !!! *  !       ! !!!!* !!!  !  ! !  * * !  !!*!!!!*   !!!

logo

NTDB id 150152 NH16 RS05750 WP 048592760.1  TTNQKYSAYNARVQGLYAELSANTARFQPEVLALPNEKLDAYL.ATAGLKKYAHFFDVLKARKPHTLPAEQEALLAGASDIFNAS  169
NTDB id 480 HSISS4 RS02090 WP 002890133.1   TTVGLYQEYQAKASNLYSQLSEAFAYFEPEFMALDDKKLAEFKEQEPGLGLYDHYFERLLANKDHVLSQEAEELLAAAGDIFNGP  167
consensus                                   !!   !  !*!*   !!  !!   !*! !! *!!*  !!  * *  *!!  ! !*!* ! ! !*! !* ! ! !!!*! !!!!**

logo

NTDB id 150152 NH16 RS05750 WP 048592760.1  EQTFGALDNSDIVFGDVHTETGEIVPLTNGLYSLLLESKDRSLREEAFTTLYDSYIALQNTFASTLSSHVKGHNFLAKTRHYDSA  254
NTDB id 480 HSISS4 RS02090 WP 002890133.1   TDTFNVLDNADILFPWVSDGQGDVVELTHGNFITLMESKDRDIRKGAYEAMYGTYEQFQHTYAQTLQGVVKVHNYQAKVRHYNSA  252
consensus                                     !!  !!! !!*!* !*   !**!*!!*! *  !*!!!!! *!  !*  *! *!   !*!*! !!  *!! !!* !! !!! !!

logo

NTDB id 150152 NH16 RS05750 WP 048592760.1  RQAAVTANDIPESVFETLTKTVDANLPLLQRFVSLRKKILNVDDVHSYDLYVPLVDEINFEVTYEKAKDIVLAALAPLGEDYIAI  339
NTDB id 480 HSISS4 RS02090 WP 002890133.1   RHAALAANFIPESVYDSLLESVNKHLPLLHRYLDLRKKVLGLDELKMYDVYTPLSET.ETALTYEESLKKAEEVLAIFGEEYSKG  336
consensus                                   !*!!* !! !!!!!***!  *!  *!!!!*!** !!!!*! *!*** !!*! !! * *   *!!!        !!* !!*!

logo

NTDB id 150152 NH16 RS05750 WP 048592760.1  VQKAFDERWIDVVENKGKRTGAYSSGSYDTKPFILLNWQNNLNNVYTLAHEMGHSVHSYFTRHNQEYHYGDYPIFLAEIASTTNE  424
NTDB id 480 HSISS4 RS02090 WP 002890133.1   VHAAFTERWIDVHPNKGKRSGAYSGGAYDTNAFMLLNWQDTLDNLFTLVHETGHSLHSTFTRQTQPYVYGDYPIFLAEIASTTNE  421
consensus                                   !* !! !!!!!!**!!!!!*!!!! ! !!! *!*!!!!!  ! !**!! !! !!!*!! !!!* !*!*!!!!!!!!!!!!!!!!!!

logo

NTDB id 150152 NH16 RS05750 WP 048592760.1  GLLTDYLLKTNDDPKFQAYVLNQYLDGFKGTVFRQTQFAEFEQWIHEQSAAGVALTADEMSRFYGSLNQKFYGSDLFPDEAIAYE  509
NTDB id 480 HSISS4 RS02090 WP 002890133.1   NILTETLLKEVKDDKTRFAILNHYLDGFKGTVFRQTQFAEFEHAIHEADASGQILTADFMNKLYADLNEKYYNLKAEDNYEIQFE  506
consensus                                    *!!* !!!    !*!     *!!*!!!!!!!!!!!!!!!!!!* !!!  ! !  !!!! ! * !* !! !*!     *   ! *!

logo

NTDB id 150152 NH16 RS05750 WP 048592760.1  WARIPHFYYNFYVYQYSTGEAAATTLAERILTQ..NGAEDYKNYLKAGNSDYALNVIKKAGVNMSQPDYLNEAFKVFEERLNEFE  592
NTDB id 480 HSISS4 RS02090 WP 002890133.1   WERIPHFYMNYYVYQYATGFAAASYLAEKIVHGTEEDKEAYLTYLKAGSSDYPLEVIKKAGVDMTNTDYLDAAFKVFEDRLVELE  591
consensus                                   ! !!!!!! !*!!!!! !! !!!* !!!*!** **   ! !  !!!!! !!!*! !!!!!!! !***!!!  !!!!!!*!! ! !
```

```
logo                                          KLVLK
                                              ATMEKGVHLS
NTDB id 150152 NH16 RS05750 WP 048592760.1    KIMLK.....   597
NTDB id 480 HSISS4 RS02090 WP 002890133.1     ALVEKGVHLS   601
consensus                                      **  !*****
```

X non conserved

X similar

X $\geq$ 50% conserved