```
logo
NTDB id 163609 AUC31 RS09700 WP 058383400.1  MTEKLLTRDQVPAELTWRLEDIFATDSQWEEEFKAVSALAEKAGQYEGTLSGGADALYDALSYKDELSERLRKLYAYAHM   80
NTDB id 480 HSISS4 RS02090 WP 002890133.1    ...MSDNRTHLEEKYTWDLTTIFATDADWETEYESTVQDLKKASAYAGHLLDSAKNLLGATELYMSLMRRLEKIYVYASM   77
consensus                                    ***     ! ***   !! !  !!!!!  !! !*        !!  ! !*!   !  !  !      !  !! !*! !!*!

logo
NTDB id 163609 AUC31 RS09700 WP 058383400.1  RYDQDTTNSIYQAMDSRIKSLFAKTAAGLSFMTPEILSLDEAELNRYVDEQERLKLYKHALEELNKMRPHVLKAEQEALL  160
NTDB id 480 HSISS4 RS02090 WP 002890133.1    KNDQDTTVGLYQEYQAKASNLYSQLSEAFAYFEPEFMALDDKKLAEFKEQEPGLGLYDHYFERLLANKDHVLSQEAEELL  157
consensus                                    * !!!!!  *!!    *   !*     *  *  !! * !!*  !  * *  * ! !! !  ! !   **!!!  ! ! !!

logo
NTDB id 163609 AUC31 RS09700 WP 058383400.1  AQLSEVVGASSETFGMLNNADLEFPEIENENGEKVQITHGNYIRFMESKDRRVREDAFKAVYATYGKFRNTFASTLSGNV  240
NTDB id 480 HSISS4 RS02090 WP 002890133.1    AAAGDIFNGPTDTFNVLDNADILFPWVSDGQGDVVELTHGNFITLMESKDRDIRKGAYEAMYGTYEQFQHTYAQTLQGVV  237
consensus                                    !    **  ****!! *! !!!* !! *   *!* ! *!!!!*!  !!!!!! *!  !* !*!*!!  ! *!*! !! ! !

logo
NTDB id 163609 AUC31 RS09700 WP 058383400.1  KRDNVHARIRNYSSAREAALSDDHIPEAVYDQLVETVNNNLHLLQRYVALRKEVLGLDQVHMYDMYTPLVKEVKMEIPYD  320
NTDB id 480 HSISS4 RS02090 WP 002890133.1    KVHNYQAKVRHYNSARHAALAANFIPESVYDSLLESVNKHLPLLHRYLDLRKKVLGLDELKMYDVYTPLSET.ETALTYE  316
consensus                                    ! *! *!**!*! !!!*!!!   *!!! !!! !*!*!! *! !!*!!* !!! !!!!! **!!!*!!!!   *   **!*

logo
NTDB id 163609 AUC31 RS09700 WP 058383400.1  KATGMMLEGLHALGEEYVGIVKSGIDNRWVDVKENKGKRSGAYSSGAYGTNPYILMNWQDNVDNLFTLAHEFGHSVHSHY  400
NTDB id 480 HSISS4 RS02090 WP 002890133.1    ESLKKAEEVLAIFGEEYSKGVHAAFTERWIDVHPNKGKRSGAYSGGAYDTNAFMLLNWQDTLDNLFTLVHETGHSLHSTF  396
consensus                                           ! !*  !!!!   !* *   !!*!!**!!!!!!!!!! !!! !!***!*!!!! *!!!!!! !! !!!*!!**

logo
NTDB id 163609 AUC31 RS09700 WP 058383400.1  TRESQPFVYGDYSIFVAEVASTTNEALLNEHLVNTTEDEQERIYLLNHWLDGFRGTVFRQTMFAEFEHTIHQMDQNGEAL  480
NTDB id 480 HSISS4 RS02090 WP 002890133.1    TRQTQPYVYGDYPIFLAEIASTTNENILTETLLKEVKDDKTRFAILNHYLDGFKGTVFRQTQFAEFEHAIHEADASGQIL  476
consensus                                    !! *!!*!!!!!*!!*!!*!!!!!! *!  !*!*    !*   !  *!!!*!!!!*!!!!!!! !!!!!! !!   !   !   !

logo
NTDB id 163609 AUC31 RS09700 WP 058383400.1  TADRLTEVYYELNKKYFGEEMAVDEEIGLEWARIPHFYYNYYVFQYATGFSAATALSKKILEEGQPAVDRYINEFLKAGS  560
NTDB id 480 HSISS4 RS02090 WP 002890133.1    TADFMNKLYADLNEKYYNLKAEDNYEIQFEWERIPHFYMNYYVYQYATGFAAASYLAEKIVHGTEEDKEAY.LTYLKAGS  555
consensus                                    !!! *  *! *!! !!*         !!  !! !!!!!! !!!!*!!!!!! !!* !  !!**   *  * !*  *!!!!!
```

```
logo

NTDB id 163609 AUC31 RS09700 WP 058383400.1   SDYPIEVLKKAGVDMTSSEPVEEACKVFGQKLEELEALLLKK....   602
NTDB id 480 HSISS4 RS02090 WP 002890133.1     SDYPLEVIKKAGVDMTNTDYLDAAFKVFEDRLVELEALVEKGVHLS   601
consensus                                     !!!!*!!*!!!!!!!! ***** !*!!!  *! !!!!!* ! ****
```

X non conserved

X similar

X $\geq$ 50% conserved