```
NTDB id 239817 CG419 RS08860 WP 089557058.1  MSTQQLPTRDAVPEKLTWDLTTIFKNDAAFEVAFKKVKTQLPTLKT.LDRPFESADQLVATIEQILTTFRQLETIYVYAS  79
NTDB id 480 HSISS4 RS02090 WP 002890133.1    ....MSDNRTHLEEKYTWDLTTIFATDADWETEYESTVQDLKKASAYAGHLLDSAKNLLGATELYMSLMRRLEKIYVYAS  76
consensus                                    ****  * ! ***!! !!!!!!!!  !! *!  *      !*    *  ** *!! *!**  !  **  ! !! !!!!!!
```

```
NTDB id 239817 CG419 RS08860 WP 089557058.1  MKNDQDTANATYQGYQAQVDALAAEVSAAAAFLEPAILAIPAGQLADWLTKMPNLAVYSHFIQTITDSRDHVLSGQEEAL  159
NTDB id 480 HSISS4 RS02090 WP 002890133.1    MKNDQDTTVGLYQEYQAKASNLYSQLSEAFAYFEPEFMALDDKKLAEFKEQEPGLGLYDHYFERLLANKDHVLSQEAEEL  156
consensus                                    !!!!!!!  * !! !!!   !  *! ! !* !!  *!**  !!**   ! !**! !*  *  *!!!!!   ! !
```

```
NTDB id 239817 CG419 RS08860 WP 089557058.1  LAAAGDIFSAASQTFSVLDNSDLQFPEVTDENGQTLQLSDGVYSQLLQSTNRSVRQAAFEALYKTYGQFKNTFATTLATE  239
NTDB id 480 HSISS4 RS02090 WP 002890133.1    LAAAGDIFNGPTDTFNVLDNADILFPWVSDGQGDVVELTHGNFITLMESKDRDIRKGAYEAMYGTYEQFQHTYAQTLQGV  236
consensus                                    !!!!!!!! *** !! !!!! !* !! !*! *!  * !**! *  !* !  ! *! *!*!!*! !! !! *!*! !!
```

```
NTDB id 239817 CG419 RS08860 WP 089557058.1  IKGHNYLAQVHHYDSARQAALAPKAIPEAVYTTLVDQVNQHLPLLHRYTELRKKQLNLSELHMFDLYTPLLGKPALTYTY  319
NTDB id 480 HSISS4 RS02090 WP 002890133.1    VKVHNYQAKVRHYNSARHAALAANFIPESVYDSLLESVNKHLPLLHRYLDLRKKVLGLDELKMYDVYTPLSET.ETALTY  315
consensus                                    *! !!! ! !*!! !!!*!!!!* !!! !! *!** !! !!!!!!!! *!!!! ! ! !!*!*!*!!!!    *    !!
```

```
NTDB id 239817 CG419 RS08860 WP 089557058.1  EQAQATAKEALSILGPDYAKQVTHIFDDRLIDVCENQGKRSGAYSGGAYDTNPFILLNWQDDLNNLYTLVHETGHSVHSA  399
NTDB id 480 HSISS4 RS02090 WP 002890133.1    EESLKKAEEVLAIFGEEYSKGVHAAFTERWIDVHPNKGKRSGAYSGGAYDTNAFMLLNWQDTLDNLFTLVHETGHSLHST  395
consensus                                    !       ! ! ! ! !**! ! !** ! *! !!! *! !!!!!!!!!!!!!!!!*!*!!!!!! ! !!*!!!!!!!!!*!!
```

```
NTDB id 239817 CG419 RS08860 WP 089557058.1  FTRQTQDYVYGDYPIFVAEIASTTNENLLTEYLLQTQSDPKVQAYLLNYYLDGFKGTVFRQTQFAEFEHAMHAAAANGQP  479
NTDB id 480 HSISS4 RS02090 WP 002890133.1    FTRQTQPYVYGDYPIFLAEIASTTNENILTETLLKEVKDDKTRFAILNHYLDGFKGTVFRQTQFAEFEHAIHEADASGQI  475
consensus                                    !!!!!!*!!!!!!!!!!*!!!!!!!!!!*!!! !!     !*!     *!!*!!!!!!!!!!!!!!!!!!!!*! ! ! !!*
```

```
NTDB id 239817 CG419 RS08860 WP 089557058.1  LTAEFMSQQYADINSRYYGPAVVNDPQIALEWTRIPHFYMNYYVYQYATGFAAATTLANGISTKQSGALDHYLDYLKAGS  559
NTDB id 480 HSISS4 RS02090 WP 002890133.1    LTADFMNKLYADLNEKYYNLKAEDNYEIQFEWERIPHFYMNYYVYQYATGFAAASYLAEKIVHGTEEDKEAYLTYLKAGS  555
consensus                                    !!!*!!   !!!*! *!! *     * !  !! !!!!!!!!!!!!!!!!!!!* !!  ! *      **!! !!!!!!
```

logo

```
NTDB id 239817 CG419 RS08860 WP 089557058.1   SAYPIEIMQQAGVDMTSADYLERAFAVFEERLDQLEALLAKLN...   602
NTDB id 480 HSISS4 RS02090 WP 002890133.1     SDYPLEVIKKAGVDMTNTDYLDAAFKVFEDRLVELEALVEKGVHLS   601
consensus                                     ! !!*!**  !!!!!!  !!!* !! !!!*!!  !!!!* !  ***
```

X non conserved

X similar

X ≥ 50% conserved