```
NTDB id 391404 LM596 RS03530 WP 003688059.1  MSKEISKLKSRSEVPEELKWDLTKVYQNENELAEDIKGIQEEIKRADKLKNTLKDGSLALKEALKTYFTVERKTVKVYVY   80
NTDB id 480 HSISS4 RS02090 WP 002890133.1    ......MSDNRTHLEEKYTWDLTTIFATDADWETEYESTVQDLKKASAYAGHLLDSAKNLLGATELYMSLMRRLEKIYVY   74
consensus                                    ******    !****!   !!!! **  * *  *      **!*!      *! !   !  !  ! ** !*  !*!!!
```

```
NTDB id 391404 LM596 RS03530 WP 003688059.1  TSMLSDQDTNNKKNQGLFSQAQQLYAKVAAAFSWFEPELLALGEKKLNEYYDNDQELTGYKQYISEIMAKKDHLLSEKEE  160
NTDB id 480 HSISS4 RS02090 WP 002890133.1    ASMKNDQDTTVGLYQEYQAKASNLYSQLSEAFAYFEPEFMALDDKKLAEFKEQEPGLGLYDHYFERLLANKDHVLSQEAE  154
consensus                                     !!  !!!!     !     ! *!!  *  !! *!!!! *!! *!!! !* **** !  ! *!    **! !!!*!!    !
```

```
NTDB id 391404 LM596 RS03530 WP 003688059.1  KLLAGASDIFSTPENIFGILNNADLKFPTVTDEKGNKVELSHGLYGKFLESGNRRVRKEAFQGLYKTYGQFENTFATSLA  240
NTDB id 480 HSISS4 RS02090 WP 002890133.1    ELLAAAGDIFNGPTDTFNVLDNADILFPWVSDGQGDVVELTHGNFITLMESKDRDIRKGAYEAMYGTYEQFQHTYAQTLQ  234
consensus                                     !!!*!  !!!   !   ! *! !!!* !! !*!  !  !!!*!! *   *!!  ! *!! !* **!  !! !! *!*!  *!
```

```
NTDB id 391404 LM596 RS03530 WP 003688059.1  AHVHTHNFQASVRNYPDAVSAALSTNNIPVAVYDTLVERVNNHLDLLHRYVEVRKEVLNLDSVHMYDLYAPITKLPEEKY  320
NTDB id 480 HSISS4 RS02090 WP 002890133.1    GVVKVHNYQAKVRHYNSARHAALAANFIPESVYDSLLESVNKHLPLLHRYLDLRKKVLGLDELKMYDVYTPLSET.ETAL  313
consensus                                    **!* !!*!! !!*!* ! *!!!  ! !!  !!!*!*! !! !!*!!!!!***!! !!  !!  **!!!*! !**  *!
```

```
NTDB id 391404 LM596 RS03530 WP 003688059.1  NYKNSKKIALDALSIFGEDYVQTVKNAFASRWIDVLENTGKRSGAYSSGMFDTPPYILLNWQDNLESLFTLVHEMGHSMH  400
NTDB id 480 HSISS4 RS02090 WP 002890133.1    TYEESLKKAEEVLAIFGEEYSKGVHAAFTERWIDVHPNKGKRSGAYSGGAYDTNAFMLLNWQDTLDNLFTLVHETGHSLH  393
consensus                                     !  ! ! ! * ! !!!!*!   !* !!  !!!!!**! !!!!!!!! ! *!!**** !!!!!!  !* !!!!!!!  !!!*!
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```
NTDB id 391404 LM596 RS03530 WP 003688059.1  SYLSNHNQPYHYSDYSIFVAEIASTTNENILTQYLLDNSDDLQFKAYVLNHYLDGFKGTVYRQTQFAEFERWLHDQDKAG  480
NTDB id 480 HSISS4 RS02090 WP 002890133.1    STFTRQTQPYVYGDYPIFLAEIASTTNENILTETLLKEVKDDKTRFAILNHYLDGFKGTVFRQTQFAEFEHAIHEADASG  473
consensus                                    !  * * !!!*! !!*!!*!!!!!!!!!!!!!!!  !!     !   *  *!!!!!!!!!!!!!*!!!!!!!!!* *!* !  !
```

```
NTDB id 391404 LM596 RS03530 WP 003688059.1  LPLTSQELNNKYANLNEHYYGPAITNDPEIALEWSRIPHFYYNFYVYQYATGFAAASALAGKIVK...EGPASYLEFLKS  557
NTDB id 480 HSISS4 RS02090 WP 002890133.1    QILTADFMNKLYADLNEKYYNLKAEDNYEIQFEWERIPHFYMNYYVYQYATGFAAASYLAEKIVHGTEEDKEAYLTYLKA  553
consensus                                     *!!   *!  !! !!!*!! *     *!!  !! !!!!!! !*!!!!!!!!!!!!!! !! !!!**** *  !! *!!
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logo

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NTDB id 391404 LM596 RS03530 WP 003688059.1   GSSALPIDIVKQAGVDMTKPNYLDDAFVVFEQRLGELEDVLAKLQN..   603
NTDB id 480 HSISS4 RS02090 WP 002890133.1     GSSDYPLEVIKKAGVDMTNTDYLDAAFKVFEDRLVELEALVEKGVHLS   601
consensus                                     !!!  !****! !!!!!! * !!! !! !!! !! !!! ** !  ***
```

X non conserved

X similar

X ≥ 50% conserved