```
logo
NTDB id 177550 SporoP8 RS13860 WP 232319266.1  ...MRDEVSEEETWRLEDIFSSDEEWDKEYSKIEEMAKEAEQYKGTLGNGAHPLFEALTYRDKLAERLRRLYTYAHLKTD   77
NTDB id 480 HSISS4 RS02090 WP 002890133.1      MSDNRTHLEEKYTWDLTTIFATDADWETEYESTVQDLKKASAYAGHLLDSAKNLLGATELYMSLMRRLEKIYVYASMKND   80
consensus                                      *** ! ** !  !! !  !! *! *!* !!       ! !  ! !*!   !**!  !       !  !! **! !!**! !

logo
NTDB id 177550 SporoP8 RS13860 WP 232319266.1  QDTTNSFYQAMDGRIRTLVVKISTALSYFTPELLSIDEKKLNETIESHEGLRLYKQEFEELNAERAHVLSSEQEQLIAQL  157
NTDB id 480 HSISS4 RS02090 WP 002890133.1      QDTTVGLYQEYQAKASNLYSQLSEAFAYFEPEFMALDDKKLAEFKEQEPGLGLYDHYFERLLANKDHVLSQEAEELLAAA  160
consensus                                      !!!!   !!   **   !  *! !  !! !! * *!*!!! !  ! **!! !! * !! ! ! * !!!! ! ! !*!

logo
NTDB id 177550 SporoP8 RS13860 WP 232319266.1  SEVTGKSSETFSMLNNADLTFGMVKDEEGRDIQLTHGRYSQFLESKDPKVREAAFKEMYARYGEFKNTFASTLSGNVKGH  237
NTDB id 480 HSISS4 RS02090 WP 002890133.1      GDIFNGPTDTFNVLDNADILFPWVSDGQGDVVELTHGNFITLMESKDRDIRKGAYEAMYGTYEQFQHTYAQTLQGVVKVH  240
consensus                                       **   ***!! *! !!!* !* ! !  !  * !!!! *   *!!!!* *! *!*  !!* !  ! *!*! !! ! !! !

logo
NTDB id 177550 SporoP8 RS13860 WP 232319266.1  NVNARIRNYSSARAAALSNNHIPEQVYENLLSTINKNLGLLHRYVALRKKVLNVNQLHMWDIYTPLVEDTKMKYTYDEAK  317
NTDB id 480 HSISS4 RS02090 WP 002890133.1      NYQAKVRHYNSARHAALAANFIPESVYDSLLESVNKHLPLLHRYLDLRKKVLGLDELKMYDVYTPLSETE.TALTYEESL  319
consensus                                      ! *!**!*! !!!*!!!  !*!!! !!* !! **!!*!*!!!!!* !!!!!! *  !*!*!*!!!! !  *   !!*!

logo
NTDB id 177550 SporoP8 RS13860 WP 232319266.1  ETMLESFHPLGEDYRAVVKEGLDNRWVDVRENKGKRSGAYSSGSYGTNPYILMNWQDNVNNLFTLAHEFGHSVHSYYSRK  397
NTDB id 480 HSISS4 RS02090 WP 002890133.1      KKAEEVLAIFGEEYSKGVHAAFTERWIDVHPNKGKRSGAYSGGAYDTNAFMLLNWQDTLDNLFTLVHETGHSLHSTFTRQ  399
consensus                                          !  ** !!*!    !* *   !!*!!**!!!!!!!!!! ! ! !!***!*!!!! * !!!!! !! !!!*!! **!

logo
NTDB id 177550 SporoP8 RS13860 WP 232319266.1  YQPFIYSGYSIFVAEVASTVNEALLNDHLLKVTTDEDQRIYLLNYWLDGFRATVFRQTMFAEYEHLIHKLDQDGVPLTAE  477
NTDB id 480 HSISS4 RS02090 WP 002890133.1      TQPYVYGDYPIFLAEIASTTNENILTETLLKEVKDDKTRFAILNHYLDGFKGTVFRQTQFAEFEHAIHEADASGQILTAD  479
consensus                                       !!**!  !*!!*!!*!!! !! *! **!!!   !*  !  *!!**!!!!**!!!!!! !!!*!! !!   !  ! *!!!*

logo
NTDB id 177550 SporoP8 RS13860 WP 232319266.1  KLTEEYYALNKKYYGDAIVSDEEIGLEWARIPHFYMNYYVYQYATGYSAAVALSKQILEEGEPAVERYITNFLKAGSSDY  557
NTDB id 480 HSISS4 RS02090 WP 002890133.1      FMNKLYADLNEKYYNLKAEDNYEIQFEWERIPHFYMNYYVYQYATGFAAASYLAEKIVHGTEEDKEAYL.TYLKAGSSDY  558
consensus                                       *   !  !! !!!         !!  !! !!!!!!!!!!!!!!!!!* !!  !   !**  !*  ! !** *!!!!!!!!
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logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 177550 SporoP8 RS13860 WP 232319266.1  PIEVLKKAGVDMTSEKPIEEACRVFEARLNELEQLLAKRG...   597
NTDB id 480 HSISS4 RS02090 WP 002890133.1      PLEVIKKAGVDMTNTDYLDAAFKVFEDRLVELEALVEKGVHLS   601
consensus                                      !*!!*!!!!!!!!   *** !**!!! !! !!! !* !   ***
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X non conserved

X similar

X $\geq$ 50% conserved