```
logo
                                   MKEILKTLTEAMTLPEDSYSEQDAEFLEIFIEEIEEIFVDLQPLINKWMQSENIATLTEIRRHFHTLKGSGRMIGAKSSAELAWT
NTDB id 1419 SGL RS12550 WP 010873252.1    .....................................................................................     0
NTDB id 413 AAK55817.1 141..845( )         .....................................................................................     0
NTDB id 374 SMU RS06885 WP 002262930.1     .....................................................................................     0
NTDB id 1046 HON27 RS03130 WP 168726941.1  MKEILKTLTEAMTLPEDSYSEQDAEFLEIFIEEIEEIFVDLQPLINKWMQSENIATLTEIRRHFHTLKGSGRMIGAKSSAELAWT    85
NTDB id 42821 CDC37 RS16845 WP 096623378.1 .....................................................................................     0
NTDB id 1417 SGL RS04200 WP 014407071.1    .....................................................................................     0
NTDB id 1047 HON27 RS03110 WP 000389061.1  .....................................................................................     0
consensus
```

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logo
                                   VEDTLNRVINQSLQLTPTIQSYVQLVFKFYFLKLVDNFKQKRAHTLDFRPLILLGQQLQQQQSLEPALEELLQLSHTLMAETVTG
NTDB id 1419 SGL RS12550 WP 010873252.1    .....................................................................................     0
NTDB id 413 AAK55817.1 141..845( )         .....................................................................................     0
NTDB id 374 SMU RS06885 WP 002262930.1     .....................................................................................     0
NTDB id 1046 HON27 RS03130 WP 168726941.1  VEDTLNRVINQSLQLTPTIQSYVQLVFKFYFLKLVDNFKQKRAHTLDFRPLILLGQQLQQQQSLEPALEELLQLSHTLMAETVTG   170
NTDB id 42821 CDC37 RS16845 WP 096623378.1 .....................................................................................     0
NTDB id 1417 SGL RS04200 WP 014407071.1    .....................................................................................     0
NTDB id 1047 HON27 RS03110 WP 000389061.1  .....................................................................................     0
consensus
```

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logo
                                   LELDYIEQDSLAEPIIQATHTEIEINLDETLTLFMEEAEEHLATIHQFLDQELHQYDSYNALIRALHTLRGSSAMAQVETIFEAS
NTDB id 1419 SGL RS12550 WP 010873252.1    .....................................................................................     0
NTDB id 413 AAK55817.1 141..845( )         .....................................................................................     0
NTDB id 374 SMU RS06885 WP 002262930.1     .....................................................................................     0
NTDB id 1046 HON27 RS03130 WP 168726941.1  LELDYIEQDSLAEPIIQATHTEIEINLDETLTLFMEEAEEHLATIHQFLDQELHQYDSYNALIRALHTLRGSSAMAQVETIFEAS   255
NTDB id 42821 CDC37 RS16845 WP 096623378.1 .....................................................................................     0
NTDB id 1417 SGL RS04200 WP 014407071.1    .....................................................................................     0
NTDB id 1047 HON27 RS03110 WP 000389061.1  .....................................................................................     0
consensus
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logo
                                   TKVEHLFKILLQEELSSHSEEILLLQEYREFVRDSLELLSRYSSSEQLEARLLQFNQSWDAYVEQHGDRTDPLMPSHGLVSQLLQ
NTDB id 1419 SGL RS12550 WP 010873252.1    .....................................................................................     0
NTDB id 413 AAK55817.1 141..845( )         .....................................................................................     0
NTDB id 374 SMU RS06885 WP 002262930.1     .....................................................................................     0
NTDB id 1046 HON27 RS03130 WP 168726941.1  TKVEHLFKILLQEELSSHSEEILLLQEYREFVRDSLELLSRYSSSEQLEARLLQFNQSWDAYVEQHGDRTDPLMPSHGLVSQLLQ   340
NTDB id 42821 CDC37 RS16845 WP 096623378.1 .....................................................................................     0
NTDB id 1417 SGL RS04200 WP 014407071.1    .....................................................................................     0
NTDB id 1047 HON27 RS03110 WP 000389061.1  .....................................................................................     0
consensus
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logo



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NTDB id 1419 SGL RS12550 WP 010873252.1     ..................................................................................   0
NTDB id 413 AAK55817.1 141..845( )          ..................................................................................   0
NTDB id 374 SMU RS06885 WP 002262930.1      ..................................................................................   0
NTDB id 1046 HON27 RS03130 WP 168726941.1   LDVSELLDAELDFEKGIRNEFPDYLERLSEQADLLLQHTHSQAMLGLHEYTSQLKESYEVLLDKPALLQSDYIFEIYQKAHQQLI   425
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ..................................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1     ..................................................................................   0
NTDB id 1047 HON27 RS03110 WP 000389061.1   ..................................................................................   0
consensus
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logo



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NTDB id 1419 SGL RS12550 WP 010873252.1     ..........................................................MTSDPN..........   6
NTDB id 413 AAK55817.1 141..845( )          ..................................................................................   0
NTDB id 374 SMU RS06885 WP 002262930.1      ..................................................................................   0
NTDB id 1046 HON27 RS03130 WP 168726941.1   QLFDALAAGQRVGVVKQHQSILEELKLYTQYTPDISNDLPQQDSTSFEPIYNIEPEPEVVATVENFSDSADWAVLGQSVQQDRQY   510
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ..................................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1     ..................................................................................   0
NTDB id 1047 HON27 RS03110 WP 000389061.1   ..................................................................................   0
consensus
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logo



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NTDB id 1419 SGL RS12550 WP 010873252.1     ..............................PAQAFENWFEEEEGDDAFTSLIAGE...........   31
NTDB id 413 AAK55817.1 141..845( )          ..................................................................................   0
NTDB id 374 SMU RS06885 WP 002262930.1      ..................................................................................   0
NTDB id 1046 HON27 RS03130 WP 168726941.1   ISSTQVNRNFDADLLDIFLEEAEELLEGIDTDLNIWVGEQENFAALNNLMRYLHTLKGGANMVQATYLGLIAHELESIYERLIQK   595
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ..................................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1     ..................................................................................   0
NTDB id 1047 HON27 RS03110 WP 000389061.1   ..................................................................................   0
consensus
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logo



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NTDB id 1419 SGL RS12550 WP 010873252.1     ..................................................ETNSGIEELDFGDLFEGEPTVIQGEGFGS...........   60
NTDB id 413 AAK55817.1 141..845( )          ..................................................................................   0
NTDB id 374 SMU RS06885 WP 002262930.1      ..................................................................................   0
NTDB id 1046 HON27 RS03130 WP 168726941.1   QLVVTSDLIDFIRLVQDDLADRLQIMREQQLDYAAPYTINALKRAGQNSNFQPLPVVEAFDAESEVFSEQKVISEIIIDEIPVEL   680
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ..................................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1     ..................................................................................   0
NTDB id 1047 HON27 RS03110 WP 000389061.1   ..................................................................................   0
consensus
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logo



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NTDB id 1419 SGL RS12550 WP 010873252.1     ..............PSSGEEDPPVRMTLDFNSPEAELD...........ALFTDEDAPTTAIDPFESSSWLEIDQMMEADPLA   118
NTDB id 413 AAK55817.1 141..845( )          ..................................................................................   0
NTDB id 374 SMU RS06885 WP 002262930.1      ..................................................................................   0
NTDB id 1046 HON27 RS03130 WP 168726941.1   EPALAELETHHDQVFDTAVTELATPVEMITTVTSQENEVAANEQDIEAVVEQTFLEEATELLEMAESLLKQWFEQRTNR......   759
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ..................................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1     ..................................................................................   0
NTDB id 1047 HON27 RS03110 WP 000389061.1   ..................................................................................   0
consensus
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logo



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NTDB id 1419 SGL RS12550 WP 010873252.1     SIPETNAPAYQTAGGLDDNDLAELQDLLGVGDVEPAITNPGLHSFAGADRVTPLTNEVLL.FA........AIDDLDGLINAPVL   194
NTDB id 413 AAK55817.1 141..845( )          ..................................................................................   0
NTDB id 374 SMU RS06885 WP 002262930.1      ..................................................................................   0
NTDB id 1046 HON27 RS03130 WP 168726941.1   S..................ILL..............QLQRAVHSLKGGARMVGLEAVQAIAYQLENAFEQFALHHFNSNIYDHLL   812
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ..................................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1     ..................................................................................   0
NTDB id 1047 HON27 RS03110 WP 000389061.1   ..................................................................................   0
consensus
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logo


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NTDB id 1419 SGL RS12550 WP 010873252.1     DEEFSF.........TELETLIDTPAPKSFATISHPFRLPVAMEEDEDEFKDLEALLEQADSSLGGGIAGMGGARLPARP...R   266
NTDB id 413 AAK55817.1 141..845( )          ..................................................................................   0
NTDB id 374 SMU RS06885 WP 002262930.1      ..................................................................................   0
NTDB id 1046 HON27 RS03130 WP 168726941.1   ESAIAWLKDAIFNHNYQHFDGLQQSLENIQF..FETTIQIPTKLTRA.DLFSS.EP........VMTFIQGDGTEPPPMMGAWEQ   885
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ..................................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1     ..................................................................................   0
NTDB id 1047 HON27 RS03110 WP 000389061.1   ..................................................................................   0
consensus
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logo



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NTDB id 1419 SGL RS12550 WP 010873252.1     QVKSRSFEQTMRVPIKQLDNLSNLIGELVVKRNRLEQDQERLRQFLDNLLNQAQNLSDVGGRMQDLYERTLLEGALLASRSTNSR   351
NTDB id 413 AAK55817.1 141..845( )          ..................................................................................   0
NTDB id 374 SMU RS06885 WP 002262930.1      ..................................................................................   0
NTDB id 1046 HON27 RS03130 WP 168726941.1   TERLDQNNEMIRVSADLIEKMIDLSGENSINRSRIEMDLSQFSHTLVEMELAIQRLADQLRRMEGELETQI..............   956
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ..................................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1     ..................................................................................   0
NTDB id 1047 HON27 RS03110 WP 000389061.1   ..................................................................................   0
consensus
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logo



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NTDB id 1419 SGL RS12550 WP 010873252.1     HHSSKTTYPDARITASSSSTMNDQPLDALEMDRFTGFHLLSQEMIELIVRVRESASDIQYLVDETDQVARTLRQVTTQLQEGMTK   436
NTDB id 413 AAK55817.1 141..845( )          ..............................................................................   0
NTDB id 374 SMU RS06885 WP 002262930.1      ..............................................................................   0
NTDB id 1046 HON27 RS03130 WP 168726941.1   ............IAKHGIEHSRYTDFDPLEMDQYSSLNQLSKSLAESASDLVDFKNTLSDKIRDTESLLLQQSRIQAEIQEGLMR  1029
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ..............................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1     ..............................................................................   0
NTDB id 1047 HON27 RS03110 WP 000389061.1   ..............................................................................   0
consensus
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logo



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NTDB id 1419 SGL RS12550 WP 010873252.1     SRMVPFTQTADRLPRAIREVSMKLNKKVNLEVEGGDVLIDKMILEHLYNPMTHLVNNAITHGIETPAERQKLGKSPEGHLAVRAF   521
NTDB id 413 AAK55817.1 141..845( )          ..............................................................................   0
NTDB id 374 SMU RS06885 WP 002262930.1      ..............................................................................   0
NTDB id 1046 HON27 RS03130 WP 168726941.1   TRLVPFSRLLPRLQRIVRQTSTALNRPAELFVNNTEGELDRNILERLVTPLEHMLRNAIDHGLEDRAQRQQANKPETGRIELNIQ  1114
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ..............................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1     ..............................................................................   0
NTDB id 1047 HON27 RS03110 WP 000389061.1   ..............................................................................   0
consensus
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logo


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NTDB id 1419 SGL RS12550 WP 010873252.1     LQGNQTLITVSDDGAGINTEMVKQKAVEKGLISRMEAQSLSQSEVYDLLFHAGFSTKDTADDFAGRGVGLDVVRTSLIDIRGAIN   606
NTDB id 413 AAK55817.1 141..845( )          ..............................................................................   0
NTDB id 374 SMU RS06885 WP 002262930.1      ..............................................................................   0
NTDB id 1046 HON27 RS03130 WP 168726941.1   RQGTDVVVVFSDDGQGIDVEKVRQKALLAGLIKP..EQDLEQQDILQLIFHPGLSTAEQVTQISGRGVGLDVVQSDIKSLGGHVS  1197
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ..............................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1     ..............................................................................   0
NTDB id 1047 HON27 RS03110 WP 000389061.1   ..............................................................................   0
consensus
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logo


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NTDB id 1419 SGL RS12550 WP 010873252.1     IESTVGKGTTFTIRLPLTLSICKALCCLSDRARIAFPMDGVEDTRDYLPKDIVTD.EDGQKCVKYGKEALLLPLYPLKDLLNYNR   690
NTDB id 413 AAK55817.1 141..845( )          ..............................................................................   0
NTDB id 374 SMU RS06885 WP 002262930.1      ..............................................................................   0
NTDB id 1046 HON27 RS03130 WP 168726941.1   VESVYGQGTTFTIRVPTTVAVSDALMVKVADQQFAIPLAQIDRIIRVSPASLEQYFESPQELFEYEN.....KRYPLRYLSEFVG  1277
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ..............................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1     ..............................................................................   0
NTDB id 1047 HON27 RS03110 WP 000389061.1   ..............................................................................   0
consensus
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logo



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NTDB id 1419 SGL RS12550 WP 010873252.1     QLSRGSVYGGKQEEDVVRVIIARGSSGNLLALQIDQVLGEE.EIVIKQIEGPIPKPPGIAGATVRGDGSIMPIADVLELIEIAQG   774
NTDB id 413 AAK55817.1 141..845( )          ..........................................................................................   0
NTDB id 374 SMU RS06885 WP 002262930.1      ..........................................................................................   0
NTDB id 1046 HON27 RS03130 WP 168726941.1   NQPIPRLNG...VMYSLPVLMIKANNGQTVALLVDQLIGSRAQIVVKPIGQQFSSIGAIAGATILGDGQVCLILDGQNIARQIQS  1359
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ..........................................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1     ..........................................................................................   0
NTDB id 1047 HON27 RS03110 WP 000389061.1   ..........................................................................................   0
consensus
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logo



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NTDB id 1419 SGL RS12550 WP 010873252.1     RLRT.DSSGGLWRKTLTPTVNEVHMDPTVLIVDDSITVRELLSLSFKKAGFRVEQARDGQEAWDQLKSGLPCDLVFCDIEMPRKN   858
NTDB id 413 AAK55817.1 141..845( )          ........................MKKILIVDDEKPISDIIKFNMTKEGYEVVTAFNGREALEQFEAE.QPDIIILDLMLPEID    59
NTDB id 374 SMU RS06885 WP 002262930.1      ........................MKKILIVDDEKPISDIIKFNLAKEGYDTITAFDGREALSKYEEE.NPDLIILDLMLPELD    59
NTDB id 1046 HON27 RS03130 WP 168726941.1   TQRHKQLSEAVY......RQRESDERRLIMIVDDSVTVRKVTSRLLERQGYDVVTAKDGVDAIEQLENI.KPDLMLLDIEMPRMD  1437
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ........................MSTVLIVEDSIAQREMITDLLKASGLTVTHASDGVEALEAILTA.PPDLVVLDIVMPRMN    59
NTDB id 1417 SGL RS04200 WP 014407071.1     ........................MNAVLLVEDSSSQREMISGILKDHGWQVTIACDGVEALEKLQNF.SPDLVVLDIVMPRMN    59
NTDB id 1047 HON27 RS03110 WP 000389061.1   ....................MEDAFQNLKVMVIDDSKTIRRTAETLLQREGCEVITAVDGFEALSKIAEA.NPDIVFVDIMMPRLD    65
consensus                                                        *  *****!** ******* ** * !******! *! *!** *      *!****!***!***
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logo



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NTDB id 1419 SGL RS12550 WP 010873252.1     GLELLSELQADEELSSIPVALLTSRGADRHRKVAAKLGATGYFTKPYTEKDILDAANRMLNGEVLLPGSTRKTNSILSRFKKARG   943
NTDB id 413 AAK55817.1 141..845( )          GLEVAKTIR...KTSSVPLLMLSAKDSEFDKVIGLELGADDYVTKPFSNRELQARVKALLRRSQPMPVDGQ.EADSKPQ.PIQIG   139
NTDB id 374 SMU RS06885 WP 002262930.1      GLEVAKEVR...KNSHVPIIMLSAKDSEFDKVIGLEIGADDYVTKPFSNRELLARVKAHLRRTENIESAVAEENASGIP.EIIIG   140
NTDB id 1046 HON27 RS03130 WP 168726941.1   GFEVLNLVRHHDMHQYMPIIMITSRTGEKHRERAFSLGVSQYMGKPFQEEELLENIDALLVAFESEVKS.................  1506
NTDB id 42821 CDC37 RS16845 WP 096623378.1  GYEVCRRLKSDPKTQNVPVVMCSSKGEEFDRYWGMKQGADAYIAKPFQPTELVGTVKQLLRG.....................   121
NTDB id 1417 SGL RS04200 WP 014407071.1     GYEVCRRIKSDPKTKNVPVIMCSSKGEEFDRFWGMRQGADAYIAKPFQPMELVGTIKQLLRN.....................   121
NTDB id 1047 HON27 RS03110 WP 000389061.1   GYQTCALIKNSQNYQNIPVIMLSSKDGLFDQAKGRVVGSDEYLTKPFSKDELLNAIRNHVSS.....................   127
consensus                                   !*** * **   *   *!********  ****  ** *!** !**!!**  ****  **  ***
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logo



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NTDB id 1419 SGL RS12550 WP 010873252.1     NFSEEAPTIVRSNPGTL.....R.....STVLIIDDSVMVREMLSMTFKKADYHTETARDGQDAWEKLKSGLPCDLILCDIEMPR  1018
NTDB id 413 AAK55817.1 141..845( )          DLEIVPDAYVAKKYGEELDLTHREFELLYHLASHTGQVITREHLLET.................VWGYDYFG...DVRTVDVTV..   203
NTDB id 374 SMU RS06885 WP 002262930.1      DLQILPDAFVAKKRGTEVELTHREFELLHHLATHTGQVMTREHLLET.................VWGYDYFG...DVRTVDVTV..   204
NTDB id 1046 HON27 RS03130 WP 168726941.1   ..........................................................................................  1506
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ..........................................................................................   121
NTDB id 1417 SGL RS04200 WP 014407071.1     ..........................................................................................   121
NTDB id 1047 HON27 RS03110 WP 000389061.1   ..........................................................................................   127
consensus
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<0

logo



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NTDB id 1419 SGL RS12550 WP 010873252.1     MNGLELLERIQEDPNLSRIPVAMITSRGAQKMQRMAAEKGAKGYFVKPYIEETLLEASQRLIRGEVLLDLAALSADE  1095
NTDB id 413 AAK55817.1 141..845( )          ...RRLREKIEDTPSR...PEYILT.............RRGVGYYMRNNA*.........................   234
NTDB id 374 SMU RS06885 WP 002262930.1      ...RRLREKIEDTPSR...PEYILT.............RRGVGYYMKSYD.........................   235
NTDB id 1046 HON27 RS03130 WP 168726941.1   ..............................................................................  1506
NTDB id 42821 CDC37 RS16845 WP 096623378.1  ..............................................................................   121
NTDB id 1417 SGL RS04200 WP 014407071.1     ..............................................................................   121
NTDB id 1047 HON27 RS03110 WP 000389061.1   ..............................................................................   127
consensus
```

X non conserved
X similar
X ≥ 50% conserved