```
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 H0N27 RS03130 WP 168726941.1 MKEILKTLTEAMTLPEDSYSEQDAEFLEIFIEEIEEIFVDLQPLINKWMQSENIATLTEIRRHFHTLKGSGRMIGAKSSAELAWT  85
NTDB id 1047 H0N27 RS03110 WP 000389061.1 ...............................................................................   0
NTDB id 66457 LBWT RS02620 WP 017290869.1 ...............................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1   ...............................................................................   0
consensus


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 H0N27 RS03130 WP 168726941.1 VEDTLNRVINQSLQLTPTIQSYVQLVFKFYFLKLVDNFKQKRAHTLDFRPLILLGQQLQQQQSLEPALEELLQLSHTLMAETVTG  170
NTDB id 1047 H0N27 RS03110 WP 000389061.1 ...............................................................................   0
NTDB id 66457 LBWT RS02620 WP 017290869.1 ...............................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1   ...............................................................................   0
consensus


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 H0N27 RS03130 WP 168726941.1 LELDYIEQDSLAEPIIQATHTEIEINLDETLTLFMEEAEEHLATIHQFLDQELHQYDSYNALIRALHTLRGSSAMAQVETIFEAS  255
NTDB id 1047 H0N27 RS03110 WP 000389061.1 ...............................................................................   0
NTDB id 66457 LBWT RS02620 WP 017290869.1 ...............................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1   ...............................................................................   0
consensus


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 H0N27 RS03130 WP 168726941.1 TKVEHLFKILLQEELSSHSEEILLLQEYREFVRDSLELLSRYSSSEQLEARLLQFNQSWDAYVEQHGDRTDPLMPSHGLVSQLLQ  340
NTDB id 1047 H0N27 RS03110 WP 000389061.1 ....................................................................................   0
NTDB id 66457 LBWT RS02620 WP 017290869.1 ....................................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1   ....................................................................................   0
consensus
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logo
                                        LDVSELLDAELDFEKGIRNEFPDYLERLSEQADLLLQHTHSQAMLGLHEYTSQLKESYEVLLDKPALLQSDYIFEIYQKAHQQLI
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 H0N27 RS03130 WP 168726941.1 LDVSELLDAELDFEKGIRNEFPDYLERLSEQADLLLQHTHSQAMLGLHEYTSQLKESYEVLLDKPALLQSDYIFEIYQKAHQQLI   425
NTDB id 1047 H0N27 RS03110 WP 000389061.1 .............................................................................................   0
NTDB id 66457 LBWT RS02620 WP 017290869.1 .............................................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1   .............................................................................................   0
consensus


logo
                                        QLFDALAAGQRVGVVKQHQSILEELKLYTQYTPDISNDLPQQDSTSFEPIYNIEPDPEVVATVENFSDSADWAVLGQSVQQDRQY
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 H0N27 RS03130 WP 168726941.1 QLFDALAAGQRVGVVKQHQSILEELKLYTQYTPDISNDLPQQDSTSFEPIYNIEPEPEVVATVENFSDSADWAVLGQSVQQDRQY   510
NTDB id 1047 H0N27 RS03110 WP 000389061.1 .............................................................................................   0
NTDB id 66457 LBWT RS02620 WP 017290869.1 .............................................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1   .............................................................................................   0
consensus


logo
                                        ISSTQVNRNFDADLLDIFLEEAEELLEGIDTDLNIWVGEQENFAALNNLMRYLHTLKGGANMVQATYLGLIAHELESIYERLIQK
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 H0N27 RS03130 WP 168726941.1 ISSTQVNRNFDADLLDIFLEEAEELLEGIDTDLNIWVGEQENFAALNNLMRYLHTLKGGANMVQATYLGLIAHELESIYERLIQK   595
NTDB id 1047 H0N27 RS03110 WP 000389061.1 .............................................................................................   0
NTDB id 66457 LBWT RS02620 WP 017290869.1 .............................................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1   .............................................................................................   0
consensus


logo
                                        QLVVTSDLIDFIRLVQDDLADRLQIMREQQLDYAAPYTINALKRAEQNSNFQPLPVVEAFDAESEVFSEQKVISEIIIDEIPVEL
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 H0N27 RS03130 WP 168726941.1 QLVVTSDLIDFIRLVQDDLADRLQIMREQQLDYAAPYTINALKRAGQNSNFQPLPVVEAFDAESEVFSEQKVISEIIIDEIPVEL   680
NTDB id 1047 H0N27 RS03110 WP 000389061.1 .............................................................................................   0
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NTDB id 1417 SGL RS04200 WP 014407071.1   .............................................................................................   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 1047 HON27 RS03110 WP 000389061.1 ..................................................................................  0
NTDB id 66457 LBWT RS02620 WP 017290869.1 ..................................................................................  0
NTDB id 1417 SGL RS04200 WP 014407071.1   ..................................................................................  0
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consensus

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 1047 HON27 RS03110 WP 000389061.1 ..................................................................................  0
NTDB id 66457 LBWT RS02620 WP 017290869.1 ..................................................................................  0
NTDB id 1417 SGL RS04200 WP 014407071.1   ..................................................................................  0
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consensus

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 1047 HON27 RS03110 WP 000389061.1 ..................................................................................  0
NTDB id 66457 LBWT RS02620 WP 017290869.1 ..................................................................................  0
NTDB id 1417 SGL RS04200 WP 014407071.1   ..................................................................................  0
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consensus

logo


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NTDB id 1419 SGL RS12550 WP 010873252.1   QVKSRSFEQTMRVPIKQLDNLSNLIGELVVKRNRLEQDQERLRQFLDNLLNQAQNLSDVGGRMQDLYERTLLEGALLASRSTNSR  351
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NTDB id 1046 HON27 RS03130 WP 168726941.1 TERLDQNNEMIRVSADLIEKMIDLSGENSINRSRIEMDLSQFSHTLVEMELAIQRLADQLRRMEGELETQI..............  956
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NTDB id 66457 LBWT RS02620 WP 017290869.1 ...................................................................................  0
NTDB id 1417 SGL RS04200 WP 014407071.1   ...................................................................................  0
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consensus

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logo
                                      HHSSKTTYPDAR ITKSSSTSRYTBFDRALEMDRYTSFNPLSQRSMAESLAVRYWESKSTTSYKYRBETESYKRTQRRYTEFTQEGMTR
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 1047 HON27 RS03110 WP 000389061.1 .............................................................................   0
NTDB id 66457 LBWT RS02620 WP 017290869.1 .............................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1   .............................................................................   0
consensus


logo
                                      TRMVPFTRTLERLPRAYREYSTKLNRRXNLEVNNTEVEYDRNILERLYTPMTHYYRNAITHGTETRAQRQRLNKSETGRTEYRAP
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 1047 HON27 RS03110 WP 000389061.1 .............................................................................   0
NTDB id 66457 LBWT RS02620 WP 017290869.1 .............................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1   .............................................................................   0
consensus


logo
                                      RQGTDVYYYYSDDGRGINYEMVRQKAYLKGLISRMEAEQSLEQSEYYRLTFHRGFSTKETDXTDFAGRGVGLDWRTSLKSLRGHYS
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 1047 HON27 RS03110 WP 000389061.1 .............................................................................   0
NTDB id 66457 LBWT RS02620 WP 017290869.1 .............................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1   .............................................................................   0
consensus


logo
                                      YESYYGRGTTFTIRYPLTYSYSKALMYKVRRRRIAIPMRQYERTRBVEPADTEQDFEBSEQKLYKYENEALLLKEYPLRDLEEFNS
NTDB id 1419 SGL RS12550 WP 010873252.1   IESTVGKGTTFTIRLPLTLSICKALCCLSDRARIAFPMDGVEDTRDYLPKDIVTD.EDGQKCVKYGKEALLLPLYPLKDLLNYNR   690
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NTDB id 374 SMU RS06885 WP 002262930.1    .............................................................................   0
NTDB id 1046 HON27 RS03130 WP 168726941.1 VESVYGQGTTFTIRVPTTVAVSDALMVKVADQQFAIPLAQIDRIIRVSPASLEQYFESPQELFEYEN.....KRYPLRYLSEFVG   1277
NTDB id 1047 HON27 RS03110 WP 000389061.1 .............................................................................   0
NTDB id 66457 LBWT RS02620 WP 017290869.1 .............................................................................   0
NTDB id 1417 SGL RS04200 WP 014407071.1   .............................................................................   0
consensus
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logo

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 H0N27 RS03130 WP 168726941.1	NQPIPRLNG...VMYSLPVLMIKANNGQTVALLVDQLIGSRAQIVVKPIGQQFSSIGAIAGATILGDGQVCLILDGQNIARQIQS	1359
NTDB id 1047 H0N27 RS03110 WP 000389061.1	....	0
NTDB id 66457 LBWT RS02620 WP 017290869.1	....	0
NTDB id 1417 SGL RS04200 WP 014407071.1	....	0

consensus

logo

NTDB id 1419 SGL RS12550 WP 010873252.1	RLRT.DSSGGLWRKTLTPTVNEVHMDPTVLIVDDSITVRELLSLSFKKAGFRVEQARDGQEAWDQLKSGLPCDLVFCDIEMPRKN	858
NTDB id 413 AAK55817.1 141..845( )	...................MKKTLIVDDEKPISDIIKFNMTKEGYEVVTAFNGREALEQFEAEQ.PDIIILDLMLPEID	59
NTDB id 374 SMU RS06885 WP 002262930.1	...................MKKILIVDDEKPISDIIKFNLAKEGYDTITAFDGREALSKYEEEN.PDLIILDLMLPELD	59
NTDB id 1046 H0N27 RS03130 WP 168726941.1	TQRHKQLSEAVY......RQRESDERRLIMIVDDSVTVRKVTSRLLERQGYDVVTAKDGVDATEQLENIK.PDLMLLDIEMPRMD	1437
NTDB id 1047 H0N27 RS03110 WP 000389061.1	.............MEDAFQNLKVMVIDDSKTIRRTAETLLQREGCEVITAVDGFEALSKIAEAN.PDIVFVDIMMPRLD	65
NTDB id 66457 LBWT RS02620 WP 017290869.1	...................MSTVLVVEDSVTQREMITDLLKGSGIEVTIATDGVEALEHIQGHC.PDLVVLDIVMPRMN	59
NTDB id 1417 SGL RS04200 WP 014407071.1	...................MNAVLLVEDSSSQREMISGILKDHGWQVTIACDGVEALEKLQNFS.PDLVVLDIVMPRMN	59

consensus   *   * ****** !* * ****** ** ** * !*****! *! *!** *   *!*****!**!***

logo

NTDB id 1419 SGL RS12550 WP 010873252.1	GLELLSELQADEELSSIPVALLTSRGADRHRKVAAKLGATGYFTKPYTEKDILDAANRMLNGEVLLPGSTRKTNSILSRFKKARG	943
NTDB id 413 AAK55817.1 141..845( )	GLEVAKTIR...KTSSVPILMLSAKDSEFDKVIGLELGADDYVTKPFSNRELQARVKALLRRSQPMPVDGQ.EADSKPQ.PIQIG	139
NTDB id 374 SMU RS06885 WP 002262930.1	GLEVAKEVR...KNSHVPIIMLSAKDSEFDKVIGLEIGADDYVTKPFSNRELLARVKAHLRRTENIESAVAEENASGIP.EIIIG	140
NTDB id 1046 H0N27 RS03130 WP 168726941.1	GFEVLNLVRHHDMHQYMPIIMITSRTGEKHRERAFSLGVSQYMGKPFQEEELLENIDALLVAFESEVKS................	1506
NTDB id 1047 H0N27 RS03110 WP 000389061.1	GYQTCALIKNSQNYQNIPVIMLSSKDGLFDQAKGRVVGSDEYLTKPFSKDELLNAIRNHVSS..................	127
NTDB id 66457 LBWT RS02620 WP 017290869.1	GYEVCRRLKADPKTQKVPVVMCSSKGEEFDRYWGMKQGADAYIAKPFQPTELVGTVKQLLRG...................	121
NTDB id 1417 SGL RS04200 WP 014407071.1	GYEVCRRIKSDPKTKNVPVIMCSSKGEEFDRFWGMRQGADAYIAKPFQPMELVGTIKQLLRN...................	121

consensus   !*** * **   * *!****** **** ** *!** !**!!*   **** ** ***

logo

NTDB id 1419 SGL RS12550 WP 010873252.1	NFSEEAPTIVRSNPGTL.....R.....STVLIIDDSVMVREMLSMTFKKADYHTETARDGQDAWEKLKSGLPCDILLCDIEMPR	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 H0N27 RS03130 WP 168726941.1	....	1506
NTDB id 1047 H0N27 RS03110 WP 000389061.1	....	127
NTDB id 66457 LBWT RS02620 WP 017290869.1	....	121
NTDB id 1417 SGL RS04200 WP 014407071.1	....	121

consensus

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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 1047 HON27 RS03110 WP 000389061.1   ..........................................................................    127
NTDB id 66457 LBWT RS02620 WP 017290869.1   ..........................................................................    121
NTDB id 1417 SGL RS04200 WP 014407071.1     ..........................................................................    121
consensus
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X non conserved
X similar
X ≥ 50% conserved