```
logo
NTDB id 1139135 DQM54 RS08360 WP 111724041.1  MKKRNVLAMAGVTLLAVGVLAACSSSKSGSSNTNTNFTYVYQTDPETLDYTLSGKTSTHDITSNVIDGLLENDQYGNLVP   80
NTDB id 475 HSISS4 RS07005 WP 021143809.1     MKKSKWLALAGVALLSVGALAACSSKSS...TSGTTYGYVYNSDPESLDYITSNTGPTKTAVTNGVDGLMEADKYGNLVP   77
NTDB id 324 STU RS16140 WP 011226306.1        MKKSKWLALAGVALLGVGVLAACSSKSN...TSGTTYGYVYSSDPETLDYITSNTGPTKSVVTNGVDGLMEADKYGNLVP   77
NTDB id 292 STER RS06940 WP 011681419.1       MKKSKWLALAGVALLGVGVLAACSSKSN...TSGTTYGYVYSSDPETLDYITSNTGPTKSVVTNGVDGLMEADKYGNLVP   77
consensus                                     !!!***!!*!!!*!!*!!*!!!!!!**    ***!***!!!**!!!*!!!**!****!*****!**!!!*!*!*!!!!!!

logo
NTDB id 1139135 DQM54 RS08360 WP 111724041.1  SIAEDWSVSKDGLTYTYKLRKNAKWYTSDGEEYADVTAKDFVTGLKHAVDKKSEALYMVENSIKGLAAYAKGETKDFSTV  160
NTDB id 475 HSISS4 RS07005 WP 021143809.1     SVAEDWSVSQDGLTYTYKIRKGVKWYTSDGEEYADVTAKDFVTGLKHAADGKAGALYLVQDSIAGLSDYLSGANKDFSNV  157
NTDB id 324 STU RS16140 WP 011226306.1        SVAEDWSVSKDGLTYTYKIRKGIKWYTSEGEEYANVTAKDFVTGLKHAADSKAGGIYLVQDSIAGLSDYLSGTNKDFSNV  157
NTDB id 292 STER RS06940 WP 011681419.1       SVAEDWSVSKDGLTYTYKIRKGIKWYTSEGEEYANVTAKDFVTGLKHAADSKAGGIYLVQDSIAGLSDYLSGTNKDFSNV  157
consensus                                     !*!!!!!!!*!!!!!!!!*!!**!!!!!*!!!!! !!!!!!!!!!!!!*!*!****!*!**!!*!!**!**!**!!!!*!

logo
NTDB id 1139135 DQM54 RS08360 WP 111724041.1  GIKAVDDHTLQFTLEHPESFWNSKLTMGILFPVNEEFLKSKGDKFGQATDPSSILYNGPFLLKSVTSKSSIEFAKNPNYW  240
NTDB id 475 HSISS4 RS07005 WP 021143809.1     GVKAIDDYTLQYTLKKPEPYWNSKTTYGLLSPVNEDFLKNKGKDFGKSTDPTSILYNGPFLLKSLTAKSSIELTKNENYW  237
NTDB id 324 STU RS16140 WP 011226306.1        GVKAIDEYTLQYTLKQPEPYWNSKTTYSLLFPVNEDFLKNKGKDFGKSTDPTSILYNGPFLLKSLTAKSSIELVKNEHYW  237
NTDB id 292 STER RS06940 WP 011681419.1       GVKAIDDYTLQYTLKQPEPYWNSKTTYSLLFPVNEDFLKNKGKDFGKSTDPTSILYNGPFLLKSLTAKSSIELVKNEHYW  237
consensus                                     !*!!*!**!!!*!!**!!**!!!!*!* *!*!!!!*!!!*!!**!!**!!!*!!!!!!!!!!!!*!*!!!!!**!!**!!

logo
NTDB id 1139135 DQM54 RS08360 WP 111724041.1  DKDNVHVDNVKLAFYDGQDQESLIRGFKDGSYSKARVYPRSSNYASVEKEYKDNIIFSPQGSSSFVVFTNIDRQSYNHTS  320
NTDB id 475 HSISS4 RS07005 WP 021143809.1     DKKNVHFDAIKLSYYDGSDQEALERGFTDGAYSLARVYPTSSNYSSVEKKYKDNIYYTAPGASTSAIGVNIDRQSYKFSA  317
NTDB id 324 STU RS16140 WP 011226306.1        DKKNVHFDAIKFSYYDGSDQDALVRGFTDGAYNFARVFPTSSNYASVEKKYKDNIYYTAPGASTSAIGINLDRQSYKYTA  317
NTDB id 292 STER RS06940 WP 011681419.1       DKKNVHFDAIKFSYYDGSDQDALVRGFTDGAYNFARVFPTSSNYASVEKKYKDNIFYTAPGASTSAIGINIDRQSYKYTA  317
consensus                                     !!*!!!*!**! **!!!*!!**!!!*!!*! *!!!*!*!!!!*!!!!*!!!!!*****!*!******!*!!!!!****

logo
NTDB id 1139135 DQM54 RS08360 WP 111724041.1  KSTDAQKSSTKKAILNKDFRQALNFAYDRKAYSDQVNGEEGALKSVRNLYVPPTFVQVGDKNFGDVVKEDVVKYGDEWKD  400
NTDB id 475 HSISS4 RS07005 WP 021143809.1     KKTDAEKTSTKKALLNKDFRQSINFAIDRTAYQSQMNGKDGAALALRNLFVPSDFVSAGDKTFGDLVTEKMSSYGDEWSG  397
NTDB id 324 STU RS16140 WP 011226306.1        KKTDSEKSSTKKALLNKDFRQAINFAIDRKAYQSQINGKDGATLAVRNLFVPSDFVSAGDKTFGDLVTEKMSSYGDEWSG  397
NTDB id 292 STER RS06940 WP 011681419.1       KKTDSEKSSTKKALLNKDFRQAINFAIDRKAYQSQINGKDGATLGVRNLFVPSDFVSAGDKTFGDLVTEKMSSYGDEWSG  397
consensus                                     !*!! *!*!!!!!*!!!!!!!**!!!*!!*!!**!*!!**!!****!!!*!!!**!!**!!!*!!!*!*!****!!!!!**

logo
NTDB id 1139135 DQM54 RS08360 WP 111724041.1  VDFSDATNGLYNPEKAKAEFAKAKEALQAEGVEFPIHLDIPAIQTNTLGVKRVQSMKQSIEKSLGTDNVVVDIQMLSQED  480
NTDB id 475 HSISS4 RS07005 WP 021143809.1     VNFTDGQDGLYNAEKAKTEFAKAKETLQADGVQFPIHLDLPVDQSSKINVAQAQSLKQTIEQSLGSDNVVIDVNQLSSDD  477
NTDB id 324 STU RS16140 WP 011226306.1        VNFADSQDGLYNAEKAKTEFAKAKDALQADGVQFPIHLDLPVDQSSKLNVAQAQSLKQTIEKSLGSENVVIDINQLSSDD  477
NTDB id 292 STER RS06940 WP 011681419.1       VNLADSQDGLYNAEKAKTEFAKAKDALQADGVQFPIHLDLPVNQSSKLNVAQVQSLKQTIEKSLGSENVVIDINQLSSDD  477
consensus                                     !***!***!!!!*!!!!*!!!!!!**!!!*!!*!!!!!!*!**!*****!** !!*!!*!!*!!!**!!!*!***!!**!
```

```
logo
NTDB id 1139135 DQM54 RS08360 WP 111724041.1  VQNITYYAPNAAALDWDITDQLGWTPDFQDPSSYLEILHPETGDNTKSFLGFEAGSGNAAAKQIGMDEFGKLLDEAAAEK   560
NTDB id 475 HSISS4 RS07005 WP 021143809.1     IQNATLNAANAAAEDWDISNGVIWGPDYQDPSTYLDIFKTTSSENTKTFMGYDDP.NNAAAAQVGLKDYDALLDSAASET   556
NTDB id 324 STU RS16140 WP 011226306.1        LENVTLNAANAAAEDWDISNSVAWAPDYQDPSTYLDIFKTTSSENTKAFMGYDDP.NNAAAAQVGLKDYDALLNSAASET   556
NTDB id 292 STER RS06940 WP 011681419.1       LENATLNAANAAAEDWDISNSVGWAPDYQDPSTYLDIFKTTSSENTKAFMGYDDP.NNAAAAQVGLKDYDALLNSAASET   556
consensus                                     * !*!**!*!!!!*!!!!*****!*!!*!!!!*!!*!*******!!!*!*!**** *!!!!*!*!******!! *!!*!*

logo
NTDB id 1139135 DQM54 RS08360 WP 111724041.1  TDTTKRYEKYAAAQAWLTDSSILLPSGSNGG.GAGVTKVVPFTTPFGWTGNKSDGSVLYKYIKLQDKPVTKKEYQEAEKK   639
NTDB id 475 HSISS4 RS07005 WP 021143809.1     TDLNARYDRYAQAQAWLEDSSLVIPLTVGNGAAPVISRLTPFTGASMQVGDKNS.SDYFKYVKPQEKVVTKKEYEQSREK   635
NTDB id 324 STU RS16140 WP 011226306.1        SDLNVRYDRYAQAQAWLEDSSLVIPLTVGNGAAPAISRLTPFTGASLQVGDKNSSNDYIKYVKPQEKVVTKKEYEQSREK   636
NTDB id 292 STER RS06940 WP 011681419.1       SDLNVRYDRYAQAQAWLEDSSLVIPLTVGNGAAPVISRLTPFTGASLQVGDKNSSNDYIKYVKPQEKVVTKKEYEQSREK   636
consensus                                     *!***!!**!!*!!!!!*!!!***!*****!*********!!!******!*!*** ***!!*!*!*!*!!!!!!*****!

logo
NTDB id 1139135 DQM54 RS08360 WP 111724041.1  WIKEKEESNKKAQEELEKHIK   660
NTDB id 475 HSISS4 RS07005 WP 021143809.1     WLKEKKASNEKAQKDLEKHVK   656
NTDB id 324 STU RS16140 WP 011226306.1        WLKEKKESNEKAQKDLEKHVK   657
NTDB id 292 STER RS06940 WP 011681419.1       WLKEKKESNEKAQKDLEKHVK   657
consensus                                     !*!!!**!!*!!!**!!!!*!
```

X non conserved

X similar

X $\geq$ 50% conserved