```
NTDB id 1239 Cj0634 YP 002344063.1      MASEI...LPDEFLELFKDLKKPPKKLHYKGNLSLLK.QDKIAIIGSRRMSVYTKNCVFSLASMLKNAHLCVVSGGALGV   76
NTDB id 47088 HP2018 RS01690 WP 000835226.1 MKSHFQYSALENIPKAFDILKDPPKKLYCVGDTKLLEAPLKVAIIGTRRPTPYSKQHTITLARELAKNGAVIVSGGALGV   80
NTDB id 1210 C694 RS01710 WP 001862983.1 MKSHFQYSTLENIPKAFDILKDPPKKLYCVGDTKLLDTPLKVAIIGTRRPTPYSKQHTITLARELAKNGAVIVSGGALGV   80
consensus                               !*!***** *******!**!!*!!!!!***!***!!* **!*!!!!*!!***!*!*****!!**!*******!!!!!!!!
```

```
NTDB id 1239 Cj0634 YP 002344063.1      DITASMAAMPNTIGIFANGLDQIYPRTNEKIIKQIYENALALSEYEDDYLPKNYDFLLRNRLVIALSKAVVVAQADIKSG  156
NTDB id 47088 HP2018 RS01690 WP 000835226.1 DIIAQENALPKTIMLSPCSLDLIYPTNNHKVIQEIVQNGLILSEYEKDFMPVKGSFLARNRLVIALSDAVIIPQADLQSG  160
NTDB id 1210 C694 RS01710 WP 001862983.1 DIIAQENALPKTIMLSPCSLDFIYPTNNHKVIQEIAQNGLILSEYEKDFMPIKGSFLARNRLVIALSDVVIIPQADLKSG  160
consensus                               !!*!***!*!*!!******!! !!!**!*!*!**! *!*!*!!!!!*!**!****!!*!!!!!!!!!**!***!!!**!!
```

```
NTDB id 1239 Cj0634 YP 002344063.1      SMQSAKLALELNKPLYVLPQRLGESTATNLLLKENKAKLICDFKEFVSEF......ASIDMNQDEFLEFCKKGVSVDEAL  230
NTDB id 47088 HP2018 RS01690 WP 000835226.1 SMSSARLAQKYQKPLFVLPQRLNESDGTNELLGKGQAQGIFNIQNFINTLLKDYHLKEMPEMKDEFLEYCAKNPSYEEAY  240
NTDB id 1210 C694 RS01710 WP 001862983.1 SMSSARLAQKYQKPLFVLPQRLNESDGTNELLEKGQAQGIFNIQNFINTLLKDYHLKEMPEMEDEFLEYCAKNPSYEEAY  240
consensus                               !!*!!*!!****!!!*!!!!!!*!!**!!*!! ***!**!*****!**************** !!!!!*!*!**!**!!*
```

```
NTDB id 1239 Cj0634 YP 002344063.1      KIYGQKVYEYELEGKISIEGLFIRVLA   257
NTDB id 47088 HP2018 RS01690 WP 000835226.1 LKFGDKLLEYELLGKIKRINHLVVLA.   266
NTDB id 1210 C694 RS01710 WP 001862983.1 LKFGDKLLEYELLGKIKRINHIVVLA.   266
consensus                               ***!*!**!!!!*!!!*****!****
```

X non conserved
X similar
X ≥ 50% conserved