logo

```
NTDB id 1166395 AB3230 RS01795 WP 260196363.1  .....................................MHW.RN..YVAQVDEMDCGVAALAMILKNYGLTTSLA  34
NTDB id 358 SMU RS01425 WP 002263523.1         MKQVIYVVLIVIAVNILLEIIKRVTKRGGTVSSSNPLPDGQSKLFWRRHYKLVPQIDTRDCGPAVLASVAKHYGSNYSIA  80
NTDB id 421 SGO RS10260 WP 012131060.1         .....................................MKFRKQHY..RAQVDTRDCGVAALAMIFGYYGSYFSLA  36
NTDB id 511 SMSK321 RS10730 WP 000668322.1     .....................................MKFGKRHY..RPQVDQMDCGVASLAMVFGYYGSYYSLA  36
NTDB id 483 SM12261 RS00275 WP 000668315.1     .....................................MKFGKRHY..RPQVDQMDCGVASLAMVFGYYGSYYSLA  36
NTDB id 247 KZH43 RS00220 WP 000668290.1       .....................................MKFGKRHY..RPQVDQMDCGVASLAMVFGYYGSYYFLA  36
NTDB id 206 SPD RS00235 WP 000668290.1         .....................................MKFGKRHY..RPQVDQMDCGVASLAMVFGYYGSYYFLA  36
NTDB id 171 SPR RS00230 WP 000668290.1         .....................................MKFGKRHY..RPQVDQMDCGVASLAMVFGYYGSYYFLA  36
NTDB id 131 SP RS00255 WP 000668284.1          .....................................MKFGKRHY..RPQVDQMDCGVASLAMVFGYYGSYYFLA  36
consensus                                                                           ********  **!*!**!!!*!*!!*****!!*****!
```

logo

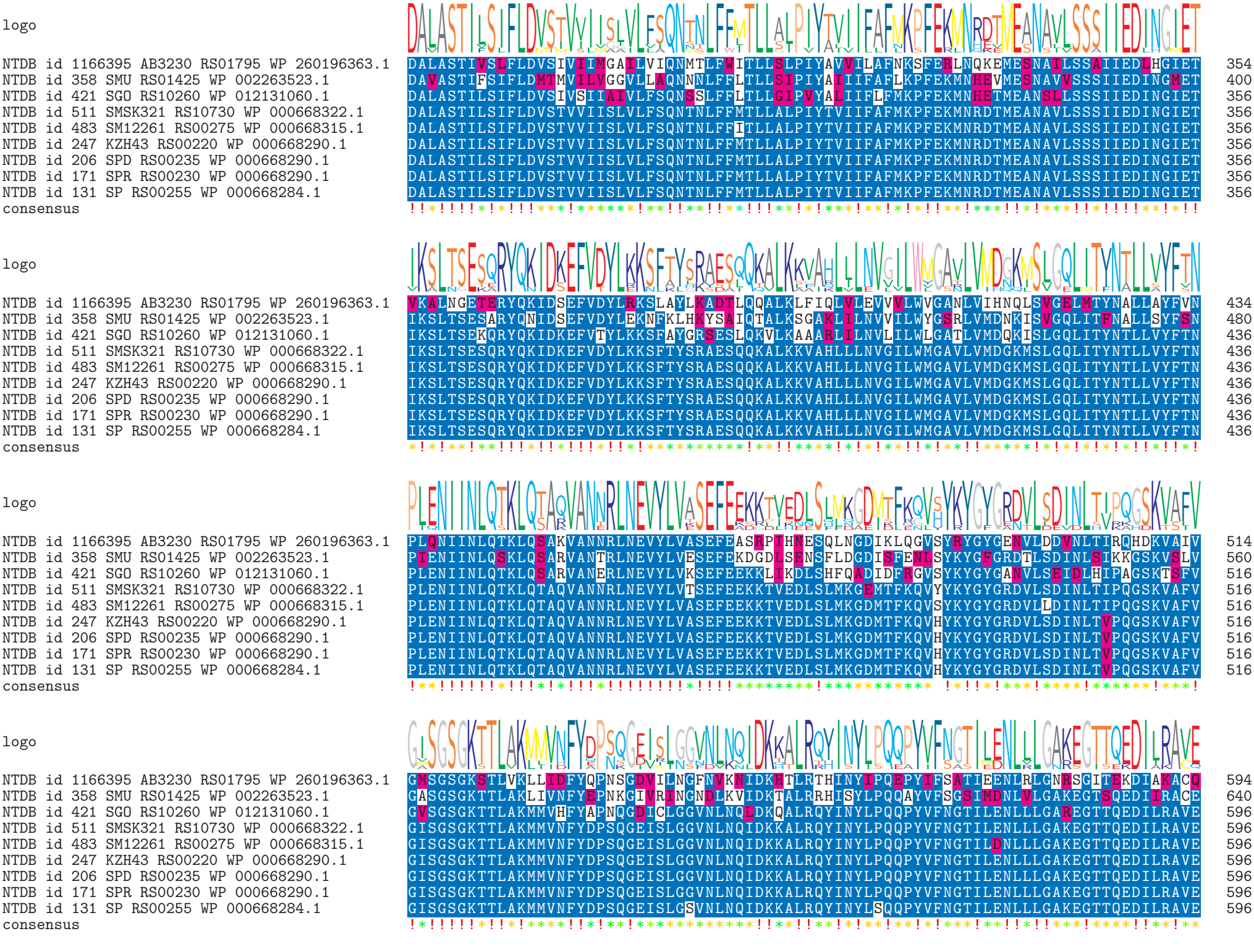
```
NTDB id 1166395 AB3230 RS01795 WP 260196363.1  YLRNIAKTSLEGTTALGLVKTAEKLGFETKAIQADMSLFEVQDLPLPFIVHVTKNGDLQHFYVVVKTSKTHVVIADPDPT  114
NTDB id 358 SMU RS01425 WP 002263523.1         YLRELSKTNKQGTTALGIVEAAKKLGFETRSIKADMTLFDYNDLTYPFIVHVIKGKRLQHYYVVYGSQNNQLIIGDPDPS  160
NTDB id 421 SGO RS10260 WP 012131060.1         TLREKAKTTNDGTTALGLVKVAEGLNFETRAFKADMSLFDLEEVSYPFIAHILKDGKLLHYYVVTGQDKHTIHIADPDPQ  116
NTDB id 511 SMSK321 RS10730 WP 000668322.1     HLRELAKTTMDGTTALGLVKVAEEIGFETRAIKADMTLFDLPDLTFPFVAHVLKEGKLLHYYVVTGQDKGSIHIADPDPG  116
NTDB id 483 SM12261 RS00275 WP 000668315.1     HLRELAKTTMDGTTALGLVKVAEEIGFETRAIKADMTLFDLPDLTFPFVAHVLKEGKLLHYYVVTGQDKDSIHIADPDPG  116
NTDB id 247 KZH43 RS00220 WP 000668290.1       HLRELAKTTMDGTTALGLVKVAEEIGFETRAIKADMTLFDLPDLTFPFVAHVLKEGKLLHYYVVTGQDKDSIHIADPDPG  116
NTDB id 206 SPD RS00235 WP 000668290.1         HLRELAKTTMDGTTALGLVKVAEEIGFETRAIKADMTLFDLPDLTFPFVAHVLKEGKLLHYYVVTGQDKDSIHIADPDPG  116
NTDB id 171 SPR RS00230 WP 000668290.1         HLRELAKTTMDGTTALGLVKVAEEIGFETRAIKADMTLFDLPDLTFPFVAHVLKEGKLLHYYVVTGQDKDSIHIADPDPG  116
NTDB id 131 SP RS00255 WP 000668284.1          HLRELAKTTMDGTTALGLVKVAEEIGFETRAIKADMTLFDLPDLTFPFVAHVLKEGKLLHYYVVTGQDKDSIHIADPDPG  116
consensus                                      *!!***!!***!!!!!!*!**!****!!!****!!!*!!********!!**!**!***!*!*!!!**********!*!!!!*
```

logo

```
NTDB id 1166395 AB3230 RS01795 WP 260196363.1  VAVISMSKERFESEWSGVALFFAPKSEYKPVKQDKGSLWGFIPSLLKQRRLVINIVLAAVLITIISICGSYFLQAVIDTY  194
NTDB id 358 SMU RS01425 WP 002263523.1         VKVTRMSKERFQSEWTGLAIFLAPQPNYKPHKGEKNGLSNFFPLIFKQKALMTYIIIASLIVTLIDIVGSYYLQGILDEY  240
NTDB id 421 SGO RS10260 WP 012131060.1         VKMTKISRERFEQEWTGITIFLAPSPAYKPSQEKKNGLLDFIPLLIKQKGLITNIVLATLLVTLINIVGSYYLQSIIDTY  196
NTDB id 511 SMSK321 RS10730 WP 000668322.1     VKLTKLPRERFAEEWTGVTLFMAPSPDYKPHKDQKNGLLSFIPILVKQRGLIANIVLATLLVTVINIVGSYYLQSIIDTY  196
NTDB id 483 SM12261 RS00275 WP 000668315.1     VKLTKLPRERFAEEWTGVTLFMAPSPDYKPHKDQKNGLLSFIPILVKQRGLIANIVLATLLVTLINIVGSYYLQSIIDTY  196
NTDB id 247 KZH43 RS00220 WP 000668290.1       VKLTKLPRERFEEEWTGVTLFMAPSPDYKPHKEQKNGLLSFIPILVKQRGLIANIVLATLLVTVINIVGSYYLQSIIDTY  196
NTDB id 206 SPD RS00235 WP 000668290.1         VKLTKLPRERFEEEWTGVTLFMAPSPDYKPHKEQKNGLLSFIPILVKQRGLIANIVLATLLVTVINIVGSYYLQSIIDTY  196
NTDB id 171 SPR RS00230 WP 000668290.1         VKLTKLPRERFEEEWTGVTLFMAPSPDYKPHKEQKNGLLSFIPILVKQRGLIANIVLATLLVTVINIVGSYYLQSIIDTY  196
NTDB id 131 SP RS00255 WP 000668284.1          VKLTKLPRERFEEEWTGVTLFMAPSPDYKPHKEQKNGLLSFIPILVKQRGLIANIVLATLLVTVINIVGSYYLQSIIDTY  196
consensus                                      !*******!!!**!!*!***!*!!***!!!****!**!**!*!***!!**!***!**!****!*!*!*!!!*!!***!*!
```

logo

```
NTDB id 1166395 AB3230 RS01795 WP 260196363.1  IPNNMHSTLAVVGIGLLVFYTFQAIFTYAQNFLLAVLGQRLSIEILGYIRHVFELPMSFFATRRTGEIVSRFTDANSKII  274
NTDB id 358 SMU RS01425 WP 002263523.1         IPDQLISTLGMIIIGLIIIYIIQQVMAFAKEYLLAVLSLRLVIDVILSYIKHIFTLPMSFFATRRTGEITSRFTDANQII  320
NTDB id 421 SGO RS10260 WP 012131060.1         VPDHMKTTLGMISIGLIIVYILQQFLSYAQEYLLLVLGQRLSIDVILSYIKHVFQLPMSFFATRRTGEIVSRFTDANRII  276
NTDB id 511 SMSK321 RS10730 WP 000668322.1     VPDQMRSTLGIISIGLVIVYILQQILSYAQEYLLLVLGQRLSIDVILSYIKHVFHLPMSFFATRRTGEIVSRFTDANSII  276
NTDB id 483 SM12261 RS00275 WP 000668315.1     VPDQMRSTLGIISIGLVIVYILQQILSYAQEYLLLVLGQRLSIDVILSYIKHVFHLPMSFFATRRTGEIVSRFTDANSII  276
NTDB id 247 KZH43 RS00220 WP 000668290.1       VPDQMRSTLGIISIGLVIVYILQQILSYAQEYLLLVLGQRLSIDVILSYIKHVFHLPMSFFATRRTGEIVSRFTDANSII  276
NTDB id 206 SPD RS00235 WP 000668290.1         VPDQMRSTLGIISIGLVIVYILQQILSYAQEYLLLVLGQRLSIDVILSYIKHVFHLPMSFFATRRTGEIVSRFTDANSII  276
NTDB id 171 SPR RS00230 WP 000668290.1         VPDQMRSTLGIISIGLVIVYILQQILSYAQEYLLLVLGQRLSIDVILSYIKHVFHLPMSFFATRRTGEIVSRFTDANSII  276
NTDB id 131 SP RS00255 WP 000668284.1          VPDQMRSTLGIISIGLVIVYIFQQILSYAQEYLLLVLGQRLSIDVILSYIKHVFHLPMSFFATRRTGEIVSRFTDANSII  276
consensus                                      *!*****!!****!!!***!**!*****!***!!*!!**!!*!**!!*!!*!*!*!!!!!!!!!!!!!!!!!!!!!**!!
```


logo
NTDB id 1166395 AB3230 RS01795 WP 260196363.1 DALASTIVSLFLDVSIVIIMGAILVIQNMTLFWITLLSLPIYAVVILAFNKSFERLNQKEMESNAILSSAIIEDLHGIET 354
NTDB id 358 SMU RS01425 WP 002263523.1 DAVASTIFSIFLDMTMVILVGGVLLAQNNNLFFLTLLSIPIYAIIIFAFLKPFEKMNHEVMESNAVVSSSIIEDINGMET 400
NTDB id 421 SGO RS10260 WP 012131060.1 DALASTILSIFLDVSIVSIIAIVLFSQNSSLFFLTLLGIPVYALIIFLFMKPFEKMNHETMEANSLLSSSIIEDINGIET 356
NTDB id 511 SMSK321 RS10730 WP 000668322.1 DALASTILSIFLDVSTVVIISLVLFSQNTNLFFMTLLALPIYTVIIFAFMKPFEKMNRDTMEANAVLSSSIIEDINGIET 356
NTDB id 483 SM12261 RS00275 WP 000668315.1 DALASTILSIFLDVSTVVIISLVLFSQNTNLFFITLLALPIYTVIIFAFMKPFEKMNRDTMEANAVLSSSIIEDINGIET 356
NTDB id 247 KZH43 RS00220 WP 000668290.1 DALASTILSIFLDVSTVVIISLVLFSQNTNLFFMTLLALPIYTVIIFAFMKPFEKMNRDTMEANAVLSSSIIEDINGIET 356
NTDB id 206 SPD RS00235 WP 000668290.1 DALASTILSIFLDVSTVVIISLVLFSQNTNLFFMTLLALPIYTVIIFAFMKPFEKMNRDTMEANAVLSSSIIEDINGIET 356
NTDB id 171 SPR RS00230 WP 000668290.1 DALASTILSIFLDVSTVVIISLVLFSQNTNLFFMTLLALPIYTVIIFAFMKPFEKMNRDTMEANAVLSSSIIEDINGIET 356
NTDB id 131 SP RS00255 WP 000668284.1 DALASTILSIFLDVSTVVIISLVLFSQNTNLFFMTLLALPIYTVIIFAFMKPFEKMNRDTMEANAVLSSSIIEDINGIET 356
consensus
logo
NTDB id 1166395 AB3230 RS01795 WP 260196363.1 VKALNGETERYQKIDSEFVDYLRKSLAYLKADTLQQALKLFIQLVLEVVVLWVGANLVIHNQLSVGELMTYNALLAYFVN 434
NTDB id 358 SMU RS01425 WP 002263523.1 IKSLTSESARYQNIDSEFVDYLEKNFKLHKYSAIQTALKSGAKLILNVVILWYGSRLVMDNKISVGQLITFNALLSYFSN 480
NTDB id 421 SGO RS10260 WP 012131060.1 IKSLTSEKQRYQKIDKEFVTYLKKSFAYGRSESLQKVLKAAARLILNVLILWLGATLVMDQKISLGQLITYNTLLVYFTN 436
NTDB id 511 SMSK321 RS10730 WP 000668322.1 IKSLTSESQRYQKIDKEFVDYLKKSFTYSRAESQQKALKKVAHLLLNVGILWMGAVLVMDGKMSLGQLITYNTLLVYFTN 436
NTDB id 483 SM12261 RS00275 WP 000668315.1 IKSLTSESQRYQKIDKEFVDYLKKSFTYSRAESQQKALKKVAHLLLNVGILWMGAVLVMDGKMSLGQLITYNTLLVYFTN 436
NTDB id 247 KZH43 RS00220 WP 000668290.1 IKSLTSESQRYQKIDKEFVDYLKKSFTYSRAESQQKALKKVAHLLLNVGILWMGAVLVMDGKMSLGQLITYNTLLVYFTN 436
NTDB id 206 SPD RS00235 WP 000668290.1 IKSLTSESQRYQKIDKEFVDYLKKSFTYSRAESQQKALKKVAHLLLNVGILWMGAVLVMDGKMSLGQLITYNTLLVYFTN 436
NTDB id 171 SPR RS00230 WP 000668290.1 IKSLTSESQRYQKIDKEFVDYLKKSFTYSRAESQQKALKKVAHLLLNVGILWMGAVLVMDGKMSLGQLITYNTLLVYFTN 436
NTDB id 131 SP RS00255 WP 000668284.1 IKSLTSESQRYQKIDKEFVDYLKKSFTYSRAESQQKALKKVAHLLLNVGILWMGAVLVMDGKMSLGQLITYNTLLVYFTN 436
consensus
logo
NTDB id 1166395 AB3230 RS01795 WP 260196363.1 PLQNIINLQTKLQSAKVANNRLNEVYLVASEFEASRPIHNESQLNGDIKLQGVSYRYGYGENVLDDVNLTIRQHDKVAIV 514
NTDB id 358 SMU RS01425 WP 002263523.1 PIENIINLQSKLQSARVANTRLNEVYLVESEFEKDGDLSENSFLDGDISFENLSYKYGFGRDTLSDINLSIKKGSKVSLV 560
NTDB id 421 SGO RS10260 WP 012131060.1 PLENIINLQTKLQSARVANERLNEVYLVKSEFEEKKLIKDLSHFQADIDFRGVSYKYGYGANVLSEIDLHIPAGSKTSFV 516
NTDB id 511 SMSK321 RS10730 WP 000668322.1 PLENIINLQTKLQTAQVANNRLNEVYLVTSEFEEKKTVEDLSLMKGEMTFKQVYYKYGYGRDVLSDINLTIPQGSKVAFV 516
NTDB id 483 SM12261 RS00275 WP 000668315.1 PLENIINLQTKLQTAQVANNRLNEVYLVASEFEEKKTVEDLSLMKGDMTFKQVSYKYGYGRDVLLDINLTIPQGSKVAFV 516
NTDB id 247 KZH43 RS00220 WP 000668290.1 PLENIINLQTKLQTAQVANNRLNEVYLVASEFEEKKTVEDLSLMKGDMTFKQVHYKYGYGRDVLSDINLTVPQGSKVAFV 516
NTDB id 206 SPD RS00235 WP 000668290.1 PLENIINLQTKLQTAQVANNRLNEVYLVASEFEEKKTVEDLSLMKGDMTFKQVHYKYGYGRDVLSDINLTVPQGSKVAFV 516
NTDB id 171 SPR RS00230 WP 000668290.1 PLENIINLQTKLQTAQVANNRLNEVYLVASEFEEKKTVEDLSLMKGDMTFKQVHYKYGYGRDVLSDINLTVPQGSKVAFV 516
NTDB id 131 SP RS00255 WP 000668284.1 PLENIINLQTKLQTAQVANNRLNEVYLVASEFEEKKTVEDLSLMKGDMTFKQVHYKYGYGRDVLSDINLTVPQGSKVAFV 516
consensus
logo
NTDB id 1166395 AB3230 RS01795 WP 260196363.1 GMSGSGKSTLVKLLIDFYQPNSGDVILNGFNVKNIDKHTLRTHINYIPQEPYIFSATIEENLRLGNRSGITEKDIAKACQ 594
NTDB id 358 SMU RS01425 WP 002263523.1 GASGSGKTTLAKLIVNFYEPNKGIVRINGNDLKVIDKTALRRHISYLPQQAYVFSGSIMDNLVLGAKEGTSQEDIRACE 640
NTDB id 421 SGO RS10260 WP 012131060.1 GVSGSGKTTLAKMMVHFYAPNQGDICLGGVNLNQLDKQALRQYINYLPQQPYVFNGTILENLLLGAREGTTQEDILRAVE 596
NTDB id 511 SMSK321 RS10730 WP 000668322.1 GISGSGKTTLAKMMVNFYDPSQGEISLGGVNLNQIDKKALRQYINYLPQQPYVFNGTILENLLLGAKEGTTQEDILRAVE 596
NTDB id 483 SM12261 RS00275 WP 000668315.1 GISGSGKTTLAKMMVNFYDPSQGEISLGGVNLNQIDKKALRQYINYLPQQPYVFNGTILDNLLLGAKEGTTQEDILRAVE 596
NTDB id 247 KZH43 RS00220 WP 000668290.1 GISGSGKTTLAKMMVNFYDPSQGEISLGGVNLNQIDKKALRQYINYLPQQPYVFNGTILENLLLGAKEGTTQEDILRAVE 596
NTDB id 206 SPD RS00235 WP 000668290.1 GISGSGKTTLAKMMVNFYDPSQGEISLGGVNLNQIDKKALRQYINYLPQQPYVFNGTILENLLLGAKEGTTQEDILRAVE 596
NTDB id 171 SPR RS00230 WP 000668290.1 GISGSGKTTLAKMMVNFYDPSQGEISLGGVNLNQIDKKALRQYINYLPQQPYVFNGTILENLLLGAKEGTTQEDILRAVE 596
NTDB id 131 SP RS00255 WP 000668284.1 GISGSGKTTLAKMMVNFYDPSQGEISLGSVNLNQIDKKALRQYINYLSQQPYVFNGTILENLLLGAKEGTTQEDILRAVE 596
consensus

logo

```
NTDB id 1166395 AB3230 RS01795 WP 260196363.1   LALIDTDINKMAMQYQTKLDENGNTLSGGQRQRLTIARALLSPAQVLIFDESTSGLDAITEKQLIDNLVAMTDKTIIFIA   674
NTDB id 358 SMU RS01425 WP 002263523.1          IAEIRSDIEQMPQGYQTEL.SDGAGISGGQKQRIALARALLTQAPVLILDEATSSLDILTEKKIISNLLQMTEKTIIFVA   719
NTDB id 421 SGO RS10260 WP 012131060.1          LAEIRSDIERMPLNYQTELSADGAGISGGQRQRIALARALLTDAPVLILDEATSSLDILTEKRIIDNLMVL.DKTIIFIA   675
NTDB id 511 SMSK321 RS10730 WP 000668322.1      LAEIREDIERMPLNYQTELTSDGAGISGGQRQRIALARALLTDAPILILDEATSSLDILTEKRIVDNLMAL.DKTLIFIA   675
NTDB id 483 SM12261 RS00275 WP 000668315.1      LAEIREDIERMPLNYQTELTSDGAGISGGQRQRIALARALLTDAPVLILDEATSSLDILTEKRIVDNLMAL.DKTLIFIA   675
NTDB id 247 KZH43 RS00220 WP 000668290.1        LAEIREDIERMPLNYQTELTSDGAGISGGQRQRIALARALLTDAPVLILDEATSSLDILTEKRIVDNLIAL.DKTLIFIA   675
NTDB id 206 SPD RS00235 WP 000668290.1          LAEIREDIERMPLNYQTELTSDGAGISGGQRQRIALARALLTDAPVLILDEATSSLDILTEKRIVDNLIAL.DKTLIFIA   675
NTDB id 171 SPR RS00230 WP 000668290.1          LAEIREDIERMPLNYQTELTSDGAGISGGQRQRIALARALLTDAPVLILDEATSSLDILTEKRIVDNLIAL.DKTLIFIA   675
NTDB id 131 SP RS00255 WP 000668284.1           LAEIREDIERMPLNYQTELTSDGAGISGGQRQRIALARALLTDAPVLILDEATSSLDILTEKRIVDNLIAL.DKTLIFIA   675
consensus                                       *!*!**!!**!***!!!*!***!***!!!!*!!***!!!!!**!**!!*!!*!!*!!**!!!****!!***  *!!*!!*!
```

logo

```
NTDB id 1166395 AB3230 RS01795 WP 260196363.1   HRLSIAKRTNHIIVLHDGRVAEEGTHAALLNEHGYYYDLINS   716
NTDB id 358 SMU RS01425 WP 002263523.1          HRLSISQRTDEVIVMDQGKIVEQGTHKELLAKQGFYYNLFN.   760
NTDB id 421 SGO RS10260 WP 012131060.1          HRLTIAERSEQVVVLDQGRIVESGSHKELIEREGFYHHLVNS   717
NTDB id 511 SMSK321 RS10730 WP 000668322.1      HRLTIAERTEKVVVLNQGKIVEEGKHADLLAQGGFYAHLVNS   717
NTDB id 483 SM12261 RS00275 WP 000668315.1      HRLTIAERTEKVVVLDQGKIVEEGNHADLLAQGGFYAHLVNS   717
NTDB id 247 KZH43 RS00220 WP 000668290.1        HRLTIAERTEKVVVLDQGKIVEEGKHADLLAQGGFYAHLVNS   717
NTDB id 206 SPD RS00235 WP 000668290.1          HRLTIAERTEKVVVLDQGKIVEEGKHADLLAQGGFYAHLVNS   717
NTDB id 171 SPR RS00230 WP 000668290.1          HRLTIAERTEKVVVLDQGKIVEEGKHADLLAQGGFYAHLVNS   717
NTDB id 131 SP RS00255 WP 000668284.1           HRLTIAERTEKVVVLDQGKIVEEGKHADLLAQGGFYAHLVNS   717
consensus                                       !!!*!**!*****!***!***!*!*!**!****!*!**!*!*
```

X non conserved
X similar
X ≥ 50% conserved