

logo

|                                             |                                                                                   |    |
|---------------------------------------------|-----------------------------------------------------------------------------------|----|
| NTDB id 1177 A1552VC RS01165 WP 000422572.1 | MEINQYLDGMLTHKASDLYITVGGAPILYRVDGELRAQGE.ALSVADVTTALLHAMMDARQAEEFKQTREAN          | 69 |
| NTDB id 190636 A6L45 RS02700 WP 002221204.1 | MFTDENMTAKEELFAWLHRHMNQNGSDFVTTTHFPAMKLDGKITRITDEPLTAEKCMETAFSIMSAKQAEFSSSTNECN   | 80 |
| NTDB id 1203 PSJM300 01605 AFN76401.1       | MEFEKLLRLMVEKGGSDLFITAGVPPSMKVNGKILPVNKTPTSPEMTRETIVHGVMMNEQQRREFTENHECN          | 70 |
| NTDB id 1019 ACIAD RS04205 WP 004922051.1   | MDFNLLNLMAKHKASDLFITAGVEPSLKINGEITPVSKTKLDGDMIAQLIDSITTQKQRQEFIIETHECN            | 70 |
| NTDB id 1307 DR RS10055 WP 010888596.1      | .....MTSGIDITDILRLAADKGASDITLAAGLPQFKLSGDYDAQGFEP LSASDTRKLMYSMMNERQQRIFEEREKRELD | 74 |
| NTDB id 1086 NMV RS00245 WP 002218487.1     | MQITDLLAFGAKNKASDLHLSSGISPMIRVHGDMMRRINLPESAAEEVGNMVTSMVNDHQRKIYQQNLEVD           | 70 |
| NTDB id 1283 ACE17W RS02630 WP 010947729.1  | MDIAELLAFSVKNKSSDLHISAGMPPMIRVDGDLRKINLPPLLEHKDVIKIIYDIMNDRQRKEYEEFFETD           | 70 |
| NTDB id 1259 GC085 RS10305 WP 010947729.1   | MDIAELLAFSVKNKSSDLHISAGMPPMIRVDGDLRKINLPPLLEHKDVIKIIYDIMNDRQRKEYEEFFETD           | 70 |
| NTDB id 1194 PAKAF RS01995 WP 003084552.1   | MDITELLAFSAKQGASDLHLSAGLPPMIRVDGDVRRINLPPLLEHKQVHALIYDIMNDKQRKDFFEEFLET           | 70 |
| NTDB id 1202 PSJM300 01600 AFN76400.1       | MDITELLAFSAKQGASDLHLSAGLPPMIRVDGDVRRINLPAMDHKQVHALIYDIMNDKQRKDFFEEFLET            | 70 |
| NTDB id 1020 ACIAD RS04210 WP 011182164.1   | MDITELLAFSVQNRASDLHLSAGIPPMIRVDGEVRRINLPAMDHSEVHNLIYDIMNDKQRRDYEEKLET             | 70 |
| NTDB id 1081 FDQ49 RS05335 WP 006581387.1   | MDITELLAFSVKNKASDLHLSAGMPPMIRVDGEVRRINLPALLEHKDVHRLVYDIMNDKQRRDYEEKLET            | 70 |
| NTDB id 1060 ABD1 RS04380 WP 000355489.1    | MDITELLAFSVKNKASDLHLSAGMPPMIRVDGEVRRINLPALLEHKDVHRLVYDIMNDKQRRDYEEKLET            | 70 |
| NTDB id 1040 HON27 RS13360 WP 000355489.1   | MDITELLAFSVKNKASDLHLSAGMPPMIRVDGEVRRINLPALLEHKDVHRLVYDIMNDKQRRDYEEKLET            | 70 |
| consensus                                   | *****!***** *!!*****!*****!*****!*****!*****!*****!*****!*****!*****              |    |

logo

|                                             |                                                                                    |     |
|---------------------------------------------|------------------------------------------------------------------------------------|-----|
| NTDB id 1177 A1552VC RS01165 WP 000422572.1 | FAVVRD..SGRFRVSFAFFQRELPGAVIRRIETRIPTFEELKLPVLQNLAI AKRGLVLVVGATGSGKSTTMAAMTGVRNQ  | 147 |
| NTDB id 190636 A6L45 RS02700 WP 002221204.1 | FAISLPD.TSRFRVNAMIQRGATALVFRAITSKIPKFESLNLPPVLKDVALKKRGLVIFVGGTSGSKSTSLASLIDYRNE   | 159 |
| NTDB id 1203 PSJM300 01605 AFN76401.1       | FAISARG.IGRFRVSFAFYQRNLAGMVLRRRIETNIPTIEDLKLPPVLKKLALTKRGLVLFVGATGTGKSTSLAAMIYGRNQ | 149 |
| NTDB id 1019 ACIAD RS04205 WP 004922051.1   | FAILNREKNERFRVSAFQQRDMPGMVIIRRIETKIPSPDDLHLPLILKELAMSKRGIIIFSGATGTGKSTSLASMIQHRNQ  | 150 |
| NTDB id 1307 DR RS10055 WP 010888596.1      | FSFALGD.KARFRVNAFMQRGNVGVMLRIPTTVRTTAEMGLPQTVIDIANAPRGLVLVTGPTGSGKSTTLASMIDHINT    | 153 |
| NTDB id 1086 NMV RS00245 WP 002218487.1     | FSFELPN.VARFRVNAFNIGRGAFAVFRTIPSTVLSLEELKAPSIFQKIAESPRGMVLVTGPTGSGKSTTLAAMINYINE   | 149 |
| NTDB id 1283 ACE17W RS02630 WP 010947729.1  | FSFEIAN.LARFRVNAFNQSRGAFAVFRTIPSEILSMEDLGLPPIFKEMASFSRGLVLVTGPTGSGKSTTLAAVIDYINS   | 149 |
| NTDB id 1259 GC085 RS10305 WP 010947729.1   | FSFEIAN.LARFRVNAFNQSRGAFAVFRTIPSEILSMEDLGLPPIFKEMASFSRGLVLVTGPTGSGKSTTLAAVIDYINS   | 149 |
| NTDB id 1194 PAKAF RS01995 WP 003084552.1   | FSFEVPG.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEELGMGEVFKRVS DVPRLGLVLVTGPTGSGKSTTLAAMDYINN  | 149 |
| NTDB id 1202 PSJM300 01600 AFN76400.1       | FSFEVPG.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEELGMGEVFKRITDVPRLGLVLVTGPTGSGKSTTLAAMDYINN   | 149 |
| NTDB id 1020 ACIAD RS04210 WP 011182164.1   | FSFEVPN.LARFRVNVFNQNRGAGAVFRTIPSQVLTLEELGLGKIFRDCDYPRGLVLVTGPTGSGKSTTLAAMDYINN     | 149 |
| NTDB id 1081 FDQ49 RS05335 WP 006581387.1   | FSFEVPN.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEELGLGQIFKDCDYPRGIVLVTGPTGSGKSTTLAAMDYINE     | 149 |
| NTDB id 1060 ABD1 RS04380 WP 000355489.1    | FSFEVPN.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEELGLGQIFKDCDYPRGIVLVTGPTGSGKSTTLAAMDYINE     | 149 |
| NTDB id 1040 HON27 RS13360 WP 000355489.1   | FSFEVPN.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEELGLGQIFKDCDYPRGIVLVTGPTGSGKSTTLAAMDYINE     | 149 |
| consensus                                   | !***** *!!!!!!***** *****!*****!*****!*****!*****!*****!*****!*****!*****!         |     |

logo

|                                             |                                                                                   |     |
|---------------------------------------------|-----------------------------------------------------------------------------------|-----|
| NTDB id 1177 A1552VC RS01165 WP 000422572.1 | HRTGHILTVEDPIEFVHEHKRCIVTQREVGLDTESYEVALKNSLRQAPDMILIGEIRSRETMEYAMTFAETGHLCMATLH  | 227 |
| NTDB id 190636 A6L45 RS02700 WP 002221204.1 | NSFGHIITIEDPIEFVHEHKNCIITQREVGVDTENWMAALKNTLRQAPDVLIGEIRDRETMDYAIAFAETGHLCMATLH   | 239 |
| NTDB id 1203 PSJM300 01605 AFN76401.1       | NSSGHIISIEDPIEFIHQHQCIVTQREVGIDTDSFEVALKNTLRQAPDVLIGEVRTRETMDHAVAFETGHLCLATLH     | 229 |
| NTDB id 1019 ACIAD RS04205 WP 004922051.1   | HSKGHIITIEDPIEFIEHAGCIITQREVGIDTDSFEIALKNTLRQAPDVLIGEIRSREVMYALAFETGHLVFAATLH     | 230 |
| NTDB id 1307 DR RS10055 WP 010888596.1      | TKKLHILTIEDPIEFMHPNKASIIINQREVGSDTLSFDDALRALRQAPDVLIVGEMRDYETIKAAVTAETGHLVFMGTLLH | 233 |
| NTDB id 1086 NMV RS00245 WP 002218487.1     | TQPAHILTIEDPIEFVHQSKKSLINQRELHQHTLSFANALRSALREDPDVILVGE MRDPETIGLALTAETGHLVFGTLH  | 229 |
| NTDB id 1283 ACE17W RS02630 WP 010947729.1  | SRYEHIITVEDPIEFVHQSKKCLVNQREVHKDTLSFNAALRSALREDPDIILVGE LRDLETIRLAMTAAETGHLVFGTLH | 229 |
| NTDB id 1259 GC085 RS10305 WP 010947729.1   | SRYEHIITVEDPIEFVHQSKKCLVNQREVHKDTLSFNAALRSALREDPDIILVGE LRDLETIRLAMTAAETGHLVFGTLH | 229 |
| NTDB id 1194 PAKAF RS01995 WP 003084552.1   | TKYHHILTIEDPIEFVHESKKCLVNQREVHRDTLGFSEALRSALREDPDIILVGE MRDLETIRLALTAETGHLVFGTLH  | 229 |
| NTDB id 1202 PSJM300 01600 AFN76400.1       | TKYHHILTIEDPIEFVHESKKCLVNQREVHRDTLGFSEALRSALREDPDIILVGE MRDLETIRLALTAETGHLVFGTLH  | 229 |
| NTDB id 1020 ACIAD RS04210 WP 011182164.1   | HRYDHILTVEDPIEFVHEPKKCLINQREVHRDTLGFNEALRSALREDPDIILVGE MRDLETIRLALTAETGHLVFGTLH  | 229 |
| NTDB id 1081 FDQ49 RS05335 WP 006581387.1   | NRYDHILTVEDPIEFVHQSKKCLINQREVHRDTLGFNEALRSALREDPDIILVGE MRDLETIRLALTAETGHLVFGTLH  | 229 |
| NTDB id 1060 ABD1 RS04380 WP 000355489.1    | NRYDHILTVEDPIEFVHQSKKCLINQREVHRDTLGFNEALRSALREDPDIILVGE MRDLETIRLALTAETGHLVFGTLH  | 229 |
| NTDB id 1040 HON27 RS13360 WP 000355489.1   | NRYDHILTVEDPIEFVHQSKKCLINQREVHRDTLGFNEALRSALREDPDIILVGE MRDLETIRLALTAETGHLVFGTLH  | 229 |
| consensus                                   | * * !*****!!!!!! * *****!*****!*****!*****!*****!*****!*****!*****!*****!         |     |

logo

|           |    |        |         |         |            |             |
|-----------|----|--------|---------|---------|------------|-------------|
| NTDB      | id | 1177   | A1552VC | RS01165 | WP         | 000422572.1 |
| NTDB      | id | 190636 | A6L45   | RS02700 | WP         | 002221204.1 |
| NTDB      | id | 1203   | PSJM300 | 01605   | AFN76401.1 |             |
| NTDB      | id | 1019   | ACIAD   | RS04205 | WP         | 004922051.1 |
| NTDB      | id | 1307   | DR      | RS10055 | WP         | 010888596.1 |
| NTDB      | id | 1086   | NMV     | RS00245 | WP         | 002218487.1 |
| NTDB      | id | 1283   | ACE17W  | RS02630 | WP         | 010947729.1 |
| NTDB      | id | 1259   | GC085   | RS10305 | WP         | 010947729.1 |
| NTDB      | id | 1194   | PAKAF   | RS01995 | WP         | 003084552.1 |
| NTDB      | id | 1202   | PSJM300 | 01600   | AFN76400.1 |             |
| NTDB      | id | 1020   | ACIAD   | RS04210 | WP         | 011182164.1 |
| NTDB      | id | 1081   | FDQ49   | RS05335 | WP         | 006581387.1 |
| NTDB      | id | 1060   | ABD1    | RS04380 | WP         | 000355489.1 |
| NTDB      | id | 1040   | HON27   | RS13360 | WP         | 000355489.1 |
| consensus |    |        |         |         |            |             |



307  
319  
309  
310  
313  
309  
308  
308  
308  
308  
308  
308  
308  
308  
308  
308  
308

logo

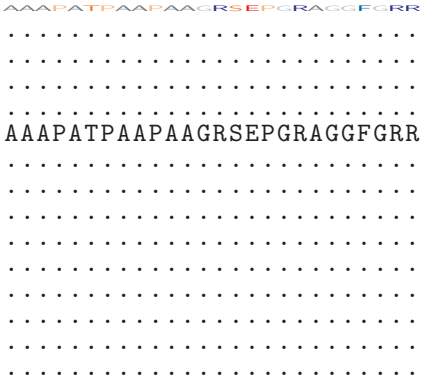
|           |    |        |         |         |            |             |
|-----------|----|--------|---------|---------|------------|-------------|
| NTDB      | id | 1177   | A1552VC | RS01165 | WP         | 000422572.1 |
| NTDB      | id | 190636 | A6L45   | RS02700 | WP         | 002221204.1 |
| NTDB      | id | 1203   | PSJM300 | 01605   | AFN76401.1 |             |
| NTDB      | id | 1019   | ACIAD   | RS04205 | WP         | 004922051.1 |
| NTDB      | id | 1307   | DR      | RS10055 | WP         | 010888596.1 |
| NTDB      | id | 1086   | NMV     | RS00245 | WP         | 002218487.1 |
| NTDB      | id | 1283   | ACE17W  | RS02630 | WP         | 010947729.1 |
| NTDB      | id | 1259   | GC085   | RS10305 | WP         | 010947729.1 |
| NTDB      | id | 1194   | PAKAF   | RS01995 | WP         | 003084552.1 |
| NTDB      | id | 1202   | PSJM300 | 01600   | AFN76400.1 |             |
| NTDB      | id | 1020   | ACIAD   | RS04210 | WP         | 011182164.1 |
| NTDB      | id | 1081   | FDQ49   | RS05335 | WP         | 006581387.1 |
| NTDB      | id | 1060   | ABD1    | RS04380 | WP         | 000355489.1 |
| NTDB      | id | 1040   | HON27   | RS13360 | WP         | 000355489.1 |
| consensus |    |        |         |         |            |             |



368  
376  
381  
383  
392  
347  
344  
344  
344  
344  
344  
345  
345  
345

logo

|           |    |        |         |         |            |             |
|-----------|----|--------|---------|---------|------------|-------------|
| NTDB      | id | 1177   | A1552VC | RS01165 | WP         | 000422572.1 |
| NTDB      | id | 190636 | A6L45   | RS02700 | WP         | 002221204.1 |
| NTDB      | id | 1203   | PSJM300 | 01605   | AFN76401.1 |             |
| NTDB      | id | 1019   | ACIAD   | RS04205 | WP         | 004922051.1 |
| NTDB      | id | 1307   | DR      | RS10055 | WP         | 010888596.1 |
| NTDB      | id | 1086   | NMV     | RS00245 | WP         | 002218487.1 |
| NTDB      | id | 1283   | ACE17W  | RS02630 | WP         | 010947729.1 |
| NTDB      | id | 1259   | GC085   | RS10305 | WP         | 010947729.1 |
| NTDB      | id | 1194   | PAKAF   | RS01995 | WP         | 003084552.1 |
| NTDB      | id | 1202   | PSJM300 | 01600   | AFN76400.1 |             |
| NTDB      | id | 1020   | ACIAD   | RS04210 | WP         | 011182164.1 |
| NTDB      | id | 1081   | FDQ49   | RS05335 | WP         | 006581387.1 |
| NTDB      | id | 1060   | ABD1    | RS04380 | WP         | 000355489.1 |
| NTDB      | id | 1040   | HON27   | RS13360 | WP         | 000355489.1 |
| consensus |    |        |         |         |            |             |



368  
376  
381  
383  
418  
347  
344  
344  
344  
344  
344  
345  
345  
345

 non conserved  
 similar  
  $\geq 50\%$  conserved