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|---------------------------------------------|----------------------------------------------------------------------------------|----|
| NTDB id 1410 SGL RS13950 WP 010873519.1     | MSVLTIGDKRLGAALLDAGLLTDEELQRALERHREVGGSLAEVLVDMGLLSERRIAQTIEDRFGIPLVELHRVEIPPKVK | 0  |
| NTDB id 1028 TT RS08215 WP 011173991.1      | MSVLTIGDKRLGAALLDAGLLTDEELQRALERHREVGGSLAEVLVDMGLLSERRIAQTIEDRFGIPLVELHRVEIPPKVK | 80 |
| NTDB id 1168 A1552VC RS11070 WP 000957200.1 | .....                                                                            | 0  |
| NTDB id 1293 VP RS12240 WP 005479695.1      | .....                                                                            | 0  |
| NTDB id 1401 DSB67 RS12665 WP 010643259.1   | .....                                                                            | 0  |
| NTDB id 1110 NGFG RS09235 WP 003689817.1    | .....                                                                            | 0  |
| NTDB id 1251 GC085 RS07725 WP 011946523.1   | .....                                                                            | 0  |
| NTDB id 207701 BS064 RS19080 WP 001274984.1 | .....                                                                            | 0  |
| NTDB id 1058 ABD1 RS01615 WP 001274986.1    | .....                                                                            | 0  |
| NTDB id 1018 ACIAD RS01685 WP 004920473.1   | .....                                                                            | 0  |
| consensus                                   |                                                                                  |    |

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| NTDB id 1410 SGL RS13950 WP 010873519.1     | ALLPAEKAKELKAIPFALDEEAGVVRVAFLNPLDTLSLEEVEDLTGLVVEPYQTTKSAFLYALAKHYPELGLPVPPPPSG | 0   |
| NTDB id 1028 TT RS08215 WP 011173991.1      | ALLPAEKAKELKAIPFALDEEAGVVRVAFLNPLDTLSLEEVEDLTGLVVEPYQTTKSAFLYALAKHYPELGLPVPPPPSG | 160 |
| NTDB id 1168 A1552VC RS11070 WP 000957200.1 | .....                                                                            | 0   |
| NTDB id 1293 VP RS12240 WP 005479695.1      | .....                                                                            | 0   |
| NTDB id 1401 DSB67 RS12665 WP 010643259.1   | .....                                                                            | 0   |
| NTDB id 1110 NGFG RS09235 WP 003689817.1    | .....                                                                            | 0   |
| NTDB id 1251 GC085 RS07725 WP 011946523.1   | .....                                                                            | 0   |
| NTDB id 207701 BS064 RS19080 WP 001274984.1 | .....                                                                            | 0   |
| NTDB id 1058 ABD1 RS01615 WP 001274986.1    | .....                                                                            | 0   |
| NTDB id 1018 ACIAD RS01685 WP 004920473.1   | .....                                                                            | 0   |
| consensus                                   |                                                                                  |     |

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| NTDB id 1410 SGL RS13950 WP 010873519.1     | EGQKDLKLGELLQKGWISREALEEALVEQEKTGDLLGRILVRKGLPEEALYRALAEQKGLEFLESTEGIVPDPSAALLL | 0   |
| NTDB id 1028 TT RS08215 WP 011173991.1      | EGQKDLKLGELLQKGWISREALEEALVEQEKTGDLLGRILVRKGLPEEALYRALAEQKGLEFLESTEGIVPDPSAALLL | 240 |
| NTDB id 1168 A1552VC RS11070 WP 000957200.1 | .....                                                                           | 0   |
| NTDB id 1293 VP RS12240 WP 005479695.1      | .....                                                                           | 0   |
| NTDB id 1401 DSB67 RS12665 WP 010643259.1   | .....                                                                           | 0   |
| NTDB id 1110 NGFG RS09235 WP 003689817.1    | .....                                                                           | 0   |
| NTDB id 1251 GC085 RS07725 WP 011946523.1   | .....                                                                           | 0   |
| NTDB id 207701 BS064 RS19080 WP 001274984.1 | .....                                                                           | 0   |
| NTDB id 1058 ABD1 RS01615 WP 001274986.1    | .....                                                                           | 0   |
| NTDB id 1018 ACIAD RS01685 WP 004920473.1   | .....                                                                           | 0   |
| consensus                                   |                                                                                 |     |

NTDB id 1410 SGL RS13950 WP 010873519.1  
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NTDB id 1018 ACIAD RS01685 WP 004920473.1  
consensus

[illegible]

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NTDB id 1028 TT RS08215 WP 011173991.1
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NTDB id 1410 SGL RS13950 WP 010873519.1  
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NTDB id 1018 ACIAD RS01685 WP 004920473.1  
consensus

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|---------------------------------------------|---------------------------------------------------|--------------------------------------------|-------------|
| NTDB id 1410 SGL RS13950 WP 010873519.1     | QDDFNQLIEQYIAIREEWFAAQEKRDQERALDKLNDLTDIVGSIDMNLG | EDKEDVDNALDSNDANQAPVINLVNKILAKA            | 244         |
| NTDB id 1028 TT RS08215 WP 011173991.1      | EAAITTKLIERFYGKAELSEIAKEF.....                    | AKKQAEIEVPSPLELDESAAQKFVKQVIREA            | 518         |
| NTDB id 1168 A1552VC RS11070 WP 000957200.1 | HRALQAAIRRLYGRSISQGAANQGK..EI.SQDELANL.....       | VKVSDDQLQSTIEDLSQDDSPVSRFINQVLLDA          | 193         |
| NTDB id 1293 VP RS12240 WP 005479695.1      | FRELSTAIRRLYGRSLSHEKSGLK..EI.NQEELASL.....        | VDVGADEIDNIEDLSQDES PVSRYINQILLDA          | 193         |
| NTDB id 1401 DSB67 RS12665 WP 010643259.1   | FRELTAAIRRLYGRSLGQEKSGLK..EI.NQDELAGL.....        | VDIGEDEIENIEDLSQDES PVSRYINQILLDA          | 193         |
| NTDB id 1110 NGFG RS09235 WP 003689817.1    | DDQLAGLLDWVGSFSTSL..LQEL.....                     | GEG.....QEEEEHSHTLYIDNEEAEDGPVPRFIHKHTLSDA | 183         |
| NTDB id 1251 GC085 RS07725 WP 011946523.1   | TDKLSALIDNLLTAKESQGLSEYVEDSG.DLEGLEIS.....        | AD.DEDQDIDTATSVTDDAPIVKFVNKILLDA           | 202         |
| NTDB id 207701 BS064 RS19080 WP 001274984.1 | HHKLEKVLGQHF AEES SFD FNDE...EF.D...LDVN.....     | LDGPTAQDDEEEAPQGDEAPIVKYINKLLIDA           | 197         |
| NTDB id 1058 ABD1 RS01615 WP 001274986.1    | HHKLEKVLGQHF AEES SFD FNDE...EF.D...LDVN.....     | LDGPTAQDEDEEAPQGDEAPIVKYINKLLIDA           | 197         |
| NTDB id 1018 ACIAD RS01685 WP 004920473.1   | HDKLERLLSEHFVEETHFNFDTE...EL.D...LDVE.....        | VDPHTTDDDDDEDKDKLDEAPIVKYINKLLIDA          | 197         |
| consensus                                   | * ** **** * * *                                   | ** ***** *                                 | *****!!!!!! |

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| NTDB id 1410 SGL RS13950 WP 010873519.1     | LQEGTSDIHVEPQEETLRIRFRKDGVLNQAFDPLPRKITPAVVARFKIMADMDIAERRSPQDGKIRRIYQ..GRKVDFRV    | 322                               |
| NTDB id 1028 TT RS08215 WP 011173991.1      | FLQDASDIHIEPRQNDVQVRLRIDGALRPYSTL.PKGALNAVISVVKIMGGLNIAEKRLPQDGRVRYR..EGAIDVDLRL    | 595                               |
| NTDB id 1168 A1552VC RS11070 WP 000957200.1 | VRKGASDIHFEPYENQYRIRLRCDGILVETQQP.ASHLSRRLAARIKILSKLDIAERRLPQDGRIKLRLSR.DTAIDMRV    | 271                               |
| NTDB id 1293 VP RS12240 WP 005479695.1      | VRKGASDIHFEPYEKMYRVRLRCDGILVETQQP.PNHLSRRLSARIKILSKLDIAERRLPQDGRIKLKLNQ.DTAIDMRV    | 271                               |
| NTDB id 1401 DSB67 RS12665 WP 010643259.1   | VRKGASDIHFEPYENMYRVRLRCDGILVETQQP.PSHLSRRLSARIKILSKLDIAERRLPQDGRIKLKLNQ.DTAIDMRV    | 271                               |
| NTDB id 1110 NGFG RS09235 WP 003689817.1    | LRSGASDIHFEFYEHNARIRFRVDGQLREVVQP.PIAVRGQLASRIKVM SRLDISEKRIPQDGRMQLTFQKGGKPVDFRV   | 262                               |
| NTDB id 1251 GC085 RS07725 WP 011946523.1   | IRQGASDIHFEPYEREYRIRYRQDGLHEVATP.PASLSRITARIKVM SNLDISERRIPQDGGFKMKISK.SRAIDFRV     | 280                               |
| NTDB id 207701 BS064 RS19080 WP 001274984.1 | IRMGASDLHFEPYEKSYRVRYRVDGVLRLQIANP.PLQLANRLASRLKVM SQMDISEKRVPPQDGRIKLKLSK.TKAIDFRV | 275                               |
| NTDB id 1058 ABD1 RS01615 WP 001274986.1    | IRMGASDLHFEPYEKSYRVRYRVDGVLRLQIANP.PLQLANRLASRLKVM SQMDISEKRVPPQDGRIKLKLSK.TKAIDFRV | 275                               |
| NTDB id 1018 ACIAD RS01685 WP 004920473.1   | IRMSASDLHFEPYEKSYRVRYRVDGVLRLIATP.PLQLATRLASRLKVM SQMDISEKRVPPQDGRIKLKMSK.SKIDFRV   | 275                               |
| consensus                                   | ** **!!*!*!*!* * * * * *                                                            | * * * * * * * * * * * * * * * * * |

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| NTDB id 1410 SGL RS13950 WP 010873519.1     | NTLPSRYGEKVCLRILDNSATQLGLDFLITNPETLQTVRELAARPYGLMLVTGPTGSGKSTTLYSVLAERNSPEVNINTA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| NTDB id 1028 TT RS08215 WP 011173991.1      | STLPTVYGEKAVMRLLKKASDIPEIEDLGFAPGVFERFKEVTSKPYGIFLITGPTGSGKSFTTFSILKRIATPDKNTQTI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| NTDB id 1168 A1552VC RS11070 WP 000957200.1 | STLPTLWGEKIVLRLLDSSAANLDDIDKLGYNPQQKQLYLEALNRKPQGMILMTGPTGSGKTVSLYTGLRILNTSQINISTA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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| NTDB id 1293 VP RS12240 WP 005479695.1      | STLPTLWGEKIVLRLLDSSASLDDIDKLGYSSEQKQLYLEALRRPQGMILMTGPTGSGKTVSLYTGLNILNKPEINISTA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| NTDB id 1401 DSB67 RS12665 WP 010643259.1   | STLPTLWGEKIVLRLLDSSAALDDINKLGYSDSQKQLYLDALRRPQGMILMTGPTGSGKTVSLYTGLSILNKPEINISTA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| NTDB id 1110 NGFG RS09235 WP 003689817.1    | STLPTLWGEKIVMRILNSDAASLNIDQLGFEPFQKKLLLEATHRPYGMVLVTGPTGSGKTVSLYTCLNILNTESVNIATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| NTDB id 1251 GC085 RS07725 WP 011946523.1   | STCPTSAGEKIVMRVLDSGAAKLGIEALGFNPVQRTNFKLAIQRPQGMILVTGPTGSGKTVTLYTALNILNTIEVNISTA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         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| NTDB id 207701 BS064 RS19080 WP 001274984.1 | NSLPTLWGEKIVLRILDPSSAMLGIDALGYEEDQKALFMEALDKPQGMILLITGPTGSGKTVSLYTGLNILNTESSNISTA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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| NTDB id 1058 ABD1 RS01615 WP 001274986.1    | NSLPTLWGEKIVLRILDPSSAMLGIDALGYEEDQKALFMEALDKPQGMILLITGPTGSGKTVSLYTGLNILNTESSNISTA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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| NTDB id 1018 ACIAD RS01685 WP 004920473.1   | NSLPTLWGEKIVLRILDPASAMLGIDALGYEPEKQALFMEALNKPQGMILLITGPTGSGKTVSLYTGLNILNTEHANISTA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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| consensus                                   | ***!***!!*!***!*!***** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** *!*** 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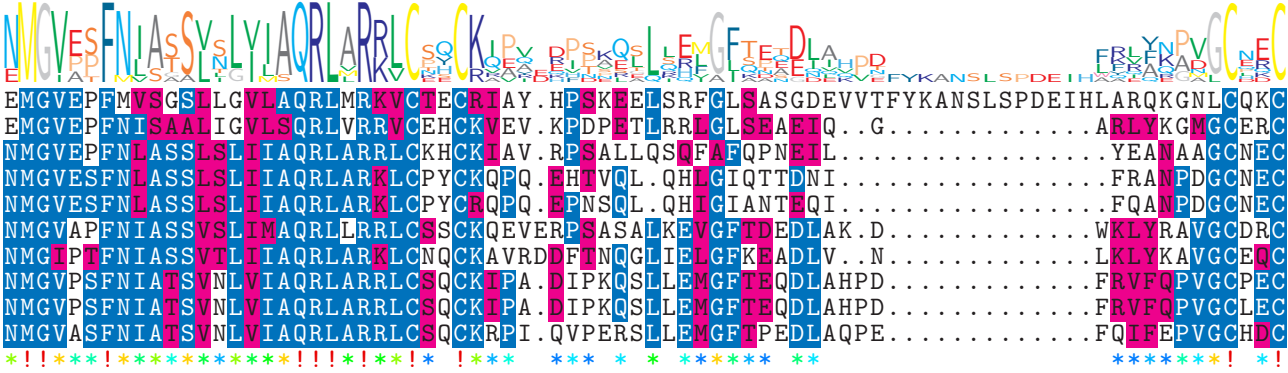
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| NTDB id   | 1293   | VP RS12240 WP 005479695.1      |
| NTDB id   | 1401   | DSB67 RS12665 WP 010643259.1   |
| NTDB id   | 1110   | NGFG RS09235 WP 003689817.1    |
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| NTDB id   | 207701 | BS064 RS19080 WP 001274984.1   |
| NTDB id   | 1058   | ABD1 RS01615 WP 001274986.1    |
| NTDB id   | 1018   | ACIAD RS01685 WP 004920473.1   |
| consensus |        |                                |



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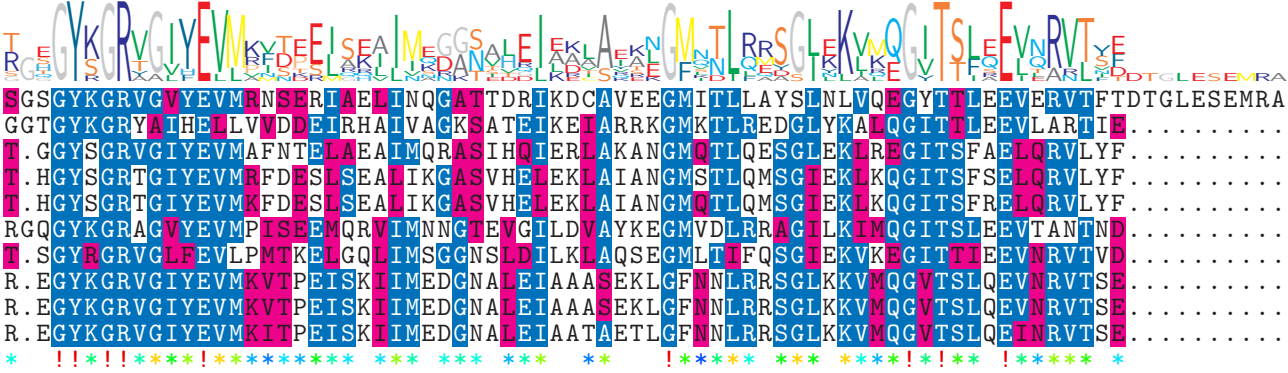
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| NTDB id   | 1410   | SGL RS13950 WP 010873519.1     |
| NTDB id   | 1028   | TT RS08215 WP 011173991.1      |
| NTDB id   | 1168   | A1552VC RS11070 WP 000957200.1 |
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| NTDB id   | 1058   | ABD1 RS01615 WP 001274986.1    |
| NTDB id   | 1018   | ACIAD RS01685 WP 004920473.1   |
| consensus |        |                                |



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| NTDB id 1410 SGL RS13950 WP 010873519.1     | KRKSALTCRTCAAELQQEWLDCPYCMTSRFS | 672 |
| NTDB id 1028 TT RS08215 WP 011173991.1      | .....                           | 889 |
| NTDB id 1168 A1552VC RS11070 WP 000957200.1 | .....                           | 562 |
| NTDB id 1293 VP RS12240 WP 005479695.1      | .....                           | 561 |
| NTDB id 1401 DSB67 RS12665 WP 010643259.1   | .....                           | 561 |
| NTDB id 1110 NGFG RS09235 WP 003689817.1    | .....                           | 558 |
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| NTDB id 207701 BS064 RS19080 WP 001274984.1 | .....                           | 570 |
| NTDB id 1058 ABD1 RS01615 WP 001274986.1    | .....                           | 570 |
| NTDB id 1018 ACIAD RS01685 WP 004920473.1   | .....                           | 570 |
| consensus                                   |                                 |     |

-  non conserved
-  similar
-  ≥ 50% conserved