MAAVVLENGVLSRKLSDFGQETSYIEDNSNQNGAISLIFSLKEEVGALAKVLRLFEENDINLTHIESRPSRLNKDEYEFFTYLDKRTKPVLGSIIKSLRNDIGATVHELSRDKEKNTVPW MAAVVLENGVLSRKLSDFGQETSYIEDNSNQNGAVSLIFSLKEEVGALAK VLRLFEENDINLTHIESRPSRLNKDEYEFFTYLDKRSKPVLGSIIKSLRNDIGATVHELSRDKEKNTVPW MSTAVLENPGLGRKLSDFGQETSYIEDNCNQNGAISLIFSLKEEVGALAK VLRLFEENDVNLTHIESRPSRLKKDEYEFFTHLDKRSLPALTNIIKILRHDIGATVHELSRDKKKDTVPW MSALVLESRALGRKLSDFGQETSYIEGNSDQN.AVSLIFSLKEEVGALAR VLRLFEENDINLTHIESRPSRLRKDEYEFFTNLDQRSVPALANIIKILRHDIGATVHELSRDKKKDTVPW * *** * ************ * * * * * * * *	120 120 120 119 0 0 0
FPRTIQELDRFANQILSYGAELDADHPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYTEEEKQTWGTVFRTLKALYKTHACYEHNHIFPLLEKYCGFREDNIPQLEDVSQFLQTCTGF FPRTIQELDRFANQILSYGAELDADHPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYTEEERKTWGTVFRTLKALYKTHACYEHNHIFPLLEKYCGFREDNIPQLEDVSQFLQTCTGF FPRTIQELDRFANQILSYGAELDADHPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYMEEEKKTWGTVFRTLKSLYKTHACYEHNHIFPLLEKYCGFREDNIPQLEDVSQFLQTCTGF FPRTIQELDNFANQVLSYGAELDADHPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYMEEEKKTWGTVFRTLKSLYKTHACYEHNHIFPLLEKYCGFREDNIPQLEEVSQFLQSCTGF FPRTIQELDNFANQVLSYGAELDADHPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYTEEEKKTWGTVFRTLKSLYKTHACYEHNHIFPLLEKYCGFREDNIPQLEEVSQFLQSCTGF FPRTIQELDNFANQVLSYGAELDADHPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYTEEEKKTWGTVFTLKSLYKTHACYEHNHIFPLLEKYCGFREDNIPQLEEVSQFLQSCTGF FPRTIQELDNFANQVLSYGAELDADHPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYTEEEKKTWGTVFRTLKSLYKTHACYEHNHIFPLLEKYCGFREDNIPQLEEVSQFLQSCTGF FPRTIQELDRFANQILSYGAELDADHPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYMEEKKTWGTVFRTLKSLYKTHACYEHNHIFPLLEKYCGFREDNIPQLEEVSQFLQTCTGF FPRTIQELDRFANQILSYGAELDADHPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYMEEKKTWGTVFRTLKSLYKTHACYEHNHIFPLLEKYCGFREDNIPQLEEVSQFLQTCTGF FPRTIQELDRFANQILSYGAELDADHPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYMEEKKTWGTVFRTLKSLYYHHIFPLLEKYCGFREDNIPQLEEVSQFLQTCTGF FPRTIQELDRFANQILSYGAELDADHPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYMEEKKTWGTVFRTLKSLYYHHIFPLLEKYCGFREDNIPQLEEVSQFLQSCTGF FPRTIQELDRFANQILSYGAELDADHPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYMEEKKTWGTVFRTLKSLYYHHIFPLLEKYCGFREDNIPQLEEVSQFLQSCTGF FPRTIQELDRFANQILSYGAELDADHPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYMEEKKTWGTVFRTLKSLYYHHIFPLLKYCGFREDNIPQLEEVSQFLQSCTGF MNDRADFVYDDADRFANGTANANTHEELKTURGF MAIATPTSAAPTPAPAGFTGTLTDKLRGEPVPTRTLMRATGW MSG. DGLSNGPPPGAR PDWTIDQGWETYTQAEHDVWITTLYPRQCKLLSGRACQEFLQGL DALDLHRSGTPDFARINEELKRTGW MKTTQYVARQPD DDRFHYPETEHQVWNTLITRQLKVIEGRACQEFLQGL EQLGLPHERIPQLDEINRYLQATTGW MSG. DGLSNGPPPGAR DDVTTQGWETYTQAEHDVWITTLYPRGCKLLSGTPUTTALATHON MATGWETTA TOTALATGW MKTTQYVARQPD DDRFHYPETEHQVWNTLITRQLKVIEGRACQEFLQGL EQLGLPHETPQLDEINRYLQATTGW MKTTQYVARQPD DDRFHYPETEHQUWNTLITRGLKVIEGRACQEFLOGGL EQLGCHATGWATTA TOTALATGWETTA TOTALATGWATTA TOTALATG	240 240 240 239 93 109 84 76 90
RLRPVAGLLSSRDFLGGLAFRVFHCTQYIRHGSKPMYTPEPDICHELLGHVPLFSDRSFAQFSQEIG. LASLGAPDEYIEKLATIYWFTVEFGLCKEG. DSIKAYGAGLLSSFGELQYCL RLRPVAGLLSSRDFLGGLAFRVFHCTQYIRHGSKPMYTPEPDICHELLGHVPLFSDRSFAQFSQEIG. LASLGAPDEYIEKLATIYWFTVEFGLCKEG. DSIKAYGAGLLSSFGELQYCL RLRPVAGLLSSRDFLGGLAFRVFHCTQYIRHGSKPMYTPEPDICHELLGHVPLFSDRSFAQFSQEIG. LASLGAPDEYIEKLATIYWFTVEFGLCKQG. DSIKAYGAGLLSSFGELQYCL RLRPVAGLLSSRDFLGGLAFRVFHCTQYIRHGSKPMYTPEPDICHELLGHVPLFSDRSFAQFSQEIG. LASLGAPDEYIEKLATIYWFTVEFGLCKQG. DSIKAYGAGLLSSFGELQYCL KIVAVPGLIPDDVFFEHLANRRFPVTWWLREPHQLDYLQEPDVFHDLFGHVPLLINPVFADYHCAYGKGGVKAKALGALPMLARLYWYTVEFGLINTP. AGMRIYGAGILSSKSESIYCL QIVAVPGLVPDEVFFEHLANRRFPASWWMRRPDQLDYLQEPDGFHDIFGHVPLLINPVFADYMQAYGQGGLKAARLGALPMLARLYWYTVEFGLINTP. AGLRIYGAGIVSSKSESVYAL TVVAVPGLVPDDVFFDHLANRRFPAGGFIRKPHELDYLQEPDIFHDVFGHVPMLTDPVFADYMQAYGEGGRRALGLGRLANLARLYWYTVEFGLMNTP. AGLRIYGAGIVSSRTESIFAL RVARVPALIPFQTFFELLASQQFFVATFIRTPEELDYLQEPDIFHEIFGHCPLLTNPWFAEFTHTYGKLGLKASKE.ERVFLARLYWMTTEFGLVETD.QGKRIYGGGILSSPKETVYSL EIIAVPGLIPAAPFFDHLANRRFPVTNWLRTRQELDYIVEPDMFHDFFGHVPVLSQPVFADFMQMYGKKAGDIIALGGDEMITRLYWYTAEYGLVQEAGQPLKAFGAGLMSSFTELQFAV *** *******************************	358 358 358 357 212 228 203 194 210
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 \overline{X} non-conserved \overline{X} $\geq 50\%$ conserved