

MAAVVLENGVLSRKLSDFGQETSYIEDNSNQNGAISLIFSLKEEVGALAKVLRLFEENDINLTHIESRPSRLNKDEYEFFTYLDKRTKPVLGSIIIKSLRNDIGATVHELSRDKEKNTVPWFPRTIQELDRFANQILSYGAELDAD
MAAVVLENGVLSRKLSDFGQETSYIEDNSNQNGAVSLIFSLKEEVGALAKVLRLFEENEINLTHIESRPSRLNKDEYEFFTYLDKRSKPVLGSIIIKSLRNDIGATVHELSRDKEKNTVPWFPRTIQELDRFANQILSYGAELDAD
MSTAVLENPGLGRKLSDFGQETSYIEDNCNQNGAISLIFSLKEEVGALAKVLRLFEENDVNLTHIESRPSRLKKDEYEFFTHLDKRSLPALTNIIKILRHDIGATVHELSRDKKKDTVWFPRTIQELDRFANQILSYGAELDAD
MSALVLESRALGRKLSDFGQETSYIEGNSDQN.AVSLIFSLKEEVGALARVLRLFEENDINLTHIESRPSRLRKDEYEFFTNLDQRSVPALANIIKILRHDIGATVHELSRDKKKDTVWFPRTIQELDNFANQVLSYGAELDAD
.....MNDRADFVVPD..
.....MAIATPTSAAPTPAPAGF
.....MSG.....
.....MSVAEYAR.....

PH4H Rattus norvegicus
PH4H Mus musculus
PH4H Homo sapiens
PH4H Bos taurus
PH4H Chromobacterium violaceum
PH4H Ralstonia solanacearum
PH4H Caulobacter crescentus
PH4H Pseudomonas aeruginosa
PH4H Rhizobium loti

HPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYTEEBKQTWGTVFRTLKALYKTHACYEHNHIFPLLEKYCGFREDNIPQLEDVSQFLQTCTGFRLRPVAGLLSSRDFLGGLAFRVFHCTQYIRHGSKPMYTPEPDICHELLGH
HPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYTEEERKTWGTVFRTLKALYKTHACYEHNHIFPLLEKYCGFREDNIPQLEDVSQFLQTCTGFRLRPVAGLLSSRDFLGGLAFRVFHCTQYIRHGSKPMYTPEPDICHELLGH
HPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYMEEEEKKTWGTVFKTLKSLYKTHACYEYNHIFPLLEKYCGFHEDNIPQLEDVSQFLQTCTGFRLRPVAGLLSSRDFLGGLAFRVFHCTQYIRHGSKPMYTPEPDICHELLGH
HPGFKDPVYRARRKQFADIAYNYRHGQPIPRVEYTEEBKKTWGTVFRTLKSLYKTHACYEHNHIFPLLEKYCGFREDNIPQLEEVSQFLQSCTGFRLRPVAGLLSSRDFLGGLAFRVFHCTQYIRHGSKPMYTPEPDICHELLGH
...ITTRKNVGLSHDAN.....DFTLPQPLDRYSAEDHATWATLYQRQCKLLPGRACDEFMEGL....ERLEVDADRVPDFNKLNQKLMAATGWKIVAVPGLIPDDVFFEHLANRRFPVTWLREPHQLDYLQEPDVFHDLFGH
TGTLTDKLREQFAEGLDGQTLRPDFTMEQPVHRYTAADHATWRTLYDRQEALLPGRACDEFLQGL....STLGMSREGVPSFDRLNETLMRATGWQIVAVPGLVPDEVFFEHLANRRFPASWWMRRPDQLDYLQEPDGFHDIFGH
.....DGLSNGPPPGAR.....PDWTIDQGWETYTQAEDHVWITLYERQTDMLHGRACDEFMRGL....DALDLHRSGIPDFARINEELKRLTGWTVVAVPGLVPDDVFFDHLANRRFPAGQFIRKPHELDYLQEPDIFHDVFGH
.....MKTTQYVARQPD.....DNGFIHYPETEHQVWNTLITRQLKVIEGRACQEYLDGI....EQLGLPHERIPQLDEINRVLQATTGWRVARVPALIPFQTFFELLASQQFPVATFIRTPEELDYLQEPDIFHEIFGH
.....DCAAQGLRGDYS..VCRADFTVAQDYD.YSDEEQAVWRTLCDRQTKLTRKLAHHSYLDGV....EKLGL.LDRIPDFEDVSTKLRKLTGWEIIAVPGLIPAAPFFDHLANRRFPVTNWLRTRQELDYIVEPDMFHDFGH

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VPLFSDRSFAQFSQEIG.LASLGAPDEYIEKLATIYWFTVEFGLCKEG.DSIKAYGAGLLSSFGELQYCLSD.KPKLLPLELEKTACQEYSVTEFQPLYYVAESFSDAKEKVRTFAATIPRPFSVRYDPYTQRVEVLDNTQQLKI
VPLFSDRSFAQFSQEIG.LASLGAPDEYIEKLATIYWFTVEFGLCKEG.DSIKAYGAGLLSSFGELQYCLSD.KPKLLPLELEKTACQEYTVTEFQPLYYVAESFNDAKEKVRTFAATIPRPFSVRYDPYTQRVEVLDNTQQLKI
VPLFSDRSFAQFSQEIG.LASLGAPDEYIEKLATIYWFTVEFGLCKQG.DSIKAYGAGLLSSFGELQYCLSE.KPKLLPLELEKTAIQNYTVTEFQPLYYVAESFNDAKEKVRNFAATIPRPFSVRYDPYTQRIEVLDNTQQLKI
VPLFSDRSFAQFSQEIG.LASLGAPDEYIEKLATIYWFTVEFGLCKQG.DSIKAYGAGLLSSFGELQYCLSD.KPKLLPLELEKTAVQEYTTTEFQPLYYVAESFNDAKEKVRNFAATIPRPFSVHYDPYTQRIEVLDNTQQLKI
VPLLINPVFADYLEAYCGKGGVKAKALGALPMLARLYWYTVEFGLINTP.AGMRIYGAGILSSKSESTYCLDSASPNRVGFDLMRIMNTRYRIDTFQKTYFVIDSFKQLFDATA.PDFAPLYLQLADAQPWGAGDVAPDDLVLNAG
VPLLINPVFADYMQAYCQGGKKAARLGALDMLARLYWYTVEFGLIRTP.AGLRIYGAGIVSSKSESVYALDSASPNRIGFDVHRIMRTRYRIDTFQKTYFVIDSFEQLFDATR.PDFTPLYEALGTLPTFGAGDVVDGDAVLNAG
VPMILTDPVFADYMQAYCEGRRALGLGRLANLARLYWYTVEFGLMNTP.AGLRIYGAGIVSSRTESIFALDDPSPNRIGFDLERVMRTLYRIDDFQQVYFVIDSIQTLQEVTL.RDFGAIYERLASVSDIGVAEIVPGDAVLTRG
CPLLTNPWFAEFTHTYGKLLGLKASKE.ERVFLARLYWMTTEFGLVETD.QGKRIYCGGILSSSPKETVYSLSDEPLHQAFNPLEAMRTPYRIDILQPLYFYVLPDLKRLFQLAQ.EDIMALVHEAMRLG.LHAPLFPPKQAA....
VPVLSQPVFADFMQMYGKKAAGDIIALGGDEMITRLLYWYTAEYGLVQEAGQPLKAFGAGLMSSFTELQFAVEGKDAHHVPFDLETVMRTGYEIDKFQRAYFVLPSFDALRDAFQTADFEAIVARRKDQKALDPATV.....

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LADSINSEVGILCHALQKIKS PH4H Mus musculus
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LADSISSEVEILCSALQKLK. PH4H Bos taurus
DRQGWADTEDV..... PH4H Chromobacterium violaceum
TREGWADTADI..... PH4H Ralstonia solanacearum
T.QAYATAGGRLAGAAAG... PH4H Caulobacter crescentus
..... PH4H Pseudomonas aeruginosa
..... PH4H Rhizobium loti

☐ non conserved
☒ ≥ 50% conserved