

AHP1 : --MD-LVQKQKSLQDYTKSLFLEG-ILDSQFLQLQQLQDE-SNPDFVSVQVTLFFQSDRIILNDLSLSLDQ-Q-VV : 69  
AHP2 : MDAL-IAQLQRQFRDYTISLYQQG-FLDDQFTELKKLQDD-GSPDFVSEVLSLFFEDCVKLISNMARALDTGTGTV : 72  
AHP3 : MDTL-IAQLQRRFCDFDTISLYHQG-FLDDQFTELKKLQDE-CSPDFVAEVVTLFFEDCEKLISNMARALDTGNV : 72  
AHP4 : -----MTNIGKCM--QG-YLDEQFMEELELQDD-ANPNFVVEVSALYFKDSARLINNIDQAL-ERGSF : 58  
AHP5 : MNTIVVAQLQRQFQDYIVSLYQQG-FLDNQFSELRKLQDE-GTPDFVAEVVSLFFDDCSKLINTMSISLERPDNV : 73  
AHP6 : MLGLGVDRILQADINRLLASLFHQG-VLDEQFLQLQQLQDE-TSPNFVVDVINIYFDESEKLLRNLRLLIMDREFS : 73  
OsAHP1 : ---MAAAALTSQNLALVNNMFAMG-LLDDQFQQLQMLQDS-TAPDFVSEVVTFLFCDDGERIICELSRQL-EKPNV : 69  
OsAHP2 : ---MAAAALRDQLTALLSSMFSQG-LVDEQFQQLQMLQDEGGTPEGFVSEVVTFLFCDDADRIINEIATLL-EQPVV : 70  
OsPHP1 : ---MDYSNLRRAASMKKSLFDQG-YLDEQFCQVEDLQDE-ASP NFVVEVVTFLFFKDSGRLMSNIEQAL-EKYPR : 69  
OsPHP2 : ---MEYSNLRRIIFMKKNLFDQG-YLDEQFNQLEELQDE-SSPNFVEEVAALFFKDSRLLTNI EQAI-DKYPQ : 69  
OsPHP3 : ---MEYGNLRRAASLKKSLFDQG-YLDEQFCQVEDLQDE-ANPNFAEVVSLFFKDSRVM LNFEQAI-EKHPK : 69  
GmHP01 : --MD-VGQMQRQWIDYTKSLFLEG-FLDGQFLQLQQLQDE-NNPDFVVEVVS LFFEDSERLLKDLTFALDQNGV : 69  
GmHP02 : --MD-VGQMQRQWIDYTKSLFLEG-FLDGQFLQLQQLQDE-NNPDFVVEVVS LFFEDSERLLKDLTFALDQNGV : 69  
GmHP03 : --ME-VDQMQRRECLDYTKSLFLEKGF LDGQFLQLQQLQDE-NNPDFVVEVVS LFFEDSERLLNDLTFALNQK-SI : 70  
GmHP04 : --MDGIVQLQRQLVDY TASLFHEG-FLDDQFNQLQQLQDE-SNPDFVVEVVTFLFFEDAERLLNELTKTLGQP-SI : 70  
GmHP05 : --MDGIVQLERQLVDY TASLFHEG-FLDDQFNQLQQLQDE-SNPDFVVEVVTFLFFEDADRLLNELTKALGQP-SI : 70  
GmHP06 : -----MDG-FLDDQFNQLQKLQDE-SSPYFVMEVMTMFFG DSEKLLNRALALECK-PV : 51  
GmHP07 : ---MDRNQSRQVAAMKQSLFDQG-FLDEQFIQLEELQDD-ANPNFVEEIVTLHYRDSRLLISSIEQALKERNPL : 70  
GmHP08 : ---MDRNQSRQVAAMKQSLFDQG-LLDEQFIQLEELQDD-ANPNFVEEIVTLHYRDSRLLISSIEQALKERNPL : 70  
GmHP09 : -MTMDVAQLQRKLREHQAAMFQQG-FLDDQFSQLOKLQDE-STPDFVIEVITMFFDSENLLKNMARCL-EQVPA : 71  
GmHP10 : -MTMDVVQLQRKLREHQAAMFQQG-FLDDQFSQLOKLQDE-STPDFVIEVITMFFDSENLLKNMARCL-EQVPV : 71  
GmPHP01 : MLGLGADLWADMNRL LAF LFHQG-VLDEQFLQLQQLQDE-TSPNFVSEV VNIYFHESEKLLRNLRALLMEKEFS : 73  
GmPHP02 : MLGLGADLWADMNRL LAF LFHQG-VLDEQFLQLQQLQDE-TSPNFVSEV VNIYFHESEKLLRNLRALLMEKEFS : 73  
GmPHP03 : MLGFGADLWADMNRL LAF LFHQG-VLDEQFLQLQQLQDE-ASP NFVSEV VNIYFHESEKLLRNLRGLLMEREY- : 72

AHP1 : DFKKVDPHVHQLKGSSSSSIGAQRVKNACVVFERSFCEQQNVEACHRCLQOVKQEYYLVKNRLETFLK-LEQQIVAS : 143  
AHP2 : DFSQVGASVHQLKGSSSSSVGAKRVKTL CVSFKECC EAKNYEGCVRCLQOVDIEYKALKTKLQDMFN-LEKQIIQA : 146  
AHP3 : DFKLVGSSVHQLKGSSSSSVGAKRVKGLCVTLKECCDSQNYEGCVRCLQOVDIEYKTLKAKLQDLFN-LEQQIVQA : 146  
AHP4 : DENRLDSYMHQFKGSSSTSIGASKVKAECTTFREYCRAGNAEGCLRTFOQLKKEHSTLRKKLEHYFQ-ASQ----- : 127  
AHP5 : DFKQVDSGVHQLKGSSSSSVGARRVKNVCISFKECCDVQNREGCLRCLQOVDY EYKMLKTKLQDLFN-LEKQILQA : 147  
AHP6 : DYKKIGLHNLQLVGSSSSSIGARRVRNVCVAFRSASELSNRPGLRGLVVEHEHYHLKNMMHELFQ-LEQRILA : 147  
OsAHP1 : DFDRVDSYVHQLKGSSASVGAQKVKNTCIQFREFCQQRSDGCLKTLDLVRTEFYDLRNKFCAMLQ-LEQQIQAC : 143  
OsAHP2 : NFDKVDAYVHQLKGSSASVGAQKVKFTCMQFRQFCQDKSRDGCLMALAVRNDFYDLRNKFCOTMLQ-LEQQIQAY : 144  
OsPHP1 : DENRWDTYMQQLKGSCSSIGASRMKNECMSFRDSCGQGNVEGCMRSFOKVKREHAVLRQKLESYFQ-LLRCAGPA : 143  
OsPHP2 : DFYRLDSLVMQQLKGSGSSIGALRMKNECSVFKVNCNDRNLEGCRRSLOKMKREHATLKQKLESYFQ-LLRCVGPR : 143  
OsPHP3 : DFARWDTHMQQLKGSCSSIGASRVKNECTSFRNFCEENAE GCTRSFOKVKREHAVLRQKLESYFQ-LLRCAGPA : 143  
GmHP01 : DFKKVDAHVHQLKGSSSSSIGAQRVKNACIAFRNFCEEQNTDACVRCLQOVKQEYCLVKNKLETMER-LEQQIVAA : 143  
GmHP02 : DFKKVDAHVHQLKGSSSSSIGAQRVKNACIAFRNFCEEQNTDACLRCLQOVKQEYCLVKNKLETMER-LEQQIVAA : 143  
GmHP03 : DFKKVDAHVHQLKGSSSSSIGAQRVKNCCISFRNFCEEQNTIDACLSCLOQVRQEYCHVKNKLETMER-LEQQIVAA : 144  
GmHP04 : DFKRLDAHVHQLKGSSSSSIGAQRVKNACIAFRNFCEEQNTIDACLSCLOQVRQEYSLVSKLETMER-MEQQILAA : 144  
GmHP05 : DFKRLDAHVHQLKGSSSSSIGAQRVKNACIAFRNFCEEQNTIDACLSCLOQVRQEYSLVSKLETMER-MEQQILAA : 144  
GmHP06 : DFKSVDNSVHQLKGSSASVGVARVVDVCTNFRNICEAQNLEG--RLYPEINFEVNTENATSTKYFLNWSGDLIFF : 124  
GmHP07 : DENKLDTLMHQFKGSSSSSIGAKKVKAE CNLFREYCRTGNAEGCMRSFOQLKREYAA LRKKLEAYFQ-LARCAGP- : 143  
GmHP08 : DENKLDTLMHQFKGSSSSSIGAKKVKTECNLFREYCRAGNAEGCMRSFOQLKREYAA LRKKLEAYFQ-VTRO---- : 140  
GmHP09 : DFKQIDAHAHQYKGSASIGAARVKNVCATFRAFCEAKNLEGCMRCLSOLQQEYSLKNALQYLFN-LQQQIKAA : 145  
GmHP10 : DFKQIDAHAHQYKGSASIGAARVKNVCATFRAFCEAKNLEGCMRCLSOLQQEYSLKNALQYLFN-LQQQIKAA : 145  
GmPHP01 : DYKKMGIHLNFMVGSSSSIGAKRVNVCVAFRAATEQNNRAGCLRAL EMLEHEYCYLKNKLHELFQ-IEQRALA : 147  
GmPHP02 : DYKKMGIHLNFMVGSSSSIGAKRVNVCVAFRAATEQNNRAGCLRAL EMLEHEYCYLKNKLHELFQ-IEQRALA : 147  
GmPHP03 : --KKMGIHLNFMVGSSSSIGAKRVNVCVAFRAATEQNNRAGCLRAL EMLEHEYCYLKNKLHELFQ-IEQRALV : 144

AHP1 : GGMIPAVELGF-- : 154  
AHP2 : GGIVPQVDIN--- : 156  
AHP3 : GGRIPQVDI---- : 155  
AHP4 : ----- : -  
AHP5 : GGTIPQVDIN--- : 157  
AHP6 : AGVRYPM----- : 154  
OsAHP1 : YPKH----- : 147  
OsAHP2 : DPKQQ----- : 149  
OsPHP1 : GAATRPVM----- : 151  
OsPHP2 : DYAVSSRK----- : 151  
OsPHP3 : GTATRPAGK---- : 152  
GmHP01 : GGSIP-TELSFSG : 155  
GmHP02 : GGSIP-TELSFIG : 155  
GmHP03 : GGSIPMMEFSF-- : 155  
GmHP04 : GG----- : 146  
GmHP05 : GGSVSR----- : 150  
GmHP06 : IFSEFVI----- : 131  
GmHP07 : ----- : -  
GmHP08 : ----- : -  
GmHP09 : GGSIPTQ----- : 152  
GmHP10 : GGSIPTQ----- : 152  
GmPHP01 : AGVRYPVQN---- : 156  
GmPHP02 : AGVRYPVQN---- : 156  
GmPHP03 : AGVRYPVQNQ--- : 154