

(a)

PhEGS1 1 MAEKSKILIIIGGTGYIGKFVVEASAKAGHPTFVLVRES TVSDPAKGIKIVESFNNSGVITIL
PpEGS1 1 MAEKSKILIIIGGTGYIGKFVVEASAKAGHPTFVLVREN TVSDPAKGIKIVESFNNSGVITIL

PhEGS1 61 YGDLYDHESLVKAIKQVDVVIS TVGQMQLADQTKIIAAIKEAGNIKRFFPSEFGMDVDKV
PpEGS1 61 YGDLYDHESLVKAIKQVDVVIS TVGQMQLADQTKIIAAIKEAGNIKRFFPSEFGMDVDKV

PhEGS1 121 NAVEPAKSTFAIKVQIRRAIEAEGIPYTYVSSNCFAGYFLPTLVQPGAT PPRDKVIISG
PpEGS1 121 NAVEPAKSTFAIKVQIRRAIEAEGIPYTYVSSNCFAGYFLPTLVQPGAT PPRDKVIISG

PhEGS1 181 DGNKAVFNEEHDIGTYTIKAVDDPRTLNTLYIKPPKNTLSFNELVAIWEKLIKGTLEK
PpEGS1 181 DGNKAVFNEEHDIGTYTIKAVDDPRTLNTLYIKPPKNTLSFNELVAIWEKLIKGTLEK

PhEGS1 241 IYIPEEQILKDIATSPIPIINILAINHSTFVKGDQTNFVIEPSFGVEASELYPDVKYTTV
PpEGS1 241 IYIPEEQILKDIATSPIPIINILAINHSTFVKGDQTNFVIEPSFGVEASELYPDVKYTTV

PhEGS1 301 EEYLSHFA
PpEGS1 301 EEYLSHFA

(b)

PhCFAT 1 MGNTDFHVTVKKKEVVAAVLPMHHEHWL PMSNLDLLLPPLDFGVFFCYKRSNI DNDTKDD
PpCFAT 1 MGNTDFHVTVKKKEVVAAVLPMHHEHWL PMSNLDLLLPPLDFGVFFCYKRSNI DNDTKDD

PhCFAT 61 DEITIKKALAE TLVSFYALAGEVVFNSLGEPELLCNRGVDFHAYADIELNLDLYHPDV
PpCFAT 61 DEITIKKALAE TLVSFYALAGEVVFNSLGEPELLCNRGVDFHAYADIELNLDLYHPDV

PhCFAT 121 SVHEKLIPIKKGVL SVQVTGLKCGGIVVGC F DHRVADAYSANMFLVAAAIARKDNNI
PpCFAT 121 SVHEKLIPIKKGVL SVQVTGLKCGGIVVGC F DHRVADAYSANMFLVAAAIARKDNNI

PhCFAT 181 NTVIPSFRRSLLNRRPPQFDDSE FIDSTYVFLSSPPKQPNVLT SRVYYINSQEINLLQS
PpCFAT 181 NTVIPSFRRSLLNRRPPQFDDSE FIDSTYVFLSSPPKQPNVLT SRVYYINSQEINLLQS

PhCFAT 241 QATRNGSKRSKLECFSAFLWKTIAEGGIDDSKRCKLGI TVDGRQLRHDSSTTMKNYFGN
PpCFAT 241 QATRNGSKRSKLECFSAFLWKTIAEGGIDDSKRCKLGI TVDGRQLRHDSSTTMKNYFGN

PhCFAT 301 VLSVPYTEASVGLKQTPLGKVADLVHTCLDNVANEHHEF SLIDWVELHRPQAIKVVYC
PpCFAT 301 VLSVPYTEASVGLKQTPLGKVADLVHTCLDNVANEHHEF SLIDWVELHRPQAIKVVYC

PhCFAT 361 KDECNDEAAIVVSSGLRFPLSQVNFVGWCPDFGSYIFPWGGQTYVMPMPSPKNGDWIV
PpCFAT 361 KDECNDEAAIVVSSGLRFPLSQVNFVGWCPDFGSYIFPWGGQTYVMPMPSPKNGDWIV

PhCFAT 421 YMHLQKKHLDLVETRAPHIFHPLTACYLDTATY
PpCFAT 421 YMHLQKKHLDLVETRAPHIFHPLTACYLDTATY