

1 10 20 30 40 50 60 70 80

β1 α1 β2 β3 β4 α2

PAI MSISKDSRIAIIGAGPAGLAAGMYLEQAGFHDYTILEARTDHVGGKCHSPNYHGRRYEMGAIMGVPSYDTIQEIMDRTDG...KVDGPKLR.....

PFI .THDFDDTIHAVVGAGYSGLSAAFTLVKKGYNVEIYFSQGEVGGYVYSVDYNNVAHDLATYALTPAYWKFQEA M K S I G V G F C E L D V A I V Q T N S T P V S V

UGM ...MYD...YIIVGSGLFGAVCANELKKLN.KKVLVIEKRNHIGGNAYTEDCEGIQIHKYGAHIFHTNDKY..IWDYVND....L.VEFNR.....

90 100 110 120 130 140 150 160 170

β5 β6 η1 α3 η2 α4 η3 α5 π1

PAI ..REFLHEDGEIYVP.EKDPVR..GPQVMAAVQKLGQLLATKYQG...YDANGHY...N..KVHEDLMLPFDEFALINGCEAARDWVWVINPFTAFGYG

PFI PFEKWMAAYWAAKVPNPLNLVRKVSTQVSTYVEVWKKLFNMDFIDTSTKRTNRLFPLKTNVDVLAQFSMPMKDFVALHKLDLLEPWFIQATDSQAYG

UGMFTNSPLAIYKDKLFNLPF...NMNTFHQMVGKDPQEAQN.IINAQKKKYG...D..KVPENLEEQA...ISLVGEDLYQA...IKGYTEKQWG

180 190 200 210 220 230 240

α6 α7 α8 β7 β8 β9

PAI HFDNVPAAYVLKYLD..FVTMMSFAKGDLTWADGTQAMFEHLNATLEHP...AERNVDITRITRE.GK...VH..IHT.....TDWDRES

PFI PYDTPPALYYMVWFPP.NLFNGEENTVPCGTYS.MQSMAEHMAEWKSKGVTFFHMNTKVTKISRATGSSPSLLEEGVATPKLFDTIISTNKLPSAN

UGM RSAKELPAFIKRIIPVRFTFDNNYFS.DRYQGIP.VGGYTKLIEKMLEGV...DVKLGIDFLKDK.S.....LAS.....K...AH

250 260 270 280 290 300 310 320 330

β10 α9 α10 β11 β12 η4 η5 β13 β14

PAI VLVLTVPLEKFLDYSDADDDEREY.FSKIIHQ.....Q....YMVDACLKEY.PTISGYVPDNMRPERLGHVMVYYHRWADDPHQIITTYLL..RN

PFI RAEVVTPLLPKEREAADTYEELQM.FSALLETNRSDAIPTTGFLMVDADAI AH.DPNTGFWGCLNAERRGGYSDENAILSSDTVTRVSAIYYTERA

UGM RIIYTGIDQYFDYRFGALEYRSLETERHEF.....P.....NFQGNVAVINFTDANVPYT..RIIEHK..HFD....YVETKHTVVTKEYP....

340 350 360 370 380 390 400 410 420

α11 β15 α12 α13 η6 β16 η7 α14

PAI HPDYADKTQECRQMVLDDMETFGHPVEKIIIEEQTWY.YFPHVSSSEDYKAGWYEKVEGMQGRRTFYAGEIMS.FGNFDEVCHYSKDLVTRFFV

PFI NNERIDFSLDEKIQQVKTNLATWDSATWTNLTSTRTFGGYFQRWRTPDVMGQKPNLADIQEGDVYYVNSAACGFESVGHVFD CADNLIKDF.

UGM ...LEWKVGDPEYYPVNDKNMELFKKYRELASREDKVI.FGRLAE.YK..YYDMHQVIS..AALYQVKNIMS....TD.....