

PaIso 1 MALLSSSLSSQIPTGSHPLTH --- TQCIPHRFSTTINAGHSAGKPRSFYLRWGKGSNKIIACVGGTTSLLHYQSAEKTDSLSAPTLVKREFFPPGFWK
 PaLAS 1 MALLSSSLSSQIPTGABHLNLNAYANTQCIPHRFSTLNAGTSAGKRSLYLRWGKGSNKIIACVGG --- DLSLAPTLVKREFFPPGFWK
 PtLAS 1 MALLSSSLSSQIPG --- ATQCIPHRFHSLNAGTSAGKRSLYLRWGKSPKIVACAG --- DPFVPTLVKREFFPPGFWK
 AgAS 1 MAMSSSLSSQIPTAAHHLIAN --- AQSIPHRFSTTINAGSSASKRRLSLYLRWGKGSNKIIACVGGGATSVVHYQSAEKNDSLSSTLVKREFFPPGFWK
 GbLS 1 MAGVLEIANLPCSLQLSPKVPFR --- QSTNIIIPFRKRSSFGNAQHCVRSHLRLRWNCVGIHSAABTRPDQLE --- QERFVSRNLADYHPAVWK

PaIso 94 DHVIDSLTSSHKVSAABE --- KRMETLISEIKNFRSMGVGETNPSAYDTAWVARIPAVDGSBHPFPETLEWILONQLKDGSGWGEFFYFLAYDRI
 PaLAS 86 DHVIDSLTSSHKVSAABE --- KRMETLISEIKNFRSMGVGETNPSAYDTAWVARIPAVDGSBHPFPETLEWILONQLKDGSGWGEFFYFLAYDRI
 PtLAS 77 DHVIDSLMPYSHKVAABE --- KRMETLISEIKNFRSMGVGETNPSAYDTAWVARIPAVDGSBHPFPETLEWILONQLKDGSGWGEFFYFLAYDRI
 AgAS 96 DDVIDSLTSSHKVSAABE --- KRMETLISEIKNFRSMGVGETNPSAYDTAWVARIPAVDGSBHPFPETVTEWILONQLKDGSGWGEFFYFLAYDRI
 GbLS 91 DDVIDSLTSPNSHATSKS SVDETINMKRIQTLVKEIQCMFQSMGGETNPSAYDTAWVARIPSIDGSGAPCFPQTLOWILNQLIDGSGWGEBCIFLAYDRV

PaIso 187 LATLACIITLTLWRTGETQIRKGIIEFFKTQAGKIEDEADSHRPSGFEIVFPAMLKEAKVLGLDLPYELPFIKQIIEKREAKLRLPTNIIYALPTLLYS
 PaLAS 179 LATLACIITLTLWRTGETQVQKGIIEFFKTQAGKIEDEADSHRPSGFEIVFPAMLKEAKVLGLDLPYELPFIKQIIEKREAKLRLPTNIIYALPTLLYS
 PtLAS 170 LATLACIITLTIWQGDVQVQKGIIEFFKTQAGKIEEADSHRPSGFEIVFPAMLKEAKVLGLDLPYELPFIKQIIEKREAKLRLPDDLYALPTLLYS
 AgAS 189 LATLACIITLTLWRTGETQVQKGIIEFFKTQAGKMEDEADSHRPSGFEIVFPAMLKEAKVLGLDLPYDLPFIKQIIEKREAKLRLIPTDLYALPTLLYS
 GbLS 191 LATLACLLTLKWNKGDVQVQKGVFVRKHEEMKDEADNHRPSGFEIVFPAMLEAKVSLGLDLPYHLPFISQIHOKRQKLIKIPIDLNHNHOTALLY

PaIso 287 LEGLQIVVDWEKIIKLQSKDGSFLSPASTAAVFMRTGNKKCLEFLNVLVKKFNHVPCHYPLDLFERLWAVDTVERLGDIDHFKEEKDALDYVYSHWD
 PaLAS 279 LEGLQIVVDWQIINKLQSKDGSFLSPASTAAVFMRTGNKKCLEFLNVLVKKFNHVPCHYPLDLFERLWAVDTIERLGDIDHFKEEKDALDYVYSHWD
 PtLAS 270 LEGLQIVVDWEKIMKLQSKDGSFLSPASTAAVFMRTGNKKCLEFLNVLVKKFNHVPCHYPLDLFERLWAVDTVERLGDIDHFKEEKDALDYVYSHWD
 AgAS 289 LEGLQIVVDWQIINKLQSKDGSFLSPASTAAVFMRTGNKKCLEFLNVLVKKFNHVPCHYPLDLFERLWAVDTVERLGDIDHFKEEKDALDYVYSHWD
 GbLS 291 LEGLQIVVDWQIINKLQSRDGSFLSPASTACVFMHTGNKKCLEFLNVLVSKFGDYVPCHYPLDLFERLWAVDTVERLGDIDRYFKKEIKESLDYVYVYWD

PaIso 387 ERGIGWARENPVPIDDDTAMGLRILRLHGYNVSSDVLKTRFDENGEFFCFLGQTRGVTDMLNVNRCSHVAFPGETIMEEAKLCTERYLRNALEDVGF
 PaLAS 379 ERGIGWARENPVPIDDDTAMGLRILRLHGYNVSSDVLKTRFDENGEFFCFLGQTRGVTDMLNVNRCSHVAFPGETIMEEAKLCTERYLRNALEDVGF
 PtLAS 370 ERGIGWARENPVPIDDDTAMGLRILRLHGYNVSSDVLKTRFDENGEFFCFLGQTRGVTDMLNVNRCSHVAFPGETIMEEAKLCTERYLRNALEDVGF
 AgAS 389 ERGIGWARENPVPIDDDTAMGLRILRLHGYNVSSDVLKTRFDENGEFFCFLGQTRGVTDMLNVNRCSHVAFPGETIMEEAKLCTERYLRNALEDVGF
 GbLS 391 ERGIGWARCNPIPDVDDTAMGLRILRLHGYNVSSDVLNFRDEKGDFFCFAGQTCRGVTDMLNLRCSQVCFPGEKIMEEAKLPTNHLQNALAKNNAF

PaIso 486 DKWALKKNIRGEVEYALIKYPHRSMPREARSYIEHYGNPDVWLKGTMYMPPYISNKYLELAKLDFNMQVSHQKELDRDLRWKSSGSLSEKLFTRERY
 PaLAS 478 DKWALKKNIRGEVEYALIKYPHRSMPREARSYIEHYGNPDVWLKGTMYMPPYISNKYLELAKLDFNMQVSHQKELDRDLRWKSSGSLSEKLFTRERY
 PtLAS 469 DKWALKKNIRGEVEYALIKYPHRSMPREARSYIENYGNPDVWLKGTMYMPPYISNKYLELAKLDFNMQVSHQKELDRDLRWKSSGSLSEKLFTRERY
 AgAS 488 DKWAFKNIRGEVEYALIKYPHRSMPREARSYIENYGNPDVWLKGTMYMPPYISNKYLELAKLDFNMQVSHQKELQDLRWKSSGSLSEKLFTRERY
 GbLS 491 DKWAFKNIDGVEVEYALIKYPHRSMPREARSYIEHYGNPDVWLKGTMYMPPYISNKYLELAKLDFNMQVSHQKELQHIVSWRRESGFDLNFTRQRE

PaIso 586 TEIYFSPASFIFPEPEFATCRVYTKTSNFTVILDDLYDAHGTLDNLELFSVGVKRWDLSSLVDMPQDMKICFVGFYNTFNIEIABGRKRQGRDVLGYIR
 PaLAS 578 TEIYFSPASFIFPEPEFATCRVYTKTSNFTVILDDLYDAHGTLDLKLFTESVKKRWDLSSLVDMPQDMKICFVGFYNTFNIEIABGRKRQGRDVLGYIR
 PtLAS 569 AEIYFSPASFIFPEPEFATCRVYTKTSNFTVILDDLYDAHGTLDNKLFTESVKKRWDLSSLVDMPQDMKICFVGFYNTFNIEIABGRKRQGRDVLGYIQ
 AgAS 588 TEIYFSPASFIFPEPEFATCRVYTKTSNFTVILDDLYDAHGSLDCLKLFTESVKKRWDLSSLVDMPQDMKICFVGFYNTFNIEIABGRKRQGRDVLGYIQ
 GbLS 591 VEMYFSPAVSMFPEPEFAACRYAYKTSGLAVILDDLYDHGSLDCLKLFSVAERVRWDLSSLVDMPQDMKICFVGFYNTFNIEIABGRKRQGRDVLGYIR

PaIso 685 NVVEIQLEAYTKAEWSAARVYVPSFDEYIENASVSIALGTVVLISALFTGTEILIDDVLSKIGRSRFLQMLGLTGRLVNDTKTYAERGQGEVASAQCY
 PaLAS 677 NVVEIQLEAYTKAEWSAARVYVPSFDEYIENASVSIALGTVVLISALFTGTEILIDDVLSKIGRSRFLQMLGLTGRLVNDTKTYAERGQGEVASAQCY
 PtLAS 668 KVVEIQLEAYTKAEWSAARVYVPSFDEYIENASVSIALGTVVLISALFTGTEILIDDVLSKIGRSRFLQMLGLTGRLVNDTKTYAERGQGEVASAQCY
 AgAS 687 NVVEIQLEAYTKAEWSAARVYVPSFDEYIENASVSIALGTVVLISALFTGTEILIDDVLSKIGRSRFLQMLGLTGRLVNDTKTYAERGQGEVASAQCY
 GbLS 691 KVVEIQLEAYTKAEWSAARVYVPSFDEYIENASVSIALGTVVLISALFTGTEILIDDVLSKIGRSRFLQMLGLTGRLVNDTKTYAERNRDELVSVQCY

PaIso 785 MKEHPEISEEEALQHVVYVMENALDELNREFVNNR-DVPDSCRRLVFETARIMQLFYMGDGLTSHHMEIKEHVKNCLFPQVA
 PaLAS 777 MKDHPKISEEEALQHVVYVMENALDELNREFVNNR-EVPDSCRRLVFETARIMQLFYMGDGLTSHHMEIKEHVKNCLFPQVA
 PtLAS 768 MKDHPKISEEEALQHVVYVMENALDELNREFVNNR-DVPDTCRRLVFETARIMQLFYMGDGLTSHHMEIKEHVKNCLFPQVA
 AgAS 787 MKDHPKISEEEALQHVVYVMENALDELNREFVNNR-KIPDYKRLVFETARIMQLFYMGDGLTSHHMEIKEHVKNCLFPQVA
 GbLS 791 MRENPECEEEALSHVYCHIDNALKELNWEANPASNAPLQVRRLLFNTRARVQLFMYRDFGECISDRKEMKDHVSRITLFDPA