


  
**MDITVKEEDFSNGLIKNSAFENLKFNSNIK-FKVQKRFQILYVILFIFVTGGFFFFLIGNFFF**TPNYKVNEIVQNTEHLTIGFKIERPHDKVLKTIKEK

	10	20	30	40	50	60	70	80	90	100	
Pgal PM						-MKFFKTP-----		EYLTIAVKIERSQEKVLKTLINK		30	
Pviv PM	MDIAVKEQDYSNGLIKNSAAFENLKFNSNIK-FKVQKRFQILYILFVFVTGIFFFLISTYFFT	PNYKVNKIVQNTEH	LTLAFKIERPYDKVLKTISK							99	
Pova PM	MDITVKDQDFSNGLIKNSAFENLKFNSNIK-IKVQKRFQLLYFILFIFITGLFFFFIIGSY	FTPSYNVYQVVQNTE	ELHTIPFKIVKPHDKI	KSI	VNK					99	
Pmal PM	MDITVKEQEFSNGLIKNSAFENLKFNSNIKNNFKVQKKFQILYFILFIFITGVFFFFLIGNY	FFSPNYKVNKIVQNTE	HLTIGFKIERPHDKV	LKTIVEK						100	
PfPM4	MALTVKEEEFSNTLIKNASAFDRKLGNLKN-LKIQQKLQFLYILFVLITGVFFFFLIGNFY	SHR-KLYQVIKNTKHTTIG	FKIDRPHDKV	LSSV	LKN					97	
PfPM1	MALSIK-EDFSSAFAKNESAVNSSTFNMMKWTKIQKRFQILYVFFF	LITGALFYYLIDNVLP	PKNKKINEIMNTSKH	VIIGFSIENSHDRIM	KTVQH					99	
PfPM2	MDITVREHDFKHGFIKSNSTFDGLNIDNSKNKKIQKGFI	QILYVLLFC	CSVMGLFYYVYENWLQRDNEM	NEILKNSE	HTLIGFKVENAHDRI	LKTIKTH				100	
PfHAP	MNLTIKEEDFTNTFMKNEESNTFRVTKVKR-WNAKRLFKILF	VT	IVLAGGF	SYYIFENFV	QKNRKINHI	IKTSY	STVG	FNIE	SYDR	MKTKEH	99


  
**KLKNYIKESVKFFFSGYTKQNYLGSENDVIELDDVANVMFYGEGEVGDNKQKFMFIFDTGSANLWVPSKKCNSIGCSTK**NLYDSSSKSKTYEKDGTKVEIT

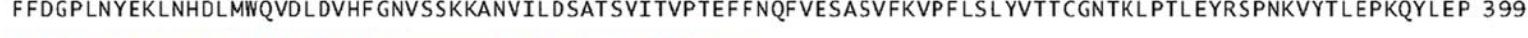
	110	120	130	140	150	160	170	180	190	200	
Pgal PM	KLKNYIKETFKFLNSGYLTENYLGENDSYE	DEVSNVMFYGEAEVGDDKQKFT	FIFDTGSANLWVPS	TCKSSKGCTKHI	DSSSKSKTIEE	DGEKAEIT				130	
Pviv PM	NLKNYIKETFNFFKSGYMKQNYLGSENDVIEL	DDVANIMFYGEGEVGDNH	QKFM	IFDTGSANLWVPS	KKCNSSGCSIKNL	YDSSSKSYE	KDGTV	DIT		199	
Pova PM	NLKNYIKETYNLFKSGYVKQNYLGSENDVIEL	DDVANLMFYGEGEVGDNH	QKFM	IFDTGSANLWVPS	KKCNSIGCSTK	HLYDSSSKSYE	KDGTE	VEIT		199	
Pmal PM	NLKNYIKETVKFFFQSGYVKQNYLGSENDVIEL	DDVANLMFYGEQIGITNK	QPFMF	IFDTGSANLWVPS	VNCDSIGCSTK	HLYDASASKSYE	KDGTV	KEIT		200	
PfPM4	KLSTYVKEFSKFFFSGYAQKG	YLGSENDSIEL	DDVANLMFYGEQIGITNK	QPFMF	IFDTGSANLWVPS	VNCDSIGCSTK	HLYDASASKSYE	KDGTV	KEIS	197	
PfPM1	RLKNYIKESLKFFF	KLTQKPHLG	NAGDSVTNDVANVMY	YEAQIGIDNK	QKFAF	IFDTGSANLWVPS	AQCNTIGCKT	KNLYDSSN	SKSYE	KDGTV	199
PfPM2	KLKNYIKESVNFLNSGLT	KTNYLGSSNDNIEL	VDQ	NIMFYGDAE	VGDNQQPFT	ILDGTGSANLWVPS	VKCTTAGCL	TKHLYDSS	SKRTY	KDGTV	200
PfHAP	KLKNYIKESVKLFNKGLT	KKSYLGSEFDN	VELKDLANVLSF	GEAKLG	DONGQKFNF	LHTASSNVWVPS	IKCTSES	CESKNH	YDSSSKSYE	KDDTPV	199


  
**YGSGTVSGFFSKDLVTGLNLSLPYK**FIEVTD~~DDLEPIY~~SASEFDGILGLGWKDLSIGSIDP~~IV~~VELKNQNKNIDNALFTFYLPVHDKHAGYL TIGGIEEK

	210	220	230	240	250	260	270	280		mAb 2G4 ***		
Pgal PM	YGSGSIKGSFSKDLVTIGH	<u>SLPYK</u> FIEVTD <del>DDLEPIY</del> S	<u>SSPF</u> DGIVGLGWKD	<u>LA</u> LGKIS	<u>SPIV</u> VELKNQNKNID	<u>DHG</u> LETFYLPVLDKHA	<u>GYLT</u> IGGIEDK			230		
Pviv PM	YGSGTVKFFF	<u>SKDLVTG</u> HL	<u>SLPYK</u> FIEVTD <del>DDLEPIY</del> S	<u>SSPF</u> DGIVGLGWKD	<u>LA</u> LGKIS	<u>SPIV</u> VELKNQNKNID	<u>DHG</u> LETFYLPVLDKHA	<u>GYLT</u> IGGIEDK		299		
Pova PM	YGSGSIKFFF	<u>SKDLVTG</u> YLS	<u>SLPYK</u> FIEVTD <del>DDLEPIY</del> S	<u>SSPF</u> DGIVGLGWKD	<u>LA</u> LGKIS	<u>SPIV</u> VELKNQNKNID	<u>DHG</u> LETFYLPVLDKHA	<u>GYLT</u> IGGIEDK		299		
Pmal PM	YGSGTVRGFF	<u>SKDLVTG</u> YLS	<u>SLPYK</u> FIEVTD <del>DDLEPIY</del> S	<u>SSPF</u> DGIVGLGWKD	<u>LA</u> LGKIS	<u>SPIV</u> VELKNQNKNID	<u>DHG</u> LETFYLPVLDKHA	<u>GYLT</u> IGGIEDK		300		
PfPM4	YGSGTVRGYF	<u>SKDVISLG</u> DL	<u>SLPYK</u> FIEVTD <del>ADDLEPIY</del> S	<u>SSPF</u> DGIVGLGWKD	<u>LA</u> LGKIS	<u>SPIV</u> VELKNQNKNID	<u>DHG</u> LETFYLPVLDKHA	<u>GYLT</u> IGGIESD		297		
PfPM1	YVSGTVSGFF	<u>SKDIVTIAN</u> LS	<u>SLPYK</u> FIEVTD <del>NGFEPA</del> Y	<u>SSPF</u> DGIVGLGWKD	<u>LA</u> LGKIS	<u>SPIV</u> VELKNQNKNID	<u>DHG</u> LETFYLPVLDKHA	<u>GYLT</u> IGGIEDR		299		
PfPM2	YVSGTVSGFF	<u>SKDLVTVG</u> NL	<u>SLPYK</u> FIEVID <del>NGFEPT</del> Y	<u>SSPF</u> DGIVGLGWKD	<u>LA</u> LGKIS	<u>SPIV</u> VELKNQNKNID	<u>DHG</u> LETFYLPVLDKHA	<u>GYLT</u> IGGIEER		300		
PfHAP	SKAGTISGIFS	<u>SKDLVTIG</u> KL	<u>SLPYK</u> FIEMTEIVG	<u>SSPF</u> YSES	<u>VDGV</u> FLGWKD	<u>LA</u> LGKIS	<u>SPIV</u> YI	<u>VELKT</u> QNKIEQAVY	SIYLPP	ENKNKG	YLTIGGIEER	299


  
**FYEGERLTYEKLNHDL**YQIDLDVHFGNTTMEKANAIVDGTSTITAPTEFLNKFFKDLNVIKVPFLPFYVTTCDNKKLPTLEFTSANNTYTLEPEYYLDP

	320	330	340	350	360	370	380		mAb 1H10 ***			
Pgal PM	FYEGERLTYEKLNHDL	<u>F</u> WQIDLDITFG	<u>N</u> DTFEKANAI	<u>I</u> IDSGT	<u>S</u> GT	<u>T</u> ITAPTEFL	<u>N</u> KFFKD	<u>L</u> VPVYVTECDNKS	<u>L</u> PTLEFTFHSGNN	KYTL	EPEKFYLD	330
Pviv PM	FYEGRNITYEKLNHDL	<u>Y</u> WQIDLDVHFG	<u>K</u> QTMEKANV	<u>I</u> VD	<u>D</u> SGT	<u>T</u> ITAPSEFL	<u>N</u> KFF	<u>F</u> ANLN	<u>V</u> KVPFLPFYVTT	<u>C</u> DNK	<u>E</u> MP	399
Pova PM	FYQGEERTYEKLNHDL	<u>Y</u> WQIDLDMHFG	<u>N</u> NTMTK	<u>A</u> NAI	<u>I</u> IDSGT	<u>S</u> SSITAP	<u>T</u> TFITEFF	<u>K</u> DKN	<u>V</u> KVPFLPFY	<u>I</u> TC	<u>N</u> KEMPL	399
Pmal PM	FYEGERLTYEKLNHDL	<u>F</u> WQV	<u>D</u> LDVNF	<u>G</u> KTSME	<u>K</u> ANV	<u>V</u> DSGT	<u>T</u> ITAPSF	<u>I</u> NKFF	<u>K</u> DLN	<u>N</u> VPFL	<u>P</u> LY	400
PfPM4	FYEGPLTYEKLNHDL	<u>Y</u> WQIDLDIHFG	<u>K</u> YVMQKANAV	<u>V</u> DSGT	<u>T</u> ITAPSF	<u>L</u> NKFF	<u>R</u> DMNV	<u>I</u> VPFL	<u>P</u> LY	<u>V</u> TTCDN	<u>D</u> LP	397
PfPM1	FYEGOLTYEKLNHDL	<u>Y</u> WQV	<u>D</u> LDLHFG	<u>N</u> LT	<u>E</u> KATA	<u>I</u> VD	<u>D</u> GT	<u>S</u> ITAPTEFL	<u>N</u> KFF	<u>E</u> GLDV	<u>V</u> KIPFL	399
PfPM2	FYEGPLTYEKLNHDL	<u>Y</u> WQITL	<u>D</u> AHVGN	<u>I</u> MLEKANC	<u>I</u> VD	<u>D</u> GT	<u>S</u> TAIT	<u>V</u> PTDF	<u>L</u> NKML	<u>Q</u> LN	<u>D</u> V	400
PfHAP	FFDGPLNYEKLNHDL	<u>M</u> WQV	<u>D</u> LDVHFG	<u>N</u> SSKK	<u>K</u> ANV	<u>I</u> LD	<u>S</u> ATSV	<u>I</u> TPTEFF	<u>N</u> QF	<u>V</u> ESAS	<u>V</u> KVPFL	399


  
**LEDIDDTLCMLYILPV**DIDKNTFILGDPFMRKYFTVFDYDNESVGFAVAKN--

	410	420	430	440	450							
Pgal PM	LEEVD	ESLCM	YIMP	GDIDK	Q						352	
Pviv PM	I	LEVDDTLC	MITMLPV	DIDSNT	FILGDPF	M	FMRKYFTV	FDYD	KESVG	FAIAKN	450	
Pova PM	L	F	DIDETL	CIVDI	IPV	DIDENT	FILGAP	FMRKYFSV	FDYDNERV	YGF	450	
Pmal PM	L	L	DIDDTL	CMLY	YILP	V	DIDNT	FILGDP	FMRKYFTV	FDYDKE	SGFAVAKN	451
PfPM4	L	S	DIDP	ALCMLY	YILP	V	DIDNT	FILGDP	FMRKYFTV	FDYDKE	ESVGFAVAKN	449
PfPM1	I	DFG	ISL	CMVSI	IPV	DLN	KNTF	ILGDP	FMRKYFTV	FDYD	NHTVG	452
PfPM2	I	EVG	PGL	CMLN	I	GLDF	PVPT	FILGDP	FMRKYFTV	FDYD	NHSVG	453
PfHAP	L	ENI	FSAL	CMLN	NIV	PIDLE	KNTF	YLGDP	FMRKYFTV	YD	DNHTVG	451