




GmTLP1	MALF	10	20	30	40	50	60	
GmTLP2	M	ASSTQFSTTLVTLCL	FQFLAGS	YSTTFTIVNKC	SYTVWPGILSGAGTSPLPTT	GFVLQ		
GmTLP3	MSAGNSV	FHLISIIYRMAFVVTMATT	CNVRMGNSTKMASIV	TMASLFF	FQFLSGS	CSTRLTITNKC	SYTVWPAILSATGSSPLSTS	GFVLQ
GmTLP4		MAVTK	SLSIFLFIA	MSCVAAA	QAAFNITNNCTYT	VWAAAVP	GGGARLN	
GmTLP5	MVY	LALCS	LLTL	ALSLATT	HAANFEIVNCPYTVWAAASP	GGGRRLD		
GmTLP6	MSPFF	SHHPLSPQR	FFIFLLIL	AFRGVRV	SATFTFVNKCDHT	VWPGIL	GKPDIGTT	GFELK
GmTLP7	MPIV	MTSWK	FPSFLAIL	FTLLSYS	FSSIFTITNNCSHT	IWPGTSLGAGSPPLPTT	GFRLD	
GmTLP8		MPTSM	YPFIFLSI	LISIPLT	GGTQLILVNNCQESV	WPGILSGGGHPTPKDGG	FHLC	
GmTLP9	MDQ	LTL	AFPFLTL	HLLVSGVVATTSFTLV	NKCDYT	VWPGILSNAGIATLPTT	GFVLQ	
GmTLP10	MPYR							
GmTLP11		MA	FTTVVFF	LGFLSGS	YGATLMVTNKC	SYTVWPAILSAARSLPVHTP	GLVLQ	
GmTLP12							MQQELE	
GmTLP13	MASPH	IALLK	LTSIFIVI	ASAPELCG	SSKTFTLVNYCKET	IWPGITRSDNH	SGDGFALK	
GmTLP14	M	AALRK	AVFFVIA	QCFTFSA	YAARFEITNRC	TYTVWAAASP	VGGGVQLN	
GmTLP15		MTLTK	ALFFVTA	LCCTSAA	YAARFDITNRC	SYPVWAAAVP	GGGRRLN	
GmTLP16	M	PTLRP	ILTTIFFL	FTVLKVS	ASSSVIFYNKC	PHVPWPGIQPSAGKPVLAG	GFKLA	
GmTLP17	MDH	LTL	AFPFLTL	HLLASGVLATTTFTLV	NKCDYT	VWPGILSNAGIATLPTT	GFVLQ	
GmTLP18					MFIVKAMWYL	ITL	SGSGSPPLATT	GFRLD
GmTLP19		MAMPR	SLFITLAIF	LGFLSGS	YAAKFRISNEC	ISTVWPAIVANS	TSTTGFSLQ	
GmTLP20		MARTS	SILFYLVA	FCSIIII	DGAQLILVNNCGESV	WPGILGGAGQTPKDGG	MHLG	
GmTLP21	MAMM	GSMLLSLRP	FLTITFFL	TLTVLKVS	ASSSVIFYNKC	QHPVWPGIQPSAGKPVLAG	GFKLA	
GmTLP22	MANPH	IALLK	LTSIFIVIF	ASAPELCG	SNKTFTLVNYCKET	IWPGITRSDNH	SGDGFALK	
GmTLP23	MSQLHG						LADSGQGLN	
GmTLP24	MV							
GmTLP25		MMSN	IFSLCLSF	SLLFYVA	QGATVTFTNNCQYT	VWPGTTLTGDNQNPQLSTT	GFELA	
GmTLP26	MTSNMQNSPLHLQENY	TYPTMTTT	RVALCLLF	AFLFYAA	EGAKVSFNNKCTYT	VWPGTTLTGDKPQLSTT	GFELG	
GmTLP27		MTTT	RVALCLLF	AFLFYAA	EGAKVSFNNKCTYT	VWPGTTLTGDKPQLSTT	GFELG	
GmTLP28		MMSN	IFSLCLSF	SLLFYVA	QGATVTFTNNCQYT	VWPGTTLTGDNQNPQLSTT	GFELA	
GmTLP29	MAPTMQNSPLHLQNE	KYPTMTTT	RVAICLCF	AFLYAA	EGAKVSFNNKCSYT	VWPGTTLTGDKPQLSTT	GFELG	
GmTLP30		MAKNV	SLNLFPLML	LLCAGVQ	SDVTFTFENLCS	DTLWRA	SNPSIGDLEPDLP	
GmTLP31		MAVTK	SLSIFLFIA	ISCVAVA	QAAFNITNNCTYT	VWAAAVP	GGGSRLN	
GmTLP32	M	ASSAQFSTTLVVLCL	FQFLAGS	YSTTFTIVNKC	SYTVWPGILT	GAGTSPLSTT	GFVLQ	
GmTLP33	MALF	SHHRHSYET	LLGFLLFL	VFR	EV	SGATFTFVNKCDHT	VWPGIL	GAPQLGSTGFELV
GmTLP34	MGRLLLLF		LIILSLVA	FSFLSDV	QSASFKIVNKC	RHTIWPGLLSGATSPPLPTT	GFTLE	
GmTLP35								
GmTLP36		MARSL	FLCSLLIFA	VTTFSSPT	GALILTLVNNCNYT	VWPAIQPNAGHPVL	LAGGGLTLR	
GmTLP37		MATSS	HYFIFFSI	LVSISLT	DGTQLIIVNCKESV	WPGILNGGHPSPKHGG	FHLC	
GmTLP38	MGRLLLLF		LIIPSLVA	LSFLSEV	QSASFKIVNKC	RHTIWPGLLSGATSPPLPTT	GFTLE	
GmTLP39	MGL	LASS	CFILIAL	LLTPKGV	MGATFTFFNKC	DYTVWPGILANAGSPPLDST	GFELP	
GmTLP40		MARSL	FLCSLLILA	VTTFSSPT	GALILTLVNNCNYT	VWPGIQPNAGHPVL	LAGGGLTLR	
GmTLP41	MA		LKQLSLLV	MLFSLGV	DATVLT	LQNKCRDIWPGILT	GAGRP	ELIDGGAELT
GmTLP42	MA	LHLQT	ILPFILVLA	ILSGQRTCD	SARVFTIVNYCKET	LWPAVTPGES	FNGGGFVLK	
GmTLP43	MALI	PNSKT	SALFHLL	FILGNVA	YATVFTLENHCSYT	VWPGTTLSGNGA	ATIGDGGFMA	
GmTLP44	MALI	PNSKT	SALFHLL	FILGNIA	YATVFTLENHCSYT	VWPGTTLSGNGVAT	LGDGGFMA	
GmTLP45	MALI	PNSKT	PPLFHLL	FLLGNVA	NATVFTLENHCSYT	VWPGTTLSGNSA	AILGGGFALA	
GmTLP46	MA	LHLQT	ILPFTLVLA	ILSGQRTCE	CARVFTIVNYCKET	LWPAVTPGEN	FNGGGFVLK	
GmTLP47	MPIV	MTSWK	FPSFLAIL	FTLLSYS	FSSIFTITNNCPHT	IWPGTSLGAGSPPLPTT	GFRLD	
GmTLP48	MDR	PTLSS	LFSFLLTL	HLSLSGV	ISTFTTLVNNKCDYT	VWPGILSNAGV	PPLSTTGLVLQ	
GmTLP49		MEASS	IFALTLS	TFLLSGA	YSATFTVTNNCAFT	IWPAATLTGGGNSQLPST	GFELT	
GmTLP50	MSPY	HGHSSQR	FFIFLLIL	AFRGVRV	TATFTFVNKCDHT	VWPGVL	GKPDIGTT	GFELK
GmTLP51	MSA	STHDQFAATLIFLFF	SHFLRGS	NSATFSIVNKC	SYPVWPGILSGAGTAQLATT	GFALQ		
GmTLP52	MALI	PNSKT	SALFHLL	FLLGNVA	YATVFTLENHCSYT	VWPGTTLSGNGA	ALLGEGGFALA	
GmTLP53	MDR	PTL	S	LFSFLLTL	HLSLSGV	ISTFTTLVNNKCEYT	VWPGILSNAGV	PPLSTTGFVLQ
GmTLP54	MDS	MAPHC	FSIHIALIW	VLLCQGA	LGATFTLINKCDYT	VWPGILANAGSSGLDST	GFELR	
GmTLP55	MQ	LPKYI	AASFFCLICSSIIYYGKAEA	HQVNFYVHNK	CFPFIWPAATAPNSGQPVIADG	GFYLA		

	70	80	90	100	110	120	130	140																		
GmTLP1	KGGSRSFQAPTG.	WSGRFWGRTG	CQFD.	GL.	GKGT	CATADCG	SGEVNCNGAGA.	SPPATLA	EFTLGTG....	SMDYYD	VSLVDGYN	LPM	VAR....	147												
GmTLP2	PGESNVIAPVAA.	WSGRLWGRTF	CTQD.	AT.	GKFS	CVTGDCG	SSAVECNGGGA.	APPATLA	EFTLNGA...	G.GLD	FFD	VSLVDGYN	LPM	VEPQ....	146											
GmTLP3	PGDFKIVPVPPA.	WSGRLWGRIT	CLSLDITS.		TKFS	CVTGDCG	STTIECVG	GNA.	TPPV	TLVKFT	TLNGT...	G.GLD	FFD	VSLVDGYN	LPM	VEPR....	178									
GmTLP4	PGESWNISVTNGTTR	GRIWGRIN	CTFD.	NA.	GRGK	CLTGDC	E.GVLECN	KTG...	TPPN	TVDFAL	NQY...	N.NLD	FFD	VSLVDGYN	LPM	TP....	135									
GmTLP5	RCQTWNLWVNP	GTAMARIW	GRTG	CNFD.	GS.	GRGR	CQTGDC	T.GGLNC	QGWG...	VPPN	TLAEFAL	NQF...	G.NQD	FFD	VSLVDGYN	LPM	DFYPL....	133								
GmTLP6	RCSTRITFDGPPG.	WSGRFWGRTG	CQFD.	QS.	GQGT	CATGDCG	SGQVTC	NGAGA.	TPPA	TLAEFT	LGE	G...	APD	YYD	VSLVDGYN	LPM	DAS....	148								
GmTLP7	SGQMMKLTSVPG.	WSGRIWARTG	CTFD.	AT.	GIGK	CQTGDCG	GRLECD	GNGA.	APPT	SLFEI	TLGKG...	N.DQD	YYD	VSV	MDGYN	LPL	VQPR....	146								
GmTLP8	SGDEVVLEVP	EG.WSGRIW	GRQG	CFD	TKT.	GKGT	CETGDCG	GLLK	ECG	MGG...	VPPATL	VEMT	LTGP...	QSA	LHF	YD	VSLVDGYN	LPM	SKPV....	144						
GmTLP9	TGESKTVTAPTS.	WGGRFWGR	TLCTQD.	SA.	GKFS	CLSGDCG	SGKLEC	AGNA.	TPPA	TLAEFT	LDGA...	G.GLD	FFD	VSLVDGYN	LPM	L	VAPQ....	145								
GmTLP10	.....	.....	.....	.....	.....	.....	SCA	GGMK	CTG	GG...	VPPV	TLAEFT	IGTG...	S.AQD	FFD	VSLVDGYN	VAM	GVRAT....	53	
GmTLP11	PGDTINTIQVPPT.	WSGRLWGRT	TLCSYN.	IT.	GSFT	CVTGDC	ISSTVE	CGG...	A.	TAPV	TLAEFT	LN	GT...	G.GLD	YFD	VSLVDGYN	LPL	V	VEPR....	137						
GmTLP12	NAKQV.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60
GmTLP13	SGQSTVYTAPDG.	WSGRIWARTG	CNFD.	NN.	GNGK	CQTGCG	TSIN	CTVP	G...	SPPAT	SA	D	TLGE.....	P	D	F	YD	VSLVDGYN	LPM	IV	VKAI....	141				
GmTLP14	PGQSWSVDVPAGTKG	ARVWARTG	CNFD.	GS.	GRGG	CQTGDCG	GVL	DCKAYG...	APPNT	TLAEY	GLN	GF...	N.NLD	FFD	VSLVDGYN	LPM	DF	SPT....	135							
GmTLP15	SGQSWALDVPAGTKG	ARVWARTG	CNFD.	GS.	GRGG	CQTGDCG	GVL	DCKAYG...	TPPN	TLAEYAL	NQF...	S.NLD	FFD	VSLVDGYN	LPM	DF	SPT....	133								
GmTLP16	PNRAYSLQLPAL.	WSGRFWGRHG	CAFD.	VG.	GRGR	CATGDCG	GSL	FCNGIGG...	SPPATLA	E	TLGNE.....	Q	D	F	YD	VSLVDGYN	LPM	IS	TPF....	141						
GmTLP17	TAESKTVTAPTS.	WGGRFWGR	TLCTQD.	SA.	GKFS	CITGDCG	SGKLEC	AGSGA.	TPPA	TLAEFT	LDGA...	G.GLD	FFD	VSLVDGYN	VAM	L	VAPQ....	145								
GmTLP18	TGQSIKLTTPVG.	WSGRIWARTG	CTFD.	AT.	GVGK	CQTGDCG	GRLECD	GNGA.	APPT	SLFEI	TLGAG...	N.GQD	FFD	VSV	MDGYN	LPL	L	TPF....	116							
GmTLP19	PGKSYMVTMPTG.	EVK	VWARTG	CSYS.	IA.	GNFS	CFTGDC	SSN	IDCR	GNANPK	PPV	TLAEFT	LN	GS...	Y.GLD	Y	K	V	SLR	E	GNL	PM	S	TEPG....	141	
GmTLP20	SGEEVLDVPEK.	WSGRIWGR	QGCSFD.	ND.	GHGH	CLTDGCN	GML	HCR	GGG...	VPPATL	VEMT	LGSS...	SSPL	GH	F	YD	VSLVDGYN	LPM	V	SKPV....	143					
GmTLP21	PNRAYSLQLPAL.	WSGRFWGRHG	CSFD.	AG.	GRGR	CATGDCG	GSL	FCNGIGG...	SPPATLA	E	TLGNE.....	Q	D	F	YD	VSLVDGYN	LPM	IS	TPF....	149						
GmTLP22	SGQTTVYTAPDG.	WSGRIWARTG	CFD.	NN.	GNGK	CKTGCG	TSIN	CTPG	G...	SPPAT	SA	D	TLGE.....	P	D	F	YD	VSLVDGYN	LPM	IV	VKAI....	142				
GmTLP23	AQQTHM.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	78
GmTLP24	RHGC	IFD.	SS.	GS	GT	CITGDCG	GKL	KCD	GVGG...	APPATLA	EFT	LDSQ.....	E	G	D	F	YD	VSLVDGYN	LPM	S	IFPT....	68		
GmTLP25	PGGTNSVNIPSP.	WSGRFWARTG	CSNN...		GGFT	CDTGDC	ASGQ	VECN	GAGA.	IPPA	TLVEI	T	VAPN...	G.GQD	F	YD	VSV	N	D	G	F	N	V	S	ITPQ....	140
GmTLP26	PGASNSVDLPSP.	WSGRFWARTG	CSNN...	N.	GRFS	CATAD																				

GmTLP1	150	GGG.....GS	160	CGATG	170	CGEDLN..	180	RRCPSELR..	190	VEGGD.....	200	ACQ	210	SACGAFGKPEY	220	CCNGAFSNPS..	230	TCKP	SMYSQMFKST	CPKAYSAY	DDAT	STF	230	
GmTLP2	GGTG...	AGN	CTATG	CVVDLN..	TPCPAELM..	VMSSGE...	GVA	CKS	ACEAFDDPQY	YCCSGAYATPD..	TCKP	SSYSQFFKSA	CPRAYSYAY	DDGS	STF	234							234	
GmTLP3	GG.....	RNRRTATG	CEMDLN..	LSCPTELK..	VI.RDGD...	AVACKSSCQA.....					EPCLTSQFFKTAC	CPGAHVH.....										236		
GmTLP4	.....	YN	CSSVK	CAADII..	GECPTQLQ..	VPG.....	GCNNP	CTVFNTTQ	YCCSTGAA...	GCGPT	DYSKFFKER	CPDAYSYPM	DDAT	SMF	210							210		
GmTLP5	N.....	GG	CHKIS	CSADIN..	GQCPGLR..	APG.....	GCNNP	CTVFKTNEY	YCCCTNGQG...	SCGPT	NYSRFFKDR	CHDSYSYPQ	DDPT	STF	209							209		
GmTLP6	GGG.....	GACAATG	CGADLN..	RRCPAELR..	VDGGD.....	ACQ	SACRAFGKPEF	CCSGAFNSPA..	ACAP	SMYSQIFKAAC	CPKSYSYAF	DDAT	STF	231								231		
GmTLP7	GVYG...	TGV	CNATG	CVTDIN..	RGCPKELQ..	VVG	GDAYQDGVV	CKS	ACEAFGSDQY	YCCSGEFANPT..	TCQP	SYSTLKFQAC	CPKAYSAY	FDDAT	STF	238							238	
GmTLP8	GGG....	IG	CGVAA	CEANLN..	VCCPFALV..	MK.RQGK...	VVG	CKS	ACLAAKSDRY	YCCCTGEFATPK..	SCKP	SAFSRLFKTI	CPKAYSAY	DDST	GLK	230							230	
GmTLP9	GGSG...	DNCTSTG	CVGDLN..	GACPSLR..	VTSVDGKQ..	SVACKS	ACEAFGSPQY	YCCSGAYGSP.T	TCKP	SPYSQIFKNAC	CPRAYSYAY	DDKT	STF	234								234		
GmTLP10	GGT....	GN	CQYAG	CVTDLN..	GKCPTELQ..	VTAEGGS...	IVACKS	ACAAFNAAEF	CCCTGEYSTPQ..	TCKP	TQYSEIFKSAC	CPSAYSAY	DDAT	STC	140								140	
GmTLP11	SAIG...	AEN	CRATG	CRRNLN..	KKCPVELQ..	VIKEGEG...	VVG	CKSS	CEVHE.....	PC..	SNNSNL	FSHFLKTR	CPDAYHNA.....	SF	208								208	
GmTLP12	GVYG...	GV	CNATG	CITDIN..	RGCPRELQ..	LLGGHQNQQ..	VVG	CRS	ACEAFKTDKY	YCCR.....	N..	TCKP	SYSTIFKKA	CPRSYSYAF	DDGT	STF	144							144
GmTLP13	NGT....	GN	CSTVG	CDGDLR..	QNCPSELA..	SK.DNDK...	VIA	CRS	ACDVNTDEY	YCCRGTYGNPA..	TCLAS	NYSKIFKQV	CPAAYS	FALDDPT	SLI	227							227	
GmTLP14	SN.....	GCTRGIS	CTADIN..	GQCPSLR..	TQG.....	GCNNP	CTVFKTDQY	YCCNSG.....	SCGPT	DYSRFFKQR	CPDAYSYPK	DDPT	STF	210									210	
GmTLP15	SN.....	GCTRGIR	CTADIN..	GQCPSLR..	TQG.....	GCNNP	CTVFKTDQY	YCCNSG.....	SCVPT	DYSRFFKQR	CPDAYSYPK	DDPT	STF	208									208	
GmTLP16	KGS....	GK	CSYAG	CVSDLN..	TMCVPLQ..	VRSRDNKR..	VVACKS	ACSAFNSPKY	YCCGTSGYSPQ..	ACKP	TVYSKIFKTA	CPKAYSAY	DDPT	SIA	229								229	
GmTLP17	GGSG...	DNCTSTG	CAGDLN..	GACPSLR..	VTSVDGKQ..	SVACKS	ACEAFGSPQY	YCCSGAYGSPN..	TCKP	SPYSQIFKNAC	CPRAYSYAY	DDKT	STF	234									234	
GmTLP18	GVYG...	DA	CNSTG	CITDIN..	RGCPKELQ..	LLGGDQNR..	VVG	CRS	ACEAFKTDKY	YCCSGAFANPN..	TCQP	SYSTIFKKA	CPRAYSYAF	DDGT	STF	206								206
GmTLP19	.....	GS	CRSTG	CGRDLN..	QKCPTELK..	VIIDGGD...	VVG	CCSL	CQAHE.....	TCKST	LFSEFSKTK	CPEAYQH.....	GSF	205										205
GmTLP20	GGG....	VG	CGVAS	CEVDLN..	VCCPSALE..	VK.RNGK...	VVG	CKS	ACLAMQSAKY	YCCGTGSYDPK..	TCKP	TLFAHLFKAI	CPKAYSAY	DDSS	SLN	229								229
GmTLP21	KGS....	GK	CSYAG	CVSDLN..	TMCVPLQ..	VRSRDNKR..	VVACKS	ACSAFNSPKY	YCCGTSGYSPQ..	ACKP	TVYSKIFKTA	CPKAYSAY	DDPT	SIA	237									237
GmTLP22	NGT....	GN	CSTVG	CDGDLR..	QNCPSELA..	SK.DNDK...	VIA	CRS	ACDVNTDDY	YCCRGTYGNPA..	TCLAS	NYSKIFKQV	CPAAYS	FALDDPT	SLI	228								228
GmTLP23	GGL....	RG	CNTTSS	PSDVN..	KVYPPSFS..	VKGSDGS...	VIA	CKS	ACLALNQPEY	YCCGTGPFASAD..	KCPPT	TPYSIIFKNM	CPQAYSAY	DDRT	STF	165								165
GmTLP24	GGG....	RQ	CKAVT	CRSDLN..	RNCPSRL..	VRNQSH...	IVG	CKS	ACMAFNKPEY	YCCGTGYFNSPK..	KCQPT	SYSKVFKAS	CPQAYSAY	DDAT	STF	154								154
GmTLP25	GGG....	GE	CKTSS	CPNNINDVNV	CPSELQ..	VKGSDGN...	VIA	CNS	ACVAFNEDQY	YCCRGDYDTEE..	TCPT	PNYSQIFEEQ	CPDAYSYAY	DDKS	STF	229								229
GmTLP26	GGG....	GD	CKTSS	CPKNIN..	SVCPAELQ..	VKGSDGN...	VIA	CKS	ACEAFKEDRY	YCCGTGPNNTAE..	TCPT	PNYSQIFEEQ	CPDAYSYAY	DDKS	STF	249								249
GmTLP27	GGG....	GD	CKTSS	CPKNIN..	SVCPAELQ..	VKGSDGN...	VIA	CKS	ACEAFKEDRY	YCCGTGPNNTAE..	TCPT	PNYSQIFEEQ	CPDAYSYAY	DDKS	STF	228								228
GmTLP28	GGG....	GE	CKTSS	CPNNINDVNV	CPSELQ..	VKGSDGN...	VIA	CNS	ACVAFNEDQY	YCCRGDYDTEE..	TCPT	PNYSQIFEEQ	CPDAYSYAY	DDKS	STF	229								229
GmTLP29	GGG....	GD	CKTSS	CPKNIN..	SVCPAELQ..	VKGSDGN...	VIA	CKS	ACEAFKEDRY	YCCGTGPNNTAE..	TCPT	PNYSQIFEEQ	CPDAYSYAY	DDKS	STF	247								247
GmTLP30	GGTLVDGSGP	CPMVD	CNKELS..	SVCPDLI..	AGNKNDQ...	YVGC	NSPCDGYKDPKY	YCCNGN.....	GCGP	DEISVKYKGL	CPFAHTYPGD	NQPPIY	224											224
GmTLP31	.....	YN	CSSVK	CAADII..	GECPTQLQ..	VPG.....	GCNNP	CTVFNTTQY	YCCSTGAA...	GCGPT	DYSKFFKER	CPDAYSYPM	DDAT	SMF	210									210
GmTLP32	GGSG...	AGN	CSATG	CVVDLN..	TPCPTTELK..	VMSSGD...	GVA	CKS	ACEAFDDPQY	YCCSGAYATPD..	TCKP	SSYSQFFKSA	CPRAYSYAY	DDGS	STF	234								234
GmTLP33	GGG.....	GS	CAATG	CGEDLN..	QRCPSLR..	VEGGD.....	ACQ	SACGAFGKPEY	CCNGAFSNPS..	TCKP	SMYSQMFKSV	CPKAYSAY	DDAT	STF	228									228
GmTLP34	DGTR...	GG	CSATG	CLVDLN..	GGCPAELR..	VARSNGSRG..	SVAC	RS	ACEAFGDPR	FCCSEAYSTPD..	MCGP	SPYSLFFKHAC	CPRAYSYAY	DDKT	STY	234								234
GmTLP35	.....											MFKAAC	CPRSYSYAY	DDAT	STF	21								21
GmTLP36	EGK....	GV	CPVVG	CRDDLL..	ATCPHVLQHR	VPAVHGP...	VVACKS	GCEAFHTDEL	CCRNHFNNPS..	TCKG	SIYSSFFKHAY	PATFTFAHDT	PLSMH	234										234
GmTLP37	GGG....	AG	CGVAA	CEANLN..	VYCPSSLV..	VE.RNGK...	VVG	CKS	ACLAAKSDRY	YCCCTGEFAGGRY..	CKPT	VFARLKTVCN	AYSAY	DDSS	AVL	235								235
GmTLP38	DGIR...	GG	CSATG	CLVDLN..	GGCPAELR..	VARSNGSRG..	SVAC	RS	ACEAFGDPR	FCCSEAYSTPD..	TCGP	SPYSLFFKHAC	CPRAYSYAY	DDKT	STY	234								234
GmTLP39	GGG....	GL	CASTG	CTSDLN..	QQCPAELR..	ASEGS.....	ACKS	ACEAFGSPEY	YCCSGAYGSPA..	TCRP	SIYSEMFKAA	CPRSYSYAY	DDAT	STF	227									227
GmTLP40	EGK....	GV	CPVVG	CRNDLL..	ATCPHVLQHR	VPAVHGP...	VVACKS	GCEAFHTDEL	CCRNHFNNPN..	TCKG	SIYSSFFKHAC	PATFTFAHDT	PLSMH	234										234
GmTLP41	GGG....	GQ	CAVT	CQSDLN..	RNCPNLE..	VRNQSH...	IVG	CKS	ACMAFNKPEY	YCCGTGDFSNPR..	KCQPT	SYSKVFKAS	CPQAYSAY	DDAT	STF	224								224
GmTLP42	NGK....	GN	CSTAG	CSDLR..	NSCPKELS..	LR.ANGK...	TVG	CRS	ACDVNTDEY	YCCCKGNYGNPS..	TCKPT	FYSKKFKEAC	PTSYSYAY	DDPT	SIF	227								227
GmTLP43	GGT....	GD	CKYAG	CSEDLN..	PACPAELQ..	VKDGGGA...	VVACKS	ACAAFNNTAEF	CCCTGDHSSPQ..	TCSP	TRYSKIIFKNAC	CPAAYSAY	DDPS	SIC	231									231
GmTLP44	GGT....	GD	CKYAG	CSEDLN..	AACPAELQ..	VKDGGGE...	VVACKS	ACAAFNNTAEF	CCCTGDHSSPQ..	TCSP	TLYSKIIFKNAC	CPAAYSAY	DDPS	SIC	235									235
GmTLP45	GGT....	GD	CQYAG	CVADV..	GVCPAELQ..	VRDGAGS...	VVACKS	ACAAFNNTAEF	CCCTGDHSTPQ..	TCSP	THHSEIFKKA	CPTAYSAY	DDAS	STC	234									234
GmTLP46	NGK....	GN	CTTAG	CSDLR..	ATCPNELA..	VK.VNGK...	TVG	CRS	ACDVNTDEY	YCCCKGNYGNPS..	TCNP	TFYSKKFKEAC	PTSYSYAY	DDPT	SIF	227								227
GmTLP47	GVYG...	TGV	CNATG	CVTDIN..	RGCPKELQ..	VVG	GDAYQDGVV	CKS	ACEAFGSDQY	YCCSGEFANPT..	TCQP	SYSTLKFQAC	CPKAYSAY	FDDAT	STF	238								238
GmTLP48	GGSG...	EK	CTATG	CVGDLN..	GACPSLR..	VMGADGREG..	VVACKS	ACEAFNSPQY	YCCSGAYGTPD..	TCKP	SAYSIAIFKSAC	CPRAYSYAY	DDKT	STF	236									236
GmTLP49	GGL....	RG	CNTTS	CPSDVN..	KVCPNFA..	VKGSDGS...	VIA	CKS	ARLALDQPEY	YCCGTGPFASAD..	KCPPT	TPYSVIFKNQ	CPQAYSAY	DDRT	STF	229								229
GmTLP50	GGG....	GS	CAATG	CGADLN..	RRCPSELR..	VDGGD.....	ACQ	SACRAFGKPEF	CCSDAFNSPA..	ACAP	SMYSQIFKAAC	CPKSYSYAF	DDAT	STF	228									228
GmTLP51	GG.....	GN	CTATG	CAADLN..	GGCPAELK..	VKTVASGE...	GVA	CKS	ACEAFGDPRY	YCCSGRYATPE..	TCKA	SSYSQLFKSAC	CPRAYSYAY	DDAT	STY	235								235
GmTLP52	GGT....	GD	CQYAG	CVADV..	GVCPAELQ..	VRDGSGA...	VVACKS	ACLALNTAEY	CCCTGDHNTTPQ..	TCPT	THYSEIFKNAC	CPTAYSAY	DDAS	STC	234									234
GmTLP53	GGSG...	GK	CSATG	CVGDLN..	GACPSLR..	VMSGDGREG..	VVACKS	ACEAFNSPQY	YCCSGAYGTPD..	TCKS	SYSEIFKSAC	CPRAYSYAY	DDKT	STF	236									236
GmTLP54	GGG....	GT	CGSTG	CLADLN..	QGCPSLR..	VADRS.....	ACRS	ACEAFGSPEY	YCCSGAYASPA..	TCKP	SVYSQIFKSAC	CPKSYSYAF	DDAT	STF	230									230
GmTLP55	ITN....	PK	CNIPG	CLKDLK..	GLCPPELE..	VLNSKGE...	IVACKS	ACLAFDNDKF	CCRNQYGSPG..	KCKP	SVYSKIFKDA	CPNYFSYAF	DTPT	PLV	235									235

GmTLP1	.TCSG.AD.YTITFCP	243
GmTLP2	.TCAT.AD.YTITFCP	247
GmTLP3	.TCSS.HD.YTITFCP	249
GmTLP4	.TCMG.SD.YRVVFCP	223
GmTLP5	.TCPAGSN.YKVVFCP	223
GmTLP6	.TCTA.AD.YTVTFCP	244
GmTLP7	.ICKA.FE.YDIIFCP	251
GmTLP8	.ICKA.HR.YVITFCP	243
GmTLP9	.TCASAAA.YTITFCP	248
GmTLP10	.TCSA.SD.YVITFCP	153
GmTLP11	.TCVS.AD.FTITFCP	221
GmTLP12	.TCKA.YE.YDIVFCP	157
GmTLP13	.TCSK.AN.FVVIFCG	240
GmTLP14	.TCNGGTD.YRVVFCP	224
GmTLP15	.TCKGGTN.YRVVFCP	222
GmTLP16	.TCTK.AN.YFLTFCP	242
GmTLP17	.TCASAAA.YTITFCP	248
GmTLP18	.TCKA.NE.YDIVFCP	219
GmTLP19	.TCAS.AQY.YTVTFCP	219
GmTLP20	.RCRA.PR.YVITFCP	242
GmTLP21	.TCTK.AN.YLVTFCP	250
GmTLP22	.TCSK.AD.FVVIFCG	241
GmTLP23	.TCSGGAN.YSITFCP	179
GmTLP24	.TCQG.AN.YLIRFC.	166
GmTLP25	.TCFNGPD.YAIIFCP	243
GmTLP26	.TCSNRPD.YAIIFCP	263
GmTLP27	.TCSNRPD.YAIIFCP	242
GmTLP28	.TCFNGPD.YAIIFCP	243
GmTLP29	.TCSNRPD.YAIIFCP	261
GmTLP30	.QCKG.ADS.YDITFCP	238
GmTLP31	.TCMGGSD.YRLVFCP	224
GmTLP32	.TCAS.AD.YTITFCP	247
GmTLP33	.TCSG.AD.YTITFCP	241
GmTLP34	.TCAN.AN.YLIIFCP	247
GmTLP35	.TCSG.VD.YTVTFCP	34
GmTLP36	.QCSSPRE.LKVIFCH	248
GmTLP37	KTCVA.PR.YVITFCP	249
GmTLP38	.TCAN.AN.YLIIFCP	247
GmTLP39	.TCSG.AD.YTVTFCP	240
GmTLP40	.QCSSPRE.LKVIFCH	248
GmTLP41	.TCQG.AN.YLIRFC.	236
GmTLP42	.TCTG.TD.YVIAFCS	240
GmTLP43	.TCSG.SD.YVITFCP	244
GmTLP44	.TCSG.SD.YVITFCP	248
GmTLP45	.TCSG.SD.YRITFCP	247
GmTLP46	.TCSG.TD.YVVAFCA	240
GmTLP47	.ICKA.FE.YDIVFCP	251
GmTLP48	.TCAS.AD.YTITFCP	249
GmTLP49	.TCSGEQT.IPSHFAP	243
GmTLP50	.TCTA.AD.YTVTFCP	241
GmTLP51	.TCAS.AD.YRITFCP	248
GmTLP52	.TCSG.SD.YRITFCS	247
GmTLP53	.TCAS.AD.YTITFCP	249
GmTLP54	.TCTG.AD.YTITFCP	243
GmTLP55	.SCAS.SE.FIITFCP	248

 non-conserved
 similar
 $\geq 80\%$ conserved