

@
@
@

Glyma.08G059500	Glyma.08G059500.6	.....MMECR.RKKENQNPN.....	STFPDEVLERISG...	MLKSRKDKSTVSL	40
Glyma.07G189800	Glyma.07G189800.5	.....MECR.RKKENQKSN.....	STFPDEVLERILG...	MLKSRKDKSTVSL	39
Lj4g0012889.1	Lj4g0012889.1	.....MECIRKKESPEPNILNQ.....	ASFPDEVLERVLG...	MVKSRRKDRSSVSL	45
Glyma.02G152800	Glyma.02G152800.2	.....MRPRVAY.....	SFPEEVLEHVFS...	FIECDKDRGSI	32
Glyma.10G021500	Glyma.10G021500.2	.....MRPRVNY.....	SFPEEVLEHVFS...	FIECDKDRGSI	32
Lj5g0004781	Lj5g0004781.1	.....MQRVAF.....	SLPEEVLEHVFS...	FIDNDKDRSSI	31
Glyma.03G209400	Glyma.03G209400.1	.....MQKMAYTF.....	SFPEEVLEHVFS...	FIWSEDRNAISL	33
Glyma.19G206800	Glyma.19G206800.1	.....MQRMAYTF.....	SFPEEVLEHVFS...	FIWNERDRNAISL	33
Lj1g0015670	Lj1g0015670.1	.....MKRMVC.....	SFPEEVLEHVFS...	FIQVDTDRNAISL	31
AT3G62980	AT3G62980.1	.....MQKRIAL.....	SFPEEVLEHVFS...	FIQLDKDRNSVSL	32
AT4G03190	AT4G03190.1	.....MGL.....	RFPPKVLEHILS...	FIDSNERDRNSVSL	28
AT1G12820	AT1G12820.1	.....MNY.....	FPDEVIEHVFD...	FVASHKDRNSISL	27
AT3G26810	AT3G26810.1	.....MNY.....	FPDEVIEHVFD...	FVTSHKDRNAISL	27
Glyma.16G050500	Glyma.16G050500.1	.....MMNY.....	FPDEVIEHIFD...	YVVSHSDRNALSL	28
Glyma.19G100200	Glyma.19G100200.1	.....MMNY.....	FPDEVIEHIFD...	YVVSHSDRNALSL	28
Lj1g0006513	Lj1g0006513.1	.....MMNY.....	FPDEVIEHVFD...	YVVSHRDRNALSL	28
Glyma.16G146400	Glyma.16G146400.1	.....MNC.....	FPDEVIGHIFG...	CVTSQRDRNAVSL	27
Glyma.02G065300	Glyma.02G065300.1	.....MNF.....	FPDEVIEHIFD...	YVTSQRDRNDLSL	27
AT4G24390	AT4G24390.1	MTEE..DSSAKMSEDVEKYLNLNPPCSSSSSSSSAATFTN.....	KSRNFKSSPPPCPDHVLNVLENVLQ	FLTSRCDRNAVSL	77
AT5G49980	AT5G49980.1	MTQD..RSEMSEDDDDDQSPPLDLPSTAIADPCSSSSSPN.....	KSRNCISNSQTFPDHVLNVLENVLQ	FLD SRCDRNAASL	77
Glyma.04G093500	Glyma.04G093500.1	.....MNQIDDG.....	RTLSPDPQVLENVLESVLH	FLTSRRDRNAASL	40
Glyma.06G095400	Glyma.06G095400.1	.....MKQIDDGDD.....	EQRSLSPLPEQVLENVLESVLH	FLTSRRDRNAASL	44
Glyma.02G211800	Glyma.02G211800.1	MRDKSESHPSTNSEDDHRSSPLLDLAC.AEITESSNSKTR...TCGP..FPGSGPSEPQAP	FPDQVLENVLENVLH	FLPSRRDRNAASL	83
Glyma.14G179500	Glyma.14G179500.1	MREK.ENHPSTNSEDDHRSS.LLDLAR.AEITESSNSKTR...TCGSGLGSGSGTSEPQAP	FPDQVLENVLENVLH	FLSSRRDRNAASL	83
Lj1g0027142	Lj1g0027142.1	MRDN..HPPPPTSDDDHRSSSLPDLARGGQITDSSSSSKTRPGPGSSSSSLPQPGSSSELQAQ	FPDQVLENVLENVLH	FLSSRRDRNAASL	88
Glyma.02G254300	Glyma.02G254300.1	.....MTA.....	RRLSDVVLDCVMP...	YIHDSKDRDAVSQ	29
Glyma.14G062100	Glyma.14G062100.1	.....MEDRDAKRMA.....	TRLSDVVLDCVMP...	YIHDSKDRDAVSQ	36
Glyma.11G227300	Glyma.11G227300.1	.....MTEDRNVRK.....	TRVVDVLDCVIP...	YIDDPKDRDAVSQ	35
Glyma.18G030200	Glyma.18G030200.1	.....MTEERNVRK.....	TRVVDVLDCVIP...	YIDDPKDRDAVSQ	35
Lj3g0010583	Lj3g0010583.1	.....MEENRSVRC.....	KHVVDEVLDCVIP...	YIDDPK.....	28
Lj6g0020395	Lj6g0020395.1	...MAAAAATEDRSARR.....	NRLVDEVLDCVIP...	YIDDPKDRDAVSQ	40
AT2G39940	AT2G39940.1	.....MEDPDIKRCKLSC.....	VATVDDVTEQVMT...	YITDPKDRDSASL	39
consensus		*	*****!***	* * * * *	

Glyma.08G059500	Glyma.08G059500.6	VCKE	WYNA	ERWS	RRS	VFIGN	CYS	SV	SPEIL	TR	RF	PN	IR	SV	TLKG	KPRF	SDFN	LVP	AN	WG	ADI	HS	WL	VV	F	AG	KYP	W	LEEL	R	L	K	R	M	T	V	T	D	S	129											
Glyma.07G189800	Glyma.07G189800.5	VCKE	WFNA	ERWS	RRS	VFIGN	CYS	SV	SPEIL	TR	RF	PN	IR	SV	TLKG	KPRF	SDFN	LVP	AN	WG	ADI	HS	WL	VV	F	AE	KYP	W	LEEL	R	L	K	R	M	T	V	T	D	S	128											
Lj4g0012889.1	Lj4g0012889.1	VCKE	WYNA	ERWS	RRS	VFIGN	CYS	SV	SPEIL	TR	RF	PN	IR	SV	TLKG	KPRF	SDFN	LVP	AN	WG	ADI	RS	WL	VV	F	AD	KYP	W	LEEL	R	L	K	R	M	T	V	T	D	S	134											
Glyma.02G152800	Glyma.02G152800.2	VCKS	WY	EI	ER	WC	RR	RV	FV	GN	CY	AV	S	P	A	T	V	N	R	F	P	K	V	R	S	I	A	I	G	K	P	H	F	A	D	F	N	L	V	P	E	G	121								
Glyma.10G021500	Glyma.10G021500.2	VCKS	WY	EI	ER	WC	RR	RV	FV	GN	CY	AV	S	P	A	T	V	N	R	F	P	K	V	R	S	I	A	I	G	K	P	H	F	A	D	F	N	L	V	P	E	G	121								
Lj5g0004781	Lj5g0004781.1	VCRS	WY	EI	ER	CC	RR	N	V	F	V	GN	CY	AV	S	P	E	M	V	V	K	R	F	P	R	V	R	S	V	T	L	K	G	K	P	H	F	A	D	F	N	L	V	P	D	G	120				
Glyma.03G209400	Glyma.03G209400.1	VCKS	WY	EI	ER	WC	RR	K	V	F	V	GN	CY	AV	S	P	L	M	V	I	K	R	F	P	E	L	R	S	I	A	L	K	G	K	P	H	F	A	D	F	N	L	V	P	E	G	122				
Glyma.19G206800	Glyma.19G206800.1	VCKS	WY	EI	ER	WC	RR	K	V	F	V	GN	CY	AV	S	P	L	M	V	V	K	R	F	P	E	V	R	S	I	A	L	K	G	K	P	H	F	A	D	F	N	L	V	P	D	G	122				
Lj1g0015670	Lj1g0015670.1	VCKS	WY	EI	ER	WC	RR	K	V	F	V	GN	CY	AV	S	P	M	I	V	I	K	R	F	P	E	V	R	S	I	A	L	K	G	K	P	H	F	A	D	F	N	L	V	P	E	G	120				
AT3G62980	AT3G62980.1	VCKS	WY	EI	ER	WC	RR	K	V	F	V	GN	CY	AV	S	P	A	T	V	I	R	F	P	K	V	R	S	V	E	L	K	G	K	P	H	F	A	D	F	N	L	V	P	D	G	121					
AT4G03190	AT4G03190.1	VCKS	W	F	E	T	E	R	K	T	R	K	V	F	V	GN	CY	AV	S	P	A	A	V	T	R	F	P	E	M	R	S	L	T	L	K	G	K	P	H	F	A	D	Y	N	L	V	P	D	G	117	
AT1G12820	AT1G12820.1	VCKS	W	H	K	I	E	R	F	S	R	K	E	V	F	GN	CY	A	I	N	P	E	R	L	I	R	F	P	C	L	K	S	L	T	L	K	G	K	P	H	F	A	D	F	N	L	V	P	H	E	116
AT3G26810	AT3G26810.1	VCKS	WY	K	I	E	R	S	R	Q	K	V	F	GN	CY	A	I	N	P	E	R	L	L	R	F	P	C	L	K	S	L	T	L	K	G	K	P	H	F	A	D	F	N	L	V	P	H	E	116		
Glyma.16G050500	Glyma.16G050500.1	VCKS	WY	R	I	E	R	C	T	R	Q	R	V	F	GN	CY	S	I	T	P	E	R	L	I	Q	R	F	P	G	L	K	S	L	T	L	K	G	K	P	H	F	A	D	F	S	L	V	P	Y	D	117
Glyma.19G100200	Glyma.19G100200.1	VCKS	WY	R	I	E	R	C	T	R	Q	R	V	F	GN	CY	S	I	T	P	E																														

Glyma.08G059500	Glyma.08G059500.6	LEFLALQFPN	FKALSLLSCDGFST	DGLAS	IATNCKNLT	ELDIQEN	.GIED	KSGNWL	GCFPDS	.FTSLEV	LN	FANL	HNDVN	.FD	ALE	212																																																																																																																																																																																																																																																																																																																																																																																																										
Glyma.07G189800	Glyma.07G189800.5	LEFLALKFPN	FKALSLLSCDGFST	DGLAS	IATNCKNLT	ELDIQEN	.GIED	KSGNWL	SFCFDS	.FTSLEV	LN	FANL	HNDVN	.FD	ALE	211																																																																																																																																																																																																																																																																																																																																																																																																										
Lj4g0012889.1	Lj4g0012889.1	LEFLALSFPY	FKALSLLSCDGFST	DGLAA	IATNCKNLT	ELDIQEN	.GIDD	KSGNWL	SFCPES	.FTSLEV	LN	FANL	PN	DVN	.SD	ALE	217																																																																																																																																																																																																																																																																																																																																																																																																									
Glyma.02G152800	Glyma.02G152800.2	LELIAKSFKN	FQVLVLTSC	EGFTD	GLAAIA	ANCRNL	RELELRES	.EVD	ICGH	WLSHF	PD	.Y	TSLV	SLN	ISCL	GNEVN	.LS	ALE	204																																																																																																																																																																																																																																																																																																																																																																																																							
Glyma.10G021500	Glyma.10G021500.2	LELIAKSFKN	FQVLVLTSC	EGFTD	GLAAIA	ANCRNL	RELELRES	.EVD	ICGH	WLSHF	PD	.Y	TSLV	SLN	ISCL	GNEVN	.LS	ALE	204																																																																																																																																																																																																																																																																																																																																																																																																							
Lj5g0004781	Lj5g0004781.1	LDLIAKSFKN	FRVLVLTSC	EGFTT	HGLAAIA	ANCRNL	RELDLRES	.EVED	ICGH	WLSHF	PD	.Y	NSLES	LN	ISCL	SNEVN	.LP	ALE	203																																																																																																																																																																																																																																																																																																																																																																																																							
Glyma.03G209400	Glyma.03G209400.1	LELIAKSFKN	FKVLVLTSC	EGFTAD	GLTAIA	SNCRN	RELDLQES	.EVED	LSGH	WLSHF	PD	.Y	TSLV	SLN	ISCL	NHEVS	.LS	ALE	205																																																																																																																																																																																																																																																																																																																																																																																																							
Glyma.19G206800	Glyma.19G206800.1	LELIAKSFKN	FKVLVLTSC	EGFTT	DGLAAIA	ANCRNL	RELDLQES	.EVED	LSGH	WLSHF	PD	.Y	TSLV	SLN	ISCL	NNEVS	.LS	ALE	206																																																																																																																																																																																																																																																																																																																																																																																																							
Lj1g0015670	Lj1g0015670.1	LELIAKSFKN	FKVLVLTSC	EGFTT	DGLAAIA	ANCRNL	RELDLQES	.EVED	LSGH	WLSHF	PD	.Y	TSLV	SLN	ISCL	SNEVS	.LS	ALE	203																																																																																																																																																																																																																																																																																																																																																																																																							
AT3G62980	AT3G62980.1	LELIAKSFKN	FKVLVLTSC	EGFST	DGLAAIA	AATCRN	LKLDLRES	.DVDD	VS	GH	WLSHF	PD	.Y	TSLV	SLN	ISCL	ASEVS	.FS	ALE	204																																																																																																																																																																																																																																																																																																																																																																																																						
AT4G03190	AT4G03190.1	LEKIAASF	KD	FKVLVLTSC	EGFST	DGLIAA	IYAATCRN	LRVLELREC	.IVED	L	G	D	WLS	HF	PD	.S	TSLV	SIDF	SC	LDSEV	K	ISD	LE	200																																																																																																																																																																																																																																																																																																																																																																																																		
AT1G12820	AT1G12820.1	LDLLSR	SFAN	FKSLV	LV	SC	EGFTT	DGLAS	IA	ANCR	HL	RELDLQEN	.EIDD	HR	Q	W	LN	C	F	PD	.C	T	T	L	M	S	LN	F	A	C	L	K	GETN	.V	A	ALE	199																																																																																																																																																																																																																																																																																																																																																																																					
AT3G26810	AT3G26810.1	LELLSR	SFVN	FKSLV	LV	SC	EGFTT	DGLAS	IA	ANCR	HL	RDLQEN	.EIDD	HR	Q	W	LN	C	F	PD	.C	T	T	L	V	T	LN	F	A	C	L	E	GETN	.L	V	ALE	199																																																																																																																																																																																																																																																																																																																																																																																					
Glyma.16G050500	Glyma.16G050500.1	LELLSR	SFTH	FKSLV	LV	SC	EGFST	DGLAA	LA	ANCR	FL	RELDLQEN	.EVED	H	K	Q	W	LN	C	F	PD	.C	T	S	L	V	SLN	F	A	C	L	K	GEVS	.L	G	ALE	200																																																																																																																																																																																																																																																																																																																																																																																					
Glyma.19G100200	Glyma.19G100200.1	LELLSR	SFTH	FKSLV	LV	SC	EGFST	DGLAA	IA	ANCR	FL	RELDLQEN	.EVED	H	K	Q	W	LN	C	F	PD	.C	T	S	L	V	SLN	F	A	C	L	K	GEVS	.L	G	ALE	200																																																																																																																																																																																																																																																																																																																																																																																					
Lj1g0006513	Lj1g0006513.1	LELLSR	SFVN	FKSLV	LV	SC	EGFTT	DGLAA	VA	ANCR	FL	RELDLQEN	.EVED	K	Q	Q	W	LN	C	F	PD	.C	T	S	L	V	SLN	F	A	C	L	K	GDVN	.L	G	ALE	200																																																																																																																																																																																																																																																																																																																																																																																					
Glyma.16G146400	Glyma.16G146400.1	LELLSR	SFVN	FKSLV	LV	R	CEGFTT	E	GLAA	IA	ANCR	FL	KDL	DLHEN	.V	V	T	D	L	K	Q	W	LN	C	F	PD	.C	T	S	L	V	SLN	F	A	C	L	K	QIN	.A	G	D	LE	199																																																																																																																																																																																																																																																																																																																																																																															
Glyma.02G065300	Glyma.02G065300.1	LELLSR	SFMN	FKSLV	LV	SC	EGFTT	DGLAA	IA	ANCR	FL	KEL	DLQEN	.EVD	HR	Q	W	LN	C	F	PD	.C	T	S	L	V	SLN	F	A	C	L	K	QIN	.L	G	ALE	199																																																																																																																																																																																																																																																																																																																																																																																					
AT4G24390	AT4G24390.1	LALLAES	FPG	FKEL	T	LV	C	EGFST	T	SGIA	I	V	ANK	C	R	Q	L	K	V	D	L	MES	.E	V	T	D	.E	L	D	W	I	S	C	F	P	E	G	.E	T	H	L	E	S	L	S	F	D	C	V	E	S	P	I	N	.F	K	A	L	E	249																																																																																																																																																																																																																																																																																																																																																														
AT5G49980	AT5G49980.1	LALLADS	FPG	FKEL	T	LV	C	EGFST	T	SGIS	I	V	ANK	C	R	K	L	K	V	D	L	I	ES	.E	V	T	D	.E	V	D	W	I	S	C	F	P	E	D	.V	T	C	L	E	S	L	A	F	D	C	V	E	A	P	I	N	.F	K	A	L	E	249																																																																																																																																																																																																																																																																																																																																																													
Glyma.04G093500	Glyma.04G093500.1	LTLSSH	SLPS	FQDL	LL	T	C	CEGFT	T	TALA	AL	AS	NCRL	LR	V	L	E	L	V	E	CVV	E	V	G	D	.E	L	D	W	I	S	C	F	P	E	I	D	A	Q	T	L	E	S	L	V	F	D	C	V	E	C	P	I	N	.L	E	A	L	E	217																																																																																																																																																																																																																																																																																																																																																														
Glyma.06G095400	Glyma.06G095400.1	LILLSH	SFSP	FQDL	V	L	T	C	CEGFT	T	TGALA	LT	SNCR	LL	R	V	L	E	L	V	E	CVV	E	V	G	D	.E	M	D	W	I	S	C	F	P	E	S	D	A	Q	T	H	L	E	S	L	V	F	D	C	V	E	C	P	I	N	.F	D	A	L	E	221																																																																																																																																																																																																																																																																																																																																																												
Glyma.02G211800	Glyma.02G211800.1	LALIADS	FA	FREL	V	LV	C	CEGFT	T	PGLAA	V	ASK	C	R	L	L	R	V	L	E	L	V	E	S	V	E	V	E	D	D	E	E	V	D	W	I	S	C	F	P	E	T	.Q	T	N	M	E	S	L	V	F	D	C	V	E	V	P	I	N	.F	E	A	L	E	258																																																																																																																																																																																																																																																																																																																																																									
Glyma.14G179500	Glyma.14G179500.1	LALIADS	FAA	FREL	V	LV	C	CEGFT	T	PGLA	V	V	V	SK	C	R	L	L	R	V	L	E	L	V	E	S	.E	V	E	D	D	E	E	V	D	W	I	S	C	F	P	E	S	.Q	T	N	L	E	S	L	V	F	D	C	V	D	V	P	I	N	.F	E	A	L	E	256																																																																																																																																																																																																																																																																																																																																																								
Lj1g0027142	Lj1g0027142.1	LAVVADS	FS	FREL	V	LV	C	CEGFT	T	RGLAA	V	ASK	C	R	L	L	R	V	L	E	V	V	E	S	L	V	E	P	V	S	E	D	V	D	W	I	S	C	F	P	E	T	.Q	T	H	L	E	S	L	V	F	D	C	V	E	Y	P	I	N	.F	E	A	L	E	263																																																																																																																																																																																																																																																																																																																																																									
Glyma.02G254300	Glyma.02G254300.1	LQVLARS	RGHVLQAL	R	L	N	C	S	G	F	T	D	G	L	L	Y	I	G	R	C	R	N	L	R	V	L	F	L	E	S	.S	L	V	E	.K	D	G	W	L	H	E	L	A	L	N	.N	T	V	L	E	T	L	N	F	Y	L	T	D	I	A	N	V	R	I	Q	D	L	E	203																																																																																																																																																																																																																																																																																																																																																					
Glyma.14G062100	Glyma.14G062100.1	LQVLARS	RGHILQAL	K	L	D	K	C	S	G	F	T	D	G	L	Y	I	G	R	C	R	N	L	R	V	L	F	L	E	S	.S	L	V	E	.N	D	G	W	L	H	E	L	A	L	N	.N	T	V	L	E	T	L	N	F	Y	L	T	D	I	A	N	V	R	I	Q	D	L	E	210																																																																																																																																																																																																																																																																																																																																																					
Glyma.11G227300	Glyma.11G227300.1	LRNLARD	R	G	H	V	L	H	S	L	K	L	D	K	C	S	G	F	T	D	G	L	F	H	I	G	R	F	C	K	S	L	R	V	L	F	L	E	S	.S	I	V	E	.K	D	G	W	L	H	E	L	A	L	N	.N	T	V	L	E	T	L	N	F	Y	L	T	D	I	A	N	V	K	I	Q	D	L	E	209																																																																																																																																																																																																																																																																																																																																												
Glyma.18G030200	Glyma.18G030200.1	LQN	LARD	R	G	H	V	L	H	A	L	K	L	D	K	C	S	G	F	T	D	G	L	F	H	I	G	R	F	C	K	S	L	R	V	L	F	L	E	S	.S	I	L	E	.K	D	G	W	L	H	E	L	A	L	N	.N	T	V	L	E	T	L	N	F	Y	L	T	D	I	A	N	V	K	I	E	D	L	E	209																																																																																																																																																																																																																																																																																																																																											
Lj3g0010583	Lj3g0010583.1</

Glyma.08G059500	Glyma.08G059500.6	KLVCRC	SLKTL	LKVNKS	VTLEQL	QRLLVHV	PQLG	ELGTGS	SFS.	QELTA	..	QQCS	....	DLES	AFKN	CRNLHT	LSGLWV	ATAQ	YLPVL	YS	294																																																																																																																																																																																																																																																																																																																																																																			
Glyma.07G189800	Glyma.07G189800.5	KLVSRC	SLKTL	LKVNKS	VTLEQL	QRLLVHV	PQLG	ELGTGS	SFS.	QELTS	..	QQCS	....	DLES	ALKN	CKNLHT	LSGLWV	ATAQ	YLPVL	YS	293																																																																																																																																																																																																																																																																																																																																																																			
Lj4g0012889.1	Lj4g0012889.1	KLVSRC	SLKTL	LKVNRN	VTLEQL	QRLLVRA	PQLG	ELGS	SFSEDD	LTA	..	QQYS	....	EIES	AFNN	CKNLHT	LSGLWD	PAEQ	YLPPLL	YP	300																																																																																																																																																																																																																																																																																																																																																																			
Glyma.02G152800	Glyma.02G152800.2	RLVSRCP	NLQTL	RNLNRA	VPLDRL	TNLLRG	APQL	VELGT	GAYT	.TEM	RP	..	EVFT	....	NLAE	AFSG	CKQLKG	LSGFWD	VLPS	YLP	AVYP	286																																																																																																																																																																																																																																																																																																																																																																		
Glyma.10G021500	Glyma.10G021500.2	RLVSRCP	NLQTL	RNLNRA	VPLDRL	TNLLRG	APQL	VELGT	GTYT	.TEM	RP	..	EVFT	....	NLAE	AFSG	CKQLKG	LSGFWD	VLPS	YLP	AVYP	286																																																																																																																																																																																																																																																																																																																																																																		
Lj5g0004781	Lj5g0004781.1	RLVSRCP	NLQTL	RNLNRA	VPLDRL	TNLLRG	APQL	VELGT	GAYT	.AEM	RP	..	EVLA	....	NLTE	AFSG	CKQLKG	LSGFWD	VLPS	YLP	AVYP	285																																																																																																																																																																																																																																																																																																																																																																		
Glyma.03G209400	Glyma.03G209400.1	RLLGRC	RNLR	TLRNLNRA	VPLDRL	PNLLLR	CPQL	VELGT	GVYS	.TEM	RP	..	EVFS	....	NLEA	AFSG	CKQLKS	LSGFWD	VLPS	YLP	AVYP	287																																																																																																																																																																																																																																																																																																																																																																		
Glyma.19G206800	Glyma.19G206800.1	RLLGRC	PNLRT	LRNLNRA	VPLDRL	PNLLLR	CPQL	VELGT	GVYS	.TEM	RP	..	EVFS	....	NLEA	AFSG	CKQLKS	LSGFWD	VLPS	YLP	AVYP	288																																																																																																																																																																																																																																																																																																																																																																		
Lj1g0015670	Lj1g0015670.1	RLLGRC	PNMKT	LRNLNRA	VPLDRL	PNLLLR	CPQL	VELGT	GVYS	.AEM	RP	..	DVFS	....	NLAA	AFSG	CKQLKS	LSGFWD	VLPS	YLP	AVYP	285																																																																																																																																																																																																																																																																																																																																																																		
AT3G62980	AT3G62980.1	RLVTRC	PNLKS	LKNRA	VPLEKL	PNLLLR	APQL	EELGT	GGYT	.AE	VRP	..	DVYS	....	GLSV	ALSG	CKELRC	LSGFWD	AVPAYL	PAVYS		286																																																																																																																																																																																																																																																																																																																																																																		
AT4G03190	AT4G03190.1	RLVSR	SPNLK	SLKLN	PAVTL	DGLV	SLLR	RCAP	QLT	ELGT	GSFA	.AQL	KP	..	KLSE	AFSN	CKQLQS	LSGLWD	VLPE	YLP	ALYS	282																																																																																																																																																																																																																																																																																																																																																																			
AT1G12820	AT1G12820.1	RLVAR	SPNLK	SLKLN	RAVPL	DALAR	LMSC	APQL	VDL	GV	GSYE	.NE	PD	..	KLMT	AIKKY	TS	LSR	LSGF	LEV	APLCL	PAFY	281																																																																																																																																																																																																																																																																																																																																																																		
AT3G26810	AT3G26810.1	RLVAR	SPNLK	SLKLN	RAVPL	DALAR	LMAC	APQIV	D	LV	GSYE	.ND	PD	..	ESYL	KLMA	VIKK	CTS	LSR	LSGF	LEA	PHCL	SAFH	281																																																																																																																																																																																																																																																																																																																																																																
Glyma.16G050500	Glyma.16G050500.1	RLVAR	SPYLK	SLKLN	RSVP	FDAL	QRIM	MRAP	Q	LS	D	LG	ISFV	..	HD	PE	S	.EAYI	KLKN	TILKR	KS	ITS	LSGF	LEV	APH	CLAA	IYP	282																																																																																																																																																																																																																																																																																																																																																												
Glyma.19G100200	Glyma.19G100200.1	RFVAR	SPNLK	SLKLN	RSVP	VDAL	QRIM	MRAP	Q	LS	D	LG	ISL	..	HD	PE	S	.EAYI	KLKN	TILK	CK	SITS	LSGF	LEV	APH	CLAA	IYP	282																																																																																																																																																																																																																																																																																																																																																												
Lj1g0006513	Lj1g0006513.1	RLVAR	SPNLK	SLRLN	RSVP	IEAL	QRIL	MQAP	Q	L	A	D	LG	ISFV	..	HNP	FS	.DAFS	KLKN	TILK	SK	SITS	LSGF	LEV	GP	FCL	PAM	YP	282																																																																																																																																																																																																																																																																																																																																																											
Glyma.16G146400	Glyma.16G146400.1	RLVAR	SPNLK	SLRLN	HTVP	LSAL	QRIL	MQAP	Q	L	A	D	LV	D	LG	ISFV	.FD	PR	S	.EVYN	NMKN	AILK	CMS	ITS	LSGF	F	WVY	PHCL	SA	IYP	281																																																																																																																																																																																																																																																																																																																																																									
Glyma.02G065300	Glyma.02G065300.1	RLVAR	SPNLK	SLRLN	HTVP	LSAL	QRIL	RRAP	Q	I	V	D	LG	ISF	..	PDP	N	S	.NVFI	KLMT	NITIE	CK	SITS	LSGF	FEV	TR	PC	LPA	IYP	281																																																																																																																																																																																																																																																																																																																																																										
AT4G24390	AT4G24390.1	ELVVR	SPFLK	KKLRL	NRFV	SLLEH	LRML	MVRAP	Q	L	T	SL	GT	GS	FSP	DN	P	.PQGE	QP	DYAA	AFRA	CK	SIVC	LSGF	REF	TR	PE	YLL	AISS	333																																																																																																																																																																																																																																																																																																																																																										
AT5G49980	AT5G49980.1	GLVAR	SPFLK	KKLRL	NRFV	SLVEL	HRLL	LLGAP	Q	L	T	SL	GT	GS	F	SHD	EE	.PQSE	QEP	DYAA	AFRA	CK	SVVC	LSGF	REL	M	PE	YLP	AI	FP	333																																																																																																																																																																																																																																																																																																																																																									
Glyma.04G093500	Glyma.04G093500.1	RLVAR	SPSLR	KLRLN	RYV	SMSQ	LHRL	MHRAP	Q	L	THL	GT	GS	S	F	SAS	EL	..	DQEL	DFAS	AFAA	CK	SLVC	LSGF	REI	W	PD	YL	PA	IYP	298																																																																																																																																																																																																																																																																																																																																																									
Glyma.06G095400	Glyma.06G095400.1	RLVAR	SPLLR	KLRLN	RYV	SMSQ	LHRL	MHRAP	Q	L	THL	GT	GS	S	F	SAS	EL	..	DQEL	DFAS	AFAS	CK	SLVC	LSGF	REF	W	AD	YL	PA	IYP	302																																																																																																																																																																																																																																																																																																																																																									
Glyma.02G211800	Glyma.02G211800.1	GLVAR	SPRLK	KKLRLN	QFV	SMAQ	LYRLL	LLRAP	Q	L	THL	GT	GS	S	F	SAT	EAG	V	VG	DQEP	DYAA	AFEA	CR	SLVC	LSGF	REI	W	AD	YL	PA	IYP	343																																																																																																																																																																																																																																																																																																																																																								
Glyma.14G179500	Glyma.14G179500.1	GLVAR	SPRLK	KKLRLN	RYV	SMAEL	YRLL	LLRAP	Q	L	THL	GT	GS	S	F	SAT	EAG	A	V	DQEP	DY	QEP	DYAA	AFEA	CR	SLVC	LSGF	REI	W	AD	YL	PA	IYP	346																																																																																																																																																																																																																																																																																																																																																							
Lj1g0027142	Lj1g0027142.1	GLVAR	SPGLK	KKLRLN	RFV	SMPQ	LYRL	MLRAP	Q	L	THL	GT	GS	S	F	S	DSE	EA	..	LEQEP	DYAS	AFAA	CR	SLVC	LSGF	REI	W	AN	YL	PA	ILP	345																																																																																																																																																																																																																																																																																																																																																								
Glyma.02G254300	Glyma.02G254300.1	LIARN	CPNLN	SVKIT	.DCEVLD	LVNFFQY	ASALE	EE	F	CG	GSYNEE	SEKY	SAM	SLPAK	LSRL	GLTY	ITKNEM	PIV	F	277																																																																																																																																																																																																																																																																																																																																																																		
Glyma.14G062100	Glyma.14G062100.1	LIARN	CPNLN	SVKIT	.DCEVLD	LVNFFRY	ASALE	EE	F	CG	GSYNEE	SEKY	SAM	SLPAK	LSRL	GLTY	ITKNEM	PMV	F	284																																																																																																																																																																																																																																																																																																																																																																		
Glyma.11G227300	Glyma.11G227300.1	LLAKN	CPNLV	SVKLT	.DSEILD	LVNFFKH	ASALE	EE	F	CG	GSYNEE	PEKY	SAM	SLPAK	LCRL	GLTY	IGKNEL	PIV	F	283																																																																																																																																																																																																																																																																																																																																																																		
Glyma.18G030200	Glyma.18G030200.1	LLAKN	CPNLV	SVKLT	.DCEILD	LVNFFKH	ASALE	EE	F	CG	GSYNEE	PERY	SAM	SLPAK	LCRL	GLTY	IGKNEL	PIV	F	283																																																																																																																																																																																																																																																																																																																																																																		
Lj3g0010583	Lj3g0010583.1	LLAKN	RPNLV	SVKIT	.EYEN	KYC	..	IYNEE	PERY	YV	ISLPAK	LCRL	GLTY	IGKNEL	PI	MLR	135																																																																																																																																																																																																																																																																																																																																																																		
Lj6g0020395	Lj6g0020395.1	LLAKN	CPNLV	SVKIT	.EYEISN	LVNFFRQ	ASSLE	EE	F	CG	GIYNEE	PEIY	SAV	SLPAK	LCRL	GLTY	IGKNEL	PM	MML	288																																																																																																																																																																																																																																																																																																																																																																		
AT2G39940	AT2G39940.1	TIARN	CRSLV	SVKVG	.DFEILE	LVGFFKA	AANLE	EE	F	CG	GSLNEDIG	MPEK	YMN	LVFPR	KLCRL	GLSYM	G	PNEM	PI	LF	290																																																																																																																																																																																																																																																																																																																																																																	
consensus		***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***</

Glyma.08G059500	Glyma.08G059500.6	ACTNLTFLNFSYAP.LDS	DGLAKLLVHCPK	LQRIWVVD	TVEDK	GLEAVGSH	CPLLEELRVFP	ADPFD..EGIVHG	VTESGFIAVS	QGCPR	381
Glyma.07G189800	Glyma.07G189800.5	ACTNLTFLNFSYAP.LDS	DGLTKLLVHCPK	LQRLWVVD	TVEDK	GLEAVGSH	CPLLEELRVFP	ADPFD..EGIVHG	VTESGFIAVS	QGCPR	380
Lj4g0012889.1	Lj4g0012889.1	ACTNLTFFNLSYAP.LD	GDGLAKLLVHCPN	LRLWVVD	TVEDK	GLEAVGSH	CPLLEELRVFP	ADPFD.EAIGHG	VTESGFVALS	RGCPR	388
Glyma.02G152800	Glyma.02G152800.2	ICSNLTSLNLSYAT.IQ	SPDLIKLVGQ	CESLQRLWVLDY	IEDA	GLEVTIAAS	CKDLRELRFVP	DPFG..LEPNVAL	TEQGLVSV	SEGCTK	373
Glyma.10G021500	Glyma.10G021500.2	ICSNLTSLNLSYAT.IQ	SPDLIKLVGQ	CESLQRLWVLDY	IEDA	GLEVTIAAS	CKDLRELRFVP	DPFG..LEPNVAL	TEQGLVSV	SEGCTK	373
Lj5g0004781	Lj5g0004781.1	VCSGLTSLNLSYAT.IQ	SPDHIKLVSQ	CGSLQRLWVLDY	IEDA	GLDVLAAS	CKDLRELRFVP	DPFG..LEPNVAL	TEEGLISV	SEGCPK	372
Glyma.03G209400	Glyma.03G209400.1	ICSRLTSLNLSYAI.IQ	SSDLIKLISQ	CPNLLRLWVLDY	IEDA	GLYALAAS	CKDLRELRFVP	SEPFG..LEPNVSL	TEQGLVSV	SEGCPK	374
Glyma.19G206800	Glyma.19G206800.1	ICSRLTSLNLSYAI.IQ	SSDLIKLISQ	CPNLLRLWVLDY	IEDA	GLYALAAS	CKDLRELRFVP	DPFG..LEPNVAL	TEQGLVSV	SEGCPK	375
Lj1g0015670	Lj1g0015670.1	VCSGLTSLNLSYAT.VQ	SSDLIKLISQ	CPSLQRLWVLDY	IEDA	GLDVLAAS	CKDLRELRFVP	DPFG..FEPNVAL	TERGLVSV	SEGCPK	372
AT3G62980	AT3G62980.1	VCSRLTTLNLSYAT.VQ	SYDLVKLLCQ	CPKLQRLWVLDY	IEDA	GLEVLAST	CKDLRELRFVP	SEPFG..MEPNVAL	TEQGLVSV	SMGCPK	373
AT4G03190	AT4G03190.1	VCPGLTSLNLSYAT.VR	MPDLVELLRR	CSKLQKLWVMDL	IEDK	GLEAVASY	CKELRELRFVP	SEPD..DATNIPL	TEQGLVSV	SKGCRK	369
AT1G12820	AT1G12820.1	ICQNLISLNL	SYAAEIQGNHLIKL	IQLCKRLQRLWILDS	IGDKGLAVVAAT	CKELQELRVFP	SDVHGE.EDNNAS	VTEVGLVAIS	AGCPK	370	
AT3G26810	AT3G26810.1	ICHNLTSLNLSYAAE	IHGSHLIKLI	QCKKLQRLWILDS	IGDKGLEVVAST	CKELQELRVFP	SDLLG...GGNTA	VTEEGLVAIS	AGCPK	368	
Glyma.16G050500	Glyma.16G050500.1	ICPNLTSLNLSYAAE	IQSSDLIKLIR	HCVKLQRLWILDMDC	IGDKGLDVVATS	CKDLQELRVFP	SPVFG...NPAAVTEK	GLVAISMGC	CPK	368	
Glyma.19G100200	Glyma.19G100200.1	ICPNLTSLNLSYAAE	IQSSALVKLI	HHCVKLQRLWIMDC	IGDKGLGVVATT	CKDLQELRVFP	SPVFG...DPAAVTEK	GLVAISMGC	CPK	368	
Lj1g0006513	Lj1g0006513.1	ICRNLTALNLSYAAE	IHGNELIKLI	YHCGKLQRLWIMDC	IGDKGLGIVAST	CKELQELRVFP	SPVFG...NPAAVTEK	GLVAISAG	CRK	368	
Glyma.16G146400	Glyma.16G146400.1	VCMNLTTLNLRFAAG	IQNTELIKLI	CCCGKLQRLSIMDC	IGDNLGLVVAAT	CKDLQELRVFP	PVVRVGG..NGPTRVTEK	GLVAISMGC	PE	369	
Glyma.02G065300	Glyma.02G065300.1	VCMNLTAMNLSYAAE	ISRELIKLIC	RCGKLQRLWIMDC	IGDFGLHVVAST	CKDLQELRVFP	SVRVGR..NDPAGVTEK	GLVAISMGC	CPK	369	
AT4G24390	AT4G24390.1	VCANLTSLNFSYAN.I	SPHMLKPIISN	CHNIRVFWALDS	IRDEGLQAVAAT	CKELRELRI	FPFDPRE...DSEGPVSGV	GLQAI	SEGCRK	419	
AT5G49980	AT5G49980.1	VCANLTSLNFSYAN.I	SPDMFKPIILN	CHKLQVFWALDS	ICDEGLQAVAAT	CKELRELRI	FPFDPRE...DSEGPVSEL	GLQAI	SEGCRK	419	
Glyma.04G093500	Glyma.04G093500.1	ACANLTSLNFSYAD.I	SADQLISVIRH	CHKLQTFWVLD	TICDEGLQAVAET	CKDLRELRFVP	VNTRE...EIEGPVSEV	GFEAIS	RGCPR	384	
Glyma.06G095400	Glyma.06G095400.1	ACANLTSLNFSYAD.I	SADQLKSVIRH	CHKLQTFWVLD	TICDEGLQAVAET	CKDLRELRFVP	VNTRE...EIEGPVSEV	GFEAIS	RGCPR	388	
Glyma.02G211800	Glyma.02G211800.1	VCANLTSLNLSYAD.I	NTDQLKSVICH	CHKLQIFWVLD	SIRDEGLQAVAAT	CKDLRELRFVP	MDARE...ETDGPVSEV	GFEAIS	QGCPR	429	
Glyma.14G179500	Glyma.14G179500.1	VCTNLTSLNLSYAD.V	NTDQLKSVIRH	CHKLQIFWVLD	SIRDEGLQAVAAT	CKDLRELRFVP	MDARE...ETDGPVSEV	GFEAIS	QGCPR	432	
Lj1g0027142	Lj1g0027142.1	VCANLTSLNLSYAD.V	NADQLRSVICH	CRKLQILWALDS	IGDEGLQAVATT	CHDLRELRFVP	MDARE...ESEGPVSEV	GFEAIS	SKGCRK	431	
Glyma.02G254300	Glyma.02G254300.1	YAALLKKLDLLYAM.L	DTEHDCTLIQ	RCPNLEVLES	RNVIGDRGLEVLARC	CRRLKRLRIERG	DDDQGMED	EAGVVSQRGLIAL	SHGCPE	366	
Glyma.14G062100	Glyma.14G062100.1	YAALLKKLDLLYAM.L	DTEHDCTLIQ	RCPNLEVLES	RNVIGDRGLEVLARC	CRRLKRLRIERG	DDDQGMED	EAGVVSQRGLIAL	SHGCPE	373	
Glyma.11G227300	Glyma.11G227300.1	FAAVLKKLDLLYAM.L	DTEHDCTLIQ	RCPNLEVLETRNV	IGDRGLEVLGRC	CKRLKRLRIERG	DDDQGMED	EAGTVSHRGLIAL	SGCSE	372	
Glyma.18G030200	Glyma.18G030200.1	FAAVLKKLDLLYAM.L	DTEHDCTLIQ	RCPNLEVLETRNV	IGDRGLEVLGRC	CKRLKRLRIERG	DDDQGMED	EAGTVSHRGLIAL	SGCSE	372	
Lj3g0010583	Lj3g0010583.1	FAAALT	TKLDLLYAL.LD	TDDH.....DRGLEVLGSC	CKRLKRLRIECG	DDDQGMED	EGTVCHRG	GLIALSE...			

Glyma.08G059500	Glyma.08G059500.6	LHYVLYFCRQMTNAAVATVVQNCPDFTHFRLCI	MHPGQPDYLTQESMDEAFGAVVKTCTKLQRLAVSG...	YLTDLTFEYIGKYAKNLET	468
Glyma.07G189800	Glyma.07G189800.5	LHYVLYFCRQMTNAAVATVVQNCPDFTHFRLCI	MHPGQLDYLTQESMDEAFGAVVKTCTKLQRLAVSG...	YLTDLTFEYIGKYAKNLET	467
Lj4g0012889.1	Lj4g0012889.1	LHYVLYFCRQMTNAAVATVVQNCPDFTHFRLCI	MNPGQPDYLTQESMDEAFGAVVKTCTKLQRLAVSG...	LLTDLTFEYIGKYAKNLET	475
Glyma.02G152800	Glyma.02G152800.2	LQSVLYFCRQMSNAALDTIARSRPNMTRFRLCI	IEPRAPDYLTQHPLDAGFGAIVEHCKDLQRLSLSG...	LLTDRVFEYIGTYGKKLEM	460
Glyma.10G021500	Glyma.10G021500.2	LQSVLYFCRQMTNSALDTIARNRPNMTRFRLCI	IEPQAPDHLTHQPLDAGFGAIVEHCKDLQRLSLSG...	LLTDRVFEYIGTYGKKLEM	460
Lj5g0004781	Lj5g0004781.1	LQSVLYFCRQMSNAALNTIAQNRPNMTRFRLCI	IEPRTPDYLTQHPLDAGFGAIVQHCKNLQRLSLSG...	LLTDRVFEYIGTYAKKLEM	459
Glyma.03G209400	Glyma.03G209400.1	LQSVLYFCRQMSNAALHTIARNRPNLTRFRLCI	IEPRTPDYLTLEPLDSGFGAIVEQCKDLQRLSLSG...	LLTDRVFEYIGTYAKKLEM	461
Glyma.19G206800	Glyma.19G206800.1	LQSVLYFCRQMSNAALHTIARNRPNLTRFRLCI	IEPRTPDYLTLEPLDSGFGAIVEQCKDLQRLSLSG...	LLTDRVFEYIGTCGKKLEM	462
Lj1g0015670	Lj1g0015670.1	LQSVLYFCRQMSNAALHTIARNRPNFTCFRLCI	IEPQAPDYLTQLPLDSGFGAIVEHCKGLQRLSLSG...	LLTDRVFEYIGTYGKKLEM	459
AT3G62980	AT3G62980.1	LESVLYFCRQMTNAAALITIARNRPNMTRFRLCI	IEPKAPDYLTLEPLDIGFGAIVEHCKDLRRLSLSG...	LLTDKVFEYIGTYAKKMEM	460
AT4G03190	AT4G03190.1	LESVLYFCVQFTNAAALFTIARKRPNLKCFLRC	VIEPFAPDYKTNEPLDKGFKATAEGRDLRRLSVSG...	LLSDKAFKYIGKHAQKVRM	456
AT1G12820	AT1G12820.1	LHSILYFCQKMTNAAALIAVAKNCPNFIRFRLCI	LEPHKPDHITFQSLDEGFGAIVQACKGLRRLSVSG...	LLTDQVFLYIGMYAEQLEM	457
AT3G26810	AT3G26810.1	LHSILYFCQKMTNAAALITVAKNCPNFIRFRLCI	LEPNKPDHVTSQLDEGFGAIVKACKSLRRLSLSG...	LLTDQVFLYIGMYANQLEM	455
Glyma.16G050500	Glyma.16G050500.1	LHSLLYFCHQMTNAAALITVAKNCPNFIRFRLCI	LDATKPDPTMQPLDEGFGAIVQSCRRLRRLSLSG...	QLTDQVFLYIGMYAEKLEM	455
Glyma.19G100200	Glyma.19G100200.1	LHSLLYFCHQMTNAAALITVAKNCPNFIRFRLCI	LDATKPDPTMQPLDEGFGAIVQSCRRLRRLSLSG...	KLTDQVFLYIGMYAEKLEM	455
Lj1g0006513	Lj1g0006513.1	LHSLLYFCHQMTNAAALITVAKNCPNFIRFRLCI	LDATKPDPTMQPLDEGFGAIVQSCRRLRRLSLSG...	QLTDQVFLYIGMYAEQLEM	455
Glyma.16G146400	Glyma.16G146400.1	LHSLLYFCQKMTNAAALITVAKNCPNFIRFRLCI	LDPTKPDPTMQPLNEGFGAIVQSCQLRRLSLSG...	QLTDQVFLYIGMYAEQLEM	456
Glyma.02G065300	Glyma.02G065300.1	LHSLLYFCQKMTNAAALITVAKNCPNFIRFRLCI	LDPTKPDPTVQPLDEGFGAIVQSCQLRRLSLSG...	QLTDQVFLYIGVYAEQLEM	456
AT4G24390	AT4G24390.1	LESILYFCQMTNGAVTAMSENCPLTVFRLCI	MGRHRPDHVTGKPMDDGFGAIVKNCKKLTRLAVSG...	LLTDEAFSYIGEYGKLIRT	506
AT5G49980	AT5G49980.1	LESILYFCQMTNAAAVIAMSENCPELTVFRLCI	MGRHRPDHVTGKPMDEGFGAIVKNCKKLTRLAVSG...	LLTDQAFRYMGEYGKLVRT	506
Glyma.04G093500	Glyma.04G093500.1	LQSILFFCQMTNAAAVVAMSNNCPDLVVFRLCI	IGRYRDPETLEPMDEGFGAIVMNCKKLTRLAVSG...	LLTDRAFNIGTYGKLIRT	471
Glyma.06G095400	Glyma.06G095400.1	LQSILFFCQMTNAAAVVAMSNNCPDLVVFRLCI	IGQYRDPVTELEPMDEGFGAIVMNCKKLTRLAVSG...	LLTDRAFSYIGTYGKLIRT	475
Glyma.02G211800	Glyma.02G211800.1	LESILFLCQMTNAAAVVAMSKNCPDLVVFRLCI	IGRYRDPVTELEPMDEGFGAIVMNCKKLTRLAVSG...	LLTDRAFEYIGTYGKLVRT	516
Glyma.14G179500	Glyma.14G179500.1	LESILFFCQMTNAAAVVAMSKNCPDLVVFRLCI	IGRYRDPVTEEPMDGFGAIVMNCKKLTRLAMSG...	LLTDRVFEYIGMYGKLVRT	519
Lj1g0027142	Lj1g0027142.1	LESILFFCQMTNAAAVVAMSKNCPDLVVFRLCI	IGRYRPAVTEPEMDGFGAIVMNCRLTRLAVSG...	LLTDRAFEYIGRYGKLVRT	518
Glyma.02G254300	Glyma.02G254300.1	LEYLAVYVSDITNASLEHIGTHLKNLCDFRLVLLD	..REEKITDPLDNGVRALLRGCDKLRRFALYLRPGGLTDVGLGYVGQYSPNVRW	454	
Glyma.14G062100	Glyma.14G062100.1	LEYLAVYVSDITNASLEHIGTHLKNLCDFRLVLLD	..REEKITDPLDNGVRALLRGCDKLRRFALYLRPGGLTDVGLGYIGQYSPNVRW	461	
Glyma.11G227300	Glyma.11G227300.1	LEYMAVYVSDITNASLEHIGTHLKNLCDFRLVLLD	..HEEKITDPLDNGVRALLRGCDKLRRFALYLRPGGLTDVGLGYIGQYSPNVRW	460	
Glyma.18G030200	Glyma.18G030200.1	LEYMAVYVSDITNASLEHIGTHLKNLCDFRLVLLD	..HEEKITDPLDNGVRALLRGCDKLRRFALYLRPGGLTDVGLGYIGQYSPNVRW	460	
Lj3g0010583	Lj3g0010583.1	.....	VYLPDRGVALLRGCDKLRRFALYLRPGGLTDVGLGYIG.YPP....	243	
Lj6g0020395	Lj6g0020395.1	LEYLAVYVSDITNASLEHMGTHLRNLCDFRLVLLD	..QEEKITDPLDRGVQALLRGCDKLRRFALYLRPGGLTDVGLSYIGQYSPNVRW	459	
AT2G39940	AT2G39940.1	LEYMAVYVSDITNESLESIGTYLKNLCDFRLVLLD	..REERITDPLDNGVRSLLIGCKKLRRFAFYLRQGLTDGLGLSYIGQYSPNVRW	467	
consensus		* * * * *	* * * * *	* * * * *	

Glyma.08G059500	Glyma.08G059500.6	LSVAFAGSSDWGMRCVLDGCPKLRKLEVRDCP	FGNGALLSGLGKYESMRSLWMSDCNLTMNQVRLLAKEMPRLNVEVIKEETY.....	551
Glyma.07G189800	Glyma.07G189800.5	LSVAFAGSSDWGMRCVLDGCPKLRKLEVRDCP	FGNGALLSGLGKYESMRSLWMSDCNLTMNQVRLLAQEMPRNVEVIKEEY.....	550
Lj4g0012889.1	Lj4g0012889.1	LSVAFAGSSDWGMRCVLDGCPKLRKLEVRDCP	FGNAALLSGLERYESMRSLWMSDCNLTMNQVRLLAKEMPRLNVEVIKEEGC.....	558
Glyma.02G152800	Glyma.02G152800.2	LSVAFAGDSDLGLHHVLSGCDNLRKLEIRDCP	FGDKALLANAAKLETMRSLWMSSCLVSYGACKLLGQKMPRLNVEVIDERGP....PD	545
Glyma.10G021500	Glyma.10G021500.2	LSVAFAGDSDLGLHHVLSGCDNLRKLEIRDCP	FGDKALLANAAKLETMRSLWMSSCLVSYGACKLLGQKLPRLNVEVIDERGP....PD	545
Lj5g0004781	Lj5g0004781.1	LSVAFAGDSDLGLHHVLSGCDNLRKLEIRDCP	FGDKALLANAAKLETMRSLWMSSCLVSYGACKLLGQKMPRLNVEVIDERGP....PD	544
Glyma.03G209400	Glyma.03G209400.1	LSVAFAGDSDLGLHHVLSGCDNLRKLEIRDCP	FGDKALLANAEKLETMRSLWMSSCLVSYGACKLLGQKMPRLNVEVIDERGP....PD	546
Glyma.19G206800	Glyma.19G206800.1	LSVAFAGDSDLGLHHVLSGCDNLRKLEIRDCP	FGDKALLANAEKLETMRSLWMSSCLVSYGACKLLGQKMPRLNVEVIDERGP....PD	547
Lj1g0015670	Lj1g0015670.1	LSLAFAGDSDLGLHHVLSGCDNLRKLEIRDCP	FGDKALLANAAKLETMRSLWMSSCLVSYGACKLLGLKMPKLNVEVIDERGP....PD	544
AT3G62980	AT3G62980.1	LSVAFAGDSDLGMHHVLSGCDNLRKLEIRDCP	FGDKALLANASKLETMRSLWMSSCLVSYGACKLLGQKMPKLNVEVIDERGA....PD	545
AT4G03190	AT4G03190.1	LSLAFAGDSDLMLHHVLSGCDNLRKLEIRDCP	FGDTALLLHAAKLETMRSLWMSSCLVSYGACKLLSQKMPRLNVEVIDEH.P....PE	540
AT1G12820	AT1G12820.1	LSLAFAGDTPDKGMLYVLNGCKKMRKLEIRDSP	FGNAALLADVGRYETMRSLWMSSCEVTLLGCKRLAQNSPRLNVEIINENENNGMEQN	546
AT3G26810	AT3G26810.1	LSLAFAGDTPDKGMLYVLNGCKKMRKLEIRDSP	FGDTALLADVSKYETMRSLWMSSCEVTLLGCKRLAEKAPWLNVEIINENDNNRMEEN	544
Glyma.16G050500	Glyma.16G050500.1	LSLAFAGEESDKGMLYVLNGCKKLRKLEIRDCP	FGNVALLTDVGKYETMRSLWMSSCEVTVGACKLLAKKMPRLNVEIFNENEQ...EDC	541
Glyma.19G100200	Glyma.19G100200.1	LSLAFAGDGDKGMLYVLNGCKKLRKLEIRDCP	FGDMALLTDVGKYETMRSLWMSSCEVTVGACKLLAKKMPRLNVEIFNENEQ...EDC	541
Lj1g0006513	Lj1g0006513.1	LSLAFAGEESDKGMQYVLNGCKKLRKLEIRDCP	FGNMALLADIGKYETMRSLWMSSCEVTVGACKELAEKMPRLNVEIFNENEQ...EEC	541
Glyma.16G146400	Glyma.16G146400.1	LSVAFAGEESDKAMLYVLNGCKKIHKLIRGSP	FGDSALLMDVGKYETMQFLWMTSCNVTVGACKALAEKMPRLNVEIFNENKK...VDR	542
Glyma.02G065300	Glyma.02G065300.1	LSLAFAGEESDKAMLYVLNGCKKLRKLEIRDSP	FGDSALLMDVGKYETMRSLWMSSCDVTIGACKALAKKMPGLNVEIFNGNEK...VDR	542
AT4G24390	AT4G24390.1	LSVAFAGNSDKALRYVLEGGCPKLRKLEIRDSP	FGDVGLRSGMHRYSNMRFVWLSLSSCLISRGGRGVSHALPNVVVEVFGADGDDDEDTV	595
AT5G49980	AT5G49980.1	LSVAFAGDSDMAIRHVLEGGCPRLQKLEIRDSP	FGDVALLRSGMHRYSNMRFVWMSACSLSKGCCDIARAMPNLVVEVIGSDDDDDD....	591
Glyma.04G093500	Glyma.04G093500.1	LSVAFAGDTPDLGLQYVLEGGCPNLQKLEIRDSP	FGDGALLRSGLHHFYNNMRFWMSSCKLTRQACREVARMLPHLVLEVINSEEDKADD..	558
Glyma.06G095400	Glyma.06G095400.1	LSVAFAGDTPDLGLQYVLEGGCPNLQKLEIRDSP	FGDGALLRSGLHHFYNNMRFWMSSCKLTRQACQEVATLPHLVLEVINSEEDKADG..	562
Glyma.02G211800	Glyma.02G211800.1	LSVAFAGDTPDGLKYVLEGGCPNLQKLEIRDSP	FGDGALLRSGLHHFYNNMRFWMSTCKLTLLQACQEVARVLPNLVFEVINNNSEENAG..	603
Glyma.14G179500	Glyma.14G179500.1	LSVAFAGDTPDGLKYVLEGGCPNLQKLEIRDSP	FGDGALLRSGLHHFYNNMRFWMSSCKLTRQACQEVARALPNLVLEVINNNNEENAGDE	608
Lj1g0027142	Lj1g0027142.1	LSVAFNGDTPDLALKYVLEGGCPNMQLKLEIRDCP	FGDAALLRSGLHHFYNNMRFWMSSCKLTRQACQDVARALPHLVVEVINKEDAAVD..	605
Glyma.02G254300	Glyma.02G254300.1	MLLGYVGETDAGLLEFSKGCPSLQKLEMRGCSFF	SEYALAIATQLNSLRYLWVQGYASASGRDLLAMARPYWNIELIPSRSVVVSNNQ	544
Glyma.14G062100	Glyma.14G062100.1	MLLGYVGETDAGLLEFSKGCPSLQKLEMRGCSFF	SEYALAIATQLNSLRYLWVQGYGASPSGRDLLAMARPYWNIELIPSRRVVVSNNQ	551
Glyma.11G227300	Glyma.11G227300.1	MLLGYVGESDAGLLEFSKGCPSLQKLEMRGCSFF	SERALAVAATQLTSLRYLWVQGYGVSPSGRDLAMARPFWNIELIPSRKVAMNTNS	550
Glyma.18G030200	Glyma.18G030200.1	MLLGYVGESDAGLLEFAKGCPSLQKLEMRGCLFF	SERALAVAATQLTSLRYLWVQGYGVSPSGRDLVLMARPFWNIELIPSRKVATNTNP	550
Lj3g0010583	Lj3g0010583.1	.....	FIEHALAVAATQLISLRYLWVQGYDASLSGRNLLAMARPFWNIELIPSRRVVTKNNM	300
Lj6g0020395	Lj6g0020395.1	MLLGAVGETDEGLLEFAKGCPSLQKLEMRGCSFF	SEHALAVAATQLTSLRYLWVQGYGASPTGRDLLAMARPFWNIELIPSRRVVNNNM	549
AT2G39940	AT2G39940.1	MLLGYVGESDEGLMEFSRGCPSLQKLEMRGCC	SERATIAAVTKLPSSLRYLWVQGYRASMTGQDLMQMARPYWNIELIPSRRVPEVNQQ	556
consensus		*****	*****	

Glyma.08G059500	Glyma.08G059500.6	...ET..HQAKKVYVYRSVAGPRRDAPPFVLT	579
Glyma.07G189800	Glyma.07G189800.5	...ET..HQAKKVYVYRSVAGPRRDAPPFVLT	578
Lj4g0012889.1	Lj4g0012889.1	...YE..GPAQRVYVYRSVAGPRRDAPSFVLAHCGPHNARGSGKGSTTWSIVCTMQPYLVCYMRGYFQNL	623
Glyma.02G152800	Glyma.02G152800.2	SRPES..SPVEKLYIYRTVSGPRLDMPGYVWRMQDD	585
Glyma.10G021500	Glyma.10G021500.2	SRPES..SPVEKLYMYRTVSGPRLDMPGYVWRMQDD	585
Lj5g0004781	Lj5g0004781.1	TRPES..SPVEKLYIYRTISGPRVDMPGYVWTMEDD	583
Glyma.03G209400	Glyma.03G209400.1	SRPDD..CPVEKLYIYRTVAGPRLDMPGFVWTMEDD	586
Glyma.19G206800	Glyma.19G206800.1	SRPDD..CPVEKLYIYRTIAGPRLDMPGFVWTMEDD	587
Lj1g0015670	Lj1g0015670.1	SRPDS..CPVEKLYIYRTIAGPRMDMPGFVYRMEDEDD	585
AT3G62980	AT3G62980.1	SRPES..CPVERVFIYRTVAGPRFDMPGFVWNMDQD	594
AT4G03190	AT4G03190.1	SRPES..SPVERIYIYRTVAGPRMDTPEFVWTIHKNPENGVSHLAIK	585
AT1G12820	AT1G12820.1	EEDER..EKVDKLYLYRTVVCTRKDAPPYVRIL	577
AT3G26810	AT3G26810.1	GHEGR..QKVDKLYLYRTVVCTRMADAPPFWIL	575
Glyma.16G050500	Glyma.16G050500.1	SLEDG..QKVEKMYLYRTLACGRKDAPEYVWTL	572
Glyma.19G100200	Glyma.19G100200.1	SLEDG..QKVEKMYLYRTLACGRKDAPEYVWTL	572
Lj1g0006513	Lj1g0006513.1	SLEDE..QSVEKMYLYRTLACGRNDAPEYVCTL	572
Glyma.16G146400	Glyma.16G146400.1	DVDDG..QKVEKMYLYRTLACGRKDAPELVWTL	573
Glyma.02G065300	Glyma.02G065300.1	DVDDG..QKVEKTYLYRTLVGRRKDAPEHVWTL	573
AT4G24390	AT4G24390.1	...TG..DYVETLYLYRSIDGPRKDAPKFVTIL	623
AT5G49980	AT5G49980.1	...NR..DYVETLYMYRSIDGPRNDAPKFVTIL	619
Glyma.04G093500	Glyma.04G093500.1	.....IEILYMYRSIDRPRDDAPKVVTILC	583
Glyma.06G095400	Glyma.06G095400.1	.....IEILYMYRSIDGPRDDAPKVVTILC	587
Glyma.02G211800	Glyma.02G211800.1	.....DEVETLYMYRSIDGPRDDAPRFVTILQ	630
Glyma.14G179500	Glyma.14G179500.1	EENAG..DEVETLYMYRSIDGPRDDAPRFVTILQ	640
Lj1g0027142	Lj1g0027142.1	.....DIELLYMYRSIDGPRDDAPQVVTILH	631
Glyma.02G254300	Glyma.02G254300.1	EDPVV.VEHLAHLAYVSLAGPRTDFFPDTVIPLDPGTYVDT	584
Glyma.14G062100	Glyma.14G062100.1	EEPVV.VEHPAHLAYVSLAGPRTDFFPDTVIPLDPATYVDT	591
Glyma.11G227300	Glyma.11G227300.1	DETVV.VEHPAHLAYVSLAGQRSDFPDTVVPLDTATCVDT	590
Glyma.18G030200	Glyma.18G030200.1	DETVV.VEHPAHLAYVSLAGQRSDFPDTVVPLDTATCVDT	590
Lj3g0010583	Lj3g0010583.1	DEPVV....AAHIFAYVSLAG	317
Lj6g0020395	Lj6g0020395.1	DGPVSVVHHPAHLAYVSLAGQRSDFPDTVVPLDPATFVEP	590
AT2G39940	AT2G39940.1	GEIRE.MEHPAHLAYVSLAGQRTDCPTTVRVLKEPI	592
consensus		*** * !***** ** *	

☐ non-conserved
☒ ≥ 50% conserved