

Supplemental File 2

Multiple sequences alignments among maize, *Arabidopsis* and rice CNGCs by using T-COFFEE method.

Residues in highlighted indicate most conserved among these CNGCs

	230	240	250	260	270	280	290	300									
AT5G53130	VVFQYIPR	IRIYPL	YKEV	RTSGL	TEPAWA	GAANFL	FLYMLASHV	GFAYLFS	ERTVCKWQA	ERN	N	PP	I				
AT3G48010	IVLQYVPR	LVMLPL	NRRR	I.KAT	GNAAK	PAWS	GAAYNLLY	LLVSHVLSV	YVIVS	QR	QHE	WRRE	IKR	MNAT	HSPS	S	
AT2G23980	IVLVQYIPR	LRMYPL	SSSE	K.RTAC	VFPAE	PAWA	GAAYYLLY	MLASHVIGAL	WYLLS	ALERN	NND	CKSKA	HNN	Q	N	T	
AT2G24610	IVLVQYIPR	YLIFPL	SAAE	I.KAT	GVYTT	PAWA	GAAYNLLY	QMLASHVIG	SAWYLLS	TER	QAT	WKAE	HKE	SV	PLQ	V	
AT5G54250	TFLFQYLPK	YHSIRH	LRRNA	TLSS	YIFG	VTW	GTALN	MLAYFVA	AHAAG	ACWYLLS	QV	SAK	CLKEQ	ENT	IG	D	
AT2G28260	ILIFQYVPR	FLIFPL	SRQI	I.KAT	GVYTE	PAWA	GAAYNLLY	MLASHITG	ACWYLLS	LAVER	QEA	CRHHA	NIE	K	QT	Q	
AT5G15410	IVLFQYLPK	YHCCI	MRMQ	KVTY	YIFG	VTW	FALN	LAYFLASHV	GCWYVLA	QV	AS	CRQ	MRT	GN	N	C	
AT1G15990	IVLVQYIPR	VRFIPL	TSEK	K.RTAC	VFPAE	PAWA	GAAYYLLY	MLASHVIG	AFWYLLS	VER	NDT	CRWFA	KVQ	P	DP	LC	
AT4G30560	IVLVQYIPR	LRRLPL	SSSE	K.RTAC	VFPAE	PAWA	GAAYYLLY	MLASHVIG	AFWYLLS	ALERN	YNG	WTKV	SNSS	L	D	H	
AT5G57940	IVLVQYIPR	LRVLPL	TSEK	K.RTAC	VFPAE	PAWA	GAAYYLLY	MLASHVIG	AFWYLLS	ALERN	DA	QW	QEA	IDA	G	N	S
AT3G17700	AVLFQYIPK	LRLLPL	FLAQ	QTPT	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	GKF	GR	E	N
AT1G01340	SIIAQYVPR	LRMYPL	YTEV	RTSGL	TEPAWA	GAAYNLLY	MLASHVIG	GFAYLFS	YVIVS	QR	EDR	CKWQA	EKT	K	G	N	
AT1G19780	IVLVQYIPR	VRFIPL	TSEK	K.RTAC	VFPAE	PAWA	GAAYYLLY	MLASHVIG	AFWYLLS	VER	NDT	CLRSA	KVQ	P	DP	KV	
AT2G46450	IVLVQYIPR	IRMYPL	YKEV	RTSGL	TEPAWA	GAAYNLLY	MLASHVIG	GFAYLFS	YVIVS	QR	EDR	CKWQA	ART	S	D	N	
AT4G30360	IVLVQYIPR	YLIIP	SSQV	I.KAT	GVYTK	PAWA	GAAYNLLY	MLASHVIG	AAWYLLS	VD	YTS	CKWSR	NGE	AG	QVN	Q	
AT5G14870	IVLVQYIPR	FLIFPL	NQRI	I.KTT	GF	AK	PAWA	GAAYNLLY	MLASHVIG	AMWYLLS	SR	QFS	CWSNV	KKD	NAL	R	VLD
AT4G01010	VIFVQYIPR	LRRIPL	YTEV	RTSGL	TEPAWA	GAAYNLLY	MLASHVIG	GFAYLFS	YVIVS	QR	EDR	CKWQA	EKI	P	EV	N	
AT3G17690	TVLFQYVPR	LRRLPL	FLAQ	QTPT	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	GKF	GR	E	N
AT2G46430	VIFCQYVPR	ARIYPL	FKEV	RTSGL	TEPAWA	GAAYNLLY	MLASHVIG	GFAYLFS	YVIVS	QR	EDR	CKWQA	AKI	Q	N	T	
AT2G46440	IVLVQYVPR	IRMYPL	YKEV	RTSGL	TEPAWA	GAAYNLLY	MLASHVIG	GFAYLFS	YVIVS	QR	EDR	CKWQA	ART	S	D	N	
LOC_Os06g33570	IVICQYVPR	IRIRPL	YLOQ	T.RSAG	VT	TE	PAWA	GAAYNLLY	MLASHVIG	ALWYLLS	ER	KD	AC	WRDM	SNN	S	TV
LOC_Os06g33610	IVLVQYIPR	VRFIPL	TSEK	K.RTAC	VFPAE	PAWA	GAAYYLLY	MLASHVIG	AFWYLLS	ALERN	YNG	WTKV	SNSS	L	D	H	
LOC_Os03g44440	IVLVQYIPR	VRFIPL	TSEK	K.RTAC	VFPAE	PAWA	GAAYYLLY	MLASHVIG	AFWYLLS	ALERN	YNG	WTKV	SNSS	L	D	H	
LOC_Os12g28260	IVLVQYIPR	VRFIPL	TSEK	K.RTAC	VFPAE	PAWA	GAAYYLLY	MLASHVIG	AFWYLLS	ALERN	YNG	WTKV	SNSS	L	D	H	
LOC_Os04g55080	VVLFQYIPR	LRIFPL	TKDK	K.RTAC	VFPAE	PAWA	GAAYYLLY	MLASHVIG	TLWYLLS	TER	EDS	CKWQA	HSN	D	G	N	
LOC_Os02g41710	SIIAQYVPR	FQIFPL	SRQI	V.MAT	GVYTE	PAWA	GAAYNLLY	MLASHVIG	ALWYLLS	ER	QEA	CKWQA	HVE	G	PS	Q	
LOC_Os12g06570	VIMIQYVPR	FLIVPL	SNQI	I.KAA	GVYAK	PAWA	GAAYNLLY	MLASHVIG	ALWYLLS	ER	QEA	CKWQA	TRE	NGT	PAIP	K	
LOC_Os09g38580	VIMIQYVPR	FLIVPL	SNQI	I.KAA	GVYAK	PAWA	GAAYNLLY	MLASHVIG	ALWYLLS	ER	QEA	CKWQA	TRE	NGT	PAIP	K	
LOC_Os02g54760	IVLVQYVPR	YLIIF	NQRI	I.KTT	GF	AK	PAWA	GAAYNLLY	MLASHVIG	AMWYLLS	SR	QFS	CWSNV	KKD	NAL	R	
LOC_Os06g08850	IVLVQYVPR	YLIIF	NQRI	I.KTT	GF	AK	PAWA	GAAYNLLY	MLASHVIG	AMWYLLS	SR	QFS	CWSNV	KKD	NAL	R	
LOC_Os02g53340	TVLLQYVPR	IRFVPL	LGGO	S.DSS	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	SAS	KI	PS	
LOC_Os06g10580	TVLLQYVPR	IRFVPL	LGGO	S.DSS	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	SAS	KI	PS	
LOC_Os03g55100	IVLVQYVPR	IRFVPL	LGGO	S.DSS	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	SAS	KI	PS	
LOC_Os01g57370	IVLVQYVPR	IRFVPL	LGGO	S.DSS	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	SAS	KI	PS	
LOC_Os05g42250	IVLVQYVPR	IRFVPL	LGGO	S.DSS	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	SAS	KI	PS	
GRMZM2G005791	IVLVQYVPR	IRFVPL	LGGO	S.DSS	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	SAS	KI	PS	
GRMZM2G023037	VVLIQYIPR	LRIFPL	ITDK	K.RTAC	VFPAE	PAWA	GAAYYLLY	MLASHVIG	TLWYLLS	TER	EDD	CKWQA	DDP	PNF	GL	G	
GRMZM2G066269	IVLVQYVPR	IRFVPL	LGGO	S.DSS	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	SAS	KI	PS	
GRMZM2G068904	SIIAQYVPR	FQIFPL	SRQI	V.MAT	GVYTE	PAWA	GAAYNLLY	MLASHVIG	ALWYLLS	ER	QEA	CKWQA	LLV	S	PT	S	
GRMZM2G074317	IVLVQYVPR	IRFVPL	LGGO	S.DSS	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	SAS	KI	PS	
GRMZM2G077828	IVLVQYVPR	IRFVPL	LGGO	S.DSS	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	SAS	KI	PS	
GRMZM2G090528	IVLVQYVPR	IRFVPL	LGGO	S.DSS	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	SAS	KI	PS	
GRMZM2G129375	IVLVQYVPR	IRFVPL	LGGO	S.DSS	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	SAS	KI	PS	
GRMZM2G135651	VIVIQYVPR	YLIIF	NQRI	I.KAA	GVYAK	PAWA	GAAYNLLY	MLASHVIG	ALWYLLS	ER	QEA	CKWQA	TRE	NGT	PAIP	K	
GRMZM2G141642	TVLLQYVPR	IRFVPL	LGGO	S.DSS	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	SAS	KI	PS	
GRMZM2G148118	IVLVQYVPR	IRFVPL	LGGO	S.DSS	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	SAS	KI	PS	
GRMZM5G858887	IVLVQYVPR	IRFVPL	LGGO	S.DSS	GF	FE	SAWANF	INLL	TFMLAGHV	VGSCWYLLS	QV	NQ	CLRNA	SAS	KI	PS	
consensus>70	.v.qy.pr	.pl	.g	.aw.g.a.n.l.y.lashv.g.wyl.ier.c.c													

	310	320	330	340										
AT5G53130	S.K.L.Y	DPETA	GG.NA	LNE	S.CP	I.QT	PNTTL	D.GIHL	LDAT	QSGV	.VES			
AT3G48010	L.L.F.I	DGSLD	PGRQ	WMRI	T.RV	LSN	CDA	RN	DDQH	D.FGMF	GDAT	TNDY	.TS	
AT2G23980	R.N.N.F	GNQNM	KGYA	ADNI	KVSY	LQK	CPVNV	PE	DEEP	D.FGIY	LRAL	SSGI	.VSS	
AT2G24610	T.D.F.F	GTLHR	DDRN	QONT	T.VV	FSN	CDP	S	NNIO	T.FGIY	ADAL	TKNV	.VSS	
AT5G54250	L.R.R.M	SKEPVY	GTVM	VLDR	ARLA	WAQN	H.QA	RSV	CL	DINTN	T.FGIY	QWT	QLV	.VS
AT2G28260	Y.R.R.F	ERLED	PQRNS	FEW	S.NI	TTIC	K	PASK	F	FGIY	GDV	TSTV	.TS	
AT5G15410	L.S.A	KEEVCY	QVSP	STV	GYPC	LSGN	LTS	V.VN	KPM	CL	DNSNGP	R.FGIY	RPV	.SS
AT1G15990	V.Q.O.I	Y.GTKFV	SSGET	WIKT	VEP	LLKSN	CSA	K	ADD	SK	N.FGIY	GOAL	SSGI	.VSS
AT4G30560	R.N.N.F	GNQNM	DGYA	ADNI	KVSY	LQK	CPVNV	PE	DEEP	D.FGIY	LRAL	SSGI	.VSS	
AT5G57940	T.D.F.F	GTLHR	DDRN	QONT	T.VV	FSN	CDP	S	NNIO	T.FGIY	ADAL	TKNV	.VSS	
AT3G17700	Q.D.D.L	ID.GNGNS	S.VL	VRAT	WKDN	A.S	ANAC	F	QEDG	F	FGIY	LKAV	NL	.T.NH
AT1G01340	M.K.F.F	Y.ENDRN	VS	NN	FLTT	S	CPFLDP	G	DI	TNSTI	N.FGIY	TDAL	KSGV	.VES
AT1G19780	V.Q.O.I	Y.GTKFV	SSGET	WIKT	VEP	LLKSN	CSA	K	ADD	SK	N.FGIY	GOAL	SSGI	.VSS
AT2G46450	L.T.V	D.LL	KRAGS	DN	IR	FLNT	S	CPLIDP	A	QI	TNSTD	D.FGMX	IDAL	KSGV
AT4G30360	L.Y.Y	YD	KSMYD	NNQ	M	W	ANV	T	KV	FKL	CLDA	R	NGE	K
AT5G14870	P.S.F	YD	KSLEQ	PER	QY	QNV	T	QV	L	SH	CLDA	T	SSTTN	K
AT4G01010	F.R.F	YD	DGNSS	VR	ND	FLTT	S	CPFINP	D	DI	TNSTN	N.FGIY	TDAL	KSGV
AT3G17690	R.N.L	YD	ARGSYAS	KS	Q	RDL	WRDN	A	S	VNAC	F	QENG	T	Y
AT2G46430	H.A.A	YD	SPTGE	DN	RL	FLNG	S	CPLIDP	E	EI	TNSTV	N.FGIY	ADAL	QSGV
AT2G46440	L.T.V	D.LL	KRAGS	DN	IR	FLNT	S	CPLIDP	A	QI	TNSTD	D.FGMX	IDAL	KSGV
LOC_Os06g33570	Q.A.A	YD	GDKE	NS	IL	RT	A	CL	P	ID	SNDID	N.FGIY	VPAL	NNV
LOC_Os06g33610	K.I.Y	MY	GND	HQ	K	FLE	WRTI	T	QY	IN	ET	CEP	R	DG
LOC_Os03g44440	K.K.Y	MY	GND	HQ	K	FLE	WRTI	T	QY	IN	ET	CEP	R	DG
LOC_Os12g28260	K.K.Y	MY	GND	HQ	K	FLE	WRTI	T	QY	IN	ET	CEP	R	DG
LOC_Os04g55080	K.S.Y	YD	SDNHT	GNSY	TS	WLSK	RTELL	SAC	STNS	Q	FGIY	EQAL	VSGI	.LRP
LOC_Os02g41710	T.L.F	F	DKTVS	SN	RTM	WYSL	S	NI	TSLC	T	PSNG	Q	FGIY	GEAL
LOC_Os12g06570	M.S.Y	YD	KTLED	PIR	M	W	HSR	S	EI	DH	QCLL	PEAT	V	Y
LOC_Os09g38580	F.N.F	YD	DNTGS	SSY	L	T	WGN	T	SI	FDN	CDP	N	RNS	SAN
LOC_Os02g54760	I.K.F	YD	DVIPN	Q	N	W	ASK	T	AI	FNT	CD	T	N	SIS
LOC_Os06g08850	N.R.Y	YD	DIQSD	SN	W	K	S	T	AI	FNT	CD	T	N	SIS
LOC_Os02g53340	D.G.F	YD	GRGINIG	KQ	N	L	S	R	Q	W	FND	S	A	STAC
LOC_Os06g10580	N.N.C	YD	GITG	IN	R	T	W	L	N	S	D	L	T	G
LOC_Os03g55100	L.T.S	YD	SKEMCF	H	L	P	S	D	K	N	G	L	A	C
LOC_Os01g57370	P.G.A	YD	AAPLY	G	G	A	V	G	G	A	D	R	L	A
LOC_Os05g42250	SSTA	A	V	D	P	L	Y	G	A	V	S	V	G	D
GRMZM2G005791	L.K.Y	YD	DTTPN	A	T	W	N	T	A	V	F	S	N	C
GRMZM2G023037	S.S.Y	YD												

350 360 370 380 390 400 410 420 430
AT5G53130 QDFPQ FFYCFWFWGQNLSSLGNNKT TYIWI ICAAFV SLA GLVLF SFLIGNMOT YLOST TTRL ERMVRV RDA QWMS HRRL ENLQ
AT3G48010 SPFFD YFYCFWFWGRNLSSYGSLAA TLSS TITSCFIV CVA GLVLF SHLIGNVQN YLOST FARL EWRVRR RRD EEMR RRRL DELO
AT2G23980 KNFVS YFYCFWFWGNLSTLGGGDET TYPG VLSIAA IATG LLLFA LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT2G24610 SPFLY YFYCFWFWGNLSTLGGGDET TSVL TMAALV IAF GLVLF LLIGNMOT YLOST TVRL EWRVRR RRD EEMR RRRL QPFL
AT5G54250 ESRLE ILLYCFWFWGNLSTLGGGDET TEWS VVNVN IIV LTS GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT2G28260 SKFIN YFYCFWFWGNLSSLGNNKT TYAG IIVN IATL GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT5G15410 NSLAV ILLYCFWFWGNLSTLGGGDET SNWL VVNVN IIV VLS GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT1G15990 TTFFS YFYCFWFWGNLSTLGGGDET TYPG VLSIAA IATG LLLFA LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT4G30560 KSFVS YFYCFWFWGNLSTLGGGDET TYPG VLSIAA IATG LLLFA LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT5G57940 QNFIV YCYCFWFWGNLSTLGGGDET TYPM IIVSIAA IATG LLLFA LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT3G17700 SNLFT YSYCFWFWGNLSTLGGGDET YFFL VVFMGT IGL GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT1G01340 HDFWK YFYCFWFWGNLSTLGGGDET KYFG VVIAA IATG LLLFA LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT1G19780 TTFFS YFYCFWFWGNLSTLGGGDET TYPG VLSIAA IATG LLLFA LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT2G46450 KDFPR YFYCFWFWGNLSTLGGGDET NSAG IFAA IIV CVS GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT4G30360 SQFFE YFYCFWFWGNLSSYGNNST MFMG TAVL IAF GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT5G14870 TDFVS YFYCFWFWGNLSSYGNNST VYLG TLLCT CTF GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT4G01010 DDFWK YFYCFWFWGNLSTLGGGDET KFYG VVIAA IATG LLLFA LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT3G17690 SFFTS YFYCFWFWGNLSTLGGGDET SPYV VVFMGT IGL GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT2G46430 RDFPK YFYCFWFWGNLSTLGGGDET AFEG IFAA IIV CVS GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
AT2G46440 KDFPR YFYCFWFWGNLSTLGGGDET NSAG IFAA IIV CVS GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
LOC_Os06g33570 TNFLA LFCYFWFWGNLSSLGNNKT TYAW NLA AVF VLS GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
LOC_Os06g33610
LOC_Os03g44440 NDFTS LLLCYFWFWGNLSTLGGGDET IYTG ALV SFA ATF GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
LOC_Os12g28260 TNLVA VLFYCFWFWGNLSTLGGGDET KYFG VVIAA IATG LLLFA LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
LOC_Os04g55080 GNFIS YCYCFWFWGNLSTLGGGDET IYFG VVIAA IATG LLLFA LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
LOC_Os02g41710 SFFTQ YFYCFWFWGNLSSYGNNST LFIG ITATV IGV GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
LOC_Os12g06570 VNFWD YFYCFWFWGNLSSYGNNST TYRG TTA CIL CIM GLVLF SHLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
LOC_Os09g38580 APFLV YFYCFWFWGNLSSYGNNST AYIA NTAA IGA LS GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
LOC_Os02g54760 QRFLM YFYCFWFWGNLSSYGNNST TYIG TTA CIL AVL GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
LOC_Os06g08850 QGFLL YFYCFWFWGNLSSYGNNST TYIG TTA CIL AVL GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
LOC_Os02g53340 DNAVK YIYCFWFWGNLSSYGNNST YFVW VVIMAT IGL GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
LOC_Os06g10580 EPGLK YIYCFWFWGNLSSYGNNST YFVW VVIMAT IGL GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
LOC_Os03g55100 NSLAV ILLYCFWFWGNLSTLGGGDET SNWL VVNVN IIV VLS GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
LOC_Os01g57370 PSRLE ILLYCFWFWGNLSTLGGGDET TEWL VVNVN IIV ITG GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
LOC_Os05g42250 PSRLE ILLYCFWFWGNLSTLGGGDET TEWL VVNVN IIV ITG GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
GRMZM2G005791 QSFAM YFYCFWFWGNLSSYGNNST TYIG TTA CIL AVL GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
GRMZM2G023037 GNFIS YCYCFWFWGNLSTLGGGDET IYFG VVIAA IATG LLLFA LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
GRMZM2G066269
GRMZM2G068904 SFFTQ YFYCFWFWGNLSSYGNNST LFIG ITATV IGV GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
GRMZM2G074317 NSLAV ILLYCFWFWGNLSTLGGGDET SNWL VVNVN IIV VLS GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
GRMZM2G077828 KDTTS LLLYCFWFWGNLSTLGGGDET IYTG ALV SFA ATF GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
GRMZM2G090528 PSRVE VLLYCFWFWGNLSTLGGGDET TEWL VVNVN IIV ITG GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
GRMZM2G129375
GRMZM2G135651 SPFLV YFYCFWFWGNLSSYGNNST YFVW VVIMAT IGL GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
GRMZM2G141642 DSAVK YIYCFWFWGNLSSYGNNST YFVW VVIMAT IGL GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
GRMZM2G148118 TSFFE YFYCFWFWGNLSSYGNNST YFVW VVIMAT IGL GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
GRMZM5G858887 NSLAV ILLYCFWFWGNLSTLGGGDET SNWL VVNVN IIV VLS GLVLF LLIGNMOT YLOST TTRL ERMVRV RRD EEMR RRRL QPFL
consensus>70k..y..wgl.nls..gq.l..s...e..f.i.....gl.lf.llign.q.ylq...r.eem...rd.#qwm.hr.lP..l.

440 450 460 470 480 490 500 510 520
AT5G53130 KIRRYEYOYVWLETRGQVDEIN SNRRLRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT3G48010 ERVRRYVOYVWLETRGQVDEIN RAALRRQQRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT2G23980 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT2G24610 ERVRRYVOYVWLETRGQVDEIN HSALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT5G54250 QVRNRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT2G28260 QVRNRYVOYVWLETRGQVDEIN ISALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT5G15410 QVRNRYVOYVWLETRGQVDEIN HDALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT1G15990 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT4G30560 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT5G57940 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT3G17700 RVRREARFVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT1G01340 KIRRYEYOYVWLETRGQVDEIN RNALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT1G19780 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT2G46450 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT4G30360 NVRNRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT5G14870 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT4G01010 KIRRYEYOYVWLETRGQVDEIN RNALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT3G17690 KVRREARFVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT2G46430 KIRRYEYOYVWLETRGQVDEIN RNALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
AT2G46440 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
LOC_Os06g33570 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
LOC_Os06g33610 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
LOC_Os03g44440 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
LOC_Os12g28260 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
LOC_Os04g55080 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
LOC_Os02g41710 QVRNRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
LOC_Os12g06570 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
LOC_Os09g38580 DRVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
LOC_Os02g54760 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
LOC_Os06g08850 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
LOC_Os02g53340 RVRREARFVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
LOC_Os06g10580 RVRREARFVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
LOC_Os03g55100 HVRRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
LOC_Os01g57370 HVRRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
LOC_Os05g42250 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
GRMZM2G005791 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
GRMZM2G023037 HVRRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
GRMZM2G066269 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
GRMZM2G068904 QVRNRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
GRMZM2G074317 QVRNRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
GRMZM2G077828 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
GRMZM2G090528 HVRRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
GRMZM2G129375 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
GRMZM2G135651 ERVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
GRMZM2G141642 RVRREARFVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
GRMZM2G148118 DRVRRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
GRMZM5G858887 QVRNRYVOYVWLETRGQVDEIN VONALRRDKRHLCALMVPVMEKMDQLDLDALCDRLQPVYVYEEYVIREGDPDEMFIM
consensus>70 er!rrry.y.w..trGv#Ee.l...\$P dlrrdkrhlc.l...Vplf..Mde..ll#aicerl...ly....ivregdp!n.Mlf!.

	530	540	550	560	570	580	590	600		
AT5G53130	GK L I T N	GRTGF .L	SEY GA GDFC	CE L T	WAL DPHSSN	... . . . .	P I SRTV	RA M VEAP	PALK	ADDLKFVASFRR
AT3G48010	QME I S T T D	GGRS GF .F	SIT RP GDFC	CE L T	WAL VPMNHN	... . . . .	P L SRTV	RT I S VEAP	PALR	AEDLKFVANOFRR
AT2G23980	QME I S T T D	GGRS GF .F	RSL KE GDFC	CE L T	WAL DPKSGSN	... . . . .	P S SRTV	KAL T VEAP	PALI	AEDLKFVASFRR
AT2G24610	QK I E S T T N	GRTGF .F	SIT RP GDFC	CE L T	WAL LPKSTVN	... . . . .	P S SRTV	RA I E VEAP	PALQ	GDLKFVANOFRR
AT5G54250	Q H I L Q S O L	L R D G V .K	CCM G P N S	CE L T	WAL RRRFVFR	... . . . .	P P S S T I	V T E T E A P	GLD	AEDVKYVTOHFRYTF
AT2G28260	Q H I D Y T T N	GRTGF .F	SCL GP GDFC	CE L T	WAL DRRPVVI	... . . . .	P S SRTV	KAI C VEAP	PALK	AEDLQVASFRR
AT5G15410	Q R V K I O S	L S K G V .L	AT S T E P G G	CE L T	WAL RRRFLDR	... . . . .	P P S S A T	V Y C E N E A P	SLGS	EDLRYITDHFYKF
AT1G15990	Q R V T T D	GGRS GF .F	RGL KE GDFC	CE L T	WAL DPKAGSN	... . . . .	P S SRTV	KAL T VEAP	PAL E	AEDLKFVASFRR
AT4G30560	Q R I E V T T D	GGRS GF .F	RSL KE GDFC	CE L T	WAL DPKSGSN	... . . . .	P S SRTV	KAL T VEAP	PALI	AEDLKFVASFRR
AT5G57940	Q R I E V T T D	GGRS GF .F	RSL KE GDFC	CE L T	WAL DPKSGSN	... . . . .	P S SRTV	KAL T VEAP	PAL T	AEDLKFVASFRR
AT3G17700	Q M E I G E D	S V . . .	L P Y E G D V C	CE L T	WAL C I E R S S V N P D	G T R I R M P S K G L	L L S R R N V	R C V T N V E A P	S L S	A D L E D V T S L S R F
AT1G01340	Q R V A T T N	GGRS GF .F	AVN KAS DFC	CE L T	WAL D P O S S S H F	... . . . .	P I SRTV	QAL T VEAP	PAL T	AEDLKFVASFRR
AT1G19780	Q R I E V T T D	GGRS GF .F	RGL KE GDFC	CE L T	WAL DPKAGSN	... . . . .	P S SRTV	KAL T VEAP	PAL E	AEDLKFVASFRR
AT2G46450	Q K K T T G S H	EM G V R N	CCD Q D G D I C	CE L T	WAL F N G S . . . . .	... . . . .	P T SRTV	M T I T E V E A P	P L L P	DDIKFIASHLNV F
AT4G30360	Q R I E V T T D	GGRS GF .F	SII RP GDFC	CE L T	WAL L P K S T L N	... . . . .	P S SRTV	R A L V E V E A P	P A L R	AEDLKFVANOFRR
AT5G14870	Q I E S T T N	GGRS GF .F	STT RP GDFC	CE L T	WAL M P N S T L N	... . . . .	P S SRTV	R A L S V E V E A P	P A L S	AEDLKFVANOFRR
AT4G01010	Q M E I G E D	S V . . .	AVY K P S DFC	CE L T	WAL D P O S S S H F	... . . . .	P I SRTV	QAL T VEAP	P A L A	AEDLKFVASFRR
AT3G17690	Q M E I G E D	S V . . .	L P S E G D V C	CE L T	WAL C I S S I N P D	G T R I K M P P K G L	L V N R R N V	R C V T N V E A P	S L S	A D L E D V T S L S R F
AT2G46430	Q N I I T T T Y	GRTGF .F	SVD VAG DFC	CE L T	WAL D P I S . S O F	... . . . .	P I S S R T V	QAL T VEAP	P I S	AEDLKFVATQYRR
LOC_Os06g33570	Q N M M T T D	GRTGF .F	SDV K G DFC	CE L T	WAL D P T S V S S	... . . . .	P S SRTV	K T M S V E V E A P	P A L R	AEDLKFVATOFRR
LOC_Os06g33610	Q N M M T T D	GRTGF .F	SVD IAG D S C	CE L T	WAL Y I S I S . S O F	... . . . .	P I S S R T V	QAL T VEAP	P I S	AEDLKFVATQYRR
LOC_Os03g44440	Q C E I T T D	GGRS GF .F	RSL EES DFC	CE L T	WAL D P K A G L S	... . . . .	P S SRTV	R A L S V E V E A P	P A L S	DELKVFAGOFRR
LOC_Os12g28260	Q R E S T T D	GGRM GF .F	RGL KE GDFC	CE L T	WAL D P K A A A N	... . . . .	P L SRTV	K A I S V E V E A P	P A L S	AEDLKFVANOFRR
LOC_Os04g55080	Q C E I T T D	GGRS GF .F	KVQ KE G A C	CE L T	WAL D P K S A A N	... . . . .	P A SRTV	KAL T VEAP	P A L C	AEDLKFVASFRR
LOC_Os02g41710	Q Y D Y T T Q	GGRS GF .F	SCR GAGE GFC	CE L T	WAL D P R P A A S	... . . . .	P L SRTV	R A V S V E V E A P	P A L V	ADDLKFVASFRR
LOC_Os12g06570	Q E S T T D	GGRN GF .F	SIT RP GDFC	CE L T	WAL M P N P S L N F	... . . . .	P Q SRTV	R S V T V E V E A P	P A L R	AEDLKFVANOFRR
LOC_Os09g38580	Q K E S T T N	GGRN GF .F	SII RP GDFC	CE L T	WAL L P K T N V H F	... . . . .	P L SRTV	Q S I T V E V E A P	P A L R	AEDLKFVANOFRR
LOC_Os02g54760	Q K E S T T N	GGRN GF .F	STT K S DFC	CE L T	WAL G V A L P K P T V N	... . . . .	P S SRTV	K A L I V E V E A P	P A L Q	AEDLKFVANOFRR
LOC_Os06g08850	Q K E S T T D	GRTGF .F	SIT K T GDFC	CE L T	WAL G V A L P K P T V N	... . . . .	P S SRTV	K T I V T V E V E A P	P A L S	AEDLKFVASFRR
LOC_Os02g53340	Q K E I S A D	S K	A P H E G D V C	CE L T	WAL T Y I E H S S A N D	G G M R F H G M R L V A I R T V	R C L T N V E A P	V L R	S D L E E V T S O F S R F	
LOC_Os06g10580	Q R E I S A D	S N K	S P Q E G D V C	CE L T	WAL S W Y I E Q S S V N R D	G G K I K L H G M R L V A I R T V	R C L T N V E A P	V L R	S D L E E V T S O F S R F	
LOC_Os03g55100	Q K R T O P	L A K V V A T C M	G A G N L G D F C	CE L T	WAL S W C I R R P S L D R	... . . . .	P A S S A T	F E C V E A Q A P	C L D	P D L R F I T E H F R Y K F
LOC_Os01g57370	Q K I Q S O V	L R T G A T C C T	G P N S D F C	CE L T	WAL S W C M R P F L R	... . . . .	P A S S T I	V M E S T E A P	G L E	A D V K Y V T O H F R Y T F
LOC_Os05g42250	Q H I Q S O V	M R N G A T W C T	G P N S D F C	CE L T	WAL S W C M R P F M E R	... . . . .	P A S S T I	V T A E S T E A P	G L E	G D V K Y V T O H F R Y T F
GRMZM2G005791	Q H I Q S T T N	GRTGF .F	SIT KP GDFC	CE L T	WAL G V A L P R P T T N	... . . . .	P S SRTV	K A L I V E V E A P	P A L Q	AEDLKFVASFRR
GRMZM2G023037	Q C E I T T D	GGRS GF .F	KVQ KE G S C	CE L T	WAL D P K S A A N	... . . . .	P V S S R T V	Q A L T V E V E A P	P A L C	AEDLKFVASFRR
GRMZM2G066269	Q R E S T T D	GGRM GF .F	SNV EGG DFC	CE L T	WAL D P A S G S N	... . . . .	P V S S R T V	R T L S V E V E A P	S L R	R H L R E V A S O Y R R L
GRMZM2G068904	Q Y D Y T T Q	GGRS GF .F	SCR GAGE GFC	CE L T	WAL D P R P A A K	... . . . .	P L SRTV	R A V S V E V E A P	P A L V	ADDLKFVASFRR
GRMZM2G074317	Q K R T O P	L T K V V A T C M	G A G S L G D F C	CE L T	WAL S W C I R R P F V D R	... . . . .	P A S S A T	F E C V E A Q A P	C L G	P D L R F I T E H F R Y N F
GRMZM2G077828	Q S E I T T D	GGRS GF .F	RSL EEE DFC	CE L T	WAL D P R A G A C	... . . . .	P S SRTV	M A L S V E V E A P	P A L H	AEDLKFVANOFRR
GRMZM2G090528	Q H I Q S O V	L R N G A Y C C M	G P N S D F C	CE L T	WAL S W C I R R P F L R	... . . . .	P G S S T I	A T E S T E A P	G L D	A D V K Y V T O H F R Y T F
GRMZM2G129375	Q N M M T T N	GGRS GF .F	SDV K A G DFC	CE L T	WAL D P T S T S S	... . . . .	P S SRTV	K T M S V E V E A P	P A L R	AEDLRFVATOFRR
GRMZM2G135651	Q K E S T T N	GGRN GF .F	SII RP GDFC	CE L T	WAL L P K T N V H F	... . . . .	P L SRTV	R S H T V E V E A P	P A L R	AEDLKFVANOFRR
GRMZM2G141642	Q K E I S A D	S K	A P H D G D V C	CE L T	WAL T Y I E H S S A N D	G G K I K F Q G M R L V A I R T V	R C L T N V E A P	V L R	S D L E E V T S O F A R F	
GRMZM2G148118	Q K T I E I S A D	S G T	F S N V K G DFC	CE L T	WAL D P T S A S N	... . . . .	P G S S T V	R T L S V E V E A P	P A L R	AEDLKFVANOFRR
GRMZM5G858887	Q K R T O P	L T K V V A T C M	G A G N L G D F C	CE L T	WAL S W C I R R P F V D R	... . . . .	P A S S A T	F E C V E A Q A P	C L D	P D L R F I T E H F R Y K F
consensus>70	r G . l e s . t t d g g r . g f	l	g d f c g # e l l . w a l	l	p . s . r t v . . l e v # a f . l . a e d l k f ! a . q f r r . l					

	610	620	630	640	650	
AT5G53130	H S K Q	R T F R Y Y S	Q O R T W A A C	I O A A N R R Y I	K K L E E S	K E E N R L Q D A
AT3G48010	H S K K	O H T F R F Y S	H O R T W A A C	I O A A N R R Y M	K R K L A M E	A R Q E E D D Y F
AT2G23980	H S K K	O H T F R F Y S	H O R T W A A C	M O A A N R R Y I	K R K L E Q	R K E E E E E A A
AT2G24610	H S K K	O H T F R F Y S	H O R T W A A C	V O V A N R R Y K	K K L A K S	S L A F S S S Y D E E E A V A V A A T E E M S H E G
AT5G54250	V N E K V	R S A R Y Y S	P G R T W A A V A	V O L A W R R Y K	R R L T I T S	S F I R P R R P L S
AT2G28260	I T K Q	R K F R F Y S	H O R T W A A C	I O A A N R R H R	K R Y K T E	R A K E F H Y R F
AT5G15410	A N E R I	K R T A R Y Y S	S N R T W A A V N	I O A A N R R R R	K R R G E N	G G S M S . P V S
AT1G15990	H S R O V	O H T F R F Y S	Q O R T W A A C	I O A A N R R Y S	K R N A E L R R I E	K E E E L G
AT4G30560	H S R O V	O H T F R F Y S	Q O R T W A A I	I O A A N R R Y Y	K K K L E Q	R K E E E E G E
AT5G57940	H S R O V	O H T F R F Y S	H O R T W A A C	I O A A N R R Y C	K R K M E E	E A E A A A V S
AT3G17700	R S H R V	O G A I R Y D S	P Y R L R A A R Q	I O V A N R Y R R	R L H R L C	T P O S S Y S
AT1G01340	H S K Q	O H T F R F Y S	Q O R T W A A S V S	I O A A N R R Y C	K R K L A K S	R D E D R L R E A
AT1G19780	H S R O V	O H T F R F Y S	Q O R T W A A C	I O A A N R R H L	K R I A E L R R K E	E E E E M D
AT2G46450	Q R O K K	O H T F R L Y S	Q O R S W A A F	I O A A N R K H C	R K L S K T R D N	E N I
AT4G30360	H S K K	O H T F R F Y S	H H R T W A A C	I O A A N R R Y K	R V M E N N	T A I S M E N E E G E V G E E L V V V E
AT5G14870	Q S K K L	O H T F R F Y S	H O R T W A A C	V O S A N R R Y K	K R K L A K E	S L H S S G Y Y Y
AT4G01010	H S K K	O H T F R F Y S	Q O R T W A A S	I O A A N R R H C	K R K L A R S	T E E D R F R N A
AT3G17690	R S H R V	O G A I R Y E S	P Y R L R A A M Q	I O V A N R Y R K	Q L Q R L N	T A H S N S N
AT2G46430	H S K K	R H M F R F Y S	V O R T W A A C	I O A A N R K H C	R K L S K A	R E E E G K L H N T
AT2G46440	H S K K	R H M F R F Y S	L O N Q T W A A C	I O A A N R K H C	R K L S K A	R E E E G K L H N T
LOC_Os06g33570	H S K K	O H T F K F Y S	Q H R T W A A C	I O A A N R H Y C	K K K I E D S	R E K E K R L Q F A
LOC_Os06g33610	Y R K Q	R H T F R A P L N C S	. . . . .	. . . . .	S E I E E Q	N T L F
LOC_Os03g44440	H S K O V	O H T F R F Y S	Q O R T W A A T	I O A A N R R H L	K R R A E L R R R E	E E E E E
LOC_Os12g28260	H S K O	O H T F R F Y S	Q O R T W A A C	I O A A N R R H L	K R R A E Q R R R E	E E E E E
LOC_Os04g55080	H S R O V	O H T F R F Y S	Q H R T W A A C	I O A A N R R Y Y	K R K M A E Q R K E	E A A N R
LOC_Os02g41710	H S A R	R H T F R F Y S	H O R T W A A C	I O A A N R R N K	K R R A S M E	R M R G G E A R P
LOC_Os12g06570	H S K R L	O H T F R F Y S	H O R S W A A C	V O G A N R R Y K	K R K L A R E	S K Q E L Y Y M Q
LOC_Os09g38580	H S K K L	O H T F R F Y S	H H R T W A A C	I O A A N R Q H O	K R K L A E S	S R W E S Y S W P
LOC_Os02g54760	H S K R L	O H T F R F Y S	H H R T W A A C	I O A A N R Y Y K	K R K M A R D	S M R E S F C S M P
LOC_Os06g08850	H S R K	O H T F R F Y S	H H R T W A A C	I O A A N R R Y K	K R R L A K D	S I R E S F F S R R
LOC_Os02g53340	R N P R V	O G A I R Y E S	P Y R T I A A T R	I O V A N R Y R N	R R L K R A G	S K L N D Q S Y N S
LOC_Os06g10580	R N P L V	L G T I R Y E S	P Y W K N L A A N R	I O V A N R Y R K	R R L K R A E	Q R L O
LOC_Os03g55100	A N E K	K R T A R Y Y S	S N R T W A A V N	I O L A W R R Y K	A R T T D L A	S A A O P . P S A
LOC_Os01g57370	T N D R	R S S A R Y Y S	H G R T W A A V A	V O L A W R R Y K	K R K T L A S	S F I R P R R P L S
LOC_Os05g42250	T S D K	R S S A R Y Y S	H G R T W A A V A	V O L A W R R Y K	K R K T L A S	S F I R P R R P L S
GRMZM2G005791	H S K K	O H T F R F Y S	H H R T W A A C	I O A A N R R Y K	K R K M A K D	S M R E S F N S V R
GRMZM2G023037	H S K Q	O H T F R F Y S	Q O R T W A A C	I O A A N R R Y Y	K R K M A E Q R K E	E A A S R
GRMZM2G066269	H S K R	R H T F R F Y S	H O R T W A A C	V O A A N R H Y C	K R R L E E G	R E K E R M F R A A
GRMZM2G068904	H S A R	R H T F R F Y S	H O R T W A A C	I O A A N R R Y K	K R R A S M E	R V R E V R A
GRMZM2G074317	A N E K	K R T A R Y Y S	S N R T W A A V N	I O L A W R R Y R	A R T S A D L A P	P L V
GRMZM2G077828	H S K A V	O H T F R F Y S	Q O R T W A A T	I O A A N R R H L	K R R A E L R R R E	D E E L E
GRMZM2G090528	T N D K	R S S A R Y Y S	P G R T W A A V A	V O L A W R R Y K	K R K T L A S	S F I R P R R P L S
GRMZM2G129375	H S K K L	O H T F R F Y S	H H R T W A A C	I O A A N R H O	K R K L A E S	S R W E S Y S W S
GRMZM2G135651	H S K K	O H T F R F Y S	H H R T W A A C	I O A A N R H C	R K K I E D S	R E K E K R L Q F A
GRMZM2G141642	R N P R V	O G A I R Y E S	P Y R T I A A T R	I O V A N R Y R K	R R L K R A E K	S R L S E E T Y A S
GRMZM2G148118	H S K Q	O H T F R F Y S	Q O R T W A A C	I O A A N R H Y C	K R K L E E A	Y E K E K R L Q A A
GRMZM5G858887	A N E K	K R T A R Y Y S	S N R T W A A V N	I O L A W R R Y R	A R A S T D L A	A M A A P . P L A
consensus>70	. s	f r f y s . . w r t w a a . f i q . a w r r	r	e		

