

At3g06160
 At3g06220
 At4g34400
 At3g53310
 At5g57720
 At1g16640
 At5g60130
 At5g60140
 At3g46770
 At3g18960
 At4g01580
 At1g49475
 At2g24680 MAWNLAIIITLVGKDGTKLEATLRRENRLMCLGNGWKDLSISNGLKSGKSFTELELILENGTPMLSLSTQ
 At2g24690MMIQFSNNH
 At4g00260
 At4g31660
 At5g32460
 At2g16210
 At5g09780
 At2g35310
 At3g17010
 At5g18000
 At5g25465
 At5g25475
 At1g49480
 At3g18990
 At5g66980
 At4g33280MEENCEDCMKWEELLYWTHFQTLHFTQLLLPGFHNRLQFM
 At3g19185
 At5g58280
 At3g24650MKSLHVAANAGDLAEDCGILGGD
 At1g28300
 At5g35780

	1	10	20	30	40
At3g06160
At3g06220
At4g34400
At3g53310
At5g57720
At1g16640
At5g60130
At5g60140
At3g46770
At3g18960
At4g01580
At1g49475
At2g24680	STSHKSQKRECSKHSEKESISAVPSKGGKRNKARSNREERRDSSSAIQNRVFTFTP.EDIRDCILILPSQ	.....	.....	.....	.....
At2g24690	DNNIEFQRR.....	.....	.....	.....	.....
At4g00260
At4g31660
At5g32460
At2g16210
At5g09780
At2g35310
At3g17010
At5g18000
At5g25465
At5g25475
At1g49480
At3g18990
At5g66980
At4g33280	LLFQFLHVFTFLCFPPAFNLEIYTQMYQRGLSNFCFFLSKSVLTCGFKSPKIANSSIKITTFCNLLQVIPR	.....	.....	.....	.....
At3g19185
At5g58280
At3g24650	ADDIVLMDGIDEVGREIWLDDHGGDNNHVHGHQDDDLIVHHDPSIFYGDLPLTLPDFPCMSSSSSSSSTSPA	.....	.....	.....	.....
At1g28300
At5g35780

	50	60	70	80	90	100																
At3g06160	SYYNLLPRPLPKT	AILIGTG	.GRFWK	VAMTSKQE	...QVY	.FEQGWGNF	VADNQLKEGEFLT	FVVF	...													
At3g06220	SYYEHLPRRLPKT	AILTGTG	.GRVWK	VAMMSKRE	...QVY	.LARGWENF	VADNELKDGFLT	FVVF	...													
At4g34400	SYDHIPIHRRPKT	VILRGP	.GCSWK	VATEIKDD	...EVL	.FSQGWPKF	VRDNTLNDGFLT	FAY	...													
At3g53310	PFMAFLADPLPKT	VKQLQGLG	.GKLWT	VSLLKISG	...AAY	.LTRGWPKF	VEEHELKNGEFT	FVY	...													
At5g57720	SYNRYYPNPLPQT	AVLKNPE	.GRFWN	VQMTKSQE	...VIISL	.QEGWVKF	VKDNGLIDRDFLL	FY	...													
At1g16640	GFNEYFPAPFPIT	VDLDDYS	.GRSWT	VRMKKRGE	...KVF	.LTVGWENF	VKDNLEDGKYLQ	FY	...													
At5g60130	SFTRFLPKSLPET	VTVRSIS	.GNIWK	LELKKCCGDD	TEKFMV	VNGWKRI	VKDEDLKGDFLE	F	...													
At5g60140	SFNCLPKSLPKT	VTVRSIS	.GNIWK	LGFKKCGG	...EVER	FVMVSGWKKI	VRDENLNGDLS	F	...													
At3g46770	VSDKISGKPLPRK	VTVKSVSS	GNIWR	MEMKANGN	...TVFL	RDGWKKI	VKDENVTEP	IFLE	F													
At3g18960	RFVKLQGSKLS	EVVLET	PA.GFKRS	IKLKRIGE	...EIWF	HEGWSEF	EAHSIEEGHFL	F	...													
At4g01580	RFVKLQGSKLS	EVVLT	PTA.GYKRS	IKLKRIGE	...EIWF	HEGWSEF	EAHSIEEGHFL	F	...													
At1g49475	RFVRF	.GPKLTDN	VTLQTPV	.GFKRS	IRIKRIGD	...EVWF	EKGWSEF	EAHSLS	SDGHFL	F	...											
At2g24680	FIKANGINNLGEI	TLLGQNR	MKWFAY	LLSMSKDG	...SLAL	GSGWKI	CEANGVNTGEAFT	LEY	IDEQ	...												
At2g24690	FTRENGINKPKI	YLVGKDG	GSKWLAN	LLLENNRG	...RMT	LGDGKWSF	VKANGLKTGD	TYT	F	...												
At4g00260	FLKYIEGRYEQKT	AKLRSD	ASKRTWE	VKIDGQR	...LTDG	WKEF	AVSHDLRIGDI	IVV	F	...												
At4g31660	FSKRIQGRNEGR	TVELRTD	ASEKTWO	VKIQGR	...LTVG	WKEF	ASAHDFRVGDI	IVV	F	...												
At5g32460	YSNYLEGRQEGNA	AELRSD	ATEITWK	IKIDGR	...MTKG	WEEF	VAHNLQVDI	ILV	F	...												
At2g16210	DFSRSTFDKELSR	KMKIRA	QWNSWE	VGISKNPR	...FYF	MEKSGWEK	VRDNALGNS	ELLT	F	...												
At5g09780	DFVINFS	SDNELSG	DMKFR	VQWNSWK	VKISKNPR	...FYF	MEKSGWEK	VIDNAL	GDHEFLT	F	...											
At2g35310	DFVRSF	SNNELSR	KMKIK	ARWSSWE	VEICKNPR	...FYF	MEKSGWEK	VIDNAL	LGASEFLT	F	...											
At3g17010	SFISKVSEKDFSY	KMVI	RAQWKTWO	VEVSKNPT	...YYYI	ETR	GDWDLF	VSDNAL	LGQNEFIT	F	...											
At5g18000	HLIRISIDKSSSF	KMVL	RVPWGRSWQ	VKISKNP	...FHY	MEDR	GNWQF	VNDNGL	GENEYLT	F	...											
At5g25465	EFVRRTRG	.AFEHR	VVFS	VRWNSWO	WL	LEREEK	...DLFM	EEDWDEF	VDDNHL	GPNDNVF	F	...										
At5g25475	DFVRRTRG	.AFEHR	VVFS	VRWNSWO	WL	LEREKN	...ELFM	EEDWNEF	VDDNHL	GPNDNLF	F	...										
At1g49480	...PESTEPVN	KGYGG	STAIQSF	RK	.ESKAAE	...TPKV	LKRRG	KKK	VPNPEE	VNSSTPG	DD	...										
At3g18990	YPSPLPESTVPAN	KGY	.ASSAI	QTLF	TGPV	KAAEPT	TPKPI	KKRGR	KKK	NADPEE	INSAPR	DD	...									
At5g66980	AFIDMLEKPLPKE	AF	LVDEI	.GRLWC	VETK	TEDTEER	.FCVFF	TKGWQSF	ANDQS	LEFGDFL	V	...										
At4g33280	KFSTHCKRKLPI	VTLK	SPS	.GVTYN	V	GVEEDDE	...KTM	AFRFG	WDK	VKDH	SREENDLLV	F	...									
At3g19185	SSSSKPSPAKPR	TMRIP	VDFSEVRR	SKRAKELS	...DPYS	QFLEPL	RRRPR	RSSTWATY	IS	...												
At5g58280	QLLQQRNHKPIDK	ALLATA	EPRSSR	VRTVI	SSYR	...DDVV	VD	TGR	TSN	RRSRHS	STWATY	IS	...									
At3g24650	PVNAIVSSASSSS	AA	SSSTSSAAS	VA	LRSD	GEDTP	PNQNY	ASGNC	DDSS	GALQ	STASMEIP	L	...									
At1g28300	SYPVEQMAAVMNP	QPVY	LS	ECYPQIP	T	QSGSEFG	...SLV	GNP	CLWQER	GGFL	DP	MTK	MAR	I	...							
At5g35780	EEDSDKSFYRFP	RKI	IR	SSLV	KRRYT	Q	PNNGAS	...TSS	AVL	DLNLI	T	DY	DL	K	T	Q	Q	N	P	S	E	...

110

At3g06160	.....	DGHKSYE	V	SIY	.GRGDCK	.....															
At3g06220	.....	DGYKSYE	V	SIY	.GRGSCK	.....															
At4g34400	.....	NGAHIFE	V	SIFRGY	DACK	.....															
At3g53310	.....	DGHRTFE	V	SVF	.DRWGSK	.....															
At5g57720	.....	DGSRSFV	V	RIH	.RNLPL	.....															
At1g16640	.....	DRDRTFY	V	IY	.GHNMCS	.....															
At5g60130	.....	DGSSCFH	F	CIYEHRT	MCK	.....															
At5g60140	.....	DGSHFFN	F	SIFDHETT	CK	.....															
At3g46770	.....	DGYGVFH	F	CVIYEG	SMCK	.....															
At3g18960	.....	KENSSFR	V	IIFNVS	ACET	.....															
At4g01580	.....	KKNSSFR	V	IIFNAS	ACET	.....															
At1g49475	.....	EGDSCFR	V	VIFDVS	ASEI	.....															
At2g24680	ETAHKT	SQCVGEDDAL	...WKV	GLEMLN	SSDL	GPSRCD	IRDLP	APSST	NDQ	GKTEL	LARKK	VKRS	NTEI									
At2g24690	.TTPV	LSL	CFEYNTD	...TRV	GEES	SKSL	PAEPS	...SQE	KIVK	DDNN	KDES	STWK	REGNHL	R								
At4g00260	QESDL	LAFH	V	TLL	GPS	CCGI	QYGS													
At4g31660	HEGSL	VFH	V	TAL	GPS	CC	EIQYVP													
At5g32460	HEGNLLF	H	V	TPF	GLSF	CEILYS	QRDEK	VDKDT	TGK	VTR	SRT	V	K	N	...						
At2g16210	KGKMHFT	V	NIF	KLDG	KEMM															
At5g09780	KGQMSFT	V	KIF	NKDG	KEMM															
At2g35310	KGNMRF	V	NIF	MDG	KEML															
At3g17010	RGNMVFH	V	NIYE	QNG	LEMR															
At5g18000	EANMCFN	V	TIFE	ADG	TEML															
At5g25465	DDKMFLE	V	QIF	KNDG	NEII															
At5g25475	DETMNLE	V	QIF	KNG	VEII															
At1g49480	SENRSKF	Y	ES	SARK	RTVT															
At3g18990	PENRSKF	Y	ES	SARK	RTVT															
At5g66980	DGDSRF	S	V	TIF	AND	GCKK	DVG													
At4g33280	HGVSEFE	V	LV	FDG	QTL	CEKPT	SYF	V	VR	CG										
At3g19185	VYASDD	ARMY	AF	DRAE	KL															
At5g58280	PLHECK	F	ASYE	E	KV	G														
At3g24650	GCGEGGGDC	IDMMET	FGYMD	LLDS	NEFFD	TSAIF	SQDD	DTQ	PNL	MDQ	TLE	RQED	QVVV	P	M	M	N	S	G	G	D	M
At1g28300	KNAMMR	S	R	NN	SP	N	SS	P	S	E										
At5g35780	MSIET	PE	WV	FQ	V	MRYM	N	DA	ET	P										

At3g06160
At3g06220
At4g34400
At3g53310
At5g57720
At1g16640
At5g60130
At5g60140
At3g46770
At3g18960
At4g01580
At1g49475
At2g24680 EADASSSDNSCFVALVTASNLRKDALVTVCFISNLYSNFSLVVISILFGESVFSRLLYLCLYLPQDLTSS
At2g24690 KDS TSPSQNCTLTVTITPDSLEHGRLRLPLQFMTENSMNKPGEITLLG.....
At4g00260 CSVEKNNLGDGELCSVSGSSRNVRFRPRGFVRDNGVVGSGEIVLM.....
At4g31660 SCNNQENIS.....
At5g32460 GKNECSSVDTFVVPVTASNQRVDSFYLPFGFTTSSGSSKLCNEIILI.....
At2g16210
At5g09780
At2g35310
At3g17010
At5g18000
At5g25465
At5g25475
At1g49480
At3g18990
At5g66980
At4g33280
At3g19185
At5g58280
At3g24650 QMMNSSLEQDDD LAAVFLEWLKNNKE TVSAEDLRKVKIKKATIESAARRLGGGKEAMKQLLKLILEWVQT
At1g28300
At5g35780

At3g06160
At3g06220
At4g34400
At3g53310
At5g57720
At1g16640
At5g60130
At5g60140
At3g46770
At3g18960
At4g01580
At1g49475
At2g24680 VGLERKYREIVVTDERERRSWALDLRFNKSSDTFYISRGWRSFCDENGKKPGGVFVFKLVGNRETPVLSF
At2g24690 TDGARWMASLLEKKG.RMSLGKGWKDFAKANGLKTGDSITLEPIWEDRTPVLSI
At4g00260 NEKGRSWNFNLQKPSNGTVVYVRGGWVSPCDANGLKAGDNYTFKLIKRACTLVLR
At4g31660 NL SMKQS..... IK.....
At5g32460 DEKDRPSTLKLRYNKSSNRFCVSRGWRAFCCRNGYRTGCFLRIILVRKKGKTPVLR
At2g16210
At5g09780
At2g35310
At3g17010
At5g18000
At5g25465
At5g25475
At1g49480
At3g18990
At5g66980
At4g33280
At3g19185
At5g58280
At3g24650 NHLQRRRTTTTTNLSYQOSFQQDPFQNPNNNNLIPSDQTCFSPSTWVPPPPQQQAFVSDPGFGYMP
At1g28300
At5g35780

At3g06160
At3g06220
At4g34400
At3g53310
At5g57720
At1g16640
At5g60130
At5g60140
At3g46770
At3g18960
At4g01580
At1g49475
At2g24680 CSTESINDG.....TQGHKNNKYNMELKSKKKRMRCRDSTSPSQNRFM TLLTLTHDNLIKSRRQ
At2g24690 KSSSGKQGSEFSKESLSIKPSSGNMTKKVENNREASRKYPPRSRESSSAIQQFMALTPLRDIVSQVAHD
At4g00260 LPNEP.....
At4g31660
At5g32460 FPLE.....
At2g16210
At5g09780
At2g35310
At3g17010
At5g18000
At5g25465
At5g25475
At1g49480
At3g18990
At5g66980
At4g33280
At3g19185
At5g58280
At3g24650 APNYPPQPE.....
At1g28300
At5g35780

At3g06160
At3g06220
At4g34400
At3g53310
At5g57720
At1g16640
At5g60130
At5g60140
At3g46770
At3g18960
At4g01580
At1g49475
At2g24680 LP L P F M R.....ENGLVKPGIINLLGKDGTKWEVNL RREANGTMYLGKGWKDFTI ANGLKTG
At2g24690 LSIGEVINFRHKGDNMLRVSDLGSNCCGVQDLLAPSSNYDHDNIKPPSKKKVKKNNPEMEADYLS DHSCF
At4g00260
At4g31660
At5g32460
At2g16210
At5g09780
At2g35310
At3g17010
At5g18000
At5g25465
At5g25475
At1g49480
At3g18990
At5g66980
At4g33280
At3g19185
At5g58280
At3g24650
At1g28300
At5g35780

	120	130	140
At3g06160	ETRAVIQVEEISDD	.....	TEDDNLVSLH.....
At3g06220	ETRAVVHVEEISDE	.....	SESDNDSL.....
At4g34400	EISEVTELEEEEDSVISL	SSSED	TGAKSEMKNVPEGRDKGK
At3g53310	EVRAEIQAIPLSDSD	.....	SDSVVEDEK.....
At5g57720	EPTAPIKIQEISDD	.....	EDETNGDG.....
At1g16640	EYRDFPQVAVEVDDY	.....	.....
At5g60130	KIRRSSDQS.EEIKV	.....	ESDSDEQNQA.....
At5g60140	RLKRSSEQSKDIKV	.....	GSDCEEESQA.....
At3g46770	RMR.SPMEKEVIKV	.....	DSE.....
At3g18960	KYPLDAVHIIDSDDD	.....	.....
At4g01580	NYPLDAVHIIDSDDD	.....	.....
At1g49475	EYPLDDTD.DNREE	.....	.....
At2g24680	ESFTLEAVLENGTRMLSLVSTQSTSDRNQQGECLDSEKESNSTEPSSGKRKAMINRGVRR	..KSPASQ	
At2g24690	VSHVTTSSLHTNALSLEVKESLPIEPSIKPNISEDDNNKEEDIEENSS.FEREKNHWICI	..DSISSSQ	
At4g00260	KEEANVSLPEEPESDAERNLEKIQRKEKVKKNVTR.EAESSQD	.....
At4g31660	TELESSLDED	.....	KVNMGKFPKPKHVKKRIPAEAKSFSSD
At5g32460	RDEDNIEHEESVKEETNVESGKLRDRLLQKDPKN	..LCSTSQ	
At2g16210	QPPQSRSFASSK.QEEN	.....	DIK.EEVVSSN.RGQ
At5g09780	QPPQSRASFASSRVRKTEQ	.....	DVKREEEVLVSSDSRSGP
At2g35310	QPPQSMFMASSRPPKREQ	.....	GIP.....SLAT
At3g17010	KPKKFQTMGPSSG.IKKEEGENSLIDVKKEEESD	.....
At5g18000	RPR.KTITSSSGRNKREERKSIYKDVKKEEEEIESWSESSHPC	.....
At5g25465	DAPPEVEPETEPFHPTPKNS	.....
At5g25475	DVPLGVEPETEPFHP.TPKK	.....
At1g49480	AEERAVNAAKT	.....
At3g18990	AEERERAINAAKT	.....
At5g66980	VVSTDRSRVSLDEEPPDDIFTKPDRMRDCDCGQSNRKRKRDSVNE	.....
At4g33280	HAETKGIIDFNATSSRSRKRHFNPDDVETTPNQQLVISPVDNELE	.....
At3g19185	QSSLDSEYASFTKP	.....
At5g58280	AFKAAEKFORSLKSP	.....	HPYFV
At3g24650	FLPLLESPPSWPPPQSGMPHQFPMPPTSQYNQFGDPTGFNGYNNMP	.....
At1g28300	LVDSKRQLMMLNLKNNVQISDKKDSYQQSTFDNKKLRVLCCELKN	.....
At5g35780	RLIFERTLFNSDVKS	.....

	150	160	170	180	190	200
At3g06160	SPSNVSLDLSLNSDSSHSTSNVSLRSLNSDSLHGDAEIESDSEYSPENLPSASISVESVEV	.....			
At3g06220	SLVDVTPMPAEENSDDTEG	.....	DND	.....	SCDSVD	
At4g34400	SKVEVVEDSDDDEEEDSVYSESSEETETDIDSEFKVAKPTIPKSQKKGKKEQVVESSDDEEEDSDS	.....			
At3g53310	DSTDVVEDDDDEDEDEDDDGSDFEDEE	.....			ISQSLYP	
At5g57720	DPHMEEGDTDENMIVSLSLGSSDEVGDDDDDD	.....			YDTAICDEVNK	
At1g16640	ENGEDEEDGDDQDKHQ	.....			
At5g60130	SDDVLSLDEDD.DSD.YNCGEDN	..DSDDYADEAAVEKDDNDADDEDVDNVADDVPVEDD	.....		
At5g60140	SDDVIVLNSDDSDSDNDYSVEDDVAEDDDGLEDEVDVEAEDG.YDAKDSGLEDEDDDEAE	.....			
At3g46770	.EDVLVGNEES	.....			TKGLEES	
At3g18960	.....				
At4g01580	.....				
At1g49475	.....				
At2g24680	NRCVTLKLTNDNLKSRRLPLSFTRDNGLDKP.GMIFLLGKTGRKWEANLLREASGRIVLTGKGWKEFA	.....			
At2g24690	NRFLTITIPDSLKHGRLRLPLQFMIEENSMNKP.GEITVLGKDGAKWLVSLLEERRGRMSLDAS	.....			
At4g00260	PSCFVANVSPSSRLRYDTLYLPKRFMRENGVDKRCGEMILINEKGSWTLLDKVKKSSGTSLIKRGWRSFC	.....			
At4g31660	KSCFVAHVTDNLREDTLFLPRKFDSDGLIKGSNKIVLMNEEARTWTLILKFRNSK	.....			
At5g32460	DTNFVVPVTASNQRHDSFHLPKGLTSSGLSKLCKKIIFMDQGRSSILDLSYSISDDRFTVRRGWKAF	.....			
At2g16210	TAAAES.KG...RKLNLGKRAAKESQS	.....			
At5g09780	TAAETNRGGSYKRKLNFGKKAETQTYKRTER	.....			
At2g35310	TIAAESNGGGYKRKLNFEKKAEEESHN	.....			
At3g17010	...ESPG...RAEFLVRKKKTEDSKSKK	.....			
At5g18000	KTAEESTSGRLTQKQELNLRKKEADKTEKSK	.....			
At5g25465	.....HKETTTASASASASEFSN	.....			
At5g25475	.....HKETTPASSFASGSGCSANGG	.....			
At1g49480	.....				
At3g18990	.....				
At5g66980	DPHVLVDDKPEYVSTYKTKPEHSEKTORTVN	.....			
At4g33280	DLIDIDLDFDIDKILNPLLVASHTGYEQEEHINSIDTASAQLPVISPTSIVRVVSEGYPLSG	.....			
At3g19185	..MLQSHVTGGFWLGLPLPCKAHMPKRDVIMT	.....			
At5g58280	KSMVRSHVYSFVWGLPLSRFCADNFPEETMEIELE	.....			
At3g24650	YQYYPVAGQMRDQRLRLRLCSSLATKEARKRMARORRFLSHHHRRHNNNNNNNNNNQONQTOIGETCAAVA	.....			
At1g28300	SDVGSGLGRIVLPKRDAEANLPKLSKKEGIVVQMRDVFMSQS	.....			
At5g35780	.....GLSRLLLIP	.....			

210 220

At3g06160VNPTTSRQRSYKRKTIE.....N.....
 At3g06220VTPMPVEEIS.....
 At4g34400 DYIETFGQLDIEENSISEEDSSYPDKEDTATASFVKPKVANKVANLKRKVDPMIKN.....
 At3g53310IDEETATDAAVFEGNLD.....
 At5g57720ASGSSKKGRVTRKHRDSDLASIT.....
 At1g16640
 At5g60130DYVEAFDSRDHAKAD...DDED.....
 At5g60140DGYDAKDDDDGLEDEDDLEDEDD.....
 At3g46770PRRGGTSRRRAKLTKSHK.....
 At3g18960
 At4g01580
 At1g49475
 At2g24680 MANGLKSGELFTLEAILEKGTPLMSLVNTQSTNYRSQQGECSDSEKESSICAEPSRGNKKWKATNNRKE
 At2g24690SGQETREAEKNR...EESSLWELEKRTYCP
 At4g00260 SANGLRAGSIIITLKLIKKRATLVLRRLIPNEPEEANEVVSLSLSTEQESDEESIHKIS.....
 At4g31660LKSIVSTKDFNKIKR.....KESGDS...SQKVP.....
 At5g32460 CRNEHKTGCFRLRLILVQNGKTPPECNVYEG..TFSIPAKNSKKIKQVEYESAKEKN.....
 At2g16210SKRTEKVVRRARSDYAG.....
 At5g09780TQNSKRTERVVSKEVYAG.....
 At2g35310SKRTDKVFSVQRESAG.....
 At3g17010KMTNRNKVKKKSJKSK.....
 At5g18000TSKKKKVETVSNSEA.....
 At5g25465WRETHGCADIKNPEL.....
 At5g25475TNGRQKQRSSDVKNPER.....
 At1g49480
 At3g18990
 At5g66980RAGDTCDISWFEKKNHG.....
 At4g33280FKKMRRELSNDNLDQKAAGSNKK.....A
 At3g19185
 At5g58280
 At3g24650 PQLNVPVATTAGGTWYWPVPAVPPQLPVPVMTQLPTMDRAGSASAMPQQVVPDRRQGWKPEKNLRF
 At1g28300WSFKYKFWSNKSRMYVLENTG.....
 At5g35780

230 240 250 260

At3g06160 PHLYLDDPNNVCFETCLK.LRKFEELV.....HAQLVKDYGLIF..SDNV
 At3g06220DAS.....DS
 At4g34400 PERYLDDPKNIHFETNVK.NRLYELLV.....HAQLVKDYCLRF..GDYV
 At3g53310VEALTNPHFPPTTLK.NRIYELLI.....PANVVKDMNLEF..GSSI
 At5g57720 PQIFLADPNNPFFISTSS.CSRRILVI.....ARQVIKDYGLNF..DGTV
 At1g16640
 At5g60130 ERQYLDDRENPSFTLILNPKKKSOLLII.....PARVIKDYDLHF..PESI
 At5g60140 ERRYLDDHENPYFTMTLNPKKKSQLHI.....PAHVIRDYDLTF..PERI
 At3g46770 IYEHLDNKNLPSFPVDMTQNRTR...I.....PSLLIKDYNLTF..PNMV
 At3g18960IIDITGKEFVGTQGRKNNQSVN.....GGDTEHKSCKRS..R.DI
 At4g01580VIEITGKEF.....DTEHKSCKRP..R.DI
 At1g49475VMDDDEQGFTEGFESSDDDDGEVVD.....MDELLKKKKKKPP..RVNI
 At2g24680 RRDSSSAIQNRVYVTLTLPEDVRACTL.....ILPSQFMKANGINK..LGKK
 At2g24690 KRDSSSDVKNRFLTLTLPEDVVDKGNL.....HLPQCFMRINGINK..PGQI
 At4g00260 .RRKSLLSENRFVTLTLPYTIQSSLLNENLLCE.....SMFQRLPVPFTRMNGIN..EETKM
 At4g31660 .SSSSSVSEYRFLTLTVPAAALKDGRLL.....RVPKFKIKGNRMENLGMKKI
 At5g32460 .LESLSLSDNSSFVVSVTVSNLSEDL.....HLPIRLSRNLDDK.KIHEI
 At2g16210ASSSTAFAFTILFKQGYLVFLRIP.....NSVSK...DQVPDEKT
 At5g09780EPSSSVAGFKIFISIKSYIKSLAIP.....KPFK...NYMPKEKT
 At2g35310ASSSSVAEFVSMFIKSYLIYMAISY.....AEAENDFQDTSKPYEE
 At3g17010QVLDGVPEFKITIRKSYLKLFLAIP.....KHFVD...DHIPNKS
 At5g18000GTSSLIPEFKLTIKSHLLFLGIP.....KHFVD...MHMPTETT
 At5g25465YLLNPKNPYFVKTLTKGNDVLYVP.....KTVIKKYGLKFGPHLS
 At5g25475YLLNPNPYFVQAVTKRNDVLYVS.....RPVVQSYRLKFGPVKS
 At1g49480FEPTNPFYRVVLRPSYLYRGCII.....MYLPSGFAEKYLSGI
 At3g18990FEPTNPFYRVVLRPSYLYRGCII.....MYLPSGFAEKYLSGI
 At5g66980 FEESVYKPKPHFVRNITRGSLOKLELP.....LTFRLRNGIELEEDTEL
 At4g33280 LSLAKRAISPDGFLVFMKRSHVVSKEFL.....TIPYKWCVKMMLITRQ
 At3g19185LVDEEEESQAKYLAQKNGLSGGWR.....GFAIDHQLVDGDVAVF
 At5g58280DEEGEVYEAIVYIGRAGLSGGWK.....RFALDHKLLDDGDALLF
 At3g24650 LQKVLKQSDVGNLGRIVLPKKEAETHLPELEARDGISLAMEDIGTSRVWNMRYRFWPNKSRMYLLENTG
 At1g28300EFVKQNGAELIGDFLTIYEDESKNLY.....FAMNGNSGKQNEGRENES
 At5g35780FQQLIRNDFLTPAECRAIQKDEDN.....EDDKNIGVGTILVNQR

270 280 290 300 310 320
 At3g06160 DYID...GYGKLTAKTTKWADQRVCINKWQKICERNQFTE.NDSILCEILRNED..KVVYAIKIHIFRD
 At3g06220 DYY.....
 At4g34400 NYID...RFGKLSAKTAKWKDQRVCIKRWMRICKRNKLLK.EDRILCELLRKG...TFVYAIKLVHVRG
 At3g53310 KYID...GEGTLVGLRGKWADKRVCFKGWDRICRRNRLKKHQDTVECELLHDDQ..KMVHSIRVHVLRR
 At5g57720 NLID...GFGELTRKVGKWKDR.VVIYKWNEMFTRNKVKQ.GDVIICEIREE...DVVRSIKVHFVKN
 At1g16640
 At5g60130 TLVDP LVKKFGTLEKQIKIQTNGSVFVKGFSGSIIRRNKVKT.TDKMIFEIKKTGD.NNLVQTIKIHIISG
 At5g60140 TVVD...EMGALEKAIKIQKNGCIFVKGFSGFIRRNKMKM.TDKMICELKRTG..GNLVHTIKVKIISG
 At3g46770 IMRD...KIGILKRRRIVWKNRSVYLVNGIGSIIRRNHVKP.GNEVVVELKVMVNGYHGLVHEIKVHIKA
 At3g18960 ELDK..ILHLDVDMNPMHVLEKEEEDKR.....VFRG.....
 At4g01580 EFDK..ILHLDVDM...QVLKEEEDKR.....VLRG.....
 At1g49475 KSEN..VIILDDVEEIAMRSLEEEDLKKNLCKYVSPTKISAVPSSLNHIIVLRGNSCQAWQELCSKNLAN
 At2g24680 TLLGQNRKKWFAYLLSKSGF...VALGSGWKGFCEANGVKTGESFNLEYIDEQDTPVFKFCNSVVEYVK
 At2g24690 TLLGRGGMKWFAYLLSGDGT...VVVNGWKGFCANGVMLGETFVLEFIPKDDTNHVFKFYTK.....
 At4g00260 TLLDKHGKWLTLTRFEDDKRKRRLRMVGGWQGFIOANDVKANESIMLELIWEEETSVCVLFKFCSKVKLEIK
 At4g31660 TLLDKHGVEWVPLVVMYKGN.TQTRFSGGLKEFFKANGIEACKSFVLELV.....
 At5g32460 VLMNKEGRTWILSLKYSKYS.GRFRI TRGWKSFCEANGQKPGCTFLLKHLMSMTRFDQDGVAVDDK....
 At2g16210 VFKIHPNGKKSNNVVYL..ERFGAFSGGWRRRVVKEYPLAVGDTCKFTFKPKKELLVVSKE.....
 At5g09780 RVKIHPDGEKTKWVVFVVKERQIFSGGWKRLCKEYPPVFGDTCKFTLITPLELLLVSKP.....
 At2g35310 VMECGLRGVRDEIKLLCWMERFSGSRISSSWRHLQVFIHQTRADSLCKLTLRGDSLNSDDECEGVY..
 At3g17010 IFTIRHPNGG.SWKVLCVREIRTFISGGYSKCLAREFPLMVGDKCTFKLIKPFEFVLLTSKKNREKMDQC
 At5g18000 MFKLIHYPRGKKSVDVTVVTDVQSRFSGGWSRLAKELGLLVGDVCTFKLIKPTEMRVKVSKE.....
 At5g25465 PMHYLLPGDKIN.GSTKIYGGGSAPCFNGWVDLCRRYNLKTGDSMVCELEERSGELVTAVRVHFINK...
 At5g25475 TITYLLPGEKKEEENRIYNG..KPCFSGWSVLCRRHNLNIGDSVCELEERSGGVVTAVRVHFVKKD...
 At1g49480 SGFIKLQLGKQWVPRCLYKAGRAKFSGGWYEFLENNLGEQDVCVFELLRTRDFVLEVTAFRVNEYV..
 At3g18990 SGFIKVLQAEKQWVPRCLYKAGRAKFSGGWYEFLENNLGEQDVCVFELLRTRDFVLEVTAFRVNEYV..
 At5g66980 CDES...GKKWPLKILNHRGFKFSHESWLFCFKSHEMILTNNKCLFEFIVPSNGRCSEILVRIVSGRLP
 At4g33280 EVVMQVDQTKWEMKFNIFGARGSGGISTGWKKFVQDNNLRGDCVFEFANSETKPLHLNVYIFRGEETE
 At3g19185 HLIARTTFKVYIIRVNDANNDSDGNEVDNDDSDGNEEDRDNDNESNEKQKETVSEGRQLRSSGKRRRG
 At5g58280 ELVEPKKFKIYVFKGNENANLTSARKRGRATTPSEEEEEEDKDVEESGDEEHSRATKRSSVRLLRKRK
 At3g24650 DFVKTNGLQEGDFIVIYSDVKCGKYLIRGVKVDVQPSGQKPEAPPSSAATKRQNKSSQRNINNNSPSANVVV
 At1g28300 RERNHYEEAMLDIIPRDEEASIAMLIGNLNDHYIPNDLMDLTDLQHHQATSSSMPEDHAYVGSDD
 At5g35780 SKMWGLRFKIWAMEKDSGHGTLNYILNWGWNDVVKGNGLKAGDNI SLWTFRCRGLVLCFPLET.....

330
 At3g06160 AAAST.....
 At3g06220
 At4g34400 KDL.....
 At3g53310 DA.....
 At5g57720
 At1g16640
 At5g60130
 At5g60140
 At3g46770
 At3g18960
 At4g01580
 At1g49475 L.....
 At2g24680 FTSLP.....
 At2g24690
 At4g00260
 At4g31660
 At5g32460
 At2g16210
 At5g09780
 At2g35310
 At3g17010 MID.....
 At5g18000
 At5g25465
 At5g25475
 At1g49480
 At3g18990
 At5g66980 TTMTKNNYQVIDMQP
 At4g33280 RTNNVDPVYTISE..
 At3g19185 RK.....
 At5g58280 A.....
 At3g24650 ASPTSQTVK.....
 At1g28300 QVSFNDFEWW.....
 At5g35780