

SUPPLEMENTARY DATA

Fig. S1. (A) A binary scan of the area of a lobed *M. laciniatus* × *M. guttatus* F_2 leaf. (B) The convex hull area of the F_2 leaf from (A) is indicated by the red line. (C) The convex hull measurement of a round *M. guttatus*. Note the greater difference between the true area of a lobed leaf and its convex hull than that between the area of a round leaf and its convex hull.

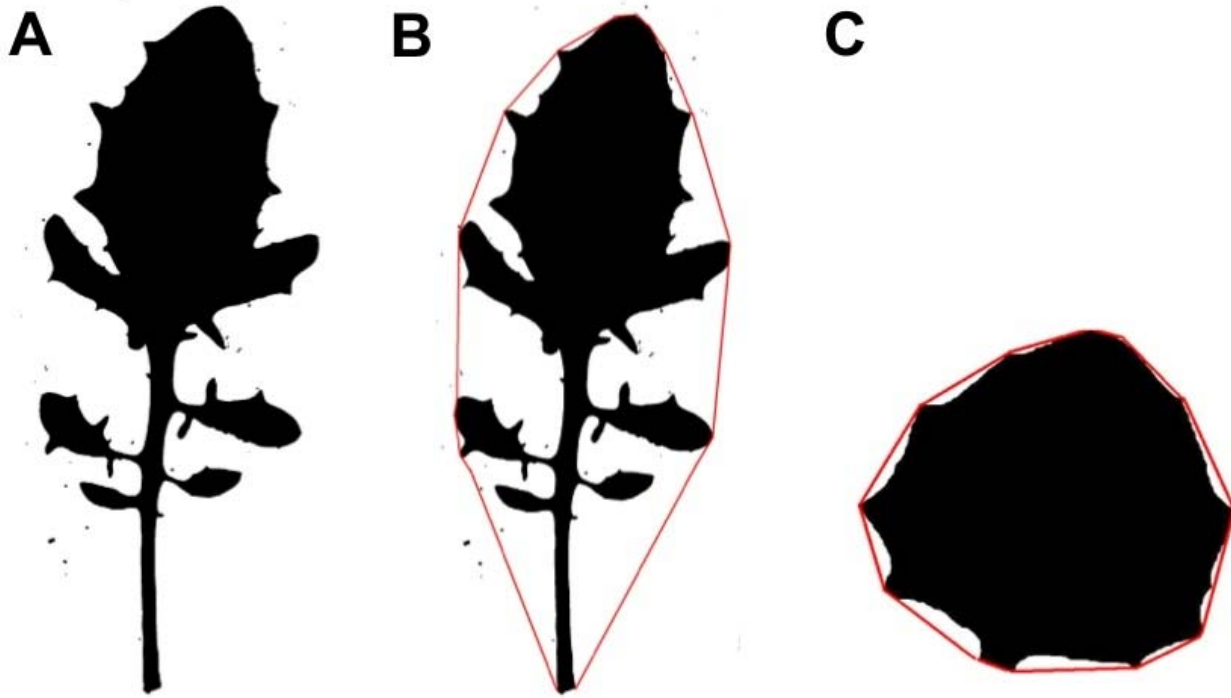


Table S1. The length of and number of genes in each significant *M. laciniatus* × *M. guttatus* QTL region.

QTL Region	Length (kb)	No. of genes
LG2.1	1075	105
LG2.2	1029	210
LG4.1	5108	906
LG4.2	578	40
LG11	2589	494

Table S2. A complete list of annotated *Mimulus* genes located under each of the three significant bulk segregant QTL regions including *Mimulus* ID number, *A. thaliana* ortholog, and predicted gene function. Genes related to leaf development are highlighted in green.

<i>M. guttatus</i> ID	Linkage Group	Position	<i>A. thaliana</i> ID	<i>A. thaliana</i> name	<i>A. thaliana</i> function
<i>Migut.B01176</i>	LG2	13894257	<i>AT3G15605.4</i>	Symbols:	nucleic acid binding
<i>Migut.B01177</i>	LG2	13916320	<i>AT2G38720.1</i>	Symbols: MAP65-5	microtubule-associated protein 65-5
<i>Migut.B01178</i>	LG2	13922912	<i>AT5G07050.1</i>	Symbols:	nodulin MtN21 /EamA-like transporter family protein
<i>Migut.B01179</i>	LG2	13986823	<i>AT5G06570.2</i>	Symbols:	alpha/beta-Hydrolases superfamily protein
<i>Migut.B01180</i>	LG2	13992262	<i>AT5G45140.1</i>	Symbols: NRPC2	nuclear RNA polymerase C2
<i>Migut.B01181</i>	LG2	14005108	<i>AT5G45140.1</i>	Symbols: NRPC2	nuclear RNA polymerase C2
<i>Migut.B01182</i>	LG2	14020899	<i>AT5G07020.1</i>	Symbols:	proline-rich family protein
<i>Migut.B01183</i>	LG2	14027355	<i>AT2G40840.1</i>	Symbols: DPE2	disproportionating enzyme 2
<i>Migut.B01184</i>	LG2	14029542	<i>AT5G03450.1</i>	Symbols:	Transducin/WD40 repeat-like superfamily protein
<i>Migut.B01185</i>	LG2	14031502	<i>AT5G38430.1</i>	Symbols:	Ribulose biphosphate carboxylase (small chain)
<i>Migut.B01186</i>	LG2	14035161	<i>AT5G07010.1</i>	Symbols: ATST2A, ST2A Symbols: AGL20, SOC1, ATSOC1	sulfotransferase 2A AGAMOUS-like 20
<i>Migut.B01187</i>	LG2	14045250	<i>AT2G45660.1</i>	Symbols: AMS	basic helix-loop-helix (bHLH) DNA-binding superfamily
<i>Migut.B01188</i>	LG2	14048511	<i>AT2G16910.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.B01189</i>	LG2	14067763	<i>AT3G12320.1</i>	Symbols:	D-aminoacid aminotransferase-like PLP-dependent
<i>Migut.B01190</i>	LG2	14085170	<i>AT5G27410.1</i>	Symbols:	5'-3' exonuclease family protein
<i>Migut.B01191</i>	LG2	14102766	<i>AT1G01880.2</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.B01192</i>	LG2	14116245	<i>AT3G12300.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.B01193</i>	LG2	14118885	<i>AT5G09860.1</i>	Symbols: AtTHO1, THO1, AtHPR1, HPR1	nuclear matrix protein-related
<i>Migut.B01194</i>	LG2	14142764	<i>AT5G13460.1</i>	Symbols: IQD11	IQ-domain 11
<i>Migut.B01195</i>	LG2	14145992	<i>AT1G74470.1</i>	Symbols:	Pyridine nucleotide-disulphide oxidoreductase family
<i>Migut.B01196</i>	LG2	14149069	<i>AT5G03990.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.B01197</i>	LG2	14152427	<i>AT3G08550.1</i>	Symbols: ELD1, ABI8, KOB1	elongation defective 1 protein
<i>Migut.B01198</i>	LG2	14186797	<i>AT3G51930.1</i>	Symbols:	Transducin/WD40 repeat-like superfamily protein
<i>Migut.B01199</i>	LG2	14239965	<i>AT5G63940.1</i>	Symbols:	Protein kinase protein with adenine nucleotide
<i>Migut.B01200</i>	LG2	14249557	<i>AT5G09270.2</i>	Symbols:	unknown protein; Has 25 Blast hits to 25 proteins
<i>Migut.B01201</i>	LG2	14251547	<i>AT5G63950.1</i>	Symbols: CHR24	chromatin remodeling 24
<i>Migut.B01202</i>	LG2	14264870	<i>AT1G64890.1</i>	Symbols:	Major facilitator superfamily protein
<i>Migut.B01203</i>	LG2	14267629	<i>AT4G33830.1</i>	Symbols:	Glycosyl hydrolase family 10 protein
<i>Migut.B01204</i>	LG2	14274207	<i>AT2G21100.1</i>	Symbols:	Disease resistance-responsive (dirigent-like protein)
<i>Migut.B01205</i>	LG2	14277087	<i>AT3G15750.1</i>	Symbols:	Essential protein Yae1, N-terminal
<i>Migut.B01206</i>	LG2	14279672	<i>AT2G38780.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.B01207</i>	LG2	14285463	<i>AT4G36950.1</i>	Symbols: MAPKKK21	mitogen-activated protein kinase kinase
<i>Migut.B01208</i>	LG2	14287773	<i>AT4G30880.1</i>	Symbols:	Bifunctional inhibitor/lipid-transfer protein/seed
<i>Migut.B01209</i>	LG2	14294697	<i>AT1G52340.1</i>	Symbols: ABA2, SIS4, GIN1, SDR1, ISI4, SRE1, ATABA2, ATSDR1	
<i>Migut.B01210</i>	LG2	14300635	<i>AT5G23395.1</i>	Symbols: MIA40	Cox19-like CHCH family protein
<i>Migut.B01211</i>	LG2	14303383	<i>AT3G54510.2</i>	Symbols:	Early-responsive to dehydration stress protein
<i>Migut.B01212</i>	LG2	14308636	<i>AT2G38760.1</i>	Symbols: ANNAT3, ANN3	annexin 3

<i>Migut.B01213</i>	LG2	14316081	<i>AT2G38750.1</i>	Symbols: ANNAT4	annexin 4
<i>Migut.B01214</i>	LG2	14325555	<i>AT5G12380.1</i>	Symbols: ANNAT8	annexin 8
<i>Migut.B01215</i>	LG2	14334407	<i>AT3G54500.1</i>	Symbols:	BEST Arabidopsis thaliana protein match is: dentin
<i>Migut.B01216</i>	LG2	14348232	<i>AT3G63480.2</i>	Symbols:	ATP binding microtubule motor family protein
<i>Migut.B01217</i>	LG2	14353460	<i>AT3G54490.1</i>	Symbols: RPB5E	RNA polymerase II fifth largest subunit, E
<i>Migut.B01218</i>	LG2	14360216	<i>AT3G07300.2</i>	Symbols:	NagB/RpiA/CoA transferase-like superfamily protein
<i>Migut.B01219</i>	LG2	14377224	<i>AT3G61790.1</i>	Symbols:	Protein with RING/U-box and TRAF-like domains
<i>Migut.B01220</i>	LG2	14384839	<i>AT3G54470.1</i>	Symbols:	uridine 5'-monophosphate synthase / UMP synthase
<i>Migut.B01221</i>	LG2	14404017	<i>AT3G07940.1</i>	Symbols:	Calcium-dependent ARF-type GTPase activating protein
<i>Migut.B01222</i>	LG2	14410357	<i>AT5G13810.1</i>	Symbols:	Glutaredoxin family protein
<i>Migut.B01223</i>	LG2	14423757	<i>AT5G13480.1</i>	Symbols: FY	Transducin/WD40 repeat-like superfamily protein
<i>Migut.B01224</i>	LG2	14434492	<i>AT3G57040.1</i>	Symbols: ARR9, ATRR4	response regulator 9
<i>Migut.B01225</i>	LG2	14437470	<i>AT3G54460.1</i>	Symbols:	SNF2 domain-containing protein / helicase domain-containing
<i>Migut.B01226</i>	LG2	14447992	<i>AT3G54450.1</i>	Symbols:	Major facilitator superfamily protein
<i>Migut.B01227</i>	LG2	14473813	<i>AT2G40030.1</i>	Symbols: NRPD1B, DRD3, ATNRPD1B, DMS5, NRPE1	nuclear RNA
<i>Migut.B01228</i>	LG2	14489579	<i>AT3G54440.1</i>	Symbols:	glycoside hydrolase family 2 protein
<i>Migut.B01229</i>	LG2	14498300	<i>AT5G63320.1</i>	Symbols: NPX1	nuclear protein X1
<i>Migut.B01230</i>	LG2	14505367	<i>AT5G63320.1</i>	Symbols: NPX1	nuclear protein X1
<i>Migut.B01231</i>	LG2	14512400	<i>AT5G63320.1</i>	Symbols: NPX1	nuclear protein X1
<i>Migut.B01232</i>	LG2	14521154	<i>AT4G15236.1</i>	Symbols:	ABC-2 and Plant PDR ABC-type transporter family
<i>Migut.B01233</i>	LG2	14524472	<i>AT1G49250.1</i>	Symbols:	ATP-dependent DNA ligase
<i>Migut.B01234</i>	LG2	14527309	<i>AT3G07960.1</i>	Symbols:	Phosphatidylinositol-4-phosphate 5-kinase family
<i>Migut.B01235</i>	LG2	14561115	<i>AT3G54400.1</i>	Symbols:	Eukaryotic aspartyl protease family protein
<i>Migut.B01236</i>	LG2	14568219	<i>AT3G54390.1</i>	Symbols:	sequence-specific DNA binding transcription factors
<i>Migut.B01237</i>	LG2	14572583	<i>AT1G08315.1</i>	Symbols:	ARM repeat superfamily protein
<i>Migut.B01238</i>	LG2	14574142	<i>AT4G38490.1</i>	Symbols:	unknown protein; Has 30201 Blast hits to 17322
<i>Migut.B01239</i>	LG2	14577820	<i>AT3G06730.1</i>	Symbols: TRX P, TRX z	Thioredoxin z
<i>Migut.B01240</i>	LG2	14580495	<i>AT3G56710.1</i>	Symbols: SIB1	sigma factor binding protein 1
<i>Migut.B01241</i>	LG2	14591061	<i>AT2G38730.1</i>	Symbols:	Cyclophilin-like peptidyl-prolyl cis-trans isomerase
<i>Migut.B01242</i>	LG2	14594811	<i>AT5G06970.1</i>	Symbols:	Protein of unknown function (DUF810)
<i>Migut.B01243</i>	LG2	14619050			
<i>Migut.B01244</i>	LG2	14634332	<i>AT1G20160.2</i>	Symbols: ATSBT5.2	Subtilisin-like serine endopeptidase family
<i>Migut.B01245</i>	LG2	14643465	<i>AT5G65750.1</i>	Symbols:	2-oxoglutarate dehydrogenase, E1 component
<i>Migut.B01246</i>	LG2	14649268	<i>AT1G05490.1</i>	Symbols: chr31	chromatin remodeling 31
<i>Migut.B01247</i>	LG2	14658470	<i>AT1G05490.1</i>	Symbols: chr31	chromatin remodeling 31
<i>Migut.B01248</i>	LG2	14667609	<i>AT1G78830.1</i>	Symbols:	Curculin-like (mannose-binding) lectin family protein
<i>Migut.B01249</i>	LG2	14675292	<i>AT3G15140.1</i>	Symbols:	Polynucleotidyl transferase, ribonuclease H-like
<i>Migut.B01250</i>	LG2	14704530	<i>AT2G41510.1</i>	Symbols: ATCKX1, CKX1	cytokinin oxidase/dehydrogenase 1
<i>Migut.B01251</i>	LG2	14714275	<i>AT1G12830.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.B01252</i>	LG2	14718064	<i>AT5G18475.1</i>	Symbols:	Pentatricopeptide repeat (PPR) superfamily protein
<i>Migut.B01253</i>	LG2	14728888	<i>AT2G41540.3</i>	Symbols: GPDHC1	6-phosphogluconate dehydrogenase family protein
<i>Migut.B01254</i>	LG2	14735706	<i>AT5G13470.1</i>	Symbols:	unknown protein; Has 1807 Blast hits to 1807 proteins
<i>Migut.B01255</i>	LG2	14737241	<i>AT5G13800.1</i>	Symbols: PPH, CRN1	pheophytinase
<i>Migut.B01256</i>	LG2	14745394	<i>AT3G63460.1</i>	Symbols:	transducin family protein / WD-40 repeat family

<i>Migut.B01257</i>	LG2	14758458	<i>AT3G51990.1</i>	Symbols:	Protein kinase superfamily protein
<i>Migut.B01258</i>	LG2	14768796	<i>AT1G01550.2</i>	Symbols: BPS1	Protein of unknown function (DUF793)
<i>Migut.B01259</i>	LG2	14772575	<i>AT1G01550.2</i>	Symbols: BPS1	Protein of unknown function (DUF793)
<i>Migut.B01260</i>	LG2	14803023	<i>AT5G13780.1</i>	Symbols:	Acyl-CoA N-acyltransferases (NAT) superfamily protein
<i>Migut.B01261</i>	LG2	14805649	<i>AT5G45500.2</i>	Symbols:	RNI-like superfamily protein
<i>Migut.B01262</i>	LG2	14806564	<i>AT5G45480.1</i>	Symbols:	Protein of unknown function (DUF594)
<i>Migut.B01263</i>	LG2	14827302	<i>AT3G50950.1</i>	Symbols: ZAR1	HOPZ-ACTIVATED RESISTANCE 1
<i>Migut.B01264</i>	LG2	14828395	<i>AT2G02250.1</i>	Symbols: AtPP2-B2, PP2-B2	phloem protein 2-B2
<i>Migut.B01265</i>	LG2	14837163	<i>AT5G13760.1</i>	Symbols:	Plasma-membrane choline transporter family protein
<i>Migut.B01266</i>	LG2	14850594	<i>AT3G24090.1</i>	Symbols:	glutamine-fructose-6-phosphate transaminase (isomerizing)s;sugar
<i>Migut.B01267</i>	LG2	14856983	<i>AT3G43800.1</i>	Symbols: ATGSTU27, GSTU27	glutathione S-transferase tau 27
<i>Migut.B01268</i>	LG2	14865815	<i>AT3G48530.1</i>	Symbols: KING1	SNF1-related protein kinase regulatory subunit
<i>Migut.B01269</i>	LG2	14891781	<i>AT3G63490.1</i>	Symbols:	Ribosomal protein L1p/L10e family
<i>Migut.B01270</i>	LG2	14894703	<i>AT5G15920.1</i>	Symbols: SMC5	structural maintenance of chromosomes 5
<i>Migut.B01271</i>	LG2	14910482	<i>AT5G13730.1</i>	Symbols: SIG4, SIGD	sigma factor 4
<i>Migut.B01272</i>	LG2	14914733	<i>AT5G13720.1</i>	Symbols:	Uncharacterised protein family (UPF0114)
<i>Migut.B01273</i>	LG2	14922578	<i>AT1G51410.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.B01274</i>	LG2	14933239	<i>AT5G19440.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.B01275</i>	LG2	14941352	<i>AT1G51410.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.B01276</i>	LG2	14947991	<i>AT5G13690.1</i>	Symbols: CYL1, NAGLU	alpha-N-acetylglucosaminidase family
<i>Migut.B01277</i>	LG2	14956262	<i>AT3G15660.2</i>	Symbols: ATGRX4, GRX4	glutaredoxin 4
<i>Migut.B01278</i>	LG2	14964291	<i>AT3G57450.1</i>	Symbols:	unknown protein; Has 65 Blast hits to 65 proteins
<i>Migut.B01279</i>	LG2	14967913	<i>AT5G42510.1</i>	Symbols:	Disease resistance-responsive (dirigent-like protein)
<i>Migut.B01280</i>	LG2	14969446	<i>AT5G13710.2</i>	Symbols: SMT1, CPH	sterol methyltransferase 1
<i>Migut.B01711</i>	LG2	18034024	<i>AT3G61220.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.B01712</i>	LG2	18035950	<i>AT3G61220.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.B01713</i>	LG2	18037955	<i>AT3G61220.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.B01714</i>	LG2	18040016	<i>AT3G61220.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.B01715</i>	LG2	18046258	<i>AT3G61220.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.B01716</i>	LG2	18049373	<i>AT4G00660.1</i>	Symbols: RH8, ATRH8	RNAhelicase-like 8
<i>Migut.B01717</i>	LG2	18055426	<i>AT2G26680.1</i>	Symbols:	CONTAINS InterPro DOMAIN/s: Methyltransferase FkbM
<i>Migut.B01718</i>	LG2	18060152	<i>AT3G61250.1</i>	Symbols: AtMYB17, MYB17	myb domain protein 17
<i>Migut.B01719</i>	LG2	18062846	<i>AT5G23750.2</i>	Symbols:	Remorin family protein
<i>Migut.B01720</i>	LG2	18064664	<i>AT1G01800.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.B01721</i>	LG2	18067736	<i>AT3G61220.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.B01722</i>	LG2	18070670	<i>AT4G00590.1</i>	Symbols:	N-terminal nucleophile aminohydrolases (Ntn hydrolases)
<i>Migut.B01723</i>	LG2	18074357	<i>AT4G00620.1</i>	Symbols:	Amino acid dehydrogenase family protein
<i>Migut.B01724</i>	LG2	18077319	<i>AT4G00630.1</i>	Symbols: KEA2, ATKEA2	K+ efflux antiporter 2
<i>Migut.B01725</i>	LG2	18088356	<i>AT2G45800.1</i>	Symbols:	GATA type zinc finger transcription factor family
<i>Migut.B01726</i>	LG2	18092694	<i>AT5G20165.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.B01727</i>	LG2	18093032	<i>AT4G19990.2</i>	Symbols: FRS1	FAR1-related sequence 1
<i>Migut.B01728</i>	LG2	18108196	<i>AT3G61270.1</i>	Symbols:	Arabidopsis thaliana protein of unknown function
<i>Migut.B01729</i>	LG2	18112853	<i>AT5G23850.1</i>	Symbols:	Arabidopsis thaliana protein of unknown function

<i>Migut.B01730</i>	LG2	18115520	<i>AT1G01750.1</i>	Symbols: ADF11	actin depolymerizing factor 11
<i>Migut.B01731</i>	LG2	18118393	<i>AT3G48480.1</i>	Symbols:	Cysteine proteinases superfamily protein
<i>Migut.B01732</i>	LG2	18122894	<i>AT4G11610.1</i>	Symbols:	C2 calcium/lipid-binding plant phosphoribosyltransferase
<i>Migut.B01733</i>	LG2	18127350	<i>AT5G31412.1</i>	Symbols:	hAT transposon superfamily protein
<i>Migut.B01734</i>	LG2	18128900	<i>AT2G38710.2</i>	Symbols:	AMMECR1 family
<i>Migut.B01735</i>	LG2	18141832	<i>AT1G35660.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.B01736</i>	LG2	18143209	<i>AT1G26520.1</i>	Symbols:	Cobalamin biosynthesis CobW-like protein
<i>Migut.B01737</i>	LG2	18144443	<i>AT2G10440.2</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.B01738</i>	LG2	18145552	<i>AT2G29910.1</i>	Symbols:	F-box/RNI-like superfamily protein
<i>Migut.B01739</i>	LG2	18146651	<i>AT2G45850.2</i>	Symbols:	AT hook motif DNA-binding family protein
<i>Migut.B01740</i>	LG2	18151012	<i>AT2G45860.1</i>	Symbols:	unknown protein; Has 32 Blast hits to 32 proteins
<i>Migut.B01741</i>	LG2	18152747	<i>AT4G15900.1</i>	Symbols: PRL1	pleiotropic regulatory locus 1
<i>Migut.B01742</i>	LG2	18159932	<i>AT1G01730.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.B01743</i>	LG2	18163529	<i>AT4G20960.1</i>	Symbols:	Cytidine/deoxycytidylate deaminase family protein
<i>Migut.B01744</i>	LG2	18165925	<i>AT3G58760.1</i>	Symbols:	Integrin-linked protein kinase family
<i>Migut.B01745</i>	LG2	18170173	<i>AT3G61350.1</i>	Symbols: SKIP4	SKP1 interacting partner 4
<i>Migut.B01746</i>	LG2	18173074	<i>AT1G32360.1</i>	Symbols:	Zinc finger (CCCH-type) family protein
<i>Migut.B01747</i>	LG2	18180014	<i>AT3G49050.1</i>	Symbols:	alpha/beta-Hydrolases superfamily protein
<i>Migut.B01748</i>	LG2	18190472	<i>AT4G00490.1</i>	Symbols: BAM2, BMY9	beta-amylase 2
<i>Migut.B01749</i>	LG2	18197073	<i>AT4G23340.1</i>	Symbols:	2-oxoglutarate (2OG) and Fe(II)-dependent oxygenase
<i>Migut.B01750</i>	LG2	18213497	<i>AT4G18750.1</i>	Symbols: DOT4	Pentatricopeptide repeat (PPR) superfamily
<i>Migut.B01751</i>	LG2	18216013	<i>AT4G00467.1</i>	Symbols:	Calcium-dependent lipid-binding (CaLB domain) family
<i>Migut.B01752</i>	LG2	18219350	<i>AT1G01700.1</i>	Symbols: ATROPGEF2, ROPGEF2	RHO guanyl-nucleotide exchange
<i>Migut.B01753</i>	LG2	18225241	<i>AT4G00490.1</i>	Symbols: BAM2, BMY9	beta-amylase 2
<i>Migut.B01754</i>	LG2	18232214	<i>AT1G32360.1</i>	Symbols:	Zinc finger (CCCH-type) family protein
<i>Migut.B01755</i>	LG2	18235144	<i>AT3G61370.1</i>	Symbols:	Protein of unknown function (DUF3245)
<i>Migut.B01756</i>	LG2	18237283	<i>AT2G45900.1</i>	Symbols:	Phosphatidylinositol N-acetylglucosaminyltransferase
<i>Migut.B01757</i>	LG2	18247154	<i>AT1G01690.1</i>	Symbols: ATPRD3, PRD3	putative recombination initiation defects
<i>Migut.B01758</i>	LG2	18256596	<i>AT2G45910.1</i>	Symbols:	U-box domain-containing protein kinase family protein
<i>Migut.B01759</i>	LG2	18262191	<i>AT4G05450.1</i>	Symbols: ATMFDX1, MFDX1	mitochondrial ferredoxin 1
<i>Migut.B01760</i>	LG2	18266954	<i>AT1G01650.1</i>	Symbols: SPPL4, ATSPPL4	SIGNAL PEPTIDE PEPTIDASE-LIKE 4
<i>Migut.B01761</i>	LG2	18271650	<i>AT3G61415.2</i>	Symbols: ASK21, SK21	SKP1-like 21
<i>Migut.B01762</i>	LG2	18281743	<i>AT2G45960.1</i>	Symbols: PIP1B, TMP-A, ATHH2, PIP1;2	plasma membrane intrinsic
<i>Migut.B01763</i>	LG2	18284575	<i>AT1G01610.1</i>	Symbols: ATGPAT4, GPAT4	glycerol-3-phosphate acyltransferase
<i>Migut.B01764</i>	LG2	18288930	<i>AT4G00370.1</i>	Symbols: ANTR2, PHT4;4	Major facilitator superfamily protein
<i>Migut.B01765</i>	LG2	18293796	<i>AT2G45970.1</i>	Symbols: CYP86A8, LCR	cytochrome P450, family 86, subfamily
<i>Migut.B01766</i>	LG2	18297203	<i>AT4G29910.1</i>	Symbols: ORC5, ATORC5	origin recognition complex protein
<i>Migut.B01767</i>	LG2	18300374	<i>AT4G00355.2</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.B01768</i>	LG2	18303574	<i>AT2G45990.2</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.B01769</i>	LG2	18306431	<i>AT2G45990.3</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.B01770</i>	LG2	18308707	<i>AT2G46000.1</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.B01771</i>	LG2	18312364	<i>AT3G61440.1</i>	Symbols: ATCYSC1, ARATH;BSAS3;1, CYSC1	cysteine synthase

<i>Migut.B01772</i>	LG2	18316740	<i>AT2G46020.2</i>	Symbols: CHR2, ATBRM, BRM, CHA2	transcription regulatory
<i>Migut.B01773</i>	LG2	18327087	<i>AT4G11400.1</i>	Symbols:	ARID/BRIGHT DNA-binding domain;ELM2 domain protein
<i>Migut.B01774</i>	LG2	18331344	<i>AT4G00340.1</i>	Symbols: RLK4	receptor-like protein kinase 4
<i>Migut.B01775</i>	LG2	18338559	<i>AT5G41350.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.B01776</i>	LG2	18340784	<i>AT5G26960.1</i>	Symbols:	Galactose oxidase/kelch repeat superfamily protein
<i>Migut.B01777</i>	LG2	18344407	<i>AT4G00330.1</i>	Symbols: CRCK2	calmodulin-binding receptor-like cytoplasmic
<i>Migut.B01778</i>	LG2	18347618	<i>AT2G46060.1</i>	Symbols:	transmembrane protein-related
<i>Migut.B01779</i>	LG2	18354940	<i>AT5G28350.1</i>	Symbols:	Quinoprotein amine dehydrogenase, beta chain-like;
<i>Migut.B01780</i>	LG2	18366197	<i>AT1G01580.1</i>	Symbols: FRO2, FRD1, ATFRO2	ferric reduction oxidase 2
<i>Migut.B01781</i>	LG2	18371946	<i>AT1G01580.1</i>	Symbols: FRO2, FRD1, ATFRO2	ferric reduction oxidase 2
<i>Migut.B01782</i>	LG2	18379169	<i>AT1G01580.1</i>	Symbols: FRO2, FRD1, ATFRO2	ferric reduction oxidase 2
<i>Migut.B01783</i>	LG2	18385339	<i>AT1G01580.1</i>	Symbols: FRO2, FRD1, ATFRO2	ferric reduction oxidase 2
<i>Migut.B01784</i>	LG2	18389485	<i>AT4G00300.2</i>	Symbols:	fringe-related protein
<i>Migut.B01785</i>	LG2	18393918	<i>AT1G01540.2</i>	Symbols:	Protein kinase superfamily protein
<i>Migut.B01786</i>	LG2	18400271	<i>AT4G01370.1</i>	Symbols: ATPMK4, MPK4	MAP kinase 4
<i>Migut.B01787</i>	LG2	18405502	<i>AT5G49690.1</i>	Symbols:	UDP-Glycosyltransferase superfamily protein
<i>Migut.B01788</i>	LG2	18408047	<i>AT4G00290.1</i>	Symbols:	Mechanosensitive ion channel protein
<i>Migut.B01789</i>	LG2	18413419	<i>AT2G46090.1</i>	Symbols:	Diacylglycerol kinase family protein
<i>Migut.B01790</i>	LG2	18417957	<i>AT4G01310.1</i>	Symbols:	Ribosomal L5P family protein
<i>Migut.B01791</i>	LG2	18420970	<i>AT4G01290.2</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.B01792</i>	LG2	18428129	<i>AT5G64130.1</i>	Symbols:	cAMP-regulated phosphoprotein 19-related protein
<i>Migut.B01793</i>	LG2	18431432	<i>AT1G01500.1</i>	Symbols:	Erythronate-4-phosphate dehydrogenase family protein
<i>Migut.B01794</i>	LG2	18436033	<i>AT1G01490.2</i>	Symbols:	Heavy metal transport/detoxification superfamily
<i>Migut.B01795</i>	LG2	18439650	<i>AT3G61510.1</i>	Symbols: ACS1, AT-ACS1	ACC synthase 1
<i>Migut.B01796</i>	LG2	18444293	<i>AT4G01270.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.B01797</i>	LG2	18451733	<i>AT4G01250.1</i>	Symbols: WRKY22, AtWRKY22	WRKY family transcription factor
<i>Migut.B01798</i>	LG2	18454813	<i>AT3G61520.1</i>	Symbols:	Pentatricopeptide repeat (PPR) superfamily protein
<i>Migut.B01799</i>	LG2	18457426	<i>AT3G61530.2</i>	Symbols: PANB2	Phosphoenolpyruvate carboxylase family protein
<i>Migut.B01800</i>	LG2	18463415	<i>AT3G61540.1</i>	Symbols:	alpha/beta-Hydrolases superfamily protein
<i>Migut.B01801</i>	LG2	18465155	<i>AT1G14620.1</i>	Symbols: DECOY	decoy
<i>Migut.B01802</i>	LG2	18468469	<i>AT1G01470.1</i>	Symbols: LEA14, LSR3	Late embryogenesis abundant protein
<i>Migut.B01803</i>	LG2	18471091	<i>AT3G61550.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.B01804</i>	LG2	18473898	<i>AT4G01240.1</i>	Symbols:	S-adenosyl-L-methionine-dependent methyltransferases
<i>Migut.B01805</i>	LG2	18476740	<i>AT4G23630.1</i>	Symbols: BTI1, RTNLB1	VIRB2-interacting protein 1
<i>Migut.B01806</i>	LG2	18479937	<i>AT2G46180.1</i>	Symbols: GC4	golgin candidate 4
<i>Migut.B01807</i>	LG2	18489227	<i>AT2G46200.2</i>	Symbols:	unknown protein; Has 35333 Blast hits to 34131
<i>Migut.B01808</i>	LG2	18497397	<i>AT2G46200.2</i>	Symbols:	unknown protein; Has 35333 Blast hits to 34131
<i>Migut.B01809</i>	LG2	18503595	<i>AT5G52900.1</i>	Symbols:	unknown protein; Has 30201 Blast hits to 17322
<i>Migut.B01810</i>	LG2	18512384	<i>AT2G46210.1</i>	Symbols:	Fatty acid/sphingolipid desaturase
<i>Migut.B01811</i>	LG2	18514947	<i>AT5G24090.1</i>	Symbols: ATCHIA, CHIA	chitinase A
<i>Migut.B01812</i>	LG2	18516394	<i>AT2G46220.1</i>	Symbols:	Uncharacterized conserved protein (DUF2358)
<i>Migut.B01813</i>	LG2	18519856	<i>AT2G46225.1</i>	Symbols: ABIL1	ABI-1-like 1

<i>Migut.B01814</i>	LG2	18522685	<i>AT2G46230.1</i>	Symbols:	PIN domain-like family protein
<i>Migut.B01815</i>	LG2	18524807	<i>AT4G01210.1</i>	Symbols:	glycosyl transferase family 1 protein
<i>Migut.B01816</i>	LG2	18546629	<i>AT3G61590.2</i>	Symbols: HWS	Galactose oxidase/kelch repeat superfamily protein
<i>Migut.B01817</i>	LG2	18551944	<i>AT5G41620.1</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.B01818</i>	LG2	18554123	<i>AT5G41620.1</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.B01819</i>	LG2	18556314	<i>AT5G41650.1</i>	Symbols:	Lactoylglutathione lyase / glyoxalase I family
<i>Migut.B01820</i>	LG2	18559315	<i>AT3G61600.1</i>	Symbols: ATPOB1, POB1	POZ/BTB containin G-protein 1
<i>Migut.B01821</i>	LG2	18563001	<i>AT2G04520.1</i>	Symbols:	Nucleic acid-binding, OB-fold-like protein
<i>Migut.B01822</i>	LG2	18564677	<i>AT5G35680.3</i>	Symbols:	Nucleic acid-binding, OB-fold-like protein
<i>Migut.B01823</i>	LG2	18566012	<i>AT4G05400.2</i>	Symbols:	copper ion binding
<i>Migut.B01824</i>	LG2	18569328	<i>AT4G01150.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.B01825</i>	LG2	18572845	<i>AT4G01140.1</i>	Symbols:	Protein of unknown function (DUF1191)
<i>Migut.B01826</i>	LG2	18573880	<i>AT4G01130.1</i>	Symbols:	GDSL-like Lipase/Acylhydrolase superfamily protein
<i>Migut.B01827</i>	LG2	18576302	<i>AT4G01130.1</i>	Symbols:	GDSL-like Lipase/Acylhydrolase superfamily protein
<i>Migut.B01828</i>	LG2	18584141	<i>AT2G46270.1</i>	Symbols: GBF3	G-box binding factor 3
<i>Migut.B01829</i>	LG2	18591793	<i>AT3G61610.1</i>	Symbols:	Galactose mutarotase-like superfamily protein
<i>Migut.B01830</i>	LG2	18595018	<i>AT3G61620.2</i>	Symbols: RRP41	3'-5'-exoribonuclease family protein
<i>Migut.B01831</i>	LG2	18592505	<i>AT1G64230.2</i>	Symbols: UBC28	ubiquitin-conjugating enzyme 28
<i>Migut.B01832</i>	LG2	18600965	<i>AT4G27950.1</i>	Symbols: CRF4	cytokinin response factor 4
<i>Migut.B01833</i>	LG2	18603638	<i>AT2G16070.2</i>	Symbols: PDV2 Symbols: ATMTM1, MTM1	plastid division2 manganese tracking factor for mitochondrial
<i>Migut.B01834</i>	LG2	18605301	<i>AT4G27940.1</i>		
<i>Migut.B01835</i>	LG2	18608351	<i>AT5G41761.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.B01836</i>	LG2	18610136	<i>AT5G41760.2</i>	Symbols:	Nucleotide-sugar transporter family protein
<i>Migut.B01837</i>	LG2	18614025	<i>AT1G64300.2</i>	Symbols:	Protein kinase family protein
<i>Migut.B01838</i>	LG2	18617455	<i>AT1G61560.2</i>	Symbols: MLO6	Seven transmembrane MLO family protein
<i>Migut.B01839</i>	LG2	18618094	<i>AT4G01100.1</i>	Symbols: ADNT1	adenine nucleotide transporter 1
<i>Migut.B01840</i>	LG2	18625650	<i>AT2G46370.2</i>	Symbols: JAR1, FIN219	Auxin-responsive GH3 family protein
<i>Migut.B01841</i>	LG2	18633142	<i>AT3G61660.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.B01842</i>	LG2	18639376	<i>AT3G61670.1</i>	Symbols:	Protein of unknown function (DUF3133)
<i>Migut.B01843</i>	LG2	18646285	<i>AT3G61670.1</i>	Symbols:	Protein of unknown function (DUF3133)
<i>Migut.B01844</i>	LG2	18650663	<i>AT2G46390.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.B01845</i>	LG2	18658775	<i>AT4G01070.1</i>	Symbols: GT72B1, UGT72B1	UDP-Glycosyltransferase superfamily
<i>Migut.B01846</i>	LG2	18666837	<i>AT2G45400.1</i>	Symbols: BEN1	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.B01847</i>	LG2	18668773	<i>AT4G11070.1</i>	Symbols: WRKY41, AtWRKY41	WRKY family transcription factor
<i>Migut.B01848</i>	LG2	18674282	<i>AT1G05950.1</i>	Symbols:	unknown protein; Has 50 Blast hits to 45 proteins
<i>Migut.B01849</i>	LG2	18679203	<i>AT4G01060.2</i>	Symbols: ETC3, CPL3	CAPRICE-like MYB3
<i>Migut.B01850</i>	LG2	18681823	<i>AT4G01037.1</i>	Symbols: WTF1, AtWTF1	Ubiquitin carboxyl-terminal hydrolase
<i>Migut.B01851</i>	LG2	18687008	<i>AT4G01030.1</i>	Symbols:	pentatricopeptide (PPR) repeat-containing protein
<i>Migut.B01852</i>	LG2	18690020	<i>AT1G01350.1</i>	Symbols:	Zinc finger (CCCH-type/C3HC4-type RING finger)
<i>Migut.B01853</i>	LG2	18692605	<i>AT1G01360.1</i>	Symbols: RCAR1, PYL9	regulatory component of ABA receptor
<i>Migut.B01854</i>	LG2	18702011	<i>AT3G61690.1</i>	Symbols:	nucleotidyltransferases
<i>Migut.B01855</i>	LG2	18707132	<i>AT5G63630.1</i>	Symbols:	P-loop containing nucleoside triphosphate hydrolases
<i>Migut.B01856</i>	LG2	18719763	<i>AT2G46420.1</i>	Symbols:	Plant protein 1589 of unknown function

<i>Migut.B01857</i>	LG2	18722866	<i>AT4G23850.1</i>	Symbols: LACS4	AMP-dependent synthetase and ligase family
<i>Migut.B01858</i>	LG2	18728523	<i>AT5G59310.1</i>	Symbols: LTP4	lipid transfer protein 4
<i>Migut.B01859</i>	LG2	18729433	<i>AT3G61710.1</i>	Symbols: ATATG6, ATG6, BECLIN1, AtBECLIN1	AUTOPHAGY 6
<i>Migut.B01860</i>	LG2	18734573	<i>AT3G28460.1</i>	Symbols:	methyltransferases
<i>Migut.B01861</i>	LG2	18736739	<i>AT2G25410.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.B01862</i>	LG2	18741031	<i>AT5G36001.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.B01863</i>	LG2	18743116	<i>AT2G46494.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.B01864</i>	LG2	18745303	<i>AT2G46495.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.B01865</i>	LG2	18746782	<i>AT2G46494.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.B01866</i>	LG2	18748330	<i>AT5G53110.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.B01867</i>	LG2	18750643	<i>AT2G46494.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.B01868</i>	LG2	18752037	<i>AT2G46495.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.B01869</i>	LG2	18754386	<i>AT2G46495.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.B01870</i>	LG2	18756900	<i>AT5G36000.1</i>	Symbols:	BEST Arabidopsis thaliana protein match is: reduced
<i>Migut.B01871</i>	LG2	18764416	<i>AT1G01320.2</i>	Symbols:	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.B01872</i>	LG2	18777919	<i>AT5G42080.1</i>	Symbols: ADL1, ADL1A, AG68, DRP1A, RSW9, DL1	dynamnin-like
<i>Migut.B01873</i>	LG2	18785784	<i>AT3G61770.1</i>	Symbols: Symbols: ATP14K GAMMA 4, UBDK GAMMA 4, PI4K GAMMA 4	Acid phosphatase/vanadium-dependent haloperoxidase-related
<i>Migut.B01874</i>	LG2	18788261	<i>AT2G46500.2</i>	Symbols:	phosphoinositide
<i>Migut.B01875</i>	LG2	18792146	<i>AT4G23930.1</i>	Symbols:	Late embryogenesis abundant (LEA) hydroxyproline-rich
<i>Migut.B01876</i>	LG2	18793180	<i>AT3G61780.1</i>	Symbols: emb1703	embryo defective 1703
<i>Migut.B01877</i>	LG2	18798120	<i>AT3G61790.1</i>	Symbols:	Protein with RING/U-box and TRAF-like domains
<i>Migut.B01878</i>	LG2	18801743	<i>AT3G61800.1</i>	Symbols:	CONTAINS InterPro DOMAIN/s: Protein of unknown
<i>Migut.B01879</i>	LG2	18805732	<i>AT1G01300.1</i>	Symbols:	Eukaryotic aspartyl protease family protein
<i>Migut.B01880</i>	LG2	18809612	<i>AT1G01290.2</i>	Symbols: CNX3	cofactor of nitrate reductase and xanthine
<i>Migut.B01881</i>	LG2	18811924	<i>AT1G01280.1</i>	Symbols: CYP703A2, CYP703	cytochrome P450, family 703, subfamily
<i>Migut.B01882</i>	LG2	18814283	<i>AT4G30990.1</i>	Symbols:	ARM repeat superfamily protein
<i>Migut.B01883</i>	LG2	18839623	<i>AT4G00980.1</i>	Symbols:	zinc knuckle (CCHC-type) family protein
<i>Migut.B01884</i>	LG2	18842701	<i>AT2G46510.1</i>	Symbols: ATAIB, AIB	ABA-inducible BHLH-type transcription
<i>Migut.B01885</i>	LG2	18849344	<i>AT2G46520.1</i>	Symbols:	cellular apoptosis susceptibility protein, putative
<i>Migut.B01886</i>	LG2	18857515	<i>AT4G23980.2</i>	Symbols: ARF9	auxin response factor 9
<i>Migut.B01887</i>	LG2	18863112	<i>AT5G53030.2</i>	Symbols:	unknown protein; CONTAINS InterPro DOMAIN/s: Protein
<i>Migut.B01888</i>	LG2	18864357	<i>AT2G46550.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.B01889</i>	LG2	18866988	<i>AT1G01220.1</i>	Symbols: FKGP, AtFKGP	L-fucokinase/GDP-L-fucose pyrophosphorylase
<i>Migut.B01890</i>	LG2	18872521	<i>AT2G46560.1</i>	Symbols:	transducin family protein / WD-40 repeat family
<i>Migut.B01891</i>	LG2	18884500	<i>AT4G09510.1</i>	Symbols: CINV2	cytosolic invertase 2
<i>Migut.B01892</i>	LG2	18887720	<i>AT4G10810.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.B01893</i>	LG2	18888912	<i>AT5G08510.1</i>	Symbols:	Pentatricopeptide repeat (PPR) superfamily protein
<i>Migut.B01894</i>	LG2	18892548	<i>AT2G46590.1</i>	Symbols: DAG2	Dof-type zinc finger DNA-binding family protein
<i>Migut.B01895</i>	LG2	18895613	<i>AT1G01230.1</i>	Symbols:	ORMDL family protein
<i>Migut.B01896</i>	LG2	18903851	<i>AT4G00910.1</i>	Symbols:	Aluminium activated malate transporter family protein
<i>Migut.B01897</i>	LG2	18906026	<i>AT1G01225.1</i>	Symbols:	NC domain-containing protein-related

<i>Migut.B01898</i>	LG2	18908130	<i>AT3G18750.3</i>	Symbols: WNK6	with no lysine (K) kinase 6
<i>Migut.B01899</i>	LG2	18912155	<i>AT4G07950.1</i>	Symbols:	DNA-directed RNA polymerase, subunit M, archaeal
<i>Migut.B01900</i>	LG2	18914578	<i>AT2G46600.1</i>	Symbols:	Calcium-binding EF-hand family protein
<i>Migut.B01901</i>	LG2	18915364	<i>AT3G61860.1</i>	Symbols: ATRSP31, RSP31, At-RS31, RS31	RNA-binding (RRM/RBD/RNP
<i>Migut.B01902</i>	LG2	18920798	<i>AT4G00900.1</i>	Symbols: ECA2, ATECA2	ER-type Ca ²⁺ -ATPase 2
<i>Migut.B01903</i>	LG2	18925004	<i>AT1G76390.2</i>	Symbols:	ARM repeat superfamily protein
<i>Migut.B01904</i>	LG2	18939820	<i>AT4G09650.1</i>	Symbols: ATPD	ATP synthase delta-subunit gene
<i>Migut.B01905</i>	LG2	18942891	<i>AT1G01200.1</i>	Symbols: ATRABA3, ATRAB-A3, RABA3	RAB GTPase homolog A3
<i>Migut.B01906</i>	LG2	18949300			
<i>Migut.B01907</i>	LG2	18955077	<i>AT3G61880.2</i>	Symbols: CYP78A9	cytochrome p450 78a9
<i>Migut.B01908</i>	LG2	18963031	<i>AT3G52590.1</i>	Symbols: UBQ1, EMB2167, ERD16, HAP4	ubiquitin extension protein
<i>Migut.B01909</i>	LG2	18971780	<i>AT2G46700.2</i>	Symbols: ATCRK3, CRK3	CDPK-related kinase 3
<i>Migut.B01910</i>	LG2	18979804	<i>AT5G60490.1</i>	Symbols: FLA12	FASCICLIN-like arabinogalactan-protein 12
<i>Migut.B01911</i>	LG2	18989731	<i>AT2G46710.1</i>	Symbols:	Rho GTPase activating protein with PAK-box/P21-Rho-binding
<i>Migut.B01912</i>	LG2	18996298	<i>AT4G00870.1</i>	Symbols:	basic helix-loop-helix (bHLH) DNA-binding superfamily
<i>Migut.B01913</i>	LG2	18999476	<i>AT1G01180.1</i>	Symbols:	S-adenosyl-L-methionine-dependent methyltransferases
<i>Migut.B01914</i>	LG2	19009515	<i>AT1G01180.1</i>	Symbols:	S-adenosyl-L-methionine-dependent methyltransferases
<i>Migut.B01915</i>	LG2	19042200	<i>AT4G00840.1</i>	Symbols:	DHHC-type zinc finger family protein
<i>Migut.B01916</i>	LG2	19049590	<i>AT1G01140.1</i>	Symbols: CIPK9, SnRK3.12, PKS6	CBL-interacting protein kinase
<i>Migut.B01917</i>	LG2	19054791	<i>AT1G01120.1</i>	Symbols: KCS1	3-ketoacyl-CoA synthase 1
<i>Migut.B01918</i>	LG2	19057634			
<i>Migut.B01919</i>	LG2	19058190	<i>AT4G00830.2</i>	Symbols:	RNA-binding (RRM/RBD/RNP motifs) family protein
<i>Migut.B01920</i>	LG2	19062993	<i>AT2G46760.1</i>	Symbols:	D-arabinono-1,4-lactone oxidase family protein
<i>Migut.D00335</i>	LG4	1516251	<i>AT1G09550.1</i>	Symbols:	Pectinacetyltransferase family protein
<i>Migut.D00336</i>	LG4	1518932	<i>AT3G51895.1</i>	Symbols: SULTR3;1, AST12	sulfate transporter 3;1
<i>Migut.D00337</i>	LG4	1529891	<i>AT3G63280.2</i>	Symbols: ATNEK4, NEK4	NIMA-related kinase 4
<i>Migut.D00338</i>	LG4	1534361	<i>AT3G63290.1</i>	Symbols:	2-oxoglutarate (2OG) and Fe(II)-dependent oxygenase
<i>Migut.D00339</i>	LG4	1538450	<i>AT3G63300.1</i>	Symbols: FKD1	FORKED 1
<i>Migut.D00340</i>	LG4	1550406	<i>AT3G26922.1</i>	Symbols:	F-box/RNI-like superfamily protein
<i>Migut.D00341</i>	LG4	1554914	<i>AT1G03160.2</i>	Symbols: FZL	FZO-like
<i>Migut.D00342</i>	LG4	1559370	<i>AT2G38840.1</i>	Symbols:	Guanylate-binding family protein
<i>Migut.D00343</i>	LG4	1565287	<i>AT2G38830.1</i>	Symbols:	Ubiquitin-conjugating enzyme/RWD-like protein
<i>Migut.D00344</i>	LG4	1571622	<i>AT3G22970.1</i>	Symbols:	Protein of unknown function (DUF506)
<i>Migut.D00345</i>	LG4	1575350	<i>AT3G54560.1</i>	Symbols: HTA11	histone H2A 11
<i>Migut.D00346</i>	LG4	1578682	<i>AT1G03055.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D00347</i>	LG4	1583724	<i>AT3G63430.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D00348</i>	LG4	1592814	<i>AT2G38290.1</i>	Symbols: ATAMT2, AMT2;1, AMT2	ammonium transporter 2
<i>Migut.D00349</i>	LG4	1597623	<i>AT3G63410.1</i>	Symbols: APG1, VTE3, IEP37, E37	S-adenosyl-L-methionine-dependent
<i>Migut.D00350</i>	LG4	1599800	<i>AT3G63400.2</i>	Symbols:	Cyclophilin-like peptidyl-prolyl cis-trans isomerase
<i>Migut.D00351</i>	LG4	1606446	<i>AT5G37780.1</i>	Symbols: CAM1, TCH1, ACAM-1	calmodulin 1

<i>Migut.D00352</i>	LG4	1607799	<i>AT3G63380.1</i>	Symbols: Symbols: ERMO2, SEC24A	ATPase E1-E2 type family protein / haloacid dehalogenase-like
<i>Migut.D00353</i>	LG4	1619021	<i>AT3G07100.1</i>		Sec23/Sec24 protein transport family
<i>Migut.D00354</i>	LG4	1632108	<i>AT3G63370.1</i>	Symbols: OTP86	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.D00355</i>	LG4	1636125	<i>AT1G03060.1</i>	Symbols: SPI	Beige/BEACH domain ;WD domain, G-beta repeat
<i>Migut.D00356</i>	LG4	1656830	<i>AT5G19840.1</i>	Symbols:	2-oxoglutarate (2OG) and Fe(II)-dependent oxygenase
<i>Migut.D00357</i>	LG4	1665434	<i>AT1G03840.1</i>	Symbols: MGP Symbols: AT-HSFA6B, HSFA6B	C2H2 and C2HC zinc fingers superfamily protein heat shock transcription factor
<i>Migut.D00358</i>	LG4	1671377	<i>AT3G22830.1</i>		
<i>Migut.D00359</i>	LG4	1674940	<i>AT3G63340.1</i>	Symbols:	Protein phosphatase 2C family protein
<i>Migut.D00360</i>	LG4	1684426	<i>AT4G02680.1</i>	Symbols: EOL1	ETO1-like 1
<i>Migut.D00361</i>	LG4	1690476	<i>AT3G63340.1</i>	Symbols:	Protein phosphatase 2C family protein
<i>Migut.D00362</i>	LG4	1707853	<i>AT3G49790.1</i>	Symbols:	Carbohydrate-binding protein
<i>Migut.D00363</i>	LG4	1708637	<i>AT2G25800.1</i>	Symbols:	Protein of unknown function (DUF810)
<i>Migut.D00364</i>	LG4	1710687	<i>AT5G44690.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D00365</i>	LG4	1711450	<i>AT3G63310.1</i>	Symbols: BIL4	Bax inhibitor-1 family protein
<i>Migut.D00366</i>	LG4	1713306	<i>AT1G03070.2</i>	Symbols:	Bax inhibitor-1 family protein
<i>Migut.D00367</i>	LG4	1715317	<i>AT4G02620.1</i>	Symbols:	vacuolar ATPase subunit F family protein
<i>Migut.D00368</i>	LG4	1717826	<i>AT3G54640.1</i>	Symbols: TSA1, TRP3	tryptophan synthase alpha chain
<i>Migut.D00369</i>	LG4	1721348	<i>AT5G43680.2</i>	Symbols:	unknown protein; EXPRESSED IN: 21 plant structures;
<i>Migut.D00370</i>	LG4	1724532	<i>AT4G02590.2</i>	Symbols: UNE12	basic helix-loop-helix (bHLH) DNA-binding
<i>Migut.D00371</i>	LG4	1729514	<i>AT4G02580.1</i>	Symbols: Symbols: ATAUX2-11, IAA4	NADH-ubiquinone oxidoreductase 24 kDa subunit, AUX/IAA transcriptional regulator
<i>Migut.D00372</i>	LG4	1735387	<i>AT5G43700.1</i>		
<i>Migut.D00373</i>	LG4	1748817	<i>AT3G04730.1</i>	Symbols: IAA16	indoleacetic acid-induced protein 16
<i>Migut.D00374</i>	LG4	1751894	<i>AT1G03030.1</i>	Symbols:	P-loop containing nucleoside triphosphate hydrolases
<i>Migut.D00375</i>	LG4	1755995	<i>AT3G54650.1</i>	Symbols: FBL17 Symbols: GR, EMB2360, ATGR2	RNI-like superfamily protein glutathione reductase
<i>Migut.D00376</i>	LG4	1760601	<i>AT3G54660.1</i>		
<i>Migut.D00377</i>	LG4	1765355	<i>AT1G06790.1</i>	Symbols:	RNA polymerase Rpb7 N-terminal domain-containing
<i>Migut.D00378</i>	LG4	1774110	<i>AT2G30570.1</i>	Symbols: PSBW	photosystem II reaction center W
<i>Migut.D00379</i>	LG4	1775389	<i>AT1G06780.1</i>	Symbols: GAUT6	galacturonosyltransferase 6
<i>Migut.D00380</i>	LG4	1784774	<i>AT2G30580.1</i>	Symbols: DRIP2	DREB2A-interacting protein 2
<i>Migut.D00381</i>	LG4	1790054	<i>AT1G55190.1</i>	Symbols: PRA1.F2, PRA7	PRA1 (Prenylated rab acceptor) family
<i>Migut.D00382</i>	LG4	1791279	<i>AT3G04710.2</i>	Symbols: TPR10	ankyrin repeat family protein
<i>Migut.D00383</i>	LG4	1794477	<i>AT3G04710.1</i>	Symbols: TPR10	ankyrin repeat family protein
<i>Migut.D00384</i>	LG4	1798778	<i>AT3G04710.1</i>	Symbols: TPR10	ankyrin repeat family protein
<i>Migut.D00385</i>	LG4	1801791	<i>AT1G08230.2</i>	Symbols:	Transmembrane amino acid transporter family protein
<i>Migut.D00386</i>	LG4	1805215	<i>AT1G06760.1</i>	Symbols:	winged-helix DNA-binding transcription factor family
<i>Migut.D00387</i>	LG4	1807979	<i>AT2G30590.1</i>	Symbols: WRKY21	WRKY DNA-binding protein 21
<i>Migut.D00388</i>	LG4	1809108	<i>AT3G49100.1</i>	Symbols:	Signal recognition particle, SRP9/SRP14 subunit
<i>Migut.D00389</i>	LG4	1815877	<i>AT2G30620.2</i>	Symbols:	winged-helix DNA-binding transcription factor family
<i>Migut.D00390</i>	LG4	1818896	<i>AT1G06750.1</i>	Symbols:	P-loop containing nucleoside triphosphate hydrolases
<i>Migut.D00391</i>	LG4	1825330	<i>AT3G22470.1</i>	Symbols:	Pentatricopeptide repeat (PPR) superfamily protein
<i>Migut.D00392</i>	LG4	1830095	<i>AT2G24950.1</i>	Symbols:	Protein of Unknown Function (DUF239)
<i>Migut.D00393</i>	LG4	1831950	<i>AT1G06620.1</i>	Symbols:	2-oxoglutarate (2OG) and Fe(II)-dependent oxygenase
<i>Migut.D00394</i>	LG4	1834339	<i>AT1G06730.1</i>	Symbols:	pfkB-like carbohydrate kinase family protein

<i>Migut.D00395</i>	LG4	1838073	<i>AT4G19540.1</i>	Symbols: INDL	IND1(iron-sulfur protein required for NADH
<i>Migut.D00396</i>	LG4	1853057	<i>AT1G08800.2</i>	Symbols:	Protein of unknown function, DUF593
<i>Migut.D00397</i>	LG4	1857061	<i>AT5G63450.1</i>	Symbols: CYP94B1	cytochrome P450, family 94, subfamily B,
<i>Migut.D00398</i>	LG4	1860096	<i>AT5G43580.1</i>	Symbols:	Serine protease inhibitor, potato inhibitor I-type
<i>Migut.D00399</i>	LG4	1862157	<i>AT2G38870.1</i>	Symbols:	Serine protease inhibitor, potato inhibitor I-type
<i>Migut.D00400</i>	LG4	1864229	<i>AT2G38870.1</i>	Symbols:	Serine protease inhibitor, potato inhibitor I-type
<i>Migut.D00401</i>	LG4	1865269	<i>AT4G16430.1</i>	Symbols:	basic helix-loop-helix (bHLH) DNA-binding superfamily
<i>Migut.D00402</i>	LG4	1876683	<i>AT1G54560.1</i>	Symbols: XIE, ATXIE	Myosin family protein with Dil domain
<i>Migut.D00403</i>	LG4	1886662	<i>AT2G42410.1</i>	Symbols: ZFP11, ATZFP11	zinc finger protein 11
<i>Migut.D00404</i>	LG4	1890523	<i>AT5G43540.1</i>	Symbols:	C2H2 and C2HC zinc fingers superfamily protein
<i>Migut.D00405</i>	LG4	1891694	<i>AT3G55600.1</i>	Symbols:	Membrane fusion protein Use1
<i>Migut.D00406</i>	LG4	1895021	<i>AT3G58180.1</i>	Symbols:	ARM repeat superfamily protein
<i>Migut.D00407</i>	LG4	1897706	<i>AT2G31320.1</i>	Symbols: PARP2, ATPARP2	poly(ADP-ribose) polymerase 2
<i>Migut.D00408</i>	LG4	1906435	<i>AT3G58190.1</i>	Symbols: LBD29, ASL16	lateral organ boundaries-domain 29
<i>Migut.D00409</i>	LG4	1911045	<i>AT2G26200.1</i>	Symbols:	S-adenosyl-L-methionine-dependent methyltransferases
<i>Migut.D00410</i>	LG4	1914922	<i>AT5G11980.1</i>	Symbols:	conserved oligomeric Golgi complex component-related
<i>Migut.D00411</i>	LG4	1919024	<i>AT5G12000.1</i>	Symbols:	Protein kinase protein with adenine nucleotide
<i>Migut.D00412</i>	LG4	1927381	<i>AT5G52820.1</i>	Symbols:	WD-40 repeat family protein / notchless protein,
<i>Migut.D00413</i>	LG4	1933231	<i>AT1G19800.1</i>	Symbols: TGD1	trigalactosyldiacylglycerol 1
<i>Migut.D00414</i>	LG4	1935957	<i>AT2G31260.1</i>	Symbols: APG9, ATAPG9	autophagy 9 (APG9)
<i>Migut.D00415</i>	LG4	1941865	<i>AT2G31240.1</i>	Symbols:	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.D00416</i>	LG4	1945030	<i>AT5G43420.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.D00417</i>	LG4	1949160	<i>AT4G10490.1</i>	Symbols:	2-oxoglutarate (2OG) and Fe(II)-dependent oxygenase
<i>Migut.D00418</i>	LG4	1952111	<i>AT1G04370.1</i>	Symbols: ATERF14, ERF14	Ethylene-responsive element binding
<i>Migut.D00419</i>	LG4	1957133	<i>AT3G23230.1</i>	Symbols:	Integrase-type DNA-binding superfamily protein
<i>Migut.D00420</i>	LG4	1961654	<i>AT3G23240.1</i>	Symbols: ERF1, ATERF1	ethylene response factor 1
<i>Migut.D00421</i>	LG4	1963243	<i>AT4G24490.2</i>	Symbols:	RAB geranylgeranyl transferase alpha subunit 1
<i>Migut.D00422</i>	LG4	1969583	<i>AT3G54700.1</i>	Symbols: PHT1;7	phosphate transporter 1;7
<i>Migut.D00423</i>	LG4	1971776	<i>AT4G14385.2</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.D00424</i>	LG4	1975065	<i>AT2G31190.1</i>	Symbols: RUS2, WXR1	Protein of unknown function, DUF647
<i>Migut.D00425</i>	LG4	1978868	<i>AT5G44120.3</i>	Symbols: CRA1, ATCRA1, CRU1	RmlC-like cupins superfamily
<i>Migut.D00426</i>	LG4	1982709	<i>AT5G44120.3</i>	Symbols: CRA1, ATCRA1, CRU1	RmlC-like cupins superfamily
<i>Migut.D00427</i>	LG4	1994096	<i>AT1G30690.2</i>	Symbols:	Sec14p-like phosphatidylinositol transfer family
<i>Migut.D00428</i>	LG4	1996692	<i>AT1G06210.1</i>	Symbols:	ENTH/VHS/GAT family protein
<i>Migut.D00429</i>	LG4	1998894	<i>AT2G31140.1</i>	Symbols:	Peptidase S24/S26A/S26B/S26C family protein
<i>Migut.D00430</i>	LG4	2001391	<i>AT1G06190.1</i>	Symbols:	Rho termination factor
<i>Migut.D00431</i>	LG4	2003939	<i>AT5G16320.1</i>	Symbols: FRL1	FRIGIDA like 1
<i>Migut.D00432</i>	LG4	2009673			
<i>Migut.D00433</i>	LG4	2011639	<i>AT5G27220.1</i>	Symbols:	Frigida-like protein
<i>Migut.D00434</i>	LG4	2019866	<i>AT3G54790.2</i>	Symbols:	ARM repeat superfamily protein
<i>Migut.D00435</i>	LG4	2025830	<i>AT2G31160.1</i>	Symbols: LSH3	Protein of unknown function (DUF640)
<i>Migut.D00436</i>	LG4	2038564	<i>AT1G08620.2</i>	Symbols: PKDM7D Symbols: anac074,	Transcription factor jumonji (jmi) family
<i>Migut.D00437</i>	LG4	2044260	<i>AT4G28530.1</i>	NAC074	NAC domain containing protein 74

<i>Migut.D00438</i>	LG4	2050188	<i>AT2G20495.1</i>	Symbols:	CONTAINS InterPro DOMAIN/s: Serine-threonine protein
<i>Migut.D00439</i>	LG4	2053497	<i>AT4G21150.3</i>	Symbols: HAP6	ribophorin II (RPN2) family protein
<i>Migut.D00440</i>	LG4	2060840	<i>AT1G03900.1</i>	Symbols: ATNAP4, NAP4	non-intrinsic ABC protein 4
<i>Migut.D00441</i>	LG4	2070576	<i>AT1G03905.1</i>	Symbols:	P-loop containing nucleoside triphosphate hydrolases
<i>Migut.D00442</i>	LG4	2074533	<i>AT2G20470.1</i>	Symbols:	AGC (cAMP-dependent, cGMP-dependent and protein
<i>Migut.D00443</i>	LG4	2079764	<i>AT3G54220.1</i>	Symbols: SCR, SGR1	GRAS family transcription factor
<i>Migut.D00444</i>	LG4	2081646	<i>AT4G28540.1</i>	Symbols: CKL6, PAK1	casein kinase I-like 6
<i>Migut.D00445</i>	LG4	2097629	<i>AT4G28540.1</i>	Symbols: CKL6, PAK1	casein kinase I-like 6
<i>Migut.D00446</i>	LG4	2104163	<i>AT1G03950.1</i>	Symbols: VPS2.3	vacuolar protein sorting-associated protein
<i>Migut.D00447</i>	LG4	2106585	<i>AT4G27090.1</i>	Symbols:	Ribosomal protein L14
<i>Migut.D00448</i>	LG4	2111830	<i>AT4G28550.1</i>	Symbols:	Ypt/Rab-GAP domain of gyp1p superfamily protein
<i>Migut.D00449</i>	LG4	2115327	<i>AT2G33470.2</i>	Symbols: GLTP1	glycolipid transfer protein 1
<i>Migut.D00450</i>	LG4	2118882	<i>AT2G20430.1</i>	Symbols: RIC6	ROP-interactive CRIB motif-containing protein
<i>Migut.D00451</i>	LG4	2122738	<i>AT4G28560.1</i>	Symbols: RIC7	ROP-interactive CRIB motif-containing protein
<i>Migut.D00452</i>	LG4	2136911	<i>AT4G28570.1</i>	Symbols:	Long-chain fatty alcohol dehydrogenase family protein
<i>Migut.D00453</i>	LG4	2141037	<i>AT4G28570.1</i>	Symbols:	Long-chain fatty alcohol dehydrogenase family protein
<i>Migut.D00454</i>	LG4	2144619	<i>AT2G20420.1</i>	Symbols:	ATP citrate lyase (ACL) family protein
<i>Migut.D00455</i>	LG4	2149199	<i>AT4G28590.1</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.D00456</i>	LG4	2151173	<i>AT3G14940.1</i>	Symbols: ATPPC3, PPC3	phosphoenolpyruvate carboxylase 3
<i>Migut.D00457</i>	LG4	2153870	<i>AT4G00310.2</i>	Symbols: MEE46, EDA8	Putative membrane lipoprotein
<i>Migut.D00458</i>	LG4	2157556	<i>AT4G28600.1</i>	Symbols: NPGR2 Symbols: PSAT1, ATPSAT1	no pollen germination related 2 phospholipid sterol acyl transferase
<i>Migut.D00459</i>	LG4	2161576	<i>AT1G04010.1</i>	Symbols:	BEST Arabidopsis thaliana protein match is: exocyst
<i>Migut.D00460</i>	LG4	2168339	<i>AT1G10180.1</i>	Symbols:	plastid developmental protein DAG, putative
<i>Migut.D00461</i>	LG4	2171329	<i>AT1G32580.1</i>	Symbols:	
<i>Migut.D00462</i>	LG4	2174781	<i>AT1G04020.1</i>	Symbols: ATBARD1, BARD1, ROW1	breast cancer associated RING
<i>Migut.D00463</i>	LG4	2179180	<i>AT5G46050.1</i>	Symbols: ATPTR3, PTR3	peptide transporter 3
<i>Migut.D00464</i>	LG4	2182637	<i>AT5G44030.1</i>	Symbols: CESA4, IRX5, NWS2	cellulose synthase A4
<i>Migut.D00465</i>	LG4	2184926	<i>AT5G44030.1</i>	Symbols: CESA4, IRX5, NWS2	cellulose synthase A4
<i>Migut.D00466</i>	LG4	2192583	<i>AT4G28610.1</i>	Symbols: PHR1, AtPHR1	phosphate starvation response 1
<i>Migut.D00467</i>	LG4	2199116	<i>AT3G46560.1</i>	Symbols: TIM9, emb2474	Tim10/DDP family zinc finger protein
<i>Migut.D00468</i>	LG4	2200823	<i>AT5G44010.1</i>	Symbols:	unknown protein; Has 28 Blast hits to 26 proteins
<i>Migut.D00469</i>	LG4	2204161	<i>AT3G04400.1</i>	Symbols: emb2171	Ribosomal protein L14p/L23e family protein
<i>Migut.D00470</i>	LG4	2206252	<i>AT5G43990.4</i>	Symbols: SUVR2, SDG18	SET-domain containing protein lysine
<i>Migut.D00471</i>	LG4	2213095	<i>AT1G04520.1</i>	Symbols: PDLP2	plasmodesmata-located protein 2
<i>Migut.D00472</i>	LG4	2217419	<i>AT5G43970.1</i>	Symbols: TOM22-V, TOM9-2, ATTOM22-V	translocase of outer
<i>Migut.D00473</i>	LG4	2219853	<i>AT1G04080.1</i>	Symbols: PRP39	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.D00474</i>	LG4	2227989	<i>AT5G43960.1</i>	Symbols:	Nuclear transport factor 2 (NTF2) family protein
<i>Migut.D00475</i>	LG4	2232675	<i>AT5G20190.1</i>	Symbols:	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.D00476</i>	LG4	2237097	<i>AT1G04090.1</i>	Symbols:	Plant protein of unknown function (DUF946)
<i>Migut.D00477</i>	LG4	2243106	<i>AT2G33310.2</i>	Symbols: IAA13	auxin-induced protein 13
<i>Migut.D00478</i>	LG4	2245257	<i>AT4G28650.1</i>	Symbols:	Leucine-rich repeat transmembrane protein kinase
<i>Migut.D00479</i>	LG4	2250508	<i>AT4G28660.1</i>	Symbols: PSB28	photosystem II reaction center PSB28 protein

<i>Migut.D00480</i>	LG4	2251734	<i>AT1G04110.1</i>	Symbols: SDD1	Subtilase family protein
<i>Migut.D00481</i>	LG4	2255686	<i>AT2G20370.1</i>	Symbols: KAM1, MUR3	Exostosin family protein
<i>Migut.D00482</i>	LG4	2260136	<i>AT2G20362.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00483</i>	LG4	2260643	<i>AT2G20360.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.D00484</i>	LG4	2265947	<i>AT1G04120.1</i>	Symbols: ATMRP5, MRP5, ATABCC5, ABCC5	multidrug resistance-associated
<i>Migut.D00485</i>	LG4	2274271	<i>AT2G20340.1</i>	Symbols:	Pyridoxal phosphate (PLP)-dependent transferases
<i>Migut.D00486</i>	LG4	2277491	<i>AT2G20330.1</i>	Symbols:	Transducin/WD40 repeat-like superfamily protein
<i>Migut.D00487</i>	LG4	2281663	<i>AT2G20320.1</i>	Symbols:	DENN (AEX-3) domain-containing protein
<i>Migut.D00488</i>	LG4	2286505	<i>AT4G28690.1</i>	Symbols:	BEST Arabidopsis thaliana protein match is: RPM1
<i>Migut.D00489</i>	LG4	2292255	<i>AT3G04300.1</i>	Symbols:	RmlC-like cupins superfamily protein
<i>Migut.D00490</i>	LG4	2294554	<i>AT1G32370.3</i>	Symbols: TOM2B, TTM1	tobamovirus multiplication 2B
<i>Migut.D00491</i>	LG4	2297452	<i>AT2G20300.1</i>	Symbols: ALE2	Protein kinase superfamily protein
<i>Migut.D00492</i>	LG4	2302655	<i>AT4G28706.3</i>	Symbols:	pfkB-like carbohydrate kinase family protein
<i>Migut.D00493</i>	LG4	2306054	<i>AT1G04150.1</i>	Symbols:	C2 calcium/lipid-binding plant phosphoribosyltransferase
<i>Migut.D00494</i>	LG4	2318317	<i>AT5G43900.3</i>	Symbols: MYA2	myosin 2
<i>Migut.D00495</i>	LG4	2339982	<i>AT4G28720.1</i>	Symbols: YUC8	Flavin-binding monooxygenase family protein
<i>Migut.D00496</i>	LG4	2345055	<i>AT2G20270.1</i>	Symbols:	Thioredoxin superfamily protein
<i>Migut.D00497</i>	LG4	2347413	<i>AT4G28740.1</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.D00498</i>	LG4	2349470	<i>AT2G20260.1</i>	Symbols: PSAE-2	photosystem I subunit E-2
<i>Migut.D00499</i>	LG4	2352670	<i>AT4G28760.2</i>	Symbols:	Protein of unknown function (DUF3741)
<i>Migut.D00500</i>	LG4	2357702	<i>AT2G20230.1</i>	Symbols:	Tetraspanin family protein
<i>Migut.D00501</i>	LG4	2361929	<i>AT4G28780.1</i>	Symbols:	GDSL-like Lipase/Acylhydrolase superfamily protein CONTAINS InterPro DOMAIN/s: Ribosomal protein S27/S33,
<i>Migut.D00502</i>	LG4	2363696	<i>AT5G44710.1</i>	Symbols:	
<i>Migut.D00503</i>	LG4	2365909	<i>AT3G23990.1</i>	Symbols: HSP60, HSP60-3B	heat shock protein 60
<i>Migut.D00504</i>	LG4	2372744	<i>AT2G20180.3</i>	Symbols: PIL5	phytochrome interacting factor 3-like 5
<i>Migut.D00505</i>	LG4	2375647	<i>AT4G28820.1</i>	Symbols:	HIT-type Zinc finger family protein
<i>Migut.D00506</i>	LG4	2379184	<i>AT4G29040.1</i>	Symbols: RPT2a	regulatory particle AAA-ATPase 2A
<i>Migut.D00507</i>	LG4	2381856	<i>AT5G36890.1</i>	Symbols: BGLU42	beta glucosidase 42
<i>Migut.D00508</i>	LG4	2386289	<i>AT4G29030.1</i>	Symbols:	Putative membrane lipoprotein
<i>Migut.D00509</i>	LG4	2391692	<i>AT3G27831.1</i>	Symbols:	Gamma-thionin family protein
<i>Migut.D00510</i>	LG4	2393268	<i>AT3G27831.1</i>	Symbols:	Gamma-thionin family protein
<i>Migut.D00511</i>	LG4	2401551	<i>AT3G24650.1</i>	Symbols: ABI3, SIS10	AP2/B3-like transcriptional factor family
<i>Migut.D00512</i>	LG4	2405848	<i>AT5G48940.1</i>	Symbols:	Leucine-rich repeat transmembrane protein kinase
<i>Migut.D00513</i>	LG4	2422430	<i>AT4G13220.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00514</i>	LG4	2424416	<i>AT2G31300.1</i>	Symbols: ARPC1B, ARPC1	actin-related protein C1B
<i>Migut.D00515</i>	LG4	2430494	<i>AT4G13710.1</i>	Symbols:	Pectin lyase-like superfamily protein
<i>Migut.D00516</i>	LG4	2436382	<i>AT5G57520.1</i>	Symbols: ZFP2, ATZFP2	zinc finger protein 2
<i>Migut.D00517</i>	LG4	2438293	<i>AT3G07020.2</i>	Symbols:	UDP-Glycosyltransferase superfamily protein
<i>Migut.D00518</i>	LG4	2443692	<i>AT3G24730.1</i>	Symbols:	mRNA splicing factor, thioredoxin-like U5 snRNP
<i>Migut.D00519</i>	LG4	2446550	<i>AT5G48870.1</i>	Symbols: SAD1	Small nuclear ribonucleoprotein family protein
<i>Migut.D00520</i>	LG4	2451246	<i>AT3G24750.1</i>	Symbols:	unknown protein; Has 25 Blast hits to 25 proteins
<i>Migut.D00521</i>	LG4	2455245	<i>AT3G07030.1</i>	Symbols:	Alba DNA/RNA-binding protein
<i>Migut.D00522</i>	LG4	2457717	<i>AT5G48850.1</i>	Symbols: ATSDI1	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.D00523</i>	LG4	2460873	<i>AT5G48840.1</i>	Symbols: PANC, PTS,	homolog of bacterial PANC

ATPTS

<i>Migut.D00524</i>	LG4	2462901	<i>AT2G33120.1</i>	Symbols: SAR1, VAMP722, ATVAMP722	synaptobrevin-related protein
<i>Migut.D00525</i>	LG4	2466846	<i>AT4G13200.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00526</i>	LG4	2467675	<i>AT3G07050.1</i>	Symbols:	GTP-binding family protein
<i>Migut.D00527</i>	LG4	2482629	<i>AT4G13195.1</i>	Symbols: CLE44	CLAVATA3/ESR-RELATED 44
<i>Migut.D00528</i>	LG4	2484792	<i>AT3G07060.1</i>	Symbols: emb1974	NHL domain-containing protein
<i>Migut.D00529</i>	LG4	2491298	<i>AT3G07070.1</i>	Symbols:	Protein kinase superfamily protein
<i>Migut.D00530</i>	LG4	2493699	<i>AT3G02885.1</i>	Symbols: GASAS5	GAST1 protein homolog 5
<i>Migut.D00531</i>	LG4	2495325	<i>AT3G07080.1</i>	Symbols:	EamA-like transporter family
<i>Migut.D00532</i>	LG4	2498461	<i>AT3G07090.1</i>	Symbols:	PPPDE putative thiol peptidase family protein
<i>Migut.D00533</i>	LG4	2501486	<i>AT2G32700.6</i>	Symbols: LUH	LEUNIG_homolog
<i>Migut.D00534</i>	LG4	2510275	<i>AT3G24800.1</i>	Symbols: PRT1	proteolysis 1
<i>Migut.D00535</i>	LG4	2517939	<i>AT5G48820.1</i>	Symbols: KRP3, ICK6	
<i>Migut.D00536</i>	LG4	2524429	<i>AT3G24820.1</i>	Symbols:	BSD domain-containing protein
<i>Migut.D00537</i>	LG4	2527453	<i>AT2G44150.1</i>	Symbols: ASHH3, SDG7	histone-lysine N-methyltransferase ASHH3
<i>Migut.D00538</i>	LG4	2533245	<i>AT1G51110.1</i>	Symbols:	Plastid-lipid associated protein PAP / fibrillin
<i>Migut.D00539</i>	LG4	2536550	<i>AT3G02065.3</i>	Symbols:	P-loop containing nucleoside triphosphate hydrolases
<i>Migut.D00540</i>	LG4	2539581	<i>AT5G19900.1</i>	Symbols:	PRLI-interacting factor, putative
<i>Migut.D00541</i>	LG4	2543711	<i>AT5G13000.1</i>	Symbols: ATGSL12, gsl12	glucan synthase-like 12
<i>Migut.D00542</i>	LG4	2564254	<i>AT1G71020.2</i>	Symbols:	ARM repeat superfamily protein
<i>Migut.D00543</i>	LG4	2566787	<i>AT3G12120.2</i>	Symbols: FAD2	fatty acid desaturase 2
<i>Migut.D00544</i>	LG4	2570905	<i>AT2G18220.1</i>	Symbols:	Noc2p family
<i>Migut.D00545</i>	LG4	2576841	<i>AT5G19640.1</i>	Symbols:	Major facilitator superfamily protein
<i>Migut.D00546</i>	LG4	2582796	<i>AT2G05990.2</i>	Symbols: MOD1, ENR1	NAD(P)-binding Rossmann-fold superfamily
<i>Migut.D00547</i>	LG4	2587332			
<i>Migut.D00548</i>	LG4	2589432	<i>AT5G60900.1</i>	Symbols: RLK1	receptor-like protein kinase 1
<i>Migut.D00549</i>	LG4	2592496	<i>AT3G49142.1</i>	Symbols:	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.D00550</i>	LG4	2594721	<i>AT3G57930.2</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D00551</i>	LG4	2597153	<i>AT5G44640.1</i>	Symbols: BGLU13	beta glucosidase 13
<i>Migut.D00552</i>	LG4	2600475	<i>AT3G45140.1</i>	Symbols: LOX2, ATLOX2	lipoyxygenase 2
<i>Migut.D00553</i>	LG4	2609156	<i>AT3G45140.1</i>	Symbols: LOX2, ATLOX2	lipoyxygenase 2
<i>Migut.D00554</i>	LG4	2614890	<i>AT3G45140.1</i>	Symbols: LOX2, ATLOX2	lipoyxygenase 2
<i>Migut.D00555</i>	LG4	2620250	<i>AT3G45140.1</i>	Symbols: LOX2, ATLOX2	lipoyxygenase 2
<i>Migut.D00556</i>	LG4	2625306	<i>AT3G45140.1</i>	Symbols: LOX2, ATLOX2	lipoyxygenase 2
<i>Migut.D00557</i>	LG4	2631387	<i>AT3G45140.1</i>	Symbols: LOX2, ATLOX2	lipoyxygenase 2
<i>Migut.D00558</i>	LG4	2637826	<i>AT3G20780.1</i>	Symbols: ATTOP6B, BIN3, HYP6, RHL3, TOP6B	topoisomerase 6
<i>Migut.D00559</i>	LG4	2643351	<i>AT3G20790.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.D00560</i>	LG4	2646532	<i>AT3G57880.1</i>	Symbols:	Calcium-dependent lipid-binding (CaLB domain) plant
<i>Migut.D00561</i>	LG4	2652184	<i>AT4G05160.1</i>	Symbols:	AMP-dependent synthetase and ligase family protein
<i>Migut.D00562</i>	LG4	2656992	<i>AT3G20810.1</i>	Symbols: JMJD5	2-oxoglutarate (2OG) and Fe(II)-dependent
<i>Migut.D00563</i>	LG4	2662574	<i>AT5G12900.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00564</i>	LG4	2668387	<i>AT1G31320.1</i>	Symbols: LBD4	LOB domain-containing protein 4
<i>Migut.D00565</i>	LG4	2669206	<i>AT5G65360.1</i>	Symbols:	Histone superfamily protein
<i>Migut.D00566</i>	LG4	2670835	<i>AT4G12070.1</i>	Symbols:	unknown protein; INVOLVED IN: biological_process

<i>Migut.D00567</i>	LG4	2675429	<i>AT5G12930.1</i>	Symbols:	unknown protein; Has 1807 Blast hits to 1807 proteins
<i>Migut.D00568</i>	LG4	2679132	<i>AT2G42280.1</i>	Symbols:	basic helix-loop-helix (bHLH) DNA-binding superfamily
<i>Migut.D00569</i>	LG4	2688959	<i>AT3G20820.1</i>	Symbols:	Leucine-rich repeat (LRR) family protein
<i>Migut.D00570</i>	LG4	2691454	<i>AT5G12950.1</i>	Symbols:	Putative glycosyl hydrolase of unknown function
<i>Migut.D00571</i>	LG4	2696175	<i>AT5G12950.1</i>	Symbols:	Putative glycosyl hydrolase of unknown function
<i>Migut.D00572</i>	LG4	2701950	<i>AT3G13440.1</i>	Symbols:	S-adenosyl-L-methionine-dependent methyltransferases
<i>Migut.D00573</i>	LG4	2707186	<i>AT3G20830.1</i>	Symbols:	AGC (cAMP-dependent, cGMP-dependent and protein
<i>Migut.D00574</i>	LG4	2718331	<i>AT3G12630.1</i>	Symbols:	A20/AN1-like zinc finger family protein
<i>Migut.D00575</i>	LG4	2722146	<i>AT1G51190.1</i>	Symbols: PLT2	Integrase-type DNA-binding superfamily protein
<i>Migut.D00576</i>	LG4	2731265	<i>AT5G13070.1</i>	Symbols:	MSF1-like family protein
<i>Migut.D00577</i>	LG4	2733246	<i>AT4G29860.1</i>	Symbols: EMB2757, TAN	Transducin/WD40 repeat-like superfamily
<i>Migut.D00578</i>	LG4	2735008	<i>AT1G51200.4</i>	Symbols:	A20/AN1-like zinc finger family protein
<i>Migut.D00579</i>	LG4	2738301	<i>AT3G20860.1</i>	Symbols: ATNEK5, NEK5	NIMA-related kinase 5
<i>Migut.D00580</i>	LG4	2744421	<i>AT2G28290.1</i>	Symbols: SYD, CHR3	P-loop containing nucleoside triphosphate
<i>Migut.D00581</i>	LG4	2767745	<i>AT1G19670.1</i>	Symbols: ATCLH1, COR11, ATHCOR1, CLH1	chlorophyllase 1
<i>Migut.D00582</i>	LG4	2769778	<i>AT3G20870.1</i>	Symbols: ZTP29	ZIP metal ion transporter family
<i>Migut.D00583</i>	LG4	2776495	<i>AT3G57670.1</i>	Symbols: NTT, WIP2	C2H2-type zinc finger family protein
<i>Migut.D00584</i>	LG4	2784853	<i>AT5G19620.1</i>	Symbols: EMB213, OEP80, ATOEP80, TOC75	outer envelope protein
<i>Migut.D00585</i>	LG4	2790865	<i>AT1G63440.1</i>	Symbols: HMA5	heavy metal atpase 5
<i>Migut.D00586</i>	LG4	2797838	<i>AT5G13490.2</i>	Symbols: AAC2	ADP/ATP carrier 2
<i>Migut.D00587</i>	LG4	2802618	<i>AT1G67680.1</i>	Symbols:	SRP72 RNA-binding domain
<i>Migut.D00588</i>	LG4	2812865	<i>AT3G63530.2</i>	Symbols: BB, BB2	RING/U-box superfamily protein
<i>Migut.D00589</i>	LG4	2815840	<i>AT1G21310.1</i>	Symbols: ATEXT3, RSH, EXT3	extensin 3
<i>Migut.D00590</i>	LG4	2864109	<i>AT4G34890.1</i>	Symbols: ATXDH1, XDH1	xanthine dehydrogenase 1
<i>Migut.D00591</i>	LG4	2871956			
<i>Migut.D00592</i>	LG4	2886321			
<i>Migut.D00593</i>	LG4	2887071	<i>AT4G34890.1</i>	Symbols: ATXDH1, XDH1	xanthine dehydrogenase 1
<i>Migut.D00594</i>	LG4	2894476	<i>AT3G57650.1</i>	Symbols: LPAT2	lysophosphatidyl acyltransferase 2
<i>Migut.D00595</i>	LG4	2899192	<i>AT5G19350.2</i>	Symbols:	RNA-binding (RRM/RBD/RNP motifs) family protein
<i>Migut.D00596</i>	LG4	2903092	<i>AT4G14700.1</i>	Symbols: ATORC1A, ORC1A	origin recognition complex 1
<i>Migut.D00597</i>	LG4	2908552	<i>AT4G36250.1</i>	Symbols: ALDH3F1	aldehyde dehydrogenase 3F1
<i>Migut.D00598</i>	LG4	2914282	<i>AT5G23960.2</i>	Symbols: TPS21	terpene synthase 21
<i>Migut.D00599</i>	LG4	2918104	<i>AT5G12860.1</i>	Symbols: DiT1	dicarboxylate transporter 1
<i>Migut.D00600</i>	LG4	2921608	<i>AT1G51340.2</i>	Symbols:	MATE efflux family protein
<i>Migut.D00601</i>	LG4	2925671	<i>AT1G51350.1</i>	Symbols:	ARM repeat superfamily protein
<i>Migut.D00602</i>	LG4	2930569	<i>AT5G19855.1</i>	Symbols:	Chaperonin-like RbcX protein
<i>Migut.D00603</i>	LG4	2933512	<i>AT3G20898.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00604</i>	LG4	2941174	<i>AT5G12840.4</i>	Symbols: HAP2A, ATHAP2A, NF-YA1	nuclear factor Y, subunit
<i>Migut.D00605</i>	LG4	2942930	<i>AT3G20920.1</i>	Symbols:	translocation protein-related
<i>Migut.D00606</i>	LG4	2946487	<i>AT5G12480.1</i>	Symbols: CPK7	calmodulin-domain protein kinase 7
<i>Migut.D00607</i>	LG4	2950842	<i>AT1G65720.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00608</i>	LG4	2953637	<i>AT5G04590.1</i>	Symbols: SIR	sulfite reductase

<i>Migut.D00609</i>	LG4	2957992	<i>AT3G21055.1</i>	Symbols: PSBTN	photosystem II subunit T
<i>Migut.D00610</i>	LG4	2962167	<i>AT1G51405.1</i>	Symbols: Symbols: WNK8, ATWNK8	myosin-related with no lysine (K) kinase 8
<i>Migut.D00611</i>	LG4	2965102	<i>AT5G41990.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.D00612</i>	LG4	2966861	<i>AT5G19440.1</i>	Symbols:	F-box family protein
<i>Migut.D00613</i>	LG4	2976714	<i>AT3G06240.1</i>	Symbols:	F-box family protein
<i>Migut.D00614</i>	LG4	2978640	<i>AT5G44220.1</i>	Symbols:	alpha/beta-Hydrolases superfamily protein
<i>Migut.D00615</i>	LG4	2983323	<i>AT1G51440.1</i>	Symbols:	Protein of unknown function (DUF3411)
<i>Migut.D00616</i>	LG4	2988758	<i>AT5G12470.1</i>	Symbols:	Protein of unknown function (DUF604)
<i>Migut.D00617</i>	LG4	2991945	<i>AT5G12460.1</i>	Symbols:	Protein of unknown function (DUF604)
<i>Migut.D00618</i>	LG4	2995318	<i>AT5G12460.1</i>	Symbols:	Protein of unknown function (DUF604)
<i>Migut.D00619</i>	LG4	3001647	<i>AT5G12460.1</i>	Symbols:	Protein of unknown function (DUF604)
<i>Migut.D00620</i>	LG4	3006018	<i>AT5G12460.1</i>	Symbols:	Protein of unknown function (DUF604)
<i>Migut.D00621</i>	LG4	3011387	<i>AT3G21070.2</i>	Symbols: NADK1	NAD kinase 1
<i>Migut.D00622</i>	LG4	3019027	<i>AT1G51450.1</i>	Symbols: TRO	TRAUCO
<i>Migut.D00623</i>	LG4	3022054	<i>AT3G21090.1</i>	Symbols:	ABC-2 type transporter family protein
<i>Migut.D00624</i>	LG4	3029030	<i>AT3G21090.1</i>	Symbols:	ABC-2 type transporter family protein
<i>Migut.D00625</i>	LG4	3032527	<i>AT3G62470.1</i>	Symbols:	Pentatricopeptide repeat (PPR) superfamily protein
<i>Migut.D00626</i>	LG4	3037791	<i>AT2G47430.1</i>	Symbols: CK11	Signal transduction histidine kinase
<i>Migut.D00627</i>	LG4	3041212	<i>AT4G02060.2</i>	Symbols: PRL	Minichromosome maintenance (MCM2/3/5) family
<i>Migut.D00628</i>	LG4	3046338	<i>AT1G51510.1</i>	Symbols: Y14	RNA-binding (RRM/RBD/RNP motifs) family protein
<i>Migut.D00629</i>	LG4	3064204	<i>AT3G21100.2</i>	Symbols:	RNA-binding (RRM/RBD/RNP motifs) family protein
<i>Migut.D00630</i>	LG4	3071166	<i>AT3G21100.2</i>	Symbols:	RNA-binding (RRM/RBD/RNP motifs) family protein
<i>Migut.D00631</i>	LG4	3075483	<i>AT2G47000.1</i>	Symbols: MDR4, PGP4, ABC4, ATPGP4	ATP binding cassette subfamily
<i>Migut.D00632</i>	LG4	3078479	<i>AT2G47000.1</i>	Symbols: MDR4, PGP4, ABC4, ATPGP4	ATP binding cassette subfamily
<i>Migut.D00633</i>	LG4	3082447	<i>AT1G50450.1</i>	Symbols:	Saccharopine dehydrogenase
<i>Migut.D00634</i>	LG4	3085940	<i>AT5G41560.1</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.D00635</i>	LG4	3095307	<i>AT1G50460.1</i>	Symbols: HKL1, ATHKL1	hexokinase-like 1
<i>Migut.D00636</i>	LG4	3100828	<i>AT1G70170.1</i>	Symbols: MMP	matrix metalloproteinase
<i>Migut.D00637</i>	LG4	3102357	<i>AT1G59970.1</i>	Symbols:	Matrixin family protein
<i>Migut.D00638</i>	LG4	3114361	<i>AT1G59970.1</i>	Symbols:	Matrixin family protein
<i>Migut.D00639</i>	LG4	3123067	<i>AT4G16640.1</i>	Symbols:	Matrixin family protein
<i>Migut.D00640</i>	LG4	3125151	<i>AT3G20060.1</i>	Symbols: UBC19	ubiquitin-conjugating enzyme19
<i>Migut.D00641</i>	LG4	3129814	<i>AT1G73830.1</i>	Symbols: BEE3	BR enhanced expression 3
<i>Migut.D00642</i>	LG4	3132337	<i>AT5G12400.1</i>	Symbols:	DNA binding;zinc ion binding;DNA binding
<i>Migut.D00643</i>	LG4	3145552	<i>AT1G50420.1</i>	Symbols: SCL3, SCL-3	scarecrow-like 3
<i>Migut.D00644</i>	LG4	3148730	<i>AT1G50510.1</i>	Symbols:	indigoidine synthase A family protein
<i>Migut.D00645</i>	LG4	3153158	<i>AT4G31530.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.D00646</i>	LG4	3156906	<i>AT1G50450.1</i>	Symbols:	Saccharopine dehydrogenase
<i>Migut.D00647</i>	LG4	3164301	<i>AT5G46170.1</i>	Symbols:	F-box family protein
<i>Migut.D00648</i>	LG4	3166142	<i>AT1G34470.1</i>	Symbols:	Protein of unknown function (DUF803)
<i>Migut.D00649</i>	LG4	3169956	<i>AT3G57090.1</i>	Symbols: BIGYIN, FIS1A	Tetratricopeptide repeat (TPR)-like
<i>Migut.D00650</i>	LG4	3172492	<i>AT3G07910.1</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.D00651</i>	LG4	3174815	<i>AT3G14190.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein

<i>Migut.D00652</i>	LG4	3179055	<i>AT4G38180.1</i>	Symbols: FR55	FAR1-related sequence 5
<i>Migut.D00653</i>	LG4	3188171	<i>AT4G03250.1</i>	Symbols:	Homeodomain-like superfamily protein
<i>Migut.D00654</i>	LG4	3192124	<i>AT2G03120.1</i>	Symbols: ATSP, SPP	signal peptide peptidase
<i>Migut.D00655</i>	LG4	3198397	<i>AT5G12340.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D00656</i>	LG4	3206340	<i>AT5G12330.1</i>	Symbols: LRP1	Lateral root primordium (LRP) protein-related
<i>Migut.D00657</i>	LG4	3210831	<i>AT5G12310.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.D00658</i>	LG4	3213628	<i>AT5G12300.1</i>	Symbols:	Calcium-dependent lipid-binding (CaLB domain) family
<i>Migut.D00659</i>	LG4	3215952	<i>AT5G13500.3</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00660</i>	LG4	3218642	<i>AT2G26870.1</i>	Symbols: NPC2	non-specific phospholipase C2
<i>Migut.D00661</i>	LG4	3230311	<i>AT4G30880.1</i>	Symbols:	Bifunctional inhibitor/lipid-transfer protein/seed
<i>Migut.D00662</i>	LG4	3231041	<i>AT2G26870.1</i>	Symbols: NPC2	non-specific phospholipase C2
<i>Migut.D00663</i>	LG4	3235423	<i>AT4G30880.1</i>	Symbols:	Bifunctional inhibitor/lipid-transfer protein/seed
<i>Migut.D00664</i>	LG4	3236268	<i>AT4G28010.1</i>	Symbols:	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.D00665</i>	LG4	3241473	<i>AT5G19390.2</i>	Symbols:	Rho GTPase activation protein (RhoGAP) with PH
<i>Migut.D00666</i>	LG4	3250425	<i>AT4G29070.2</i>	Symbols:	Phospholipase A2 family protein
<i>Migut.D00667</i>	LG4	3253370	<i>AT5G12170.2</i>	Symbols: CLT3	CRT (chloroquine-resistance transporter)-like
<i>Migut.D00668</i>	LG4	3257695	<i>AT1G70250.1</i>	Symbols:	receptor serine/threonine kinase, putative
<i>Migut.D00669</i>	LG4	3261890	<i>AT5G19370.1</i>	Symbols:	rhodanese-like domain-containing protein / PPIC-type
<i>Migut.D00670</i>	LG4	3265220	<i>AT5G12180.1</i>	Symbols: CPK17	calcium-dependent protein kinase 17
<i>Migut.D00671</i>	LG4	3269052	<i>AT1G13570.1</i>	Symbols:	F-box/RNI-like superfamily protein
<i>Migut.D00672</i>	LG4	3273009	<i>AT1G13570.1</i>	Symbols:	F-box/RNI-like superfamily protein
<i>Migut.D00673</i>	LG4	3276466	<i>AT5G12200.1</i>	Symbols: PYD2	pyrimidine 2
<i>Migut.D00674</i>	LG4	3283406	<i>AT2G32560.1</i>	Symbols:	F-box family protein
<i>Migut.D00675</i>	LG4	3286716	<i>AT2G26530.1</i>	Symbols: AR781	Protein of unknown function (DUF1645)
<i>Migut.D00676</i>	LG4	3288784	<i>AT2G26840.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00677</i>	LG4	3292925	<i>AT2G13650.3</i>	Symbols: GONST1	golgi nucleotide sugar transporter 1
<i>Migut.D00678</i>	LG4	3296943	<i>AT2G26800.1</i>	Symbols:	Aldolase superfamily protein
<i>Migut.D00679</i>	LG4	3300744	<i>AT5G12240.2</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00680</i>	LG4	3303536	<i>AT4G10320.1</i>	Symbols:	tRNA synthetase class I (I, L, M and V) family
<i>Migut.D00681</i>	LG4	3308424	<i>AT2G26780.1</i>	Symbols:	ARM repeat superfamily protein
<i>Migut.D00682</i>	LG4	3323229	<i>AT1G08500.1</i>	Symbols: ENODL18, AtENODL18	early nodulin-like protein 18
<i>Migut.D00683</i>	LG4	3326001	<i>AT1G69850.1</i>	Symbols: ATNRT1:2, NTL1, NRT1:2	nitrate transporter 1:2
<i>Migut.D00684</i>	LG4	3330216	<i>AT2G26770.2</i>	Symbols:	pectin-related
<i>Migut.D00685</i>	LG4	3334022	<i>AT2G02800.2</i>	Symbols: APK2B	protein kinase 2B
<i>Migut.D00686</i>	LG4	3336076	<i>AT2G26980.3</i>	Symbols: CIPK3	CBL-interacting protein kinase 3
<i>Migut.D00687</i>	LG4	3348862	<i>AT5G21105.1</i>	Symbols:	Plant L-ascorbate oxidase
<i>Migut.D00688</i>	LG4	3353308			
<i>Migut.D00689</i>	LG4	3355206	<i>AT5G51140.1</i>	Symbols:	Pseudouridine synthase family protein
<i>Migut.D00690</i>	LG4	3356238	<i>AT2G06025.1</i>	Symbols:	Acyl-CoA N-acyltransferases (NAT) superfamily protein
<i>Migut.D00691</i>	LG4	3369134	<i>AT5G56200.1</i>	Symbols:	C2H2 type zinc finger transcription factor family
<i>Migut.D00692</i>	LG4	3386016	<i>AT5G21170.1</i>	Symbols: AKINBETA1	5'-AMP-activated protein kinase beta-2
<i>Migut.D00693</i>	LG4	3391243	<i>AT3G43810.1</i>	Symbols: CAM7	calmodulin 7
<i>Migut.D00694</i>	LG4	3396305	<i>AT2G27040.2</i>	Symbols: AGO4	Argonaute family protein
<i>Migut.D00695</i>	LG4	3403343	<i>AT3G48480.1</i>	Symbols:	Cysteine proteinases superfamily protein

<i>Migut.D00696</i>	LG4	3406258	<i>AT4G35870.1</i>	Symbols:	early-responsive to dehydration stress protein
<i>Migut.D00697</i>	LG4	3410076	<i>AT3G48480.1</i>	Symbols:	Cysteine proteinases superfamily protein
<i>Migut.D00698</i>	LG4	3413155	<i>AT5G21160.1</i>	Symbols:	LA RNA-binding protein
<i>Migut.D00699</i>	LG4	3421194	<i>AT2G41060.2</i>	Symbols:	RNA-binding (RRM/RBD/RNP motifs) family protein
<i>Migut.D00700</i>	LG4	3421792	<i>AT2G23680.1</i>	Symbols:	Cold acclimation protein WCOR413 family
<i>Migut.D00701</i>	LG4	3424662	<i>AT5G16790.1</i>	Symbols: THO7, AtTHO7	Tho complex subunit 7/Mft1p
<i>Migut.D00702</i>	LG4	3427943	<i>AT5G19500.1</i>	Symbols:	Tryptophan/tyrosine permease
<i>Migut.D00703</i>	LG4	3432763	<i>AT2G26930.1</i>	Symbols: ATCDPMEK, PDE277, ISPE, CDPMEK	4-(cytidine 5'-phospho)-2-C-methyl-D-erythritol
<i>Migut.D00704</i>	LG4	3435638	<i>AT2G26920.1</i>	Symbols:	Ubiquitin-associated/translation elongation factor
<i>Migut.D00705</i>	LG4	3441680	<i>AT5G19490.1</i>	Symbols:	Histone superfamily protein
<i>Migut.D00706</i>	LG4	3444229	<i>AT2G40880.1</i>	Symbols: FL3-27, ATCYSA, CYSA	cystatin A
<i>Migut.D00707</i>	LG4	3446034	<i>AT5G19485.1</i>	Symbols:	transferases;nucleotidyltransferases
<i>Migut.D00708</i>	LG4	3457913	<i>AT5G26960.1</i>	Symbols:	Galactose oxidase/kelch repeat superfamily protein
<i>Migut.D00709</i>	LG4	3461770	<i>AT3G03740.1</i>	Symbols: ATBPM4, BPM4	BTB-POZ and MATH domain 4
<i>Migut.D00710</i>	LG4	3465885	<i>AT5G06100.1</i>	Symbols: MYB33, ATMYB33	myb domain protein 33
<i>Migut.D00711</i>	LG4	3471033	<i>AT5G21040.2</i>	Symbols: FBX2	F-box protein 2
<i>Migut.D00712</i>	LG4	3476393	<i>AT3G43720.1</i>	Symbols:	Bifunctional inhibitor/lipid-transfer protein/seed
<i>Migut.D00713</i>	LG4	3480796	<i>AT2G24190.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.D00714</i>	LG4	3483695	<i>AT2G27100.1</i>	Symbols: SE	C2H2 zinc-finger protein SERRATE (SE)
<i>Migut.D00715</i>	LG4	3489561	<i>AT2G03200.1</i>	Symbols:	Eukaryotic aspartyl protease family protein
<i>Migut.D00716</i>	LG4	3494560	<i>AT2G27090.1</i>	Symbols:	Protein of unknown function (DUF630 and DUF632)
<i>Migut.D00717</i>	LG4	3499925	<i>AT2G27080.2</i>	Symbols:	Late embryogenesis abundant (LEA) hydroxyproline-rich
<i>Migut.D00718</i>	LG4	3502289	<i>AT2G27060.1</i>	Symbols:	Leucine-rich repeat protein kinase family protein
<i>Migut.D00719</i>	LG4	3510701	<i>AT3G20770.1</i>	Symbols: EIN3, AtEIN3	Ethylene insensitive 3 family protein
<i>Migut.D00720</i>	LG4	3516530	<i>AT2G27140.1</i>	Symbols:	HSP20-like chaperones superfamily protein
<i>Migut.D00721</i>	LG4	3518389	<i>AT3G43610.1</i>	Symbols:	Spc97 / Spc98 family of spindle pole body (SBP)
<i>Migut.D00722</i>	LG4	3529544	<i>AT2G27150.2</i>	Symbols: AAO3, At-AO3, AODelta, AtAAO3	abscisic aldehyde
<i>Migut.D00723</i>	LG4	3535430	<i>AT5G20960.2</i>	Symbols: AAO1, AO1, ATAO, AT-AO1, AOalpha, AtAO1	aldehyde
<i>Migut.D00724</i>	LG4	3541038	<i>AT3G07425.1</i>	Symbols:	unknown protein; Has 35333 Blast hits to 34131
<i>Migut.D00725</i>	LG4	3542239	<i>AT3G07430.1</i>	Symbols: emb1990, YLMG1-1, ATYLMG1-1	YGGT family protein
<i>Migut.D00726</i>	LG4	3544095	<i>AT3G07440.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D00727</i>	LG4	3546889	<i>AT5G48520.1</i>	Symbols:	unknown protein; Has 609 Blast hits to 593 proteins
<i>Migut.D00728</i>	LG4	3554084	<i>AT2G29640.1</i>	Symbols: JOSL	JOSEPHIN-like protein
<i>Migut.D00729</i>	LG4	3556385	<i>AT5G48500.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D00730</i>	LG4	3563589	<i>AT1G54217.2</i>	Symbols:	Ribosomal protein L18ae family
<i>Migut.D00731</i>	LG4	3564487	<i>AT5G48485.1</i>	Symbols: DIR1	Bifunctional inhibitor/lipid-transfer protein/seed
<i>Migut.D00732</i>	LG4	3566559	<i>AT5G48480.1</i>	Symbols:	Lactoylglutathione lyase / glyoxalase I family
<i>Migut.D00733</i>	LG4	3571017	<i>AT5G48470.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00734</i>	LG4	3573115	<i>AT5G48485.1</i>	Symbols: DIR1	Bifunctional inhibitor/lipid-transfer protein/seed
<i>Migut.D00735</i>	LG4	3574941	<i>AT5G48480.1</i>	Symbols:	Lactoylglutathione lyase / glyoxalase I family
<i>Migut.D00736</i>	LG4	3576731	<i>AT5G48470.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function

<i>Migut.D00737</i>	LG4	3582150	<i>AT5G48460.1</i>	Symbols:	Actin binding Calponin homology (CH) domain-containing
<i>Migut.D00738</i>	LG4	3592111	<i>AT2G43060.1</i>	Symbols: IBH1	IL1 binding bHLH 1
<i>Migut.D00739</i>	LG4	3596360			
<i>Migut.D00740</i>	LG4	3596975	<i>AT3G07470.1</i>	Symbols:	Protein of unknown function, DUF538
<i>Migut.D00741</i>	LG4	3604705	<i>AT4G03500.1</i>	Symbols:	Ankyrin repeat family protein
<i>Migut.D00742</i>	LG4	3608404	<i>AT5G48450.1</i>	Symbols: sks3	SKU5 similar 3
<i>Migut.D00743</i>	LG4	3612581	<i>AT1G10610.1</i>	Symbols:	basic helix-loop-helix (bHLH) DNA-binding superfamily
<i>Migut.D00744</i>	LG4	3617312	<i>AT5G48440.1</i>	Symbols:	FAD-dependent oxidoreductase family protein
<i>Migut.D00745</i>	LG4	3620650	<i>AT1G05990.1</i>	Symbols: RHS1	EF hand calcium-binding protein family
<i>Migut.D00746</i>	LG4	3622318	<i>AT3G07510.2</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00747</i>	LG4	3627970	<i>AT3G07510.2</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00748</i>	LG4	3631903	<i>AT2G29120.1</i>	Symbols: ATGLR2.7, GLR2.7	glutamate receptor 2.7
<i>Migut.D00749</i>	LG4	3634886	<i>AT5G48400.2</i>	Symbols: ATGLR1.2, GLR1.2	Glutamate receptor family protein
<i>Migut.D00750</i>	LG4	3639518	<i>AT4G12840.2</i>	Symbols:	Protein of unknown function (DUF707)
<i>Migut.D00751</i>	LG4	3643089	<i>AT3G08750.1</i>	Symbols:	F-box and associated interaction domains-containing
<i>Migut.D00752</i>	LG4	3645466	<i>AT4G13420.1</i>	Symbols: HAK5, ATHAK5	high affinity K ⁺ transporter 5
<i>Migut.D00753</i>	LG4	3652488	<i>AT4G13420.1</i>	Symbols: HAK5, ATHAK5	high affinity K ⁺ transporter 5
<i>Migut.D00754</i>	LG4	3656989	<i>AT5G52610.1</i>	Symbols:	F-box and associated interaction domains-containing
<i>Migut.D00755</i>	LG4	3659074	<i>AT4G12740.1</i>	Symbols:	HhH-GPD base excision DNA repair family protein
<i>Migut.D00756</i>	LG4	3662174	<i>AT2G04039.2</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00757</i>	LG4	3663520	<i>AT3G07580.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00758</i>	LG4	3667308	<i>AT4G12760.1</i>	Symbols:	unknown protein; Has 30201 Blast hits to 17322
<i>Migut.D00759</i>	LG4	3670195	<i>AT4G12770.1</i>	Symbols:	Chaperone DnaJ-domain superfamily protein
<i>Migut.D00760</i>	LG4	3676051	<i>AT3G07565.1</i>	Symbols:	Protein of unknown function (DUF3755)
<i>Migut.D00761</i>	LG4	3682244	<i>AT3G25520.1</i>	Symbols: ATL5, PGY3, OL15, RPL5A	ribosomal protein L5
<i>Migut.D00762</i>	LG4	3685713	<i>AT3G25520.1</i>	Symbols: ATL5, PGY3, OL15, RPL5A	ribosomal protein L5
<i>Migut.D00763</i>	LG4	3688684	<i>AT4G12790.5</i>	Symbols:	P-loop containing nucleoside triphosphate hydrolases
<i>Migut.D00764</i>	LG4	3693077	<i>AT5G48340.1</i>	Symbols:	unknown protein; Has 1807 Blast hits to 1807 proteins
<i>Migut.D00765</i>	LG4	3695547	<i>AT2G39780.1</i>	Symbols: RNS2	ribonuclease 2
<i>Migut.D00766</i>	LG4	3707173	<i>AT3G07210.1</i>	Symbols:	unknown protein; Has 97 Blast hits to 85 proteins
<i>Migut.D00767</i>	LG4	3716976	<i>AT3G25500.1</i>	Symbols: AFH1, FH1, AHF1, ATFH1	formin homology 1 Thioesterase/thiol ester dehydrase-isomerase superfamily
<i>Migut.D00768</i>	LG4	3719309	<i>AT5G48370.2</i>	Symbols:	
<i>Migut.D00769</i>	LG4	3723313	<i>AT5G48380.1</i>	Symbols: BIR1	BAK1-interacting receptor-like kinase 1
<i>Migut.D00770</i>	LG4	3729313	<i>AT4G31710.1</i>	Symbols: ATGLR2.4, GLR2.4	glutamate receptor 2.4
<i>Migut.D00771</i>	LG4	3729433	<i>AT5G48385.1</i>	Symbols:	FRIGIDA-like protein
<i>Migut.D00772</i>	LG4	3733490	<i>AT5G48390.1</i>	Symbols: ATZIP4	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.D00773</i>	LG4	3737801	<i>AT3G25480.1</i>	Symbols:	Rhodanese/Cell cycle control phosphatase superfamily
<i>Migut.D00774</i>	LG4	3744171	<i>AT3G07525.2</i>	Symbols: ATG10, ATATG10	autophagocytosis-associated family
<i>Migut.D00775</i>	LG4	3745894	<i>AT3G25470.1</i>	Symbols:	bacterial hemolysin-related
<i>Migut.D00776</i>	LG4	3749066	<i>AT4G12800.1</i>	Symbols: PSAL	photosystem I subunit I
<i>Migut.D00777</i>	LG4	3751207	<i>AT4G12830.1</i>	Symbols:	alpha/beta-Hydrolases superfamily protein
<i>Migut.D00778</i>	LG4	3753536	<i>AT3G18240.2</i>	Symbols:	Ribosomal protein S24/S35, mitochondrial

<i>Migut.D00779</i>	LG4	3758246	<i>AT3G25530.1</i>	Symbols: GHBDH, ATGHBDH, GLYR1, GR1	glyoxylate reductase
<i>Migut.D00780</i>	LG4	3761018	<i>AT2G26970.1</i>	Symbols:	Polynucleotidyl transferase, ribonuclease H-like
<i>Migut.D00781</i>	LG4	3765028	<i>AT3G20000.1</i>	Symbols: TOM40	translocase of the outer mitochondrial membrane
<i>Migut.D00782</i>	LG4	3771240	<i>AT5G10860.1</i>	Symbols:	Cystathionine beta-synthase (CBS) family protein
<i>Migut.D00783</i>	LG4	3772644	<i>AT1G33330.1</i>	Symbols:	Class I peptide chain release factor
<i>Migut.D00784</i>	LG4	3775650	<i>AT1G31480.1</i>	Symbols: SGR2	shoot gravitropism 2 (SGR2)
<i>Migut.D00785</i>	LG4	3783702	<i>AT1G66560.1</i>	Symbols: UCH2	Peptidase C12, ubiquitin carboxyl-terminal
<i>Migut.D00786</i>	LG4	3788964	<i>AT1G02670.1</i>	Symbols:	P-loop containing nucleoside triphosphate hydrolases
<i>Migut.D00787</i>	LG4	3790279	<i>AT4G10360.2</i>	Symbols:	TRAM, LAG1 and CLN8 (TLC) lipid-sensing domain
<i>Migut.D00788</i>	LG4	3793973	<i>AT1G09575.1</i>	Symbols:	Protein of unknown function (DUF607)
<i>Migut.D00789</i>	LG4	3795430	<i>AT1G31360.1</i>	Symbols: RECQL2, ATRECQ2, MED34	RECQ helicase L2
<i>Migut.D00790</i>	LG4	3803004	<i>AT5G24910.1</i>	Symbols: CYP714A1	cytochrome P450, family 714, subfamily
<i>Migut.D00791</i>	LG4	3808254	<i>AT1G29050.1</i>	Symbols: TBL38	TRICHOME BIREFRINGENCE-LIKE 38
<i>Migut.D00792</i>	LG4	3812210	<i>AT5G42510.1</i>	Symbols:	Disease resistance-responsive (dirigent-like protein)
<i>Migut.D00793</i>	LG4	3814060	<i>AT1G19070.1</i>	Symbols:	F-box family protein
<i>Migut.D00794</i>	LG4	3817729	<i>AT5G50400.1</i>	Symbols: ATPAP27, PAP27	purple acid phosphatase 27
<i>Migut.D00795</i>	LG4	3824721	<i>AT5G50400.1</i>	Symbols: ATPAP27, PAP27	purple acid phosphatase 27
<i>Migut.D00796</i>	LG4	3832005	<i>AT4G30880.1</i>	Symbols:	Bifunctional inhibitor/lipid-transfer protein/seed
<i>Migut.D00797</i>	LG4	3833008	<i>AT2G13440.1</i>	Symbols:	glucose-inhibited division family A protein
<i>Migut.D00798</i>	LG4	3842609	<i>AT1G52640.1</i>	Symbols:	Pentatricopeptide repeat (PPR) superfamily protein
<i>Migut.D00799</i>	LG4	3844435	<i>AT5G58260.1</i>	Symbols:	oxidoreductases, acting on NADH or NADPH, quinone
<i>Migut.D00800</i>	LG4	3847277	<i>AT5G58270.1</i>	Symbols: STA1, ATATM3, ATM3	ABC transporter of the mitochondrion
<i>Migut.D00801</i>	LG4	3859209	<i>AT2G30530.1</i>	Symbols:	unknown protein; LOCATED IN: cellular_component
<i>Migut.D00802</i>	LG4	3864538	<i>AT3G08600.1</i>	Symbols:	Protein of unknown function (DUF1191)
<i>Migut.D00803</i>	LG4	3871504	<i>AT2G38610.2</i>	Symbols:	RNA-binding KH domain-containing protein
<i>Migut.D00804</i>	LG4	3876275	<i>AT5G05370.1</i>	Symbols:	Cytochrome b-c1 complex, subunit 8 protein
<i>Migut.D00805</i>	LG4	3878582	<i>AT5G58280.1</i>	Symbols:	AP2/B3-like transcriptional factor family protein
<i>Migut.D00806</i>	LG4	3881199	<i>AT1G26910.1</i>	Symbols: RPL10B	Ribosomal protein L16p/L10e family protein
<i>Migut.D00807</i>	LG4	3884485	<i>AT1G06840.1</i>	Symbols:	Leucine-rich repeat protein kinase family protein
<i>Migut.D00808</i>	LG4	3891843	<i>AT1G06840.1</i>	Symbols:	Leucine-rich repeat protein kinase family protein
<i>Migut.D00809</i>	LG4	3897974	<i>AT4G16730.1</i>	Symbols: TPS02	terpene synthase 02
<i>Migut.D00810</i>	LG4	3901385	<i>AT5G58290.1</i>	Symbols: RPT3	regulatory particle triple-A ATPase 3
<i>Migut.D00811</i>	LG4	3906915	<i>AT1G64230.2</i>	Symbols: UBC28	ubiquitin-conjugating enzyme 28
<i>Migut.D00812</i>	LG4	3912274	<i>AT4G27950.1</i>	Symbols: CRF4	cytokinin response factor 4
<i>Migut.D00813</i>	LG4	3916151	<i>AT5G20920.3</i>	Symbols: EIF2 BETA	eukaryotic translation initiation factor
<i>Migut.D00814</i>	LG4	3921933	<i>AT5G58320.2</i>	Symbols:	Kinase interacting (KIP1-like) family protein
<i>Migut.D00815</i>	LG4	3925945	<i>AT1G55150.1</i>	Symbols:	DEA(D/H)-box RNA helicase family protein
<i>Migut.D00816</i>	LG4	3947886	<i>AT2G30490.1</i>	Symbols: ATC4H, C4H, CYP73A5, REF3	cinnamate-4-hydroxylase
<i>Migut.D00817</i>	LG4	3951045	<i>AT2G30480.3</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00818</i>	LG4	3958781	<i>AT2G30470.1</i>	Symbols: HSI2, VAL1	high-level expression of sugar-inducible
<i>Migut.D00819</i>	LG4	3967677	<i>AT1G31930.3</i>	Symbols: XLG3	extra-large GTP-binding protein 3
<i>Migut.D00820</i>	LG4	3970160	<i>AT1G06900.1</i>	Symbols:	Insulinase (Peptidase family M16) family protein

<i>Migut.D00821</i>	LG4	3981054	<i>AT2G40610.1</i>	Symbols: ATEXPA8, EXP8, ATEXP8, ATHEXP ALPHA 1.11, EXPA8	
<i>Migut.D00822</i>	LG4	3984339	<i>AT1G06890.2</i>	Symbols:	nodulin MtN21 /EamA-like transporter family protein
<i>Migut.D00823</i>	LG4	3989792	<i>AT3G10920.2</i>	Symbols: MSD1	manganese superoxide dismutase 1
<i>Migut.D00824</i>	LG4	3993753	<i>AT1G12520.3</i>	Symbols: ATCCS, CCS	copper chaperone for SOD1
<i>Migut.D00825</i>	LG4	3996510	<i>AT2G40590.1</i>	Symbols:	Ribosomal protein S26e family protein
<i>Migut.D00826</i>	LG4	4002207	<i>AT3G51620.2</i>	Symbols: Symbols: ATOFP17, OFP17	PAP/OAS1 substrate-binding domain superfamily ovate family protein 17
<i>Migut.D00827</i>	LG4	4008617	<i>AT2G30395.1</i>	Symbols: CHAL, EPFL6	allergen-related
<i>Migut.D00828</i>	LG4	4010239	<i>AT2G30370.1</i>	Symbols: CIPK11, PKS5, SIP4, SNRK3.22	SOS3-interacting protein
<i>Migut.D00829</i>	LG4	4013848	<i>AT2G30360.1</i>	Symbols:	P-loop containing nucleoside triphosphate hydrolases
<i>Migut.D00830</i>	LG4	4017317	<i>AT5G58370.2</i>	Symbols:	Methyltransferase-related protein
<i>Migut.D00831</i>	LG4	4022917	<i>AT5G58375.1</i>	Symbols:	Excinuclease ABC, C subunit, N-terminal
<i>Migut.D00832</i>	LG4	4025360	<i>AT2G30350.2</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D00833</i>	LG4	4029875	<i>AT2G40475.1</i>	Symbols:	Peroxidase superfamily protein
<i>Migut.D00834</i>	LG4	4031069	<i>AT5G05340.1</i>	Symbols:	Peroxidase superfamily protein
<i>Migut.D00835</i>	LG4	4051763	<i>AT5G05340.1</i>	Symbols: Symbols: ATTIC110, TIC110	translocon at the inner envelope
<i>Migut.D00836</i>	LG4	4054829	<i>AT1G06950.1</i>	Symbols:	Major facilitator superfamily protein
<i>Migut.D00837</i>	LG4	4067644	<i>AT2G30300.1</i>	Symbols: PYD4	PYRIMIDINE 4
<i>Migut.D00838</i>	LG4	4072060	<i>AT3G08860.1</i>	Symbols:	HEAT/U-box domain-containing protein
<i>Migut.D00839</i>	LG4	4075617	<i>AT5G58410.1</i>	Symbols: ATST2A, ST2A	sulfotransferase 2A
<i>Migut.D00840</i>	LG4	4088128	<i>AT5G07010.1</i>	Symbols:	mitochondrial 28S ribosomal protein S29-related
<i>Migut.D00841</i>	LG4	4091265	<i>AT1G16870.1</i>	Symbols: WRKY33, ATWRKY33	WRKY DNA-binding protein 33
<i>Migut.D00842</i>	LG4	4099032	<i>AT2G38470.1</i>	Symbols:	methyltransferases
<i>Migut.D00843</i>	LG4	4103139	<i>AT5G01710.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00844</i>	LG4	4106802	<i>AT1G06980.1</i>	Symbols:	GDSL-like Lipase/Acylhydrolase family protein
<i>Migut.D00845</i>	LG4	4113239	<i>AT2G30310.1</i>	Symbols: ATEXO70B1, EXO70B1	exocyst subunit exo70 family
<i>Migut.D00846</i>	LG4	4115065	<i>AT5G58430.1</i>	Symbols:	BEST Arabidopsis thaliana protein match is: mucin-related
<i>Migut.D00847</i>	LG4	4120017	<i>AT5G62270.1</i>	Symbols: ATCHX25, CHX25	cation/H ⁺ exchanger 25
<i>Migut.D00848</i>	LG4	4124149	<i>AT5G58460.1</i>	Symbols:	Calcineurin-like metallo-phosphoesterase superfamily
<i>Migut.D00849</i>	LG4	4135715	<i>AT1G07010.1</i>	Symbols:	Protein phosphatase 2C family protein
<i>Migut.D00850</i>	LG4	4140539	<i>AT2G30170.1</i>	Symbols:	Mitochondrial substrate carrier family protein
<i>Migut.D00851</i>	LG4	4142782	<i>AT1G07030.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D00852</i>	LG4	4147894	<i>AT3G14750.1</i>	Symbols:	ferritin 4
<i>Migut.D00853</i>	LG4	4151427	<i>AT2G40300.1</i>	Symbols: ATFER4, FER4	
<i>Migut.D00854</i>	LG4	4155563	<i>AT1G07090.1</i>	Symbols: LSH6	Protein of unknown function (DUF640)
<i>Migut.D00855</i>	LG4	4157406	<i>AT2G30105.1</i>	Symbols:	CONTAINS InterPro DOMAIN/s: Leucine-rich repeat,
<i>Migut.D00856</i>	LG4	4166564	<i>AT2G30105.1</i>	Symbols:	CONTAINS InterPro DOMAIN/s: Leucine-rich repeat,
<i>Migut.D00857</i>	LG4	4186447	<i>AT2G29970.1</i>	Symbols:	Double Clp-N motif-containing P-loop nucleoside
<i>Migut.D00858</i>	LG4	4191323	<i>AT2G29960.1</i>	Symbols: CYP5, ATCYP5, CYP19-4	cyclophilin 5
<i>Migut.D00859</i>	LG4	4194513	<i>AT2G29650.1</i>	Symbols: ANTR1, PHT4;1 Symbols: CYP86A1, CYP86	phosphate transporter 4;1 cytochrome P450, family 86, subfamily
<i>Migut.D00860</i>	LG4	4197973	<i>AT5G58860.1</i>		

<i>Migut.D00861</i>	LG4	4201438	<i>AT5G26250.1</i>	Symbols:	Major facilitator superfamily protein
<i>Migut.D00862</i>	LG4	4204420	<i>AT3G47000.1</i>	Symbols:	Glycosyl hydrolase family protein
<i>Migut.D00863</i>	LG4	4209387	<i>AT2G29590.1</i>	Symbols:	Thioesterase superfamily protein
<i>Migut.D00864</i>	LG4	4211747	<i>AT3G46960.1</i>	Symbols:	RNA helicase, ATP-dependent, SK12/DOB1 protein
<i>Migut.D00865</i>	LG4	4227204	<i>AT5G59613.2</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00866</i>	LG4	4231182	<i>AT2G30040.1</i>	Symbols: MAPKKK14	mitogen-activated protein kinase kinase
<i>Migut.D00867</i>	LG4	4233426	<i>AT5G05950.1</i>	Symbols: MEE60	maternal effect embryo arrest 60
<i>Migut.D00868</i>	LG4	4235321	<i>AT1G07410.1</i>	Symbols: ATRABA2B, RAB-A2B, ATRAB-A2B, RABA2b	RAB GTPase
<i>Migut.D00869</i>	LG4	4237853	<i>AT2G46800.2</i>	Symbols: ZAT, ATMTP1, MTP1, ZAT1, ATCDF1	zinc transporter
<i>Migut.D00870</i>	LG4	4242158	<i>AT5G59160.3</i>	Symbols: TOPP2, PPO	type one serine/threonine protein phosphatase
<i>Migut.D00871</i>	LG4	4247620	<i>AT5G38630.1</i>	Symbols: ACYB-1, CYB-1	cytochrome B561-1
<i>Migut.D00872</i>	LG4	4249268	<i>AT3G46790.1</i>	Symbols: CRR2	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.D00873</i>	LG4	4252647	<i>AT1G07420.1</i>	Symbols: ATSMO2, SMO2-1	sterol 4-alpha-methyl-oxidase 2-1
<i>Migut.D00874</i>	LG4	4257062	<i>AT2G29380.1</i>	Symbols: HAI3	highly ABA-induced PP2C gene 3
<i>Migut.D00875</i>	LG4	4259442	<i>AT5G12460.1</i>	Symbols:	Protein of unknown function (DUF604)
<i>Migut.D00876</i>	LG4	4261865	<i>AT3G46780.1</i>	Symbols: PTAC16	plastid transcriptionally active 16
<i>Migut.D00877</i>	LG4	4264837	<i>AT2G29210.1</i>	Symbols:	splicing factor PWI domain-containing protein
<i>Migut.D00878</i>	LG4	4276556	<i>AT1G07470.1</i>	Symbols:	Transcription factor IIA, alpha/beta subunit
<i>Migut.D00879</i>	LG4	4283366	<i>AT5G59250.1</i>	Symbols:	Major facilitator superfamily protein
<i>Migut.D00880</i>	LG4	4287591	<i>AT3G46750.1</i>	Symbols:	unknown protein; Has 2631 Blast hits to 1984 proteins
<i>Migut.D00881</i>	LG4	4290784	<i>AT4G13650.1</i>	Symbols:	Pentatricopeptide repeat (PPR) superfamily protein
<i>Migut.D00882</i>	LG4	4293738	<i>AT3G46740.1</i>	Symbols: TOC75-III, MAR1	translocon at the outer envelope
<i>Migut.D00883</i>	LG4	4299100	<i>AT5G59610.1</i>	Symbols:	Chaperone DnaJ-domain superfamily protein
<i>Migut.D00884</i>	LG4	4303466	<i>AT3G46640.2</i>	Symbols: PCL1	Homeodomain-like superfamily protein
<i>Migut.D00885</i>	LG4	4305674	<i>AT2G29180.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00886</i>	LG4	4308918	<i>AT2G29200.1</i>	Symbols: APUM1, PUM1	pumilio 1
<i>Migut.D00887</i>	LG4	4316264	<i>AT3G20190.1</i>	Symbols:	Leucine-rich repeat protein kinase family protein
<i>Migut.D00888</i>	LG4	4319956	<i>AT1G78895.1</i>	Symbols:	Reticulon family protein
<i>Migut.D00889</i>	LG4	4322782	<i>AT1G78900.2</i>	Symbols: VHA-A	vacuolar ATP synthase subunit A
<i>Migut.D00890</i>	LG4	4328816	<i>AT4G30010.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00891</i>	LG4	4329255	<i>AT5G64820.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00892</i>	LG4	4331370	<i>AT4G31540.1</i>	Symbols: ATEXO70G1, EXO70G1	exocyst subunit exo70 family
<i>Migut.D00893</i>	LG4	4333720	<i>AT1G08130.1</i>	Symbols: ATLIG1, LIG1	DNA ligase 1
<i>Migut.D00894</i>	LG4	4343272	<i>AT3G21200.1</i>	Symbols: PGR7	proton gradient regulation 7
<i>Migut.D00895</i>	LG4	4346414	<i>AT2G29110.1</i>	Symbols: ATGLR2.8, GLR2.8	glutamate receptor 2.8
<i>Migut.D00896</i>	LG4	4350740	<i>AT2G04270.2</i>	Symbols: RNEE/G	RNAse E/G-like
<i>Migut.D00897</i>	LG4	4357292	<i>AT3G21215.1</i>	Symbols:	RNA-binding (RRM/RBD/RNP motifs) family protein
<i>Migut.D00898</i>	LG4	4361896	<i>AT2G18740.1</i>	Symbols:	Small nuclear ribonucleoprotein family protein
<i>Migut.D00899</i>	LG4	4363252	<i>AT1G17745.1</i>	Symbols: PGDH	D-3-phosphoglycerate dehydrogenase
<i>Migut.D00900</i>	LG4	4366727	<i>AT1G73050.1</i>	Symbols:	Glucose-methanol-choline (GMC) oxidoreductase family

<i>Migut.D00901</i>	LG4	4369950	<i>AT3G21220.1</i>	Symbols: ATMKK5, ATMAP2K_ALPHA, MAP2K_A, MKK5, ATMEK5, MEK5	
<i>Migut.D00902</i>	LG4	4372712	<i>AT1G72300.1</i>	Symbols:	Leucine-rich receptor-like protein kinase family
<i>Migut.D00903</i>	LG4	4377057	<i>AT1G53710.1</i>	Symbols:	Calcineurin-like metallo-phosphoesterase superfamily
<i>Migut.D00904</i>	LG4	4381545	<i>AT1G53708.1</i>	Symbols: RTFL9	ROTUNDIFOLIA like 9
<i>Migut.D00905</i>	LG4	4386518	<i>AT3G14360.1</i>	Symbols:	alpha/beta-Hydrolases superfamily protein
<i>Migut.D00906</i>	LG4	4389731	<i>AT1G53750.1</i>	Symbols: RPT1A	regulatory particle triple-A 1A
<i>Migut.D00907</i>	LG4	4395217	<i>AT1G53800.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D00908</i>	LG4	4400035	<i>AT1G53820.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.D00909</i>	LG4	4403014	<i>AT1G11180.1</i>	Symbols:	Secretory carrier membrane protein (SCAMP) family
<i>Migut.D00910</i>	LG4	4410169	<i>AT1G53840.1</i>	Symbols: ATPME1, PME1	pectin methylesterase 1
<i>Migut.D00911</i>	LG4	4416642	<i>AT1G72330.1</i>	Symbols: ALAAT2	alanine aminotransferase 2
<i>Migut.D00912</i>	LG4	4420273	<i>AT1G53850.2</i>	Symbols: PAE1	20S proteasome alpha subunit E1
<i>Migut.D00913</i>	LG4	4424096	<i>AT3G14270.1</i>	Symbols: FAB1B	phosphatidylinositol-4-phosphate 5-kinase
<i>Migut.D00914</i>	LG4	4436535	<i>AT3G14260.1</i>	Symbols:	Protein of unknown function (DUF567)
<i>Migut.D00915</i>	LG4	4439786	<i>AT1G53900.1</i>	Symbols:	Eukaryotic translation initiation factor 2B (eIF-2B)
<i>Migut.D00916</i>	LG4	4447927	<i>AT1G53903.1</i>	Symbols:	Protein of unknown function (DUF581)
<i>Migut.D00917</i>	LG4	4452715	<i>AT1G53910.3</i>	Symbols: RAP2.12	related to AP2 12
<i>Migut.D00918</i>	LG4	4458378	<i>AT1G56220.3</i>	Symbols:	Dormancy/auxin associated family protein
<i>Migut.D00919</i>	LG4	4461006	<i>AT4G26340.1</i>	Symbols:	F-box/RNI-like/FBD-like domains-containing protein
<i>Migut.D00920</i>	LG4	4473294	<i>AT4G26340.1</i>	Symbols:	F-box/RNI-like/FBD-like domains-containing protein
<i>Migut.D00921</i>	LG4	4475156	<i>AT3G14172.2</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.D00922</i>	LG4	4484607	<i>AT3G14170.1</i>	Symbols:	Plant protein of unknown function (DUF936)
<i>Migut.D00923</i>	LG4	4489886	<i>AT1G11890.1</i>	Symbols: SEC22, ATSEC22	Synaptobrevin family protein
<i>Migut.D00924</i>	LG4	4493758	<i>AT3G14120.1</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.D00925</i>	LG4	4506702	<i>AT1G17370.1</i>	Symbols: UBP1B	oligouridylylate binding protein 1B
<i>Migut.D00926</i>	LG4	4512244	<i>AT1G19180.2</i>	Symbols: TIFY10A	jasmonate-zim-domain protein 1
<i>Migut.D00927</i>	LG4	4517306	<i>AT3G42880.1</i>	Symbols:	Leucine-rich repeat protein kinase family protein
<i>Migut.D00928</i>	LG4	4520270	<i>AT1G72470.1</i>	Symbols: ATEXO70D1, EXO70D1	exocyst subunit exo70 family
<i>Migut.D00929</i>	LG4	4524040	<i>AT1G72480.1</i>	Symbols:	Lung seven transmembrane receptor family protein
<i>Migut.D00930</i>	LG4	4528667	<i>AT3G14080.2</i>	Symbols:	Small nuclear ribonucleoprotein family protein
<i>Migut.D00931</i>	LG4	4532178	<i>AT1G72490.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D00932</i>	LG4	4539530	<i>AT3G14075.2</i>	Symbols:	Mono-/di-acylglycerol lipase, N-terminal;Lipase,
<i>Migut.D00933</i>	LG4	4549203	<i>AT1G54100.2</i>	Symbols: ALDH7B4	aldehyde dehydrogenase 7B4
<i>Migut.D00934</i>	LG4	4561709	<i>AT1G54120.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D00935</i>	LG4	4564484	<i>AT3G14050.1</i>	Symbols: RSH2, AT-RSH2, ATRSH2	RELA/SPOT homolog 2
<i>Migut.D00936</i>	LG4	4569613	<i>AT4G16110.1</i>	Symbols: ARR2, RR2	response regulator 2
<i>Migut.D00937</i>	LG4	4576274	<i>AT1G72610.1</i>	Symbols: GLP1, ATGER1, GER1	germin-like protein 1
<i>Migut.D00938</i>	LG4	4580353			
<i>Migut.D00939</i>	LG4	4593353	<i>AT1G54210.1</i>	Symbols: APG12, ATG12A, ATATG12	Ubiquitin-like superfamily
<i>Migut.D00940</i>	LG4	4595811	<i>AT1G17455.2</i>	Symbols: ELF4-L4	ELF4-like 4
<i>Migut.D00941</i>	LG4	4598086	<i>AT1G72640.2</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein

<i>Migut.D00942</i>	LG4	4601845	<i>AT1G72650.1</i>	Symbols: TRFL6	TRF-like 6
<i>Migut.D00943</i>	LG4	4610404	<i>AT3G13980.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D00944</i>	LG4	4614640	<i>AT5G13640.1</i>	Symbols: ATPDAT, PDAT, PDAT1	phospholipid:diacylglycerol
<i>Migut.D00945</i>	LG4	4626297	<i>AT3G14010.3</i>	Symbols: CID4	CTC-interacting domain 4
<i>Migut.D00946</i>	LG4	4633073	<i>AT5G20510.1</i>	Symbols: AL5	alfin-like 5
<i>Migut.D00947</i>	LG4	4638400	<i>AT5G48490.1</i>	Symbols:	Bifunctional inhibitor/lipid-transfer protein/seed
<i>Migut.D00948</i>	LG4	4640363	<i>AT3G13940.1</i>	Symbols:	DNA binding;DNA-directed RNA polymerases
<i>Migut.D00949</i>	LG4	4642843	<i>AT1G72770.3</i>	Symbols: HAB1	homology to ABI1
<i>Migut.D00950</i>	LG4	4648947	<i>AT5G26150.1</i>	Symbols:	protein kinase family protein
<i>Migut.D00951</i>	LG4	4657023	<i>AT1G17530.1</i>	Symbols: ATTIM23-1, TIM23-1	translocase of inner mitochondrial
<i>Migut.D00952</i>	LG4	4658479	<i>AT3G13930.1</i>	Symbols:	Dihydroliipoamide acetyltransferase, long form protein
<i>Migut.D00953</i>	LG4	4666761	<i>AT1G17520.1</i>	Symbols:	Homeodomain-like/winged-helix DNA-binding family
<i>Migut.D00954</i>	LG4	4671322	<i>AT3G13920.1</i>	Symbols: EIF4A1, RH4, TIF4A1	eukaryotic translation initiation
<i>Migut.D00955</i>	LG4	4676448	<i>AT5G11970.1</i>	Symbols:	Protein of unknown function (DUF3511)
<i>Migut.D00956</i>	LG4	4678552	<i>AT1G72710.1</i>	Symbols: CKL2	casein kinase 1-like protein 2
<i>Migut.D00957</i>	LG4	4683934	<i>AT1G17500.1</i>	Symbols:	ATPase E1-E2 type family protein / haloacid dehalogenase-like
<i>Migut.D00958</i>	LG4	4694507	<i>AT1G60970.1</i>	Symbols:	SNARE-like superfamily protein
<i>Migut.D00959</i>	LG4	4696708	<i>AT3G13898.1</i>	Symbols:	unknown protein; LOCATED IN: endomembrane system;
<i>Migut.D00960</i>	LG4	4698818	<i>AT1G72690.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D00961</i>	LG4	4700782	<i>AT1G72670.1</i>	Symbols: iqd8	IQ-domain 8
<i>Migut.D00962</i>	LG4	4707548	<i>AT3G13882.1</i>	Symbols:	Ribosomal protein L34
<i>Migut.D00963</i>	LG4	4710692	<i>AT1G17650.1</i>	Symbols: GLYR2, GR2	glyoxylate reductase 2
<i>Migut.D00964</i>	LG4	4715473	<i>AT3G13780.1</i>	Symbols:	SMAD/FHA domain-containing protein
<i>Migut.D00965</i>	LG4	4717424	<i>AT3G13845.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D00966</i>	LG4	4721033	<i>AT3G13850.1</i>	Symbols: LBD22	LOB domain-containing protein 22
<i>Migut.D00967</i>	LG4	4723626	<i>AT1G17620.1</i>	Symbols:	Late embryogenesis abundant (LEA) hydroxyproline-rich
<i>Migut.D00968</i>	LG4	4727986	<i>AT5G53790.1</i>	Symbols:	Protein of unknown function (DUF295)
<i>Migut.D00969</i>	LG4	4730543	<i>AT3G13870.1</i>	Symbols: RHD3	Root hair defective 3 GTP-binding protein (RHD3)
<i>Migut.D00970</i>	LG4	4743699	<i>AT2G19520.1</i>	Symbols: FVE, ACG1, MSI4, NFC4, NFC04, ATMSI4	Transducin
<i>Migut.D00971</i>	LG4	4750271	<i>AT3G13772.1</i>	Symbols: TMN7, AtTMN7	transmembrane nine 7
<i>Migut.D00972</i>	LG4	4754793	<i>AT3G13750.1</i>	Symbols: BGAL1	beta galactosidase 1
<i>Migut.D00973</i>	LG4	4770686	<i>AT1G55170.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D00974</i>	LG4	4778826	<i>AT1G55190.1</i>	Symbols: PRA1.F2, PRA7	PRA1 (Prenylated rab acceptor) family
<i>Migut.D00975</i>	LG4	4780016	<i>AT1G55200.1</i>	Symbols:	Protein kinase protein with adenine nucleotide
<i>Migut.D00976</i>	LG4	4796879	<i>AT1G51700.1</i>	Symbols: ADOF1, DOF1	DOF zinc finger protein 1
<i>Migut.D00977</i>	LG4	4799940	<i>AT1G17720.2</i>	Symbols: ATB BETA	Protein phosphatase 2A, regulatory subunit
<i>Migut.D00978</i>	LG4	4809170	<i>AT1G51720.1</i>	Symbols:	Amino acid dehydrogenase family protein
<i>Migut.D00979</i>	LG4	4815781	<i>AT4G29410.2</i>	Symbols:	Ribosomal L28e protein family
<i>Migut.D00980</i>	LG4	4818259	<i>AT3G21295.1</i>	Symbols:	Tudor/PWWP/MBT superfamily protein
<i>Migut.D00981</i>	LG4	4822769	<i>AT1G73040.1</i>	Symbols:	Mannose-binding lectin superfamily protein
<i>Migut.D00982</i>	LG4	4824633			

<i>Migut.D00983</i>	LG4	4827114	<i>AT5G11730.1</i>	Symbols:	Core-2/I-branching beta-1,6-N-acetylglucosaminyltransferase
<i>Migut.D00984</i>	LG4	4830395	<i>AT2G04220.1</i>	Symbols:	Plant protein of unknown function (DUF868)
<i>Migut.D00985</i>	LG4	4832278	<i>AT1G52080.1</i>	Symbols: AR791	actin binding protein family
<i>Migut.D00986</i>	LG4	4845078	<i>AT3G16490.1</i>	Symbols: IQD26	IQ-domain 26
<i>Migut.D00987</i>	LG4	4849937	<i>AT4G32850.3</i>	Symbols: nPAP	nuclear poly(a) polymerase
<i>Migut.D00988</i>	LG4	4856772	<i>AT2G19860.1</i>	Symbols: ATHXK2, HXK2	hexokinase 2
<i>Migut.D00989</i>	LG4	4860922	<i>AT3G16500.1</i>	Symbols: PAP1, IAA26	phytochrome-associated protein 1
<i>Migut.D00990</i>	LG4	4871721	<i>AT3G59780.1</i>	Symbols:	Rhodanese/Cell cycle control phosphatase superfamily
<i>Migut.D00991</i>	LG4	4876610	<i>AT1G79730.1</i>	Symbols: ELF7	hydroxyproline-rich glycoprotein family protein
<i>Migut.D00992</i>	LG4	4880040	<i>AT2G22460.1</i>	Symbols:	Protein of unknown function, DUF617
<i>Migut.D00993</i>	LG4	4882348	<i>AT1G79750.1</i>	Symbols: ATNADP-ME4, NADP-ME4	NADP-malic enzyme 4
<i>Migut.D00994</i>	LG4	4903266	<i>AT3G16340.1</i>	Symbols: ATPDR1, PDR1	pleiotropic drug resistance 1
<i>Migut.D00995</i>	LG4	4933258	<i>AT1G06150.2</i>	Symbols:	basic helix-loop-helix (bHLH) DNA-binding superfamily
<i>Migut.D00996</i>	LG4	4937141	<i>AT1G06620.1</i>	Symbols:	2-oxoglutarate (2OG) and Fe(II)-dependent oxygenase
<i>Migut.D00997</i>	LG4	4940538	<i>AT1G06640.2</i>	Symbols:	2-oxoglutarate (2OG) and Fe(II)-dependent oxygenase
<i>Migut.D00998</i>	LG4	4957544	<i>AT2G48030.1</i>	Symbols:	DNAse I-like superfamily protein
<i>Migut.D00999</i>	LG4	4958729	<i>AT3G06895.1</i>	Symbols:	unknown protein; Has 2 Blast hits to 2 proteins
<i>Migut.D01000</i>	LG4	4958970	<i>AT2G48020.1</i>	Symbols:	Major facilitator superfamily protein
<i>Migut.D01001</i>	LG4	4964258	<i>AT2G48010.1</i>	Symbols: RKF3	receptor-like kinase in in flowers 3
<i>Migut.D01002</i>	LG4	4984500	<i>AT1G52140.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D01003</i>	LG4	4986600	<i>ATCG00040.1</i>	Symbols: MATK	maturase K
<i>Migut.D01004</i>	LG4	4993878	<i>AT1G52140.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D01005</i>	LG4	4995033	<i>AT1G52150.1</i>	Symbols: ATHB-15, ATHB15, CNA, ICU4	Homeobox-leucine zipper
<i>Migut.D01006</i>	LG4	5006133	<i>AT3G16240.1</i>	Symbols: DELTA-TIP, TIP2;1, DELTA-TIP1, AQP1, ATTIP2;1	delta
<i>Migut.D01007</i>	LG4	5011998	<i>AT2G26490.1</i>	Symbols:	Transducin/WD40 repeat-like superfamily protein
<i>Migut.D01008</i>	LG4	5017788	<i>AT5G11180.1</i>	Symbols: ATGLR2.6, GLR2.6	glutamate receptor 2.6
<i>Migut.D01009</i>	LG4	5018640	<i>AT3G16200.1</i>	Symbols:	unknown protein; Has 97 Blast hits to 97 proteins
<i>Migut.D01010</i>	LG4	5021720	<i>AT3G27750.1</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.D01011</i>	LG4	5023117	<i>AT1G79810.1</i>	Symbols: TED3, PEX2, ATPEX2	Pex2/Pex12 N-terminal domain-containing
<i>Migut.D01012</i>	LG4	5032061	<i>AT4G29100.1</i>	Symbols:	basic helix-loop-helix (bHLH) DNA-binding superfamily
<i>Migut.D01013</i>	LG4	5037461	<i>AT3G16190.1</i>	Symbols:	Isochorismatase family protein
<i>Migut.D01014</i>	LG4	5039305	<i>AT3G16190.1</i>	Symbols:	Isochorismatase family protein
<i>Migut.D01015</i>	LG4	5042121	<i>AT1G79830.3</i>	Symbols: GC5	golgin candidate 5
<i>Migut.D01016</i>	LG4	5051406	<i>AT1G52220.1</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.D01017</i>	LG4	5054925	<i>AT1G52230.1</i>	Symbols: PSAH2, PSAH-2, PSI-H	photosystem I subunit H2
<i>Migut.D01018</i>	LG4	5056532	<i>AT3G24620.1</i>	Symbols: ATROPGEF8, ROPGEF8	RHO guanyl-nucleotide exchange
<i>Migut.D01019</i>	LG4	5062150	<i>AT1G79870.1</i>	Symbols:	D-isomer specific 2-hydroxyacid dehydrogenase family
<i>Migut.D01020</i>	LG4	5064794	<i>AT1G52240.2</i>	Symbols: ATROPGEF11, ROPGEF11, PIRF1	RHO guanyl-nucleotide
<i>Migut.D01021</i>	LG4	5073477	<i>AT1G15230.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function

<i>Migut.D01022</i>	LG4	5075712	<i>AT3G16080.1</i>	Symbols:	Zinc-binding ribosomal protein family protein
<i>Migut.D01023</i>	LG4	5078442	<i>AT3G16050.1</i>	Symbols: A37, ATPDX1.2, PDX1.2	pyridoxine biosynthesis 1.2
<i>Migut.D01024</i>	LG4	5082225	<i>AT3G16060.1</i>	Symbols:	ATP binding microtubule motor family protein
<i>Migut.D01025</i>	LG4	5086557	<i>AT1G79900.1</i>	Symbols: ATMBAC2, BAC2	Mitochondrial substrate carrier family
<i>Migut.D01026</i>	LG4	5090546	<i>AT1G15270.1</i>	Symbols:	Translation machinery associated TMA7
<i>Migut.D01027</i>	LG4	5093392	<i>AT4G13270.1</i>	Symbols:	Late embryogenesis abundant (LEA) hydroxyproline-rich
<i>Migut.D01028</i>	LG4	5095841	<i>AT1G52342.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D01029</i>	LG4	5098516	<i>AT2G25735.1</i>	Symbols:	unknown protein; Has 31 Blast hits to 31 proteins
<i>Migut.D01030</i>	LG4	5101806	<i>AT1G52343.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D01031</i>	LG4	5105215	<i>AT1G79960.1</i>	Symbols: ATOFP14, OFP14	ovate family protein 14
<i>Migut.D01032</i>	LG4	5107000	<i>AT1G79920.1</i>	Symbols:	Heat shock protein 70 (Hsp 70) family protein Alcohol dehydrogenase transcription factor Myb/SANT-like
<i>Migut.D01033</i>	LG4	5113619	<i>AT3G24490.1</i>	Symbols:	
<i>Migut.D01034</i>	LG4	5117164	<i>AT3G16000.1</i>	Symbols: MFP1	MAR binding filament-like protein 1
<i>Migut.D01035</i>	LG4	5121214	<i>AT3G15990.1</i>	Symbols: SULTR3;4	sulfate transporter 3;4
<i>Migut.D01036</i>	LG4	5137105	<i>AT1G79990.5</i>	Symbols:	structural molecules
<i>Migut.D01037</i>	LG4	5154848	<i>AT3G15540.1</i>	Symbols: IAA19, MSG2	indole-3-acetic acid inducible 19
<i>Migut.D01038</i>	LG4	5159101	<i>AT4G14550.1</i>	Symbols: IAA14, SLR	indole-3-acetic acid inducible 14
<i>Migut.D01039</i>	LG4	5163368	<i>AT1G80360.1</i>	Symbols:	Pyridoxal phosphate (PLP)-dependent transferases
<i>Migut.D01040</i>	LG4	5176606	<i>AT1G52790.1</i>	Symbols:	2-oxoglutarate (2OG) and Fe(II)-dependent oxygenase
<i>Migut.D01041</i>	LG4	5178714	<i>AT1G80310.1</i>	Symbols:	sulfate transmembrane transporters
<i>Migut.D01042</i>	LG4	5181125	<i>AT3G15570.1</i>	Symbols:	Phototropic-responsive NPH3 family protein
<i>Migut.D01043</i>	LG4	5185117	<i>AT1G80300.1</i>	Symbols: NTT1, ATNTT1	nucleotide transporter 1
<i>Migut.D01044</i>	LG4	5195021	<i>AT1G52760.1</i>	Symbols: LysoPL2	lysophospholipase 2
<i>Migut.D01045</i>	LG4	5204871	<i>AT1G15490.1</i>	Symbols:	alpha/beta-Hydrolases superfamily protein
<i>Migut.D01046</i>	LG4	5210004	<i>AT3G15610.1</i>	Symbols:	Transducin/WD40 repeat-like superfamily protein
<i>Migut.D01047</i>	LG4	5214155	<i>AT5G19990.1</i>	Symbols: RPT6A, ATSUG1	regulatory particle triple-A ATPase
<i>Migut.D01048</i>	LG4	5220738	<i>AT4G32460.2</i>	Symbols:	Protein of unknown function, DUF642
<i>Migut.D01049</i>	LG4	5221997	<i>AT3G27240.1</i>	Symbols:	Cytochrome C1 family
<i>Migut.D01050</i>	LG4	5229339	<i>AT3G14205.1</i>	Symbols:	Phosphoinositide phosphatase family protein
<i>Migut.D01051</i>	LG4	5241380	<i>AT2G26710.1</i>	Symbols: BAS1, CYP734A1, CYP72B1	Cytochrome P450 superfamily
<i>Migut.D01052</i>	LG4	5245658	<i>AT1G80230.1</i>	Symbols:	Rubredoxin-like superfamily protein
<i>Migut.D01053</i>	LG4	5248276	<i>AT1G68140.2</i>	Symbols:	Protein of unknown function (DUF1644)
<i>Migut.D01054</i>	LG4	5250567	<i>AT1G52680.1</i>	Symbols:	late embryogenesis abundant protein-related / LEA
<i>Migut.D01055</i>	LG4	5252117	<i>AT1G80210.1</i>	Symbols: BRCC36A, AtBRCC36A	Mov34/MPN/PAD-1 family protein
<i>Migut.D01056</i>	LG4	5259671	<i>AT1G15410.1</i>	Symbols:	aspartate-glutamate racemase family
<i>Migut.D01057</i>	LG4	5264073	<i>AT1G80180.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D01058</i>	LG4	5268609	<i>AT1G80500.1</i>	Symbols:	SNARE-like superfamily protein
<i>Migut.D01059</i>	LG4	5273629	<i>AT1G80170.1</i>	Symbols:	Pectin lyase-like superfamily protein
<i>Migut.D01060</i>	LG4	5277675			
<i>Migut.D01061</i>	LG4	5279035	<i>AT2G34160.1</i>	Symbols:	Alba DNA/RNA-binding protein
<i>Migut.D01062</i>	LG4	5281606	<i>AT1G52620.1</i>	Symbols:	Pentatricopeptide repeat (PPR) superfamily protein
<i>Migut.D01063</i>	LG4	5284467	<i>AT1G80150.1</i>	Symbols:	Tetratricopeptide repeat (TPR)-like superfamily

<i>Migut.D01064</i>	LG4	5288048	<i>AT5G11170.1</i>	Symbols:	DEAD/DEAH box RNA helicase family protein
<i>Migut.D01065</i>	LG4	5294043	<i>AT1G15370.1</i>	Symbols:	SNARE-like superfamily protein
<i>Migut.D01066</i>	LG4	5298506	<i>AT1G52570.1</i>	Symbols: PLDALPHA2	phospholipase D alpha 2
<i>Migut.D01067</i>	LG4	5303526	<i>AT5G12890.1</i>	Symbols:	UDP-Glycosyltransferase superfamily protein
<i>Migut.D01068</i>	LG4	5305808	<i>AT5G25360.2</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D01069</i>	LG4	5307658	<i>AT1G52560.1</i>	Symbols:	HSP20-like chaperones superfamily protein
<i>Migut.D01070</i>	LG4	5310428	<i>AT1G80133.1</i>	Symbols:	unknown protein; LOCATED IN: endomembrane system;
<i>Migut.D01071</i>	LG4	5312577	<i>AT3G15780.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D01072</i>	LG4	5315248	<i>AT5G20190.1</i>	Symbols:	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.D01073</i>	LG4	5318383	<i>AT1G15340.1</i>	Symbols: MBD10	methyl-CPG-binding domain 10
<i>Migut.D01074</i>	LG4	5321814	<i>AT1G80080.1</i>	Symbols: TMM, AtRLP17	Leucine-rich repeat (LRR) family protein
<i>Migut.D01075</i>	LG4	5326523	<i>AT1G52540.1</i>	Symbols:	Protein kinase superfamily protein
<i>Migut.D01076</i>	LG4	5328187	<i>AT1G52540.1</i>	Symbols:	Protein kinase superfamily protein
<i>Migut.D01077</i>	LG4	5332133	<i>AT4G12560.2</i>	Symbols: CPR30	F-box and associated interaction domains-containing
<i>Migut.D01078</i>	LG4	5340775	<i>AT1G80490.1</i>	Symbols: TPR1	TOPLESS-related 1
<i>Migut.D01079</i>	LG4	5345874	<i>AT1G80080.1</i>	Symbols: TMM, AtRLP17	Leucine-rich repeat (LRR) family protein
<i>Migut.D01080</i>	LG4	5347925	<i>AT1G80070.1</i>	Symbols: SUS2, EMB33, EMB177, EMB14	Pre-mRNA-processing-splicing
<i>Migut.D01081</i>	LG4	5351254	<i>AT1G80070.1</i>	Symbols: SUS2, EMB33, EMB177, EMB14	Pre-mRNA-processing-splicing
<i>Migut.D01082</i>	LG4	5360168	<i>AT5G32440.1</i>	Symbols:	Ubiquitin system component Cue protein
<i>Migut.D01083</i>	LG4	5364396	<i>AT1G80030.2</i>	Symbols:	Molecular chaperone Hsp40/DnaJ family protein
<i>Migut.D01084</i>	LG4	5371257	<i>AT3G42170.1</i>	Symbols:	BED zinc finger ;hAT family dimerisation domain
<i>Migut.D01085</i>	LG4	5377686	<i>AT1G15690.1</i>	Symbols: AVP1, ATAVP3, AVP-3, AtVHP1;1	Inorganic H pyrophosphatase
<i>Migut.D01086</i>	LG4	5383333	<i>AT2G11890.1</i>	Symbols:	adenylate cyclases
<i>Migut.D01087</i>	LG4	5384535			
<i>Migut.D01088</i>	LG4	5387921	<i>AT1G80510.1</i>	Symbols:	Transmembrane amino acid transporter family protein
<i>Migut.D01089</i>	LG4	5391264	<i>AT1G80520.1</i>	Symbols:	Sterile alpha motif (SAM) domain-containing protein
<i>Migut.D01090</i>	LG4	5392243	<i>AT3G02645.1</i>	Symbols:	Plant protein of unknown function (DUF247)
<i>Migut.D01091</i>	LG4	5394805	<i>AT2G26000.2</i>	Symbols: BRIZ2	zinc finger (C3HC4-type RING finger) family
<i>Migut.D01092</i>	LG4	5399159	<i>AT1G80600.1</i>	Symbols: WIN1	HOPW1-1-interacting 1
<i>Migut.D01093</i>	LG4	5403688	<i>AT1G15800.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D01094</i>	LG4	5415429	<i>AT1G28190.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D01095</i>	LG4	5416603	<i>AT2G07560.1</i>	Symbols: AHA6, HA6	H(+)-ATPase 6
<i>Migut.D01096</i>	LG4	5425228	<i>AT1G15860.2</i>	Symbols:	Domain of unknown function (DUF298)
<i>Migut.D01097</i>	LG4	5433664	<i>AT1G80980.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D01098</i>	LG4	5437624			
<i>Migut.D01099</i>	LG4	5440355			
<i>Migut.D01100</i>	LG4	5446072	<i>AT5G25160.1</i>	Symbols: ZFP3	zinc finger protein 3
<i>Migut.D01101</i>	LG4	5449471	<i>AT1G15900.1</i>	Symbols:	unknown protein; Has 19 Blast hits to 19 proteins
<i>Migut.D01102</i>	LG4	5452465	<i>AT1G15910.1</i>	Symbols:	XH/XS domain-containing protein
<i>Migut.D01103</i>	LG4	5457287	<i>AT4G00380.1</i>	Symbols:	XH/XS domain-containing protein
<i>Migut.D01104</i>	LG4	5467942	<i>AT3G59140.1</i>	Symbols: ATMMP14, MRP14, ABCC10	multidrug resistance-associated
<i>Migut.D01105</i>	LG4	5475225	<i>AT1G10450.1</i>	Symbols: SNL6	SIN3-like 6
<i>Migut.D01106</i>	LG4	5475763	<i>AT1G80810.2</i>	Symbols:	Tudor/PWWP/MBT superfamily protein

<i>Migut.D01107</i>	LG4	5482247	<i>AT1G72980.1</i>	Symbols: LBD7	LOB domain-containing protein 7
<i>Migut.D01108</i>	LG4	5485333	<i>AT1G15940.1</i>	Symbols:	Tudor/PWWP/MBT superfamily protein
<i>Migut.D01109</i>	LG4	5488935	<i>AT1G80780.2</i>	Symbols:	Polynucleotidyl transferase, ribonuclease H-like hydroxycinnamoyl-CoA shikimate/quinate hydroxycinnamoyl
<i>Migut.D01110</i>	LG4	5497015	<i>AT5G48930.1</i>	Symbols: HCT	hydroxycinnamoyl-CoA shikimate/quinate hydroxycinnamoyl
<i>Migut.D01111</i>	LG4	5507455	<i>AT5G48930.1</i>	Symbols: HCT	hydroxycinnamoyl-CoA shikimate/quinate hydroxycinnamoyl
<i>Migut.D01112</i>	LG4	5514208	<i>AT2G32070.1</i>	Symbols:	Polynucleotidyl transferase, ribonuclease H-like
<i>Migut.D01113</i>	LG4	5516874	<i>AT2G32060.2</i>	Symbols:	Ribosomal protein L7Ae/L30e/S12e/Gadd45 family
<i>Migut.D01114</i>	LG4	5519092	<i>AT2G25110.1</i>	Symbols: SDF2, ATSDL, AtSDF2	stromal cell-derived factor
<i>Migut.D01115</i>	LG4	5524817	<i>AT1G11870.1</i>	Symbols: ATSR5, OVA7, SRS	Seryl-tRNA synthetase
<i>Migut.D01116</i>	LG4	5528676	<i>AT4G31880.1</i>	Symbols:	LOCATED IN: cytosol, chloroplast; EXPRESSED IN:
<i>Migut.D01117</i>	LG4	5535320	<i>AT1G80810.2</i>	Symbols:	Tudor/PWWP/MBT superfamily protein
<i>Migut.D01118</i>	LG4	5538654	<i>AT5G10950.1</i>	Symbols:	Tudor/PWWP/MBT superfamily protein
<i>Migut.D01119</i>	LG4	5541968	<i>AT4G31880.2</i>	Symbols:	LOCATED IN: cytosol; EXPRESSED IN: 24 plant structures;
<i>Migut.D01120</i>	LG4	5545671	<i>AT1G80990.1</i>	Symbols:	XH domain-containing protein
<i>Migut.D01121</i>	LG4	5550422	<i>AT4G31880.1</i>	Symbols:	LOCATED IN: cytosol, chloroplast; EXPRESSED IN:
<i>Migut.D01122</i>	LG4	5573198	<i>AT1G15950.1</i>	Symbols: CCR1, IRX4, ATCCR1	cinnamoyl coa reductase 1
<i>Migut.D01123</i>	LG4	5587457	<i>AT1G80830.1</i>	Symbols: NRAMP1, PMIT1, ATNRAMP1	natural resistance-associated
<i>Migut.D01124</i>	LG4	5608053	<i>AT1G80840.1</i>	Symbols: WRKY40, ATWRKY40	WRKY DNA-binding protein 40
<i>Migut.D01125</i>	LG4	5610290	<i>AT5G57970.2</i>	Symbols:	DNA glycosylase superfamily protein
<i>Migut.D01126</i>	LG4	5614956	<i>AT1G80860.1</i>	Symbols: ATPLMT, PLMT	phospholipid N-methyltransferase
<i>Migut.D01127</i>	LG4	5622886	<i>AT1G80870.1</i>	Symbols:	Protein kinase superfamily protein
<i>Migut.D01128</i>	LG4	5628219	<i>AT5G15350.1</i>	Symbols: ENODL17, AtENODL17	early nodulin-like protein 17
<i>Migut.D01129</i>	LG4	5633497	<i>AT1G80920.1</i>	Symbols: J8	Chaperone DnaJ-domain superfamily protein
<i>Migut.D01130</i>	LG4	5638129	<i>AT5G48930.1</i>	Symbols: HCT	hydroxycinnamoyl-CoA shikimate/quinate hydroxycinnamoyl
<i>Migut.D01131</i>	LG4	5650333	<i>AT5G48930.1</i>	Symbols: HCT	hydroxycinnamoyl-CoA shikimate/quinate hydroxycinnamoyl
<i>Migut.D01132</i>	LG4	5658123	<i>AT5G48930.1</i>	Symbols: HCT	hydroxycinnamoyl-CoA shikimate/quinate hydroxycinnamoyl
<i>Migut.D01133</i>	LG4	5661991			
<i>Migut.D01134</i>	LG4	5666850	<i>AT2G46620.1</i>	Symbols:	P-loop containing nucleoside triphosphate hydrolases
<i>Migut.D01135</i>	LG4	5668190	<i>AT5G18420.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D01136</i>	LG4	5674234	<i>AT1G16030.1</i>	Symbols: Hsp70b	heat shock protein 70B
<i>Migut.D01137</i>	LG4	5678836	<i>AT3G12580.1</i>	Symbols: HSP70, ATHSP70	heat shock protein 70
<i>Migut.D01138</i>	LG4	5681474	<i>AT3G12580.1</i>	Symbols: HSP70, ATHSP70	heat shock protein 70
<i>Migut.D01139</i>	LG4	5683714	<i>AT1G16030.1</i>	Symbols: Hsp70b	heat shock protein 70B
<i>Migut.D01140</i>	LG4	5686780	<i>AT3G17380.1</i>	Symbols:	TRAF-like family protein
<i>Migut.D01141</i>	LG4	5688095	<i>AT1G56450.1</i>	Symbols: PBG1	20S proteasome beta subunit G1
<i>Migut.D01142</i>	LG4	5706960	<i>AT4G36950.1</i>	Symbols: MAPKKK21	mitogen-activated protein kinase kinase
<i>Migut.D01143</i>	LG4	5712302	<i>AT3G53690.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.D01144</i>	LG4	5727766	<i>AT2G24100.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D01145</i>	LG4	5752073	<i>AT1G79720.1</i>	Symbols:	Eukaryotic aspartyl protease family protein

<i>Migut.D01146</i>	LG4	5754684	<i>AT1G79710.1</i>	Symbols:	Major facilitator superfamily protein
<i>Migut.D01147</i>	LG4	5766175	<i>AT1G16060.2</i>	Symbols: ADAP	ARIA-interacting double AP2 domain protein
<i>Migut.D01148</i>	LG4	5769814	<i>AT1G16080.1</i>	Symbols:	unknown protein; LOCATED IN: apoplast, chloroplast
<i>Migut.D01149</i>	LG4	5772217	<i>AT1G16170.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D01150</i>	LG4	5776648	<i>AT1G79650.1</i>	Symbols: RAD23, RAD23B	Rad23 UV excision repair protein family
<i>Migut.D01151</i>	LG4	5782593	<i>AT5G59850.1</i>	Symbols:	Ribosomal protein S8 family protein
<i>Migut.D01152</i>	LG4	5792572	<i>AT5G57800.1</i>	Symbols: FLP1, YRE, CER3, WAX2	Fatty acid hydroxylase superfamily
<i>Migut.D01153</i>	LG4	5799558	<i>AT2G24530.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D01154</i>	LG4	5803430	<i>AT5G43150.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D01155</i>	LG4	5812147	<i>AT3G14250.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.D01156</i>	LG4	5816755	<i>AT4G30080.1</i>	Symbols: ARF16	auxin response factor 16
<i>Migut.D01157</i>	LG4	5822017	<i>AT3G53690.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.D01158</i>	LG4	5824554	<i>AT3G14250.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.D01159</i>	LG4	5827087	<i>AT3G14250.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.D01160</i>	LG4	5829857	<i>AT3G53690.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.D01161</i>	LG4	5850987	<i>AT3G14250.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.D01162</i>	LG4	5853537	<i>AT3G21240.1</i>	Symbols: 4CL2, AT4CL2	4-coumarate:CoA ligase 2
<i>Migut.D01163</i>	LG4	5863515	<i>AT5G51060.1</i>	Symbols: RHD2, ATRBOHC, RBOHC	NADPH/respiratory burst oxidase
<i>Migut.D01164</i>	LG4	5870213	<i>AT1G65780.1</i>	Symbols:	P-loop containing nucleoside triphosphate hydrolases
<i>Migut.D01165</i>	LG4	5882976	<i>ATCG00530.1</i>	Symbols: YCF10	CemA-like proton extrusion protein-related
<i>Migut.D01166</i>	LG4	5893225	<i>AT5G51060.1</i>	Symbols: RHD2, ATRBOHC, RBOHC	NADPH/respiratory burst oxidase
<i>Migut.D01167</i>	LG4	5900775	<i>AT5G07380.2</i>	Symbols:	unknown protein; Has 84 Blast hits to 81 proteins
<i>Migut.D01168</i>	LG4	5908621	<i>AT5G61750.1</i>	Symbols:	RmlC-like cupins superfamily protein
<i>Migut.D01169</i>	LG4	5918557	<i>AT5G07350.2</i>	Symbols: Tudor1, AtTudor1, TSN1	TUDOR-SN protein 1
<i>Migut.D01170</i>	LG4	5945023	<i>AT5G61790.1</i>	Symbols: CNX1, ATCNX1	calnexin 1
<i>Migut.D01171</i>	LG4	5947009	<i>AT5G61790.1</i>	Symbols: CNX1, ATCNX1	calnexin 1
<i>Migut.D01172</i>	LG4	5949115	<i>AT5G61820.1</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.D01173</i>	LG4	5955077	<i>AT5G51030.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.D01174</i>	LG4	5958648	<i>AT5G35450.1</i>	Symbols:	Disease resistance protein (CC-NBS-LRR class) family
<i>Migut.D01175</i>	LG4	5961926	<i>AT5G61840.1</i>	Symbols: GUT1	Exostosin family protein
<i>Migut.D01176</i>	LG4	5967886	<i>AT1G01630.1</i>	Symbols:	Sec14p-like phosphatidylinositol transfer family
<i>Migut.D01177</i>	LG4	5971979	<i>AT1G01630.1</i>	Symbols:	Sec14p-like phosphatidylinositol transfer family
<i>Migut.D01178</i>	LG4	5976045	<i>AT1G01630.1</i>	Symbols:	Sec14p-like phosphatidylinositol transfer family
<i>Migut.D01179</i>	LG4	5988430	<i>AT5G61850.1</i>	Symbols: LFY, LFY3	floral meristem identity control protein
<i>Migut.D01180</i>	LG4	5991129	<i>AT1G29880.1</i>	Symbols:	glycyl-tRNA synthetase / glycine--tRNA ligase
<i>Migut.D01181</i>	LG4	5996689	<i>AT5G61865.1</i>	Symbols:	unknown protein; Has 30201 Blast hits to 17322
<i>Migut.D01182</i>	LG4	6005066	<i>AT5G61880.2</i>	Symbols:	Protein Transporter, Pam16
<i>Migut.D01183</i>	LG4	6008029	<i>AT5G61900.3</i>	Symbols: BON1, CPN1, BON	Calcium-dependent phospholipid-binding
<i>Migut.D01184</i>	LG4	6026762	<i>AT5G50930.1</i>	Symbols:	Histone superfamily protein
<i>Migut.D01185</i>	LG4	6034922	<i>AT2G33550.1</i>	Symbols:	Homeodomain-like superfamily protein
<i>Migut.D01186</i>	LG4	6035724	<i>AT4G25080.4</i>	Symbols: CHLM	magnesium-protoporphyrin IX methyltransferase
<i>Migut.D01187</i>	LG4	6041118	<i>AT1G54390.1</i>	Symbols: ING2	PHD finger protein-related

<i>Migut.D01188</i>	LG4	6054080	<i>AT5G13980.2</i>	Symbols:	Glycosyl hydrolase family 38 protein
<i>Migut.D01189</i>	LG4	6065374	<i>AT5G40820.1</i>	Symbols: ATRAD3, ATR, ATATR	Ataxia telangiectasia-mutated
<i>Migut.D01190</i>	LG4	6070215	<i>AT5G62000.3</i>	Symbols: ARF2, ARF1-BP, HSS, ORE14	auxin response factor
<i>Migut.D01191</i>	LG4	6087161	<i>AT1G12860.1</i>	Symbols: SCRM2, ICE2	basic helix-loop-helix (bHLH) DNA-binding
<i>Migut.D01192</i>	LG4	6101934	<i>AT5G50920.1</i>	Symbols: CLPC, ATHSP93-V, HSP93-V, DCA1, CLPC1	CLPC homologue
<i>Migut.D01193</i>	LG4	6108038	<i>AT1G56690.1</i>	Symbols:	Pentatricopeptide repeat (PPR) superfamily protein
<i>Migut.D01194</i>	LG4	6114136	<i>AT5G37600.1</i>	Symbols: ATGSR1, GLN1;1, GSR 1, ATGLN1;1	glutamine synthase
<i>Migut.D01195</i>	LG4	6120196	<i>AT5G42390.1</i>	Symbols:	Insulinase (Peptidase family M16) family protein
<i>Migut.D01196</i>	LG4	6131373	<i>AT3G44400.2</i>	Symbols:	Disease resistance protein (TIR-NBS-LRR class)
<i>Migut.D01197</i>	LG4	6161097	<i>AT2G01670.1</i>	Symbols: atnudt17, NUDT17	nudix hydrolase homolog 17
<i>Migut.D01198</i>	LG4	6167744	<i>AT4G37110.1</i>	Symbols:	Zinc-finger domain of monoamine-oxidase A repressor
<i>Migut.D01199</i>	LG4	6170175	<i>AT3G17830.1</i>	Symbols:	Molecular chaperone Hsp40/DnaJ family protein
<i>Migut.D01200</i>	LG4	6196047	<i>AT3G17850.1</i>	Symbols:	Protein kinase superfamily protein
<i>Migut.D01201</i>	LG4	6198190	<i>AT3G17850.1</i>	Symbols:	Protein kinase superfamily protein
<i>Migut.D01202</i>	LG4	6206213	<i>AT3G17850.1</i>	Symbols:	Protein kinase superfamily protein
<i>Migut.D01203</i>	LG4	6230342	<i>AT1G68130.1</i>	Symbols: AtIDD14, IDD14	indeterminate(ID)-domain 14
<i>Migut.D01204</i>	LG4	6238243	<i>AT4G18395.1</i>	Symbols:	unknown protein; Has 30201 Blast hits to 17322
<i>Migut.D01205</i>	LG4	6243277	<i>AT1G68120.1</i>	Symbols: BPC3, ATBPC3	basic pentacysteine 3
<i>Migut.D01206</i>	LG4	6248575	<i>AT3G43810.1</i>	Symbols: CAM7	calmodulin 7
<i>Migut.D01207</i>	LG4	6252425	<i>AT3G17770.1</i>	Symbols:	Dihydroxyacetone kinase
<i>Migut.D01208</i>	LG4	6265349	<i>AT1G73480.1</i>	Symbols:	alpha/beta-Hydrolases superfamily protein
<i>Migut.D01209</i>	LG4	6273027	<i>AT3G17790.1</i>	Symbols: ATACP5, ATPAP17, PAP17	purple acid phosphatase 17
<i>Migut.D01210</i>	LG4	6278451	<i>AT2G02050.1</i>	Symbols:	NADH-ubiquinone oxidoreductase B18 subunit, putative
<i>Migut.D01211</i>	LG4	6279864	<i>AT4G32880.1</i>	Symbols: ATHB-8, ATHB8, HB-8	homeobox gene 8
<i>Migut.D01212</i>	LG4	6282326	<i>AT1G25230.1</i>	Symbols:	Calcineurin-like metallo-phosphoesterase superfamily
<i>Migut.D01213</i>	LG4	6284324	<i>AT1G48450.1</i>	Symbols:	Protein of unknown function (DUF760)
<i>Migut.D01214</i>	LG4	6288078	<i>AT1G68660.1</i>	Symbols:	Ribosomal protein L12/ ATP-dependent Clp protease
<i>Migut.D01215</i>	LG4	6295966	<i>AT1G73820.1</i>	Symbols:	Ssu72-like family protein
<i>Migut.D01216</i>	LG4	6298464	<i>AT2G39260.1</i>	Symbols:	binding;RNA binding
<i>Migut.D01217</i>	LG4	6311996	<i>AT3G17780.1</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.D01218</i>	LG4	6325804	<i>AT3G02850.1</i>	Symbols: SKOR	STELAR K+ outward rectifier
<i>Migut.D01219</i>	LG4	6338501	<i>AT3G17810.1</i>	Symbols: PYD1	pyrimidine 1
<i>Migut.D01220</i>	LG4	6350515	<i>AT1G14760.2</i>	Symbols: KNATM	KNOX Arabidopsis thaliana meinox
<i>Migut.D01221</i>	LG4	6352677	<i>AT1G10170.1</i>	Symbols: ATNFXL1, NFXL1	NF-X-like 1
<i>Migut.D01222</i>	LG4	6359437	<i>AT4G32640.2</i>	Symbols:	Sec23/Sec24 protein transport family protein
<i>Migut.D01223</i>	LG4	6380102	<i>AT5G14040.1</i>	Symbols: PHT3;1	phosphate transporter 3;1
<i>Migut.D01224</i>	LG4	6387592	<i>AT5G50915.2</i>	Symbols:	basic helix-loop-helix (bHLH) DNA-binding superfamily
<i>Migut.D01225</i>	LG4	6401388	<i>AT1G12840.1</i>	Symbols: DET3, ATVHA-C	vacuolar ATP synthase subunit C (VATC)
<i>Migut.D01226</i>	LG4	6410011	<i>AT3G48820.1</i>	Symbols:	Glycosyltransferase family 29 (sialyltransferase)
<i>Migut.D01227</i>	LG4	6416494	<i>AT5G23680.1</i>	Symbols:	Sterile alpha motif (SAM) domain-containing protein
<i>Migut.D01228</i>	LG4	6418267	<i>AT5G23670.2</i>	Symbols: LCB2	long chain base2

<i>Migut.D01229</i>	LG4	6426715	<i>AT5G14030.4</i>	Symbols:	translocon-associated protein beta (TRAPB) family
<i>Migut.D01230</i>	LG4	6470870	<i>AT3G17980.1</i>	Symbols:	Calcium-dependent lipid-binding (CaLB domain) family
<i>Migut.D01231</i>	LG4	6484403	<i>AT3G27160.1</i>	Symbols: GHS1	Ribosomal protein S21 family protein
<i>Migut.D01232</i>	LG4	6487927	<i>AT1G66350.1</i>	Symbols: RGL1, RGL	RGA-like 1
<i>Migut.D01233</i>	LG4	6493777	<i>AT3G26040.1</i>	Symbols:	HXXXD-type acyl-transferase family protein
<i>Migut.D01234</i>	LG4	6506777	<i>AT5G50350.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D01235</i>	LG4	6510112	<i>AT5G63320.3</i>	Symbols: NPX1	nuclear protein X1
<i>Migut.D01236</i>	LG4	6535407	<i>AT5G26760.1</i>	Symbols:	unknown protein; Has 30201 Blast hits to 17322
<i>Migut.D01237</i>	LG4	6536162	<i>AT4G01400.3</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.D01238</i>	LG4	6599093	<i>AT5G50360.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.D01239</i>	LG4	6610909	<i>AT5G63380.1</i>	Symbols:	AMP-dependent synthetase and ligase family protein
<i>Migut.D01240</i>	LG4	6623895	<i>AT5G20090.2</i>	Symbols:	Uncharacterised protein family (UPF0041)
<i>Migut.D01476</i>	LG4	8910964	<i>AT5G60440.1</i>	Symbols: AGL62	AGAMOUS-like 62
<i>Migut.D01477</i>	LG4	8950529	<i>AT1G68490.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.D01478</i>	LG4	8967522	<i>AT3G18400.1</i>	Symbols: anac058, NAC058	NAC domain containing protein 58
<i>Migut.D01479</i>	LG4	8981717	<i>AT1G73980.1</i>	Symbols:	Phosphoribulokinase / Uridine kinase family
<i>Migut.D01480</i>	LG4	9006674	<i>AT1G73990.1</i>	Symbols: SPPA, SPPA1	signal peptide peptidase
<i>Migut.D01481</i>	LG4	9041392	<i>AT1G73990.1</i>	Symbols: SPPA, SPPA1	signal peptide peptidase
<i>Migut.D01482</i>	LG4	9058184	<i>AT5G35520.1</i>	Symbols: MIS12, ATMIS12	minichromosome instability 12 (mis12)-like
<i>Migut.D01483</i>	LG4	9063712	<i>AT3G46730.1</i>	Symbols:	NB-ARC domain-containing disease resistance protein
<i>Migut.D01484</i>	LG4	9070246	<i>AT1G53350.1</i>	Symbols:	Disease resistance protein (CC-NBS-LRR class) family
<i>Migut.D01485</i>	LG4	9084609	<i>AT1G18490.1</i>	Symbols:	Protein of unknown function (DUF1637)
<i>Migut.D01486</i>	LG4	9091259	<i>AT3G46530.1</i>	Symbols: RPP13	NB-ARC domain-containing disease resistance
<i>Migut.D01487</i>	LG4	9104366	<i>AT2G23810.1</i>	Symbols: TET8	tetraspanin8
<i>Migut.D01488</i>	LG4	9106936	<i>AT5G23040.1</i>	Symbols: CDF1	Protein of unknown function (DUF3353)
<i>Migut.D01489</i>	LG4	9120501	<i>AT5G23050.1</i>	Symbols: AAE17	acyl-activating enzyme 17
<i>Migut.D01490</i>	LG4	9133139	<i>AT5G23060.1</i>	Symbols: CaS	calcium sensing receptor
<i>Migut.D01491</i>	LG4	9142470	<i>AT5G61070.1</i>	Symbols: HDA18, ATHDA18	histone deacetylase of the RPD3/HDA1
<i>Migut.D01492</i>	LG4	9145176	<i>AT2G22180.1</i>	Symbols:	hydroxyproline-rich glycoprotein family protein
<i>Migut.D01493</i>	LG4	9194570	<i>AT3G42660.1</i>	Symbols:	transducin family protein / WD-40 repeat family
<i>Migut.D01494</i>	LG4	9208307	<i>AT3G05670.1</i>	Symbols:	RING/U-box protein
<i>Migut.D01495</i>	LG4	9261278	<i>AT5G27100.1</i>	Symbols: ATGLR2.1, GLR2.1	glutamate receptor 2.1
<i>Migut.D01496</i>	LG4	9274621	<i>AT5G57280.1</i>	Symbols:	S-adenosyl-L-methionine-dependent methyltransferases
<i>Migut.D01497</i>	LG4	9319705	<i>AT4G38090.1</i>	Symbols:	Ribosomal protein S5 domain 2-like superfamily
<i>Migut.D01498</i>	LG4	9320201	<i>ATCG00900.1</i>	Symbols: RPS7.1, RPS7	Ribosomal protein S7p/S5e family protein
<i>Migut.D01499</i>	LG4	9320910	<i>ATCG01250.1</i>	Symbols: NDHB.2	NADH-Ubiquinone/plastoquinone (complex I)
<i>Migut.D01500</i>	LG4	9322926	<i>AT5G35450.1</i>	Symbols:	Disease resistance protein (CC-NBS-LRR class) family
<i>Migut.D01501</i>	LG4	9339663	<i>AT3G17940.1</i>	Symbols:	Galactose mutarotase-like superfamily protein
<i>Migut.D01502</i>	LG4	9342905	<i>AT1G50180.1</i>	Symbols:	NB-ARC domain-containing disease resistance protein
<i>Migut.D01503</i>	LG4	9377518	<i>AT1G50180.1</i>	Symbols:	NB-ARC domain-containing disease resistance protein
<i>Migut.D01504</i>	LG4	9380146	<i>AT1G48590.1</i>	Symbols:	Calcium-dependent lipid-binding (CaLB domain) family
<i>Migut.D01505</i>	LG4	9384697	<i>AT1G48590.1</i>	Symbols:	Calcium-dependent lipid-binding (CaLB domain) family
<i>Migut.D01506</i>	LG4	9416554	<i>AT3G17980.1</i>	Symbols:	Calcium-dependent lipid-binding (CaLB domain) family
<i>Migut.D01507</i>	LG4	9417732	<i>AT5G43470.2</i>	Symbols: RPP8, HRT,	Disease resistance protein (CC-NBS-LRR

				RCY1	
<i>Migut.D01508</i>	LG4	9427929	<i>AT3G17980.1</i>	Symbols:	Calcium-dependent lipid-binding (CaLB domain) family
<i>Migut.D01509</i>	LG4	9433179	<i>AT1G48590.1</i>	Symbols:	Calcium-dependent lipid-binding (CaLB domain) family
<i>Migut.D01510</i>	LG4	9433822	<i>AT3G46530.1</i>	Symbols: RPP13	NB-ARC domain-containing disease resistance
<i>Migut.D01511</i>	LG4	9439810	<i>AT5G37740.1</i>	Symbols:	Calcium-dependent lipid-binding (CaLB domain) family
<i>Migut.D01512</i>	LG4	9441887	<i>AT3G17980.1</i>	Symbols:	Calcium-dependent lipid-binding (CaLB domain) family
<i>Migut.D01513</i>	LG4	9442581	<i>AT3G46530.1</i>	Symbols: RPP13	NB-ARC domain-containing disease resistance
<i>Migut.D01514</i>	LG4	9459811	<i>AT1G48590.1</i>	Symbols:	Calcium-dependent lipid-binding (CaLB domain) family
<i>Migut.D01515</i>	LG4	9488815	<i>AT1G77450.1</i>	Symbols: anac032, NAC032	NAC domain containing protein 32
<i>Migut.K00067</i>	LG11	329041	<i>AT3G20860.1</i>	Symbols: ATNEK5, NEK5	NIMA-related kinase 5
<i>Migut.K00068</i>	LG11	333394	<i>AT2G41905.1</i>	Symbols:	BEST Arabidopsis thaliana protein match is: arabinogalactan
<i>Migut.K00069</i>	LG11	335395	<i>AT3G18140.1</i>	Symbols:	Transducin/WD40 repeat-like superfamily protein
<i>Migut.K00070</i>	LG11	339280	<i>AT1G20580.1</i>	Symbols:	Small nuclear ribonucleoprotein family protein
<i>Migut.K00071</i>	LG11	341331	<i>AT3G57650.1</i>	Symbols: LPAT2	lysophosphatidyl acyltransferase 2
<i>Migut.K00072</i>	LG11	347040	<i>AT3G57610.1</i>	Symbols: ADSS	adenylosuccinate synthase
<i>Migut.K00073</i>	LG11	350212	<i>AT2G05320.1</i>	Symbols:	beta-1,2-N-acetylglucosaminyltransferase II
<i>Migut.K00074</i>	LG11	352379	<i>AT3G18830.1</i>	Symbols: ATPLT5, PMT5, ATPMT5	polyol/monosaccharide transporter
<i>Migut.K00075</i>	LG11	354443	<i>AT1G78995.1</i>	Symbols:	unknown protein; Has 30201 Blast hits to 17322
<i>Migut.K00076</i>	LG11	356868	<i>AT5G13960.1</i>	Symbols: SUVH4, KYP, SDG33	SU(VAR)3-9 homolog 4
<i>Migut.K00077</i>	LG11	364138	<i>AT3G57550.2</i>	Symbols: AGK2, GK-2	guanylate kinase
<i>Migut.K00078</i>	LG11	377047	<i>AT3G57530.1</i>	Symbols: CPK32, ATCPK32, CDPK32	calcium-dependent protein
<i>Migut.K00079</i>	LG11	381633	<i>AT3G57520.1</i>	Symbols: AtSIP2, SIP2	seed imbibition 2
<i>Migut.K00080</i>	LG11	385214	<i>AT2G02980.1</i>	Symbols: OTP85	Pentatricopeptide repeat (PPR) superfamily
<i>Migut.K00081</i>	LG11	388634	<i>AT2G41850.1</i>	Symbols: PGAZAT, ADPG2	polygalacturonase abscission zone
<i>Migut.K00082</i>	LG11	391714	<i>AT1G48320.1</i>	Symbols:	Thioesterase superfamily protein
<i>Migut.K00083</i>	LG11	394759	<i>AT3G57500.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.K00084</i>	LG11	396975	<i>AT2G41830.1</i>	Symbols:	Uncharacterized protein
<i>Migut.K00085</i>	LG11	404024	<i>AT1G01170.2</i>	Symbols:	Protein of unknown function (DUF1138)
<i>Migut.K00086</i>	LG11	405966	<i>AT2G41820.1</i>	Symbols:	Leucine-rich repeat protein kinase family protein
<i>Migut.K00087</i>	LG11	413226	<i>AT2G41810.1</i>	Symbols:	Protein of unknown function, DUF642
<i>Migut.K00088</i>	LG11	417812	<i>AT1G48020.1</i>	Symbols: PME11, ATPME11	pectin methylesterase inhibitor 1
<i>Migut.K00089</i>	LG11	418796	<i>AT3G57440.1</i>	Symbols:	unknown protein; Has 31 Blast hits to 31 proteins
<i>Migut.K00090</i>	LG11	422507	<i>AT1G60080.1</i>	Symbols:	3'-5'-exoribonuclease family protein
<i>Migut.K00091</i>	LG11	429009	<i>AT2G41740.1</i>	Symbols: VLN2, ATVLN2	villin 2
<i>Migut.K00092</i>	LG11	436133	<i>AT2G41680.1</i>	Symbols: NTRC	NADPH-dependent thioredoxin reductase C
<i>Migut.K00093</i>	LG11	439109	<i>AT2G41670.1</i>	Symbols:	P-loop containing nucleoside triphosphate hydrolases
<i>Migut.K00094</i>	LG11	448936	<i>AT2G41660.1</i>	Symbols: MIZ1	Protein of unknown function, DUF617
<i>Migut.K00095</i>	LG11	452501	<i>AT3G10330.1</i>	Symbols:	Cyclin-like family protein
<i>Migut.K00096</i>	LG11	455677	<i>AT2G15490.1</i>	Symbols: UGT73B4	UDP-glycosyltransferase 73B4
<i>Migut.K00097</i>	LG11	458552	<i>AT2G15490.1</i>	Symbols: UGT73B4	UDP-glycosyltransferase 73B4
<i>Migut.K00098</i>	LG11	460287	<i>AT3G57360.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.K00099</i>	LG11	461502	<i>AT2G15490.3</i>	Symbols: UGT73B4	UDP-glycosyltransferase 73B4

<i>Migut.K00100</i>	LG11	464577	<i>AT2G15490.3</i>	Symbols: UGT73B4	UDP-glycosyltransferase 73B4
<i>Migut.K00101</i>	LG11	469237	<i>AT2G41620.1</i>	Symbols:	Nucleoporin interacting component (Nup93/Nic96-like)
<i>Migut.K00102</i>	LG11	475858	<i>AT3G57300.1</i>	Symbols: INO80, ATINO80	INO80 ortholog
<i>Migut.K00103</i>	LG11	485804	<i>AT4G20990.1</i>	Symbols: ATACA4, ACA4	alpha carbonic anhydrase 4
<i>Migut.K00104</i>	LG11	488906	<i>AT3G57290.1</i>	Symbols: EIF3E, TIF3E1, ATEIF3E-1, INT-6, ATINT6, INT6	eukaryotic
<i>Migut.K00105</i>	LG11	492511	<i>AT2G41510.1</i>	Symbols: ATCKX1, CKX1	cytokinin oxidase/dehydrogenase 1
<i>Migut.K00106</i>	LG11	502393	<i>AT3G57280.1</i>	Symbols:	Transmembrane proteins 14C
<i>Migut.K00107</i>	LG11	505388	<i>AT3G57270.1</i>	Symbols: BG1	beta-1,3-glucanase 1
<i>Migut.K00108</i>	LG11	508131	<i>AT3G10210.1</i>	Symbols:	SEC14 cytosolic factor family protein / phosphoglyceride
<i>Migut.K00109</i>	LG11	509655	<i>AT5G04080.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.K00110</i>	LG11	511220	<i>AT5G04060.1</i>	Symbols:	S-adenosyl-L-methionine-dependent methyltransferases
<i>Migut.K00111</i>	LG11	524513	<i>AT3G10190.1</i>	Symbols:	Calcium-binding EF-hand family protein
<i>Migut.K00112</i>	LG11	526560	<i>AT5G04040.1</i>	Symbols: SDP1	Patatin-like phospholipase family protein
<i>Migut.K00113</i>	LG11	529744	<i>AT3G57170.1</i>	Symbols:	N-acetylglucosaminyl transferase component family
<i>Migut.K00114</i>	LG11	535457	<i>AT2G41430.5</i>	Symbols: ERD15	dehydration-induced protein (ERD15)
<i>Migut.K00115</i>	LG11	538064	<i>AT5G04010.1</i>	Symbols:	F-box family protein
<i>Migut.K00116</i>	LG11	539275	<i>AT3G19360.1</i>	Symbols:	Zinc finger (CCCH-type) family protein
<i>Migut.K00117</i>	LG11	541798	<i>AT2G41460.1</i>	Symbols: ARP	apurinic endonuclease-redox protein
<i>Migut.K00118</i>	LG11	545019	<i>AT5G40010.1</i>	Symbols: AATP1	AAA-ATPase 1
<i>Migut.K00119</i>	LG11	547230	<i>AT2G41490.1</i>	Symbols: GPT	UDP-glnac-adolichol phosphate glcnac-1-p-transferase
<i>Migut.K00120</i>	LG11	552882	<i>AT4G14750.1</i>	Symbols: IQD19	IQ-domain 19
<i>Migut.K00121</i>	LG11	555345	<i>AT3G50140.1</i>	Symbols:	Plant protein of unknown function (DUF247)
<i>Migut.K00122</i>	LG11	557077	<i>AT5G66520.1</i>	Symbols:	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.K00123</i>	LG11	559157	<i>AT5G14800.1</i>	Symbols: P5CR, AT-P5R, AT-P5C1, EMB2772	pyrroline-5- carboxylate
<i>Migut.K00124</i>	LG11	563668	<i>AT2G41380.1</i>	Symbols:	S-adenosyl-L-methionine-dependent methyltransferases
<i>Migut.K00125</i>	LG11	564733	<i>AT2G41350.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.K00126</i>	LG11	567150	<i>AT2G04865.1</i>	Symbols:	Aminotransferase-like, plant mobile domain family
<i>Migut.K00127</i>	LG11	571990	<i>AT3G14470.1</i>	Symbols:	NB-ARC domain-containing disease resistance protein
<i>Migut.K00128</i>	LG11	574656	<i>AT3G57062.2</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.K00129</i>	LG11	576221	<i>AT3G57050.1</i>	Symbols: CBL	cystathionine beta-lyase
<i>Migut.K00130</i>	LG11	579475	<i>AT3G10250.2</i>	Symbols:	Plant protein 1589 of unknown function
<i>Migut.K00131</i>	LG11	583527	<i>AT3G57040.1</i>	Symbols: ARR9, ATRR4	response regulator 9
<i>Migut.K00132</i>	LG11	590902	<i>AT5G19400.2</i>	Symbols: SMG7	Telomerase activating protein Est1
<i>Migut.K00133</i>	LG11	597163	<i>AT2G41200.1</i>	Symbols:	unknown protein; Has 26 Blast hits to 26 proteins
<i>Migut.K00134</i>	LG11	598673	<i>AT2G41190.1</i>	Symbols:	Transmembrane amino acid transporter family protein
<i>Migut.K00135</i>	LG11	606166	<i>AT3G12600.1</i>	Symbols: atnudt16, NUDT16	nudix hydrolase homolog 16
<i>Migut.K00136</i>	LG11	610559	<i>AT2G41180.1</i>	Symbols:	VQ motif-containing protein
<i>Migut.K00137</i>	LG11	612248	<i>AT5G03415.1</i>	Symbols: DPB, ATDPB	Transcription factor DP
<i>Migut.K00138</i>	LG11	616622	<i>AT3G12250.5</i>	Symbols: TGA6, BZIP45	TGACG motif-binding factor 6
<i>Migut.K00139</i>	LG11	619400	<i>AT1G80270.3</i>	Symbols: PPR596	PENTATRICOPEPTIDE REPEAT 596
<i>Migut.K00140</i>	LG11	623418	<i>AT1G80270.3</i>	Symbols: PPR596	PENTATRICOPEPTIDE REPEAT 596
<i>Migut.K00141</i>	LG11	627047	<i>AT2G41140.1</i>	Symbols: CRK1, ATCRK1, ATCBK3	CDPK-related kinase 1

<i>Migut.K00142</i>	LG11	635419	<i>AT1G63380.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.K00143</i>	LG11	637337	<i>AT3G55290.2</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.K00144</i>	LG11	643644	<i>AT2G17845.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.K00145</i>	LG11	645636	<i>AT3G55290.1</i>	Symbols:	NAD(P)-binding Rossmann-fold superfamily protein
<i>Migut.K00146</i>	LG11	648349	<i>AT5G05130.1</i>	Symbols:	DNA/RNA helicase protein
<i>Migut.K00147</i>	LG11	653530	<i>AT5G05140.1</i>	Symbols:	Transcription elongation factor (TFIIS) family
<i>Migut.K00148</i>	LG11	659093	<i>AT5G12250.1</i>	Symbols: TUB6	beta-6 tubulin
<i>Migut.K00149</i>	LG11	662220	<i>AT5G06150.1</i>	Symbols: CYC1BAT, CYCB1;2	Cyclin family protein
<i>Migut.K00150</i>	LG11	665267	<i>AT3G10760.1</i>	Symbols:	Homeodomain-like superfamily protein
<i>Migut.K00151</i>	LG11	666978	<i>AT3G56680.1</i>	Symbols:	Single-stranded nucleic acid binding R3H protein
<i>Migut.K00152</i>	LG11	672438	<i>AT2G40950.1</i>	Symbols: BZIP17	Basic-leucine zipper (bZIP) transcription
<i>Migut.K00153</i>	LG11	675580	<i>AT3G56650.1</i>	Symbols:	Mog1/PsbP/DUF1795-like photosystem II reaction
<i>Migut.K00154</i>	LG11	679660	<i>AT3G56640.1</i>	Symbols: SEC15A	exocyst complex component sec15A
<i>Migut.K00155</i>	LG11	684816	<i>AT1G68570.1</i>	Symbols:	Major facilitator superfamily protein
<i>Migut.K00156</i>	LG11	691647	<i>AT5G07050.1</i>	Symbols:	nodulin MtN21 /EamA-like transporter family protein
<i>Migut.K00157</i>	LG11	694522	<i>AT3G12460.1</i>	Symbols:	Polynucleotidyl transferase, ribonuclease H-like
<i>Migut.K00158</i>	LG11	696125	<i>AT5G48570.1</i>	Symbols: ROF2, ATFKBP65, FKBP65	FKBP-type peptidyl-prolyl
<i>Migut.K00159</i>	LG11	699445	<i>AT3G12460.1</i>	Symbols: Symbols: ATP14K GAMMA 1, PI4K GAMMA 1	Polynucleotidyl transferase, ribonuclease H-like phosphoinositide 4-kinase
<i>Migut.K00160</i>	LG11	701272	<i>AT2G40850.1</i>		
<i>Migut.K00161</i>	LG11	704644	<i>AT2G40840.1</i>	Symbols: DPE2	disproportionating enzyme 2
<i>Migut.K00162</i>	LG11	713499	<i>AT3G56590.1</i>	Symbols:	hydroxyproline-rich glycoprotein family protein
<i>Migut.K00163</i>	LG11	718151	<i>AT3G49470.1</i>	Symbols: NACA2	nascent polypeptide-associated complex subunit
<i>Migut.K00164</i>	LG11	720756	<i>AT5G39000.1</i>	Symbols:	Malectin/receptor-like protein kinase family protein
<i>Migut.K00165</i>	LG11	726411	<i>AT3G14470.1</i>	Symbols:	NB-ARC domain-containing disease resistance protein
<i>Migut.K00166</i>	LG11	729658	<i>AT2G40830.3</i>	Symbols: RHC1A	RING-H2 finger C1A
<i>Migut.K00167</i>	LG11	733210	<i>AT3G56880.1</i>	Symbols:	VQ motif-containing protein
<i>Migut.K00168</i>	LG11	742620	<i>AT1G72050.2</i>	Symbols: TFIIIA	transcription factor IIIA
<i>Migut.K00169</i>	LG11	746588	<i>AT3G56900.1</i>	Symbols:	Transducin/WD40 repeat-like superfamily protein
<i>Migut.K00170</i>	LG11	752133	<i>AT3G10740.1</i>	Symbols: ASD1, ARAF1, ARAF, ATASD1	alpha-L-arabinofuranosidase
<i>Migut.K00171</i>	LG11	756780	<i>AT1G73100.1</i>	Symbols: SUVH3, SDG19	SU(VAR)3-9 homolog 3
<i>Migut.K00172</i>	LG11	761398	<i>AT5G05070.1</i>	Symbols:	DHHC-type zinc finger family protein
<i>Migut.K00173</i>	LG11	764691	<i>AT3G56930.1</i>	Symbols:	DHHC-type zinc finger family protein
<i>Migut.K00174</i>	LG11	767638	<i>AT3G56940.1</i>	Symbols: CRD1, CHL27, ACSF	dicarboxylate diiron protein,
<i>Migut.K00175</i>	LG11	769486	<i>AT3G56950.1</i>	Symbols: SIP2;1, SIP2	small and basic intrinsic protein 2;1
<i>Migut.K00176</i>	LG11	772178	<i>AT5G61310.4</i>	Symbols:	Cytochrome c oxidase subunit Vc family protein SPFH/Band 7/PHB domain-containing membrane-associated
<i>Migut.K00177</i>	LG11	776000	<i>AT5G62740.1</i>	Symbols: HIR1, ATHIR1	
<i>Migut.K00178</i>	LG11	778790	<i>AT2G27020.1</i>	Symbols: PAG1	20S proteasome alpha subunit G1
<i>Migut.K00179</i>	LG11	782196	<i>AT2G40980.1</i>	Symbols:	Protein kinase superfamily protein
<i>Migut.K00180</i>	LG11	786255	<i>AT4G24380.1</i>	Symbols:	INVOLVED IN: 10-formyltetrahydrofolate biosynthetic
<i>Migut.K00181</i>	LG11	788355	<i>AT5G05080.2</i>	Symbols: UBC22, ATUBC22	ubiquitin-conjugating enzyme 22
<i>Migut.K00182</i>	LG11	790785	<i>AT3G43810.1</i>	Symbols: CAM7	calmodulin 7

<i>Migut.K00183</i>	LG11	792949	<i>AT2G41000.1</i>	Symbols:	Chaperone DnaJ-domain superfamily protein
<i>Migut.K00184</i>	LG11	794691	<i>AT1G08680.1</i>	Symbols: ZIGA4, AGD14	ARF GAP-like zinc finger-containing
<i>Migut.K00185</i>	LG11	802355	<i>AT1G33110.1</i>	Symbols:	MATE efflux family protein
<i>Migut.K00186</i>	LG11	812133	<i>AT3G03620.1</i>	Symbols:	MATE efflux family protein
<i>Migut.K00187</i>	LG11	813028	<i>AT3G03610.1</i>	Symbols:	ELMO/CED-12 family protein
<i>Migut.K00188</i>	LG11	826462	<i>AT5G65180.1</i>	Symbols:	ENTH/VHS family protein
<i>Migut.K00189</i>	LG11	834036	<i>AT3G43790.1</i>	Symbols: ZIFL2	zinc induced facilitator-like 2
<i>Migut.K00190</i>	LG11	839563	<i>AT3G56820.1</i>	Symbols:	unknown protein; Has 34 Blast hits to 34 proteins
<i>Migut.K00191</i>	LG11	841231	<i>AT5G04200.1</i>	Symbols: AtMC9, MC9	metacaspase 9
<i>Migut.K00192</i>	LG11	854007	<i>AT3G56820.1</i>	Symbols:	unknown protein; Has 34 Blast hits to 34 proteins
<i>Migut.K00193</i>	LG11	855665	<i>AT5G04200.1</i>	Symbols: AtMC9, MC9	metacaspase 9
<i>Migut.K00194</i>	LG11	865755	<i>AT3G57490.1</i>	Symbols:	Ribosomal protein S5 family protein
<i>Migut.K00195</i>	LG11	868679	<i>AT5G04200.1</i>	Symbols: AtMC9, MC9	metacaspase 9
<i>Migut.K00196</i>	LG11	877362	<i>AT5G04200.1</i>	Symbols: AtMC9, MC9	metacaspase 9
<i>Migut.K00197</i>	LG11	888533			
<i>Migut.K00198</i>	LG11	890502	<i>AT5G04200.1</i>	Symbols: AtMC9, MC9	metacaspase 9
<i>Migut.K00199</i>	LG11	892736	<i>AT3G56850.1</i>	Symbols: AREB3, DPBF3	ABA-responsive element binding protein
<i>Migut.K00200</i>	LG11	896545	<i>AT3G57490.1</i>	Symbols:	Ribosomal protein S5 family protein
<i>Migut.K00201</i>	LG11	899956	<i>AT4G18710.2</i>	Symbols: BIN2	Protein kinase superfamily protein
<i>Migut.K00202</i>	LG11	906307	<i>AT4G18710.2</i>	Symbols: BIN2	Protein kinase superfamily protein
<i>Migut.K00203</i>	LG11	914166	<i>AT1G05675.1</i>	Symbols:	UDP-Glycosyltransferase superfamily protein
<i>Migut.K00204</i>	LG11	921725	<i>AT5G04190.1</i>	Symbols: PKS4	phytochrome kinase substrate 4
<i>Migut.K00205</i>	LG11	926985	<i>AT3G03660.1</i>	Symbols: WOX11	WUSCHEL related homeobox 11
<i>Migut.K00206</i>	LG11	939150	<i>AT5G04200.1</i>	Symbols: AtMC9, MC9	metacaspase 9
<i>Migut.K00207</i>	LG11	948466	<i>AT5G04200.1</i>	Symbols: AtMC9, MC9	metacaspase 9
<i>Migut.K00208</i>	LG11	962485	<i>AT5G04200.1</i>	Symbols: AtMC9, MC9	metacaspase 9
<i>Migut.K00209</i>	LG11	969247	<i>AT5G04200.1</i>	Symbols: AtMC9, MC9	metacaspase 9
<i>Migut.K00210</i>	LG11	972861	<i>AT5G04200.1</i>	Symbols: AtMC9, MC9	metacaspase 9
<i>Migut.K00211</i>	LG11	977072	<i>AT3G47510.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.K00212</i>	LG11	982609	<i>AT1G50720.1</i>	Symbols:	Stigma-specific Stig1 family protein
<i>Migut.K00213</i>	LG11	985730	<i>AT3G03680.1</i>	Symbols:	C2 calcium/lipid-binding plant phosphoribosyltransferase
<i>Migut.K00214</i>	LG11	991952	<i>AT2G45100.1</i>	Symbols:	Cyclin/Brf1-like TBP-binding protein
<i>Migut.K00215</i>	LG11	998008	<i>AT3G45400.1</i>	Symbols:	exostosin family protein
<i>Migut.K00216</i>	LG11	1000268	<i>AT5G17770.1</i>	Symbols: ATCBR, CBR1, CBR	NADH:cytochrome B5 reductase 1
<i>Migut.K00217</i>	LG11	1003433	<i>AT2G31270.1</i>	Symbols: ATCDT1A, CDT1A, CDT1	homolog of yeast CDT1 A
<i>Migut.K00218</i>	LG11	1007538	<i>AT5G17780.1</i>	Symbols:	alpha/beta-Hydrolases superfamily protein
<i>Migut.K00219</i>	LG11	1009621	<i>AT5G17790.1</i>	Symbols: VAR3	zinc finger (Ran-binding) family protein
<i>Migut.K00220</i>	LG11	1012714	<i>AT1G58030.1</i>	Symbols: CAT2	cationic amino acid transporter 2
<i>Migut.K00221</i>	LG11	1016722	<i>AT4G01650.2</i>	Symbols:	Polyketide cyclase / dehydrase and lipid transport
<i>Migut.K00222</i>	LG11	1020278	<i>AT1G08810.1</i>	Symbols: MYB60, AtMYB60	myb domain protein 60
<i>Migut.K00223</i>	LG11	1022313	<i>AT1G28760.1</i>	Symbols:	Uncharacterized conserved protein (DUF2215)
<i>Migut.K00224</i>	LG11	1027966	<i>AT5G44800.1</i>	Symbols: CHR4, PKR1	chromatin remodeling 4
<i>Migut.K00225</i>	LG11	1036979	<i>AT4G30160.1</i>	Symbols: VLN4, ATVLN4	villin 4

<i>Migut.K00226</i>	LG11	1045167	<i>AT5G20500.1</i>	Symbols:	Glutaredoxin family protein
<i>Migut.K00227</i>	LG11	1047404	<i>AT1G50090.1</i>	Symbols:	D-aminoacid aminotransferase-like PLP-dependent
<i>Migut.K00228</i>	LG11	1050950	<i>AT4G16780.1</i>	Symbols: ATHB-2, HAT4, ATHB2, HB-2	homeobox protein 2
<i>Migut.K00229</i>	LG11	1052272	<i>AT2G18910.1</i>	Symbols:	hydroxyproline-rich glycoprotein family protein
<i>Migut.K00230</i>	LG11	1053533	<i>AT5G57360.1</i>	Symbols: ZTL, LKP1, ADO1, FKL2	Galactose oxidase/kelch repeat
<i>Migut.K00231</i>	LG11	1058365	<i>AT2G18950.1</i>	Symbols: HPT1, TPT1, ATHPT, VTE2	homogentisate phytyltransferase
<i>Migut.K00232</i>	LG11	1064669	<i>AT4G30190.1</i>	Symbols: AHA2, PMA2, HA2	H(+)-ATPase 2
<i>Migut.K00233</i>	LG11	1070770	<i>AT5G57330.1</i>	Symbols:	Galactose mutarotase-like superfamily protein
<i>Migut.K00234</i>	LG11	1073390	<i>AT5G57330.1</i>	Symbols:	Galactose mutarotase-like superfamily protein
<i>Migut.K00235</i>	LG11	1076155	<i>AT5G57330.1</i>	Symbols:	Galactose mutarotase-like superfamily protein
<i>Migut.K00236</i>	LG11	1083288	<i>AT5G57330.1</i>	Symbols:	Galactose mutarotase-like superfamily protein
<i>Migut.K00237</i>	LG11	1086137	<i>AT5G57330.1</i>	Symbols:	Galactose mutarotase-like superfamily protein
<i>Migut.K00238</i>	LG11	1087870	<i>AT5G20600.1</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.K00239</i>	LG11	1090697	<i>AT4G30200.3</i>	Symbols: VEL1, VIL2	vernalization5/VIN3-like
<i>Migut.K00240</i>	LG11	1094877	<i>AT5G57410.1</i>	Symbols:	Afadin/alpha-actinin-binding protein
<i>Migut.K00241</i>	LG11	1100075	<i>AT4G30210.2</i>	Symbols: ATR2, AR2	P450 reductase 2
<i>Migut.K00242</i>	LG11	1105316	<i>AT4G30230.1</i>	Symbols:	unknown protein; Has 42 Blast hits to 42 proteins
<i>Migut.K00243</i>	LG11	1107494	<i>AT2G18860.1</i>	Symbols:	Syntaxin/t-SNARE family protein
<i>Migut.K00244</i>	LG11	1111290	<i>AT2G18850.2</i>	Symbols:	SET domain-containing protein
<i>Migut.K00245</i>	LG11	1115335	<i>AT4G30260.1</i>	Symbols:	Integral membrane Yip1 family protein
<i>Migut.K00246</i>	LG11	1119750	<i>AT5G54550.1</i>	Symbols:	Protein of unknown function (DUF295)
<i>Migut.K00247</i>	LG11	1121413	<i>AT5G57490.1</i>	Symbols: VDAC4, ATVDAC4	voltage dependent anion channel 4
<i>Migut.K00248</i>	LG11	1127594	<i>AT5G57510.1</i>	Symbols:	unknown protein; Has 27 Blast hits to 27 proteins
<i>Migut.K00249</i>	LG11	1132104	<i>AT5G57520.1</i>	Symbols: ZFP2, ATZFP2	zinc finger protein 2
<i>Migut.K00250</i>	LG11	1136263	<i>AT4G25810.1</i>	Symbols: XTR6, XTH23	xyloglucan endotransglycosylase 6
<i>Migut.K00251</i>	LG11	1139197	<i>AT4G30270.1</i>	Symbols: MERI5B, MERI- 5, XTH24, SEN4	xyloglucan endotransglucosylase/hydrolase
<i>Migut.K00252</i>	LG11	1142053	<i>AT4G25810.1</i>	Symbols: XTR6, XTH23	xyloglucan endotransglycosylase 6
<i>Migut.K00253</i>	LG11	1143906	<i>AT5G57580.1</i>	Symbols:	Calmodulin-binding protein
<i>Migut.K00254</i>	LG11	1154888	<i>AT5G57610.1</i>	Symbols:	Protein kinase superfamily protein with octicosapeptide/Phox/Bem1p
<i>Migut.K00255</i>	LG11	1169692	<i>AT5G57610.1</i>	Symbols:	Protein kinase superfamily protein with octicosapeptide/Phox/Bem1p
<i>Migut.K00256</i>	LG11	1172933	<i>AT5G57620.1</i>	Symbols: MYB36, AtMYB36	myb domain protein 36
<i>Migut.K00257</i>	LG11	1176828	<i>AT5G17050.1</i>	Symbols: UGT78D2	UDP-glucosyl transferase 78D2
<i>Migut.K00258</i>	LG11	1179523	<i>AT4G25780.1</i>	Symbols:	CAP (Cysteine-rich secretory proteins, Antigen
<i>Migut.K00259</i>	LG11	1182000	<i>AT4G30320.1</i>	Symbols:	CAP (Cysteine-rich secretory proteins, Antigen
<i>Migut.K00260</i>	LG11	1187785	<i>AT5G57655.2</i>	Symbols:	xylose isomerase family protein
<i>Migut.K00261</i>	LG11	1193151	<i>AT2G24765.1</i>	Symbols: ARF3, ARL1, ATARL1	ADP-ribosylation factor 3
<i>Migut.K00262</i>	LG11	1198674	<i>AT5G57660.1</i>	Symbols: ATCOL5, COL5	CONSTANS-like 5
<i>Migut.K00263</i>	LG11	1201745	<i>AT5G57670.2</i>	Symbols:	Protein kinase superfamily protein
<i>Migut.K00264</i>	LG11	1208641	<i>AT5G57685.1</i>	Symbols: ATGDU3, GDU3, LSB1	glutamine dumper 3

<i>Migut.K00265</i>	LG11	1213439	<i>AT2G18730.1</i>	Symbols: ATDGK3, DGK3	diacylglycerol kinase 3
<i>Migut.K00266</i>	LG11	1217910	<i>AT4G28020.1</i>	Symbols:	unknown protein; CONTAINS InterPro DOMAIN/s: Uncharacterised
<i>Migut.K00267</i>	LG11	1225066	<i>AT5G57710.1</i>	Symbols:	Double Clp-N motif-containing P-loop nucleoside
<i>Migut.K00268</i>	LG11	1229982	<i>AT2G18700.1</i>	Symbols: ATTPS11, TPS11, ATTPSB	trehalose phosphatase/synthase
<i>Migut.K00269</i>	LG11	1238591	<i>AT4G28025.2</i>	Symbols:	unknown protein.
<i>Migut.K00270</i>	LG11	1241704	<i>AT2G18690.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.K00271</i>	LG11	1246349	<i>AT2G18680.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.K00272</i>	LG11	1248364	<i>AT2G18670.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.K00273</i>	LG11	1250435	<i>AT4G30400.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.K00274</i>	LG11	1255974	<i>AT5G57740.1</i>	Symbols: XBAT32	XB3 ortholog 2 in Arabidopsis thaliana
<i>Migut.K00275</i>	LG11	1260075	<i>AT5G14850.1</i>	Symbols:	Alg9-like mannosyltransferase family
<i>Migut.K00276</i>	LG11	1263391	<i>AT4G30410.1</i>	Symbols:	sequence-specific DNA binding transcription factors
<i>Migut.K00277</i>	LG11	1270559	<i>AT5G57800.1</i>	Symbols: FLP1, YRE, CER3, WAX2	Fatty acid hydroxylase superfamily
<i>Migut.K00278</i>	LG11	1278620	<i>AT4G30420.1</i>	Symbols:	nodulin MtN21 /EamA-like transporter family protein
<i>Migut.K00279</i>	LG11	1282229	<i>AT4G24972.1</i>	Symbols: TPD1	tapetum determinant 1
<i>Migut.K00280</i>	LG11	1283802	<i>AT5G57330.1</i>	Symbols:	Galactose mutarotase-like superfamily protein
<i>Migut.K00281</i>	LG11	1286833	<i>AT3G61610.1</i>	Symbols:	Galactose mutarotase-like superfamily protein
<i>Migut.K00282</i>	LG11	1289015	<i>AT1G32583.1</i>	Symbols:	FUNCTIONS IN: molecular_function unknown; INVOLVED
<i>Migut.K00283</i>	LG11	1290071	<i>AT4G24972.1</i>	Symbols: TPD1	tapetum determinant 1
<i>Migut.K00284</i>	LG11	1291088	<i>AT5G57815.1</i>	Symbols:	Cytochrome c oxidase, subunit Vib family protein
<i>Migut.K00285</i>	LG11	1293690	<i>AT4G30460.1</i>	Symbols:	glycine-rich protein
<i>Migut.K00286</i>	LG11	1300155	<i>AT4G30440.1</i>	Symbols: GAE1	UDP-D-glucuronate 4-epimerase 1
<i>Migut.K00287</i>	LG11	1302901	<i>AT2G23890.1</i>	Symbols:	HAD-superfamily hydrolase, subfamily IG, 5'-nucleotidase
<i>Migut.K00288</i>	LG11	1309507	<i>AT4G30480.2</i>	Symbols: TPR1, AtTPR1	Tetratricopeptide repeat (TPR)-like
<i>Migut.K00289</i>	LG11	1314136	<i>AT5G35200.1</i>	Symbols:	ENTH/ANTH/VHS superfamily protein
<i>Migut.K00290</i>	LG11	1319763	<i>AT4G30490.1</i>	Symbols:	AFG1-like ATPase family protein
<i>Migut.K00291</i>	LG11	1325691	<i>AT2G23940.1</i>	Symbols:	Protein of unknown function (DUF788)
<i>Migut.K00292</i>	LG11	1327682	<i>AT4G30510.1</i>	Symbols: ATATG18B, ATG18B, G18B	homolog of yeast autophagy
<i>Migut.K00293</i>	LG11	1331935	<i>AT4G12650.1</i>	Symbols:	Endomembrane protein 70 protein family
<i>Migut.K00294</i>	LG11	1336520	<i>AT4G11120.1</i>	Symbols:	translation elongation factor Ts (EF-Ts), putative
<i>Migut.K00295</i>	LG11	1340897	<i>AT2G23950.1</i>	Symbols:	Leucine-rich repeat protein kinase family protein
<i>Migut.K00296</i>	LG11	1348220	<i>AT3G49410.1</i>	Symbols:	Transcription factor IIIC, subunit 5
<i>Migut.K00297</i>	LG11	1355566			
<i>Migut.K00298</i>	LG11	1359559	<i>AT1G16060.1</i>	Symbols: ADAP	ARIA-interacting double AP2 domain protein
<i>Migut.K00299</i>	LG11	1365011	<i>AT4G30850.2</i>	Symbols: HHP2	heptahelical transmembrane protein2
<i>Migut.K00300</i>	LG11	1368293	<i>AT4G28080.1</i>	Symbols:	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.K00301</i>	LG11	1382291	<i>AT2G24090.1</i>	Symbols:	Ribosomal protein L35
<i>Migut.K00302</i>	LG11	1383839	<i>AT4G30790.1</i>	Symbols:	INVOLVED IN: autophagy; EXPRESSED IN: 24 plant
<i>Migut.K00303</i>	LG11	1394432	<i>AT4G30810.1</i>	Symbols: scpl29	serine carboxypeptidase-like 29
<i>Migut.K00304</i>	LG11	1403825	<i>AT5G63010.1</i>	Symbols:	Transducin/WD40 repeat-like superfamily protein
<i>Migut.K00305</i>	LG11	1408150	<i>AT5G57860.2</i>	Symbols:	Ubiquitin-like superfamily protein
<i>Migut.K00306</i>	LG11	1415738	<i>AT2G24070.2</i>	Symbols: QWRF4	Family of unknown function (DUF566)
<i>Migut.K00307</i>	LG11	1420390	<i>AT4G30700.1</i>	Symbols:	Pentatricopeptide repeat (PPR) superfamily protein

<i>Migut.K00308</i>	LG11	1423074	<i>AT2G24060.1</i>	Symbols:	Translation initiation factor 3 protein
<i>Migut.K00309</i>	LG11	1427288	<i>AT1G16030.1</i>	Symbols: Hsp70b	heat shock protein 70B
<i>Migut.K00310</i>	LG11	1430683	<i>AT5G57870.2</i>	Symbols: eIFiso4G1	MIF4G domain-containing protein / MA3
<i>Migut.K00311</i>	LG11	1436649			
<i>Migut.K00312</i>	LG11	1437774			
<i>Migut.K00313</i>	LG11	1439122			
<i>Migut.K00314</i>	LG11	1439836	<i>AT4G28088.1</i>	Symbols:	Low temperature and salt responsive protein family
<i>Migut.K00315</i>	LG11	1442008	<i>AT5G61750.1</i>	Symbols:	RmlC-like cupins superfamily protein
<i>Migut.K00316</i>	LG11	1443564	<i>AT5G57910.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.K00317</i>	LG11	1448737	<i>AT4G30620.1</i>	Symbols:	Uncharacterised BCR, YbaB family COG0718
<i>Migut.K00318</i>	LG11	1450232	<i>AT4G30610.1</i>	Symbols: BRS1, SCPL24	alpha/beta-Hydrolases superfamily protein
<i>Migut.K00319</i>	LG11	1459288	<i>AT3G59500.1</i>	Symbols:	Integral membrane HRF1 family protein
<i>Migut.K00320</i>	LG11	1475438	<i>AT4G31830.1</i>	Symbols:	unknown protein; Has 42 Blast hits to 42 proteins
<i>Migut.K00321</i>	LG11	1477513	<i>AT4G30580.1</i>	Symbols: ATS2, EMB1995, LPAT1	Phospholipid/glycerol acyltransferase
<i>Migut.K00322</i>	LG11	1481475	<i>AT5G57940.3</i>	Symbols: ATCNGC5, CNGC5	cyclic nucleotide gated channel 5
<i>Migut.K00323</i>	LG11	1487185	<i>AT5G57330.1</i>	Symbols:	Galactose mutarotase-like superfamily protein
<i>Migut.K00324</i>	LG11	1489808	<i>AT5G10840.1</i>	Symbols:	Endomembrane protein 70 protein family
<i>Migut.K00325</i>	LG11	1497845	<i>AT5G35770.1</i>	Symbols: SAP	Transducin/WD40 repeat-like superfamily protein
<i>Migut.K00326</i>	LG11	1501210	<i>AT4G30900.2</i>	Symbols:	DNAse I-like superfamily protein
<i>Migut.K00327</i>	LG11	1505313	<i>AT4G30920.1</i>	Symbols:	Cytosol aminopeptidase family protein
<i>Migut.K00328</i>	LG11	1515452	<i>AT4G30935.1</i>	Symbols: WRKY32, ATWRKY32	WRKY DNA-binding protein 32
<i>Migut.K00329</i>	LG11	1522322	<i>AT2G24230.1</i>	Symbols:	Leucine-rich repeat protein kinase family protein
<i>Migut.K00330</i>	LG11	1526453	<i>AT5G57990.1</i>	Symbols: UBP23	ubiquitin-specific protease 23
<i>Migut.K00331</i>	LG11	1532790	<i>AT1G50670.1</i>	Symbols:	OTU-like cysteine protease family protein
<i>Migut.K00332</i>	LG11	1536816	<i>AT2G24240.1</i>	Symbols:	BTB/POZ domain with WD40/YVTN repeat-like protein
<i>Migut.K00333</i>	LG11	1539750	<i>AT4G30950.1</i>	Symbols: FAD6, FADC, SFD4	fatty acid desaturase 6
<i>Migut.K00334</i>	LG11	1545795	<i>AT5G58000.1</i>	Symbols:	Reticulon family protein
<i>Migut.K00335</i>	LG11	1575468	<i>AT4G30960.1</i>	Symbols: CIPK6, SIP3, SNRK3.14, ATCIPK6	SOS3-interacting
<i>Migut.K00336</i>	LG11	1579498	<i>AT2G24260.1</i>	Symbols: LRL1	LJRH1-like 1
<i>Migut.K00337</i>	LG11	1585099	<i>AT5G58005.2</i>	Symbols:	Cytochrome c oxidase, subunit Vib family protein
<i>Migut.K00338</i>	LG11	1591217	<i>AT1G50680.1</i>	Symbols:	AP2/B3 transcription factor family protein
<i>Migut.K00339</i>	LG11	1596686	<i>AT2G24260.1</i>	Symbols: LRL1	LJRH1-like 1
<i>Migut.K00340</i>	LG11	1604344	<i>AT5G58030.1</i>	Symbols:	Transport protein particle (TRAPP) component
<i>Migut.K00341</i>	LG11	1607608	<i>AT2G38350.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.K00342</i>	LG11	1610390	<i>AT3G07010.1</i>	Symbols:	Pectin lyase-like superfamily protein
<i>Migut.K00343</i>	LG11	1613542	<i>AT1G19485.2</i>	Symbols:	Transducin/WD40 repeat-like superfamily protein
<i>Migut.K00344</i>	LG11	1618611	<i>AT5G58070.1</i>	Symbols: ATTIL, TIL	temperature-induced lipocalin
<i>Migut.K00345</i>	LG11	1620195	<i>AT5G58060.1</i>	Symbols: YKT61, ATYKT61, ATGP1	SNARE-like superfamily protein
<i>Migut.K00346</i>	LG11	1624046	<i>AT2G24290.1</i>	Symbols:	Protein of unknown function (DUF1068)
<i>Migut.K00347</i>	LG11	1627163	<i>AT2G25180.1</i>	Symbols: ARR12, RR12	response regulator 12
<i>Migut.K00348</i>	LG11	1633566	<i>AT5G67030.2</i>	Symbols: ABA1, LOS6, NPQ2, ATABA1, ZEP, IBS3, ATZEP	zeaxanthin

<i>Migut.K00349</i>	LG11	1636366	<i>AT2G25180.1</i>	Symbols: ARR12, RR12	response regulator 12
<i>Migut.K00350</i>	LG11	1639455	<i>AT4G31020.1</i>	Symbols:	alpha/beta-Hydrolases superfamily protein
<i>Migut.K00351</i>	LG11	1645372	<i>AT5G58200.2</i>	Symbols:	Calcineurin-like metallo-phosphoesterase superfamily
<i>Migut.K00352</i>	LG11	1648955	<i>AT1G17130.1</i>	Symbols:	Family of unknown function (DUF572)
<i>Migut.K00353</i>	LG11	1652725	<i>AT5G35330.3</i>	Symbols: MBD02	methyl-CPG-binding domain protein 02
<i>Migut.K00354</i>	LG11	1656769	<i>AT5G35330.3</i>	Symbols: MBD02	methyl-CPG-binding domain protein 02
<i>Migut.K00355</i>	LG11	1659530	<i>AT4G23290.1</i>	Symbols: CRK21	cysteine-rich RLK (RECEPTOR-like protein kinase)
<i>Migut.K00356</i>	LG11	1668743	<i>AT4G19810.1</i>	Symbols:	Glycosyl hydrolase family protein with chitinase
<i>Migut.K00357</i>	LG11	1671325	<i>AT3G42640.1</i>	Symbols: AHA8, HA8	H(+)-ATPase 8
<i>Migut.K00358</i>	LG11	1676615	<i>AT1G80710.1</i>	Symbols: DRS1	DROUGHT SENSITIVE 1
<i>Migut.K00359</i>	LG11	1679828	<i>AT2G22650.1</i>	Symbols:	FAD-dependent oxidoreductase family protein
<i>Migut.K00360</i>	LG11	1683524	<i>AT4G38500.1</i>	Symbols:	Protein of unknown function (DUF616)
<i>Migut.K00361</i>	LG11	1687337	<i>AT2G07690.1</i>	Symbols: MCM5	Minichromosome maintenance (MCM2/3/5) family
<i>Migut.K00362</i>	LG11	1693236	<i>AT5G20320.1</i>	Symbols: DCL4, ATDCL4	dicer-like 4
<i>Migut.K00363</i>	LG11	1706333	<i>AT5G51350.1</i>	Symbols:	Leucine-rich repeat transmembrane protein kinase
<i>Migut.K00364</i>	LG11	1714349	<i>AT5G35180.2</i>	Symbols:	Protein of unknown function (DUF1336)
<i>Migut.K00365</i>	LG11	1725861	<i>AT4G02050.1</i>	Symbols: STP7	sugar transporter protein 7
<i>Migut.K00366</i>	LG11	1733256	<i>AT5G35170.1</i>	Symbols:	adenylate kinase family protein
<i>Migut.K00367</i>	LG11	1740740	<i>AT5G35160.2</i>	Symbols:	Endomembrane protein 70 protein family
<i>Migut.K00368</i>	LG11	1760558	<i>AT2G46490.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.K00369</i>	LG11	1764159	<i>AT5G35110.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.K00370</i>	LG11	1765770	<i>AT5G35110.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.K00371</i>	LG11	1767296	<i>AT2G46490.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.K00372</i>	LG11	1769057	<i>AT5G35110.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.K00373</i>	LG11	1770463	<i>AT5G35110.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.K00374</i>	LG11	1772107	<i>AT5G35110.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.K00375</i>	LG11	1774359	<i>AT5G07680.2</i>	Symbols: ANAC080, NAC080	NAC domain containing protein 80
<i>Migut.K00376</i>	LG11	1784589	<i>AT5G25220.1</i>	Symbols: KNAT3	KNOTTED1-like homeobox gene 3
<i>Migut.K00377</i>	LG11	1787889	<i>AT5G62865.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein
<i>Migut.K00378</i>	LG11	1790302	<i>AT3G46920.1</i>	Symbols:	Protein kinase superfamily protein with octicosapeptide/Phox/Bem1p
<i>Migut.K00379</i>	LG11	1796183	<i>AT5G11070.1</i>	Symbols:	unknown protein; Has 1807 Blast hits to 1807 proteins
<i>Migut.K00380</i>	LG11	1798552	<i>AT2G15580.2</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.K00381</i>	LG11	1800477	<i>AT1G48960.1</i>	Symbols:	Adenine nucleotide alpha hydrolases-like superfamily
<i>Migut.K00382</i>	LG11	1803166	<i>AT2G15580.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.K00383</i>	LG11	1805864	<i>AT5G18370.1</i>	Symbols:	Disease resistance protein (TIR-NBS-LRR class)
<i>Migut.K00384</i>	LG11	1808247	<i>AT5G45290.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.K00385</i>	LG11	1815811	<i>AT4G16515.1</i>	Symbols: RGF6	Encodes a root meristem growth factor (RGF).
<i>Migut.K00386</i>	LG11	1819368	<i>AT1G79620.1</i>	Symbols:	Leucine-rich repeat protein kinase family protein
<i>Migut.K00387</i>	LG11	1841632	<i>AT3G04690.1</i>	Symbols: ANX1	Malectin/receptor-like protein kinase family
<i>Migut.K00388</i>	LG11	1853172	<i>AT5G54380.1</i>	Symbols: THE1	protein kinase family protein
<i>Migut.K00389</i>	LG11	1856274	<i>AT2G41040.1</i>	Symbols:	S-adenosyl-L-methionine-dependent methyltransferases
<i>Migut.K00390</i>	LG11	1859366	<i>AT1G19250.1</i>	Symbols: FMO1	flavin-dependent monooxygenase 1
<i>Migut.K00391</i>	LG11	1864986	<i>AT1G19250.1</i>	Symbols: FMO1	flavin-dependent monooxygenase 1
<i>Migut.K00392</i>	LG11	1874109	<i>AT2G12646.1</i>	Symbols:	PLATZ transcription factor family protein

<i>Migut.K00393</i>	LG11	1884368	<i>AT2G41210.1</i>	Symbols: PIP5K5	phosphatidylinositol- 4-phosphate 5-kinase
<i>Migut.K00394</i>	LG11	1885967	<i>AT5G25280.2</i>	Symbols:	serine-rich protein-related
<i>Migut.K00395</i>	LG11	1894125	<i>AT4G35165.1</i>	Symbols:	Protein of unknown function (DUF1278)
<i>Migut.K00396</i>	LG11	1901582	<i>AT5G59180.1</i>	Symbols: NRPB7	DNA-directed RNA polymerase II
<i>Migut.K00397</i>	LG11	1905251	<i>AT5G59180.1</i>	Symbols: NRPB7	DNA-directed RNA polymerase II
<i>Migut.K00398</i>	LG11	1912468	<i>AT2G25290.3</i>	Symbols: Phox1	Octicosapeptide/Phox/Bem1p (PB1) domain-containing
<i>Migut.K00399</i>	LG11	1916064	<i>AT5G51940.1</i>	Symbols: NRPB6A, NRPD6A, NRPE6A	RNA polymerase Rpb6
<i>Migut.K00400</i>	LG11	1920173	<i>AT5G34940.2</i>	Symbols: AtGUS3, GUS3	glucuronidase 3
<i>Migut.K00401</i>	LG11	1924115	<i>AT5G20380.1</i>	Symbols: PHT4;5	phosphate transporter 4;5
<i>Migut.K00402</i>	LG11	1928321			
<i>Migut.K00403</i>	LG11	1929611	<i>AT5G20400.1</i>	Symbols:	2-oxoglutarate (2OG) and Fe(II)-dependent oxygenase
<i>Migut.K00404</i>	LG11	1931498	<i>AT1G15710.1</i>	Symbols:	prephenate dehydrogenase family protein
<i>Migut.K00405</i>	LG11	1934545	<i>AT1G15690.1</i>	Symbols: AVP1, ATAVP3, AVP-3, AtVHP1;1	Inorganic H pyrophosphatase
<i>Migut.K00406</i>	LG11	1941700	<i>AT4G34990.1</i>	Symbols: AtMYB32, MYB32	myb domain protein 32
<i>Migut.K00407</i>	LG11	1943535	<i>AT2G21500.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.K00408</i>	LG11	1946388	<i>AT1G07985.1</i>	Symbols:	Expressed protein
<i>Migut.K00409</i>	LG11	1949607	<i>AT5G20410.1</i>	Symbols: MGD2, ATMGD2	monogalactosyldiacylglycerol synthase
<i>Migut.K00410</i>	LG11	1953197	<i>AT1G60430.2</i>	Symbols: ARPC3	actin-related protein C3
<i>Migut.K00411</i>	LG11	1961675	<i>AT5G10790.1</i>	Symbols: UBP22	ubiquitin-specific protease 22
<i>Migut.K00412</i>	LG11	1969031	<i>AT5G20300.3</i>	Symbols:	Avirulence induced gene (AIG1) family protein
<i>Migut.K00413</i>	LG11	1973875	<i>AT1G23940.1</i>	Symbols:	ARM repeat superfamily protein
<i>Migut.K00414</i>	LG11	1975774	<i>AT5G06130.1</i>	Symbols:	chaperone protein dnaJ-related
<i>Migut.K00415</i>	LG11	1977944	<i>AT5G34850.1</i>	Symbols: ATPAP26, PAP26	purple acid phosphatase 26
<i>Migut.K00416</i>	LG11	1982053	<i>AT1G05500.1</i>	Symbols: SYTE, ATSYTE, NTMC2TYPE2.1, NTMC2T.1, SYT5	Calcium-dependent
<i>Migut.K00417</i>	LG11	1992221	<i>AT5G33280.1</i>	Symbols:	Voltage-gated chloride channel family protein
<i>Migut.K00418</i>	LG11	1995741	<i>AT2G11520.1</i>	Symbols: CRCK3	calmodulin-binding receptor-like cytoplasmic
<i>Migut.K00419</i>	LG11	2003563	<i>AT5G20270.1</i>	Symbols: HHP1	heptahelical transmembrane protein1
<i>Migut.K00420</i>	LG11	2006617	<i>AT2G11000.1</i>	Symbols: ATMAK10, MAK10	MAK10 homologue
<i>Migut.K00421</i>	LG11	2019692	<i>AT5G35200.1</i>	Symbols:	ENTH/ANTH/VHS superfamily protein
<i>Migut.K00422</i>	LG11	2027049	<i>AT4G31080.1</i>	Symbols:	Protein of unknown function (DUF2296)
<i>Migut.K00423</i>	LG11	2033432	<i>AT5G35430.1</i>	Symbols:	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.K00424</i>	LG11	2041700	<i>AT5G11730.1</i>	Symbols:	Core-2/I-branching beta-1,6-N-acetylglucosaminyltransferase
<i>Migut.K00425</i>	LG11	2053768	<i>AT5G20250.4</i>	Symbols: DIN10	Raffinose synthase family protein
<i>Migut.K00426</i>	LG11	2057051	<i>AT3G53270.5</i>	Symbols:	Small nuclear RNA activating complex (SNAPc), subunit
<i>Migut.K00427</i>	LG11	2060788	<i>AT3G42170.1</i>	Symbols:	BED zinc finger ;hAT family dimerisation domain
<i>Migut.K00428</i>	LG11	2079258	<i>AT3G59440.1</i>	Symbols:	Calcium-binding EF-hand family protein
<i>Migut.K00429</i>	LG11	2080763	<i>AT5G32440.3</i>	Symbols:	Ubiquitin system component Cue protein
<i>Migut.K00430</i>	LG11	2088194	<i>AT3G01300.1</i>	Symbols:	Protein kinase superfamily protein
<i>Migut.K00431</i>	LG11	2096904	<i>AT5G52600.1</i>	Symbols: AtMYB82, MYB82	myb domain protein 82
<i>Migut.K00432</i>	LG11	2104879	<i>AT4G32280.1</i>	Symbols: IAA29	indole-3-acetic acid inducible 29

<i>Migut.K00433</i>	LG11	2109934	<i>AT2G13290.2</i>	Symbols:	beta-1,4-N-acetylglucosaminyltransferase family
<i>Migut.K00434</i>	LG11	2113288	<i>AT1G03050.1</i>	Symbols:	ENTH/ANTH/VHS superfamily protein
<i>Migut.K00435</i>	LG11	2116002	<i>AT5G67040.1</i>	Symbols:	Protein of unknown function (DUF295)
<i>Migut.K00436</i>	LG11	2118261	<i>AT3G33530.2</i>	Symbols:	Transducin family protein / WD-40 repeat family
<i>Migut.K00437</i>	LG11	2121622	<i>AT3G33530.1</i>	Symbols:	Transducin family protein / WD-40 repeat family
<i>Migut.K00438</i>	LG11	2127985	<i>AT5G20230.1</i>	Symbols: ATBCB, BCB, SAG14	blue-copper-binding protein
<i>Migut.K00439</i>	LG11	2131991	<i>AT4G00630.1</i>	Symbols: KEA2, ATKEA2	K+ efflux antiporter 2
<i>Migut.K00440</i>	LG11	2136228	<i>AT5G20230.1</i>	Symbols: ATBCB, BCB, SAG14	blue-copper-binding protein
<i>Migut.K00441</i>	LG11	2139290	<i>AT2G26600.1</i>	Symbols:	Glycosyl hydrolase superfamily protein
<i>Migut.K00442</i>	LG11	2146046	<i>AT4G02530.1</i>	Symbols:	chloroplast thylakoid lumen protein
<i>Migut.K00443</i>	LG11	2156478	<i>AT2G26580.2</i>	Symbols: YAB5	plant-specific transcription factor YABBY family
<i>Migut.K00444</i>	LG11	2166960	<i>AT5G20200.1</i>	Symbols:	nucleoporin-related
<i>Migut.K00445</i>	LG11	2171971	<i>AT5G20190.1</i>	Symbols:	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.K00446</i>	LG11	2189538	<i>AT5G35410.1</i>	Symbols: SOS2, SNRK3.11, CIPK24, ATSOS2	Protein kinase superfamily
<i>Migut.K00447</i>	LG11	2195567	<i>AT2G25490.1</i>	Symbols: EBF1, FBL6	EIN3-binding F box protein 1
<i>Migut.K00448</i>	LG11	2203784	<i>AT5G25360.2</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.K00449</i>	LG11	2219724	<i>AT3G15760.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.K00450</i>	LG11	2222923	<i>AT3G15730.1</i>	Symbols: PLDALPHA1, PLD	phospholipase D alpha 1
<i>Migut.K00451</i>	LG11	2227236	<i>AT3G15730.1</i>	Symbols: PLDALPHA1, PLD	phospholipase D alpha 1
<i>Migut.K00452</i>	LG11	2235354	<i>AT3G15730.1</i>	Symbols: PLDALPHA1, PLD	phospholipase D alpha 1
<i>Migut.K00453</i>	LG11	2242774	<i>AT5G19650.1</i>	Symbols: ATOFP8, OFP8	ovate family protein 8
<i>Migut.K00454</i>	LG11	2248544	<i>AT3G18830.1</i>	Symbols: ATPLT5, PMT5, ATPMT5	polyol/monosaccharide transporter
<i>Migut.K00455</i>	LG11	2261529	<i>AT5G19540.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.K00456</i>	LG11	2265574		Symbols: ALDH2C4, ALDH1A, REF1	aldehyde dehydrogenase 2C4
<i>Migut.K00457</i>	LG11	2272028	<i>AT3G24503.1</i>	Symbols: MSH7, MSH6-2, ATMSH7	MUTS homolog 7
<i>Migut.K00458</i>	LG11	2276258	<i>AT3G24495.1</i>	Symbols:	Alcohol dehydrogenase transcription factor Myb/SANT-like
<i>Migut.K00459</i>	LG11	2295529	<i>AT3G24490.1</i>	Symbols:	ATP binding
<i>Migut.K00460</i>	LG11	2297431	<i>AT3G24430.1</i>	Symbols: HCF101	ATP binding
<i>Migut.K00461</i>	LG11	2304651	<i>AT5G19600.1</i>	Symbols: SULTR3;5	sulfate transporter 3;5
<i>Migut.K00462</i>	LG11	2312793	<i>AT4G13350.2</i>	Symbols: NIG	NSP (nuclear shuttle protein)-interacting GTPase
<i>Migut.K00463</i>	LG11	2319672	<i>AT2G26695.1</i>	Symbols:	Ran BP2/NZF zinc finger-like superfamily protein
<i>Migut.K00464</i>	LG11	2321628	<i>AT3G24330.1</i>	Symbols:	O-Glycosyl hydrolases family 17 protein
<i>Migut.K00465</i>	LG11	2326226	<i>AT3G24360.2</i>	Symbols:	ATP-dependent caseinolytic (Clp) protease/crotonase
<i>Migut.K00466</i>	LG11	2329644	<i>AT2G26730.1</i>	Symbols:	Leucine-rich repeat protein kinase family protein
<i>Migut.K00467</i>	LG11	2335789	<i>AT3G24740.2</i>	Symbols:	Protein of unknown function (DUF1644)
<i>Migut.K00468</i>	LG11	2341209	<i>AT2G26910.1</i>	Symbols: PDR4, ATPDR4	pleiotropic drug resistance 4
<i>Migut.K00469</i>	LG11	2356373	<i>AT1G08510.1</i>	Symbols: FATB	fatty acyl-ACP thioesterases B
<i>Migut.K00470</i>	LG11	2363219	<i>AT1G04870.2</i>	Symbols: PRMT10, ATPRMT10	protein arginine methyltransferase
<i>Migut.K00471</i>	LG11	2367162	<i>AT3G24480.1</i>	Symbols:	Leucine-rich repeat (LRR) family protein

<i>Migut.K00472</i>	LG11	2378836	<i>AT2G26695.1</i>	Symbols:	Ran BP2/NZF zinc finger-like superfamily protein
<i>Migut.K00473</i>	LG11	2380393	<i>AT5G19460.1</i>	Symbols: atnuds20, NUDT20	nudix hydrolase homolog 20
<i>Migut.K00474</i>	LG11	2383291	<i>AT5G20110.1</i>	Symbols:	Dynein light chain type 1 family protein
<i>Migut.K00475</i>	LG11	2387517	<i>AT5G25400.1</i>	Symbols:	Nucleotide-sugar transporter family protein
<i>Migut.K00476</i>	LG11	2390506	<i>AT2G34160.1</i>	Symbols:	Alba DNA/RNA-binding protein
<i>Migut.K00477</i>	LG11	2393001	<i>AT1G80170.1</i>	Symbols:	Pectin lyase-like superfamily protein
<i>Migut.K00478</i>	LG11	2398906	<i>AT3G47650.1</i>	Symbols:	DnaJ/Hsp40 cysteine-rich domain superfamily protein
<i>Migut.K00479</i>	LG11	2400960	<i>AT3G47650.1</i>	Symbols:	DnaJ/Hsp40 cysteine-rich domain superfamily protein
<i>Migut.K00480</i>	LG11	2402671	<i>AT2G41475.1</i>	Symbols:	Embryo-specific protein 3, (ATS3)
<i>Migut.K00481</i>	LG11	2405238	<i>AT1G30760.1</i>	Symbols:	FAD-binding Berberine family protein
<i>Migut.K00482</i>	LG11	2407586	<i>AT2G26670.1</i>	Symbols: HY1, ATHO1, HO1, TED4, GUN2, HY6	Plant haem oxygenase
<i>Migut.K00483</i>	LG11	2411527	<i>AT2G41480.1</i>	Symbols:	Peroxidase superfamily protein
<i>Migut.K00484</i>	LG11	2414952	<i>AT5G19960.1</i>	Symbols:	RNA-binding (RRM/RBD/RNP motifs) family protein
<i>Migut.K00485</i>	LG11	2425346	<i>AT3G57620.1</i>	Symbols:	glyoxal oxidase-related protein
<i>Migut.K00486</i>	LG11	2443189	<i>AT1G70830.5</i>	Symbols: MLP28	MLP-like protein 28
<i>Migut.K00487</i>	LG11	2446012	<i>AT4G28850.1</i>	Symbols: XTH26, ATXTH26	xyloglucan endotransglucosylase/hydrolase
<i>Migut.K00488</i>	LG11	2450727	<i>AT1G70830.5</i>	Symbols: MLP28	MLP-like protein 28
<i>Migut.K00489</i>	LG11	2454250	<i>AT4G28850.1</i>	Symbols: XTH26, ATXTH26	xyloglucan endotransglucosylase/hydrolase
<i>Migut.K00490</i>	LG11	2470641	<i>AT1G67290.1</i>	Symbols:	glyoxal oxidase-related protein
<i>Migut.K00491</i>	LG11	2475504	<i>AT2G20080.1</i>	Symbols:	unknown protein; FUNCTIONS IN: molecular_function
<i>Migut.K00492</i>	LG11	2482643	<i>AT4G29060.1</i>	Symbols: emb2726	elongation factor Ts family protein
<i>Migut.K00493</i>	LG11	2486650	<i>AT4G29060.1</i>	Symbols: emb2726	elongation factor Ts family protein
<i>Migut.K00494</i>	LG11	2493312	<i>AT4G14465.1</i>	Symbols: AHL20	AT-hook motif nuclear-localized protein 20
<i>Migut.K00495</i>	LG11	2495853	<i>AT4G29100.1</i>	Symbols:	basic helix-loop-helix (bHLH) DNA-binding superfamily
<i>Migut.K00496</i>	LG11	2499880	<i>AT1G30910.1</i>	Symbols:	Molybdenum cofactor sulfurase family protein
<i>Migut.K00497</i>	LG11	2506024	<i>AT3G06880.2</i>	Symbols:	Transducin/WD40 repeat-like superfamily protein
<i>Migut.K00498</i>	LG11	2512385	<i>AT1G665980.1</i>	Symbols: TPX1	thioredoxin-dependent peroxidase 1
<i>Migut.K00499</i>	LG11	2515206	<i>AT4G28950.1</i>	Symbols: ARAC7, ATROP9, ATRAC7, RAC7, ROP9	RHO-related protein
<i>Migut.K00500</i>	LG11	2518353	<i>AT3G61610.1</i>	Symbols:	Galactose mutarotase-like superfamily protein
<i>Migut.K00501</i>	LG11	2522890	<i>AT4G28990.1</i>	Symbols:	RNA-binding protein-related
<i>Migut.K00502</i>	LG11	2530179	<i>AT4G29000.1</i>	Symbols:	Tesmin/TSO1-like CXC domain-containing protein
<i>Migut.K00503</i>	LG11	2535317	<i>AT4G29010.1</i>	Symbols: AIM1	Enoyl-CoA hydratase/isomerase family
<i>Migut.K00504</i>	LG11	2542411	<i>AT3G61610.1</i>	Symbols:	Galactose mutarotase-like superfamily protein
<i>Migut.K00505</i>	LG11	2560455	<i>AT5G57330.1</i>	Symbols:	Galactose mutarotase-like superfamily protein
<i>Migut.K00506</i>	LG11	2564143	<i>AT5G42030.1</i>	Symbols: ABIL4	ABL interactor-like protein 4
<i>Migut.K00507</i>	LG11	2567143	<i>AT5G19550.1</i>	Symbols: ASP2, AAT2	aspartate aminotransferase 2
<i>Migut.K00508</i>	LG11	2569507	<i>AT3G24620.1</i>	Symbols: ATROPGEF8, ROPGEF8	RHO guanyl-nucleotide exchange
<i>Migut.K00509</i>	LG11	2579463	<i>AT3G24600.1</i>	Symbols:	Late embryogenesis abundant protein, group 2
<i>Migut.K00510</i>	LG11	2581447	<i>AT1G52280.1</i>	Symbols: AtRABG3d, RABG3d	RAB GTPase homolog G3D
<i>Migut.K00511</i>	LG11	2584153	<i>AT5G02850.1</i>	Symbols:	hydroxyproline-rich glycoprotein family protein
<i>Migut.K00512</i>	LG11	2587243	<i>AT3G24550.1</i>	Symbols: ATPERK1, PERK1	proline extensin-like receptor kinase

<i>Migut.K00513</i>	LG11	2597711	<i>AT2G26660.1</i>	Symbols: ATPX2, SPX2	SPX domain gene 2
<i>Migut.K00514</i>	LG11	2616063	<i>AT1G67280.1</i>	Symbols:	Glyoxalase/Bleomycin resistance protein/Dioxygenase
<i>Migut.K00515</i>	LG11	2621009	<i>AT4G28910.3</i>	Symbols: NINJA	novel interactor of JAZ
<i>Migut.K00516</i>	LG11	2627659	<i>AT2G20030.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.K00517</i>	LG11	2631660	<i>AT2G20050.1</i>	Symbols:	protein serine/threonine phosphatases;protein kinases;catalytics;cAMP-dependent
<i>Migut.K00518</i>	LG11	2643749	<i>AT5G37000.1</i>	Symbols:	Exostosin family protein
<i>Migut.K00519</i>	LG11	2648076	<i>AT2G20020.1</i>	Symbols: CAF1, ATCAF1	RNA-binding CRS1 / YhbY (CRM) domain-containing
<i>Migut.K00520</i>	LG11	2651728	<i>AT1G77210.2</i>	Symbols: STP14	sugar transporter 14
<i>Migut.K00521</i>	LG11	2666906	<i>AT2G44970.1</i>	Symbols:	alpha/beta-Hydrolases superfamily protein
<i>Migut.K00522</i>	LG11	2676720	<i>AT5G11590.1</i>	Symbols: TINY2	Integrase-type DNA-binding superfamily protein
<i>Migut.K00523</i>	LG11	2685601	<i>AT5G55300.1</i>	Symbols: MGO1, TOP1ALPHA, TOP1	DNA topoisomerase I alpha
<i>Migut.K00524</i>	LG11	2701261	<i>AT2G25800.1</i>	Symbols:	Protein of unknown function (DUF810)
<i>Migut.K00525</i>	LG11	2707771	<i>AT5G42180.1</i>	Symbols:	Peroxidase superfamily protein
<i>Migut.K00526</i>	LG11	2709666	<i>AT5G19690.1</i>	Symbols: STT3A	staurosporin and temperature sensitive 3-like
<i>Migut.K00527</i>	LG11	2719226	<i>AT1G77170.1</i>	Symbols:	Tetratricopeptide repeat (TPR)-like superfamily
<i>Migut.K00528</i>	LG11	2732146	<i>AT5G56369.1</i>	Symbols:	Defensin-like (DEFL) family protein
<i>Migut.K00529</i>	LG11	2736689	<i>AT1G33020.1</i>	Symbols:	F-box and associated interaction domains-containing
<i>Migut.K00530</i>	LG11	2738295	<i>AT2G19950.2</i>	Symbols: GC1	golgin candidate 1
<i>Migut.K00531</i>	LG11	2752315	<i>AT2G19930.1</i>	Symbols:	RNA-dependent RNA polymerase family protein
<i>Migut.K00532</i>	LG11	2758333	<i>AT5G25880.1</i>	Symbols: ATNADP-ME3, NADP-ME3	NADP-malic enzyme 3
<i>Migut.K00533</i>	LG11	2763977	<i>AT1G35190.1</i>	Symbols:	2-oxoglutarate (2OG) and Fe(II)-dependent oxygenase
<i>Migut.K00534</i>	LG11	2768240	<i>AT1G35190.1</i>	Symbols:	2-oxoglutarate (2OG) and Fe(II)-dependent oxygenase
<i>Migut.K00535</i>	LG11	2773022	<i>AT3G19950.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.K00536</i>	LG11	2777960	<i>AT3G19950.1</i>	Symbols:	RING/U-box superfamily protein
<i>Migut.K00537</i>	LG11	2780258	<i>AT4G15450.1</i>	Symbols:	Senescence/dehydration-associated protein-related
<i>Migut.K00538</i>	LG11	2784016	<i>AT2G40570.1</i>	Symbols:	initiator tRNA phosphoribosyl transferase family
<i>Migut.K00539</i>	LG11	2787696	<i>AT1G60660.1</i>	Symbols: B5 #5, ATCB5LP, CB5LP	cytochrome B5-like protein
<i>Migut.K00540</i>	LG11	2789533	<i>AT2G19880.1</i>	Symbols:	Nucleotide-diphospho-sugar transferases superfamily
<i>Migut.K00541</i>	LG11	2794991	<i>AT2G19870.1</i>	Symbols:	tRNA/rRNA methyltransferase (SpoU) family protein
<i>Migut.K00542</i>	LG11	2798610	<i>AT2G37410.2</i>	Symbols: ATTIM17-2, TIM17, TIM17-2	translocase inner membrane
<i>Migut.K00543</i>	LG11	2801487	<i>AT2G37410.2</i>	Symbols: ATTIM17-2, TIM17, TIM17-2	translocase inner membrane
<i>Migut.K00544</i>	LG11	2804409	<i>AT5G25930.1</i>	Symbols:	Protein kinase family protein with leucine-rich
<i>Migut.K00545</i>	LG11	2807977	<i>AT4G14010.1</i>	Symbols: RALFL32	ralf-like 32
<i>Migut.K00546</i>	LG11	2810843	<i>AT3G16490.1</i>	Symbols: IQD26	IQ-domain 26
<i>Migut.K00547</i>	LG11	2814692	<i>AT5G19730.1</i>	Symbols:	Pectin lyase-like superfamily protein
<i>Migut.K00548</i>	LG11	2824581	<i>AT4G29380.1</i>	Symbols:	protein kinase family protein / WD-40 repeat family
<i>Migut.K00549</i>	LG11	2848477	<i>AT5G56550.1</i>	Symbols: OXS3, ATOXS3	oxidative stress 3
<i>Migut.K00550</i>	LG11	2852108	<i>AT5G56590.1</i>	Symbols:	O-Glycosyl hydrolases family 17 protein
<i>Migut.K00551</i>	LG11	2856530	<i>AT2G19760.1</i>	Symbols: PFN1, PRF1	profilin 1
<i>Migut.K00552</i>	LG11	2861634	<i>AT2G19770.1</i>	Symbols: PRF5	profilin 5
<i>Migut.K00553</i>	LG11	2872167	<i>AT4G29310.1</i>	Symbols:	Protein of unknown function (DUF1005)
<i>Migut.K00554</i>	LG11	2882993	<i>AT1G52720.1</i>	Symbols:	unknown protein; BEST Arabidopsis thaliana protein

<i>Migut.K00555</i>	LG11	2886506	<i>AT4G29260.1</i>	Symbols:	HAD superfamily, subfamily IIIB acid phosphatase
<i>Migut.K00556</i>	LG11	2891391	<i>AT4G29240.1</i>	Symbols:	Leucine-rich repeat (LRR) family protein
<i>Migut.K00557</i>	LG11	2896561	<i>AT2G35680.1</i>	Symbols:	Phosphotyrosine protein phosphatases superfamily
<i>Migut.K00558</i>	LG11	2902033	<i>AT4G29230.1</i>	Symbols: anac075, NAC075	NAC domain containing protein 75
<i>Migut.K00559</i>	LG11	2911835	<i>AT1G51980.1</i>	Symbols:	Insulinase (Peptidase family M16) protein
<i>Migut.K00560</i>	LG11	2918050	<i>AT5G47240.1</i>	Symbols: atnudt8, NUDT8	nudix hydrolase homolog 8

Table S3. Amino acid sequences from the *M. guttatus* and *M. laciniatus* homologs of the leaf shape candidate genes *BAM2* (Exon 5) and *KNATM* (Exon 2). Amino acid differences between the species are highlighted in red.

Gene	Exon	Species	Amino acid sequence
<i>BAM2</i>	5	<i>M. guttatus</i>	VYFDYMRSFRVEFDEFFEDGVITEIEIGLGPCGELRYPSYPAKHGW KYPGIGEFQ
		<i>M. laciniatus</i>	VYFDYMRSFRVEFDEFFEDRVITEIEIGLGPCGELRYPSYPAKHGW KYPGIGEFQ
<i>KNATM</i>	2	<i>M. guttatus</i>	EAYCMTLKKVKERIEEPQQESMAFIDQMYSQLGDLLIDFPSSSIHH QVSLSLSLSLSYVKREIKFEMRMN*
		<i>M. laciniatus</i>	EAYCMTLKKVKERMEEPQQESMAFIDQMYSQLGDLLIDFPSSSIH HQVSLSLSLSLSYVKREIKFEMRMN*