

## SUPPLEMENTARY DATA

**Table S1. Gene-specific primers used for genotyping and RT-PCR analyses of *Mob1A* and *Mob1B* T-DNA lines.**

### Primers for genotyping

Gene	Mutant name	T-DNA line	Left primer	Right primer
<i>Mob1A</i>	<i>mob1A-1</i>	GK719G04	TCTGATATTAACCGCAAACGC	AATCAACCATGAACCTGAATCC
	<i>mob1A-2</i>	SALK_076775	GGATTCGTGTGGCTTTCTTC	CATTGCAAATGCATAACTGAAA
<i>Mob1B</i>	<i>mob1B-1</i>	SALK_062070	CTAAGAAGAGCGCACCATCAG	TCCTGCAAAACAAAACCAGAC

### Primers for RT-PCR analyses

Gene	Mutant	Semi-quantitative PCR primers	Quantitative PCR primers
<i>Mob1A</i>	<i>mob1A-1</i>	For ATGAGTCTCTTTGGGTTAGG	For CCCCAATAAATTAACGGTAAGAA
	<i>mob1A-2</i>	Rev TCAATAAGGTGAAATGATAGATT	Rev TGCTTTTCACATGAACACACAT
<i>Mob1B</i>	<i>mob1B-1</i>	For CGTGTCTCACTCCGATAAAGC Rev TGGACAGAGGATTTGGGTTT	For ACCAAACAAAACCCAAATCC Rev TAAAATCCAAGGTTTCAGCAGTG
<i>ACTIN7</i>		For TGTTCACTACTACCGCAGAA Rev GGTGCAACCACCTTGATCTT	
<i>ACTIN2</i>			For GCTCCTCTTAACCCAAAGGC Rev ACACCATCACCAGAATCCAGC

**Table S2. List of the 54 genes with the highest co-expression to *Mob1A* (At5g45550) based on 1662 perturbation (Genevestigator: Co-expression tool).**

Gene number	Description
At1g27000	Protein of unknown function (DUF1664)
At1g60740	Thioredoxin superfamily protein
At2g04900	unknown protein; FUNCTIONS IN: molecular_function unknown; INVOLVED IN: N-terminal protein myristoylation; LOCATED IN: cellular_component unknown; EXPRESSED IN: 23 plant structures; EXPRESSED DURING: 15 growth stages; CONTAINS InterPro DOMAIN/s: Protein of unknown function DUF423 (InterPro:IPR006696); Has 1824 Blast hits to 1824 proteins in 878 species: Archae - 0; Bacteria - 1498; Metazoa - 118; Fungi - 14; Plants - 58; Viruses - 0; Other Eukaryotes - 136 (source: NCBI BLink).
At2g26230	uricase / urate oxidase / nodulin 35, putative
At1g74290	alpha/beta-Hydrolases superfamily protein
At5g59840	Ras-related small GTP-binding family protein
At5g45490	P-loop containing nucleoside triphosphate hydrolases superfamily protein
At5g23830	MD-2-related lipid recognition domain-containing protein
At1g21900	emp24/gp25L/p24 family/GOLD family protein
At3g11780	MD-2-related lipid recognition domain-containing protein / ML domain-containing protein
At1g09020	ATSNF4, SNF4, homolog of yeast sucrose nonfermenting 4
At1g24350	Acid phosphatase/vanadium-dependent haloperoxidase-related protein
At5g07960	unknown protein; CONTAINS InterPro DOMAIN/s: Uncharacterised protein family UPF0139 (InterPro:IPR005351); Has 193 Blast hits to 193 proteins in 75 species: Archae - 0; Bacteria - 0; Metazoa - 130; Fungi - 0; Plants - 52; Viruses - 0; Other Eukaryotes - 11 (source: NCBI BLink).
At3g11200	AL2, alfin-like 2
At1g65970	TPX2, thioredoxin-dependent peroxidase 2
At2g33150	KAT2, PED1, PKT3, peroxisomal 3-ketoacyl-CoA thiolase 3
At4g12590	Protein of unknown function DUF106, transmembrane
At3g54300	ATVAMP727, VAMP727, VAMP727, vesicle-associated membrane protein 727
At4g22330	ATCES1, Alkaline phytoceramidase (aPHC)
At1g10730	Clathrin adaptor complexes medium subunit family protein
At5g45500	RNI-like superfamily protein
At1g80670	Transducin/WD40 repeat-like superfamily protein
At1g65980	TPX1, thioredoxin-dependent peroxidase 1
At5g41950	Tetratricopeptide repeat (TPR)-like superfamily protein
At1g49300	ATRAB7, ATRABG3E, RABG3E, RAB GTPase homolog G3E
At2g43080	AT-P4H-1, P4H isoform 1
At3g46440	UXS5, UDP-XYL synthase 5
At2g24040	Low temperature and salt responsive protein family
At1g62790	Bifunctional inhibitor/lipid-transfer protein/seed storage 2S albumin superfamily protein
At3g11800	unknown protein; FUNCTIONS IN: molecular_function unknown; INVOLVED IN: biological_process unknown; LOCATED IN: endomembrane system; EXPRESSED IN: 24 plant structures; EXPRESSED

	DURING: 15 growth stages; BEST Arabidopsis thaliana protein match is: unknown protein (TAIR:AT3G44150.1); Has 74 Blast hits to 73 proteins in 18 species: Archae - 0; Bacteria - 0; Metazoa - 0; Fungi - 0; Plants - 72; Viruses - 0; Other Eukaryotes - 2 (source: NCBI BLink).
At5g39950	ATH2, ATTRX2, ATTRXH2, TRX2, TRXH2, thioredoxin 2
At3g18820	ATRAB7B, ATRABG3F, RAB71, RAB7B, RAB7B, RABG3F, RAB GTPase homolog G3F
At4g40040	Histone superfamily protein
At5g55850	NOI, RPM1-interacting protein 4 (RIN4) family protein
At5g09890	Protein kinase family protein
At5g25760	PEX4, UBC21, peroxin4
At2g37110	PLAC8 family protein
At5g45550	Mob1/phocein family protein
At4g36750	Quinone reductase family protein
At5g03290	IDH-V, isocitrate dehydrogenase V
At4g32680	unknown protein; BEST Arabidopsis thaliana protein match is: unknown protein (TAIR:AT1G52343.1); Has 30201 Blast hits to 17322 proteins in 780 species: Archae - 12; Bacteria - 1396; Metazoa - 17338; Fungi - 3422; Plants - 5037; Viruses - 0; Other Eukaryotes - 2996 (source: NCBI BLink).
At2g17130	IDH-II, IDH2, isocitrate dehydrogenase subunit 2
At4g23470	PLAC8 family protein
At5g45440	P-loop containing nucleoside triphosphate hydrolases superfamily protein
At1g09560	GLP5, germin-like protein 5
At5g11970	Protein of unknown function (DUF3511)
At1g74280	alpha/beta-Hydrolases superfamily protein
At1g71190	SAG18, senescence associated gene 18
At1g47420	SDH5, succinate dehydrogenase 5
At3g12030	Protein of unknown function DUF106, transmembrane
At3g02420	unknown protein; FUNCTIONS IN: molecular_function unknown; INVOLVED IN: biological_process unknown; LOCATED IN: membrane; EXPRESSED IN: 25 plant structures; EXPRESSED DURING: 15 growth stages; CONTAINS InterPro DOMAIN/s: Uncharacterised protein family UPF0121 (InterPro:IPR005344); Has 72 Blast hits to 71 proteins in 25 species: Archae - 0; Bacteria - 0; Metazoa - 2; Fungi - 2; Plants - 60; Viruses - 0; Other Eukaryotes - 8 (source: NCBI BLink).
At2g27000	CYP705A8, cytochrome P450, family 705, subfamily A, polypeptide 8
At3g63080	ATGPX5, GPX5, MEE42, glutathione peroxidase 5
At4g15470	Bax inhibitor-1 family protein

**Table S3. List of the 55 genes with the highest co-expression to *Mob1A* (At5g45550) based on 74 anatomical parts (Genevestigator: Co-expression tool).**

Gene number	Description
At1g27000	Protein of unknown function (DUF1664)
At1g59900	AT-E1 ALPHA, E1 ALPHA, pyruvate dehydrogenase complex E1 alpha subunit
At1g64060	ATRBOH F, ATRBOHF, RBOH F, RBOHAP108, RBOHF, respiratory burst oxidase protein F
At1g43890	ATRAB-C1, ATRAB18, ATRABC1, RAB18, RAB18-1, RABC1, RAB GTPASE HOMOLOG B18
At1g31730	Adaptin family protein
At4g23850	LACS4, AMP-dependent synthetase and ligase family protein
At1g76180	ERD14, Dehydrin family protein
At5g58430	ATEXO70B1, EXO70B1, exocyst subunit exo70 family protein B1
At4g02350	SEC15B, exocyst complex component sec15B
At4g24990	ATGP4, Ubiquitin family protein
At3g23000	ATSR2, ATSRPK1, CIPK7, PKS7, SnRK3.10, CBL-interacting protein kinase 7
At1g08800	Protein of unknown function, DUF593
At3g24550	ATPERK1, PERK1, proline extensin-like receptor kinase 1
At2g17980	ATSLY1, Sec1/munc18-like (SM) proteins superfamily
At1g07140	SIRANBP, Pleckstrin homology (PH) domain superfamily protein
At1g52360	Coatomer, beta' subunit
At4g12460	ORP2B, OSBP(oxysterol binding protein)-related protein 2B
At5g43900	ATMYA2, MYA2, XI-2, XI-6, myosin 2
At1g08720	ATEDR1, EDR1, Protein kinase superfamily protein
At5g47420	Tryptophan RNA-binding attenuator protein-like
At5g03040	iqd2, IQ-domain 2
At3g54300	ATVAMP727, VAMP727, VAMP727, vesicle-associated membrane protein 727
At4g31490	Coatomer, beta subunit
At4g32960	unknown protein; BEST Arabidopsis thaliana protein match is: unknown protein (TAIR:AT4G32970.1); Has 106 Blast hits to 106 proteins in 39 species: Archae - 0; Bacteria - 0; Metazoa - 62; Fungi - 0; Plants - 37; Viruses - 0; Other Eukaryotes - 7 (source: NCBI BLink).
At5g20490	ATXIK, XI-17, XIK, Myosin family protein with Dil domain
At2g30440	TPP, thylakoid processing peptide
At5g20470	myosin, putative
At4g36780	BEH2, BES1/BZR1 homolog 2
At1g74380	XXT5, xyloglucan xylosyltransferase 5
At2g32080	PUR ALPHA-1, purin-rich alpha 1
At4g24290	MAC/Perforin domain-containing protein
At3g08670	unknown protein; BEST Arabidopsis thaliana protein match is: unknown protein (TAIR:AT3G51540.1); Has 48380 Blast hits to 29827 proteins in 1356 species: Archae - 46; Bacteria - 5589; Metazoa - 17361; Fungi - 13192; Plants - 2237; Viruses - 905; Other Eukaryotes - 9050 (source: NCBI BLink).

At1g20260	ATPase, V1 complex, subunit B protein
At1g18890	ATCDPK1, CDPK1, CPK10, calcium-dependent protein kinase 1
At1g06870	Peptidase S24/S26A/S26B/S26C family protein
At4g31480	Coatomer, beta subunit
At4g35830	ACO1, aconitase 1
At4g01650	Polyketide cyclase / dehydrase and lipid transport protein
At3g07100	ERMO2, SEC24A, Sec23/Sec24 protein transport family protein
At4g33920	Protein phosphatase 2C family protein
At5g09890	Protein kinase family protein
At4g14350	AGC (cAMP-dependent, cGMP-dependent and protein kinase C) kinase family protein
At1g30000	MNS3, alpha-mannosidase 3
At5g53140	Protein phosphatase 2C family protein
At5g45550	Mob1/phocein family protein
At4g36750	Quinone reductase family protein
At4g30160	ATVLN4, VLN4, villin 4
At1g76030	ATPase, V1 complex, subunit B protein
At5g23450	ATLCBK1, LCBK1, long-chain base (LCB) kinase 1
At4g23470	PLAC8 family protein
At1g79340	AtMC4, MC4, metacaspase 4
At5g11850	Protein kinase superfamily protein
At3g57070	Glutaredoxin family protein
At5g65910	BSD domain-containing protein
At5g66060	2-oxoglutarate (2OG) and Fe(II)-dependent oxygenase superfamily protein