

Supplemental Table S3 Upregulated fatty acid synthetic genes in *LEC1-OXI* plants

Category	AGI ID	log ₂ ratio	Annotation
Synthesis and storage of oil	At3g01570	11.2	Oleosin
	At3g27660	11.0	Oleosin
	At4g25140	11.0	Oleosin
	At5g40420	9.8	Oleosin
	At5g51210	8.8	Oleosin
	At3g18570	6.8	Oleosin
	At5g55240	6.7	Caleosin
Fatty acid synthesis in plastids	At5g27200	6.2	Plastidial Acyl Carrier Protein
	At3g02630	3.6	Stearoyl-ACP Desaturase
	At5g16240	3.4	Stearoyl-ACP Desaturase
	At3g05020	3.4	Plastidial Acyl Carrier Protein
	At5g15530	3.2	ACCase, biotin carboxyl carrier protein
	At3g16950	3.1	Plastidial Dihydrolipoamide Dehydrogenase
	At5g08415	2.3	Lipoic acid synthase family protein
	At3g25110	2.1	Acyl-ACP Thioesterase FatA
	At5g35360	2.0	ACCase, biotin carboxylase
	At2g38040	1.9	ACCase, α -carboxyltransferase
	At1g62610	1.9	Plastidial Ketoacyl-ACP Reductase
	At2g30200	1.8	Malonyl-CoA:ACP Malonyltransferase
	At2g05990	1.6	Plastidial Enoyl-ACP Reductase
	At1g74960	1.6	Ketoacyl-ACP synthase II
	At1g01090	1.4	Plastidial pyruvate dehydrogenase E1 α subunit
At2g43710	1.3	Stearoyl-ACP Desaturase	
At2g34590	1.2	Plastidial pyruvate dehydrogenase E1 β subunit	
Phospholipid Synthesis in ER	At2g46210	2.8	Ceramide Sphingobase Δ -8 Desaturase
	At2g29980	1.9	ER linoleate Desaturase
	At2g41540	1.5	ER dihydroxyacetone-phosphate reductase
	At3g12120	1.5	ER oleate desaturase
	At1g80950	1.1	Acyltransferase
At4g38570	1.0	Phosphatidylinositol synthase	
Metabolism of acyl-lipids in mitochondria	At1g03090	1.2	Methylcrotonyl-CoA carboxylase, biotinylated subunit
	At3g06850	1.1	Dihydrolipoamide transacylase
Fatty acid elongation	At4g34520	9.6	Ketoacyl-CoA synthase
Miscellaneous	At3g23470	3.4	Cyclopropane fatty acid synthase
	At5g64080	3.0	Lipid transfer protein type 5

	At1g09430	1.4	ATP citrate lyase A subunit
	At1g65880	6.6	Acyl-activating enzyme 11 (AAE11)
	At2g27360	2.5	Acyl-CoA binding protein
Other lipid synthetic genes	At1g52670	2.2	Biotin/lipoyl attachment domain-containing protein
	At5g27630	1.8	Acyl-CoA binding protein
	At3g16170	1.8	Acyl-activating enzyme 13
	At5g02100	1.6	Oxysterol-binding family protein
	At2g43360	1.6	Biotin synthase (BIO2)