

Table S3. The enriched GO terms for differentially expressed genes in *otu5-1*.

Cat ^a	Term Name	GOID	Depth	Reference ^b	Count (gene list) ^c	Fsh ^d	elim ^e
<i>Specific biological processes</i>							
P1	Response to chitin	0010200	6	127	9 (At1G27730/At2G40140/At2G44840/ At2G46400/At4G23810/At5G43170/At5G47230/ At5G51190/At5G59820)	5.24E-09	5.24E-09
P2	Defense response to fungus	0050832	5	132	7 (At1G02920/At2G40140/At4G12470/At4G12490/ At5G39580/At5G61600/At5G64120)	1.98E-06	1.98E-06
P3	Response to wounding	0009611	4	153	7 (At1G17420/At1G27730/At1G52030/At1G72920/ At3G61190/At5G47240/At5G59820)	5.28E-06	5.28E-06
P4	Defense response	0006952	4	796	19 (At1G02920/At1G02930/At1G17420/ At1G19610/At1G24020/ At1G52030/At1G72920/At2G40140/At2G43520/At3 G61190/At4G11190/At4G12470/At4G12490/At4G22 212/At4G23680/At4G23810/At5G39580/At5G61600 /At5G64120)	2.28E-09	3.81E-05
P5	Response to cold	0009409	4	279	10 (At1G27730/At2G40140/At2G45660/At3G61190/At 4G25470/At5G10140/At5G43170/At5G47230/At5G 59820/At5G65080)	4.63E-07	6.97E-04
P6	Flower development	0009908	4	338	7 (At1G17420/At1G52030/At1G65010/ At2G45660/At5G02600/At5G10140/At5G65080)	7.50E-04	7.50E-04

P7					7 (At1G02920/At1G02930/At1G27730/At2G38380/At2G38390/At5G43170/At5G59820)		
	Response to salt stress	0009651	5	416		0.002451	0.002451
P8	Vernalization response	0010048	5	17	2 (At5G10140/At5G65080)	0.002476	0.002476
P9	Cold acclimation	0009631	5	21	2 (At4G25470/At5G59820)	0.00378	0.00378
P10					5 (At2G38530/At4G12470/At4G12490/At4G12500/At4G39670)		
	Lipid transport	0006869	5	147		4.86E-04	0.003951
P11	Phospholipid transfer to membrane	0006649	4	1	1 (At2G38530)	0.004375	0.004375
P12	Photosynthetic acclimation	0009643	7	1	1 (At5G59820)	0.004375	0.004375
P13	Regulation of protein import into nucleus	0042306	5	1	1 (At5G41790)	0.004375	0.004375
P14	Nucleus organization	0006997	6	28	2 (At1G13220/At1G67230)	0.006669	0.006669
P15					5 (At1G02930/At1G27730/At3G20340/At5G59820/At5G66390)		
	Response to oxidative stress	0006979	4	278		0.007705	0.007705
<i>Specific biochemical activities/molecular functions</i>							
F1					6 (At2G38380/At2G38390/At4G36430/At5G39580/At5G64120/At5G66390)		
	Peroxidase activity	0004601	3	103		6.38E-06	6.38E-06
F2					7 (At2G38530/At3G61190/At4G12470/At4G12490/At4G12500/At4G39670/At5G59320)		
	Lipid binding	0008289	3	229		7.07E-05	7.07E-05
F3	Ferric-chelate reductase activity	0000293	6	8	2 (At5G49730/At5G49740)	5.23E-04	5.23E-04
F4	Glutathione binding	0043295	4	10	2 (At1G02920/At1G02930)	8.36E-04	8.36E-04
F5	Sequence-specific DNA binding	0003700	3	1681	17	0.001127	0.001127

(At1G27730/At1G44830/At2G40140/At2G44840/At2G45660/At2G46400/At4G23810/At4G25470/At4G39250/At5G10140/At5G41020/At5G43170/At5G47230/At5G51190/At5G59820/At5G61600/At5G65080)

Specific cellular/complex components

C1	Plastid small ribosomal subunit	0000312	5	19	2 (AtCG00800/AtCG00820)	0.003096	0.003096
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7
(At2G19970/At2G22860/At2G43520/At2G43620/At
5G49360/At5G59320/At5G64120)

C5	20
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20
(At1G02920/At1G13220/At1G27730/At1G44830/At1G67230/At1G68790/At2G44840/At2G45660/At2G

Nucleus	0005634	5	2435	1G67230/At1G68790/At2G44840/At2G45660/At2G	0.004791	0.004791
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46400/At4G14760/At4G23810/At4G25470/At5G026
00/At5G40340/At5G43170/At5G47230/At5G48600/
At5G51190/At5G61600/At5G65080)

C6	Integrin complex	0008305	5	2	1 (At3G28300)	0.00873	0.00873
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^aCat, GO terms are classified as being involved in specific biological processes (P1-P15), specific biochemical activities/molecular functions (F1-F12), and specific cellular and complex compartments (C1-C6) based on the TAIR GO annotations.

^bThe reference referred to the number of loci annotated in the TAIR10 genome release with the specific GO term.

^cLoci indicated in green and red colors are down- and up-regulated, respectively.

^dFsh, Fisher’s exact test.

^e*elim*, TopGO *elim* algorithm.
