

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 |

Supplemental Data. Radjacommare et al.

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|---|---|---------|---|------|--|----------|----------|
| 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 |

Supplemental Data. Radjacommare et al.

transcription factor activity

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

| | | | | | | | |
|-----|--|---------|---|-----|---|----------|----------|
| F6 | Transcription repressor activity | 0016564 | 3 | 51 | 3 (At1G27730/At5G10140/At5G43170) | 0.001465 | 0.001465 |
| F7 | Arsenate reductase (glutaredoxin) activity | 0008794 | 5 | 14 | 2 (At4G15660/At4G15680) | 0.001671 | 0.001671 |
| F8 | Transcription activator activity | 0016563 | 3 | 129 | 4 (At4G23810/At4G25470/At5G47230/At5G61600) | 0.002535 | 0.002535 |
| F9 | Dihydrokaempferol 4-reductase activity | 0045552 | 6 | 1 | 1 (At5G42800) | 0.004375 | 0.004375 |
| F10 | Thioglucosidase binding | 0010180 | 5 | 1 | 1 (At1G52030) | 0.004375 | 0.004375 |
| F11 | Malonyl-CoA decarboxylase activity | 0050080 | 6 | 1 | 1 (At4G04320) | 0.004375 | 0.004375 |
| F12 | Heme binding | 0020037 | 4 | 290 | 5 (At2G38380/At2G38390/At4G36430/At5G39580/At5G66390) | 0.009147 | 0.009147 |

Specific cellular/complex components

| | | | | | | | |
|----|---------------------------------|---------|---|------|--|----------|----------|
| C1 | Plastid small ribosomal subunit | 0000312 | 5 | 19 | 2 (AtCG00800/AtCG00820) | 0.003096 | 0.003096 |
| C2 | Cell wall | 0005618 | 4 | 554 | 8 (At1G02930/At1G54000/At2G38380/At3G20470/At4G36430/At5G49360/At5G59320/At5G64120) | 0.003139 | 0.003139 |
| C3 | Extracellular region | 0005576 | 2 | 439 | 7 (At2G19970/At2G22860/At2G43520/At2G43620/At5G49360/At5G59320/At5G64120) | 0.003298 | 0.003298 |
| C4 | Thioglucosidase complex | 0010169 | 4 | 1 | 1 (At1G52030) | 0.004375 | 0.004375 |
| C5 | Nucleus | 0005634 | 5 | 2435 | 20 (At1G02920/At1G13220/At1G27730/At1G44830/At1G67230/At1G68790/At2G44840/At2G45660/At2G51190/At2G59820/At2G61600/At2G65080) | 0.004791 | 0.004791 |

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 |
|----|------------------|---------|---|---|---------------|---------|---------|

^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.
