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| --- | --- | --- | --- | --- | --- | --- |
| **Table S5:** Gene ontology (GO) terms for the 8,966 inductive genes identified | | | | | | |
| GO term | Ontology | Description | Number | P-value | FDR |  |
| Up |  |  |  |  |  |  |
| GO:0003824 | F | catalytic activity | 1766 | 9.50E-38 | 1.70E-34 |  |
| GO:0044710 | P | single-organism metabolic process | 692 | 4.90E-31 | 1.50E-27 |  |
| GO:0044699 | P | single-organism process | 874 | 4.90E-27 | 7.40E-24 |  |
| GO:0016491 | F | oxidoreductase activity | 453 | 7.30E-25 | 6.70E-22 |  |
| GO:0009415 | P | response to water | 37 | 1.10E-24 | 8.60E-22 |  |
| GO:0001101 | P | response to acid chemical | 37 | 1.10E-24 | 8.60E-22 |  |
| GO:1901700 | P | response to oxygen-containing compound | 42 | 4.60E-23 | 2.80E-20 |  |
| GO:0010035 | P | response to inorganic substance | 41 | 7.10E-23 | 3.60E-20 |  |
| GO:0048037 | F | cofactor binding | 179 | 1.70E-22 | 1.00E-19 |  |
| GO:0055114 | P | oxidation-reduction process | 430 | 4.10E-22 | 1.80E-19 |  |
| GO:0044281 | P | small molecule metabolic process | 239 | 1.20E-17 | 4.40E-15 |  |
| GO:0009628 | P | response to abiotic stimulus | 37 | 1.00E-16 | 3.40E-14 |  |
| GO:0006082 | P | organic acid metabolic process | 170 | 1.90E-16 | 5.70E-14 |  |
| GO:0050662 | F | coenzyme binding | 120 | 7.10E-15 | 3.20E-12 |  |
| GO:0008152 | P | metabolic process | 1617 | 1.80E-14 | 5.00E-12 |  |
| GO:0043436 | P | oxoacid metabolic process | 143 | 6.90E-13 | 1.70E-10 |  |
| GO:0005975 | P | carbohydrate metabolic process | 207 | 2.30E-12 | 5.30E-10 |  |
| GO:0030170 | F | pyridoxal phosphate binding | 49 | 2.50E-12 | 9.00E-10 |  |
| GO:0019752 | P | carboxylic acid metabolic process | 140 | 2.50E-12 | 5.30E-10 |  |
| GO:0016614 | F | oxidoreductase activity, acting on CH-OH group of donors | 70 | 1.80E-10 | 5.50E-08 |  |
| Down |  |  |  |  |  |  |
| GO:0003824 | F | catalytic activity | 1592 | 2.10E-53 | 3.70E-50 |  |
| GO:0015979 | P | photosynthesis | 106 | 4.60E-48 | 1.20E-44 |  |
| GO:0008152 | P | metabolic process | 1566 | 2.70E-46 | 3.40E-43 |  |
| GO:0034357 | C | photosynthetic membrane | 91 | 7.40E-40 | 2.70E-37 |  |
| GO:0009579 | C | thylakoid | 94 | 2.30E-39 | 2.80E-37 |  |
| GO:0044436 | C | thylakoid part | 94 | 2.30E-39 | 2.80E-37 |  |
| GO:0009521 | C | photosystem | 88 | 7.80E-39 | 7.10E-37 |  |
| GO:0009654 | C | photosystem II oxygen evolving complex | 42 | 1.30E-28 | 8.50E-27 |  |
| GO:0042651 | C | thylakoid membrane | 45 | 1.40E-28 | 8.50E-27 |  |
| GO:0044710 | P | single-organism metabolic process | 587 | 7.20E-27 | 6.10E-24 |  |
| GO:1990204 | C | oxidoreductase complex | 45 | 3.00E-24 | 1.50E-22 |  |
| GO:0006793 | P | phosphorus metabolic process | 456 | 5.50E-23 | 3.50E-20 |  |
| GO:0009523 | C | photosystem II | 57 | 4.60E-22 | 2.10E-20 |  |
| GO:0006796 | P | phosphate-containing compound metabolic process | 451 | 4.90E-22 | 2.50E-19 |  |
| GO:0019898 | C | extrinsic component of membrane | 33 | 9.10E-22 | 3.70E-20 |  |
| GO:0009522 | C | photosystem I | 31 | 1.60E-21 | 5.80E-20 |  |
| GO:0098796 | C | membrane protein complex | 107 | 4.80E-21 | 1.60E-19 |  |
| GO:0044699 | P | single-organism process | 724 | 2.80E-20 | 1.20E-17 |  |
| GO:0016310 | P | phosphorylation | 392 | 3.50E-20 | 1.30E-17 |  |
| GO:0016020 | C | membrane | 424 | 3.40E-18 | 1.00E-16 |  |