

Table S1. Go enrichment analysis of upregulated DEGs (adjusted P-value < 0.05)

| Term type | NO. | GO accession | Description | Corrected P Value | Protein number |
|--------------------|------------|---------------------|---|--------------------------|-----------------------|
| | 1 | GO:0007264 | small GTPase mediated signal transduction | 1.10E-07 | 186 |
| | 2 | GO:0065099 | regulation of molecular function | 3.17E-05 | 152 |
| | 3 | GO:0051056 | regulation of small GTPase mediated signal transduction | 3.95E-05 | 35 |
| | 4 | GO:0050790 | regulation of catalytic activity | 4.71E-05 | 141 |
| | 5 | GO:0051641 | cellular localization | 0.000131 | 626 |
| | 6 | GO:0033036 | macromolecule localization | 0.000469 | 624 |
| | 7 | GO:0043087 | regulation of GTPase activity | 0.000469 | 59 |
| | 8 | GO:0007266 | Rho protein signal transduction | 0.000469 | 18 |
| | 9 | GO:0035023 | regulation of Rho protein signal transduction | 0.000469 | 18 |
| Biological process | 10 | GO:0051649 | establishment of localization in cell | 0.001253 | 584 |
| | 11 | GO:0051336 | regulation of hydrolase activity | 0.001483 | 77 |
| | 12 | GO:0007265 | Ras protein signal transduction | 0.001895 | 25 |
| | 13 | GO:0046578 | regulation of Ras protein signal transduction | 0.001895 | 25 |
| | 14 | GO:0008104 | protein localization | 0.003145 | 548 |
| | 15 | GO:0045184 | establishment of protein localization | 0.003437 | 523 |
| | 16 | GO:1902531 | regulation of intracellular signal transduction | 0.004585 | 45 |
| | 17 | GO:0006470 | protein dephosphorylation | 0.009589 | 50 |
| | 18 | GO:0015031 | protein transport | 0.009749 | 505 |
| | 19 | GO:0035556 | intracellular signal transduction | 0.009756 | 298 |

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|----|----------------|--|----------|-----|
| 20 | GO:004690 7 | intracellular transport | 0.010529 | 509 |
| 21 | GO:000704 9 | cell cycle | 0.012566 | 301 |
| 22 | GO:000996 6 | regulation of signal transduction | 0.025295 | 67 |
| 23 | GO:003336 5 | protein localization to organelle | 0.025295 | 148 |
| 24 | GO:005125 8 | protein polymerization | 0.026491 | 91 |
| 25 | GO:002305 1 | regulation of signaling | 0.030259 | 69 |
| 26 | GO:003461 3 | cellular protein localization | 0.030259 | 449 |
| 27 | GO:007072 7 | cellular macromolecule localization | 0.030259 | 449 |
| 28 | GO:000177 5 | cell activation | 0.030259 | 70 |
| 29 | GO:003250 5 | reproduction of a single-celled organism | 0.030939 | 61 |
| 30 | GO:003016 8 | platelet activation | 0.030939 | 64 |
| 31 | GO:000639 7 | mRNA processing | 0.032502 | 123 |
| 32 | GO:001607 1 | mRNA metabolic process | 0.032502 | 141 |
| 33 | GO:000091 7 | barrier septum assembly | 0.032502 | 63 |
| 34 | GO:003250 6 | cytokinetic process | 0.032502 | 63 |
| 35 | GO:009052 9 | cell septum assembly | 0.032502 | 63 |
| 36 | GO:190241 0 | mitotic cytokinetic process | 0.032502 | 63 |
| 37 | GO:000027 8 | mitotic cell cycle | 0.032502 | 125 |
| 38 | GO:190304 7 | mitotic cell cycle process | 0.032502 | 125 |
| 39 | GO:001064 6 | regulation of cell communication | 0.033484 | 68 |
| 40 | GO:190258 2 | single-organism intracellular transport | 0.035609 | 274 |
| 41 | GO:000691 3 | nucleocytoplasmic transport | 0.042165 | 71 |

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|----------|-------|-----------|--|----------|------|
| | 42 | GO:000028 | mitotic cytokinesis | 0.042165 | 64 |
| | | 1 | | | |
| | 43 | GO:006164 | cytoskeleton-dependent cytokinesis | 0.042165 | 64 |
| | | 0 | | | |
| | 44 | GO:000759 | blood coagulation | 0.044018 | 65 |
| | | 6 | | | |
| | 45 | GO:190258 | single-organism cellular localization | 0.044754 | 153 |
| | | 0 | | | |
| | 46 | GO:004887 | cell motility | 0.046942 | 83 |
| | | 0 | | | |
| | 47 | GO:005167 | localization of cell | 0.046942 | 83 |
| | | 4 | | | |
| | <hr/> | | | | |
| | 1 | GO:004442 | organelle part | 0.000469 | 1307 |
| | | 2 | | | |
| | 2 | GO:004444 | intracellular organelle part | 0.000472 | 1298 |
| | | 6 | | | |
| | 3 | GO:003197 | membrane-enclosed lumen | 0.000518 | 405 |
| | | 4 | | | |
| | 4 | GO:000565 | nucleoplasm | 0.000664 | 187 |
| | | 4 | | | |
| | 5 | GO:004445 | nucleoplasm part | 0.000664 | 187 |
| | | 1 | | | |
| | 6 | GO:004323 | organelle lumen | 0.001659 | 399 |
| | | 3 | | | |
| | 7 | GO:007001 | intracellular organelle lumen | 0.001659 | 399 |
| | | 3 | | | |
| | 8 | GO:003198 | nuclear lumen | 0.003079 | 379 |
| | | 1 | | | |
| Cellular | 9 | GO:004442 | nuclear part | 0.005163 | 550 |
| componen | | 8 | | | |
| t | 10 | GO:000042 | DNA-directed RNA polymerase complex | 0.011971 | 81 |
| | | 8 | | | |
| | 11 | GO:005502 | nuclear DNA-directed RNA polymerase complex | 0.011971 | 81 |
| | | 9 | | | |
| | 12 | GO:001659 | DNA-directed RNA polymerase II, holoenzyme | 0.015103 | 76 |
| | | 1 | | | |
| | 13 | GO:004443 | cytoskeletal part | 0.020102 | 280 |
| | | 0 | | | |
| | 14 | GO:000585 | cytoskeleton | 0.020102 | 290 |
| | | 6 | | | |
| | 15 | GO:009057 | RNA polymerase II transcription factor complex | 0.030259 | 63 |
| | | 5 | | | |
| | 16 | GO:004323 | intracellular membrane-bounded organelle | 0.030259 | 1618 |
| | | 1 | | | |

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|-----------------------|-------|----------------|---|----------|------|
| | 17 | GO:000557 7 | fibrinogen complex | 0.030939 | 64 |
| | 18 | GO:004322 7 | membrane-bounded organelle | 0.031324 | 1619 |
| | 19 | GO:000931 8 | exodeoxyribonuclease VII complex | 0.036221 | 49 |
| | 20 | GO:003151 4 | motile cilium | 0.044386 | 53 |
| | <hr/> | | | | |
| | 1 | GO:001642 3 | tRNA (guanine) methyltransferase activity | 2.91E-05 | 66 |
| | 2 | GO:000817 6 | tRNA (guanine-N7-)-methyltransferase activity | 4.09E-05 | 56 |
| | 3 | GO:000817 5 | tRNA methyltransferase activity | 5.15E-05 | 73 |
| | 4 | GO:000509 6 | GTPase activator activity | 0.001633 | 50 |
| | 5 | GO:003509 1 | phosphatidylinositol binding | 0.00209 | 34 |
| | 6 | GO:000804 7 | enzyme activator activity | 0.004002 | 69 |
| | 7 | GO:000508 5 | guanyl-nucleotide exchange factor activity | 0.004075 | 45 |
| | 8 | GO:003069 5 | GTPase regulator activity | 0.005717 | 55 |
| | 9 | GO:000828 9 | lipid binding | 0.011733 | 111 |
| Molecular function | 10 | GO:006058 9 | nucleoside-triphosphatase regulator activity | 0.019029 | 96 |
| | 11 | GO:000813 8 | protein tyrosine/serine/threonine phosphatase activity | 0.019029 | 30 |
| | 12 | GO:000472 1 | phosphoprotein phosphatase activity | 0.028217 | 39 |
| | 13 | GO:000551 5 | protein binding | 0.030939 | 2455 |
| | 14 | GO:001679 6 | exonuclease activity, active with either ribo- or deoxyribonucleic acids and producing 5'-phosphomonoesters | 0.032502 | 62 |
| | 15 | GO:000885 5 | exodeoxyribonuclease VII activity | 0.036221 | 49 |
| | 16 | GO:000452 7 | exonuclease activity | 0.036221 | 83 |
| | 17 | GO:004573 5 | nutrient reservoir activity | 0.036637 | 26 |
| | 18 | GO:000554 | phospholipid binding | 0.040345 | 52 |

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|----|-----------|--|--|----------|-----|
| | 3 | | | | |
| 19 | GO:000875 | S-adenosylmethionine-dependent | | 0.04293 | 116 |
| | 7 | methyltransferase activity | | | |
| 20 | GO:000452 | exodeoxyribonuclease activity | | 0.044018 | 51 |
| | 9 | | | | |
| 21 | GO:001689 | exodeoxyribonuclease activity, producing | | 0.044018 | 51 |
| | 5 | 5'-phosphomonoesters | | | |
| 22 | GO:000817 | RNA methyltransferase activity | | 0.048527 | 79 |
| | 3 | | | | |
