|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table S4: qRT-PCR validation of RNA-seq data of 60 selected genes. qRT-PCR was conducted 4 times for each gene. \* p<0.05, \*\* p<0.01, \*\*\*p<0.001. | | | | | | | | | | |
|  |  | **100 pM Melatonin** | | | | **1 mM Melatonin** | | | | |
|  |  | mRNA-seq | | qPCR | | mRNA-seq | | qPCR | | |
| Accession # | Gene name | fold change | | 2^-∆∆ct | | fold change | | 2^-∆∆ct | | |
| AT1G01310 | CAP | -2.84 | \*\*\* | -3.49 | \*\*\* | -5.72 | \*\*\* | | -10.91 | \*\*\* |
| AT4G15390 | AT4G15390 | -2.40 | \*\* | -1.73 | \*\* | -4.73 | \*\*\* | | -2.12 | \* |
| AT1G74670 | GASA6 | 0.51 |  | 2.01 |  | -4.33 | \*\*\* | | -3.07 | \*\* |
| AT5G61890 | AT5G61890 | -0.28 |  | 2.19 |  | -4.24 | \*\*\* | | 1.19 |  |
| AT5G13930 | TT4 | 0.04 |  | 1.09 |  | -3.87 | \*\*\* | | -3.84 | \*\*\* |
| AT1G04250 | AXR3 | -0.53 |  | 1.20 |  | -3.49 | \*\*\* | | -1.97 | \*\* |
| AT3G28220 | AT3G28220 | 2.95 | \*\*\* | 3.55 | \*\* | -3.42 | \*\*\* | | -1.48 |  |
| AT4G13770 | CYP83A1 | -0.14 |  | 1.01 |  | -3.39 | \*\*\* | | -5.53 | \*\*\* |
| AT2G26020 | PDF | 0.21 |  | 1.92 |  | -3.29 | \*\*\* | | -1.10 |  |
| AT3G57260 | BGL2 | -1.11 |  | -1.10 |  | -3.05 | \*\*\* | | 1.56 |  |
| AT5G64770 | RGF9 | 0.22 |  | 1.59 |  | -3.01 | \*\*\* | | -3.99 | \* |
| AT3G04290 | LTL1 | -0.34 |  | 1.09 |  | -2.81 | \*\*\* | | -9.08 | \*\*\* |
| AT4G25100 | FSD1 | 0.00 |  | -1.05 |  | -2.80 | \*\*\* | | -6.65 | \*\* |
| AT1G28290 | AGP31 | -0.57 |  | 1.13 |  | -2.58 | \*\*\* | | -3.03 | \*\* |
| AT3G20470 | GRP5 | 0.95 |  | 1.34 | \* | -2.35 | \*\*\* | | -1.43 | \* |
| AT2G38210 | PDX1L4 | 0.48 |  | 1.80 |  | -2.02 | \*\*\* | | -1.95 | \*\* |
| AT1G19670 | ATCLH1 | 1.07 |  | 1.96 | \*\* | -2.01 | \*\*\* | | -2.30 | \*\*\* |
| AT4G23810 | WRKY53 | -0.64 |  | 2.52 | \* | -0.94 |  | | 1.26 | \* |
| AT5G24770 | VSP2 | 2.48 | \*\*\* | 7.16 | \*\*\* | 0.76 |  | | 2.01 | \* |
| AT4G39030 | EDS5 | -0.90 |  | 1.03 | \*\*\* | 1.20 | \* | | 2.23 | \*\*\* |
| AT2G14610 | PR1 | -4.15 | \*\*\* | -1.65 |  | 1.68 | \* | | 2.56 | \* |
| AT5G07010 | ST2A | 0.13 |  | -1.32 |  | 2.01 | \*\*\* | | 4.89 | \*\* |
| AT2G27150 | AAO3 | 0.10 |  | 1.25 | \* | 2.01 | \*\*\* | | 4.93 | \*\* |
| AT5G45110 | NPR3 | -0.25 |  | 1.35 | \* | 2.05 | \*\*\* | | 5.21 | \*\*\* |
| AT5G13320 | PBS3 | -0.68 |  | -1.01 |  | 2.05 | \*\*\* | | 18.34 | \*\*\* |
| AT2G40000 | HSPRO2 | 0.94 |  | 2.38 | \*\* | 2.06 | \*\*\* | | 4.78 | \*\*\* |
| AT1G74020 | SS2 | -0.56 |  | -1.01 |  | 2.09 | \*\*\* | | 4.49 | \*\* |
| AT1G05560 | UGT75B1 | 0.00 |  | 2.00 |  | 2.09 | \*\*\* | | 6.34 | \*\*\* |
| AT3G52400 | SYP122 | -0.03 |  | 1.34 | \* | 2.09 | \*\*\* | | 3.45 | \*\*\* |
| AT4G08950 | EXO | 0.09 |  | 1.70 |  | 2.12 | \*\*\* | | 5.30 | \*\* |
| AT3G28210 | PMZ | -2.04 | \*\* | -1.45 |  | 2.12 | \*\*\* | | 6.92 | \*\* |
| AT1G54100 | ALDH7B4 | 0.24 |  | 2.15 |  | 2.16 | \*\*\* | | 5.22 | \*\*\* |
| AT4G34138 | UGT73B1 | 0.39 |  | 1.29 |  | 2.16 | \*\*\* | | 6.81 | \*\*\* |
| AT5G13190 | GILP | -0.29 | \* | 1.46 | \*\* | 2.20 | \*\*\* | | 6.10 | \*\* |
| AT2G23170 | GH3.3 | -1.30 |  | 1.97 |  | 2.23 | \*\*\* | | 3.65 | \* |
| AT2G29420 | ATGSTU7 | -0.50 |  | -1.18 |  | 2.23 | \*\*\* | | 9.73 | \*\* |
| AT2G36800 | DOGT1 | -1.00 |  | 1.21 |  | 2.25 | \*\*\* | | 7.33 | \*\*\* |
| AT2G33380 | RD20 | 0.60 |  | 1.57 | \* | 2.28 | \*\*\* | | 4.33 | \*\* |
| AT3G49780 | ATPSK4 | 0.02 |  | 3.57 | \* | 2.32 | \*\*\* | | 11.81 | \* |
| AT1G73805 | SARD1 | -0.36 |  | 1.25 |  | 2.41 | \*\*\* | | 4.43 | \*\*\* |
| AT3G22231 | PCC1 | -1.57 | \*\* | -1.73 | \* | 2.47 | \*\*\* | | 7.34 | \*\*\* |
| AT5G27420 | CNI1 | -0.40 |  | 2.09 |  | 2.48 | \*\*\* | | 7.30 | \*\*\* |
| AT3G55970 | JRG21 | -0.32 |  | -1.06 |  | 2.49 | \*\*\* | | 7.29 | \* |
| AT2G41230 | ORS1 | -1.09 |  | 1.00 |  | 2.61 | \*\*\* | | 8.15 | \*\*\* |
| AT2G32140 | AT2G32140 | -0.47 |  | 1.51 | \* | 2.63 | \*\*\* | | 3.09 | \* |
| AT3G22060 | AT3G22060 | -0.63 |  | 1.84 |  | 2.64 | \*\*\* | | 6.19 | \* |
| AT1G63840 | AT1G63840 | -0.46 |  | 1.11 |  | 2.77 | \*\*\* | | 6.61 | \*\*\* |
| AT1G54040 | ESP | 2.87 |  | 1.21 |  | 2.94 | \*\*\* | | 1.27 |  |
| AT1G76650 | CML38 | 1.77 | \* | 1.30 |  | 2.95 | \*\*\* | | 4.02 | \*\* |
| AT5G59220 | HAI1 | 0.02 |  | 1.42 | \* | 3.01 | \*\*\* | | 4.57 | \*\*\* |
| AT2G29490 | ATGSTU1 | -1.56 |  | 1.45 | \* | 3.10 | \*\*\* | | 2.51 | \*\* |
| AT4G26200 | ACS7 | 0.66 |  | 1.74 | \* | 3.43 | \*\*\* | | 7.02 | \*\*\* |
| AT5G26920 | CBP60G | 0.08 |  | 1.25 | \* | 3.52 | \*\*\* | | 9.74 | \*\*\* |
| AT5G39580 | AT5G39580 | 0.62 |  | 1.50 | \* | 3.63 | \*\*\* | | 14.66 | \*\*\* |
| AT5G54610 | ANK | -1.42 | \* | -1.59 | \*\* | 3.72 | \*\*\* | | 17.30 | \* |
| AT2G25090 | CIPK16 | 0.02 |  | 1.45 |  | 3.83 | \*\*\* | | 1.90 | \*\* |
| AT1G02450 | NIMIN1 | -1.13 |  | -1.14 |  | 4.02 | \*\*\* | | 5.17 | \*\*\* |
| AT4G16740 | ATTPS03 | -1.74 |  | 1.01 |  | 4.10 | \*\*\* | | 1.65 |  |
| AT5G56970 | CKX3 | -0.55 |  | 1.50 |  | 4.52 | \*\*\* | | 1.71 |  |
| AT3G11480 | BSMT1 | 0.61 |  | 1.15 |  | 5.79 | \*\*\* | | 1.52 | \* |