

Figure S1. Analysis of reads from Arabidopsis samples infested with *T. urticae* during 0h (AE7611-13), 30min (AE7614-16), 1h (AE7617-19), 3h (AE7620-22), and 24h (AE7623-25). **(A)** Principal Component Analysis (PCA) showing the distribution of the samples in the two first dimensions. **(B)** Percentage of mapped reads per chromosome. **(C)** Mapping statistics. **(D)** Number of genes detected with at least one mapping.

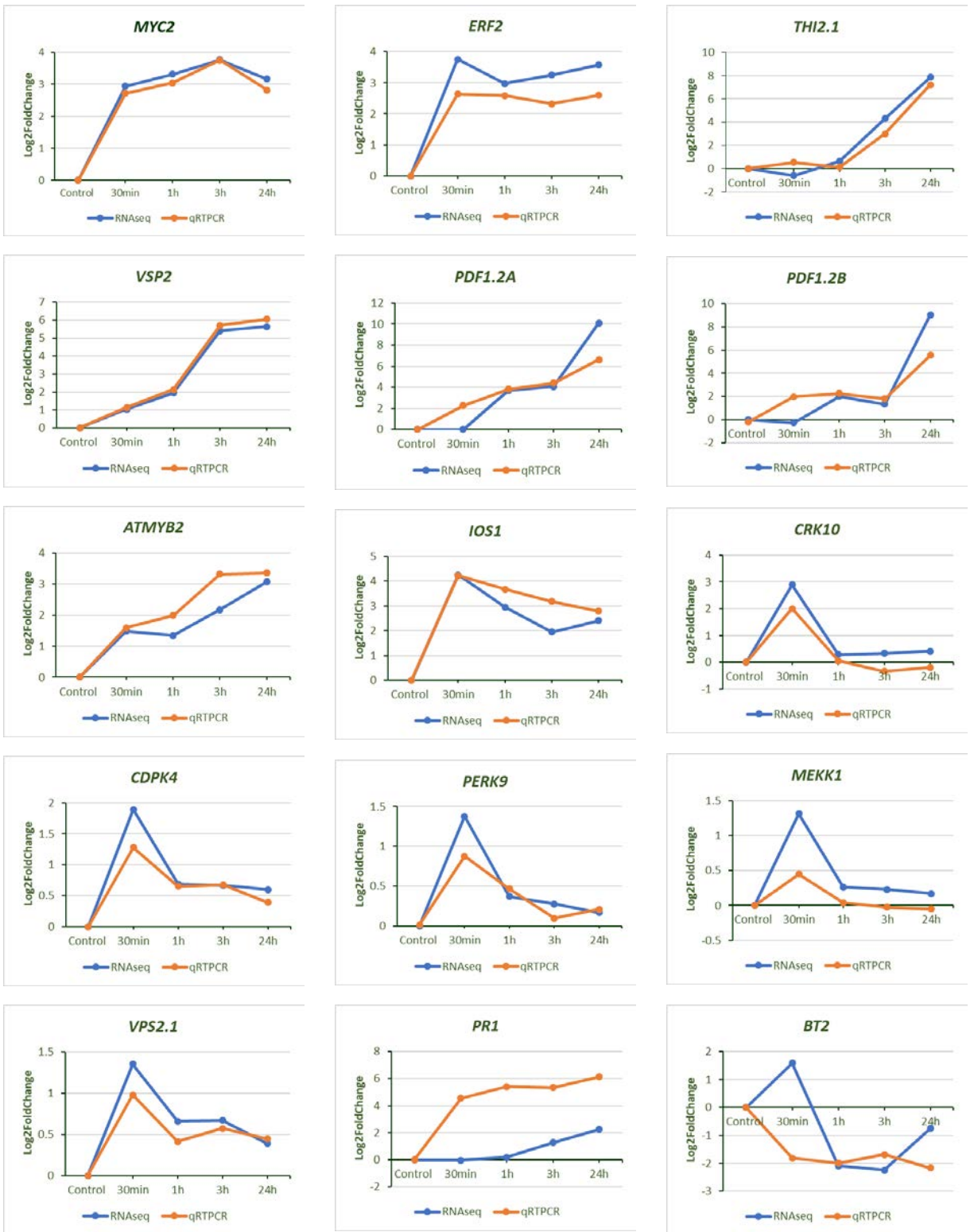


Figure S2. Linear graphics comparing the expression pattern of fifteen selected genes by RNA-seq and RT-qPCR techniques.

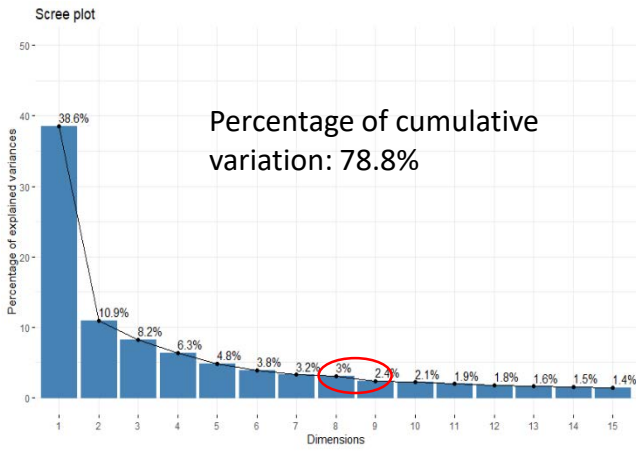
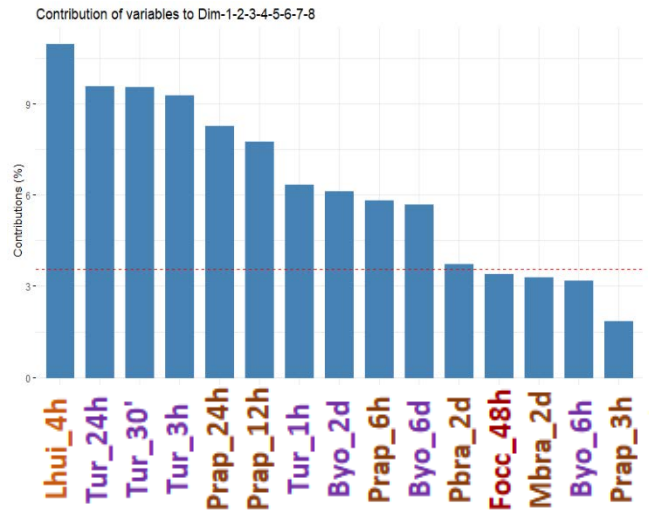
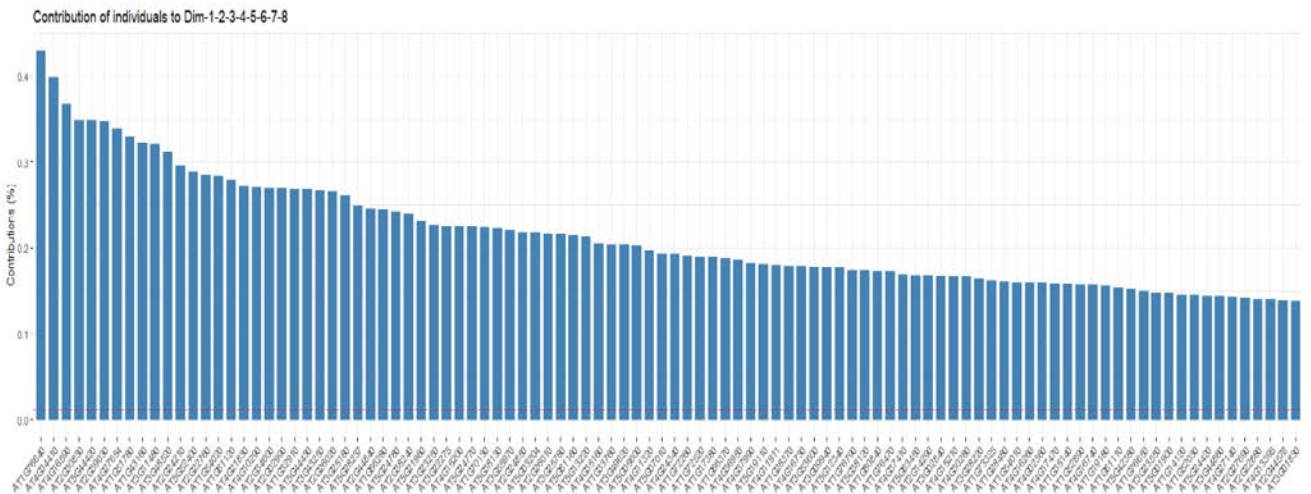
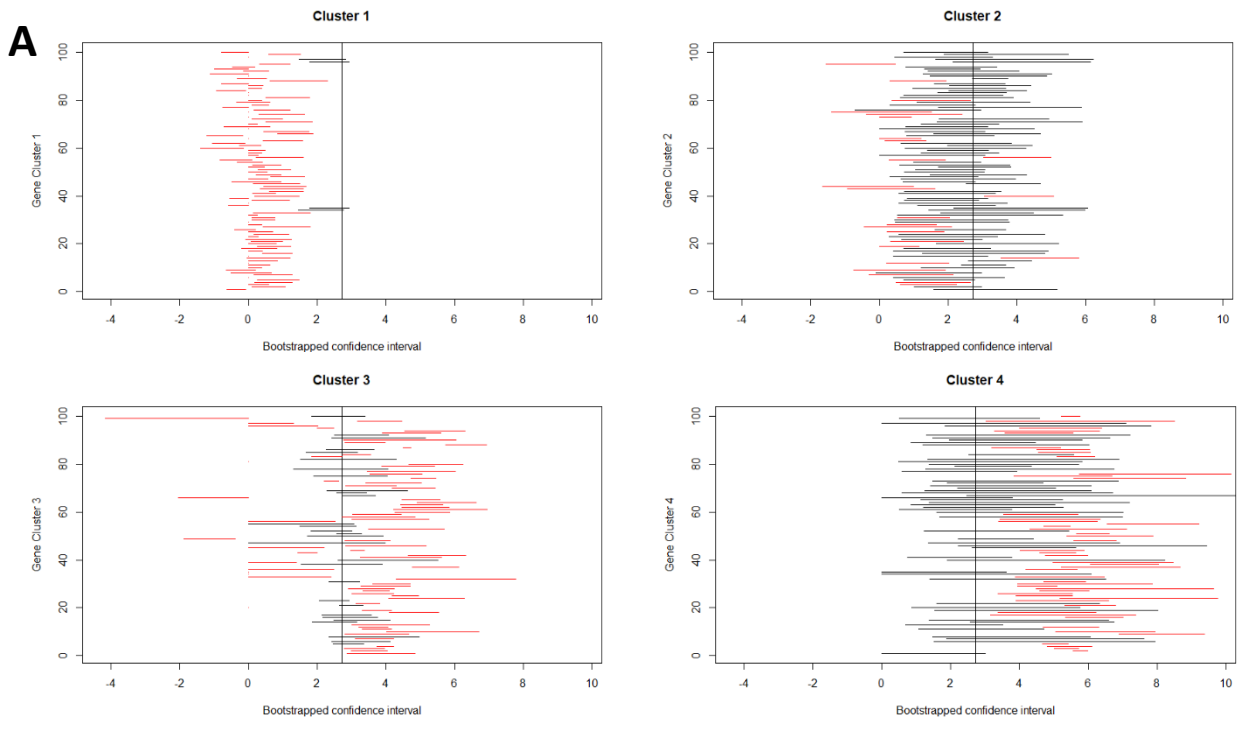
A**B****C**

Figure S3. (A) Scree plot and percentage of variation explained by each PCA dimension. Red circle indicates the present of a point of inflection. (B) Top 15 experiments and (C) top 100 genes with the highest contributions in the eight first PCA dimensions. Red dashed lines indicates the mean value of percentage contribution showed through all experiments or genes.



B

| Clusters | Number of genes different to the mean |
|-----------|---------------------------------------|
| Cluster 1 | 95 (lower than the mean) |
| Cluster 2 | 25 (3 higher than the mean) |
| Cluster 3 | 71 (56 higher than the mean) |
| Cluster 4 | 49 (higher than the mean) |

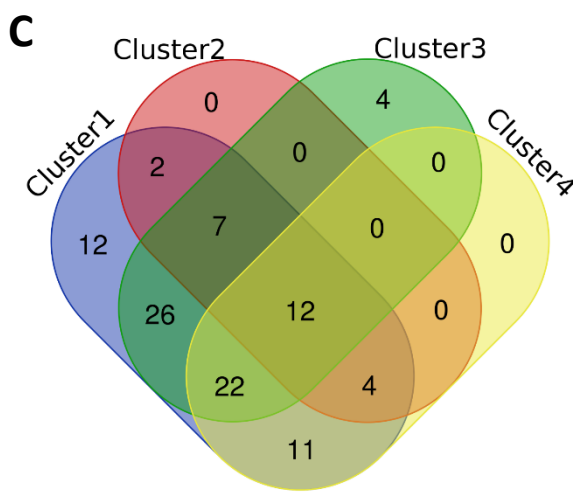


Figure S4. (A) Representation per cluster of the bootstrapped Confidence Intervals against the log₂FC mean from the top 100 clustering-responsible genes. Confidence Intervals significantly different from the log₂FC mean for each cluster are coloured in red. (B) Number of genes significantly different to the log₂FC mean in each cluster. (C) Venn diagram showing the specific and shared significant genes for each cluster.

Supporting Methods

Real-time RT-qPCR analysis

RT-qPCR assays were performed for validation of the RNA-seq data using a new batch of samples. Rosettes from the ecotype Columbia-0 of *A. thaliana* were sampled and frozen after 0h, 30min, 1h, 3h, and 24h of mite infestation. Total RNA was extracted (Oñate-Sánchez and Vicente-Carbajosa 2008), treated with RQ1 DNase treatment (Promega), and reverse transcribed using Revert AidTM H Minus First Strand cDNA Synthesis Kit (Thermo Fisher). RT-qPCR was performed for three samples coming from three independent experiments using the Light Cycler 480 SYBR Green I Master (Roche). Specific primers were designed through the PRIMER 3 program (Kõressaar et al. 2018). Primer sequences are indicated in **Table S4**. Gene expression was referred to as fold change ($2^{-\Delta\Delta C_t}$), normalizing the expression to ubiquitin (Livak and Schmittgen 2001). The resulting values were log2 transformed (log2 fold change) for comparison with RNA-seq data. The non-parametric Spearman rank correlation test was used. The statistical analysis was performed using GraphPadPrism v6.01.

Analyses of stored microarray and RNA-seq data

Data analysis was developed according to the different nature of the data. For microarray experiments, raw data was obtained as GenePix (GPR) files for two-channel microarray experiments and chip electronic files (CEL) for single-channel microarrays. Bioconductor, affy and limma packages of R v.3.5.2 were used for background correction, normalization and differential expression analyses (Gautier et al. 2004; Gentleman et al. 2004; Ritchie et al. 2015; R Core Team 2018). A gene expression matrix was generated from affy package, using RMA (robust multiarray average), in the case of the single-channel microarrays (Irizarry et al. 2003). For two-channel microarrays, background correction was performed using the 'normexp' approach (Ritchie et al. 2007) and datasets were log-transformed and normalized using the printtip-loess approach (Smyth and Speed 2003). Then, in both cases, statistical analysis and differential expression were performed using linear models and eBayes functions (Phipson et al. 2016). Adjusted p-values were calculated using Benjamini-Hochberg (BH) FDR correction (Benjamini and Hochberg 1995). DEGs were considered those with a log2 ratio (fold change) higher than 1 and an adjusted p-value < 0.05 for all species, except for *L. huidobrensis*. In this species, to avoid the putative noise inherent to an extremely high number of DEG, we considered a log2 ratio ≥ 2 and an adjusted p-value < 0.01.

For the RNA-seq experiments, raw data were obtained as FASTQ files from the NCBI SRA database (Barrett et al. 2012). Reads were mapped against the TAIR10 reference genome of *A. thaliana* using STAR aligner (v.2.5.3a and v.2.7.0f) (Dobin et al. 2013). The alignments were sorted with Samtools (Li et al. 2009). HTSeq Python library was used for the generation of the

count data files from sorted BAM files through the htseq-count script (Anders et al. 2015). RNA-seq read counts were modeled by a generalized linear model considering a specific experimental design for each RNA-seq. To evaluate the DEGs between two different conditions, we performed an analysis with the Bioconductor R package DESeq2 (Love et al. 2014). DEGs were considered those genes with a log₂ ratio ≥ 1 and an adjusted p-value < 0.05 . These genes were selected for the subsequent comparisons and functional analyses.

Supporting References

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Table S1. Enriched biological processes upon 30min, 1h, 3h, and 24h of *T. urticae* infestation.

30min

| GOID | GO Term | Term PValue Corrected | % Associated Genes | Nr. Genes | Associated Genes Found |
|------------|---|-----------------------|--------------------|-----------|---|
| GO:0009753 | response to jasmonic acid | 5.53E-33 | 16.74 | 37 | [SPTASE11, ACS6, AGB1, BT2, BT4, ERF1, GL3, GRX480, JAZ1, JAZ10, JAZ12, JAZ3, JAZ5, JAZ6, JAZ7, JAZ8, MPK4, MPK6, MYB3, MYBR1, MYC2, NINJA, NPR1, NPR3, NPR4, PAP1, PEPR1, PFT1, PHYB, RGA1, RGL1, RGL3, SYP121, SYP122, TIFY10B, TIFY7, TPL] |
| GO:0009966 | regulation of signal transduction | 2.34E-28 | 10.99 | 40 | [ABI1, AT4G16660, EBF2, EXO70B1, GID1B, HAI1, HY5, JAZ1, JAZ10, JAZ12, JAZ3, JAZ5, JAZ6, JAZ7, JAZ8, KEG, MEKK1, MKK2, MKK4, MKK5, MKK6, MKK9, MKP2, MYB73, MYB77, MYB96, MYBR1, NPR1, NPR3, NPR4, PIL6, PP2CA, PTP1, RCAR3, RGA1, RGL1, RGL3, TIFY10B, TIFY7, TMAC2] |
| GO:0009738 | abscisic acid-activated signaling pathway | 4.42E-21 | 12.39 | 28 | [ABF2, ABF3, ABF4, ABI1, BT2, CBL1, CDPK1, CPK32, CPK6, EXO70B1, HAI1, HFR1, HY5, KEG, LTI65, MKK5, MPK3, MPK6, MYB96, NF-YB6, PP2C5, PP2CA, PRN, PYL13, PYL5, PYL7, RCAR3, TMAC2] |
| GO:0043549 | regulation of kinase activity | 3.42E-14 | 12.34 | 19 | [AT2G32710, CKS1, CYCA3;1, CYCD5;1, CYCD6;1, CYCP4;1, HB1, ICK1, ICK5, KRP2, MEKK1, MKK2, MKK4, MKK5, MKK6, MKK9, MKP2, PDK1, PTP1] |
| GO:0009751 | response to salicylic acid | 2.92E-13 | 10.98 | 19 | [AHBP-1B, BAP1, BAP2, BT1, BT2, BT4, BT5, GRX480, MPK4, MYBR1, NPR1, NPR4, OPR1, RGA1, RGL1, RGL3, SYP121, SYP122, WAK1] |
| GO:0023014 | signal transduction by protein phosphorylation | 5.92E-12 | 13.89 | 15 | [MEKK1, MKK2, MKK4, MKK5, MKK6, MKK9, MKP2, MPK11, MPK17, MPK3, MPK4, MPK5, MPK6, PHYB, PTP1] |
| GO:0006887 | exocytosis | 6.73E-10 | 17.46 | 11 | [EXO70B1, EXO70B2, EXO70E2, EXO70H4, EXO70H7, RAB8, SEC15B, SEC1B, SEC8, SYP121, SYP122] |
| GO:0071482 | cellular response to light stimulus | 9.74E-10 | 10.85 | 14 | [CO, HFR1, HY5, NPH4, PAPP2C, PFT1, PHOT1, PHYB, PIF3, PIL5, PIL6, PKS1, PRN, SIB1] |
| GO:0043405 | regulation of MAP kinase activity | 4.65E-09 | 28.57 | 8 | [MEKK1, MKK2, MKK4, MKK5, MKK6, MKK9, MKP2, PTP1] |
| GO:0004693 | cyclin-dependent protein serine/threonine kinase activity | 2.01E-08 | 12.64 | 11 | [AT2G32710, CDC2, CKS1, CYCA3;1, CYCD5;1, CYCD6;1, CYCP4;1, ICK1, ICK5, KRP2, ORG1] |
| GO:0060548 | negative regulation of cell death | 6.20E-08 | 20.51 | 8 | [AT4G16660, BIR1, BON1, BON2, MKP2, RIN4, SYP121, SYP122] |

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|-------------------|---|----------|-------|----|--|
| GO:0015036 | disulfide oxidoreductase activity | 4.97E-07 | 10.31 | 10 | [AT2G30540, AT4G15660, AT4G15670, AT4G15680, AT4G15700, GRX480, MYB102, NTRC, TH9, TRX5] |
| GO:0009740 | gibberellic acid mediated signaling pathway | 2.71E-06 | 12.12 | 8 | [GID1B, HY5, MYB3, PIF3, PIL5, RGA1, RGL1, RGL3] |
| GO:0015749 | monosaccharide transmembrane transport | 4.50E-06 | 14.00 | 7 | [AT1G08890, ERD6, ESL1, GLT1, MSS1, PMT5, PMT6] |
| GO:0034620 | cellular response to unfolded protein | 6.75E-06 | 12.96 | 7 | [AGB1, BIP3, BZIP28, BZIP60, ERD2, HSP70T-2, mtHsc70-1] |
| GO:0010182 | sugar mediated signaling pathway | 7.74E-05 | 11.11 | 5 | [ABF2, ABI5, BT2, EIN3, PAP1] |

1h

| GOID | GOTerm | Term PValue Corrected | % Associated Genes | Nr. Genes | Associated Genes Found |
|-------------------|--|-----------------------|--------------------|-----------|---|
| GO:0009753 | response to jasmonic acid | 5.03E-22 | 11.31 | 25 | [BT2, BT4, ERF1, GL3, GRX480, JAZ1, JAZ10, JAZ12, JAZ3, JAZ5, JAZ6, JAZ7, JAZ8, MPK6, MYB21, MYBR1, MYC2, NINJA, NPR4, PAP1, PFT1, PHYB, TIFY10B, TIFY7, TPL] |
| GO:0071456 | cellular response to hypoxia | 3.39E-14 | 7.63 | 20 | [AGC2-1, AT-HSFB2B, AT1G54050, AT1G59860, AT4G16660, CML37, CML38, HB1, HSFA2, HSP101, HSP17.4, HSP17.6A, HSP17.6II, HSP70, MKK9, PAP1, PBP1, RHL41, STZ, TCH3] |
| GO:0009966 | regulation of signal transduction | 1.59E-11 | 5.49 | 20 | [AT4G16660, CPSF30, HSP70, HY5, JAZ1, JAZ10, JAZ12, JAZ3, JAZ5, JAZ6, JAZ7, JAZ8, MKK4, MKK9, MYB73, MYBR1, NPR4, PTP1, TIFY10B, TIFY7] |
| GO:0010017 | red or far-red light signaling pathway | 8.00E-09 | 14.29 | 9 | [ELF4, HFR1, HY5, HYH, PAP3, PFT1, PHYB, PIF3, PIL5] |
| GO:0031539 | positive regulation of anthocyanin metabolic process | 5.81E-08 | 50.00 | 5 | [GL3, HY5, PAP1, PAP3, PIF3] |
| GO:0015036 | disulfide oxidoreductase activity | 3.52E-07 | 9.28 | 9 | [AT1G06830, AT3G62950, AT4G15660, GRX480, GRXS13, GRXS17, NTRC, ROXY2, TRX5] |
| GO:0034620 | cellular response to unfolded protein | 1.15E-06 | 12.96 | 7 | [AT3G09440, BIP3, ERD2, HSFA2, HSP70, Hsp70-2, MTHSC70-2] |
| GO:0004707 | MAP kinase activity | 2.18E-05 | 11.11 | 6 | [MKK4, MKK9, MPK11, MPK3, MPK6, PTP1] |

| | | | | | |
|-------------------|---|----------|------|---|---|
| GO:0009751 | response to salicylic acid | 3.38E-05 | 5.20 | 9 | [AHBP-1B, BT1, BT2, BT4, CPSF30, GRX480, MYBR1, NPR4, WRKY62] |
| GO:0023014 | signal transduction by protein phosphorylation | 7.59E-05 | 6.48 | 7 | [MKK4, MKK9, MPK11, MPK3, MPK6, PHYB, PTP1] |
| GO:0043549 | regulation of kinase activity | 7.79E-05 | 5.19 | 8 | [AKINBETA1, CYCA2;3, CYCA3;1, HB1, MKK4, MKK9, PTP1, cypc3;1] |
| GO:0009739 | response to gibberellin | 1.40E-04 | 5.65 | 7 | [BT4, GAMMA-TIP, HY5, MYB21, PAP3, PIF3, PIL5] |
| GO:0015144 | carbohydrate transmembrane transporter activity | 5.68E-04 | 5.10 | 5 | [AT1G08890, AT1G08900, ESL1, GLT1, STP14] |
| GO:0004693 | cyclin-dependent protein serine/threonine kinase activity | 6.56E-04 | 5.75 | 5 | [CDC2, CYCA2;3, CYCA3;1, ORG1, cypc3;1] |
| GO:0006475 | internal protein amino acid acetylation | 7.05E-04 | 6.17 | 5 | [BT1, BT2, BT4, HAF01, HD1] |

3h

| GOID | GO Term | Term PValue Corrected | % Associated Genes | Nr. Genes | Associated Genes Found |
|-------------------|---|------------------------------|---------------------------|------------------|--|
| GO:0009753 | response to jasmonic acid | 5.94E-26 | 12.22 | 27 | [BT2, BT4, ERF1, GL3, GRX480, JAZ1, JAZ10, JAZ12, JAZ3, JAZ5, JAZ6, JAZ7, JAZ8, MPK4, MPK6, MYB21, MYBR1, MYC2, NINJA, PAP1, PEPR1, PFT1, TIFY10B, TIFY7, TPL, TT4, TT8] |
| GO:0071456 | cellular response to hypoxia | 1.41E-10 | 6.11 | 16 | [AGC2-1, AT4G16660, CML37, CML38, HB2, HSP101, HSP17.4, HSP17.6A, HSP17.6II, HSP70, PAP1, PBP1, RHL41, S6K2, STZ, TCH3] |
| GO:0009962 | regulation of flavonoid biosynthetic process | 8.35E-07 | 17.65 | 6 | [GL3, MYB7, MYC2, PAP1, TT4, TT8] |
| GO:0009718 | anthocyanin-containing compound biosynthetic process | 1.82E-06 | 15.38 | 6 | [DFR, GL3, MYC4, PAP1, TT4, TT8] |
| GO:0015036 | disulfide oxidoreductase activity | 1.97E-06 | 8.25 | 8 | [AT1G06830, AT1G77370, AT2G30540, AT4G15660, ERO1, GRX480, NTRC, TRX5] |
| GO:0009751 | response to salicylic acid | 1.38E-05 | 5.20 | 9 | [BT1, BT2, BT4, BT5, GRX480, KT11, MPK4, MYBR1, WRKY62] |
| GO:0004693 | cyclin-dependent protein serine/threonine kinase activity | 1.28E-04 | 6.90 | 6 | [CDC2, CKS2, CYCA2;3, CYCA3;1, CYCP4;1, ORG1] |

| | | | | | |
|-------------------|---------------------------------------|----------|------|---|-----------------------------------|
| GO:0016573 | histone acetylation | 7.94E-04 | 6.17 | 5 | [BT1, BT2, BT4, BT5, HD1] |
| GO:0006626 | protein targeting to mitochondrion | 1.33E-03 | 6.35 | 4 | [AR192, MPPalpha, MYB90, TIM17-1] |
| GO:0034620 | cellular response to unfolded protein | 1.48E-03 | 7.41 | 4 | [BIP3, CNX1, HSP70, HSP70T-2] |
| GO:0004707 | MAP kinase activity | 1.48E-03 | 7.41 | 4 | [MPK11, MPK3, MPK4, MPK6] |

24h

| GOID | GO Term | Term PValue Corrected | % Associated Genes | Nr. Genes | Associated Genes Found |
|-------------------|---|------------------------------|---------------------------|------------------|---|
| GO:0009867 | jasmonic acid mediated signaling pathway | 6.20E-27 | 20.00 | 23 | [ERF1, GL3, GRX480, JAZ1, JAZ10, JAZ12, JAZ3, JAZ5, JAZ6, JAZ7, JAZ8, MPK6, MYB21, MYBR1, MYC2, NINJA, PAP1, PFT1, SGT1B, TIFY10B, TIFY7, TPL, TT8] |
| GO:0009753 | response to jasmonic acid | 7.04E-23 | 11.31 | 25 | [BT2, BT4, ERF1, GL3, GRX480, JAZ1, JAZ10, JAZ12, JAZ3, JAZ5, JAZ6, JAZ7, JAZ8, MPK6, MYB21, MYBR1, MYC2, NINJA, PAP1, PFT1, SGT1B, TIFY10B, TIFY7, TPL, TT8] |
| GO:0015036 | disulfide oxidoreductase activity | 5.24E-10 | 11.34 | 11 | [AT2G30540, AT2G47870, AT3G21460, AT4G15660, GRX480, GRXC2, NTRC, ROXY2, TH8, TRX3, TRX5] |
| GO:0009751 | response to salicylic acid | 1.87E-08 | 6.94 | 12 | [BT1, BT2, BT4, BT5, GRX480, KTI1, MKK7, MYBR1, WRKY18, WRKY38, WRKY40, WRKY62] |
| GO:0015144 | carbohydrate transmembrane transporter activity | 1.72E-07 | 9.18 | 9 | [AT1G08890, AT5G61520, ESL1, GLT1, INT2, MSS1, PMT5, PMT6, SFP2] |
| GO:0071456 | cellular response to hypoxia | 1.48E-06 | 4.58 | 12 | [AGC2-1, CML37, CML38, HSP101, HSP70, MKK9, PAP1, PBP1, RHL41, S6K2, STZ, TCH3] |
| GO:0004707 | MAP kinase activity | 1.39E-05 | 11.11 | 6 | [MKK7, MKK9, MPK11, MPK3, MPK6, PTP1] |
| GO:0009738 | abscisic acid-activated signaling pathway | 2.01E-05 | 4.42 | 10 | [BT2, CEN2, HAI1, HFR1, KEG, MPK3, MPK6, NF-YB6, PP2CA, PRN] |
| GO:0009962 | regulation of flavonoid biosynthetic process | 2.26E-05 | 14.71 | 5 | [GL3, MYB7, MYC2, PAP1, TT8] |
| GO:0023014 | signal transduction by protein phosphorylation | 4.57E-05 | 6.48 | 7 | [MKK7, MKK9, MPK11, MPK3, MPK6, PHYA, PTP1] |

| | | | | | |
|-------------------|---|----------|------|---|---------------------------------------|
| GO:0016573 | histone acetylation | 8.85E-05 | 7.41 | 6 | [BT1, BT2, BT4, BT5, HAF01, HD1] |
| GO:0009863 | salicylic acid mediated signaling pathway | 3.82E-04 | 7.25 | 5 | [GRX480, MKK7, MYBR1, WRKY38, WRKY62] |
| GO:0010017 | red or far-red light signaling pathway | 2.05E-03 | 6.35 | 4 | [ELF4, HFR1, PFT1, PHYA] |
| GO:0009734 | auxin-activated signaling pathway | 2.67E-03 | 4.40 | 4 | [BT2, MYB73, MYBR1, SGT1B] |
| GO:1902531 | regulation of intracellular signal transduction | 2.90E-03 | 5.19 | 4 | [HSP70, MKK7, MKK9, PTP1] |

Table S2. Selected transcriptomic experiments for the analysis of the response of plants to herbivore attack. Accession number of the experiment is provided as Gene Expression Datasets Series (GSE) from the Gene Expression Omnibus (GEO) platform, as E-MTAB accession number from ArrayExpress database, as SRP accession number from the Sequence Read Archive (SRA) or as NASCarray experiments from the Nottingham Arabidopsis Stock Centre's microarray database. The presence of an asterisk (*) indicates that a re-analysis of the data was performed.

| Accession | Year | Herbivore | Type of herbivore | Type of experiment | Infestation time | Plant tissue | Plant age | Ref. |
|-------------|------|--|----------------------|--------------------|---------------------|--------------|-----------|--------------------------|
| GSE38281* | 2014 | <i>Liriomyza huidobrensis</i> | Leafminer (Dipteran) | Microarray | 4h | Leaves | 4 weeks | (Zhang et al. 2012) |
| GSE39245* | 2013 | <i>Brevicoryne brassicae</i> | Aphid | Microarray | 72h | Rosettes | 4.5 weeks | (Barah et al. 2013) |
| E-MTAB-3223 | 2015 | <i>Myzus persicae</i> <i>Myzus cerasi</i> <i>Rhopalosiphum pisum</i> | Aphids | Microarray | 3, 6, 24h | Rosettes | 4 weeks | (Jaouannet et al. 2015) |
| NASC-330* | 2005 | <i>Frankiniella occidentalis</i> | Thrip | Microarray | 24, 48h | Leaves | 5 weeks | (De Vos et al. 2005) |
| GSE6516 | 2006 | <i>Bemisia tabaci</i> | Hemiptera | Microarray | 21d | Leaves | 4 weeks | (Kempema et al. 2007) |
| GSE114211 | 2019 | <i>Pieris brassicae</i> <i>Mamestra brassicae</i> | Lepidopterans | Microarray | 48h | Leaves | 8 weeks | (Oberländer et al. 2019) |
| E-MTAB-1418 | 2013 | <i>Spodoptera littoralis</i> | Lepidopteran | Microarray | 8d | Leaves | 4 weeks | (Schweizer et al. 2013) |
| SRP073212 | 2016 | <i>Pieris rapae</i> | Lepidopteran | RNA-seq | 3, 6, 12, 24h | Leaves | 5 weeks | (Coolen et al. 2016) |
| SRP144249 | 2018 | <i>Brevipalpus yothersi</i> | Mite | RNA-seq | 6h, 2d, 6d | Leaves | 4 weeks | (Arena et al. 2018) |
| - | 2020 | <i>Tetranychus urticae</i> | Mite | RNA-seq | 30 min 1, 3, 24h | Rosettes | 4 weeks | - |

Supporting References:

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Table S3. Individual genes significantly deregulated in clusters 3 and 4.

| Gene ID | Cluster 1 | Cluster 2 | Cluster 3 | Cluster 4 | Gene name | Description |
|-----------|-----------|-----------|-----------|-----------|-----------|--|
| AT5G42380 | -1.99 | -3.28 | -0.43 | 2.72 | CML37 | Calcium-binding protein CML37 (Q9FIH9) |
| AT3G01830 | -1.89 | -2.38 | -0.94 | 2.38 | CML40 | Probable calcium-binding protein CML40 (Q9SGI8) |
| AT1G72520 | -2.36 | -1.11 | #N/A | 3.24 | LOX4 | Lipoxygenase 4, chloroplastic (Q9FNX8) |
| AT3G48520 | -2.81 | -1.75 | #N/A | 5.67 | CYP94B3 | CYP94B3 (A0A178V8H3) |
| AT4G30280 | -2.73 | -2.21 | #N/A | 2.70 | XTH18 | Xyloglucan endotransglucosylase/hydrolase 18 (Q9M0D2) |
| AT2G22880 | -2.38 | -1.46 | #N/A | 2.47 | - | At2g22880 (O81005) |
| AT2G38240 | -2.82 | #N/A | -2.04 | 4.08 | ANS | 2-oxoglutarate-dependent dioxygenase ANS (O80449) |
| AT5G05600 | -2.73 | #N/A | -0.36 | 2.95 | - | 2-oxoglutarate-dependent dioxygenase At5g05600 (Q9FFF6) |
| AT2G27690 | -2.81 | #N/A | -1.08 | 2.05 | CYP94C1 | Cytochrome P450 94C1 (Q9ZUX1) |
| AT2G24850 | -2.04 | #N/A | -1.18 | 2.67 | TAT3 | Probable aminotransferase TAT3 (Q9SK47) |
| AT3G44860 | -2.64 | #N/A | #N/A | 2.38 | FAMT | Farnesoic acid carboxyl-O-methyltransferase (Q9FYC4) |
| AT5G13220 | -2.59 | #N/A | #N/A | 2.40 | JAZ10 | jasmonate-zim-domain protein 10 (cc:AT5G13220) |
| AT5G63450 | -2.86 | #N/A | #N/A | 2.77 | CYP94B1 | cytochrome P450, fam 94, subfam B, polypep 1 (AT5G63450) |
| AT3G25780 | -2.06 | #N/A | #N/A | 3.47 | AOC3 | Allene oxide cyclase 3, chloroplastic (Q9LS01) |
| AT5G12340 | -2.60 | #N/A | #N/A | 2.66 | - | DUF4228 domain protein (Q1PDX4) |
| AT1G76470 | -2.63 | #N/A | #N/A | 2.66 | - | NAD-binding Rossmann-fold superfamily protein (F4I2E5) |
| AT2G34600 | -2.29 | #N/A | #N/A | 4.52 | TIFY 5B | Protein TIFY 5B (O64687) |
| AT3G25180 | -2.52 | #N/A | #N/A | 4.34 | CYP82G1 | Cytochrome P450 82G1 (Q9LSF8) |
| AT1G61120 | -1.89 | #N/A | #N/A | 3.55 | GES | (E,E)-geranylinalool synthase (Q93YV0) |
| AT1G28480 | -1.81 | #N/A | #N/A | 2.33 | GRXC9 | Glutaredoxin-C9 (Q9SGP6) |
| AT1G66280 | -2.60 | #N/A | #N/A | 2.83 | BGLU22 | Beta-glucosidase 22 (Q9C8Y9) |

| Gene ID | Cluster 1 | Cluster 2 | Cluster 3 | Cluster 4 | Gene name | Description |
|-----------|-----------|-----------|-----------|-----------|-----------|--|
| AT5G21960 | -1.30 | -1.63 | 3.68 | #N/A | ERF016 | Ethylene-responsive transcription factor ERF016 (Q9C591) |
| AT4G37990 | -2.60 | -1.41 | 2.98 | #N/A | CAD8 | Cinnamyl alcohol dehydrogenase 8 (Q02972) |
| AT4G15200 | -2.73 | -2.30 | 3.20 | #N/A | AFH3 | formin 3 (cc:AT4G15200) |
| AT1G33760 | -2.10 | -2.01 | 1.11 | #N/A | ERF022 | Ethylene-responsive transcription factor ERF022 (Q9LQ28) |
| AT1G70130 | -2.04 | -2.34 | 1.01 | #N/A | LECRK52 | L-type lectin-domain containing receptor kinase V.2 (O04533) |
| AT4G13395 | -1.78 | -2.07 | 2.36 | #N/A | DVL10 | DVL10 (Q6IM91) |
| AT3G11480 | -2.36 | #N/A | 1.52 | #N/A | BSMT1 | Salicylate/benzoate carboxyl methyltransferase (Q6XMI3) |
| AT4G11320 | -2.69 | #N/A | 3.11 | #N/A | RDL5 | Probable cysteine protease RDL5 (Q9SUS9) |
| AT1G52030 | -2.52 | #N/A | 1.11 | #N/A | F-ATMBP | Myrosinase-binding protein 2 (Q9SAV1) |
| AT4G21830 | -1.61 | #N/A | 1.02 | #N/A | MSRB7 | Peptide methionine sulfoxide reductase B7 (Q8VY86) |
| AT1G54010 | -2.45 | #N/A | 1.76 | #N/A | GLL23 | Inactive GDSL esterase/lipase-like protein 23 (Q8W4H8) |
| AT5G24770 | -2.73 | #N/A | 2.04 | #N/A | VSP2 | Vegetative storage protein 2 (O82122) |
| AT4G24340 | -2.30 | #N/A | 1.74 | #N/A | - | At4g24340 (Q8GW53) |
| AT1G73325 | -2.13 | #N/A | 0.74 | #N/A | - | Kunitz family trypsin (Q9FX28) |
| AT5G24420 | -2.66 | #N/A | 0.76 | #N/A | PGL5 | Probable 6-phosphogluconolactonase 3 (Q8LEV7) |
| AT4G17470 | -2.64 | #N/A | 2.11 | #N/A | - | Alpha/beta-Hydrolases superfamily protein (Q501G7) |
| AT2G24210 | -2.64 | #N/A | 3.86 | #N/A | TPS10 | Tricyclene synthase, chloroplastic (Q9ZUH4) |
| AT4G35160 | -2.83 | #N/A | 2.09 | #N/A | - | O-methyltransferase family protein (Q9T003) |
| AT4G37410 | -2.71 | #N/A | 2.15 | #N/A | CYP81F4 | Cytochrome P450 81F4 (Q9SZU1) |
| AT5G07010 | -3.10 | #N/A | 0.46 | #N/A | SOT15 | Sulfotransferase (A0A178UG65) |
| AT4G11911 | -3.16 | #N/A | 2.43 | #N/A | - | unknown protein (AT4G11911) |
| AT2G44578 | -2.30 | #N/A | 1.92 | #N/A | - | RING/U-box domain-containing protein (A8MS73) |
| AT4G10290 | -3.29 | #N/A | 2.37 | #N/A | - | RmlC-like cupins superfamily protein (F4JLM2) |
| AT1G14120 | -2.92 | #N/A | 1.42 | #N/A | - | 2-oxoglutarate and Fe(II)-dependent oxygenase (Q9XI76) |
| AT3G55970 | -2.60 | #N/A | 1.19 | #N/A | JRG21 | JRG21 (A0A178V764) |
| AT4G15210 | -3.25 | #N/A | 2.42 | #N/A | BAM5 | Beta-amylase 5 (P25853) |
| AT5G44420 | #N/A | #N/A | -1.49 | #N/A | PDF1.2A | Defensin-like protein 16 (Q9FI23) |
| AT5G44430 | #N/A | #N/A | -2.08 | #N/A | PDF1.2C | PDF1.2c (A0A178UR42) |
| AT2G26020 | #N/A | #N/A | -2.73 | #N/A | PDF1.2B | PDF1.2b (A0A178VQC3) |
| AT2G26010 | #N/A | #N/A | -2.73 | #N/A | PDF1.3 | PDF1.3 (A0A178VSS6) |

| Gene ID | Cluster 1 | Cluster 2 | Cluster 3 | Cluster 4 | Gene name | Description |
|-----------|-----------|-----------|-----------|-----------|-----------|--|
| AT1G43160 | -2.88 | -1.96 | 1.21 | 5.38 | RAP2-6 | Ethylene-responsive transcription factor RAP2-6 (Q7G1L2) |
| AT4G27654 | -1.93 | -1.88 | 2.41 | 4.91 | - | At4g27654 (Q3E9V5) |
| AT1G76650 | -2.45 | -1.79 | 1.90 | 2.12 | CML38 | CML38 (A0A178WMC5) |
| AT1G80840 | -1.77 | -1.89 | 1.09 | 2.44 | WRKY40 | Probable WRKY transcription factor 40 (Q9SAH7) |
| AT3G02840 | -1.71 | -3.15 | 0.50 | 2.56 | - | ARM repeat superfamily protein (Q9M8S5) |
| AT2G02990 | -2.60 | -1.89 | 0.95 | 4.50 | RNS1 | Ribonuclease 1 (P42813) |
| AT1G52890 | -2.73 | -1.75 | 1.02 | 2.63 | NAC019 | NAC domain-containing protein 19 (Q9C932) |
| AT1G19180 | -2.53 | -1.32 | 0.71 | 2.61 | TIFY10A | TIFY10A (A0A178W7G1) |
| AT1G28370 | -2.15 | -1.31 | 1.24 | 2.65 | ERF11 | ERF domain protein 11 (cc:AT1G28370) |
| AT3G23250 | -1.57 | #N/A | 0.81 | 3.46 | MYB15 | Transcription factor MYB15 (Q9LTC4) |
| AT3G43250 | -2.30 | #N/A | 2.05 | 3.61 | - | Coiled-coil protein (DUF572) (Q9LXK9) |
| AT5G38120 | -3.02 | #N/A | 2.20 | 1.83 | 4CLL8 | 4-coumarate--CoA ligase-like 8 (Q84P26) |
| AT5G19110 | -2.84 | #N/A | 1.91 | 1.53 | - | Eukaryotic aspartyl protease family protein (cc:AT5G19110) |
| AT3G53600 | -2.64 | #N/A | 1.71 | 2.24 | - | At3g53600 (Q9LFG0) |
| AT1G51780 | -2.60 | #N/A | 2.98 | 4.12 | ILL5 | IAA-amino acid hydrolase ILR1-like 5 (Q9SWX9) |
| AT1G76640 | -2.14 | #N/A | 2.58 | 5.15 | CML39 | Calcium-binding protein CML39 (Q9SRE7) |
| AT2G22760 | -2.38 | #N/A | 1.51 | 4.10 | BHLH19 | Putative uncharacterized protein At2g22760 (C0SV56) |
| AT1G76790 | -2.73 | #N/A | 0.89 | 1.76 | IGMT5 | Indole glucosinolate O-methyltransferase 5 (Q9SRD4) |
| AT1G17380 | -2.32 | #N/A | 0.81 | 2.94 | TIFY11A | Protein TIFY 11A (Q9LDU5) |
| AT1G66370 | -2.52 | #N/A | 2.23 | 2.00 | MYB113 | Transcription factor MYB113 (Q9FNV9) |
| AT5G52400 | -2.73 | #N/A | 1.09 | 4.16 | CYP715A1 | Cytochrome P450, fam 715, subfam A, polypep 1 (F4KG63) |
| AT2G44840 | -1.62 | #N/A | 2.90 | 2.72 | ERF13 | Ethylene-responsive transcription factor 13 (Q8L9K1) |
| AT2G14290 | -2.73 | #N/A | 1.47 | 1.65 | - | F-box protein At2g14290 (Q9ZQ60) |
| AT2G30830 | -2.73 | #N/A | 2.74 | 4.62 | - | 2-oxoglutarate and Fe(II)-dependent oxygenase (O80850) |
| AT4G34410 | -2.13 | #N/A | 1.60 | 5.73 | ERF109 | Ethylene-responsive transcription factor ERF109 (Q9SZ06) |
| AT5G38130 | -2.76 | #N/A | 2.82 | 2.21 | - | At5g38130 (Q6DBD5) |
| AT4G02360 | -2.56 | #N/A | 1.12 | 1.83 | - | Putative uncharacterized protein AT4g02360 (O81297) |

Table S4. Oligonucleotide sequences for RT-qPCR analysis. F, forward; R, reverse.

| ID | Nombre | Secuencia | |
|-----------|---------|-------------------------|---|
| At2g47190 | ATMYB2 | CCTCAAACCTCCATTCTCTTTGG | F |
| | | TCTTAGGTGTTTGGCTTGCTTT | R |
| At4g09570 | CDPK4 | TCAAGAAAATGGCCTTACGAGT | F |
| | | TTCAAAGGTGATTGTTCCACTG | R |
| At2g06530 | VPS2.1 | AATGAACAGGCAGATGAACCTT | F |
| | | CTTCTTCCTCATCTCCTTCAA | R |
| At4g08500 | MEKK1 | GGAAGAGATGGGAGCTAGGTTT | F |
| | | CCATCTGGATAGATAGGCGAAG | R |
| At5g47220 | ERF2 | GGGTTAATTCCGGTGAACCT | F |
| | | CACGTGTCTCATCACCACC | R |
| At1g51800 | IOS1 | GCGCTACCACGAAAAGAAG | F |
| | | AGGTTCAAACCGTGGTGAG | R |
| At4g23180 | CRK10 | TAACGGGCGACCATTAGAAC | F |
| | | GGCACGGGTAAAGTCACAGT | R |
| At3g48360 | BT2 | AAGAAAAGAAGGCGACGACA | F |
| | | AACGCCTTACAAGGCTCTGA | R |
| At1g68690 | PERK9 | CTCCGGTTTCAAATTCTCCA | F |
| | | TGGTGGTGGTGGAGGTAGTCA | R |
| At1g32640 | MYC2 | TCCGAGTCCGGTTCATTCT | F |
| | | TCTCGGGAGAAAGTGTTATTGAA | R |
| At5g24770 | VSP2 | ATGCCAAAGGACTTGCCCTA | F |
| | | CGGGTCGGTCTTCTCTGTTC | R |
| At5g44420 | PDF1.2A | GTTCTCTTTGCTGCTTTGAC | F |
| | | GCAAACCCTGACCATGT | R |
| At2g26020 | PDF1.2B | GTTCTCTTTGACGCTTTTG | F |
| | | TCCACCATTGTTGGTACTT | R |
| At2g14610 | PR1 | TCAGTGAGACTCGGATGTGC | F |
| | | CGTTCACATAATTCCACGA | R |
| At1g72260 | THI2.1 | CTGCCCTTCCAACCAAGCTA | F |
| | | TGGCATCCACTCACTTGCAT | R |