A subset of highly responsive transcription factors upon tomato infection by pepino mosaic virus

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Short Title: tomato responsive TFs against PepMV

One-sentence summary: A combinatorial research approach was applied primarily relying on transcriptome analysis to identify highly responsive tomato TFs and understand the molecular defensive mechanisms of the tomato-PepMV pathosystem.

Keywords: *Solanum lycopersicum*, RNA-seq, PepMV, transcription factors, *C2H2* Zinc Finger, *NAC*, *bHLH*

Abbreviations

DEGs: differentially expressed genes

TFs: transcription factors

PepMV: pepino mosaic virus

ABSTRACT

- Plants have evolved well-tuned surveillance systems, including perplexed defense mechanisms, to restrain pathogens. Transcription factors (TFs) are master regulators of host molecular responses against plant pathogens. While pepino mosaic virus (PepMV) constitutes a major threat to the global tomato production, there is still lack of knowledge about the key TFs that regulate host responses against the virus.
- A combinatorial research approach was applied relying on tomato transcriptome analysis, reverse-transcription quantitative-PCR validation, phylogenetic classification, comparative analysis of structural features, *cis*-regulatory element mining and *in silico* co-expression analysis to identify a set of 11 highly responsive TFs involved in the regulation of host responses against PepMV.
- An endemic PepMV isolate, generating typical mosaic symptoms, modified the expression of approximately 3.3% tomato genes resulting in 1,120 Differentially Expressed Genes (DEGs). Functional classification of 502 upregulated DEGs revealed that photosynthesis, carbon fixation and gene silencing were widely affected, whereas 618 downregulated genes had an impact on mainly plant defense and carotenoid biosynthesis. Strikingly all 11 highly responsive TFs carried abiotic stress response *cis*-regulatory elements, whereas 5 of them were better aligned with rice than *Arabidopsis* gene homologs, suggesting that plant response against viruses may predate the divergence to monocots and dicots. Interestingly, tomato *C2H2* family TFs, *ZAT1-like* and *ZF2*, may have distinct roles in plant defense due to the opposite response pattern, similarly to their *Arabidopsis ZAT10* and *ZAT12* homologs.
- These highly responsive TFs set the basis to study in deep the molecular responses of tomato-PepMV pathosystem, opening a perspective to better comprehend viral infections.

INTRODUCTION

Tomato (*Solanum lycopersicum*) is an important vegetable of high economic value due to its taste, high-yield and elevated content of beneficial to human health compounds (Martinez-Valverde et al., 2002). Tomato plants are susceptible to various pathogens that compromise both fruit yield and quality. Viral diseases constitute a major threat due to practical restrictions regarding their control (Hanssen et al., 2010). Viruses have a great potential to quickly evolve and adapt under natural selection pressure due to their large population size, short generation time and high rates of mutations or recombination events (Moya et al., 2004; Hanssen et al., 2010). The spread of newly evolved strains constitutes a constant threat to modern agriculture.

Up to date, more than 312 viral species, including satellite viruses and viroids, have been reported to infect tomato (Rivarez et al., 2021). Pepino mosaic virus (PepMV) together with the tomato yellow leaf curl virus (TYLCV), tomato torrado virus (ToTV) and tomato brown rugose fruit virus (ToBRFV) have recently emerged mostly in greenhouses with a devasting impact on tomato global production (Hančinský et al., 2020; Hanssen et al., 2010). PepMV belongs to the *Potexvirus* genus of the *Alphaflexiviridae* family (Virus Taxonomy: 2019 Release, ictvonline.org) and was first reported in 1980 on pepino (*Solanum muricatum*) in Peru (Jones et al., 1980). Twenty years after the initial report on tomato infections in the Netherlands, PepMV has become a major pathogenic threat for greenhouse grown tomatoes worldwide (Hanssen et al., 2009; Alcaide and Arranda, 2021).

PepMV has a positive sense single stranded RNA genome of approximately 6400 nucleotides long that contains five open reading frames (ORFs), including an RNA-dependent RNA polymerase gene (*RdRp*), a triple gene block (*TGB*) and a coat protein gene (*CP*) (Hanssen and Thomma, 2010). Five PepMV strains have been reported with a sequence identity ranging from 78% to 95%: the original Peruvian (LP), the European (EU), the American (US1), the Chilean (CH2) and the new Peruvian (PES) (Hanssen and Thomma, 2010; Moreno-Pérez et al., 2014). Since its first appearance, PepMV has been rapidly established in most tomato producing countries. Within a short-time period, PepMV outbreaks were reported in the EU, UK, China, Canada and the USA (Hanssen and Thomma, 2010). Initially, these reported outbreaks were related with the EU strain, causing a rather mild series of symptoms. However, studies on the genetic structure of PepMV

populations in several European countries revealed that although the EU strain was presumed to be dominant, the occurrence of other PepMV genotypes or mixed infections also became frequently reported (Hanssen and Thomma, 2010). Even though the CH2 strain was evident in Europe since 2006, mixed infections by both the EU and CH2 strains were also reported in tomato crops (Hanssen et al., 2008; Hanssen and Thomma, 2010). Then a shift in PepMV populations was gradually observed all over Europe, as the EU strain was likely overtaken by the CH2 one (Hasiów-Jaroszewska et al., 2009; Hanssen and Thomma, 2010). This probably originated from a biological advantage of CH2 strain over the EU, due to CH2 ability to spread more rapidly (Hanssen et al., 2008; Hanssen and Thomma, 2010).

Typically, PepMV causes a wide range of symptoms, with fruit marbling being the most common and economically important symptom (Spence et al., 2006). In addition, fruit discoloration, open fruit, nettle-heads, leaf blistering or bubbling, leaf chlorosis and yellow angular leaf spots, leaf mosaic and leaf or stem necrosis have been also associated with PepMV infections (Hanssen and Thomma, 2010). The severity of PepMV symptoms likely depends on the environmental conditions, as well as on the genetic features of the viral strains. Even minor nucleotide sequence differences between isolates of the same genotype have been associated with enhanced pathogenicity and severe symptoms (Hanssen and Thomma, 2010).

To cope with numerous pathogens, plants have developed a compendium of well-tuned surveillance systems, including a sophisticated genetically controlled defense mechanism. Successful defense relies on the well-timed and rigorous detection of the invading pathogen and the subsequent induction of response pathways to avert pathogen attack. Transcriptional reprogramming is a major part of plant defense response modulating a myriad of complex molecular, biochemical, and physiological changes that occur in a highly synchronized manner largely governed by transcription factors (TFs) (Moore et al., 2011). TFs are master regulators of gene expression controlling a plethora of biological processes including defense and stress responses (Tsuda and Somssich, 2015; Sukumari Nath et al., 2019). Previous studies have identified several TFs implicated in regulating the expression of plant defense responsive genes (Moore et al., 2011; Tsuda and Somssich, 2015; Sukumari Nath et al., 2019). While significant progress has been made in terms of high-throughput analysis of tomato gene expression post

PepMV infection (Hanssen et al., 2011), the role of TFs that control the host's response remains largely unknown.

Currently, tomato intensive cultivation, together with climate instability, promotes the outbreak and dominance of biotic threatening agents. The most successful management strategy against viral pathogens is through the application of preventive methods, given that the introduction of genetic resistance in the plant host is time consuming, and cross-protection can be effective only under well-defined and controlled conditions. Moreover, the exact defensive mechanisms of the plant to overcome the disease are not completely understood. Thus, it is urgent to comprehend the molecular networks controlling tomato responses against viral infections. The strain of PepMV, alongside the environmental conditions, are the two most significant parameters affecting the severity of disease symptoms. Herein, we report the transcriptome response of tomatoes against PepMV infection by applying an RNA-seq approach to seek for differentially expressed transcription factors (DETFs). This led to the identification of a subset of tomato highly differentiated DETFs. Phylogenetic, structural and functional analysis of the DETFs showed that they are highly conserved among vascular plants. Moreover, the highly differentiated DETFs contained defense related elements in their regulatory regions. Our analysis reveals a subset of tomato TFs with altered expression upon PepMV infection and broadens the practical implications towards breeding of virus resistant crops.

MATERIALS AND METHODS

Plant material and growth conditions

Tomato (*Solanum lycopersicum*) Belladonna F1 hybrid seeds were planted in plastic pots containing Potgrond P, a natural turf mixture (Klasmann-Deilmann GmbH, Geeste, Germany), and grown at 22 °C in a Fitotron (Weiss Gallenkamp, Loughborough, UK) growth chamber under a long day photoperiod with 16 h of light and 8 h of darkness per day and 100 µmol m^{-2} s^{-1} light intensity.

Virus isolate and mechanical inoculation of tomatoes for transcriptome analysis

The TomCr3 isolate of PepMV was obtained from naturally infected tomato plants in 2019 grown in a greenhouse in Ierapetra area of Crete island in Southern Greece (35.0119° N, 25.7407° E). The virus was preserved in the laboratory through serial mechanical inoculations of tomato plants (*Solanum lycopersicum L.*, hybrid *Belladonna*). The presence of PepMV was verified by enzyme-linked immunosorbent assay (ELISA) with an antibody prepared by Agdia, Inc., and by reverse transcription polymerase chain reaction (RT-PCR) as previously described (Ling et al., 2008). Mechanical inoculations of tomato plants were performed by rub inoculation onto young leaves at the fourth leaf stage. PepMV inoculum was prepared by grinding 0.5 g of TomCr3 infected leaves in 5 mL of mechanical inoculation buffer (0.1M (Na_2HPO_4/KH_2PO_4) pH 7.4, 0.2% w/v Na_2SO_3). The leaf extract was centrifuged at 1,000 x g for 5 s, 1.5 ml of the supernatant was transferred to an Eppendorf tube which contained 0.2 g Silicon Carbide - 400 mesh (Merck KGaA) and was vortexed thoroughly. A volume of 25 µL PepMV inoculum was placed onto the second leaf of each plant (the inoculum was vortexed every 3 plants) and was rubbed with sterile hydrophobic cotton. After 3 min the leaf was rinsed with tap water. Mock inoculations were performed with the same procedure by using healthy tomato leaves for the inoculum and were used as a control. When initial symptoms of PepMV infection became visible on the inoculated tomato plants, 10 days post inoculation (dpi), ~~Exactly 10 days post inoculation (dpi),~~ approximately 0.1 g of tissue was cut from the upper (non-inoculated) two or three leaves of each plant. The material was immediately frozen in liquid nitrogen and stored at -80°C until further processing.

RNA Extraction, RNA Sequencing and Transcriptome Analysis

RNA preparation and RNA-seq analysis were performed as previously described (Daras et al., 2019). Briefly, total RNA was extracted using the Direct-zol RNA Miniprep kit (Zymo research, Irvine, CA, USA) with an on-column DNase treatment according to the manufacturer's instructions from control and PepMV infected tomato tissues. The quantity and quality of RNA were assessed using a NanoDrop ND-1000 spectrophotometer (Thermo Fischer Scientific, Waltham, MA, USA) and agarose gel electrophoresis.

RNA-seq libraries were generated using the TruSeq Low Input kit according to the manufacturer's instructions (Illumina). Sequencing was performed on BGISEQ-500 platform instrument at BGI (Beijing Genomics Institute, Shenzhen, China). Raw reads were filtered into clean reads and aligned to the tomato genome (GCF_000188115.3_SL2.50_ncbi_20180905). RNA-seq data were analyzed using the SOAPnuke (version v.1.5.2) with parameters "-n 0.001 -l 20 -q 0.4 -A 0.25" and the HISAT2 pipeline (version 2.0.4) with parameters ''--phred33 --sensitive --no-discordant --no-mixed -I 1 -X 1000″. Approximately 130 million reads were obtained for the control or PepMV infected samples. On average, about 95% of the clean reads could be unambiguously aligned to the SL2.50 reference genome sequence. For the detection of differentially expressed genes (DEGs), clean reads were mapped to the reference genome with Bowtie2, and then the gene expression level was calculated with RSEM with default parameters. Statistical analysis of differential gene expression was conducted utilizing Poisson Distribution (Audic and Claverie, 1997) with fold change parameters greater than 2 and an FDR value ≤ 0.001. Heatmaps of the DEGs were constructed with Perseus software (version 1.6.8.0) using Euclidean distancing with average linkage and without any constraints in the algorithm.

Reverse-Transcription qPCR Analysis

Reverse transcription (RT) was performed on 1 µg of total DNA-free RNA using Invitrogen SuperScript IV VILO Master Mix (Thermo Fisher scientific, Waltham, MA, USA). Quantitative gene expression analysis was performed using gene specific primers (Table S1) with a PikoReal 96 Real-Time PCR System (Thermo Scientific, Waltham, MA, USA) using the SYBR Select Master Mix (Applied Biosystems, Waltham, MA, USA). For RT-qPCR analysis, *Glyceraldehyde-3-phosphate dehydrogenase* (*GAPDH*) was chosen as a housekeeping gene and the control plants were used as internal calibrators (Tsitsekian et al., 2021). Quantification of gene expression was

calculated as the expression of the gene of interest relative to *GAPDH* expression based on $2^{-\Delta Ct}$ method as previously described (Tsitsekian et al., 2021). The fold change was calculated by the $2^{-\Delta\Delta Ct}$ method as previously described (Ioannidi et al., 2016).

Homologs identification, sequence alignment and phylogenetic analysis

The analysis was performed as previously described (Tsitsekian et al., 2019), with slight modifications. To identify and retrieve the tomato DETFs homolog genes of *Arabidopsis* and rice, BLASTP searches were conducted using the tomato DETF protein sequences as the query search in the publicly available Phytozome database v.13 (https://phytozome-next.jgi.doe.gov/, Accessed: May 2021). Multiple sequence alignment of the identified amino acid sequences were performed by the ClustalX 1.83 software. The results were exported as GCG/MSF format and analyzed using the GeneDoc MFC Application version 2.6.0.2. The visualization of the phylogenetic trees was made by the Interactive Tree of Life (http://itol.embl.de) online platform.

Bioinformatics resources for *in silico* analysis

Gene ontology (GO) and Kyoto Encyclopedia of Genes and Genomes (KEGG) pathways enrichment were performed using the DAVID tools database (Huang et al., 2009a; 2009b). For protein conserved motifs analysis, the MEME-suite (Bailey et al., 2015) was used with default settings. To identify the *cis*-elements within the promoter regions of the transcription factors the PlantCARE database was applied (Lescot et al., 2002). The gene co-expression analysis of the *Arabidopsis* homologs and the functional enrichment analysis of the resulting gene network were performed by utilizing the STRING database (v.11.5; https://string-db.org/).

Data availability

The transcriptomic data of the tomato-PepMV pathosystem has been deposited in the Gene Expression Omnibus database at the National Center for Biotechnology Information (NCBI) under the accession number GSE203627.

RESULTS

PepMV infection resulted in alterations of tomato gene expression

An endemic PepMV isolate causing typical leaf mosaic symptoms, hereafter called TomCr3, was obtained from greenhouse grown tomatoes (Fig. 1A). An experimental system was developed inoculating tomato plants with the TomCr3 isolate and collecting leaf tissues for transcriptome analysis 10 days post inoculation, when the symptoms became visible. Mechanical inoculations of tomato hybrid line Belladonna F1 plants were performed by applying a TomCr3 extract onto the first emerging leaf. To verify that the symptoms were caused by TomCr3 isolate, molecular analysis of the *TGB2* and *TGB3* genes, known to be expressed by a single subgenomic PepMV RNA segment, was performed (Fig. 1B). The PCR amplification of the reverse-transcribed viral genomic RNA revealed the predominant expression of these two genes in the infected tissues. Furthermore, multiple-sequence alignment of the *TGB2* and *TBG3* genes verified that TomCr3 is a PepMV isolate (Figure S1).

To gain further insights into the molecular mechanisms controlling tomato defense response, transcriptome analysis of PepMV infected and control plants was performed. RNA-sequencing (RNA-seq) data analysis resulted in an average of 125M clean reads (Table S2A). Given that the tomato genome encodes for 34,075 genes, the total genes identified by the analysis were approximately 22,900 for the control and 22,500 for PepMV infected plants, which corresponded to 31,300 and 30,200 transcripts, respectively (Table S2B). Overall, these quality metrics of the RNA-seq approach demonstrated an efficient coverage of the tomato genome. The parameters of false discovery rate (FDR) and $\log_2$ FC were set to FDR < 0.001 and $\log_2$ FC ≥ 1 or ≤ -1, respectively, to screen for differentially expressed genes (DEGs; Figure S2). These selection criteria permit the identification of genes with a significant change of ≥2 fold in terms of expression compared to the control. The analysis revealed 1,120 DEGs, which is equal to approximately 3.3% of the tomato genes (Fig. 2A; Table S3A). This relatively small number of genes potentially indicates a specific response of the tomato transcriptome against PepMV infection.

Based on the response pattern, the DEGs were categorized in two groups (Fig. 2 A,B). The first group consisted of genes whose expression was upregulated by the virus infection and included 502 genes. The second group contained 618 genes that were downregulated upon PepMV

infection. Interestingly, these significant responsive genes highlighted a series of distinct biological processes that were affected during the viral infection. The Gene Ontology (GO) and Kyoto Encyclopedia of Genes and Genomes (KEGG) pathways enrichment analyses that were performed for the upregulated genes, revealed that photosynthesis, carbon fixation and post-translational gene silencing (PTGS) were the most prominent enriched terms (Fig. 2C). On the contrary, plant defense response, ABA signaling or response, carotenoid biosynthesis and the activity of transcription factors were among the most highly enriched terms within the genes that were downregulated (Fig. 2D). These results are consistent with the data of previous studies relying on microarray analysis of PepMV infected tomato plants (Hanssen et al., 2011). Likewise, photosynthesis and PTGS were reported to be particularly induced upon PepMV infection, whereas the biosynthesis of carotenoids and the defense related responses were significantly hampered. Taken together, our results are in agreement with previous reported data supporting the accurate analysis of tomato transcriptome reprogramming upon PepMV infection.

A subset of tomato TFs was substantially responsive against PepMV infection

~~As TFs are central regulatory hubs of the host transcriptome that respond against biotic stress factors, a deep analysis of the RNA-seq data was performed to comprehend the molecular networks that control tomato responses against PepMV infection.~~ As TFs are central regulatory hubs of the host transcriptome responding against biotic stress factors, a deep analysis of the RNA-seq data was performed to identify the TFs that show differential expression and subsequently to comprehend the molecular networks that control tomato responses against PepMV infection. Targeted analysis for TFs applying the initial cutoffs ($-1 \geq \log_2$FC (PepMV/Control) ≥ 1, FDR $\leq$ 0.001) identified 84 differentially expressed TFs (DETFs), of which 38 were upregulated and 46 were downregulated upon PepMV infection (Fig. 3A; Figure S2; Table S3B). Given that the TFs showing the highest alterations in terms of gene expression would be most likely involved in the regulation of host's responses against the virus, a set of most strict selection criteria was applied. These parameters excluded genes that showed a fold change of expression lower than 3 ($-1.59 \geq \log_2$FC (PepMV/Control) ≥ 1.59) or a relatively low expression level (FPKM < 5), leading to the identification of 11 highly responsive TFs (Fig. 3B; Figure S2). Notably, these TFs were categorized in 7 distinct families that were further divided in almost two halves. The group of upregulated TFs consisted of 5 members, whereas the rest of 6 TFs were downregulated, upon

PepMV infection (Fig. 3C, D). The *NAC* family was represented by three TFs, of which a pair was upregulated, whereas *JA2L* was downregulated. The expression of two *bHLH* TFs, namely *bHLH81* and *bHLH87*, was reduced. While *ZAT1-like*, a member of C2H2 TFs, was induced upon PepMV infection, the expression level of another member, *ZF2*, was reduced. The remaining 4 DETFs were single members of the growth regulating factors (*GRF*), *B3*, ethylene responsive factors (*ERF*) and *bZIP* families.

Given the great difference of these TFs expression upon PepMV infection compared to control plants, a reverse-transcription quantitative polymerase chain reaction (RT-qPCR) method was applied to validate their highly responsive pattern. Interestingly, RT-qPCR analysis supported the classification of these TFs into a group of 5 upregulated genes that included two members, *Solyc02g093420* and *GRF4*, that exhibited an almost 5-fold induction and into a second group of 6 downregulated genes including *JA2L* and *TAF-1-like* that showed the highest reduction of expression (Fig. 4A). Moreover, the expression pattern of all 11 DETFs was almost identical between both experimental approaches (Fig. 4B). As shown by the fold change of each gene expression, the RT-qPCR analysis further confirmed the accuracy and repeatability of RNA-seq data acquisition. Taken together, the application of stringent selection criteria led to the identification of 11 highly responsive TFs in the tomato-PepMV pathosystem by distinct but complementary gene expression analysis approaches, which most likely modulate critical host responses against the viral pathogen infection.

The evolutionary relationships of tomato DETFs in model plant species

Rice (*Oryza sativa*) and *Arabidopsis thaliana* are representative model organisms of monocot and dicot plant species, respectively. Their genome is often used as a reference to monitor the evolution of homologous genes. Hence, a wide-genome BLAST query was performed to identify the highly homolog counterparts of the responsive tomato TFs against PepMV infection (Table S4). To understand the evolutionary history of the tomato TFs, a phylogenetic tree (Fig. 5 left panel) was constructed and aligned with the exon-intron structure of the genes (Fig. 5 middle panel). In most cases, the intron length of the tomato genes was relatively longer compared to rice and *Arabidopsis*. Moreover, this complementary approach revealed that in terms of homology, the tomato TFs were categorized into two subgroups. The first subgroup included 5 TFs that were best

aligned with the rice counterparts. These tomato TFs according to their tag numbers were [1], [2], [3] and [4], which were induced by PepMV infection, and [6] whose expression was reduced. The second subgroup consisted of 6 tomato TFs, which were highly homologous with the *Arabidopsis* counterparts. Most of these were downregulated, namely [7], [8], [9], [10] and [11], whereas only one [5] was stimulated upon the viral infection. Interestingly, the analysis revealed that the origin of the first subgroup of tomato TFs is most likely defined before the evolutionary divergence between the monocot and dicot species in angiosperms. These results are consistent with previous phylogenetic analyses demonstrating that nearly half of the *Arabidopsis* and rice TFs can be classified into clear orthologous groups supporting the notion that they originate from a common ancestor of the monocot and dicot species (Xiong et al., 2005).

In addition to the phylogenetic classification, the TF homologs were further analyzed based on the diversification of strongly conserved amino acid motifs within the members of each family (Table S5). Strikingly, 4 out of the 7 families of TFs showed evident differences between the homolog gene members within the family (Fig. 5 right panel). In the *ERF* family, the tomato *DREB3* TF, like its *Arabidopsis* homolog, contained three conserved motifs. This is in contrast to the rice counterpart, which had only two motifs. Surprisingly, some of the tomato TFs classified in the remaining 3 families included members that showed higher structural homology to the rice counterparts contrary to the other tomato members of the family that were more similar to the dicotyledonous homologs of *Arabidopsis*. In particular, *GRF4*, belonging to the *GRF* family, contained three distinct conserved motifs similar to its rice monocot homolog, but it deviated from the dicot homolog of *Arabidopsis*, which bore just a pair of motifs. A somehow similar structural representation was evident within the families of tomato *bHLH* and *NAC* TFs that included two and three highly responsive TFs, respectively. The tomato *bHLH81*, which grouped best with its rice homolog, had two motifs, whereas the tomato *bHLH87* contained one more rising to three motifs like the *Arabidopsis* homolog. Likewise, two tomato TFs members of the NAC family, with [2] and [4] as tag numbers, showed higher similarity to the rice monocot homologs and bore one motif in the polypeptide sequence more than the tomato *JA2L* TF, which had two motifs similar to the dicot *Arabidopsis* homologs. In line with the phylogenetic analysis, the divergence in terms of the conserved structural motifs further supports that few of the tomato TFs derived from the common ancestor that existed before the divergence between monocot and dicot plant species.

The tomato TFs have a potential enhanced response capacity to stress and defense

Regulatory elements are specific nucleotide motifs located at the promoter sequence that control gene expression in a temporal, spatial, and/or cell type-specific manner. As the tomato TFs responded to the viral infection, a comparison of their genomic regulatory regions, which cover 2000-bp upstream of the translation initiation site, was performed to understand the molecular basis of these genes' expression. Remarkably, a number of *cis*-acting regulatory elements related to stress or defense related hormone response were found (Fig. 6A; Table S6). The ABA and abiotic stress responsive ABRE element were identified in the promoter regions of all highly responsive tomato TFs. The SA-responsive (TCA-element) and JA-responsive elements (CGTCA-motif and TGACG-motif) were also abundant in the promoter regions of 3 and 9 genes, respectively. The ethylene responsive ERE motif or the wounding response WUN-motif were present in the promoters of 8 genes. Several W-boxes were identified in the promoters of 7 genes, indicating that these genes might be regulated by WRKY, whereas the TC-rich repeat defense and stress response element was identified in 4 promoter regions. Taken together, these results supported the notion that stress responsive *cis*-regulatory elements involved in defense or stress responses are overrepresented in the promoters of the tomato highly responsive genes against PepMV infection.

Since an adequate degree of gene homology was identified between tomato and *Arabidopsis* and given that a plethora of experimental data available for *Arabidopsis*, a query for gene co-expression networks was performed relying on the *Arabidopsis* homologs (Fig. 6B). This approach led to a hub of transcriptional regulators *ZAT6*, *ZAT10* and *ZAT12*, comprised of the C2H2 zinc finger gene family. The network also included two ribonuclease H-like superfamily proteins *CAF1a* and *CAF1b*, the pathogen-induced transcription factors *WRKY33* and *WRKY40*, the Calcium-binding EF-hand family protein *At4g27280* and *At4g29780* which encodes for a nuclease. Intriguingly, based on the tomato transcriptome analysis, *ZAT1-like* the homolog of *Arabidopsis ZAT12* was induced upon the infection of PepMV, whereas the expression of *ZF2* was downregulated. This could possibly reflect different roles between *Arabidopsis ZAT12* and the *Arabidopsis* homologs of tomato *ZF2*, namely *ZAT10* and *ZAT6*. Genetic and gene expression evidence in *Arabidopsis*, support that the function of *ZAT10* may be linked to *ZAT12* during stress but possibly ZAT10

could be not only an activator, but also a transcriptional suppressor modulating the activation of defense responses during different stresses, as well as stress combinations (Mittler, 2006). Moreover, the *Arabidopsis* based approach highlighted the role of tomato TFs in defense and stress response. Functional enrichment analysis of the gene co-expression network showed that the Gene Ontology (GO) biological process enriched terms were associated with plant defense or with response to stress factors (Fig. 6C). Concerning the Cellular Component (CC) terms analysis, two processes tightly linked with gene expression regulation were overrepresented: the nucleus and the P-bodies (processing bodies), which are cytoplasmic protein complexes involved in the degradation and translational arrest of mRNA. In terms of Molecular Function (MF) term a sole term was enriched related to the DNA-binding transcription factor activity. Overall, these results support the notion that the responsive TFs most likely drive the reprogramming of tomato transcriptome to cope with a viral attack.

DISCUSSION

~~Tomato is a worldwide highly consumed vegetable and a major dietary source of mainly antioxidants, which have been linked to many health benefits. Tomato intensive cultivation together with climate instability, promotes the outbreak and dominance of biotic threatening agents. Nowadays, viruses have become a critical threat to greenhouse grown tomato cultivars and thus it is considered extremely difficult to apply a successful crop protection protocol. PepMV has a severe impact on fresh-market tomato production and is a major disease of greenhouse tomato crops globally. The strain of PepMV, alongside the environmental conditions, are the two most significant parameters affecting the severity of disease symptoms. Currently, the most successful management strategy against viral pathogens is through the application of preventive methods given that the introduction of genetic resistance in the plant host is time consuming, and cross-protection can be effective only under well-defined and controlled conditions. Moreover, the exact defensive mechanisms of the plant to overcome the disease are not completely understood. Thus, it is urgent to comprehend the molecular networks controlling tomato responses against viral infections.~~

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Our transcriptomic analysis revealed that the expression of about 3.3% of genes composing the tomato genome was modified upon virus infection, corresponding to 1,120 DEGs. Classification of these genes in functional categories revealed that 502 genes, which showed stimulation of gene expression, were mainly categorized in biological processes associated with photosynthesis, carbon fixation and post-transcriptional gene silencing (PTGS). However, the most highly enriched terms within the 618 downregulated genes were related to plant defense response, ABA signaling or response, carotenoid biosynthesis and the activity of transcription factors. Interestingly, these results are in conjunction with the data of a previous tomato GeneChip array analysis (Hanssen et al., 2011). In particular, photosynthesis, defense response, RNA silencing and carotenoid biosynthesis, likely responsible for the marbled leaf phenotype which is typical for a mosaic disease, were also among the biological processes that were previously reported. This tight correlation between both technical approaches demonstrates the core tomato responses against PepMV infection and opens the way to elucidate the network of TFs being responsive upon the viral attack.

In total 84 TFs were responsive against TomCr3 infection, showing either a two-fold induction (38 TFs) or repression (46 TFs) in terms of gene expression. For the sake of a better overview, the focus of the analysis was put to distinguish TFs that were highly responsive. By setting strict selection criteria, the list of TFs with a fold change of transcriptional response greater than three ended to 5 upregulated and 6 downregulated TFs classified in 7 families. The response pattern of these TFs was also confirmed by RT-qPCR analysis. A phylogenetic classification distinguished 5 tomato TFs that were highly homologous with the rice counterparts, whereas the rest of 6 tomato TFs were closer to the *Arabidopsis* homologs, showing the formation of distinct orthologous pairs. Interestingly, phylogenetic analysis of all *Arabidopsis* and rice TFs revealed that approximately half of these are classified into orthologous groups, supporting the idea that orthologous TFs may have conserved fundamental functions between monocots and dicots (Xiong et al., 2005). Likewise, the sorting of tomato TFs may suggest that these regulators of gene expression upon a viral attack possibly originated early in the evolutionary history of higher plants, before the divergence between monocot and dicot species in angiosperms that likely occurred 150 million of years ago (Pires and Dolan, 2012).

Promoter analysis of the highly responsive TFs revealed that all contained defense and stress response regulatory elements within their promoter sequences. Recent reports support the functional involvement of these tomato TFs in defense or abiotic stress responses. In our analysis the expression of *Jasmonic Acid 2-Like* (*JA2L*) was suppressed upon PepMV infection. *JA2L* together with its homolog *JA2* (*Jasmonic Acid 2*) belong to the NAC family of TFs. There are reports demonstrating that both these NAC TFs are involved in the pathogen-triggered stomatal movement upon tomato pathogen attack (Du et al., 2014). Upon perception of pathogen infection, plants close stomata, a response, which is referred to as "stomatal defense" and is an integral part of plant innate immunity (Melotto et al., 2006; Du et al., 2014). Likewise, viral infections are strongly associated with a reduction in stomatal density and stomatal closure, thus appear to negatively affect transpiration most likely to reduce viral movement around the host (Murray et al., 2016; Manacorda et al., 2021).

Many pathogens use effectors to counteract stomatal defense, reopen plant stomata and facilitate their entry into the plant leaf (Melotto et al., 2006; Du et al., 2014). Coronatine (COR) is a toxin produced by a bacterial pathogen, *Pseudomonas syringae* pv tomato DC3000 (DC3000), and is essential for the virulent strain for stomatal reopening and to overcome apoplastic defenses, including the SA-mediated defense (Melotto et al., 2006). COR is a structural and functional mimic of Jasmonic Acid (JA) and has been reported that COR hijacks the JA signaling pathway to suppress plant defenses, including stomatal reopening and apoplastic defenses, through a hormonal crosstalk (Du et al., 2014). Consequently, *JA2* acts in the ABA-mediated stomatal closure, whereas *JA2L* functions in COR/JA-mediated stomatal reopening process (Du et al., 2014). On the basis of these observations, it appears reasonable to assume that downregulation of *JA2L* expression in virus infected tomato plants is most likely attributed to prevent stomatal reopening. Despite an effect on stomatal density, there is evidence that plant infection by viruses may regulate stomatal conductance most likely due to reduction in stomata aperture (Chaerle et al., 2006; Aguilar et al., 2017; Manacorda et al., 2021). Consequently, tomato potentially responds by a *JA2L*-mediated stomata closure mechanism, albeit this could be an indirect effect driven by disturbed hormonal homeostasis. Nevertheless, further experiments are required to clarify whether stomatal closure is a bona fide defense response by the plant against viruses or is a beneficial to the virus reaction. Therefore, tomato potentially applies a defensive response against PepMV infection by a

~~*JA2L* mediated stomata closure mechanism to slow down transpiration, increase water use effieiency and reduce viral movement.~~

Despite *JA2L*, the expression of *bHLH81* and *DREB3A* TFs was also substantially reduced in PepMV infected tomato plants. Intriguingly, the *Arabidopsis* homologs of both tomato *bHLH81* and *DREB3A* genes responded differently upon a bacterial infection. The expression pattern of *FBH3*, an *Arabidopsis* homolog of tomato *bHLH81*, was induced upon DC3000 infection. Furthermore, *FBH3* subsequently regulated the expression of a group of downstream TFs that were also induced upon bacterial infection (Lewis et al., 2015). *TINY2*, the functional homolog of *DREB3A* in *Arabidopsis*, has been reported to be rapidly induced upon abiotic challenges such as cold, drought, mechanical wounding and salinity (Wei et al., 2005). In addition, *TINY2* was also induced upon ABA treatment. The opposite expression response pattern of *bHLH81* and *DREB3A* potentially highlights distinct plant defensive strategies against viral and bacterial plant pathogens or environmental ques.

An *Arabidopsis*-based approach revealed a co-expression interaction network among tomato TFs of the *C2H2* zinc finger gene family. The tomato *ZAT1-like*, homolog of *Arabidopsis ZAT12*, was induced upon PepMV infection, whereas the expression of tomato *ZF2*, which is homologous to *Arabidopsis ZAT10* and *ZAT6* TFs, was downregulated. Remarkably, the *in silico* analysis revealed that the *Arabidopsis* homologs of the *C2H2* zinc finger gene family, namely *ZAT10* (*At1g27730*), *ZAT6 (At5g04340)* and *ZAT12* (*At5g59820*), formed a single hub of gene expression regulators. Nevertheless, these plant homologs have been previously documented to possess potential distinct roles in plant defense or abiotic stresses. A similar expression pattern was observed, when *ZAT10* and *ZAT12* were induced upon abiotic stresses in *Arabidopsis*, suggesting that both TFs could share common functions in stress response (Mittler et al., 2006). However, characterization of *ZAT10* and *ZAT12* transgenic lines of *Arabidopsis* subjected to abiotic stresses revealed an interesting functional response of mainly *ZAT10*. Plants overexpressing *ZAT12* showed a tolerant phenotype upon osmotic stress, contrary to *ZAT12* knockout lines, supporting the positive role of *ZAT12* against stress conditions (Davletova et al., 2005). Likewise, overexpression of the *Brassica carinata ZAT12* homolog (*BcZAT12*) in transgenic tomato plants conferred drought resistance and suppression of the oxidative stress caused by heat-shock treatment (Shah et al., 2013; Krishna et

al., 2021). In striking contrast, *ZAT10* overexpression or knockout led to tolerant transgenic plants against mainly abiotic stresses compared to the wild-type (Mittler et al., 2006). These observations jointly suggest that while *Arabidopsis ZAT12* acts as a transcriptional activator, *Arabidopsis ZAT10* can either act as a positive or a negative regulator of the defense related genes (Mittler et al., 2006). Our results are consistent with a distinct response pattern among the *C2H2* TFs. As *ZAT1-like* was induced, *ZF2* expression was downregulated against PepMV infection to coordinate tomato molecular defensive responses.

Overall, we shed light on tomato transcriptome reprogramming upon viral infection of a PepMV isolate through the application of an RNA-seq analysis approach. The analysis provided complementary evidence about typical plant responses against a viral mosaic disease including photosynthesis, carbon fixation, gene silencing, plant defense and carotenoid biosynthesis. Moreover, a subset of highly responsive transcription factors was identified, which based on previous research observations, constitute a group of gene transcriptional regulators with functional features mainly related to abiotic challenges. The data particularly support a regulatory network of gene expression composed of the *Arabidopsis ZAT10* and *ZAT12* homologs that show distinct patterns of response upon viral infection. This work provides a platform for future studies on plant viral infections opening the perspective to comprehend host responses related to the mobilizing of molecular defense mechanisms.

ACKNOWLEDGEMENTS

This research was supported by the European Regional Development Fund of the European Union and Greek national funds through the Operational Program Competitiveness, Entrepreneurship and Innovation, under the call RESEARCH–CREATE–INNOVATE (project code: T1EDK-04142). We thank the members of Molecular Biology Laboratory at AUA for critical reading and helpful suggestions.

AUTHOR CONTRIBUTIONS

SR and GD conceived the research and designed the experiments. DTs. performed most of the experiments and analyzed the data. DTem. helped in bioinformatics analysis together with FA. LL, CO and VM performed PepMV isolation and plant inoculations. DTs prepared the initial draft. SR and VM supervised the experiments and acquired funding. SR, VM, GD, LL and VN revised the manuscript. All authors have read and approved the manuscript.

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FIGURE LEGENDS

Figure 1. A PepMV isolate caused highly virulent infections in tomato plants (A) Typical mosaic symptoms of tomato leaves infected with TomCr3, the PepMV isolate (Scale bar = 1cm). (B) Expression of PepMV *TGB2* and *TGB3* genes by Reverse-Transcription semiquantitative and quantitative PCR (RT-qPCR) analysis. The expression of the viral genes was evident only in the infected tomato tissues.

Figure 2. Overview of differentially expressed genes (DEGs) upon PepMV infection. (A) Scatter plot showing differential gene expression between control and PepMV infected plants. The axes represent $\log_2$ transformed RNA-seq gene FPKM values. Red and blue dots denote genes whose expression was significantly up- or downregulated, respectively, upon PepMV infection. Grey dots denote genes whose expression was unchanged. (B) Venn diagram showing the number of genes that were significantly upregulated or downregulated in response to PepMV infection. (C-D) Functional enrichment analysis of the upregulated (C) and downregulated (D) genes upon PepMV infection. The enriched Gene Ontology (GO) terms of Biological Process (BP), Cellular Component (CC) and Molecular Function (MF) are shown in blue, orange and green letters, respectively, whereas the overrepresented KEGG pathways are shown in red. *p*-value is calculated by Fisher's exact test, whereas the count value refers to the number of genes observed within each term.

Figure 3. Differentially expressed transcription factors (DETFs) identified upon tomato infection by PepMV. (A) Volcano plot showing the distribution of the 84 DETFs (2-fold change or greater and FDR $\leq$ 0.001). (B) Scatter plot of the highly responsive DETFs. The axes represent $\log_2$ transformed RNA-seq gene Fragments Per Kilobase of transcript per Million mapped reads (FPKM) values. Red and blue dots denote genes whose expression was significantly up- or downregulated, respectively (fold change greater than 3, FDR $\leq$ 0.001 and FPKM $\geq$ 5). Grey dots denote genes whose expression was not modified. Genes within the dark grey box show low levels of expression (FPKM < 5). (C and D) Identification data (C) and normalized gene expression profiles (D) of the highly responsive tomato TFs upon PepMV infection.

747 **Figure 4.** Comparative expression analysis of the highly differentiated tomato TFs upon PepMV
748 infection. (A) Reverse-Transcription quantitative PCR (RT-qPCR) validation. Values are mean ±
749 SD of four (n = 4) replicates derived by RT-qPCR analysis. Asterisks indicate significant
750 differences (*t*-test) between the PepMV infected and control plants ($P \leq 0.05$) (B) Comparison of
751 gene transcription results derived from RT-qPCR and RNA-seq transcriptome analysis. Magenta
752 bars represent the fold change of gene expression of the PepMV infected plants relative to the
753 control, calculated as the $\log_2$ transformed ratio of the FPKM values obtained by RNA-seq
754 analysis. Green bars represent the $\log_2$ transformed fold change expression values obtained by RT-
755 qPCR analysis. Positive values correlate with upregulated gene expression, whereas negative
756 values with downregulation of gene expression.
757
758 **Figure 5.** Phylogenetic classification and structural features comparative analysis of the highly
759 responsive tomato TFs compared with their homologs of rice and *Arabidopsis*. (Left panel)
760 Phylogenetic categorization of the tomato TFs relative to the highly similar monocot or dicot
761 counterpart. Each TF family has been marked with a color box. The tree distance is indicated on
762 top of every node. (Middle panel) Gene exon-intron structure of the tomato TFs and their monocot
763 or dicot homologs. The colored numbers in brackets indicate the tag number of each tomato DETF
764 as annotated in Fig. 3. The fonts in red and blue color present the tomato DETFs that are up- or
765 down-regulated, respectively, upon PepMV infection. The slash-separated numbers in parentheses
766 represent the exon/intron numbers of each TF homolog. (Right panel) Distribution of conserved
767 amino acid motifs within the tomato TFs and their homologs per family. Colored boxes indicate
768 distinct signature motifs shown in Table S5 that were identified within the members of each TF
769 family.
770
771 **Figure 6.** Evidence of the stress and defense response capacity of the tomato TFs. (A) Graphical
772 representation of stress or defense response *cis*-regulatory elements within the promoter regions
773 of the most differentiated tomato TFs upon PepMV infection. (B) An *Arabidopsis*-based approach
774 revealed a co-expression interaction network among tomato TF homologs. Purple circles indicate
775 the input *Arabidopsis* genes, whereas the grey circles depict the interactors identified by the
776 analysis. The gene IDs colored in red depict the tomato upregulated TFs and in blue the tomato
777 downregulated TFs. (C) Functional enrichment analysis of the *Arabidopsis* co-expression network

of TFs. The enriched Gene Ontology (GO) terms of Biological Process (BP), Cellular Component (CC) and Molecular Function (MF) are shown in blue, orange and green letters respectively. The count value refers to the number of genes observed within each term.

SUPPORTING INFORMATION

Table S1. Oligos used in this study for gene expression analysis

Table S2. RNA-sequencing data quality metrics

Table S3. Expression data of the differentially expressed genes (DEGs) identified by RNA-seq analysis

Table S4. The rice (*Oryza sativa*) and *Arabidopsis thaliana* homologs of the highly responsive tomato TFs against PepMV infection

Table S5. Identification of distinct signature motifs within the members of each TF family

Table S6. The *cis*-elements identified within the promoter regions of the 11 highly differentiated DETFs

Figure S1. Multiple-sequence alignment of the *TGB2* and *TBG3* genes verified that TomCr3 is a virulent isolate of PepMV. The TomCr3 sequence of 365 nucleotides was aligned with the indicated five PepMV genotypes CH2, LP-2001, EU, US1 and PES with GenBank accession numbers DQ000985, AJ606361, KJ018164, AY509926 and HG313806, respectively.

Figure S2. Outline of the experimental workflow leading to the identification of differentially expressed transcription factors (DETFs) upon PepMV infection of tomato.

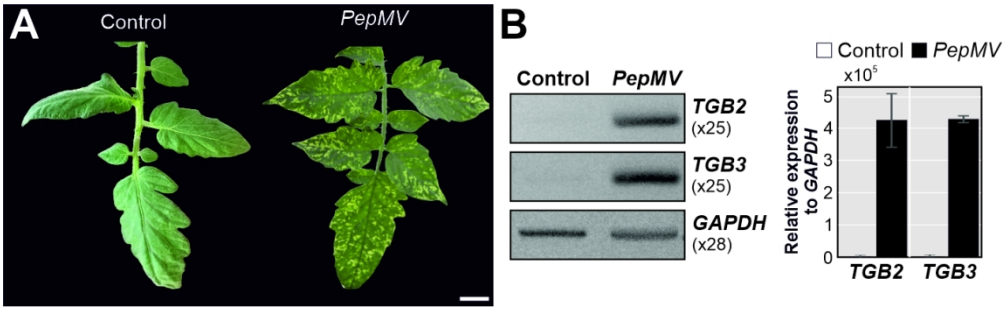

Figure 1

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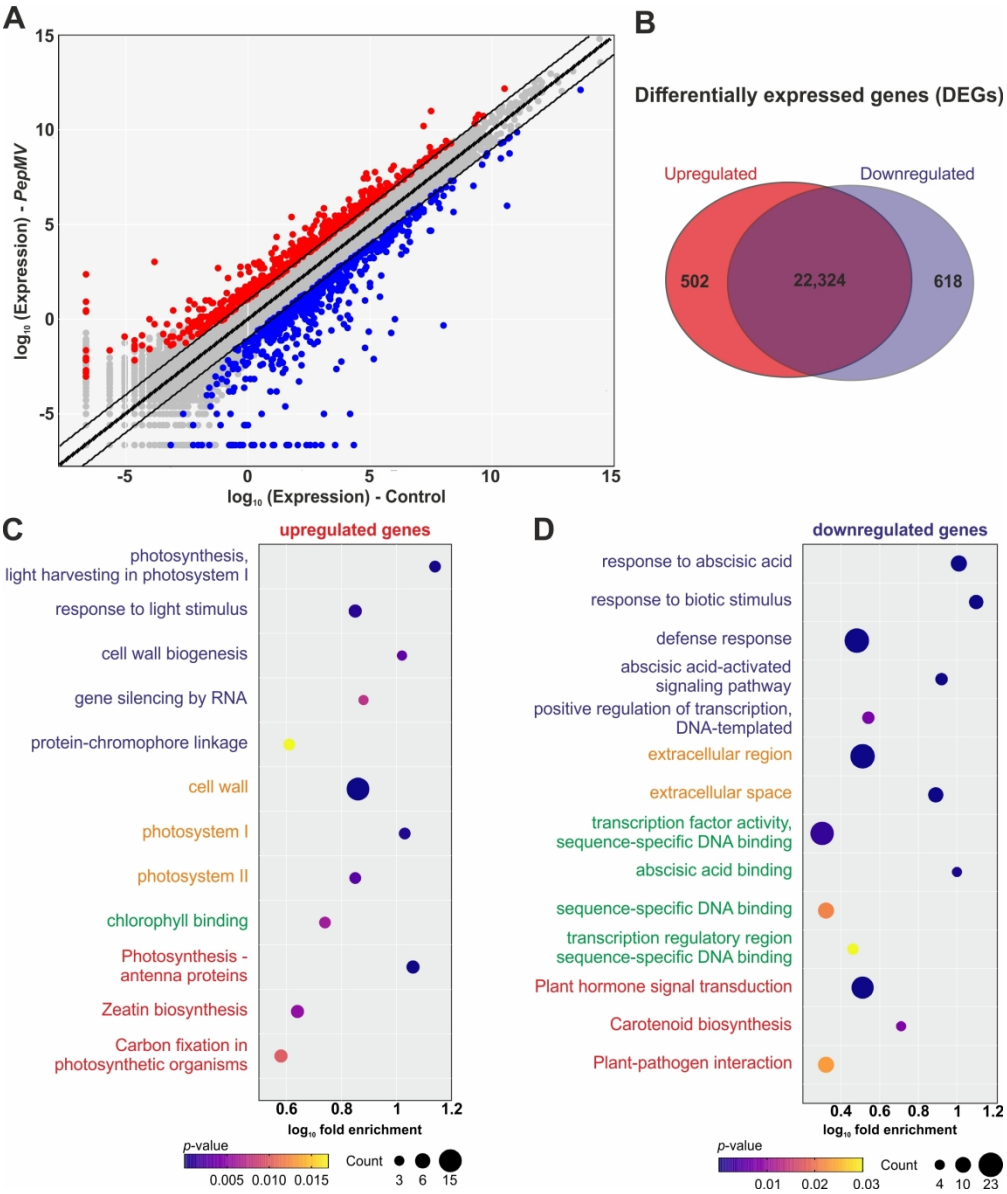

Figure 2

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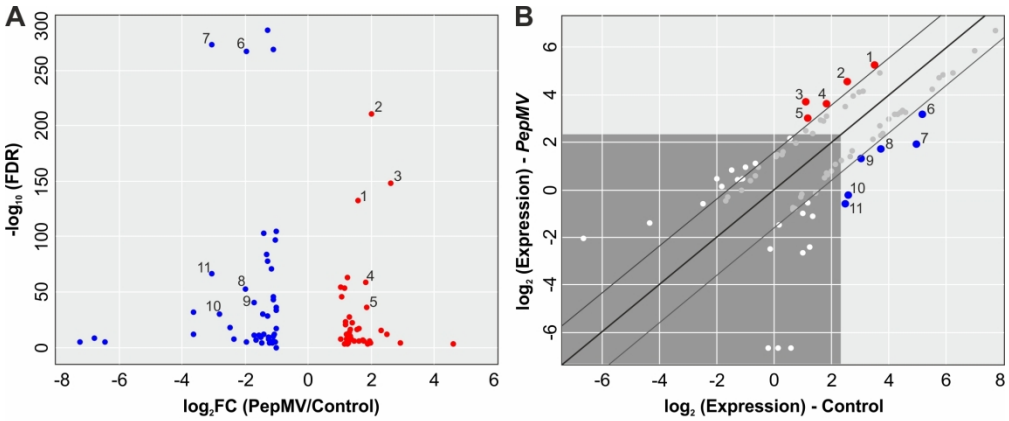

C

Spot	Gene ID	Gene name	TF family
1	*Solyc04g015500*	*Solyc04g015500*	*B3*
2	*Solyc02g093420*	*Solyc02g093420*	*NAC*
3	*Solyc12g096070*	*GRF4*	*GRF*
4	*Solyc02g077610*	*NAC073*	*NAC*
5	*Solyc06g075780*	*ZAT1-like*	*C2H2*
6	*Solyc11g056650*	*bHLH81*	*bHLH*
7	*Solyc07g063410*	*JA2L*	*NAC*
8	*Solyc01g107170*	*ZF2*	*C2H2*
9	*Solyc03g121240*	*bHLH87*	*bHLH*
10	*Solyc12g044390*	*DREB3*	*ERF*
11	*Solyc05g050220*	*TAF-1-like*	*bZIP*

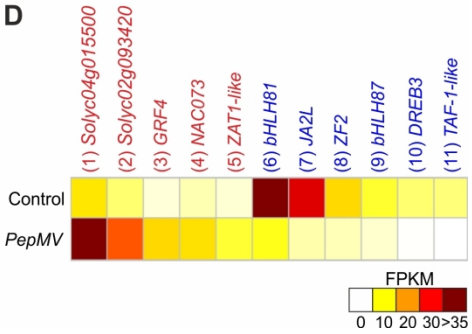

Figure 3

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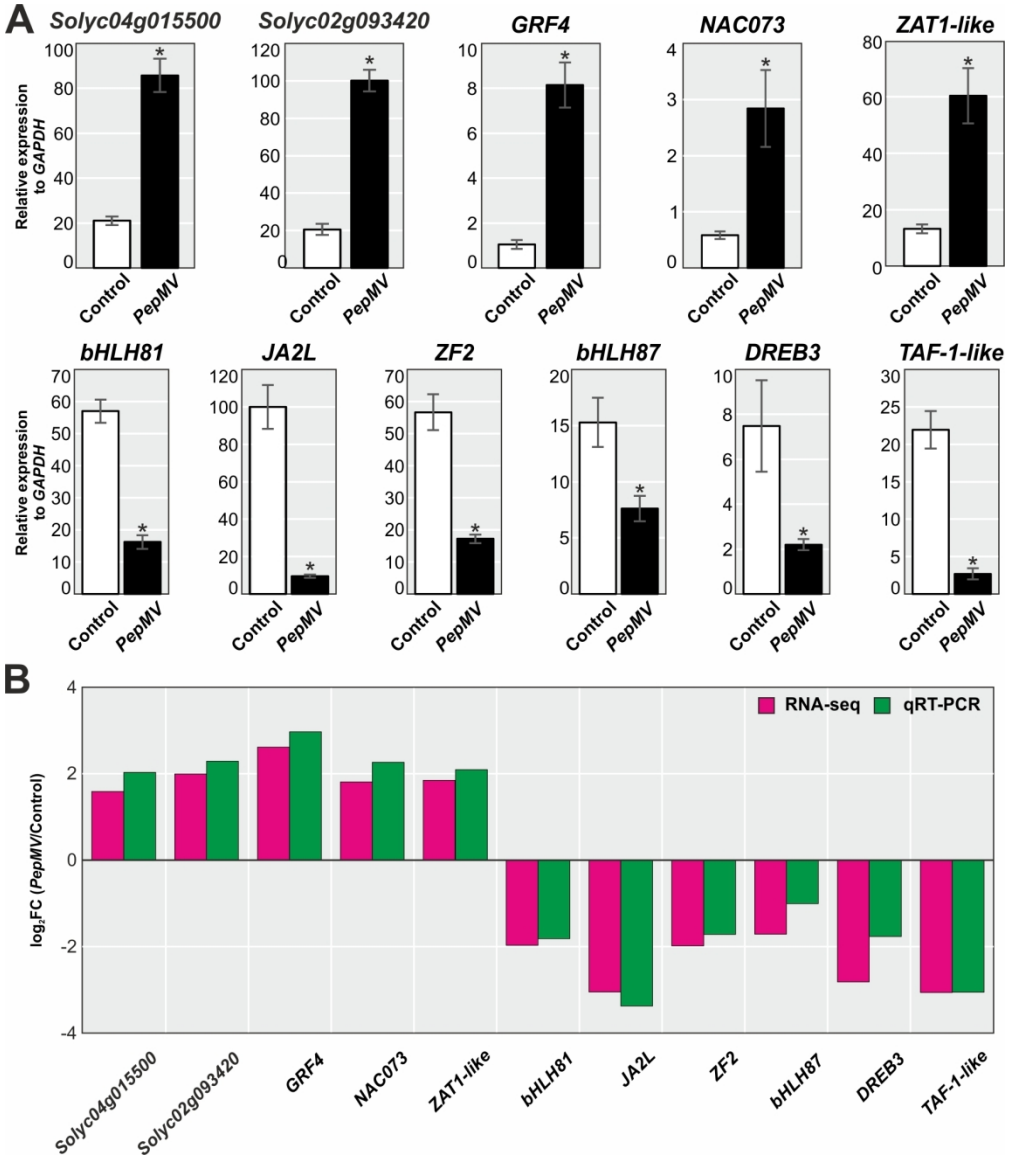

Figure 4

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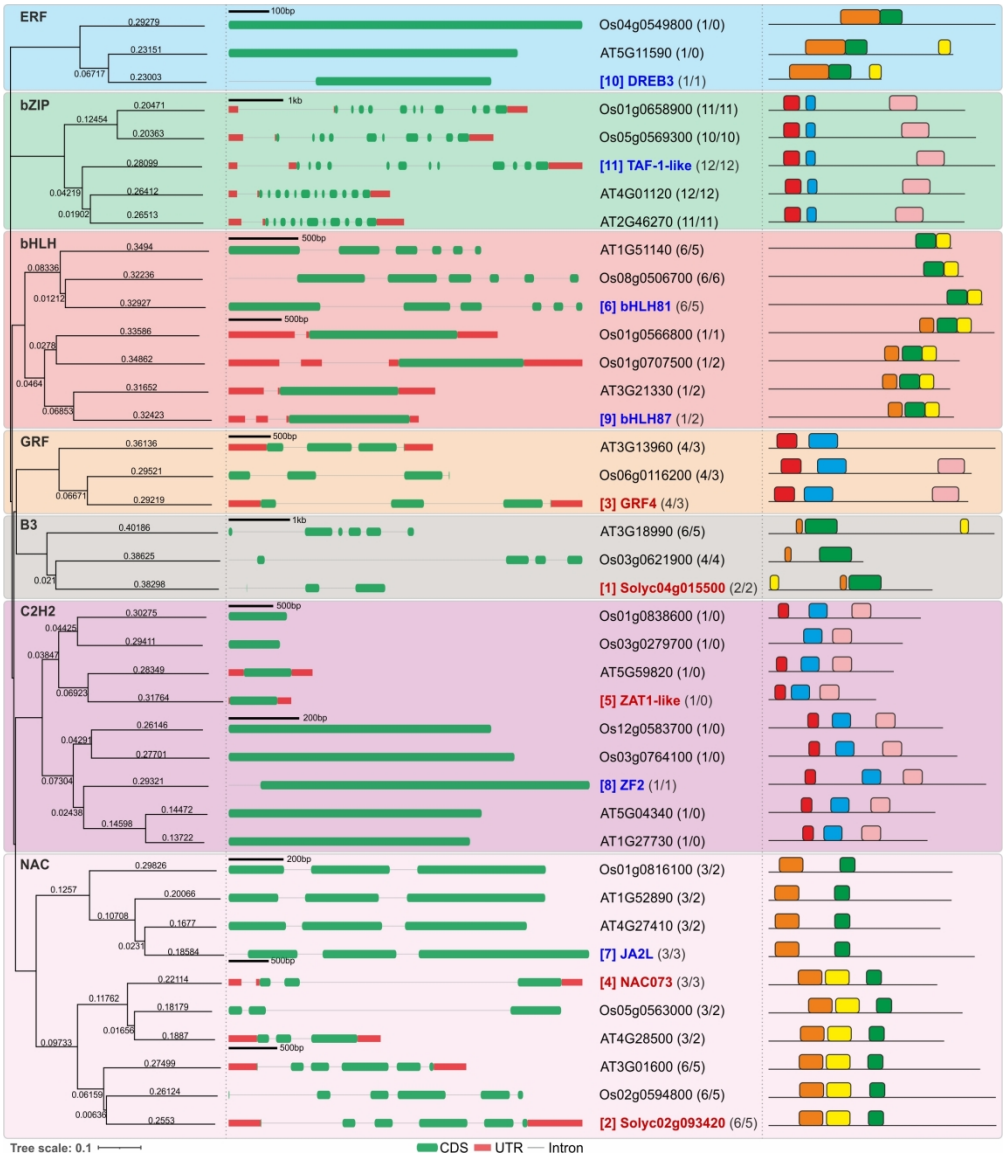

Figure 5

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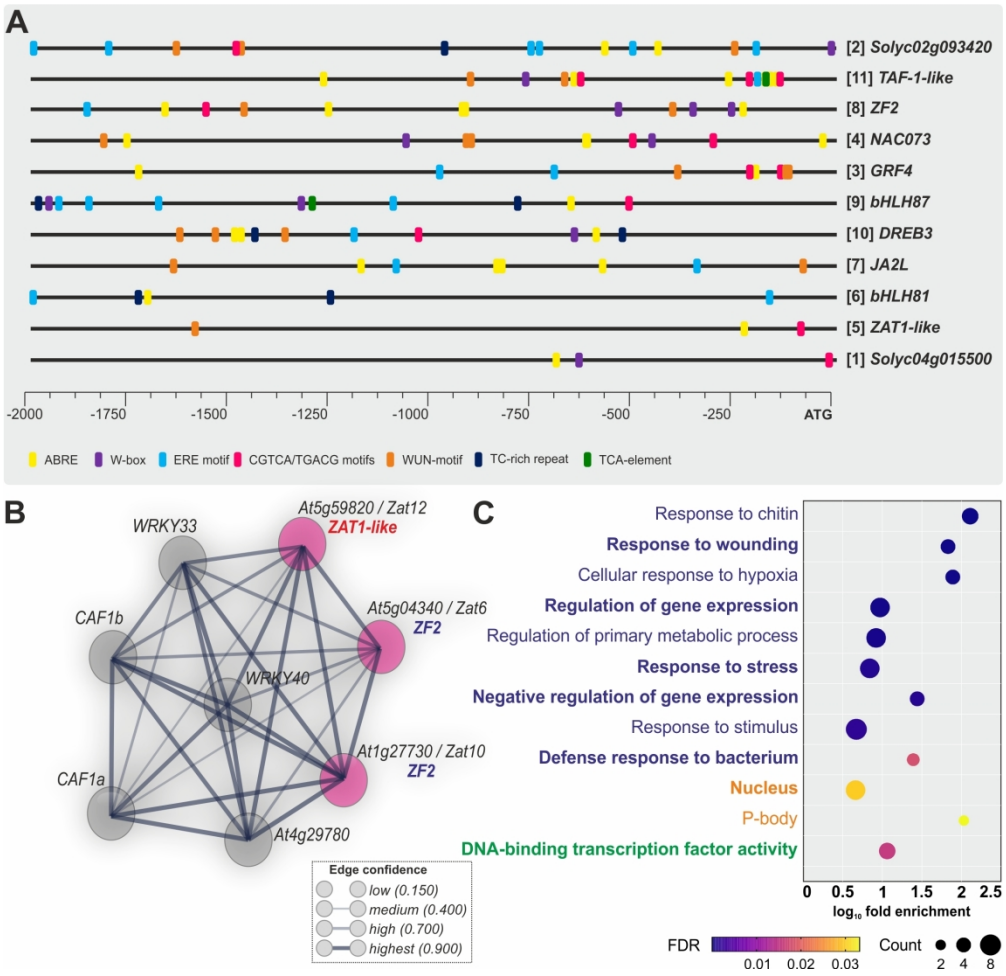

Figure 6

202x194mm (300 x 300 DPI)

Figure S1

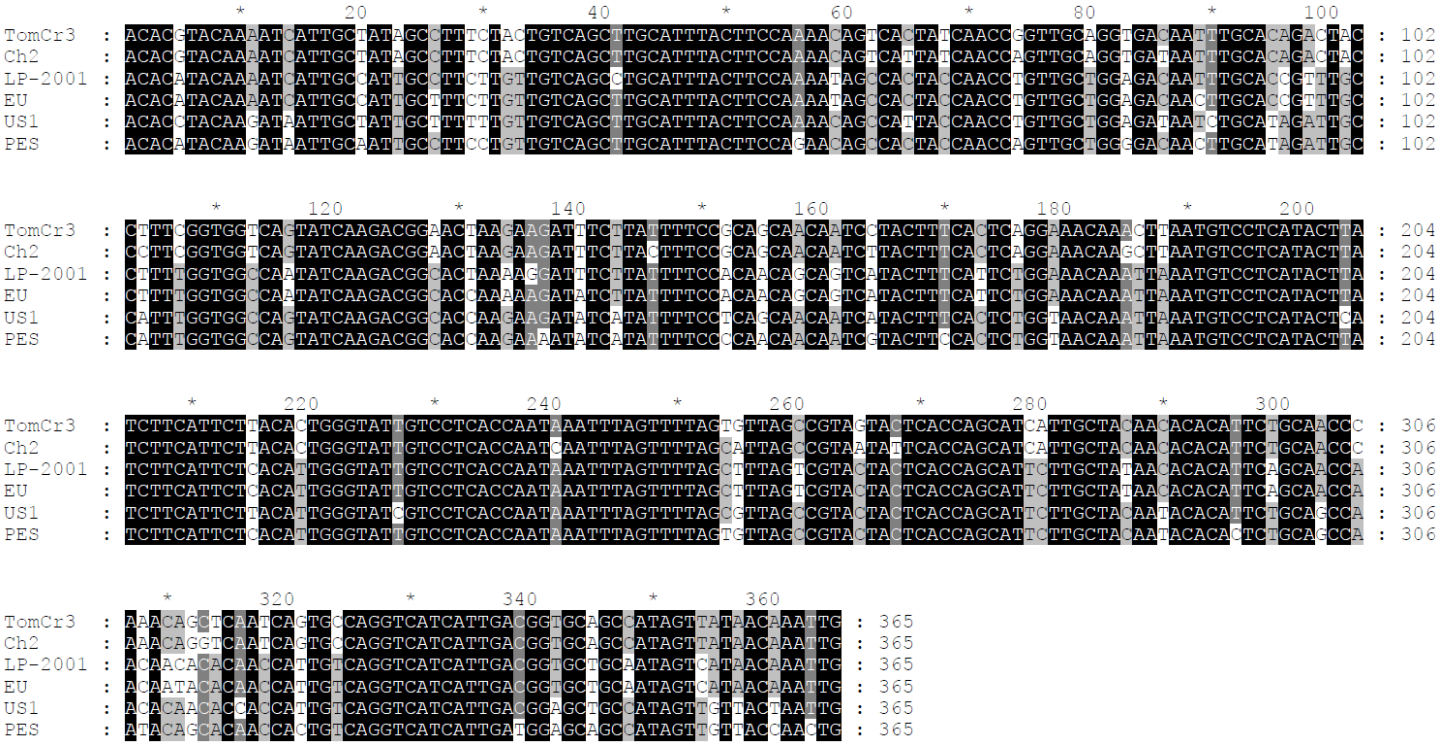

Figure S1. Multiple-sequence alignment of the *TGB2* and *TBG3* genes verified that TomCr3 is a virulent isolate of PepMV. The TomCr3 sequence of 365 nucleotides was aligned with the indicated five PepMV genotypes CH2, LP-2001, EU, US1 and PES with GenBank accession numbers DQ000985, AJ606361, KJ018164, AY509926 and HG313806, respectively.

Figure S2

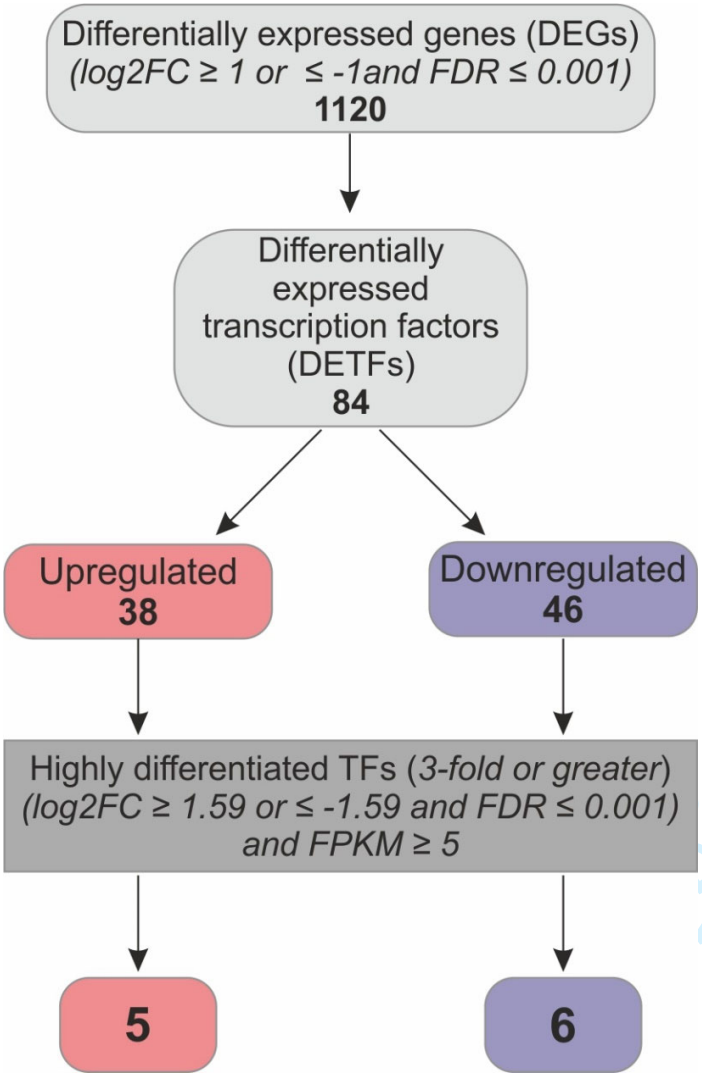

Figure S2. Outline of the experimental workflow leading to the identification of differentially expressed transcription factors (DETFs) upon PepMV infection of tomato.

Supplementary Table S1. Oligos used in this study for gene expression analysis

Entrez Gene ID	ITAG 4.0 Gene ID	Gene symbol		Sequence (5' --> 3')	Tm	cDNA	gDNA
101248376	*Solyc04g015500*	*Solyc04g015500*	For	GATGGCAAGCAGACAAGGGCAAG	64.77	202	791
			Rev	GTTTAGCAGTCTTACTTTCCATACCAC	62.32		
101261180	*Solyc02g093420*	*Solyc02g093420*	For	GTGACAATGAGGAAGCCAGTGTG	62.96	206	379
			Rev	CTCCATCTCACACTTAATTTTAGCATCAG	62.80		
101263989	*Solyc12g096070*	*GRF4*	For	GACGAATGGCCTACAACTAAGGA	61.12	216	309
			Rev	TGACTAGCATATCTGTTCCTCAGC	61.45		
101264084	*Solyc02g077610*	*NAC073*	For	GAAGCAAAAGTACTTTCAGATAATCA	57.24	213	2929
			Rev	CACCACCATCAATTTCAGTGTGTA	59.73		
101254394	*Solyc06g075780*	*ZAT1-like*	For	GTGGAATGGAGTTTTCTATGGGTC	61.45	214	214
			Rev	GATAAGAATGGAGGTACAGGTGGC	63.22		
101263275	*Solyc11g056650*	*bHLH81*	For	CACAGCAGATATGTTGGATTTTGC	59.73	153	248
			Rev	CATTATCAGCTCCCTTTCATCCTAAC	62.07		
101248026	*Solyc07g063410*	*JA2L*	For	GGATTATGCACGAATACAGGCTCAGTGA	65.57	199	282
			Rev	GTAGAGATTCCAGCATATCATCAAACTG	62.59		
101055585	*Solyc01g107170*	*ZF2*	For	GTTCTCACGTGTGCTCTATTTGTC	64.98	284	284
			Rev	TCTACCTCCGCAGTCGATTGTCAG	61.45		
101250001	*Solyc03g121240*	*bHLH87*	For	GTACCAGGAGGAAGTAAAATGGATAC	60.10	221	221
			Rev	GAGAACATGTCAACTCTTTGGTCG	61.45		
101256853	*Solyc12g044390*	*DREB3*	For	GAGAATTTGGTTGGGTACTTATCC	59.73	228	228
			Rev	CGTTTCCATCGATTCACTGTGTCTC	63.46		
101252588	*Solyc05g050220*	*TAF-1-like*	For	GCAGAAGAATTGGCAGTGCAGGTTCA	65.30	221	303
			Rev	CTCTTGCTAGTAGGTCTGCTGTGC	64.98		
101258368	*Solyc05g014470*	*GAPDH*	For	CAACATCATCCCTAGCAGCACT	65.30	200	290
			Rev	ACCCTTCAATTTACCCTCTGA	64.98		

Supplementary Table S1. Oligos used in this study for gene expression analysis

Gene		Primer Sequence (5' --> 3')	Tm	PCR product
TGB2	For	GACTCCTAGAGCTGATCTCACTG	62.96	241
	Rev	GTGTAAGAATGAAGATAAGTATGAGGAC	61.08	
TGB3	For	CTTCATTCTTACACTGGGTATTGTCCTC	64.10	185
	Rev	GCTTTAAGAACTTCAGGTGTGTTTGGA	62.32	

Supplementary Table S2. RNA-sequencing data quality metrics. (A) RNA-seq clean reads quality metrics

Sample	**Total Raw reads (Mb)**	**Total Clean reads (Mb)**	**Clean reads ratio (%)**
Control	129.93	123.74	95.23%
PepMV	132.43	127.24	96.08%

Supplementary Table S2. RNA-sequencing data quality metrics. (B) Statistical summary of the identified genes and transcripts between mock and PepMV infected plants

Sample	**Total Gene Number**	**Total Transcript Number**
Control	22931	31318
PepMV	22497	30192

Supplementary Table S3. Expression data of the differentially expressed genes (DEGs) identified by RNA-seq analysis. (A) Expression data of the 1120 differentially expressed genes (DEGs) identified by RNA-seq analysis.

GeneID	Length	Control FPKM	PepMV FPKM	log2Fold Change (PepMV/Control)	FDR	Up/Down-Regulation (PepINF/Control)	Pvalue	Symbol	Description	Cellular Component	Molecular Function	Biological Process	Kegg Orthology
101256334	532	0.01	5.2	9.0223678	4.45E-34	Up	3.39E-35	LOC101256334	PREDICTED: Sol	GO:0005840	GO:00037	GO:00064	K02942//l
109118700	2174	0.01	1.83	7.5156998	1.77E-53	Up	9.35E-55	LOC109118700	PREDICTED: Sol	GO:0043231	GO:00037	GO:00094	K17964//l
109118699	2303	0.01	1.37	7.0980321	1.06E-42	Up	6.87E-44	LOC109118699	PREDICTED: Sol	NA	GO:00037	NA	K14398//c
101264023	1666	0.01	1.32	7.0443941	1.01E-27	Up	9.13E-29	LOC101264023	PREDICTED: Sol	NA	NA	NA	NA
101248021	2349	0.07	7.94	6.8256403	4.07E-234	Up	5.97E-236	LOC101248021	PREDICTED: Sol	NA	NA	NA	NA
109119317	977	0.01	0.31	4.9541963	0.00026	Up	9.01E-05	LOC109119317	PREDICTED: Sol	NA	NA	NA	NA
101248351	1087	0.01	0.24	4.5849625	0.000671	Up	0.000245	LOC101248351	PREDICTED: Sol	GO:0005634	GO:00009	GO:00063	K09422//t
101266758	1763	0.01	0.22	4.4594316	1.51E-05	Up	4.47E-06	LOC101266758	PREDICTED: Sol	NA	GO:00468	GO:00091	K00764//a
101261785	1996	0.01	0.22	4.4594316	2.12E-05	Up	6.34E-06	LOC101261785	PREDICTED: Sol	GO:0016021	GO:00152	GO:00068	K03327//
104644719	730	0.03	0.51	4.0874628	0.0003	Up	0.000105	LOC104644719	PREDICTED: Sol	GO:0016021	GO:00167	NA	NA
101249661	375	0.06	0.99	4.0443941	0.000719	Up	0.000263	LOC101249661	PREDICTED: Sol	GO:0005737	GO:00469	GO:00300	K19307//
101261464	3007	0.02	0.31	3.9541963	1.28E-09	Up	2.67E-10	LOC101261464	PREDICTED: Sol	GO:0000502	GO:00302	GO:00421	K03028//
101261911	2416	0.42	6.47	3.9453045	1.15E-147	Up	2.50E-149	LOC101261911	PREDICTED: Sol	GO:0005634	GO:00036	GO:00096	K10882//c
101268190	2061	0.01	0.15	3.9068906	0.00026	Up	9.01E-05	LOC101268190	PREDICTED: Sol	NA	NA	NA	K17604//z
109119186	2131	0.01	0.15	3.9068906	0.000101	Up	3.31E-05	LOC109119186	PREDICTED: Sol	NA	NA	NA	K19985//e
101260458	2133	0.01	0.14	3.8073549	0.00026	Up	9.01E-05	LOC101260458	PREDICTED: Sol	NA	NA	NA	K17604//z
101259485	583	3.41	41.3	3.5982981	3.83E-193	Up	6.62E-195	LOC101259485	PREDICTED: Sol	NA	NA	NA	NA
104647537	2901	0.01	0.12	3.5849625	0.0003	Up	0.000105	LOC104647537	PREDICTED: Sol	NA	NA	NA	K01528//
101267923	885	0.07	0.83	3.5676845	5.54E-07	Up	1.43E-07	LOC101267923	PREDICTED: Sol	NA	GO:00167	NA	K00799//
101247045	1400	0.04	0.46	3.523562	2.99E-06	Up	8.27E-07	LOC101247045	PREDICTED: Sol	GO:0016021	NA	NA	K02184//f
101251786	1089	0.12	1.33	3.4703199	1.91E-12	Up	3.27E-13	LOC101251786	PREDICTED: Sol	NA	NA	NA	K12486//s
100147717	742	180.41	1996.54	3.4681508	0	Up	0	LOC100147717	PREDICTED: Sol	NA	NA	NA	K03006//
101261106	1901	0.05	0.54	3.4329594	2.36E-09	Up	5.03E-10	LOC101261106	PREDICTED: Sol	NA	NA	NA	K20929//
104646534	737	0.05	0.54	3.4329594	0.000299	Up	0.000105	LOC104646534	PREDICTED: Sol	NA	NA	NA	K22184//
104649450	729	0.19	1.95	3.3594028	1.02E-11	Up	1.82E-12	LOC104649450	PREDICTED: Sol	NA	NA	NA	NA
101265357	2515	0.04	0.38	3.2479275	4.77E-08	Up	1.12E-08	LOC101265357	PREDICTED: Sol	GO:0016021	NA	NA	NA
104647144	502	2.23	20.53	3.202618	3.73E-73	Up	1.51E-74	LOC104647144	PREDICTED: Sol	NA	NA	NA	NA
101244376	1229	0.04	0.35	3.129283	0.000247	Up	8.53E-05	LOC101244376	Solanum lycopersi	GO:0009505	GO:00468	GO:00069	K00430//
109118705	1015	0.04	0.33	3.0443941	0.000719	Up	0.000263	LOC109118705	PREDICTED: Sol	GO:0016021	GO:00046	NA	K13420//
104648606	1296	0.04	0.33	3.0443941	0.000859	Up	0.000318	LOC104648606	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	NA

544271	1399	0.81	6.64	3.0351894	1.52E-67	Up	6.62E-69	ARG2	PREDICTED: Sol	NA	GO:00468	NA	K01476//a
101255243	1134	0.1	0.81	3.0179219	2.33E-07	Up	5.82E-08	LOC101255243	PREDICTED: Sol	GO:0016021	GO:00055	NA	K01537//
101245301	633	147.06	1164.57	2.9853206	0	Up	0	SN2	Solanum lycopersi	GO:0005618	NA	GO:00069	K03860//
101252520	604	0.57	4.51	2.9840936	4.89E-19	Up	6.03E-20	LOC101252520	PREDICTED: Sol	NA	NA	NA	NA
101267575	1608	0.18	1.41	2.9696264	5.24E-17	Up	7.08E-18	LOC101267575	PREDICTED: Sol	GO:0016021	GO:00167	GO:00102	K20667//
101253130	639	0.22	1.72	2.9668331	3.35E-08	Up	7.75E-09	LOC101253130	PREDICTED: Sol	NA	NA	NA	NA
101252786	1384	0.05	0.38	2.9259994	0.000258	Up	8.93E-05	LOC101252786	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	K03094//
101264863	1549	28.23	209.12	2.88903	0	Up	0	LOC101264863	PREDICTED: Sol	NA	GO:00084	GO:00090	K00815//t
101256104	1933	0.05	0.37	2.8875253	7.90E-06	Up	2.27E-06	LOC101256104	PREDICTED: Sol	GO:0016021	GO:00167	NA	K07428//c
101265400	1393	0.98	6.62	2.7559776	1.44E-60	Up	6.82E-62	LOC101265400	PREDICTED: Sol	NA	NA	NA	K04708//
101250202	888	8.49	56.43	2.7326259	0	Up	0	LOC101250202	PREDICTED: Sol	GO:0000151	GO:00616	GO:00427	K11975//
101264605	1130	26.87	176.02	2.7116711	0	Up	0	LOC101264605	Solanum lycopersi	GO:0016021	GO:00052	NA	K09872//a
104647308	424	0.3	1.96	2.7078192	1.12E-05	Up	3.25E-06	LOC104647308	PREDICTED: Sol	NA	NA	NA	NA
101267701	746	1.17	7.57	2.6937848	3.76E-35	Up	2.78E-36	LOC101267701	PREDICTED: Sol	NA	NA	GO:00069	NA
101260552	1027	0.09	0.58	2.688056	0.000164	Up	5.52E-05	LOC101260552	PREDICTED: Sol	NA	GO:00167	NA	NA
101249807	1298	0.79	5.05	2.6763588	1.20E-41	Up	7.85E-43	LOC101249807	PREDICTED: Sol	GO:0005634	GO:00036	GO:00101	K09272//s
104647943	495	3.58	21.93	2.6148743	5.44E-62	Up	2.53E-63	LOC104647943	PREDICTED: Sol	NA	NA	NA	NA
101263989	1836	2.14	13.07	2.6105764	2.75E-148	Up	5.95E-150	LOC101263989	PREDICTED: Sol	NA	NA	NA	K20496//l
101262976	1088	1.35	8.23	2.607933	1.25E-55	Up	6.44E-57	LOC101262976	PREDICTED: Sol	NA	NA	NA	K04733//i
101255585	1481	7.41	44.89	2.5988486	0	Up	0	LOC101255585	PREDICTED: Sol	NA	NA	NA	K21596//c
101268097	1680	1.23	7.33	2.5751549	5.23E-75	Up	2.05E-76	LOC101268097	PREDICTED: Sol	NA	GO:00036	GO:00063	K15032//
544031	779	0.33	1.95	2.5629362	1.21E-09	Up	2.53E-10	ER5	Solanum lycopersi	NA	NA	GO:00092	NA
101256859	1826	36.94	217.37	2.5568971	0	Up	0	LOC101256859	PREDICTED: Sol	GO:0043231	GO:00800	GO:00081	K21371//c
101252885	657	1.28	7.34	2.5196363	1.31E-27	Up	1.19E-28	LOC101252885	PREDICTED: Sol	NA	NA	GO:00069	NA
101260563	1720	29.75	168.57	2.5023862	0	Up	0	LOC101260563	PREDICTED: Sol	GO:0009508	NA	GO:00063	NA
101268894	789	1.94	10.95	2.4968023	5.63E-49	Up	3.20E-50	LOC101268894	Solanum lycopersi	GO:0005783	NA	GO:00101	NA
101245410	1412	0.25	1.4	2.4854268	3.92E-12	Up	6.84E-13	LOC101245410	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	K09286//
101267770	2708	0.06	0.33	2.4594316	5.58E-06	Up	1.58E-06	LOC101267770	PREDICTED: Sol	NA	NA	NA	NA
101243937	2971	0.14	0.77	2.4594316	2.50E-14	Up	3.88E-15	LOC101243937	PREDICTED: Sol	GO:0016021	GO:00055	NA	K04733//i
101258262	4181	0.04	0.22	2.4594316	6.80E-06	Up	1.94E-06	LOC101258262	PREDICTED: Sol	GO:0016021	GO:00046	NA	K13420//
104646731	1292	1.02	5.49	2.428237	3.69E-40	Up	2.48E-41	LOC104646731	PREDICTED: Sol	NA	NA	GO:00069	K10745//r
101255344	1559	5.12	27.12	2.4051415	2.30E-236	Up	3.35E-238	LOC101255344	PREDICTED: Sol	GO:0005634	GO:00048	GO:00062	K03648//
104645976	1005	6.95	36.52	2.3936019	1.08E-198	Up	1.82E-200	LOC104645976	PREDICTED: Sol	GO:0016021	GO:00081	GO:00066	K07252//
101250114	964	0.18	0.93	2.3692338	1.13E-05	Up	3.30E-06	LOC101250114	PREDICTED: Sol	GO:0005634	GO:00469	NA	K08065//
101260051	781	0.28	1.42	2.3423922	1.01E-06	Up	2.67E-07	LOC101260051	PREDICTED: Sol	NA	NA	NA	K04733//i
101250357	2859	8.68	43.83	2.3361517	0	Up	0	LOC101250357	PREDICTED: Sol	NA	NA	NA	K01087//t
104645999	393	1.48	7.37	2.3160674	1.82E-14	Up	2.79E-15	LOC104645999	PREDICTED: Sol	GO:0016021	NA	NA	NA

101261864	1569	0.36	1.79	2.3138908	9.94E-16	Up	1.43E-16	LOC101261864	PREDICTED: Sol	GO:0005634	GO:000552	GO:00325(	K15601//l
101254673	1667	0.54	2.61	2.2730185	2.56E-23	Up	2.67E-24	LOC101254673	PREDICTED: Sol	GO:0005794	GO:001641	GO:00715	K16573//
101255673	1413	0.11	0.53	2.2684888	7.56E-05	Up	2.43E-05	LOC101255673	PREDICTED: Sol	GO:0005737	GO:000458	GO:00333	K01581//
101248826	1300	0.37	1.78	2.2662801	8.09E-13	Up	1.36E-13	LOC101248826	PREDICTED: Sol	NA	NA	NA	NA
101266990	2251	0.11	0.52	2.2410081	3.66E-07	Up	9.26E-08	LOC101266990	PREDICTED: Sol	GO:0016021	NA	NA	K18171//
101252509	1590	3.38	15.92	2.2357452	4.19E-128	Up	1.05E-129	LOC101252509	PREDICTED: Sol	NA	GO:00167(	NA	K20556//c
101256502	793	6.47	30.15	2.2203204	5.65E-116	Up	1.54E-117	LOC101256502	PREDICTED: Sol	GO:0046658	GO:000455	NA	K03006//
543837	917	17.5	78.83	2.1713899	0	Up	0	PR-5	Solanum lycopersi	NA	NA	NA	K04733//i
101253069	2402	1.42	6.31	2.1517491	3.02E-74	Up	1.19E-75	LOC101253069	PREDICTED: Sol	GO:0016021	GO:000545	NA	K13862//s
101246212	2240	2.01	8.91	2.1482299	1.77E-97	Up	5.55E-99	LOC101246212	PREDICTED: Sol	GO:0016021	GO:000552	NA	K04733//i
101247976	4798	6.03	26.68	2.1455288	0	Up	0	DCL2d	Solanum lycopersi	NA	GO:000372	GO:000635	K11592//e
104646732	1753	0.1	0.44	2.1375035	8.84E-05	Up	2.87E-05	LOC104646732	PREDICTED: Sol	NA	NA	GO:000695	NA
101251725	479	1.48	6.45	2.123702	2.87E-14	Up	4.47E-15	LOC101251725	PREDICTED: Sol	NA	NA	GO:000973	K14488//
104646809	1314	0.12	0.52	2.1154772	0.000126	Up	4.17E-05	LOC104646809	PREDICTED: Sol	NA	NA	NA	NA
101252867	609	63.03	269.88	2.0982075	0	Up	0	LOC101252867	PREDICTED: Sol	NA	NA	NA	K03860//
101245904	632	24.36	103.14	2.0820179	9.89E-284	Up	1.20E-285	LOC101245904	PREDICTED: Sol	GO:0048046	GO:004713	GO:000666	K03671//t
544212	1259	0.2	0.83	2.0531113	1.05E-05	Up	3.05E-06	LOC544212	PREDICTED: Sol	GO:0016020	NA	GO:000966	K20628//e
101246976	471	58.04	240.23	2.0492969	0	Up	0	LOC101246976	PREDICTED: Sol	GO:0016021	NA	NA	NA
101263175	1195	40.04	165.22	2.0448745	0	Up	0	LOC101263175	PREDICTED: Sol	GO:0016021	GO:004435	GO:007171	K10666//
104646059	828	0.26	1.07	2.0410273	0.000112	Up	3.68E-05	LOC104646059	PREDICTED: Sol	NA	NA	NA	K00799//
101262502	1131	0.22	0.9	2.0324215	4.10E-05	Up	1.27E-05	LOC101262502	PREDICTED: Sol	NA	NA	NA	NA
101251987	1134	1.57	6.4	2.0273073	1.67E-32	Up	1.33E-33	LOC101251987	PREDICTED: Sol	NA	NA	NA	NA
101246628	1396	27.34	111.14	2.023293	0	Up	0	LOC101246628	PREDICTED: Sol	GO:0009535	GO:001616	GO:000976	K14172//l
101246149	699	2.79	11.29	2.0167085	5.96E-34	Up	4.56E-35	LOC101246149	PREDICTED: Sol	NA	NA	NA	K09539//
101267371	763	0.22	0.89	2.0163018	0.000568	Up	0.000206	LOC101267371	PREDICTED: Sol	NA	NA	GO:004662	K14488//
101246713	1824	2.24	9.04	2.012824	1.40E-73	Up	5.60E-75	LOC101246713	PREDICTED: Sol	GO:0005576	GO:000465	GO:000597	K01184//
101261180	2060	5.9	23.46	1.9914162	1.82E-211	Up	2.86E-213	LOC101261180	PREDICTED: Sol	GO:0005634	GO:000367	GO:000635	NA
101262811	850	0.28	1.1	1.9740048	6.50E-05	Up	2.07E-05	LOC101262811	PREDICTED: Sol	GO:0005634	GO:000367	GO:000635	K09260//
101254739	2441	0.5	1.96	1.9708537	1.90E-21	Up	2.12E-22	LOC101254739	PREDICTED: Sol	NA	NA	NA	K02184//f
101268195	2375	0.24	0.94	1.9696264	1.75E-10	Up	3.42E-11	LOC101268195	PREDICTED: Sol	GO:0016020	NA	NA	K13412//c
101257220	735	0.46	1.8	1.9682911	2.28E-06	Up	6.22E-07	LOC101257220	PREDICTED: Sol	NA	GO:000808	NA	NA
101251607	1993	4.45	17.35	1.9630584	1.31E-148	Up	2.81E-150	LOC101251607	PREDICTED: Sol	NA	GO:004687	NA	K05277//l
101246590	749	0.5	1.94	1.9560567	7.69E-07	Up	2.01E-07	LOC101246590	PREDICTED: Sol	GO:0005634	GO:000367	GO:000635	K14516//e
101263653	1069	8.88	34.17	1.9440987	6.62E-151	Up	1.40E-152	LOC101263653	PREDICTED: Sol	NA	NA	NA	K04733//i
101243792	951	0.49	1.88	1.939879	2.72E-08	Up	6.26E-09	LOC101243792	PREDICTED: Sol	NA	NA	NA	NA
101262337	1127	0.2	0.76	1.9259994	0.000226	Up	7.75E-05	LOC101262337	PREDICTED: Sol	NA	NA	NA	NA
101246961	581	4.82	18.31	1.9255267	5.28E-42	Up	3.45E-43	LOC101246961	PREDICTED: Sol	NA	GO:00048(	GO:000961	NA

101244725	1949	0.27	1.02	1.9175378	3.09E-09	Up	6.63E-10	LOC101244725	PREDICTED: Sol	GO:0043231	GO:00800	GO:00081	K13495//c
778225	2192	3.69	13.9	1.9133922	4.28E-128	Up	1.08E-129	LOC778225	Solanum lycopersi	GO:0009507	GO:00468	GO:00466	K02552//
101253556	1568	0.16	0.6	1.9068906	7.08E-05	Up	2.26E-05	LOC101253556	PREDICTED: Sol	NA	GO:00167	NA	K13065//s
101250018	691	2.13	7.98	1.9055353	2.99E-22	Up	3.25E-23	LOC101250018	PREDICTED: Sol	NA	NA	NA	K14306//
101267994	2074	0.76	2.84	1.9018196	7.53E-25	Up	7.40E-26	LOC101267994	PREDICTED: Sol	GO:0016021	GO:00055	NA	K05681//
101263993	2355	0.45	1.68	1.9004643	3.72E-17	Up	4.98E-18	LOC101263993	PREDICTED: Sol	GO:0005737	GO:00044	GO:00060	K01638//
543951	990	2.52	9.39	1.8977014	1.06E-37	Up	7.49E-39	TIP	Solanum lycopersi	GO:0009705	GO:00152	GO:00342	K09873//a
101259870	1082	0.18	0.67	1.8961642	0.000681	Up	0.000249	LOC101259870	PREDICTED: Sol	GO:0005634	GO:00036	NA	K01870//i
101263261	1553	32.75	121.43	1.8905581	0	Up	0	Tom52	Solanum lycopersi	NA	GO:00055	NA	K10355//a
101255604	1892	11.97	44.34	1.8891856	0	Up	0	LOC101255604	PREDICTED: Sol	GO:0016021	GO:00167	NA	K07428//c
101244403	1537	8.42	30.8	1.8710382	2.16E-188	Up	3.80E-190	LOC101244403	PREDICTED: Sol	GO:0016021	GO:00468	NA	NA
101266172	1238	9.84	35.92	1.8680571	4.44E-175	Up	8.15E-177	LOC101266172	PREDICTED: Sol	GO:0009507	GO:00036	GO:00325	K15032//
101255488	3883	1.19	4.33	1.8634055	1.45E-68	Up	6.19E-70	LOC101255488	PREDICTED: Sol	GO:0043231	GO:00037	GO:00094	K17964//l
104646656	1363	0.21	0.76	1.8556101	4.38E-05	Up	1.37E-05	LOC104646656	PREDICTED: Sol	NA	NA	NA	NA
104646221	533	3.35	12.1	1.852774	2.93E-24	Up	2.94E-25	LOC104646221	PREDICTED: Sol	NA	NA	NA	NA
101253800	822	25.65	92.57	1.8515859	2.74E-288	Up	3.22E-290	LOC101253800	PREDICTED: Sol	GO:0009507	NA	NA	K07253//
101254394	1145	2.26	8.11	1.8433791	1.85E-36	Up	1.34E-37	LOC101254394	PREDICTED: Sol	NA	GO:00036	NA	NA
101246807	1205	15.19	54.44	1.8415452	1.91E-252	Up	2.64E-254	LOC101246807	PREDICTED: Sol	NA	NA	NA	K14496//a
101250317	1217	4.36	15.34	1.8148984	4.86E-71	Up	2.02E-72	LOC101250317	PREDICTED: Sol	GO:0016020	GO:00055	GO:00072	K04392//
101254591	1117	8.67	30.5	1.8147053	2.53E-128	Up	6.35E-130	LOC101254591	PREDICTED: Sol	NA	GO:00164	NA	K09841//
101264084	1271	3.53	12.37	1.8091054	1.00E-59	Up	4.84E-61	LOC101264084	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	NA
101247679	4669	18.16	63.57	1.8075819	0	Up	0	DCL2c	Solanum lycopersi	NA	GO:00037	GO:00063	K11592//e
101255600	989	0.64	2.24	1.8073549	4.19E-09	Up	9.09E-10	LOC101255600	Solanum lycopersi	GO:0009705	GO:00152	GO:00342	K09873//a
101255332	1580	0.14	0.49	1.8073549	0.000757	Up	0.000278	LOC101255332	PREDICTED: Sol	NA	GO:00041	GO:00065	K00924//
101261675	1929	0.93	3.24	1.8006912	1.45E-24	Up	1.44E-25	LOC101261675	PREDICTED: Sol	GO:0043231	GO:00800	GO:00081	K13496//
101256037	989	0.31	1.07	1.7872707	8.37E-05	Up	2.71E-05	LOC101256037	PREDICTED: Sol	NA	GO:00474	GO:00091	K16904//
101264232	3292	0.65	2.22	1.7720481	2.71E-28	Up	2.42E-29	LOC101264232	PREDICTED: Sol	GO:0016021	GO:00163	NA	K13466//
104647423	1047	2.98	10.17	1.7709354	3.04E-39	Up	2.08E-40	LOC104647423	PREDICTED: Sol	NA	NA	NA	NA
101258746	1677	2.17	7.4	1.7698302	2.36E-46	Up	1.41E-47	LOC101258746	PREDICTED: Sol	GO:0005887	GO:00152	GO:00033	K03834//t
104647464	699	0.63	2.14	1.7641871	3.11E-06	Up	8.61E-07	LOC104647464	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	K09260//
101265385	1695	8.93	30.33	1.7640134	9.02E-189	Up	1.58E-190	LOC101265385	PREDICTED: Sol	GO:0016021	NA	NA	K07297//a
101268568	1750	1.46	4.95	1.7614602	1.54E-32	Up	1.22E-33	LOC101268568	PREDICTED: Sol	NA	GO:00163	NA	K14963//
101250032	2636	0.11	0.37	1.7500217	8.00E-05	Up	2.58E-05	LOC101250032	PREDICTED: Sol	NA	GO:00468	NA	K05278//f
101251556	1518	0.36	1.21	1.7489382	1.46E-05	Up	4.31E-06	LOC101251556	PREDICTED: Sol	NA	NA	NA	NA
101248621	670	0.65	2.18	1.7458165	5.40E-06	Up	1.53E-06	LOC101248621	PREDICTED: Sol	NA	NA	GO:00097	K14488//
101263764	2061	13.04	43.69	1.7443592	0	Up	0	LOC101263764	PREDICTED: Sol	NA	NA	NA	K19041//
104647122	1093	0.26	0.87	1.7425038	0.000259	Up	8.96E-05	LOC104647122	PREDICTED: Sol	NA	NA	NA	NA

101256761	1684	0.84	2.81	1.7421089	4.83E-18	Up	6.22E-19	LOC101256761	PREDICTED: Sol	NA	GO:00167	NA	NA
101246259	1247	0.41	1.36	1.7299108	6.46E-07	Up	1.68E-07	LOC101246259	PREDICTED: Sol	GO:0005634	GO:00036	NA	NA
101266674	1524	1.17	3.88	1.7295481	1.62E-21	Up	1.81E-22	LOC101266674	PREDICTED: Sol	NA	GO:00084	GO:00090	K00815//t
101258730	1208	0.19	0.63	1.7293524	0.000724	Up	0.000265	LOC101258730	PREDICTED: Sol	NA	NA	NA	NA
101258643	1095	0.39	1.29	1.725825	5.61E-06	Up	1.59E-06	LOC101258643	PREDICTED: Sol	GO:0016021	NA	NA	K04733//i
104648572	2196	1.08	3.57	1.7248928	7.09E-29	Up	6.21E-30	LOC104648572	PREDICTED: Sol	GO:0016021	GO:00052	NA	K14638//s
101260801	1641	4.09	13.51	1.7238549	4.32E-79	Up	1.62E-80	LOC101260801	PREDICTED: Sol	NA	GO:00468	NA	K05278//f
101266787	1226	31.77	103.75	1.7073743	0	Up	0	LOC101266787	PREDICTED: Sol	GO:0009507	GO:00047	GO:00090	K01807//r
101252998	2378	0.12	0.39	1.7004397	0.000467	Up	0.000167	LOC101252998	PREDICTED: Sol	NA	NA	NA	NA
101249263	1223	4.04	13.1	1.6971396	1.64E-55	Up	8.44E-57	LOC101249263	PREDICTED: Sol	NA	GO:00039	NA	NA
543803	1360	1428.5	4630.37	1.6966264	0	Up	0	ca2	Solanum lycopersi	NA	GO:00082	GO:00159	K01673//c
101244789	1261	1.52	4.92	1.694587	5.90E-22	Up	6.48E-23	LOC101244789	PREDICTED: Sol	NA	GO:00167	NA	K21026//a
101256339	2359	1.44	4.66	1.6942611	1.91E-39	Up	1.30E-40	LOC101256339	PREDICTED: Sol	GO:0016021	NA	NA	NA
104645965	908	0.6	1.94	1.6930222	1.93E-07	Up	4.77E-08	LOC104645965	PREDICTED: Sol	NA	NA	NA	NA
101258619	1740	0.39	1.26	1.6918777	1.50E-08	Up	3.37E-09	LOC101258619	PREDICTED: Sol	GO:0016021	NA	NA	NA
101245183	2288	6.29	20.19	1.682509	6.56E-160	Up	1.30E-161	LOC101245183	PREDICTED: Sol	NA	GO:00087	GO:00015	K21971//
101246482	745	5.57	17.83	1.6785575	4.12E-44	Up	2.57E-45	LOC101246482	PREDICTED: Sol	NA	NA	NA	NA
104644828	410	0.89	2.84	1.6740137	0.000154	Up	5.15E-05	LOC104644828	PREDICTED: Sol	NA	NA	NA	NA
101264700	1780	41.45	132.26	1.6739328	0	Up	0	LOC101264700	PREDICTED: Sol	GO:0005737	GO:00037	NA	K03231//e
101257381	1292	1.03	3.26	1.6622276	1.21E-15	Up	1.75E-16	LOC101257381	PREDICTED: Sol	NA	GO:00468	NA	K00475//
109121128	738	0.48	1.51	1.6534422	0.000156	Up	5.25E-05	LOC109121128	PREDICTED: Sol	NA	NA	NA	NA
101248089	1804	0.83	2.6	1.6473284	1.69E-16	Up	2.34E-17	LOC101248089	PREDICTED: Sol	GO:0016020	GO:00167	GO:00445	K07410//c
101265704	1527	0.84	2.63	1.6466016	3.74E-14	Up	5.85E-15	LOC101265704	PREDICTED: Sol	NA	NA	NA	NA
101244702	1624	8.27	25.86	1.644763	2.96E-139	Up	6.89E-141	LOC101244702	PREDICTED: Sol	NA	GO:00082	GO:00065	K01285//l
104646463	1851	1.11	3.47	1.644376	3.99E-22	Up	4.36E-23	LOC104646463	PREDICTED: Sol	NA	GO:00082	NA	K07151//
101251570	3311	0.24	0.75	1.6438562	5.51E-09	Up	1.20E-09	LOC101251570	PREDICTED: Sol	GO:0016021	GO:00046	NA	K13428//
101260153	1622	0.44	1.37	1.6386005	2.73E-08	Up	6.28E-09	LOC101260153	PREDICTED: Sol	NA	GO:00168	NA	K14963//
101256006	926	175.77	546.88	1.6375354	0	Up	0	CAB12	Solanum lycopersi	GO:0010287	GO:00314	GO:00097	K08910//l
101245470	885	2	6.22	1.6369146	2.29E-18	Up	2.91E-19	LOC101245470	PREDICTED: Sol	NA	NA	NA	NA
101260301	1452	12.74	39.37	1.6277314	7.94E-186	Up	1.41E-187	LOC101260301	PREDICTED: Sol	NA	NA	NA	NA
101260686	2924	9.22	28.41	1.6235602	2.75E-286	Up	3.28E-288	LOC101260686	PREDICTED: Sol	GO:0016021	GO:00055	NA	K20718//
101250079	1338	3.55	10.92	1.6210819	1.01E-47	Up	5.85E-49	LOC101250079	PREDICTED: Sol	NA	GO:00167	NA	K13065//s
101250825	605	5.47	16.82	1.620565	9.77E-32	Up	7.94E-33	LOC101250825	PREDICTED: Sol	NA	GO:00199	GO:00103	NA
101246748	1304	0.44	1.35	1.617384	1.21E-06	Up	3.21E-07	LOC101246748	PREDICTED: Sol	GO:0005634	GO:00009	GO:00063	K09422//t
101260060	1104	20.45	62.68	1.6159043	1.89E-219	Up	2.94E-221	LOC101260060	PREDICTED: Sol	GO:0031248	GO:00045	GO:00064	NA
101243718	1117	0.76	2.32	1.6100535	3.18E-09	Up	6.83E-10	LOC101243718	PREDICTED: Sol	NA	GO:00468	NA	K05282//
101267169	1192	1.47	4.48	1.6076826	1.21E-17	Up	1.59E-18	LOC101267169	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	K13434//

101257326	1360	2.58	7.82	1.5997975	2.74E-34	Up	2.07E-35	LOC101257326	PREDICTED: Sol	GO:0016021	GO:00038	GO:00091	K07870//
101261071	1339	0.41	1.24	1.5966443	3.60E-06	Up	1.00E-06	LOC101261071	PREDICTED: Sol	GO:0009506	NA	GO:00199	K20628//e
543795	1258	36.83	111.38	1.5965369	0	Up	0	LOC543795	PREDICTED: Sol	GO:0016020	NA	GO:00096	K20628//e
101248376	1199	11.9	35.83	1.5902065	4.91E-134	Up	1.19E-135	LOC101248376	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	NA
101250851	3890	5.24	15.76	1.5886288	7.01E-197	Up	1.19E-198	LOC101250851	PREDICTED: Sol	GO:0016021	GO:00046	GO:00064	K00924//
101246318	1876	1.38	4.11	1.5744701	6.86E-25	Up	6.73E-26	LOC101246318	PREDICTED: Sol	NA	GO:00084	GO:00067	K01082//
101253386	1807	0.33	0.98	1.5703157	2.10E-06	Up	5.71E-07	LOC101253386	PREDICTED: Sol	NA	GO:00055	NA	K13448//c
101262875	1482	31.39	93.15	1.5692507	0	Up	0	LOC101262875	Solanum lycopersi	GO:0016021	NA	GO:00068	K15109//s
101254312	1737	14.13	41.88	1.5675	1.26E-224	Up	1.93E-226	LOC101254312	PREDICTED: Sol	GO:0043231	GO:00037	GO:00094	K06180//
101248387	650	15.2	45.04	1.5671355	5.56E-86	Up	1.94E-87	LOC101248387	PREDICTED: Sol	NA	NA	NA	K01513//e
101257465	1288	24.58	72.79	1.5662553	1.33E-285	Up	1.59E-287	LOC101257465	PREDICTED: Sol	GO:0005622	GO:00052	NA	K14399//
101254471	1785	21.18	62.68	1.5653026	0	Up	0	LOC101254471	PREDICTED: Sol	NA	GO:00468	GO:00454	K01728//
104648056	882	1.41	4.16	1.5608884	8.77E-12	Up	1.56E-12	LOC104648056	PREDICTED: Sol	NA	NA	NA	K11273//c
101248663	3693	0.47	1.38	1.5539356	1.82E-16	Up	2.52E-17	LOC101248663	PREDICTED: Sol	GO:0005634	GO:00080	GO:00062	K10862//t
101251973	2333	6.39	18.72	1.5506926	3.13E-134	Up	7.59E-136	LOC101251973	PREDICTED: Sol	GO:0005634	GO:00048	NA	K08332//
101262525	788	8.06	23.6	1.5499351	5.97E-55	Up	3.10E-56	LOC101262525	PREDICTED: Sol	NA	NA	NA	NA
101255793	1619	6.5	19	1.5474878	1.65E-93	Up	5.31E-95	LOC101255793	PREDICTED: Sol	GO:0005576	GO:00046	GO:00059	K01184//
100134889	1150	1	2.91	1.5410192	7.47E-11	Up	1.43E-11	GA2ox4	Solanum lycopersi	NA	GO:00468	GO:00094	K04125//
101268244	927	0.42	1.22	1.5384199	0.000272	Up	9.43E-05	LOC101268244	PREDICTED: Sol	NA	NA	GO:00466	K14488//
101254986	847	50.65	145.68	1.5241687	0	Up	0	LOC101254986	PREDICTED: Sol	GO:0005623	GO:00150	GO:00454	K03676//
104647171	1374	0.43	1.23	1.5162498	6.15E-06	Up	1.75E-06	LOC104647171	PREDICTED: Sol	NA	NA	NA	K03006//
101248064	934	19.21	54.92	1.5154741	1.44E-146	Up	3.15E-148	LOC101248064	PREDICTED: Sol	NA	NA	NA	NA
101263304	1999	3.86	10.89	1.4963312	1.60E-63	Up	7.27E-65	LOC101263304	PREDICTED: Sol	NA	GO:00167	GO:00081	K13495//c
544122	2382	6.77	19.02	1.4902895	3.23E-131	Up	7.96E-133	MFP1	Solanum lycopersi	GO:0016363	GO:00036	NA	K20283//
101246986	1434	10.76	30.16	1.4869584	7.33E-124	Up	1.90E-125	LOC101246986	PREDICTED: Sol	NA	NA	NA	NA
101263329	1226	0.39	1.09	1.4827821	9.03E-05	Up	2.93E-05	LOC101263329	PREDICTED: Sol	GO:0005739	NA	NA	K18179//c
101262252	1154	22.5	62.75	1.4796905	1.23E-201	Up	2.03E-203	LOC101262252	PREDICTED: Sol	NA	NA	NA	K09841//
101246760	1085	0.69	1.91	1.4689044	1.16E-06	Up	3.07E-07	LOC101246760	PREDICTED: Sol	NA	NA	GO:20000	NA
101245177	1115	18.55	51.32	1.468102	1.31E-157	Up	2.63E-159	LOC101245177	PREDICTED: Sol	NA	NA	NA	K17911//
101255616	2593	0.66	1.82	1.4634005	5.70E-14	Up	9.03E-15	LOC101255616	PREDICTED: Sol	GO:0005622	GO:00465	NA	K17756//l
101055611	3554	1.22	3.36	1.4615801	1.95E-34	Up	1.47E-35	LOC101055611	Solanum lycopersi	GO:0005886	GO:00479	GO:00059	K00696//s
101261981	1592	0.28	0.77	1.4594316	0.000257	Up	8.87E-05	LOC101261981	PREDICTED: Sol	NA	GO:00167	GO:00065	NA
101257978	1242	69.05	189.77	1.4585386	0	Up	0	LOC101257978	PREDICTED: Sol	NA	NA	NA	K22068//i
101267821	829	2.67	7.32	1.4550039	5.20E-17	Up	7.02E-18	LOC101267821	PREDICTED: Sol	GO:0005576	NA	NA	K20412//
104645668	1399	1.41	3.86	1.4529057	2.25E-14	Up	3.48E-15	LOC104645668	PREDICTED: Sol	NA	GO:00167	NA	K12639//c
104648136	1202	0.41	1.12	1.4498029	0.000148	Up	4.95E-05	LOC104648136	PREDICTED: Sol	NA	GO:00038	NA	K17508//
101267261	838	1.67	4.55	1.4460184	3.92E-11	Up	7.34E-12	LOC101267261	PREDICTED: Sol	NA	NA	NA	NA

104646621	1914	0.32	0.87	1.4429435	2.77E-05	Up	8.44E-06	LOC104646621	PREDICTED: Sol	GO:0005730	NA	NA	K14855//r
101268608	1018	43.94	119.2	1.4397775	0	Up	0	LOC101268608	PREDICTED: Sol	NA	NA	NA	K13447//r
101262956	1442	15.27	41.28	1.4347429	7.35E-160	Up	1.46E-161	LOC101262956	PREDICTED: Sol	NA	GO:00167	NA	NA
544237	1782	82.18	221.81	1.4324652	0	Up	0	LOC544237	Solanum lycopersi	GO:0005623	GO:00090	GO:00454	K00382//
101258983	1747	3.58	9.66	1.4320636	3.88E-46	Up	2.33E-47	LOC101258983	PREDICTED: Sol	GO:0016021	GO:00052	NA	K00850//
101268660	756	4.67	12.6	1.4319293	2.61E-25	Up	2.53E-26	LOC101268660	PREDICTED: Sol	NA	NA	NA	NA
101243914	1627	9.52	25.67	1.4310498	1.66E-112	Up	4.60E-114	LOC101243914	Solanum lycopersi	GO:0005886	NA	NA	NA
101254402	1705	19.56	52.73	1.4307176	2.17E-241	Up	3.08E-243	LOC101254402	PREDICTED: Sol	GO:0043231	GO:00800	GO:00081	K13495//c
101245976	1477	25.15	67.73	1.4292366	8.17E-267	Up	1.06E-268	LOC101245976	PREDICTED: Sol	NA	NA	NA	K13115//c
101259800	575	1.17	3.14	1.424256	1.68E-05	Up	4.98E-06	LOC101259800	PREDICTED: Sol	NA	NA	NA	K03860//
101247878	1089	0.79	2.11	1.4173184	6.14E-07	Up	1.59E-07	LOC101247878	PREDICTED: Sol	NA	NA	NA	NA
101260430	1455	27.84	74.29	1.4160088	5.77E-284	Up	6.97E-286	LOC101260430	PREDICTED: Sol	GO:0016021	GO:00081	NA	K12589//e
101251870	1070	0.59	1.57	1.4119777	2.77E-05	Up	8.44E-06	LOC101251870	PREDICTED: Sol	GO:0016021	NA	NA	K19041//
101251239	716	52.85	140.51	1.4106974	1.07E-226	Up	1.63E-228	LOC101251239	PREDICTED: Sol	NA	NA	NA	NA
101262198	1496	2.12	5.63	1.4090707	8.44E-23	Up	9.00E-24	LOC101262198	Solanum lycopersi	NA	GO:00469	NA	K16190//
101268283	958	5.28	14.02	1.4088765	4.14E-35	Up	3.07E-36	LOC101268283	PREDICTED: Sol	NA	NA	GO:00069	K10745//r
101258163	3255	2.49	6.59	1.4041327	2.59E-57	Up	1.30E-58	LOC101258163	PREDICTED: Sol	NA	GO:00302	GO:00059	K12309//
101250586	1623	41.78	110.39	1.4017251	0	Up	0	LOC101250586	PREDICTED: Sol	GO:0016021	GO:00164	GO:00066	K20416//
101261193	1736	2.54	6.7	1.3993326	6.41E-31	Up	5.34E-32	LOC101261193	PREDICTED: Sol	GO:0043231	GO:00800	GO:00081	K12356//c
101260610	1593	4.3	11.34	1.3990121	2.45E-47	Up	1.43E-48	LOC101260610	PREDICTED: Sol	NA	GO:00167	NA	K13065//s
101254642	2166	6.11	15.99	1.3879257	6.65E-90	Up	2.22E-91	LOC101254642	PREDICTED: Sol	NA	NA	NA	NA
101249824	2602	11.32	29.41	1.3774328	3.24E-196	Up	5.54E-198	PAL2	Solanum lycopersi	GO:0005737	GO:00455	GO:00098	K10775//
101248819	1917	8.7	22.6	1.3772355	1.83E-110	Up	5.12E-112	LOC101248819	PREDICTED: Sol	GO:0005829	GO:00167	GO:00081	K13258//
101268314	605	689.98	1789.73	1.3751155	0	Up	0	LOC101268314	PREDICTED: Sol	NA	NA	NA	NA
101268846	2662	0.9	2.33	1.372333	9.53E-17	Up	1.30E-17	LOC101268846	PREDICTED: Sol	NA	GO:00050	NA	K10418//
101254974	1033	1.08	2.78	1.3640536	5.90E-08	Up	1.39E-08	LOC101254974	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	NA
101267854	2519	0.54	1.39	1.3640536	7.45E-10	Up	1.53E-10	LOC101267854	PREDICTED: Sol	NA	NA	GO:00165	K03063//
104646517	1315	0.79	2.03	1.3615552	1.71E-07	Up	4.21E-08	LOC104646517	PREDICTED: Sol	NA	NA	NA	NA
101264067	1651	2.52	6.45	1.3558754	4.17E-27	Up	3.83E-28	LOC101264067	PREDICTED: Sol	GO:0016021	NA	NA	K04733//i
101251812	847	1.11	2.84	1.3553313	9.24E-07	Up	2.43E-07	LOC101251812	PREDICTED: Sol	NA	NA	NA	NA
101249327	664	32.03	81.88	1.3540873	1.65E-127	Up	4.18E-129	LOC101249327	PREDICTED: Sol	GO:0009507	NA	NA	NA
104647914	2388	0.2	0.51	1.3504972	0.000413	Up	0.000147	LOC104647914	PREDICTED: Sol	NA	NA	NA	K19525//
101263714	1466	8.81	22.44	1.3488588	8.34E-81	Up	3.05E-82	LOC101263714	PREDICTED: Sol	GO:0005737	GO:00468	GO:00300	K17046//
101256987	1010	2.16	5.5	1.3484003	3.32E-14	Up	5.18E-15	LOC101256987	PREDICTED: Sol	NA	NA	NA	NA
101260911	1839	8.68	22.07	1.3463197	6.24E-100	Up	1.90E-101	LOC101260911	PREDICTED: Sol	GO:0016021	GO:00468	GO:00454	K01728//
100736527	1149	71.94	182.88	1.3460312	0	Up	0	LOC100736527	Solanum lycopersi	GO:0005887	GO:00152	GO:00342	K09872//a
101258159	832	22.96	58.27	1.3436307	2.12E-114	Up	5.80E-116	LOC101258159	PREDICTED: Sol	GO:0005634	GO:00036	GO:00458	NA

101256655	1530	1.05	2.66	1.3410369	7.27E-11	Up	1.39E-11	LOC101256655	PREDICTED: Sol	NA	GO:000367	NA	K20557//t
101246041	2533	1.82	4.59	1.3345557	3.47E-29	Up	3.02E-30	LOC101246041	PREDICTED: Sol	GO:0016021	GO:000467	NA	K04730//i
101267289	2413	3.5	8.81	1.3317871	3.35E-49	Up	1.90E-50	LOC101267289	PREDICTED: Sol	NA	GO:004687	NA	NA
101249287	1130	85.17	214.34	1.3314839	0	Up	0	LOC101249287	PREDICTED: Sol	GO:0005838	NA	GO:000650	K03031//
101261631	2530	0.37	0.93	1.3297054	8.63E-07	Up	2.26E-07	LOC101261631	PREDICTED: Sol	NA	GO:000425	NA	K12619//
109120511	1126	0.43	1.08	1.3286227	0.000675	Up	0.000246	LOC109120511	PREDICTED: Sol	NA	NA	NA	K03006//
101261158	1945	9	22.58	1.3270486	1.22E-105	Up	3.57E-107	LOC101261158	PREDICTED: Sol	GO:0009507	GO:000816	GO:001935	K02303//
101243919	909	3.1	7.76	1.3237884	3.44E-17	Up	4.60E-18	LOC101243919	PREDICTED: Sol	GO:0005634	GO:000552	GO:003250	K20496//l
109118704	590	3.14	7.86	1.3237648	3.65E-11	Up	6.80E-12	LOC109118704	PREDICTED: Sol	NA	NA	GO:000973	K14488//
101252601	6534	24.64	61.62	1.3223964	0	Up	0	LOC101252601	PREDICTED: Sol	NA	NA	GO:000973	K03255//
101265617	1109	177.45	443.69	1.3221395	0	Up	0	LOC101265617	PREDICTED: Sol	GO:0010287	GO:003140	GO:000976	K08909//l
104645933	1669	0.48	1.2	1.3219281	1.22E-05	Up	3.56E-06	LOC104645933	PREDICTED: Sol	GO:0016021	NA	NA	NA
543582	1146	71.17	177.43	1.3179088	0	Up	0	EXP2	Solanum lycopersi	GO:0016020	NA	GO:000960	K20628//e
101254918	933	277.41	690.17	1.314932	0	Up	0	LOC101254918	PREDICTED: Sol	GO:0005618	GO:004573	NA	NA
100125906	1425	43.58	108.37	1.3142273	0	Up	0	ODD	Solanum lycopersi	NA	GO:004687	NA	K06892//f
101247176	3257	0.33	0.82	1.3131579	1.60E-07	Up	3.92E-08	LOC101247176	PREDICTED: Sol	GO:0005634	GO:004356	GO:000635	K14494//
101244240	2770	0.97	2.41	1.3129765	3.19E-16	Up	4.48E-17	LOC101244240	PREDICTED: Sol	NA	NA	NA	K12619//
101248862	710	29.64	73.6	1.3121603	2.15E-117	Up	5.80E-119	LOC101248862	PREDICTED: Sol	GO:0016021	NA	NA	NA
101252626	1178	25.59	63.53	1.3118579	4.22E-173	Up	7.91E-175	LOC101252626	PREDICTED: Sol	NA	NA	GO:008016	K04733//i
101243657	1124	0.92	2.28	1.3093281	7.43E-07	Up	1.94E-07	LOC101243657	PREDICTED: Sol	NA	NA	NA	K13070//
104645884	982	629.08	1557.18	1.3076203	0	Up	0	Cab-1A	Solanum lycopersi	GO:0010287	GO:003140	GO:000976	K08912//l
101248844	872	1.95	4.82	1.305559	1.75E-10	Up	3.43E-11	LOC101248844	PREDICTED: Sol	NA	NA	GO:000973	K14488//
101252871	2766	0.51	1.26	1.3048546	2.82E-09	Up	6.04E-10	LOC101252871	PREDICTED: Sol	NA	GO:004355	GO:000695	K19613//l
101258235	3895	0.17	0.42	1.3048546	4.25E-05	Up	1.32E-05	LOC101258235	PREDICTED: Sol	NA	GO:001678	GO:004685	K01099//i
101260157	1584	0.62	1.53	1.3031915	1.29E-06	Up	3.43E-07	LOC101260157	PREDICTED: Sol	GO:0043231	GO:000372	GO:000945	K19589//r
101251463	3475	1.12	2.76	1.3011695	2.01E-23	Up	2.09E-24	LOC101251463	PREDICTED: Sol	GO:0016021	GO:000521	NA	K14638//s
101258284	885	24.76	60.86	1.297483	9.10E-121	Up	2.42E-122	LOC101258284	PREDICTED: Sol	GO:0016021	NA	NA	NA
101248254	687	128.79	316.54	1.2973672	0	Up	0	LOC101248254	Solanum lycopersi	GO:0005576	NA	NA	K03860//
101247257	552	3.11	7.64	1.2966581	5.04E-10	Up	1.02E-10	LOC101247257	PREDICTED: Sol	GO:0005576	GO:000823	GO:000961	NA
101260372	2271	10.63	26.04	1.2925879	7.92E-138	Up	1.87E-139	LOC101260372	PREDICTED: Sol	NA	NA	NA	K17535//s
101250945	1927	1.25	3.06	1.2916036	1.82E-14	Up	2.80E-15	LOC101250945	PREDICTED: Sol	GO:0005634	GO:004356	GO:001021	K18835//
101267047	1396	3.54	8.66	1.2906177	3.59E-28	Up	3.22E-29	LOC101267047	PREDICTED: Sol	GO:0005634	GO:000552	GO:003250	K15601//l
101259886	1792	8.29	20.28	1.2906136	1.19E-83	Up	4.27E-85	LOC101259886	PREDICTED: Sol	GO:0016021	GO:000467	GO:000646	K04733//i
101252930	727	2.04	4.99	1.2904707	7.51E-09	Up	1.66E-09	LOC101252930	PREDICTED: Sol	NA	NA	GO:000973	K14488//
101247792	717	38.56	94.11	1.287243	1.15E-143	Up	2.57E-145	LOC101247792	PREDICTED: Sol	GO:0005685	GO:000372	GO:000024	K11088//s
104648148	580	10.78	26.24	1.2834105	4.53E-33	Up	3.55E-34	LOC104648148	PREDICTED: Sol	NA	NA	NA	NA
101257526	2017	2.52	6.12	1.2801079	8.92E-29	Up	7.86E-30	LOC101257526	PREDICTED: Sol	GO:0016021	GO:000842	GO:190165	K05350//

101257576	2504	41.83	101.51	1.279012	0	Up	0	LOC101257576	PREDICTED: Sol	NA	NA	NA	K17275//
101252446	1278	10.79	26.15	1.2771161	1.23E-73	Up	4.94E-75	LOC101252446	PREDICTED: Sol	NA	NA	GO:00512(	K21919//
544110	1752	16.08	38.93	1.2756149	2.14E-153	Up	4.43E-155	AMT1-2	Solanum lycopersi	GO:0016021	GO:000851	GO:000962	K03320//a
543609	3037	26.87	65.05	1.2755527	0	Up	0	TBG3	Solanum lycopersi	NA	GO:00302	GO:000597	K12309//
101244055	627	40.36	97.58	1.2736593	1.13E-129	Up	2.82E-131	LOC101244055	Solanum lycopersi	GO:0043231	GO:00515	GO:00550	NA
101249800	2904	1.71	4.12	1.268648	2.35E-27	Up	2.15E-28	LOC101249800	PREDICTED: Sol	GO:0005759	GO:00468	GO:000662	K01410//
101255140	1565	18.13	43.65	1.2676027	1.22E-151	Up	2.55E-153	LOC101255140	PREDICTED: Sol	GO:0005634	GO:00037	GO:000701	K10364//c
101254923	1233	22.68	54.54	1.2658941	1.66E-147	Up	3.61E-149	LOC101254923	PREDICTED: Sol	NA	NA	NA	K10268//
101268070	3676	0.47	1.13	1.2655901	1.38E-10	Up	2.67E-11	LOC101268070	PREDICTED: Sol	GO:0016021	NA	GO:000681	K05740//
101249141	3473	33.59	80.65	1.2636427	0	Up	0	AGO2A	Solanum lycopersi	NA	GO:000367	GO:00310	K11593//e
101264349	1215	0.63	1.51	1.2611248	5.56E-05	Up	1.76E-05	LOC101264349	PREDICTED: Sol	GO:0005634	GO:000098	GO:000635	K09422//t
101247488	694	28.01	67.12	1.2608007	3.49E-98	Up	1.09E-99	LOC101247488	PREDICTED: Sol	NA	GO:00048	NA	K01051//
101260536	1792	0.31	0.74	1.2552571	0.000869	Up	0.000322	LOC101260536	PREDICTED: Sol	GO:0016020	GO:00167(	GO:00445	K20619//c
101244290	2122	2.13	5.08	1.2539751	1.34E-24	Up	1.33E-25	LOC101244290	PREDICTED: Sol	NA	GO:00055(	NA	K13448//c
101254040	1820	13.69	32.65	1.2539605	2.83E-130	Up	7.02E-132	LOC101254040	PREDICTED: Sol	NA	GO:00164	NA	K10767//
101244145	1493	26.98	64.24	1.2515815	6.90E-208	Up	1.12E-209	LOC101244145	PREDICTED: Sol	NA	NA	NA	NA
101265927	1008	0.98	2.33	1.2494763	5.42E-06	Up	1.53E-06	LOC101265927	PREDICTED: Sol	GO:0048046	GO:00167(	GO:00104	K08235//
101246552	4534	0.24	0.57	1.2479275	9.55E-07	Up	2.51E-07	LOC101246552	PREDICTED: Sol	NA	GO:00435	GO:000716	K22038//
101250847	803	1.2	2.85	1.2479275	9.39E-06	Up	2.71E-06	LOC101250847	PREDICTED: Sol	NA	NA	GO:000973	K14488//
778300	488	5.02	11.91	1.2464141	1.85E-12	Up	3.18E-13	LOC778300	Solanum lycopersi	NA	GO:00468	NA	NA
101248037	1119	52.21	123.48	1.2418793	6.13E-292	Up	7.10E-294	LOC101248037	PREDICTED: Sol	GO:0016021	GO:000521	NA	K09872//a
101055515	987	12.94	30.52	1.2379173	1.74E-63	Up	7.95E-65	LOC101055515	Solanum lycopersi	NA	GO:00469	NA	K18485//
101244203	824	3.71	8.75	1.2378638	8.84E-16	Up	1.26E-16	LOC101244203	PREDICTED: Sol	GO:0016021	NA	NA	NA
101257365	1072	0.56	1.32	1.2370392	0.000524	Up	0.000189	LOC101257365	PREDICTED: Sol	GO:0005634	GO:000367	GO:000635	NA
101249624	2095	36.39	85.7	1.2357532	0	Up	0	4CL	Solanum lycopersi	NA	GO:00162(	GO:000815	K01904//
101249503	732	3.52	8.28	1.2340553	2.73E-13	Up	4.46E-14	LOC101249503	PREDICTED: Sol	NA	NA	GO:000973	K14488//
101266576	1543	43.42	101.91	1.230864	0	Up	0	LOC101266576	PREDICTED: Sol	NA	GO:00037	GO:000635	K03124//t
101264755	1047	0.75	1.76	1.2306129	8.36E-05	Up	2.70E-05	LOC101264755	PREDICTED: Sol	NA	NA	NA	NA
101250276	2149	30.53	71.52	1.2281191	0	Up	0	LOC101250276	PREDICTED: Sol	NA	GO:000817	GO:000635	NA
101249679	3218	2.17	5.08	1.2271335	4.49E-37	Up	3.22E-38	LOC101249679	PREDICTED: Sol	NA	NA	NA	K21842//
101256557	1848	55.82	130.61	1.2264113	0	Up	0	LOC101256557	PREDICTED: Sol	NA	GO:000402	GO:000010	K13811//
101263191	962	0.62	1.45	1.2257128	0.000826	Up	0.000305	LOC101263191	PREDICTED: Sol	NA	NA	NA	NA
544018	610	1.16	2.71	1.224168	0.000274	Up	9.53E-05	PRO1	Solanum lycopersi	GO:0005856	GO:00037	GO:004298	K05759//
101259387	2146	7.07	16.5	1.2226839	1.43E-72	Up	5.85E-74	LOC101259387	PREDICTED: Sol	GO:0043231	GO:00800	GO:000815	K21373//
101259032	884	1.7	3.96	1.2199657	4.27E-08	Up	9.97E-09	LOC101259032	PREDICTED: Sol	NA	NA	NA	K21994//
101248942	1060	195.86	455.23	1.2167728	0	Up	0	LOC101248942	PREDICTED: Sol	GO:0009507	GO:00468	NA	K03940//
101253752	2312	0.31	0.72	1.2157287	0.000152	Up	5.07E-05	LOC101253752	PREDICTED: Sol	NA	GO:00036	NA	K14794//r

543794	1287	40.17	93.14	1.2132824	1.23E-245	Up	1.72E-247	exp11	Solanum lycopersi	GO:0016020	NA	GO:000966	K20628//e
101266110	1986	1.22	2.82	1.208814	1.63E-12	Up	2.78E-13	LOC101266110	PREDICTED: Sol	NA	NA	NA	K13422//t
100134915	1523	4.66	10.77	1.2086164	1.96E-34	Up	1.48E-35	LOC100134915	Solanum lycopersi	GO:0016021	GO:001671	GO:000662	K10257//a
101251551	791	0.94	2.17	1.2069624	0.000236	Up	8.13E-05	LOC101251551	PREDICTED: Sol	NA	GO:006163	GO:004316	K19045//
101263369	3279	0.26	0.6	1.2064509	6.14E-05	Up	1.95E-05	LOC101263369	PREDICTED: Sol	NA	GO:004687	GO:000601	K01191//a
101252437	2799	1.2	2.76	1.2016339	1.00E-16	Up	1.37E-17	LOC101252437	PREDICTED: Sol	GO:0016021	GO:000552	NA	K13420//
101244088	931	36.95	84.77	1.1979794	4.81E-156	Up	9.77E-158	LOC101244088	PREDICTED: Sol	GO:0009507	NA	NA	NA
101256323	2600	11.61	26.63	1.1976845	4.20E-142	Up	9.54E-144	LOC101256323	PREDICTED: Sol	GO:0005829	GO:005066	GO:000205	K03495//t
101265239	2824	0.41	0.94	1.1970368	1.30E-06	Up	3.46E-07	LOC101265239	PREDICTED: Sol	NA	NA	NA	K14963//
101243687	2399	13.03	29.84	1.1954105	3.52E-145	Up	7.77E-147	LOC101243687	PREDICTED: Sol	NA	GO:000367	NA	K05857//
101256329	1317	1.49	3.41	1.1944594	5.22E-10	Up	1.06E-10	LOC101256329	PREDICTED: Sol	NA	NA	NA	NA
101256495	2283	0.28	0.64	1.1926451	0.000453	Up	0.000162	LOC101256495	PREDICTED: Sol	GO:0016021	NA	NA	K15503//s
101248885	1240	152.16	347.43	1.1911332	0	Up	0	LOC101248885	PREDICTED: Sol	NA	NA	NA	NA
101267437	1035	93.26	212.93	1.1910489	0	Up	0	LOC101267437	PREDICTED: Sol	NA	NA	NA	K12603//
101258036	2334	1.13	2.58	1.1910483	3.66E-13	Up	6.02E-14	LOC101258036	PREDICTED: Sol	GO:0016021	GO:001674	GO:000663	K15397//
101250944	1211	9.94	22.69	1.1907389	4.40E-55	Up	2.28E-56	LOC101250944	PREDICTED: Sol	NA	NA	NA	K14496//a
101246621	757	6.8	15.52	1.1905219	1.89E-23	Up	1.97E-24	LOC101246621	PREDICTED: Sol	NA	GO:004698	NA	K17693//
101260921	1300	1.24	2.83	1.1904619	2.84E-08	Up	6.56E-09	LOC101260921	PREDICTED: Sol	GO:0016021	NA	NA	K11153//r
101251647	600	4.01	9.15	1.1901695	2.57E-11	Up	4.74E-12	LOC101251647	PREDICTED: Sol	NA	NA	NA	NA
101264832	2292	4.01	9.14	1.1885919	5.12E-43	Up	3.29E-44	LOC101264832	PREDICTED: Sol	NA	NA	NA	K13140//i
101252654	2044	15.03	34.22	1.1869948	1.93E-140	Up	4.48E-142	LOC101252654	PREDICTED: Sol	GO:0031982	NA	GO:001619	NA
101251995	1158	1.78	4.05	1.1860447	4.02E-10	Up	8.08E-11	LOC101251995	PREDICTED: Sol	NA	NA	NA	NA
109121043	467	1.61	3.66	1.184783	0.000409	Up	0.000145	LOC109121043	PREDICTED: Sol	NA	NA	NA	NA
101248362	955	17.04	38.73	1.1845262	2.04E-72	Up	8.36E-74	LOC101248362	PREDICTED: Sol	GO:0031977	NA	NA	NA
101250583	936	156.83	356.45	1.1844982	0	Up	0	LOC101250583	PREDICTED: Sol	GO:0005576	GO:004573	NA	NA
101266372	1413	3.3	7.49	1.1824997	2.76E-21	Up	3.10E-22	LOC101266372	PREDICTED: Sol	NA	GO:000367	GO:000635	K01872//a
101252466	1736	3.08	6.99	1.1823621	6.09E-25	Up	5.97E-26	LOC101252466	PREDICTED: Sol	GO:0005623	GO:001667	GO:001941	K05907//a
104648440	745	1.86	4.22	1.1819404	5.54E-07	Up	1.43E-07	LOC104648440	PREDICTED: Sol	NA	NA	NA	NA
101250755	774	1.42	3.22	1.1811698	1.03E-05	Up	3.00E-06	LOC101250755	PREDICTED: Sol	NA	NA	NA	NA
101266496	1450	3.27	7.4	1.1782346	6.77E-22	Up	7.45E-23	LOC101266496	PREDICTED: Sol	NA	NA	NA	NA
101250059	2801	9.13	20.56	1.1711535	1.55E-114	Up	4.24E-116	LOC101250059	PREDICTED: Sol	NA	NA	NA	K10352//
101255525	348	7.61	17.13	1.1705568	3.77E-11	Up	7.04E-12	LOC101255525	PREDICTED: Sol	GO:0016021	NA	NA	NA
101261645	574	53.04	119.32	1.1696832	5.47E-93	Up	1.77E-94	LOC101261645	PREDICTED: Sol	GO:0000439	NA	GO:000635	K10845//
101245631	868	50.99	114.5	1.1670614	1.95E-187	Up	3.46E-189	LOC101245631	PREDICTED: Sol	NA	NA	NA	NA
101246802	3530	6.95	15.57	1.1636841	1.19E-108	Up	3.37E-110	LOC101246802	PREDICTED: Sol	GO:0005634	GO:000828	NA	K09338//
101252293	2266	6.86	15.33	1.1600772	7.97E-68	Up	3.45E-69	LOC101252293	PREDICTED: Sol	GO:0016021	NA	GO:000962	K17085//t
104648350	801	2.48	5.54	1.1595459	3.29E-09	Up	7.08E-10	LOC104648350	PREDICTED: Sol	NA	NA	NA	K10393//

100529103	1893	25.91	57.72	1.1555623	9.67E-210	Up	1.55E-211	LOC100529103	Solanum lycopersi	GO:0005886	GO:01021	GO:00597	K12373//
101257650	1182	17.73	39.47	1.154564	9.26E-89	Up	3.11E-90	LOC101257650	PREDICTED: Sol	GO:0005737	GO:00468	GO:00300	K17046//
101261316	1679	0.93	2.07	1.1543281	1.16E-07	Up	2.81E-08	LOC101261316	PREDICTED: Sol	GO:0005576	GO:00046	GO:00059	K01213//
101265639	1691	0.49	1.09	1.1534745	0.000171	Up	5.77E-05	LOC101265639	PREDICTED: Sol	NA	GO:00055	NA	K08900//
101252151	1011	79.32	176.07	1.1503925	0	Up	0	LOC101252151	PREDICTED: Sol	GO:0010287	GO:00314	GO:00097	K08908//l
104648418	2253	1.07	2.37	1.1472763	5.11E-11	Up	9.66E-12	LOC104648418	PREDICTED: Sol	GO:0016021	NA	NA	K17046//
101262127	713	19.48	43.13	1.146698	3.84E-56	Up	1.96E-57	LOC101262127	PREDICTED: Sol	NA	NA	GO:00069	NA
101258238	1820	39.23	86.84	1.1464024	6.42E-299	Up	7.21E-301	LOC101258238	PREDICTED: Sol	GO:0016020	GO:00167	GO:00445	K07409//c
101244302	725	13.42	29.68	1.1451064	1.46E-39	Up	9.92E-41	LOC101244302	PREDICTED: Sol	GO:0016021	NA	NA	NA
101255499	1667	7.79	17.22	1.1443899	1.26E-54	Up	6.57E-56	LOC101255499	PREDICTED: Sol	NA	GO:00036	NA	K20557//t
543991	2192	16.15	35.68	1.1435815	1.65E-148	Up	3.56E-150	GP1	Solanum lycopersi	GO:0048046	NA	GO:00098	K06699//
101254978	626	6.52	14.39	1.1421227	7.64E-17	Up	1.04E-17	LOC101254978	PREDICTED: Sol	NA	NA	NA	NA
104646222	2605	0.39	0.86	1.1408625	3.92E-05	Up	1.22E-05	LOC104646222	PREDICTED: Sol	NA	GO:00036	NA	K21026//a
101268886	1622	1.67	3.68	1.1398577	4.31E-12	Up	7.56E-13	LOC101268886	PREDICTED: Sol	NA	NA	NA	K19307//
101245640	1822	8.44	18.59	1.1392119	4.27E-64	Up	1.92E-65	LOC101245640	PREDICTED: Sol	NA	NA	NA	NA
101262607	1808	0.8	1.76	1.1375035	5.79E-07	Up	1.50E-07	LOC101262607	PREDICTED: Sol	GO:0016021	GO:00084	NA	K16903//
101251000	1668	0.45	0.99	1.1375035	0.000503	Up	0.000181	LOC101251000	PREDICTED: Sol	GO:0005634	GO:00036	NA	K14794//r
101251196	573	84.22	184.9	1.1345104	1.45E-184	Up	2.59E-186	LOC101251196	PREDICTED: Sol	GO:0005665	GO:00038	GO:00063	K03007//
101247764	1004	1.29	2.83	1.133431	5.24E-06	Up	1.48E-06	LOC101247764	PREDICTED: Sol	NA	NA	NA	NA
101267980	1986	47.64	104.4	1.1318764	0	Up	0	LOC101267980	PREDICTED: Sol	NA	NA	NA	K19613//l
101250846	1493	47.52	103.98	1.1296993	7.08E-285	Up	8.52E-287	LOC101250846	PREDICTED: Sol	GO:0005829	GO:00048	GO:00195	K01803//t
544152	1943	249.45	544.42	1.1259694	0	Up	0	LOC544152	Solanum lycopersi	GO:0009507	GO:00038	GO:00094	K01626//
101248871	2256	6.94	15.13	1.1244044	1.59E-63	Up	7.22E-65	LOC101248871	PREDICTED: Sol	NA	GO:00506	GO:00092	K11752//
544158	1373	7.12	15.52	1.1241794	2.00E-39	Up	1.37E-40	LOC544158	PREDICTED: Sol	NA	GO:00051	GO:00096	K03006//
101266629	1605	117.62	256.01	1.1220668	0	Up	0	LOC101266629	PREDICTED: Sol	GO:0005737	GO:00468	GO:00059	K03841//f
101268821	2469	6.19	13.46	1.1206671	9.02E-62	Up	4.21E-63	LOC101268821	PREDICTED: Sol	GO:0043231	GO:00037	GO:00094	K19090//
101244999	507	1.79	3.89	1.1198106	0.000261	Up	9.03E-05	LOC101244999	PREDICTED: Sol	GO:0016021	NA	GO:00485	NA
101254427	1268	3.2	6.95	1.1189411	9.97E-17	Up	1.37E-17	LOC101254427	PREDICTED: Sol	GO:0005737	GO:00055	GO:00193	K00469//i
104646795	435	4.81	10.44	1.1180129	2.01E-08	Up	4.58E-09	LOC104646795	PREDICTED: Sol	NA	NA	NA	K01868//t
101258047	1574	6.4	13.88	1.1168638	4.10E-40	Up	2.76E-41	LOC101258047	PREDICTED: Sol	NA	NA	NA	K15502//s
104645726	447	32.74	70.72	1.111064	2.41E-52	Up	1.30E-53	LOC104645726	PREDICTED: Sol	GO:0016021	NA	NA	NA
101265090	2729	0.63	1.36	1.1101829	9.93E-08	Up	2.39E-08	LOC101265090	PREDICTED: Sol	NA	GO:00038	GO:00081	K00666//f
101254141	5090	0.89	1.92	1.1092291	1.18E-16	Up	1.62E-17	LOC101254141	PREDICTED: Sol	GO:0005643	NA	GO:00068	K14297//
101267742	1618	1.72	3.71	1.1090106	6.61E-11	Up	1.26E-11	LOC101267742	PREDICTED: Sol	GO:0016021	NA	GO:00551	K03189//
101254886	1609	7.28	15.69	1.107835	8.90E-46	Up	5.38E-47	LOC101254886	PREDICTED: Sol	NA	NA	NA	K03063//
543809	1952	173.71	373.63	1.1049295	0	Up	0	LOC543809	Solanum lycopersi	GO:0005737	GO:00045	GO:00086	K01858//
101260945	856	1.67	3.59	1.1041357	2.57E-06	Up	7.04E-07	LOC101260945	PREDICTED: Sol	GO:0016021	NA	NA	NA

101249313	1241	36.21	77.74	1.1022689	2.39E-169	Up	4.55E-171	LOC101249313	PREDICTED: Sol	GO:0005840	GO:00037	GO:00325	K02935//l
100037489	1648	2.18	4.68	1.1021804	1.51E-14	Up	2.31E-15	CYP85A1	Solanum lycopersi	GO:0016021	GO:00167	GO:00102	K09590//
101251724	1182	11.54	24.77	1.1019506	9.46E-52	Up	5.13E-53	LOC101251724	PREDICTED: Sol	GO:0016021	NA	GO:00096	K09422//t
104649338	1033	7.11	15.24	1.0999414	4.75E-28	Up	4.28E-29	LOC104649338	PREDICTED: Sol	NA	NA	NA	K01868//t
101268119	2017	11.47	24.58	1.0996195	2.28E-88	Up	7.71E-90	LOC101268119	PREDICTED: Sol	GO:0016021	GO:00052	GO:00068	K14638//s
101247340	2205	7.47	16	1.0988918	3.41E-63	Up	1.56E-64	LOC101247340	PREDICTED: Sol	NA	GO:00161	GO:00002	K01177//
101260340	1123	37.55	80.24	1.0955087	9.31E-155	Up	1.92E-156	LOC101260340	PREDICTED: Sol	GO:0005623	GO:00047	GO:00066	K03671//t
101265433	1593	3.52	7.52	1.0951572	8.77E-22	Up	9.67E-23	LOC101265433	PREDICTED: Sol	NA	NA	NA	NA
101255125	1673	22.79	48.67	1.0946319	9.80E-143	Up	2.21E-144	LOC101255125	PREDICTED: Sol	NA	GO:00616	GO:00301	K15685//
101257036	1527	12.12	25.88	1.0944479	1.84E-69	Up	7.76E-71	LOC101257036	PREDICTED: Sol	NA	NA	NA	K11247//e
101251848	670	5.54	11.82	1.0932722	4.60E-14	Up	7.24E-15	LOC101251848	PREDICTED: Sol	GO:0005623	GO:00150	GO:00454	K03676//
101252202	1305	7.49	15.98	1.0932298	7.07E-37	Up	5.08E-38	LOC101252202	PREDICTED: Sol	GO:0005783	GO:00616	GO:00304	K20417//
101244251	2796	0.6	1.28	1.0931094	1.79E-07	Up	4.42E-08	LOC101244251	PREDICTED: Sol	GO:0043231	GO:00037	GO:00094	K01176//a
101246107	1281	5.48	11.69	1.0930271	4.60E-26	Up	4.36E-27	LOC101246107	PREDICTED: Sol	NA	GO:00002	GO:00198	K06133//
101264842	2160	34.16	72.83	1.0922249	3.04E-276	Up	3.78E-278	LOC101264842	PREDICTED: Sol	GO:0009941	NA	GO:00064	K10578//
101243647	2605	9.39	19.98	1.0893595	8.84E-92	Up	2.90E-93	LOC101243647	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	K16670//
101250679	880	14.79	31.47	1.0893551	2.47E-47	Up	1.44E-48	LOC101250679	PREDICTED: Sol	NA	NA	NA	NA
101252854	812	6.45	13.72	1.0889094	1.49E-19	Up	1.80E-20	LOC101252854	PREDICTED: Sol	GO:0005623	GO:00047	GO:00066	K03671//t
101246156	717	1.58	3.36	1.0885367	5.27E-05	Up	1.66E-05	LOC101246156	PREDICTED: Sol	GO:0016021	NA	NA	NA
101266147	752	50.6	107.59	1.0883347	4.93E-135	Up	1.18E-136	LOC101266147	PREDICTED: Sol	NA	NA	NA	K19363//l
543720	1892	91.65	194.8	1.0877869	0	Up	0	mek1	Solanum lycopersi	GO:0005737	GO:00046	GO:00230	K20603//
101266182	1023	608.22	1291.99	1.0869297	0	Up	0	LOC101266182	PREDICTED: Sol	GO:0010287	GO:00314	GO:00097	K08912//l
100736484	1875	0.68	1.44	1.0824622	1.20E-05	Up	3.49E-06	LOC100736484	Solanum lycopersi	GO:0016021	GO:00046	NA	K13429//c
101261120	1131	5.56	11.73	1.0770462	4.15E-23	Up	4.37E-24	LOC101261120	PREDICTED: Sol	GO:0005737	GO:00047	NA	K18045//t
101261588	1099	281.83	594.43	1.0766817	0	Up	0	LOC101261588	Solanum lycopersi	NA	NA	NA	K00430//
101266036	901	0.93	1.96	1.075551	0.000636	Up	0.000232	LOC101266036	PREDICTED: Sol	NA	NA	NA	K15697//
101253663	1875	16.05	33.79	1.0740231	2.72E-108	Up	7.77E-110	LOC101253663	PREDICTED: Sol	GO:0005743	GO:00165	GO:00068	K15119//s
544272	1281	33.8	71.06	1.0720144	1.16E-152	Up	2.43E-154	XTH1	Solanum lycopersi	GO:0048046	GO:00167	GO:00104	K08235//
101245586	658	103.42	217.06	1.0695787	9.91E-229	Up	1.50E-230	LOC101245586	Solanum lycopersi	NA	NA	NA	K11855//
101264365	682	7.11	14.92	1.0693261	2.48E-17	Up	3.30E-18	LOC101264365	PREDICTED: Sol	NA	NA	NA	K01180//e
101265605	986	791.45	1659.11	1.0678394	0	Up	0	LOC101265605	PREDICTED: Sol	GO:0010287	GO:00314	GO:00097	K08912//l
104644351	1066	1.8	3.77	1.0665676	1.46E-07	Up	3.57E-08	LOC104644351	PREDICTED: Sol	NA	NA	NA	K00799//
101266952	838	220.97	461.75	1.0632614	0	Up	0	LOC101266952	PREDICTED: Sol	GO:0005840	GO:00037	GO:00064	K02879//l
101257878	1373	0.68	1.42	1.0622843	0.000775	Up	0.000285	LOC101257878	PREDICTED: Sol	GO:0005576	GO:00457	NA	NA
101268276	1811	28.79	60.12	1.0622772	7.72E-182	Up	1.40E-183	LOC101268276	PREDICTED: Sol	GO:0016020	GO:00167	GO:00445	K14985//
101253234	730	2.09	4.36	1.0608252	4.56E-06	Up	1.28E-06	LOC101253234	PREDICTED: Sol	NA	NA	GO:00097	K14488//
101261433	898	263.04	548.38	1.0598938	0	Up	0	LOC101261433	PREDICTED: Sol	GO:0005840	GO:00037	GO:00064	K02895//l

104648378	750	1.19	2.48	1.0593785	0.000561	Up	0.000203	LOC104648378	PREDICTED: Sol	NA	GO:00469	NA	NA
101249376	1040	39.31	81.75	1.0563224	7.34E-138	Up	1.73E-139	LOC101249376	PREDICTED: Sol	GO:0005686	GO:00037	GO:00003	K11094//
101248252	3252	4.65	9.67	1.0562852	2.29E-53	Up	1.22E-54	LOC101248252	PREDICTED: Sol	GO:0016021	GO:00046	NA	K00924//
101249898	2078	0.63	1.31	1.0561431	1.58E-05	Up	4.66E-06	LOC101249898	PREDICTED: Sol	NA	GO:00055	NA	K08900//
101258063	1586	1.54	3.2	1.0551416	3.03E-09	Up	6.48E-10	LOC101258063	PREDICTED: Sol	NA	GO:00037	NA	K12741//
101265791	943	1.83	3.8	1.0541558	4.77E-06	Up	1.34E-06	LOC101265791	PREDICTED: Sol	GO:0005730	GO:00430	GO:00004	K03264//t
101249132	2783	10.76	22.32	1.0526589	7.94E-103	Up	2.37E-104	LOC101249132	PREDICTED: Sol	GO:0005737	GO:00046	GO:00230	K04421//
101266763	1303	0.69	1.43	1.0513469	0.000494	Up	0.000177	LOC101266763	PREDICTED: Sol	GO:0016021	NA	NA	K11649//
544223	1783	43.37	89.87	1.0511422	1.21E-262	Up	1.59E-264	LOC544223	Solanum lycopersi	GO:0005777	GO:00041	GO:00197	K16296//s
101247889	617	68.45	141.82	1.0509386	1.47E-135	Up	3.52E-137	LOC101247889	PREDICTED: Sol	GO:0009523	NA	GO:00159	K02259//c
101255295	1118	99.98	206.9	1.0492222	0	Up	0	LOC101255295	PREDICTED: Sol	GO:0015934	GO:00037	GO:00064	K02876//l
101256723	992	157.12	324.79	1.0476404	0	Up	0	LOC101256723	PREDICTED: Sol	GO:0009535	GO:00055	GO:00159	K02717//
543511	1280	80.87	167.17	1.0476395	0	Up	0	LOC543511	Solanum lycopersi	GO:0048046	GO:00167	GO:00104	K08235//
101262309	1450	2.75	5.68	1.0464593	3.25E-14	Up	5.07E-15	LOC101262309	PREDICTED: Sol	NA	NA	NA	NA
101258880	1595	8.56	17.68	1.0464356	1.95E-46	Up	1.16E-47	LOC101258880	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	K09286//
101266928	684	22.17	45.78	1.0461087	3.76E-49	Up	2.13E-50	LOC101266928	PREDICTED: Sol	NA	NA	GO:00069	K10745//r
101268623	1094	82.94	171.14	1.045037	4.07E-298	Up	4.61E-300	aquaporin	Solanum lycopersi	GO:0005887	GO:00152	GO:00342	K09872//a
101245895	920	1.12	2.31	1.0443941	0.000226	Up	7.75E-05	LOC101245895	PREDICTED: Sol	NA	NA	GO:00097	K14488//
101243986	740	2.22	4.57	1.0416345	3.11E-06	Up	8.59E-07	LOC101243986	PREDICTED: Sol	NA	NA	NA	NA
101252082	1516	28.22	58.08	1.0413235	1.12E-141	Up	2.56E-143	LOC101252082	PREDICTED: Sol	NA	GO:00468	GO:00454	K01728//
101266892	2058	1.21	2.49	1.0411387	3.47E-09	Up	7.46E-10	LOC101266892	PREDICTED: Sol	NA	GO:00055	NA	K08900//
101243878	693	20.36	41.89	1.0408683	2.62E-45	Up	1.60E-46	LOC101243878	PREDICTED: Sol	NA	NA	NA	NA
101263716	745	59.5	122.3	1.0394628	7.73E-141	Up	1.78E-142	LOC101263716	PREDICTED: Sol	NA	NA	NA	K11855//
101055598	1719	7.83	16.09	1.0390801	1.22E-43	Up	7.67E-45	SlCKX1	PREDICTED: Sol	NA	GO:00166	GO:00096	K00279//c
101252569	1654	0.55	1.13	1.0388192	0.00033	Up	0.000116	LOC101252569	PREDICTED: Sol	GO:0005634	GO:00036	NA	K18490//
104645946	291	96.53	198.07	1.0369611	4.88E-79	Up	1.83E-80	LOC104645946	PREDICTED: Sol	NA	NA	NA	NA
100736446	1759	134.94	276.47	1.0348049	0	Up	0	CYP51	Solanum lycopersi	GO:0005783	GO:00167	GO:00161	K05917//s
101252642	1397	1.1	2.25	1.0324215	1.85E-05	Up	5.52E-06	LOC101252642	PREDICTED: Sol	NA	GO:00164	NA	K13070//
101251933	972	3.6	7.36	1.0317089	1.51E-10	Up	2.95E-11	LOC101251933	PREDICTED: Sol	NA	GO:00038	NA	K08695//a
101267670	3511	0.46	0.94	1.0310269	1.24E-06	Up	3.29E-07	LOC101267670	PREDICTED: Sol	GO:0005886	GO:00468	NA	K10615//
101267965	2368	46.09	94.16	1.0306606	0	Up	0	LOC101267965	PREDICTED: Sol	GO:0016021	GO:00468	NA	K16075//
101259820	954	14.84	30.29	1.0293505	3.05E-45	Up	1.86E-46	LOC101259820	PREDICTED: Sol	GO:0005779	GO:00428	GO:00443	K13352//
101263424	1351	1.24	2.53	1.0287973	2.26E-06	Up	6.15E-07	LOC101263424	PREDICTED: Sol	GO:0016021	NA	GO:00551	NA
101266010	4227	1	2.04	1.0285692	6.52E-15	Up	9.77E-16	LOC101266010	PREDICTED: Sol	NA	NA	NA	K19613//l
101244634	942	11.38	23.19	1.0270023	2.70E-34	Up	2.04E-35	LOC101244634	PREDICTED: Sol	GO:0016021	GO:00090	NA	K03006//
101257983	2042	5.83	11.87	1.0257521	1.20E-38	Up	8.35E-40	LOC101257983	PREDICTED: Sol	NA	NA	NA	NA
104648605	633	3.68	7.49	1.02526	5.27E-08	Up	1.24E-08	LOC104648605	Solanum lycopersi	NA	NA	NA	NA

101257993	2300	18.14	36.92	1.0252281	9.59E-135	Up	2.31E-136	LOC101257993	PREDICTED: Sol	NA	GO:00082	NA	K03452//
101247979	1721	1.72	3.5	1.0249464	2.30E-10	Up	4.53E-11	LOC101247979	PREDICTED: Sol	NA	GO:00089	GO:00066	K00145//
101251036	1599	13.49	27.45	1.0249158	2.59E-69	Up	1.10E-70	LOC101251036	PREDICTED: Sol	NA	GO:00167	GO:00081	K21371//c
101263383	1442	24.68	50.19	1.0240576	3.80E-113	Up	1.05E-114	LOC101263383	PREDICTED: Sol	GO:0010598	GO:00302	GO:00097	NA
101249445	1605	311.22	632.7	1.0235868	0	Up	0	LOC101249445	PREDICTED: Sol	NA	GO:00166	GO:00060	K05298//
101265489	3448	5.63	11.43	1.0216186	4.66E-55	Up	2.42E-56	LOC101265489	PREDICTED: Sol	NA	NA	NA	K18046//t
100136876	3478	6.72	13.64	1.0213105	4.07E-76	Up	1.58E-77	LOC100136876	Solanum lycopersi	GO:0005737	GO:00045	GO:00102	NA
101257548	3424	6.11	12.4	1.0210958	5.45E-68	Up	2.35E-69	LOC101257548	PREDICTED: Sol	GO:0005634	GO:00082	NA	K09338//
101263526	553	9.67	19.6	1.0192659	1.18E-16	Up	1.62E-17	LOC101263526	PREDICTED: Sol	NA	NA	NA	NA
101247017	2313	8.21	16.63	1.018334	1.34E-60	Up	6.33E-62	LOC101247017	PREDICTED: Sol	GO:0005622	GO:00168	NA	K09835//
101247929	2540	1.96	3.97	1.0182854	7.99E-17	Up	1.09E-17	LOC101247929	PREDICTED: Sol	GO:0016021	GO:00055	NA	K04733//i
101267554	720	2.86	5.79	1.0175482	3.67E-07	Up	9.29E-08	LOC101267554	PREDICTED: Sol	NA	NA	NA	NA
101246730	1906	18.36	37.15	1.0167962	1.78E-110	Up	4.98E-112	LOC101246730	PREDICTED: Sol	NA	GO:00002	GO:00066	K05929//
101249062	2065	17.42	35.2	1.0148308	2.78E-113	Up	7.64E-115	LOC101249062	PREDICTED: Sol	NA	GO:00468	NA	K11975//
104645444	968	2.56	5.17	1.0140205	1.64E-08	Up	3.70E-09	LOC104645444	PREDICTED: Sol	NA	NA	NA	NA
101256217	3243	18.55	37.45	1.0135465	1.65E-202	Up	2.71E-204	LOC101256217	PREDICTED: Sol	GO:0005739	GO:00048	GO:00064	K14164//
101264273	1448	196.88	397.26	1.012767	0	Up	0	LOC101264273	Solanum lycopersi	GO:0005829	GO:00421	GO:00059	K03841//f
101266880	1354	4.11	8.29	1.0122337	4.92E-18	Up	6.34E-19	LOC101266880	PREDICTED: Sol	NA	NA	NA	K08081//t
101262881	1451	15.99	32.23	1.0112342	5.81E-72	Up	2.40E-73	LOC101262881	PREDICTED: Sol	GO:0000151	NA	GO:00431	NA
101247302	2351	17.59	35.42	1.0098087	7.31E-129	Up	1.83E-130	LOC101247302	PREDICTED: Sol	NA	GO:00302	GO:00302	K01179//e
101246648	2006	1.7	3.42	1.0084616	3.86E-11	Up	7.22E-12	LOC101246648	PREDICTED: Sol	GO:0016021	NA	NA	K08150//
101254500	523	19.7	39.53	1.0047523	5.74E-30	Up	4.87E-31	LOC101254500	PREDICTED: Sol	NA	NA	NA	K03860//
101244316	1732	3.71	7.44	1.0038834	1.98E-20	Up	2.30E-21	LOC101244316	PREDICTED: Sol	NA	GO:00167	GO:00081	K17193//a
101252838	2302	9.85	19.72	1.0014639	9.83E-70	Up	4.13E-71	LOC101252838	PREDICTED: Sol	NA	GO:00055	NA	K17871//
543759	612	2.31	4.62	1	5.07E-05	Up	1.59E-05	fsm1	Solanum lycopersi	GO:0005634	GO:00036	NA	NA
101267897	2550	0.48	0.96	1	9.67E-05	Up	3.15E-05	LOC101267897	PREDICTED: Sol	NA	NA	NA	K09527//
101268614	4435	0.5	1	1	1.11E-07	Up	2.69E-08	LOC101268614	PREDICTED: Sol	GO:0005871	GO:00055	GO:00070	K10400//
104645696	785	2.98	5.96	1	9.33E-08	Up	2.24E-08	LOC104645696	PREDICTED: Sol	NA	GO:00167	NA	K21026//a
101266908	2306	19.75	0.01	-10.94764	0	Down	0	LOC101266908	PREDICTED: Sol	NA	NA	NA	NA
101251387	592	11.97	0.01	-10.22521	6.65E-69	Down	2.83E-70	LOC101251387	PREDICTED: Sol	NA	NA	NA	NA
101247133	932	8.1	0.01	-9.661778	1.27E-76	Down	4.91E-78	LOC101247133	PREDICTED: Sol	GO:0005576	NA	NA	K20628//e
101259487	999	6.67	0.01	-9.381543	6.48E-68	Down	2.80E-69	LOC101259487	PREDICTED: Sol	GO:0005829	NA	GO:00094	NA
101256409	1058	17.7	0.03	-9.204571	1.73E-195	Down	2.96E-197	USP	Solanum lycopersi	NA	NA	GO:00069	NA
104647185	435	5.79	0.01	-9.17742	2.53E-23	Down	2.64E-24	LOC104647185	PREDICTED: Sol	NA	NA	NA	NA
101257497	1342	5.18	0.01	-9.016808	4.50E-72	Down	1.86E-73	LOC101257497	PREDICTED: Sol	GO:0005886	GO:00046	GO:00064	K00924//
101261225	691	4.15	0.01	-8.696968	3.12E-28	Down	2.79E-29	LOC101261225	PREDICTED: Sol	NA	NA	NA	K13993//
101253038	540	258.53	0.78	-8.372642	0	Down	0	LE25	Solanum lycopersi	NA	NA	GO:00097	NA

101267532	745	3.21	0.01	-8.326429	1.03E-23	Down	1.05E-24	LOC101267532	PREDICTED: Sol	GO:0016021	GO:00515	NA	K11000//c
101262752	982	3.11	0.01	-8.280771	5.51E-31	Down	4.57E-32	LOC101262752	PREDICTED: Sol	NA	NA	NA	NA
101251603	534	2.96	0.01	-8.209453	4.05E-15	Down	6.01E-16	LOC101251603	PREDICTED: Sol	GO:0016021	NA	NA	NA
101245172	1022	8.43	0.03	-8.134426	6.67E-86	Down	2.34E-87	LOC101245172	PREDICTED: Sol	NA	GO:00038	NA	NA
101250895	688	2.08	0.01	-7.70044	3.80E-14	Down	5.94E-15	LOC101250895	PREDICTED: Sol	GO:0005576	NA	GO:00199	NA
101249653	621	2.01	0.01	-7.651052	3.34E-12	Down	5.81E-13	LOC101249653	PREDICTED: Sol	GO:0005576	NA	GO:00199	NA
100750252	723	35.74	0.23	-7.279762	8.78E-257	Down	1.18E-258	LOC100750252	Solanum lycopersi	NA	NA	NA	K20254//
101244844	411	1.51	0.01	-7.238405	7.48E-06	Down	2.14E-06	LOC101244844	PREDICTED: Sol	NA	GO:00469	NA	K10863//a
101249875	559	1.17	0.01	-6.870365	2.00E-06	Down	5.42E-07	LOC101249875	PREDICTED: Sol	NA	NA	GO:00097	NA
100037736	1205	1.1	0.01	-6.78136	1.46E-13	Down	2.35E-14	tbn1	Solanum lycopersi	NA	GO:00045	GO:00063	NA
101248880	791	1.09	0.01	-6.768184	9.97E-09	Down	2.22E-09	LOC101248880	PREDICTED: Sol	GO:0005634	GO:00009	GO:00063	K09422//t
101250514	1032	57.57	0.61	-6.560364	0	Down	0	LOC101250514	Solanum lycopersi	GO:0009705	GO:00152	GO:00342	K09873//a
101246841	666	0.87	0.01	-6.442943	7.48E-06	Down	2.14E-06	LOC101246841	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	K09286//
101264804	957	0.81	0.01	-6.33985	5.88E-08	Down	1.39E-08	LOC101264804	PREDICTED: Sol	GO:0016021	NA	NA	NA
101251154	1149	27.43	0.34	-6.334076	1.08E-301	Down	1.20E-303	LOC101251154	Solanum lycopersi	GO:0009705	GO:00152	GO:00342	K09873//a
104647854	1772	0.77	0.01	-6.266787	2.42E-14	Down	3.76E-15	LOC104647854	PREDICTED: Sol	GO:0016021	GO:00055	NA	K05681//
101249857	1991	12.23	0.16	-6.256209	5.29E-238	Down	7.61E-240	vicilin	Solanum lycopersi	NA	GO:00457	NA	K18626//t
101246412	838	2.85	0.04	-6.154818	2.83E-22	Down	3.08E-23	LOC101246412	PREDICTED: Sol	GO:0016021	NA	NA	NA
101257892	1172	0.7	0.01	-6.129283	1.55E-08	Down	3.51E-09	LOC101257892	PREDICTED: Sol	NA	GO:00468	GO:00094	K04124//
104645830	1081	13.93	0.21	-6.051662	1.86E-141	Down	4.25E-143	LOC104645830	PREDICTED: Sol	NA	NA	NA	K12811//
101267061	880	0.66	0.01	-6.044394	4.82E-06	Down	1.36E-06	LOC101267061	PREDICTED: Sol	GO:0016021	NA	NA	NA
101250974	1179	63.94	0.97	-6.04259	0	Down	0	LOC101250974	PREDICTED: Sol	NA	GO:00164	NA	K00002//a
101245363	854	0.64	0.01	-6	1.16E-05	Down	3.39E-06	LOC101245363	PREDICTED: Sol	GO:0016021	NA	NA	NA
101252753	699	0.63	0.01	-5.97728	0.000158	Down	5.30E-05	LOC101252753	PREDICTED: Sol	GO:0016021	NA	GO:00159	K03541//
101263785	1763	0.61	0.01	-5.930737	3.09E-11	Down	5.74E-12	LOC101263785	PREDICTED: Sol	GO:0005773	NA	NA	NA
101263037	729	0.6	0.01	-5.906891	0.000158	Down	5.30E-05	LOC101263037	PREDICTED: Sol	GO:0016021	NA	GO:00199	NA
544282	710	0.59	0.01	-5.882643	0.000243	Down	8.38E-05	LOC544282	Solanum lycopersi	NA	NA	NA	K13993//
101247056	513	31.02	0.62	-5.644787	1.29E-143	Down	2.89E-145	LOC101247056	PREDICTED: Sol	GO:0005829	NA	GO:00483	NA
101254720	1541	1	0.02	-5.643856	1.26E-14	Down	1.92E-15	LOC101254720	PREDICTED: Sol	NA	GO:00167	GO:00102	K09843//(
101267438	1249	1.45	0.03	-5.594947	4.25E-17	Down	5.71E-18	LOC101267438	PREDICTED: Sol	NA	GO:00164	NA	K00002//a
101255207	1474	0.92	0.02	-5.523562	9.81E-13	Down	1.65E-13	LOC101255207	PREDICTED: Sol	GO:0016021	NA	NA	NA
104648161	1468	0.89	0.02	-5.475733	3.61E-12	Down	6.28E-13	LOC104648161	PREDICTED: Sol	NA	GO:00167	NA	K13065//s
101258525	1640	4.3	0.1	-5.426265	3.01E-65	Down	1.34E-66	LOC101258525	PREDICTED: Sol	NA	NA	NA	K20254//
101261928	2740	0.33	0.01	-5.044394	1.08E-09	Down	2.24E-10	LOC101261928	PREDICTED: Sol	GO:0016021	GO:00083	GO:00066	K00679//
101263695	516	2.2	0.07	-4.974005	1.48E-09	Down	3.10E-10	LOC101263695	PREDICTED: Sol	GO:0005737	GO:00468	GO:00300	K07213//c
101246023	1338	0.27	0.01	-4.754888	0.000579	Down	0.000209	LOC101246023	PREDICTED: Sol	GO:0009705	GO:00052	GO:00303	K05389//
101262930	495	1.88	0.07	-4.747234	1.04E-07	Down	2.51E-08	LOC101262930	Solanum lycopersi	NA	NA	GO:00069	NA

544056	746	1553.55	62.31	-4.639961	0	Down	0	TAS14	Solanum lycopersi	GO:0005829	NA	GO:00094	NA
101246280	736	4.46	0.18	-4.630975	8.26E-27	Down	7.66E-28	LOC101246280	PREDICTED: Sol	NA	NA	NA	NA
101250900	2808	0.24	0.01	-4.584963	2.97E-06	Down	8.21E-07	LOC101250900	PREDICTED: Sol	GO:0016021	NA	NA	K21989//c
101266883	1689	16.6	0.71	-4.54722	3.01E-237	Down	4.34E-239	LOC101266883	PREDICTED: Sol	NA	GO:00167	NA	K19747//
101256004	1531	0.46	0.02	-4.523562	2.97E-06	Down	8.21E-07	LOC101256004	PREDICTED: Sol	NA	GO:00168	NA	K10260//
101256556	1610	0.21	0.01	-4.392317	0.000892	Down	0.000331	LOC101256556	PREDICTED: Sol	GO:0016021	NA	GO:00157	K03695//
104647879	1817	0.21	0.01	-4.392317	0.000375	Down	0.000132	LOC104647879	PREDICTED: Sol	GO:0010494	GO:00040	GO:00339	K12614//
101268587	1053	0.61	0.03	-4.345775	2.36E-05	Down	7.12E-06	LOC101268587	PREDICTED: Sol	NA	NA	GO:00097	K14488//
100134906	1151	2.68	0.14	-4.258734	8.47E-25	Down	8.35E-26	LOC100134906	Solanum lycopersi	GO:0016021	NA	GO:00199	K20628//e
101265833	715	42.07	2.23	-4.237676	1.80E-230	Down	2.68E-232	LOC101265833	PREDICTED: Sol	NA	NA	NA	NA
101255307	513	18.16	0.98	-4.211839	9.84E-69	Down	4.20E-70	LOC101255307	PREDICTED: Sol	GO:0016021	NA	NA	NA
101245668	1055	14.83	0.81	-4.194453	7.57E-123	Down	1.98E-124	LOC101245668	PREDICTED: Sol	GO:0048046	GO:00167	GO:00104	K14504//
101262901	1219	2.83	0.16	-4.144658	1.96E-27	Down	1.79E-28	LOC101262901	PREDICTED: Sol	GO:0005634	GO:00167	NA	K07766//
101247602	1640	2.82	0.16	-4.139551	2.75E-37	Down	1.97E-38	LOC101247602	PREDICTED: Sol	GO:0016021	GO:00167	NA	K20562//
101248072	782	6.52	0.39	-4.063326	1.21E-38	Down	8.42E-40	LOC101248072	PREDICTED: Sol	GO:0005829	NA	GO:00094	NA
101257315	500	4.58	0.28	-4.031849	1.31E-17	Down	1.72E-18	LOC101257315	PREDICTED: Sol	NA	GO:00082	NA	K02995//s
101250492	906	7.15	0.44	-4.022368	3.97E-49	Down	2.25E-50	LOC101250492	PREDICTED: Sol	NA	NA	NA	K14611//s
104648547	966	3.85	0.24	-4.003752	1.94E-28	Down	1.73E-29	LOC104648547	PREDICTED: Sol	GO:0016021	NA	NA	NA
101244961	1632	3.83	0.24	-3.996238	6.03E-49	Down	3.43E-50	LOC101244961	PREDICTED: Sol	NA	GO:00167	NA	K13065//s
101263222	1327	10.53	0.66	-3.995896	1.20E-107	Down	3.44E-109	LOC101263222	PREDICTED: Sol	GO:0005737	GO:00055	GO:00193	K00469//i
101267002	2128	16.81	1.13	-3.894925	1.39E-274	Down	1.73E-276	LOC101267002	PREDICTED: Sol	GO:0005774	GO:00151	GO:00033	K15015//s
101254960	789	27.46	1.96	-3.808406	1.49E-155	Down	3.03E-157	LOC101254960	PREDICTED: Sol	NA	NA	NA	NA
101258131	1961	0.41	0.03	-3.77259	1.96E-06	Down	5.30E-07	LOC101258131	PREDICTED: Sol	NA	GO:00044	NA	K00029//
101267582	366	2.63	0.2	-3.716991	1.31E-06	Down	3.49E-07	LOC101267582	PREDICTED: Sol	GO:0009507	GO:00002	GO:00342	K01255//l
101256744	2338	5.78	0.44	-3.715494	3.58E-101	Down	1.08E-102	LOC101256744	PREDICTED: Sol	GO:0016021	GO:00457	NA	K18626//t
101268729	1741	13.4	1.04	-3.687578	1.48E-171	Down	2.81E-173	LOC101268729	PREDICTED: Sol	NA	GO:00084	NA	K00827//a
101249086	857	2.01	0.16	-3.651052	1.32E-12	Down	2.24E-13	LOC101249086	PREDICTED: Sol	NA	NA	NA	K13944//
101249100	1839	2.38	0.19	-3.64689	3.08E-32	Down	2.47E-33	LOC101249100	PREDICTED: Sol	NA	GO:00468	NA	K15172//t
101252059	1875	7.5	0.6	-3.643856	4.54E-103	Down	1.35E-104	LOC101252059	PREDICTED: Sol	NA	NA	NA	K17987//
101264644	1927	2.5	0.22	-3.506353	1.01E-34	Down	7.54E-36	LOC101264644	PREDICTED: Sol	GO:0016021	GO:00167	NA	K07428//c
101259229	2643	0.9	0.08	-3.491853	3.10E-17	Down	4.14E-18	LOC101259229	PREDICTED: Sol	NA	GO:00167	GO:00513	K13525//t
101254463	3138	0.11	0.01	-3.459432	0.000892	Down	0.000331	LOC101254463	PREDICTED: Sol	GO:0016021	GO:00167	NA	K20887//
101262843	763	1.96	0.18	-3.444785	1.62E-10	Down	3.16E-11	LOC101262843	PREDICTED: Sol	NA	NA	NA	NA
101251623	1755	1.18	0.11	-3.423211	6.15E-15	Down	9.21E-16	LOC101251623	PREDICTED: Sol	GO:0016021	GO:00041	GO:00450	K15406//
101244638	2110	0.21	0.02	-3.392317	0.000595	Down	0.000216	LOC101244638	PREDICTED: Sol	GO:0005840	GO:00037	GO:00422	NA
101259407	784	3.91	0.39	-3.325623	2.80E-20	Down	3.28E-21	LOC101259407	PREDICTED: Sol	GO:0016021	NA	GO:00199	NA
101259649	1938	5.3	0.53	-3.321928	7.44E-70	Down	3.12E-71	LOC101259649	PREDICTED: Sol	NA	NA	NA	K01835//

101267981	1407	31.8	3.19	-3.317398	2.15E-298	Down	2.43E-300	LOC101267981	PREDICTED: Sol	GO:0016021	NA	NA	NA
101251576	1718	17.62	1.78	-3.307265	5.94E-203	Down	9.70E-205	LOC101251576	PREDICTED: Sol	GO:0016020	GO:00167(	GO:00445	K20623//t
101265270	1518	1.08	0.11	-3.295456	1.31E-11	Down	2.37E-12	LOC101265270	PREDICTED: Sol	NA	NA	NA	K20473//
101251122	1032	2.45	0.26	-3.236198	8.76E-17	Down	1.20E-17	LOC101251122	PREDICTED: Sol	NA	GO:00435(	GO:00063	K14431//t
101243665	951	0.65	0.07	-3.215013	0.000145	Down	4.82E-05	LOC101243665	PREDICTED: Sol	NA	NA	NA	NA
101246267	462	2.04	0.23	-3.148863	5.10E-06	Down	1.44E-06	LOC101246267	PREDICTED: Sol	NA	NA	NA	NA
101250584	1192	42.78	4.86	-3.137908	0	Down	0	LOC101250584	PREDICTED: Sol	GO:0016021	NA	NA	K20254//
101259817	1030	1.93	0.22	-3.133025	8.32E-13	Down	1.40E-13	LOC101259817	PREDICTED: Sol	NA	GO:00167	GO:00098(	K08233//
101249495	1783	0.35	0.04	-3.129283	9.86E-05	Down	3.22E-05	LOC101249495	PREDICTED: Sol	GO:0005634	GO:00055	GO:00181(	K13412//c
101258357	817	11.6	1.35	-3.103093	2.30E-63	Down	1.05E-64	LOC101258357	PREDICTED: Sol	NA	NA	NA	NA
778339	2356	5.75	0.68	-3.079955	1.73E-86	Down	6.01E-88	LOC778339	PREDICTED: Sol	GO:0005887	GO:00228	NA	K08176//
101252649	1450	0.59	0.07	-3.075288	5.10E-06	Down	1.44E-06	LOC101252649	PREDICTED: Sol	GO:0016020	GO:00083	NA	K20891//
101254946	849	0.67	0.08	-3.066089	0.00045	Down	0.00016	LOC101254946	PREDICTED: Sol	NA	NA	NA	K13993//
101262066	2120	2.93	0.35	-3.065474	1.64E-39	Down	1.12E-40	LOC101262066	PREDICTED: Sol	GO:0016021	NA	NA	NA
104647629	567	0.92	0.11	-3.06413	0.000399	Down	0.000141	LOC104647629	PREDICTED: Sol	NA	NA	NA	NA
101252588	1960	5.6	0.67	-3.063194	3.63E-67	Down	1.59E-68	LOC101252588	PREDICTED: Sol	NA	GO:00037(	NA	K09060//
101248026	1418	31.29	3.78	-3.049244	5.10E-274	Down	6.41E-276	JA2L	Solanum lycopersi	GO:0005634	GO:00036	GO:00063	K13126//
544091	1212	1.53	0.19	-3.00946	8.30E-12	Down	1.48E-12	Q`a	Solanum lycopersi	NA	GO:00045	GO:00059	K19893//
778275	1287	6.58	0.84	-2.969626	3.53E-51	Down	1.93E-52	SNF4	Solanum lycopersi	NA	GO:00163(	NA	K07200//
101244308	3619	1.4	0.18	-2.959358	2.01E-31	Down	1.64E-32	LOC101244308	PREDICTED: Sol	GO:0005634	GO:00055	NA	K13254//s
101267951	490	2.25	0.29	-2.9558	1.19E-06	Down	3.16E-07	PSK2	Solanum lycopersi	GO:0005576	GO:00080	GO:00082	NA
101268303	726	2.16	0.28	-2.947533	1.52E-09	Down	3.19E-10	LOC101268303	PREDICTED: Sol	GO:0005576	NA	GO:00199	NA
101250270	715	12.32	1.61	-2.93587	2.68E-50	Down	1.48E-51	SP2G	Solanum lycopersi	NA	NA	NA	K16223//
101249811	2327	2.29	0.3	-2.932313	1.04E-32	Down	8.23E-34	LOC101249811	PREDICTED: Sol	GO:0005634	GO:00048	NA	K08332//
543808	2466	20.68	2.82	-2.874469	1.81E-303	Down	2.00E-305	cuAO	Solanum lycopersi	GO:0016021	GO:00081	GO:00093(	K00276//
101264953	603	4.09	0.57	-2.843067	7.39E-14	Down	1.17E-14	LOC101264953	PREDICTED: Sol	NA	NA	NA	NA
544066	661	77.72	10.86	-2.839262	1.91E-279	Down	2.36E-281	TSW12	Solanum lycopersi	GO:0016020	GO:00082	GO:00068(	NA
101249794	1505	88.28	12.34	-2.838744	0	Down	0	LOC101249794	PREDICTED: Sol	NA	GO:00468	NA	K14497//
101256853	904	5.98	0.85	-2.814611	1.51E-30	Down	1.27E-31	LOC101256853	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	K09286//
101261478	1731	3.51	0.5	-2.811471	2.31E-35	Down	1.71E-36	LOC101261478	PREDICTED: Sol	GO:0016020	GO:00167(	GO:00445	K00512//s
544069	651	177.42	25.35	-2.807111	0	Down	0	PR-P2	Solanum lycopersi	GO:0005618	NA	GO:00508	NA
101262661	1167	172.53	24.97	-2.78858	0	Down	0	LOC101262661	PREDICTED: Sol	GO:0005634	GO:00435(	NA	K09338//
101255592	1239	339.56	49.6	-2.775254	0	Down	0	LOC101255592	PREDICTED: Sol	GO:0005887	GO:00511	GO:00714	K15382//s
101248335	671	1.7	0.25	-2.765535	1.19E-06	Down	3.15E-07	LOC101248335	PREDICTED: Sol	GO:0009507	GO:00090	GO:00229(	K02639//f
104646748	1341	13.14	1.94	-2.759837	2.88E-98	Down	8.95E-100	LOC104646748	PREDICTED: Sol	NA	NA	NA	K07466//r
101261974	1013	10.04	1.53	-2.714156	1.66E-53	Down	8.78E-55	LOC101261974	PREDICTED: Sol	NA	NA	NA	K08064//
101250467	1607	6.5	1.02	-2.671871	4.77E-57	Down	2.39E-58	LOC101250467	PREDICTED: Sol	GO:0043231	GO:00800	GO:00081	K21354//

104645665	828	4.14	0.65	-2.671119	1.69E-18	Down	2.13E-19	LOC104645665	PREDICTED: Sol	NA	NA	NA	NA
101247830	1407	3.8	0.6	-2.662965	3.04E-29	Down	2.64E-30	LOC101247830	PREDICTED: Sol	GO:0005743	GO:00052	GO:00065	K15109//s
101261456	1304	5.67	0.91	-2.63941	7.51E-40	Down	5.09E-41	LOC101261456	PREDICTED: Sol	NA	NA	NA	K15095//(
101256209	1682	8.06	1.3	-2.632268	3.69E-64	Down	1.66E-65	LOC101256209	PREDICTED: Sol	GO:0016021	NA	NA	NA
101258342	576	7.97	1.32	-2.594042	2.60E-23	Down	2.71E-24	XSP10	Solanum lycopersi	NA	NA	NA	NA
101251233	2488	0.36	0.06	-2.584963	1.19E-06	Down	3.15E-07	LOC101251233	PREDICTED: Sol	NA	NA	NA	K09458//
101267241	1561	19.35	3.23	-2.582727	2.71E-158	Down	5.42E-160	LOC101267241	PREDICTED: Sol	GO:0016021	GO:00151	GO:00033	K14993//s
101247647	1068	99.02	16.93	-2.548138	0	Down	0	LOC101247647	PREDICTED: Sol	GO:0005576	NA	GO:00199	K20628//e
101255514	747	2.88	0.5	-2.526069	3.51E-11	Down	6.54E-12	LOC101255514	PREDICTED: Sol	NA	NA	NA	NA
544034	613	78.85	13.94	-2.49988	1.29E-227	Down	1.96E-229	LE16	Solanum lycopersi	GO:0016020	GO:00082	GO:00068	NA
101267939	1416	2.54	0.46	-2.465123	1.90E-18	Down	2.40E-19	LOC101267939	PREDICTED: Sol	NA	GO:00469	NA	K13422//t
101268445	1919	0.55	0.1	-2.459432	6.45E-06	Down	1.84E-06	LOC101268445	PREDICTED: Sol	NA	GO:00046	GO:00065	K00318//
101262282	3069	1.53	0.28	-2.450033	2.06E-24	Down	2.05E-25	LOC101262282	PREDICTED: Sol	GO:0016021	GO:00302	GO:00485	K04733//i
101268663	2138	2.45	0.45	-2.444785	1.09E-26	Down	1.01E-27	LOC101268663	PREDICTED: Sol	GO:0016021	GO:00055	GO:00066	K15404//a
101245070	2449	2.99	0.55	-2.442642	2.44E-37	Down	1.74E-38	LOC101245070	PREDICTED: Sol	GO:0016021	GO:00052	GO:00550	K13783//
101263398	753	3.64	0.67	-2.441705	1.71E-13	Down	2.77E-14	LOC101263398	PREDICTED: Sol	GO:0016021	NA	GO:00199	NA
101256448	1741	1.52	0.28	-2.440573	8.48E-14	Down	1.35E-14	LOC101256448	PREDICTED: Sol	NA	GO:00166	NA	K21840//
101266084	872	1.45	0.27	-2.425022	9.99E-07	Down	2.63E-07	LOC101266084	PREDICTED: Sol	GO:0005737	GO:00043	GO:00067	K00799//
101253409	3731	0.16	0.03	-2.415037	0.000881	Down	0.000327	LOC101253409	PREDICTED: Sol	NA	GO:00163	NA	K21026//a
109120650	2122	0.31	0.06	-2.369234	0.00021	Down	7.17E-05	LOC109120650	PREDICTED: Sol	NA	NA	NA	NA
101251993	1651	0.92	0.18	-2.353637	1.70E-08	Down	3.85E-09	LOC101251993	PREDICTED: Sol	NA	GO:00435	GO:00063	K14431//t
101265388	786	1.53	0.3	-2.350497	3.95E-06	Down	1.10E-06	LOC101265388	PREDICTED: Sol	NA	NA	NA	NA
101243675	811	10.28	2.03	-2.340289	5.47E-38	Down	3.85E-39	LOC101243675	PREDICTED: Sol	NA	NA	NA	K16223//
101250521	1991	5.97	1.18	-2.338944	1.07E-56	Down	5.39E-58	LOC101250521	PREDICTED: Sol	GO:0016021	NA	GO:00550	K13754//s
101247301	1557	0.96	0.19	-2.337035	9.57E-08	Down	2.30E-08	LOC101247301	PREDICTED: Sol	GO:0043231	GO:00037	GO:00094	K20892//
101257623	2617	5.06	1.01	-2.324782	3.77E-63	Down	1.73E-64	LOC101257623	PREDICTED: Sol	NA	GO:00167	NA	K06617//r
101055596	2189	14.25	2.86	-2.316875	1.30E-146	Down	2.85E-148	hsc70.3	PREDICTED: Sol	NA	GO:00055	NA	K03283//
104645532	834	0.99	0.2	-2.307429	0.000228	Down	7.83E-05	LOC104645532	PREDICTED: Sol	NA	GO:00036	GO:00150	NA
101244860	321	6.93	1.43	-2.27684	3.91E-09	Down	8.46E-10	LOC101244860	PREDICTED: Sol	NA	NA	NA	NA
101245417	2043	24.74	5.17	-2.258609	2.26E-229	Down	3.39E-231	LOC101245417	PREDICTED: Sol	GO:0016021	NA	NA	K15015//s
101268307	837	14.75	3.12	-2.241097	3.93E-53	Down	2.09E-54	LOC101268307	PREDICTED: Sol	NA	NA	NA	K13993//
109119578	1172	8.12	1.73	-2.230708	1.73E-42	Down	1.12E-43	LOC109119578	PREDICTED: Sol	NA	GO:00435	GO:00063	K21867//
104646084	1578	0.75	0.16	-2.228819	6.47E-06	Down	1.84E-06	LOC104646084	PREDICTED: Sol	NA	NA	NA	K14709//s
101264531	1045	5.86	1.26	-2.217477	7.67E-27	Down	7.10E-28	LOC101264531	PREDICTED: Sol	NA	GO:00037	NA	K01166//r
543983	2070	0.41	0.09	-2.187627	0.000186	Down	6.32E-05	LOC543983	Solanum lycopersi	GO:0009507	GO:00428	GO:00090	K01754//t
101250924	2316	12.59	2.8	-2.16878	6.19E-127	Down	1.58E-128	LOC101250924	PREDICTED: Sol	GO:0016021	GO:00052	NA	K14638//s
101267723	3286	2.01	0.45	-2.159199	1.98E-29	Down	1.72E-30	ppc2	PREDICTED: Sol	NA	GO:00089	GO:00060	K01595//

101254378	1737	27.5	6.17	-2.156089	6.58E-208	Down	1.06E-209	LOC101254378	PREDICTED: Sol	NA	GO:001662	NA	K00166//
100316895	1783	50.81	11.4	-2.156079	0	Down	0	PP2C-2	Solanum lycopersi	NA	GO:004687	NA	K14497//
104648458	507	1.87	0.42	-2.154577	0.000186	Down	6.32E-05	LOC104648458	PREDICTED: Sol	NA	NA	NA	NA
101263880	336	6.49	1.46	-2.15225	1.71E-08	Down	3.87E-09	LOC101263880	PREDICTED: Sol	GO:0016021	NA	NA	K03363//c
101266080	659	587.03	132.69	-2.145375	0	Down	0	LOC101266080	Solanum lycopersi	GO:0016020	GO:000828	GO:000686	NA
101246666	785	6.06	1.37	-2.145142	7.82E-20	Down	9.31E-21	LOC101246666	Solanum lycopersi	NA	NA	GO:000695	NA
104644397	1716	0.57	0.13	-2.13245	7.85E-05	Down	2.53E-05	LOC104644397	PREDICTED: Sol	NA	NA	NA	K13161//
101244167	698	91.8	21.15	-2.117836	1.35E-251	Down	1.87E-253	LOC101244167	PREDICTED: Sol	NA	NA	NA	K12741//
101260986	837	5.38	1.24	-2.117266	1.33E-18	Down	1.66E-19	LOC101260986	PREDICTED: Sol	GO:0016021	GO:006165	GO:004316	K19040//
101255654	730	15.27	3.52	-2.117053	7.97E-45	Down	4.93E-46	LOC101255654	PREDICTED: Sol	NA	NA	NA	NA
101258100	885	10.12	2.34	-2.112629	1.91E-36	Down	1.39E-37	LOC101258100	PREDICTED: Sol	NA	NA	NA	NA
100529102	2783	2.4	0.56	-2.099536	1.36E-28	Down	1.20E-29	lTTS1	Solanum lycopersi	NA	GO:001686	NA	K15813//
101257495	792	1.07	0.25	-2.097611	0.000491	Down	0.000176	LOC101257495	PREDICTED: Sol	GO:0005739	NA	NA	K02267//c
101252861	2027	0.47	0.11	-2.095157	0.000108	Down	3.55E-05	LOC101252861	PREDICTED: Sol	GO:0009505	GO:001672	NA	K19791//i
101263926	1610	9.77	2.29	-2.093011	1.29E-67	Down	5.62E-69	LOC101263926	PREDICTED: Sol	NA	GO:001682	NA	K01761//
101258285	354	24.29	5.7	-2.091329	1.83E-30	Down	1.54E-31	LOC101258285	PREDICTED: Sol	NA	NA	NA	NA
101259698	1503	2.11	0.5	-2.077243	1.23E-13	Down	1.97E-14	LOC101259698	PREDICTED: Sol	NA	GO:004687	NA	K05277//l
544180	1196	6.37	1.51	-2.076745	4.01E-31	Down	3.32E-32	abz1	Solanum lycopersi	NA	GO:000370	NA	K09060//
778310	1267	4.63	1.11	-2.060453	6.15E-24	Down	6.26E-25	GGPS1	Solanum lycopersi	NA	GO:001674	GO:000825	K13789//
101245699	826	4.91	1.18	-2.056936	2.64E-16	Down	3.69E-17	LOC101245699	PREDICTED: Sol	NA	NA	NA	K03006//
101264793	1498	28.03	6.76	-2.051877	9.68E-172	Down	1.83E-173	LOC101264793	PREDICTED: Sol	GO:0016021	GO:001517	GO:000335	K15015//s
101252966	1781	16.24	3.92	-2.050626	2.38E-116	Down	6.45E-118	LOC101252966	PREDICTED: Sol	GO:0016021	NA	NA	K14209//s
104648861	2380	0.33	0.08	-2.044394	0.000675	Down	0.000246	LOC104648861	PREDICTED: Sol	NA	NA	NA	K11843//
101266471	1381	0.66	0.16	-2.044394	0.000279	Down	9.69E-05	LOC101266471	PREDICTED: Sol	GO:0005737	GO:000467	GO:002301	K04421//
104644865	1663	1.27	0.31	-2.034488	0.000107	Down	3.49E-05	LOC104644865	PREDICTED: Sol	NA	NA	NA	NA
101244894	658	228.78	56.4	-2.020194	0	Down	0	LOC101244894	PREDICTED: Sol	NA	NA	NA	K09874//a
101246264	1777	4.7	1.16	-2.018536	2.24E-33	Down	1.74E-34	LOC101246264	PREDICTED: Sol	GO:0005886	GO:000414	GO:001943	K15406//
101259110	964	0.85	0.21	-2.017074	0.000356	Down	0.000125	LOC101259110	PREDICTED: Sol	NA	NA	NA	NA
109119902	542	7.26	1.8	-2.011973	3.12E-15	Down	4.61E-16	LOC109119902	PREDICTED: Sol	NA	NA	NA	NA
101248124	762	10.59	2.66	-1.993204	3.36E-30	Down	2.85E-31	LOC101248124	PREDICTED: Sol	NA	NA	NA	NA
101249967	714	3.42	0.86	-1.991588	1.13E-09	Down	2.34E-10	LOC101249967	PREDICTED: Sol	GO:0048046	GO:001685	NA	K01870//i
101055585	1086	13.03	3.3	-1.981299	1.95E-53	Down	1.03E-54	ZF2	Solanum lycopersi	GO:0005634	GO:000367	NA	K05747//
104646047	678	1.77	0.45	-1.975752	4.85E-05	Down	1.52E-05	LOC104646047	PREDICTED: Sol	NA	NA	NA	NA
101263275	1965	35.61	9.07	-1.973108	4.72E-268	Down	6.04E-270	LOC101263275	PREDICTED: Sol	GO:0005634	GO:000122	GO:000636	K12126//
101260767	724	2	0.51	-1.971431	6.19E-06	Down	1.76E-06	LOC101260767	PREDICTED: Sol	GO:0005634	GO:000367	GO:000635	K14516//e
101252918	1693	2.81	0.72	-1.964501	1.38E-18	Down	1.73E-19	LOC101252918	PREDICTED: Sol	NA	GO:004687	NA	K06892//f
101268519	1592	1.01	0.26	-1.957772	1.07E-06	Down	2.84E-07	LOC101268519	PREDICTED: Sol	GO:0016021	NA	NA	K19041//

101055556	729	3.26	0.84	-1.956411	2.89E-09	Down	6.18E-10	LOC101055556	Solanum lycopersi	GO:0005634	NA	GO:00063	K14484//a
101255889	1578	2.51	0.65	-1.949176	8.29E-16	Down	1.19E-16	LOC101255889	PREDICTED: Sol	NA	GO:00167	NA	K19747//
101245338	1784	15.25	3.95	-1.948885	1.21E-92	Down	3.94E-94	LOC101245338	PREDICTED: Sol	NA	NA	NA	NA
778214	777	1657.52	429.57	-1.948061	0	Down	0	ltpg1	Solanum lycopersi	GO:0016020	GO:00082	GO:00068	NA
544185	705	94.51	24.53	-1.94592	2.68E-235	Down	3.92E-237	P4	Solanum lycopersi	GO:0005576	NA	GO:00508	K13449//
101266923	667	90.36	23.61	-1.936286	4.79E-210	Down	7.65E-212	LOC101266923	PREDICTED: Sol	NA	NA	NA	K12121//
101246214	1813	2.16	0.57	-1.921997	3.12E-15	Down	4.60E-16	LOC101246214	PREDICTED: Sol	NA	GO:00457	NA	K17815//e
101263226	975	6.59	1.77	-1.896529	3.29E-23	Down	3.45E-24	LOC101263226	PREDICTED: Sol	NA	NA	GO:00069	K20165//
544017	1929	5.33	1.45	-1.878083	1.41E-37	Down	1.00E-38	LAPA1	Solanum lycopersi	GO:0009507	GO:00002	GO:00342	K01255//l
543875	2259	11.08	3.04	-1.865815	4.81E-90	Down	1.60E-91	LEAS1	Solanum lycopersi	NA	GO:00055	GO:00065	K01953//a
101263372	2072	0.69	0.19	-1.860597	4.78E-06	Down	1.34E-06	LOC101263372	PREDICTED: Sol	NA	GO:00468	GO:00461	K00422//
104645765	1301	1.08	0.3	-1.847997	1.19E-05	Down	3.48E-06	LOC104645765	PREDICTED: Sol	NA	GO:00041	GO:00065	NA
101262581	1490	4.52	1.26	-1.842899	5.76E-23	Down	6.09E-24	LOC101262581	PREDICTED: Sol	NA	GO:00055	NA	K07910//
101267932	1947	0.93	0.26	-1.838719	4.83E-07	Down	1.24E-07	LOC101267932	PREDICTED: Sol	NA	NA	NA	K13963//s
101254668	1794	17.79	4.98	-1.836849	3.00E-111	Down	8.36E-113	LOC101254668	PREDICTED: Sol	GO:0016020	GO:00167	GO:00445	K20562//
543853	1470	3.77	1.06	-1.8305	1.07E-19	Down	1.29E-20	Xegip	Solanum lycopersi	NA	GO:00041	GO:00065	K00924//
101245242	1937	1.1	0.31	-1.827163	4.75E-08	Down	1.11E-08	LOC101245242	PREDICTED: Sol	NA	GO:00042	NA	K02563//
104648973	1090	3.1	0.88	-1.816693	4.24E-12	Down	7.43E-13	LOC104648973	PREDICTED: Sol	NA	NA	NA	NA
544149	956	1279.55	365.29	-1.808522	0	Down	0	CHI3	Solanum lycopersi	GO:0005615	GO:00045	GO:00060	K20547//
101247100	1488	1.75	0.5	-1.807355	1.44E-09	Down	3.01E-10	LOC101247100	PREDICTED: Sol	NA	GO:00048	NA	K10260//
101244796	1532	52.82	15.1	-1.806536	2.49E-273	Down	3.14E-275	LOC101244796	PREDICTED: Sol	NA	GO:00719	NA	K09838//z
101246743	595	42.07	12.03	-1.806155	6.80E-79	Down	2.56E-80	LOC101246743	PREDICTED: Sol	GO:0016020	GO:00082	GO:00068	NA
544163	2170	47.2	13.6	-1.79518	0	Down	0	LOC544163	Solanum lycopersi	NA	GO:00167	NA	K09840//
101245487	1917	2.39	0.69	-1.792342	9.74E-16	Down	1.40E-16	LOC101245487	PREDICTED: Sol	GO:0005783	GO:00082	NA	K19907//s
101260726	1315	10.2	2.95	-1.789782	7.00E-48	Down	4.05E-49	LOC101260726	PREDICTED: Sol	GO:0016021	GO:00082	NA	K10661//
101055548	1151	33.78	9.77	-1.789739	5.36E-128	Down	1.36E-129	IAA8	Solanum lycopersi	GO:0005634	NA	GO:00063	K14484//a
101245919	945	3.04	0.88	-1.788496	4.57E-10	Down	9.21E-11	LOC101245919	PREDICTED: Sol	NA	NA	NA	K17506//
101266086	1515	5.38	1.56	-1.78606	9.50E-28	Down	8.59E-29	LOC101266086	PREDICTED: Sol	GO:0005615	GO:00082	GO:00516	K01373//c
101264922	2239	2.68	0.78	-1.780687	1.58E-20	Down	1.83E-21	LOC101264922	PREDICTED: Sol	NA	NA	NA	K17046//
101261619	677	16.62	4.84	-1.779841	1.40E-35	Down	1.03E-36	LOC101261619	PREDICTED: Sol	GO:0005737	GO:00468	GO:00300	K07213//c
101261956	877	3.67	1.07	-1.778169	4.50E-11	Down	8.46E-12	LOC101261956	PREDICTED: Sol	NA	NA	NA	NA
101245348	1368	1.77	0.52	-1.767166	1.13E-08	Down	2.53E-09	LOC101245348	PREDICTED: Sol	NA	NA	NA	K03097//c
101256490	1744	1.32	0.39	-1.758992	2.02E-08	Down	4.59E-09	LOC101256490	PREDICTED: Sol	NA	GO:00167	NA	K19747//
101245840	1716	39.66	11.75	-1.755024	3.05E-222	Down	4.72E-224	LOC101245840	PREDICTED: Sol	GO:0005623	GO:00047	GO:00454	K17609//
101263090	1728	0.64	0.19	-1.752072	0.000167	Down	5.63E-05	LOC101263090	PREDICTED: Sol	NA	GO:00167	GO:00081	K21373//
544236	2628	40.83	12.13	-1.75105	0	Down	0	SIP	Solanum lycopersi	NA	GO:00167	NA	K06617//r
109118734	1331	31.37	9.32	-1.750984	1.53E-134	Down	3.69E-136	LOC109118734	PREDICTED: Sol	NA	GO:00468	NA	K04124//

778293	1401	6.33	1.9	-1.736206	7.60E-29	Down	6.67E-30	9612	Solanum lycopersi	NA	GO:00468	GO:00454	K01728//
101246954	861	15.19	4.58	-1.729702	9.93E-41	Down	6.63E-42	LOC101246954	PREDICTED: Sol	NA	NA	NA	K20855//
101247761	609	1.69	0.51	-1.728454	0.000722	Down	0.000264	LOC101247761	PREDICTED: Sol	NA	NA	GO:00097	K14488//
101255191	2218	13.07	3.95	-1.726335	1.87E-90	Down	6.20E-92	LOC101255191	PREDICTED: Sol	NA	NA	GO:00063	K17398//
104648541	952	3.11	0.94	-1.726182	6.25E-10	Down	1.27E-10	LOC104648541	PREDICTED: Sol	GO:0016021	NA	GO:00199	NA
101261459	3138	7.45	2.27	-1.714548	1.25E-74	Down	4.94E-76	LOC101261459	PREDICTED: Sol	GO:0005886	NA	NA	NA
101250764	1501	2.26	0.69	-1.711655	1.94E-11	Down	3.55E-12	LOC101250764	PREDICTED: Sol	GO:0005634	GO:00009	GO:00063	K09422//t
101250001	1603	8.25	2.52	-1.71097	1.77E-41	Down	1.16E-42	LOC101250001	PREDICTED: Sol	NA	GO:00469	NA	K16189//
101246665	4046	4.84	1.48	-1.70941	1.28E-63	Down	5.81E-65	LOC101246665	PREDICTED: Sol	NA	GO:00510	NA	NA
544134	738	2.55	0.78	-1.708951	2.12E-06	Down	5.76E-07	TSI-1	Solanum lycopersi	NA	NA	GO:00069	K14496//a
101249144	1192	27.62	8.46	-1.706984	5.49E-102	Down	1.65E-103	LOC101249144	PREDICTED: Sol	GO:0005634	GO:00435	NA	K09338//
100037510	1610	50.89	15.6	-1.705836	1.23E-256	Down	1.67E-258	SRK2C	Solanum lycopersi	GO:0005634	GO:00046	GO:00064	K14498//s
101261337	3010	0.39	0.12	-1.70044	0.000125	Down	4.14E-05	LOC101261337	PREDICTED: Sol	GO:0005737	GO:00048	GO:00099	K01931//
101247242	525	3.05	0.94	-1.698077	2.18E-05	Down	6.55E-06	LOC101247242	PREDICTED: Sol	GO:0016020	GO:00082	GO:00068	NA
101249340	1368	0.94	0.29	-1.696608	6.99E-05	Down	2.23E-05	LOC101249340	PREDICTED: Sol	GO:0043231	GO:00037	GO:00094	K20892//
101266493	812	3.19	0.99	-1.688056	2.02E-08	Down	4.60E-09	LOC101266493	PREDICTED: Sol	NA	NA	NA	NA
101260277	5172	0.61	0.19	-1.68281	3.44E-11	Down	6.41E-12	LOC101260277	PREDICTED: Sol	GO:0005886	GO:00435	GO:00071	K07198//
101252201	1696	0.61	0.19	-1.68281	0.000532	Down	0.000192	LOC101252201	PREDICTED: Sol	GO:0016021	GO:00167	NA	K07428//c
101258143	776	3.2	1	-1.678072	4.82E-08	Down	1.13E-08	LOC101258143	PREDICTED: Sol	GO:0016021	NA	GO:00199	NA
101256151	797	5.52	1.73	-1.673896	1.39E-13	Down	2.24E-14	LOC101256151	PREDICTED: Sol	GO:0016021	GO:00052	GO:00550	K15400//
101265369	1533	2.07	0.65	-1.671119	2.58E-10	Down	5.11E-11	LOC101265369	PREDICTED: Sol	GO:0043231	GO:00800	GO:00081	K12938//a
104648156	1033	56.94	17.92	-1.667872	3.07E-174	Down	5.71E-176	LOC104648156	PREDICTED: Sol	GO:0046658	GO:00090	NA	K01179//e
544092	1250	79.27	24.98	-1.666001	1.80E-296	Down	2.06E-298	Q`b	Solanum lycopersi	GO:0046658	GO:00429	GO:00059	K19893//
101245973	1522	3.52	1.11	-1.665016	9.79E-18	Down	1.28E-18	LOC101245973	PREDICTED: Sol	NA	NA	NA	NA
101251084	1787	1.14	0.36	-1.662965	4.90E-07	Down	1.25E-07	LOC101251084	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	K12900//
101247078	1279	1.04	0.33	-1.656046	9.13E-05	Down	2.97E-05	LOC101247078	PREDICTED: Sol	NA	GO:00167	GO:00081	K13258//
104648615	941	1.75	0.56	-1.643856	1.58E-05	Down	4.68E-06	LOC104648615	PREDICTED: Sol	GO:0016021	NA	NA	NA
104645408	834	4.15	1.33	-1.641685	1.07E-10	Down	2.06E-11	LOC104645408	PREDICTED: Sol	NA	NA	NA	K15920//
101264952	522	218.01	70.02	-1.638555	3.65E-306	Down	4.00E-308	LOC101264952	PREDICTED: Sol	NA	NA	NA	NA
101262489	2466	3.6	1.16	-1.633872	3.17E-27	Down	2.91E-28	LOC101262489	Solanum lycopersi	NA	GO:00002	GO:00096	K17982//
101266963	1866	6.78	2.19	-1.630354	4.18E-38	Down	2.94E-39	LOC101266963	PREDICTED: Sol	GO:0016020	GO:00167	GO:00445	K14985//
101259682	910	49.98	16.17	-1.628031	2.87E-129	Down	7.15E-131	LOC101259682	PREDICTED: Sol	GO:0016021	NA	GO:00097	K03251//t
104647829	469	3.52	1.14	-1.626542	3.74E-05	Down	1.16E-05	LOC104647829	PREDICTED: Sol	NA	NA	NA	NA
109119848	1817	0.92	0.3	-1.616671	1.16E-05	Down	3.39E-06	LOC109119848	PREDICTED: Sol	GO:0016020	GO:00167	GO:00445	K07408//c
544028	1942	3.37	1.1	-1.615245	4.93E-20	Down	5.83E-21	ACS1A	Solanum lycopersi	NA	GO:00038	GO:00090	K20772//
104649633	1231	0.98	0.32	-1.61471	0.000287	Down	9.98E-05	LOC104649633	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	NA
101249481	1291	5.41	1.77	-1.611879	1.11E-20	Down	1.28E-21	LOC101249481	PREDICTED: Sol	NA	GO:00468	NA	K06892//f

101262567	1187	19.79	6.48	-1.610706	2.64E-67	Down	1.15E-68	LOC101262567	PREDICTED: Sol	GO:0009506	GO:00048	GO:00069	NA
101263538	1999	1.66	0.55	-1.59368	1.83E-10	Down	3.59E-11	LOC101263538	PREDICTED: Sol	GO:0016021	GO:00052	NA	K14638//s
101264425	1258	5.65	1.89	-1.579865	2.37E-20	Down	2.76E-21	LOC101264425	PREDICTED: Sol	GO:0005576	GO:00468	GO:00069	K00430//
101257896	2613	40.56	13.58	-1.578574	1.08E-302	Down	1.20E-304	sbt4b	Solanum lycopersi	NA	GO:00042	NA	K12619//
544035	1286	3.85	1.29	-1.577487	2.06E-14	Down	3.18E-15	EXP1	Solanum lycopersi	GO:0016020	NA	GO:00096	K20628//e
101248657	1431	4.64	1.56	-1.572579	7.39E-19	Down	9.16E-20	LOC101248657	PREDICTED: Sol	GO:0016021	GO:00167	GO:00066	K10256//
101244010	518	3.42	1.15	-1.572362	2.65E-05	Down	8.05E-06	LOC101244010	PREDICTED: Sol	NA	NA	GO:00069	NA
101256065	1414	2.73	0.92	-1.569195	1.68E-11	Down	3.06E-12	LOC101256065	PREDICTED: Sol	GO:0005634	GO:00435	GO:00063	K13425//
101243802	2190	2.61	0.88	-1.568474	6.21E-17	Down	8.41E-18	LOC101243802	PREDICTED: Sol	GO:0016021	NA	GO:00102	K16055//t
101245037	1124	13.52	4.56	-1.567989	4.48E-42	Down	2.92E-43	LOC101245037	PREDICTED: Sol	GO:0005634	GO:00435	NA	K09338//
101254104	1731	1.33	0.45	-1.563429	2.52E-07	Down	6.31E-08	LOC101254104	PREDICTED: Sol	GO:0016021	GO:00616	GO:00431	K19038//
101245684	758	7.24	2.45	-1.563208	3.46E-15	Down	5.11E-16	LOC101245684	PREDICTED: Sol	GO:0005737	GO:00468	GO:00300	K07213//c
544250	1572	95.4	32.38	-1.558886	0	Down	0	fdh	Solanum lycopersi	GO:0005739	GO:00166	GO:00421	K00122//f
109119181	1416	7.3	2.48	-1.557556	3.10E-29	Down	2.69E-30	LOC109119181	PREDICTED: Sol	GO:0016021	GO:00167	GO:00066	K10256//
101244867	1445	2.17	0.74	-1.552098	1.31E-09	Down	2.73E-10	LOC101244867	PREDICTED: Sol	GO:0016021	NA	GO:00550	K07088//
101253938	944	2.46	0.84	-1.550197	5.73E-07	Down	1.48E-07	LOC101253938	PREDICTED: Sol	GO:0005634	GO:00434	GO:00163	K14490//
543953	536	116.59	39.95	-1.545177	2.11E-155	Down	4.32E-157	ER1	Solanum lycopersi	GO:0005576	GO:00048	GO:00096	NA
101259007	2774	64.54	22.21	-1.538984	0	Down	0	LOC101259007	PREDICTED: Sol	NA	NA	NA	K09060//
109118713	1368	1.8	0.62	-1.537657	2.33E-07	Down	5.81E-08	LOC109118713	PREDICTED: Sol	GO:0016021	NA	NA	K13195//c
101258079	1845	2.67	0.92	-1.537134	4.34E-14	Down	6.82E-15	LOC101258079	PREDICTED: Sol	NA	GO:00469	GO:00060	K01647//c
101267030	870	1.77	0.61	-1.536868	8.15E-05	Down	2.63E-05	LOC101267030	PREDICTED: Sol	GO:0016021	GO:00515	NA	NA
101244327	1998	4.06	1.4	-1.536053	7.77E-23	Down	8.26E-24	LOC101244327	PREDICTED: Sol	GO:0016021	GO:00152	NA	K03327//
109120086	745	3.55	1.23	-1.529161	1.30E-07	Down	3.17E-08	LOC109120086	PREDICTED: Sol	GO:0016021	NA	NA	NA
101265741	2419	0.49	0.17	-1.527247	0.000474	Down	0.00017	LOC101265741	PREDICTED: Sol	NA	GO:00055	NA	K08835//s
101245149	3463	2.88	1	-1.526069	3.42E-28	Down	3.06E-29	LOC101245149	PREDICTED: Sol	GO:0005829	GO:00089	GO:00060	K01595//
101268052	880	59.41	20.66	-1.523866	9.53E-135	Down	2.29E-136	LOC101268052	PREDICTED: Sol	NA	NA	GO:00094	NA
544083	917	8.41	2.94	-1.51629	1.74E-20	Down	2.02E-21	PR-1a1	Solanum lycopersi	GO:0005576	NA	NA	K13449//
101252766	1587	2.8	0.98	-1.514573	1.98E-11	Down	3.61E-12	LOC101252766	PREDICTED: Sol	NA	NA	NA	NA
544123	807	12527.42	4385.59	-1.514246	0	Down	0	PR1b1	Solanum lycopersi	GO:0005576	NA	GO:00508	K13449//
544061	696	142.6	50.06	-1.510244	4.07E-249	Down	5.65E-251	LOC544061	PREDICTED: Sol	NA	NA	NA	K10747//
101249257	1261	36.92	12.97	-1.509224	2.16E-121	Down	5.69E-123	LOC101249257	PREDICTED: Sol	GO:0005634	GO:00046	GO:00181	K04515//c
544297	978	5.69	2	-1.508429	5.04E-15	Down	7.52E-16	CrtR-b2	Solanum lycopersi	GO:0016021	GO:00055	GO:00086	K15746//
101256789	2113	1.65	0.58	-1.508341	3.61E-10	Down	7.22E-11	LOC101256789	PREDICTED: Sol	NA	GO:00469	NA	K13422//t
101266759	784	10.26	3.61	-1.50696	6.73E-21	Down	7.71E-22	LOC101266759	PREDICTED: Sol	NA	NA	NA	NA
101247334	2078	1.79	0.63	-1.506536	3.11E-10	Down	6.19E-11	LOC101247334	PREDICTED: Sol	NA	GO:00167	NA	K01426//a
101256979	2517	39.87	14.09	-1.500632	2.14E-266	Down	2.80E-268	EDS1	Solanum lycopersi	NA	GO:00167	GO:00066	K18875//e
101250069	513	5.03	1.78	-1.498681	6.80E-07	Down	1.76E-07	LOC101250069	PREDICTED: Sol	GO:0009506	GO:00510	GO:00064	NA

101265862	1010	6.3	2.23	-1.498308	5.91E-17	Down	7.99E-18	LOC101265862	PREDICTED: Sol	GO:0005618	GO:00457	NA	K00384//t
544286	512	125.27	44.41	-1.496084	3.28E-151	Down	6.91E-153	mcpi	Solanum lycopersi	GO:0016021	GO:00041	NA	NA
543816	892	16.21	5.75	-1.49525	8.04E-37	Down	5.79E-38	GST-T4	Solanum lycopersi	GO:0005737	GO:00043	GO:00067	K00799//
101267006	851	20.69	7.35	-1.493117	2.10E-44	Down	1.30E-45	LOC101267006	PREDICTED: Sol	NA	NA	NA	NA
101267866	1673	2.7	0.96	-1.491853	2.15E-12	Down	3.70E-13	LOC101267866	PREDICTED: Sol	NA	NA	NA	NA
101254501	656	38.81	13.82	-1.489671	4.82E-62	Down	2.24E-63	LOC101254501	PREDICTED: Sol	NA	NA	NA	NA
101260320	1897	2.73	0.98	-1.478047	4.47E-14	Down	7.02E-15	LOC101260320	PREDICTED: Sol	NA	NA	NA	K02433//a
101262200	1627	115.92	41.84	-1.470175	0	Down	0	LOC101262200	PREDICTED: Sol	GO:0009505	GO:00198	NA	K07200//
101246420	894	251.94	91.03	-1.468666	0	Down	0	Asr4	Solanum lycopersi	NA	NA	GO:00069	K12741//
101268427	1516	2.6	0.94	-1.467779	9.19E-11	Down	1.76E-11	LOC101268427	PREDICTED: Sol	NA	NA	NA	NA
101247540	603	2.68	0.97	-1.466176	0.000131	Down	4.33E-05	LOC101247540	PREDICTED: Sol	GO:0005622	GO:00082	NA	K19939//
101262533	1752	2.48	0.9	-1.462343	8.51E-12	Down	1.52E-12	LOC101262533	PREDICTED: Sol	GO:0016021	GO:00167	NA	K07428//c
101268860	1756	13.03	4.73	-1.461925	2.69E-58	Down	1.33E-59	LOC101268860	PREDICTED: Sol	NA	NA	GO:00071	K05747//
101244426	1047	18.73	6.8	-1.461744	1.19E-48	Down	6.78E-50	LOC101244426	PREDICTED: Sol	GO:0016021	NA	NA	NA
101251889	927	1.57	0.57	-1.461731	0.000234	Down	8.03E-05	LOC101251889	PREDICTED: Sol	NA	NA	NA	K13944//
101257792	1554	13.63	4.95	-1.461285	1.14E-53	Down	6.01E-55	LOC101257792	PREDICTED: Sol	GO:0016021	GO:00052	NA	K00850//
101256765	1504	5.09	1.85	-1.46014	4.16E-20	Down	4.90E-21	LOC101256765	PREDICTED: Sol	GO:0043231	GO:00800	GO:00081	K13495//c
104646584	2267	1.32	0.48	-1.459432	2.39E-08	Down	5.47E-09	LOC104646584	PREDICTED: Sol	NA	NA	NA	NA
101262352	1667	2.28	0.83	-1.457851	2.77E-10	Down	5.51E-11	LOC101262352	PREDICTED: Sol	GO:0016020	GO:00150	GO:00156	NA
104647880	465	4.01	1.46	-1.457634	5.27E-05	Down	1.66E-05	LOC104647880	PREDICTED: Sol	GO:0016021	NA	NA	NA
101251222	863	11.15	4.06	-1.457492	8.49E-24	Down	8.68E-25	LOC101251222	PREDICTED: Sol	GO:0005795	GO:00200	GO:00067	K05770//t
101055579	1535	1.73	0.63	-1.457348	3.47E-10	Down	6.94E-11	LOC101055579	PREDICTED: Sol	GO:0016021	GO:00166	GO:00096	K00279//c
101259076	1144	1.81	0.66	-1.455452	6.64E-06	Down	1.89E-06	LOC101259076	PREDICTED: Sol	GO:0016021	GO:00511	GO:00086	K15382//s
101253759	1811	50.75	18.51	-1.455103	3.46E-231	Down	5.12E-233	LOC101253759	PREDICTED: Sol	GO:0016021	GO:00055	GO:00069	K08472//
101257588	1908	13.15	4.81	-1.450954	8.42E-64	Down	3.81E-65	LOC101257588	PREDICTED: Sol	GO:0005618	GO:00167	GO:00715	K19882//
101255907	573	9.26	3.39	-1.449727	6.95E-13	Down	1.16E-13	LOC101255907	PREDICTED: Sol	GO:0016020	GO:00082	GO:00068	NA
101253729	966	1.96	0.72	-1.444785	2.14E-05	Down	6.42E-06	LOC101253729	PREDICTED: Sol	GO:0005618	GO:00457	NA	K00384//t
101055581	1067	3.62	1.33	-1.444563	3.35E-11	Down	6.23E-12	LOC101055581	PREDICTED: Sol	NA	NA	NA	K07199//
101249954	965	12.7	4.67	-1.443334	6.05E-30	Down	5.14E-31	LOC101249954	PREDICTED: Sol	NA	NA	NA	NA
101244562	1041	2.66	0.98	-1.440573	1.77E-07	Down	4.37E-08	LOC101244562	PREDICTED: Sol	NA	GO:00048	NA	NA
101260225	1524	1.49	0.55	-1.437809	2.51E-06	Down	6.88E-07	LOC101260225	PREDICTED: Sol	GO:0016020	GO:00046	GO:00160	K16815//c
101268129	1761	46.38	17.13	-1.436978	4.21E-201	Down	6.98E-203	NAOD	Solanum lycopersi	NA	NA	NA	K01438//a
101265482	1006	13.2	4.89	-1.432632	1.21E-30	Down	1.01E-31	LOC101265482	PREDICTED: Sol	GO:0090575	GO:00036	GO:00063	NA
101262509	942	45.63	16.92	-1.431253	8.56E-102	Down	2.58E-103	LOC101262509	PREDICTED: Sol	GO:0016021	NA	NA	NA
104649135	480	35.1	13.02	-1.430742	2.31E-37	Down	1.65E-38	LOC104649135	PREDICTED: Sol	NA	NA	NA	NA
101258004	1703	2.55	0.95	-1.424498	0.000992	Down	0.00037	LOC101258004	PREDICTED: Sol	NA	GO:00037	GO:00442	K03754//t
101252465	834	321.13	120.2	-1.417721	0	Down	0	LOC101252465	PREDICTED: Sol	NA	NA	NA	NA

101266879	790	764.35	286.51	-1.415648	0	Down	0	LOC101266879	PREDICTED: Sol	GO:0016020	GO:00082	GO:00068	NA
101245625	1209	1.36	0.51	-1.415037	0.000114	Down	3.75E-05	LOC101245625	PREDICTED: Sol	NA	GO:00082	NA	NA
101254922	802	6.93	2.6	-1.414344	1.68E-13	Down	2.72E-14	LOC101254922	PREDICTED: Sol	NA	NA	NA	K11804//
101246932	2814	1.57	0.59	-1.411978	8.73E-13	Down	1.47E-13	LOC101246932	PREDICTED: Sol	GO:0000783	GO:00036	GO:00316	K00430//
101261722	3632	19.69	7.41	-1.409918	6.29E-175	Down	1.16E-176	LOC101261722	PREDICTED: Sol	GO:0016021	GO:00047	GO:00060	K14157//a
101255051	1012	16.39	6.17	-1.409473	4.45E-39	Down	3.06E-40	LOC101255051	PREDICTED: Sol	GO:0016021	GO:00166	GO:00066	K10258//
101250569	1429	1.46	0.55	-1.408465	8.05E-06	Down	2.32E-06	LOC101250569	PREDICTED: Sol	GO:0005737	GO:00046	GO:00230	K04421//
101258706	2099	40.23	15.19	-1.40515	1.74E-202	Down	2.86E-204	LOC101258706	PREDICTED: Sol	GO:0016021	GO:00152	GO:00097	K20456//
101261765	1745	3.01	1.14	-1.40073	3.63E-13	Down	5.98E-14	LOC101261765	PREDICTED: Sol	NA	GO:00167	NA	K09754//c
101245153	1741	7.52	2.85	-1.399771	1.10E-31	Down	8.98E-33	LOC101245153	PREDICTED: Sol	GO:0016020	GO:00167	GO:00445	K20562//
101267355	3159	13.66	5.18	-1.398933	1.05E-103	Down	3.10E-105	LOC101267355	PREDICTED: Sol	NA	GO:00469	NA	K12126//
101246025	2172	8.78	3.34	-1.394373	3.16E-44	Down	1.97E-45	LOC101246025	PREDICTED: Sol	GO:0005634	GO:00036	NA	NA
101246381	848	147.06	56.02	-1.392391	6.24E-280	Down	7.69E-282	LOC101246381	Solanum lycopersi	NA	NA	GO:00069	K14496//a
101256767	1359	6.66	2.54	-1.390694	1.09E-21	Down	1.21E-22	LOC101256767	PREDICTED: Sol	GO:0016021	GO:00167	GO:00066	K10256//
101250515	1945	65.9	25.15	-1.38972	1.82E-305	Down	2.00E-307	SlADH12A1	Solanum lycopersi	NA	GO:00164	NA	K00294//
101260284	1631	9.94	3.8	-1.387246	2.20E-38	Down	1.53E-39	LOC101260284	PREDICTED: Sol	GO:0016021	NA	NA	K01180//e
101267816	954	2.17	0.83	-1.386512	1.73E-05	Down	5.14E-06	LOC101267816	PREDICTED: Sol	NA	NA	NA	NA
101248076	494	32.36	12.39	-1.385035	4.95E-34	Down	3.78E-35	LOC101248076	PREDICTED: Sol	GO:0016021	NA	NA	NA
101266903	1499	6.12	2.35	-1.380871	3.17E-22	Down	3.46E-23	LOC101266903	PREDICTED: Sol	NA	GO:00468	NA	K06892//f
101246328	2025	8.15	3.13	-1.380637	4.02E-39	Down	2.76E-40	LOC101246328	PREDICTED: Sol	NA	GO:00084	GO:00090	K00814//a
101245159	759	5.33	2.05	-1.378512	1.06E-09	Down	2.19E-10	LOC101245159	PREDICTED: Sol	NA	NA	NA	NA
101255829	941	6.7	2.58	-1.37679	7.90E-15	Down	1.19E-15	LOC101255829	PREDICTED: Sol	NA	GO:00167	GO:00081	K07025//
100134881	1613	2.49	0.96	-1.375039	5.52E-10	Down	1.12E-10	LOC100134881	Solanum lycopersi	NA	NA	NA	K18081//
101255474	1366	21.6	8.33	-1.374643	1.24E-67	Down	5.39E-69	LOC101255474	PREDICTED: Sol	GO:0016021	GO:00167	GO:00066	K10256//
101247196	1378	99.36	38.33	-1.374191	0	Down	0	LOC101247196	PREDICTED: Sol	NA	GO:00045	NA	K08999//
101244900	2736	0.57	0.22	-1.373458	0.000188	Down	6.37E-05	LOC101244900	PREDICTED: Sol	GO:0016021	NA	NA	K01240//
101262640	1161	4.89	1.89	-1.371448	1.53E-13	Down	2.46E-14	LOC101262640	PREDICTED: Sol	NA	GO:00167	NA	NA
101246396	2154	12.62	4.88	-1.370759	3.25E-63	Down	1.49E-64	LOC101246396	Solanum lycopersi	NA	GO:00200	GO:00069	K10529//a
101258987	950	3.98	1.54	-1.369838	1.57E-09	Down	3.30E-10	LOC101258987	Solanum lycopersi	GO:0009507	GO:00200	GO:00069	K00434//
101268143	704	52.81	20.47	-1.3673	3.14E-80	Down	1.16E-81	LOC101268143	PREDICTED: Sol	NA	NA	NA	NA
101249960	1658	40.32	15.63	-1.367178	2.67E-155	Down	5.47E-157	LOC101249960	PREDICTED: Sol	NA	GO:00302	GO:00059	K01792//
101251368	2471	10.57	4.1	-1.36628	9.02E-61	Down	4.26E-62	LOC101251368	PREDICTED: Sol	GO:0016021	GO:00055	GO:00086	K15404//a
101264731	1798	16.44	6.39	-1.363322	7.45E-68	Down	3.23E-69	LOC101264731	PREDICTED: Sol	GO:0005634	GO:00435	NA	K09338//
101266146	923	33.83	13.15	-1.36324	7.01E-69	Down	2.99E-70	LOC101266146	PREDICTED: Sol	NA	NA	NA	K04733//i
101265980	1037	21.45	8.37	-1.357678	4.23E-50	Down	2.35E-51	LOC101265980	PREDICTED: Sol	NA	GO:00037	NA	K08064//
101244665	1559	5.53	2.16	-1.356248	2.49E-19	Down	3.03E-20	LOC101244665	PREDICTED: Sol	NA	NA	NA	K15631//
101249528	1168	1.51	0.59	-1.355762	9.75E-05	Down	3.18E-05	LOC101249528	PREDICTED: Sol	GO:0005615	GO:00082	GO:00516	K13441//c

101250559	1690	8.87	3.47	-1.353998	2.55E-34	Down	1.93E-35	LOC101250559	PREDICTED: Sol	GO:0016020	GO:00167(	GO:00985	K07418//c
101254322	2448	38	14.93	-1.347785	1.69E-210	Down	2.68E-212	LOC101254322	PREDICTED: Sol	NA	GO:00042	NA	K12619//
101251255	1263	3.93	1.55	-1.342261	1.11E-11	Down	1.99E-12	LOC101251255	Solanum lycopersi	NA	GO:00468	GO:00096	K05933//a
101263630	770	89.61	35.6	-1.331782	6.97E-144	Down	1.55E-145	LOC101263630	PREDICTED: Sol	GO:0005634	GO:00435(	NA	K09338//
101262584	864	16.92	6.73	-1.330051	2.42E-31	Down	1.99E-32	LOC101262584	PREDICTED: Sol	GO:0016021	GO:00515	NA	NA
104649031	1266	2.01	0.8	-1.329124	1.21E-05	Down	3.53E-06	LOC104649031	PREDICTED: Sol	NA	NA	NA	NA
101245158	1083	9.39	3.74	-1.328087	1.43E-22	Down	1.54E-23	LOC101245158	PREDICTED: Sol	GO:0016021	NA	NA	NA
101266972	902	8.69	3.47	-1.324421	3.70E-17	Down	4.96E-18	LOC101266972	PREDICTED: Sol	GO:0005737	GO:00043(	GO:00067	K00799//
101263489	1637	23.72	9.48	-1.323145	1.51E-84	Down	5.34E-86	LOC101263489	PREDICTED: Sol	NA	GO:00468	NA	K15172//t
101263945	1478	1.1	0.44	-1.321928	0.000221	Down	7.58E-05	LOC101263945	PREDICTED: Sol	GO:0016021	GO:00087	GO:00322	NA
101262912	1841	181.86	72.87	-1.319431	0	Down	0	LOC101262912	PREDICTED: Sol	GO:0005829	GO:00168	GO:00197	K01590//
543986	1205	202.05	80.97	-1.319253	0	Down	0	LOC543986	Solanum lycopersi	GO:0005615	GO:00429	GO:00069	K19891//
101257330	1941	5.8	2.33	-1.315723	5.03E-25	Down	4.93E-26	LOC101257330	PREDICTED: Sol	GO:0043231	GO:00800	GO:00081	K18823//s
101255324	1070	66.88	26.9	-1.313969	3.96E-150	Down	8.41E-152	LOC101255324	PREDICTED: Sol	GO:0016021	NA	NA	NA
101255164	2189	5.19	2.09	-1.312232	2.61E-25	Down	2.53E-26	LOC101255164	PREDICTED: Sol	NA	GO:00055	NA	K03283//
101260130	1258	2.18	0.88	-1.308753	1.35E-06	Down	3.60E-07	LOC101260130	PREDICTED: Sol	NA	NA	NA	K14299//
101245781	671	89.45	36.12	-1.308284	3.99E-120	Down	1.07E-121	LOC101245781	PREDICTED: Sol	NA	NA	GO:00069	NA
101261835	2011	55.47	22.4	-1.308209	2.85E-230	Down	4.25E-232	LOC101261835	PREDICTED: Sol	NA	GO:00468	NA	K14497//
543645	1261	10.85	4.4	-1.30212	1.89E-29	Down	1.63E-30	LOC543645	Solanum lycopersi	NA	GO:00090	NA	NA
543815	838	61.25	24.87	-1.300303	2.64E-104	Down	7.78E-106	LOC543815	Solanum lycopersi	GO:0005737	GO:00043(	GO:00067	K00799//
101266721	2134	20.42	8.3	-1.2988	4.57E-93	Down	1.48E-94	LOC101266721	PREDICTED: Sol	NA	NA	GO:00071(	K05747//
101260687	1011	2.16	0.88	-1.295456	2.81E-05	Down	8.56E-06	LOC101260687	PREDICTED: Sol	GO:0016021	GO:00616	GO:00431(	K19040//
543731	2853	27.64	11.27	-1.29427	1.05E-167	Down	2.01E-169	sus3	PREDICTED: Sol	NA	GO:00161	GO:00059	K00695//s
100134914	2589	4.19	1.71	-1.292954	8.73E-24	Down	8.94E-25	HSP70	Solanum lycopersi	NA	GO:00055	GO:00064	K03283//
101259953	614	8.93	3.65	-1.290764	1.94E-11	Down	3.54E-12	LOC101259953	PREDICTED: Sol	NA	NA	NA	NA
101254669	1686	4.45	1.82	-1.289867	1.88E-16	Down	2.60E-17	LOC101254669	PREDICTED: Sol	GO:0016020	GO:00167(	GO:00445	K20562//
101248118	1371	20.65	8.46	-1.287412	8.56E-50	Down	4.78E-51	LOC101248118	PREDICTED: Sol	NA	NA	NA	K07305//
101265425	794	5.07	2.08	-1.285402	7.61E-09	Down	1.68E-09	LOC101265425	PREDICTED: Sol	GO:0005886	GO:00436	GO:00069	NA
101246536	1893	0.9	0.37	-1.2824	0.000235	Down	8.09E-05	LOC101246536	PREDICTED: Sol	NA	NA	NA	K15271//
108511945	856	45.82	18.86	-1.280648	2.66E-78	Down	1.01E-79	ERF5	Solanum lycopersi	GO:0005634	GO:00036	GO:00063	K09286//
544204	1849	74.56	30.7	-1.280163	5.82E-287	Down	6.90E-289	AREB	PREDICTED: Sol	NA	GO:00036	NA	K14432//
101254813	520	29.93	12.36	-1.275914	1.48E-29	Down	1.27E-30	LOC101254813	PREDICTED: Sol	NA	NA	NA	NA
101267720	2695	0.75	0.31	-1.274622	3.90E-05	Down	1.21E-05	LOC101267720	PREDICTED: Sol	NA	GO:00161	GO:00059	K00695//s
101250923	1335	3	1.24	-1.274622	6.36E-09	Down	1.40E-09	LOC101250923	PREDICTED: Sol	NA	NA	NA	NA
101251700	1193	12.29	5.08	-1.274585	2.92E-30	Down	2.46E-31	LOC101251700	PREDICTED: Sol	NA	GO:00167	GO:00081	K14493//
101249565	2082	4.77	1.98	-1.268489	4.23E-21	Down	4.79E-22	LOC101249565	PREDICTED: Sol	NA	GO:00167(	GO:00102	K09843//(
101268013	1862	29.33	12.18	-1.267863	6.28E-112	Down	1.74E-113	LOC101268013	PREDICTED: Sol	GO:0016021	GO:00167(	NA	K07428//c

101268294	1669	21.25	8.83	-1.266977	1.63E-72	Down	6.66E-74	LOC101268294	PREDICTED: Sol	GO:0005737	GO:003162	GO:00431(	K10523//s
101262624	1370	1.13	0.47	-1.26559	0.000581	Down	0.00021	LOC101262624	PREDICTED: Sol	NA	GO:00168	GO:00090	K21407//a
101260177	4464	1.13	0.47	-1.26559	3.30E-11	Down	6.15E-12	LOC101260177	PREDICTED: Sol	GO:0016021	GO:00055	GO:00068	K05681//
101243932	733	12.21	5.08	-1.265163	7.24E-18	Down	9.41E-19	LOC101243932	PREDICTED: Sol	NA	NA	NA	NA
101255139	1714	30.79	12.82	-1.264066	2.49E-107	Down	7.16E-109	LOC101255139	PREDICTED: Sol	GO:0016021	NA	NA	K08145//
104644746	920	5.21	2.17	-1.263588	2.24E-10	Down	4.41E-11	LOC104644746	PREDICTED: Sol	NA	NA	NA	NA
101260643	4547	7.31	3.05	-1.261062	1.91E-69	Down	8.06E-71	LOC101260643	PREDICTED: Sol	GO:0016021	GO:00055	GO:00068	K05681//
101250797	1076	3.66	1.53	-1.258312	1.42E-08	Down	3.20E-09	LOC101250797	PREDICTED: Sol	GO:0005634	GO:00036	NA	K10773//e
101254884	755	6.3	2.64	-1.254814	7.34E-10	Down	1.50E-10	LOC101254884	PREDICTED: Sol	GO:0005634	GO:00036	NA	K05747//
101245324	1627	1.19	0.5	-1.250962	8.73E-05	Down	2.83E-05	LOC101245324	PREDICTED: Sol	GO:0016021	NA	NA	K14209//s
101268010	1409	3.4	1.43	-1.24952	2.74E-10	Down	5.44E-11	LOC101268010	PREDICTED: Sol	NA	NA	NA	K13126//
104647874	580	12.63	5.32	-1.247356	3.80E-14	Down	5.95E-15	LOC104647874	PREDICTED: Sol	GO:0016021	NA	NA	NA
101247545	4612	3.48	1.47	-1.243271	2.59E-33	Down	2.01E-34	LOC101247545	PREDICTED: Sol	GO:0016021	GO:00055	GO:00068	K05681//
101258887	1257	25.06	10.62	-1.238603	2.28E-61	Down	1.07E-62	LOC101258887	PREDICTED: Sol	GO:0005576	NA	NA	K20628//e
101249973	951	46.53	19.77	-1.234848	2.44E-84	Down	8.65E-86	LOC101249973	PREDICTED: Sol	GO:0009506	GO:00048	GO:00069	NA
101266533	733	37.18	15.8	-1.234602	8.01E-51	Down	4.39E-52	LOC101266533	PREDICTED: Sol	NA	GO:00055	NA	K16465//c
101262714	1249	1.6	0.68	-1.234465	0.0001	Down	3.28E-05	LOC101262714	PREDICTED: Sol	NA	NA	NA	NA
101265748	1745	3.08	1.31	-1.233364	2.87E-11	Down	5.32E-12	LOC101265748	PREDICTED: Sol	NA	NA	NA	K01214//i
101246876	1745	9.49	4.04	-1.232053	5.79E-33	Down	4.55E-34	LOC101246876	PREDICTED: Sol	GO:0016021	GO:00085	NA	K03320//a
101260481	2158	49.95	21.34	-1.226925	1.79E-210	Down	2.85E-212	LOC101260481	PREDICTED: Sol	GO:0016021	NA	GO:00096	NA
101268009	910	11.97	5.12	-1.225207	1.59E-25	Down	1.53E-26	LOC101268009	PREDICTED: Sol	GO:0016021	NA	NA	K06890//
101262527	1202	47.39	20.28	-1.224525	2.46E-108	Down	7.00E-110	LOC101262527	PREDICTED: Sol	GO:0045263	GO:00150	GO:00159	K13153//
101252269	1092	13.15	5.63	-1.223856	1.16E-27	Down	1.05E-28	LOC101252269	PREDICTED: Sol	GO:0046658	GO:00090	NA	K03006//
101266245	938	84.18	36.06	-1.223078	5.41E-147	Down	1.18E-148	LOC101266245	PREDICTED: Sol	GO:0009507	GO:00503	GO:00065	K22246//t
101249488	775	11.4	4.89	-1.221127	6.31E-17	Down	8.56E-18	LOC101249488	PREDICTED: Sol	NA	NA	NA	NA
101257929	744	120.61	51.77	-1.220161	4.11E-163	Down	8.04E-165	LOC101257929	PREDICTED: Sol	NA	NA	NA	NA
101244335	1010	1.91	0.82	-1.219877	0.000176	Down	5.94E-05	LOC101244335	PREDICTED: Sol	NA	NA	NA	K13945//
101256273	1953	7.38	3.17	-1.219138	6.26E-29	Down	5.48E-30	LOC101256273	PREDICTED: Sol	NA	NA	NA	K16865//
101266149	896	2	0.86	-1.217591	0.000341	Down	0.00012	LOC101266149	PREDICTED: Sol	GO:0005737	GO:00043	GO:00067	K00799//
101243709	2240	2.09	0.9	-1.215506	6.34E-10	Down	1.29E-10	LOC101243709	PREDICTED: Sol	GO:0016021	GO:00055	NA	K04733//i
101257491	2571	15.6	6.72	-1.215013	7.19E-78	Down	2.74E-79	LOC101257491	PREDICTED: Sol	GO:0016021	NA	NA	K15503//s
101244959	2087	21.8	9.4	-1.213595	1.27E-87	Down	4.31E-89	LOC101244959	PREDICTED: Sol	NA	NA	NA	K01599//
101265813	989	5.35	2.31	-1.211646	1.40E-10	Down	2.72E-11	LOC101265813	PREDICTED: Sol	NA	NA	NA	NA
101263832	1799	0.9	0.39	-1.206451	0.000755	Down	0.000277	LOC101263832	PREDICTED: Sol	GO:0005886	GO:00055	GO:00064	K04733//i
101249525	1359	4.52	1.96	-1.205469	3.10E-12	Down	5.38E-13	LOC101249525	PREDICTED: Sol	NA	GO:00167	NA	K19747//
101249743	1531	4.77	2.07	-1.204358	2.01E-14	Down	3.09E-15	LOC101249743	PREDICTED: Sol	GO:0016021	NA	GO:00551	NA
543895	2164	0.99	0.43	-1.203092	5.91E-05	Down	1.88E-05	LOC543895	Solanum lycopersi	NA	GO:00200	GO:00069	K10529//a

101265590	1068	108.68	47.37	-1.198041	6.70E-211	Down	1.06E-212	LOC101265590	PREDICTED: Sol	GO:0005737	GO:00089	GO:00067	NA
101268197	1268	1.53	0.67	-1.191299	0.0002	Down	6.80E-05	LOC101268197	PREDICTED: Sol	GO:0016021	GO:00083	GO:00064	K20843//
101265690	986	25.78	11.29	-1.191207	3.97E-46	Down	2.39E-47	LOC101265690	PREDICTED: Sol	NA	GO:00468	GO:00098	K00588//c
101268222	2093	10.04	4.4	-1.190184	1.22E-39	Down	8.32E-41	LOC101268222	PREDICTED: Sol	NA	NA	NA	NA
100736441	1361	203.2	89.06	-1.190051	0	Down	0	LOC100736441	Solanum lycopersi	GO:0005768	NA	GO:00096	K06699//
101256484	833	2.21	0.97	-1.18799	0.000387	Down	0.000137	LOC101256484	PREDICTED: Sol	NA	NA	NA	K21373//
101251778	700	3.98	1.75	-1.185414	1.17E-05	Down	3.40E-06	LOC101251778	Solanum lycopersi	GO:0005634	GO:00435	GO:00063	K18835//
101261506	2383	3.16	1.39	-1.18484	8.32E-14	Down	1.32E-14	LOC101261506	PREDICTED: Sol	NA	NA	GO:00063	NA
101265775	1049	49.41	21.75	-1.183788	1.19E-92	Down	3.85E-94	LOC101265775	PREDICTED: Sol	GO:0016021	GO:00090	NA	K03006//
101246190	1233	5.29	2.33	-1.182938	1.69E-12	Down	2.89E-13	LOC101246190	PREDICTED: Sol	NA	GO:00468	NA	K18054//
104648182	3157	1.18	0.52	-1.182203	5.06E-05	Down	1.59E-05	LOC104648182	PREDICTED: Sol	NA	GO:00036	GO:00150	K12447//
101261429	1607	8.94	3.94	-1.182079	3.82E-27	Down	3.51E-28	LOC101261429	PREDICTED: Sol	NA	GO:00167	GO:00092	K20884//r
101256961	2797	4.17	1.84	-1.180342	5.22E-21	Down	5.94E-22	LOC101256961	PREDICTED: Sol	GO:0005622	GO:00041	GO:00072	K00901//
543963	714	14.98	6.61	-1.180315	4.31E-19	Down	5.30E-20	RSI-1	Solanum lycopersi	GO:0009506	NA	GO:00097	K03860//
101251958	1529	1.11	0.49	-1.179706	0.000541	Down	0.000195	LOC101251958	PREDICTED: Sol	GO:0016021	GO:00616	GO:00431	K15692//
101261914	2238	1.97	0.87	-1.179108	4.84E-09	Down	1.05E-09	LOC101261914	PREDICTED: Sol	NA	GO:00168	GO:00059	K18195//r
101258189	2334	3.26	1.44	-1.178803	7.92E-15	Down	1.19E-15	sbt4e	Solanum lycopersi	NA	GO:00042	NA	K12619//
101250113	1406	2.71	1.2	-1.175258	1.17E-07	Down	2.85E-08	LOC101250113	PREDICTED: Sol	NA	GO:00167	NA	K21026//a
101260072	1639	12.67	5.63	-1.17021	7.26E-38	Down	5.12E-39	LOC101260072	PREDICTED: Sol	NA	GO:00200	GO:00069	K14454//a
101265851	868	17.21	7.66	-1.167831	2.17E-26	Down	2.04E-27	LOC101265851	PREDICTED: Sol	NA	GO:00163	NA	K13418//s
101267225	785	5.59	2.49	-1.166703	2.56E-08	Down	5.88E-09	LOC101267225	PREDICTED: Sol	NA	NA	NA	NA
101268896	1262	1.39	0.62	-1.164745	0.000609	Down	0.000221	LOC101268896	PREDICTED: Sol	GO:0005622	GO:00048	GO:00065	K05609//
101244740	1566	7.3	3.26	-1.163024	5.07E-21	Down	5.76E-22	LOC101244740	Solanum lycopersi	GO:0016021	NA	NA	K20854//
778337	2213	3	1.34	-1.16273	1.01E-12	Down	1.70E-13	ftsH6	Solanum lycopersi	GO:0016020	GO:00082	GO:00103	K03798//c
101257549	1062	2.28	1.02	-1.160465	4.89E-05	Down	1.54E-05	LOC101257549	PREDICTED: Sol	NA	NA	GO:00069	NA
101268787	1893	21.21	9.5	-1.158745	7.72E-72	Down	3.19E-73	LOC101268787	PREDICTED: Sol	GO:0005634	GO:00435	GO:00508	K13424//
101246306	1351	20.45	9.17	-1.157107	9.95E-49	Down	5.69E-50	LOC101246306	PREDICTED: Sol	NA	NA	NA	K13783//
101251627	1362	19.33	8.67	-1.156738	1.53E-46	Down	9.09E-48	LOC101251627	PREDICTED: Sol	GO:0005829	GO:00185	GO:00466	NA
101261104	1493	343.34	154.1	-1.155771	0	Down	0	LOC101261104	PREDICTED: Sol	GO:0016021	GO:00511	GO:00086	K15382//s
101247272	1110	208.6	93.65	-1.155388	0	Down	0	LOC101247272	PREDICTED: Sol	GO:0016021	NA	NA	NA
101250935	1949	75	33.71	-1.153714	3.12E-258	Down	4.16E-260	LOC101250935	PREDICTED: Sol	GO:0016021	GO:00151	GO:00033	K19476//
544074	1684	2.38	1.07	-1.153351	7.72E-08	Down	1.84E-08	ADH2	Solanum lycopersi	NA	GO:00040	NA	K18857//a
101254095	1203	11.3	5.09	-1.150585	4.34E-24	Down	4.38E-25	LOC101254095	PREDICTED: Sol	GO:0016021	NA	NA	NA
101258849	1085	1.95	0.88	-1.147899	0.000182	Down	6.16E-05	LOC101258849	PREDICTED: Sol	NA	GO:00469	NA	K04733//i
101258039	2460	5.27	2.38	-1.146841	1.81E-23	Down	1.87E-24	LOC101258039	PREDICTED: Sol	NA	NA	NA	K19613//l
544082	895	2044.89	925.74	-1.143344	0	Down	0	TPM-1	Solanum lycopersi	NA	NA	NA	K04733//i
101265726	888	3.07	1.39	-1.143154	2.05E-05	Down	6.14E-06	LOC101265726	PREDICTED: Sol	NA	NA	NA	NA

101247130	895	2.87	1.3	-1.142539	3.94E-05	Down	1.22E-05	LOC101247130	PREDICTED: Sol	NA	GO:00048	NA	K01051//
101264592	2616	0.75	0.34	-1.141356	0.000253	Down	8.73E-05	LOC101264592	PREDICTED: Sol	NA	GO:00435	GO:00069	K13457//
778266	840	9.38	4.26	-1.138734	9.41E-14	Down	1.50E-14	LOC778266	Solanum lycopersi	GO:0016021	NA	NA	NA
101257269	1737	15.67	7.12	-1.138056	2.07E-47	Down	1.21E-48	LOC101257269	PREDICTED: Sol	GO:0009505	GO:00526	GO:00059	K07407//a
101251145	1276	72.47	32.93	-1.137981	6.60E-157	Down	1.34E-158	Rcr3	Solanum lycopersi	GO:0005615	GO:00041	GO:00516	K13441//c
101266204	1225	12.84	5.84	-1.136605	3.29E-27	Down	3.02E-28	LOC101266204	PREDICTED: Sol	GO:0009506	NA	NA	K15382//s
101251753	1365	3.45	1.57	-1.135832	4.50E-09	Down	9.79E-10	LOC101251753	PREDICTED: Sol	NA	NA	NA	NA
101244694	1697	5.14	2.34	-1.13526	9.67E-16	Down	1.39E-16	LOC101244694	Solanum lycopersi	NA	GO:00164	NA	K11153//r
109120085	1123	10.14	4.62	-1.134093	3.78E-20	Down	4.45E-21	LOC109120085	PREDICTED: Sol	NA	GO:00167	NA	K21026//a
101265869	885	6.21	2.83	-1.133791	7.12E-10	Down	1.46E-10	LOC101265869	PREDICTED: Sol	GO:0016021	NA	NA	NA
101255309	2084	6.03	2.75	-1.132726	3.50E-22	Down	3.82E-23	LOC101255309	PREDICTED: Sol	GO:0005737	GO:00037	NA	K03265//
101257682	1422	9.56	4.36	-1.132682	1.07E-23	Down	1.10E-24	LOC101257682	PREDICTED: Sol	GO:0005618	GO:00453	GO:00454	K01051//
104649684	740	4.51	2.06	-1.130483	0.000119	Down	3.93E-05	LOC104649684	PREDICTED: Sol	NA	GO:00036	NA	K05666//
101259283	1553	11.28	5.16	-1.128324	3.38E-30	Down	2.86E-31	LOC101259283	PREDICTED: Sol	NA	GO:00038	NA	K08726//s
101259198	791	838.75	383.92	-1.127435	0	Down	0	LOC101259198	PREDICTED: Sol	NA	NA	NA	NA
101266243	1063	4.87	2.23	-1.126878	2.36E-09	Down	5.03E-10	LOC101266243	PREDICTED: Sol	NA	NA	NA	NA
778321	807	7.73	3.54	-1.126719	6.50E-11	Down	1.24E-11	LOC778321	Solanum lycopersi	NA	NA	GO:00069	NA
101266856	1588	7.58	3.48	-1.123111	6.01E-21	Down	6.87E-22	LOC101266856	PREDICTED: Sol	GO:0043231	GO:00800	GO:00081	K21374//
101248665	1239	22.36	10.28	-1.12108	2.39E-46	Down	1.43E-47	LOC101248665	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	K12862//
101258824	1987	6.24	2.87	-1.120495	1.17E-21	Down	1.30E-22	LOC101258824	PREDICTED: Sol	NA	NA	NA	NA
101252505	1388	273.52	125.83	-1.12017	0	Down	0	Cyp-3	Solanum lycopersi	GO:0005615	GO:00082	GO:00516	K01366//c
101267829	1523	16.3	7.5	-1.119909	5.01E-42	Down	3.27E-43	LOC101267829	PREDICTED: Sol	GO:0005886	GO:00039	GO:19010	NA
101255714	2301	0.91	0.42	-1.115477	0.000163	Down	5.49E-05	LOC101255714	PREDICTED: Sol	NA	NA	NA	K10278//
101244186	2257	22.55	10.41	-1.115157	5.22E-86	Down	1.81E-87	LOC101244186	PREDICTED: Sol	NA	NA	NA	NA
101243979	958	2.62	1.21	-1.11456	7.56E-05	Down	2.43E-05	LOC101243979	Solanum lycopersi	NA	NA	NA	K04733//i
543990	1804	1661.58	767.53	-1.114261	0	Down	0	cat1	Solanum lycopersi	GO:0009514	GO:00468	GO:00069	K03781//c
101256047	1575	2.12	0.98	-1.113211	2.54E-06	Down	6.97E-07	LOC101256047	PREDICTED: Sol	NA	GO:00081	GO:00066	K00559//s
101267548	1164	5.06	2.34	-1.112629	1.93E-10	Down	3.79E-11	LOC101267548	Solanum lycopersi	GO:0005634	GO:00036	GO:00063	K09286//
101261854	1691	13.11	6.08	-1.108524	3.54E-37	Down	2.54E-38	LOC101261854	PREDICTED: Sol	NA	NA	NA	K21440//a
101263788	780	6.23	2.89	-1.108163	1.87E-08	Down	4.25E-09	LOC101263788	PREDICTED: Sol	NA	GO:00468	NA	K13811//
101244582	1354	19.7	9.15	-1.106352	6.30E-44	Down	3.94E-45	LOC101244582	Solanum lycopersi	GO:0005634	GO:00036	GO:00063	K03094//
101268757	1419	1.57	0.73	-1.104796	0.000163	Down	5.46E-05	LOC101268757	PREDICTED: Sol	NA	GO:00055	NA	K20043//c
101267987	1962	6.75	3.14	-1.104123	1.32E-22	Down	1.41E-23	LOC101267987	PREDICTED: Sol	GO:0016020	GO:00167	GO:00445	K14985//
101253953	583	28.95	13.49	-1.101673	5.62E-26	Down	5.35E-27	LOC101253953	PREDICTED: Sol	NA	NA	NA	NA
101261098	1682	2.51	1.17	-1.101179	8.63E-08	Down	2.07E-08	LOC101261098	PREDICTED: Sol	GO:0005743	GO:00151	GO:00096	K15102//s
101250024	2277	6.65	3.1	-1.101086	2.21E-24	Down	2.21E-25	LOC101250024	PREDICTED: Sol	GO:0016021	NA	GO:00086	K08150//
101247199	562	5.04	2.35	-1.100763	4.35E-05	Down	1.36E-05	LOC101247199	PREDICTED: Sol	NA	NA	NA	NA

101247807	1488	23.24	10.84	-1.100245	3.02E-56	Down	1.53E-57	LOC101247807	PREDICTED: Sol	NA	GO:00168	GO:000652	K01620//t
101257043	1048	3.51	1.64	-1.097775	1.06E-06	Down	2.80E-07	LOC101257043	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	K09286//
101261451	1078	63.25	29.56	-1.097419	3.24E-108	Down	9.27E-110	LOC101261451	PREDICTED: Sol	NA	GO:00167	NA	K01061//c
101249360	2435	0.92	0.43	-1.097297	0.000145	Down	4.84E-05	LOC101249360	PREDICTED: Sol	GO:0005634	GO:00048	NA	K08332//
101261650	1284	1650.73	772.08	-1.096282	0	Down	0	LOC101261650	Solanum lycopersi	GO:0046658	GO:00429	GO:00069	K19891//
101259182	917	1410.05	659.59	-1.096105	0	Down	0	LOC101259182	PREDICTED: Sol	NA	NA	NA	K13344//
101260164	1347	125.35	58.65	-1.095759	4.20E-270	Down	5.34E-272	LOC101260164	PREDICTED: Sol	NA	NA	NA	NA
778364	1247	3.74	1.75	-1.095683	1.87E-08	Down	4.25E-09	Asc-1	Solanum lycopersi	GO:0005783	GO:00502	GO:00465	K04710//c
101245588	806	30.68	14.37	-1.094238	8.34E-39	Down	5.77E-40	LOC101245588	Solanum lycopersi	NA	NA	GO:00069	K06674//s
101255009	1506	8.39	3.93	-1.094141	5.90E-21	Down	6.73E-22	LOC101255009	PREDICTED: Sol	GO:0019898	GO:00800	GO:00344	K17908//a
100191111	832	1615.3	758.09	-1.091361	0	Down	0	LOC100191111	Solanum lycopersi	GO:0005576	NA	NA	K13449//
101252347	902	12.03	5.65	-1.090314	1.51E-17	Down	1.99E-18	LOC101252347	PREDICTED: Sol	GO:0005840	GO:00701	GO:00064	K02990//s
101261400	1867	27.34	12.85	-1.089245	1.43E-82	Down	5.16E-84	LOC101261400	PREDICTED: Sol	NA	GO:00048	NA	K06001//t
101253070	1077	4.01	1.89	-1.085216	6.90E-06	Down	1.97E-06	LOC101253070	PREDICTED: Sol	NA	NA	NA	NA
104647150	3789	0.7	0.33	-1.084889	4.28E-05	Down	1.34E-05	LOC104647150	PREDICTED: Sol	NA	NA	NA	K01528//
544148	1154	1306.5	616.67	-1.083137	0	Down	0	CHI9	Solanum lycopersi	GO:0005618	GO:00080	GO:00060	K20547//
101247551	2554	7.09	3.35	-1.081625	4.54E-30	Down	3.85E-31	LOC101247551	PREDICTED: Sol	NA	GO:00036	NA	K14007//
544193	974	5.1	2.41	-1.081464	1.83E-08	Down	4.16E-09	rnalx	Solanum lycopersi	GO:0005737	GO:00037	NA	K01166//r
101245962	1066	10.37	4.91	-1.078621	9.54E-18	Down	1.24E-18	LOC101245962	PREDICTED: Sol	GO:0048046	GO:00167	GO:00104	K08235//
543871	2389	34.25	16.22	-1.07833	5.05E-131	Down	1.25E-132	FRO1	Solanum lycopersi	GO:0016021	GO:00164	NA	K00521//f
101253408	2746	13.67	6.48	-1.076948	1.43E-60	Down	6.77E-62	LOC101253408	PREDICTED: Sol	GO:0016021	NA	NA	NA
101266225	777	7.32	3.47	-1.076908	7.90E-10	Down	1.62E-10	LOC101266225	PREDICTED: Sol	NA	NA	NA	K01513//e
101262849	1047	2.13	1.01	-1.076498	0.000249	Down	8.57E-05	LOC101262849	PREDICTED: Sol	NA	NA	NA	NA
101266039	2296	3.1	1.47	-1.076452	4.14E-07	Down	1.06E-07	LOC101266039	PREDICTED: Sol	NA	NA	NA	K11267//s
101250708	637	26.51	12.61	-1.071968	3.31E-25	Down	3.22E-26	LOC101250708	PREDICTED: Sol	GO:0005737	GO:00468	GO:00300	K04733//i
101263056	1132	6.57	3.13	-1.069731	4.07E-12	Down	7.12E-13	LOC101263056	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	K09286//
101255440	1508	17.07	8.14	-1.068362	1.80E-40	Down	1.20E-41	LOC101255440	PREDICTED: Sol	GO:0000326	NA	GO:00483	K12472//e
104647325	1746	1.74	0.83	-1.067904	1.29E-05	Down	3.77E-06	LOC104647325	PREDICTED: Sol	NA	GO:00081	NA	K01025//s
101243985	1886	3.96	1.89	-1.067114	1.90E-12	Down	3.26E-13	LOC101243985	PREDICTED: Sol	NA	GO:00055	NA	K04420//
101249493	1919	24.19	11.55	-1.066518	9.12E-73	Down	3.70E-74	LOC101249493	PREDICTED: Sol	NA	GO:00037	NA	K09060//
101262056	2239	1.34	0.64	-1.066089	1.58E-05	Down	4.70E-06	LOC101262056	PREDICTED: Sol	NA	NA	NA	K20254//
544142	874	104.64	49.99	-1.065723	4.90E-136	Down	1.17E-137	LOC544142	Solanum lycopersi	GO:0005634	GO:00036	GO:00094	K11275//
101055553	684	14.45	6.92	-1.062226	5.06E-15	Down	7.55E-16	LOC101055553	Solanum lycopersi	GO:0005634	NA	GO:00063	K14484//a
101258071	1641	8.99	4.31	-1.060633	2.29E-23	Down	2.38E-24	LOC101258071	Solanum lycopersi	NA	GO:00468	NA	K14497//
109119847	803	4.75	2.28	-1.058894	1.60E-06	Down	4.28E-07	LOC109119847	PREDICTED: Sol	NA	GO:00048	NA	NA
100271890	1256	34.86	16.74	-1.058273	1.74E-66	Down	7.69E-68	ZIP	Solanum lycopersi	NA	GO:00037	NA	K09060//
101250791	2212	4.06	1.95	-1.058006	1.22E-14	Down	1.85E-15	LOC101250791	PREDICTED: Sol	GO:0016021	GO:00052	NA	K14638//s

101261885	694	4.39	2.11	-1.056978	3.03E-05	Down	9.27E-06	LOC101261885	PREDICTED: Sol	NA	GO:000367	NA	NA
101250444	1756	12.27	5.9	-1.056348	1.33E-33	Down	1.02E-34	LOC101250444	PREDICTED: Sol	GO:0016021	GO:00167(	NA	K20661//c
543944	1500	13.68	6.58	-1.055909	9.38E-32	Down	7.61E-33	ARG1	Solanum lycopersi	NA	GO:004687	NA	K01476//a
104649084	524	7.1	3.42	-1.053823	5.21E-06	Down	1.47E-06	LOC104649084	PREDICTED: Sol	GO:0016021	NA	NA	K00030//i
109120423	1138	11.02	5.31	-1.05334	1.93E-19	Down	2.33E-20	LOC109120423	PREDICTED: Sol	NA	NA	NA	NA
101249999	1876	4.69	2.26	-1.053265	3.20E-14	Down	4.99E-15	LOC101249999	PREDICTED: Sol	GO:0016021	GO:00167(	NA	K20661//c
101243997	4996	1.39	0.67	-1.052852	1.05E-11	Down	1.89E-12	LOC101243997	PREDICTED: Sol	GO:0016021	GO:000552	GO:000681	K05681//
101257056	1107	59.15	28.54	-1.051393	2.58E-97	Down	8.10E-99	LOC101257056	PREDICTED: Sol	NA	NA	NA	NA
101265728	1705	121	58.4	-1.050967	0	Down	0	LOC101265728	PREDICTED: Sol	NA	NA	NA	K19475//
543878	984	877.56	424.13	-1.048991	0	Down	0	LOC543878	Solanum lycopersi	NA	NA	NA	K04733//i
101257730	1712	2.42	1.17	-1.048499	3.39E-07	Down	8.56E-08	LOC101257730	PREDICTED: Sol	GO:0016021	NA	GO:005508	K02575//
543574	711	237.4	114.79	-1.048323	4.79E-239	Down	6.83E-241	ASR1	Solanum lycopersi	NA	NA	GO:000695	NA
101246437	2253	7.59	3.67	-1.04832	1.00E-26	Down	9.31E-28	LOC101246437	PREDICTED: Sol	GO:0016021	GO:001675	NA	K13680//
104648101	1122	4.77	2.31	-1.046096	1.11E-08	Down	2.48E-09	LOC104648101	PREDICTED: Sol	GO:0009506	GO:005108	GO:000645	NA
101246295	1578	49.33	23.96	-1.041837	4.18E-116	Down	1.14E-117	LOC101246295	PREDICTED: Sol	GO:0043231	GO:008004	GO:000815	K13495//c
101255252	1802	9.95	4.84	-1.039689	1.64E-27	Down	1.50E-28	LOC101255252	PREDICTED: Sol	GO:0016021	GO:001523	NA	K03327//
101259463	1955	3.7	1.8	-1.039528	1.38E-11	Down	2.50E-12	LOC101259463	PREDICTED: Sol	GO:0016021	NA	GO:00512(	K03217//
101249609	1271	2.01	0.98	-1.036342	0.000124	Down	4.10E-05	LOC101249609	PREDICTED: Sol	NA	GO:000875	GO:001943	K16040//t
101245191	1052	7.7	3.76	-1.034126	1.90E-12	Down	3.26E-13	LOC101245191	PREDICTED: Sol	NA	NA	NA	NA
101259361	1512	7.31	3.58	-1.029912	5.74E-17	Down	7.75E-18	LOC101259361	PREDICTED: Sol	GO:0009507	GO:000897	GO:000657	K15227//a
104645573	1022	20.99	10.28	-1.029862	3.09E-31	Down	2.54E-32	LOC104645573	PREDICTED: Sol	GO:0016021	NA	NA	NA
101246812	1434	15.94	7.81	-1.029257	7.38E-34	Down	5.65E-35	LOC101246812	Solanum lycopersi	GO:0005634	GO:00435(	GO:000961	K13424//
101251574	1374	130.16	63.86	-1.027302	3.62E-258	Down	4.84E-260	LOC101251574	PREDICTED: Sol	NA	NA	NA	K18342//
101251704	1399	2.14	1.05	-1.027221	2.95E-05	Down	9.00E-06	LOC101251704	PREDICTED: Sol	GO:0016020	NA	GO:00071(	K15503//s
101245084	819	20.93	10.27	-1.027136	1.59E-24	Down	1.58E-25	LOC101245084	PREDICTED: Sol	GO:0016021	NA	NA	NA
104647159	1229	4.87	2.39	-1.026911	3.29E-08	Down	7.61E-09	LOC104647159	PREDICTED: Sol	NA	NA	NA	NA
101244669	2594	11.69	5.74	-1.026152	2.49E-44	Down	1.55E-45	LOC101244669	PREDICTED: Sol	GO:0005887	GO:000524	GO:004235	K05391//c
101259235	1788	3.93	1.93	-1.025928	3.62E-11	Down	6.75E-12	LOC101259235	PREDICTED: Sol	NA	GO:000435	GO:000653	K01580//
101262338	1658	9.74	4.79	-1.023896	3.50E-24	Down	3.52E-25	LOC101262338	PREDICTED: Sol	GO:0012505	GO:000014	GO:000685	K08486//s
101267118	1632	13.54	6.66	-1.023634	1.20E-32	Down	9.45E-34	LOC101267118	PREDICTED: Sol	NA	GO:001662	NA	K00166//
100736519	1734	209.49	103.07	-1.023257	0	Down	0	TCP12	Solanum lycopersi	GO:0005634	GO:000367	GO:000635	K13035//
104648432	1594	2.09	1.03	-1.020859	1.18E-05	Down	3.46E-06	LOC104648432	PREDICTED: Sol	NA	NA	NA	NA
101259340	744	316.99	156.25	-1.020581	0	Down	0	LOC101259340	PREDICTED: Sol	NA	NA	GO:000695	NA
101268692	1654	11.82	5.83	-1.019662	7.63E-29	Down	6.70E-30	LOC101268692	PREDICTED: Sol	NA	NA	NA	K03283//
101266611	2662	4.63	2.29	-1.015665	1.35E-18	Down	1.70E-19	LOC101266611	PREDICTED: Sol	GO:0016021	NA	GO:000662	K01052//l
101250644	1430	1.88	0.93	-1.01543	0.000106	Down	3.49E-05	LOC101250644	PREDICTED: Sol	GO:0016021	GO:001675	NA	K01988//l
101247777	1731	2.83	1.4	-1.015375	6.07E-08	Down	1.43E-08	LOC101247777	PREDICTED: Sol	GO:0016020	GO:00167(	GO:004455	K07418//c

101252574	1048	96.36	47.7	-1.014445	1.17E-140	Down	2.71E-142	LOC101252574	PREDICTED: Sol	NA	GO:00080	NA	K22246//t
101247504	1482	3.53	1.75	-1.012313	2.74E-08	Down	6.30E-09	LOC101247504	PREDICTED: Sol	GO:0005634	GO:00009	GO:00063	K12135//z
778249	1259	179.51	89	-1.012187	0	Down	0	CIP2b	Solanum lycopersi	GO:0005634	GO:00469	NA	K08066//
101261342	1426	18.51	9.19	-1.010168	1.02E-36	Down	7.40E-38	LOC101261342	PREDICTED: Sol	GO:0005634	GO:00036	GO:00063	K13126//
101244173	2308	1.75	0.87	-1.008268	1.54E-06	Down	4.14E-07	LOC101244173	PREDICTED: Sol	GO:0005739	NA	GO:00083	K17964//l
101246456	369	7.68	3.82	-1.007534	0.000278	Down	9.65E-05	LOC101246456	PREDICTED: Sol	GO:0016020	GO:00082	GO:00068	NA
543736	2390	13.71	6.82	-1.007385	1.97E-43	Down	1.25E-44	tEG3	PREDICTED: Sol	GO:0005618	GO:00045	GO:00059	K12309//
101252968	1980	109.15	54.32	-1.006757	0	Down	0	LOC101252968	PREDICTED: Sol	NA	GO:00164	NA	K14085//a
101253864	1809	6.34	3.16	-1.004558	6.51E-17	Down	8.83E-18	LOC101253864	PREDICTED: Sol	GO:0043231	GO:00800	GO:00081	K03809//
101247407	627	4.39	2.19	-1.00329	0.000179	Down	6.05E-05	LOC101247407	PREDICTED: Sol	GO:0043231	GO:00800	GO:00081	K13495//c
101261035	593	13.21	6.59	-1.00328	5.98E-11	Down	1.13E-11	LOC101261035	PREDICTED: Sol	NA	NA	NA	NA
101257639	993	12.94	6.46	-1.002232	3.56E-18	Down	4.57E-19	LOC101257639	PREDICTED: Sol	NA	GO:00469	NA	K04733//i
101252947	1171	60.93	30.42	-1.002133	2.21E-98	Down	6.86E-100	LOC101252947	PREDICTED: Sol	NA	GO:00301	NA	K15631//
101258448	751	13.96	6.97	-1.002068	1.11E-14	Down	1.68E-15	LOC101258448	PREDICTED: Sol	NA	NA	NA	NA
101263123	1429	53.11	26.52	-1.001903	9.71E-106	Down	2.83E-107	LOC101263123	PREDICTED: Sol	GO:0005634	GO:00044	GO:00431	K10523//s
101253557	6043	8.99	4.49	-1.001606	1.24E-78	Down	4.67E-80	LOC101253557	PREDICTED: Sol	NA	NA	NA	K04733//i
101254816	1688	4.44	2.22	-1	2.31E-11	Down	4.24E-12	LOC101254816	PREDICTED: Sol	GO:0016021	NA	GO:00157	K03695//

Supplementary Table S3. Expression data of the differentially expressed genes (DEGs) identified by RNA-seq analysis. (B) Expression data of the 84 differentially expressed transcription factors (DETFs) identified by RNA-seq analysis.

GeneID	Length	Control FPKM	PepMV FPKM	log2FC (PepMV/Control)	Pvalue	Transcripts	TF_family	Symbol	Description	Cellular Component	Molecular Function	Biological Process	Kegg Orthology
101263989 (Solyc12g096070)	1836	2.14	13.07	2.610576439	5.95E-150	XM_010316518.2	GRF	LOC101263989	PREDICTED: Sc	NA	NA	NA	K20496//l
101261180 (Solyc02g093420)	2060	5.9	23.46	1.991416154	2.86E-213	XM_004231794.3	NAC	LOC101261180	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	NA
101254394 (Solyc06g075780)	1145	2.26	8.11	1.843379142	1.34E-37	XM_004241199.3	C2H2	LOC101254394	PREDICTED: Sc	NA	GO:00036	NA	NA
101264084 (Solyc02g077610)	1271	3.53	12.37	1.809105412	4.84E-61	XM_010318477.2	NAC	LOC101264084	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	NA
101248376 (Solyc04g015500)	1199	11.9	35.83	1.59020647	1.19E-135	BGI_novel_T0019	ABI3VP1	LOC101248376	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	NA
101248351	1087	0.01	0.24	4.584962501	0.00024506	XM_004232564.3	MYB	LOC101248351	PREDICTED: Sc	GO:0005634	GO:00009	GO:00063	K09422//t
101252786	1384	0.05	0.38	2.925999419	8.93E-05	XM_004242184.3	NAC	LOC101252786	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	K03094//
101245410	1412	0.25	1.4	2.485426827	6.84E-13	XM_010329417.2	AP2-EREBP	LOC101245410	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	K09286//
101261864	1569	0.36	1.79	2.313890776	1.43E-16	XM_004249405.2	GRF	LOC101261864	PREDICTED: Sc	GO:0005634	GO:00055	GO:00325	K15601//l
101262811	850	0.28	1.1	1.974004791	2.07E-05	XM_010321849.2	MADS	LOC101262811	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	K09260//
101246590	749	0.5	1.94	1.956056652	2.01E-07	XM_004250498.2	AP2-EREBP	LOC101246590	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	K14516//
101259870	1082	0.18	0.67	1.896164189	0.00024879	XM_004246133.3	C2H2	LOC101259870	PREDICTED: Sc	GO:0005634	GO:00036	NA	K01870//i
104647464	699	0.63	2.14	1.764187063	8.61E-07	XM_010322879.1	MADS	LOC104647464	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	K09260//
101246259	1247	0.41	1.36	1.729910837	1.68E-07	XM_004242235.3	C2H2	LOC101246259	PREDICTED: Sc	GO:0005634	GO:00036	NA	NA
101246748	1304	0.44	1.35	1.617383978	3.21E-07	XM_004228325.3	MYB	LOC101246748	PREDICTED: Sc	GO:0005634	GO:00009	GO:00063	K09422//t
101267169	1192	1.47	4.48	1.607682577	1.59E-18	XM_004231151.3	AP2-EREBP	LOC101267169	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	K13434//
101248663	3693	0.47	1.38	1.553935605	2.52E-17	BGI_novel_T0018	FHA	LOC101248663	PREDICTED: Sc	GO:0005634	GO:00080	GO:00062	K10862//t
101246760	1085	0.69	1.91	1.468904371	3.07E-07	XM_004229745.3	C2C2-YABBY	LOC101246760	PREDICTED: Sc	NA	NA	GO:20000	NA
101262198	1496	2.12	5.63	1.409070658	9.00E-24	BGI_novel_T0052	bHLH	LOC101262198	Solanum lycoper	NA	GO:00469	NA	K16190//
101254974	1033	1.08	2.78	1.364053571	1.39E-08	XM_004251574.3	ABI3VP1	LOC101254974	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	NA
101256655	1530	1.05	2.66	1.341036918	1.39E-11	XM_004251750.3	bZIP	LOC101256655	PREDICTED: Sc	NA	GO:00036	NA	K20557//t
101243919	909	3.1	7.76	1.323788437	4.60E-18	XM_004246087.3	GRF	LOC101243919	PREDICTED: Sc	GO:0005634	GO:00055	GO:00325	K20496//l
101247176	3257	0.33	0.82	1.313157885	3.92E-08	XM_010314051.2	GRAS	LOC101247176	PREDICTED: Sc	GO:0005634	GO:00435	GO:00063	K14494//
101250945	1927	1.25	3.06	1.291603558	2.80E-15	XM_010313966.2	FAR1	LOC101250945	PREDICTED: Sc	GO:0005634	GO:00435	GO:00102	K18835//
101267047	1396	3.54	8.66	1.290617665	3.22E-29	XM_019215420.1	GRF	LOC101267047	PREDICTED: Sc	GO:0005634	GO:00055	GO:00325	K15601//l
101264349	1215	0.63	1.51	1.261124816	1.76E-05	XM_004244680.3	MYB	LOC101264349	PREDICTED: Sc	GO:0005634	GO:00009	GO:00063	K09422//t
101055515	987	12.94	30.52	1.237917345	7.95E-65	NM_001279002.1	bHLH	LOC101055515	Solanum lycoper	NA	GO:00469	NA	K18485//
101257365	1072	0.56	1.32	1.237039197	0.00018879	XM_004238118.3	ABI3VP1	LOC101257365	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	NA
101259032	884	1.7	3.96	1.219965684	9.97E-09	XM_004235189.3	LOB	LOC101259032	PREDICTED: Sc	NA	NA	NA	K21994//
101253752	2312	0.31	0.72	1.215728691	5.07E-05	XM_004251070.2	C2H2	LOC101253752	PREDICTED: Sc	NA	GO:00036	NA	K14794//r
101266110	1986	1.22	2.82	1.208814015	2.78E-13	XM_004235794.3	bHLH	LOC101266110	PREDICTED: Sc	NA	NA	NA	K13422//t
101246621	757	6.8	15.52	1.190521906	1.97E-24	XM_004236988.2	bHLH	LOC101246621	PREDICTED: Sc	NA	GO:00469	NA	K17693//
101266372	1413	3.3	7.49	1.182499694	3.10E-22	XM_010326422.2	Sigma70-like	LOC101266372	PREDICTED: Sc	NA	GO:00036	GO:00063	K01872//
101255499	1667	7.79	17.22	1.144389909	6.57E-56	XM_004240817.3	bZIP	LOC101255499	PREDICTED: Sc	NA	GO:00036	NA	K20557//t
101251000	1668	0.45	0.99	1.137503524	0.00018074	XM_004241269.3	C2H2	LOC101251000	PREDICTED: Sc	GO:0005634	GO:00036	NA	K14794//r
101258880	1595	8.56	17.68	1.046435573	1.16E-47	XM_004244583.3	AP2-EREBP	LOC101258880	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	K09286//
101265489	3448	5.63	11.43	1.021618576	2.42E-56	XM_019215477.1	Alfin-like	LOC101265489	PREDICTED: Sc	NA	NA	NA	K18046//t
104645444	968	2.56	5.17	1.01402047	3.70E-09	XM_010317128.2	OFP	LOC104645444	PREDICTED: Sc	NA	NA	NA	NA
101252588 (Solyc05g050220)	1960	5.6	0.67	-3.063193826	1.59E-68	XM_010323221.2	bZIP	LOC101252588	PREDICTED: Sc	NA	GO:00037	NA	K09060//
101248026 (Solyc07g063410)	1418	31.29	3.78	-3.049243519	6.41E-276	NM_001319178.1	NAC	JA2L	Solanum lycoper	GO:0005634	GO:00036	GO:00063	K13126//
101256853 (Solyc12g044390)	904	5.98	0.85	-2.814610738	1.27E-31	XM_004252453.3	AP2-EREBP	LOC101256853	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	K09286//
101055585 (Solyc01g107170)	1086	13.03	3.3	-1.981299154	1.03E-54	NM_001279257.1	C2H2	ZF2	Solanum lycoper	GO:0005634	GO:00036	NA	K05747//

101263275 (Solyc11g056650)	1965	35.61	9.07	-1.97310798	6.04E-270	XM_004250809.3	bHLH	LOC101263275	PREDICTED: Sc	GO:0005634	GO:00012	GO:00063	K12126//
101250001 (Solyc03g121240)	1603	8.25	2.52	-1.710970386	1.16E-42	XM_010320219.2	bHLH	LOC101250001	PREDICTED: Sc	NA	GO:00469	NA	K16189//
101244844	411	1.51	0.01	-7.238404739	2.14E-06	XM_004234674.1	bHLH	LOC101244844	PREDICTED: Sc	NA	GO:00469	NA	K10863//
101248880	791	1.09	0.01	-6.768184325	2.22E-09	XM_004240173.3	MYB	LOC101248880	PREDICTED: Sc	GO:0005634	GO:00009	GO:00063	K09422//t
101246841	666	0.87	0.01	-6.442943496	2.14E-06	XM_004243645.3	AP2-EREBP	LOC101246841	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	K09286//
101249086	857	2.01	0.16	-3.651051691	2.24E-13	XM_004240230.3	LOB	LOC101249086	PREDICTED: Sc	NA	NA	NA	K13944//
101249100	1839	2.38	0.19	-3.64689025	2.47E-33	XM_004243322.3	C3H	LOC101249100	PREDICTED: Sc	NA	GO:00468	NA	K15172//t
101267939	1416	2.54	0.46	-2.465122731	2.40E-19	XM_004248047.3	bHLH	LOC101267939	PREDICTED: Sc	NA	GO:00469	NA	K13422//t
101251993	1651	0.92	0.18	-2.353636955	3.85E-09	XM_010324134.2	bZIP	LOC101251993	PREDICTED: Sc	NA	GO:00435	GO:00063	K14431//t
101260767	724	2	0.51	-1.971430848	1.76E-06	XM_004247876.3	AP2-EREBP	LOC101260767	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	K14516//
101250764	1501	2.26	0.69	-1.711654506	3.55E-12	XM_004232741.3	MYB	LOC101250764	PREDICTED: Sc	GO:0005634	GO:00009	GO:00063	K09422//t
101251084	1787	1.14	0.36	-1.662965013	1.25E-07	XM_004237769.3	AP2-EREBP	LOC101251084	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	K12900//
101256065	1414	2.73	0.92	-1.569195185	3.06E-12	XM_004234227.3	WRKY	LOC101256065	PREDICTED: Sc	GO:0005634	GO:00435	GO:00063	K13425//
101256789	2113	1.65	0.58	-1.508341219	7.22E-11	XM_010325751.2	bHLH	LOC101256789	PREDICTED: Sc	NA	GO:00469	NA	K13422//t
101251889	927	1.57	0.57	-1.461730735	8.03E-05	XM_004240553.2	LOB	LOC101251889	PREDICTED: Sc	NA	NA	NA	K13944//
101265482	1006	13.2	4.89	-1.432631559	1.01E-31	BGI_novel_T0042	bHLH	LOC101265482	PREDICTED: Sc	GO:0090575	GO:00036	GO:00063	NA
101246932	2814	1.57	0.59	-1.4119777	1.47E-13	XM_010324049.2	MYB	LOC101246932	PREDICTED: Sc	GO:0000783	GO:00036	GO:00316	K00430//
101267355	3159	13.66	5.18	-1.398933481	3.10E-105	XM_010315661.1	bHLH	LOC101267355	PREDICTED: Sc	NA	GO:00469	NA	K12126//
101263489	1637	23.72	9.48	-1.323145046	5.34E-86	XM_004251602.3	C3H	LOC101263489	PREDICTED: Sc	NA	GO:00468	NA	K15172//t
543645	1261	10.85	4.4	-1.302119614	1.63E-30	NM_001247500.1	WRKY	LOC543645	Solanum lycoper	NA	GO:00090	NA	NA
108511945	856	45.82	18.86	-1.280647783	1.01E-79	NM_001330445.1	AP2-EREBP	ERF5	Solanum lycoper	GO:0005634	GO:00036	GO:00063	K09286//
544204	1849	74.56	30.7	-1.280163204	6.90E-289	XM_010321757.2	bZIP	AREB	PREDICTED: Sc	NA	GO:00036	NA	K14432//
101250797	1076	3.66	1.53	-1.258311996	3.20E-09	XM_004238868.3	C2H2	LOC101250797	PREDICTED: Sc	GO:0005634	GO:00036	NA	K10773//
101254884	755	6.3	2.64	-1.254813899	1.50E-10	XM_004252770.3	C2H2	LOC101254884	PREDICTED: Sc	GO:0005634	GO:00036	NA	K05747//
101268010	1409	3.4	1.43	-1.249519599	5.44E-11	XM_004243835.3	NAC	LOC101268010	PREDICTED: Sc	NA	NA	NA	K13126//
101244335	1010	1.91	0.82	-1.219876823	5.94E-05	XM_004232313.3	LOB	LOC101244335	PREDICTED: Sc	NA	NA	NA	K13945//
101251778	700	3.98	1.75	-1.185413509	3.40E-06	NM_001323315.1	WRKY	LOC101251778	Solanum lycoper	GO:0005634	GO:00435	GO:00063	K18835//
101268787	1893	21.21	9.5	-1.158745202	3.19E-73	XM_004246260.3	FAR1	LOC101268787	PREDICTED: Sc	GO:0005634	GO:00435	GO:00508	K13424//
101258849	1085	1.95	0.88	-1.147898695	6.16E-05	XM_004236949.3	bHLH	LOC101258849	PREDICTED: Sc	NA	GO:00469	NA	K04733//i
101248665	1239	22.36	10.28	-1.121079924	1.43E-47	XM_004236996.3	NAC	LOC101248665	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	K12862//
101267548	1164	5.06	2.34	-1.112628855	3.79E-11	NM_001328614.1	AP2-EREBP	LOC101267548	Solanum lycoper	GO:0005634	GO:00036	GO:00063	K09286//
101244582	1354	19.7	9.15	-1.106351981	3.94E-45	NM_001329523.1	NAC	LOC101244582	Solanum lycoper	GO:0005634	GO:00036	GO:00063	K03094//
101257043	1048	3.51	1.64	-1.097775216	2.80E-07	XM_004234061.3	AP2-EREBP	LOC101257043	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	K09286//
101260164	1347	125.35	58.65	-1.095758983	5.34E-272	XM_010327256.1	PLATZ	LOC101260164	PREDICTED: Sc	NA	NA	NA	NA
101263056	1132	6.57	3.13	-1.069730713	7.12E-13	XM_004229716.3	AP2-EREBP	LOC101263056	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	K09286//
101261885	694	4.39	2.11	-1.056977941	9.27E-06	XM_010315247.2	C2H2	LOC101261885	PREDICTED: Sc	NA	GO:00036	NA	NA
101257056	1107	59.15	28.54	-1.051392834	8.10E-99	XM_004235767.3	LOB	LOC101257056	PREDICTED: Sc	NA	NA	NA	NA
101246812	1434	15.94	7.81	-1.029257176	5.65E-35	NM_001316915.1	WRKY	LOC101246812	Solanum lycoper	GO:0005634	GO:00435	GO:00096	K13424//
100736519	1734	209.49	103.07	-1.023256902	0	NM_001246877.1	TCP	TCP12	Solanum lycoper	GO:0005634	GO:00036	GO:00063	K13035//
101261342	1426	18.51	9.19	-1.010168129	7.40E-38	XM_019214651.1	NAC	LOC101261342	PREDICTED: Sc	GO:0005634	GO:00036	GO:00063	K13126//
101257639	993	12.94	6.46	-1.002231547	4.57E-19	XM_004252186.3	bHLH	LOC101257639	PREDICTED: Sc	NA	GO:00469	NA	K04733//i
101263123	1429	53.11	26.52	-1.001902754	2.83E-107	XM_004241479.2	TAZ	LOC101263123	PREDICTED: Sc	GO:0005634	GO:00044	GO:00431	K10523//

Supplementary Table S4. The rice (*Oryza sativa*) and *Arabidopsis thaliana* homologs of the highly responsive tomato TFs against *PepMV* infection

	Tomato Gene ID	Gene symbol	length (aa)	TF family	Homologs	Description	length (aa)	Query Cover	Per. Ident	E value
1	*Solyc04g015500*	Solyc04g015500	245	B3	At3g18990	AP2/B3-like transcriptional factor family protein	341	40%	45.54%	2.00E-23
					Os03g0621900	Transcriptional factor B3 domain containing protein	143	39%	34.38%	3.00E-14
2	*Solyc02g093420*	Solyc02g093420	393	NAC	At3g01600	NAC domain containing protein 44	366	100%	43.04%	3.00E-96
					Os02g0594800	No apical meristem (NAM) family protein, Awn development, Regulation of boundary formation, lateral organ separation and floral organ identity, NAC50	393	100%	49.01%	4.00E-121
3	*Solyc12g096070*	GRF4	349	GRF	At3g13960	growth-regulating factor 5	397	33%	60.16%	6.00E-47
					Os06g0116200	growth-regulating factor 5	349	93%	45.10%	9.00E-86
4	*Solyc02g077610*	NAC073	292	NAC	At4g28500	NAC domain containing protein 73	305	76%	72.49%	2.00E-117
					Os05g0563000	NAC domain-containing protein 62	315	85%	57.24%	2.00E-115
5	*Solyc06g075780*	ZAT1-like	323	C2H2	At5g59820	zinc finger protein Zat12	162	81%	45.75%	8.00E-30
					Os03g0279700	Similar to ZPT2-12	192	43%	63.01%	2.00E-23
					Os01g0838600	Zinc finger, C2H2-like domain containing protein	217	61%	39.85%	1.00E-20
6	*Solyc11g056650*	bHLH81	441	bHLH	At1g51140	basic helix-loop-helix (bHLH) DNA-binding superfamily protein, FBH3	379	54%	42.64%	6.00E-50
					Os08g0506700	Homolog of Arabidopsis FBH, Control of flowering	400	67%	39.32%	2.00E-46
7	*Solyc07g063410*	JA2L	356	NAC	At4g27410	NAC (No Apical Meristem) domain transcriptional regulator superfamily protein, ANAC072, RD26	297	72%	69.62%	1.00E-128
					At1g52890	NAC domain containing protein 19	317	71%	63.97%	7.00E-118
					Os01g0816100	Plant-specific transcription factor, Regulation of hypersensitive response (HR) cell death, OsNAC4	319	51%	60.21%	2.00E-79
8	*Solyc01g107170*	ZF2	310	C2H2	At1g27730	salt tolerance zinc finger, STZ, ZAT10	227	99%	35.76%	1.00E-33
					At5g04340	salt tolerance zinc finger, ZAT6	238	99%	34.29%	2.00E-30
					Os03g0764100	Zinc finger transcription factor ZF1	270	56%	39.06%	2.00E-26
					Os12g0583700	TFIIIA-type zinc finger protein, Tolerance to salt and drought stresses	248	89%	32.41%	6.00E-26
9	*Solyc03g121240*	bHLH87	380	bHLH	At3g21330	basic helix-loop-helix (bHLH) DNA-binding superfamily protein	373	78%	49.53%	2.00E-79
					Os01g0707500	Similar to Transcription factor LAX PANICLE	394	31%	62.10%	1.00E-45
					Os01g0566800	Hypothetical conserved gene, bHLH117	467	50%	48.47%	7.00E-45
10	*Solyc12g044390*	DREB3	143	ERF	At5g11590	Integrase-type DNA-binding superfamily protein, TINY2	236	65%	76.84%	1.00E-49
					Os04g0549800	ethylene-responsive transcription factor ERF037	289	64%	71.74%	3.00E-42
11	*Solyc05g050220*	TAF-1-like	416	bZIP	At2g46270	G-box binding factor 3	359	99%	44.63%	1.00E-94
					At4g01120	G-box binding factor 2	360	96%	39.46%	5.00E-67
					Os05g0569300	Similar to G-box binding factor 1	381	96%	35.68%	2.00E-62
					Os01g0658900	bZIP class abscisic acid responsive element (ABRE)-binding factor, Salt tolerance	361	100%	32.38%	8.00E-48

Supplementary Table S5. Identification of distinct signature motifs within the members of each TF family

TF family	motif	Sequence	length (aa)
B3	1	CFCKCGRQKFMQ	12
	2	DGHVWKVGL	9
	3	GKVWLQDGWQEFVDRYSIKIGYFLIFRYEGNSQFDVFIFDLSGSEIEY	48
GRF	1	YYAYYGKKFDPEPGRCRRTDGKKWRCSKEAYPDSKYCERHMHRGRNRSRK	50
	2	PFTAVQWQELEHQALIYKYLVAGVPVPPDLILPIR	35
	3	VKQENRPLRPFFDEWPGRKESWSELDEEGSNKNNFSTTQLSISIPM	46
NAC	1	KVLYFYYGKAPKPEKTNWVMHZYHLG	26
	2	PGLPPGVKFDPTDEELLEHLECKKVAGNSKPHPLIDEFILT	41
	3	ICYTHPENLPGVNKDGTSRHFFHRPSKAYTTGTRKRRKIHT	41
C2H2	1	KVHECSICGKEFPTGQALGGHKRRHYE	27
	2	FECKTCNKQFSSYQALGGHKASHKKP	26
	3	TEDEYLALCLMLLAR	15
bHLH	1	RKNVGISTDPQTVAARVRRERISERIRVLQELVPGGDKMDT	41
	2	ASMLDEAABYJKFLKSQVKALEELRAKCT	29
	3	YEPDPEAIAQVKEMIYRAAAFRPVNFGAE	29
bZIP	1	BERELKREKRKQSNRESARRSRLRKQAETEELAVKVEALTAENTSLRSEI	50
	2	YPDWAAMQAYYGPRVAPPPYYSSAIAPGH	29
	3	MPPPYGAPYAAVYPHGG	17
ERF	1	HPVYRGVRMRSWGKWVSEIREPRKKSRIWLGTFPTPEMAARAHDVAALSI	50
	2	KGNAAILNFPELADSLPRPASJSPRDVQ	28
	3	EDNLGQGIEPNFGKG	15

Supplementary Table S6. The *cis*-elements identified within the promoter regions of the 11 highly differentiated DETFs

Gene	Site name	Organism	Position	Strand	Matrix score	Sequence	Function
Solyc04g015500	ABRE	*Arabidopsis thaliana*	-705	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	CGTCA-motif	*Hordeum vulgare*	-16	-	5	CGTCA	cis-acting regulatory element involved in the MeJA-responsiveness
	TGACG-motif	*Hordeum vulgare*	-16	+	5	TGACG	cis-acting regulatory element involved in the MeJA-responsiveness
	W box	*Arabidopsis thaliana*	-632	+	6	TTGACC	
Solyc02g093420	ABRE	*Triticum aestivum*	-578	+	9	GACACGTGGC	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-432	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	CGTCA-motif	*Hordeum vulgare*	-1487	-	5	CGTCA	cis-acting regulatory element involved in the MeJA-responsiveness
	ERE	*Nicotiana glutinos*	-1986	+	8	ATTTTAAA	
	ERE	*Nicotiana glutinos*	-526	-	8	ATTTTAAA	
	ERE	*Nicotiana glutinos*	-768	-	8	ATTTTAAA	
	ERE	*Nicotiana glutinos*	-205	-	8	ATTTTAAA	
	ERE	*Nicotiana glutinos*	-1800	+	8	ATTTTAAA	
	ERE	*Nicotiana glutinos*	-746	-	8	ATTTTAAA	
	TC-rich repeats	*Nicotiana tabacum*	-963	+	9	ATTCTCTAAC	cis-acting element involved in defense and stress responsiveness
	TGACG-motif	*Hordeum vulgare*	-1487	+	5	TGACG	cis-acting regulatory element involved in the MeJA-responsiveness
	W box	*Arabidopsis thaliana*	-14	-	6	TTGACC	
	WUN-motif	*Nicotiana glutinosa*	-1675	+	9	AAATTACTA	
	WUN-motif	*Nicotiana glutinosa*	-251	+	8	AAATTACT	
	WUN-motif	*Nicotiana glutinosa*	-1466	-	8	AAATTACT	
GRF4	ABRE	*Arabidopsis thaliana*	-1720	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-213	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	CGTCA-motif	*Hordeum vulgare*	-235	-	5	CGTCA	cis-acting regulatory element involved in the MeJA-responsiveness
	CGTCA-motif	*Hordeum vulgare*	-132	+	5	CGTCA	cis-acting regulatory element involved in the MeJA-responsiveness
	ERE	*Nicotiana glutinos*	-993	+	8	ATTTTAAA	
	ERE	*Nicotiana glutinos*	-716	-	8	ATTTTAAA	
	TGACG-motif	*Hordeum vulgare*	-132	-	5	TGACG	cis-acting regulatory element involved in the MeJA-responsiveness
	TGACG-motif	*Hordeum vulgare*	-235	+	5	TGACG	cis-acting regulatory element involved in the MeJA-responsiveness
	WUN-motif	*Nicotiana glutinosa*	-396	+	9	TAATTACTC	
	WUN-motif	*Nicotiana glutinosa*	-1644	+	8	AAATTACT	
	WUN-motif	*Nicotiana glutinosa*	-177	-	9	TTATTACAT	
	WUN-motif	*Nicotiana glutinosa*	-221	+	9	AAATTACTA	
NAC073	ABRE	*Arabidopsis thaliana*	-1759	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-622	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-623	-	6	CACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-38	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	CGTCA-motif	*Hordeum vulgare*	-516	-	5	CGTCA	cis-acting regulatory element involved in the MeJA-responsiveness
	CGTCA-motif	*Hordeum vulgare*	-308	-	5	CGTCA	cis-acting regulatory element involved in the MeJA-responsiveness
	TGACG-motif	*Hordeum vulgare*	-516	+	5	TGACG	cis-acting regulatory element involved in the MeJA-responsiveness

	TGACG-motif	*Hordeum vulgare*	-308	+	5	TGACG	cis-acting regulatory element involved in the MeJA-responsiveness
	W box	*Arabidopsis thaliana*	-1068	-	6	TTGACC	
	W box	*Arabidopsis thaliana*	-484	+	6	TTGACC	
	WUN-motif	*Nicotiana glutinosa*	-1817	+	9	CCATTTCAA	
	WUN-motif	*Nicotiana glutinosa*	-935	-	8	AAATTACT	
	WUN-motif	*Nicotiana glutinosa*	-936	-	9	AAATTACTA	
ZAT1-like	ABRE	*Arabidopsis thaliana*	-238	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	CGTCA-motif	*Hordeum vulgare*	-86	-	5	CGTCA	cis-acting regulatory element involved in the MeJA-responsiveness
	TGACG-motif	*Hordeum vulgare*	-86	+	5	TGACG	cis-acting regulatory element involved in the MeJA-responsiveness
	WUN-motif	*Nicotiana glutinosa*	-1485	+	9	AAATTTCTT	
bHLH81	ABRE	*Arabidopsis thaliana*	-1714	-	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	ERE	*Nicotiana glutinos*	-1998	-	8	ATTTTAAA	
	ERE	*Nicotiana glutinos*	-165	+	8	ATTTTAAA	
	TC-rich repeats	*Nicotiana tabacum*	-1743	+	9	GTTTTCTTAC	cis-acting element involved in defense and stress responsiveness
	TC-rich repeats	*Nicotiana tabacum*	-1254	-	9	GTTTTCTTAC	cis-acting element involved in defense and stress responsiveness
JA2L	ABRE	*Arabidopsis thaliana*	-837	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-1180	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Oryza sativa*	-838	+	8	TACGTGTC	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-573	-	7	TACGGTC	cis-acting element involved in the abscisic acid responsiveness
	ERE	*Nicotiana glutinos*	-1108	+	8	ATTTTAAA	
	ERE	*Nicotiana glutinos*	-348	-	8	ATTTCATA	
	WUN-motif	*Nicotiana glutinosa*	-1654	+	9	TTATTACAT	
	WUN-motif	*Nicotiana glutinosa*	-72	-	9	AAATTTCTT	
ZF2	ABRE	*Arabidopsis thaliana*	-239	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-1667	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-927	-	6	CACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-1259	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-926	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	CGTCA-motif	*Hordeum vulgare*	-1562	+	5	CGTCA	cis-acting regulatory element involved in the MeJA-responsiveness
	ERE	*Nicotiana glutinos*	-1862	-	8	ATTTTAAA	
	TGACG-motif	*Hordeum vulgare*	-1562	-	5	TGACG	cis-acting regulatory element involved in the MeJA-responsiveness
	W box	*Arabidopsis thaliana*	-547	-	6	TTGACC	
	W box	*Arabidopsis thaliana*	-269	+	6	TTGACC	
	W box	*Arabidopsis thaliana*	-362	+	6	TTGACC	
	WUN-motif	*Brassica oleracea*	-1474	+	9	AAATTTCCT	wound-responsive element
	WUN-motif	*Nicotiana glutinosa*	-406	-	8	AAATTACT	
	ABRE	*Arabidopsis thaliana*	-655	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	CGTCA-motif	*Hordeum vulgare*	-510	-	5	CGTCA	cis-acting regulatory element involved in the MeJA-responsiveness
	ERE	*Nicotiana glutinos*	-1930	-	8	ATTTTAAA	
	ERE	*Nicotiana glutinos*	-1678	-	8	ATTTCATA	

bHLH87	ERE	*Nicotiana glutinos*	-1857	-	8	ATTTTAAA	
	ERE	*Nicotiana glutinos*	-1102	-	8	ATTTTAAA	
	TC-rich repeats	*Nicotiana tabacum*	-1988	+	9	ATTCTCTAAC	cis-acting element involved in defense and stress responsiveness
	TC-rich repeats	*Nicotiana tabacum*	-790	-	9	ATTCTCTAAC	cis-acting element involved in defense and stress responsiveness
	TCA-element	*Nicotiana tabacum*	-1307	-	9	CCATCTTTTT	cis-acting element involved in salicylic acid responsiveness
	TGACG-motif	*Hordeum vulgare*	-510	+	5	TGACG	cis-acting regulatory element involved in the MeJA-responsiveness
	W box	*Arabidopsis thaliana*	-1968	+	6	TTGACC	
	W box	*Arabidopsis thaliana*	-1341	+	6	TTGACC	
DREB3	ABRE	*Arabidopsis thaliana*	-1498	-	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-592	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-1419	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	CGTCA-motif	*Hordeum vulgare*	-1040	-	5	CGTCA	cis-acting regulatory element involved in the MeJA-responsiveness
	ERE	*Nicotiana glutinos*	-1217	+	8	ATTTTAAA	
	TC-rich repeats	*Nicotiana tabacum*	-1447	+	9	ATTCTCTAAC	cis-acting element involved in defense and stress responsiveness
	TC-rich repeats	*Nicotiana tabacum*	-530	+	9	ATTCTCTAAC	cis-acting element involved in defense and stress responsiveness
	TGACG-motif	*Hordeum vulgare*	-1040	+	5	TGACG	cis-acting regulatory element involved in the MeJA-responsiveness
	W box	*Arabidopsis thaliana*	-643	+	6	TTGACC	
	WUN-motif	*Nicotiana glutinosa*	-1319	-	8	AAATTACT	
	WUN-motif	*Brassica oleracea*	-1554	+	9	AAATTTCCT	wound-responsive element
	WUN-motif	*Nicotiana glutinosa*	-1626	+	9	CCATTTCAA	
TAF-1-like	ABRE	*Arabidopsis thaliana*	-1274	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-158	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Oryza sativa*	-263	-	8	TACGTGTC	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-171	-	6	CACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-648	-	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-170	+	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	ABRE	*Arabidopsis thaliana*	-261	-	5	ACGTG	cis-acting element involved in the abscisic acid responsiveness
	CGTCA-motif	*Hordeum vulgare*	-646	+	5	CGTCA	cis-acting regulatory element involved in the MeJA-responsiveness
	CGTCA-motif	*Hordeum vulgare*	-160	-	5	CGTCA	cis-acting regulatory element involved in the MeJA-responsiveness
	CGTCA-motif	*Hordeum vulgare*	-219	-	5	CGTCA	cis-acting regulatory element involved in the MeJA-responsiveness
	ERE	*Nicotiana glutinos*	-203	-	8	ATTTTAAA	
	TCA-element	*Nicotiana tabacum*	-148	+	9	CCATCTTTTT	cis-acting element involved in salicylic acid responsiveness
	TGACG-motif	*Hordeum vulgare*	-646	-	5	TGACG	cis-acting regulatory element involved in the MeJA-responsiveness
	TGACG-motif	*Hordeum vulgare*	-160	+	5	TGACG	cis-acting regulatory element involved in the MeJA-responsiveness
	TGACG-motif	*Hordeum vulgare*	-219	+	5	TGACG	cis-acting regulatory element involved in the MeJA-responsiveness
	W box	*Arabidopsis thaliana*	-771	-	6	TTGACC	
	WUN-motif	*Nicotiana glutinosa*	-904	+	8	AAATTACT	
	WUN-motif	*Nicotiana glutinosa*	-669	-	8	AAATTACT	