

² Supplementary Information for

- Enhanced resistance to bacterial and oomycete pathogens by short tandem target mimic
- 4 RNAs in tomato

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¹³ **Plant strains and growth conditions.** Tomato (*Solanum lycopersicum*) cultivars M82 were raised from seeds in compost ¹⁴ (LevingtonTM M3) and maintained in a growth room with 16/8h light/dark periods at 22°C (day) and 18°C (night), with 60% ¹⁵ relative humidity, at a light intensity of 300 µmol photons $m^{-2} \cdot s^{-1}$. Agrobacterium tumefaciens-mediated stable transformation ¹⁶ of tomato plants were performed based on published work (1).

Cloning and vector construction. The STTMs vector construction was done based on a previous report (2). In brief, a long (110bp) DNA oligo containing two mimic sequences separated by a spacer was designed and cloned into a pENTR L1L2 vector (Invitrogen). The insert in this plasmid (pENTR-STTM) was then LR recombined into pGWB402 destination vector containing a 2X35S promoter driving the expression of the insert, and kanamycin-resistant marker (NOS promoter:NPTII:NOS terminator) for selection. All constructs were confirmed by Sanger sequencing.

Small RNA northern blot. Small RNA detection was performed using the northern blot technique. In brief, 5 µg of total RNA per sample were prepared in 10 µl, added equal volume of 2X loading buffer (95% deionized formamide, 18 mM EDTA, 0.025% SDS, xylene cyanol FF, bromophenol blue), and heated at 65°C for 5 min. Then placed in ice for 1 min and loaded and run in a 15% polyacrylamide 7 M urea gel, using 0.5X TBE running buffer. RNA was then transferred to a positively charged nylon membrane (Amershan Hybond-N+, GE HealthcareTM) using overnight capillary system: gels were soaked for 10 min in 20X SSC, then placed on a clean glass plate, membrane on top, 2 pieces of 3MM paper soaked in 20X SSC, and finally 3-5cm of thick paper on top. Another glass plate was put on top and 1kg of weight over this plate. RNA was cross-linked two times per side with 0.12 J of UV light in a Stratalinker® (AgilentTM). Oligonucleotides and Locked Nucleic Acid (LNATM; by Exiqon) probes radiolabelled with γ^{32} P-ATP were hybridized in ULTRAhyb-Oligo buffer (Thermo Fisher ScientificTM) for 12 hours at 40°C or 2 hours at 57°C, respectively. Then washed three times with 2X SSC, 0.2% SDS. Phosphoimager plates (Fujifilm) were exposed and then imaged with a Typhoon 8610 (Molecular Dynamics).

Target prediction. All tomato miRNA mature sequences were downloaded from miRBase (v21) (3). MicroRNAs targeting genes were predicted by psRNATarget v1 (Dai and Zhao, 2011). Cut-off values were established based on the optimal scores reported in previous studies (4). Tomato NLR sequences were retrieved from a previous study (5) and curated using the ITAG3.2 annotation.

Degradome (PARE) analysis. Parallel analysis of RNA ends (PARE) was performed using the software sPARTA (6). The
 analysis was done on publicly available datasets from the tomato degradome data of leaf samples (7).

sRNAseq analysis. Small RNAs libraries were prepared using the NEBNext ® Small RNA Library Prep (New England Biolabs). 39 In brief, three biological replicates each of 1 month old tomato leaf RNA were prepared using 1 µg of total RNA per sample. 40 After preparation, size selection of libraries was performed using BluePippin 3% agarose cassettes (Sage Science). Each 41 library was barcoded, pooled, and sequenced using a single NextSeq 500/550 High Output Kit v2 (75 cycles). Sequences were 42 demultiplex, and trimmed and filtered using Trim Galore! (Babraham Bioinformatics) with default parameters and reads 43 were concordantly aligned to the Heinz genome SL3.00 version using Bowtie v1.2.0 with modifiers -v 1 -m 50 -best -strata. 44 Identification of sRNA loci and differential expression was performed using the segmentSeq package and baySeq respectively 45 (8, 9).46

Phytophthora infestans infections. The Phytophthora infestans strain in this study is 88069 (10). Cultures were stored in liquid 47 nitrogen and grown on rye sucrose medium. Infection assays were performed on detached tomato leaves, measuring lesion sizes. 48 In brief, four well developed leaves per plant and four plants per condition were detached from four-week-old plants and placed 49 on water-saturated paper in a tray. Spore suspensions of P. infestans were prepared by rinsing two-week-old plates covered with 50 mycelium with cold water and incubating the sporangiophore at 4°C for 1-2 hours. After release of zoospores, the concentration 51 was adjusted to approximately $5 \cdot 10^4$ spores \cdot ml⁻¹. *P. infestans* were spot-inoculated on the abaxial side of the leaf, by 52 placing six 10 µl droplets on various locations right and left of the midvein. The trays were covered and incubated at room 53 temperature at constant light a photoperiod. Disease assessments were performed daily from 3 to 7 days post inoculation (dpi) 54 55 under blue light using a DarkReader ® Transilluminator (Clare Chemical Research) and a Nikon COOLPIX P520. Lesion diameters were measured using ImageJ software, followed by statistical analysis and plotting in R. 56

Pseudomonas syringae infections. The Pseudomonas syringae pv. tomato strain used in this study is DC3000, which is a pathogen of tomato developed in 1986 as rifampicin-resistant derivative of Pst DC52. Cultures were stored in liquid nitrogen and grown on King's B medium. Infection assays were performed in planta, inoculating mature tomato leaves and measuring bacterial growth based on previous work (11). Statistical analysis and plotting were done in R.

RNAseq analysis. RNAseq libraries were prepared using the Truseq® mRNA HT kit (Illumina). In brief, total RNA from three different conditions (young: 3 weeks old leaves, old: 6 weeks old leaves, and infected: 3 day post inoculation of detached leaves with *P. infestans*) with six biological replicates each of 3 week old, and 6 week old tomato leaves, RNA were prepared using 1 µg of total RNA per sample. PolyA bead selection and strand-specific RNA-seq libraries were made and indexed according to manufacturer instructions. Finalized libraries were sequenced as a pool on one lane of a NextSeq 500/550 High Output Kit v2

- 66 (75+75 cycles). Sequences were de-multiplex, and trimmed and filtered using Trim Galore! (Babraham Bioinformatics) with
- ⁶⁷ default parameters. Trimmed reads were pseudo-aligned to ITAG3.2 transcriptome using Kallisto (12), with the parameter -b
- 100. Differential expression was performed on kallisto-estimated counts using the Bioconductor package limma (13). For visual
- representations and analysis, abundances were reported as quantile-normalized transcripts per million (TPM). Processing,
- ⁷⁰ analysis and plotting were done in R.

Phylogenetic analysis. BLASTN analyses were performed using genomic sequences of tomato genes and miRNA precursor
 sequences against the genomes of all plant model organisms and all available genome assemblies of major Solanaceae species.
 The threshold expectation value was defined at 10⁻³ to filter out any spurious hits. Any hits were then manually curated.

74 Supplementary images



Fig. S1. Sequence similarity between NLR domains and TAS5. BLAST (Basic Local Alignment Search Tool) summary and dot plot matrix of TAS5 versus (A) the closest TNL and (B) the closest CNL in the tomato genome. Gene diagram of TAS5 locus is placed underneath the matrix indicates in (A) similarity to a TIR domain in green and (B) similarity to a NB-ARC in yellow. (C) Regions within exons with most significant sequence similarity with known NLR domains are highlighted in yellow and green. Nucleotide sequence alignment of these regions and known tomato NLRs are shown below. The degree of conservation for each nucleotide along the region is represented by the colour, with a dark blue denoting a high level of conservation and a light blue denoting a low level. Dotted arrows indicate direction of the sequence similarity.



Fig. S2. TAS5 is a phasiRNA-producing locus. (A) Gene diagram of TAS5 locus. A 2.7kb region containing 4 exons (grey boxes) and 3 introns (grey dotted lines). The arrow on the left indicates transcription start site and direction. (B) Number of sequenced small RNAs with 5' residues at each position between the cleavage sites of the TAS5 transcript. Red bars indicate phased sequences while blue indicate out of phased. Red diamonds indicate that expected phased siRNA is present in the sample. (C) Distribution of the phasing of small RNAs at the TAS5 locus. Each spoke of wheel the represents 1 of the 21 possible registers, with the percentage of small RNAs mapping plotted as distance from the centre (correction of 2-nt 3' overhangs of DCL cleavage was applied when assigning register in the anti-sense strand). The specific registers predicted from 5' and 3' cleavage sites of miR2118b are indicated with grey circles.



Fig. S3. Levels of target miRNA sequestration in first generation STTM transgenic lines. RNA gel blot analysis of tomato transgenic mimic lines. Upper line shows miRNA blotted with highly specific locked nucleic acid (LNA) probes. Lower image shows the same blot hybridized with U6, as a loading control. Barplot indicates relative pixel ratio of miRNA signal vs U6 signal.



Fig. S4. Effects were consistent across independent STTM lines. (A) MA plot showing fold changes of miRNAs in STTM lines. Tomato mature miRNA sequences were extracted from miRBASE. The blue dots indicate miR482, yellow is miR2118a and red is miR2118b; grey indicate other miRNAs. The dotted line represents a Poisson distribution with 1 % significance values at the top and bottom of the range, applying the 0 correction (if nreads=0;+1). sRNA reads are normalized to the whole library with reads per million (nRPM) and presented as the mean from three biological replicates. (B) Boxplot and leaf images of lesion size in WT and mimicry lines. Statistically significant differences were determined using one-way ANOVA test followed by Tukey HSD at 95% confidence limits. (C) Boxplot of bacterial population in WT and STTM lines leaves infected with *Pseudomonas syringae pv. tomato DC3000*. Bacterial counts at 0 and 3 days post leaf infiltration. Statistically significant differences were determined using ANOVA test followed by Tukey HSD at 95% confidence limits.



Fig. S5. qRT-PCR analysis validates RNA-seq results for miR482 and miR2118b targets. Quantitative PCR analysis for the abundance of target mRNAs LRR2 and TAS5 in 3 and 6 week old leaf tissue (n=6). Expression values were adjusted to tomato housekeeping gene EXP and shown relatively to WT values. Statistically significant differences were explored using two-way ANOVA test followed by Tukey HSD at 95% confidence limits.



Fig. S6. Growth remains majorly unaffected in STTM transgenic lines. (Top) representative images of leaves and whole plants. White scale bars represent 10cm. (Bottom) Dot plots representing differences in shoot dry weight, length, number of nodes, and number of floral meristems. Black dots represent individual plants, and red dots represent means of all biological replicates (n=8). Images and data were collected at 8 week after germination. Statistically significant differences were determined using a two-way ANOVA test followed by Tukey HSD at 95% confidence limits.



Fig. S7. TAS5 and MIR2118b are only present in Solanum species. Diagram summarising the presence or absence of genomic sequences matching TAS5 and MIR2118b in Solanaceae and a close relative. A close sequenced relative of Solanaceae, *Coffea canephora*, was included as an outgroup.



Fig. S8. Known non-NLR defense-related genes remain unaffected in STTM lines. Heatmap of the RNAseq for the non-NLR PTI/ETI-related genes. RNAseq abundances are presented in transcript per million (TPM) and Log2 fold changes between STTM lines and WT across conditions. The list was elaborated based on published work in tomato (14–21).

75 Supplementary tables

Table S1. Summary of identified members of the miR482/2118 family in tomato. All available nomenclatures of miR482/2118 members in tomato in the different studies, present in the current literature.

Sequence	This work	miRBase	Zhang et al. 2016 (22)	DeVries et al. 2015 (23)	Shivaprasaed et al. 2012 (24)	Karlova et al. 2013 (25)	Notes
UUUCCAAUUCCACCCAUUCCUA	mi2118a	sly miR482a	miR482a	miR482	miR482	miR-Y	-
UUUCCUAUUCCACCCAUGCCAA	mi2118b	sly-miR482d	miR482d	miR482g	-	-	-
UCUUGCCUACACCGCCCAUGCC	miR482b	sly-miR482b	miR482b	miR482a	miR482a		-
UCUUUCCUACUCCUCCCAUACC	miR482e	sly-miR482e	miR482e	miR482f	miR482f	miR482*	-
UCUUGCCAAUACCGCCCAUUCC	miR482c	sly-miR482c	miR482c	miR482b	miR482b		-
UUACCAAUUCCACCCAUUCCUA	-	-	-	miR482h	-	-	No evidence of expression
UCUUUCCUACUCCUCCCUACC	-	-	-	-	miR482c	-	No evidence of expression
UCUUUCCUACUCCUCCCAUGCC	-	-	-	-	miR482e	-	or presence of the sequence
UCUUUCCUACUCCUCCCAUCCC	-	-	-	-	miR482d	-	in the genome

Table S2. Summary of all predicted targets of miR482/2118 members.

miRNA	Target	Score	UPE	Posit	Target description
mi2118a	Solyc11g008140	1	11.101	1224	Pectate lyase
mi2118a	Solyc01g102920	2	14.713	635	Disease resistance protein (TIR-NBS-LRR class)
mi2118a	Solyc04g007320	2	21.199	1110	Disease resistance protein (TIR-NBS-LRR class)
mi2118a	Solyc01g020371	2.5	20.058	349	GRF zinc finger family protein
mi2118a	Solyc03g116360	2.5	15.966	2405	Regulator of chromosome condensation (RCC1) family protein
mi2118a	Solyc04g024950	2.5	15.862	4	MATH domain/coiled-coil protein
mi2118a	Solyc04g049780	2.5	13.961	70	Retrovirus-related Pol polyprotein from transposon TNT 1-94
mi2118a	Solyc04g053070	2.5	17.989	278	DNA topoisomerase
mi2118a	Solyc06g009533	2.5	18.082	77	Kinase family protein
mi2118a	Solyc06g062440	2.5	22.729	593	Disease resistance protein
mi2118a	Solyc10g007065	2.5	17.785	580	Phenylalanyl-tRNA synthetase alpha chain
mi2118a	Solyc01g066020	3	25.484	656	disease resistance protein (TIR-NBS-LRR class)
mi2118a	Solyc01g087200	3	19.95	515	Disease resistance protein
mi2118a	Solyc01g090860	3	8.404	782	Nucleotidyltransferase family protein
mi2118a	Solyc02g030100	3	17.13	3745	Vacuolar protein sorting-associated protein 54
mi2118a	Solyc02g030105	3	17.13	2139	Vacuolar protein sorting-associated protein 54
mi2118a	Solyc02g091890	3	6.22	4704	myb-like protein X
mi2118a	Solyc03g083130	3	16.198	1745	gamma-irradiation and mitomycin c induced 1
mi2118a	Solyc05g009750	3	17.541	164	NBS-LRR resistance protein-like protein
mi2118a	Solyc08g005510	3	18.753	1512	disease resistance protein (TIR-NBS-LRR class)
mi2118a	Solyc09g090390	3	18.271	1709	2-oxoglutarate-dependent dioxygenase AOP2
mi2118a	Solyc10g050115	3	5.699	891	Transposon Ty3-I Gag-Pol polyprotein
mi2118a	Solyc11g011350	3	19.87	1381	disease resistance protein (TIR-NBS-LRR class)
mi2118a	Solyc12g009450	3	19.542	727	Disease resistance protein (CC-NBS-LRR class) family
mi2118a	Solyc12g056490	3	23.311	324	WD40 repeat-containing protein
mi2118a	Solyc01g094520	3.5	20.797	978	F-box/kelch-repeat protein
mi2118a	Solyc01g112260	3.5	30.089	316	Phosphoenolpyruvate carboxylase
mi2118a	Solyc02g064680	3.5	19.849	1125	Calcium-transporting ATPase
mi2118a	Solyc02g090860	3.5	19.613	1387	Phenylalanyl-tRNA synthetase alpha chain
mi2118a	Solyc03g025190	3.5	21.744	803	anthocyanin permease
mi2118a	Solyc03g112630	3.5	16.495	3497	Sec14p-like phosphatidylinositol transfer family protein
mi2118a	Solyc04g011960	3.5	15.189	521	Disease resistance protein (CC-NBS-LRR class) family
mi2118a	Solyc04g011980	3.5	16.151	521	Disease resistance protein (CC-NBS-LRR class) family
mi2118a	Solyc04g011990	3.5	15.575	1077	Disease resistance protein (NBS-LRR class) family
mi2118a	Solyc04g012000	3.5	17.228	221	NBS-coding resistance gene analog
mi2118a	Solyc04g012010	3.5	18.466	541	Disease resistance protein (NBS-LRR class) family
mi2118a	Solyc05g010240	3.5	11.485	3748	Chaperonin-60 beta subunit
mi2118a	Solyc06g061215	3.5	20.712	170	Proteinase inhibitor II
mi2118a	Solyc06g069390	3.5	24.527	1442	D-aminoacyl-tRNA deacylase
mi2118a	Solyc07g063430	3.5	13.261	643	Peroxisomal membrane (Mpv17/PMP22) family protein
mi2118a	Solyc08g066500	3.5	13.834	554	Homeobox leucine-zipper protein
mi2118a	Solyc09g005290	3.5	20.812	668	Nbs-lrr resistance protein
mi2118a	Solyc09g091990	3.5	18.213	665	Kinase family protein
mi2118a	Solyc10g087013	3.5	18.136	838	Cytochrome P450
mi2118a	Solyc12g056960	3.5	13.791	484	Glucan 1
mi2118a	Solyc01g008800	4	14.87	1561	disease resistance protein (TIR-NBS-LRR class)
mi2118a	Solyc01g111160	4	17.893	181	far-red elongated hypocotyls 3
mi2118a	Solyc02g081870	4	16.621	267	Pleiotropic drug resistance ABC transporter
mi2118a	Solyc02g093340	4	15.426	1078	RNA-binding (RRM/RBD/RNP motifs) family protein
mi2118a	Solyc03g111140	4	18.294	766	Malate synthase
mi2118a	Solyc03g115740	4	10.662	2443	Xyloglucan alpha-1
mi2118a	Solyc05g008340	4	23.996	791	Core-2/I-branching beta-1
mi2118a	Solyc05g009470	4	14.478	2663	Alpha-glucosidase
mi2118a	Solyc06g009533	4	20.01	1085	Kinase family protein
mi2118a	Solyc06g065820	4	14.049	582	Ethylene Response Factor H.1
mi2118a	Solyc06g068700	4	21.249	2627	Calreticulin/calnexin
mi2118a	Solyc07g008950	4	20.753	2523	Methionyl-tRNA synthetase family protein
mi2118a	Solyc07g008955	4	20.753	2631	Unknown protein

mi2118a	Solyc07g041030	4	22.468	277	DNA topoisomerase
mi2118a	Solyc08g013900	4	19.494	4686	Plant regulator RWP-RK family protein
mi2118a	Solyc08g082000	4	17.749	789	Homeobox-leucine zipper HOX24
mi2118a	Solyc09g007710	4	26.176	986	Disease resistance protein (TIR-NBS-LRR class) family
mi2118a	Solyc09g075010	4	4.321	683	HSP20-like chaperones superfamily protein
mi2118a	Solyc11g045350	4	19.839	3532	Plant regulator RWP-RK family protein
mi2118a	Solyc11g062220	4	19.961	5265	Zinc finger CCCH domain-containing protein 44
mi2118h	Solve06c005410	1	15 878	592	TAS5
mi2118b	Solvc06g005410	1	15.670	1630	TAS5
mi2118b	Solvc02g000410	2	15.005 15.284	796	Disease resistance protein (TIR-NBS-LBR class)
mi2118b	Solvc01g105340	$\frac{2}{25}$	20.142	810	Chaperone protein Dna I
mi2118b	Solvc01g113620	2.5	16 895	806	Disease resistance protein (TIR-NBS-LBR class) family
mi2118b	Solvc04g009110	2.5	18 119	572	Nbs-Irr resistance protein
mi2118b	Solvc04g009130	2.5	20.332	584	Nbs-Irr resistance protein
mi2118b	Solvc04g009290	2.5	18 898	572	Disease resistance protein
mi2118b	Solvc04g026110	2.5	22.415	491	Disease resistance family protein
mi2118b	Solvc05g009750	$\frac{2.0}{2.5}$	17541	164	NBS-LBB resistance protein-like protein
mi2118b	Solvc08g075630	2.5	26.52	743	NBS-LBB resistance protein
mi2118b	Solvc08g076000	2.5	25.842	851	NBS-LBB resistance protein
mi2118b	Solvc01g102920	3	14713	635	Disease resistance protein (TIR-NBS-LBR class)
mi2118b	Solvc02g0302920	3	19.46	281	Nbs-Irr resistance protein
mi2118b	Solvc02g030250	3	23 811	479	Disease resistance protein
mi2118b	Solvc06g062440	3	20.011 22.729	592	Disease resistance protein
mi2118b	Solvc08g075640	3	24.051	836	NBS-LBR resistance protein
mi2118b	Solvc09g075010	3	16.92	611	HSP20-like chaperones superfamily protein
mi2118b	Solvc09g098100	3	18.265	2059	CC-NBS-LBB Solve(09ø098100
mi2118b	Solvc01g110000	35	16 414	2336	Beta-galactosidase
mi2118b	Solvc02g036270	3.5	16.852	$\frac{2000}{679}$	Disease resistance protein (NBS-LBR class) family
mi2118b	Solvc03g123630	3.5	23 333	1670	nectin methylesterase
mi2118b	Solvc04g009120	3.5	20.000 22 379	599	Nbs-Irr resistance protein
mi2118b	Solvc04g025820	3.5	20.87	312	Disease resistance protein
mi2118b	Solvc04g025840	3.5	20.843	491	Disease resistance family protein
mi2118b	Solvc05g008070	3.5	21.429	530	Disease resistance protein
mi2118b	Solvc05g014030	3.5	21.401	738	Regulator of chromosome condensation (RCC1) family protein
mi2118b	Solvc06g007780	3.5	21.021	2776	Nuclear transport factor 2 (NTF2)
mi2118b	Solvc07g039400	3.5	22.502	491	Disease resistance protein
mi2118b	Solvc07g039420	3.5	22.458	566	Disease resistance protein (NBS-LRR class) family
mi2118b	Solvc08g067060	3.5	24.14	674	Pentatricopeptide repeat superfamily protein
mi2118b	Solvc08g074250	3.5	15.378	545	Disease resistance protein (CC-NBS-LRR class) family
mi2118b	Solvc11g008140	3.5	11.101	1224	Pectate lyase
mi2118b	Solvc12g006040	3.5	21.275	662	NBS-LRR protein
mi2118b	Solyc01g105775	4	23.141	221	Carbonic anhydrase
mi2118b	Solvc01g111100	4	18.433	635	Neutral invertase
mi2118b	Solyc02g079310	4	16.167	387	Equilibrative nucleoside transporter family protein
mi2118b	Solyc02g079350	4	14.312	2490	Equilibrative nucleoside transporter family protein
mi2118b	Solyc02g083960	4	19.892	3334	2-oxoglutarate and Fe-dependent oxygenase-like protein
mi2118b	Solyc03g007330	4	22.962	983	ATP-dependent zinc metalloprotease FTSH protein
mi2118b	Solyc03g083430	4	21.732	1551	Splicing factor 3A subunit 3
mi2118b	Solyc04g005540	4	17.383	850	Disease resistance protein (NBS-LRR class) family
mi2118b	Solyc04g005550	4	21.364	868	Disease resistance protein (NBS-LRR class) family
mi2118b	Solyc04g071260	4	21.507	2316	Actin
mi2118b	Solyc05g014760	4	21.583	3126	Kinase family protein
mi2118b	Solyc05g018720	4	17.342	62	NBS-coding resistance protein
mi2118b	Solyc07g005770	4	24.094	539	Disease resistance protein
mi2118b	Solyc07g064700	4	25.463	1362	Bromodomain-containing protein
mi2118b	Solyc09g005120	4	18.535	483	DnaJ domain-containing protein
mi2118b	Solyc09g076010	4	8.678	370	Acyl-CoA N-acyltransferase
mi2118b	Solyc10g008230	4	19.11	548	Disease resistance protein
mi2118b	Solyc11g069020	4	20.947	497	Disease resistance protein
mi2118b	Solyc12g017800	4	23.624	1102	NBS-LRR class disease resistance protein
mi2118b	Solyc12g099060	4	23.521	644	Disease resistance protein

mi2118b	Solyc12g099940	4	15.941	2435	Acyl-CoA N-acyltransferase
miR482b	Solvc04g009070	0	25.758	211	Disease resistance family protein
miR482b	Solyc02g036270	1.5	12.267	681	Disease resistance protein (NBS-LRR class) family
miR482b	Solvc04g009120	1.5	21.183	601	Nbs-lrr resistance protein
miR482b	Solvc05g008070	1.5	21.303	532	Disease resistance protein
miR482b	Solyc04g025820	2	19.14	314	Disease resistance protein
miR482b	Solvc04g025840	2	19.226	493	Disease resistance family protein
miR482b	Solvc07g039420	2	23.494	568	Disease resistance protein (NBS-LRR class) family
miR482b	Solvc11g065780	2	21.191	786	Disease resistance protein
miR482b	Solvc12g017800	2	24.453	1104	NBS-LRR class disease resistance protein
miR482b	Solvc01g067165	2.5	20.018	529	Disease resistance protein (CC-NBS-LRR class) family protein
miR482b	Solvc04g009130	2.5	20.794	586	Nbs-Irr resistance protein
miR482b	Solvc04g009290	2.5	23.41	574	Disease resistance protein
miR482b	Solvc07g039400	2.5	22.497	493	Disease resistance protein
miR482b	Solvc10g054970	2.5	19.563	538	CCNBS gene
miR482b	Solvc10g054990	2.5	16.38	520	Disease resistance protein (NBS-LRR class) family
miR482b	Solvc10g055170	2.5	21.742	46	Disease resistance protein (CC-NBS-LRB class) family protein
miR482b	Solvc11g006530	2.5	18 804	526	Disease resistance protein
miR482b	Solvc11g006630	2.5	21.57	532	Disease resistance protein
miR482h	Solvc04g009240	3	27.611	565	Nbs-Irr resistance protein
miR482b	Solvc04g009250	3	28.375	577	Nbs-Irr resistance protein
miR482h	Solvc04g009260	3	28.833	550	Nbs-Irr resistance protein
miR482h	Solvc04g009690	3	27.03	562	Nbs-Irr resistance protein
miR482h	Solvc07g005770	3	23 779	541	Disease resistance protein
miR482h	Solvc08g005440	3	21.814	627	NBS-LBB disease resistance protein
miR482h	Solvc10g051050	3	21.011	929	Disease resistance protein
miR482b	Solvc11g020090	3	21.243 20 197	103	Disease resistance protein
miR482h	Solvc11g020000	3	23 736	1110	Disease resistance protein
miR482b	Solve11g020100	3	20.100	622	Disease resistance protein
miR482b	Solve01g113620	35	16 503	808	Disease resistance protein (TIR-NBS-LBR class) family
miR482b	Solve02g032650	3.5	15 288	798	Disease resistance protein (TIR-NBS-LRR class)
miR482h	Solvc02g052030	3.5	25 498	412	NBS-LBB resistance protein
miR482h	Solvc04g005540	3.5	15547	852	Disease resistance protein (NBS-LBB class) family
miR482b	Solvc04g005550	3.5	18 848	870	Disease resistance protein (NBS-LBB class) family
miR482h	Solvc04g009110	3.5	17.68	574	Nbs-Irr resistance protein
miR482b	Solvc04g056746	3.5	16 29	687	Pentatricopentide repeat-containing protein
miR482b	Solvc05g006630	3.5	29.979	1034	disease resistance protein (TIR-NBS-LBR class)
miR482b	Solvc05g007170	3.5	22.989	5882	Disease resistance protein
miR482b	Solvc06g072000	3.5	20.074	307	P-loop containing nucleoside triphosphate hydrolases protein
miR482b	Solvc07g044790	3.5	21.329	1223	Pvr4
miR482b	Solvc07g044797	3.5	21.329	286	CC-NBS-LBB disease resistance protein
miR482b	Solvc07g049700	3.5	24 47	5 44	Disease resistance protein
miR482b	Solvc09g065560	3.5	14.452	1794	Sulfate transporter
miR482b	Solvc11g006520	3.5	23.607	819	Disease resistance protein
miR482b	Solvc11g006640	3.5	26.45	532	Disease resistance protein
miR482b	Solvc11g068360	3.5	22.83	622	Disease resistance protein
miR482b	Solvc11g069620	3.5	21.64	706	Disease resistance protein
miR482b	Solvc12g044180	3.5	19.352	526	CC-NBS-LRR disease resistance protein
miR482b	Solvc12g044190	3.5	18.858	526	Disease resistance protein (CC-NBS-LRR class) family protein
miR482b	Solvc12g044200	3.5	18.45	1186	Disease resistance protein (CC-NBS-LRR class) family protein
miR482b	Solvc02g037540	4	23.271	481	Disease resistance protein
miR482b	Solvc03g078300	4	20.201	726	Disease resistance protein
miR482b	Solvc04g009150	4	25.145	565	Nbs-lrr resistance protein
miR482b	Solvc04g026110	4	21.107	493	Disease resistance family protein
miR482b	Solvc04g048920	4	15.927	46	CC-NBS-LRR disease resistance protein
miR482b	Solvc05g012740	4	20.929	1585	Disease resistance protein
miR482b	Solvc07g053010	4	28.026	1171	NBS-LRR type disease resistance protein
miR482b	Solvc10g045050	4	14.193	268	Enolase
miR482b	Solvc10g051170	4	20.714	673	Disease resistance protein
miR482b	Solvc10g055050	4	17.252	379	CC-NBS-LRR disease resistance protein
miR482b	Solyc11g069990	4	23.911	1218	I2C5
I		1	1	1	

miR482b	Solyc11g070020	4	23.911	1990	Disease resistance protein
miR482b	Solyc11g071423	4	25.798	229	Disease resistance protein
miR482b	Solvc11g071995	4	26.508	622	Disease resistance protein
miR482b	Solvc12g006040	4	20.75	664	NBS-LRR protein
	Solw008c075620	15	01.051	745	NDC I DD registence protein
miR4620	Solycoog075050	1.0	24.601	740 059	NDS-LRR resistance protein
IIIIR462C	Solycoog070000	1.0	24.122	000	NDS-LIKK resistance protein
miR482c	Solyc02g021140	2.5	1.12	4	Superoxide dismutase
m1R482c	Solyc02g078280	3	11.484	1597	DNA ligase-like protein
miR482c	Solyc05g006630	3	29.979	1034	disease resistance protein (TIR-NBS-LRR class)
miR482c	Solyc06g076350	3	15.598	392	LePCL1
miR482c	Solyc11g011560	3	19.304	1085	PHD finger protein family
miR482c	Solyc11g065780	3	21.191	786	Disease resistance protein
miR482c	Solyc00g006530	3.5	25.591	771	Calmodulin-binding protein
miR482c	Solyc01g102660	3.5	18.543	218	Glutathione S-transferase
miR482c	Solyc02g032650	3.5	15.288	798	Disease resistance protein (TIR-NBS-LRR class)
miR482c	Solyc02g036270	3.5	12.267	681	Disease resistance protein (NBS-LRR class) family
miR482c	Solyc04g005540	3.5	15.547	852	Disease resistance protein (NBS-LRR class) family
miR482c	Solyc04g005550	3.5	18.848	870	Disease resistance protein (NBS-LRR class) family
miR482c	Solvc04g009110	3.5	17.68	574	Nbs-lrr resistance protein
miR482c	Solvc04g009150	3.5	25.145	565	Nbs-lrr resistance protein
miR482c	Solvc04g025160	3.5	19.754	340	ATPase
miR482c	Solvc04g026110	3.5	21.107	493	Disease resistance family protein
miB482c	Solvc04g080590	3.5	25,393	748	Proteasome subunit alpha type
miB482c	Solvc06g060360	3.5	21 646	1010	Adenine nucleotide alpha hydrolases-like superfamily protein
miR482c	Solvc06g083875	3.5	17 908	247	pollen Ole e I family allergen protein
miR482c	Solve07c053200	3.5	12 314	023	Adonino nucleotido alpha hydrolasos liko superfamily protein
miR482c	Solyc07g055200	35	22.014	323 475	Vacualar processing anguma
miR482c	Solyc08g005740	3.5	23.003	9071	vacuolar processing enzyme
miR4820	Solyc08g008040	0.0 9 E	11.004	2071 502	Zinc inger FTVE domain protein
IIIIR462C	Solyc10g007200	0.0	10.052	005 475	Discourse and interaction
IIIIR462C	Solyc10g070440	0.0	10.000	470	Disease resistance protein
IIIIR462C	Solyc11g017570	0.0	19.701	1910	Charactin structure news deliver seven las submit suffit
miR482c	Solyc11g062010	3.0	20.533	9000	Chromatin structure-remodeling complex subunit sni21
m1R482c	Solyc12g005230	3.0	13.933	4330	Breast carcinoma-amplified sequence 3
miR482c	Solyc12g019144	3.5	23.587	1538	RING/U-box superiamily protein
miR482c	Solyc01g097390	4	20.058	1141	NAD(P)-linked oxidoreductase superfamily protein
miR482c	Solyc01g103450	4	30.773	415	Heat snock protein 70
miR482c	Solyc02g005180	4	25.396	273	Sugar facilitator protein 2
miR482c	Solyc02g070730	4	25.498	412	NBS-LRR resistance protein
miR482c	Solyc02g078790	4	14.982	1601	Transcription factor jumonji domain protein
miR482c	Solyc02g080960	4	18.235	39	transmembrane protein
miR482c	Solyc03g097980	4	17.739	550	Guanine nucleotide-binding alpha-2 subunit
miR482c	Solyc03g113620	4	28.565	230	MYB transcription factor
miR482c	Solyc05g005460	4	23.644	2043	Quinone oxidoreductase-like protein
miR482c	Solyc05g018370	4	5.408	808	Leguminosin group485 secreted peptide
miR482c	Solyc06g062440	4	22.498	595	Disease resistance protein
miR482c	Solyc06g068210	4	6.629	2252	Protein FAR1-RELATED SEQUENCE 8
miR482c	Solyc07g052760	4	16.463	540	DNA-binding storekeeper protein-related transcriptional regulator
miR482c	Solyc07g055380	4	19.526	1969	Disease resistance protein (TIR-NBS-LRR class)
miR482c	Solyc07g055610	4	20.758	553	Disease resistance protein (TIR-NBS-LRR class)
miR482c	Solyc09g007830	4	14.32	265	Cytokinin riboside 5'-monophosphate phosphoribohydrolase
miR482c	Solyc11g010660	4	12.438	988	protein SGT1
miR482c	Solyc11g062010	4	21.236	9856	Chromatin structure-remodeling complex subunit snf21
miR482c	Solyc11g069830	4	21.579	309	ATPase ASNA1
 	Solve11c006530	15	18 804	526	Disease resistance protein
miR_{1820}	Solve11c006630	1.5	21 57	520	Disease resistance protein
miR402e	Solve07c040700	1.0 9	21.01	544	Disease resistance protein
miD 4020	Solve01~067165		24.47	590	Disease resistance protein (CC NDC I DD class) family matein
miD 402e	Solyco1g00/103	2.0	20.010	029	Disease resistance protein (CC-WDS-LAR Class) lanning protein
miD 402	S01yc04g009070	2.0	20.708	211 E20	Disease resistance ranny protein
miR482e	501yc05g008070	2.5	21.303	03Z	Disease resistance protein
m1K482e	Solyc0bg074760	2.5	15.026	1529	King/U-Box superiamily protein
m1R482e	Solyc10g054970	2.5	19.563	538	CONBS gene

miR482e	Solyc10g054990	2.5	16.38	520	Disease resistance protein (NBS-LRR class) family
miR482e	Solyc10g055170	2.5	21.742	46	Disease resistance protein (CC-NBS-LRR class) family protein
miR482e	Solyc11g020100	2.5	23.736	1110	Disease resistance protein
miR482e	Solyc12g009450	2.5	19.509	729	Disease resistance protein (CC-NBS-LRR class) family
miR482e	Solyc12g017800	2.5	24.453	1104	NBS-LRR class disease resistance protein
miR482e	Solvc01g014840	3	16.059	649	disease resistance protein (TIR-NBS-LRR class)
miR482e	Solvc01g108460	3	19.975	5259	Carboxypeptidase
miR482e	Solvc04g009250	3	28.375	577	Nbs-lrr resistance protein
miR482e	Solvc04g009660	3	28.833	550	Nbs-lrr resistance protein
miB482e	Solvc04g009690	3	27.03	562	Nbs-Irr resistance protein
miR482e	Solvc05g032850	3	17.00	2848	evolutionarily conserved C-terminal region 2
miR482e	Solvc07g027020	3	15 263	2 010 914	Protein kinase family protein
miR/182e	Solvc09g021020	3	15.200 15.779	833	Calcium-dependent lipid-binding (CaLB domain) family protein
miR482c	Solve11c006520	3	23 607	810	Disease resistance protein
miR/82e	Solve11g006640	0 २	26.001	532	Disease resistance protein
miR482e	Solve11g000040	3	20.40	692 692	Disease resistance protein
miR482e	Solyc11g009920	ე ე	24.035	664	NPS I PP protein
miR402e	Solyc12g000040	ง วร	20.75	1564	disease resistance protein (TIP NPS I PP class)
min462e	Solyc01g008800	3.0 9 E	10.407	1004 650	disease resistance protein (TIR-NDS-LRR class)
min462e	Solyc01g000020	0.0 9 F	20.025	008	Disease resistance protein (TIR-NDS-LRR class)
m1R482e	Solyc02g032200	3.3 9 r	18.488	709	Disease resistance protein (TR-NB5-LRR class) family
m1R482e	Solyc02g036270	3.5	12.267	681	Disease resistance protein (NBS-LRR class) family
m1R482e	Solyc03g046207	3.5	24.478	703	Disease resistance protein (CC-NBS-LRR class) family protein
miR482e	Solyc04g005540	3.5	15.547	852	Disease resistance protein (NBS-LRR class) family
miR482e	Solyc04g005550	3.5	18.848	870	Disease resistance protein (NBS-LRR class) family
miR482e	Solyc04g009120	3.5	21.183	601	Nbs-lrr resistance protein
miR482e	Solyc04g074865	3.5	16.828	1400	Retrovirus-related Pol polyprotein from transposon TNT 1-94
miR482e	Solyc05g006630	3.5	29.979	1034	disease resistance protein (TIR-NBS-LRR class)
miR482e	Solyc07g005770	3.5	23.779	541	Disease resistance protein
miR482e	Solyc07g044790	3.5	21.329	1223	Pvr4
miR482e	Solyc07g044797	3.5	21.329	286	CC-NBS-LRR disease resistance protein
miR482e	Solyc10g051050	3.5	21.243	928	Disease resistance protein
miR482e	Solyc11g011350	3.5	20.579	1383	disease resistance protein (TIR-NBS-LRR class)
miR482e	Solyc11g020090	3.5	20.197	103	Disease resistance protein
miR482e	Solyc11g068360	3.5	22.83	622	Disease resistance protein
miR482e	Solyc11g069300	3.5	25.111	2436	Kinase family protein
miR482e	Solyc11g069620	3.5	21.64	706	Disease resistance protein
miR482e	Solyc11g069990	3.5	23.911	1218	I2C5
miR482e	Solyc11g070020	3.5	23.911	1990	Disease resistance protein
miR482e	Solyc11g071423	3.5	25.798	229	Disease resistance protein
miR482e	Solyc11g071995	3.5	26.508	622	Disease resistance protein
miR482e	Solyc12g005970	3.5	15.572	493	Disease resistance protein (CC-NBS-LRR class) family
miR482e	Solyc12g044180	3.5	19.352	526	CC-NBS-LRR disease resistance protein
miR482e	Solvc12g044190	3.5	18.858	526	Disease resistance protein (CC-NBS-LRR class) family protein
miR482e	Solvc12g044200	3.5	18.45	1186	Disease resistance protein (CC-NBS-LRR class) family protein
miR482e	Solvc01g087200	4	19.546	517	Disease resistance protein
miR482e	Solvc01g100310	4	14.841	947	Calmodulin-binding protein
miR482e	Solvc02g032650	4	15.288	798	Disease resistance protein (TIR-NBS-LRR class)
miR482e	Solvc02g073574	4	17.186	583	Disease resistance protein
miR482e	Solvc02g084450	4	17.186	2110	Disease resistance protein
miR482e	Solvc03g078300	4	20.201	727	Disease resistance protein
miR482e	Solvc04g011590	4	30.314	622	Amino acid transporter
miR482e	Solvc04g011960	4	15 415	523	Disease resistance protein (CC-NBS-LBR class) family
miR482e	Solvc04g011980	4	16 137	523	Disease resistance protein (CC-NBS-LBB class) family
miR/82e	Solvc04c011000	1	15 7/1	1079	Disease resistance protein (NBS-LRR class) family
miR/82e	Solve04c012000	т 1	17 879	101 <i>3</i> 992	NBS-coding resistance gang analog
miR4820	Solve04c012000	т 1	18 376	5/12	Disease resistance protein (NRS LRR class) family
miP 4920	Solve04c042010	т 1	15 097	040 46	CC NBS LBB disease resistance protein
miP402e	Solyc04g046920	4	16.927	40 99	SAUR like auxin responsive protein famile
miD 482-	Solycoog079130	4	10.89	22 080	Disease registence protein (TID NDC LDD -1) f
miR482e	Solycuaguur 10	4	20.33	989 270	CC NDS LDD diagona projeture a protein
m1K482e	Solyc10g055050	4	17.252	319	DU-INBO-LKK disease resistance protein
m_1R482e	Solyc11g065780	4	21.191	786	Disease resistance protein

miR482e	Solyc12g005520	4	23.107	121	Disease resistance protein (CC-NBS-LRR class) family
miR482e	Solyc12g096920	4	17.72	544	Disease resistance protein (CC-NBS-LRR class) family protein

Table S3. Target prediction for all siRNA-producing NLRs. Summary of sNLs, with their gene id, class of NLR protein based on the phylogen genetic analysis of a previous study (5) and not in the presence of representative domains, total counts for 21-nt sRNAs (nRPM), and targeting scores for each individual microRNA (red indicates stronger targeting prediction). *TAS5* (bottom) is added for reference.

Gene	eral information	1		Target Prediction						
Gene_ID	NLR class	sRNA prod.	miR482b	miR482e	miR482c	miR2118a	miR2118b			
Solyc11g065780	CNL	1159.4	2	3	4	-	-			
Solyc05g008070	CNL	569.4	1.5	2.5	-	-	3.5			
Solyc02g036270	CNL - LRR1	514.6	1.5	3.5	3.5	-	3.5			
Solyc04g005540	CNL - LRR2	303.2	3.5	3.5	3.5	-	4			
Solyc11g071995	CNL	259.4	4	3.5	-	-	-			
Solyc04g005550	CNL	129.6	3.5	3.5	3.5	-	4			
Solyc10g051050	CNL	128.0	3	3.5	-	-	-			
Solyc09g064610	CNL	77.7	-	-	-	-	-			
Solyc01g008800	TNL	74.7	-	3.5	-	4	-			
Solyc08g007630	CNL	70.0	-	-	-	-	-			
Solyc05g009630	CNL	66.9	-	-	-	-	-			
Solyc11g069990	CNL	65.3	4	3.5	-	-	-			
Solyc11g069620	CNL	64.9	3.5	3.5	-	-	-			
Solyc11g069925	CNL	58.4	3	3	-	-	-			
Solyc05g005330	CNL	48.2	-	-	-	-	-			
Solyc11g068360	CNL	34.4	3.5	3.5	-	-	-			
Solyc07g049700	CNL	25.0	3.5	2	-	-	-			
Solyc11g071410	CNL	23.3	-	-	-	-	-			
Solyc10g085460	CNL	19.9	-	-	-	-	-			
Solyc11g011350	TNL	18.2	-	3.5	-	3	-			
Solyc11g006640	CNL	17.8	3.5	3	-	-	-			
Solyc12g044190	CNL	17.3	3.5	3.5	-	-	-			
Solyc11g020100	CNL	17.3	3	2.5	-	-	-			
Solyc12g044200	CNL	17.2	3.5	3.5	-	-	-			
Solyc07g005770	CNL	15.5	3	3.5	-	-	4			
Solyc09g018220	CNL	14.7	-	-	-	-	-			
Solyc11g064770	CNL	14.3	-	-	-	-	-			
Solyc02g032650	TNL	14.3	3.5	4	3.5	-	2			
Solyc12g006040	CNL	13.7	4	3	-	-	3.5			
Solyc08g076000	CNL	12.5	-	-	1.5	-	2.5			
Solyc11g069660	CNL	12.0	-	-	-	-	-			
Solyc09g098130	CNL	11.1	-	-	-	-	-			
Solyc06g005410	TAS5	431.2	-	-	-	-	1 / 2			

Table S4 Summary of degradome (PARE) signatures. Summary of validated degradome products for miR482/2118 members on the whole tomato transcriptome (p-value < 0.05). Peak category refers to PARE read abundances of that position correspond to (0) > 90th percentile, (1) > 75th, (2) > 50th percentile, (3) < 50th percentile of total PARE read signatures in the genome.

			Cleavage		Proportion of reads	Peak	Corrected	
miRname	Target	Score	Position	Reads	in 10nt window	category	p-value	Annotation
miR2118b/a	Solyc06g005410	1/4	513	62	1	0	0.0001/0.0058	TAS5
miR482b/c	Solyc02g036270	1.5/3	1017	12	1	2	0.0058/ 0.0155	LRR1
miR2118b	Solyc06g005410	2	2536	18	0.3	2	0.0061	TAS5
miR482c	Solyc04g005540	3	864	7	1	2	0.0155	LRR2
miR482e	Solyc11g013750	4	1778	9	1	2	0.0401	Disease resistance protein (NLR class) family
miR2118a	Solyc06g064550	7	6499	8	1	2	0.042	Aspartokinase-homoserine dehydrogenase
miR482c	Solyc06g062440	3.5	607	7	1	2	0.0475	Disease resistance protein
miR2118a	Solyc08g065220	7	4795	4	1	3	0.0487	Glycine decarboxylase p-protein

Table S5. Summary of phasing signatures. Top 20 phasing signatures in our sRNA dataset mapping to tomato genes. Colour code indicates when the gene is a predicted to be a preferential target of (blue) miR482 or (red) miR2118.

Gene ID	Start	End	phaseR score	Annotation
Solyc02g036270	278	3514	-26.9	LRR1
Solyc06g005410	361	1513	-24.6	TAS5
Solyc10g051050	938	2624	-22.9	Disease resistance protein (NLR class) family
Solyc09g074520	409	2264	-21.0	Transport inhibitor response 1 (TIR1)
Solyc05g008070	287	2479	-18.8	Disease resistance protein (NLR class) family
Solyc04g005540	431	3965	-18.3	LRR2
Solyc05g009630	701	2948	-17.4	Disease resistance protein (NLR class) family
Solyc11g069990	763	3397	-16.5	Disease resistance protein (NLR class) family
Solyc11g065820	2293	6253	-16.0	Disease resistance protein (NLR class) family
Solyc12g099870	1691	2072	-15.5	LRR RLK
Solyc11g011350	780	3629	-15.5	Disease resistance protein (NLR class) family
Solyc06g048960	518	3675	-15.3	Dicer-like 2a (DCL2a)
Solyc05g051230	2225	2876	-14.2	MOCS3-like
Solyc04g051190	154	1809	-14.2	P450 carotenoid β -hydrolase (CYP97A29)
Solyc11g071995	506	3586	-14.1	Disease resistance protein (NLR class) family
Solyc11g020100	957	2602	-14.0	Disease resistance protein (NLR class) family
Solyc01g058100	0	126	-13.9	NAD(P)H-quinone oxidoreductase subunit K
Solyc09g018220	562	2549	-13.5	Disease resistance protein (NLR class) family
Solyc02g032650	376	3091	-13.3	Disease resistance protein (NLR class) family
Solyc11g065790	12	409	-13.2	Disease resistance protein (NLR class) family

Table S6. Most significant differential sRNA loci in STTM lines. Genetic loci with differential accumulation of sRNAs (any size-class), with their gene id, annotation, log2 fold changes, direction of the change, and adjusted p-value (cut-off of 0.05). Colour code indicates when the gene is a predicted to be a preferential target of (blue) miR482 or (red) miR2118.

Differential sRNA loci between STTM4	82.1 and wild type
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Gene ID	Annotation	Log2(FC)	Condition	adj. p-value
Solyc11g065780	Disease resistance protein (NLR class) family	1.596	WT > STTM482.1	2.3E-06
Solyc09g064610	Disease resistance protein (NLR class) family	3.255	WT > STTM482.1	3.2E-05
Solyc01g008790	Non specific phospholipase C	2.730	WT > STTM482.1	2.3E-04
Solyc01g067165	Disease resistance protein (NLR class) family	1.971	WT > STTM482.1	3.4E-04
Solyc01g008800	Disease resistance protein (NLR class) family	2.508	WT > STTM482.1	4.5E-04
Solyc04g017620	F-box family protein	2.065	WT > STTM482.1	5.4E-04
Solyc12g044190	Disease resistance protein (NLR class) family	1.924	WT > STTM482.1	9.4E-04
Solyc07g005770	Disease resistance protein (NLR class) family	2.787	WT > STTM482.1	1.4E-03
Solyc08g076000	Disease resistance protein (NLR class) family	2.336	WT > STTM482.1	1.8E-03
Solyc02g036270	Disease resistance protein (NLR class) family	1.921	WT > STTM482.1	2.3E-03
Solyc02g032650	Disease resistance protein (NLR class) family	2.140	WT > STTM482.1	3.6E-03
Solyc04g005550	Disease resistance protein (NLR class) family	2.306	WT > STTM482.1	7.1E-03
Solyc04g005540	Disease resistance protein (NLR class) family	1.751	WT > STTM482.1	1.7E-02
Solyc01g067147	Asterix-like protein	2.230	WT > STTM482.1	3.2E-02
Solyc01g100380	Calreticulin	1.322	WT < STTM482.1	1.2E-02
Solyc03g112330	U-box domain-containing kinase family protein	1.684	WT < STTM482.1	2.5E-02
Solyc03g112335	O-acyltransferase (WSD1-like) family protein	1.637	WT < STTM482.1	4.0E-02
Solyc09g097780	Glycine-rich protein	1.499	WT < STTM482.1	4.8E-02

Differential sRNA loci between	MIM2118b and wild ty	/pe
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Gene ID	Annotation	Log2(FC)	Condition	adj. p-value
Solyc06g005410	TAS5	2.168	WT > STTM2118b.5	8.09E-05

General info	ral information small RNA Analysis						Target P	redictions	RNAseq Analysis								
		Total 21nt counts			Loa2 di	ference			Ava Exp (TPM)			LOG2	STTM482.1	/WT)	LOG2(STTM2118b.5 /WT)		.5 /WT)
Gene ID	NLR class	wт	STTM482.1	STTM2118b.5	S4.1/W	S2.5/W	miR482	miR2118	Young	Öld	, P. inf	Young	Old	P. inf	Young	Old	P. inf
Solyc11g065780	CNL	1159.4	420.5	1225.5	-1.463	0.080	be c	-	0.0	0.0	0.0	•			•		
Solyc05g008070	CNL	569.4	578.4	577.9	0.023	0.021	be	b	5.1	6.4	7.4	-0.353	-0.395	-0.689	-0.349	-0.347	-0.178
Solyc02g036270	CNL - LRR1	514.6	124.2	545.1	-2.050	0.083	b ec	b	4.9	5.2	4.3	0.422	0.486	0.516	0.228	0.180	0.161
Solyc04g005540	CNL - LRR2	303.2	78.5	349.7	-1.949	0.206	bec	b	8.9	15.1	14.7	0.237	0.299	0.273	-0.064	0.087	-0.039
Solyc11g071995	CNL	259.4	338.2	291.3	0.382	0.167	be	-	6.1	11.2	6.6	0.167	0.052	0.400	-0.166	0.113	-0.061
Solyc04g005550	CNL	129.6	24.1	150.8	-2.429	0.219	bec	b	3.3	10.0	13.7	-0.140	-0.468	0.133	0.227	-0.622	-0.140
Solyc10g051050	CNL	128.0	131.0	146.7	0.034	0.197	be	-	1.3	1.9	2.6	-0.163	-0.705	0.533	0.085	-0.767	-0.039
Solyc09g064610	CNL	77.7	7.9	83.9	-3.296	0.111	-	-	6.1	8.1	5.5	-0.230	-0.645	-0.172	0.045	-0.441	-0.197
Solyc01g008800	TNL	74.7	11.2	82.8	-2.738	0.148	е	а	1.2	8.2	12.9	0.009	-0.263	0.288	0.121	-0.848	0.067
Solyc08g007630	CNL	70.0	48.9	78.6	-0.518	0.167	-	-	5.1	9.4	2.3	0.137	-0.217	1.148	0.138	-0.151	0.281
Solyc05g009630	CNL	66.9	67.5	71.9	0.013	0.103	-	-	17.4	33.5	15.2	-0.044	-0.067	0.868	0.056	-0.154	0.756
Solyc11g069990	CNL	65.3	56.2	61.3	-0.217	-0.091	be	-	2.8	4.0	1.8	0.055	-0.192	1.019	0.231	0.056	0.445
Solyc11g069620	CNL	64.9	36.1	72.4	-0.845	0.158	be	-	3.7	6.9	2.4	0.193	0.068	1.390	-0.027	-0.208	0.622
Solyc11g069925	CNL	58.4	47.0	58.9	-0.314	0.012	be	-	3.2	6.7	4.0	0.170	0.085	1.009	-0.100	-0.122	0.496
Solyc05g005330	CNL	48.2	47.1	38.3	-0.032	-0.329	-	-	6.8	8.8	5.2	-0.285	-0.080	0.309	-0.175	0.095	0.099
Solyc11g068360	CNL	34.4	24.0	33.6	-0.523	-0.036	be	-	1.9	4.6	1.1	0.361	-0.113	1.133	0.252	0.294	0.283
Solyc07g049700	CNL	25.0	22.8	28.7	-0.129	0.200	be	-	0.5	2.3	8.8	-0.664	-0.140	-0.205	0.470	-1.055	-0.168
Solyc11g071410	CNL	23.3	27.1	26.6	0.215	0.186	-	-	2.1	4.4	2.9	0.394	0.142	-0.087	-0.189	0.223	-0.098
Solyc10g085460	CNL	19.9	18.4	13.7	-0.114	-0.532	-	-	16.0	22.0	17.4	-0.089	0.025	0.829	0.036	-0.058	0.569
Solyc11g011350	TNL	18.2	21.7	25.8	0.252	0.504	е	а	1.0	1.7	2.1	-0.210	0.164	0.614	0.123	-0.242	0.587
Solyc11g006640	CNL	17.8	14.4	19.5	-0.305	0.132	be	-	4.3	5.0	1.7	0.645	0.566	1.325	0.094	0.261	0.570
Solyc12g044190	CNL	17.3	4.4	17.9	-1.974	0.047	be	-	3.8	10.8	6.2	0.504	-0.090	0.868	-0.293	0.175	0.196
Solyc11g020100	CNL	17.3	16.1	15.8	-0.108	-0.128	be	-	1.3	8.1	4.9	0.290	-0.153	0.303	0.409	-0.374	-0.082
Solyc12g044200	CNL	17.2	5.1	17.3	-1.758	0.012	be	-	5.3	4.0	0.9	-0.215	-0.027	0.856	-0.061	0.536	1.031
Solyc07g005770	CNL	15.5	2.3	15.2	-2.780	-0.028	be	b	1.2	1.2	0.4	-0.098	0.252	1.079	-0.204	0.565	0.832
Solyc09g018220	CNL	14.7	16.8	6.4	0.200	-1.196	-	-	1.0	1.5	2.3	-0.894	-0.150	0.341	-0.351	-0.580	-0.074
Solyc11g064770	CNL	14.3	5.9	16.6	-1.284	0.215	-	-	0.0	0.0	0.0						
Solyc02g032650	TNL	14.3	3.1	14.1	-2.214	-0.023	bec	b	0.7	7.0	10.5	1.264	0.372	0.882	1.0151	0.0349	0.799
Solyc12g006040	CNL	13.7	11.5	5.7	-0.258	-1.261	be	b	0.3	1.0	5.4	0.308	-0.334	0.292	-0.1123	-0.4187	0.105
Solyc08g076000	CNL	12.5	2.2	12.2	-2.526	-0.033	с	b	0.9	1.1	1.4	-0.141	0.231	-0.017	-0.2096	-0.0822	0.123
Solyc11g069660	CNL	12.0	6.1	13.2	-0.977	0.132	-	-	3.5	2.0	0.2	-0.279	-0.828	0.929	0.0269	0.2589	0.208
Solyc09g098130	CNL	11.1	11.9	12.0	0.101	0.108	-	-	3.0	1.9	4.8	-0.554	-0.016	-0.602	-0.0318	-0.0852	-0.514
Solyc06g005410	TAS5	431.2	342.2	83.8	-0.334	-2.363	-	b	2.1	5.2	7.7	0.1841	-0.0324	0.016	0.4292	0.5832	0.759

Table S7. Summary of sNLs. Gene id, class of NLR protein based on the phylogenetic analysis of Andolfo et al. [2014]. Total counts for 21-nt sRNAs (nRPM) in wild type (WT), STTM482.1 and STTM2118b.5 lines. Log2 fold changes between WT and STTM lines (intensity of colour indicates stronger reduction). Summary of target prediction, with letters indicating the predicted targeting miRNA. Summary of RNAseq abundances in transcript per million (TPM) and Log2 fold changes between STTM lines and WT across conditions. SlyTAS5 (bottom) is added for additional reference.

Table S8. Table S8. Most differentially expressed genes in STTM lines. Genes with differential accumulation in at least two of the three conditions (adjusted p-value cut-off of 0.05), with gene id, direction of the change, summary of RNAseq abundances in transcript per million (TPM) in STTM lines and WT across conditions, and annotation. Predicted targets for miR482 or miR2118, respectively, are highlighted in red. (WT = wild type; S4 = STTM482.1; S2 = STTM2118b.5; Y = Young; O = Old; P = P.infestans infected).

Differentially expressed	genes between	STTM482.1 and wild type
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GeneID	Dir.	Y.WT	$\mathbf{Y}.\mathbf{S4}$	O.WT	0.84	P.WT	P.S4	Annotation
Solyc00g005000	WT <s4< td=""><td>0.02</td><td>0.00</td><td>1.50</td><td>3.55</td><td>0.05</td><td>0.61</td><td>Eukaryotic aspartyl protease family protein</td></s4<>	0.02	0.00	1.50	3.55	0.05	0.61	Eukaryotic aspartyl protease family protein
Solyc01g010937 Solyc01g017560	WT <s4< td=""><td>0.07</td><td>5.76</td><td>0.20</td><td>5.90</td><td>0.11</td><td>4.54</td><td>LOW QUALITY:BED zinc finger</td></s4<>	0.07	5.76	0.20	5.90	0.11	4.54	LOW QUALITY:BED zinc finger
Solyc01q028805	WT < S4	9.52	18.63	9.33	24.51	20.29	21.59	Cytochrome P450
Solyc01g081250	WT < S4	0.10	0.34	0.04	0.97	0.17	38.26	Glutathione s-transferase
Solyc01g087620	WT <s4< td=""><td>33.73</td><td>41.68</td><td>116.74</td><td>123.32</td><td>196.39</td><td>253.24</td><td>ubiquitin-like protein 5 Destin hans like surgerfamily protein</td></s4<>	33.73	41.68	116.74	123.32	196.39	253.24	ubiquitin-like protein 5 Destin hans like surgerfamily protein
Solyc01g100980 Soluc01a102850	WT < S4	4.27	$\frac{2.91}{5.73}$	20.18	38.84	0.47 6.77	2.02	Disease resistance protein
Solyc01g103110	WT <s4< td=""><td>7.55</td><td>8.56</td><td>13.29</td><td>16.51</td><td>3.18</td><td>4.45</td><td>Acyl-CoA N-acyltransferase</td></s4<>	7.55	8.56	13.29	16.51	3.18	4.45	Acyl-CoA N-acyltransferase
Solyc01g104350	WT <s4< td=""><td>5.78</td><td>7.63</td><td>17.55</td><td>20.06</td><td>11.67</td><td>12.50</td><td>Elongation factor 4</td></s4<>	5.78	7.63	17.55	20.06	11.67	12.50	Elongation factor 4
Solyc01g105310 Solwc01g106600	WT <s4< td=""><td>1.60</td><td>2.93</td><td>6.57 2.06</td><td>13.62</td><td>2.40</td><td>8.22</td><td>metacaspase 2 MVB transcription factor</td></s4<>	1.60	2.93	6.57 2.06	13.62	2.40	8.22	metacaspase 2 MVB transcription factor
Solyc02q014077	WT <s4< td=""><td>0.36</td><td>1.62</td><td>1.99</td><td>3.88</td><td>1.22</td><td>7.81</td><td>phosphoglucan</td></s4<>	0.36	1.62	1.99	3.88	1.22	7.81	phosphoglucan
Solyc02g014690	WT < S4	0.00	0.29	0.06	2.11	0.00	0.44	Late embryogenesis abundant
Solyc02g030290	WT <s4< td=""><td>0.00</td><td>0.00</td><td>0.17</td><td>0.66</td><td>0.28</td><td>1.02</td><td>LOW QUALITY:Nbs-Irr resistance protein</td></s4<>	0.00	0.00	0.17	0.66	0.28	1.02	LOW QUALITY:Nbs-Irr resistance protein
Solyc02g036270 Solyc02a036280	W1 < S4 WT < S4	130.00 18.59	100.41 23.82	189.88 27.43	250.30	141.11 21.56	$\frac{219.59}{32.77}$	LRRI Pyr4
Solyc02q037640	WT <s4< td=""><td>0.36</td><td>1.08</td><td>1.13</td><td>3.02</td><td>0.70</td><td>1.93</td><td>LOW QUALITY:DNA helicase homolog</td></s4<>	0.36	1.08	1.13	3.02	0.70	1.93	LOW QUALITY:DNA helicase homolog
Solyc02g062580	WT < S4	3.01	4.10	3.13	4.20	1.73	1.97	Phosphatidic acid phosphatase 2
Solyc02g071750	WT <s4< td=""><td>0.38</td><td>0.94</td><td>12.66</td><td>15.55</td><td>10.64</td><td>15.30</td><td>RNA ligase/cyclic nucleotide phosphodiesterase</td></s4<>	0.38	0.94	12.66	15.55	10.64	15.30	RNA ligase/cyclic nucleotide phosphodiesterase
Solyc02g082000 Soluc02a084037	WT < S4	0.74	2.98	21.85	23.90 3.21	9.54 1.04	2.35	stress response NST1-like protein
Solyc02g085120	WT <s4< td=""><td>8.51</td><td>8.13</td><td>0.87</td><td>2.80</td><td>0.69</td><td>2.98</td><td>Laccase</td></s4<>	8.51	8.13	0.87	2.80	0.69	2.98	Laccase
Solyc03g006580	WT <s4< td=""><td>19.93</td><td>26.27</td><td>36.65</td><td>40.28</td><td>33.65</td><td>34.81</td><td>LisH and RanBPM domains containing protein</td></s4<>	19.93	26.27	36.65	40.28	33.65	34.81	LisH and RanBPM domains containing protein
Solyc03g112200	WT <s4< td=""><td>16.91</td><td>37.15</td><td>168.28</td><td>162.60</td><td>35.90</td><td>69.75 0.41</td><td>LOW QUALITY:Insulinase Melectin/receptor like protein kinase</td></s4<>	16.91	37.15	168.28	162.60	35.90	69.75 0.41	LOW QUALITY:Insulinase Melectin/receptor like protein kinase
Solyc03g117220 Soluc03a119700	$WT \leq S4$	65.04	80.98	88.20	112.84	39.06	53.54	ATP-dependent Clp protease adaptor protein ClpS
Solyc04g007800	WT <s4< td=""><td>9.37</td><td>33.40</td><td>176.34</td><td>189.09</td><td>27.06</td><td>64.91</td><td>Calcium-dependent lipid-binding</td></s4<>	9.37	33.40	176.34	189.09	27.06	64.91	Calcium-dependent lipid-binding
Solyc04g009860	WT <s4< td=""><td>0.06</td><td>1.55</td><td>12.65</td><td>18.29</td><td>37.23</td><td>47.17</td><td>2-oxoglutarate</td></s4<>	0.06	1.55	12.65	18.29	37.23	47.17	2-oxoglutarate
Solyc04g025160	WT <s4< td=""><td>21.56</td><td>27.22</td><td>12.43</td><td>16.48</td><td>4.32</td><td>6.98</td><td>ATPase</td></s4<>	21.56	27.22	12.43	16.48	4.32	6.98	ATPase
Solyc04g025120 Soluc04a049185	WT < S4	94.29 0.00	0.15	0.00	0.62	25.67	$\frac{57.54}{1.52}$	LOW QUALITY:BED zinc finger
Solyc04g051427	WT <s4< td=""><td>0.02</td><td>0.90</td><td>0.13</td><td>1.50</td><td>0.08</td><td>2.35</td><td>BED zinc finger</td></s4<>	0.02	0.90	0.13	1.50	0.08	2.35	BED zinc finger
Solyc04g052890	WT <s4< td=""><td>0.08</td><td>1.41</td><td>0.00</td><td>1.33</td><td>0.00</td><td>0.00</td><td>SAUR-like auxin-responsive protein family</td></s4<>	0.08	1.41	0.00	1.33	0.00	0.00	SAUR-like auxin-responsive protein family
Solyc04g054157 Solwc04g054285	WT <s4< td=""><td>0.00</td><td>0.10</td><td>0.01</td><td>0.26</td><td>0.03</td><td>0.66</td><td>BED zinc finger</td></s4<>	0.00	0.10	0.01	0.26	0.03	0.66	BED zinc finger
Solyc049054585 Soluc04a072050	WT < S4	4.05	3.90	4.32	6.10	4.22	5.33 5.46	Transmembrane protein
Solyc04g074490	WT < S4	17.65	19.05	52.56	74.32	90.10	122.37	F-box protein
Solyc04g079480	WT <s4< td=""><td>0.10</td><td>1.02</td><td>2.05</td><td>5.77</td><td>4.15</td><td>16.77</td><td>Serpin-like protein</td></s4<>	0.10	1.02	2.05	5.77	4.15	16.77	Serpin-like protein
Solyc04g080810 Solyc04g081670	WT <s4< td=""><td>9.09</td><td>12.88 3.15</td><td>22.68</td><td>$\frac{28.32}{3.62}$</td><td>32.92 0.74</td><td>45.27 1 11</td><td>Cytokinin oxidase/dehydrogenase-like Vacuolar-processing enzyme</td></s4<>	9.09	12.88 3.15	22.68	$\frac{28.32}{3.62}$	32.92 0.74	45.27 1 11	Cytokinin oxidase/dehydrogenase-like Vacuolar-processing enzyme
Solyc049081070 Solyc04q081700	WT <s4< td=""><td>0.47</td><td>5.00</td><td>2.23</td><td>16.81</td><td>2.70</td><td>25.40</td><td>Ribosomal protein S5/Elongation factor</td></s4<>	0.47	5.00	2.23	16.81	2.70	25.40	Ribosomal protein S5/Elongation factor
Solyc04g082710	WT < S4	91.98	81.11	9.04	28.93	7.10	32.33	Cysteine protease
Solyc05g005130	WT <s4< td=""><td>3.33</td><td>5.33</td><td>14.64</td><td>16.24</td><td>14.12</td><td>19.99</td><td>Disease resistance protein</td></s4<>	3.33	5.33	14.64	16.24	14.12	19.99	Disease resistance protein
Solyc05g006850 Solyc05g007240	WT <s4< td=""><td>5.29 23.11</td><td>13.09 37.81</td><td>51.11 43 31</td><td>72.09 57.83</td><td>$35.99 \\ 17.02$</td><td>65.07 16.91</td><td>Thioredoxin family protein P-loop nucleoside triphosphate hydrolase</td></s4<>	5.29 23.11	13.09 37.81	51.11 43 31	72.09 57.83	$35.99 \\ 17.02$	65.07 16.91	Thioredoxin family protein P-loop nucleoside triphosphate hydrolase
Solyc05g013630	WT <s4< td=""><td>28.86</td><td>79.44</td><td>252.55</td><td>328.00</td><td>51.96</td><td>95.33</td><td>LOW QUALITY:CP-interacting protein-L</td></s4<>	28.86	79.44	252.55	328.00	51.96	95.33	LOW QUALITY:CP-interacting protein-L
Solyc05g015847	WT <s4< td=""><td>0.00</td><td>0.54</td><td>0.21</td><td>1.49</td><td>0.46</td><td>5.90</td><td>BED zinc finger</td></s4<>	0.00	0.54	0.21	1.49	0.46	5.90	BED zinc finger
Solyc05g021370	WT <s4< td=""><td>0.02</td><td>0.15</td><td>0.10</td><td>3.09</td><td>0.02</td><td>1.82</td><td>Lectin alpha chain</td></s4<>	0.02	0.15	0.10	3.09	0.02	1.82	Lectin alpha chain
Solyc05g021375 Soluc05a042126	WT < S4	0.00	1.92	0.00	1.04	0.00 0.23	1.38	BED zinc finger
Solyc05g051740	WT < S4	2.79	3.25	4.24	8.40	1.00	2.52	Prosystemin
Solyc05g053965	WT <s4< td=""><td>0.21</td><td>0.64</td><td>1.78</td><td>3.56</td><td>0.36</td><td>2.08</td><td>Amino acid transporter</td></s4<>	0.21	0.64	1.78	3.56	0.36	2.08	Amino acid transporter
Solyc05g054010 Solwc06g008025	WT <s4< td=""><td>0.02</td><td>0.50</td><td>0.15</td><td>3.63</td><td>0.19</td><td>5.47</td><td>NBS-LRR resistance protein-like protein</td></s4<>	0.02	0.50	0.15	3.63	0.19	5.47	NBS-LRR resistance protein-like protein
Solyc00g008235 Solyc06q051835	WT < S4	0.13	0.31	0.41	0.43	0.48	0.40	BED zinc finger
Solyc06g054380	WT < S4	7.76	8.41	8.71	10.57	5.88	8.10	RNA binding protein
Solyc06g060110	WT <s4< td=""><td>59.36</td><td>116.11</td><td>549.41</td><td>432.76</td><td>373.75</td><td>592.50</td><td>amino acid transporter 2</td></s4<>	59.36	116.11	549.41	432.76	373.75	592.50	amino acid transporter 2
Solyc0bg0b2900 Solwc06a068100	WT <s4< td=""><td>3.27</td><td>4.61</td><td>3.88</td><td>4.11</td><td>1.69</td><td>3.11</td><td>Transcription initiation factor TFIID subunit 12 Ubiquitin system component Cue protein</td></s4<>	3.27	4.61	3.88	4.11	1.69	3.11	Transcription initiation factor TFIID subunit 12 Ubiquitin system component Cue protein
Solyc06g069727	WT <s4< td=""><td>46.15</td><td>81.36</td><td>25.64</td><td>44.82</td><td>15.53</td><td>19.77</td><td>Thioredoxin-like protein</td></s4<>	46.15	81.36	25.64	44.82	15.53	19.77	Thioredoxin-like protein
Solyc06g069760	WT <s4< td=""><td>23.54</td><td>23.05</td><td>23.56</td><td>34.67</td><td>6.89</td><td>10.78</td><td>Dof zinc finger protein 22</td></s4<>	23.54	23.05	23.56	34.67	6.89	10.78	Dof zinc finger protein 22
Solyc06g073180 Soluc06g075590	WT <s4< td=""><td>94.25 0.58</td><td>97.10 1.20</td><td>29.65</td><td>46.97</td><td>36.69</td><td>59.01 2.72</td><td>CONSTANS interacting protein 1</td></s4<>	94.25 0.58	97.10 1.20	29.65	46.97	36.69	59.01 2.72	CONSTANS interacting protein 1
Solyc00g075520 Solyc06a075650	WT < S4	3.85	2.71	3.33	11.19	1.48	4.13 5.85	tonoplast intrinsic protein 1.2
Solyc06g076460	WT <s4< td=""><td>56.72</td><td>66.45</td><td>71.32</td><td>84.05</td><td>90.51</td><td>86.97</td><td>Transcription elongation factor B polypeptide 1</td></s4<>	56.72	66.45	71.32	84.05	90.51	86.97	Transcription elongation factor B polypeptide 1
Solyc07g005750	WT <s4< td=""><td>1.02</td><td>1.86</td><td>3.68</td><td>5.55</td><td>4.45</td><td>6.00</td><td>F-box family protein</td></s4<>	1.02	1.86	3.68	5.55	4.45	6.00	F-box family protein
Solyc07g007725 Solwc07c025530	WT <s4< td=""><td>0.00</td><td>0.08</td><td>0.00</td><td>0.09</td><td>0.01</td><td>0.04 0.67</td><td>Bifunctional inhibitor/lipid-transfer protein S adenosyl L methioning dependent methyltransferase</td></s4<>	0.00	0.08	0.00	0.09	0.01	0.04 0.67	Bifunctional inhibitor/lipid-transfer protein S adenosyl L methioning dependent methyltransferase
Solyc07g025550 Soluc07a032493	WT <s4< td=""><td>0.00</td><td>0.45</td><td>0.00</td><td>1.50</td><td>0.33 0.27</td><td>3.80</td><td>BED zinc finger</td></s4<>	0.00	0.45	0.00	1.50	0.33 0.27	3.80	BED zinc finger
Solyc07g032497	WT < S4	0.00	1.66	0.00	1.92	0.11	2.21	HAT family dimerisation domain containing protein
Solyc07g055450	WT <s4< td=""><td>0.00</td><td>0.02</td><td>0.01</td><td>0.11</td><td>0.01</td><td>0.17</td><td>Cytochrome P450</td></s4<>	0.00	0.02	0.01	0.11	0.01	0.17	Cytochrome P450
501yc07g055460 Soluc07a055480	W1<84 WT<84	0.04	0.14 0.06	2.04	53.57 0.63	5.33 0.28	09.50 1.47	Cytochrome P450 Cytochrome P450
Solyc07g064560	WT <s4< td=""><td>2.40</td><td>6.19</td><td>8.84</td><td>17.79</td><td>9.72</td><td>26.51</td><td>AT hook</td></s4<>	2.40	6.19	8.84	17.79	9.72	26.51	AT hook
Solyc08g005550	WT < S4	0.03	0.16	0.01	0.01	0.03	0.13	alternative oxidase 1c
Solyc08g048560	WT <s4< td=""><td>0.00</td><td>1.69</td><td>0.00</td><td>3.43</td><td>0.00</td><td>0.85</td><td>Protein kinase protein / WD-40 repeat protein</td></s4<>	0.00	1.69	0.00	3.43	0.00	0.85	Protein kinase protein / WD-40 repeat protein
Solyc08g044280 Solyc08a061323	WT <s4< td=""><td>11.75</td><td>22.65</td><td>20.05</td><td>32.87</td><td>10.81</td><td>$\frac{20.41}{41.23}$</td><td>BED zinc finger</td></s4<>	11.75	22.65	20.05	32.87	10.81	$\frac{20.41}{41.23}$	BED zinc finger
Solyc08g062220	WT <s4< td=""><td>65.65</td><td>302.63</td><td>445.59</td><td>529.02</td><td>69.48</td><td>166.43</td><td>Glycosyltransferase</td></s4<>	65.65	302.63	445.59	529.02	69.48	166.43	Glycosyltransferase
Solyc08g062290	WT <s4< td=""><td>6.35</td><td>12.33</td><td>13.76</td><td>20.69</td><td>5.74</td><td>10.60</td><td>Light-independent protochlorophyllide reductase subunit B</td></s4<>	6.35	12.33	13.76	20.69	5.74	10.60	Light-independent protochlorophyllide reductase subunit B
Solyc08g065265	WT <s4< td=""><td>0.21</td><td>0.64</td><td>0.46</td><td>1.74</td><td>0.85</td><td>5.57</td><td>BED zinc finger HAT family dimension domain containing protein</td></s4<>	0.21	0.64	0.46	1.74	0.85	5.57	BED zinc finger HAT family dimension domain containing protein
Solyc08a068070	WT < S4	0.38	0.55	1.20	1.20	0.08	0.94	hemoglobin 3
Solyc08g077190	WT <s4< td=""><td>0.18</td><td>0.51</td><td>0.24</td><td>0.58</td><td>0.18</td><td>0.32</td><td>LOW QUALITY:MATE efflux family protein</td></s4<>	0.18	0.51	0.24	0.58	0.18	0.32	LOW QUALITY:MATE efflux family protein
Solyc08g083410	WT <s4< td=""><td>0.00</td><td>0.29</td><td>0.00</td><td>0.22</td><td>0.00</td><td>0.05</td><td>Cytochrome P450 family protein</td></s4<>	0.00	0.29	0.00	0.22	0.00	0.05	Cytochrome P450 family protein
Solyc08g079370	WT <s4< td=""><td>0.00</td><td>0.14</td><td>0.01</td><td>0.53</td><td>0.07</td><td>0.35</td><td>Cytochrome P450 family protein</td></s4<>	0.00	0.14	0.01	0.53	0.07	0.35	Cytochrome P450 family protein

Solyc08g080070	WT <s4< th=""><th>4.62</th><th>4.44</th><th>0.41</th><th>1.32</th><th>0.14</th><th>0.48</th><th>LOW QUALITY:transmembrane protein</th></s4<>	4.62	4.44	0.41	1.32	0.14	0.48	LOW QUALITY:transmembrane protein
Solyc08g081790	WT <s4< td=""><td>40.42</td><td>32.16</td><td>2.05</td><td>6.18</td><td>0.31</td><td>2.54</td><td>Dirigent protein</td></s4<>	40.42	32.16	2.05	6.18	0.31	2.54	Dirigent protein
Solyc08g082120 Solyc00a011020	W1<54	29.73	129.44	913.02	27.19	130.23	302.31	Methanol inducible protein Hep 70 binding protein 1
Solyc09g011030 Soluc09a011990	WT < S4	0.24	3.78	1.30	6.62	8.59	9.42	Clade IV lectin receptor kinase
Solyc09g018610	WT <s4< td=""><td>0.00</td><td>0.68</td><td>0.00</td><td>4.39</td><td>0.00</td><td>2.36</td><td>Mitochondrial ATP synthase subunit G protein</td></s4<>	0.00	0.68	0.00	4.39	0.00	2.36	Mitochondrial ATP synthase subunit G protein
Solyc09g056010	WT <s4< td=""><td>0.01</td><td>0.13</td><td>0.44</td><td>0.69</td><td>0.25</td><td>0.73</td><td>ACT-like protein tyrosine kinase family protein</td></s4<>	0.01	0.13	0.44	0.69	0.25	0.73	ACT-like protein tyrosine kinase family protein
Solyc09g056185	WT <s4< td=""><td>0.03</td><td>2.96</td><td>0.01</td><td>2.93</td><td>0.04</td><td>2.50</td><td>HAT family dimerisation domain containing protein</td></s4<>	0.03	2.96	0.01	2.93	0.04	2.50	HAT family dimerisation domain containing protein
Solyc09g060100	WT <s4< td=""><td>18.96</td><td>20.14</td><td>4.93</td><td>9.09</td><td>3.97</td><td>7.33</td><td>transmembrane protein</td></s4<>	18.96	20.14	4.93	9.09	3.97	7.33	transmembrane protein
Solyc09g064365	WT <s4< td=""><td>0.00</td><td>0.04</td><td>0.20</td><td>1.43</td><td>0.13</td><td>2.90</td><td>BED zinc finger</td></s4<>	0.00	0.04	0.20	1.43	0.13	2.90	BED zinc finger
Solyc09g004142 Solyc09a064750	W1 < 54 WT < S4	0.38	2.05	1.19	0.32 4 30	1.41	8.63	root hair specific 16
Solyc09g064480 Soluc09g065883	WT < S4	0.00	0.08	0.00	0.60	0.15	1.68	Na+/H+ antiporter
Solyc09g072725	WT <s4< td=""><td>0.41</td><td>2.20</td><td>1.42</td><td>3.28</td><td>0.92</td><td>3.41</td><td>LOW QUALITY:BED zinc finger</td></s4<>	0.41	2.20	1.42	3.28	0.92	3.41	LOW QUALITY:BED zinc finger
Solyc09g074185	WT < S4	0.10	11.04	2.69	16.76	0.70	16.55	LOW QUALITY:BED zinc finger
Solyc09g089740	WT <s4< td=""><td>16.45</td><td>21.22</td><td>12.04</td><td>28.55</td><td>14.84</td><td>38.07</td><td>2-oxoglutarate</td></s4<>	16.45	21.22	12.04	28.55	14.84	38.07	2-oxoglutarate
Solyc09g098380	WT <s4< td=""><td>0.06</td><td>0.16</td><td>0.05</td><td>4.50</td><td>1.23</td><td>6.62</td><td>Transmembrane amino acid transporter family protein</td></s4<>	0.06	0.16	0.05	4.50	1.23	6.62	Transmembrane amino acid transporter family protein
Solyc10g006600 Solwc10a018500	WT <s4< td=""><td>5.02</td><td>0.07</td><td>15.40</td><td>15.89</td><td>9.74</td><td>12.31</td><td>Gluconokinase Blastid lipid associated protein</td></s4<>	5.02	0.07	15.40	15.89	9.74	12.31	Gluconokinase Blastid lipid associated protein
Solyc10g018590 Soluc10a018903	W1 < S4 WT < S4	0.00	0.10	0.00	0.22	0.01	0.44	SPT4 homolog 2
Solyc10q050050	WT <s4< td=""><td>0.05</td><td>0.51</td><td>0.00</td><td>0.52</td><td>0.00</td><td>0.08</td><td>Nucleotide binding site-leucine rich repeat protein</td></s4<>	0.05	0.51	0.00	0.52	0.00	0.08	Nucleotide binding site-leucine rich repeat protein
Solyc10g054810	WT <s4< td=""><td>0.80</td><td>4.05</td><td>4.17</td><td>8.62</td><td>0.04</td><td>0.00</td><td>X-intrinsic protein 1.3</td></s4<>	0.80	4.05	4.17	8.62	0.04	0.00	X-intrinsic protein 1.3
Solyc10g078670	WT <s4< td=""><td>0.00</td><td>0.07</td><td>0.00</td><td>0.08</td><td>0.07</td><td>0.22</td><td>BZIP transcription factor family protein</td></s4<>	0.00	0.07	0.00	0.08	0.07	0.22	BZIP transcription factor family protein
Solyc10g079600	WT <s4< td=""><td>9.83</td><td>10.66</td><td>6.05</td><td>13.53</td><td>2.13</td><td>5.46</td><td>Two-component response regulator</td></s4<>	9.83	10.66	6.05	13.53	2.13	5.46	Two-component response regulator
Solyc10g081770	WT <s4< td=""><td>18.30</td><td>25.43</td><td>54.31</td><td>87.06</td><td>8.20</td><td>21.72</td><td>Polyketide cyclase/dehydrase</td></s4<>	18.30	25.43	54.31	87.06	8.20	21.72	Polyketide cyclase/dehydrase
Solyc11g017440 Solyc11a050938	W1 < S4 WT < S4	20.92	19.27	8.77	9.69	2.11	3.85 29.50	Gibbereilin-regulated family protein Perovisomal
Soluc11a065340	WT < S4	4.16	5.85	46.14	63.04	17.49	18.90	Magnesium-chelatase subunit H
Solyc11g072580	WT <s4< td=""><td>4.10</td><td>3.56</td><td>0.42</td><td>0.59</td><td>0.00</td><td>0.10</td><td>Major facilitator superfamily protein</td></s4<>	4.10	3.56	0.42	0.59	0.00	0.10	Major facilitator superfamily protein
Solyc12g010370	WT <s4< td=""><td>0.18</td><td>0.85</td><td>0.09</td><td>0.62</td><td>0.33</td><td>1.45</td><td>Ultrapetala</td></s4<>	0.18	0.85	0.09	0.62	0.33	1.45	Ultrapetala
Solyc12g010755	WT <s4< td=""><td>0.80</td><td>3.82</td><td>0.41</td><td>2.77</td><td>1.49</td><td>6.55</td><td>Ultrapetala</td></s4<>	0.80	3.82	0.41	2.77	1.49	6.55	Ultrapetala
Solyc12g015865	WT <s4< td=""><td>0.03</td><td>1.12</td><td>0.41</td><td>2.48</td><td>0.23</td><td>3.97</td><td>LOW QUALITY:BED zinc finger</td></s4<>	0.03	1.12	0.41	2.48	0.23	3.97	LOW QUALITY:BED zinc finger
Solyc12g021160	WT <s4< td=""><td>2.29</td><td>3.43</td><td>13.29</td><td>20.00</td><td>4.66</td><td>9.34</td><td>LOW QUALITY: cysteine-rich RLK</td></s4<>	2.29	3.43	13.29	20.00	4.66	9.34	LOW QUALITY: cysteine-rich RLK
Solyc12g042340 Soluc12a042800	W1 < S4 WT < S4	0.13	4 20	0.10	10.99	0.23	6.16	dsBNA-binding domain-like superfamily protein
Solyc12g042800 Soluc12g049370	WT < S4	29.62	32.44	63.58	74.79	47.65	60.59	Nucleoside diphosphate kinase
Solyc12g087880	WT < S4	0.06	0.13	6.29	14.13	0.08	0.95	Purine permease-like protein
Solyc12g094700	WT <s4< td=""><td>20.22</td><td>16.89</td><td>1.86</td><td>4.87</td><td>0.59</td><td>3.25</td><td>Cysteine protease</td></s4<>	20.22	16.89	1.86	4.87	0.59	3.25	Cysteine protease
Solyc01g098790	WT>S4	1.39	0.40	2.41	1.03	1.11	1.30	HSP20-like chaperones superfamily protein
Solyc01g103470	WT>S4	0.15	0.09	1.48	0.41	4.09	2.70	Cytosolic Fe-S cluster assembly factor nar-1
		0.40		0.04		0.04	0.4 -	
Solyc01g111880	WT>S4	0.46	0.42	0.64	0.17	0.84	0.17	MAP kinase kinase 11
Solyc01g111880 Solyc02g014840 Solyc02g084890	WT>S4 WT>S4 WT>S4	$0.46 \\ 0.34 \\ 11.52$	$0.42 \\ 0.10 \\ 3.50$	$0.64 \\ 0.71 \\ 37.08$	0.17 0.19 14.29	0.84 0.17 7.58	$0.17 \\ 0.19 \\ 11.24$	MAP kinase kinase kinase 11 F-box protein NRSLIR disease resistance protein NRS50
Solyc01g111880 Solyc02g014840 Solyc02g084890 Soluc02g089040	WT>S4 WT>S4 WT>S4 WT>S4	$0.46 \\ 0.34 \\ 11.52 \\ 5.86$	$0.42 \\ 0.10 \\ 3.50 \\ 6.35$	0.64 0.71 37.08 8.33	0.17 0.19 14.29 5.22	$0.84 \\ 0.17 \\ 7.58 \\ 14.78$	$0.17 \\ 0.19 \\ 11.24 \\ 10.85$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein
Solyc01g111880 Solyc02g014840 Solyc02g084890 Solyc02g089040 Solyc02g089720	WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4	$0.46 \\ 0.34 \\ 11.52 \\ 5.86 \\ 58.40$	$\begin{array}{c} 0.42 \\ 0.10 \\ 3.50 \\ 6.35 \\ 14.62 \end{array}$	$\begin{array}{c} 0.64 \\ 0.71 \\ 37.08 \\ 8.33 \\ 112.61 \end{array}$	$\begin{array}{c} 0.17 \\ 0.19 \\ 14.29 \\ 5.22 \\ 35.19 \end{array}$	$\begin{array}{c} 0.84 \\ 0.17 \\ 7.58 \\ 14.78 \\ 615.21 \end{array}$	$0.17 \\ 0.19 \\ 11.24 \\ 10.85 \\ 503.41$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase
Solyc01g111880 Solyc02g014840 Solyc02g084890 Solyc02g089040 Solyc02g089720 Solyc02g089720 Solyc02g089900	$\begin{array}{c} \mathrm{WT}{>}\mathrm{S4} \\ \mathrm{WT}{>}\mathrm{S4} \\ \mathrm{WT}{>}\mathrm{S4} \\ \mathrm{WT}{>}\mathrm{S4} \\ \mathrm{WT}{>}\mathrm{S4} \\ \mathrm{WT}{>}\mathrm{S4} \\ \mathrm{WT}{>}\mathrm{S4} \end{array}$	$0.46 \\ 0.34 \\ 11.52 \\ 5.86 \\ 58.40 \\ 12.02$	$\begin{array}{c} 0.42 \\ 0.10 \\ 3.50 \\ 6.35 \\ 14.62 \\ 2.52 \end{array}$	$\begin{array}{c} 0.64 \\ 0.71 \\ 37.08 \\ 8.33 \\ 112.61 \\ 53.40 \end{array}$	$\begin{array}{c} 0.17 \\ 0.19 \\ 14.29 \\ 5.22 \\ 35.19 \\ 12.44 \end{array}$	$\begin{array}{c} 0.84 \\ 0.17 \\ 7.58 \\ 14.78 \\ 615.21 \\ 38.38 \end{array}$	$\begin{array}{c} 0.17 \\ 0.19 \\ 11.24 \\ 10.85 \\ 503.41 \\ 38.64 \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein
Solyc01g111880 Solyc02g014840 Solyc02g084890 Solyc02g089040 Solyc02g089720 Solyc02g089900 Solyc03g025340	WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4	$\begin{array}{c} 0.46 \\ 0.34 \\ 11.52 \\ 5.86 \\ 58.40 \\ 12.02 \\ 41.58 \end{array}$	$\begin{array}{c} 0.42 \\ 0.10 \\ 3.50 \\ 6.35 \\ 14.62 \\ 2.52 \\ 30.80 \\ 0.00 \end{array}$	$\begin{array}{c} 0.64 \\ 0.71 \\ 37.08 \\ 8.33 \\ 112.61 \\ 53.40 \\ 193.39 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ \end{array}$	$\begin{array}{c} 0.84 \\ 0.17 \\ 7.58 \\ 14.78 \\ 615.21 \\ 38.38 \\ 116.73 \\ \end{array}$	$\begin{array}{c} 0.17 \\ 0.19 \\ 11.24 \\ 10.85 \\ 503.41 \\ 38.64 \\ 122.60 \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein
Solyc01q111880 Solyc02g014840 Solyc02g089040 Solyc02g089040 Solyc02g089000 Solyc02g089900 Solyc03g025340 Solyc03g036480 Solyc03g0366480	WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4	$\begin{array}{c} 0.46 \\ 0.34 \\ 11.52 \\ 5.86 \\ 58.40 \\ 12.02 \\ 41.58 \\ 0.02 \\ 0.08 \end{array}$	$\begin{array}{c} 0.42 \\ 0.10 \\ 3.50 \\ 6.35 \\ 14.62 \\ 2.52 \\ 30.80 \\ 0.00 \\ 0.00 \end{array}$	$\begin{array}{c} 0.64 \\ 0.71 \\ 37.08 \\ 8.33 \\ 112.61 \\ 53.40 \\ 193.39 \\ 3.64 \\ 121.76 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 0.07\end{array}$	$\begin{array}{c} 0.84 \\ 0.17 \\ 7.58 \\ 14.78 \\ 615.21 \\ 38.38 \\ 116.73 \\ 0.89 \\ 21.20 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.00\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase
Solyc01q111880 Solyc02g014840 Solyc02g089040 Solyc02g089040 Solyc02g089720 Solyc02g089900 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042660	WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4	$\begin{array}{c} 0.46 \\ 0.34 \\ 11.52 \\ 5.86 \\ 58.40 \\ 12.02 \\ 41.58 \\ 0.02 \\ 0.08 \\ 8.31 \end{array}$	$\begin{array}{c} 0.42 \\ 0.10 \\ 3.50 \\ 6.35 \\ 14.62 \\ 2.52 \\ 30.80 \\ 0.00 \\ 0.09 \\ 4.00 \end{array}$	$\begin{array}{c} 0.64 \\ 0.71 \\ 37.08 \\ 8.33 \\ 112.61 \\ 53.40 \\ 193.39 \\ 3.64 \\ 121.76 \\ 6.08 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20 \end{array}$	$\begin{array}{c} 0.84\\ 0.17\\ 7.58\\ 14.78\\ 615.21\\ 38.38\\ 116.73\\ 0.89\\ 21.30\\ 7.85\end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase Abydrowy-tetrabydrodinicolinate synthase
Solyc01q111880 Solyc02g014840 Solyc02g089040 Solyc02g089040 Solyc02g08900 Solyc02g08900 Solyc03g025340 Solyc03g042560 Solyc03g042660 Solyc03g042660 Solyc03g042940	WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4	$\begin{array}{c} 0.46\\ 0.34\\ 11.52\\ 5.86\\ 58.40\\ 12.02\\ 41.58\\ 0.02\\ 0.08\\ 8.31\\ 32.70\\ \end{array}$	$\begin{array}{c} 0.42 \\ 0.10 \\ 3.50 \\ 6.35 \\ 14.62 \\ 2.52 \\ 30.80 \\ 0.00 \\ 0.09 \\ 4.00 \\ 21.47 \end{array}$	$\begin{array}{c} 0.64\\ 0.71\\ 37.08\\ 8.33\\ 112.61\\ 53.40\\ 193.39\\ 3.64\\ 121.76\\ 6.08\\ 51.00\\ \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 35.24 \end{array}$	$\begin{array}{c} 0.84\\ 0.17\\ 7.58\\ 14.78\\ 615.21\\ 38.38\\ 116.73\\ 0.89\\ 21.30\\ 7.85\\ 48.99 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31 \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2
Solyc01q111880 Solyc02g014840 Solyc02g0884890 Solyc02g089720 Solyc02g089720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g044660 Solyc03g044660 Solyc03g094080	WT > S4 WT > S4	$\begin{array}{c} 0.46\\ 0.34\\ 11.52\\ 5.86\\ 58.40\\ 12.02\\ 41.58\\ 0.02\\ 0.08\\ 8.31\\ 32.70\\ 1.92 \end{array}$	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 0.09\\ 4.00\\ 21.47\\ 0.40\\ \end{array}$	$\begin{array}{c} 0.64\\ 0.71\\ 37.08\\ 8.33\\ 112.61\\ 53.40\\ 193.39\\ 3.64\\ 121.76\\ 6.08\\ 51.00\\ 6.96 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 35.24\\ 0.73 \end{array}$	$\begin{array}{c} 0.84\\ 0.17\\ 7.58\\ 14.78\\ 615.21\\ 38.38\\ 116.73\\ 0.89\\ 21.30\\ 7.85\\ 48.99\\ 7.10 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase/hydrolase
Solyc01q111880 Solyc02g014840 Solyc02g088040 Solyc02g089040 Solyc02g089020 Solyc02g089090 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g054940 Solyc03g059490 Solyc03g093080 Solyc03g093110	$\begin{array}{c} WT > S4 \\ WT > S4 \end{array}$	$\begin{array}{c} 0.46\\ 0.34\\ 11.52\\ 5.86\\ 58.40\\ 12.02\\ 41.58\\ 0.02\\ 0.08\\ 8.31\\ 32.70\\ 1.92\\ 1.77 \end{array}$	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 0.09\\ 4.00\\ 21.47\\ 0.40\\ 0.30\\ \end{array}$	$\begin{array}{c} 0.64\\ 0.71\\ 37.08\\ 8.33\\ 112.61\\ 53.40\\ 193.39\\ 3.64\\ 121.76\\ 6.08\\ 51.00\\ 6.96\\ 3.07 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 35.24\\ 0.73\\ 0.25\\ \end{array}$	$\begin{array}{c} 0.84\\ 0.17\\ 7.58\\ 14.78\\ 615.21\\ 38.38\\ 116.73\\ 0.89\\ 21.30\\ 7.85\\ 48.99\\ 7.10\\ 3.13 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78 \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase
Solyc01q111880 Solyc02g014840 Solyc02g089040 Solyc02g089040 Solyc02g089000 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g042560 Solyc03g059490 Solyc03g059490 Solyc03g093110 Solyc03g093120	WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4 WT>S4	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 0.09\\ 4.00\\ 21.47\\ 0.40\\ 0.30\\ 0.32\\ \end{array}$	$\begin{array}{c} 0.64\\ 0.71\\ 37.08\\ 8.33\\ 112.61\\ 53.40\\ 193.39\\ 3.64\\ 121.76\\ 6.08\\ 51.00\\ 6.96\\ 3.07\\ 16.34 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 35.24\\ 0.73\\ 0.25\\ 1.23\\ \end{array}$	$\begin{array}{c} 0.84\\ 0.17\\ 7.58\\ 14.78\\ 615.21\\ 38.38\\ 116.73\\ 0.89\\ 21.30\\ 7.85\\ 48.99\\ 7.10\\ 3.13\\ 18.57 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase/hydrolase xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase
Solyc01g111880 Solyc02g014840 Solyc02g089040 Solyc02g089040 Solyc02g089720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g042560 Solyc03g0944660 Solyc03g09310 Solyc03g093110 Solyc03g093120 Solyc03g093120	$\begin{array}{c} WT > S4 \\ WT > S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 0.13	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 0.09\\ 4.00\\ 21.47\\ 0.40\\ 0.30\\ 0.32\\ 3.94\\ 3.94\\ 0.20\\ 0.32\\ 3.94\\ 0.30\\ 0.32\\ 0.$	$\begin{array}{c} 0.64\\ 0.71\\ 37.08\\ 8.33\\ 112.61\\ 53.40\\ 193.39\\ 3.64\\ 121.76\\ 6.08\\ 51.00\\ 6.96\\ 3.07\\ 16.34\\ 2.36\\ 100\\ 57.06\\ 16.34\\ 2.36\\ 100\\ 57.06\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 100\\ 1$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 35.24\\ 0.73\\ 0.25\\ 1.23\\ 1.64\\ 9.02\\ 0.25\\ 1.23\\ 1.64\\ 9.02\\ 0.25\\$	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 0.92\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase/hydrolase xyloglucan endotransglucosylase-hydrolase cinnamoyl-CoA reductase
Solyc01q111880 Solyc02g014840 Solyc02g0884890 Solyc02g089720 Solyc02g089720 Solyc03g025340 Solyc03g036480 Solyc03g042560 Solyc03g042560 Solyc03g042560 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g120550 Solyc03g120550	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 0.09\\ 4.00\\ 21.47\\ 0.40\\ 0.30\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ \end{array}$	0.64 0.71 37.08 8.33 112.61 53.40 193.39 3.64 121.76 6.08 51.00 6.96 3.07 16.34 2.36 103.67 7.08	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 35.24\\ 0.73\\ 0.25\\ 1.23\\ 1.64\\ 37.28\\ 1.12\end{array}$	$\begin{array}{c} 0.84\\ 0.17\\ 7.58\\ 14.78\\ 615.21\\ 38.38\\ 116.73\\ 0.89\\ 21.30\\ 7.85\\ 48.99\\ 7.10\\ 3.13\\ 18.57\\ 8.23\\ 75.50\\ 0.40\\ \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase Xyloglucan endotransglucosylase-hydrolase Cinnamoyl-CoA reductase Major facilitator superfamily protein Bheenhete responsesing 1 femily motein
Solyc01q111880 Solyc02g014840 Solyc02g088040 Solyc02g089720 Solyc02g089720 Solyc02g089720 Solyc03g025340 Solyc03g036480 Solyc03g042560 Solyc03g042560 Solyc03g09310 Solyc03g093110 Solyc03g093110 Solyc03g093110 Solyc03g097170 Solyc03g120550 Solyc04g074420	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24	0.42 0.10 3.50 6.35 14.62 2.52 30.80 0.00 0.00 4.00 21.47 0.40 0.32 3.94 22.39 1.85 23.12	0.64 0.71 37.08 8.33 112.61 53.40 193.39 3.64 121.76 6.08 51.00 6.96 3.07 16.34 2.36 103.67 7.08 67.78	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 35.24\\ 0.73\\ 0.25\\ 1.23\\ 1.64\\ 37.28\\ 1.13\\ 9.78\end{array}$	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase/hydrolase xyloglucan endotransglucosylase-hydrolase Cinnamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein Phosphate-responsive 1 family protein
Solyc01q111880 Solyc02g014840 Solyc02g088040 Solyc02g089040 Solyc02g089020 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g042560 Solyc03g093110 Solyc03g093110 Solyc03g093120 Solyc03g120550 Solyc03g120550 Solyc04g074420 Solyc04g074430	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 4.00\\ 21.47\\ 0.40\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ 3.38 \end{array}$	$\begin{array}{c} 0.64\\ 0.71\\ 37.08\\ 8.33\\ 112.61\\ 53.40\\ 193.39\\ 3.64\\ 121.76\\ 6.08\\ 51.00\\ 6.96\\ 3.07\\ 16.34\\ 2.36\\ 103.67\\ 7.08\\ 67.78\\ 1.74 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 1.23\\ 1.64\\ 37.28\\ 1.13\\ 9.78\\ 0.56\\ \end{array}$	$\begin{array}{c} 0.84\\ 0.17\\ 7.58\\ 14.78\\ 615.21\\ 38.38\\ 116.73\\ 0.89\\ 21.30\\ 7.85\\ 48.99\\ 7.10\\ 3.13\\ 18.57\\ 8.23\\ 75.50\\ 0.40\\ 12.26\\ 1.02 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase Cinnamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein Phosphate-responsive 1 family protein DUF1005 family protein
Solyc01q111880 Solyc02q014840 Solyc02g089040 Solyc02g089040 Solyc02g089020 Solyc02g089020 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g042560 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g120550 Solyc03g120550 Solyc04g074420 Solyc04g0774430 Solyc04g077161	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.111 6.62 96.24 4.37 24.61	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 0.09\\ 4.00\\ 21.47\\ 0.40\\ 0.30\\ 0.32\\ 3.94\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ \end{array}$	$\begin{array}{c} 0.64\\ 0.71\\ 37.08\\ 8.33\\ 112.61\\ 53.40\\ 193.39\\ 3.64\\ 121.76\\ 6.08\\ 51.00\\ 6.96\\ 3.07\\ 16.34\\ 2.36\\ 103.67\\ 7.08\\ 67.78\\ 1.74\\ 46.07 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 35.24\\ 0.73\\ 0.25\\ 1.23\\ 1.64\\ 37.28\\ 1.13\\ 9.78\\ 0.56\\ 21.78\\ \end{array}$	$\begin{array}{c} 0.84\\ 0.17\\ 7.58\\ 14.78\\ 615.21\\ 38.38\\ 116.73\\ 0.89\\ 21.30\\ 7.85\\ 48.99\\ 7.10\\ 3.13\\ 18.57\\ 8.23\\ 75.50\\ 0.40\\ 12.26\\ 1.02\\ 13.32\\ \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ 20.67\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase A-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase/hydrolase xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase Cinnamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein Phosphate-responsive 1 family protein DUF1005 family protein
Solyc01q111880 Solyc02q014840 Solyc02g088040 Solyc02g089720 Solyc02g089720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g059490 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g120550 Solyc04g074430 Solyc04g077460 Solyc04g077160 Solyc04g077650	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.111 6.62 96.24 4.37 24.61 8.15	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 0.00\\ 21.47\\ 0.40\\ 0.30\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ \end{array}$	$\begin{array}{c} 0.64\\ 0.71\\ 37.08\\ 8.33\\ 112.61\\ 53.40\\ 193.39\\ 3.64\\ 121.76\\ 6.08\\ 51.00\\ 6.96\\ 3.07\\ 16.34\\ 2.36\\ 103.67\\ 7.08\\ 67.78\\ 1.74\\ 46.07\\ 25.90 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 35.24\\ 0.73\\ 0.25\\ 1.23\\ 1.64\\ 37.28\\ 1.13\\ 9.78\\ 0.56\\ 21.78\\ 11.05\\ \end{array}$	$\begin{array}{c} 0.84\\ 0.17\\ 7.58\\ 14.78\\ 615.21\\ 38.38\\ 116.73\\ 0.89\\ 21.30\\ 7.85\\ 48.99\\ 7.10\\ 3.13\\ 18.57\\ 8.23\\ 75.50\\ 0.40\\ 12.26\\ 1.02\\ 13.32\\ 17.29\\ 17.29\end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ 20.67\\ 17.14 \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase/hydrolase xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase Cinnamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein Phosphate-responsive 1 family protein DUF1005 family protein U-box domain-containing family protein WRKY transcription factor 7
Solyc01q111880 Solyc02q014840 Solyc02g0884890 Solyc02g089720 Solyc02g089720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g120550 Solyc03g120550 Solyc04g071420 Solyc04g071420 Solyc04g0774610 Solyc04g0778550 Solyc04g078550	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 21.47\\ 0.40\\ 0.30\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 0.70\\ 4.02\\ \end{array}$	0.64 0.71 37.08 8.33 112.61 53.40 193.39 3.64 121.76 6.08 51.00 6.96 3.07 16.34 2.36 103.67 7.08 67.78 1.74 46.07 25.90 0.22 0.21	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 35.24\\ 0.73\\ 0.25\\ 1.23\\ 1.64\\ 37.28\\ 1.13\\ 9.78\\ 0.56\\ 21.78\\ 11.05\\ 0.29\\ 11.05\\ 0.29\end{array}$	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.40	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ 20.67\\ 17.14\\ 0.32\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase/hydrolase xyloglucan endotransglucosylase-hydrolase Xyloglucan endotransglucosylase-hydrolase Kinase facilitator superfamily protein Phosphate-responsive 1 family protein DuF1005 family protein U-box domain-containing family protein WRKY transcription factor 7 DUF241 domain protein
Solyc01q111880 Solyc02q014840 Solyc02g088040 Solyc02g089720 Solyc02g089720 Solyc02g089720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g093110 Solyc03g093110 Solyc03g093110 Solyc03g093110 Solyc03g097170 Solyc03g120550 Solyc04g0774420 Solyc04g077410 Solyc04g077610 Solyc04g077610 Solyc04g0778550 Solyc04g078550 Solyc04g078550 Solyc04g078570 Solyc04g078570 Solyc04g078570	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 1.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.66 0.76	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 4.00\\ 21.47\\ 0.40\\ 0.30\\ 0.30\\ 0.30\\ 0.30\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 0.70\\ 4.33\\ 8.2\\ 0.70\\ 4.33\\ 0.04\\ \end{array}$	$\begin{array}{c} 0.64\\ 0.71\\ 37.08\\ 8.33\\ 112.61\\ 53.40\\ 193.39\\ 3.64\\ 121.76\\ 6.08\\ 51.00\\ 6.96\\ 3.07\\ 16.34\\ 2.36\\ 103.67\\ 7.08\\ 67.78\\ 1.74\\ 46.07\\ 25.90\\ 0.22\\ 0.01\\ 1.11\\ \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ $	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.69 0.254	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ 20.67\\ 17.14\\ 0.32\\ 0.01\\ 0.74\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase (innamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein Phosphate-responsive 1 family protein DUF1005 family protein U-box domain-containing family protein WRKY transcription factor 7 DUF241 domain protein Petin lyase-like superfamily protein Potein MTB dengedaget 6 shoenshofmate/inarga
Solyc01q111880 Solyc02q014840 Solyc02q088040 Solyc02q0889040 Solyc02q0889720 Solyc02q0889720 Solyc03q025340 Solyc03q036480 Solyc03g042560 Solyc03g042560 Solyc03q093120 Solyc03q093120 Solyc03g093120 Solyc03g120550 Solyc03g120550 Solyc04g0774430 Solyc04g0774430 Solyc04g0774430 Solyc04g0774430 Solyc04g0774430 Solyc04g077610 Solyc04g077610 Solyc04g077510 Solyc04g082270 Solyc05g024230 Solyc05g024230	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 0.09\\ 4.00\\ 21.47\\ 0.40\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 0.70\\ 4.33\\ 0.04\\ 5.00\\ \end{array}$	$\begin{array}{c} 0.64\\ 0.71\\ 37.08\\ 8.33\\ 112.61\\ 53.40\\ 193.39\\ 3.64\\ 121.76\\ 6.08\\ 51.00\\ 6.96\\ 3.07\\ 16.34\\ 2.36\\ 103.67\\ 7.08\\ 67.78\\ 1.74\\ 46.07\\ 25.90\\ 0.22\\ 0.01\\ 1.11\\ 0.74 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 1.23\\ 1.64\\ 3.7.28\\ 1.13\\ 9.78\\ 1.13\\ 9.78\\ 1.13\\ 9.78\\ 1.13\\ 9.78\\ 1.13\\ 9.78\\ 1.13\\ 9.78\\ 1.05\\ 0.29\\ 0.00\\ 0.09\\ 0.67\\ 1.05\\ 0.29\\ 0.00\\ 0.00\\ 0.67\\ 1.05\\ 0.57\\ 0.57\\ 0.57\\ 0.58$	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.18 2.54 15.15	0.17 0.19 11.24 10.85 503.41 38.64 122.60 0.20 2.90 2.90 5.88 54.31 2.91 0.78 5.90 0.78 5.90 0.78 5.90 0.27 3.29 0.34 20.67 17.14 0.32 0.01 0.75 5.55	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase Cinnamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein Phosphate-responsive 1 family protein DUF1005 family protein U-box domain-containing family protein WRKY transcription factor 7 DUF241 domain protein Pectin lyase-like superfamily protein ATP-dependent 6-phosphofructokinase
Solyc01q111880 Solyc02q014840 Solyc02g0884890 Solyc02g089720 Solyc02g089720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g042560 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g097170 Solyc03g120550 Solyc04g074430 Solyc04g074430 Solyc04g0774550 Solyc04g077610 Solyc04g078550 Solyc04g078550 Solyc04g078550 Solyc04g078550 Solyc04g078570 Solyc05g024230 Solyc05g024230	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.111 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18 11.82	0.42 0.10 3.50 6.35 14.62 2.52 30.80 0.00 0.09 4.00 21.47 0.40 0.32 3.94 22.39 1.85 23.12 3.38 12.69 3.82 0.74 3.82 0.04 5.81	0.64 0.71 37.08 8.33 112.61 53.40 193.39 3.64 121.76 6.08 51.00 6.96 3.07 16.34 2.36 103.67 7.08 67.78 1.74 46.07 25.90 0.22 0.01 1.11 0.74 8.79	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 35.24\\ 0.73\\ 1.23\\ 1.64\\ 37.28\\ 1.13\\ 9.78\\ 0.56\\ 21.78\\ 11.05\\ 0.29\\ 0.00\\ 0.09\\ 0.67\\ 4.90 \end{array}$	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.18 2.54 15.15 7.45	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ 20.67\\ 17.14\\ 0.32\\ 20.67\\ 17.14\\ 0.33\\ 20.61\\ 0.74\\ 3.25\\ 3.18\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase/hydrolase xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase Cinnamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein Phosphate-responsive 1 family protein DUF1005 family protein U-box domain-containing family protein WRKY transcription factor 7 DUF241 domain protein ATP-dependent 6-phosphofructokinase Methylenetetrahydrofolate reductase
Solyc01q111880 Solyc02q014840 Solyc02g0884890 Solyc02g089720 Solyc02g089720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g0971420 Solyc03g120550 Solyc04g0774420 Solyc04g077440 Solyc04g077440 Solyc04g0774610 Solyc04g077610 Solyc04g077610 Solyc04g078550 Solyc04g078550 Solyc05g022230 Solyc05g057730 Solyc05g05730	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18 11.82 0.13	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 21.47\\ 0.40\\ 0.30\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 0.70\\ 4.33\\ 8.82\\ 0.70\\ 4.33\\ 0.04\\ 5.00\\ 5.81\\ 0.18\\ \end{array}$	0.64 0.71 37.08 8.33 112.61 53.40 193.39 3.64 121.76 6.08 51.00 6.96 3.07 16.34 2.36 103.67 2.36 107.8 1.74 46.07 25.90 0.22 0.01 1.11 0.74 8.79 7.34	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 3.5.24\\ 0.73\\ 0.25\\ 1.23\\ 1.64\\ 37.28\\ 1.13\\ 9.78\\ 0.56\\ 21.78\\ 11.05\\ 0.29\\ 0.00\\ 0.09\\ 0.67\\ 4.90\\ 3.05\\ \end{array}$	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.18 2.54 15.15 7.45 7.68	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 0.34\\ 20.67\\ 3.29\\ 0.34\\ 20.67\\ 17.14\\ 0.32\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14 \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase (innamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein DUF1005 family protein U-box domain-containing family protein WRKY transcription factor 7 DUF241 domain protein Pectin lyase-like superfamily protein ATP-dependent 6-phosphofructokinase Methylenetetrahydrofolate reductase Ethylene-responsive transcription factor Alcohol dehydrogenase
Solyc01q111880 Solyc02q014840 Solyc02q088040 Solyc02q089040 Solyc02q089040 Solyc03q025340 Solyc03q025340 Solyc03q042560 Solyc03q042560 Solyc03q042560 Solyc03q093110 Solyc03q093120 Solyc03q093120 Solyc03q093120 Solyc03q097170 Solyc03q077140 Solyc04q077450 Solyc04q077410 Solyc04q078550 Solyc04q078550 Solyc04q078550 Solyc04q078550 Solyc05q025730 Solyc05q025730 Solyc06q009810 Solyc06q073050	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 1.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18 11.82 0.13 41.02	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 4.00\\ 21.47\\ 0.40\\ 0.30\\ 0.30\\ 0.30\\ 0.30\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 0.70\\ 4.33\\ 0.04\\ 5.82\\ 0.70\\ 4.33\\ 0.04\\ 5.00\\ 5.81\\ 0.18\\ 19.57\\ \end{array}$	0.64 0.71 37.08 8.33 112.61 53.40 193.39 3.64 121.76 6.08 51.00 6.96 3.07 16.34 2.36 103.67 7.08 67.78 1.74 46.07 25.90 0.22 0.01 1.11 0.74 8.79 7.34 104.71	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 35.24\\ 0.73\\ 0.25\\ 1.23\\ 0.25\\ 1.23\\ 0.25\\ 1.23\\ 9.78\\ 0.56\\ 21.78\\ 11.05\\ 0.56\\ 21.78\\ 11.05\\ 0.29\\ 0.00\\ 0.09\\ 0.67\\ 4.90\\ 3.05\\ 49.63\\ \end{array}$	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.18 2.54 15.15 7.45 7.68 96.66	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ 20.67\\ 17.14\\ 20.67\\ 17.14\\ 0.32\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase Cinnamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein DUF1005 family protein U-box domain-containing family protein MRKY transcription factor 7 DUF241 domain protein Petin lyase-like superfamily protein ATP-dependent 6-phosphofructokinase Methylenetetrahydrofolate reductase Ethylene-responsive transcription factor Alcohol dehydrogenase NAC domain-containing protein
Solyc01q111880 Solyc02q014840 Solyc02g088040 Solyc02g0889040 Solyc02g0889720 Solyc02g0889720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g093110 Solyc03g093110 Solyc03g093110 Solyc03g093110 Solyc03g120550 Solyc03g120550 Solyc04g0774420 Solyc04g077410 Solyc04g077610 Solyc04g0777610 Solyc04g0778550 Solyc04g078550 Solyc04g078550 Solyc04g078550 Solyc05g005170 Solyc05g055730 Solyc05g055730 Solyc06g09810 Solyc06g079740 Solyc06g073050	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18 11.82 0.13 41.02 4.05	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 4.00\\ 21.47\\ 0.40\\ 0.30\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ .3.38\\ 12.69\\ 3.82\\ 12.69\\ 3.82\\ 12.69\\ 3.82\\ 12.69\\ 3.88\\ 12.69\\ 3.82\\ 12.69\\ 3.81\\ 0.70\\ 4.33\\ 0.04\\ 5.00\\ 5.81\\ 0.18\\ 19.57\\ 2.14\\ \end{array}$	$\begin{array}{c} 0.64\\ 0.71\\ 37.08\\ 8.33\\ 112.61\\ 53.40\\ 193.39\\ 3.64\\ 121.76\\ 6.08\\ 51.00\\ 6.96\\ 3.07\\ 16.34\\ 2.36\\ 103.67\\ 7.08\\ 67.78\\ 1.74\\ 46.07\\ 25.90\\ 0.22\\ 0.01\\ 1.11\\ 0.74\\ 8.79\\ 7.34\\ 104.71\\ 0.02\\ \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 1.41\\ 0.73\\ 0.73\\ 0.25\\ 1.23\\ 1.64\\ 37.28\\ 1.13\\ 9.78\\ 0.56\\ 21.78\\ 11.05\\ 0.56\\ 21.78\\ 11.05\\ 0.29\\ 0.00\\ 0.09\\ 0.67\\ 4.90\\ 3.05\\ 49.63\\ 0.00\\ \end{array}$	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.18 2.54 15.15 7.45 7.68 96.666 0.07	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ 20.67\\ 17.14\\ 0.32\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase Cinnamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein DuF1005 family protein U-box domain-containing family protein Pectin lyase-like superfamily protein ATP-dependent 6-phosphofructokinase Methylenetertahydrofolate reductase Ethylene-responsive transcription factor Alcohol dehydrogenase NAC domain-containing protein Subtilisin-like protease
Solyc01g111880 Solyc02g014840 Solyc02g088040 Solyc02g0889040 Solyc02g0889720 Solyc02g0889720 Solyc03g025340 Solyc03g035340 Solyc03g0342560 Solyc03g0342560 Solyc03g093110 Solyc03g093110 Solyc03g093110 Solyc03g093110 Solyc03g120550 Solyc03g120550 Solyc04g0774430 Solyc04g0774430 Solyc04g0774430 Solyc04g0774430 Solyc04g0774430 Solyc04g0774430 Solyc04g077610 Solyc04g077610 Solyc04g077710 Solyc05g055730 Solyc05g055730 Solyc05g055730 Solyc05g055730 Solyc06g059740 Solyc06g059740 Solyc06g073050 Solyc06g083720	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18 11.82 0.13 41.02 4.05 0.37 15.24 15.24 15.29 1	0.42 0.10 3.50 6.35 14.62 2.52 30.80 0.00 21.47 0.40 0.32 3.94 22.39 1.85 23.12 3.38 12.69 3.38 12.69 3.38 12.69 3.38 12.69 3.38 12.69 3.82 0.70 4.33 0.70 4.33 0.70 4.33 0.18 19.57 2.14 0.77	0.64 0.71 37.08 8.33 112.61 53.40 193.39 3.64 121.76 6.08 51.00 6.96 3.07 16.34 2.36 103.67 7.08 67.78 1.74 46.07 25.90 0.22 0.01 1.11 0.74 8.79 7.34 104.71 0.02 1.90 26.22	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 1.23\\ 1.64\\ 3.7.28\\ 1.13\\ 9.78\\ 0.25\\ 1.23\\ 1.64\\ 3.7.28\\ 1.13\\ 9.78\\ 0.56\\ 21.78\\ 11.05\\ 0.29\\ 0.00\\ 0.09\\ 0.67\\ 4.90\\ 3.05\\ 4.90\\ 4.90\\ 3.05\\ 4.90\\ 4.90\\ 3.05\\ 4.90\\ 4.90\\ 3.05\\ 4.90\\ $	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.18 2.54 15.15 7.45 7.68 96.666 0.07 0.18 25.2	0.17 0.19 11.24 10.85 503.41 38.64 122.60 0.20 2.90 2.90 5.88 54.31 2.91 0.78 5.90 0.78 5.90 0.78 5.90 0.78 5.90 0.27 3.29 0.34 20.67 17.14 0.32 0.01 0.74 3.25 3.18 3.14 10.91 0.01 0.01 0.01 0.01 0.01 0.02 0.25 3.18 3.14 10.91 0.01 0.01 0.02 0.25 3.18 3.14 10.91 0.01 0.01 0.02 0.01 0.02 0.25 0.18 0.01 0.01 0.01 0.01 0.02 0.02 0.25 0.14 0.01 0.01 0.02 0.02 0.02 0.01 0.02 0.02 0.01 0.02 0.01 0.02 0.02 0.01 0.01 0.01 0.01 0.01 0.01 0.02 0.01 0.02 0.01	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase Cinnamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein Phosphate-responsive 1 family protein DUF1005 family protein U-box domain-containing family protein WRKY transcription factor 7 DUF241 domain protein Pectin lyase-like superfamily protein ATP-dependent 6-phosphofructokinase Methylene-terahydrofolate reductase Ethylene-responsive transcription factor Alcohol dehydrogenase NAC domain-containing protein Subtilisin-like protease Nan-symbiotic hemoglobin 1 DED
Solyc01q111880 Solyc02q014840 Solyc02g0884890 Solyc02g089720 Solyc02g089720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g042560 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g097170 Solyc03g120550 Solyc04g0774430 Solyc04g0774430 Solyc04g0774430 Solyc04g0774610 Solyc04g0774550 Solyc04g078550 Solyc04g078550 Solyc04g078550 Solyc05g025730 Solyc05g025730 Solyc06g059740 Solyc06g073050 Solyc06g073050 Solyc06g073050 Solyc07g008240 Solyc07g008240 Solyc07g008240	$\begin{array}{l} {\rm WT} > {\rm S4} \\ {\rm WT$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18 11.32 41.02 4.05 0.37 15.34 78.66	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 21.47\\ 0.40\\ 0.30\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 0.70\\ 4.33\\ 0.04\\ 5.00\\ 5.81\\ 0.18\\ 19.57\\ 2.14\\ 0.77\\ 2.14\\ 0.77\\ 18.45\\ \end{array}$	0.64 0.71 37.08 8.33 112.61 53.40 193.39 3.64 121.76 6.08 51.00 6.96 3.07 16.34 2.36 103.67 7.08 67.78 1.74 46.07 25.90 0.22 0.01 1.11 0.74 8.79 7.34 104.71 0.02 1.90 26.72 412.85	0.17 0.19 14.29 5.22 35.19 12.44 141.50 0.46 9.07 3.20 3.20 3.22 0.73 0.25 1.23 1.64 37.28 1.64 37.28 1.64 37.28 1.64 37.28 1.64 37.28 1.64 37.28 0.73 0.25 1.23 1.64 37.28 0.78 0.78 0.29 0.00 0.09 0.00 0.09 0.43 7.64 37.64 3.05	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.18 2.54 15.15 7.45 7.68 96.666 0.07 0.18 22.56 327.11	0.17 0.19 11.24 10.85 503.41 38.64 122.60 0.20 2.90 5.88 54.31 2.91 0.78 5.90 0.96 60.93 0.27 3.29 0.34 20.67 17.14 0.34 20.67 17.14 0.34 20.67 17.14 0.34 20.61 0.74 3.18 3.14 10.81 0.01 0.04 6.04 6.04 6.04 6.04 6.05 10.75 10.01 10.04 10.04 10.05 10.75	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase A-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase/hydrolase xyloglucan endotransglucosylase/hydrolase xyloglucan endotransglucosylase-hydrolase Cinnamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein Phosphate-responsive 1 family protein DUF1005 family protein U-box domain-containing family protein MRKY transcription factor 7 DUF241 domain protein Pectin lyase-like superfamily protein ATP-dependent 6-phosphofructokinase Methylenetetrahydrofolate reductase Ethylene-responsive transcription factor Alcohol dehydrogenase NAC domain-containing protein Subtilisin-like protease Non-symbiotic hemoglobin 1 BSD domain-containing family protein
Solyc01q111880 Solyc02q014840 Solyc02g0884890 Solyc02g0889720 Solyc02g089720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g042560 Solyc03g093080 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g120550 Solyc03g120550 Solyc04g071420 Solyc04g0774420 Solyc04g077440 Solyc04g077440 Solyc04g077440 Solyc04g077460 Solyc04g078550 Solyc04g078550 Solyc04g078550 Solyc05g055730 Solyc05g055730 Solyc06g059740 Solyc07g022920 Solyc08g08370 Solyc08g076320	$\begin{array}{l} {\rm WT} > {\rm S4} \\ {\rm WT$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18 1.82 0.76 17.18 11.82 0.76 17.18 11.82 0.76 17.18 11.82 0.76 17.18 11.82 0.76 17.18 11.82 0.76 17.18 11.82 0.76 15.34 78.66 30.87	$egin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 21.47\\ 0.40\\ 0.30\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 0.70\\ 4.33\\ 8.12\\ 0.70\\ 4.38\\ 19.57\\ 2.14\\ 19.57\\ 2.14\\ 19.57\\ 2.14\\ 19.57\\ 2.18\\ 10.58\\ 1$	0.64 0.71 37.08 8.33 112.61 53.40 193.39 3.64 121.76 6.08 51.00 6.96 3.07 16.34 2.36 103.67 7.08 67.78 1.74 46.07 25.90 0.22 0.01 1.11 0.74 8.79 7.34 104.71 0.02 1.90 26.72 412.85 42.85 42.85	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 3.5.24\\ 0.73\\ 0.25\\ 1.23\\ 1.64\\ 37.28\\ 1.13\\ 9.78\\ 0.56\\ 21.78\\ 0.56\\ 21.78\\ 0.56\\ 21.78\\ 0.56\\ 21.78\\ 0.56\\ 21.64\\ 37.28\\ 1.05\\ 0.29\\ 0.00\\ 0.67\\ 4.90\\ 3.05\\ 49.63\\ 0.00\\ 0.43\\ 7.67\\ 104.43\\ 7.67\\ 104.43\\ 13.57\\ \end{array}$	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.18 2.54 15.15 7.45 7.68 96.666 0.07 0.18 22.56 327.11 43.79	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ 20.67\\ 17.14\\ 0.32\\ 0.03\\ 1.29\\ 0.34\\ 20.67\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.04\\ 6.40\\ 307.70\\ 27.38\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase (innamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein DUF1005 family protein U-box domain-containing family protein MRKY transcription factor 7 DUF241 domain protein Pectin lyase-like superfamily protein ATP-dependent 6-phosphofructokinase Methylenetetrahydrofolate reductase Ethylene-responsive transcription factor Alcohol dehydrogenase NAC domain-containing protein Subtilisin-like protease Non-symbiotic hemoglobin 1 BSD domain-containing family protein DCD Cellulose synthase
Solyc01q111880 Solyc02q014840 Solyc02g088040 Solyc02g0889040 Solyc02g0889720 Solyc02g0889720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g093100 Solyc03g093110 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g097170 Solyc04g0774420 Solyc04g0774420 Solyc04g077410 Solyc04g077410 Solyc04g077410 Solyc04g077615 Solyc04g078550 Solyc04g078550 Solyc04g078550 Solyc05g055730 Solyc05g055730 Solyc06g009810 Solyc06g059740 Solyc06g073050 Solyc06g073050 Solyc06g073050 Solyc06g083720 Solyc07g022920 Solyc07g022920 Solyc08g08370 Solyc08g08370 Solyc08g08370 Solyc08g08370	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18 11.82 0.76 17.18 11.82 0.37 15.34 78.66 30.87 2.71	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 4.00\\ 21.47\\ 0.40\\ 0.30\\ 0.30\\ 0.30\\ 0.30\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 0.70\\ 4.33\\ 0.04\\ 5.00\\ 5.81\\ 0.18\\ 19.57\\ 2.14\\ 0.77\\ 2.14\\ 0.77\\ 18.45\\ 25.83\\ 1.21\\ \end{array}$	$\begin{array}{c} 0.64\\ 0.71\\ 37.08\\ 8.33\\ 112.61\\ 53.40\\ 193.39\\ 3.64\\ 121.76\\ 6.08\\ 51.00\\ 6.96\\ 3.07\\ 16.34\\ 2.36\\ 103.67\\ 7.08\\ 67.78\\ 1.74\\ 46.07\\ 25.90\\ 0.22\\ 0.01\\ 1.11\\ 0.74\\ 8.79\\ 7.34\\ 104.71\\ 0.02\\ 1.90\\ 26.72\\ 412.85\\ 42.18\\ 12.38\\ \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 0.73\\ 0.25\\ 1.23\\ 0.25\\ 1.23\\ 1.64\\ 37.28\\ 1.13\\ 9.78\\ 0.56\\ 21.78\\ 1.05\\ 0.29\\ 0.00\\ 0.09\\ 0.67\\ 4.90\\ 3.05\\ 49.63\\ 0.00\\ 0.43\\ 7.67\\ 104.43\\ 13.57\\ 6.40\\ \end{array}$	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.18 2.54 15.15 7.45 7.68 96.66 0.07 0.18 22.56 327.11 43.79 21.81	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ 20.67\\ 17.14\\ 0.32\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.04\\ 6.40\\ 307.70\\ 27.38\\ 22.18\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase (innamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein DuF1005 family protein U-box domain-containing family protein ATP-dependent 6-phosphofructokinase Methyleneterahydrofolate reductase Ethylene-responsive transcription factor Alcohol dehydrogenase NAC domain-containing protein Subtilisin-like protease NAC domain-containing family protein BSD domain-containing family protein BSD domain-containing family protein DCD Cellulose synthase verticillium wilt disease resistance 2
Solyc01q111880 Solyc02q014840 Solyc02g088040 Solyc02g0889040 Solyc02g0889720 Solyc02g0889720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g093110 Solyc03g093110 Solyc03g093110 Solyc03g093110 Solyc03g120550 Solyc03g120550 Solyc04g0774420 Solyc04g077410 Solyc04g077610 Solyc04g0777610 Solyc04g0777610 Solyc04g078550 Solyc04g078550 Solyc04g078550 Solyc04g078570 Solyc05g055730 Solyc05g055730 Solyc05g055740 Solyc06g079740 Solyc06g073050 Solyc06g073050 Solyc07g008240 Solyc07g028220 Solyc07g028220 Solyc07g08208370 Solyc08g076320 Solyc08g076320	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18 11.82 0.13 41.02 4.05 0.37 15.34 78.66 30.87 2.71 24.33	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 4.00\\ 21.47\\ 0.40\\ 0.30\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 12.69\\ 3.82\\ 12.69\\ 3.82\\ 12.69\\ 3.82\\ 12.69\\ 19.57\\ 2.14\\ 0.77\\ 4.76\\ 18.45\\ 25.83\\ 1.21\\ 12.16\\ \end{array}$	$\begin{array}{c} 0.64\\ 0.71\\ 37.08\\ 8.33\\ 112.61\\ 53.40\\ 193.39\\ 3.64\\ 121.76\\ 6.08\\ 51.00\\ 6.96\\ 3.07\\ 16.34\\ 2.36\\ 103.67\\ 7.08\\ 67.78\\ 1.74\\ 46.07\\ 25.90\\ 0.22\\ 0.01\\ 1.11\\ 0.74\\ 8.79\\ 7.34\\ 104.71\\ 0.02\\ 1.90\\ 26.72\\ 412.85\\ 42.18\\ 12.38\\ 45.46\\ \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 1.23\\ 1.64\\ 37.28\\ 1.13\\ 9.78\\ 0.25\\ 1.23\\ 1.64\\ 37.28\\ 1.13\\ 9.78\\ 0.56\\ 21.78\\ 11.05\\ 0.56\\ 21.78\\ 11.05\\ 0.29\\ 0.00\\ 0.09\\ 0.09\\ 0.67\\ 4.90\\ 3.05\\ 49.63\\ 0.00\\ 0.43\\ 7.67\\ 104.43\\ 13.57\\ 6.40\\ 24.46\\ \end{array}$	$\begin{array}{c} 0.84\\ 0.17\\ 7.58\\ 14.78\\ 615.21\\ 38.38\\ 116.73\\ 0.89\\ 21.30\\ 7.85\\ 48.99\\ 7.10\\ 3.13\\ 18.57\\ 8.23\\ 75.50\\ 0.40\\ 12.26\\ 1.02\\ 13.32\\ 17.29\\ 0.69\\ 0.18\\ 2.54\\ 15.15\\ 7.45\\ 7.68\\ 96.66\\ 0.07\\ 0.18\\ 22.56\\ 327.11\\ 43.79\\ 21.81\\ 9.62 \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ 20.67\\ 17.14\\ 0.32\\ 0.01\\ 0.78\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.01\\ 0.04\\ 6.40\\ 307.70\\ 27.38\\ 22.18\\ 10.89\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase (mamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein DuF1005 family protein U-box domain-containing family protein Pectin lyase-like superfamily protein Pectin lyase-like superfamily protein ATP-dependent 6-phosphofructokinase Methylenetertahydrofolate reductase Ethylene-responsive transcription factor Alcohol dehydrogenase NAC domain-containing protein Subtilisin-like protease NAC domain-containing family protein DCD Cellulose synthase verticillium wilt disease resistance 2 WAS/WASL-interacting protein family member 2
Solyc01q111880 Solyc02q014840 Solyc02g0884890 Solyc02g089720 Solyc02g089720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g042560 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g097170 Solyc03g120550 Solyc04g0774430 Solyc04g0774430 Solyc04g0774430 Solyc04g0774430 Solyc04g0774430 Solyc04g0774550 Solyc04g0774550 Solyc04g078550 Solyc05g025730 Solyc05g025730 Solyc06g059740 Solyc06g073050 Solyc06g073050 Solyc06g083720 Solyc07g0028240 Solyc08g076320 Solyc08g076320 Solyc08g076320 Solyc09g055080	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18 11.82 0.76 17.18 11.62 41.02	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.09\\ 4.00\\ 21.47\\ 0.40\\ 0.30\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 0.70\\ 4.33\\ 0.04\\ 5.00\\ 5.81\\ 0.18\\ 19.57\\ 2.14\\ 0.77\\ 2.14\\ 0.77\\ 4.76\\ 18.45\\ 25.83\\ 1.21\\ 12.16\\ 0.02\\ \end{array}$	$\begin{array}{c} 0.64\\ 0.71\\ 37.08\\ 8.33\\ 112.61\\ 53.40\\ 193.39\\ 3.64\\ 121.76\\ 6.08\\ 51.00\\ 6.96\\ 3.07\\ 16.34\\ 2.36\\ 103.67\\ 7.08\\ 67.78\\ 1.74\\ 46.07\\ 25.90\\ 0.22\\ 0.01\\ 1.11\\ 0.74\\ 8.79\\ 7.34\\ 104.71\\ 0.02\\ 1.90\\ 26.72\\ 412.85\\ 42.18\\ 12.38\\ 45.46\\ 0.00\\ \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 1.23\\ 1.64\\ 3.728\\ 1.13\\ 9.78\\ 1.13\\ 9.78\\ 1.13\\ 9.78\\ 1.13\\ 9.78\\ 1.13\\ 9.78\\ 1.13\\ 9.78\\ 1.13\\ 9.78\\ 1.13\\ 9.78\\ 1.13\\ 9.78\\ 1.02\\ 1.23\\ 1.13\\ 9.78\\ 1.02\\ 1.23\\$	$\begin{array}{c} 0.84\\ 0.17\\ 7.58\\ 14.78\\ 615.21\\ 38.38\\ 116.73\\ 0.89\\ 21.30\\ 7.85\\ 48.99\\ 7.10\\ 3.13\\ 18.57\\ 8.23\\ 75.50\\ 0.40\\ 12.26\\ 1.02\\ 13.32\\ 17.29\\ 0.69\\ 0.18\\ 2.54\\ 15.15\\ 7.45\\ 7.68\\ 96.66\\ 0.07\\ 0.18\\ 22.56\\ 327.11\\ 43.79\\ 21.81\\ 9.62\\ 0.23\\ \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ 20.67\\ 17.14\\ 0.32\\ 0.34\\ 20.67\\ 17.14\\ 0.32\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.04\\ 6.40\\ 307.70\\ 27.38\\ 22.18\\ 10.89\\ 0.02\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase Xyloglucan endotransglucosylase-hydrolase Cinnamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein Phosphate-responsive 1 family protein DUF1005 family protein U-box domain-containing family protein WRKY transcription factor 7 DUF241 domain protein Pectin lyase-like superfamily protein ATP-dependent 6-phosphofructokinase Methylene-terahydrofolate reductase Ethylene-responsive transcription factor Alcohol dehydrogenase NAC domain-containing protein Subtilisin-like protease Non-symbiotic hemoglobin 1 BSD domain-containing family protein DCD Cellulose synthase verticillium wilt disease resistance 2 WAS/WASL-interacting protein family member 2 Transducin/WD40 repeat-like superfamily protein
Solyc01q111880 Solyc02q014840 Solyc02g0884890 Solyc02g089720 Solyc02g089720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g042560 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g097170 Solyc03g120550 Solyc04g0774420 Solyc04g0774420 Solyc04g0774420 Solyc04g0774420 Solyc04g077440 Solyc04g077440 Solyc04g0774550 Solyc04g077610 Solyc04g0778550 Solyc05g025730 Solyc05g025730 Solyc05g055730 Solyc06g053720 Solyc06g053720 Solyc06g073050 Solyc09g059477 Solyc10g011740	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18 11.82 0.76 17.18 11.82 0.76 17.18 11.39 41.02 4.05 0.37 15.34 78.66 30.87 2.71 24.33 0.43 44.83 0.43	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.09\\ 4.00\\ 21.47\\ 0.40\\ 0.30\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 0.70\\ 4.33\\ 8.12\\ 0.70\\ 4.38\\ 19.57\\ 2.14\\ 19.57\\ 2.14\\ 19.57\\ 2.18\\ 19.57\\ 2.18\\ 19.57\\ 2.18\\ 19.57\\ 2.18\\ 19.57\\ 2.18\\ 19.57\\ 2.18\\ 19.57\\ 2.18\\ 19.57\\ 2.18\\ 19.57\\ 2.18\\ 19.57\\ 2.18\\ 1.21\\ 12.16\\ 1.21\\ 12.16\\ 1.21\\ 12.16\\ 1.21\\ 1.$	0.64 0.71 37.08 8.33 112.61 53.40 193.39 3.64 121.76 6.08 51.00 6.96 3.07 16.34 2.36 103.67 7.08 67.78 1.74 46.07 25.90 0.22 0.01 1.11 0.74 8.79 7.34 104.71 0.02 1.90 26.72 412.85 42.85 42.18 12.38 45.46 0.00 144.78	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 9.07\\ 3.20\\ 35.24\\ 141.50\\ 0.73\\ 0.25\\ 1.23\\ 1.64\\ 37.28\\ 1.13\\ 9.78\\ 0.56\\ 21.78\\ 0.56\\ 21.78\\ 0.56\\ 21.78\\ 0.56\\ 21.78\\ 0.56\\ 21.78\\ 0.56\\ 21.64\\ 37.28\\ 1.105\\ 0.29\\ 0.00\\ 0.67\\ 4.90\\ 3.05\\ 49.63\\ 0.00\\ 0.43\\ 7.67\\ 104.43\\ 13.57\\ 6.40\\ 24.46\\ 0.00\\ 58.89\\ 1.56\\ $	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.18 2.54 15.15 7.45 7.68 96.66 0.07 0.18 22.56 327.11 43.79 21.81 9.62 0.23 93.82 93.82	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ 20.67\\ 3.29\\ 0.34\\ 20.67\\ 3.29\\ 0.34\\ 20.67\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.74\\ 3.22\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.04\\ 0.640\\ 307.79\\ 0.02\\ 127.78\\ 0.02\\ 127.79\\ 0.02\\ 127.79\\ 0.02\\ 127.79\\ 0.02\\ 127.79\\ 0.02\\ 127.79\\ 0.02\\ 127.79\\ 0.02\\ 127.79\\ 0.02\\ 127.79\\ 0.02\\ 0.02\\ 127.79\\ 0.02\\ 0.02\\ 127.79\\ 0.02\\ 0.$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase Xyloglucan endotransglucosylase-hydrolase Kinase facilitator superfamily protein Phosphate-responsive 1 family protein DUF1005 family protein U-box domain-containing family protein MRKY transcription factor 7 DUF241 domain protein Pectin lyase-like superfamily protein ATP-dependent 6-phosphofructokinase Methylenetetrahydrofolate reductase Ethylene-responsive transcription factor Alcohol dehydrogenase NAC domain-containing family protein Subtilisin-like protease Non-symbiotic hemoglobin 1 BSD domain-containing family protein DCD Cellulose synthase verticillium wilt disease resistance 2 WAS/WASL-interacting protein family protein Ubiquitin-conjugating enzyme E2
Solyc01g111880 Solyc02g014840 Solyc02g088040 Solyc02g089720 Solyc02g089720 Solyc03g025340 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g03910 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g097170 Solyc03g097170 Solyc03g097170 Solyc04g077140 Solyc04g077410 Solyc04g077410 Solyc04g077410 Solyc05g055730 Solyc05g024230 Solyc06g059740 Solyc06g059740 Solyc06g059740 Solyc06g059740 Solyc06g073050 Solyc06g083700 Solyc06g076320 Solyc08g08370 Solyc09g005080 Solyc09g01690	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18 11.82 0.76 17.18 11.82 0.76 17.18 11.82 0.76 17.18 11.82 0.76 17.18 11.82 0.76 17.18 11.63 41.02 4.05 0.37 15.34 78.66 30.87 2.71 24.33 0.43 44.83 8.64 10.92	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.09\\ 4.00\\ 21.47\\ 0.40\\ 0.30\\ 0.30\\ 0.30\\ 0.30\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 0.70\\ 4.33\\ 0.04\\ 5.81\\ 0.18\\ 19.57\\ 2.14\\ 0.77\\ 2.14\\ 0.77\\ 1.21\\ 12.16\\ 0.02\\ 1.871\\ 4.31\\ 12.16\\ 0.02\\ 1.871\\ 4.31\\ 12.16\\ 0.02\\ 1.871\\ 4.31\\ 1.21$	0.64 0.71 37.08 8.33 112.61 53.40 193.39 3.64 121.76 6.08 51.00 6.96 3.07 16.34 2.36 103.67 7.08 67.78 1.74 46.07 25.90 0.22 0.01 1.11 0.74 8.79 7.34 104.71 0.02 1.90 26.72 412.85 42.18 12.38 45.46 0.00 144.78 1.14 21.90	0.17 0.19 14.29 5.22 35.19 12.44 141.50 0.46 9.07 3.20 3.05 4.963 0.00 3.05 4.963 0.43 3.7.67 104.43 13.57 6.40 24.460 24.460 3.00 58.89 1.75 3.70	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.18 2.54 15.15 7.45 7.68 96.666 0.07 0.18 22.56 327.11 43.79 21.57 32.56 327.11 43.79 21.81 9.62 0.23 33.82 8.89 15.77	0.17 0.19 11.24 10.85 503.41 38.64 122.60 0.20 2.90 5.88 54.31 2.91 0.78 5.90 0.96 60.93 0.27 3.29 0.34 20.32 20.32 20.32 20.34 20.34 20.34 20.34 20.34 20.34 20.34 20.34 20.34 20.34 20.46 20.46 20.38 10.02 127.79 2.73 18.92 20.22 18.92 18.92 20.22 18.92 20.22 18.92 20.22 18.92 20.32 18.92 20.22 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 20.32 18.92 18	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase (innamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein DUF1005 family protein DUF1005 family protein Phosphate-responsive 1 family protein WRKY transcription factor 7 DUF241 domain protein Pectin lyase-like superfamily protein ATP-dependent 6-phosphofructokinase Methylenetetrahydrofolate reductase Ethylene-responsive transcription factor Alcohol dehydrogenase NAC domain-containing family protein Subtilisin-like protease Non-symbiotic hemoglobin 1 BSD domain-containing family protein DCD Cellulose synthase verticillium wilt disease resistance 2 WAS/WASL-interacting protein family member 2 Transducin/WD40 repeat-like superfamily protein Ubiquitin-conjugating enzyme E2 entensin X55687 transducin/WD40 repeat-protein family protein
Solyc01q111880 Solyc02q014840 Solyc02g0884890 Solyc02g088920 Solyc02g088920 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g03110 Solyc03g093110 Solyc03g093110 Solyc03g093110 Solyc03g093110 Solyc03g093120 Solyc03g097170 Solyc03g120550 Solyc04g074420 Solyc04g077410 Solyc04g077610 Solyc04g077610 Solyc04g078550 Solyc04g078550 Solyc04g078550 Solyc04g078570 Solyc05g055730 Solyc05g055730 Solyc06g079810 Solyc06g079050 Solyc06g073050 Solyc06g073050 Solyc06g073050 Solyc06g08240 Solyc07g022220 Solyc07g02220 Solyc07g02920 Solyc07g02920 Solyc09g050580 Solyc09g01690 Solyc09g055750 Solyc09g055750 Solyc09g055750 Solyc09g055750 Solyc09g055750 Solyc09g055750 Solyc09g055750 Solyc09g055750 Solyc09g055750 Solyc09g055750 Solyc09g055750 Solyc09g055750 Solyc09g055750 Solyc09g055550 Solyc0590557550 Solyc05905	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18 11.82 0.37 17.18 11.82 0.37 17.18 11.82 0.37 17.18 11.82 0.37 17.18 11.82 0.37 17.18 11.82 0.37 17.18 11.82 0.37 12.97 12.33 12.92 12.97 12.97 12.34 12.93 12.92 12.97 12.34 12.93	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.09\\ 4.00\\ 21.47\\ 0.40\\ 0.30\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 23.12\\ 12.60\\ 0.70\\ 4.33\\ 0.04\\ 5.00\\ 5.81\\ 0.18\\ 19.57\\ 2.14\\ 0.77\\ 2.14\\ 0.76\\ 18.45\\ 19.57\\ 2.14\\ 0.76\\ 18.45\\ 19.57\\ 2.14\\ 0.76\\ 18.45\\ 1.21\\ 12.16\\ 0.02\\ 18.71\\ 4.31\\ 6.05\\ 0.98\\ 1.21\\ 12.16\\ 0.08\\ 1.21\\ 12.16\\ 0.08\\ 1.21\\ 12.16\\ 0.08\\ 1.21\\ 12.16\\ 0.08\\ 1.21\\ 12.16\\ 0.08\\ 1.21\\ 12.16\\ 0.08\\ 1.21\\ 12.16\\ 0.08\\ 1.21\\ 1.21\\ 12.16\\ 0.08\\ 1.21\\ 1.21\\ 12.16\\ 0.08\\ 1.21\\ $	0.64 0.71 37.08 8.33 112.61 53.40 193.39 3.64 121.76 6.08 51.00 6.96 3.07 16.34 2.36 103.67 7.08 67.78 1.74 46.07 25.90 0.22 0.01 1.11 0.74 8.79 7.34 104.71 0.02 1.90 26.72 412.85 42.18 12.85 42.18 12.85 45.46 0.00 144.78 1.14 31.89 10.7	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 14.4\\ 141.50\\ 0.46\\ 0.73\\ 0.25\\ 1.23\\ 1.64\\ 37.28\\ 1.13\\ 9.78\\ 0.56\\ 21.78\\ 1.05\\ 0.29\\ 0.00\\ 0.09\\ 0.67\\ 4.90\\ 3.05\\ 49.63\\ 0.00\\ 0.43\\ 7.67\\ 104.43\\ 13.57\\ 6.40\\ 0.58.89\\ 1.15\\ 1.781\\ 3.64\\ \end{array}$	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.18 2.54 15.15 7.45 7.68 96.666 0.07 0.18 22.56 327.11 43.79 21.30 2.54 15.15 7.45 7.68 96.666 0.07 0.18 22.56 327.11 43.79 21.81 9.62 0.23 93.82 8.89 15.27 28.83 91.527 28.83 15.27 15.27 28.83 15.27 28.83 15.27 28.83 15.27 28.83 15.27 28.83 15.27 28.83 15.27 28.83 15.27 28.83 15.27 28.83 15.27 28.83 15.27 28.83 15.27 1	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ 20.67\\ 17.14\\ 0.32\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.04\\ 6.40\\ 307.70\\ 27.38\\ 22.18\\ 10.89\\ 0.02\\ 127.79\\ 2.73\\ 18.93\\ 0.27\\ 31.26\\ 13.26\\ $	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase (innamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein Phosphate-responsive 1 family protein DUF1005 family protein U-box domain-containing family protein ATP-dependent 6-phosphofructokinase Methylenetertahydrofolate reductase Ethylene-responsive transcription factor Alcohol dehydrogenase NAC domain-containing protein Subtilisin-like protease NAC domain-containing family protein BSD domain-containing family protein DCD Cellulose synthase verticillum wilt disease resistance 2 WAS/WASL-interacting protein family protein Ubiquitin-conjugating enzyme E2 entensin X55687 type-1 restriction enzyme mjaxp r protein LOW OULALUTY-Varbinogalactan protein LOW OULALUTY-Varbinogalactan protein LOW OULALUTY-Varbinogalactan protein
Solyc01q111880 Solyc02q014840 Solyc02g0884890 Solyc02g089720 Solyc02g089720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g042560 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g097170 Solyc03g120550 Solyc04g074430 Solyc04g0774430 Solyc04g0774430 Solyc04g0774430 Solyc04g0774550 Solyc04g0774550 Solyc04g078550 Solyc04g078550 Solyc05g0224230 Solyc05g025730 Solyc05g024230 Solyc05g024230 Solyc06g059740 Solyc06g059740 Solyc06g083720 Solyc06g083720 Solyc07g022920 Solyc08g076320 Solyc09g011690 Solyc09g01690 Solyc09g01690 Solyc09g059477 Solyc09g059477 Solyc09g059477 Solyc09g059477 Solyc09g059477 Solyc09g059477 Solyc09g059477 Solyc09g0595477 Solyc09g059477 Solyc09g059477 Solyc1g007560 Solyc1g00760 Solyc1g0760 Solyc11g00760 Solyc11g0760	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18 11.02 4.05 0.37 15.34 78.66 30.87 2.71 24.33 0.43 44.83 8.64 10.89 0.89 71.99	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 0.09\\ 4.00\\ 21.47\\ 0.40\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 23.38\\ 12.69\\ 3.82\\ 0.70\\ 4.33\\ 0.04\\ 5.00\\ 5.81\\ 0.18\\ 19.57\\ 2.14\\ 0.77\\ 4.76\\ 18.45\\ 25.83\\ 1.21\\ 4.76\\ 18.45\\ 25.83\\ 1.21\\ 4.76\\ 18.45\\ 25.83\\ 1.21\\ 4.76\\ 18.45\\ 25.83\\ 1.21\\ 4.76\\ 12.16\\ 0.02\\ 18.71\\ 18.72\\ 1$	0.64 0.71 37.08 8.33 112.61 53.40 193.39 3.64 121.76 6.08 51.00 6.96 3.07 16.34 2.36 103.67 7.08 67.78 1.74 46.07 25.90 0.22 0.01 1.11 0.74 8.79 7.34 104.71 0.02 1.90 26.72 412.85 42.18 124.78 1.238 45.46 0.00 144.78 1.14 31.89 10.17 297.22	0.17 0.19 14.29 5.22 35.19 12.44 141.50 0.46 9.07 3.20 3.20 3.24 0.73 0.25 1.23 1.64 37.28 1.13 9.78 0.56 21.78 11.05 0.29 0.00 0.09 0.67 4.90 3.05 4.90 3.157 6.40 5.87 1.15 1.781 3.68	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.18 2.54 15.15 7.68 96.666 0.07 0.18 22.56 327.11 43.79 21.81 9.62 0.23 93.82 8.83 15.27 28.83 61.82	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 2.90\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ 20.67\\ 17.14\\ 0.32\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.01\\ 0.04\\ 6.40\\ 307.70\\ 27.38\\ 22.18\\ 10.89\\ 0.02\\ 127.79\\ 2.73\\ 18.93\\ 13.26\\ 66.47\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase Phenylalanine ammonia-lyase A-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase Cinnamoyl-COA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein Phosphate-responsive 1 family protein DUF1005 family protein U-box domain-containing family protein MRKY transcription factor 7 DUF241 domain protein Pectin lyase-like superfamily protein ATP-dependent 6-phosphofructokinase Methylene-terahydrofolate reductase Ethylene-responsive transcription factor Alcohol dehydrogenase NAC domain-containing protein Subtilisin-like protease Non-symbiotic hemoglobin 1 BSD domain-containing family protein DCD Cellulose synthase verticillium wilt disease resistance 2 WAS/WASL-interacting protein family protein Ubiquitin-conjugating enzyme E2 entensin X55687 type-1 restriction enzyme mjaxp r protein LOW QUALITY:Arabinogalactan-protein Cytokinin-regulated kinase 1
Solyc01g111880 Solyc02g014840 Solyc02g0884890 Solyc02g088720 Solyc02g089720 Solyc03g025340 Solyc03g025340 Solyc03g042560 Solyc03g042560 Solyc03g042560 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g093120 Solyc03g0971420 Solyc04g0774420 Solyc04g0774420 Solyc04g0774420 Solyc04g0774420 Solyc04g0774420 Solyc04g0774550 Solyc04g0774550 Solyc05g024230 Solyc05g025730 Solyc06g059740 Solyc06g073050 Solyc06g073050 Solyc06g073720 Solyc06g083720 Solyc06g073720 Solyc07g022920 Solyc07g008240 Solyc09g0508870 Solyc09g050880 Solyc09g050880 Solyc09g055080 Solyc09g055080 Solyc09g055080 Solyc09g055080 Solyc09g055080 Solyc09g055080 Solyc09g055080 Solyc09g055080 Solyc09g055080 Solyc09g055080 Solyc09g055080 Solyc09g055080 Solyc09g055080 Solyc09g055080 Solyc11g007660 Solyc11g007660 Solyc11g007660 Solyc11g00230	$\begin{array}{l} WT>S4 \\ WT>S4 \\$	0.46 0.34 11.52 5.86 58.40 12.02 41.58 0.02 0.08 8.31 32.70 1.92 1.77 3.37 11.39 84.11 6.62 96.24 4.37 24.61 8.15 1.29 7.60 0.76 17.18 11.82 0.76 17.18 11.82 0.76 17.18 11.39 41.02 4.05 0.37 15.34 78.66 30.87 2.71 24.33 0.43 44.83 8.64 10.89 0.89 71.99 36.84	$\begin{array}{c} 0.42\\ 0.10\\ 3.50\\ 6.35\\ 14.62\\ 2.52\\ 30.80\\ 0.00\\ 21.47\\ 0.40\\ 0.30\\ 0.32\\ 3.94\\ 22.39\\ 1.85\\ 23.12\\ 3.38\\ 12.69\\ 3.82\\ 0.70\\ 4.33\\ 812.69\\ 3.82\\ 0.70\\ 4.33\\ 812.69\\ 1.85\\ 23.12\\ 1.23\\ 1.25\\ 1.21\\ 12.16\\ 1.25\\ 1.21\\ 12.16\\ 1.25\\ 1.21\\ 12.16\\ 1.25\\ 1.21\\ 12.16\\ 1.25\\ 1.21\\ 12.16\\ 1.25\\ 1.21\\ 12.16\\ 1.25\\ 1.21\\ $	$\begin{array}{c} 0.64\\ 0.71\\ 37.08\\ 8.33\\ 112.61\\ 53.40\\ 193.39\\ 3.64\\ 121.76\\ 6.08\\ 51.00\\ 6.96\\ 3.07\\ 16.34\\ 2.36\\ 103.67\\ 7.08\\ 67.78\\ 1.74\\ 46.07\\ 25.90\\ 0.22\\ 0.01\\ 1.11\\ 0.74\\ 8.79\\ 7.34\\ 104.71\\ 0.02\\ 1.90\\ 26.72\\ 412.85\\ 42.18\\ 12.38\\ 45.46\\ 0.00\\ 144.78\\ 1.14\\ 31.89\\ 10.17\\ 297.22\\ 36.79\\ \end{array}$	$\begin{array}{c} 0.17\\ 0.19\\ 14.29\\ 5.22\\ 35.19\\ 12.44\\ 141.50\\ 0.46\\ 0.07\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 3.20\\ 1.64\\ 3.20\\ 1.64\\ 3.728\\ 1.13\\ 9.78\\ 0.56\\ 21.78\\ 1.13\\ 9.78\\ 0.56\\ 21.78\\ 1.105\\ 0.29\\ 0.00\\ 0.67\\ 4.90\\ 3.05\\ 49.63\\ 0.00\\ 0.43\\ 7.67\\ 104.43\\ 13.57\\ 6.40\\ 24.46\\ 0.00\\ 58.89\\ 1.15\\ 17.81\\ 3.64\\ 78.68\\ 17.65\\ \end{array}$	0.84 0.17 7.58 14.78 615.21 38.38 116.73 0.89 21.30 7.85 48.99 7.10 3.13 18.57 8.23 75.50 0.40 12.26 1.02 13.32 17.29 0.69 0.18 2.54 15.15 7.45 7.68 96.66 0.07 0.18 22.56 327.11 43.79 21.81 9.62 0.23 93.82 8.89 15.27 28.83 61.82 32.43	$\begin{array}{c} 0.17\\ 0.19\\ 11.24\\ 10.85\\ 503.41\\ 38.64\\ 122.60\\ 0.20\\ 5.88\\ 54.31\\ 2.91\\ 0.78\\ 5.90\\ 0.96\\ 60.93\\ 0.27\\ 3.29\\ 0.34\\ 20.67\\ 7.14\\ 0.32\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 0.74\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.01\\ 3.25\\ 3.18\\ 3.14\\ 109.81\\ 0.02\\ 127.79\\ 2.38\\ 18.93\\ 13.26\\ 66.47\\ 16.92\\ \end{array}$	MAP kinase kinase kinase 11 F-box protein NBS-LRR disease resistance protein NBS50 Unknown protein Glycoside hydrolase Kinase family protein Calcium-dependent lipid-binding family protein Phenylalanine ammonia-lyase 4-hydroxy-tetrahydrodipicolinate synthase Leucine rich repeat receptor protein kinase 2 Xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase xyloglucan endotransglucosylase-hydrolase Xyloglucan endotransglucosylase-hydrolase (innamoyl-CoA reductase Major facilitator superfamily protein Phosphate-responsive 1 family protein DuF1005 family protein U-box domain-containing family protein MRKY transcription factor 7 DUF241 domain protein Pectin lyase-like superfamily protein ATP-dependent 6-phosphofructokinase Methylenetetrahydrofolate reductase Ethylene-responsive transcription factor Alcohol dehydrogenase NAC domain-containing family protein Subtilisin-like protease NAC domain-containing family protein DUF00 Cellulose synthase verticillium wilt disease resistance 2 WAS/WASL-interacting protein family member 2 Transducin/WD40 repeat-like superfamily protein Ubiquitin-conjugating enzyme E2 entensin X55687 type-1 restriction enzyme mjaxp r protein LOW QUALITY:Arabinogalactan-protein Cytokinin-regulated kinase 1 Leucine-rich repeat receptor-like protein kinase family

Differentially expressed genes between STTM2118b.5 and wild type

GeneID	Dir.	Y.WT	$\mathbf{Y}.\mathbf{S2}$	O.WT	0.S2	$\mathbf{P}.\mathbf{WT}$	P.S2	Annotation
Solyc00g005092	WT <s2< td=""><td>0.00</td><td>9.23</td><td>0.71</td><td>32.12</td><td>0.74</td><td>45.10</td><td>Serine/threonine phosphatase-like protein</td></s2<>	0.00	9.23	0.71	32.12	0.74	45.10	Serine/threonine phosphatase-like protein
Solyc00g005287	WT < S2	0.00	0.00	0.08	0.70	0.13	1.37	3-oxoacyl-[acyl-carrier-protein] synthase
Solyc00g010760	WT < S2	0.00	0.00	0.02	0.11	0.01	0.15	LOW QUALITY:DNA helicase homolog
Solyc01g060350	WT <s2< td=""><td>0.30</td><td>0.65</td><td>0.90</td><td>4.17</td><td>0.52</td><td>3.59</td><td>Mediator of RNA polII transcription subunit 33A</td></s2<>	0.30	0.65	0.90	4.17	0.52	3.59	Mediator of RNA polII transcription subunit 33A
Solyc01g098630	WT < S2	8.46	22.36	5.95	11.00	1.88	2.85	Mitochondrial inner membrane translocase subunit Tim44
Solyc01g108800	WT < S2	0.17	0.25	0.22	0.51	0.13	0.37	3-hydroxyisobutyryl-CoA hydrolase-like protein
Solyc02g014077	WT <s2< td=""><td>0.36</td><td>1.37</td><td>1.99</td><td>5.98</td><td>1.22</td><td>6.94</td><td>phosphoglucan</td></s2<>	0.36	1.37	1.99	5.98	1.22	6.94	phosphoglucan
Solyc02g037640	WT < S2	0.36	1.99	1.13	3.86	0.70	4.65	LOW QUALITY:DNA helicase homolog
Solyc02g094300	WT < S2	22.10	44.15	48.60	63.60	22.88	23.80	ACT domain-containing protein

	Solyc03g116960	WT <s2< th=""><th>0.04</th><th>0.07</th><th>0.08</th><th>0.22</th><th>0.00</th><th>0.14</th><th>LOW QUALITY:Pentatricopeptide repeat</th></s2<>	0.04	0.07	0.08	0.22	0.00	0.14	LOW QUALITY:Pentatricopeptide repeat
Soly-04007150 WT-S2 27.63 36.36 40.03 70.75 24.71 50.43 Programmed cell death protein 2-like protein Soly-040071163 WT-S2 0.00 0.03 0.00 1.02 0.00 0.48 ubiquitin-competide maryme family protein Soly-050071070 WT-S2 0.08 0.08 0.08 0.01 2.25 0.21 0.07 1.28 Control of the solution of the soluti	Solyc04g009190	WT <s2< td=""><td>0.60</td><td>1.32</td><td>1.36</td><td>2.76</td><td>1.96</td><td>4.20</td><td>UPF0664 stress-induced protein C29B12.11c</td></s2<>	0.60	1.32	1.36	2.76	1.96	4.20	UPF0664 stress-induced protein C29B12.11c
Soly-064071150 WT <s2< th=""> 3.8 1.01 17.12 29.55 0.77 1.16 Cytochrome P450 family protein Soly-054021180 WT<s2< td=""> 0.00 0.18 0.00 5.40 0.00 0.48 0.00 2.42 Pyridosa15-phosphate-dependent enzyme family protein Soly-054021180 WT<s2< td=""> 0.39 9.76 1.46 1.11 0.44 4.85 Chlorophyll synthase Soly-054054010 WT<s2< td=""> 0.02 0.07 1.78 2.55 0.36 1.50 Amino acid transporter Soly-054054010 WT<s2< td=""> 0.02 0.02 0.21 0.15 1.23 0.10 4.70 Amino acid transporter Soly-054054010 WT<s2< td=""> 0.18 0.51 0.11 1.56 8.10 1.24 MSS-IR Paridosacid transporter Soly-05407410 WT<s2< td=""> 0.64 1.63 0.41 3.61 0.44 MS Delsytroascolate reluctase Soly-05407403303 VT<s2< td=""> 0.44 4.45 5.33 5.01 Cytochroascolate reluctase Soly-0540740330</s2<></s2<></s2<></s2<></s2<></s2<></s2<></s2<>	Solyc04g051780	WT <s2< td=""><td>27.63</td><td>36.36</td><td>40.03</td><td>70.75</td><td>24.71</td><td>50.43</td><td>Programmed cell death protein 2-like protein</td></s2<>	27.63	36.36	40.03	70.75	24.71	50.43	Programmed cell death protein 2-like protein
	Solyc04g071150	WT <s2< td=""><td>3.58</td><td>14.01</td><td>17.12</td><td>29.55</td><td>0.77</td><td>1.16</td><td>Cytochrome P450 family protein</td></s2<>	3.58	14.01	17.12	29.55	0.77	1.16	Cytochrome P450 family protein
	Solyc05g021163	WT <s2< td=""><td>0.00</td><td>0.03</td><td>0.00</td><td>1.02</td><td>0.00</td><td>0.48</td><td>ubiquitin-conjugating enzyme 34</td></s2<>	0.00	0.03	0.00	1.02	0.00	0.48	ubiquitin-conjugating enzyme 34
	Solyc05g021180	WT <s2< td=""><td>0.00</td><td>0.18</td><td>0.00</td><td>5.49</td><td>0.00</td><td>2.92</td><td>Pyridoxal-5'-phosphate-dependent enzyme family protein</td></s2<>	0.00	0.18	0.00	5.49	0.00	2.92	Pyridoxal-5'-phosphate-dependent enzyme family protein
Solyc0800 WTCS2 0.08 0.06 0.81 3.02 0.81 5.32 Guanplate-binding family protein Solyc08005400 WTCS2 0.02 0.21 0.15 1.23 0.19 4.70 NBS-LAR resistance protein-like protein Solyc08005400 WTCS2 0.02 0.21 0.15 1.23 0.19 4.70 NBS-LAR resistance protein-like protein Solyc08007550 WTCS2 0.58 0.64 21.08 20.48 71.20 NBS Solyc08007550 WTCS2 0.58 0.64 0.61 2.11 Delydroscorbate reductase Solyc080075640 WTCS2 0.03 0.41 0.23 0.02 0.45 Class Inest shock protein Solyc080075640 WTCS2 0.00 0.00 0.33 2.64 4.40.05 5.35 5.018 Cytochrome P450 Solyc080072040 WTCS2 0.00 0.76 0.00 0.43 0.05 A Lassium transporter Solyc08065700 WTCS2 0.00 0.76 0.00 <td>Solyc05g024190</td> <td>WT<s2< td=""><td>0.39</td><td>9.76</td><td>1.46</td><td>11.11</td><td>0.64</td><td>4.85</td><td>Chlorophyll synthase</td></s2<></td>	Solyc05g024190	WT <s2< td=""><td>0.39</td><td>9.76</td><td>1.46</td><td>11.11</td><td>0.64</td><td>4.85</td><td>Chlorophyll synthase</td></s2<>	0.39	9.76	1.46	11.11	0.64	4.85	Chlorophyll synthase
Solyc050050505 WT-CS2 0.21 0.71 1.78 2.55 0.36 1.95 Amino acid transporter Solyc05050400 WT-CS2 10.01 9.21 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.14 0.21 0.15 1.23 0.02 TAS5 Solyc05000410 WT-CS2 0.13 0.55 0.41 0.36 0.44 0.44 NB5-LRR resistance protein-like reductase Solyc0500750540 WT-CS2 0.00 0.01 0.03 0.33 0.02 0.45 Class Hack hock protein Solyc070505400 WT-CS2 0.00 0.00 0.35 2.03 0.01 0.74 Transposon protein Solyc050602320 WT-CS2 0.00 0.76 0.00 0.81 0.00 1.50 Potasimu transporter Solyc050602200 WT-CS2 0.00 0.77 2.6 1.40 0.00 0.76 F-box-like/WD repeat-containing protein TBLXR1	Solyc05g041770	WT < S2	0.08	0.06	0.81	3.02	0.81	5.32	Guanylate-binding family protein
Solycögo54010 WT-S2 0.02 0.21 0.15 1.23 0.19 4.70 NBS-LRR resistance protein-like protein Solycögo5400 WT-S2 4.85 6.63 16.20 20.85 20.45 37.26 TX55 Solycögo5050 WT-S2 0.13 0.41 0.61 0.48 4.41 NDH-dependent cyclic electron flow 5 Solycögo75613 WT-S2 0.03 0.41 0.02 0.48 0.10 0.36 DSHydögo75616 Solycögo75640 WT-S2 0.00 0.01 0.03 0.33 0.02 0.45 Class I beat shock protein Solycögo756640 WT-S2 0.00 0.76 0.00 0.81 0.00 1.50 Potasium transporter Solycögo2720 WT-S2 0.00 0.76 0.00 1.62 1.04 1.047 Txanspoon protein Solycögo2720 WT-S2 0.00 0.76 0.00 1.61 2.046 5.73 Lectin Solycögo2720 WT-S2 0.00 0.63	Solyc05g053965	WT <s2< td=""><td>0.21</td><td>0.67</td><td>1.78</td><td>2.55</td><td>0.36</td><td>1.95</td><td>Amino acid transporter</td></s2<>	0.21	0.67	1.78	2.55	0.36	1.95	Amino acid transporter
Solyclögböshov WT-S2 116.01 89.27 51.20 97.52 14.50 88.05 Cytochrome P450 Solyclögböshov WT-S2 0.13 0.55 0.41 3.61 0.44 NDI-dependent cyclic electron flow 5 Solyclögbörshov WT-S2 0.13 0.41 0.27 0.81 2.11 Dephytrasecorbate reductase Solyclögbörshov WT-S2 0.13 0.41 0.27 0.81 2.11 Dephytrasecorbate reductase Solyclögbörshov WT-S2 0.04 3.33 2.64 4.40 5.33 D.10 0.74 Tamarybeen protein protein Solyclögbörshov WT-S2 0.04 3.33 2.64 4.40 5.33 Letin Colorbore Solyclögborshov Solyclögborshov WT-S2 0.00 0.77 2.84 0.00 0.81 1.081 3.050 Adenien nucleotid alpha hydrolase-like domain kinase Solyclögborshov WT-S2 0.00 0.27 0.26 1.63 7.74 1.716 Light-independent protechin Sothorhydrolase-like	Solyc05g054010	WT <s2< td=""><td>0.02</td><td>0.21</td><td>0.15</td><td>1.23</td><td>0.19</td><td>4.70</td><td>NBS-LRR resistance protein-like protein</td></s2<>	0.02	0.21	0.15	1.23	0.19	4.70	NBS-LRR resistance protein-like protein
Solyc060020510 WT <s2< th=""> 4.85 6.63 10.20 20.85 20.45 37.26 TAS5 Solyc06002520 WT<s2< td=""> 0.53 0.41 0.57 0.44 0.44 A44 NDH-dependent cyclic electron flow 5 Solyc06007550 WT<s2< td=""> 0.03 0.10 0.33 0.02 0.45 Chasa heat shock protein Solyc06007540 WT<s2< td=""> 0.00 0.11 0.03 0.33 0.02 0.45 Chasa heat shock protein Solyc06007540 WT<s2< td=""> 0.00 0.11 0.03 0.32 1.03 0.10 1.50 Solyc06007540 WT<s2< td=""> 0.00 7.6 0.00 0.51 1.00 1.00 1.50 Potasimin trasporter Solyc08002130 WT<s2< td=""> 0.00 0.22 0.06 1.52 0.46 5.73 Lectin Solyc0800220 WT<s2< td=""> 6.55 68.55 45.75 68.20 64.73 Lectin Potasimin trasporter Solyc0806020 WT<s2< td=""> 0.00 0.65</s2<></s2<></s2<></s2<></s2<></s2<></s2<></s2<></s2<>	Solyc05g055400	WT <s2< td=""><td>116.91</td><td>89.27</td><td>51.20</td><td>97.52</td><td>14.50</td><td>38.05</td><td>Cytochrome P450</td></s2<>	116.91	89.27	51.20	97.52	14.50	38.05	Cytochrome P450
Solychog008235 WT <s2< th=""> 0.13 0.55 0.41 3.61 0.48 4.44 NDB-dependent cyclic electron flow 5 Solychog07520 WT<s2< td=""> 0.13 0.41 0.27 0.48 0.10 0.36 Dehydroascorbate reductase Solychog07504 WT<s2< td=""> 0.00 0.00 0.35 2.03 0.10 0.74 Thasposon protein Solychog075040 WT<s2< td=""> 0.04 3.33 2.46 44.05 5.33 50.18 Cytochrome P450 Solychog015060 WT<s2< td=""> 0.04 3.33 2.46 44.05 5.33 50.18 Cytochrome P450 Solychog015060 WT<s2< td=""> 0.00 0.76 0.00 0.61 0.00 6.7 Potasium transporter Solychog020200 WT<s2< td=""> 0.00 6.45 5.7 7.80 1.90 7.7 1.91 1.01 1.91 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46</s2<></s2<></s2<></s2<></s2<></s2<></s2<>	Solyc06g005410	WT <s2< td=""><td>4.85</td><td>6.63</td><td>16.20</td><td>20.85</td><td>20.45</td><td>37.26</td><td>TAS5</td></s2<>	4.85	6.63	16.20	20.85	20.45	37.26	TAS5
Solyclög07520 WT <s2< td=""> 0.58 2.09 1.31 1.95 0.81 2.11 Dehydroascorbate reductase Solyclög076340 WT<s2< td=""> 0.00 0.11 0.03 0.03 0.02 0.45 Class I heat shock protein Solyclög076340 WT<s2< td=""> 0.00 0.01 0.33 0.02 0.45 Class I heat shock protein Solyclög076340 WT<s2< td=""> 0.00 0.83 2.04 4.45 5.33 50.8 Solyclög076340 WT<s2< td=""> 0.00 0.76 0.00 0.81 0.00 1.50 Potassium transporter Solyclög076340 WT<s2< td=""> 0.00 0.77 0.26 1.60 1.00 1.50 Potassium transporter Solyclög07520 WT<s2< td=""> 0.00 0.27 0.26 1.40 0.00 0.67 Glossitytansferase Solyclög052020 WT<s2< td=""> 6.55 38.75 9.63.20 60.44 0.83 15.58 1.95 3.46 Vacular processing enzyme Solyclög05050 WT<s2< td=""> 0.01<!--</td--><td>Solyc06g008235</td><td>WT<s2< td=""><td>0.13</td><td>0.55</td><td>0.41</td><td>3.61</td><td>0.48</td><td>4.44</td><td>NDH-dependent cyclic electron flow 5</td></s2<></td></s2<></s2<></s2<></s2<></s2<></s2<></s2<></s2<></s2<>	Solyc06g008235	WT <s2< td=""><td>0.13</td><td>0.55</td><td>0.41</td><td>3.61</td><td>0.48</td><td>4.44</td><td>NDH-dependent cyclic electron flow 5</td></s2<>	0.13	0.55	0.41	3.61	0.48	4.44	NDH-dependent cyclic electron flow 5
Solyclog(07513) W ¹ CS2 0.13 0.41 0.27 0.48 0.10 0.36 Dehydroascorbate reductase Solyclog(07640 W ¹ CS2 0.00 0.00 0.35 2.03 0.10 0.74 Case Dehydroascorbate reductase Solyclog(0760320) W ¹ CS2 0.00 0.00 0.35 2.03 0.10 0.74 Case Dehydroascorbate reductase Solyclog(0760320) W ¹ CS2 0.04 3.33 2.64 4.40 5.33 0.02 LanC-like protein Solyclog(03500 W ¹ CS2 0.028 1.86 0.97 2.85 0.43 2.97 LanC-like protein 2 Solyclog(03500 W ¹ CS2 0.00 0.70 0.10 0.70 0.10 0.150 Lance	Solyc06g075520	WT <s2< td=""><td>0.58</td><td>2.09</td><td>1.31</td><td>1.95</td><td>0.81</td><td>2.11</td><td>Dehydroascorbate reductase</td></s2<>	0.58	2.09	1.31	1.95	0.81	2.11	Dehydroascorbate reductase
Solycd6g076340 W1<22 0.00 0.11 0.03 0.33 0.02 0.45 Class I heat shock protein Solycd7g05461 W1<22 0.00 0.00 0.35 2.03 0.10 0.74 Transpoon protein Solycd7g05464 W1<23 0.04 3.33 2.64 44.05 5.33 50.18 Cytochrome P450 Solycd7g05404280 W1<23 0.28 1.86 0.97 2.85 0.43 2.97 LanC-Like protein 2 Solycd8g01568 W1<23 0.00 0.76 0.00 0.81 0.00 1.50 Potassium transporter Solycd8g03210 W1<23 0.00 0.22 0.06 1.52 0.046 5.73 Lettin Solycd8g02220 W1<23 0.00 0.22 0.06 0.12 0.16 0.00 0.67 F-box-like/WD repeat-containing protein TBL1XR1 Solycd8g02220 W1<23 0.00 0.64 0.83 15.76 2.92 45.74 17.16 Light-independent protochlorophyllide reductase subunit B Solycd8g06500 W1<23 0.00 0.64 0.02 0.12 0.15 0.29 3.47 Vacuolar processing enzyme Solycd8g06500 W1<23 0.00 0.65 0.12 2.15 0.29 3.47 Vacuolar processing enzyme Solycd8g06500 W1<22 0.01 0.06 0.00 0.19 0.00 0.30 Vacuolar processing enzyme Solycd8g06500 W1<22 0.01 0.06 0.00 0.19 0.00 0.34 TPL Vacuolar processing enzyme Solycd8g06500 W1<22 0.01 0.06 0.00 0.19 0.00 0.30 Vacuolar processing enzyme Solycd8g06500 W1<22 0.01 0.06 0.00 0.02 0.00 0.30 0.00 0.30 Vacuolar processing enzyme Solycd8g06500 W1<22 0.01 0.06 0.00 0.02 0.00 0.30 0.00 0.30 Vacuolar processing enzyme Solycd9g061810 WT<22 0.02 0.13 0.14 4.42 1.59 6.83 3000 9.20 Mitochondrial ATP porthase subunit G protein Solycd9g061815 WT<22 0.04 0.13 0.17 1.53 0.01 0.59 4000 4000 400 400 400 40 40 40 40 40 40	Solyc06g075513	WT <s2< td=""><td>0.13</td><td>0.41</td><td>0.27</td><td>0.48</td><td>0.10</td><td>0.36</td><td>Dehydroascorbate reductase</td></s2<>	0.13	0.41	0.27	0.48	0.10	0.36	Dehydroascorbate reductase
Solyc07g026710 WT <s2 0.00="" 0.01="" 0.02="" 0.03="" 0.04="" 0.06="" 0.07="" 0.08="" 0.10="" 0.12="" 0.13="" 0.16="" 0.17="" 0.19="" 0.22="" 0.25="" 0.28="" 0.29="" 0.30="" 0.33="" 0.35="" 0.46="" 0.49="" 0.52="" 0.54="" 0.55="" 0.57="" 0.59="" 0.63="" 0.64="" 0.65="" 0.70="" 0.71="" 0.72="" 0.76="" 0.81="" 0.83="" 0.88="" 1.50="" 1.52="" 1.53="" 1.573="" 1.95="" 14.59="" 149.57="" 15.58="" 2="" 2.03="" 2.04="" 2.15="" 3.47="" 3.47p="" 32.66="" 4.05="" 4.45.59="" 5.33="" 5.45.5="" 5.55="" 5.73="" 50.18="" 6.56="" 663.20="" 69.48="" 9.20="" admine="" adp="" alpha="" atp="" containing="" cytochrome="" dimerisation="" domain="" enzyme="" family="" g="" glycosyltransferase="" har="" hydrolase-like="" kinase="" lalty-previdase="" lanc-like="" lectin="" low="" may="" mitochondrial="" n<="" not="" nucleotide="" p450="" potassium="" processing="" protein="" q="" solyc07g05320="" solyc08g042340="" solyc08g04280="" solyc08g0520="" solyc08g05220="" solyc08g05680="" solyc08g06500="" solyc08g06512="" solyc08g06520="" solyc08g06622="" subunit="" synthase="" td="" transporter="" transposon="" vacuolar="" wt<s2=""><td>Solyc06g076540</td><td>WT<s2< td=""><td>0.00</td><td>0.11</td><td>0.03</td><td>0.33</td><td>0.02</td><td>0.45</td><td>Class I heat shock protein</td></s2<></td></s2>	Solyc06g076540	WT <s2< td=""><td>0.00</td><td>0.11</td><td>0.03</td><td>0.33</td><td>0.02</td><td>0.45</td><td>Class I heat shock protein</td></s2<>	0.00	0.11	0.03	0.33	0.02	0.45	Class I heat shock protein
$ Solyc12(0)53460 = W1-\xi 2 0.04 3.33 2.64 44.05 5.33 0.01 C by Cohrome P450 C $	Solyc07g026710	WT <s2< td=""><td>0.00</td><td>0.00</td><td>0.35</td><td>2.03</td><td>0.10</td><td>0.74</td><td>Transposon protein</td></s2<>	0.00	0.00	0.35	2.03	0.10	0.74	Transposon protein
$ Solyc08g05280 = W1-S2 0.28 0.28 0.97 2.85 0.43 2.97 LanC-Inte protein 2 \\ Solyc08g014280 WT-S2 0.00 0.76 0.00 0.81 0.00 1.50 Potassium transporter \\ Solyc08g014280 WT-S2 0.00 0.22 0.06 1.52 0.46 5.73 Lectin \\ Solyc08g022130 WT-S2 0.00 0.27 0.26 1.40 0.00 0.6 F-box-like/VD repeat-containing protein TBL1XR1 \\ Solyc08g02220 WT-S2 6.65 308.55 445.59 66.32 0.69.4 149.57 G lycosyltransferase \\ Solyc08g05220 WT-S2 6.6.5 308.55 445.59 66.32 0.69.4 149.57 G lycosyltransferase \\ Solyc08g05220 WT-S2 6.6.5 0.65.5 0.6.55 0.12 0.29 3.47 Vacuolar processing enzyme \\ Solyc08g05220 WT-S2 0.00 6.64 0.83 15.58 1.95 32.66 Vacuolar processing enzyme \\ Solyc08g0520 WT-S2 0.00 0.65 0.12 0.15 0.29 3.47 Vacuolar processing enzyme \\ Solyc08g0520 WT-S2 0.01 0.06 0.00 0.01 0.00 0.30 Vacuolar processing enzyme \\ Solyc08g0520 WT-S2 0.11 0.026 0.33 0.70 0.16 0.88 ATP/ADP transporter \\ Solyc08g05245 WT-S2 0.12 0.26 0.33 0.70 0.16 0.08 LOW UQALITY/Peroxidase \\ Solyc08g0510 WT-S2 0.41 1.19 1.30 3.86 8.59 9.70 Clade IV lectin receptor kinase \\ Solyc08g05180 WT-S2 0.41 1.19 1.30 3.86 8.59 9.70 Clade IV lectin receptor kinase \\ Solyc08g05180 WT-S2 0.41 1.19 1.34 4.42 1.59 6.83 3-coxacyl-acyl-arrier-protein synthase subunit G protein \\ Solyc09g05185 WT-S2 0.00 0.40 0.00 0.00 0.129 Homeobx leucine zipper protein Synthase Solyc09g0508185 WT-S2 0.02 0.13 0.17 1.53 0.01 0.59 dsRNA-binding domain containing protein \\ Solyc12g04200 WT-S2 1.136 5.196 23.05 7.355 7.78 12.61 Protease Do-like 7 Solyc03g0700 WT-S2 0.53 7.74 5.117 2.194 8.06 7.66 Phosphate transporter PHO1-like protein \\ Solyc12g04200 WT-S2 1.136 5.196 23.05 7.355 7.78 12.64 Protease oxidas/kelch repeat superfamily protein \\ Solyc03g07400 WT-S2 1.53 7.78 12.64 7.66 7.66 7.66 Phosphate transporter PHO1-like protein 15 Solyc03g07400 WT-S2 0.02 0.01 0.01 0.03 0.00 1.29 Homeobx leucine zipper protein 15 Solyc03g07400 WT-S2 1.23 6.17 1.344 6.63 7.66 7.67 7.8 12.64 Protease 0-like 7 $	Solyc07g055460	WT <s2< td=""><td>0.04</td><td>3.33</td><td>2.64</td><td>44.05</td><td>5.33</td><td>50.18</td><td>Cytochrome P450</td></s2<>	0.04	3.33	2.64	44.05	5.33	50.18	Cytochrome P450
Solycolsgub1680 W1 < 22 0.00 0.76 0.00 0.81 0.00 1.51 0.00 1.51 0.00 1.52 Potassium transporter Solycolsgub4280 W1 < 22 0.00 0.22 0.06 1.52 0.46 5.73 Lectin Solycolsgub4280 W1 < 22 0.00 0.22 0.26 1.52 0.46 5.73 Lectin Solycolsgub2130 W1 < 22 0.00 0.27 0.26 1.40 0.00 0.67 Foox.like/WD repeat-containing protein TBL1XR1 Solycolsgub2220 WT < 22 0.00 0.55 445.59 663.20 69.48 1.95 Glycolsgub420 WT < 22 0.00 0.55 13.76 29.24 5.74 17.16 Light-independent protochlorophyllide reductase subunit B Solycolsgub6200 WT < 22 0.00 0.55 0.12 2.15 0.29 3.47 Vacuolar processing enzyme Solycolsgub6500 WT < 22 0.01 0.06 0.00 0.19 0.00 0.30 Vacuolar processing enzyme Solycolsgub6602 WT < 22 0.01 0.06 0.00 0.19 0.00 0.30 Vacuolar processing enzyme Solycolsgub6520 WT < 22 0.01 0.06 0.00 0.19 0.00 0.30 Vacuolar processing enzyme Solycolsgub6620 WT < 22 0.02 0.31 0.06 0.00 0.19 0.00 0.30 Vacuolar processing enzyme Solycolsgub6520 WT < 22 0.11 0.06 0.00 0.19 0.00 0.30 Vacuolar processing enzyme Solycolsgub103 WT < 22 0.24 0.13 1.34 4.42 1.59 6.30 Vacuolar processing enzyme Solycolsgub100 WT < 22 0.24 0.13 1.34 4.42 1.59 6.8 3- $2xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx$	Solyc07g063320	WT <s2< td=""><td>0.28</td><td>1.86</td><td>0.97</td><td>2.85</td><td>0.43</td><td>2.97</td><td>LanC-like protein 2</td></s2<>	0.28	1.86	0.97	2.85	0.43	2.97	LanC-like protein 2
Solyc08g03340 WT <22 0.00 0.22 0.06 1.52 0.46 5.73 Lectin Fuller State domain kinase Solyc08g02330 WT <22 0.00 0.27 0.26 1.40 0.00 0.84 149.57 Sigma frame nucleotide alpha hydroiase-like domain kinase Solyc08g06220 WT <22 6.53 368.55 445.59 0.663.20 69.48 149.57 (Jycosyltransferase Solyc08g06220 WT <22 6.35 25.05 13.76 29.24 5.74 17.16 Light-independent protochlorophyllide reductase subunit B Solyc08g06500 WT <22 0.00 6.94 0.83 15.58 1.97 32.66 Vacuolar processing enzyme Solyc08g06500 WT <22 0.00 0.65 0.12 2.15 0.29 3.47 Vacuolar-processing enzyme Solyc08g06500 WT <22 0.00 0.65 0.12 2.15 0.29 3.47 Vacuolar-processing enzyme Solyc08g06520 WT <22 0.10 0.66 0.00 0.19 0.00 0.30 Vacuolar processing enzyme Solyc08g06520 WT <22 0.12 0.26 0.33 0.70 0.16 0.08 ATP/ADP transporter Solyc08g06525 WT <22 0.12 0.26 0.33 0.70 0.16 0.06 LOW QUALITY:Peroxidase Solyc09g011030 WT <22 0.41 1.19 1.30 3.86 8.59 9.70 Clade IV lectin receptor kinase Solyc09g05185 WT <22 0.00 3.68 0.00 17.25 0.00 9.20 Mitochondrial ATP synthase subunit G protein Solyc09g05185 WT <22 0.00 3.64 0.01 0.38 0.00 1.72 Mitochondrial ATP synthase subunit G protein Solyc09g05185 WT <22 0.00 3.64 0.01 0.38 0.00 1.72 Mitochondrial ATP synthase subunit G protein Solyc09g050158 WT <22 0.00 3.64 0.01 0.38 0.00 1.29 Homeobox lectine zipper protein loss Solyc09g06030 WT <22 0.53 3.74 2.41 3.07 0.87 1.13 CASP-like protein Gomain containing protein Solyc1g0g05030 WT <22 0.53 3.74 2.41 3.07 0.87 1.13 CASP-like protein Solyc1g0206070 WT <22 0.53 3.74 2.41 3.07 0.87 1.13 CASP-like protein Solyc1g0205070 WT <22 0.53 3.74 2.41 3.07 0.87 1.13 CASP-like protein Solyc1g0205070 WT <22 0.53 3.74 2.41 3.07 0.87 1.13 CASP-like protein Solyc1g0205070 WT <22 0.53 3.74 2.41 3.07 0.87 1.13 CASP-like protein Solyc1g0205070 WT <22 0.53 3.74 2.41 3.07 0.87 1.13 CASP-like protein Solyc1g0205070 WT <22 0.53 3.74 2.41 3.07 0.87 1.13 CASP-like protein Solyc1g0205070 WT <22 0.53 3.74 2.41 3.07 0.87 1.13 CASP-like protein Solyc1g0205070 WT <22 0.53 3.74 2.41 3.07 0.87 1.13 CASP-like protein Sol	Solyc08g015680	WT <s2< td=""><td>0.00</td><td>0.76</td><td>0.00</td><td>0.81</td><td>0.00</td><td>1.50</td><td>Potassium transporter</td></s2<>	0.00	0.76	0.00	0.81	0.00	1.50	Potassium transporter
Solycbg023330 W1 <s2 0.00="" 0.01="" 0.02="" 0.10="" 0.12="" 0.13="" 0.16="" 0.17="" 0.19="" 0.20="" 0.22="" 0.24="" 0.26="" 0.27="" 0.29="" 0.30="" 0.31="" 0.33="" 0.34="" 0.39="" 0.40="" 0.41="" 0.44="" 0.45="" 0.46="" 0.54="" 0.55="" 0.59="" 0.66="" 0.67="" 0.70="" 0.83="" 0.87="" 0.89="" 0.<="" 1.01="" 1.13="" 1.19="" 1.22="" 1.29="" 1.30="" 1.34="" 1.40="" 1.53="" 1.59="" 147.65="" 2.15="" 2.41="" 3="" 3-coxacyl-[acyl-carrier-protein]="" 3.07="" 3.47="" 3.64="" 3.74="" 3.86="" 368.55="" 4.42="" 445.59="" 5.73="" 6.65="" 6.67="" 6.83="" 65.65="" 663.20="" 69.48="" 8.59="" 9.70="" adp="" atp="" casp-like="" clade="" containing="" domain-like="" dsrna-binding="" enzyme="" f-box-like="" g="" galactose="" glycosyltransferase="" homeobox="" iv="" kelch="" kinase="" lectin="" leucine="" oxidase="" pho1-like="" processing="" prosphate="" protein="" receptor="" repeat="" repeat-containing="" section="" solycbg02330="" solycbg060518="" solycbg061030="" solycbg06161="" solycbg062220="" solycbg06600="" solycbg066590="" solycbg06660="" solycbg06692="" solycbg091190="" solycl2005070="" superfamily="" synthase="" tbl1xr1="" td="" tobunit="" transporter="" vacuolar="" vacuolar-processing="" w1<s2="" wd="" zipper=""><td>Solyc08g044280</td><td>WT<s2< td=""><td>7.91</td><td>19.03</td><td>13.15</td><td>16.02</td><td>10.81</td><td>30.59</td><td>Adenine nucleotide alpha hydrolase-like domain kinase</td></s2<></td></s2>	Solyc08g044280	WT <s2< td=""><td>7.91</td><td>19.03</td><td>13.15</td><td>16.02</td><td>10.81</td><td>30.59</td><td>Adenine nucleotide alpha hydrolase-like domain kinase</td></s2<>	7.91	19.03	13.15	16.02	10.81	30.59	Adenine nucleotide alpha hydrolase-like domain kinase
Solycbg02221 w1 < S2 6.06 0.27 0.26 1.30 0.00 0.67 P-oox-like/WD repeat-containing protein FLLTAR1 Solycbg06220 WT < S2 6.35 25.05 13.76 229.24 5.74 149.57 Glycosyltransferase Solycbg06590 WT < S2 0.00 6.94 0.83 149.57 Glycosyltransferase Solycbg06560 WT < S2 0.00 6.94 0.83 15.58 1.95 32.66 Vacuolar processing enzyme Solycbg06560 WT < S2 0.00 0.65 0.12 2.15 0.29 32.67 Vacuolar-processing enzyme Solycbg06560 WT < S2 0.10 0.06 0.00 0.19 0.00 0.30 Vacuolar processing enzyme Solycbg065620 WT < S2 0.12 0.26 0.33 0.70 0.16 0.38 ATP/ADP transporter Solycbg06525 WT < S2 0.12 0.26 0.33 0.70 0.16 0.58 ATP/ADP transporter Solycbg06525 WT < S2 0.12 0.26 0.33 0.70 0.16 0.00 0.00 Clad Vacuolar processing enzyme Solycbg06525 WT < S2 0.01 3.86 8.59 9.70 Clad VV lettin receptor kinase Solycbg061610 WT < S2 0.42 1.19 1.30 3.86 8.59 9.70 Clad VV lettin receptor kinase Solycbg061610 WT < S2 0.00 3.68 0.00 17.25 0.00 9.20 Mitochondrial ATP synthase subunit G protein Solycbg06630 WT < S2 0.03 0.64 0.01 0.88 0.04 0.49 HAT family dimerisation domain containing protein Solyclg06630 WT < S2 0.00 0.40 0.00 0.30 0.00 1.29 Horeaco-like 7 protein spiper protein Solyclg06703 WT < 2 1.36 51.66 23.05 7.35 7.78 12.61 P-rotease-like protein Solyclg06703 WT < S2 1.36 51.74 2.41 3.07 0.87 1.13 CASP-like protein Solyclg0705 WT < S2 0.00 0.10 1.134 4.84 51.73 10.49 8.06 P-hox associated interaction domain-containing protein Solyclg06703 WT < S2 0.00 0.03 8.40 0.29 1.136 4.117 2.194 8.06 F-hox associated interaction domain-containing protein Solyclg06703 WT < S2 0.00 0.00 8.42 0.00 1.76 9.73 1.12 4.80 F-hox associated interaction domain-containing protein Solyclg06705 WT < S2 0.92 0.97 1.128 4.96 5.91 3.15 Photosystem I P700 chlorophyli a apoprotein A1 Solyclg06703 WT < S2 0.02 0.00 3.64 0.12 0.89 0.54 0.22 Glatese oxidase/kelch repeat superfamily protein Solyclg06705 WT < S2 0.92 0.97 1.128 4.96 5.91 3.15 Photosystem I P700 chlorophyli a apoprotein A1 Solyclg060705 WT < S2 0.92 0.97 1.128 4.96 5.91 3.15 Photosystem I P700 chlorophyli a protein A1	Solyc08g023340	W1<52	0.00	0.22	0.06	1.52	0.46	5.73	Lectin
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Solyc08g022130	W1<52	0.00	0.27	0.26	1.40	0.00	0.67	Classes of the second and the second and the second
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Solyc08g002220	WT < 82	6.25	308.33	445.59	20.24	09.40 5 74	149.57	Giveosyltransierase
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Solyc08g062290	WT < 82	0.35	25.05	13.70	29.24	1.05	22.66	Variable and a service and the service of the servi
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Solyc08g005590	WT<82	0.00	0.94	0.83	2.15	1.95	32.00	Vacuolar processing enzyme
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Solve08g005000	WT<\$2	0.00	0.05	0.12	0.10	0.29	0.20	Vacuolar processing enzyme
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Solvc08g065720	WT < S2	0.01	0.00	0.00	0.19	0.00	0.30	ATP/ADP transporter
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Solvc08g082545	WT < S2	0.12	0.20	0.00	0.70	0.10	0.05	LOW OUALITY Paravidase
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Solvc09g011030	WT < S2	14 51	20.73	15.45	20.44	7.81	15 58	Hep70 binding protein 1
Solyc0g018610WT < S20.003.680.0017.250.009.20Mitochondrial ATP synthase subunit G proteinSolyc0g031528WT < S2	Solvc09g011990	WT < S2	0.24	1 19	1 30	3.86	8.59	9 70	Clade IV lectin receptor kinase
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Solvc09g018610	WT < S2	0.00	3.68	0.00	17 25	0.00	9.20	Mitochondrial ATP synthase subunit G protein
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Solvc09g031528	WT < S2	0.24	0.13	1.34	4.42	1.59	6.83	3-oxoacyl-[acyl-carrier-protein] synthase
	Solvc09g056185	WT <s2< td=""><td>0.03</td><td>0.64</td><td>0.01</td><td>0.88</td><td>0.04</td><td>0.49</td><td>HAT family dimerisation domain containing protein</td></s2<>	0.03	0.64	0.01	0.88	0.04	0.49	HAT family dimerisation domain containing protein
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Solvc09g066030	WT <s2< td=""><td>0.00</td><td>0.40</td><td>0.00</td><td>0.30</td><td>0.00</td><td>1.29</td><td>Homeobox leucine zipper protein</td></s2<>	0.00	0.40	0.00	0.30	0.00	1.29	Homeobox leucine zipper protein
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Solvc11g021360	WT <s2< td=""><td>11.36</td><td>51.96</td><td>23.05</td><td>73.35</td><td>7.78</td><td>12.61</td><td>Protease Do-like 7</td></s2<>	11.36	51.96	23.05	73.35	7.78	12.61	Protease Do-like 7
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Solvc12g005070	WT <s2< td=""><td>2.55</td><td>3.74</td><td>2.41</td><td>3.07</td><td>0.87</td><td>1.13</td><td>CASP-like protein</td></s2<>	2.55	3.74	2.41	3.07	0.87	1.13	CASP-like protein
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Solyc12g042800	WT <s2< td=""><td>0.02</td><td>0.13</td><td>0.17</td><td>1.53</td><td>0.01</td><td>0.59</td><td>dsRNA-binding domain-like superfamily protein</td></s2<>	0.02	0.13	0.17	1.53	0.01	0.59	dsRNA-binding domain-like superfamily protein
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Solvc01g067030	WT>S2	11.23	617	13.41	6.83	7 36	7 66	E-box associated interaction domain-containing protein
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Solvc02g088240	WT>S2	1 02	0.78	5 65	1 17	21.94	8.06	Phosphate transporter PHO1-like protein
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Solvc03g007395	WT > S2	6.99	3 71	11.28	4.96	5 91	3.15	Photosystem I P700 chlorophyll a apoprotein A1
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Solvc03g007400	WT>S2	0.45	0.22	1 01	0.39	0.54	0.20	Galactose oxidase/kelch repeat superfamily protein
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Solvc03g025150	WT > S2	75.83	57.68	139.97	97.48	151 73	160.98	Dentin sialophosphoprotein-related
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Solvc03g036480	WT > S2	0.02	0.00	3.64	0.12	0.89	0.18	Phenylalanine ammonia-lyase
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Solvc03g036473	WT>S2	0.00	0.00	8.42	0.00	1.63	0.09	Phenylalanine ammonia-lyase
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Solvc04g050220	WT > S2	5.97	3.09	6.00	1.70	3.29	1.01	F-box associated interaction domains-containing protein
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Solvc05g040050	WT>S2	9.88	7.47	17.16	12.18	19.68	19.73	DnaJ domain-containing protein
	Solvc05g052470	WT>S2	6.92	2.91	44.28	25.40	42.22	37.22	Ferritin
	Solyc05g055730	WT>S2	17.18	7.77	0.74	1.05	15.15	5.44	Methylenetetrahydrofolate reductase
	Solyc06g009170	WT>S2	6.69	3.06	61.28	41.04	53.43	48.01	Epoxide hydrolase
	Solyc06g063090	WT>S2	1.18	0.92	3.92	1.59	31.57	21.92	alanine aminotransferase 2
	Solyc08g077460	WT>S2	10.94	6.91	16.99	10.73	35.92	30.16	SBP
Solyc12g005060 WT>S2 0.25 0.02 2.04 0.93 1.61 1.76 ATP synthase gamma-subunit Solyc12g0056727 WT>S2 0.10 0.01 0.62 0.15 0.77 0.10 NADH which are original structure theory for the structure of	Solyc11g071770	WT>S2	14.77	10.26	25.75	17.13	36.76	38.65	Translation elongation factor
Solve $12 = 0.26727$ WT > S2 0.10 0.01 0.62 0.15 0.77 0.10 NADH ubiguing an exident during the first state of the second stat	Solyc12g005060	WT>S2	0.25	0.02	2.04	0.93	1.61	1.76	ATP synthase gamma-subunit
Solyc12g030121 W1>52 0.13 0.01 0.05 0.15 0.11 0.10 NADH-ubiquinone oxidoreductase chain 5	Solyc12g036727	WT>S2	0.19	0.01	0.63	0.15	0.77	0.10	NADH-ubiquinone oxidoreductase chain 5

Table S9. Oligonucleotide sequences used in this study.

Experiment	Name	Sequence (5'-3'
Northern blot	sly-miR168 sly-U6 sly-miR482e sly-miR482b (LNA) sly-miR2118a sly-miR2118b (LNA)	GTCCCGACCTGCACCAAGCGA GGCCATGCTAATCTTCTCTGTATCGTT GGTATGGGAGGAGTAGGAAAGA GGCATGGGCGGTGTAGGCAAGA TAGGAATGGGTGGAATTGGAAA TTGGCATGGGTGGAATAGGAAA
qRT-PCR	TAS5_qPCR_1_F TAS5_qPCR_1_R LRR2_qRT_B_F LRR2_qRT_B_R EXP_qPCR_F EXP_qPCR_R	GGTTTGGTTCGGGTTGTTTA TCAACATTGCTTTCCCACTTT CTAGCGAAGCGTGGTCTTGA TGAGCACAAAAGAGTTGTAGCTT GCTAAGAACGCTGGACCTAATG TGGGTGTGCCCTTTCTGAATG
RT-PCR	mimicry_482_F mimicry_482_R mimicry_2118b_F mimicry_2118b_R	AAGGCATGGGCGGCACTGT GAATTCTCTTTCCTACTATGC ACCAATTGGCATGGGTGATA GAATTCTTTCCTATTCAGTCA
Mimicry cloning	miR2118b_mimic_Fw miR2118b_mimic_Rv miR482_mimic_Fw miR482_mimic_Rv	CACCAATTGGCATGGGTGATAGAATAGGAAAGTTGTTGTTGTTGTTGTTGT

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