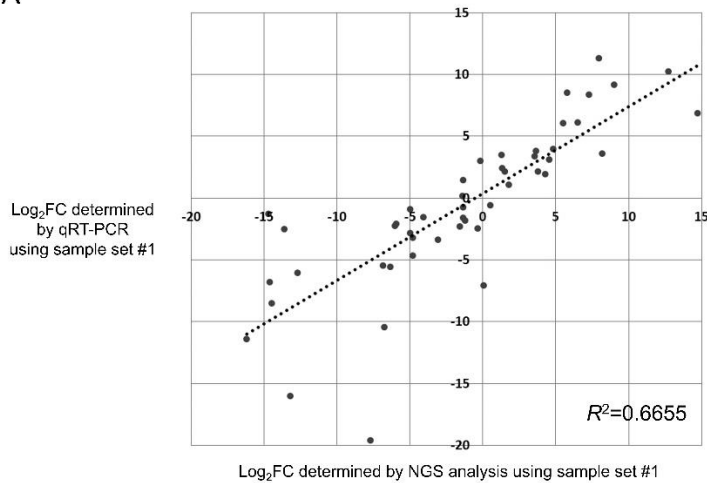


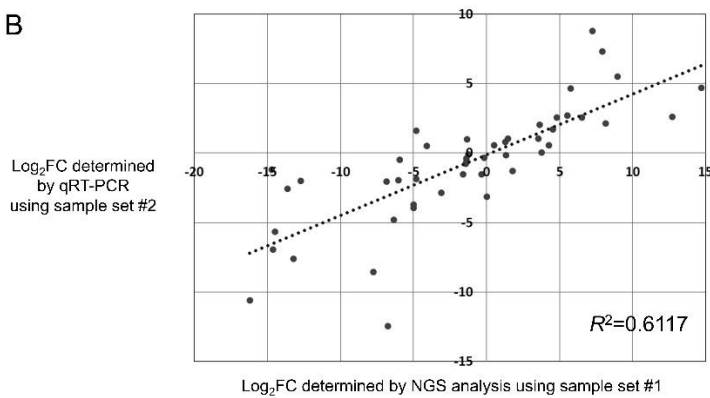
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**Supplementary Figure S1.** HPLC chromatogram (wavelength 515 nm) obtained from analysis of the ray floret corolla at four capitulum developmental stages in AD. Number above each peak correspond to that in table 1.

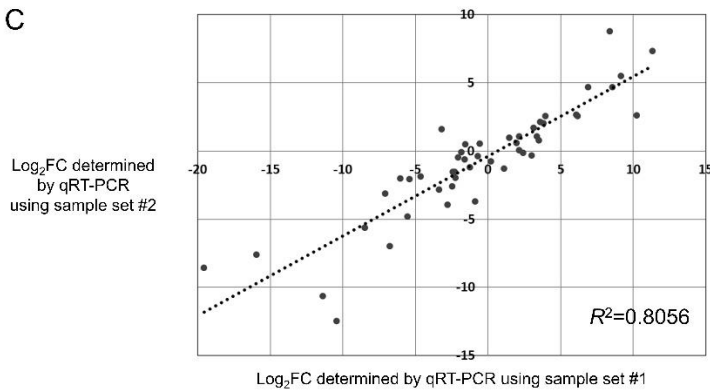
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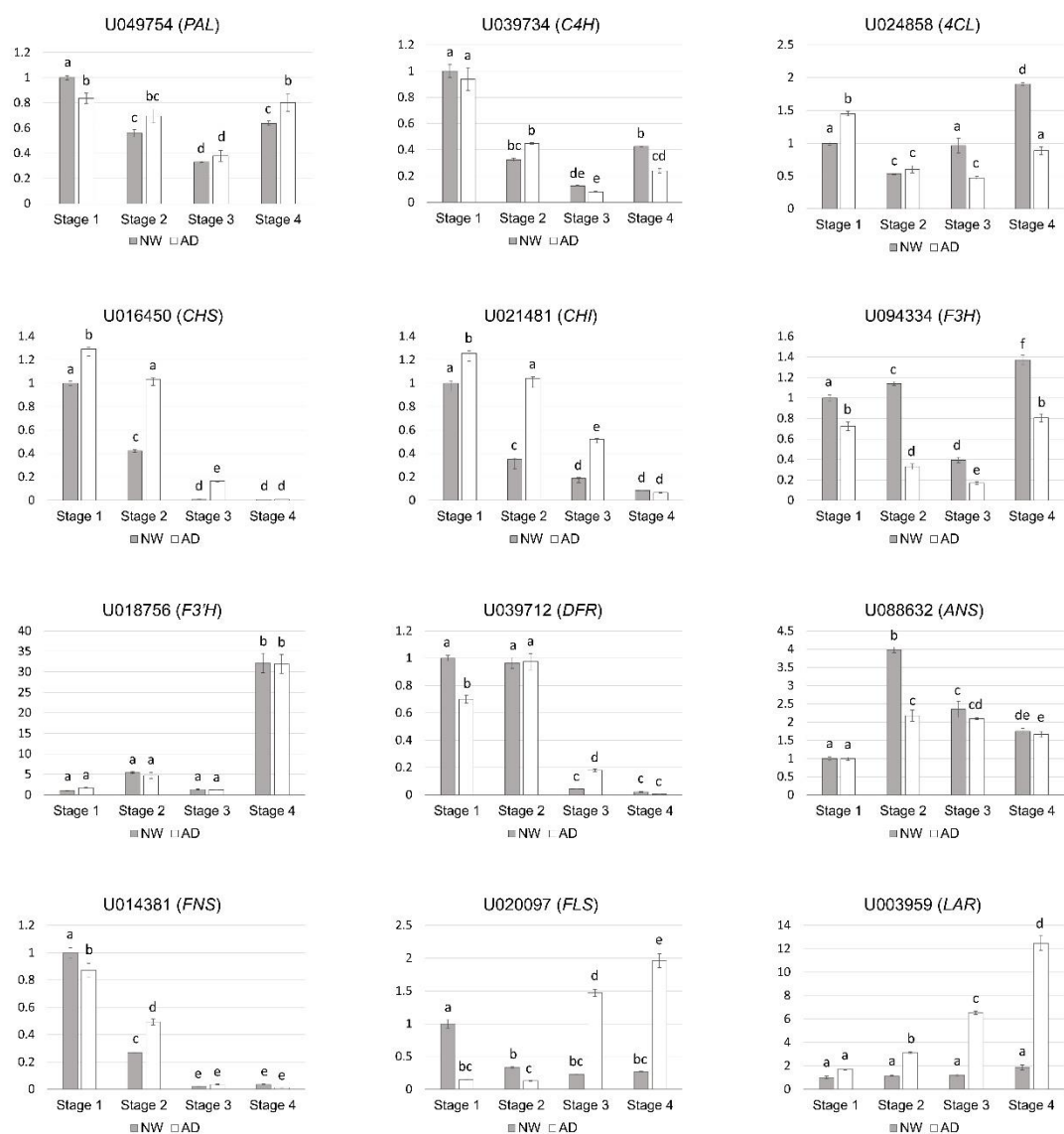


C



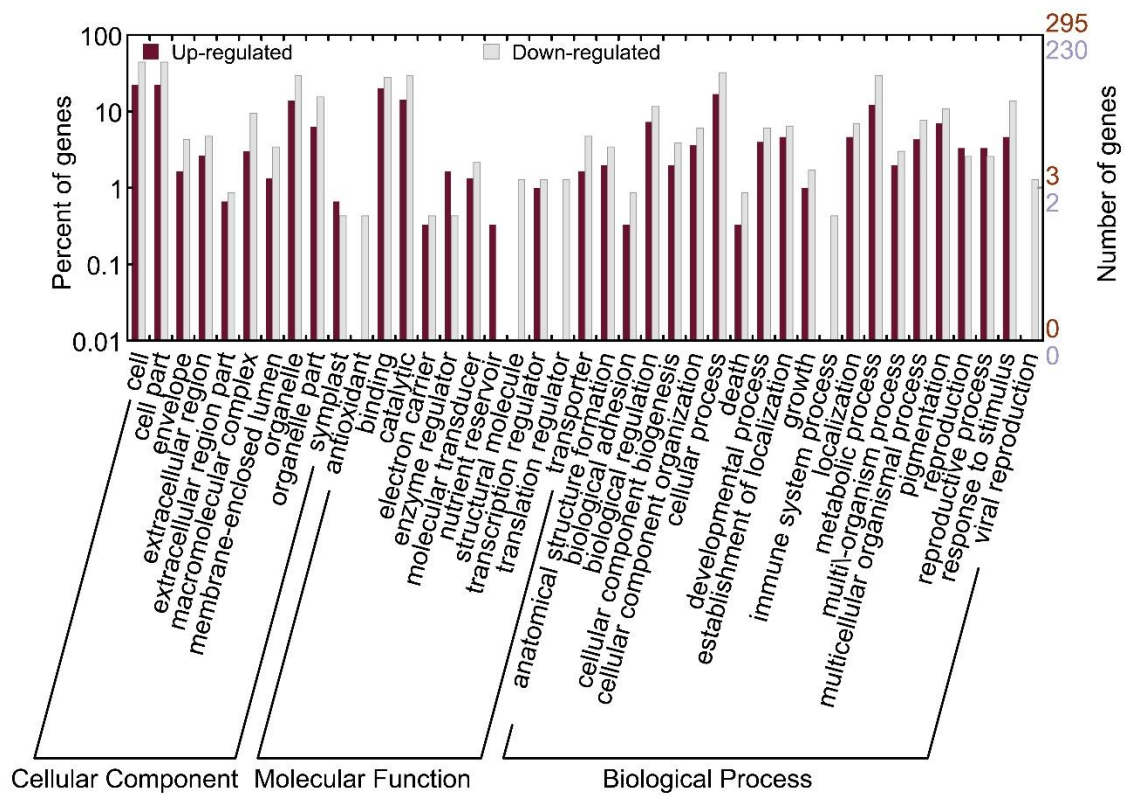
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**Supplementary Figure S2.** Correlation between expression levels of unigenes determined by a transcriptomic analysis and two qRT-PCR analyses using samples obtained in two different years. This analysis was performed for 48 unigenes listed in supplementary table 2. Log<sub>2</sub>FC refers to logarithm (base 2) of the expression level of unigenes in ARTI-Dark Chocolate relative to that in Noble Wine. (A) Correlation between results of qRT-PCR and transcriptome analysis using ray florets at stage 1 of obtained in 2014 (B) Correlation between results of qRT-PCR using ray florets at stage 1 obtained in 2019 and transcriptome analysis using ray florets at stage 1 obtained in 2014 (C) Correlation between results of qRT-PCR using ray florets at stage 1 obtained in 2019 and those at stage 1 obtained in 2014, respectively.



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**Supplementary Figure S3.** Expression of unigenes annotated as flavonoid biosynthetic genes at four flower stages in Noble Wine (NW) and ARTI-Dark Chocolate (AD). Relative expression levels were determined by qRT-PCR analysis. When multiple unigenes were annotated to a single flavonoid biosynthetic gene, the unigene that showed the highest expression level in AD in transcriptome analysis (Figure 4) was selected for this analysis. Error bars indicate  $\pm$ standard error (n = 3). Different letters above bars in graphs indicate statistical difference analyzed by one-way ANOVA and Duncan's multiple range test.



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**Supplementary Figure S4.** Classification of differentially expressed genes (DEGs) by gene ontology (GO) analysis based on assignment of level 2 GO terms to DEGs

33 **Supplementary Table S1.** Transcriptome sequencing and unigene assembly information

Total number of clean reads (Total number of base pairs in clean reads)		Number of unigenes	Average length of unigenes	N <sub>50</sub> of unigenes	Total number of expressed unigenes <sup>z</sup> (percentage to total number of unigenes)	
NW	AD				NW	AD
53,964,812 (5,377,305,797)	43,514,092 (4,335,046,053)	103,470	567	757	56,966 (55.1%)	58,467 (56.5%)

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35 <sup>z</sup> Only UniGenes having FPKM value higher than 1.0 were counted

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39**Supplementary Table S2.** Comparison of expression levels of differentially expressed genes (DEGs) determined by transcriptome sequencing and qRT-PCR analysis, respectively.

Unigene ID	Description	Transcriptome analysis by NGS				qRT-PCR			
		RPKM in NW	RPKM in AD	Log <sub>2</sub> FC	P-value	Sampled in 2014		Sampled in 2019	
						Log <sub>2</sub> FC	P-value	Log <sub>2</sub> FC	P-value
U004151	Eukaryotic peptide chain release factor subunit 1-3 [Source:SWISS;ACC:P35614]	155.48	0	-16.2	5.91E-06	-11.4	1.70E-04	-10.61	5.01E-03
U013224	Probable receptor-like protein kinase At2g39360 [Source:SWISS;ACC:O80623]	51.02	0	-14.7	1.20E-03	-1.25	6.42E-03	-1.21	5.01E-03
U029501	Chalcone--flavonone isomerase [Source:SWISS;ACC:Q45QI7]	48.24	0	-14.6	2.82E-04	-6.79	1.91E-02	-6.97	3.09E-03
U032284	Glutathione S-transferase DHAR2 [Source:SWISS;ACC:Q9FRL8]	23.72	0	-14.5	9.72E-04	-8.5	8.36E-04	-5.64	1.42E-04
U014436	Cyclin-A2-1 [Source:SWISS;ACC:Q39071]	11.52	0	-13.6	1.29E-03	-2.48	4.89E-03	-2.57	2.27E-03
U016843	-	20.62	0	-13.2	5.87E-03	-15.98	1.73E-02	-7.61	4.41E-04
U011315	Leucoanthocyanidin dioxygenase [Source:SWISS;ACC:Q96323]	35.31	0	-12.7	7.34E-02	-6.03	3.63E-04	-2.02	3.60E-05
U011807	Histone deacetylase 14 [Source:SWISS;ACC:Q941D6]	29.35	0.09	-7.73	1.33E-03	-19.57	3.68E-04	-8.58	7.56E-03
U036450	Malonyl-coenzyme A:anthocyanin 3-O-glucoside-6"-O-malonyltransferase	41.36	0.23	-6.86	1.05E-03	-5.43	7.77E-04	-2.05	7.04E-05

Unigene ID	Description	Transcriptome analysis by NGS				qRT-PCR			
		RPKM in NW	RPKM in AD	Log <sub>2</sub> FC	P-value	Sampled in 2014		Sampled in 2019	
						Log <sub>2</sub> FC	P-value	Log <sub>2</sub> FC	P-value
	{ECO:0000303 PubMed:12481098 } [Source:SWISS;ACC:Q8GSN8]								
U061875	Secoisolariciresinol dehydrogenase [Source:SWISS;ACC:Q94KL8]	238.94	1.45	-6.77	1.59E-04	-10.44	5.97E-05	-12.46	1.26E-03
U061943	Acid phosphatase 1 [Source:SWISS;ACC:P27061]	501.33	4.11	-6.35	3.89E-04	-5.55	4.09E-03	-4.82	1.61E-05
U000039	3-ketoacyl-CoA synthase 17 [Source:SWISS;ACC:Q5XEP9]	60.37	0.61	-6.01	1.75E-03	-2.24	1.14E-02	-1.94	2.18E-05
U015711	Basic blue protein [Source:SWISS;ACC:P00303]	140.33	1.59	-5.95	9.29E-03	-2.05	2.45E-02	-0.49	1.41E-02
U020751	Flavonoid 3'-monooxygenase [Source:SWISS;ACC:Q9SBQ9]	132.27	2.64	-5.01	4.53E-03	-2.8	3.71E-03	-3.94	2.31E-04
U020721	ABC transporter G family member 39 [Source:SWISS;ACC:Q7PC84]	23.68	0.48	-4.98	9.79E-03	-0.87	2.61E-02	-3.7	2.06E-07
U043123	Protein TRANSPARENT TESTA 12 [Source:SWISS;ACC:Q9LYT3]	7.37	0.17	-4.8	4.29E-02	-3.18	1.82E-02	1.6	1.11E-04
U020331	UDP-glycosyltransferase 76C1 [Source:SWISS;ACC:Q9FI99]	173.53	4.04	-4.79	3.24E-03	-4.63	5.46E-04	-1.87	1.03E-03
U029358	1-aminocyclopropane-1-carboxylate oxidase homolog 1 [Source:SWISS;ACC:Q84MB3]	207.11	8.96	-4.07	4.47E-02	-1.56	1.15E-02	0.5	1.17E-02
U020097	Flavonol synthase/flavanone 3-hydroxylase [Source:SWISS;ACC:Q9M547]	218.25	16.59	-3.1	1.72E-02	-3.38	4.37E-03	-2.85	2.16E-03

Unigene ID	Description	Transcriptome analysis by NGS				qRT-PCR			
		RPKM in NW	RPKM in AD	Log <sub>2</sub> FC	P-value	Sampled in 2014		Sampled in 2019	
						Log <sub>2</sub> FC	P-value	Log <sub>2</sub> FC	P-value
U016976	Chalcone synthase 3 [Source:SWISS;ACC:P48392]	889.03	200.47	-1.58	5.43E-01	-2.29	2.08E-03	-1.54	1.79E-03
U025458	Cytochrome P450 98A2 [Source:SWISS;ACC:O48922]	121.08	29.66	-1.4	4.48E-01	0.2	5.23E-01	-0.77	1.19E-03
U027769	Anthocyanidin 5,3-O-glucosyltransferase [Source:SWISS;ACC:Q4R1I9]	1552.95	386.97	-1.37	5.44E-01	-0.72	4.20E-02	-0.39	2.75E-02
U039712	Dihydroflavonol-4-reductase [Source:SWISS;ACC:P51102]	1859.72	475.47	-1.36	5.46E-01	-1.6	2.13E-03	-0.61	6.68E-03
U019144	Probable protein Pop3 [Source:SWISS;ACC:Q9LUV2]	158.99	45.28	-1.35	3.58E-01	1.44	9.60E-04	0.97	8.12E-03
U050684	V-type proton ATPase subunit H [Source:SWISS;ACC:Q9LX65]	217.46	60.87	-1.23	4.46E-01	-1.83	9.56E-05	-0.1	1.40E-01
U023884	Ras-related protein RHN1 [Source:SWISS;ACC:P31583]	167.57	86.77	-0.359	9.42E-01	-2.44	1.16E-03	-1.51	1.38E-05
U018755	Flavonoid 3'-monooxygenase [Source:SWISS;ACC:Q9SBQ9]	454.79	263.35	-0.163	5.62E-01	2.99	1.14E-02	-0.35	4.49E-02
U017796	Gibberellin-regulated protein 10 [Source:SWISS;ACC:Q8LFM2]	65.77	47.98	0.0358	9.40E-01	-7.07	2.32E-04	-3.14	2.85E-03
U021481	Chalcone--flavonone isomerase 2 [Source:SWISS;ACC:A1E261]	636.72	601.17	0.506	6.24E-01	-0.59	1.43E-01	0.56	4.18E-02
U003959	Leucoanthocyanidin dioxygenase [Source:SWISS;ACC:Q96323]	1.62	2.73	1.28	5.94E-01	3.49	2.79E-03	0.8	1.89E-02



Unigene ID	Description	Transcriptome analysis by NGS				qRT-PCR			
		RPKM in NW	RPKM in AD	Log <sub>2</sub> FC	P-value	Sampled in 2014		Sampled in 2019	
						Log <sub>2</sub> FC	P-value	Log <sub>2</sub> FC	P-value
U027507	Shikimate O-hydroxycinnamoyltransferase [Source:SWISS;ACC:Q8GSM7]	41.95	69.05	1.34	2.52E-01	2.42	1.07E-02	-0.13	5.95E-01
U041557	Anthocyanidin 5,3-O-glucosyltransferase [Source:SWISS;ACC:Q4R1I9]	6.87	12.51	1.49	2.47E-01	2.14	5.50E-05	1.06	3.76E-03
U043359	Shikimate O-hydroxycinnamoyltransferase [Source:SWISS;ACC:Q8GSM7]	5.48	13.24	1.77	6.46E-01	1.11	4.21E-03	-1.29	7.27E-02
U013121	Lipid transfer protein EARLI 1 [Source:SWISS;ACC:Q39176]	75.94	626.79	3.57	2.20E-02	3.38	4.03E-02	1.06	2.64E-02
U020473	Aquaporin TIP1-1 [Source:SWISS;ACC:P25818]	15.56	127.76	3.62	3.65E-03	3.83	1.19E-03	2.03	3.86E-03
U043902	Anthocyanidin 3-O-glucosyltransferase 2 [Source:SWISS;ACC:Q40285]	0.48	4.63	3.79	6.52E-01	2.16	9.17E-02	0.05	6.06E-01
U016560	Defensin-like protein {ECO:0000250 UniProtKB:Q09198} [Source:SWISS;ACC:B5LZ79]	24.21	323.44	4.26	1.11E-02	1.96	1.36E-02	0.57	5.35E-02
U033935	Uncharacterized protein YnbD [Source:SWISS;ACC:P76093]	2.5	40.54	4.55	3.14E-02	3.15	3.79E-05	1.71	6.78E-03
U033988	Cytochrome P450 86B1 [Source:SWISS;ACC:Q9FMY1]	1.71	30.85	4.8	1.34E-04	3.96	1.47E-04	2.58	9.08E-04

Unigene ID	Description	Transcriptome analysis by NGS				qRT-PCR			
		RPKM in NW	RPKM in AD	Log <sub>2</sub> FC	P-value	Sampled in 2014		Sampled in 2019	
						Log <sub>2</sub> FC	P-value	Log <sub>2</sub> FC	P-value
U024030	Copper transporter 6 [Source:SWISS;ACC:Q8GWP3]	3.3	104.57	5.52	1.29E-03	6.06	1.12E-05	2.68	4.24E-03
U014148	Probable aquaporin NIP-type [Source:SWISS;ACC:P49173]	0.82	31.55	5.76	1.30E-02	8.55	8.60E-05	4.66	8.94E-04
U020146	Copper transporter 5 [Source:SWISS;ACC:Q93VM8]	27.07	1769.93	6.51	1.41E-04	6.15	7.49E-05	2.54	7.84E-03
U026215	Caffeic acid 3-O-methyltransferase [Source:SWISS;ACC:P28002]	0.19	19.63	7.27	4.68E-03	8.39	3.49E-03	8.79	4.56E-03
U019322	Probable non-specific lipid-transfer protein AKCS9 [Source:SWISS;ACC:Q43681]	9.72	1705.88	7.94	3.13E-07	11.33	1.21E-02	7.32	4.26E-03
U031040	Protein TIFY 10A [Source:SWISS;ACC:Q9LMA8]	0.4	78.62	8.17	1.39E-04	3.59	3.53E-05	2.14	3.76E-05
U002745	Agglutinin [Source:SWISS;ACC:P82859]	2.51	860.89	8.98	5.05E-05	9.16	1.27E-02	5.52	1.24E-03
U000899	1-deoxy-D-xylulose-5-phosphate synthase 1, chloroplastic [Source:SWISS;ACC:O22567]	0	11.63	12.7	5.61E-02	10.26	1.50E-02	2.62	8.65E-03
U015169	Fatty-acid-binding protein 1 [Source:SWISS;ACC:Q9M1X2]	0	35.3	14.7	1.10E-03	6.88	9.19E-03	4.69	3.48E-04

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43 **Supplementary Table S3.** Expression levels of differentially expressed genes.

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U050360	1,273	-	253.62	0	-17.4	1.87E-07	-
U059230	1,413	-	186.56	0	-17.1	3.13E-07	-
U089491	2,172	-	95.77	0	-16.9	5.17E-07	-
U032395	1,903	Probable protein S-acyltransferase 7 [Source:SWISS;ACC:Q0WQK2]	98.3	0	-16.7	8.01E-07	GO:0005886, GO:0008270, GO:0016021, GO:0019706
U020637	3,121	-	51.41	0	-16.6	1.10E-06	-
U004151	1,023	Eukaryotic peptide chain release factor subunit 1-3 [Source:SWISS;ACC:P35614]	155.48	0	-16.2	2.64E-06	GO:0003747, GO:0005737, GO:0006415, GO:0016149
U052925	3,722	Elongation factor 2 [Source:SWISS;ACC:O23755]	33.2	0	-16.2	2.79E-06	GO:0003746, GO:0003924, GO:0005525, GO:0005737
U054922	2,803	Probable pectin methyltransferase QUA2 [Source:SWISS;ACC:Q9C9Q8]	43.05	0	-16.1	3.40E-06	GO:0000139, GO:0005768, GO:0005794, GO:0005802, GO:0007155, GO:0008168, GO:0009735, GO:0010289, GO:0016021, GO:0048364, GO:0048367
U064359	783	-	191.83	0	-16	5.33E-06	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U033430	1,730	-	58.03	0	-15.8	9.39E-06	-
U036203	1,168	-	94.66	0	-15.8	9.34E-06	-
U026643	2,236	Putative pentatricopeptide repeat-containing protein At1g12700, mitochondrial [Source:SWISS;ACC:P0C7Q7]	41.88	0	-15.7	1.05E-05	GO:0005739
U033957	1,075	Peptidyl-prolyl cis-trans isomerase CYP20-2, chloroplastic [Source:SWISS;ACC:Q9ASS6]	97.79	0	-15.7	1.29E-05	GO:0003755, GO:0006457, GO:0009507, GO:0009533, GO:0009534, GO:0009535, GO:0009543, GO:0009579, GO:0010275, GO:0031969, GO:0031977, GO:0042277, GO:0043424
U044466	1,649	UDP-galactose transporter 2 [Source:SWISS;ACC:Q9SRE4]	57.84	0	-15.7	1.20E-05	GO:0005457, GO:0005459, GO:0005460, GO:0009624, GO:0015783, GO:0015786, GO:0016021, GO:0072334
U054924	2,793	Probable pectin methyltransferase QUA2 [Source:SWISS;ACC:Q9C9Q8]	30.29	0	-15.6	1.41E-05	GO:0000139, GO:0005768, GO:0005794, GO:0005802, GO:0007155, GO:0008168, GO:0009735, GO:0010289, GO:0016021, GO:0048364, GO:0048367
U100261	1,051	-	94.76	0	-15.6	1.65E-05	-
U014898	2,669	Dammarenediol II synthase [Source:SWISS;ACC:Q08IT1]	26.96	0	-15.4	2.79E-05	GO:0016021, GO:0016829, GO:0016866
U033823	636	Ubiquitin-60S ribosomal protein L40 [Source:SWISS;ACC:P51423]	175.36	0	-15.4	3.09E-05	GO:0003735, GO:0005634, GO:0005840, GO:0006412

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U048120	870	Histone H2AX [Source:SWISS;ACC:P35063]	109.92	0	-15.4	2.68E-05	GO:0000786, GO:0003677, GO:0005634
U030774	501	Pentatricopeptide repeat-containing protein At2g25580 [Source:SWISS;ACC:Q680H3]	262.5	0	-15.3	4.09E-05	-
U091402	1,993	-	36.08	0	-15.3	3.30E-05	-
U020594	1,529	-	44.2	0	-15.2	5.23E-05	-
U021588	2,430	Exocyst complex component EXO70A1 [Source:SWISS;ACC:Q9LZD3]	26.04	0	-15.2	4.95E-05	GO:0000145, GO:0005576, GO:0005618, GO:0005829, GO:0005856, GO:0005886, GO:0006887, GO:0009524
U031677	2,132	(+)-larreatricin hydroxylase, chloroplastic [Source:SWISS;ACC:Q6UIL3]	30.99	0	-15.2	4.48E-05	GO:0004097, GO:0009543, GO:0046148, GO:0046872, GO:1901708, GO:1901709
U055255	867	Pleiotropic drug resistance protein 2 [Source:SWISS;ACC:Q2PCF1]	94.08	0	-15.2	5.16E-05	GO:0005524, GO:0006810, GO:0016021, GO:0016887
U017481	1,575	Enoyl-[acyl-carrier-protein] reductase [NADH], chloroplastic [Source:SWISS;ACC:Q9SLA8]	39.73	0	-15.1	6.93E-05	GO:0004318, GO:0005507, GO:0005835, GO:0006633, GO:0009507, GO:0009570, GO:0009579, GO:0009941, GO:0016631
U024689	1,773	Protein notum homolog [Source:SWISS;ACC:Q8R116]	34.36	0	-15.1	7.03E-05	GO:0005576, GO:0016787

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U030016	1,731	UPF0481 protein At3g47200 [Source:SWISS;ACC:Q9SD53]	37.45	0	-15.1	5.56E-05	GO:0005886, GO:0016021
U025777	928	-	74.23	0	-15	9.08E-05	-
U036301	1,313	50S ribosomal protein L22 {ECO:0000255}HAMAP- Rule:MF_01331 [Source:SWISS;ACC:A6U864]	47.11	0	-15	8.67E-05	GO:0003735, GO:0006412, GO:0015934, GO:0019843
U036204	831	-	83.88	0	-14.9	1.06E-04	-
U042866	1,401	-	41.83	0	-14.9	1.01E-04	-
U050920	1,891	NEDD8-activating enzyme E1 regulatory subunit {ECO:0000305} [Source:SWISS;ACC:P42744]	27.49	0	-14.8	1.27E-04	GO:0000166, GO:0003824, GO:0005634, GO:0005829, GO:0006281, GO:0007131, GO:0009414, GO:0009734, GO:0009735, GO:0009965, GO:0010252, GO:0016567, GO:0045116
U051061	2,344	KH domain-containing protein At4g18375 [Source:SWISS;ACC:P58223]	21	0	-14.8	1.38E-04	GO:0003723, GO:0005634
U054928	2,403	Zinc finger CCCH domain-containing protein 19 [Source:SWISS;ACC:Q9SIV5]	20.2	0	-14.8	1.44E-04	GO:0003677, GO:0005634, GO:0006352, GO:0008270, GO:0010964, GO:0016570, GO:0031047, GO:0032776, GO:0042393

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U013224	1,075	Probable receptor-like protein kinase At2g39360 [Source:SWISS;ACC:O80623]	51.02	0	-14.7	1.78E-04	GO:0004674, GO:0005524, GO:0005886, GO:0016021
U024932	1,065	-	51.29	0	-14.7	1.85E-04	-
U025917	1,049	-	53.3	0	-14.7	1.72E-04	-
U035855	985	Polyubiquitin [Source:SWISS;ACC:P0CG83]	56.1	0	-14.7	1.97E-04	GO:0005634, GO:0005737
U051690	1,583	-	31.03	0	-14.7	1.81E-04	-
U054710	554	-	143.07	0	-14.7	1.99E-04	-
U007390	1,263	-	38.98	0	-14.6	2.24E-04	-
U015372	676	-	95.41	0	-14.6	2.33E-04	-
U016920	938	-	55.86	0	-14.6	2.61E-04	-
U017856	817	-	69.22	0	-14.6	2.49E-04	-
U021134	1,418	-	32.23	0	-14.6	2.67E-04	-
U027596	840	Heavy metal-associated isoprenylated plant protein 26 [Source:SWISS;ACC:Q9SZN7]	64.32	0	-14.6	2.83E-04	GO:0005886, GO:0009506, GO:0010286, GO:0030001, GO:0031965, GO:0046872

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U029501	1,069	Chalcone--flavonone isomerase [Source:SWISS;ACC:Q45QI7]	48.24	0	-14.6	2.29E-04	GO:0009813, GO:0045430
U038944	1,403	CBS domain-containing protein CBSX2, chloroplastic [Source:SWISS;ACC:Q9C5D0]	34.09	0	-14.6	2.24E-04	GO:0009507, GO:0009570, GO:0030554, GO:0045454
U046248	2,661	-	15.38	0	-14.6	2.69E-04	-
U049419	2,266	Ubiquitin carboxyl-terminal hydrolase 22 [Source:SWISS;ACC:Q9LEW0]	18.57	0	-14.6	2.61E-04	GO:0006511, GO:0008234, GO:0008270, GO:0036459
U050533	1,855	Beta-lactamase-like protein 2 [Source:SWISS;ACC:Q0V9A9]	24.47	0	-14.6	2.20E-04	GO:0016787, GO:0046872
U056373	1,952	Probable galacturonosyltransferase-like 7 [Source:SWISS;ACC:Q8VYF4]	22.67	0	-14.6	2.35E-04	GO:0000139, GO:0005794, GO:0016021, GO:0045489, GO:0047262, GO:0071555
U001007	651	-	95.01	0	-14.5	3.03E-04	-
U018210	1,675	26S proteasome non-ATPase regulatory subunit 4 homolog [Source:SWISS;ACC:P55034]	25.82	0	-14.5	2.86E-04	GO:0000502, GO:0001653, GO:0005634, GO:0005829, GO:0006974, GO:0007165, GO:0008540, GO:0009408, GO:0009555, GO:0009651, GO:0009733, GO:0009735, GO:0009737, GO:0009744, GO:0010029, GO:0010150, GO:0016020, GO:0030163, GO:0031593, GO:0043161, GO:0043248, GO:0048366, GO:0048455, GO:0048528, GO:0048767, GO:0051788



Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U021358	914	-	53.13	0	-14.5	3.65E-04	-
U032284	1,788	Glutathione S-transferase DHAR2 [Source:SWISS;ACC:Q9FRL8]	23.72	0	-14.5	2.94E-04	GO:0004364, GO:0005829, GO:0005886, GO:0009636, GO:0010731, GO:0043295, GO:0045174, GO:0055114
U034524	1,938	Acetolactate synthase small subunit 1, chloroplastic [Source:SWISS;ACC:Q9FFF4]	20.9	0	-14.5	3.32E-04	GO:0003984, GO:0005829, GO:0006551, GO:0006573, GO:0009097, GO:0009099, GO:0009507, GO:0016597
U038804	2,208	Protein NRT1/ PTR FAMILY 8.3 [Source:SWISS;ACC:P46032]	18.59	0	-14.5	2.91E-04	GO:0000325, GO:0005773, GO:0005774, GO:0005794, GO:0009705, GO:0015031, GO:0015197, GO:0015334, GO:0015833, GO:0016021, GO:0042936, GO:0042937, GO:0042938, GO:0042939
U038806	2,192	Protein NRT1/ PTR FAMILY 8.3 [Source:SWISS;ACC:P46032]	18.58	0	-14.5	3.03E-04	GO:0000325, GO:0005773, GO:0005774, GO:0005794, GO:0009705, GO:0015031, GO:0015197, GO:0015334, GO:0015833, GO:0016021, GO:0042936, GO:0042937, GO:0042938, GO:0042939
U042081	1,743	Putative receptor protein kinase ZmPK1 [Source:SWISS;ACC:P17801]	24.19	0	-14.5	3.06E-04	GO:0004674, GO:0005524, GO:0016021, GO:0048544
U054926	2,464	Zinc finger CCCH domain-containing protein 19 [Source:SWISS;ACC:Q9SIV5]	15.5	0	-14.5	3.65E-04	GO:0003677, GO:0005634, GO:0006352, GO:0008270, GO:0010964, GO:0016570, GO:0031047, GO:0032776, GO:0042393
U064350	1,028	-	45	0	-14.5	3.68E-04	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U024593	1,385	Putative ALA-interacting subunit 2 [Source:SWISS;ACC:Q67YS6]	30.42	0	-14.4	3.72E-04	GO:0016021
U036164	1,075	-	39.66	0	-14.4	4.72E-04	-
U070452	687	-	79.94	0	-14.4	4.14E-04	-
U085823	544	-	122.98	0	-14.4	4.10E-04	-
U058839	1,121	Putative Holliday junction resolvase {ECO:0000255}HAMAP- Rule:MF_00651} [Source:SWISS;ACC:Q045P4]	35.31	0	-14.3	5.91E-04	GO:0003676, GO:0004518, GO:0005737, GO:0006281, GO:0006310
U094686	2,721	Serine/threonine-protein phosphatase 5 [Source:SWISS;ACC:Q84K11]	12.34	0	-14.3	5.64E-04	GO:0004721, GO:0005789, GO:0006470, GO:0016021, GO:0016607, GO:0031965, GO:0046872
U014751	2,528	Zinc finger CCCH domain-containing protein 19 [Source:SWISS;ACC:Q9SIV5]	12.38	0	-14.2	7.58E-04	GO:0003677, GO:0005634, GO:0006352, GO:0008270, GO:0010964, GO:0016570, GO:0031047, GO:0032776, GO:0042393
U015093	678	-	70.74	0	-14.2	7.05E-04	-
U033355	1,284	5'-adenylylsulfate reductase-like 5 [Source:SWISS;ACC:Q93YX4]	27.3	0	-14.2	7.95E-04	GO:0016021, GO:0045454
U056368	1,711	Probable galacturonosyltransferase-like 7 [Source:SWISS;ACC:Q8VYF4]	19.68	0	-14.2	7.22E-04	GO:0000139, GO:0005794, GO:0016021, GO:0045489, GO:0047262, GO:0071555

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U001774	731	-	56.4	0	-14.1	1.02E-03	-
U023278	1,567	F-box/kelch-repeat protein At3g06240 [Source:SWISS;ACC:Q8GXC7]	21.06	0	-14.1	8.25E-04	-
U023546	1,215	-	28.89	0	-14.1	8.35E-04	-
U029606	1,290	-	25.24	0	-14.1	1.04E-03	-
U035277	2,224	DEAD-box ATP-dependent RNA helicase 53 [Source:SWISS;ACC:Q9LUW5]	13.64	0	-14.1	9.00E-04	GO:0000373, GO:0003723, GO:0004386, GO:0005524, GO:0005618, GO:0005730, GO:0005739, GO:0009409, GO:0043234
U040698	811	-	48.07	0	-14.1	1.02E-03	-
U042942	2,412	Peptide-N(4)-(N-acetyl-beta- glucosaminyl)asparagine amidase [Source:SWISS;ACC:Q9FGY9]	12.11	0	-14.1	9.96E-04	GO:0000224, GO:0003684, GO:0005634, GO:0005829, GO:0006289, GO:0009751, GO:0010188, GO:0010193, GO:0046872
U057327	1,254	DNA-damage-repair/toleration protein DRT100 [Source:SWISS;ACC:Q00874]	26.44	0	-14.1	9.96E-04	GO:0000166, GO:0006281, GO:0009411, GO:0009507, GO:0042493
U058119	980	-	37.37	0	-14.1	9.35E-04	-
U062215	730	-	58.45	0	-14.1	9.11E-04	-
U063934	976	-	37.77	0	-14.1	9.23E-04	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U085186	1,036	-	34.01	0	-14.1	9.96E-04	-
U012721	1,041	Protein CREG1 [Source:SWISS;ACC:O75629]	32.98	0	-14	1.09E-03	GO:0003714, GO:0005667, GO:0006357, GO:0007275, GO:0008283, GO:0010181, GO:0016491, GO:0040008, GO:0070062, GO:1903507
U019937	1,192	Probable calcium-binding protein CML21 [Source:SWISS;ACC:Q52K82]	26.12	0	-14	1.32E-03	GO:0005509, GO:0005737
U021458	1,032	-	33.81	0	-14	1.04E-03	-
U024736	1,320	Quinone oxidoreductase 1 [Source:SWISS;ACC:P28304]	23.43	0	-14	1.21E-03	GO:0003960, GO:0005737, GO:0008270
U028119	620	-	73.36	0	-14	1.09E-03	-
U035810	841	-	44.38	0	-14	1.11E-03	-
U040374	1,673	Probable membrane-associated 30 kDa protein, chloroplastic [Source:SWISS;ACC:Q8S0J7]	18	0	-14	1.09E-03	GO:0009508, GO:0009535, GO:0009570, GO:0009706, GO:0010027, GO:0016032, GO:0016050
U049119	818	-	45.81	0	-14	1.15E-03	-
U056412	1,167	-	27.47	0	-14	1.21E-03	-
U063380	1,141	-	28.26	0	-14	1.21E-03	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U017683	1,906	Pyruvate kinase, cytosolic isozyme [Source:SWISS;ACC:Q42806]	14.48	0	-13.9	1.37E-03	GO:0000287, GO:0004743, GO:0005524, GO:0005737, GO:0006096, GO:0030955
U025727	1,160	26S proteasome non-ATPase regulatory subunit 4 homolog [Source:SWISS;ACC:P55034]	25.81	0	-13.9	1.56E-03	GO:0000502, GO:0001653, GO:0005634, GO:0005829, GO:0006974, GO:0007165, GO:0008540, GO:0009408, GO:0009555, GO:0009651, GO:0009733, GO:0009735, GO:0009737, GO:0009744, GO:0010029, GO:0010150, GO:0016020, GO:0030163, GO:0031593, GO:0043161, GO:0043248, GO:0048366, GO:0048455, GO:0048528, GO:0048767, GO:0051788
U041818	2,015	Multidrug and toxin extrusion protein 1 [Source:SWISS;ACC:A4IIS8]	12.97	0	-13.9	1.60E-03	GO:0005886, GO:0015238, GO:0015297, GO:0016021
U047571	1,398	-	20.33	0	-13.9	1.53E-03	-
U089879	795	-	44.49	0	-13.9	1.49E-03	-
U093294	672	-	59	0	-13.9	1.43E-03	-
U011831	1,651	Putative ribonuclease H protein At1g65750 [Source:SWISS;ACC:POC2F6]	15.61	0	-13.8	1.91E-03	GO:0003676, GO:0004523, GO:0046872
U013900	592	-	67.87	0	-13.8	1.94E-03	-
U014897	2,131	Dammarenediol II synthase [Source:SWISS;ACC:Q08IT1]	11.32	0	-13.8	2.06E-03	GO:0016021, GO:0016829, GO:0016866

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U020608	2,242	-	11.2	0	-13.8	1.75E-03	-
U020780	1,725	Structural maintenance of chromosomes protein 1 [Source:SWISS;ACC:Q6Q1P4]	14.94	0	-13.8	1.86E-03	GO:0003682, GO:0005524, GO:0005634, GO:0006281, GO:0007059, GO:0007064, GO:0008278, GO:0051321
U024732	1,718	Pyruvate dehydrogenase E1 component subunit beta-1, mitochondrial [Source:SWISS;ACC:Q38799]	14.67	0	-13.8	2.00E-03	GO:0004739, GO:0005730, GO:0005739, GO:0005759, GO:0005774, GO:0006086, GO:0006096, GO:0042742, GO:0048046
U028329	1,258	Uncharacterized protein ycf37 [Source:SWISS;ACC:O78458]	22.34	0	-13.8	1.77E-03	GO:0009507
U028338	1,325	-	20.89	0	-13.8	1.77E-03	-
U034171	602	-	65.71	0	-13.8	1.94E-03	-
U040774	751	-	44	0	-13.8	2.10E-03	-
U043406	647	-	56.41	0	-13.8	2.10E-03	-
U048417	2,684	Serine/threonine protein phosphatase 2A regulatory subunit B"beta [Source:SWISS;ACC:Q5QIT3]	8.74	0	-13.8	2.03E-03	GO:0005509, GO:0005829
U051216	3,261	Serine/threonine-protein kinase EDR1 [Source:SWISS;ACC:Q9FPR3]	7.18	0	-13.8	1.91E-03	GO:0000165, GO:0000186, GO:0002229, GO:0004709, GO:0004712, GO:0005524, GO:0005634, GO:0005769, GO:0005783, GO:0005802, GO:0005829, GO:0008219,

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
							GO:0009414, GO:0009617, GO:0009620, GO:0009723, GO:0009738, GO:0009788, GO:0009873, GO:0016301, GO:0046777, GO:1900150, GO:1900424, GO:2000031
U053082	660	-	56	0	-13.8	1.91E-03	-
U054349	2,017	Protein MOR1 [Source:SWISS;ACC:Q5N749]	12.51	0	-13.8	1.80E-03	GO:0005737, GO:0005874
U000600	958	Putative Holliday junction resolvase {ECO:0000255 HAMAP- Rule:MF_00651} [Source:SWISS;ACC:B8I4S7]	29.11	0	-13.7	2.54E-03	GO:0003676, GO:0004518, GO:0005737, GO:0006281, GO:0006310
U003895	1,119	-	24.27	0	-13.7	2.27E-03	-
U018328	1,323	-	19.81	0	-13.7	2.16E-03	-
U032304	2,311	Molybdopterin biosynthesis protein CNX1 [Source:SWISS;ACC:Q39054]	9.82	0	-13.7	2.46E-03	GO:0005524, GO:0005829, GO:0006777, GO:0009734, GO:0030151, GO:0061598, GO:0061599
U041414	1,506	Protein NLP3 [Source:SWISS;ACC:Q5NB82]	16.38	0	-13.7	2.38E-03	GO:0003677, GO:0005634, GO:0006351, GO:0006355
U043316	1,777	Polyadenylate-binding protein RBP47B' [Source:SWISS;ACC:Q8VXZ9]	13.48	0	-13.7	2.34E-03	GO:0000166, GO:0005634, GO:0006397, GO:0008143, GO:0010494, GO:0034605

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U043740	1,432	Probable serine/threonine-protein kinase DDB_G0276461 [Source:SWISS;ACC:Q86HW6]	17.61	0	-13.7	2.30E-03	GO:0004674, GO:0005524
U046340	1,973	Probable polyamine oxidase 5 [Source:SWISS;ACC:Q9SU79]	12.16	0	-13.7	2.20E-03	GO:0016491
U046869	1,478	F-box/FBD/LRR-repeat protein At1g13570 [Source:SWISS;ACC:Q9FZ70]	16.78	0	-13.7	2.38E-03	-
U048221	1,033	11-beta-hydroxysteroid dehydrogenase 1B [Source:SWISS;ACC:P0DKC6]	26.57	0	-13.7	2.42E-03	GO:0005811, GO:0006694, GO:0016021, GO:0070524
U054341	2,348	Glutamate receptor 3.6 [Source:SWISS;ACC:Q84W41]	9.58	0	-13.7	2.50E-03	GO:0004970, GO:0005234, GO:0005262, GO:0005886, GO:0006816, GO:0008066, GO:0009611, GO:0009864, GO:0016021, GO:0019722, GO:0070588, GO:0071230
U080883	676	-	51.66	0	-13.7	2.20E-03	-
U004461	1,315	-	18.42	0	-13.6	2.85E-03	-
U014436	1,914	Cyclin-A2-1 [Source:SWISS;ACC:Q39071]	11.52	0	-13.6	3.00E-03	GO:0000079, GO:0005634, GO:0007049, GO:0051301
U022553	911	14 kDa zinc-binding protein [Source:SWISS;ACC:P42856]	29.47	0	-13.6	3.11E-03	GO:0003824



Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U023192	983	-	26.31	0	-13.6	3.17E-03	-
U027613	866	ER membrane protein complex subunit 4 [Source:SWISS;ACC:Q6P011]	32.78	0	-13.6	2.76E-03	GO:0016021, GO:0072546
U033714	1,624	Polycomb group protein FERTILIZATION-INDEPENDENT ENDOSPERM [Source:SWISS;ACC:Q9LT47]	13.69	0	-13.6	3.22E-03	GO:0003700, GO:0005677, GO:0006349, GO:0006351, GO:0007275, GO:0009409, GO:0016571, GO:0043078, GO:2000014
U035644	1,172	-	20.93	0	-13.6	3.06E-03	-
U040546	2,671	Gamma-tubulin complex component 2 [Source:SWISS;ACC:Q9C5H9]	7.57	0	-13.6	3.46E-03	GO:0000226, GO:0000922, GO:0000930, GO:0005635, GO:0005737, GO:0005938, GO:0033566, GO:0048229, GO:0055028, GO:0090063
U041696	1,120	Glucuronoxylan 4-O-methyltransferase 3 [Source:SWISS;ACC:Q9LQ32]	22.13	0	-13.6	3.11E-03	GO:0000139, GO:0005794, GO:0005976, GO:0009808, GO:0016021, GO:0030775, GO:0045491
U041844	1,920	-	11.06	0	-13.6	3.40E-03	-
U043803	1,172	-	21.39	0	-13.6	2.85E-03	-
U046469	2,221	Ribulose-1,5 biphosphate carboxylase/oxygenase large subunit N-methyltransferase, chloroplastic [Source:SWISS;ACC:P94026]	9.66	0	-13.6	3.06E-03	GO:0009507, GO:0030785

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U084805	518	-	75.68	0	-13.6	3.40E-03	-
U093736	889	-	31.1	0	-13.6	2.90E-03	-
U023279	925	-	26.83	0	-13.5	4.00E-03	-
U024678	1,351	Caffeic acid 3-O-methyltransferase [Source:SWISS;ACC:Q43239]	16.69	0	-13.5	3.59E-03	GO:0009809, GO:0047763
U024733	1,636	Pyruvate dehydrogenase E1 component subunit beta-1, mitochondrial [Source:SWISS;ACC:Q38799]	12.73	0	-13.5	4.08E-03	GO:0004739, GO:0005730, GO:0005739, GO:0005759, GO:0005774, GO:0006086, GO:0006096, GO:0042742, GO:0048046
U028030	806	-	33.34	0	-13.5	3.79E-03	-
U039931	2,635	Protease 2 [Source:SWISS;ACC:Q59536]	7.64	0	-13.5	3.52E-03	GO:0004252, GO:0070008
U040221	2,279	F-box/FBD/LRR-repeat protein At1g13570 [Source:SWISS;ACC:Q9FZ70]	8.72	0	-13.5	3.93E-03	-
U041487	1,245	Probable mediator of RNA polymerase II transcription subunit 36b [Source:SWISS;ACC:Q9FEF8]	18.62	0	-13.5	3.52E-03	GO:0001510, GO:0005730, GO:0006351, GO:0006355, GO:0006364, GO:0008033, GO:0008168, GO:0016020, GO:0030515, GO:0030529
U041904	1,402	MLO-like protein 5 [Source:SWISS;ACC:O22815]	15.27	0	-13.5	4.16E-03	GO:0006952, GO:0009607, GO:0016021

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U042156	1,042	-	22.29	0	-13.5	4.24E-03	-
U043033	2,778	Protein MEI2-like 2 [Source:SWISS;ACC:Q6ZI17]	7.14	0	-13.5	3.65E-03	GO:0000166, GO:0003723
U046871	630	-	51.19	0	-13.5	3.46E-03	-
U048740	2,749	-	7.03	0	-13.5	4.00E-03	-
U053523	1,242	Xylosyltransferase 2 [Source:SWISS;ACC:Q9EPL0]	18.3	0	-13.5	3.79E-03	GO:0000139, GO:0005789, GO:0006024, GO:0008375, GO:0015012, GO:0016021, GO:0030158, GO:0030166, GO:0030206, GO:0030210
U087535	764	-	35.37	0	-13.5	4.08E-03	-
U004138	684	-	41.06	0	-13.4	4.57E-03	-
U006160	647	-	44.4	0	-13.4	4.84E-03	-
U043269	1,232	Tubby-like F-box protein 5 [Source:SWISS;ACC:Q6Z2G9]	17.18	0	-13.4	4.84E-03	-
U029545	1,731	-	187.31	0.07	-10.8	5.52E-07	-
U012666	980	-	347.44	0.14	-10.7	7.43E-07	-
U089492	2,152	-	80.45	0.05	-9.97	3.49E-06	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U016070	1,001	-	363.21	0.28	-9.77	1.40E-06	-
U008940	10,515	Retrovirus-related Pol polyprotein from transposon TNT 1-94 [Source:SWISS;ACC:P10978]	15.37	0.02	-9.03	6.85E-06	GO:0003676, GO:0003964, GO:0004190, GO:0004519, GO:0008270, GO:0015074
U029524	1,927	Origin of replication complex subunit 5 {ECO:0000303 PubMed:16179646} [Source:SWISS;ACC:Q6EWX0]	46.19	0.06	-8.98	4.65E-05	GO:0000808, GO:0005634, GO:0006260
U038860	3,257	Arginine--tRNA ligase {ECO:0000255 HAMAP-Rule:MF_00123} [Source:SWISS;ACC:Q5N643]	245.41	0.32	-8.94	4.67E-06	GO:0004814, GO:0005524, GO:0005737, GO:0006420
U006456	615	-	217.03	0.32	-8.93	5.41E-05	-
U093336	541	-	195.2	0.41	-8.42	2.16E-04	-
U046195	1,738	-	427.2	0.89	-8.28	9.48E-06	-
U061788	838	-	78.12	0.18	-8.18	4.01E-04	-
U091458	748	-	90.55	0.22	-8.15	4.45E-04	-
U050685	735	Probable V-type proton ATPase subunit H [Source:SWISS;ACC:Q84ZC0]	185.26	0.47	-8.09	6.61E-05	GO:0000221, GO:0000325, GO:0000902, GO:0005794, GO:0005886, GO:0006486, GO:0006623, GO:0006816, GO:0007030, GO:0007033, GO:0009507, GO:0009651,

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
							GO:0015991, GO:0016049, GO:0046961, GO:0048193
U028564	792	-	78.33	0.2	-8.04	5.49E-04	-
U025729	1,229	26S proteasome non-ATPase regulatory subunit 4 homolog [Source:SWISS;ACC:P55034]	99.33	0.27	-7.94	7.83E-05	GO:0000502, GO:0001653, GO:0005634, GO:0005829, GO:0006974, GO:0007165, GO:0008540, GO:0009408, GO:0009555, GO:0009651, GO:0009733, GO:0009735, GO:0009737, GO:0009744, GO:0010029, GO:0010150, GO:0016020, GO:0030163, GO:0031593, GO:0043161, GO:0043248, GO:0048366, GO:0048455, GO:0048528, GO:0048767, GO:0051788
U032373	1,214	Bidirectional sugar transporter SWEET10 [Source:SWISS;ACC:Q9LUE3]	38.34	0.11	-7.9	8.38E-04	GO:0005887, GO:0008515, GO:0015770, GO:0034219, GO:0051119
U031351	778	-	745.11	2.26	-7.82	1.51E-05	-
U031347	525	Glutamine synthetase nodule isozyme [Source:SWISS;ACC:P08282]	272.66	0.88	-7.81	1.58E-04	GO:0004356, GO:0005524, GO:0005737, GO:0006542, GO:0009399
U020461	838	-	59.08	0.18	-7.78	1.12E-03	-
U011807	1,365	Histone deacetylase 14 [Source:SWISS;ACC:Q941D6]	29.35	0.09	-7.73	1.28E-03	GO:0005634, GO:0005829, GO:0006351, GO:0006355, GO:0009507, GO:0032041, GO:0042903, GO:0043014, GO:0043621, GO:0046969, GO:0046970, GO:0048487, GO:0051721, GO:0090042, GO:0097372

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U002412	764	-	128.12	0.43	-7.69	2.14E-04	-
U032319	981	-	84.04	0.29	-7.62	2.62E-04	-
U025313	2,098	Aspartic proteinase-like protein 2 [Source:SWISS;ACC:Q9S9K4]	82.14	0.28	-7.58	3.70E-05	GO:0004190, GO:0005886, GO:0031225, GO:0046658
U036718	801	-	51.16	0.2	-7.48	2.34E-03	-
U024671	781	-	53.01	0.2	-7.47	2.37E-03	-
U055468	2,777	-	31.82	0.12	-7.46	1.49E-04	-
U033468	568	-	89.66	0.37	-7.44	2.57E-03	-
U025164	979	-	77.31	0.31	-7.4	3.61E-04	-
U023749	1,518	Omega-6 fatty acid desaturase, endoplasmic reticulum [Source:SWISS;ACC:Q39287]	148.34	0.63	-7.26	4.83E-05	GO:0005789, GO:0006636, GO:0016021, GO:0016491
U040767	1,535	Endoglucanase 24 [Source:SWISS;ACC:Q93YQ7]	68.04	0.29	-7.23	1.80E-04	GO:0005576, GO:0008810, GO:0030245, GO:0071555
U054125	764	-	90.18	0.43	-7.19	7.92E-04	-
U094550	677	-	55.11	0.26	-7.19	4.50E-03	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U058205	2,240	Nuclear pore complex protein NUP107 {ECO:0000303 PubMed:21189294} [Source:SWISS;ACC:Q8L748]	19.22	0.09	-7.09	1.37E-03	GO:0005635, GO:0005643, GO:0006810
U040819	1,650	DEAD-box ATP-dependent RNA helicase 46 [Source:SWISS;ACC:Q9LYJ9]	156.12	0.78	-7.02	6.10E-05	GO:0003723, GO:0005524, GO:0008026
U014899	2,578	Dammarenediol II synthase [Source:SWISS;ACC:Q08IT1]	16.67	0.08	-6.99	1.29E-03	GO:0016021, GO:0016829, GO:0016866
U040893	718	-	253.03	1.42	-6.95	1.43E-04	-
U015618	1,916	Cyclin-A2-1 [Source:SWISS;ACC:Q39071]	33.42	0.18	-6.92	5.94E-04	GO:0000079, GO:0005634, GO:0007049, GO:0051301
U027385	1,021	F-box protein GID2 [Source:SWISS;ACC:Q9STX3]	153.69	0.85	-6.92	1.31E-04	GO:0005634, GO:0009740, GO:0009845, GO:0010162, GO:0016567, GO:0019005
U036450	1,631	Malonyl-coenzyme A:anthocyanin 3-O- glucoside-6"-O-malonyltransferase {ECO:0000303 PubMed:12481098} [Source:SWISS;ACC:Q8GSN8]	41.36	0.23	-6.86	5.49E-04	GO:0009698, GO:0033809
U061875	1,171	Secoisolariciresinol dehydrogenase [Source:SWISS;ACC:Q94KL8]	238.94	1.45	-6.77	8.97E-05	GO:0000166, GO:0016491
U030015	1,698	Putative UPF0481 protein At3g02645 [Source:SWISS;ACC:POC897]	23.24	0.14	-6.76	2.16E-03	GO:0016021

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U023082	1,295	50S ribosomal protein L17 {ECO:0000255 HAMAP- Rule:MF_01368} [Source:SWISS;ACC:A0L5Z9]	67.84	0.48	-6.54	5.66E-04	GO:0003735, GO:0005840, GO:0006412
U012620	594	Cytochrome c oxidase subunit 6a, mitochondrial [Source:SWISS;ACC:Q9U070]	265.8	2.08	-6.5	3.85E-04	GO:0004129, GO:0005739, GO:0005751
U061943	965	Acid phosphatase 1 [Source:SWISS;ACC:P27061]	501.33	4.11	-6.35	1.59E-04	GO:0003993
U003068	643	Cysteine proteinase inhibitor 6 [Source:SWISS;ACC:Q8H0X6]	166.43	1.45	-6.34	8.84E-04	GO:0004869, GO:0005576, GO:0005783, GO:0005829, GO:0006952, GO:0006972, GO:0006979, GO:0009409, GO:0009414, GO:0010951, GO:0050897
U030941	1,760	CRAL-TRIO domain-containing protein C23B6.04c [Source:SWISS;ACC:Q9UU99]	21.9	0.2	-6.17	3.65E-03	GO:0005886, GO:0006696, GO:0008526, GO:0015914
U040169	1,710	Uncharacterized acetyltransferase At3g50280 [Source:SWISS;ACC:Q9SND9]	36.97	0.36	-6.05	1.43E-03	GO:0016747
U022274	1,490	Gamma carbonic anhydrase 2, mitochondrial [Source:SWISS;ACC:Q9C6B3]	71.81	0.71	-6.04	7.36E-04	GO:0004089, GO:0005739, GO:0005747, GO:0009507, GO:0009651, GO:0009853, GO:0009901, GO:0016020, GO:0031966, GO:0042802, GO:0045271, GO:0046872, GO:0070207, GO:2000377



Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U000039	1,728	3-ketoacyl-CoA synthase 17 [Source:SWISS;ACC:Q5XEP9]	60.37	0.61	-6.01	7.20E-04	GO:0006633, GO:0006970, GO:0009611, GO:0009922, GO:0010345, GO:0016021
U025273	2,014	Importin subunit alpha-1a [Source:SWISS;ACC:Q71VM4]	25.71	0.26	-6.01	2.57E-03	GO:0005634, GO:0006606, GO:0008565, GO:0016032, GO:0048471
U015711	674	Basic blue protein [Source:SWISS;ACC:P00303]	140.33	1.59	-5.95	1.63E-03	GO:0005507, GO:0009055, GO:0055114
U022396	1,820	Pentatricopeptide repeat-containing protein At1g62670, mitochondrial [Source:SWISS;ACC:Q9SXD1]	78.33	0.82	-5.95	5.24E-04	GO:0000966, GO:0003723, GO:0005739
U021839	2,000	Serine carboxypeptidase-like 16 [Source:SWISS;ACC:Q9C7D4]	383.02	4.29	-5.85	5.29E-04	GO:0004185, GO:0005576
U008278	1,043	Mini zinc finger protein 2 [Source:SWISS;ACC:Q9LJW5]	140.23	1.83	-5.67	8.99E-04	GO:0003677, GO:0005634, GO:0005737, GO:0006351, GO:0006355, GO:0007275, GO:0042803, GO:0046872
U025275	2,115	Importin subunit alpha-1a [Source:SWISS;ACC:Q71VM4]	159.49	2.1	-5.61	5.55E-04	GO:0005634, GO:0006606, GO:0008565, GO:0016032, GO:0048471
U043660	1,775	-	33.12	0.51	-5.39	3.87E-03	-
U091542	614	-	130.05	2.22	-5.38	4.62E-03	-
U054347	2,353	Protein MOR1 [Source:SWISS;ACC:Q5N749]	54.96	0.88	-5.32	1.43E-03	GO:0005737, GO:0005874

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U020751	1,932	Flavonoid 3'-monooxygenase [Source:SWISS;ACC:Q9SBQ9]	132.27	2.64	-5.01	1.56E-03	GO:0005506, GO:0005789, GO:0009813, GO:0016021, GO:0016711, GO:0020037
U020721	2,948	ABC transporter G family member 39 [Source:SWISS;ACC:Q7PC84]	23.68	0.48	-4.98	4.24E-03	GO:0000302, GO:0005524, GO:0005886, GO:0006855, GO:0016021, GO:0016887
U041526	1,024	Bifunctional epoxide hydrolase 2 [Source:SWISS;ACC:P34913]	180.31	3.89	-4.95	2.20E-03	GO:0000287, GO:0004301, GO:0005102, GO:0005777, GO:0005829, GO:0006805, GO:0006874, GO:0006954, GO:0008217, GO:0009636, GO:0010628, GO:0015643, GO:0016311, GO:0016791, GO:0017144, GO:0019369, GO:0019373, GO:0033885, GO:0042577, GO:0042632, GO:0042803, GO:0044281, GO:0045909, GO:0046272, GO:0046839, GO:0070062, GO:0072593, GO:0090181
U050035	2,290	Putative 12-oxophytodienoate reductase 11 [Source:SWISS;ACC:B9FSC8]	55.52	1.16	-4.95	2.53E-03	GO:0010181, GO:0016491, GO:0031408
U025082	2,397	-	54.98	1.15	-4.94	2.43E-03	-
U056322	4,353	Auxin response factor 5 [Source:SWISS;ACC:Q6Z2W3]	20.66	0.45	-4.87	3.67E-03	GO:0003677, GO:0005634, GO:0006351, GO:0006355, GO:0009734
U051204	2,443	Subtilisin-like protease SDD1 {ECO:0000303 PubMed:10809670} [Source:SWISS;ACC:O64495]	45.77	1.03	-4.84	3.31E-03	GO:0004252, GO:0005618, GO:0008152, GO:0009897, GO:0010103, GO:0042127, GO:0048046

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U020331	2,031	UDP-glycosyltransferase 76C1 [Source:SWISS;ACC:Q9FI99]	173.53	4.04	-4.79	2.19E-03	GO:0047807, GO:0080062
U030165	1,794	Protein TRIGALACTOSYLDIACYLGLYCER OL 4, chloroplastic [Source:SWISS;ACC:Q9M903]	57.95	1.36	-4.79	3.95E-03	GO:0005783, GO:0009507, GO:0009536, GO:0009707, GO:0009941, GO:0016020, GO:0016021, GO:0034196, GO:0042803, GO:0070300, GO:1990052
U050362	1,604	F-box protein At2g21930 [Source:SWISS;ACC:Q9SJ06]	80.77	2.07	-4.67	4.00E-03	-
U038233	1,141	Ethylene-responsive transcription factor RAP2-3 [Source:SWISS;ACC:P42736]	118.41	3.23	-4.6	4.59E-03	GO:0003677, GO:0003700, GO:0005634, GO:0005737, GO:0005886, GO:0006351, GO:0008219, GO:0009723, GO:0009735, GO:0009753, GO:0009873, GO:0010286, GO:0045893, GO:0051707
U059241	1,338	GDSL esterase/lipase At2g30310 [Source:SWISS;ACC:O22927]	143.7	3.91	-4.59	3.58E-03	GO:0005576, GO:0016042, GO:0016788
U036207	1,292	F-box/kelch-repeat protein At3g06240 [Source:SWISS;ACC:Q8GXC7]	160.56	4.97	-4.41	4.65E-03	-
U057020	3,430	BAG family molecular chaperone regulator 6 [Source:SWISS;ACC:O82345]	2	30.36	4.57	3.67E-03	GO:0005516, GO:0009408, GO:0009506, GO:0009644, GO:0010228, GO:0012502, GO:0042542, GO:0050832
U026287	830	Probable calcium-binding protein CML49 [Source:SWISS;ACC:Q8W4L0]	8.93	145.85	4.58	4.06E-03	GO:0005509

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U033988	1,798	Cytochrome P450 86B1 [Source:SWISS;ACC:Q9FMY1]	1.71	30.85	4.8	4.54E-03	GO:0004497, GO:0005506, GO:0005783, GO:0005789, GO:0010345, GO:0016021, GO:0016705, GO:0020037, GO:0042761, GO:0071555
U034715	565	Osmotin-like protein [Source:SWISS;ACC:Q41350]	8.06	169.37	4.87	4.38E-03	GO:0000911, GO:0005576, GO:0009505, GO:0009506, GO:0009664, GO:0042545
U020714	638	Non-specific lipid-transfer protein [Source:SWISS;ACC:O04004]	40.51	854.81	4.91	1.99E-03	GO:0006869, GO:0008289
U030567	719	Glutaredoxin-C6 [Source:SWISS;ACC:Q8L9S3]	13.95	299.58	4.95	1.74E-03	GO:0005737, GO:0009055, GO:0015035, GO:0045454
U012168	599	-	6.99	157.92	4.99	3.46E-03	-
U010258	506	-	7.89	185.52	5.02	4.11E-03	-
U025332	1,401	-	0.91	23.76	5.32	4.88E-03	-
U024030	755	Copper transporter 6 [Source:SWISS;ACC:Q8GWP3]	3.3	104.57	5.52	1.65E-03	GO:0005375, GO:0005773, GO:0016021
U020931	1,701	Cytochrome P450 71A1 [Source:SWISS;ACC:P24465]	1.11	33.98	5.56	1.51E-03	GO:0004497, GO:0005506, GO:0005789, GO:0009835, GO:0016021, GO:0016705, GO:0020037
U015695	645	-	1.77	62.46	5.65	4.88E-03	-
U021974	762	-	1.34	48.13	5.71	4.34E-03	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U027717	1,248	1-aminocyclopropane-1-carboxylate oxidase [Source:SWISS;ACC:A6BM06]	0.72	26.92	5.84	2.55E-03	GO:0005506, GO:0009693, GO:0009815, GO:0016706
U022675	763	-	2.48	99.81	5.87	1.07E-03	-
U019712	589	-	1.49	63.95	5.92	4.97E-03	-
U039580	1,146	-	0.82	32.86	5.92	2.38E-03	-
U034731	940	-	0.69	28.39	5.94	4.97E-03	-
U052726	575	-	9.66	440.43	6	3.18E-04	-
U014030	502	-	11.14	564.71	6.13	2.65E-04	-
U035174	650	Squamosa promoter-binding-like protein 12 [Source:SWISS;ACC:Q9S7P5]	4.95	253.45	6.19	3.01E-04	GO:0003677, GO:0003700, GO:0005634, GO:0006351, GO:0006355, GO:0046872
U062665	902	-	1.34	66.99	6.21	8.30E-04	-
U040895	858	-	0.67	35.34	6.28	2.86E-03	-
U019619	1,259	G-type lectin S-receptor-like serine/threonine-protein kinase RLK1 [Source:SWISS;ACC:Q39202]	0.38	19.57	6.3	3.22E-03	GO:0004674, GO:0005516, GO:0005524, GO:0005886, GO:0016021, GO:0030246

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U082064	810	-	3.14	179.15	6.38	2.09E-04	-
U037951	542	Non-functional NADPH-dependent codeinone reductase 2 [Source:SWISS;ACC:Q9SQ64]	1.27	76.89	6.4	3.58E-03	GO:0005829, GO:0016491
U090030	1,085	-	0.34	19.4	6.4	4.56E-03	-
U021945	616	-	0.84	51.47	6.43	3.95E-03	-
U029679	888	-	1.77	103.34	6.43	3.42E-04	-
U014619	1,002	-	0.48	28.25	6.44	2.77E-03	-
U017338	535	-	10.8	686.74	6.46	1.29E-04	-
U032087	1,698	WAT1-related protein At4g19185 [Source:SWISS;ACC:Q8W4R9]	0.43	25.33	6.5	7.96E-04	GO:0005794, GO:0016021
U003618	538	-	1.42	93.2	6.51	1.97E-03	-
U056309	1,141	-	0.54	38.92	6.77	6.28E-04	-
U002410	933	-	9.06	677.19	6.8	1.10E-04	-
U019152	661	F-box/kelch-repeat protein At1g26930 [Source:SWISS;ACC:Q84M94]	0.72	56.32	6.81	1.85E-03	GO:0005634, GO:0005777

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U035082	816	Transcription factor ORG3 [Source:SWISS;ACC:Q9M1K0]	0.69	55.04	6.87	7.89E-04	GO:0003677, GO:0003700, GO:0005634, GO:0006351, GO:0006355, GO:0010106, GO:0055072
U014292	705	-	4.77	397.23	6.91	6.16E-05	-
U055211	851	Miraculin [Source:SWISS;ACC:P13087]	0.32	27.43	6.97	3.16E-03	GO:0004866
U037831	720	-	0.5	48.28	7.12	1.16E-03	-
U018264	1,068	-	0.27	26.34	7.17	1.10E-03	-
U028470	647	-	1	107.6	7.25	2.93E-04	-
U026215	1,237	Caffeic acid 3-O-methyltransferase [Source:SWISS;ACC:P28002]	0.19	19.63	7.27	1.53E-03	GO:0009809, GO:0047763
U055418	507	-	1.31	148.4	7.28	3.94E-04	-
U083315	598	Non-specific lipid-transfer protein [Source:SWISS;ACC:O04004]	2.31	265.04	7.33	6.17E-05	GO:0006869, GO:0008289
U099116	633	-	8.87	1067.2 1	7.42	3.23E-05	-
U012257	1,297	-	29.99	3720.3 6	7.56	3.83E-03	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U017647	734	-	29.86	3904.8	7.56	4.60E-04	-
U064367	864	-	0.79	102.24	7.58	7.66E-05	-
U057529	1,528	Probable disease resistance protein At1g61180 [Source:SWISS;ACC:Q940K0]	0.36	47.14	7.65	7.05E-05	GO:0005524, GO:0006952, GO:0043531
U080025	583	-	1.82	274.27	7.72	3.73E-05	-
U046731	830	-	0.17	25	7.77	2.79E-03	-
U003323	1,145	(+)-pulegone reductase [Source:SWISS;ACC:Q6WAU0]	0.11	15.5	7.78	2.79E-03	GO:0005737, GO:0008270, GO:0016114, GO:0042214, GO:0052579, GO:0052580, GO:0070402
U059946	1,865	Geraniol 8-hydroxylase [Source:SWISS;ACC:Q8VWZ7]	1.7	242.44	7.79	1.93E-05	GO:0005506, GO:0005789, GO:0016021, GO:0016099, GO:0016709, GO:0020037
U022500	844	-	0.33	53.06	7.9	2.97E-04	-
U017648	730	-	20.05	3352.05	7.92	1.98E-04	-
U019322	581	Probable non-specific lipid-transfer protein AKCS9 [Source:SWISS;ACC:Q43681]	9.72	1705.88	7.94	1.95E-05	GO:0006810, GO:0008289



Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U012135	1,116	GDSL esterase/lipase At5g55050 [Source:SWISS;ACC:Q9FIA1]	0.11	19.28	8.04	1.46E-03	GO:0005576, GO:0016042, GO:0016298
U029636	731	-	0.2	37.61	8.06	1.40E-03	-
U030041	1,426	Replication protein A 14 kDa subunit B [Source:SWISS;ACC:Q6NLG7]	0.13	22.93	8.06	4.25E-04	GO:0003677, GO:0005634, GO:0006260, GO:0006281, GO:0006310
U008946	766	-	1.14	211.23	8.08	1.56E-05	-
U023147	709	-	0.21	40.76	8.09	1.28E-03	-
U002180	825	-	0.17	31.64	8.1	1.25E-03	-
U082888	577	-	1.24	243.92	8.11	2.99E-05	-
U047288	611	-	0.56	111.23	8.14	1.52E-04	-
U019020	558	-	1.32	271.59	8.16	2.59E-05	-
U031040	788	Protein TIFY 10A [Source:SWISS;ACC:Q9LMA8]	0.4	78.62	8.17	9.64E-05	GO:0005634, GO:0006351, GO:0006355, GO:0009555, GO:0009753, GO:0009867, GO:0009908, GO:0042742
U031336	685	-	0.23	46.09	8.18	1.02E-03	-
U000117	805	Mannose/glucose-specific lectin [Source:SWISS;ACC:P83304]	1.58	336.57	8.28	6.66E-06	GO:0000771, GO:0005536, GO:0005537

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U015407	982	Bidirectional sugar transporter SWEET7b [Source:SWISS;ACC:Q0J349]	0.13	28.01	8.31	7.26E-04	GO:0005887, GO:0034219, GO:0051119
U017583	651	-	0.25	55.16	8.31	7.40E-04	-
U032925	1,248	-	0.19	42.27	8.39	7.57E-05	-
U022674	2,005	-	0.64	144.37	8.44	4.99E-06	-
U019858	763	Polyubiquitin 11 [Source:SWISS;ACC:P0CH33]	0.57	138.92	8.46	2.19E-05	GO:0005634, GO:0005737, GO:0006511
U045981	808	Endoglucanase [Source:SWISS;ACC:P22503]	0.17	44.51	8.54	3.94E-04	GO:0008810, GO:0009835, GO:0030245
U035032	1,403	Probable dolichyl- diphosphooligosaccharide--protein glycosyltransferase subunit 3B [Source:SWISS;ACC:Q9SYB5]	0.28	67.98	8.55	1.12E-05	GO:0005783, GO:0005886, GO:0006487, GO:0008250, GO:0009507, GO:0016021
U014753	2,462	Zinc finger CCCH domain-containing protein 19 [Source:SWISS;ACC:Q9SIV5]	0.05	11.89	8.57	2.12E-04	GO:0003677, GO:0005634, GO:0006352, GO:0008270, GO:0010964, GO:0016570, GO:0031047, GO:0032776, GO:0042393
U043800	1,078	-	0.12	31.59	8.68	2.71E-04	-
U009822	677	-	0.23	79.7	8.94	1.31E-04	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U002745	832	Agglutinin [Source:SWISS;ACC:P82859]	2.51	860.89	8.98	3.61E-06	GO:0005537, GO:0008061, GO:0051781
U009402	1,391	-	0.08	28.58	9.03	1.01E-04	-
U022677	1,687	-	0.26	89.51	9.03	3.06E-06	-
U000155	579	-	1.83	716.77	9.1	1.91E-06	-
U008729	628	Non-specific lipid-transfer protein [Source:SWISS;ACC:Q39950]	0.26	119.36	9.32	4.43E-05	GO:0006869, GO:0008289
U013787	558	-	0.99	519.24	9.51	1.61E-06	-
U014343	518	Cysteine proteinase inhibitor 5 [Source:SWISS;ACC:Q41916]	1.16	611.84	9.51	1.60E-06	GO:0004869, GO:0005576, GO:0005618, GO:0006952
U013786	1,222	GTP-binding nuclear protein Ran2 [Source:SWISS;ACC:P38547]	0.2	94.95	9.52	3.46E-06	GO:0003924, GO:0005525, GO:0005634, GO:0006886, GO:0006913, GO:0007264
U036205	1,261	F-box/kelch-repeat protein At3g06240 [Source:SWISS;ACC:Q8GXC7]	0.19	97.93	9.6	2.64E-06	-
U040561	6,830	-	0.01	7.43	9.69	1.51E-05	-
U052844	1,601	Luminal-binding protein 5 [Source:SWISS;ACC:Q03685]	0.07	44.47	9.93	7.70E-06	GO:0005524, GO:0005788

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U017430	1,717	Cytochrome P450 71A4 [Source:SWISS;ACC:P37117]	0.06	43.51	10	5.92E-06	GO:0004497, GO:0005506, GO:0016021, GO:0016705, GO:0020037
U002822	714	Protein RALF-like 24 [Source:SWISS;ACC:Q9LK37]	0.42	317	10.1	9.13E-07	GO:0004871, GO:0005179, GO:0007267, GO:0019722, GO:0048046
U004468	1,537	Uncharacterized mitochondrial protein AtMg00300 [Source:SWISS;ACC:P93293]	0.07	57.17	10.2	3.43E-06	GO:0005739
U021595	7,313	-	0.04	29.08	10.2	4.56E-07	-
U024128	602	Probable non-specific lipid-transfer protein AKCS9 [Source:SWISS;ACC:Q43681]	0.13	105.61	10.2	3.37E-05	GO:0006810, GO:0008289
U081210	612	-	0.28	262.51	10.4	2.18E-06	-
U085276	1,160	-	0.38	329.45	10.4	4.12E-07	-
U021962	3,008	-	0.03	39.03	10.8	7.33E-07	-
U024662	636	-	0.04	53.65	10.8	3.58E-04	-
U028558	4,699	-	0.04	54.96	11	1.71E-07	-
U016597	3,053	-	0.03	45.92	11.1	4.00E-07	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U000795	1,018	ABC transporter E family member 2 [Source:SWISS;ACC:Q8LPJ4]	0.13	196.42	11.2	3.01E-07	GO:0005215, GO:0005524, GO:0016020, GO:0016887, GO:0046872, GO:0051539
U035373	5,485	-	0.02	26.65	11.2	2.99E-07	-
U085275	1,141	-	0.26	467.69	11.4	9.34E-08	-
U007400	748	-	0.39	851.3	11.6	9.68E-08	-
U048305	9,157	-	0.01	20.16	11.6	1.45E-07	-
U019851	2,261	Probable metal-nicotianamine transporter YSL7 [Source:SWISS;ACC:Q9SHY2]	0.01	11.87	11.7	1.09E-04	GO:0005886, GO:0016021, GO:0055085
U036202	858	-	0.16	373.93	11.8	1.07E-07	-
U037701	14,481	-	0.01	29.91	11.8	8.86E-08	-
U030773	523	Pentatricopeptide repeat-containing protein At1g29710, mitochondrial [Source:SWISS;ACC:Q9C6G2]	0.43	1282.7 8	12	5.95E-08	GO:0005739
U027761	986	-	0.13	399.76	12.2	6.23E-08	-
U056899	1,343	-	0.4	1238.1 5	12.2	9.37E-07	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U007413	632	-	0	27.23	13.8	4.75E-03	-
U029691	811	-	0	17.36	13.8	4.93E-03	-
U045822	1,890	-	0	5.49	13.8	4.75E-03	-
U057354	529	Nucleosome assembly protein 1 [Source:SWISS;ACC:Q70Z18]	0	38.86	13.8	4.93E-03	GO:0005634, GO:0005737, GO:0006334
U010167	604	-	0	31.72	13.9	3.79E-03	-
U019602	1,264	-	0	9.65	13.9	3.93E-03	-
U023801	781	-	0	19.67	13.9	3.93E-03	-
U025485	1,409	Putative receptor protein kinase ZmPK1 [Source:SWISS;ACC:P17801]	0	8.21	13.9	4.24E-03	GO:0004674, GO:0005524, GO:0016021, GO:0048544
U026284	591	-	0	33.13	13.9	3.79E-03	-
U027731	886	Polyubiquitin [Source:SWISS;ACC:P0CG73]	0	15.38	13.9	4.57E-03	GO:0005634, GO:0005737
U028668	688	-	0	23.5	13.9	4.57E-03	-
U031837	861	Transactivator/viroplasm protein [Source:SWISS;ACC:P15628]	0	16.78	13.9	3.93E-03	GO:0006417, GO:0030430

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U034831	980	-	0	13.15	13.9	4.57E-03	-
U038252	925	APO protein 1, chloroplastic [Source:SWISS;ACC:Q9XIR4]	0	15.2	13.9	3.79E-03	GO:0003723, GO:0009507
U048636	1,125	Putative ribonuclease H protein At1g65750 [Source:SWISS;ACC:P0C2F6]	0	11.46	13.9	3.79E-03	GO:0003676, GO:0004523, GO:0046872
U060314	524	Cell number regulator 3 [Source:SWISS;ACC:D9HP19]	0	40.57	13.9	4.57E-03	GO:0016021
U061467	528	-	0	41.19	13.9	4.08E-03	-
U076948	566	-	0	34.35	13.9	4.57E-03	-
U080443	2,191	Adenylate kinase 9 [Source:SWISS;ACC:Q5TCS8]	0	4.66	13.9	4.57E-03	GO:0004550, GO:0005524, GO:0005634, GO:0005730, GO:0005737, GO:0006174, GO:0006186, GO:0006756, GO:0006757, GO:0031965, GO:0050145, GO:0061508, GO:0061565, GO:0061566, GO:0061567, GO:0061568, GO:0061569, GO:0061570, GO:0061571
U083752	503	-	0	46.65	13.9	3.93E-03	-
U084409	569	-	0	34.54	13.9	4.24E-03	-
U084859	899	Unconventional myosin-X [Source:SWISS;ACC:P79114]	0	15.85	13.9	3.79E-03	GO:0001726, GO:0005524, GO:0005547, GO:0005829, GO:0005938, GO:0006200,

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
							GO:0008152, GO:0008360, GO:0016459, GO:0030027, GO:0030705, GO:0030898, GO:0031527, GO:0032433, GO:0051015, GO:0051489, GO:0060002
U089563	974	-	0	13.73	13.9	4.08E-03	-
U095550	1,207	-	0	9.99	13.9	4.24E-03	-
U018971	597	Bet1-like SNARE 1-1 [Source:SWISS;ACC:Q9M2J9]	0	33.66	14	3.28E-03	GO:0000139, GO:0005484, GO:0005634, GO:0005789, GO:0005886, GO:0015031, GO:0016021, GO:0016192
U020262	506	-	0	49	14	3.05E-03	-
U020862	967	Nudix hydrolase 22, chloroplastic [Source:SWISS;ACC:O22951]	0	14.57	14	3.40E-03	GO:0009507, GO:0016787, GO:0046872
U024377	960	Purple acid phosphatase 8 [Source:SWISS;ACC:Q8VYZ2]	0	14.79	14	3.40E-03	GO:0003993, GO:0005576, GO:0016311, GO:0046872
U036811	951	-	0	15.65	14	2.94E-03	-
U040179	605	-	0	32.59	14	3.40E-03	-
U052740	980	RING finger and CHY zinc finger domain-containing protein 1 [Source:SWISS;ACC:Q96PM5]	0	14.06	14	3.65E-03	GO:0000151, GO:0002039, GO:0004842, GO:0005634, GO:0005737, GO:0008270, GO:0016567, GO:0016607, GO:0016874, GO:0031398, GO:0032436, GO:0042787, GO:0042803, GO:0051865



Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U058878	1,178	-	0	11.26	14	3.16E-03	-
U089053	582	-	0	36.3	14	3.05E-03	-
U093099	896	-	0	16.95	14	3.05E-03	-
U095720	751	Probably inactive leucine-rich repeat receptor-like protein kinase At3g28040 [Source:SWISS;ACC:Q9LRT1]	0	22.2	14	3.28E-03	GO:0004672, GO:0005524, GO:0016021
U000317	1,386	-	0	9.4	14.1	2.74E-03	-
U011817	2,463	-	0	4.78	14.1	2.56E-03	-
U016598	1,335	-	0	10.46	14.1	2.23E-03	-
U022226	687	-	0	28.17	14.1	2.39E-03	-
U035081	869	Transcription factor ORG2 [Source:SWISS;ACC:Q9M1K1]	0	19	14.1	2.39E-03	GO:0003677, GO:0003700, GO:0005634, GO:0006351, GO:0006355, GO:0010106, GO:0055072
U035399	941	ATP-dependent Clp protease proteolytic subunit 5, chloroplastic [Source:SWISS;ACC:Q9S834]	0	16.42	14.1	2.56E-03	GO:0004252, GO:0009507, GO:0009532, GO:0009534, GO:0009570, GO:0009579, GO:0009840, GO:0009941
U045842	1,034	-	0	14.81	14.1	2.23E-03	-
U060833	521	-	0	50.03	14.1	2.23E-03	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U070695	563	ADP-ribosylation factor GTPase-activating protein AGD3 [Source:SWISS;ACC:Q5W7F2]	0	41.9	14.1	2.31E-03	GO:0005829, GO:0005886, GO:0006897, GO:0008060, GO:0008270, GO:0009733, GO:0009965, GO:0010051, GO:0010087, GO:0030140, GO:0032312, GO:0035091, GO:0043547
U077558	900	-	0	17.46	14.1	2.65E-03	-
U080814	1,620	-	0	8.09	14.1	2.31E-03	-
U091553	1,530	-	0	8.7	14.1	2.31E-03	-
U098113	859	-	0	18.99	14.1	2.56E-03	-
U023800	677	-	0	30.01	14.2	2.09E-03	-
U025371	793	AP-2 complex subunit sigma [Source:SWISS;ACC:Q84WL9]	0	23.9	14.2	1.72E-03	GO:0006897, GO:0008565, GO:0030122
U026924	842	-	0	21.09	14.2	1.95E-03	-
U029820	1,733	Cactin [Source:SWISS;ACC:F4I2J8]	0	7.58	14.2	2.16E-03	GO:0005681, GO:0006397, GO:0008380, GO:0016607
U030433	844	-	0	21.29	14.2	1.83E-03	-
U031849	1,273	F-box/kelch-repeat protein At3g18720 [Source:SWISS;ACC:Q9LSA5]	0	11.4	14.2	2.02E-03	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U044783	2,201	Histidine kinase 2 [Source:SWISS;ACC:Q9C5U2]	0	6.04	14.2	1.72E-03	GO:0000155, GO:0004673, GO:0005034, GO:0005789, GO:0005886, GO:0006970, GO:0007275, GO:0009414, GO:0009636, GO:0009651, GO:0009736, GO:0009737, GO:0009884, GO:0009909, GO:0010029, GO:0010087, GO:0010271, GO:0016021, GO:0018106, GO:0019900, GO:0034757, GO:0042802, GO:0043424, GO:0048509, GO:0048831, GO:0070417, GO:0071215, GO:0080117
U061786	837	-	0	21.58	14.2	1.83E-03	-
U061890	588	-	0	40.38	14.2	1.89E-03	-
U086415	535	-	0	48.02	14.2	2.09E-03	-
U011966	598	-	0	41.36	14.3	1.51E-03	-
U012737	2,905	-	0	4.59	14.3	1.47E-03	-
U017581	661	-	0	33.26	14.3	1.66E-03	-
U029568	974	26S proteasome non-ATPase regulatory subunit 4 homolog [Source:SWISS;ACC:P55034]	0	17.66	14.3	1.61E-03	GO:0000502, GO:0001653, GO:0005634, GO:0005829, GO:0006974, GO:0007165, GO:0008540, GO:0009408, GO:0009555, GO:0009651, GO:0009733, GO:0009735, GO:0009737, GO:0009744, GO:0010029, GO:0010150, GO:0016020, GO:0030163, GO:0031593, GO:0043161, GO:0043248, GO:0048366, GO:0048455, GO:0048528, GO:0048767, GO:0051788

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U033899	1,016	-	0	17	14.3	1.47E-03	-
U041669	672	-	0	33.06	14.3	1.51E-03	-
U049134	574	Non-specific lipid-transfer protein [Source:SWISS;ACC:P27631]	0	44.15	14.3	1.61E-03	GO:0006869, GO:0008289
U053456	1,619	Probable mitochondrial chaperone bcs1 [Source:SWISS;ACC:Q9P6Q3]	0	9.3	14.3	1.38E-03	GO:0005524, GO:0005739, GO:0005743, GO:0006200, GO:0016021, GO:0016226, GO:0034551, GO:0042623, GO:0043623
U096455	594	-	0	43.01	14.3	1.38E-03	-
U099152	630	-	0	38.54	14.3	1.34E-03	-
U002037	534	-	0	55.83	14.4	1.19E-03	-
U014544	1,610	G-type lectin S-receptor-like serine/threonine-protein kinase At1g34300 [Source:SWISS;ACC:Q9XID3]	0	9.57	14.4	1.26E-03	GO:0004674, GO:0005516, GO:0005524, GO:0005886, GO:0016021, GO:0030246, GO:0048544
U015311	847	-	0	24.08	14.4	1.13E-03	-
U022765	1,424	Wall-associated receptor kinase-like 9 [Source:SWISS;ACC:Q9C9L5]	0	11.06	14.4	1.30E-03	GO:0004674, GO:0005509, GO:0005524, GO:0016021, GO:0030247
U029170	871	-	0	23.52	14.4	1.03E-03	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U038570	912	Putative receptor-like protein kinase At5g39000 [Source:SWISS;ACC:Q9FID8]	0	20.78	14.4	1.26E-03	GO:0004674, GO:0005524, GO:0016021
U040558	1,706	-	0	9.03	14.4	1.19E-03	-
U077901	520	-	0	58.6	14.4	1.23E-03	-
U006244	1,241	Putative ribonuclease H protein At1g65750 [Source:SWISS;ACC:P0C2F6]	0	14.2	14.5	1.01E-03	GO:0003676, GO:0004523, GO:0046872
U010190	2,536	-	0	6.08	14.5	9.03E-04	-
U014741	992	-	0	20.01	14.5	9.03E-04	-
U016571	919	-	0	22.91	14.5	8.35E-04	-
U016944	586	-	0	49.09	14.5	9.28E-04	-
U018202	602	-	0	48.34	14.5	7.92E-04	-
U019351	1,233	-	0	14.64	14.5	9.28E-04	-
U034030	602	-	0	46.6	14.5	9.03E-04	-
U055694	1,647	-	0	10.24	14.5	8.80E-04	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U084616	1,540	-	0	11.34	14.5	8.13E-04	-
U002823	2,858	-	0	5.91	14.6	6.03E-04	-
U009339	2,724	-	0	5.88	14.6	7.53E-04	-
U010753	4,602	-	0	3.39	14.6	6.81E-04	-
U014953	1,032	Pentatricopeptide repeat-containing protein At1g63150 [Source:SWISS;ACC:Q9CAM8]	0	20.35	14.6	6.81E-04	-
U031368	792	-	0	30.12	14.6	7.34E-04	-
U040560	3,289	-	0	4.97	14.6	6.32E-04	-
U052990	1,600	Probable inactive receptor kinase At5g10020 [Source:SWISS;ACC:Q0WR59]	0	11.73	14.6	6.03E-04	GO:0004672, GO:0005524, GO:0005829, GO:0005886, GO:0016021
U061803	500	-	0	74.59	14.6	6.98E-04	-
U007659	1,658	-	0	11.48	14.7	5.48E-04	-
U011380	890	-	0	28.05	14.7	4.66E-04	-
U015169	753	Fatty-acid-binding protein 1 [Source:SWISS;ACC:Q9M1X2]	0	35.3	14.7	5.48E-04	GO:0005504, GO:0005739, GO:0006631, GO:0009507, GO:0009536, GO:0009570, GO:0009813, GO:0009941, GO:0045430

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U029381	888	Membrane-anchored ubiquitin-fold protein 4 [Source:SWISS;ACC:Q9LSD8]	0	27.1	14.7	5.35E-04	GO:0005886
U029383	888	Membrane-anchored ubiquitin-fold protein 4 [Source:SWISS;ACC:Q9LSD8]	0	27.1	14.7	5.35E-04	GO:0005886
U040564	2,937	-	0	5.91	14.7	5.35E-04	-
U002420	760	-	0	37.97	14.8	3.90E-04	-
U005679	553	-	0	69.82	14.8	3.82E-04	-
U010617	1,023	Putative F-box/LRR-repeat protein 23 [Source:SWISS;ACC:Q9S9V9]	0	24.16	14.8	3.73E-04	-
U010731	727	-	0	40.63	14.8	4.07E-04	-
U010822	3,536	-	0	5.28	14.8	3.73E-04	-
U015824	964	-	0	26.02	14.8	3.90E-04	-
U015835	526	-	0	78.71	14.8	3.65E-04	-
U015958	1,313	3-oxoacyl-[acyl-carrier-protein] reductase, chloroplastic [Source:SWISS;ACC:P28643]	0	17.03	14.8	3.82E-04	GO:0004316, GO:0006633, GO:0009507, GO:0051287

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U017511	559	-	0	66.83	14.8	4.17E-04	-
U017582	610	-	0	55.79	14.8	4.17E-04	-
U021470	1,186	Acyl-CoA--sterol O-acyltransferase 1 [Source:SWISS;ACC:Q9SV07]	0	18.6	14.8	4.55E-04	GO:0016021, GO:0016127, GO:0016746, GO:0034434
U031059	826	-	0	33.26	14.8	3.82E-04	-
U052350	2,524	Arginine--tRNA ligase {ECO:0000255}HAMAP- Rule:MF_00123} [Source:SWISS;ACC:Q82E68]	0	7.5	14.8	4.17E-04	GO:0004814, GO:0005524, GO:0005737, GO:0006420
U087382	636	-	0	51.95	14.8	3.99E-04	-
U017584	550	-	0	74.18	14.9	3.15E-04	-
U002273	639	-	0	60.36	15	2.14E-04	-
U013642	522	-	0	89.4	15	2.36E-04	-
U014752	2,477	Zinc finger CCCH domain-containing protein 19 [Source:SWISS;ACC:Q9SIV5]	0	8.64	15	2.56E-04	GO:0003677, GO:0005634, GO:0006352, GO:0008270, GO:0010964, GO:0016570, GO:0031047, GO:0032776, GO:0042393
U017291	4,310	-	0	4.71	15	2.51E-04	-



Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U035832	1,717	Uncharacterized acetyltransferase At3g50280 [Source:SWISS;ACC:Q9SND9]	0	13.35	15	2.56E-04	GO:0016747
U078454	661	-	0	54.5	15	2.51E-04	-
U082491	816	-	0	37.55	15	2.56E-04	-
U000060	854	-	0	37.71	15.1	1.87E-04	-
U010762	1,663	-	0	14.89	15.1	1.95E-04	-
U017814	668	-	0	57	15.1	1.95E-04	-
U037715	1,399	-	0	19.15	15.1	1.70E-04	-
U059276	526	Flavin-containing monooxygenase FMO GS-OX-like 3 [Source:SWISS;ACC:Q9SXD5]	0	93.14	15.1	1.87E-04	GO:0004499, GO:0050660, GO:0050661
U061030	1,250	-	0	22.47	15.1	1.61E-04	-
U085078	505	-	0	106.15	15.1	1.61E-04	-
U090022	831	-	0	41.06	15.1	1.58E-04	-
U008503	514	-	0	104.55	15.2	1.45E-04	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U035098	592	-	0	81.08	15.2	1.19E-04	-
U050922	1,918	NEDD8-activating enzyme E1 regulatory subunit {ECO:0000305} [Source:SWISS;ACC:P42744]	0	13.34	15.2	1.50E-04	GO:0000166, GO:0003824, GO:0005634, GO:0005829, GO:0006281, GO:0007131, GO:0009414, GO:0009734, GO:0009735, GO:0009965, GO:0010252, GO:0016567, GO:0045116
U000654	2,327	-	0	11.39	15.3	1.13E-04	-
U019372	2,858	-	0	9.13	15.3	1.07E-04	-
U040121	1,365	Cationic amino acid transporter 9, chloroplastic [Source:SWISS;ACC:Q9C5D6]	0	22.31	15.3	1.04E-04	GO:0005774, GO:0015171, GO:0016021, GO:0031969
U051888	728	-	0	57.75	15.3	9.70E-05	-
U007660	2,728	-	0	10.48	15.4	7.49E-05	-
U014568	983	-	0	37.96	15.4	7.49E-05	-
U019134	4,591	-	0	5.75	15.4	8.37E-05	-
U026362	1,099	-	0	33.07	15.4	6.82E-05	-
U079954	774	-	0	55.11	15.4	7.61E-05	-
U022834	1,067	-	0	36.09	15.5	5.60E-05	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U047287	545	-	0	112.87	15.5	6.12E-05	-
U013183	2,473	-	0	13.61	15.6	3.97E-05	-
U019371	2,608	-	0	12.96	15.6	3.76E-05	-
U102955	544	-	0	131.6	15.7	3.24E-05	-
U011899	4,371	-	0	8.36	15.8	2.14E-05	-
U025260	950	-	0	54.19	15.8	2.04E-05	-
U001046	808	-	0	73.53	15.9	1.63E-05	-
U040557	5,011	-	0	7.63	15.9	1.69E-05	-
U019170	5,234	-	0	7.92	16	1.17E-05	-
U051036	2,297	DNA topoisomerase 2 [Source:SWISS;ACC:P30182]	0	18.83	16	1.41E-05	GO:0000712, GO:0000795, GO:0000819, GO:0003677, GO:0003916, GO:0003918, GO:0005524, GO:0005634, GO:0006200, GO:0006261, GO:0006265, GO:0006312, GO:0008094, GO:0009330, GO:0044774, GO:0046872
U056819	4,211	-	0	10.12	16	1.11E-05	-
U016865	1,798	Histone-lysine N-methyltransferase ATXR2 [Source:SWISS;ACC:Q5PP37]	0	27.82	16.1	9.19E-06	GO:0005634, GO:0018024, GO:0046872

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U035806	1,214	Albumin-2 [Source:SWISS;ACC:P08688]	0	47.26	16.1	8.16E-06	GO:0005509, GO:0005829, GO:0045735
U064454	503	-	0	213.89	16.1	8.49E-06	-
U086794	550	-	0	166.61	16.1	1.06E-05	-
U007933	1,175	-	0	51.66	16.2	6.76E-06	-
U093739	905	-	0	73.14	16.2	7.71E-06	-
U023862	3,294	-	0	16.01	16.3	4.90E-06	-
U033385	1,205	Rop guanine nucleotide exchange factor 1 [Source:SWISS;ACC:Q93ZY2]	0	53.7	16.3	4.90E-06	GO:0005089, GO:0005829, GO:0009860, GO:0016324, GO:0032321, GO:0080092
U012313	618	-	0	161.9	16.4	4.29E-06	-
U034170	996	-	0	74.61	16.4	3.79E-06	-
U031348	667	-	0	168.96	16.6	1.93E-06	-
U050100	2,537	Arginine--tRNA ligase {ECO:0000255 HAMAP- Rule:MF_00123} [Source:SWISS;ACC:B7KCT7]	0	26.48	16.6	2.01E-06	GO:0004814, GO:0005524, GO:0005737, GO:0006420
U092211	643	-	0	182.71	16.6	1.86E-06	-

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U007380	5,436	-	0	12.33	16.7	1.49E-06	-
U019844	5,236	-	0	12.68	16.7	1.57E-06	-
U024325	7,193	-	0	8.96	16.7	1.65E-06	-
U063181	652	-	0	181.04	16.7	1.73E-06	-
U000069	714	-	0	172.45	16.8	1.06E-06	-
U015178	792	-	0	141.38	16.8	1.16E-06	-
U019192	1,069	-	0	89.39	16.8	1.16E-06	-
U036209	1,059	F-box/kelch-repeat protein At3g06240 [Source:SWISS;ACC:Q8GXC7]	0	90.08	16.8	1.19E-06	-
U102440	713	-	0	181.85	16.9	8.67E-07	-
U059347	1,196	-	0	97.33	17.2	4.42E-07	-
U102706	731	-	0	216.23	17.2	3.69E-07	-
U051034	3,020	DNA topoisomerase 2 [Source:SWISS;ACC:P30182]	0	34.28	17.3	3.24E-07	GO:0000712, GO:0000795, GO:0000819, GO:0003677, GO:0003916, GO:0003918, GO:0005524, GO:0005634, GO:0006200, GO:0006261, GO:0006265, GO:0006312, GO:0008094, GO:0009330, GO:0044774, GO:0046872

Unigene ID	Length	Description	FPKM		Log <sub>2</sub> FC	P-value	Gene ontology
			NW	AD			
U100830	813	-	0	323.74	18.1	5.29E-08	-
U013696	1,012	-	0	258.62	18.2	3.92E-08	-
U046194	620	-	0	610.01	18.3	3.56E-08	-
U002510	1,103	-	0	381.27	19	1.48E-08	-

45 **Supplementary Table S4.** Three highest-ranked functional clusters of up-regulated genes determined  
 46 by DAVID gene functional classification tool

Category or term	Functional annotation	No. DEGs	Fold enrichment
Annotation cluster 1 (enrichment score: 1.34)			
GO:0009055	Electron carrier activity	6	3.43
IPR017972	Cytochrome P450, conserved site	11	7.05
IPR002401	Cytochrome P450, E-class, group I	11	6.96
IPR017973	Cytochrome P450, C-terminal region	12	6.79
IPR001128	Cytochrome P450	6	6.63
SP_PIR_KEYWORDS	Iron	3	3.11
PIRSF000045	Cytochrome P450 CYP2D6	5	11.21
SP_PIR_KEYWORDS	Monooxygenase	5	5.74
GO:0005506	Iron ion binding	6	2.63
SP_PIR_KEYWORDS	Heme	6	4.01
GO:0055114	Oxidation reduction	6	1.91
GO:0020037	Heme binding	11	3.62
GO:0046906	Tetrapyrrole binding	11	3.17
SP_PIR_KEYWORDS	Metalloprotein	12	4.07
SP_PIR_KEYWORDS	Oxidoreductase	6	1.47
Annotation cluster 2 (enrichment score: 0.76)			
GO:0017076	Purine nucleotide binding	19	1.38
GO:0032555	Purine ribonucleotide binding	18	1.37
GO:0032553	Ribonucleotide binding	18	1.37
SP_PIR_KEYWORDS	Nucleotide-binding	16	1.41
GO:0030554	Adenyl nucleotide binding	17	1.35
GO:0001883	Purine nucleoside binding	17	1.35
GO:0001882	Nucleoside binding	17	1.34
GO:0005524	ATP binding	16	1.36
GO:0032559	Adenyl ribonucleotide binding	16	1.34
SP_PIR_KEYWORDS	ATP-binding	14	1.40
GO:0000166	Nucleotide binding	20	1.26
UP_SEQ_FEATURE	Nucleotide phosphate-binding region:ATP	9	1.45
Annotation cluster 3 (enrichment score: 0.75)			
UP_SEQ_FEATURE	Repeat:LRR 5	4	3.71
UP_SEQ_FEATURE	Repeat:LRR 4	4	3.21
UP_SEQ_FEATURE	Repeat:LRR 3	4	2.86
UP_SEQ_FEATURE	Repeat:LRR 2	4	2.66
UP_SEQ_FEATURE	Repeat:LRR 1	3	2.66
UP_SEQ_FEATURE	Repeat:LRR 6	4	3.40
SP_PIR_KEYWORDS	Leucine-rich repeat	3	2.24
IPR001611	Leucine-rich repeat	4	2.39

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49 **Supplementary Table S5.** Three highest-ranked functional clusters of down-regulated genes  
 50 determined using the DAVID gene functional classification tool

Category	Term	No. DEGs	Fold enrichment
Annotation cluster 1 (enrichment score: 1.06)			
GO:0009699	Phenylpropanoid biosynthetic process	4	5.82
GO:0019438	Aromatic compound biosynthetic process	5	4.02
GO:0009698	Phenylpropanoid metabolic process	4	4.25
GO:0042398	Cellular amino acid derivative biosynthetic process	4	3.73
GO:0006575	Cellular amino acid derivative metabolic process	4	2.35
GO:0019748	Secondary metabolic process	4	1.94
Annotation cluster 2 (enrichment score: 0.85)			
SM00256	FBOX	7	2.64
UP_SEQ_FEATURE	Domain:F-box	7	2.43
IPR001810	Cyclin-like F-box	7	2.26
Annotation cluster 3 (enrichment score: 0.83)			
GO:0009735	Response to cytokinin stimulus	6	9.10
GO:0009725	Response to hormone stimulus	11	2.08
GO:0009719	Response to endogenous stimulus	11	1.95
GO:0010033	Response to organic substance	12	1.74
GO:0009733	Response to auxin stimulus	6	2.93
GO:0009734	Auxin mediated signaling pathway	3	4.19
GO:0009755	Hormone-mediated signaling	5	2.32
GO:0032870	Cellular response to hormone stimulus	5	2.24
GO:0007242	Intracellular signaling cascade	6	1.49
UP_SEQ_FEATURE	Mutagenesis site	6	1.45