

Table S4 DEGs of flavonoid and anthocyanin biosynthesis in the testa of

Gene name	ID	Shanhua15R	Shanhua15R	log2FoldChange
PAL	arahy.Tifrunner.gnm1.ann1.NB2RRK	413	147	-1.492
	arahy.Tifrunner.gnm1.ann1.PUMP6L	4810	1025	-2.231
C4H	arahy.Tifrunner.gnm1.ann1.AYA1A5	62	4	-4.14
	arahy.Tifrunner.gnm1.ann1.K1LFJJ	53	5	-3.359
4CL	arahy.Tifrunner.gnm1.ann1.SGZ2CH	7874	3613	-1.124
	arahy.Tifrunner.gnm1.ann1.35X8AA	530	73	-2.853
	arahy.Tifrunner.gnm1.ann1.7DZV4F	17	0	-6.641
	arahy.Tifrunner.gnm1.ann1.BDR360	137	40	-1.771
	arahy.Tifrunner.gnm1.ann1.IT8P61	742	340	-1.127
	arahy.Tifrunner.gnm1.ann1.L700WL	79	282	1.841
	arahy.Tifrunner.gnm1.ann1.W43CKL	643	1785	1.474
	arahy.Tifrunner.gnm1.ann1.6J3HHE	110	38	-1.549
CHS	arahy.Tifrunner.gnm1.ann1.ALW2B1	22	1095	5.634
	arahy.Tifrunner.gnm1.ann1.JH8TMD	67	15	-2.198
	arahy.Tifrunner.gnm1.ann1.K0UY8K	117	19	-2.618
	arahy.Tifrunner.gnm1.ann1.QZN0LQ	111	10	-3.551
	arahy.Tifrunner.gnm1.ann1.UDJX6I	3893	1897	-1.037
	arahy.Tifrunner.gnm1.ann1.79B99S	2518	525	-2.261
F3H	arahy.Tifrunner.gnm1.ann1.HE8J5U	2687	685	-1.973
	arahy.Tifrunner.gnm1.ann1.8F7PE4	3121	876	-1.834
F3'H	arahy.Tifrunner.gnm1.ann1.K8H9R8	1769	453	-1.966
	arahy.Tifrunner.gnm1.ann1.B0KX4P	68	20	-1.786
DFR	arahy.Tifrunner.gnm1.ann1.AQ6B1J	909	128	-2.826
	arahy.Tifrunner.gnm1.ann1.UQ0Z3E	799	138	-2.53
ANS	arahy.Tifrunner.gnm1.ann1.IK60LM	753	106	-2.824
	arahy.Tifrunner.gnm1.ann1.W8TDEC	100	36	-1.48
ANR	arahy.Tifrunner.gnm1.ann1.T1J2UZ	643	6	-6.76
	arahy.Tifrunner.gnm1.ann1.M05HM0	580	7	-6.381
LAR	arahy.Tifrunner.gnm1.ann1.4WXU8P	1840	113	-4.018
	arahy.Tifrunner.gnm1.ann1.4Y1607	2828	174	-4.018

## R4 and R7 stages of Shanhua15 and Zhonghua12 peanut

pvalue	FDR	regulated	Name	Chrom	Start	End	Strand	Length
0.00151	0.018568	down	ahy.NB2R1inner.gnm1		1.46E+08	1.46E+08	-	7414
7.2E-06	0.000252	down	ahy.PUMPinner.gnm1		42030770	42036927	+	6158
5.38E-08	3.99E-06	down	ahy.AYA1inner.gnm1		2642047	2650511	+	8465
8.01E-05	0.001857	down	ahy.K1LFinner.gnm1		8101429	8107794	-	6366
0.002131	0.024098	down	ahy.SGZ2Cinner.gnm1		21279765	21284834	+	5070
6.61E-06	0.000235	down	ahy.35X8Ainner.gnm1		1.48E+08	1.48E+08	-	6568
0.000202	0.003955	down	ahy.7DZV4inner.gnm1		8358130	8363858	-	5729
7.47E-08	5.25E-06	down	ahy.BDR3inner.gnm1		29365019	29368436	-	3418
0.00022	0.004231	down	ahy.IT8P6inner.gnm1		96248067	96251891	+	3825
1.28E-08	1.16E-06	up	ahy.L700Winner.gnm1		50725449	50731693	+	6245
0.001335	0.016966	up	ahy.W43Cinner.gnm1		5092509	5096167	-	3659
0.000204	0.00399	down	ahy.6J3HFinner.gnm1		18572663	18574554	-	1892
3.79E-34	2.18E-30	up	ahy.ALW2inner.gnm1		1.29E+08	1.29E+08	+	4179
0.001883	0.021999	down	ahy.JH8TMinner.gnm1		38986848	38988503	+	1656
1.09E-09	1.29E-07	down	ahy.K0UYinner.gnm1		38961309	38963310	-	2002
5.45E-13	1.5E-10	down	ahy.QZN0inner.gnm1		18595150	18597004	+	1855
0.000722	0.010674	down	ahy.UDJXinner.gnm1		8632413	8635267	-	2855
2.11E-12	4.88E-10	down	ahy.79B99inner.gnm1		11007083	11012015	-	4933
4.86E-11	8.2E-09	down	ahy.HE8J5inner.gnm1		673566	679235	+	5670
1.39E-11	2.6E-09	down	ahy.8F7PEinner.gnm1		1.3E+08	1.3E+08	-	5438
5.81E-12	1.22E-09	down	ahy.K8H9inner.gnm1		1.06E+08	1.06E+08	-	5230
0.004007	0.038214	down	ahy.B0KX4inner.gnm1		44757364	44760433	-	3070
2.19E-27	6.79E-24	down	ahy.AQ6Binner.gnm1		12997611	12999986	+	2376
4.91E-15	2.13E-12	down	ahy.UQ0Zinner.gnm1		13644667	13647176	+	2510
2.65E-10	3.71E-08	down	ahy.IK60Linner.gnm1		1.17E+08	1.17E+08	-	2631
5.3E-05	0.00132	down	ahy.W8TDinner.gnm1		1.26E+08	1.26E+08	+	2680
5.81E-16	3.21E-13	down	ahy.T1J2Uinner.gnm1		1.1E+08	1.1E+08	+	6039
6.42E-46	1.29E-41	down	ahy.M05Hinner.gnm1		1.19E+08	1.19E+08	-	6084
6.09E-12	1.26E-09	down	ahy.4WXUinner.gnm1		19357631	19364660	-	7030
2.57E-19	2.59E-16	down	ahy.4Y16Cinner.gnm1		24219840	24228275	-	8436

Type	GO	KEGG	KOG	NR	SwissProt	TrEMBL
otein_codi	0009800, cianine amm	At3g53260	nia-lyase	henylalanin	000256	[RuleBase:RU003955]; E
otein_codi	0009800, cianine amm	At2g37040	nia-lyase	henylalanin	000256	[RuleBase:RU003955]; E
otein_codi	e 4-monooamate 4-mc	At2g30490	nooxygenc	acid 4-hydr	acterized protein	{ECO:000031
otein_codi	e 4-monooamate 4-mc	At2g30490	nooxygenc	acid 4-hydr	acterized protein	{ECO:000031
otein_codi	e 4-monooamate 4-mc	At2g30490	nooxygenc	acid 4-hydr	0313 EMBL:KRH17200.1, ECO:	
otein_codi	524, ATP b	arate--Co	At3g21240	e 2 isofor	hort=4CL 0313 EMBL:KRH02884.1, ECO:	
otein_codi	#####	arate--Co	At1g62940	igase-like	C=6.2.1.-; A--CoA ligase-like 1 {ECO:00003	
otein_codi	0016874, li	arate--Co	At4g05160	gase-like	7C=6.2.1.-; ;--CoA ligase-like 7 {ECO:00003	
otein_codi	524, ATP b	arate--Co	At3g21240	gase 2-like	hort=4CL 0313 EMBL:KRH02884.1, ECO:	
otein_codi	0016874, li	--	At5g63380	gase-like	9C=6.2.1.-; oA ligase-like protein {ECO:000	
otein_codi	0016874, li	arate--Co	At4g05160	gase-like	7C=6.2.1.-; ;--CoA ligase-like 7 {ECO:00003	
otein_codi	activity; Calcone synt	At5g13930	ase 6 [Ara	7; EC=2.3.1	one synthase {ECO:0000313 EM	
otein_codi	activity; Calcone synt	At5g13930	ase 6 [Ara	7; EC=2.3.1	one synthase {ECO:0000313 EM	
otein_codi	activity; Calcone synt	At5g13930	ase 6 [Ara	7; EC=2.3.1	one synthase {ECO:0000313 EM	
otein_codi	activity; Calcone synt	At5g13930	ase 6 [Ara	7; EC=2.3.1	one synthase {ECO:0000313 EM	
otein_codi	activity; Calcone synt	At5g13930	ase 6 [Ara	7; EC=2.3.1	one synthase {ECO:0000313 EM	
otein_codi	045486, nangenin 3-di	At3g51240	3-dioxyge	JniProtKB	none-3-hydroxylase {ECO:0000	
otein_codi	045486, nangenin 3-di	At3g51240	e 3-dioxyge	JniProtKB	none-3-hydroxylase {ECO:0000	
otein_codi	3'-monoox	oid 3'-mor	At5g07990	xygenase	[21; AltNan=F3'H {ECO:0000313 EMBL:AE	
otein_codi	3'-monoox	oid 3'-mor	At5g07990	xygenase	[21; AltNan=F3'H {ECO:0000313 EMBL:AE	
otein_codi	ity; GO:00	ctone reduct	At2g45400	ctase [Ara	Full=Vestitflavonol-4-reductase {ECO:0000	
otein_codi	O:0046872, cyanidin di	At4g22880	dioxygenc	4.11.19 {E	hocyandin synthase {ECO:00003	
otein_codi	O:0046872, cyanidin di	At4g22880	dioxygenc	4.11.19 {E	hocyandin synthase {ECO:00003	
otein_codi	reductase c	yanidin re	At1g61720	-flavan-3-	CB:Q5FB3	cyandin reductase {ECO:00003
otein_codi	reductase c	yanidin re	At1g61720	-flavan-3-	CB:Q5FB3	cyandin reductase {ECO:00003
otein_codi	ivity; GO:(hocyandin	At1g75290	eductase	lin reducta	andin reductase LAR1-2 {ECO:00	
otein_codi	ivity; GO:(hocyandin	At1g75290	eductase	lin reducta	andin reductase LAR1-2 {ECO:00	
otein_codi	irbic acid bi	onol syntha	At5g08640	e 3-hydrox	.14.11.23	hol synthase {ECO:0000313 EMI
otein_codi	irbic acid bi	onol syntha	At5g08640	ne 3-hydr	.14.11.23	pnol synthase {ECO:0000313 EM

3C=4.3.1.24 {ECO:0000256|RuleBase:RU003955};  
C=4.3.1.24 {ECO:0000256|RuleBase:RU003955};  
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3L:BAF49296.1};  
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