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Supplementary Data

Little impacts on transcriptome and secondary metabolites of transgenic rice by resveratrol synthase gene

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Supplementary Table 1. Primer sequence for RT-PCR used for confirmation on microarray data

Loc.No.	Primer forward sequence	Primer reverse sequence
Os03g0115800	TCCCCTGCATCATACAGGCAACC	GGAAGGGAACAACATTCCCTGA
OS09g0359500	CGCGTGTGCGAATTCTGCTA	GCGTTCTCGACATGTATAGCTAGG
Os08g0212400	GCTTATGCAACCAGGGAAGAG	GCAGCCATCATCATTCCGTGA
Os06g0265100	ATGAATCCCCTGCATCATAC	CAGTAGTGAATACAATCGTTGGAGA
Os03t0569000	GTGAGCAATCAACTGTTCCGG	CTCAACTGGCTCTAGCTCA
Os08g0140700	TGTGTTGTCAATGCCGGATC	ACCGATTTAGCAAGAACTGG
Os03g0421000	GTGGGCAAACTATCAGGA	CTGATTGTGCTTTCTGTTTC
Os04g0565300	ATGCGCTTCCAAGGCGAGGA	TTATATTGGCCTAACACTTG
Os03g0629800	ATGGGTGCCGTTGTGGTCGGC	TTACGGGGATGGGGAAGAG
Os02g0161700	GTTCTTCACACCCATGCCCTG	CAAGGTATAGCAAAGATGCAT
OsActin1	CTGCTATGTACGTCGCCATC	AGTCTCATGGATACCCGCAG

Supplementary Table 2. Comparison on phenolic compounds of up- and down-stream to the inserted resveratrol gene between transgenic lines and non-transgenic lines for brown rice grains

Phenolic compounds	I515	I526	DJ	ND
ρ-coumaric acid (μg/g)	36.95±1.12[a]	37.73±0.67	36.66±0.86	37.09±0.47
Vanillin (μg/g)	9.57±1.10	9.99±0.79	8.34±0.04	9.36±0.11
Chlorogenic acid (μg/g)	27.41±0.54	27.73±1.76	24.98±0.26	27.29±0.08
Naringenin (μg/g)	3.20±0.16	7.35±0.47	6.12±0.10	6.78±0.56
Biochanin A (μg/g)	88.11±1.44	94.63±2.08	88.97±0.08	91.25±3.37
Ferulic acid (μg/g)	tr[b]	tr	tr	tr
Resveratrol (μg/g)	2.15±0.09	4.34±0.11	-	-

[a] Mean±Standard deviation; [b] Trace;

Supplementary Table 3. The average characteristic performance of growth and development and yield components of I515, I526 and their wild type variety 'Dongjin' over two or three years

Variety	Years	Culm length	Panicle length	Panicle number	Weight /plant(g)	100-grain weight(g)
I515	2011	83.49±3.13	20.17±2.00	11.20±2.72	22.69±4.97	2.41±0.11
I526		94.15±4.69	20.74±1.85	11.17±2.13	30.63±7.16	2.73±0.17
DJ		96.60±4.27	20.30±1.57	13.10±1.85	34.28±7.93	2.61±0.10
I515	2012	86.50±4.49	19.67±1.14	12.42±3.38	28.55±8.51	2.55±0.08
I526		83.24±3.89	22.02±1.71	8.84±2.33	26.31±8.98	2.99±0.07
DJ		86.32±2.38	21.26±1.10	8.89±2.40	27.53±8.26	2.83±0.09
I526	2013	81.66±2.64	20.59±1.28	7.80±2.15	15.36±4.81	2.79±0.06
DJ		83.89±2.03	21.30±0.95	7.80±2.12	18.85±5.37	2.74±0.07
t (I515)	2 Y	0.34	0.77	0.10	0.06	4.86**
t (I526)	3 Y	0.36	0.17	0.07	0.16	0.71

(to be continued)

(Continued)

Variety	Years	Unfilled grain number	Filled grain number	Seed set (%)	Grain number/panicle	Resveratrol content(ug/g)
I515	2011	109.40±51.28	942.31±199.15	89.59±4.26	87.40±27.92	2.15±0.09
I526		102.35±48.88	1121.04±248.18	91.52±3.84	101.28±17.52	4.34±0.11
DJ		111.10±45.82	1313.96±311.99	92.12±3.18	100.69±19.07	-
I515	2012	168.16±83.09	1119.28±332.20	86.78±5.89	104.00±11.89	-
I526		180.46±81.28	879.91±298.24	83.03±4.67	119.16±17.95	4.27±0.19
DJ		89.42±33.71	974.79±298.06	91.46±2.80	119.71±13.49	-
I526	2013	309.57±94.91	552.23±176.02	63.75±5.37	70.64±10.37	4.48±0.03
DJ		145.30±71.19	687.68±199.60	82.67±6.20	87.88±7.23	-
t (I515)	2 Y	0.04	0.00	0.04	0.01	-
t (I526)	3 Y	0.90	0.26	0.42	0.18	-

** indicate significant difference between transgenic lines and wild type variety at 0.01 level by t-test.