Supplemental Table S1. Expression of *SDG8* in 6-week-old Col plants upon *B. cinerea* infection.

			Experiment 1			Experiment 2		
			Expression			Expression		
Gene	Treatment[a]	dpi	Av.[b]	SD	*P*[c]	Av.[b]	SD	*P*[c]
SDG8	Mock	1	1.00	0.10		1.00	0.11	
		3	1.23	0.11		1.14	0.08	
	Bo	1	1.43	0.15	*	1.80	0.11	***
		3	2.34	0.23	**	1.87	0.07	***

[a] *Bo - Botrytis cinerea*

[b] Average expression of each gene relative to the corresponding *SDG8* expression level at 1 dpi in the mock sample.

[c] Significance level of differences between mock and *B. cinerea* at one experimental point: * $P<0.05$; ** $P<0.01$; *** $P<0.001$.

Supplemental Table S2. Comparison of the expression and induction of different genes between 6-week-old Col and *sdg8-1* plants upon *A. brassicicola* infection.

			Experiment 1						Experiment 2					
			Expression			Induction			Expression			Induction		
Gene	Genotype	Treatment[a]	Av.[b]	SD	*P*[c]	Av.[d]	SD	*P*[c]	Av.[b]	SD	*P*[c]	Av.[d]	SD	*P*[c]
PDF1.2a	Col	0	1.00	0.005		1.00	0.005		1.00	0.27		1.00	0.27	
		2	436.55	21.40		436.55	21.40		106.77	9.44		106.77	9.44	
		5	84.30	2.69		84.30	2.69		10.26	0.75		10.26	0.75	
	sdg8-1	0	0.13	0.01	***	1.00	0.05		0.11	0.01	*	1.00	0.06	
		2	2.13	0.02	***	15.75	0.12	***	0.29	0.01	**	2.55	0.10	**
		5	1.00	0.06	***	7.41	0.44	***	0.12	0.01	**	1.06	0.10	**
VSP2	Col	0	1.00	0.05		1.00	0.05		1.00	0.11		1.00	0.11	
		2	158.96	1.17		158.96	1.17		61.46	3.87		61.46	3.87	
		5	68.24	0.84		68.24	0.84		16.58	0.61		16.58	0.61	
	sdg8-1	0	0.63	0.05	***	1.00	0.08		0.94	0.03	-	1.14	0.04	
		2	33.53	1.07	***	52.89	1.83	***	1.73	0.08	**	2.10	0.10	**
		5	25.59	0.44	***	40.36	0.75	***	3.42	0.24	***	4.16	0.29	**
MKK1	Col	0	1.00	0.06		1.00	0.06		1.00	0.12		1.00	0.12	
		2	1.08	0.11		1.08	0.11		0.92	0.14		0.92	0.14	
		5	0.98	0.06		0.98	0.06		0.95	0.13		0.95	0.13	
	sdg8-1	0	0.95	0.01	-	1.00	0.02		0.91	0.08	-	1.00	0.08	
		2	1.00	0.13	-	1.06	0.14	-	1.02	0.02	-	1.12	0.02	-
		5	1.02	0.03	-	1.08	0.04	-	0.99	0.03	-	1.09	0.03	-
MKK2	Col	0	1.00	0.13		1.00	0.13		1.00	0.05		1.00	0.05	
		2	1.06	0.10		1.06	0.10		1.04	0.01		1.04	0.01	
		5	1.11	0.10		1.11	0.30		1.11	0.003		1.11	0.003	
	sdg8-1	0	0.98	0.09	-	1.00	0.09		0.98	0.02	-	1.00	0.02	
		2	1.05	0.22	-	1.07	0.23	-	1.03	0.18	-	1.04	0.18	-
		5	1.20	0.02	-	1.22	0.03	-	0.96	0.14	-	0.98	0.14	-
MKK3	Col	0	1.00	0.23		1.00	0.23		1.00	0.18		1.00	0.18	
		2	4.88	0.01		4.88	0.01		1.42	0.02		1.42	0.02	
		5	5.29	0.27		5.29	0.27		2.34	0.05		2.34	0.05	
	sdg8-1	0	4.26	0.38	**	1.00	0.09		2.84	0.18	***	1.00	0.06	
		2	3.90	0.04	***	0.92	0.01	***	2.84	0.16	**	1.00	0.06	**
		5	4.08	0.38	*	0.96	0.09	***	3.22	0.46	-	1.13	0.16	**
MKK4	Col	0	1.00	0.02		1.00	0.02		1.00	0.09		1.00	0.09	
		2	1.77	0.28		1.77	0.28		1.30	0.05		1.30	0.05	
		5	3.44	0.09		3.44	0.09		2.75	0.27		2.75	0.27	
	sdg8-1	0	1.27	0.51	-	1.00	0.51		1.05	0.18	-	1.00	0.17	
		2	2.65	0.50	-	2.08	0.50	-	1.49	0.14	-	1.42	0.13	-
		5	3.71	0.14	-	2.91	0.14	*	2.81	0.40	-	2.68	0.39	-
MKK5	Col	0	1.00	0.02		1.00	0.02		1.00	0.04		1.00	0.04	
		2	1.19	0.03		1.19	0.03		1.10	0.03		1.10	0.03	
		5	1.54	0.02		1.54	0.02		1.50	0.10		1.50	0.10	
	sdg8-1	0	0.31	0.003	***	1.00	0.01		0.30	0.01	**	1.00	0.04	
		2	0.42	0.11	**	1.34	0.34	-	0.46	0.10	**	1.53	0.32	-
		5	0.36	0.05	***	1.17	0.17	-	0.40	0.14	**	1.34	0.47	-

[a] Days after *A. brassicicola* inoculation.

[b] Average expression of each gene relative to the corresponding Col expression level at 0 days after *A. brassicicola* inoculation.

[c] Significance level of differences between Col and *sdg8-1* expression or induction level at one experimental point: - $P>0.05$; * $P<0.05$; ** $P<0.01$; *** $P<0.001$.

[d] Average gene induction in Col and *sdg8-1* relative to the corresponding expression level at 0 days after *A. brassicicola* inoculation.

Supplemental Table S3. Comparison of the expression and induction of different genes between 6-week-old Col and *sdg8-1* plants upon *B. cinerea* infection.

			Experiment 1						Experiment 2					
			Expression			Induction			Expression			Induction		
Gene	Genotype	Treatment[a]	Av.[b]	SD	*P*[c]	Av.[d]	SD	*P*[c]	Av.[b]	SD	*P*[c]	Av.[d]	SD	*P*[c]
PDF1.2a	Col	0	1.00	0.04		1.00	0.04		1.00	0.09		1.00	0.09	
		1	211.57	6.22		211.57	6.22		103.97	9.60		103.97	9.60	
		3	92.57	2.04		92.57	2.04		365.79	65.96		365.79	65.96	
	sdg8-1	0	0.53	0.15	*	1.00	0.29		0.51	0.14	*	1.00	0.27	
		1	15.24	1.20	***	28.64	2.25	***	2.81	0.24	**	5.54	0.46	**
		3	12.95	1.27	***	24.34	2.39	***	21.03	5.64	*	41.39	11.11	*
VSP2	Col	0	1.00	0.29		1.00	0.29		1.00	0.31		1.00	0.31	
		1	136.48	7.03		136.48	7.03		152.04	9.19		152.04	9.19	
		3	89.32	1.21		89.32	1.21		250.41	2.55		250.41	2.55	
	sdg8-1	0	0.61	0.01	-	1.00	0.02		0.59	0.06	-	1.00	0.10	
		1	28.38	1.22	**	46.35	1.16	**	6.68	0.74	**	11.28	1.25	**
		3	11.03	1.03	***	18.02	1.23	***	26.45	0.24	***	44.68	0.40	***

[a] Days after *B. cinerea* inoculation.

[b] Average expression of each gene relative to the corresponding Col expression level at 0 days after *B. cinerea* inoculation.

[c] Significance level of differences between Col and *sdg8-1* expression or induction level at one experimental point: - $P>0.05$; * $P<0.05$; ** $P<0.01$; *** $P<0.001$.

[d] Average gene induction in Col and sdg8-1 relative to the corresponding expression level at 0 days after *B. cinerea* inoculation.

Supplemental Table S4. Comparison of the expression and induction of different genes between 6-week-old Col and *sdg8-1* plants upon MeJA exposure.

			Experiment 1						Experiment 2					
			Expression			Induction			Expression			Induction		
Gene	Genotype	Treatment[a]	Av.[b]	SD	*P*[c]	Av.[d]	SD	*P*[c]	Av.[b]	SD	*P*[c]	Av.[d]	SD	*P*[c]
ERF1	Col	0	1.00	0.14		1.00	0.14		1.00	0.24		1.00	0.24	
		8	5.29	0.13		5.29	0.13		4.77	0.15		4.77	0.15	
		24	5.92	0.22		5.92	0.22		5.67	0.84		5.67	0.84	
		48	8.54	0.10		8.54	0.10		7.71	0.31		7.71	0.31	
	sdg8-1	0	1.22	0.01	-	1.00	0.01		1.10	0.02	-	1.00	0.02	
		8	0.60	0.01	***	0.50	0.01	***	1.10	0.06	***	1.00	0.05	***
		24	2.05	0.16	***	1.68	0.13	***	2.03	0.42	*	1.85	0.38	*
		48	3.42	0.26	**	3.71	1.77	*	2.99	0.07	**	2.72	0.06	**
MYC2	Col	0	1.00	0.28		1.00	0.28		1.00	0.36		1.00	0.36	
		8	15.06	1.77		15.06	1.77		14.77	2.07		14.77	2.07	
		24	27.62	2.30		27.62	2.30		31.43	4.09		31.43	4.09	
		48	15.24	2.28		15.24	2.28		14.66	1.69		14.66	1.69	
	sdg8-1	0	1.07	0.14	-	1.00	0.13		1.13	0.72	-	1.00	0.64	
		8	4.05	0.20	**	3.78	0.19	**	3.23	0.13	*	2.86	0.12	*
		24	6.20	0.09	**	5.79	0.09	**	4.82	0.29	**	4.26	0.26	**
		48	9.65	0.45	-	9.00	0.42	*	11.60	0.11	-	10.26	0.09	*
PDF1.2a	Col	0	1.00	0.20		1.00	0.01		1.00	0.07		1.00	0.07	
		8	20.89	3.92		20.89	3.92		40.22	1.93		40.22	1.93	
		24	203.19	7.97		203.19	7.97		253.35	18.63		253.35	18.63	
		48	117.11	6.32		117.11	6.32		370.93	27.28		370.93	27.28	
	sdg8-1	0	0.43	0.10	*	1.00	0.23		0.71	0.04	**	1.00	0.04	
		8	5.13	0.42	*	11.81	0.96	-	8.43	0.12	**	11.92	0.12	**
		24	30.87	7.81	***	71.01	17.98	**	60.97	4.19	**	86.22	4.19	**
		48	34.78	6.53	***	79.99	15.03	-	97.01	22.44	***	137.19	22.44	**
VSP2	Col	0	1.00	0.09		1.00	0.09		1.00	0.09		1.00	0.09	
		8	56.89	0.01		56.89	0.01		97.79	3.78		97.79	3.78	
		24	238.44	2.92		238.44	2.92		157.59	3.86		157.59	3.86	
		48	106.34	0.26		106.34	0.26		69.55	2.22		69.55	2.22	
	sdg8-1	0	0.80	0.05	*	1.00	0.06		0.90	0.02	-	1.00	0.02	
		8	1.66	0.06	***	2.07	0.08	***	1.29	0.12	***	1.43	0.13	***
		24	4.88	0.13	***	6.07	0.16	***	13.32	1.08	***	14.74	1.20	***
		48	30.59	0.15	***	38.01	0.19	***	41.45	0.85	**	45.89	0.94	**
LOX3	Col	0	1.00	0.02		1.00	0.02		1.00	0.12		1.00	0.12	
		8	2.80	0.16		2.80	0.16		2.64	0.27		2.64	0.27	
		24	2.14	0.15		2.14	0.15		2.87	0.11		2.87	0.11	
		48	0.80	0.12		0.80	0.12		1.08	0.17		1.08	0.17	
	sdg8-1	0	0.28	0.01	***	1.00	0.02		0.34	0.03	*	1.00	0.08	
		8	0.51	0.001	**	1.80	0.004	**	0.43	0.02	**	1.26	0.06	*
		24	0.33	0.03	**	1.17	0.12	**	0.41	0.05	***	1.20	0.15	***
		48	0.36	0.01	*	1.28	0.04	*	0.50	0.06	*	1.47	0.17	*
LOX2	Col	0	1.00	0.01		1.00	0.01		1.00	0.09		1.00	0.09	
		8	18.19	1.70		18.19	1.70		18.92	2.26		18.92	2.26	
		24	10.59	0.05		10.59	0.05		17.39	1.13		17.39	1.13	
		48	6.11	0.12		6.11	0.12		6.75	0.66		6.75	0.66	
	sdg8-1	0	0.55	0.07	**	1.00	0.12		0.69	0.05	*	1.00	0.07	
		8	2.12	0.15	**	3.84	0.26	**	2.60	0.24	**	3.74	0.35	**
		24	2.17	0.03	***	3.94	0.06	***	2.72	0.40	**	3.92	0.57	**
		48	4.10	0.38	*	7.43	0.69	-	4.34	0.88	*	6.24	1.26	-

PR4	Col	0	1.00	0.03		1.00	0.03		1.00	0.04		1.00	0.04	
		8	8.88	0.54		8.88	0.54		8.50	0.31		8.50	0.31	
		24	21.74	0.43		21.74	0.43		19.60	1.10		19.60	1.10	
		48	15.37	0.75		15.37	0.75		14.17	0.14		14.17	0.14	
	sdg8-1	0	0.68	0.13	-	1.00	0.19		1.13	0.08	-	1.00	0.07	
		8	2.10	0.11	***	3.07	0.17	**	2.67	0.08	**	2.37	0.07	***
		24	4.90	0.31	***	7.16	0.46	***	7.43	0.02	**	6.60	0.02	**
		48	6.98	0.27	**	10.20	0.40	**	6.95	0.70	**	6.18	0.62	**
MKK1	Col	0	1.00	0.02		1.00	0.02		1.00	0.005		1.00	0.005	
		8	0.91	0.04		0.91	0.04		0.96	0.10		0.96	0.10	
		24	1.16	0.11		1.16	0.11		1.04	0.03		1.04	0.03	
		48	0.93	0.04		1.04	0.07		1.04	0.07		1.04	0.07	
	sdg8-1	0	1.06	0.10	-	1.00	0.10		0.98	0.02	-	1.00	0.02	
		8	1.05	0.01	-	0.99	0.005	-	0.98	0.06	-	1.00	0.06	-
		24	1.08	0.07	-	1.02	0.06	-	0.90	0.08	-	0.92	0.09	-
		48	0.96	0.02	-	0.91	0.02	-	1.01	0.08	-	1.03	0.09	-
MKK2	Col	0	1.00	0.03		1.00	0.03		1.00	0.02		1.00	0.02	
		8	1.01	0.003		1.01	0.003		1.01	0.09		1.01	0.09	
		24	1.13	0.07		1.13	0.07		0.98	0.05		0.98	0.05	
		48	1.04	0.06		1.04	0.06		0.93	0.10		0.93	0.10	
	sdg8-1	0	1.01	0.07	-	1.00	0.07		1.12	0.09	-	1.00	0.08	
		8	0.96	0.08	-	0.95	0.08	-	0.95	0.11	-	0.85	0.10	-
		24	1.09	0.06	-	1.08	0.06	-	1.04	0.04	-	0.93	0.03	-
		48	1.06	0.03	-	1.05	0.03	-	1.16	0.02	-	1.04	0.02	-
MKK3	Col	0	1.00	0.05		1.00	0.05		1.00	0.01		1.00	0.01	
		8	1.20	0.23		1.20	0.23		0.89	0.22		0.89	0.22	
		24	1.70	0.19		1.70	0.19		1.85	0.13		1.85	0.13	
		48	2.61	0.16		2.61	0.16		3.12	0.34		3.12	0.34	
	sdg8-1	0	3.09	0.17	**	1.00	0.05		2.87	0.43	*	1.00	0.15	
		8	3.46	0.31	**	1.12	0.10	-	3.29	0.21	***	1.15	0.07	-
		24	3.41	0.42	*	1.10	0.14	*	3.06	0.09	***	1.07	0.03	**
		48	3.35	0.24	*	1.08	0.08	**	2.58	0.33	-	0.90	0.11	**
MKK4	Col	0	1.00	0.02		1.00	0.02		1.00	0.02		1.00	0.02	
		8	0.97	0.09		0.97	0.09		0.90	0.01		0.90	0.01	
		24	0.96	0.05		0.96	0.05		0.99	0.01		0.99	0.01	
		48	0.99	0.09		0.99	0.09		0.94	0.07		0.94	0.07	
	sdg8-1	0	0.94	0.04	-	1.00	0.05		0.96	0.01	-	1.00	0.01	
		8	0.93	0.02	-	0.98	0.02	-	0.99	0.04	-	1.02	0.04	-
		24	0.93	0.09	-	0.99	0.09	-	0.88	0.02	*	0.91	0.02	*
		48	1.03	0.06	-	1.09	0.06	-	0.99	0.02	-	1.02	0.02	-
MKK5	Col	0	1.00	0.03		1.00	0.03		1.00	0.07		1.00	0.07	
		8	0.98	0.05		0.98	0.05		0.95	0.06		0.95	0.06	
		24	0.99	0.02		0.99	0.02		0.96	0.04		0.96	0.04	
		48	0.98	0.01		0.98	0.01		0.97	0.005		0.97	0.005	
	sdg8-1	0	0.09	0.01	***	1.00	0.12		0.18	0.01	**	1.00	0.01	
		8	0.06	0.01	***	0.70	0.003	*	0.17	0.01	**	0.95	0.03	-
		24	0.07	0.01	***	0.73	0.07	*	0.17	0.02	**	0.98	0.10	-
		48	0.06	0.01	***	0.66	0.02	**	0.14	0.03	***	0.81	0.15	-

[a] Hours after MeJA treatment.

[b] Average expression of each gene relative to the corresponding Col expression level at 0 hours after MeJA treatment.

[c] Significance level of differences between Col and *sdg8-1* expression or induction level at one experimental point: - $P > 0.05$; * $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

[d] Average gene induction in Col and *sdg8-1* relative to the corresponding expression level at 0 hours after MeJA treatment.

Supplemental Table S5. Comparison of the expression and induction of different genes between 10-day-old Col and *sdg8-1* plants upon MeJA exposure.

			Experiment 1						Experiment 2					
			Expression			Induction			Expression			Induction		
Gene	Genotype	Treatment[a]	Av.[b]	SD	*P*[c]	Av.[d]	SD	*P*[c]	Av.[b]	SD	*P*[c]	Av.[d]	SD	*P*[c]
ERF1	Col	0	1.00	0.04		1.00	0.04		1.00	0.46		1.00	0.46	
		8	2.20	0.17		2.20	0.17		2.28	1.85		2.28	1.85	
		24	2.77	0.23		2.77	0.23		3.91	0.20		3.91	0.20	
		48	4.93	0.05		4.93	0.05		4.00	0.07		4.00	0.07	
	sdg8-1	0	0.91	0.03	-	1.00	0.03		1.11	0.05	-	1.00	0.05	
		8	1.65	0.18	*	1.82	0.20	-	1.92	0.02	-	1.73	0.02	-
		24	2.51	0.04	-	2.77	0.05	-	1.25	0.01	**	1.13	0.01	**
		48	2.56	0.08	***	2.83	0.08	***	2.15	0.02	***	1.94	0.02	***
MYC2	Col	0	1.00	0.34		1.00	0.34		1.00	0.47		1.00	0.47	
		8	7.31	0.37		7.31	0.37		6.93	0.45		6.93	0.45	
		24	7.84	0.84		7.84	0.84		8.16	0.29		8.16	0.29	
		48	5.42	0.18		5.42	0.18		5.33	0.11		5.33	0.11	
	sdg8-1	0	0.89	0.04	-	1.00	0.05		0.94	0.17	-	1.00	0.19	
		8	2.81	0.43	***	3.16	0.49	**	3.36	0.51	**	3.59	0.55	**
		24	3.90	0.07	*	4.37	0.08	*	4.01	0.16	***	4.27	0.17	***
		48	5.62	0.31	-	6.30	0.35	-	4.29	0.13	**	4.58	0.14	**
PDF1.2a	Col	0	1.00	0.01		1.00	0.01		1.00	0.14		1.00	0.14	
		8	27.62	0.64		27.62	0.64		18.77	1.56		18.77	1.56	
		24	148.51	5.29		148.51	5.29		103.17	2.21		103.17	2.21	
		48	78.55	2.04		78.55	2.04		65.70	1.71		65.70	1.71	
	sdg8-1	0	0.40	0.06	**	1.00	0.16		0.61	0.21	-	1.00	0.35	
		8	1.71	0.14	***	4.22	0.34	***	2.25	0.15	**	3.70	0.24	**
		24	8.71	0.31	***	21.54	0.76	***	7.92	0.33	***	13.02	0.54	***
		48	14.66	1.14	***	36.22	2.81	***	26.95	0.36	***	44.29	0.59	**
VSP2	Col	0	1.00	0.17		1.00	0.17		1.00	0.24		1.00	0.24	
		8	196.42	29.81		196.42	29.81		118.33	6.73		118.33	6.73	
		24	112.03	7.03		112.03	7.03		54.03	8.77		54.03	8.77	
		48	62.78	2.52		62.78	2.52		41.20	7.23		41.20	7.23	
	sdg8-1	0	0.83	0.15	-	1.00	0.18		0.67	0.05	-	1.00	0.07	
		8	27.14	1.46	*	32.62	1.76	*	21.10	4.67	***	31.68	7.01	***
		24	40.88	0.24	**	49.14	0.29	**	27.07	4.12	*	40.66	6.18	-
		48	51.39	0.54	*	61.77	0.64	-	38.47	1.51	-	57.77	2.27	-
LOX3	Col	0	1.00	0.11		1.00	0.11		1.00	0.10		1.00	0.10	
		8	2.41	0.07		2.41	0.07		2.54	0.28		2.54	0.28	
		24	0.92	0.05		0.92	0.05		0.97	0.05		0.97	0.05	
		48	1.03	0.13		1.03	0.13		0.92	0.12		0.92	0.12	
	sdg8-1	0	0.32	0.06	**	1.00	0.18		0.32	0.05	**	1.00	0.17	
		8	0.74	0.04	***	2.27	0.11	-	0.78	0.04	**	2.45	0.11	-
		24	0.67	0.01	*	2.07	0.02	***	0.65	0.00	**	2.05	0.02	***
		48	0.42	0.02	*	1.29	0.08	-	0.41	0.02	*	1.28	0.07	*
LOX2	Col	0	1.00	0.05		1.00	0.05		1.00	0.04		1.00	0.04	
		8	38.68	1.39		38.68	1.39		38.85	2.48		38.85	2.48	
		24	62.63	1.89		62.63	1.89		53.76	1.96		53.76	1.96	
		48	3.74	0.08		3.74	0.08		3.32	0.06		3.32	0.06	
	sdg8-1	0	0.55	0.04	**	1.00	0.08		0.54	0.04	***	1.00	0.07	
		8	18.20	0.65	**	32.87	1.18	*	19.09	0.70	**	35.42	1.29	-
		24	33.54	1.23	***	60.59	2.22	-	32.82	1.98	**	60.90	3.67	-
		48	10.29	1.06	**	18.59	1.92	**	8.67	2.74	-	16.09	5.08	*

PR4	Col	0	1.00	0.03		1.00	0.03		1.00	0.22		1.00	0.22	
		8	3.10	0.69		3.10	0.69		4.29	0.06		4.29	0.06	
		24	5.36	1.12		5.36	1.12		4.00	0.24		4.00	0.24	
		48	16.21	0.36		16.21	0.36		9.26	0.32		9.26	0.32	
	sdg8-1	0	1.05	0.12	-	1.00	0.12		1.43	0.22	-	1.00	0.15	
		8	2.52	0.11	-	2.41	0.11	-	2.84	0.23	**	1.98	0.16	**
		24	5.63	0.50	-	5.38	0.47	-	5.04	0.62	-	3.52	0.43	-
		48	4.70	0.20	***	4.50	0.19	***	4.60	0.09	**	3.22	0.07	**
MKK1	Col	0	1.00	0.11		1.00	0.11		1.00	0.10		1.00	0.10	
		8	1.05	0.05		1.05	0.05		1.06	0.08		1.06	0.08	
		24	1.00	0.03		1.00	0.03		0.86	0.02		0.86	0.02	
		48	1.02	0.04		1.02	0.04		0.91	0.05		0.91	0.05	
	sdg8-1	0	0.93	0.03	-	1.00	0.03		0.91	0.02	-	1.00	0.02	
		8	0.90	0.01	*	0.97	0.01	-	0.95	0.02	-	1.05	0.02	-
		24	0.98	0.04	-	1.06	0.04	-	0.96	0.06	-	1.06	0.06	*
		48	1.00	0.04	-	1.08	0.04	-	0.99	0.02	-	1.09	0.02	*
MKK2	Col	0	1.00	0.04		1.00	0.04		1.00	0.05		1.00	0.05	
		8	1.02	0.05		1.02	0.05		1.02	0.03		1.02	0.03	
		24	0.98	0.03		0.98	0.03		0.94	0.03		0.94	0.03	
		48	1.05	0.02		1.05	0.02		0.93	0.02		0.93	0.02	
	sdg8-1	0	1.07	0.03	-	1.00	0.02		1.04	0.04	-	1.00	0.03	
		8	1.14	0.03	*	1.06	0.02	-	1.19	0.03	**	1.15	0.03	**
		24	1.09	0.04	*	1.02	0.04	-	1.06	0.07	-	1.02	0.07	-
		48	1.09	0.06	-	1.02	0.05	-	1.07	0.04	*	1.03	0.04	-
MKK3	Col	0												
		8												
		24												
		48	no expression in young seedlings											
	sdg8-1	0												
		8												
		24												
		48												
MKK4	Col	0	1.00	0.01		1.00	0.01		1.00	0.001		1.00	0.001	
		8	0.94	0.02		0.94	0.02		0.94	0.05		0.94	0.05	
		24	0.99	0.07		0.99	0.07		0.98	0.07		0.98	0.07	
		48	0.99	0.05		0.99	0.05		1.01	0.05		1.01	0.05	
	sdg8-1	0	0.92	0.02	*	1.00	0.02		0.95	0.02	*	1.00	0.02	
		8	0.97	0.08	-	1.06	0.08	-	1.02	0.08	-	1.07	0.08	-
		24	1.05	0.04	-	1.15	0.04	*	1.03	0.06	-	1.08	0.06	-
		48	0.98	0.01	-	1.07	0.01	-	0.96	0.03	-	1.01	0.03	-
MKK5	Col	0	1.00	0.003		1.00	0.003		1.00	0.03		1.00	0.03	
		8	1.08	0.07		1.08	0.07		0.82	0.01		0.82	0.01	
		24	0.99	0.04		0.99	0.04		0.93	0.05		0.93	0.05	
		48	0.98	0.04		0.98	0.04		1.04	0.01		1.04	0.01	
	sdg8-1	0	0.07	0.01	***	1.00	0.12		0.04	0.02	***	1.00	0.46	
		8	0.12	0.02	**	1.71	0.29	-	0.11	0.003	***	3.28	0.09	***
		24	0.11	0.01	***	1.62	0.21	*	0.09	0.01	**	2.61	0.25	**
		48	0.09	0.003	***	1.36	0.05	**	0.09	0.004	***	2.65	0.12	**

[a] Hours after MeJA treatment.

[b] Average expression of each gene relative to the corresponding Col expression level at 0 hours after MeJA treatment.

[c] Significance level of differences between Col and *sdg8-1* expression or induction level at one experimental point: - $P > 0.05$; * $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

[d] Average gene induction in Col and *sdg8-1* relative to the corresponding expression level at 0 hours after MeJA treatment.

Table S6. Comparison of H3K36me3, H3K36me1 and H3K27me3 levels at different regions of selected genes between 6-week-old Col and *sdg8-1* plants upon *A. brassicicola* infection.

				Experiment 1									Experiment 2								
				H3K36me3 Enrichment			H3K36me1 Enrichment			H3K27me3 Enrichment			H3K36me3 Enrichment			H3K36me1 Enrichment			H3K27me3 Enrichment		
Gene	Region	Genotype	Treatment[a]	Av.[b]	SD	*P*[c]	Av.[b]	SD	*P*[c]	Av.[d]	SD	*P*[c]	Av.[b]	SD	*P*[c]	Av.[b]	SD	*P*[c]	Av.[d]	SD	*P*[c]
PDF1.2a	a	Col	0	0.593	0.048		1.334	0.068		0.147	0.045		0.491	0.062		0.804	0.090		0.334	0.093	
			2	1.188	0.028		0.475	0.016		0.225	0.071		0.844	0.133		0.264	0.082		0.323	0.002	
		sdg8-1	0	0.187	0.013	***	1.234	0.044	-	0.140	0.016	-	0.138	0.001	***	0.995	0.097	-	0.311	0.134	-
			2	0.171	0.023	***	1.031	0.088	***	0.096	0.023	*	0.141	0.001	***	0.916	0.141	**	0.273	0.002	-
	b	Col	0	0.638	0.065		1.447	0.031		0.122	0.040		0.375	0.176		1.134	0.155		0.251	0.028	
			2	1.380	0.095		0.646	0.030		0.200	0.026		0.984	0.053		0.768	0.127		0.257	0.050	
		sdg8-1	0	0.167	0.017	***	1.339	0.118	-	0.223	0.004	*	0.212	0.013	-	1.204	0.071	-	0.239	0.084	-
			2	0.193	0.030	***	1.439	0.108	***	0.181	0.060	-	0.275	0.001	***	1.035	0.116	*	0.296	0.059	-
VSP2	c	Col	0	0.281	0.018		0.447	0.048		0.039	0.011		0.441	0.035		0.558	0.157		0.023	0.003	
			2	0.581	0.105		0.324	0.024		0.024	0.008		0.758	0.026		0.293	0.020		0.027	0.000	
		sdg8-1	0	0.066	0.046	**	0.705	0.046	**	0.036	0.009	-	0.071	0.013	***	0.756	0.052	-	0.034	0.001	-
			2	0.058	0.006	***	0.766	0.050	***	0.021	0.001	-	0.073	0.005	***	0.768	0.127	**	0.032	0.006	-
	d	Col	0	0.381	0.015		0.634	0.031		0.029	0.002		0.279	0.033		0.426	0.190		0.033	0.011	
			2	0.900	0.065		0.166	0.030		0.026	0.006		1.093	0.096		0.291	0.076		0.029	0.007	
		sdg8-1	0	0.091	0.013	***	0.938	0.013	***	0.035	0.002	-	0.156	0.005	**	0.394	0.031	-	0.025	0.003	-
			2	0.090	0.011	***	0.875	0.052	***	0.033	0.003	-	0.172	0.000	***	0.383	0.012	-	0.028	0.004	-
MKK3	e	Col	0	0.443	0.038		0.915	0.058		not tested			0.373	0.027		0.687	0.032		not tested		
			2	0.860	0.027		0.488	0.017					0.626	0.006		0.289	0.009				
		sdg8-1	0	0.758	0.060	**	0.551	0.050	**				0.776	0.020	***	0.764	0.032	*			
			2	0.816	0.096	-	0.549	0.049	-				0.737	0.015	**	0.615	0.091	**			
	f	Col	0	0.547	0.058		0.990	0.053		not tested			0.402	0.041		0.598	0.060		not tested		
			2	0.988	0.040		0.549	0.021					0.906	0.095		0.305	0.021				
		sdg8-1	0	1.095	0.192	**	0.504	0.047	***				0.635	0.053	**	0.687	0.032	-			
			2	1.220	0.090	*	0.535	0.021	-				0.817	0.029	-	0.698	0.025	***			
	g	Col	0	0.982	0.161		1.718	0.083		not tested			0.806	0.002		1.177	0.089		not tested		
			2	1.527	0.190		1.109	0.054					1.193	0.424		0.635	0.128				
		sdg8-1	0	1.543	0.076	**	1.181	0.029	***				1.166	0.080	**	0.897	0.028	**			
			2	1.571	0.071	-	0.982	0.026	*				1.034	0.437	-	0.943	0.044	*			

MKK5	h	Col	0	0.186	0.038		0.253	0.024		not tested	0.334	0.068		0.378	0.078		not tested
			2	0.492	0.031		0.044	0.002			0.402	0.067		0.254	0.053		
		sdg8-1	0	0.103	0.007	*	0.362	0.016	**		0.126	0.021	**	0.385	0.031	-	
			2	0.091	0.001	***	0.278	0.028	***		0.113	0.028	***	0.375	0.016	*	
	i	Col	0	1.019	0.101		1.166	0.031		not tested	0.798	0.082		0.653	0.059		not tested
			2	1.731	0.193		0.670	0.019			1.915	0.194		0.145	0.029		
		sdg8-1	0	0.467	0.016	***	1.411	0.076	**		0.336	0.011	**	0.763	0.114	-	
			2	0.420	0.013	***	1.370	0.064	***		0.396	0.052	***	0.739	0.118	**	
	j	Col	0	1.002	0.013		1.093	0.074		not tested	0.747	0.055		0.509	0.025		not tested
			2	1.788	0.046		0.437	0.008			1.553	0.023		0.418	0.017		
		sdg8-1	0	0.420	0.013	***	1.457	0.031	**		0.552	0.018	**	0.803	0.020	***	
			2	0.532	0.016	***	1.710	0.129	***		0.582	0.080	***	0.892	0.047	***	

[a] Days after *A. brassicicola* inoculation.

[b] Relative levels of H3K36me3, H3K36me1 and H3K27me3 for each gene region in Col and *sdg8-1* during *A. brassicicola* infection.

[c] Significance level of differences between Col and *sdg8-1* at one experimental point: - $P>0.05$; * $P<0.05$; ** $P<0.01$; *** $P<0.001$.

Table S7. Comparison of H3K36me3, H3K36me1 and H3K27me3 levels between 6-week-old Col and *sdg8-1* plants upon MeJA exposure.

				Experiment 1									Experiment 2								
				H3K36me3 Enrichment			H3K36me1 Enrichment			H3K27me3 Enrichment			H3K36me3 Enrichment			H3K36me1 Enrichment			H3K27me3 Enrichment		
Gene	Region	Genotype	Treatment[a]	Av.[b]	SD	*P*[c]	Av.[b]	SD	*P*[c]	Av.[d]	SD	*P*[c]	Av.[b]	SD	*P*[c]	Av.[b]	SD	*P*[c]	Av.[d]	SD	*P*[c]
PDF1.2a	a	Col	0	0.401	0.068		0.739	0.052		0.261	0.012		0.558	0.105		0.815	0.008		0.213	0.015	
			8	0.845	0.021		0.552	0.018		0.216	0.008		1.099	0.033		0.510	0.060		0.290	0.035	
		sdg8-1	0	0.185	0.031	**	1.042	0.033	**	0.251	0.045	-	0.215	0.008	**	1.007	0.033	***	0.223	0.016	-
			8	0.144	0.068	***	1.063	0.114	**	0.247	0.009	-	0.218	0.086	***	1.077	0.046	***	0.276	0.047	-
	b	Col	0	0.415	0.091		0.890	0.007		0.307	0.076		0.509	0.028		0.983	0.038		0.348	0.034	
			8	1.057	0.076		0.321	0.011		0.317	0.019		0.953	0.132		0.660	0.027		0.332	0.015	
		sdg8-1	0	0.104	0.032	**	1.077	0.089	*	0.346	0.087	-	0.296	0.111	*	0.994	0.062	-	0.327	0.046	-
			8	0.151	0.052	***	0.943	0.044	***	0.303	0.012	-	0.269	0.026	***	1.118	0.060	***	0.308	0.040	-
VSP2	c	Col	0	0.243	0.088		0.343	0.045		0.005	0.000		0.308	0.021		0.520	0.021		0.002	0.001	
			8	0.460	0.013		0.262	0.058		0.008	0.000		0.523	0.047		0.292	0.049		0.004	0.002	
		sdg8-1	0	0.094	0.016	*	0.552	0.050	**	0.021	0.013	-	0.161	0.031	**	0.672	0.030	**	0.002	0.000	-
			8	0.058	0.003	***	0.549	0.049	**	0.010	0.003	-	0.152	0.043	***	0.630	0.071	**	0.006	0.004	-
	d	Col	0	0.252	0.035		0.488	0.017		0.003	0.000		0.270	0.019		0.543	0.050		0.003	0.000	
			8	0.444	0.023		0.215	0.058		0.014	0.002		0.400	0.022		0.380	0.021		0.003	0.001	
		sdg8-1	0	0.049	0.012	***	0.478	0.038	-	0.005	0.001	-	0.212	0.075	-	0.551	0.089	-	0.004	0.002	-
			8	0.081	0.051	***	0.486	0.052	**	0.003	0.000	*	0.111	0.082	**	0.591	0.081	**	0.002	0.000	-

[a] Hours after MeJA treatment.

[b] Relative levels of H3K36me3, H3K36me1 and H3K27me3 for each gene region in Col and *sdg8-1* after MeJA treatment.

[c] Significance level of differences between Col and *sdg8-1* at one experimental point: - $P > 0.05$; * $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

Supplemental Table S8. List of primers used in this study.

			Forward Primer	Reverse Primer
Q-PCR				
MKK1	AT4G26070		5'-GCTTGGGACTGGTTTTGCTC-3'	5'-GAGGCGGGTTTTCAACAATG-3'
MKK2	AT4G29810		5'-TTTGGATCCTTCTGCAAACA-3'	5'-GGACCAGTGTTTTCGAGTTGA-3'
MKK3	AT5G40440		5'-GCTCCATATATCAGCTGGATAAGAATA-3'	5'-CCTTGAGAATTCAATGGCTATGT-3'
MKK4	AT1G51660		5'-GGAGCTGTTAGTGTTCGTTGAA-3'	5'-GGTGGCTCTAGTGGATCTGC-3'
MKK5	AT3G21220		5'-GAATCATGGTCGTTACGATGG-3'	5'-CCAAGATAGTAACACCTAAACT-3'
ERF1	AT3G23240		5'-AAAGCAGCTTGATCGTAGGC-3'	5'-ATTCGACTAGAAACGGTATTAGGG-3'
ERF2	AT5G47220		5'-CGGTTCGGATCACGTCTAAG-3'	5'-AACTTCCCGTTTTCAGACGA-3'
PDF1.2a	AT5G44420		5'-CACCCTTATCTTCGCTGCTCTT-3'	5'-TACACTTGTGTGCTGGGAAGAC-3'
PDF1.4	AT1G19610		5'-TGACAAGCCCCGTGTGAAG-3'	5'-TGCGAGAGGAGAAGCAAGACA-3'
LOX2	AT3G45140		5'-CTTACCCGCGGATCTCATC-3'	5'-ACTCCATGTTCTGCGGTCTT-3'
PR4	AT3G04720		5'-GCCATCTCATTGTTGACTACCAATTT-3'	5'-ATCAATGGCCGAAACAAGCA-3'
MYC2	AT1G32640		5'-GCCGAAGGAATACACGCAAT-3'	5'-GGTCCCAATCTTTTCCGACTATC-3'
VSP1	AT5G24780		5'-TCAATCCCGAGTTCCAAGAG-3'	5'-GCACCTTGGTGTTGAGACCT-3'
VSP2	AT5G24770		5'-TAGGCTTCAATATGAGATGCTTCCAGT-3'	5'-TGCTAAACCAGAAACCGAAGA-3'
LOX3	AT1G17420		5'-TCTCTCGCCCCAAACTCG-3'	5'-AATGGCTTCTCTACTCGGCTCTC-3'
Reference genes:				
EXP	AT4G26410		5'-GAGCTGAAGTGGCTTCAATGAC-3'	5'-GGTCCGACATACCCATGATCC-3'
GAPDH	AT1G13440		5'-TTGGTGACAACAGGTCAAGCA-3'	5'-AAACTTGTCGCTCAATGCAATC-3'
TIP41	AT4G34270		5'-GTGAAAACTGTTGGAGAGAAGCAA-3'	5'-TCAACTGGATACCCTTTCGCA-3'
Pathogen quantification				
			Forward Primer	Reverse Primer
***Arabidopsis* DNA quantification:**				
Actin2	AT3G18780		5'-CTTGCACCAAGCAGCATGAA-3'	5'-CCGATCCAGACACTGTACTTCCTT-3'
***Alternaria brassicicola* DNA quantification:**				
cutab1	ABU03393		5'-GCATGTCCGCTCACCAATATC-3'	5'-GCCTGGGATCTTGGAATGC-3'
***Botrytis cinerea* DNA quantification:**				
cut-A	Z69264		5'-GATGTGACGGTCATCTTTGCCC-3'	5'-AGATTTGAGAGCGGCGAGG-3'
Q-ChIP				
			Forward Primer	Reverse Primer
PDF1.2a	AT5G44420	a	5'-TTACTCACCGAAAGCAGCAAAG-3'	5'-TAATCATCATGGCTAAGTTTGCTTCC-3'
		b	5'-ACTCATAGAGTGACAGAGACTTA-3'	5'-ACAAGTGTATCTGTTACGTCC-3'
VSP2	AT5G24770	c	5'-TTAAGAAGCCAGATGAGAAATGAGGAGATA-3'	5'-GACCAGTAGCATTTGTTGCACC-3'
		d	5'-CCTCAACCAAATCAGCCCA-3'	5'-AAAGGTGAGGAAGAGTCTCGTG-3'
MKK3	AT5G40440	e	5'-TAGCTCCGCTTCCTATAGCTCCAA-3'	5'-TCTTCTCATGTGGATGAGTCTGAAAGTT-3'
		f	5'-CGGTTATCTTCGGTTCCC-3'	5'-GAGCTACTTGCATGGAGTGA-3'
		g	5'-ATCTTTGAAACTCGGAAGCC-3'	5'-GTGGTGGAGTCATAATTCGTG-3'

MKK5	AT3G21220	h	5'-GATTGACTTGACTCTAGGGTT-3'	5'-ATTCTCCTCTTGATTTGATCTCTTT-3'
		i	5'-TAGCACACATAAGACTAGCCC-3'	5'-AATACTGATTTGAATCATGGTCG-3'
		j	5'-ACTCAATAAACCCTAACCACAAACTG-3'	5'-AGCAAAGATAATGAGAAGAGTAGAAGAACA-3'

Reference genes:

For ChIP with @H3K36me1 and me3

ACTIN2/7	AT5G09810	5'-CCCTCGTAGATTGGCACAGT-3'	5'-GGCCGTTCTTTCTCTCTATGC-3'
TUBULIN2	AT5G62690	5'-TCAACAACGTTCCCATTCC-3'	5'-AGCTGAGAATTGTGACTGCTTG-3'

For ChIP with @H3K27me3

FUSCA3	AT3G26790	5'-AGTTGGCACGTGGGAAATAG-3'	5'-GTGGCAAGTGTTGATCATGG-3'