

Figure S1

		Treatment							Annotation
		<i>Alternaria brassicicola</i>	<i>Botrytis cinerea</i>	<i>Erysiphe cichoracearum</i>	<i>P. s. pv. tomato avrRpm1</i>	H ₂ O ₂	1-aminocyclopropane-1-carboxylate	Salicylic acid	
Fold up-regulation over controls		1.019	0.943	0.929	0.987	0.932	1.085	0.814	At5g51690 -aminocyclopropane-1-carboxylate synthase (ACS12)
		1.006	1.189	0.704	1.167	0.654	1.18	0.435	At5g65800-aminocyclopropane-1-carboxylate synthase (ACS5)
									At3g61510 1-aminocyclopropane -1-carboxylate synthase
		0.835	0.686	0.747	0.799	1.547	1.165	0.97	At5g28360 1-aminocyclopropane-1-carboxylate synthase (ACS1)
		0.964	0.563	0.6	0.706	0.826	1.227	0.669	At2g22810 1-aminocyclopropane-1-carboxylate synthase 4 (ACS4)
		1.338	0.615	0.959	0.983	0.741	0.978	0.97	At1g62960 1-aminocyclopropane-1-carboxylate synthase (ACS10)
		1.253	2.199	0.769	1.256	1.067	0.793	1.191	At1g62380 1-aminocyclopropane -1-carboxylate oxidase ,
		1.582	0.7	0.849	1.534	2.517	1.507	1.387	At4g262001-aminocyclopropane-1-carboxylate synthase (ACS7)
		0.56	0.457	0.724	0.991	1.619	2.529	1.463	At4g377701-aminocyclopropane-1-carboxylate synthase (ACS8) ,
		4.393	1.053	0.954	0.743	2.088	1.971	0.409	At4g08040 1-aminocyclopropane -1-carboxylate synthase (ASC11)
		0.583	3.907	0.919	1.175	0.637	0.565	0.335	At3g49700 1-aminocyclopropane-1-carboxylate synthase (ASC9).
		2.066	3.02	1.23	1.598	7.014	0.991	1.642	At4g112801-aminocyclopropane-1-carboxylate synthase 6 (ACS6)
		0.889	0.938	0.946	1.054	1.018	1.956	0.794	At2g19590 1-aminocyclopropane -1-carboxylate oxidase
	18.023	24.764	0.717	7.114	2.972	0.334	3.191	At1g01480 -aminocyclopropane-1-carboxylate synthase 2 (ACS2)	

Supplementary Figure S1: Expression of Ethylene Biosynthetic genes in *Arabidopsis* following pathogenic challenge or treatment with defence associated chemicals.

The Meta-analysis tool in Genevestigator (Zimmermann *et al.*, 2004) was utilised to display publicly available *Arabidopsis* microarray data. Displayed are the fold expression ratios over control microarrays, within colour coded heat maps where red indicates gene induction and green, gene suppression. Results are give for expressed genes (i.e. not pseudogenes) corresponding to ACC synthase and ACC oxidase in the *Arabidopsis* genome. Depicted are responses to the following stimuli. Gene expression in response to the necrotroph *Alternaria brassicicola* was at 48 h following the application of 3 μL drops of 10 mM MgSO_4 containing 10^6 spores. mL^{-1} onto all fully expanded leaves

(<http://affymetrix.arabidopsis.info/narrays/experimentpage.pl?experimentid=330#>; M. De Vos, V. R. Van Oosten, R. M. P. Van Poecke, J. A. Van Pelt, M. J. Pozo, M. J. Mueller, A. J. Buchala, J.-P. Métraux, L. C. Van Loon, M. Dicke, and C. M. J. Pieterse. (2005) Signal signature and transcriptome changes of *Arabidopsis* during pathogen and insect attack. *Mol. Plant Path. Interact.* **18**: 923-937.

Responses to the necrotrophic pathogen *Botrytis cinerea* represented fold increased gene expression at 48 h following application of 5 mL of 5×10^5 . mL^{-1} conidiospores on each of 4-5 fully expanded rosette leaves per plant (C. Denoux, F. Ausubel, J. Dewdney, S. Ferrari, Massachusetts General Hospital; USA

http://arabidopsis.org/servlets/TairObject?type=expression_set&id=1007967417).

Data describing the responses 3 days after inoculation with the biotrophic powdery mildew pathogen, *Erysiphe cichoracearum*, race UCSC were obtained from <http://www.ncbi.nlm.nih.gov/projects/geo/query/acc.cgi?acc=GSE431&view=quick>;

Nishimura, M.T., Stein, M., Hou, B.H., Vogel, J.P., Edwards, H. and Somerville, S.C. (2003) Loss of a callose synthase results in salicylic acid-dependent disease resistance. *Science.* **301**:969-972.

The response of the targeted genes to inoculation with 10^8 cfu. mL^{-1} *Pseudomonas syringae* pv. *tomato avrRpm1* in 10 mM MgCl_2 at 24 h was obtained from

http://arabidopsis.org/servlets/TairObject?type=expression_set&id=1007966202 (B. Kemmerling, T. Nürnberger, University of Tübingen, Germany).