

Supplementary Material

- **1** Supplementary Figures and Tables
- **1.1 Supplementary Figures**





Supplementary Figure 1. Effect of sucrose supplementation on rosette development of *Arabidopsis* wild-type Col-0 and ethylene insensitive *ein2-1* on increasing concentrations of ACC. *Arabidopsis* wild-type Col-0 and ethylene insensitive mutant *ein2-1* were sown on 0, 10 and 100 μ M ACC with 0 % (-Suc) or 1 % sucrose (+Suc). (A) Pictures of representative 2-week-old plants under long-day conditions (16h light/8h dark) at light intensity of 70 μ mol m⁻² s⁻¹ at 21°C. (B) Rosette diameter of 2-week-old plants (44 \leq n \leq 90). Different letters indicate statistically significant differences between the different groups (Three-way ANOVA, Tukey HSD, P < 0.01). Error bars are SD. Effect sizes are presented in Table S1.



Supplementary Figure 2. Rosette development of *Arabidopsis* wildtype Col-0 and ethylene insensitive *ein2-1* on increasing concentrations of ACC with and without 1-MCP treatment. *Arabidopsis* wild-type Col-0 and ethylene insensitive mutant *ein2-1* were sown on 0, 10, 50, 100 and 500 μ M ACC with or without treatment with 50 ppm 1-MCP. (A) Pictures of representative 2-week-old plants under long-day conditions (16h light/8h dark) at light intensity of 70 μ mol m⁻² s⁻¹ at 21°C. (B) Rosette diameter of 2-week-old Col-0 plants (21 \leq n \leq 29). (C) Rosette diameter of 2-week-old *ein2-1* plants (9 \leq n \leq 15). Different letters indicate statistically significant differences between the different groups (Kruskal-Wallis, Dunn's Multiple Comparison Test, P < 0.01). Error bars are SD.



Supplementary Figure 3. Rosette and root development of *Arabidopsis* wild-type Col-0 and ethylene insensitive *ein2-1* under 100 ppm ethylene with and without 1-MCP treatment. *Arabidopsis* wild-type Col-0 and ethylene insensitive mutant *ein2-1* were grown in gassing chamber supplying 100 ppm ethylene with or without treatment with 100 ppm 1-MCP. (A) Pictures of representative horizontally grown 2-week-old plants under long-day conditions (16h light/8h dark) at light intensity of 70 µmol m⁻² s⁻¹ at 21°C. (B) Rosette diameter of 2-week-old Col-0 plants ($30 \le n \le 32$). (C) Rosette diameter of 2-week-old *ein2-1* plants ($27 \le n \le 29$). (D) Pictures of representative vertically grown 2-week-old plants under long-day conditions (16h light/8h dark) at light intensity of 70 µmol m⁻² s⁻¹ at 21°C. (E) Root length of 2-week-old Col-0 plants ($37 \le n \le 39$). (F) Root length of 2-week-old *ein2-1* plants ($27 \le n \le 39$). (F) Root length of 2-week-old *ein2-1* plants ($27 \le n \le 39$). (F) Root length of 2-week-old *ein2-1* plants ($37 \le n \le 39$). (F) Root length of 2-week-old *ein2-1* plants ($29 \le n \le 36$). Statistical analysis was performed by use of a Mann-Whitney U Test (panels (B), (E) and (F), P <0.01) or a T-Test (Panel (C), P < 0.01). Error bars are SD.



Supplementary Figure 4. Triple response of *Arabidopsis* wild-type Col-0 and ethylene insensitive *ein2-1* on increasing concentrations of ACC with and without AIB treatment. *Arabidopsis* wild-type Col-0 and ethylene insensitive mutant *ein2-1* were sown in darkness on 0, 0.1, 0.25, 0.5, 0.75, 1, 5, 10 and 50 μ M ACC with or without treatment with 2 mM AIB. (A) Relative hypocotyl length and (B) relative root length of Col-0 seedlings ($38 \le n \le 55$; 3 independent replicates). (C) Relative hypocotyl length and (D) relative root length of *ein2-1* seedlings ($22 \le n \le 42$; 3 independent replicates). Lengths are expressed relative to the average length of seedlings treated with 0 μ M ACC within each genotype and AIB concentration. Statistical analysis was conducted via Kruskal-Wallis and post hoc Dunn's Multiple Comparison Test (P < 0.01) for each genotype and AIB treatment. Different letters represent significant differences. Error bars are SD.



Supplementary Figure 5. Ethylene effects on etiolated *Arabidopsis* wild-type Col-0 seedlings in the presence with AIB treatment. Arabidopsis wild-type Col-0 were sown in darkness on 0, 10, and 50 μ M ACC with or without treatment with 2 mM AIB. In addition wild-type Col-0 were sown in the absence of ACC with or without AIB treatment (2 mM), and supplemented at germination with residual ethylene levels ETH (10) (= 116 ppb) or ETH (50) (= 585 ppb). (A) Pictures of representative 4-day-old etiolated Col-0 seedlings. (B) Hypocotyl length and (C) root length of Col-0 seedlings (n = 30; 4 independent replicates). Different letters indicate statistically significant differences between the different groups (One-way ANOVA, Tukey HSD, P < 0.01). Error bars are SD. Effect sizes are presented in Table S1.

1.2. Supplementary Tables

Supplementary Table 1. Output of statistical analysis: effect sizes and p-values corresponding with statements made in the text. Small, medium and large effects correspond with effect sizes of 0.01, 0.06, and 0.15 for partial η^2 or 0.1, 0.3 and >0.5 for r.

Figure	Statement	Comparison		Effect size	P-value
Figure 1B	Compared to the mock treatment, 10 µM ACC already reduced rosette area severely	Col-0 / 0 μΜ ACC Mean = 42.59 mm ² SD = 12.76 mm ²	Col-0 / 10 μΜ ACC Mean = 18.258 mm ² SD = 6.59 mm ²	r = 0.56	p < 0.01
	A saturated response was visible as of 100 μM ACC	Col-0 / 0 μΜ ACC Mean = 42.59 mm ² SD = 12.76 mm ²	Col-0 / 100 μΜ ACC Mean = 8.07 mm ² SD = 2.15 mm ²	r = 1.06	p < 0.01
	At 10 μM ACC, ein2-1 rosette size was slightly larger compared to a treatment with 0 μM ACC.	ein2-1 / 0 μΜ ACC Mean = 47.57 mm² SD = 14.49 mm²	<i>ein2-1 /</i> 10 μΜ ACC Mean = 57.39 mm² SD = 14.28 mm²	r = 0.12	p = 0.58
	Contrarily, at 100 μΜ ACC, the mean rosette area was decreased	ein2-1 / 0 μΜ ACC Mean = 47.57 mm ² SD = 14.49 mm ²	<i>ein</i> 2-1 / 100 μΜ ACC Mean = 23.95 mm² SD = 11.70 mm²	r = 0.49	p = 0.02
Figure S1B	In general, the omission of sucrose supplementation in the growth medium resulted in a decrease in rosette area in both Col-0 and ein2-1 and irrespective of ACC concentration	Sucrose effect in three-way ANOVA analysis		partial η² = 0.039	<i>p</i> < 0.01
	In the absence of ACC, a lack of sucrose resulted in a small inhibitory effect on rosette area in Col-0 and large decrease in ein2-1	Col-0 / 0 μM ACC / +Suc Mean = 33.24 mm ² SD = 11.98 mm ² ein2-1 / 0 μM ACC / +Suc Mean = 33.29 mm ² SD = 8.56 mm ²	Col-0 / 0 μM ACC / -Suc Mean = 26.43 mm ² SD = 8.71 mm ² <i>ein2-1</i> / 0 μM ACC / -Suc Mean = 22.14 mm ² SD = 7.65 mm ²	r = 0.33 r = 0.62	р < 0.01 р < 0.01
	However, at high concentrations of ACC (e.g. 100 µM) rosette area of Col-0 and ein2-1 was reduced severely, irrespective of the presence of sucrose	ACC effect in three-way ANOVA analysis		partial η² = 0.123	p < 0.01
	For instance, in ein2-1, 100 μM ACC decreased rosette area with 5.88 mm² and 12.30 mm² in the absence or presence of sucrose, respectively	ein2-1 / 0 μM ACC / -Suc Mean = 22.14 mm ² SD = 7.65 mm ² ein2-1 / 0 μM ACC / +Suc Mean = 33.29 mm ² SD = 8.56 mm ²	<i>ein2-1 /</i> 100 μM ACC / -Suc Mean = 15.93 mm ² SD = 4.43 mm ² <i>ein2-1 /</i> 100 μM ACC / +Suc Mean = 20.99 mm ² SD = 5.99 mm ²	r = 0.51 r = 0.66	р < 0.01 р < 0.01

Supplementary Material

Figure 1C	When ethylene perception was blocked with 250 ppm 1- MCP, Col-0 rosettes were slightly larger compared to mock-treated rosettes, though this increase was	0 ppm 1-MCP / Col-0 / 0 μM ACC	250 ppm 1-MCP / Col-0 / 0 μM ACC		
		Mean = 42.59 mm ²	Mean = 44.78 mm ²	r = 0.01	p = 0.93
	negligible	SD = 12.76 mm ²	SD = 18.29 mm ²		
		250 ppm 1-MCP / Col-0 / 0 μΜ ACC	250 ppm 1-MCP / Col-0 / 10 μM ACC		
	On 10 µM ACC, MCP-treated	Mean = 44.78 mm ²	Mean = 30.01 mm ²	r = 0.19	<i>p</i> = 0.25
	compared to 0 μM ACC,	SD = 18.29 mm ²	SD = 8.52 mm ²		
	while 100 µM ACC further decreased rosette area to	250 ppm 1-MCP / Col-0 / 0 μM ACC	250 ppm 1-MCP / Col-0 / 100 μM ACC		
	8.72 mm²	Mean = 44.78 mm ²	Mean = 8.72 mm ²	r = 1.04	<i>p</i> < 0.01
		SD = 18.29 mm ²	SD = 3.80 mm ²		
Figure 1D	Furthermore 1 MCD did not				
	substantially change the	1-MCP effect in two	-way ANOVA analysis	partial $n^2 < 0.001$	n = 0.94
	increasing concentrations of ACC	I-mor effect in two-way ANOVA analysis			μ = 0.0 T
		ACC effect in two-	way ANOVA analysis	partial n ² - 0.922	n < 0.01
Figure 2B	Both ACC and 1-MCP dramatically altered root	Accenect in two-way AnovA analysis		puttar 17 = 0.022	p < 0.01
	growth	1-MCP effect in two-way ANOVA analysis		partial $\eta^2 = 0.542$	<i>p</i> < 0.01
	In the absence of 1-MCP,a reduction in root length was already apparent at 10 μΜ	0 ppm 1-MCP / Col-0 / 0 μM ACC	0 ppm 1-MCP / Col-0 / 10 μM ACC		
		Mean = 83.07 mm	Mean = 15.02 mm	r = 0.61	<i>p</i> < 0.01
	ACC	SD = 16.71 mm	SD = 6.67 mm		
	In contrast, at the same concentration of ACC in the presence of 1-MCP, a much smaller inhibition was	250 ppm 1-MCP / Col-0 / 0 μM ACC	250 ppm 1-MCP / Col-0 / 10 μM ACC		
		Mean = 90.65 mm	Mean = 60.67 mm	r = 0.24	<i>p</i> = 0.03
	observed (Fig. 2B; Table S1).	SD = 19.83 mm	SD = 14.22 mm		
	A 5-fold higher dose was required for an effective inhibition of root elongation	250 ppm 1-MCP / Col-0 / 0 μM ACC	250 ppm 1-MCP / Col-0 / 50 μM ACC		
		Mean = 90.65 mm	Mean = 23.53 mm	r = 0.53	<i>p</i> < 0.01
		SD = 19.83 mm	SD = 8.96 mm		
Figure 3A	A dose-dependent increase in ethylene levels was observed when plants were grown on ACC-containing A media		way ANOVA analysis	partial η² = 0.889	<i>p</i> < 0.01
	In addition, AIB effectively blocked ACO-mediated conversion of ACC to ethylene	AIB effect in two-way ANOVA analysis		partial $\eta^2 = 0.860$	p < 0.01
	though a small increase in	0 μM ACC / 2 mM AIB	50 µM ACC / 2 mM AIB		
	ethylene levels, could be observed at higher	Mean = 0.0038 pL seedling ⁻¹ h ⁻¹	Mean = 0.0200 pL seedling ⁻¹ h ⁻¹	r = 0.75	<i>p</i> < 0.01
	concentrations	SD = 0.0003 pL seedling ⁻¹ h^{-1}	$SD = 0.0023 \text{ pL seedling}^{-1} \text{ h}^{-1}$		
	Nevertheless, the ethylene levels in plants treated with 50 μM ACC + AIB were more than two-fold lower than those in plants treated with 1 μM ACC alone	1 μM ACC / 0 mM AIB	50 µM ACC / 2 mM AIB		
		Mean = 0.0502 pL seedling ⁻¹ h^{-1}	Mean = 0.0200 pL seedling ⁻¹ h ⁻¹	r = 0.22	<i>p</i> = 0.44
		SD = 0.0107 pL seedling ⁻¹ h^{-1}	SD = 0.0023 pL seedling ⁻¹ h^{-1}		
Figure 3C	The addition of 2 mM AIB resulted in a slight decrease	Col-0 / 0 µM ACC / 2 mM AIB	Col-0 / 50 µM ACC / 2 mM AIB	r = 0.18	<i>p</i> = 0.11

	in rosette area upon 50 μΜ ACC	Mean = 26.96 mm²	Mean = 23.73 mm ²		
		SD = 7.12 mm²	SD = 6.03 mm ²		
	Since the application of 50 μM ACC + AIB led to	Col-0 / 0 µM ACC / 0 mM AIB	Col-0 / 1 µM ACC / 0 mM AIB		
	ethylene levels lower than those observed upon 1 μ M ACC alone (Fig. 3A), and the	Mean = 29.40 mm²	Mean = 29.72 mm ²	r = 0.21	p = 0.015
	dose was relatively small for both rosettes and roots	SD = 6.37 mm²	SD = 7.12 mm ²		
Figure 3D		<i>ein2-1 </i> 0 µM ACC / 0 mM AIB	ein2-1 / 50 µM ACC / 0 mM AIB		
r iguro ob	In ein2-1 plantlets 50 uM	Mean = 27.25 mm ²	Mean = 16.84 mm ²	r = 0.73	p < 0.01
	ACC decreased rosette size	SD = 5.02 mm ²	SD = 4.64 mm ²		
	of AIB. However, in the	ein2-1 / 0 µM ACC / 2 mM AIB	<i>ein2-1 </i> 50 µМ АСС / 2 mM AIB		
	presence of 2 mM AIB, rosette area reduced only	Mean = 24.00 mm ²	Mean = 20.54 mm²	r = 0.31	p = 0.03
	slightly upon treatment with	SD = 5.66 mm ²	SD = 4.92 mm ²		
Figure 4B	In Col-0, 50 μM ACC	Col-0 / 0 µM ACC / 0 mM AIB	Col-0 / 50 µM ACC / 0 mM AIB		
riguic 4D	decreased the average root length from 39.17 mm to	Mean = 39.17 mm	Mean = 5.57 mm	r = 1.31	p < 0.01
	5.57 mm in the absence of	SD = 7.37 mm	SD = 4.29 mm		<i>p</i>
	AID.	Col-0 / 0 uM ACC / 2 mM AIB	Col-0 / 50 µM ACC / 2 mM AIB		
	In the presence of AIB, root	Mean $= 22.37 \text{ mm}$	Mean - 5.35 mm	r – 0.86	n < 0.01
	22.37 mm to 5.35 mm	SD - 5 67 mm	SD = 1.77 mm	1 = 0.80	p < 0.01
		SD = 5.07 mm	SD = 1.77 mm		
	Since the application of 50 µM ACC + AIB led to ethylene levels lower than those observed upon 1 µM ACC alone (Fig. 3A), and the inhibitory effect of the latter	Col-0 / 0 µM ACC / 0 mM AIB	Col-0 / 1 µM ACC / 0 mM AIB		
		Mean = 39.17 mm	Mean = 22.78 mm	r = 0.43	p < 0.01
	dose was relatively small for both rosettes and roots	SD = 7.37 mm	SD = 6.90 mm		
Figure 4C		ein2-1 / 0 μM ACC / 0 mM AIB	<i>ein2-1</i> / 50 µM ACC / 0 mM AIB		
	Likewise. 50 µM ACC	Mean = 33.06 mm	Mean = 12.44 mm	r = 0.94	<i>p</i> < 0.01
	reduced root elongation	SD = 7.14 mm	SD = 3.74 mm		
	without and with AIB	ein2-1 / 0 μM ACC / 2 mM AIB	<i>ein2-1</i> / 50 µM ACC / 2 mM AIB		
	supplementation	Mean = 19.69 mm	Mean = 8.25 mm	r = 0.66	<i>p</i> < 0.01
		SD = 3.97 mm	SD = 1.86 mm		
Figure 5C	In Col-0, a dose-dependent inhibition of hypocotyl elongation was observed	ACC effect in two-way ANOVA analysis		partial $\eta^2 = 0.729$	p < 0.01
		Col-0 / 0 µM ACC / 0 mM AIB	Col-0 / 1 µM ACC / 0 mM AIB		
	For instance, 1 µM ACC	Mean = 10.88 mm	Mean = 4.08 mm	r = 1.08	<i>p</i> < 0.01
	hypocotyl length from 10.88 mm to 4.08 mm, while in the presence of AIB, it only decreased from 9.81 mm to 8.11 mm	SD = 1.44 mm	SD = 1.29 mm		
		Col-0 / 0 µM ACC / 2 mM AIB	Col-0 / 1 µM ACC / 2 mM AIB		
		Mean = 9.81 mm	Mean = 8.11 mm	r = 0.29	<i>p</i> < 0.01
		SD = 1.48 mm	SD = 2.07 mm		
		Col-0 / 0 µM ACC / 0 mM AIB	Col-0 / 50 µM ACC / 0 mM AIB		
	In contrast, 50 µM ACC	Mean = 10.88 mm	Mean = 3.37 mm	r = 1.19	<i>p</i> < 0.01
	length, irrespective of AIB	SD = 1.44 mm	SD = 0.70 mm		
treatment	ireaiment	Col-0 / 0 µM ACC / 2 mM AIB	Col-0 / 50 µM ACC / 2 mM AIB	r = 0.84	p < 0.01

Supplementary Material

		Mean = 9.81 mm	Mean = 4.34 mm		
		SD = 1.48 mm	SD = 0.80 mm		
		Col-0 / 0 µM ACC / 2 mM AIB	Col-0 / 10 µM ACC / 2 mM AIB		
		Mean = 9.81 mm	Mean = 4.34 mm	r = 0.54	p < 0.01
		SD = 1.48 mm	SD = 0.80 mm		
	$50 \ \mu M \ ACC$ in the presence	Col-0 / 0 µM ACC / 0 mM AIB	Col-0 / 0.1 µM ACC / 0 mM AIB		
	inhibitory effects compared to	Mean = 10.88 mm	Mean = 10.66 mm	r = 0.03	<i>p</i> = 0.61
	0.1 and 0.75 μM ACC, respectively, in the absence	SD = 1.44 mm	SD = 1.40 mm		
	of AIB	Col-0 / 0 µM ACC / 0 mM AIB	Col-0 / 0.75 µM ACC / 0 mM AIB		
		Mean = 10.88 mm	Mean = 6.93 mm	r = 0.70	p < 0.01
		SD = 1.44 mm	SD = 1.15 mm		
Figure 5D	In Col-0, a dose-dependent inhibition of root elongation was observed	ACC effect in two	way ANOVA analysis	partial η² = 0.523	p < 0.01
U		Col-0 / 0 µM ACC / 2 mM AIB	Col-0 / 10 µM ACC / 2 mM AIB		
		Mean = 5.49 mm	Mean = 4.26 mm	r = 0.44	p < 0.01
		SD = 0.79 mm	SD = 0.82 mm		
		Col-0 / 0 µM ACC / 2 mM AIB	Col-0 / 50 µM ACC / 2 mM AIB		
	Given that in Col-0, 10 and	Mean = 5.49 mm	Mean = 2.62 mm	r = 1.11	p < 0.01
	50 μM ACC in the presence of AIB resulted in stronger	SD = 0.79 mm	SD = 0.82 mm		
	inhibitory effects compared to 0.1 and 0.75 µM ACC,	Col-0 / 0 µM ACC / 0 mM AIB	Col-0 / 0.1 µM ACC / 0 mM AIB		
	respectively, in the absence of AIB	Mean = 7.41 mm	Mean = 5.74 mm	r = 0.30	p < 0.01
		SD = 1.02 mm	SD = 0.87 mm		
		Col-0 / 0 uM ACC / 0 mM AIB	Col-0 / 0.75 µM ACC / 0 mM AIB		
		Mean = 7 41 mm	Mean = 5.38 mm	r = 0.86	p < 0.01
		SD = 1.02 mm	SD = 1.02		μ. τοιοτ
	In darkness, Col-0 and ein2-1 roots were approximately	COI-0 / 0 µM ACC / 0 mM AIB	Соі-0 / 0 µм АСС / 2 mm АІВ		
	25% shorter when treated with 2 mM AIB	Mean = 7.41 mm	Mean = 5.49 mm	r = 0.42	p < 0.01
		SD = 1.02 mm	SD = 0.79 mm		
Figure 5E		<i>ein2-1 /</i> 0 µM ACC / 0 mM AIB	ein2-1 / 50 µM ACC / 0 mM AIB		
Ŭ	At 50 µM ACC and in the absence of AIB, hypocotyl length was merely reduced	Mean = 11.46 mm	Mean = 8.57 mm	r = 0.58	<i>p</i> < 0.01
	1011 1 1.40 1111 10 0.57 11111	SD = 1.85 mm	SD = 2.41 mm		
		ein2-1 / 0 µM ACC / 0 mM AIB	ein2-1 / 0 µM ACC / 2 mM AIB		
Tigule Si	roots were approximately	Mean = 6.19 mm	Mean = 4.76 mm	r = 0.59	p < 0.01
	25% shorter when treated with 2 mM AIB	SD = 1.31 mm	SD = 0.74 mm		
Figure 5SB	B When seedlings were treated with ETH (10), hypocotyls and roots were almost	0 μM ACC / 0 mM AIB	ETH (10) / 0 mM AIB		
		Mean = 10.03 mm	Mean = 9.57 mm	r = 0.06	<i>p</i> = 0.35
	molsunguisnable from the mock treatment	SD = 1.15 mm	SD = 1.03 mm		
		0 μM ACC / 2 mM AIB	ETH (10) / 2 mM AIB		
	In the presence of 2 mM AIB,	Mean = 9.43 mm	Mean = 8.25 mm	r = 0.17	<i>p</i> = 0.04
	slightly larger in both organs	SD = 1.38 mm	SD = 1.15 mm		
	However, the effect of 10 uM	0 μM ACC / 2 mM AIB	10 µM ACC / 2 mM AIB	r = 0.51	p < 0.01
	ACC + AIB on hypocotyl and	Mean = 9.43 mm	Mean = 6.52 mm		

	root elongation was stronger than that of ETH (10)	SD = 1.38 mm	SD = 1.06 mm		
Figure 6B		Col-0 / 0 mM AIB	acs8x / 0 mM AIB		
g	Etiolated acs8x seedlings exhibited significantly longer	Mean = 9.69 mm	Mean = 11.29 mm	r = 0.58	p < 0.01
	roots compared to the wild- type	SD = 1.33 mm	SD = 0.79 mm		
Figure 6C		Col-0 / 0 mM AIB	acs8x / 0 mM AIB		
	Etiolated acs8x seedlings	Mean = 6.32 mm	Mean = 5.64 mm	r = 0.46	p < 0.01
	exhibited significantly longer hypocotyls and shorter roots compared to the wild- type	SD = 1.06 mm	SD = 0.98 mm		
		Col-0 / 0 mM AIB	Col-0 / 2 mM AIB		
	Upon addition of 2 mM AIB	Mean = 6.32 mm	Mean = 4.63 mm	r = 0.67	p < 0.01
	both wild-type and acs8x	SD = 1.06 mm	SD = 0.75 mm		
	compared to roots in absence	acs8x / 0 mM AIB	acs8x / 2 mM AIB		
	07 AID (119. 00, E)	Mean = 5.64 mm	Mean = 4.10 mm	r = 0.67	<i>p</i> < 0.01
		SD = 0.98 mm	SD = 0.82 mm		

Treatment ACC	Treatment 0 mM AIB (in pL/h/plant)	Treatment 2 mM AIB (in pL/h/plant)
0 µM	5.25 (2.42)	3.73 (0.31)
1 µM	50.26 (10.76)	4.17 (0.54)
10 µM	117.78 (20.15)	6.19 (0.62)
50 µM	259.92 (38.41)	20.07 (2.31)

Supplementary Table 2. Average ethylene emanation (SD) of 2-week-old light grown *Arabidopsis* wild-type Col-0 seedlings treated with ACC, AIB or a combination of both.

Supplementary Table 3. Average ethylene emanation (SD) of etiolated 4-day-old *Arabidopsis* wild-type Col-0 seedlings treated with ACC, AIB or a combination of both.

Treatment ACC	Treatment 0 mM AIB (in pL/h/seedling)	Treatment 2 mM AIB (in pL/h/seedling)
0 µM	0.29 (0.21)	0.14 (0.08)
0.1 μM	1.00 (0.13)	0.20 (0.06)
0.25 μM	2.23 (0.14)	0.18 (0.09)
0.5 μM	2.87 (1.93)	0.06 (0.01)
0.75 μM	5.96 (0.67)	0.27 (0.13)
1 µM	12.73 (0.86)	0.32 (0.08)
5 µM	59.29 (3.28)	0.97 (0.18)
10 µM	90.75 (3.71)	1.29 (0.16)
50 µM	176.18 (59.87)	6.50 (0.52)