

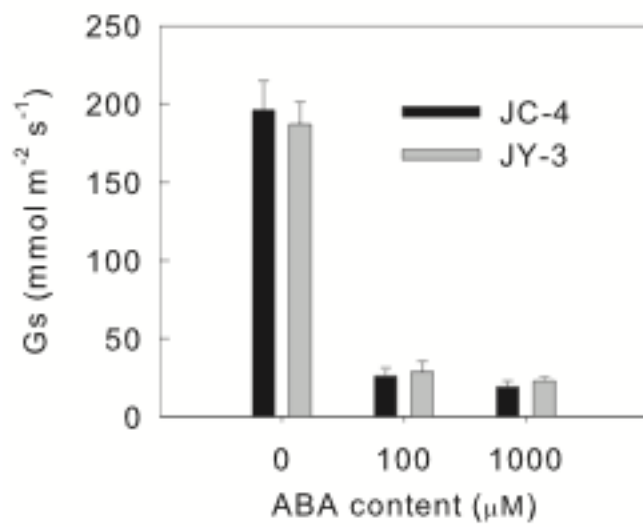
**Title: Water Status Related Root-to-Shoot Communication Regulates the Chilling Tolerance of Shoot in Cucumber (*Cucumis sativus* L.) Plants**

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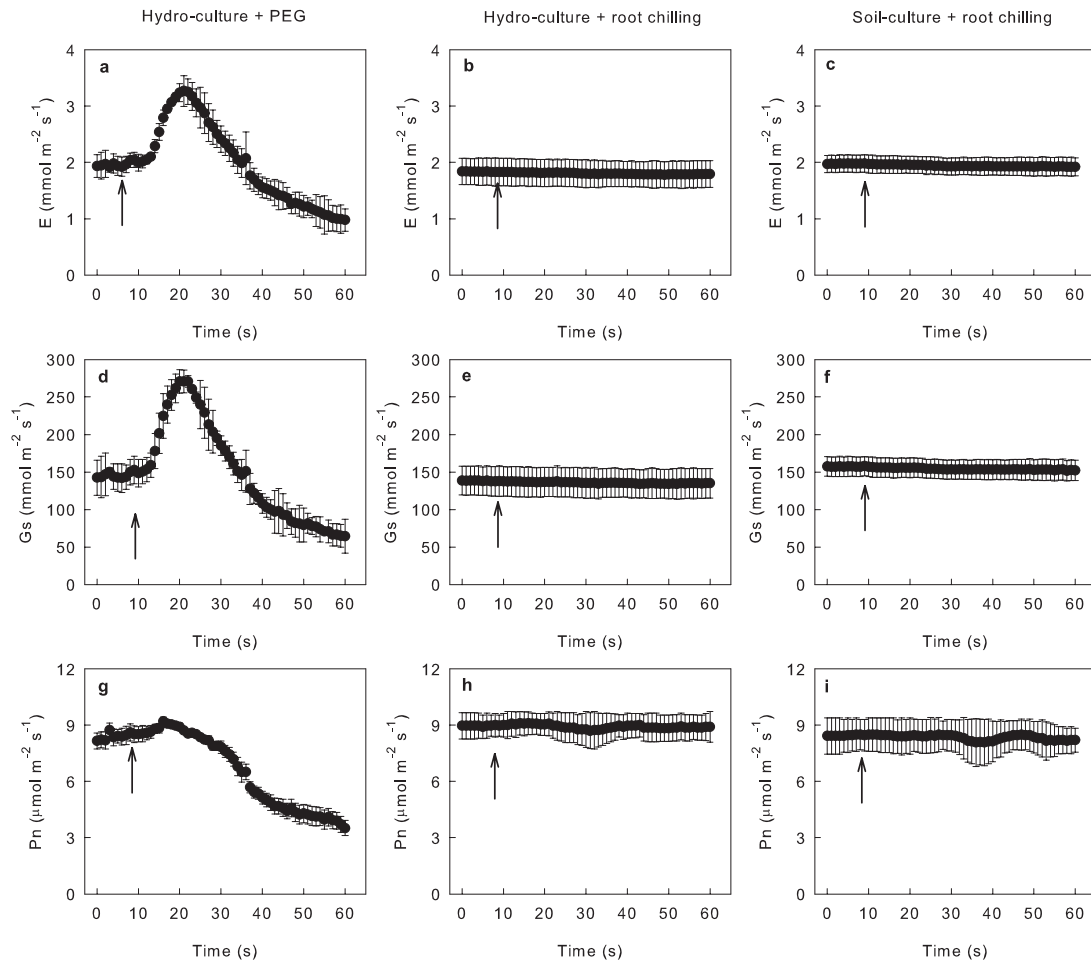
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Supplementary Figure. S1 The stomatal conductance (Gs) under light ( $800 \mu\text{mol m}^{-2} \text{s}^{-1}$ ) and  $25 \text{ }^\circ\text{C}$  in JC-4 and JY-3 leaves pretreated with 0, 100 or 1000  $\mu\text{M}$  ABA solution.



Supplementary Figure S2: The responses of transpiration rate ( $E$ ; a, b, c), stomatal conductance ( $G_s$ ; d, e, f) and net photosynthetic rate ( $P_n$ ; g, h, i) in leaves of the chilling-sensitive cucumber variety JY-3 to PEG (polyethylene glycol, 30%, W/W) shock (a, d, g) and chilling shock ( $6\text{ }^\circ\text{C}$ ; b, c, e, f, g, i) of root. The plants were grown in Hoagland nutrient solution (a, b, d, e, g, h) or soil (c, f, i). The arrowheads indicate the start of shock. The gas exchange in the leaves was measured at  $800\text{ }\mu\text{mol mol}^{-1}\text{ s}^{-1}$  light,  $25\text{ }^\circ\text{C}$ ,  $400\text{ }\mu\text{mol mol}^{-1}\text{ CO}_2$  concentration and about 65% relative humidity. The results for the chilling-tolerant cucumber variety JC-4 were similar to those of the JY-3 (Fig. 5).



Supplementary Figure S3: The substomatal CO<sub>2</sub> concentrations (C<sub>i</sub>) in the JY-3 leaves and the JC-4 leaves before and after 9 h of whole plants chilling-light treatment (6°C and 150 μmol m<sup>-2</sup> s<sup>-1</sup> light). Values represent means ± SD, and each data point is the average of 10 independent plants.

