

Supplementary materials

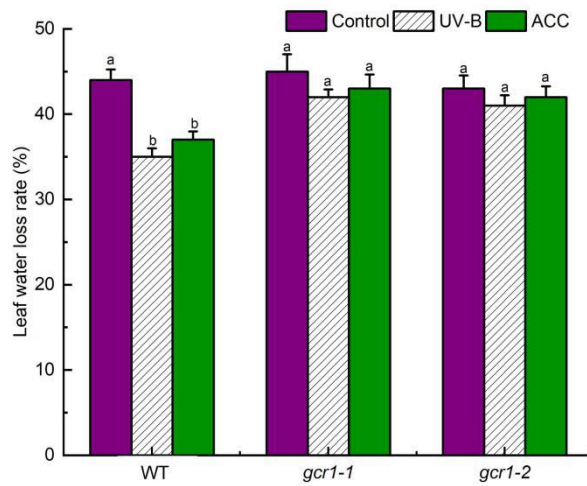


Figure S1. Effect of UV-B and ACC on the leaf water loss rate in wild-type Col-0 (WT) and *gcr1* mutants. The leaf water loss rate was calculated after leaves pretreated with MES buffer alone or with 100 $\mu\text{mol/L}$ ACC (ACC) under white light (0.1 $\text{mmol/m}^2/\text{s}$) alone or supplemented with 0.5 W/m^2 UV-B radiation (UV-B) for 3 h were placed under light without MES buffer for 2 h. Data are shown as the means \pm SE of ten leaves.

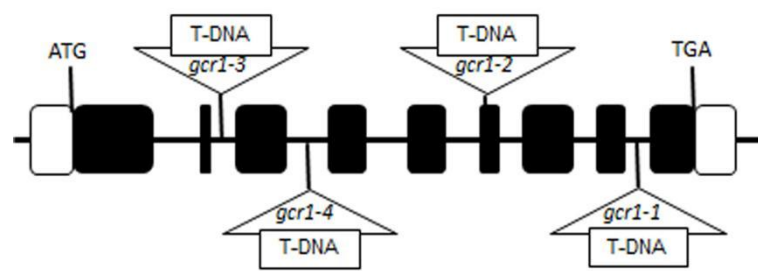


Figure S2. T-DNA insertion mutant alleles of GCR1 in Arabidopsis. Boxes and lines represent exons and introns, respectively (figure not drawn to the scale).

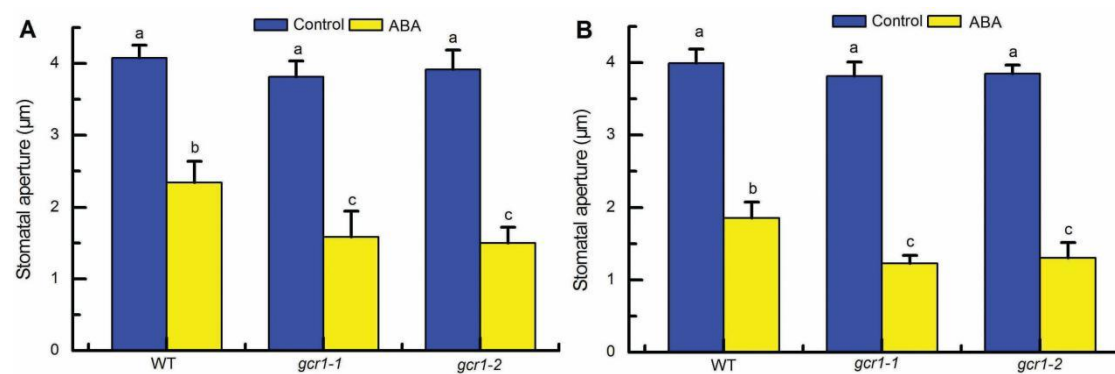


Figure S3. GCR1 plays a negative role in ABA inhibition of stomatal opening and promoting of stomatal closure. (A) Leaves of the WT and *gcr1* mutants were incubated in MES buffer under darkness for 3 h to close the stomata, and then incubated in MES buffer alone (Control) or containing 10 $\mu\text{mol/L}$ ABA (ABA) for 3 h under the light. (B) Leaves of the WT and *gcr1* mutants with open stomata were incubated in MES buffer alone (Control) or containing 10 $\mu\text{mol/L}$ ABA (ABA) for 3 h under the light. After treatments, stomatal apertures were measured in epidermal strips taken from the abaxial surfaces of the treated

leaves. Data are presented as means \pm SE of three independent experiments, each with 30 stomata. Means with different letters are significantly different at $p < 0.01$.