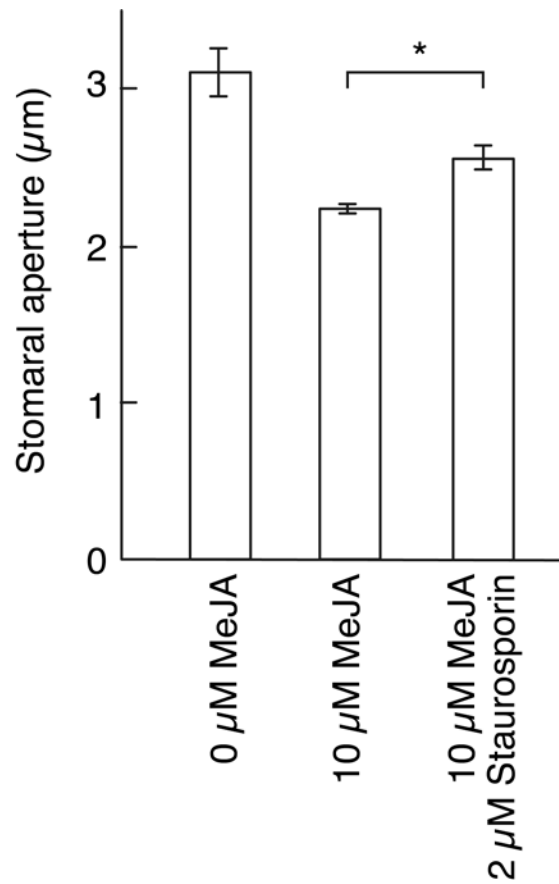
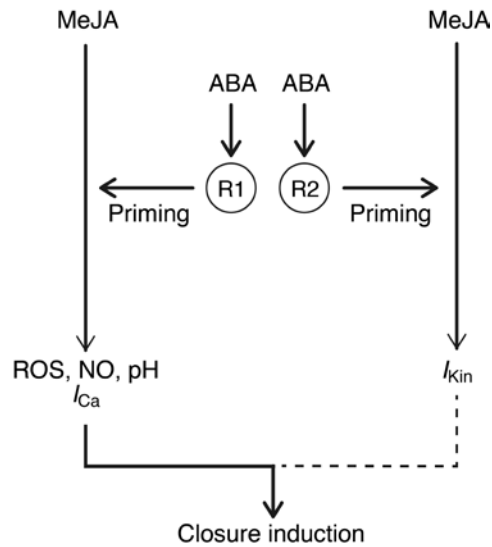


Supplementary Figure S1. Activation of I_{Ca} by 1 mM H_2O_2 in *srk2e* GCPs. E_m , membrane potential. I , current. Error bars, standard error. Open and closed symbols indicate water control and 1 mM H_2O_2 -treatment, respectively.



Supplementary Figure S2. Inhibition of MeJA-induced stomatal closure by staurosporin in Columbia-0. Ten μM MeJA was added to the stomatal assay solution 10 min later of addition of 2 μM staurosporin. Averages of stomatal aperture widths from three independent experiments (n = 3, 60 total stomata) are presented. Error bars represent standard error of the mean. * indicates P ≤ 0.05.



Supplementary Figure S3. A hypothetical model of MeJA signaling pathways and diverse function of ABA receptors in guard cells. MeJA signaling in guard cells consists of at least two parallel pathways. One pathway is primed by ABA through unknown receptor (R1) and leads ROS and NO production, cytosolic alkalization and I_{Ca} activation, eventually induce stomatal closure. Another pathway is also primed by ABA through PYR1, PYL1, PYL2 and/or PYL4 (R2) and leads inactivation of I_{Kin} , which is not or weakly associated with stomatal closure induction (dotted line).