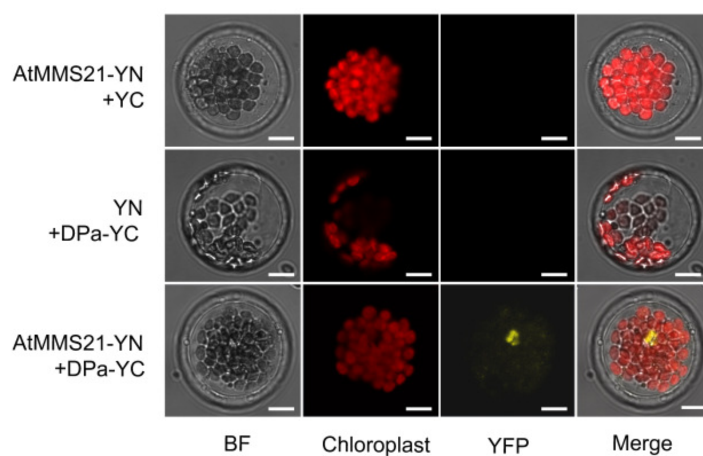
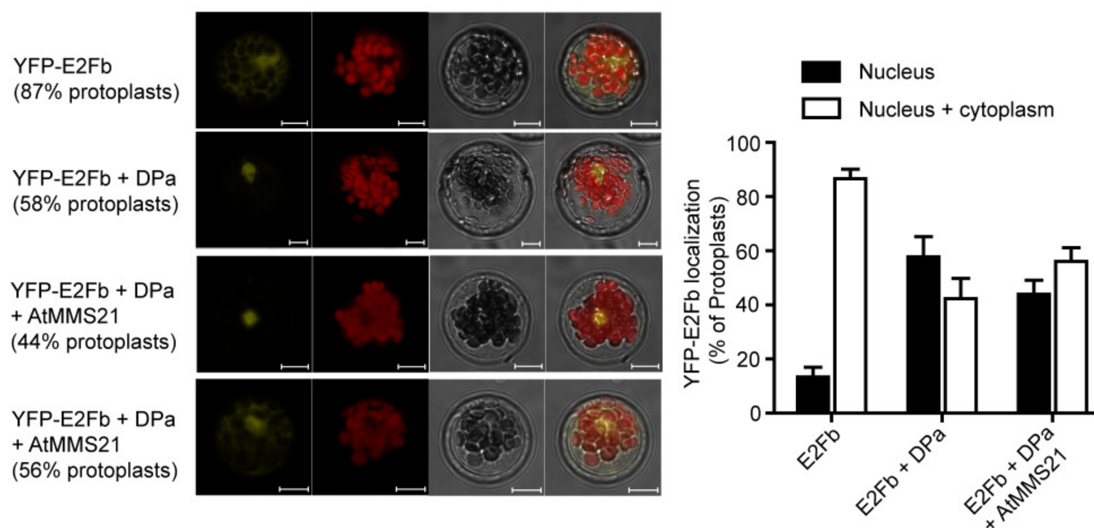
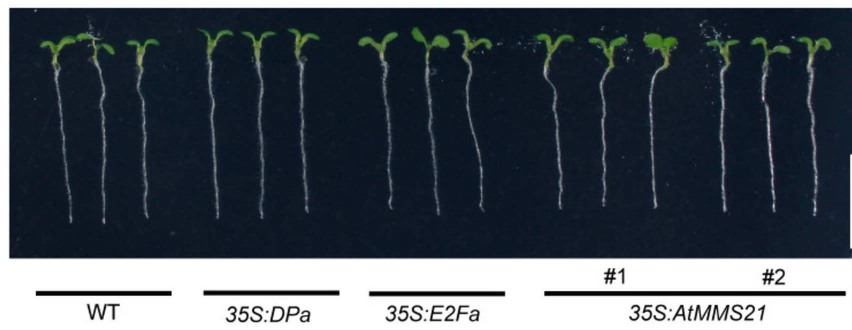


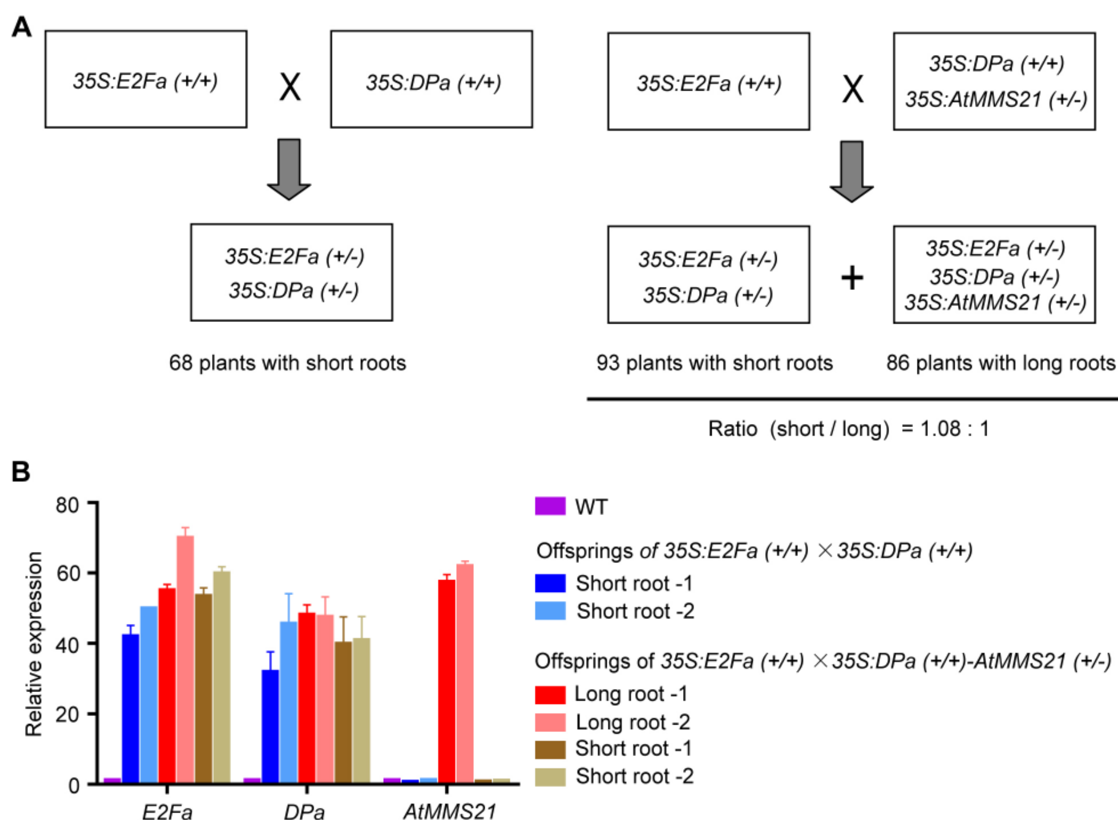

**Supplemental Figure 1. Detection of DPa-AtMMS21 interaction by bimolecular fluorescence complementation.** The protoplasts were co-transformed with plasmid pairs: *AtMMS21-YN* (AtMMS21 fused with N terminal of EYFP) and *YC* (empty vector with C terminal of EYFP); *YN* (empty vector with N terminal of EYFP) and *DPa-YC* (DPa fused with C terminal of EYFP); *AtMMS21-YN* and *DPa-YC*. Representative YFP signals were detected by confocal microscopy 48 hours after transformation. The autofluorescence from chloroplasts and bright field (BF) signals were also detected and merged. Bar=10 μm.



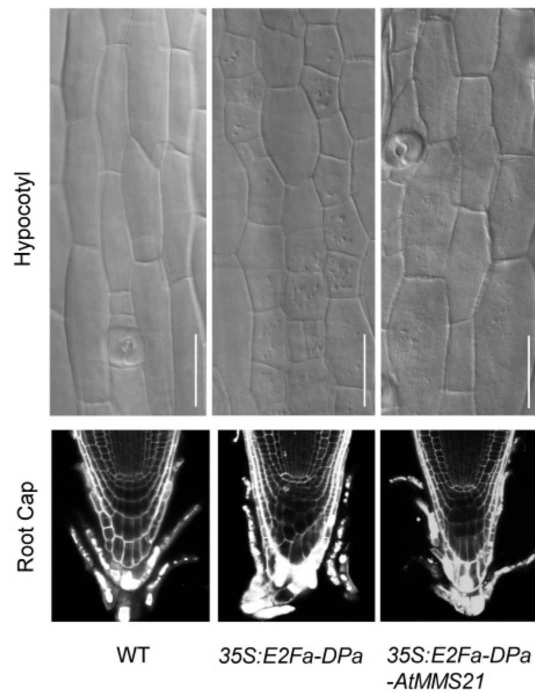

**Supplemental Figure 2. Subcellular distribution of YFP-fused E2Fb in protoplasts.** YFP-E2Fb was transiently expressed in protoplasts from wild-type and transgenic plants carrying *35S:DPa* alone or both *35S:DPa* and *35S:AtMMS21*. Representative YFP signals from the majority of the indicated protoplasts are shown. Bar=10 μm. Statistical data from means ± SD for three independent biological replicates (n>100) are shown in the right panel.




**Supplemental Figure 3. The phenotypes of WT, *35S:DPa*, *35S:E2Fa*, and *35S:AtMMS21* seedlings.** The photograph was taken 5 days after germination. Bar=1 cm.




**Supplemental Figure 4. The generation and identification of plants carrying *35S:E2Fa-DPa-AtMMS21.*** (A) The crossing scheme for generation of *35S:E2Fa-DPa* and *35S:E2Fa-DPa-AtMMS21*. The ratio of offsprings with long and short roots is shown. (B) The expression levels of *E2Fa*, *DPa* and *AtMMS21* in the plants generated from crossing were analyzed by real time PCR. The data are means±SD from triplicated experiments.




**Supplemental Figure 5. The phenotypes of hypocotyl and root cap of the *35S:E2Fa-DPa-AtMMS21* plants.** Hypocotyls of 12-day-old plants are shown in the top panel. Bar = 50 µm. Root caps of 7-day-old plants after PI staining are shown in the bottom panel.