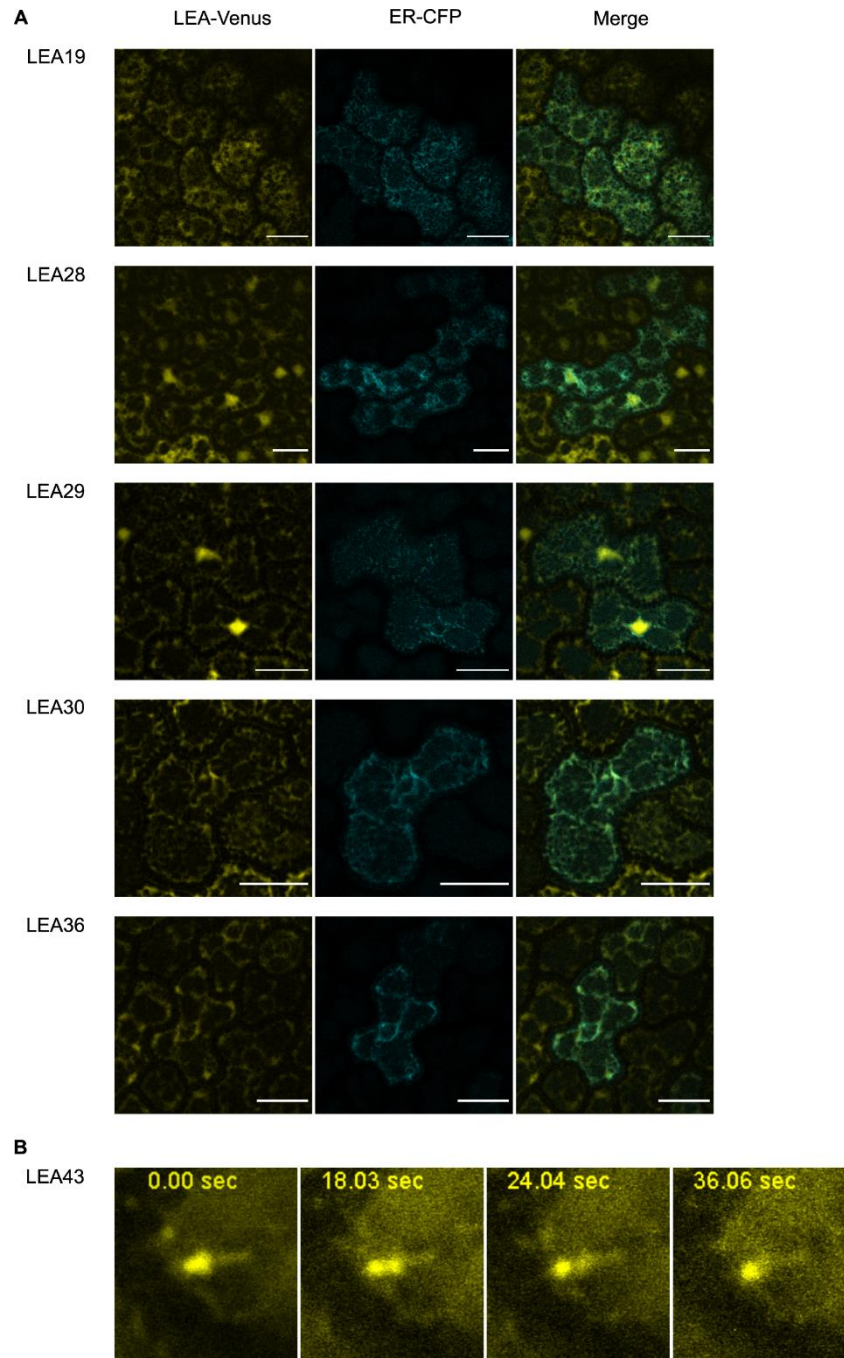
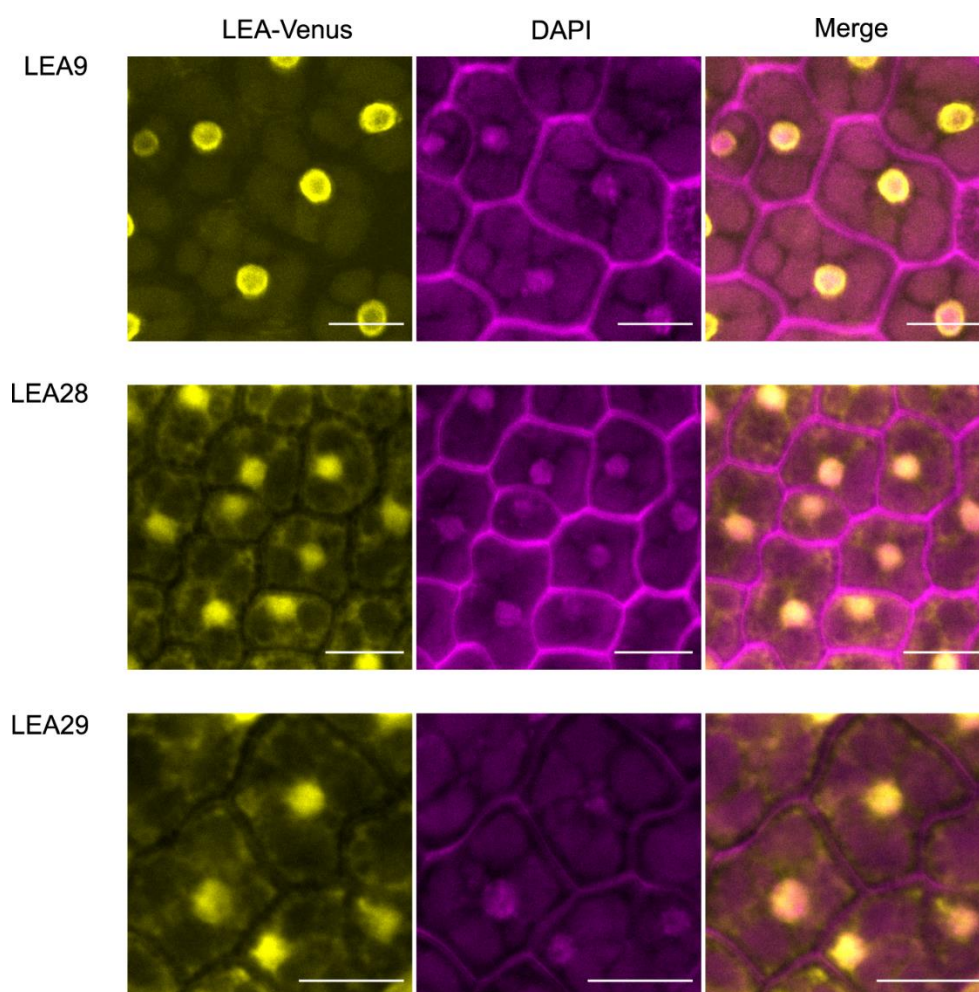


Subcellular localization of seed-expressed LEA<sub>4</sub> proteins reveals liquid-liquid phase separation for LEA9 and for LEA48 homo- and LEA42-LEA48 heterodimers

Supplementary Figure S1

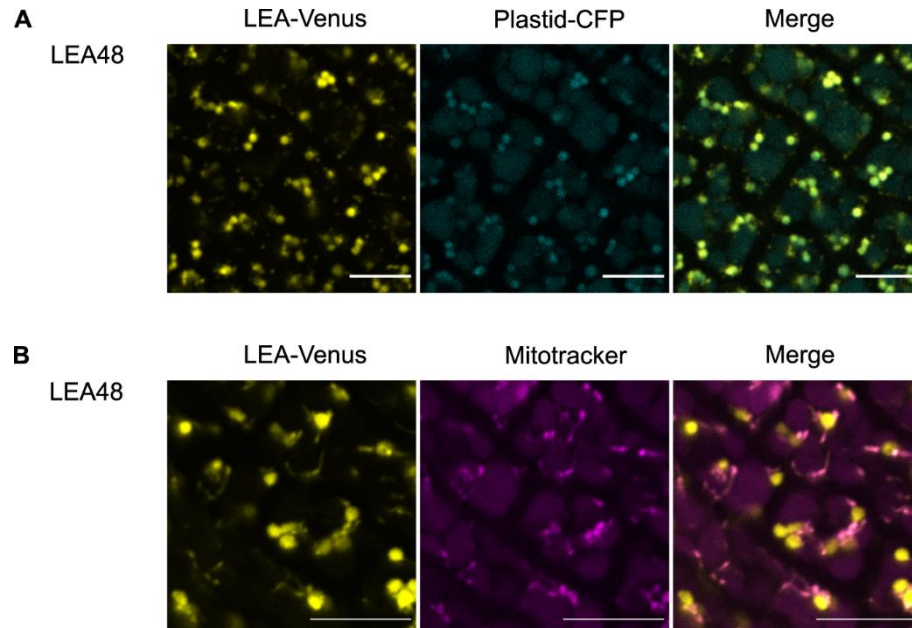


**Supplementary Figure S1:** Subcellular localization of seed-expressed LEA<sub>4</sub> proteins (LEA19, LEA28, LEA29, LEA30, LEA36) in ER in embryos of dry seeds. A) *proLEA<sub>4</sub>::LEA<sub>4</sub>:Venus* lines were crossed with an ER marker line with CFP fluorescence (ER-ck). Bars indicate 10  $\mu$ m. B) The dynamics of LEA43 punctate along ER.



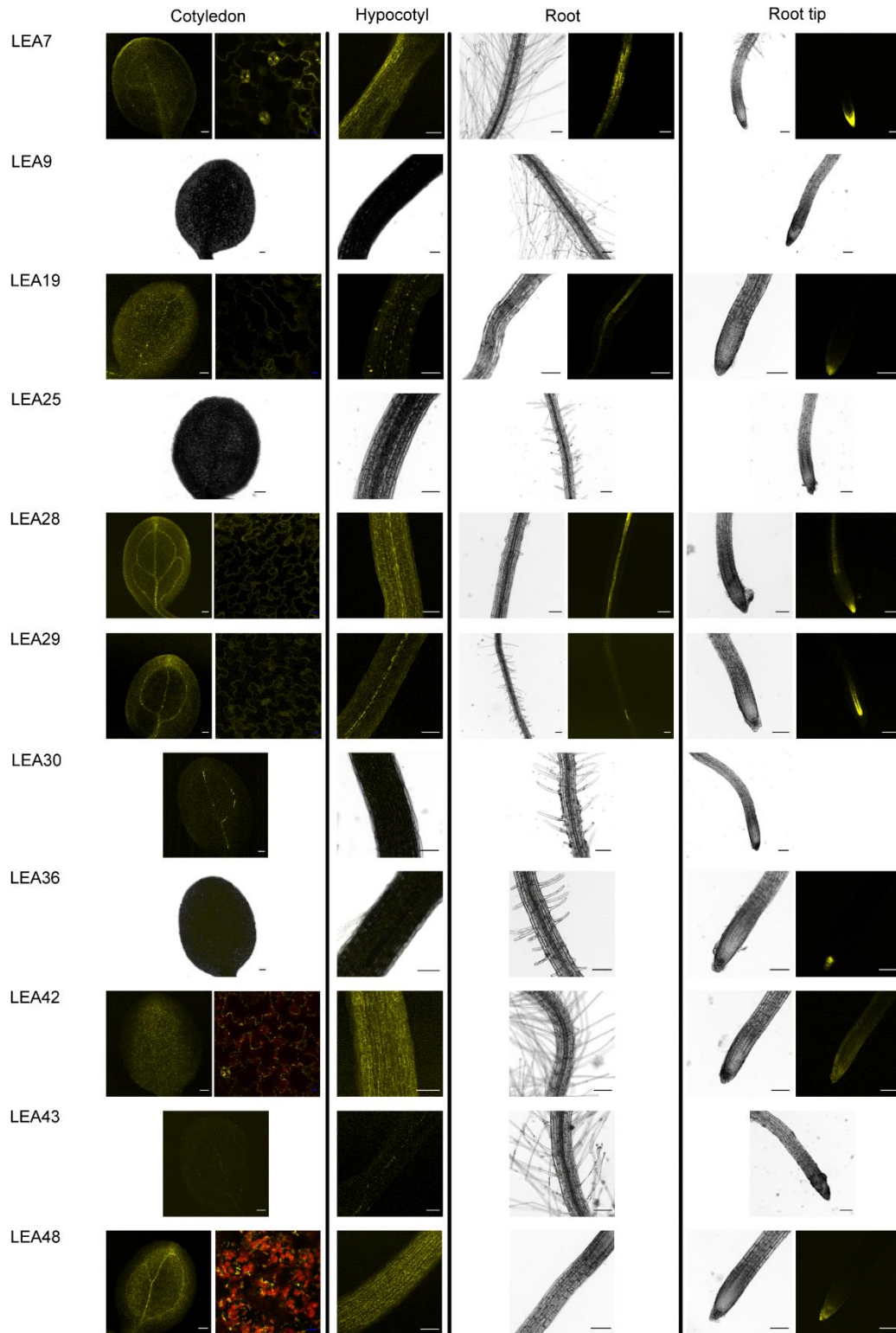
**Supplementary Figure S2:** Subcellular localization of seed-expressed LEA<sub>4</sub> proteins (LEA9, LEA28, LEA29) in nuclei in embryos of dry seeds. Dissected embryos were stained with DAPI. Bars indicate 10  $\mu$ m.

**Supplementary Figure S3**



**Supplementary Figure S3:** Subcellular localization of seed-expressed LEA<sub>4</sub> protein LEA48 in A) plastids by crossing *proLEA<sub>4</sub>::LEA<sub>4</sub>:Venus* lines with a plastid marker line with CFP fluorescence (Pt-ck) and B) mitochondria by staining dissected embryos with Mitotracker. Bars indicate 10  $\mu$ m.

**Supplementary Figure S4**



**Supplementary Figure S4:** Localization of seed-expressed LEA\_4 proteins different organs of 4-d-old seedling under control condition. If the organ is only shown with a bright field image, no fluorescence signal of Venus was detected. Red channel shows chlorophyll signal. White and black bars indicate 100 μm while blue bars indicate 10 μm.