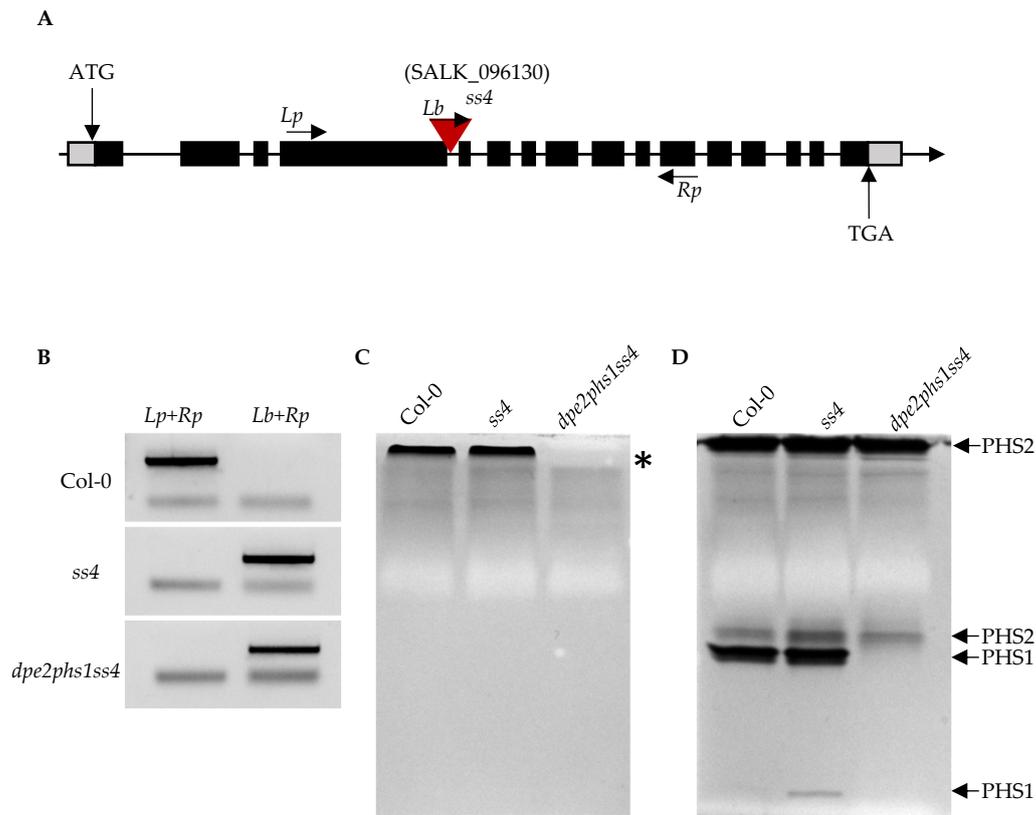
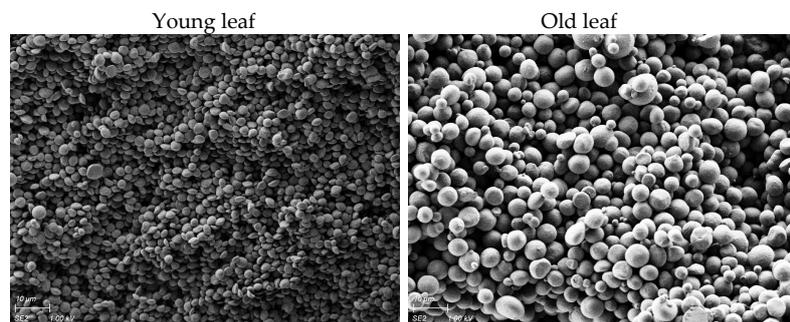


## Supplementary Figure S1



**Figure S1. Genotype confirmation of *ss4* and *dpe2phs1ss4*.** (A) Insertion site as referred to sequence information of TAIR database. (B) Confirmation for the lacking of SS4 in *ss4* and *dpe2phs1ss4*. Primers as indicated in (A). (C) Confirmation of DPE2 activity in Col-0, *ss4* and *dpe2phs1ss4* by Native-PAGE with glycogen. The targeted bands were indicated with star. (D) Confirmation of PHS1 activity by Native-PAGE with glycogen.

## Supplementary Figure S2



**Figure S2.** In vitro starch granules of *dpe2phs1ss4*. The scale bars are 10 µm indicated on each picture.