

Supplementary information

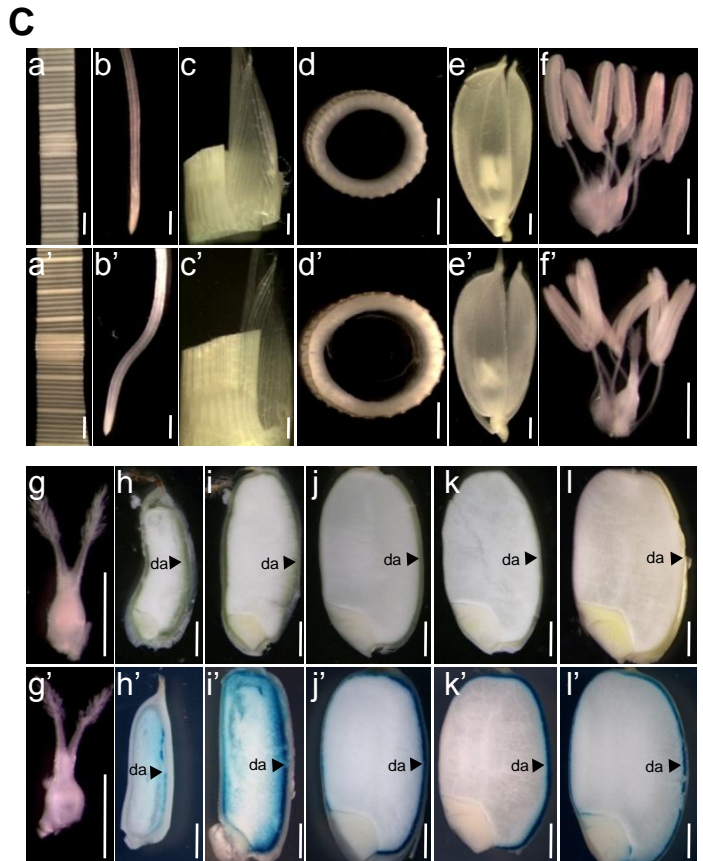
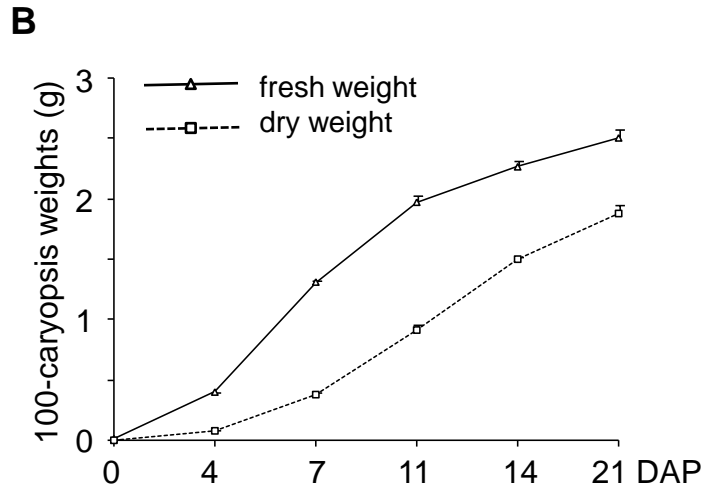
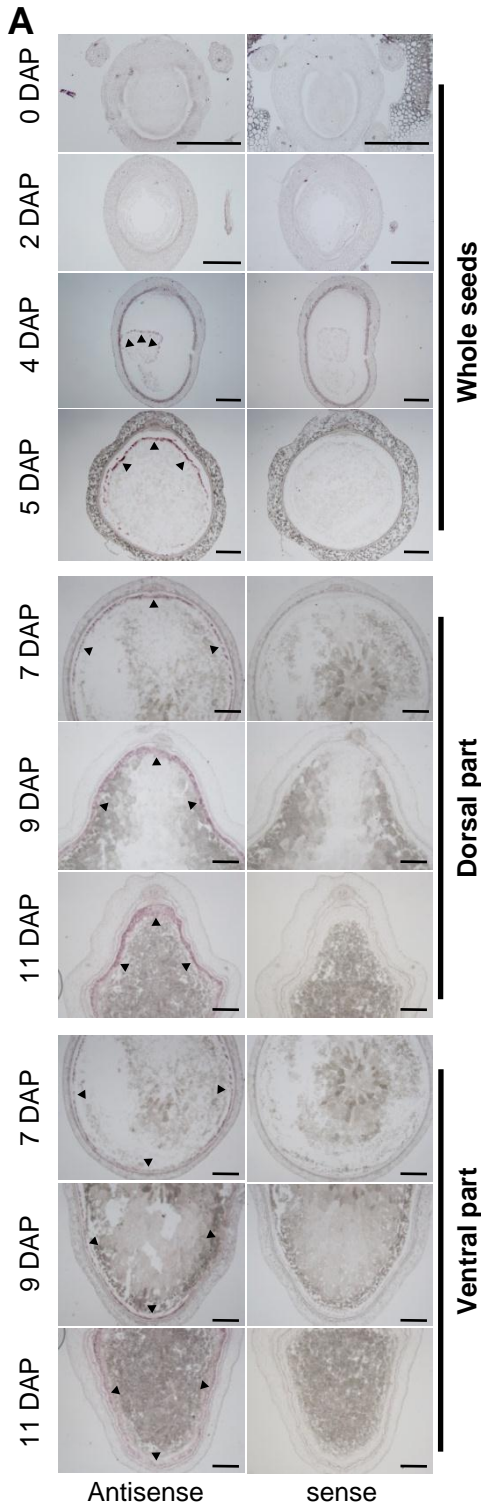


Figure S1. *NF-YB1* is specifically expressed in rice aleurone during grain filling.

- (A) *In situ* hybridization in transversely sectioned rice caryopses collected at 0, 2, 4, 5, 7, 9 and 11 DAP using antisense (left panel) and sense *NF-YB1* probes (right panel). *NF-YB1* expression was first detected at the periphery of coenocytic endosperms (indicated by arrowheads) at 4 DAP, in the dorsal aleurone at 5 DAP, and then the whole aleurone (stronger at the dorsal side) at 7, 9 and 11 DAP. Note that no *NF-YB1* expression was observed at 0 and 2 DAP. Bars = 200 μ m.
- (B) Changes of the fresh and dry weights of rice caryopses at 0, 4, 7, 11, 14 and 21 DAP. Note the rapid fresh and dry weights increase between 4 and 11 DAP.
- (C) GUS assays in transgenic rice carrying *pNF-YB1::GUS*. a to l, GUS assays performed in tissues from the wildtype; a' to l', GUS assays performed in tissues from the transgenic plants carrying *pNF-YB1::GUS*. Note that no *GUS* expression was detected in any tissues from *pNF-YB1::GUS* transgenic plants except the aleurone (h' to l'), nor in any tissues from the wildtype plants (a to l). Note the stronger *GUS* expression detected in dorsal aleurone at 7 (i') and 14 DAP (j'), and the expression was declined in caryopses at 21 (k') and 28 DAP (l'). da, dorsal aleurone. Bars = 1 mm.