



Supplemental Figure 4. In-frame *Rc* mutants in ZNS background displayed an identical male sterility phenotype as their wild type.
 (a) Morphological phenotypes of wild type ZNS and in-frame *Rc* mutant ZNS-#7. Scale bar: 20cm.
 (b) Pollen sterility in wild type ZNS and in-frame *Rc* mutants ZNS-#2, and ZNS-#7. Pollens were stained with 1% KI solution. Fertile pollens of X134 were used as a positive control. Scale bar: 3 cm.
 (c) Sterile panicles of wild type ZNS and in-frame *Rc* mutants ZNS-#2, and ZNS-#7. Fertile panicle of X134 was used as a positive control. Scale bar: 50 μ m.