



Figure S1. Mutational analysis of *OsCCR18* gene by CRISPR/Cas9. (A) Schematic diagram of the specific target sites of the *OsCCR18* gene. Boxes represent exons (black) and untranslated regions (white); black lines represent introns; the vertical black lines indicate the two target sites gRNA1 and gRNA2. The up- and downstream primers are indicated by arrows. (B) The editing

profile of two *osccr18* knockout lines. (C-E) Predicted protein structure of OsCCR18 and two mutated proteins using SWISS-MODEL. (F-G) Expression analysis of *OsCCR18* gene in the leaves (F) and anthers (G) of WT and *osccr18* mutants by qRT-PCR. For each experiment, three biological replicates and three technical replicates were performed. ** indicates significant difference between two samples by Student *t*-test ($p > 0.001$).