

DNA Repair Gene *ZmRAD51A* Improves Rice and Arabidopsis Resistance to Disease

Supplementary materials

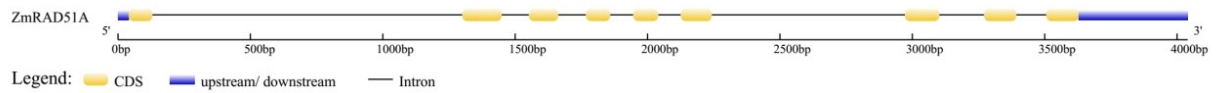


Figure S1. Gene structure of *ZmRAD51A*.

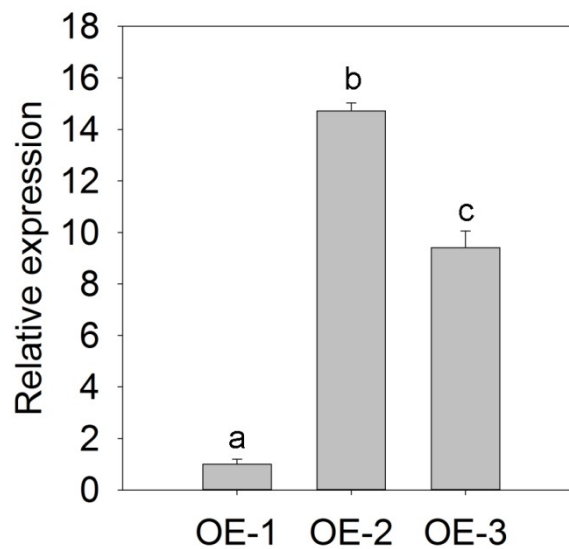


Figure S2. Relative expression levels of *ZmRAD51A* in transgenic rice lines. Different letters above the columns represent significant differences among three lines at $P < 0.05$.

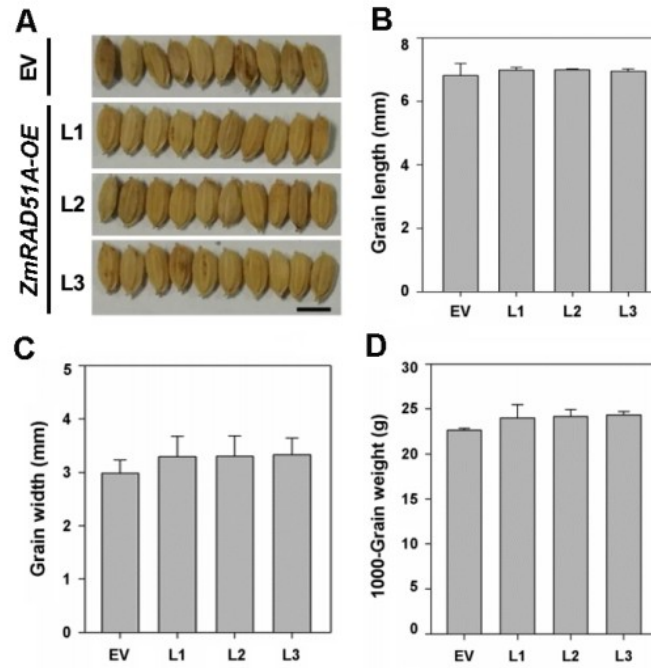


Figure S3. Grain phenotypes of *ZmRAD51A-OE* transgenic rice lines. (A) Comparison of grain size between the *ZmRAD51A-OE* and pCAMBIA1301 (EV) transgenic rice lines. (B) Grain lengths of the *ZmRAD51A-OE* and pCAMBIA1301 (EV) transgenic rice lines seeds. (C) Grain width of the *ZmRAD51A-OE* and pCAMBIA1301 (EV) transgenic rice lines seeds. (D) 1000-grain weights of the *ZmRAD51A-OE* and pCAMBIA1301 (EV) transgenic rice lines seeds. Scale bars (A) = 5 mm. Data represent means SD. Three biological replicates were performed.

Table 1. Primers used for qRT-PCR in this study.

Primer names	Primer sequences
<i>RT-AtEDS1-F</i>	AAGACCAACCCGCTACATA
<i>RT-AtEDS1-R</i>	TTCAACCTCAGCCAAAAG
<i>RT-AtNDR1-F</i>	GAAGTCAACGGTGATGGAGT
<i>RT-AtNDR1-R</i>	AACGAATAGCAAAGAATACGA
<i>RT-AtTAO1-F</i>	GACCGTTTTTATGATGTGG
<i>RT-AtTAO1-R</i>	CGAAGTTATCTCCGTCGTAT
<i>RT-AtRPM1-F</i>	GGTGTTCCTAAAATCTGGC
<i>RT-AtRPM1-R</i>	TCTAACGGTTCCTCTTCATC
<i>RT-AtUbiquitin-F</i>	CTGCGACTCAGGGAATCTTCTAA
<i>RT-AtUbiquitin-R</i>	TTGTGCCATTGAATTGAACCC
<i>RT-OsPAL06-F</i>	CGTCCGCATCAACACACTCC
<i>RT-OsPAL06-R</i>	CGTTCACCTTGCTGCCATCT
<i>RT-OsPIKM-F</i>	TGATGATAAGACATCGGTCAGG
<i>RT-OsPIKM-R</i>	TCATTTTCAGAAGGCAGAAACG
<i>RT-OsActin-F</i>	TCCATCTTGGCATCTCTCAG
<i>RT-OsActin-R</i>	GTACCCGCATCAGGCATCTG
<i>RT-ZmRAD51A-F</i>	GTGCCAGTCAACTTCATGCG
<i>RT-ZmRAD51A-R</i>	TTTCCAGAGCGGAATCACC
<i>RT-ZmActin-F</i>	GGGATTGCCGATCGTATGAG
<i>RT-ZmActin-R</i>	GAGCCACCGATCCAGACACT