

## Supplementary Materials

### Overexpression of *OsMed16* inhibits the growth of rice and causes spontaneous cell death

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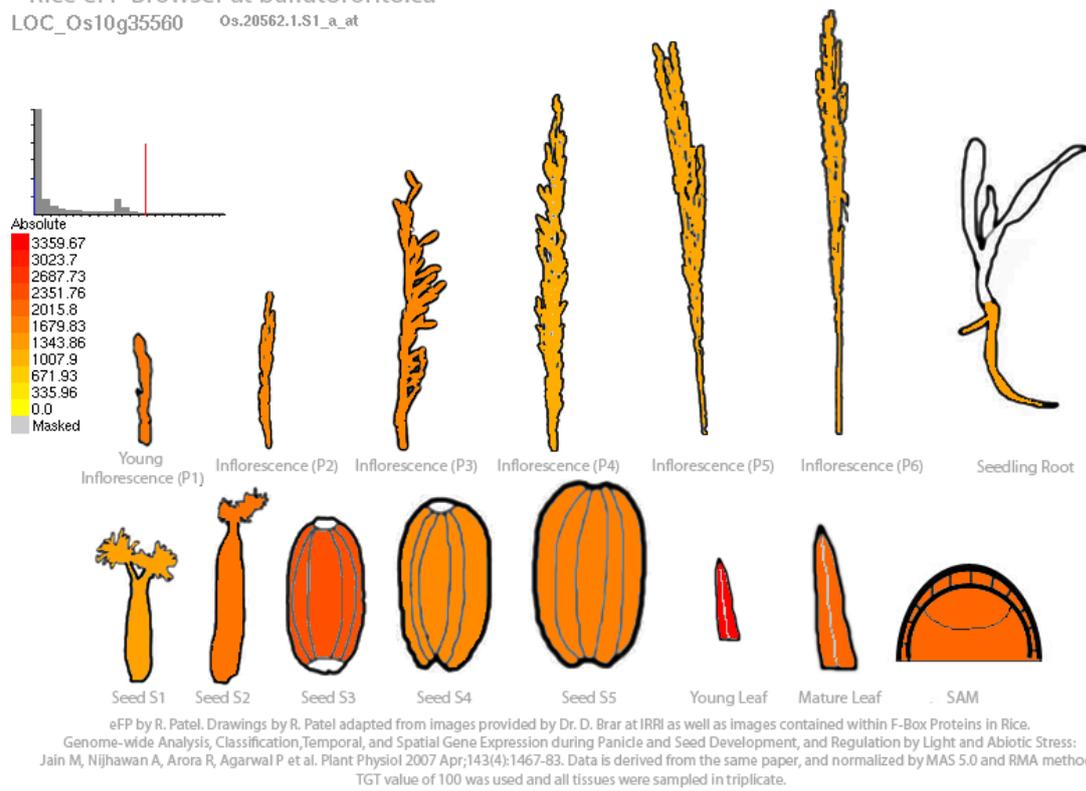
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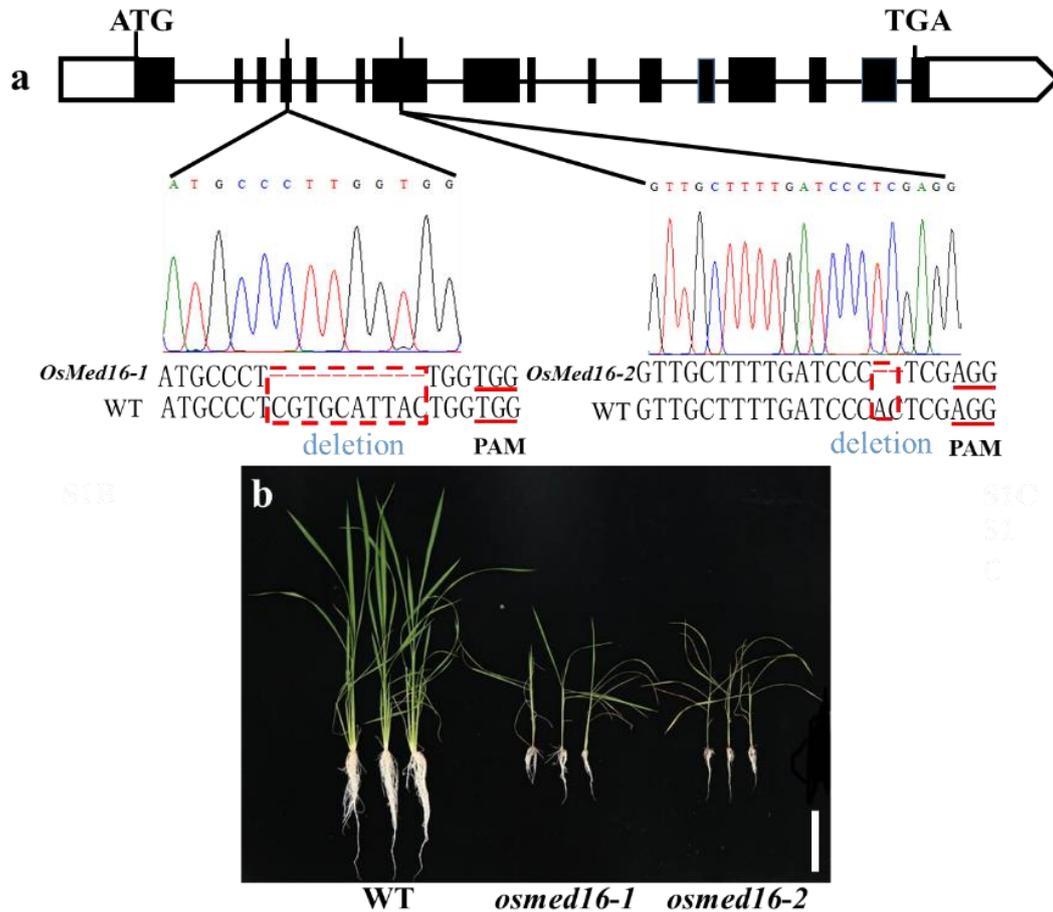
# These authors contributed equally to this work.

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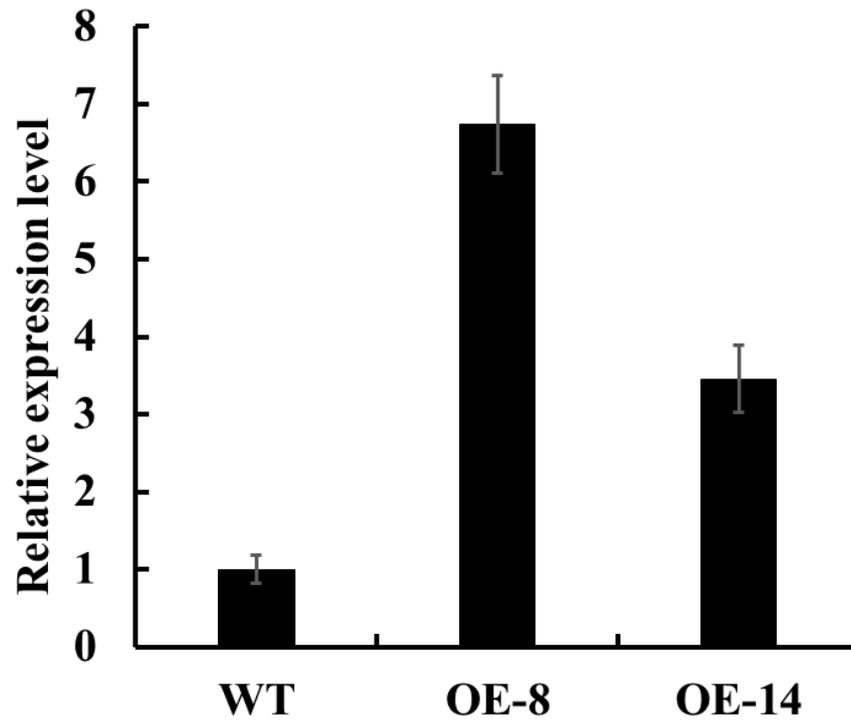


**Figure S1. Transcript level of *OsMed16* in the developing inflorescence and seed.**

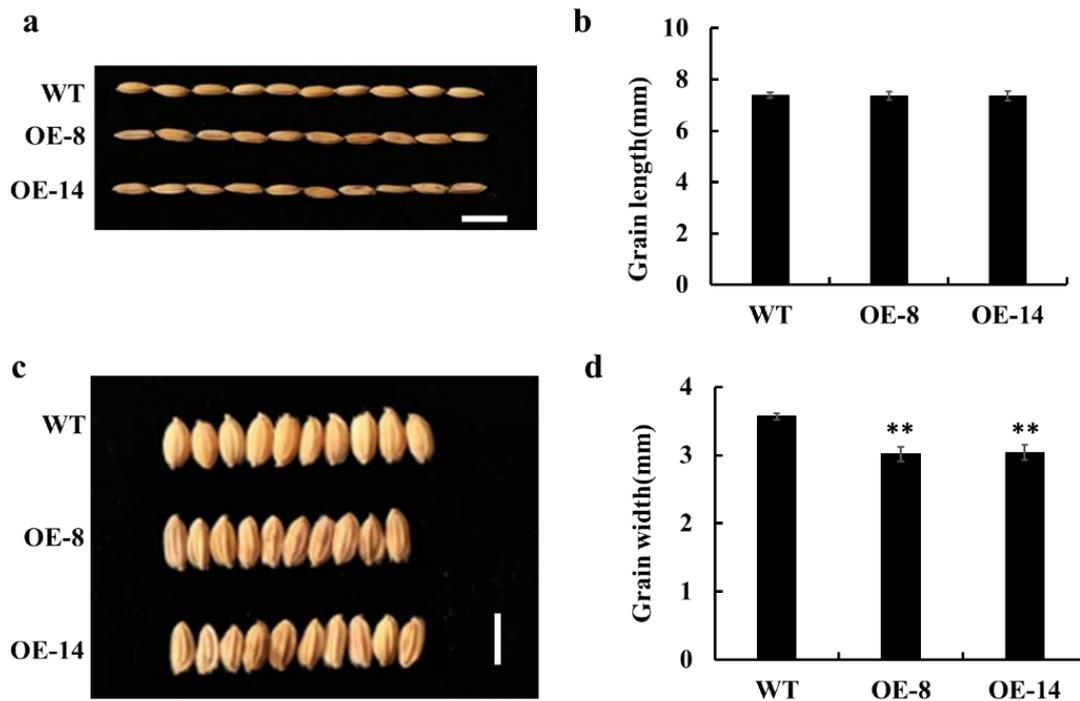
The result was extracted from the eFP browser database [31].



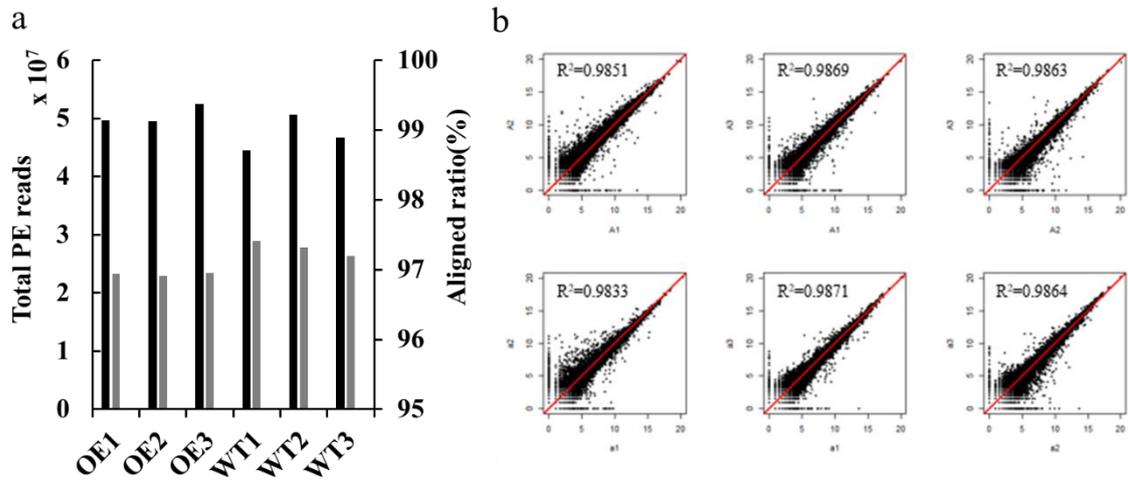
**Figure S2. Knockout of *OsMed16* using CRISPR technology that causes rice seedling lethality. (a)** The two target site mutations of *OsMed16* gene. The black inverted triangle indicates the positions of the two targets; The red dashed box is positioned at the mutation site of the mutants. **(b)** The phenotype of the wild type and two *OsMed16* knockout lines of 48-d-old seedlings. Scale bars = 10 cm. WT, wild type.



**Figure S3. Detection of the levels of expression of *OsMed16* in wild type and transgenic plants using qRT-PCR.** RNA was extracted from the roots of seedlings. The expression of rice *ACTIN* was used as the internal control. qRT-PCR, quantitative real time PCR; WT, wild type.



**Figure S4. Grain shape of *OsMed16* overexpression plants.** Comparisons of grain length (a and b) and grain width (c and d) between the wild type and *OsMed16*-OE plants. Scale bars = 5 mm. Data (c and d) are the means  $\pm$  SD of three biological replicates. \* $P < 0.05$ . \*\* $P < 0.01$ .



**Figure S5. Basic statistics of the RNA-Seq data.** (a) Statistics of total paired-end reads (black bar) and aligned ratio (gray bar) for each replicate. (b) Consistency of samples and replicates.

**Table S1.** Primers used for defense-related genes.

Gene name	Forward primer (5'-3')	Reverse primer (5'-3')
<i>OsPR1a</i>	CGTGTCGGCGTGGGTGT	GGCGAGTAGTTGCAGGTGATG
<i>OsPR1b</i>	TACGCCAGCCAGAGAAGC	GCCGAACCCCAGAAGAGG
<i>OsPR10a</i>	GTCCGGGCACCATCTACACC	CAAGCTTCGTCTCCGTCGAGT
<i>OsNLS</i>	GAAGACCACCCTTGCCAATCA	GCTTGTTGATGATGGCTTGC
<i>OsMPK3</i>	CACCTCGACCACGAGAACATCA	GGCAGTGCTCTTCTGACAGTTC
<i>OsWRKY45</i>	GCCGACGACCAGCACGATCACC	AGGCTGCTCAGCACCTCCTCCT
<i>PDI</i>	CGTCGAGTTCTACGCCCCGT	CCTGAATGTTCTTGCCCTGGTTCC
<i>OsPAL1</i>	TTCGACGCCAACATCCTCG	GCTTCAGCTTGTGGGTCAGGT