



Figure 8. Mutant identification, subcellular localization, and gene expression analyses of *OsMTP1* gene. (a) Schematic of the genomic region corresponding to *OsMTP1*. The position of the T insertion (red arrows), the initiating codon (ATG), and the stop codon (TAA) are indicated. Genomic *OsMTP1* sequences are represented by exons (black), introns (white), and untranslated 5' and 3' UTRs (gray). Green arrow indicates the stop codon in coding sequence (CDS) of *OsMTP1*. Blue arrows indicate the qPCR-amplified regions for the gene expression study. (b-c) Relative gene expression analysis of *OsMTP1* in roots and leaves of the *sit1* mutant and WT. One-week-old seedlings of the *sit1* mutant and WT were used to determine mRNA abundance of *OsMTP1* gene using two different primer pairs of qRT1 (b) and qRT2 (c) via qRT-PCR analysis ($n = 6$ with 3 replicates). *OsACT11* was used as an internal control. Value represent means \pm SD, ns = non-significant, *** $p < 0.001$, two-way ANOVA with Sidak's multiple comparison test. (d) Subcellular localization analysis of 35S::*OsMTP1*-sGFP fusion protein with plasma membrane marker. Left column is the rice protoplast expressing 35S::sGFP (empty-vector) construct used as a control. Right column is the rice protoplast co-expressing 35S::*OsMTP1*-sGFP fusion protein with pm-rk (plasma membrane marker). (e) Relative gene expression of *OsMTP1* in different tissues and development stages in WT. The mRNA abundance of *OsMTP1* gene was determined using the qRT2 primer set via qRT-PCR analysis. *OsACT11* was used as an internal control ($n = 6$ with 3 replicates). Value represent means \pm SD. (f-g) Relative gene expression of *OsMTP1* in WT under salinity stress conditions. One-week-old seedlings of WT were treated with half-strength KimuraB solution containing 0 or 50 mM NaCl for 24 h. Root (f) and leaf blade (g) tissues were harvested at 30 m, 1 h, 6, and 24h after treatments. The mRNA abundance of *OsMTP1* gene was determined using the qRT2 primer set via qRT-PCR analysis. *OsACT11* was used as an internal control ($n = 6$ with 3 replicates). Value represent means \pm SD. ns = non-significant, *** $p < 0.001$, two-way ANOVA with Sidak's multiple comparison test.