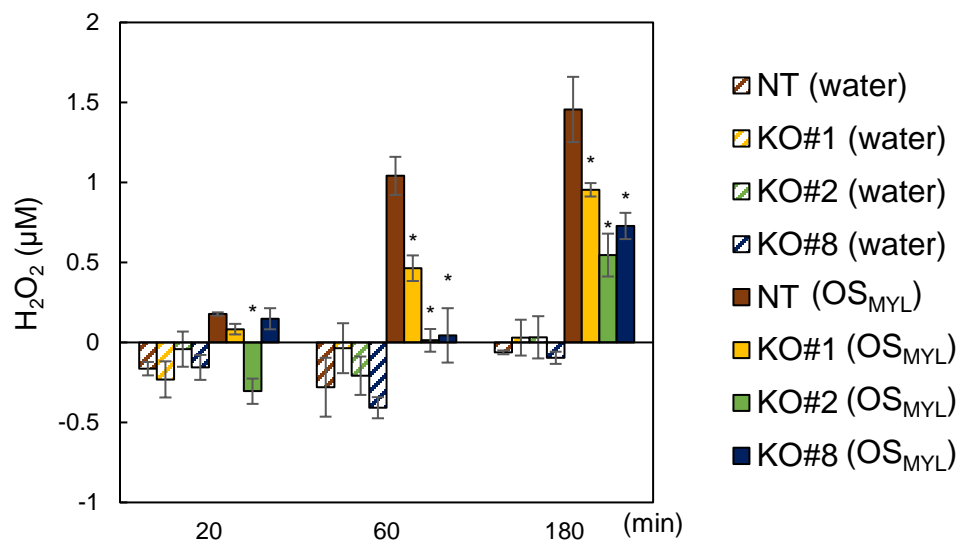


a



b

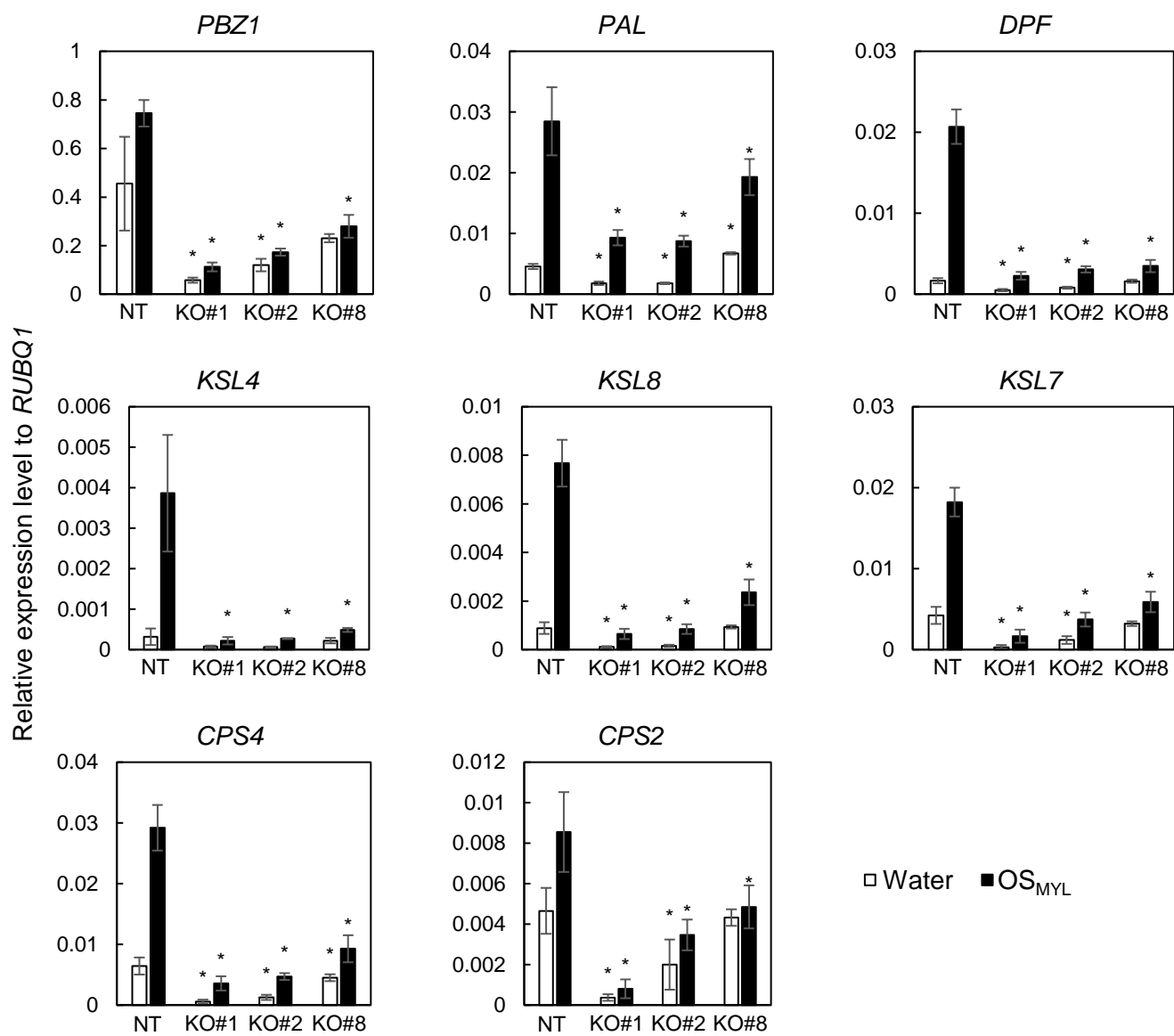


Figure S1. *BSR1* knockout suppressed defense responses to *Mythimna loreyi* oral secretions. The experiments of Figure 1 were repeated to confirm reproducibility. Suspension-cultured cells were treated with OS (500-fold dilution). (a) Time course of H₂O₂ production in the cell culture. The H₂O₂ concentrations were measured before (0 min) and 20, 60, and 180 min after treatment and calculated by subtracting the value measured at 0 min from that at each time point. (b) Transcriptional activation of defense-related genes in suspension-cultured rice cells. The *PBZ1*, *PAL1*, *DPF*, *KSL4*, *KSL8*, *KSL7*, *CPS2*, and *CPS4* transcript levels 3 h after treatment with OS were normalized against the *RUBQ1* internal control levels. Asterisks indicate significant differences between the values of NT and those of the other lines (Dunnett's test; **P* < 0.05). Values are presented as the mean \pm standard deviation of three biological replicates. Water, treated with sterile water; OS_{MYL}, treated with *Mythimna loreyi* oral secretions; KO, *BSR1*-knockout line; NT, non-transgenic line (Nipponbare).

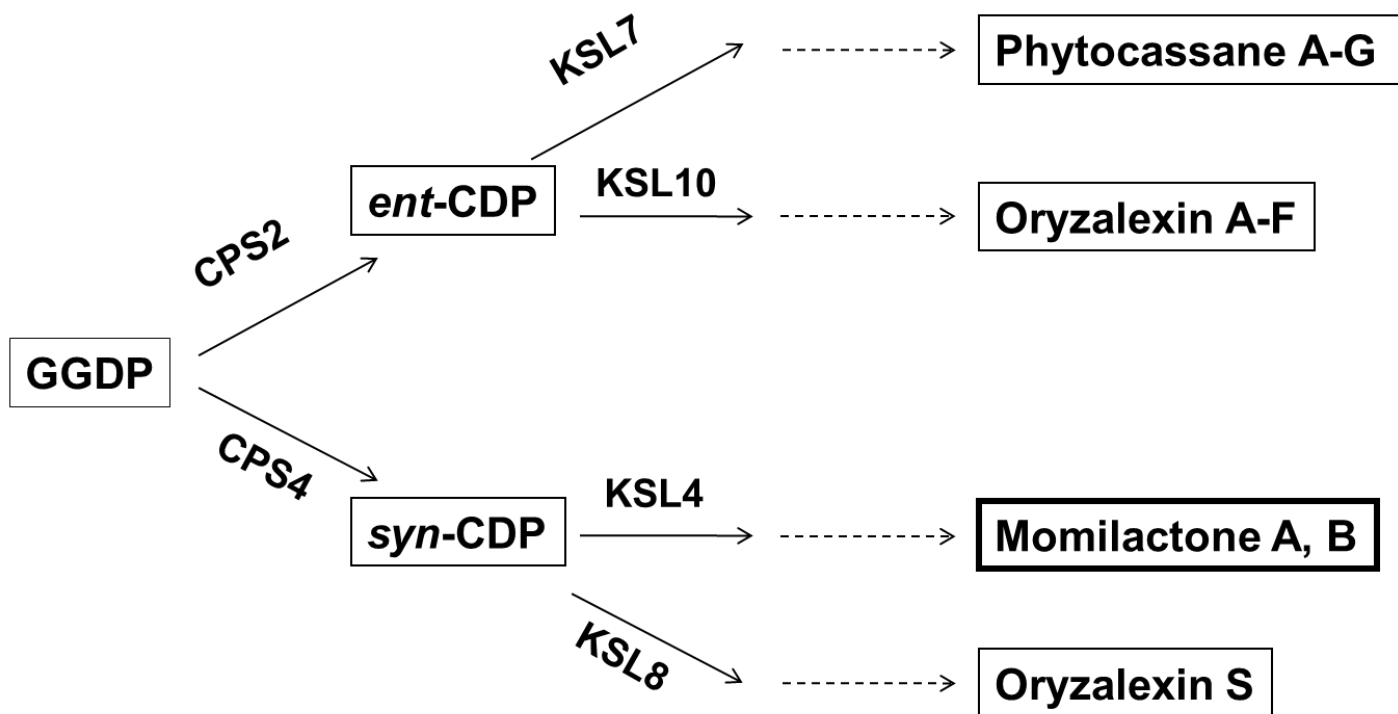


Figure S2. Schematic biosynthetic pathway of diterpenoid phytoalexins in rice. Solid arrows, reactions catalyzed by the indicated enzyme; dashed arrows, multiple reactions; GGDP, geranylgeranyl diphosphate; CDP, copalyl diphosphate.

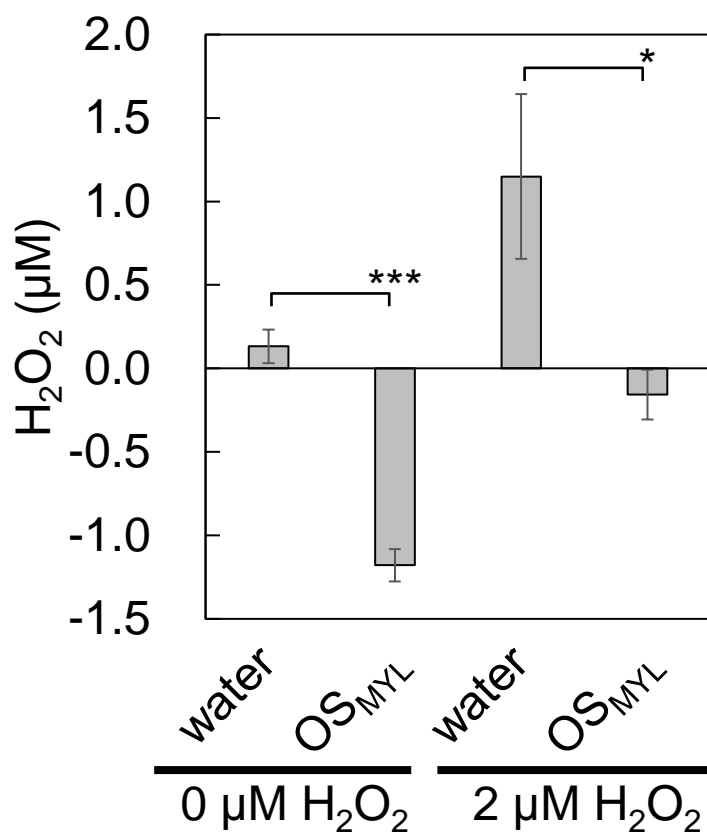


Figure S3. OS_{MYL} inhibited the luminol chemiluminescence assay, regardless of the presence of H₂O₂. Sterile water or 500-fold diluted OS_{MYL} were mixed with 0 μM H₂O₂ (water) or 2 μM H₂O₂ and then subjected to the luminol-dependent chemiluminescence assay. Asterisks indicate significant differences between indicated values (*t*-test; **P* < 0.05 and ****P* < 0.001). Values are presented as the mean ± standard deviation of three experimental replicates.

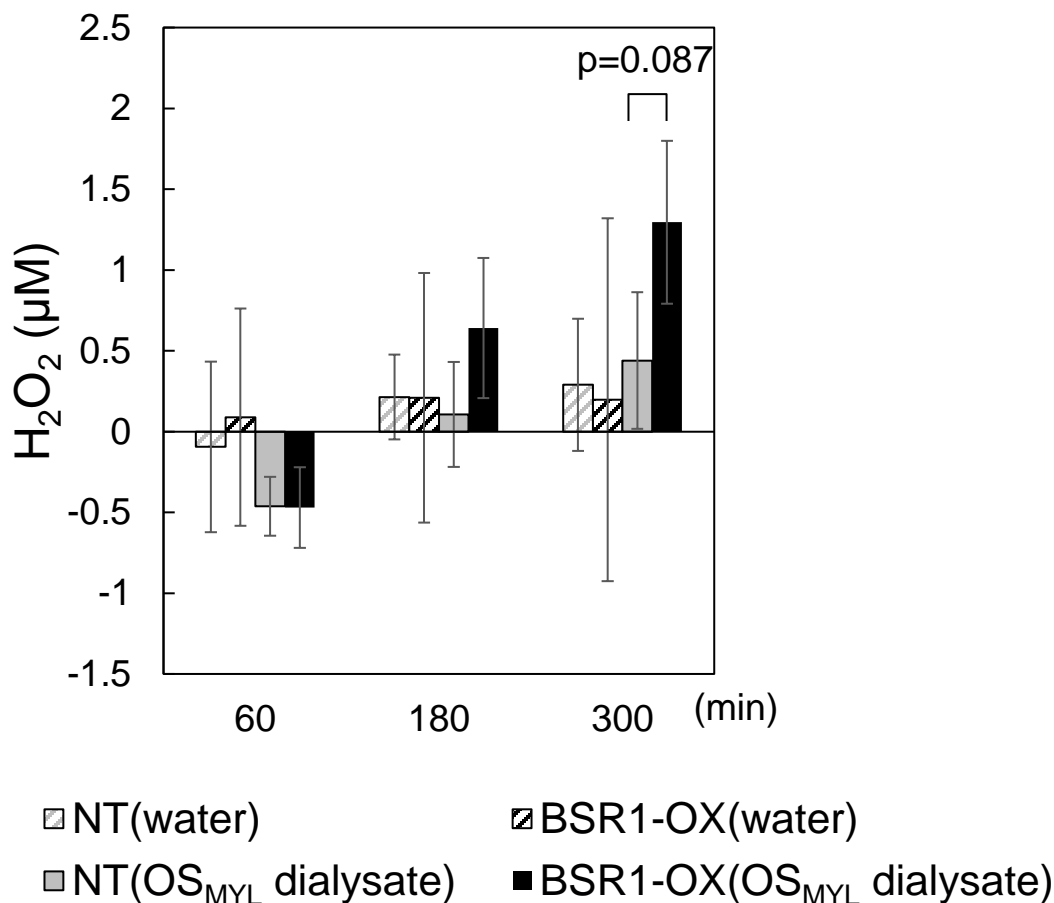


Figure S4. *BSR1* overexpression enhanced oral secretion-triggered ROS burst. The experiment of Figure 2 was repeated to confirm reproducibility. Leaf strips were treated with water or dialyzed OS_{MYL}. The H_2O_2 concentrations were measured before (0 min) and 60, 180, and 300 min after treatment and calculated by subtracting the value measured at 0 min from that at each time point. Asterisks indicate significant differences between the values of NT and those of the other lines (*t*-test; **P* < 0.05, ***P* < 0.01, and ****P* < 0.001). Values are presented as the mean \pm standard deviation of three biological replicates. Water, treated with sterile water; OS_{MYL} dialysate, treated with dialyzed oral secretion; NT, non-transgenic line (Nipponbare); BSR1-OX, *BSR1*-overexpressing line.

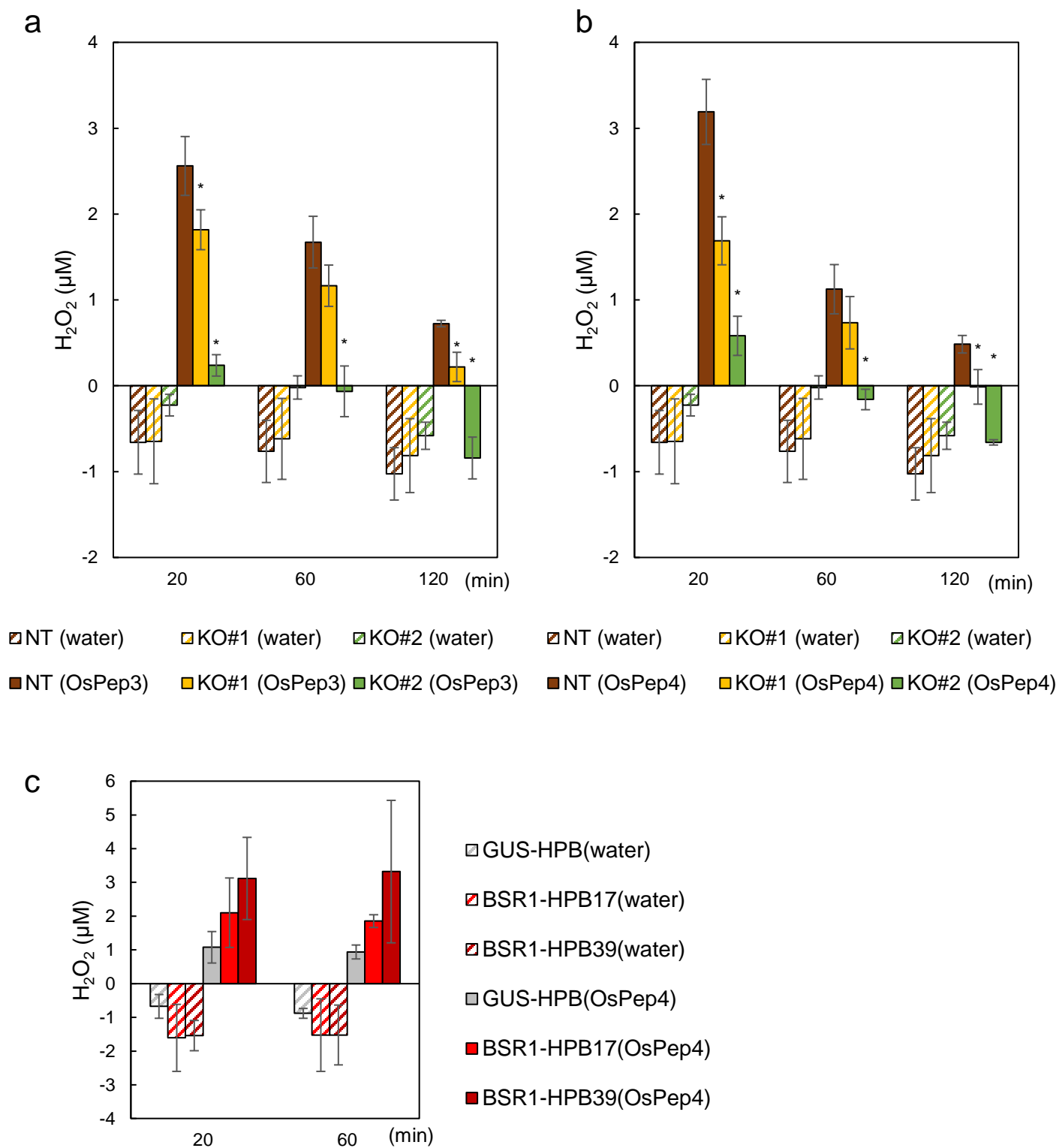


Figure S5. BSR1 mediates OsPep3- and OsPep4-triggered ROS burst. The experiments of Figure 3 were repeated to confirm reproducibility. (a, b) *BSR1*-KO suspension-cultured cells were treated with OsPep3 (a) and OsPep4 (b). The H_2O_2 concentrations were measured before (0 min) and 20, 60, and 120 min after treatment and calculated by subtracting the value measured at 0 min from that at each time point. Asterisks indicate significant differences between the values of NT and those of KO lines under the same treatment conditions (Dunnett's test; $*P < 0.05$). (c) *BSR1*-OX suspension-cultured cells were treated with OsPep4, and H_2O_2 concentrations were measured before and 20 and 60 min after treatment. Values are presented as the mean \pm standard deviation of three biological replicates. Water, treated with sterile water; NT, non-transgenic line (Nipponbare); KO, *BSR1*-knockout line.

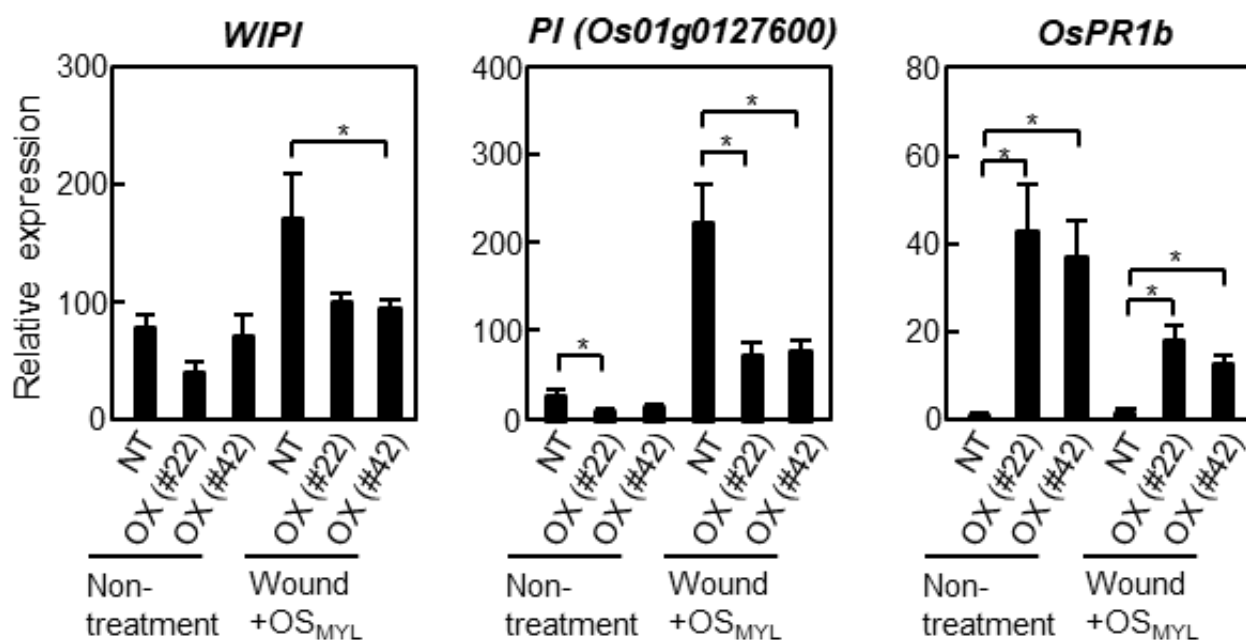


Figure S6. Expression of defense-related genes in *BSR1*-OX. Rice leaves were collected at 1 h after the treatment. Data are shown as mean \pm SE (independent biological replicates, $n=6$). Statistical differences were analyzed by Dunnett's test ($*P < 0.05$). NT, non-transgenic line (Nipponbare); OX (#22) and OX (#42), *BSR1*-overexpressing lines #22 and #42.

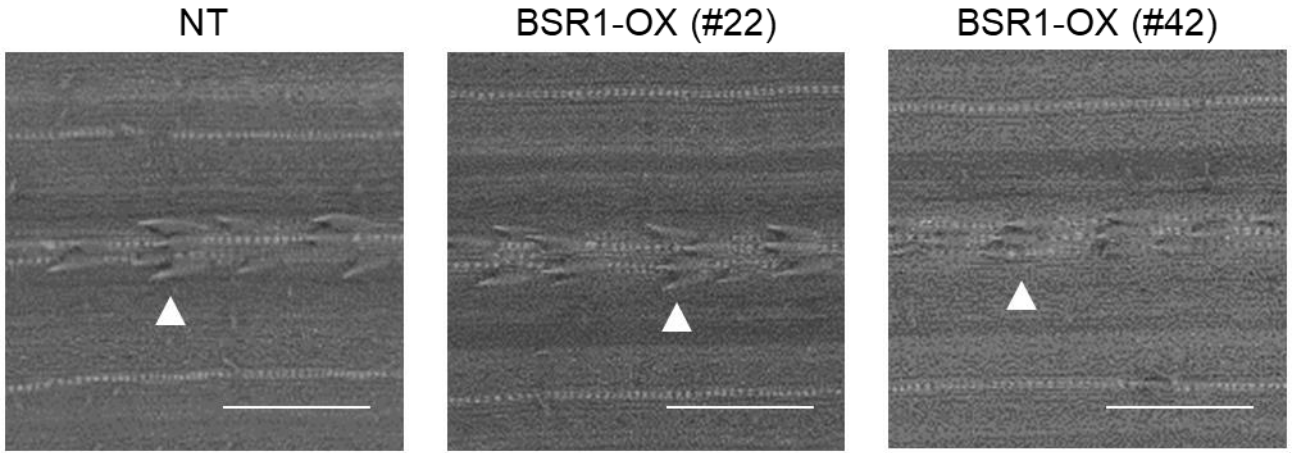


Figure S7. Surface scanning electron microscope (SEM) images of rice leaves. Fresh rice leaves were fixed on a stage and observed by SEM. The arrows indicate non-glandular silicified trichomes. Bar = 1.0 mm. NT, non-transgenic line (Nipponbare); BSR1-OX (#22) and BSR1-OX (#42), BSR1-overexpressing lines #22 and #42.

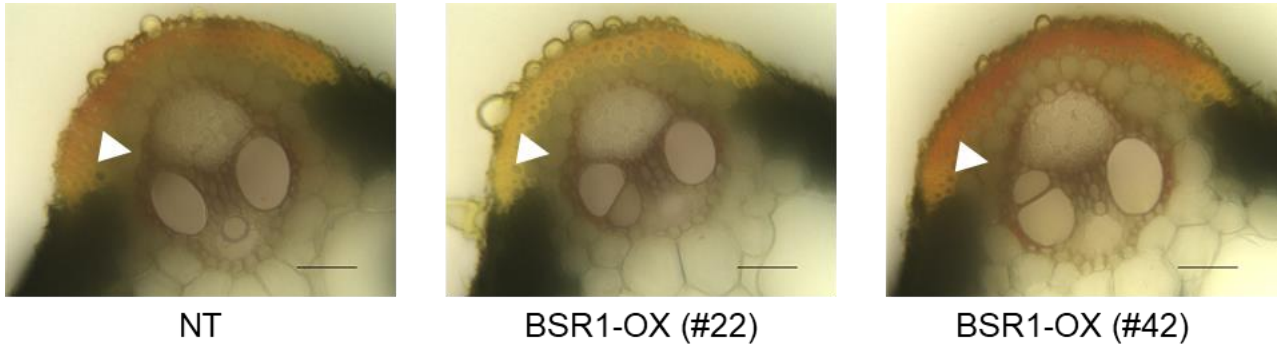


Figure S8. Lignin accumulation in non-transgenic and *BSR1*-OX rice leaves. Histochemical staining with phloroglucinol shows lignin accumulation (a red-violet color indicated by arrow). Bar = 50 mm. NT, non-transgenic line (Nipponbare); BSR1-OX (#22) and BSR1-OX (#42), BSR1-overexpressing lines #22 and #42.

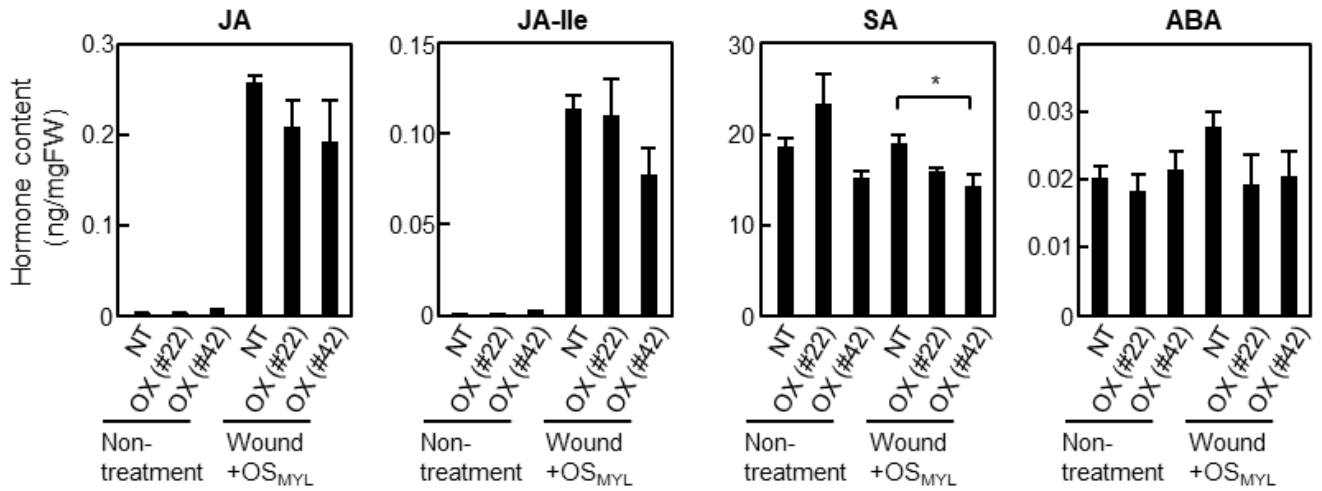


Figure S9. Phytohormone production in *BSR1*-OX. Rice leaves were collected at 1 h after the treatment. Data are shown as mean \pm SE (independent biological replicates, $n=4$). Statistical differences were analyzed by Dunnett's test ($*P < 0.05$). JA, jasmonic acid; JA-Ile, jasmonoyl-L-isoleucine; SA, salicylic acid; ABA, abscisic acid; NT, non-transgenic line (Nipponbare); OX (#22) and OX (#42), *BSR1*-overexpressing lines #22 and #42.

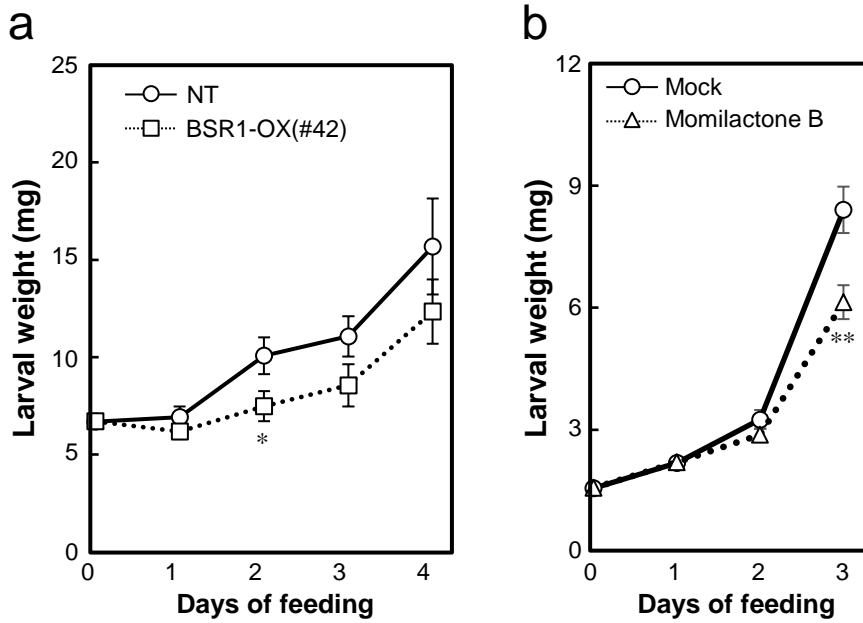


Figure S10. Larval growth performance of *Mythimna loreyi*. (a) *BSR1* overexpression in rice decreases the performance of *M. loreyi* larvae. Since we had observed similar differences in two *BSR1*-OX lines, as shown in main Figure 7a, we tested one *BSR1*-OX line in the supplementary assay. Larval masses are shown as mean \pm SE (independent biological replicates, $n=13-16$). Statistical differences were analyzed in each time-point by Student's t -test (* $P < 0.05$). (b) Biological activity of momilactone B against *M. loreyi*. *M. loreyi* larvae were individually fed on mock or momilactone B-containing artificial diet. Data are shown as mean \pm SE (independent biological replicates, $n= 32-33$). Statistical differences were analyzed in each time-point by Student's t -test (** $P < 0.01$).