**S2 Fig. Characterization of *idd4* mutants, *IDD4ox* lines and transgenic lines expressing *IDD4* phosho-modified versions**

**A** The *idd4* mutant allele resulting from the T-DNA insertion in the 1st exon was confirmed to be homozygous by using the following primer combinations: 349as/350as (left border) on lane 1-4 and gene-specific primers 350s/349as on lane 5-8. Negative control, without DNA on lane 3 and 7.

**B** Expression level of *IDD4* in *IDD4ox* overexpressor lines (*IDD4ox1-4*) compared to WT.

**C** Phenotypic comparison of WT and transgenic *IDD4ox* lines grown on Murashige and Skoog basal medium under long-day conditions (12h day/12h night).

**D** Shoot and root fresh weight of WT and 3 transgenic *IDD4ox* lines (*IDD4ox2-4*). Boxes represent the 25th and 75th percentiles and the inner rectangle highlights the median, whiskers show the SEM, letters above boxes represent significance groups as determined by multiple comparison Student’s test \( p < 0.05 \). Plants of three biological replicates (n=30) were analysed.

**E** Fresh weight of shoot and root of 18 day-old WT plants compared to *idd4* complementation line (*pIDD4::IDD4::YFP*). Boxes represent the 25th and 75th percentiles and the inner rectangle highlights the median, whiskers show the SEM, letters above boxes represent significance groups as determined by multiple comparison Student’s test \( p \leq 0.05 \).

**F** Expression of SA-biosynthesis gene *CBP60g* and the defense-markers *WRKY22, PR2* and *FRK1* is elevated in *idd4* mutants. Error bars show ± SEM, statistical significance was analyzed by Student’s test against WT control \(*p<0.05\).

**G** Phenotypic comparison of 18 day-old seedlings of WT, *idd4, IDD4ox1, IDD4-AA* and *IDD4-DD* lines grown on Murashige and Skoog basal medium under long-day conditions (12h day/12h night).

**H-I** Shoot (H) and root fresh weight (I) of 18 day-old WT, *idd4, IDD4ox, IDD4-AA* and *IDD4-DD* plants. Boxes represent the 25th and 75th percentiles and the inner rectangle highlights the median, whiskers show the SEM, letters above boxes represent significance groups as determined by multiple comparison Student’s test \( p < 0.01 \). Plants of three biological replicates (n=30) were analysed.