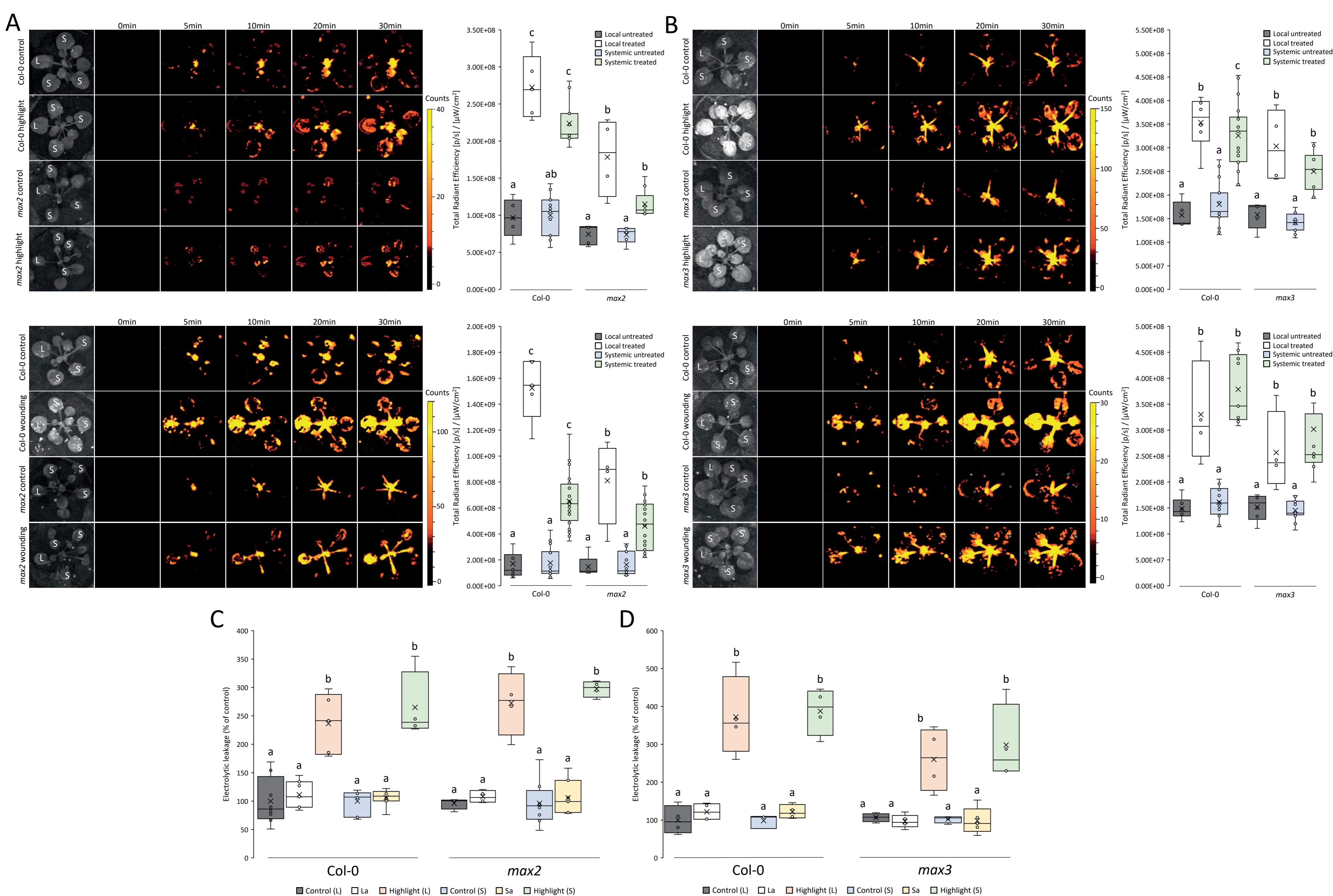
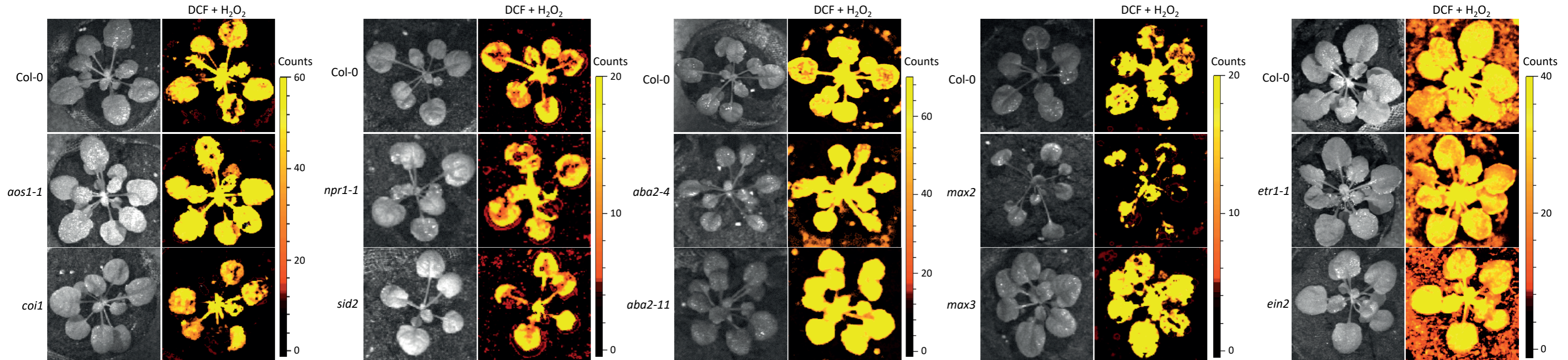


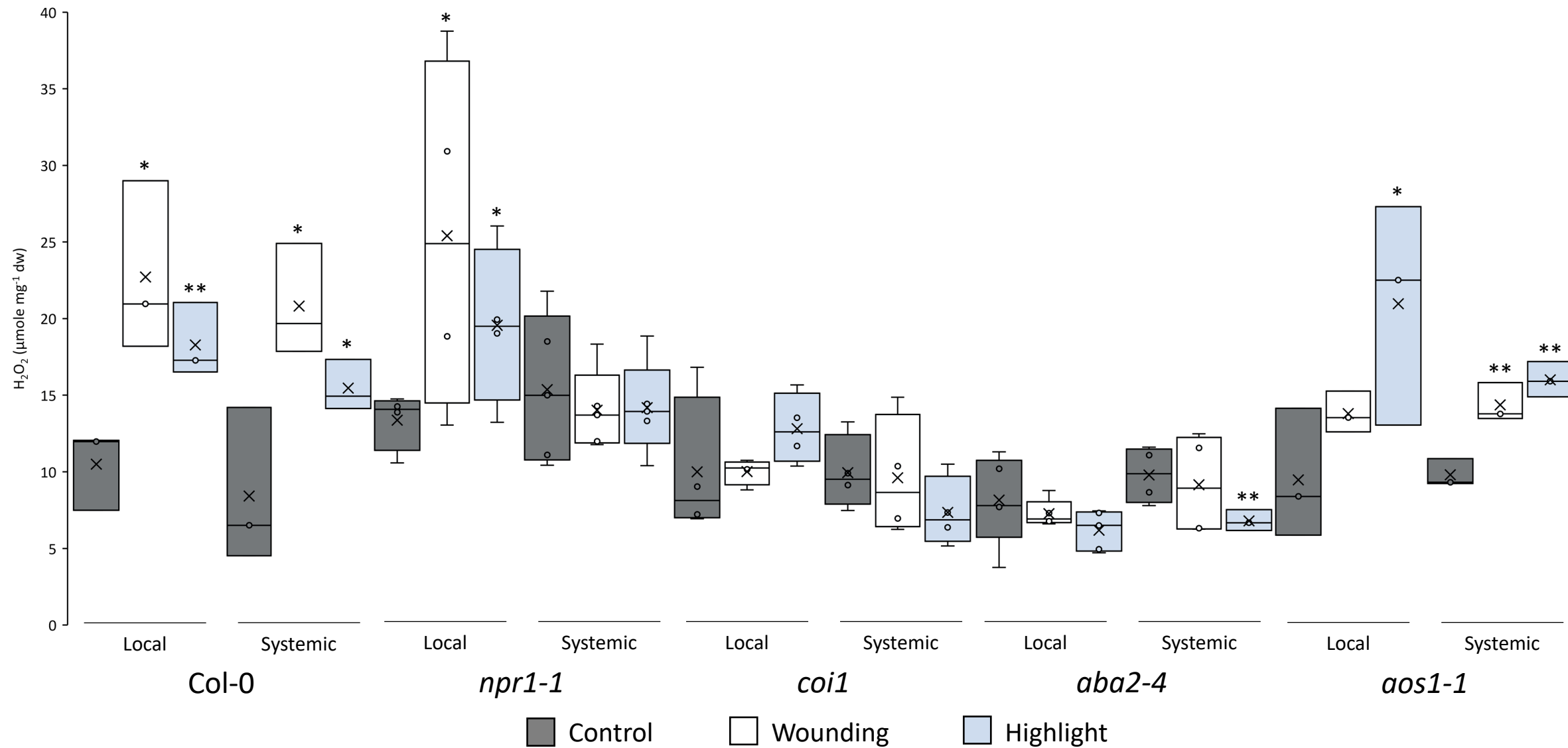
Supplemental Figure S1. Basal levels of JA, SA, and ABA in wild type and the *coi1*, *aos1-1*, *sid2*, and *npr1-1* mutants. Plants were grown under control growth conditions and local and systemic leaves were sampled from untreated plants at the same time of day all other experiments were initiated. All experiments were repeated at least three times with three plants per repeat. Results for each experiment are displayed as box-and-whisker plots, with the borders corresponding to the 25th and 75th percentiles of the data. Each data value is included as a point within each box plot, with the horizontal line representing the median and 'X' corresponding to the mean. Whiskers represent 1.5 times the minimum and maximum of the mean (1.5 times of the interquartile range). Student's t-test was used for statistical analysis (compared to Col-0); N=3; *, p<0.05. Abbreviations: ABA, abscisic acid; JA, jasmonic acid; SA, salicylic acid.



Supplemental Figure S2. Strigolactones are not required for the triggering of the ROS wave in local and systemic tissues, or for plant acclimation to HL stress. (A) Arabidopsis plants were subjected to a high light (HL) stress or wounding treatment applied to a single leaf (L, Local), and ROS accumulation was imaged, using H2DCFDA, in whole plants. Representative time-lapse images of whole plant ROS accumulation in wild type and *max2* plants are shown alongside box plots of combined data from all plants used for the analysis at the 0- and 30-min time points (L and systemic [S] leaves). (B) Similar to A, except for the *max3* mutant. (C) Ion leakage measurements of L and S leaves in Col-0 and *max2* plants following HL stress. Local and systemic leaves that were exposed to an extended period of HL stress with no pretreatment (highlight), pretreated with HL for a short period of time and allowed to incubate prior to extended light exposure (local acclimated, La; and systemic acclimated, Sa), and control plants receiving no pretreatment, were measured. (D) Similar to C, except for the *max3* mutant. All experiments were repeated at least three times with three plants per repeat. Two-way analysis of variance (ANOVA) followed by the Tukey post hoc test was conducted for statistical analysis. Letters represent a statistically significant difference of at least $p < 0.05$. Results for each experiment are displayed as box-and-whisker plots, with the borders corresponding to the 25th and 75th percentiles of the data. Each data value is included as a point within each box plot, with the horizontal line representing the median and 'X' corresponding to the mean. Whiskers represent 1.5 times the minimum and maximum of the mean (1.5 times of the interquartile range).



Supplemental Figure S3. Mutants deficient in hormone production or signaling responses show no deficiency in absorption of fluorescent dye via fumigation. *Arabidopsis* plants were subjected to H₂DCFDA fumigation that was followed by H₂O₂ fumigation. Representative images of whole plant ROS accumulation in wild type and the different mutants are shown.



Supplemental Figure S4. H₂O₂ quantification in local and systemic leaves of wild type (Col-0), *npr1-1*, *coi1*, *aba2-4*, and *aos1-1*, untreated or subjected to a local treatment of HL stress or wounding. The levels of H₂O₂ were measured in extracts from local and systemic leaves using Amplex-Red. All experiments were repeated at least 3 times with 10 plants of each genotype per experiment. Results for each experiment are displayed as box-and-whisker plots, with the borders corresponding to the 25th and 75th percentiles of the data. Each data value is included as a point within each box plot, with the horizontal line representing the median and 'X' corresponding to the mean; Whiskers represent 1.5 times the minimum and maximum of the mean (1.5 times of the interquartile range); N=30, *P < 0.05, **P < 0.01, Student's t-test (compared to untreated).