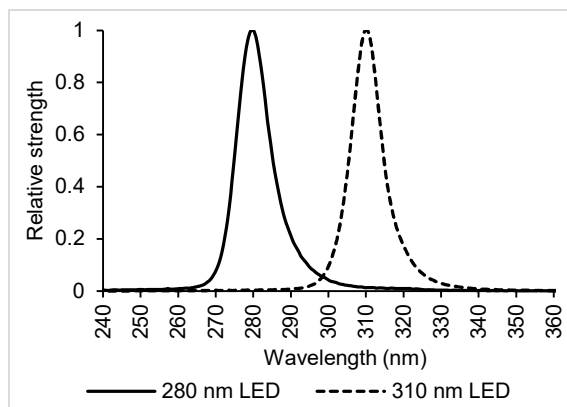


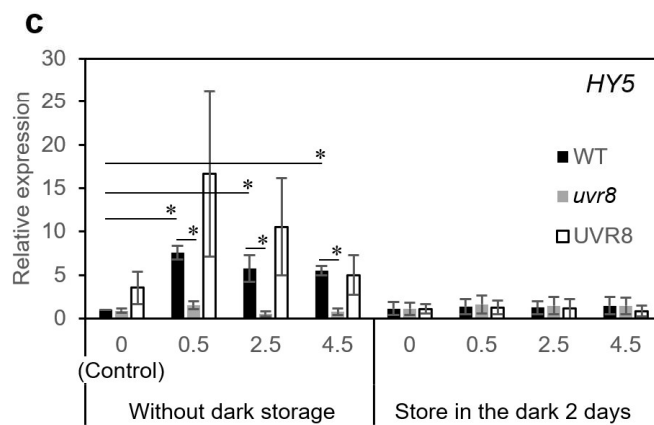
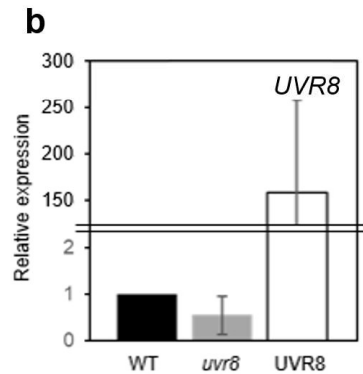
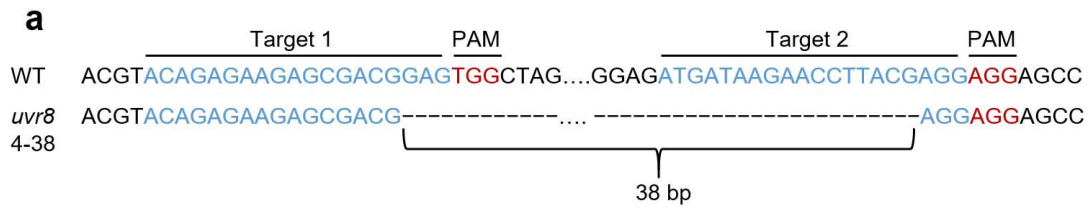
Transcriptome and metabolome analyses revealed that narrowband 280 and 310 nm UV-B induce distinctive responses in Arabidopsis

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Supplemental Figure S1. Relative emission spectra of 280 and 310 nm UV light emitting diodes (LEDs) used in the experiments.

The 280 nm UV-LED has a peak wavelength of 280 nm, a half-width of 10 nm, and a range from 260 to 310 nm. The 310 nm UV-LED has a peak wavelength of 310 nm, a half-width of 10 nm, and a range from 290 to 340 nm.



d

AT5G11260 : CGGGAATCGAAAACGCAACCTTTCTACTACAGTGTCAATGTCATATCATAGAACAAAATTAGCTTATTTTGTATATAAACACATT
uvr8 : CGGGAATCGAAAACGCAACCTTTCTACTACAGTGTCAATGTCATATCATAGAACAAAATTAGCTTATTTTGTATATAAACACATT

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Supplemental Figure S2. Characteristics of transgenic Arabidopsis.

(a) Sequence comparison of target regions in *UVR8* after CRISPR/Cas9-mediated gene editing. Dashes indicate deletions. (b) Comparison of *UVR8* expression levels in transgenic Arabidopsis with WT by RT-qPCR analysis. The data are presented as means ($n = 3$). Error bars show SD derived from three biological replicates. (c) The expression of *HY5* in Arabidopsis plants irradiated by 280 nm UV-LED at 0.5, 2.5, and 4.5 $\mu\text{mol m}^{-2} \text{s}^{-1}$ was analyzed by RT-qPCR. WT without irradiation and dark storage was used as a control to compare the expression levels. The data are presented as means ($n = 3$). Error bars show SD derived from three biological replicates. Asterisks indicate significant differences using Welch's *t*-test ($*P$ -value < 0.05). (d) *HY5* (AT5G11260) sequence of *uvr8* mutant line 4-38. The primers used are shown in the Supplementary Table S15. WT, wild type; *UVR8*, *UVR8* overexpression line 11-6; *uvr8*, *uvr8* mutant line 4-38.