



Fig. S2 (a) Expression levels of *BpHY5* in different transgenic lines of *Arabidopsis*. Statistical significance ($p < 0.05$) is indicated by a, b, c, d, e. (b) The relative expression level of *BpHY5* in transient transgenic birch and wild type. Data were represented as the mean \pm SE of three biological replicates; asterisks indicate levels of significance (t-test; **** $p < 0.0001$). (c) The statistics of fresh weight of Col, *BpHY5/Col*, and *hy5* after 10 days of treatment of 0.8 W/m² and 1.6 W/m² UV-B. (d) The statistics of cellulose content of stems of Col, *BpHY5/Col*, and *hy5* after 10 days of treatment of 0.8 W/m² and 1.6 W/m² UV-B. Data are represented as the mean \pm SE of three biological replicates; statistical significance ($p < 0.05$) between Col, *BpHY5/Col*, and *hy5* is indicated by a, b, c. (e) Phenotypes of seed germination rate of Col and *BpHY5/Col* under control condition at 7 d. (f) Phenotypes of root length of Col and *BpHY5/Col* under control condition at 16 d. (g, h) Heatmap of stress-related genes expression of control, transgenic *Arabidopsis* (g), and transient transgenic birch (h).