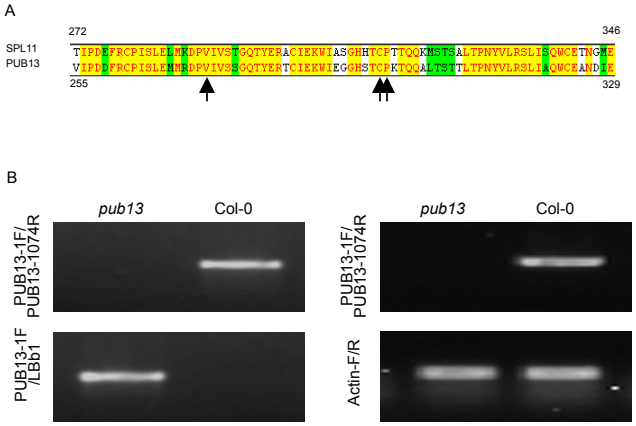

Figure S1. The amino acids comparison of the U-box domain in PUB13 and SPL11, and the identification of the T-DNA mutant *pub13*.

A, Sequence alignment in the highly conserved U-box domain of PUB13 and SPL11. The location of amino acid residues of U-box domain was indicated with numbers. The conserved residues were highlighted in yellow or green based on the degree of conservation. The highly conserved and functional amino acids in most U-box proteins were marked with arrows. B, PCR based genotyping of the T-DNA mutant *pub13*. Genomic DNA of Col-0 and *pub13* was extracted as template for regular PCR to identify T-DNA insertion of *pub13* (left figure). cDNA made from Col-0 and *pub13*, respectively, was used as template for RT-PCR to detect the *PUB13* transcriptional level (right figure).

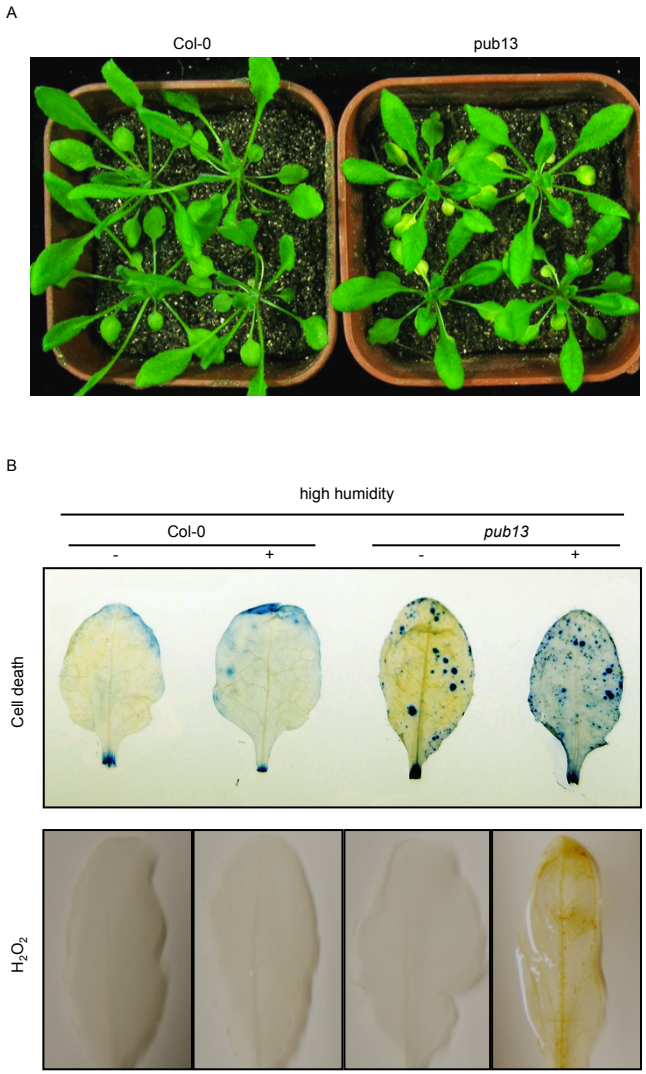

Figure S2. Cell death and H_2O_2 accumulation in *pub13* after high humidity treatment.
A, Lesion mimic phenotype of *pub13* after high humidity treatment. Four-week-old plants grown under LD conditions were treated with high humidity (95% RH). Photographs were taken after 48 hr high humidity treatment. B, Cell death and H_2O_2 accumulation in *pub13* with or without high humidity treatment. Four-week-old plants grown under LD conditions were treated with high humidity (+) for 48 hr or without treatment (-), then the middle-aged green leaves, i.e. seventh or eighth leaves of 4-week-old Col-0 and *pub13*, were sampled for trypan blue staining (upper panel) or DAB staining (lower panel).

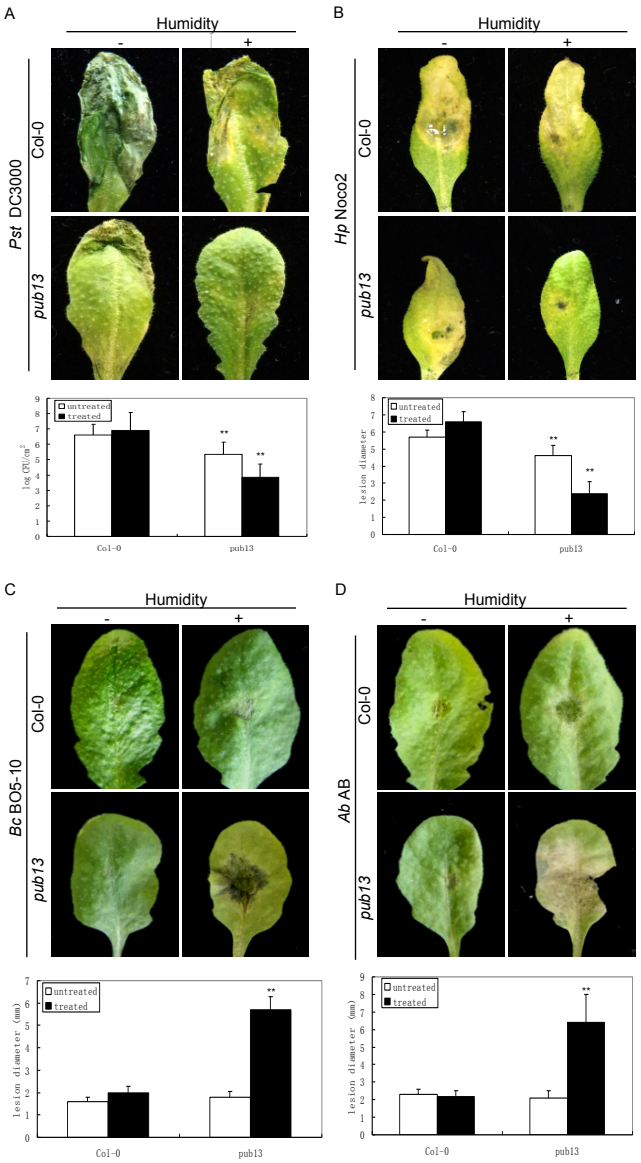

Figure S3. Disease resistance of *pub13* under high humidity.
Four-week-old plants grown under LD conditions were pretreated with high humidity (+) for 24 hr or without humidity treatment (-) before inoculation. A, Disease symptoms and bacterial growth assays of *Pst* DC3000 in Col-0 and *pub13*. Disease symptoms (upper picture) was detected on 5th day after spraying with 1×10^8 CFU mL^{-1} of DC3000. Bacterial growth was assessed on 3rd day after injection of 5×10^5 CFU mL^{-1} of DC3000. B, Symptoms and lesion diameter of *H. parasitica* Noco2 in Col-0 and *pub13*. Plants were sprayed with Noco2 spores suspension (1×10^5 spores mL^{-1}), and lesion diameter was measured at 7 dpi. C, Symptoms and lesion diameter of Col-0 and *pub13* inoculated with *B. cinerea* BO5-10. Detached leaves were dropped with 5 μL conidia suspension (1×10^4 conidia mL^{-1}) of BO5-10, then lesion diameter was measured and the infected leaves were photographed at 3 dpi. D, Symptoms and lesion diameter of Col-0 and *pub13* inoculated with *A. brassicicola* AB. Detached leaves were inoculated with 5 μL drop of spores suspension (1×10^5 spores mL^{-1}) of *A. brassicicola* AB. Photograph and lesion diameter measurement were made at 3 dpi. Student's *t* test was carried out to determine the significance of the difference between Col-0 and *pub13* plants in the same treatment. ** indicates a significant difference at $p < 0.01$.

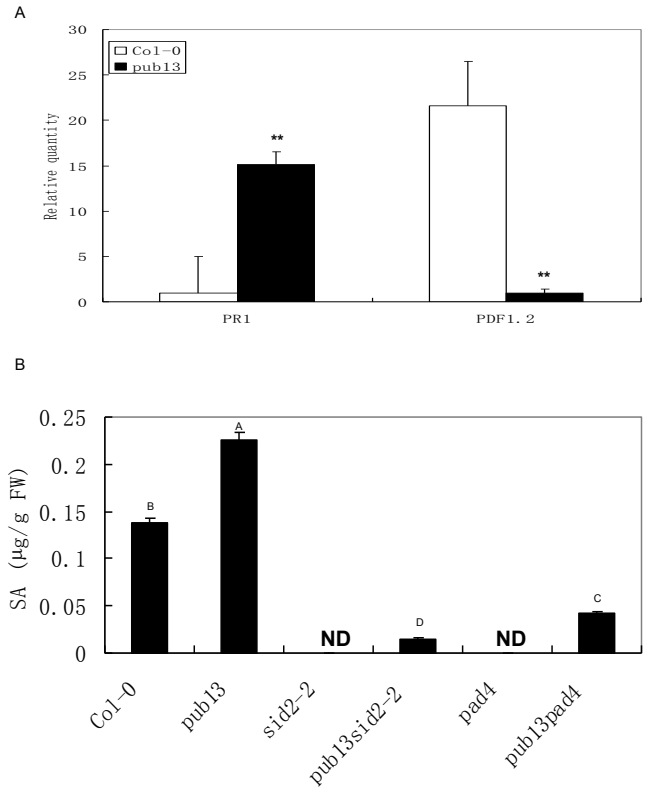

Figure S4. Defense-related genes expression and SA level in *pub13*.
Total RNA and total SA were extracted from leaves of 4-week-old plants grown under LD. A, Quantitative real-time PCR analysis of *PR1* and *PDF1.2* in Col-0 and *pub13*. Transcript levels were normalized to the expression of *Actin*. The experiment was repeated three times with similar results. B, The SA levels in *pub13*, *pub13sid2-2* and *pub13pad4*. SA was extracted from 0.2 g leaves and determined by HPLC. ND: not detectable. Student's *t* test was carried out to determine the significance of the difference. ** or capital letters indicate a significant difference at $p < 0.01$.

Figure S5. Flowering phenotypes of *PUB13* RNAi and complemented *pub13* plants.
All of these lines were grown under LD conditions. Empty vector transgenic line Col-0 (EV) was planted as a control of *PUB13* RNAi transgenic plants.

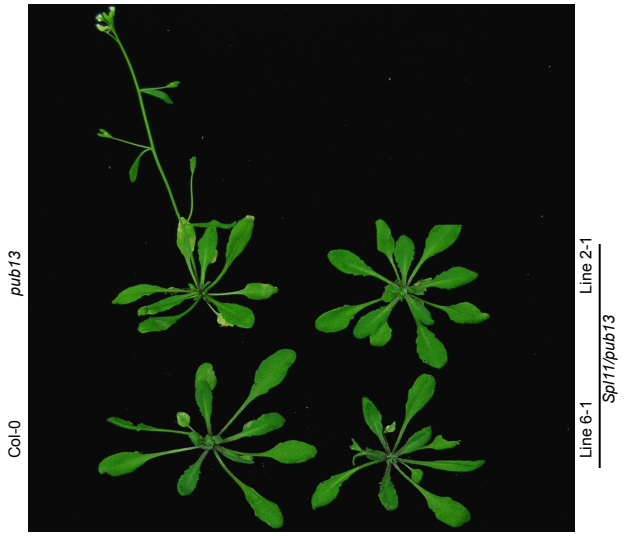

Figure S6. Flowering phenotypes of *Spl11* complemented *pub13* transgenic plants.

Plants were grown under LD conditions. Transgenic *Spl11*/*pub13* Line 2-1 and Line 6-1 are T3 generation.

Primer Name	Sequence (from 5' to 3')
PUB13-1F	ATGGAGGAAG AGAAAGCTTC
PUB13-1074R	CATAAGATCTTCAATCTTGTTCGC
FLC-F	GTAGCCGACAAGTCACCTTCT
FLC-R	CCGGTGACTCTCCCACTACTT
SOC1-F	ATGGTGAGGGGCAAAACTCAG
SOC1-R	CCCAATGAACAATTGCGTCTC
FT-F	ACAACTGGAACAACCTTTGGCAATG
FT-R	ACTACTATAGGCATCATCACCGTTCGTTACTCG
PR1-F	TACGCAGAACAACTAAGAGG
PR1-R	TCGTTCACATAATTCCCACG
PDF1.2-F	TGGAAGCACAGAAGTTGTGC
PDF1.2-R	ACTCATAGAGTGACAGAGAC
ACT-F	GGTGTCATGGTTGGTATGGGTC
ACT-R	CCTCTGTGAGTAGAACTGGGTGC

Table S1. Primers used for real time PCR and RT-PCR.