



## Figure EV1. Phylogenetic tree of SNIPER1 in dicots.

- A Schematic structure of SNIPER1. The conserved residues of the RING domain are highlighted in yellow.
- B Phylogenetic tree of putative SNIPER1 orthologs in dicots. Putative SNIPER1 othologs were obtained from NCBI using SNIPER1 protein sequence as input. Closest orthology in Oryza sativa was used as an outgroup. Muscle was used for sequences alignment and a neighborjoining tree was generated with JTT model and 5,000 bootstrap value in MEGA 7.0.



## Figure EV2. SNIPER1 functions upstream of EDS1, PAD4, and ADR1 family helper NLRs.

- A, B EDS1 (A) and PAD4 (B) protein levels in 4-week-old soil-grown plants. Equal loading is shown by Ponceau S staining of a non-specific band. The numbers below represent the normalized ratio between the intensity of the protein band and the Ponceau S band  $\pm$  SD (n = 3). Molecular mass markers in kilo Daltons are indicated on the left. Three independent experiments were carried out with similar results.
- C Morphology of 4-week-old soil-grown plants of Col-0, ADR1-L2 D484V, SNIPER1 OE, and ADR1-L2 D484V SNIPER1 OE. Scale bar = 1 cm.
- D Fresh weights of plants in (C).
- E Quantification of *H.a.* Noco2 sporulation in the indicated plants at 7 dpi with 10<sup>5</sup> spores per ml water.

Data information: For (D, E) one-way ANOVA followed by Tukey's *post hoc* test were performed. Statistical significance is indicated by different letters (P < 0.01). Error bars represent mean  $\pm$  SD (n = 4). At least two independent experiments were carried out with similar results. Source data are available online for this figure.



## Figure EV3. Characterization of sniper1-1 (SALKseq\_054376) T-DNA insertion mutant.

- A Morphology of 4-week-old Col-0, snc1, sniper1-1, and snc1 sniper1-1. Scale bar = 1 cm.
- B Fresh weights of plants in (A). Error bars represent mean  $\pm$  SD (n = 4).
- C Bacterial growth of P.s.t. DC3000 on 4-week-old leaves of the indicated genotypes at 0 and 3 dpi with bacterial inoculum of  $OD_{600} = 0.001$ . Error bars represent mean  $\pm$  SD (n = 4 for day 0; n = 5 for day 3).
- D SNC1, RPS4-HA, and RPM1myc proteins levels in *sniper1-1* plants. Equal loading is shown by Ponceau S staining of a non-specific band. The numbers below represent the normalized ratio between the intensity of the protein band and the Ponceau S band  $\pm$  SD (n = 3). Molecular mass markers in kilo Daltons are indicated on the left. Three independent experiments were carried out with similar results.

Data information: For (B, C) one-way ANOVA followed by Tukey's *post hoc* test were performed. Statistical significance is indicated by different letters (P < 0.01). Three independent experiments were carried out with similar results. Source data are available online for this figure.



## Figure EV4. Overexpression of SNIPER2 suppresses snc1-mediated autoimmunity.

- A Full-length alignment of SNIPER1 and SNIPER2 by ClustalW. The RING domain is indicated by a black line.
- B Morphology of 4-week-old soil-grown plants of Col-0, snc1, and two independent transgenic lines of SNIPER2 OE into snc1 background. Scale bar = 1 cm.
- C SNIPER2 gene expression in the indicated plants as determined by RT-PCR. Error bars represent mean  $\pm$  SD (n = 3). Two independent experiments were carried out with similar results.
- D Quantification of H.a. Noco2 sporulation in the indicated genotypes at 7 dpi with  $10^5$  spores per ml water. Error bars represent mean  $\pm$  SD (n = 4). Three independent experiments were carried out with similar results.
- E Growth of *P.s.m.* ES4326 on 4-week-old leaves of the indicated genotypes at 0 and 3 dpi with bacterial inoculum of  $OD_{600} = 0.001$ . Error bars represent mean  $\pm$  SD (n = 4 for day 0; n = 5 for day 3). Three independent experiments were carried out with similar results.

Data information: For (C–E) one-way ANOVA followed by Tukey's post hoc test were performed. Statistical significance is indicated by different letters (P < 0.01).



A–C Immunoprecipitation of SUMM2-3HA (A), RPP4myc (B), and CHS1-HA (C) by FLAG-SNIPER1<sup>H129Y</sup> in *N. benthamiana*. Two biological repeats were carried out with similar results.

D–G Interaction of SNIPER1<sup>H129Y</sup>-CLuc with SUMM2-NLuc (D), RPP4-NLuc (E), CHS1-NLuc (F), or SOC3-Nluc (G) as tested by split-luciferase complementation assay in *N. benthamiana*. Three biological repeats were carried out with similar results.

Source data are available online for this figure.