

## Supplemental Data

**Supplemental Figure 1.** Positional cloning of the *TIR2* gene. (A) The *TIR2* region on chromosome 1. The open bars represent BAC clones. Filled boxes represent exons in the *TIR2* gene. The nucleotide position of the exon/intron junction relative to the ATG is indicated above each bar. (B) Alignment of *TIR2* with garlic allinase.

**Supplemental Figure 2.** Assay for root elongation of *p35S:TIR2* lines after treatment with NPA, 5-MT, and Trp.

**Supplemental Figure 3.** Bayesian-inferred phylogenetic tree constructed using full-length TAA1/*TIR2*-related proteins in plants. Protein names are color-coded based on the plant groups from which they are derived and correspond to the colors used in the land plant phylogram (Inset): Black, eudicot; blue, monocot; teal, magnoliid; brown, gymnosperm; red, monilophyte; purple, lycophyte; green, moss; and lime, liverwort. The support values above nodes indicate *MRBAYES* posterior probabilities and the values below indicate *PAUP\** maximum parsimony bootstrap support.

**Supplemental Figure 4.** The *pTIR2:TIR2-GUS* rescued the NPA resistant phenotype of the *tir2* mutant.

**Supplemental Figure 5. GUS staining in *pTIR2:TIR2-GUS* and *DR5:GUS* seedlings after treatment with various compounds.** (A-G) *pTIR2:TIR2-GUS*. (H-N) *DR5:GUS*. 2days after treatments with 10uM IAA (A, H), 10uM IAA AVG (B, I), Mock (C, J), 10uM 5-MT (D, K), 10uM ACC (E, L), 10uM ACC 5-MT (F, M), 10uM AVG (G, N).

**Supplemental Figure 6. Expression of *DR5rev:GFP* in the *tir2-1 tir7-1* double mutant.** GFP signal in eight-day old seedling was examined by confocal microscopy. Red signal is propidium iodide. Scale bar is 10 uM in main image and 100 uM in inset images of root meristem and lateral root meristem.











