

Supplementary Information

Figure S1. Sequence analysis of *ZmCIPK21*. (A) Comparison of five class II CIPK amino acid sequences. The black boxes indicate identical residues, and gray boxes indicate residues conserved among the proteins; (B) Phylogenetic relationship of *ZmCIPK21* and *Arabidopsis* CIPKs. Multiple sequence alignment was performed using MEGA4.1, and the phylogenetic tree was constructed following the neighbor-joining method using the amino acid sequence of each CIPK protein. The accession numbers of selected CIPKs are listed as follows: *ZmCIPK21*, GRMZM2G075002, NM_00154244; *AtCIPK1*, NM_112631; *AtCIPK21*, NM_125144; *AtCIPK24*, NM_125144; *AtCIPK23*, NM_102766; *AtCIPK3*, NM_128256; *AtCIPK9*, NM_099996; *AtCIPK8*, NM_118573; *AtCIPK17*, NM_103723.

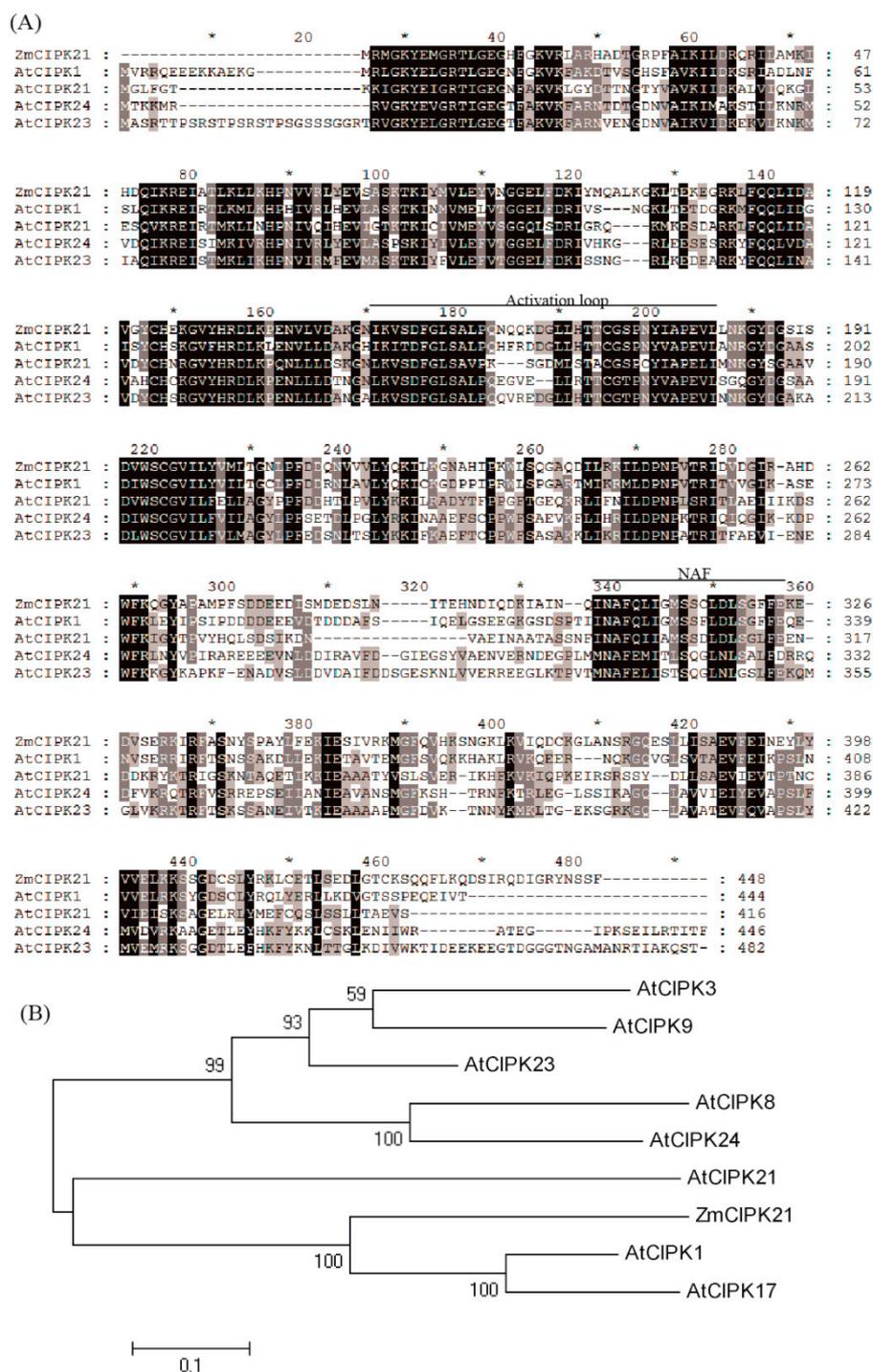


Figure S2. Expression of *ZmCIPK* in *ZmCIPK*-OE plants. The upper panel shows the RT-PCR analysis of 11 *ZmCIPK*-OE plants, with *actin* as an internal reference. Western blots of *ZmCIPK*-HA proteins are shown in the lower panels.

