

## **Description of Additional Supplementary Files:**

**Supplementary Data 1:** Mapping statistics of CAP-C libraries.

**Supplementary Data 2:** Public data used in this study.

**Supplementary Data 3:** Correlation coefficients between CAP-C chromatin contacts and the enrichment of histone modification.

**Supplementary Data 4:** Transcription factors in families of bHLH, NAC, and WRKY used in this study.

**Supplementary Data 5:** Differential expression genes under 3-hour and 12-hour cold treatments.

**Supplementary Data 6:** Gene ontology analysis of differentially expressed gene pairs containing primed PPIs.

**Supplementary Data 7:** Stable chromatin contact distance characterizations.

**Supplementary Data 8:** Enhancer Promoter (E-P) chromatin contact characterizations.

**Supplementary Data 9:** Enhancer Promoter (E-P) chromatin contact information

**Supplementary Data 10:** Promoter Promoter Interaction (PPI) characterizations.

**Supplementary Data 11:** The Gene List of PPIs.

**Supplementary Data 12:** Primers and plasmids used in this study.