

## **Descriptions of Additional Supplementary Files**

### **File Name: Supplementary Data 1**

Description: Primers used for gene mapping.

### **File Name: Supplementary Data 2**

Description: Primers used for amplification of the predicted genes in the candidate region.

### **File Name: Supplementary Data 3**

Description: ANK domain sequences used for phylogenetic analysis.

### **File Name: Supplementary Data 4**

Description: List of the 47 common wheat cultivars used for haplotype analysis of *TN1*.

### **File Name: Supplementary Data 5**

Description: List of differentially expressed genes (DEGs) in the shoot base of YZ4110 and the *tn1* mutant.

### **File Name: Supplementary Data 6**

Description: List of differentially expressed genes (DEGs) in the tiller bud of YZ4110 and the *tn1* mutant.

### **File Name: Supplementary Data 7**

Description: List of Gene Ontology (GO) terms of differentially expressed genes (DEGs) between YZ4110 and the *tn1* mutant.

### **File Name: Supplementary Data 8**

Description: Primers used for *TN1* cloning, vector construction, expression analysis, and *in situ* hybridization.