Figure S1. The information of *ubdkγ7* mutant. (A) The *ubdkγ7* mutant is a T-DNA insertion line. The insertion site is in the promoter (about -500 bp). (B) *ubdkγ7* mutant was a knock out line. *UDDKγ7* was expressed in Col-0, but not in *ubdkγ7* mutant. (C) The expression pattern of At1g13640 was identified in root (R), stem (S), flower (F) and leaf (L). The At1g13640 was found expressed in all the tissues tested.

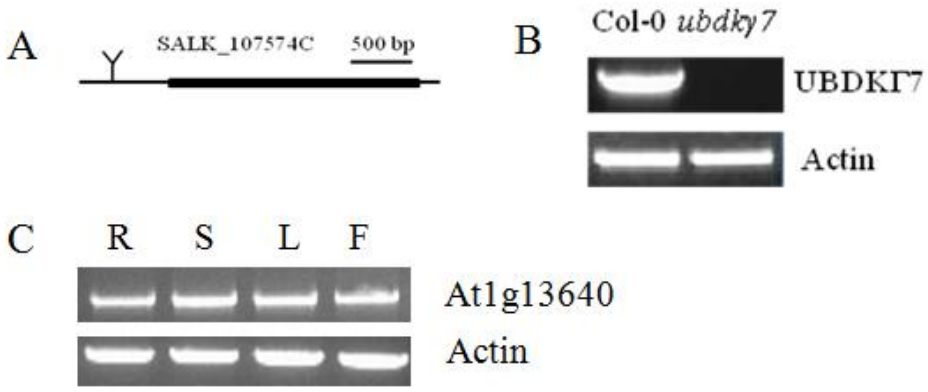

Fig S2 All PI3/4K domain-containing proteins identified in Arabidopsis (At), Humans (Hs) and Yeast (Sc) were selected for analysis. The different entries are identified by locus (Arabidopsis), gene product name or protein accession number according to UniProt/Swiss-Prot (http://www.pir.uniprot.org/index.shtml) (human and yeast). The clustering pattern separated the four major groups of PI3/4K domain-containing enzymes: PI kinase-like kinases (PIKK), type III PI4K, VPS-like PI3K and type II PI4Ks. The wheat PI4K cloned in this study clustered with the type II PI4K group. Accessions for the sequences identified by gene product were: *Saccharomyces cerevisiae* P38110 (ScTEL1), P38111 (ScMEC1), P22543 (ScVPS34), P38811 (ScTRA1), P39104 (ScPIK1), P37297 (ScSTT4), P35169 (ScTOR1), and P42951 (ScLSB6); *Homo sapiens* P42356 (HsPI4KA), Q13315 (HsATM), Q13535 (HsATR), Q9Y4A5 (HsTRRAP), P42345 (HsFRAP), and Q9Y4A5 (HsTRRAP); *Mus musculus* D78355.1 (MmTRA1).

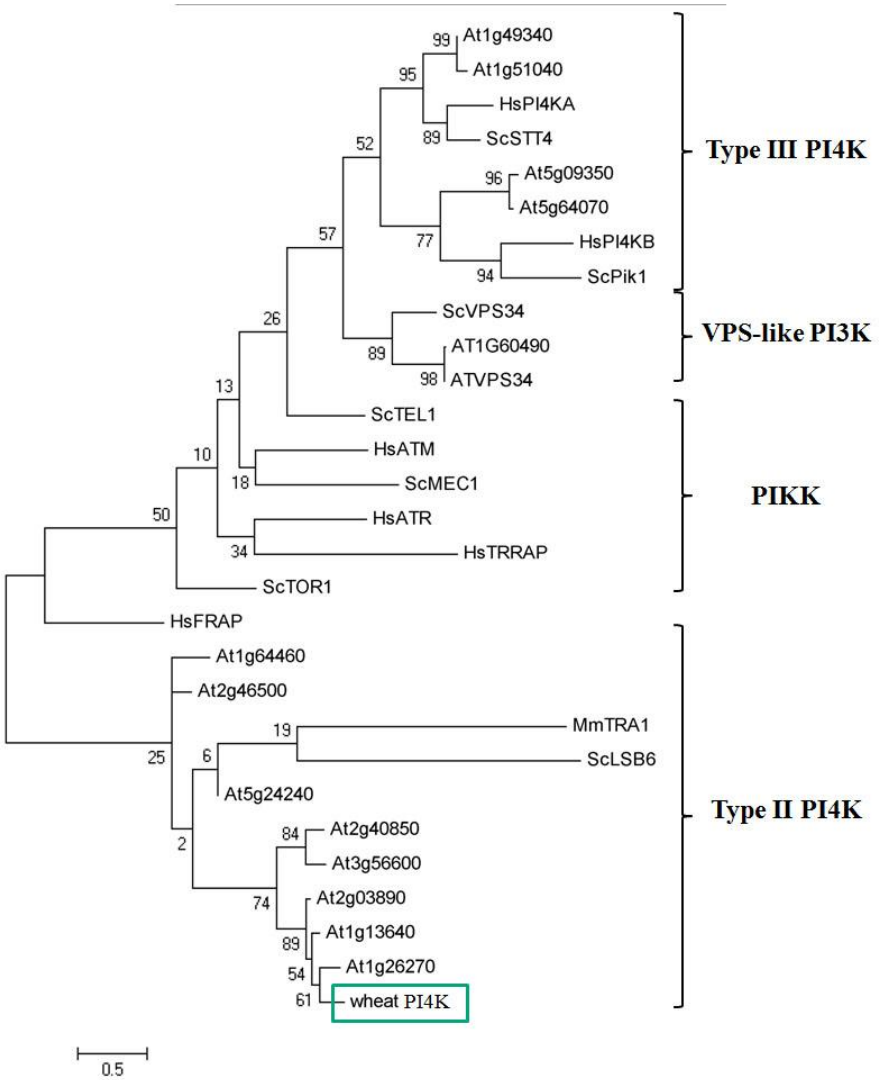

Figure S3. Expression profiles of *TaPI4KIIγ* under salicylic acid (SA) treatment for 1, 0.5, 1, 3, 6, 12, 24 and 48 h. *TaPI4KIIγ* was down-regulated by SA treatment. The expression of *TaPI4KIIγ* decreased rapidly by 0.5 h, but recovered to the normal expression level at 48 h.

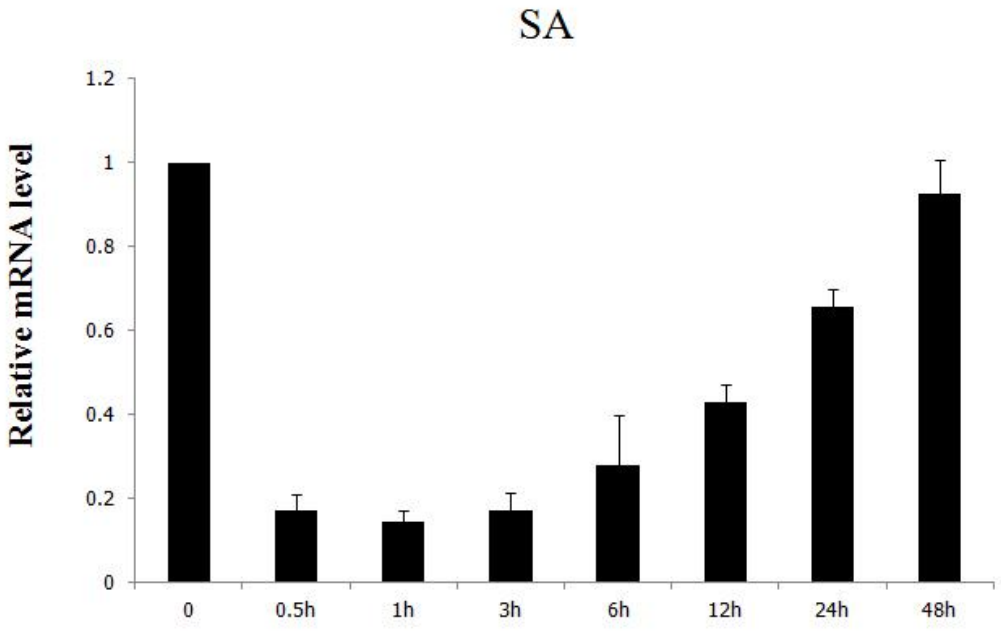

Table S1 stress-response genes selected from the TAIR database, and gene-specific primers used for qRT PCR.

Genes	Forwards primers	Reverse primers
CBF3	AGAACCAAACAAGAAAACAAGGA	AAGCCGAGTCAGCGAAATT
ZAT12	GTCACAAGAAGCCTAACAACGA	ACTCAGATCCAAACAAGCCAC
COR15A	ACTCAGTTCGTCGTCGTTTCT	CTTCTTTTCCTTTCTCCTCCAC
COR47	ACGGATCGTGGATTGTTTGA	AAGAGCTGTTGGATCGGTGA
LTI78	CTCTTTGCTGTTCTTCTCGTCG	TTTCCTCCATTGTCACCGTAG
Arabidopsis actin	AAGCAATGAGCATGAGCAAG	GGAAGACACGACAGGAAACAC
TaPI4KIIγ	GTGTTGAACAAGGAGAGGACAT	AAGCTCCTGGAACTTCTCGATG
wheat *actin*	CTCCCTCACAACAACCGC	TACCAGGAACTTCCATACCAAC