



**Supplemental Figure 1.** Arsenate Tolerance Phenotype Test.

Plants were germinated and grown on 1/2 MS medium with [+As(V)] or without [-As(V)] 200  $\mu$ M arsenate for 20 d.

**Supplemental Table 1.** Primer sequences used in this study.

Primer Name	Forward Primer (5' → 3')	Reverse Primer (5' → 3')
Primers for transgenic construction		
<i>Super:WRKY42</i>	CCCGGGATGTTTCGTTTTCCGGTAAGTC	CCGAGCTCTTATTGCCTATTGTCAACGTTGC
<i>WRKY42-GFP</i>	ACTAGTATGTTTCGTTTTCCGGTAAGTC	GGTACCTTGCCTATTGTCAACGTTGC
<i>ProWRKY42:GUS</i>	GAATTCATAGTGGATAGTCCACATTGTTGACAC	CTGCAGACTTACCGGAAAACGAAACATCTC
Primers for RT-PCR		
<i>EF1<math>\alpha</math></i>	ATGCCCCAGGACATCGTGATTTTCAT	TTGGCGGCACCCTTACGTGGATCA
<i>WRKY42</i>	TGGAAGAGAAAACGTACAAAGTGT	GGCCGCTTGCTCAATGACCT
<i>WRKY6</i>	CGTTGCTGGAGATAATGACCG	TCTTCCCGTTACTACGCCTCT
Primers for qRT-PCR		
<i>ACT2/8</i>	ACGGTAACATTGTGCTCAGTGGTG	CTTGGAGATCCACATCTGCTGGA
<i>WRKY42</i>	CCGCTAAACGCTGGTGAGA	CGGCAAAGTTGGGATTGG
<i>WRKY6</i>	CCGCCTCCTAATGGTTCCA	TGCATCAGTGAGTTGTGGTTGTT
<i>PHO1</i>	TGGTTCTCCGGAACAAGAAC	TGACTTCAAGTGACGCCAAG
<i>PHT1;1</i>	CCTTTGGGTTCTATATGCG	TAACTCAGCCTCACCAGAG
Primers for ChIP		
<i>ProPHO1</i> Q Site	GCCAATCCCGACTAAATTCC	ACGTTTCAACGGTACTATCTTTCTG
<i>ProPHO1</i> X Site	CTAAAACAAAATGTTGCATCAATTA	TGTATCAATTTCAATGAACTAATGATGTC
<i>ProPHO1</i> Y Site	ACAGTTTGCTTTCAAATCAGTTATTG	AAACATCTTCACTTTTCCATCAAA
<i>ProPHO1</i> Z Site	ATGGTCTCGAACTTGACAAAAAT	GCTTTATATATACCATGATCCGTGATG
<i>ProPHT1;1</i> P1	GTCAAATGCTCTGTTCCA	CATACAACGCAAAGAATCC
<i>ProPHT1;1</i> P2	TAAACATACGGAGGGAGT	GGAGAGTTGAGGAGAGACT
<i>ProPHT1;1</i> P3	TGTAATGGCAACTAAGTCC	TTTGAGGAGTGACAATCAG
<i>ProPHT1;1</i> P4	ATGTTTCGTAATGGTGGAT	CTGTGTAGTAGAGATAAGCA
Primers for EMSA		
<i>ProPHT1;1</i> P2	TAAACATCAACTATAAA	ATTAAGAACTTCTCTGGA
Primers for mutation probe in EMSA		
<i>ProPHT1;1</i> mP2	CATACGGAGGGAGTATTGAACGTTAAAATTCTAAAATCC AATTGTTCAATTTCTAAACGTCACATATAGTCTCTCCTCAACTC	
Primers for protein expression in <i>E. coli</i> .		
<i>WRKY42</i>	GATATCATGTTTCGTTTTCCGGTAAGTC	GTCGACTTATTGCCTATTGTCAACGTTGC