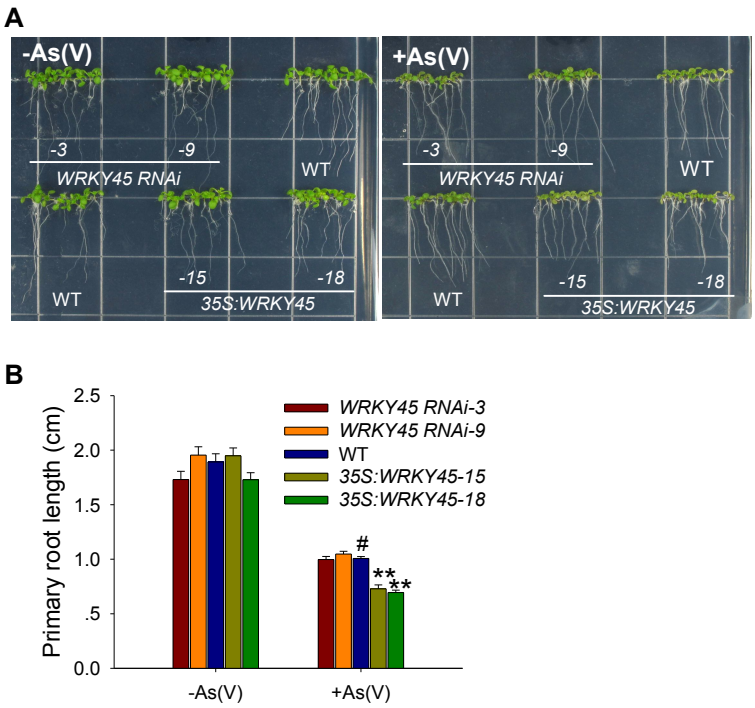
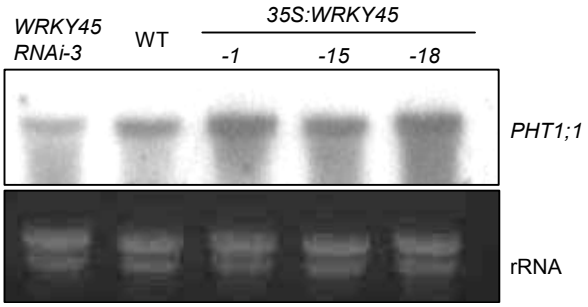
Supplementary Figure 1



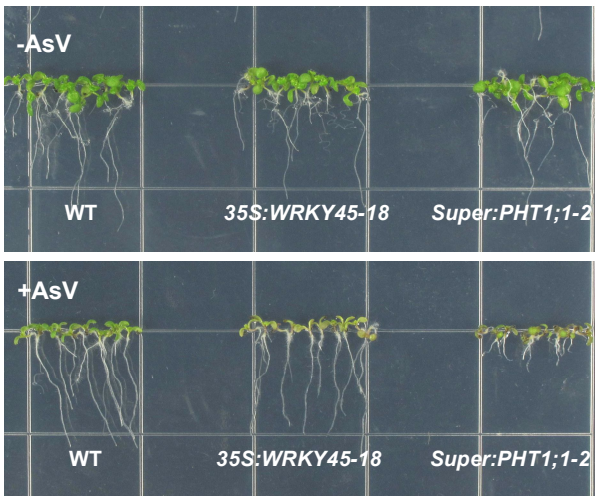
Supplementary Figure 1. Arsenate tolerance phenotype of WRKY45-overexpressing lines, WRKY45 RNAi lines and wild-type seedlings.
(A) Arsenate tolerance phenotype of plants germinated and grown on MS medium with (+AsV) or without (-AsV) arsenate for 9 d. (B) Primary root length. Values are means ± SE (n = 20-30) of each genotype per treatment. Asterisks indicate statistically significant differences compared with wild-type (Student's test, $P<0.05$). Wild-type plants (WT) were used as a control (#).

Supplementary Figure 2



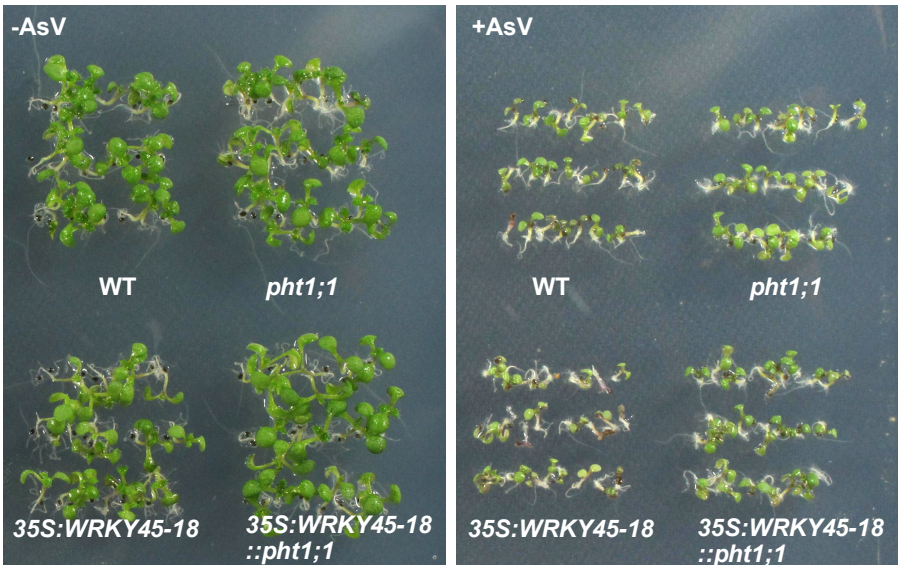
Supplementary Figure 2. RNA gel blot analysis of *PHT1;1* expression in the roots of the *WRKY45*-overexpressing lines, *WRKY45* RNAi line and wild-type plants. Ethidium bromide staining of rRNA bands are included as the loading control.

Supplementary Figure 3



Supplementary Figure 3. Arsenate tolerance phenotype of *PHT1;1*-overexpressing lines and wild-type seedlings.
Arsenate tolerance phenotype of plants germinated and grown on MS medium with (+AsV) or without (-AsV) arsenate for 9 d.

Supplementary Figure 4



Supplementary Figure 4. Arsenate tolerance phenotype of *35S:WRKY45-18*, *pht1;1* mutant, *35S:WRKY45-18::pht1;1*, and wild-type seedlings.
Arsenate tolerance phenotype of plants germinated and grown on MS medium with (+AsV) or without (-AsV) arsenate for 9 d.

Table S1. Primer sequences used in this study.

Primer name	Primer sequence (5'-3')	Vector name/Description
Primers used in transgenic construction		
WRKY45 GFP F	GGATCCATGGAGGATAGGAGGTGTGATGTG	Super1300
WRKY45 GFP R	GAGCTCTTCCTTCAAGCAAAAGGGAGG	
WRKY45 OF	GCTCTAGAATGGAGGATAGGAGGTGTGA	pBI121
WRKY45 OR	GGGGTACCTCATTCCTTCAAGCAAAAGGGA	
WRKY45 RNAi F:	GGACTAGTGGCGCGCCATGCGTACACGGTAGCGAAGAT	pBI121
WRKY45 RNAi R	GGGGTACCAGATCTATTTAAATTAGTTTGAAATTTGAATCCATTG AACC	
PHT1;1 OF	GCTCTAGAATGGCCGAACAACAACTAGGAG	Super1300
PHT1;1 OR	CCAAGCTTTTTCTCGTCATGGCTAACCTCA	
ProWRKY45 F	CGTCGACCATCGCTTTCCATCTAGCCA	pCAMBIA 1381
ProWRKY45 R	ACTGCAGTTCTTAACTCCCTCTGCGTTTAT	
ProPHT1;1 F	CTGCAGACAACGCAAAGAATCCAA	pCAMBIA 1381
ProPHT1;1 R	GTCGACATCTCCCAAATGCCGATA	
Primers used in ChIP		
ProPHT1;1 ChIP1F	GTCAAATGCTCTGTTCCA	
ProPHT1;1 ChIP1R	CATACAACGCAAAGAATCC	
ProPHT1;1 ChIP2F	TAAACATACGGAGGGAGT	
ProPHT1;1 ChIP2R	GGAGAGTTGAGGAGAGACT	
ProPHT1;1 ChIP3F	TGTAATGGCAACTAAGTCC	
ProPHT1;1 ChIP3R	TTTGAGGAGTGACAATCAG	
ProPHT1;1 ChIP4F	ATGTTCGTAATGGTGGAT	
ProPHT1;1 ChIP4R	CTGTGTAGTAGAGATAAGCA	
Primers used in qPCR		
WRKY45 qPCR F	TGCACAGAAGAAGGATGCAG	
WRKY45 qPCR R	TGGTATGTCGTCACCACCAC	
PHT1;1 qPCR F	CCTTTGGGTTCCTATATGCG	
PHT1;1 qPCR R	TAACCTCAGCCTCACCAGAG	
ACT2/8 qPCR F	ACGGTAACATTGTGCTCAGTGGTG	
ACT2/8 qPCR R	CTTGGAGATCCACATCTGCTGGA	
Primers used in EMSA		
Pht1;1 EMSA1F	GTGTATATACCATTTCAAGT	
Pht1;1 EMSA1R	CTATAATCATACAACGCAAA	
Pht1;1 EMSA4F	GCGATGCGTAATGTGATATT	
Pht1;1 EMSA4R	GAATGTTTTGTTGTTATA	