Supplemental Figure 1

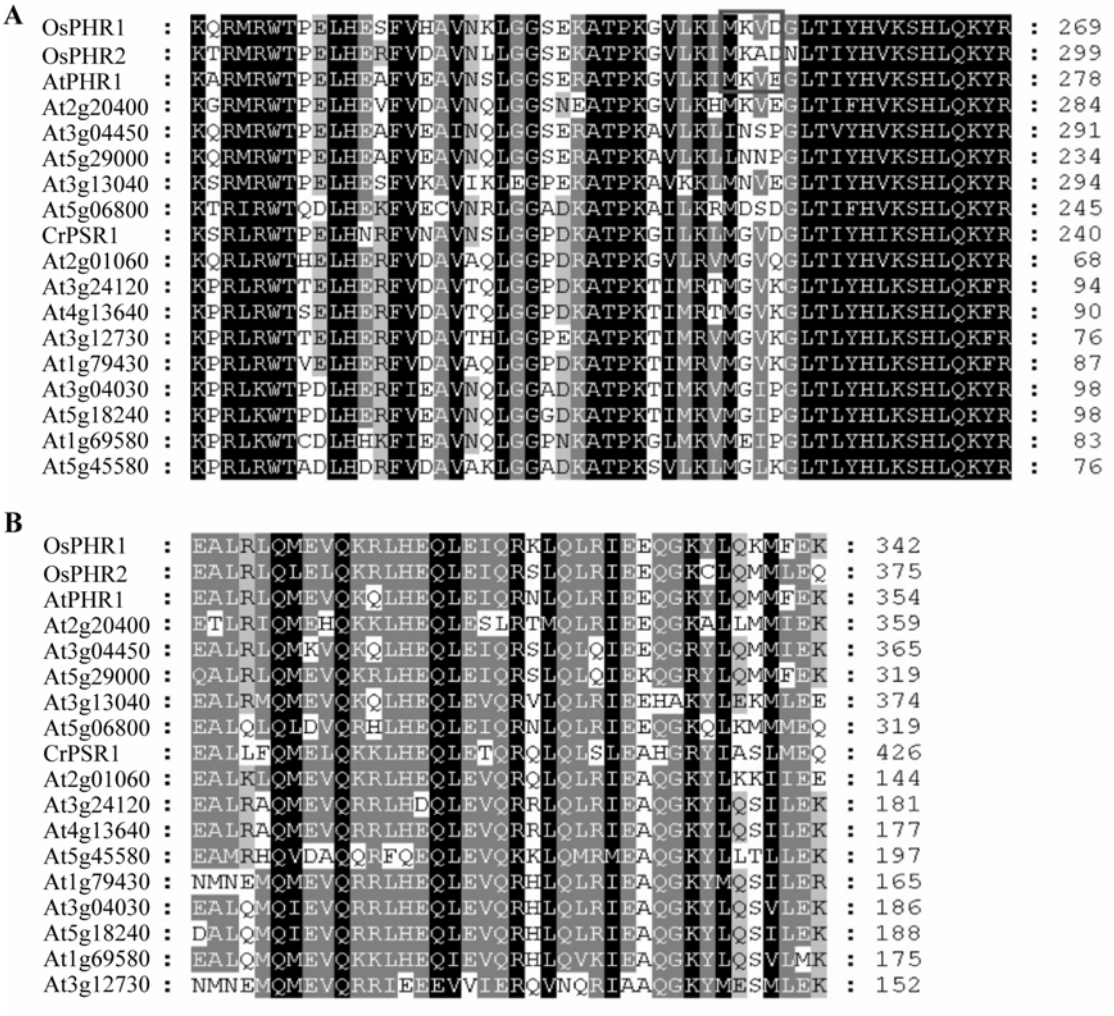

Figure S1. Alignment of the MYB (A) and predicted coiled–coil (B) conserved domains constructed by use of the CLUSTAL X 1.81 program (Thompson et al., 1997) and colored by use of the GeneDoc 3.2 program with default BLOSUM score.

Supplemental Figure 2

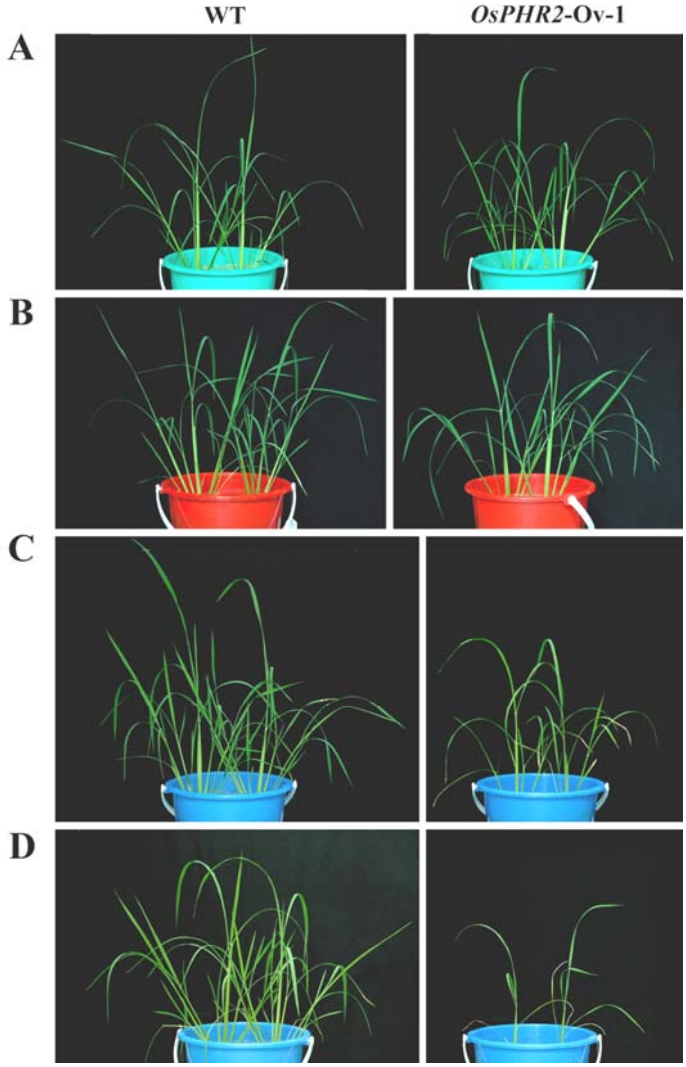

Figure S2. Growth performance of 45-d-old wild type (WT) and one line of *OsPHR2*-overexpressing plants (*OsPHR2*-Ov-1) in a pot experiment using acidic red soil supplied with 3 Pi levels: A, 30 mg Pi/Kg soil; B, 60 mg/Kg soil; C, 120 mg Pi/Kg soil; D, 200 mg Pi/Kg soil.

Supplemental Figure 3

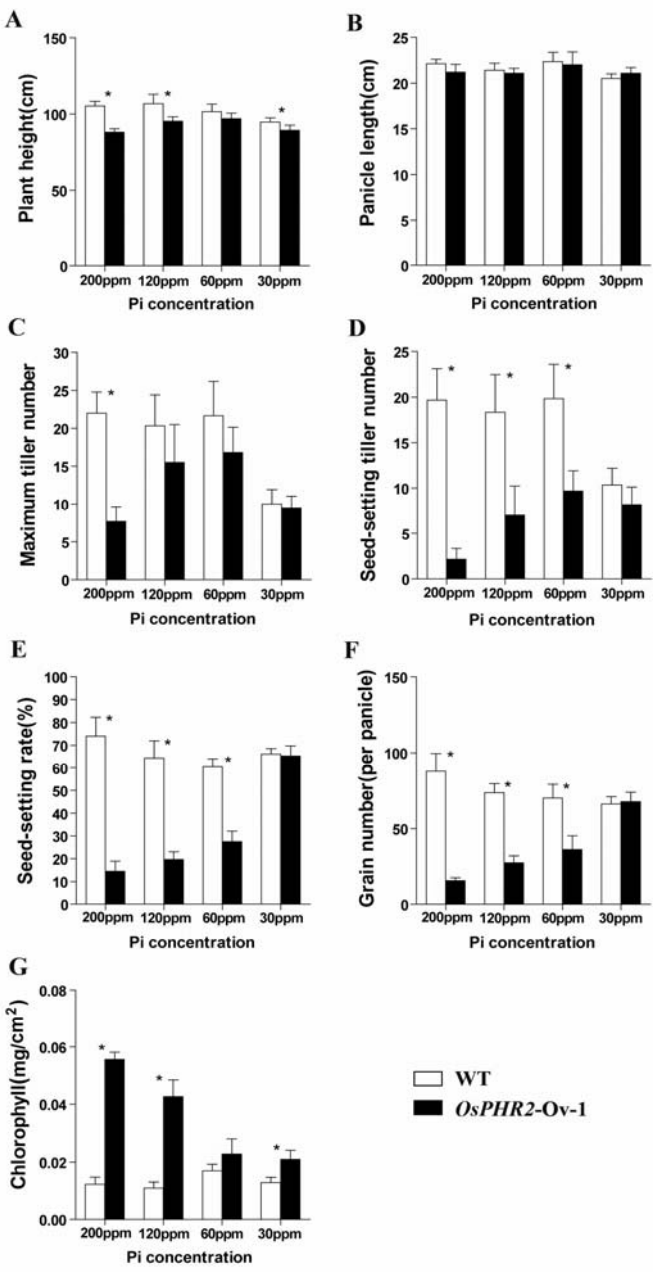

Figure S3 Growth parameters measured from wild type (white column) and *OsPHR2*-Ov-1 (black column) plants in the soil pot experiment with four Pi levels. A, Plant height; B, Panicle length; C, Maximum tiller number; D, Seed-setting tiller number; E, Seed-setting rate; F, Grain number; G, Chlorophyll. Values are mean±SD (n=6). Stars on the bars represent means that are statically different between WT and *OsPHR2-Ov-1* in the same treatment ($p<0.01$).

Supplemental Figure 4

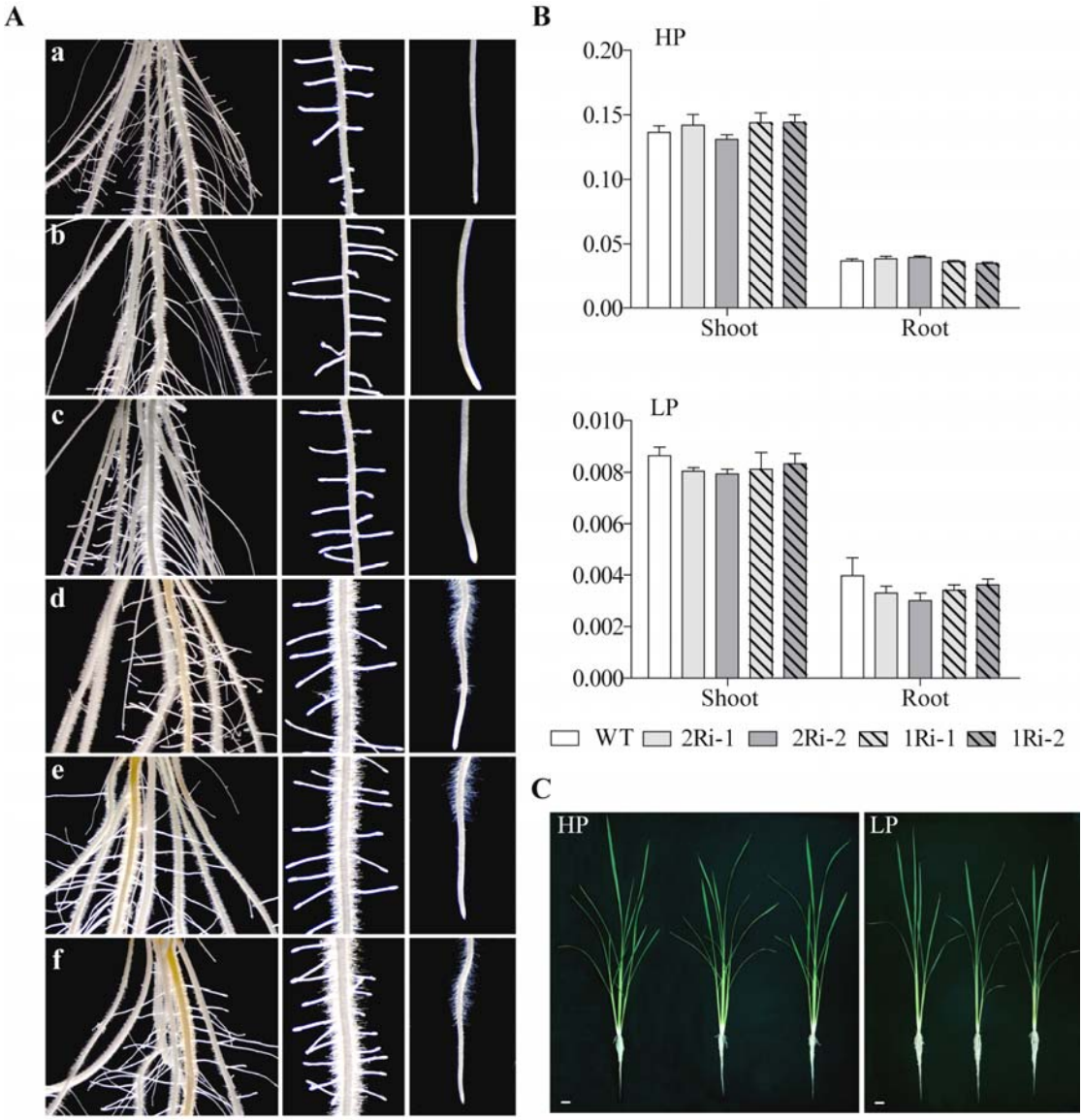

Figure 4. **A,** Root hair proliferation of *OsPHR1*-RNAi and *OsPHR2*-RNAi lines in the regions of root base (left panels), elongation zoon (middle panels) and primary root tip (right panels) grown under Pi-supplied (b,2Ri-1 and c, 1Ri-1) and Pi-deficient (e,2Ri-1 and f, 1Ri-1) conditions compared with WT (a and d). B UP, Pi concentration in the shoots and roots of wild type, 2Ri-1 and 1Ri-1; Down, Pi concentration in the shoots and roots of wild type, 2Ri-1 and 1Ri-1. Error bars indicate the SD (n=5). C Left, 2Ri-1 and 1Ri-1 after grow under high Pi conditions (10mg/L Pi, 0.5L/plant) for 30 days; Right, 2Ri-1 and 1Ri-1 after grow under low Pi conditions (1mg/L Pi, 0.5L/plant) for 30 days. Bar=1 cm.

Supplemental Table 1

Table S1. Primers of phosphate-starvation-inducible (*PSI*) genes used for RT-PCR analysis

Gene	Primer sequence (5’-3’)
OsPHR1	F：CACAAGAAGGGAAAACTACCGATG
	R：TCAAGATTCATGCACTCTACGACGC
OsPHR2	F：CGCTTTGTAGATGCTGTCAATC
	R：AGACCCTCATCACATCCTCATTATC
OsIPS1	F：AAGGGCAGGGCACACTCCACATTATC
	R：ATTAGAGCAAGGACCGAAACACAAAC
OsIPS2	F：CCT TCTTCTGGATTCCTCTC
	R：AGTTCACCACAAAAGATACAGTAG
SQD2	F：CTGAAAACGGTAATGGATAGG
	R：AACACCACCAGCACGAGC
OsPAP10	F：ATACTGGCAGCCGACGGATGA
	R：GAGGGAGCTGGAGCGGAGAA
OsActin	F：GGAACTGGTATGGTCAAGGC
	R：AGTCTCATGGATACCCGCAG

Supplemental Table 2

Table S2. Primers of Pi transporter genes used for qRT-PCR analysis.

Gene	Code	Primer sequence (5’-3’)	UPL
OsPT1	AF536961	F：AGCGTTCGGGTTCCTGTA	#116
		R：CGTTCTTGATGCCGATCC	
OsPT5	AF536965	F：GGCGAGAACGAAATGGAG	#160
		R：GACGGTCTGCCTGTAGGAGT	
OsPT7	AF536967	F：GCTTCCTCCTCACCTTCCTT	#117
		R：TTCTCCCGTGACATCTCCTC	
OsPT9	AF536969	F：GCCTGGCGGATCATACTC	#65
		R：CACCAGCGCCGTATACCT	
OsPT10	AF536971	F：GGCGGATCATTCTCATGG	#65
		R：TCCACCAAAGCCGTATATCTG	
OsPT11	AF5369672	F：ATATCCAAGGCCTCGTTCCT	#91
		R：CCGATCAGCTGGATCATGT	
OsPT12	AF536972	F：AAATCGAGGTGGAGGAGGAG	#1
		R：CGAGAAGAGGCCGTAGTCC	
OsPHO2	OS05G48390	F：TTTTACACAAGCCACCAAAGC	#149
		R：TCACGAGCATGTCCAACAA	
OsActin	OS03G0718100	F：CAACACCCCTGCTATGTACG	#158
		R：CATCACCAGAGTCCAACACAA	

Supplemental Table 3

Table S3. Primers of OsmiRNA399 and *OsPHO2* used for qRT-PCR analysis.

Gene	Primer sequence (5’-3’)
Os-miR399a	F：GCTGGAAATGATGCTGGTAGC
	R：CTCCTTTGGCACGAGATCTGT
Os-miR399d	F：GGTGGCCTTTGATAGACCATCA
	R：GCAGGCCGTTTTGGTGAAT
Os-miR399f	F：GGCAGAGGTGATCAGATTGCA
	R：GGCAAATCTCCTTTGGCAGAG
Os-miR399j	F：GGAGCATGTGAAGTCTTTTGTAGC
	R：GGCAACTCTCCTTTGGCAGA