Table S1 Nutrient solution composition used in this study

Macronutrient solution(μM)			
	0μM	25μM	200μM
$MgSO_4 \cdot 7H_2O$	1000	1000	1000
KNO_3	2500	2500	2500
$NaH_2PO_4 \cdot 2H_2O$	0	25	200
NaCl	1000	975	800
KCl	1000	1000	1000
$Ca(NO_3)_2 \cdot 4H_2O$	2500	2500	2500
Micronutrient solution (μM)			
EDTA-Fe	24.52		
H_3BO_3	22.98		
$MnSO_4 \cdot H_2O$	10.00		
$ZnSO_4 \cdot 7H_2O$	0.66		
$CuSO_4 \cdot 5H_2O$	0.32		
$(NH_4)_6Mo_7O_2 \cdot 4H_2O$	0.07		

Table S2 Primers of *SlPHT* genes used in the experiments.

Gene name	Primer sequence (5'→3')	
	Forward	Reverse
SlPT1	AGGGGAAGAGGAAACTGTAGCTG	ATACCACAAATTAACTCAAACTGCAT
SlPT2	GCCAGAGCCAAAAGGAAAATC	TGCAACAAACAAGCTTACACAATACA
SlPT3	TTGTGTTAGGTTGTGTGAATTTTCTT	AGCTCTTTGCACGATCTTAAATGAC
SlPT4	CGGGCAGAATGAGACACAGATG	TGAAGATAGAAAGCACAAGGCGTAGT
SlPT5	GCAGAACGAGACGCAGATGAA	TGCTGAATTTGATAAACTTGCCAA
SlPT6	GCCAGAGCCAAAAGGAAAATC	AAGAGTTGCATCAGTCATCACACA
SlPT7	AGGGGAAGTCACTGGAAGAGATG	GCAGCAATGACAGATAACCTAATACGT
SlPT8	AAGGGAAAACGAAGACTCAGCAC	AGGTTGAGGTAAAGAAACTATAGTGCT
SlPHT2	AGATTGCAACTTCCTGGGCA	CCGAGAAGTTTGTGCTGCAT
SlPHT3;1	CAACAATGCGAAGGGTGCAA	ATTCCCCATTGAGCACCAGT
SlPHT3;2	TCTAACCCCGCTGACAACAT	TCACAACTGGTCCAACAAGC
SlPHT3;3	GCCTGGATTTGCTAGAGGCT	TGTCGTCCCCATAGAGGTACA
SlPHT3;4	ATTGTGTCACACCCTGCTGA	AGACCGCGAGTACAAAGACC
SlPHT4;1	CACAACTGCTGTTTCGGCTG	CGCTCCAATTGAGCCAGTTC
SlPHT4;2	TCTCCCGGGAAAGAAGACGA	CCGGGATCTTCCATGCTTCT
SlPHT4;3	CATGGCCTATTGGTCCGCTT	CGACGTTCCATCCTCTCCAT
SlPHT4;4	TGGGTAGTGGGGTTTTGGTG	ACAAGGCCACCCAATAGACTG
SlPHO1;1	CAGTTATGGTTCTCGATCGTCT	GTCGAATAACTTCCAATGAGGC
SlPHO1;2	CCAACTTCTTCTTCAAGCGAAA	GATGATTTTGGACTGTCGGATG
SlPHO1;3	CTACAGGGTAACAGGGCTATTT	TGCTCATTCTCCAACCTGTAAT
SlPHO1;4	CGGTTGATGGGAAGCTTTGGA	CCAACTTTACGACTATCTTTCGCTT
SlPHO1;5	CCTTCAATTGGTATGCGTAGTG	CAAAATCTCTATTGGAGCAGGC
SlPHO1;6	AAAGTAGGGGAAGTTAAGGTGG	TGTGGTCTACCTGGACTACTAA
UBIquitin	TCGTAAGGAGTGCCCTAATGCTGA	CAATCGCCTCCAGCCTTGTTGTAA
EF	CTCCATTGGGTCGTTTTGCT	GGTCACCTTGGCACCAGTTG

Table S3 Fifty different motifs commonly observed in SlPHT proteins

Motif	Motif sequence	Width
1	MATLCFFRFWLGFGIGGDYPLSATIMSEYANKKTRGAFIAAVFAMQGFGI	50
2	VPQADYVWRIILMFGALPALLTYYWRMKMPETARYTALVAKBAKQAAADM	50
3	VLNALDTAKTQLYHFTAIVIAGMGFFTDAYDLFCISLVTKLLGRJYYHKP	50
4	QTLIALCSTVPGYWFTVAFIDKIGRFAIQLMGFFFMTVFMFAJAIPYHHW	50
5	YSLTFFFANFGPNATTFVVPAEIFPARLRSTCHGISAAAGKAGAMVGAFG	50
6	RHGLHLLGTASTWFLLDIAFYSQNLFQKDIFSAIGWIPKAKTMNALZEVY	50
7	PGSLPPNVSAAVNGVALVGTLAGQLFFGWLGDKMGRKKVYGMTLMJMVIC	50
8	KTDAGYPAGIGIKNSLIVLGCVNLLGMLFTFLVPESKGKSLEEMSRENEG	50
9	ACLEIJRRGMWNFFRLENEHLNNVGKYRAVKSVPLPFNYDD	41
10	PLNIIYRSSRFFFIRVIWRCLCAPLYKVTLPDFFLADQLTSQVQAIRSLZ	50
11	FPLYSLFAYIVLHMLLYGANIYYWKRYRINYSFIFGFKQGTELKYREVFL	50
12	WKVLVLVTSGIATVYNTYWDLVVDWGLLQRKSKNPWLRDKLLLPHKSV	48
13	CPFEAVKVRVQTQPGFARGLSDGLPKFVRAEGAAGLYKGLVPLWGRQIPY	50
14	LSCGLTHMAVTPLDLVKCNMQIDPAKYKSISSGFGVLLKEQGPRGFFRGW	50
15	LKTYSYLNLLAFSKILKKYDKITSRKASKSYLKVVDKSYLGSSDEVTKL	49