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Supplementary Material

Impact of arbuscular mycorrhizal fungi (AMF) on cucumber growth and phosphorus uptake under cold stress

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Table S1. Specification of the sequences used for the construction of the phylogenetic tree presented in Fig. S1

Plants	Names in article	mRNA ID	Protein ID	Protein annotation	References
<i>Arabidopsis thaliana</i>	AtPT1	At5g43350	Q8VYM2	Inorganic phosphate transporter 1-1	1
	AtPT2	At5g43370	Q96243	Inorganic phosphate transporter 1-2	1
	AtPT2;1	AJ302645.1	CAC15560.1	Phosphate transporter Pht2;1	2
	AtMPT	AB016066.1	BAA31585.1	Mitochondrial phosphate transporter	3
	AtPHO1	AF474076	Q8s403.1	Phosphate transporter PHO1	4
	AtPHO1;H1	AY507953	Q93ZF5.1	Phosphate transporter PHO1 homolog 1	4
	AtPHO1;H2	AY507954	AAR99484.1	PHO1-like protein	4
	AtPHO1;H3	AY507955	AAR99485.1	PHO1-like protein	4
	AtPHO1;H4	AY507956	AAR99486.1	PHO1-like protein	4
	AtPHO1;H5	AY507957	AAR99487.1	PHO1-like protein	4
	AtPHO1;H6	AY507958	AAR99488.1	PHO1-like protein	4
	AtPHO1;H7	AY507959	AAR99489.1	PHO1-like protein	4
	AtPHO1;H8	AY507960	AAR99490.1	PHO1-like protein	4
	AtPHO1;H9	AY507961	AAR99491.1	PHO1-like protein	4
	AtPHO1;H10	AY507962	AAR99492.1	PHO1-like protein	4
<i>Cucumis sativus</i>	Predicted CsPT1-3	XM_004134363.2	XP_004134411.1	PREDICTED: inorganic phosphate transporter 1-3	
	Predicted CsPT1-4	XM_004134017.2	XP_004134065.1	PREDICTED: inorganic phosphate transporter 1-4	
	Predicted CsPT1-7	XM_004140927.2	XP_004140975.1	PREDICTED: inorganic phosphate transporter 1-7	
	Predicted CsPT1-9	XM_004145556.2	XP-004145604.1	PREDICTED: inorganic phosphate transporter 1-9	
	Predicted CsPT1-11	XM_004149416.1	XP_004149464.1	PREDICTED: inorganic phosphate transporter 1-11	
	CsPT2-1	KJ477325	NP_001288019.1	inorganic phosphate transporter 2-1	
	Predicted CsMPT3	XM_4138198.2	XP_004138246.1	PREDICTED: mitochondrial phosphate carrier protein 3	
	Predicted CsMPT1	XM_0041444847.2	XP_004144895.1	PREDICTED: mitochondrial phosphate carrier protein 1	
	Predicted CsPHO1	XM_004134003.2	XP_004134051.1	PREDICTED: phosphate transporter PHO1	
	Predicted CsPHO1-H1	XM_011657449.1	XP_011655751.1	PREDICTED: phosphate transporter PHO1 homolog 1	
	Predicted CsPHO1-H3	XM_011657391.1	XP_011655693.1	PREDICTED: phosphate transporter PHO1 homolog 3	
	Predicted CsPHO1-H9	XM_004141529.2	XP_004141577.1	PREDICTED: phosphate transporter PHO1 homolog 9	

	Predicted CsPHO1-H10	XM_004135398.2	XP_004135446.1	PREDICTED: phosphate transporter PHO1 homolog 10	
<i>Lotus japonicus</i>	LjPT1	AB257212.1	BAE93351	phosphate transporter	5
	LjPT2	AB257213.1	BAE93352	phosphate transporter	5
	LjPT3	AB257214.1	BAE93353	phosphate transporter	5
<i>Medicago truncatula</i>	MtPT1	AF000354.1	AAB81346	phosphate transporter	7,8
	MtPT2	AF000355.1	AAB81347	phosphate transporter	7,8
	MtPT4	AY116211.1	AAM76744.1	phosphate transporter PT4	7,8
	MtPT2;1	AF533081.1	XP_003628943	Inorganic phosphate transporter 2-1	6
<i>Oryza sativa</i>	OsPT1	AF536961.1	AAN39042	putative phosphate transporter OsPT1	9,10
	OsPT2	AF536962.1	AAN39043	putative phosphate transporter OsPT2	9,10
	OsPT4	AF536964	AAN39045	putative phosphate transporter OsPT4	9,10
	OsPT5	AF536965	AAN39046	putative phosphate transporter OsPT5	9,10
	OsPT6	AF536966.1	AAN39047	putative phosphate transporter OsPT6	9,10
	OsPT7	AF536967.1	AAN39048	putative phosphate transporter OsPT7	9,10
	OsPT8	AF536968.1	AAN39049	putative phosphate transporter OsPT8	9,10
	OsPT9	AF536969.1	AAN39050	putative phosphate transporter OsPT9	9,10
	OsPT10	AF536970.1	AAN39051	putative phosphate transporter OsPT10	9,10
	OsPT11	AF536971.1	AAN39052	putative phosphate transporter OsPT11	9,10
	OsPT12	AF536972.1	AAN39053	putative phosphate transporter OsPT12	9,10
	OsPT13	AF536973.1	AAN39054	putative phosphate transporter OsPT13	9,10
	OsMPT	AB016065.1	BAA31584.1	mitochondrial phosphate transporter	3
<i>Solanum tuberosum</i>	StPT1	X98890.1	CAA67395	inorganic phosphate transporter 1	11,12,13
	StPT2	X98891.1	CAA67396	inorganic phosphate transporter 2	11,12,13
	StPT3	AY804011.1	AAV97729	phosphate transporter 3, partial	11,12,13
	StPT4	AY793559.1	AAW51149	inorganic phosphate transporter PT4	11,12,13
	StPT5	AY885654	AAX85195.1	mycorrhiza-inducible inorganic phosphate transporter	11,12,13
	StPT2;1	AY603690.1	AAT35816.1	chloroplast phosphate transporter precursor	14
<i>Zea mays</i>	ZmPT1	AY974044.1	AAY42388	inorganic phosphate transporter 4	15,16,17
	ZmPT2	AY974041.1	AAY42385	inorganic phosphate transporter 1	15,16,17

ZmPT3	AY639021.1	AAT51692	phosphate transport protein	15,16,17
ZmMPT	AB016064.1	BAA31583.1	mitochondrial phosphate transporter	3

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1, Mudge *et al.* 2002; 2, Daram *et al.* 1999; 3, Takabatake *et al.* 1999; 4, Wang *et al.* 2004; 5, Maeda *et al.* 2006; 6, Zhao *et al.* 2003; 7, Liu *et al.* 1998; 8, Harrison *et al.* 2002; 9, Paszkowski *et al.* 2002; 10, Guimil *et al.* 2005; 11, Rausch *et al.* 2001; 12, Karandashov *et al.* 2004; 13, Nagy *et al.* 2005; 14, Rausch *et al.* 2004; 15, Wright *et al.* 2005; 16, Glassop *et al.* 2005; 17, Nagy *et al.* 2006.

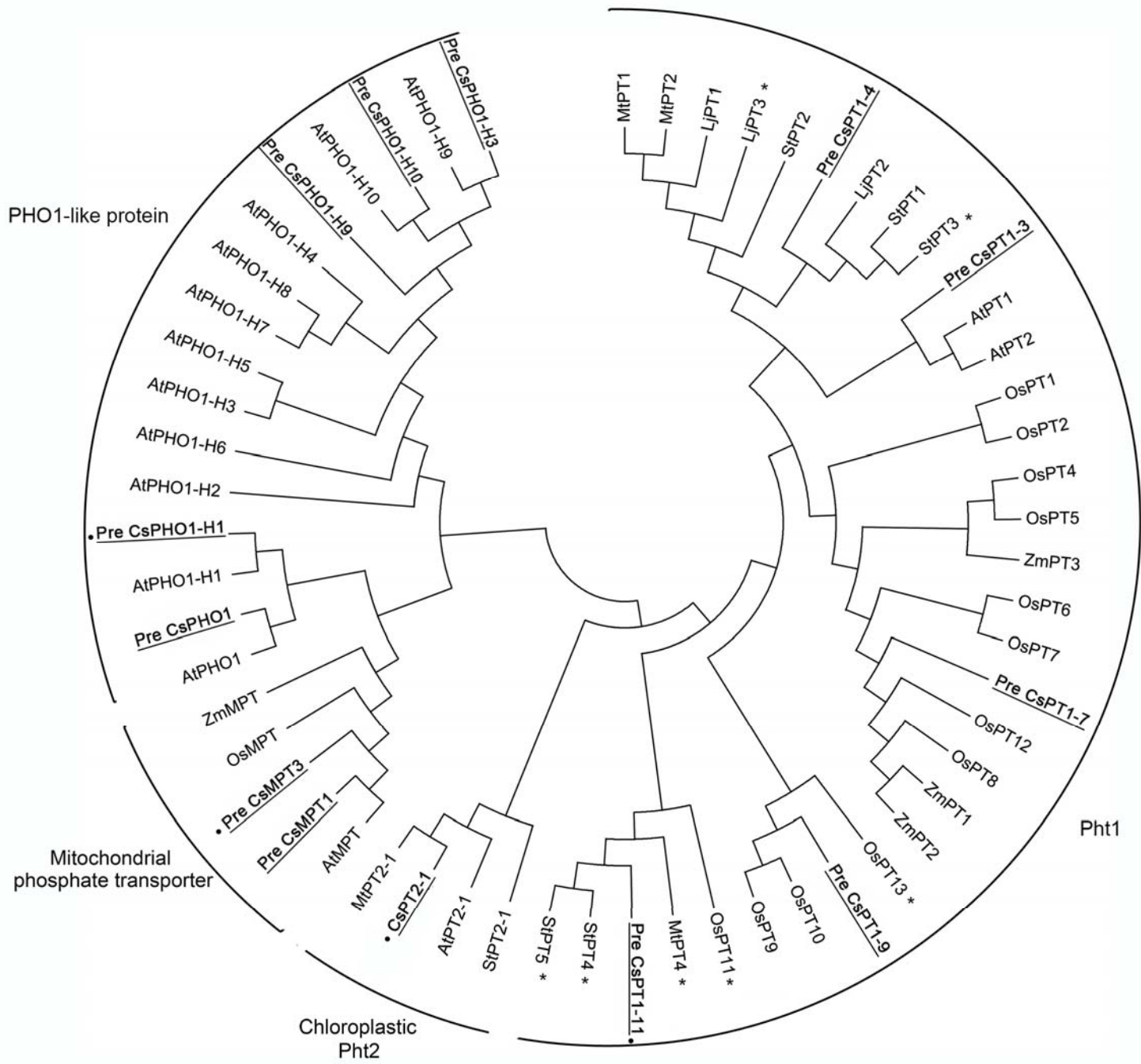


Fig. S1. Phylogenetic analysis of cucumber phosphate transporter of cucumber and other plants. Neighbor-joining tree for Pht1 transporters, chloroplastic Pht2, mitochondrial phosphate transporter and PHO1 based on aligned amino acids sequences. Cucumber genes are underlined, the assayed genes are highlighted by dot (•). Asterisks (*) indicate transporters known to be induced in response to mycorrhiza according to summary of Javot *et al.* 2007 and Walder *et al.* 2015. The NCBI accession number for the cucumber sequences were predicted *CsPT1-3* (XM_004134363.2), predicted *CsPT1-4* (XM_004134017.2), predicted *CsPT1-7* (XM_004140927.2), predicted *CsPT1-9* (XM_004145556.2), predicted *CsPT1-11* (XM_004149416.1) *CsPT2-1* (KJ477325), predicted *CsMPT3* (XM_4138198.2), predicted *CsMPT1* (XM_0041444847.2), predicted *CsPHO1* (XM_004134003.2), predicted *CsPHO1-H1* (XM_011657449.1), predicted *CsPHO1-H3* (XM_011657391.1), predicted *CsPHO1-H9* (XM_004141529.2), predicted *CsPHO1-H10* (XM_004135398.2).

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