

Additional file 1 A list of known plant *PHT1* genes.

Species	Gene name	Accession	References
<i>Glomus versiforme</i>	GvPT▽	Q00908	[1]
<i>Piriformospra indica</i>	PiPT	A8N031	[2]
<i>Neurospora crassa</i>	PHO5▽	Q01395	[3]
	PHO4▽	P15710	[4]
<i>Saccharomyces cerevisiae</i>	PHO84▽	P25297	[5]
	PHO89▽	P38361	[6]
<i>Lycopersicon esculentum</i>	LePT1▽	O24029	[7]
	LePT2	O22549	[8]
	LePT3	Q5MJA7	[9]
	LePT4*△	Q563I3	[10]
	LePT5	Q563I2	
<i>Solanum tuberosum</i>	StPT1▽	Q43650	[11]
	StPT2▽	Q41479	
	StPT3*▽	Q8W4W9	[12]
	StPT4△	Q5ICC1	[13]
	StPT5	Q563I1	[10]
<i>Nicotiana tabacum</i>	NtPT1	Q9ST22	[14]
	NtPT2	Q9AYT3	
	NtPT3	Q9AYT2	
	NtPT3	A0T3D8	[15]
	NtPT4	A0T3E1	
	NtPT5	A0T3E4	
<i>Solanum melongena</i>	SmPT1	A0T3D3	
	SmPT2	A0T3D5	
	SmPT3	A0T3D7	
	SmPT4	A0T3E0	

	SmPT5	A0T3E3	
<i>Capsicum frutescens</i>	CfPT1	A0T3D2	
	CfPT2	A0T3D4	
	CfPT3	A0T3D6	
	CfPT4	A0T3D9	
	CfPT5	A0T3E2	
<i>Lotus japonicas</i>	LjPT1	Q1T6Z7	[16]
	LjPT2	Q1T6Z6	
	LjPT3*	Q1T6Z8	
<i>Catharanthus roseus</i>	CrPT1	O22055	[17]
<i>Medicago truncatula</i>	MtPT1	O22301	[18]
	MtPT2▽	O22302	
	MtPT3△	A5H2U5	[19]
	MtPT4*△	Q8GSG4	[20]
	MtPT5▽	A5H2U6	[19]
	MtPT6	B2G3Q0	
<i>Lupinus albus</i>	LaPT1	Q9ARI9	[21]
	LaPT2	Q9AU00	
<i>Sesbania rostrata</i>	SrPT1	Q9AVR0	
<i>Triticum aestivum</i>	TaPh1*	Q5CC72	[22]
	TaPh2	Q93WR0	[23]
	TaPh8	Q7YMD9	
<i>Triticum monococcum</i>	TmPT1	Q5NKQ7	
<i>Zea mays</i>	ZmPHT1	Q49B46, GRMZM2G154090	[24]
	ZmPHT2	Q49B45, GRMZM2G024935	

	ZmPHT3	Q49B44, GRMZM2G112377	
	ZmPHT4	Q49B43, GRMZM2G024935	
	ZmPHT5	Q49B42, GRMZM2G041595	
	ZmPHT6*	Q5CC71, GRMZM2G181102	[22]
<i>Hordeum vulgare</i>	HvPht1;1▽	Q8H6E0	[25]
	HvPT2	Q84LH9	
	HvPT3	Q84VI5	
	HvPT4	Q84JQ1	
	HvPT5	Q84VI7	
	HvPht1;6△	Q8H6D9	[25]
	HvPT7	Q84VI6	
	HvPT8*	Q6Y3A2	[26]
	HvPT9	Q8H6E0	
<i>Petunia hybrida</i>	<i>PhPT1</i>	B2CPI3	[27]
	<i>PhPT2</i>	B2CPI4	
	<i>PhPT3*</i>	B2CPI5	
	<i>PhPT4*</i>	B2CPI6	
	<i>PhPT5*</i>	B2CPI7	
<i>Arabidopsis thaliana</i>	<i>AtPHT1;1</i> ▽	At5g43350	[28-30]
	<i>AtPHT1;2</i>	At5g43370	
	<i>AtPHT1;3</i>	At5g43360	
	<i>AtPHT1;4</i> ▽	At2g38940	
	<i>AtPHT1;5</i>	At2g32830	
	<i>AtPHT1;6</i>	At5g43340	
	<i>AtPHT1;7</i>	At3g54700	

	<i>AtPHT1;8</i>	At1g20860	
	<i>AtPHT1;9</i>	At1g76430	
<i>Oryza sativa</i>	<i>OsPT1</i>	Os03g05620	[31]
	<i>OsPT2</i> △	Os03g05640	
	<i>OsPT3</i>	Os10g30770	
	<i>OsPT4</i>	Os04g10750	
	<i>OsPT5</i>	Os04g10690	
	<i>OsPT6</i> ▽	Os08g45000	
	<i>OsPT7</i>	Os03g04360	
	<i>OsPT8</i> ▽	Os10g30790	
	<i>OsPT9</i>	Os06g21950	
	<i>OsPT10</i>	Os06g21950	
	<i>OsPT11</i> *	Os01g46860	
	<i>OsPT12</i>	Os03g05610	
	<i>OsPT13</i>	Os04g10800	
<i>Populus trichocarpa</i>	<i>PtPHT1;1</i>	POPTR_0010s08270	[32]
	<i>PtPHT1;2</i>	POPTR_0010s08250	
	<i>PtPHT1;3</i>	POPTR_0010s08230	
	<i>PtPHT1;4</i>	POPTR_0005s24490	
	<i>PtPHT1;5</i>	POPTR_0002s04000	
	<i>PtPHT1;6</i>	POPTR_0005s15880	
	<i>PtPHT1;7</i>	POPTR_0005s24500	
	<i>PtPHT1;8</i> *	POPTR_0019s08990	
	<i>PtPHT1;9</i>	POPTR_0002s00700	
	<i>PtPHT1;10</i> *	POPTR_0015s06110	
	<i>PtPHT1;11</i>	POPTR_0005s27740	
	<i>PtPHT1;12</i>	POPTR_0001s32590	

Note: *, its expression induced by mycorrhizal fungi; ▽, proteins with Pi high-affinity activity.

△, proteins with Pi low-affinity activity.

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