

Ethylene regulates phosphorus remobilization and expression of a phosphate transporter (*PhPT1*) during petunia corolla senescence

Laura J Chapin and Michelle L Jones

Supplementary Material

Supplementary Table S1

Supplementary Figure S1

Table S1: Primers used for the quantitative RT-PCR of the *PhPT* genes and the *PhACTIN* control.

Gene	Accession#	Primer sequence (5' → 3')
<i>PhACTIN</i>	CV299322	AGCCAACAGAGAGAAGATGACCCA ACACCATCACCAGAGTCCAACACA
<i>PhPT1</i>	EF564180	AAGCAATTCTCCGTCGTCATGGA TAGCCTGGAACAGTACTGCAGAGA
<i>PhPT2</i>	EU532761	GCTAAAGATGCGAAACGAGCAGCA TCCATGACGACGAACAACTCCCA
<i>PhPT3</i>	EU532762	AGCTAGGCTAAGATCAACGTGCCA TGGGATCTGTGGATTGAGCAGCAT
<i>PhPT4</i>	EU532763	ATGTGTTAGCTTCCGCATTGACGC TTATGCCTCCAACCTACGCCCAA
<i>PhPT5</i>	EU532764	TTCTGTCCTAGCCCAAATGGCTCT ACCCATTCCAGCAATGACAACTGC

I

LePT1 -MANDLQVLNALDVAKTQLYHFTAIVIAGMGFFTDAYDLFCISMVTKLLGRLYYHHDGAL 59
PhPT1 -MAKDLQVLTALDVAKTQLYHFTAIVIAGMGFFTDAYDLFCISLVTKLLGRIYYHHEGAL 59
AtPht4 -----
PhPT2 -----
PhPT3 MAKDQLQVLNALDVAKTQLYHFTAIVIAGMGFFTDAYDLFCISLVTKLLGRIYYFHGEGAP 60
PhPT4 MASDNLVVLNALDTARTQWYHVTAIVIAGMGFFTDAYDLFCISTVSKLLGRLYYYDPSTK 60
PhPT5 MASNNLVNLNALDTAHTQWYHVTAVVIAGMGFFTDAYDLFCISTISKLLGRLYYYDPHTH 60

II III

LePT1 KPGSLPPNVSAAVNGVAFCGTLAQLFFGWLGDKMGRKKVYGMTLMIMVICSIASGLSFG 119
PhPT1 KPGSLPPNVAAAVNGVAFCGTLAQLFFGWLGDKLGKGRKKVYGMTLMLMVICSIASGLSFG 119
AtPht4 -----MTLMVMVLCIASGLSFG 18
PhPT2 -----
PhPT3 KPGILPSGISAAVNGVAFIGTSLGQLVFGLGDKLGKGRKKVYGMTLMLMVICSIAACGLSFG 120
PhPT4 APGKLPHMANNWVIGVALVGTLSGQLVFGWLGDKLGKGRKKVYGLTLILMVICALCSGLSLG 120
PhPT5 APGKLPHTVNNWVTGVALVGTLTGQLVFGWLGDKLGKGRKKVYGLTLILMVICALSSGLSFG 120

IV V

LePT1 HTPKGVMTTLCFFRFWLGFGLGGDYPLSATIMSEYANKKTRGAFIAAVFAMQGFILAGG 179
PhPT1 HTPKSVMATLTCFFRFWLGFGLGGDYPLSATIMSEYANKKTRGAFIAAVFAMQGFILAGG 179
AtPht4 HEPKAVMATLTCFFRFWLGFGLGGDYPLSATIMSEYANKKTRGAFVSAVFAMQGFIMAGG 78
PhPT2 -----
PhPT3 KTANGVIATLTCFFRFWLGFGLGGDYPLSATIMSEYANKKTRGAFIAAVFAMQGFILAGG 180
PhPT4 YSPKSVIGTLCFFRFWLGFGLGGDYPLSATIMSEYANKSTRGAFIAAVFAMQGVGIIFAG 180
PhPT5 YSRKVVIIGTLCFFRFWLGFGLGGDYPLSATIMSEYANKRTRGAFIAAVFAMQGVGIIFAG 180

VI

LePT1 MVAIVSAAFKGAFAPAPAYEVDIAIGSTVPQADVFVWRIILMFGAIPAGLTYWRMKMPETA 239
PhPT1 MVAIVSAAFKNQFPAPAYKDGALASTISQADVFVWRIIVMFGAIPALTYYWRMKMPETA 239
AtPht4 IFAI I ISSAFEAKFPSPAYADDALGSTIPQADLVWRIILMAGAI PAAMTYYSRSKMPETA 138
PhPT2 -----TA 2
PhPT3 IVALIVSAGFKNAYPAPTYSAHGKDSTPEADYVWRIIVMIGALPALLTYWRMKMPETA 240
PhPT4 LVSMTISKVFLMNFEGKPFNVDEVLSTEPEADYVWRIVLMLGALPALLTYWRMKMPETG 240
PhPT5 LVLMTVSKVFLMRYAGKAFSTDEVFSTEPEADYVWRIVLMLGALPALLTYWRMKMPETG 240

* .

LePT1 RYTALVAKNLKQAANDMSKVLQVEIEAEPEKVTAISEAKGANDFGLFTKEFLRRHGLHLL 299
PhPT1 RYTALVAKNLKQATNDMSKVLQVEIEPEQEKEVEEISQG---NDFGLFTKQFLRRHGLHLL 296
AtPht4 RYTALVAKDAKQAASDMSKVLQVEIEPEQQKLEEISKEK-SKAFGLFSKEFMSRHGLHLL 197
PhPT2 RYTALVAKDAKRAADMCKVLHVEIDPEDAKVERMAKDE-SNQFGLFSWEFVRRHGLHLF 61
PhPT3 RYTALVAKNTVKAADMCKVLNVEIEEDKATVEKIEENG--NSFGLFSKEFLRRHGLHLL 298
PhPT4 RYTAIEEGNAKQAAIDMGKVLDEIEIQAEQDKLAQFKAAN---EYSLLSNEFFQRHGLHLI 297
PhPT5 RYTAIEEGNAKQAAIDMGKVLDEIEIQAEQEKLAQFKAAN---DYSLLSNEFFQRHGLHLI 297
****: : **: **.*:***:***: : .: : : .:***: *. *****:

VII VIII

LePT1 GTASTWFLLDIAFYSONLFQKDFSAIGWIPPAQTMNALEEVYKIARAQTLIALCSTVPG 359
PhPT1 GTASTWFLLDIAFYSONLFQKDFSAIGWIPPAETMNALEEVYRIARAQTLIALCSTVPG 356
AtPht4 GTTSTWFLLDIAFYSONLFQKDFSAIGWIPPAQSMNAIQEVFKIARAQTLIALCSTVPG 257
PhPT2 GTCSTWFLLDIAFYSONLFQKDVFTAIGWIPPAKTMNAVQEVYKIARAQTLIALCSTVPG 121
PhPT3 GTTSTWFLLDIAFYSONLFQKDFSKIGWIPPPETMNALEEVYRIARAQTLIALCSTVPG 358
PhPT4 GTMSTWFLLDIAFYSONLTQKDFIPVMGLTSKANTISALREMFETS RAMFVIALFGTFPG 357
PhPT5 GTMSTWFLLDIAFYSONLTQKDFIPTMGLVSDAKSISALREMFETS RAMFVIALLGTFPG 357
** *****:***:*. :* . .:***:***: .*** :*** .***

IX X

LePT1 YWFTVAFIDKIGRFQAIQLMGFFFMTVFMFALAI PYHHWTLKDHRI GFVVMYSFTFFFANF 419
PhPT1 YWFTVAFIDKIGRFQAIQLMGFFFMTVFMFALAI PYTHWTHKDNRI GFVIMYSLTFFFANF 416
AtPht4 YWFTVAFIDVIGRFQAIQMMGFFFMTVFMFALAI PYNHWTHKENRI GFVIMYSLTFFFANF 317

