

Table 1 Suppl. Primer sequences of *Petunia hybrida ferredoxin-thioredoxin reductase variable subunit (PhFTRv)*, *Petunia hybrida ferredoxin-thioredoxin reductase catalytic subunit (PhFTRc)*, and *Petunia hybrida actin (PhACTIN)* used in quantitative real-time PCR.

Gene	Forward primer (5'→3')	Reverse primer (5'→3')
<i>PhFTRv</i>	AATTGGGACATTGAAACAGT	AAGGTGAGCAACAAACTTAA
<i>PhFTRc</i>	TCAGACAATTTCTATGGAGGAG	ATGGATGGGATTTTCAGCA
<i>PhACTIN</i>	TGCTGATCGAATGAGCAAGGAA	GGAGCAACAACCTTAATCTTC

Table 2 Suppl. Comparative analysis of *Petunia hybrida ferredoxin-thioredoxin reductase variable subunit (PhFTRv)* amino acid sequences with its closest homologues in *Arabidopsis thaliana*, *Nicotiana tomentosiformis*, *Solanum lycopersicum*, and *Oryza sativa*.

	PhFTRv	AtFTRA1	AtFTRA2	NtFRTv	SlFTRv	OsFTRv1
AtFTRA1	43.0 %	100 %				
AtFTRA2	44.4 %	59.9 %	100 %			
NtFRTv	78.1 %	42.5 %	43.2 %	100 %		
SlFTRv	74.5 %	40.7 %	43.2 %	78.0 %	100 %	
OsFTRv1	35.3 %	35.2 %	38.5 %	33.1 %	34.2 %	100 %
OsFTRv2	37.7 %	43.8 %	42.6 %	40.0 %	39.7 %	68.2 %

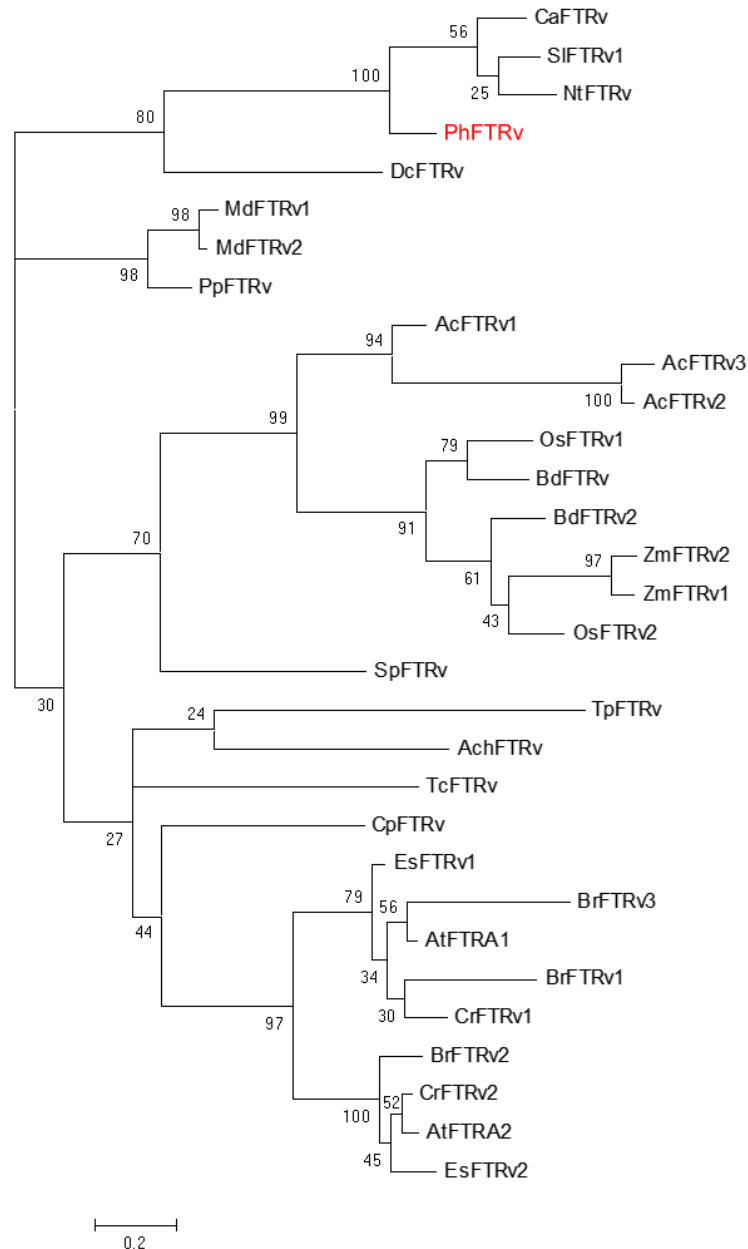


Fig. 1 Suppl. Phylogenetic analysis of the *Petunia hybrida* ferredoxin-thioredoxin reductase variable subunit (PhFTRv) family of proteins. A neighbor-joining phylogenetic tree derived from a multiple sequence alignment of the deduced full-length amino acid sequences of PhFTRv-related proteins of plants was constructed using the *ETE3* software (<https://www.genome.jp/tools-bin/ete>). *Petunia hybrida* PhFTRv (Peaxi162Scf00019g00006), *A. thaliana* AtFTRA1 (BAB09560) and AtFTRA2 (At5g08410), *Solanum lycopersicum* SIFTRv (XP_004229646), *Nicotiana tomentosiformis* NtFTRv (XP_016508304) (NCBI) and *Oryza sativa* OsFTRv1 (XP_015634256) (<https://www.ncbi.nlm.nih.gov/>), *Capsicum annuum* CaFTRv (Capana01g002634) (<http://peppersequence.genomics.cn/page/species/index.jsp>), *Ananas comosus* AcFTRv1 (Aco016350.1), AcFTRv2 (Aco031742.1) and AcFTRv3 (Aco030304.1), *Brachypodium distachyon* BdFTRv1 (Bradi5g16440.3) and BdFTRv2 (Bradi3g49790.1), *Brassica rapa* BrFTRv1 (Brara.B03716), BrFTRv2 (Brara.C00352.1), and BrFTRv3 (Brara.F02586), *Capsella rubella* CrFTRv1 (Carubv10002077m) and CrFTRv2 (Carubv10003540m), *Carica papaya* CpFTRv (evm.model.supercontig_248.7), *Daucus carota* DcFTRv (DCAR_006352), *Eutrema salsugineum* EsFTRv1 (Thhalv10005472m) and EsFTRv2 (Thhalv10014787m), *Malus domestica* MdFTRv1 (MDP0000795863) and MdFTRv2 (MDP0000589864), *Prunus persica* PpFTRv (Prupe.1G352600), *Spirodela polyrhiza* SpFTRv (Spipo1G0040100), *Theobroma cacao* TcFTRv (Thecc1EG007634t1), *Trifolium pratense* TpFTRv (Tp57577_TGAC_v2_mRNA26073), and *Zea mays* ZmFTRv1 (GRMZM2G139803_T01) and ZmFTRv2 (GRMZM2G157458_T01) (<https://phytozome.jgi.doe.gov/pz/>). The numbers represent the bootstrap values.

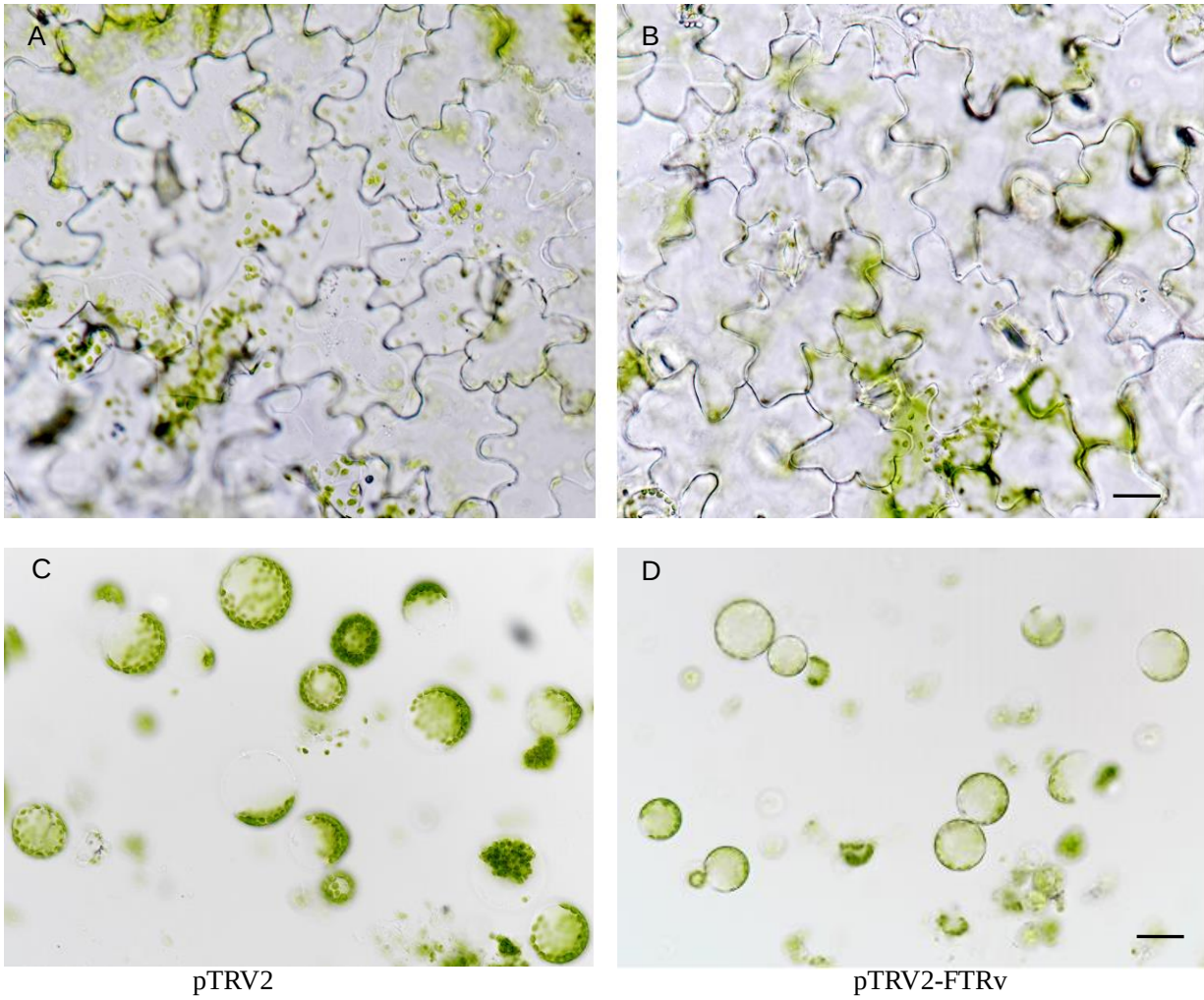


Fig. 2 Suppl. Effects of *Petunia hybrida ferredoxin-thioredoxin reductase variable subunit* silencing on leaf abaxial epidermal cells (A,B, a bar is 10 μm) and the number of chloroplasts in mesophyll cell (C,D; a bar is 20 μm). Mature leaves of 5-week-old plasmid tobacco rattle virus 2 (pTRV2)-treated (*left*) and pTRV2-ferredoxin-thioredoxin reductase variable subunit (FTRv)-treated (*right*) plants.

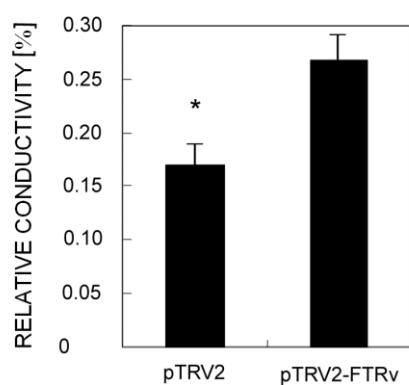


Fig. 3 Suppl. Effects of *Petunia hybrida ferredoxin-thioredoxin reductase variable subunit* silencing on relative electrical conductivity in tissues from the sixth leaves of plants five weeks after infection. pTRV2 - plasmid tobacco rattle virus 2, FTRv - ferredoxin-thioredoxin reductase variable subunit. Means $\pm$ SDs from three biological replicates. The *asterisk* indicates a significant difference at $P < 0.05$.