

UCP gene expression from *Vigna unguiculata* leaves under abiotic stress

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Uncoupling proteins (UCPs) dissipates the electrochemical gradient generated by respiration as heat. Recently, a more general role of UCPs is the regulation of energy metabolism in mitochondria to avoid the production of reactive oxygen species (ROS). Plant UCPs are encoding by multigene family that present distinct expression patterns among gene members. In a previous work we identified an UCP gene in *V. unguiculata* leaves orthologous to soybean *UCP1a*. The aim of this work was to study UCP gene expression from *V. unguiculata* L. Walp cv Vita 5 leaves under abiotic stress. The seeds of *V. unguiculata* were germinated in water and after 3 days the seedlings were transferred to Hoagland's medium and grown in the absence (control), presence of 0.1 M NaCl, 200.67 g/L PEG or 1 mM H₂O₂ during 4 days at green house. Total RNA was isolated from leaves and UCP mRNA was indirectly quantified by cDNA obtained through RT-PCR using degenerated primers deduced from conserved regions of UCP cDNAs 1 and 2 types of different species. UCP gene expression profile was slightly revealed in all stress conditions. These results suggest that UCP genes 1 and 2 types are more ubiquitously expressed such as constitutive genes.

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