



## Expression of *LTP* genes in response to saline stress in rice seedlings

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**ABSTRACT.** Saline stress is one of the primary factors limiting increased rice productivity in the southern region of Brazil. Farming can be affected by salinity that is due to both the origin of the soils as well as the irrigation water. Lipid transfer proteins (LTPs) have many physiological functions, including in the response to saline stress. Therefore, the objective of this study was to quantify the relative expression of 11 genetic isoforms that encode LTP1-type proteins in rice genotypes tolerant and sensitive to saline stress in the vegetative period. When the plants reached development stage V4, alternating irrigation was started with nutritive solution and water containing 150 mM NaCl. The *LTP7* gene showed an increase in expression by 13.81-fold after 96 h of stress exposure in the saline-tolerant group, whereas the *LTP10* gene expression level was increased by 71.10-fold after 96 h in the saline-sensitive group. The *LTP26*, *LTP23*, and *LTP18* genes showed increased expression in both genotypes; however, the expression levels and response times were different. Thus, *LTP7* and *LTP10* showed the highest response to salinity. The

*LTP18*, *LTP23*, and *LTP26* genes were negatively correlated with the response to salinity.

**Key words:** Abiotic stress; Lipid transfer proteins; *Oryza sativa* L.; *UBQ10*