

Title Differential expression of kiwifruit *ERF* genes in response to postharvest abiotic stress

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Abstract

Ethylene response factors (*ERFs*) play important roles in fruit ripening and abiotic stress response. After harvest, fruit such as kiwifruit are subject to a range of stresses associated with postharvest handling and storage treatments. There have been few attempts to evaluate fruit *ERF* responses in relation to such abiotic stress. Stress treatments including low temperature (0 °C), high temperature (35 °C), high CO₂ (5%) and high water loss (~10% RH air) were applied to freshly harvested mature kiwifruit. Expression patterns of 13 *AdERF* genes were followed. In response to the abiotic stresses, *AdERF3*, *AdERF4*, *AdERF11*, *AdERF12* and *AdERF14* were constitutively up-regulated, and *AdERF1* was generally down-regulated, while the other *AdERF* genes showed no regular expression patterns. These data showed that *AdERF* genes differentially respond to abiotic stresses experienced by fruit during postharvest storage.