Title: Overexpression of *VpEIFP1*, a novel F-box/Kelch-repeat protein from wild Chinese *Vitis pseudoreticulata*, confers higher tolerance to powdery mildew by inducing thioredoxin z proteolysis

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Overexpression of *VpEIFP1*, a novel F-box/Kelch-repeat protein from wild Chinese *Vitis pseudoreticulata*, confers higher tolerance to powdery mildew by inducing thioredoxin z proteolysis

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Highlights:

- *VpEIFP1*, an F-box gene from wild Chinese *Vitis pseudoreticulata*, was transcriptionally and translationally induced by *Erysiphe necator*.
- Overexpression of *VpEIFP1* in *Arabidopsis* and *Vitis* contributed to enhancing plants tolerance to powdery mildew attacks.
- As a component of SCF E3 ubiquitin ligase complex, VpEIFP1 mediated the degradation of VpTrxz via the ubiquitin/26S proteasome system in grapevine.

Abstract

An F-box protein (VpEIFP1) induced by *Erysiphe necator* was isolated from *Vitis*