

Accepted Manuscript



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

Authors: Jie Wang, Wenkong Yao, Lei Wang, Fuli Ma, Weihuo Tong, Chen Wang, Rui Bao, Changyue Jiang, Yazhou Yang, Jianxia Zhang, Yan Xu, Xiping Wang, Chaohong Zhang, Yuejin Wang

PII: S0168-9452(17)30271-6
DOI: <http://dx.doi.org/doi:10.1016/j.plantsci.2017.07.004>
Reference: PSL 9632

To appear in: *Plant Science*

Received date: 28-3-2017
Revised date: 3-7-2017
Accepted date: 7-7-2017

Please cite this article as: Jie Wang, Wenkong Yao, Lei Wang, Fuli Ma, Weihuo Tong, Chen Wang, Rui Bao, Changyue Jiang, Yazhou Yang, Jianxia Zhang, Yan Xu, Xiping Wang, Chaohong Zhang, Yuejin Wang, 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, *Plant Science* <http://dx.doi.org/10.1016/j.plantsci.2017.07.004>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

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

Jie Wang^{a,b,c}, Wenkong Yao^{a,b,c}, Lei Wang^{a,b,c}, Fuli Ma^{a,b,c}, Weihuo Tong^{a,b,c}, Chen Wang^{a,b,c}, Rui Bao^{a,b,c}, Changyue Jiang^{a,b,c}, Yazhou Yang^{a,b,c}, Jianxia Zhang^{a,b,c}, Yan Xu^{a,b,c}, Xiping Wang^{a,b,c}, Chaohong Zhang^{a,b,c,*}, Yuejin Wang^{a,b,c,*}

^a College of Horticulture, Northwest A&F University, Yangling 712100, Shaanxi, China

^b Key Laboratory of Horticultural Plant Biology and Germplasm Innovation in Northwest China, Ministry of Agriculture, Yangling 712100, Shaanxi, China

^c State Key Laboratory of Crop Stress Biology in Arid Areas, Northwest A&F University, Yangling 712100, Shaanxi, China

* For correspondence: C. Zhang (Tel: +86-02987082522; Fax: +86-02987082522; E-mail: zhang2659@126.com); Y. Wang (Tel: +86-02987082522; Fax: +86-02987082522; E-mail: wangyj@nwsuaf.edu.cn).

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*

Download English Version:

<https://daneshyari.com/en/article/5515767>

Download Persian Version:

<https://daneshyari.com/article/5515767>

[Daneshyari.com](https://daneshyari.com)