[Cat. No.] K-6900

Introduction

AccuPower® Walnut blight Real-time PCR Kit is a ready-to-use premix for real-time PCR that can be used to detect *Xanthomonas campestris pv. Juglandis* that causes walnut brown rot. *Xanthomonas campestris pv. Juglandis* is an anaerobic gram-negative bacterium that can infect the flowers, buds, branches, stems and fruits of walnut trees. It is the main causative agent of walnut blight disease, which is classified as one of the infectious diseases that must be controlled by the government in Korea. After infection, brown spots appear on the leaves and fruits. The branch turns black and withers. Since this infection is difficult to control with medication, it is important to conduct preliminary tests and take preventive measures to prevent spread.
This product contains vacuum-dried components specific to *Xanthomonas campestris pv. Juglandis* including DNA polymerase, primers, dNTPs, and reaction buffer required for real-time PCR. This ready-to-use kit simplifies preparation of real-time PCR mixture as the user only has to add template DNA and DEPC-D.W.

Features & Benefits

- Convenience & Reproducibility: All reactants necessary for real-time PCR including primers are lyophilized in each PCR tube, providing reproducible results in a convenient way.
- Sensitivity: By applying the patented PyroHotStart (Enzyme-mediated HotStart) technology that minimizes non-specific reactions and maximizes reaction efficiency, only the target gene can be effectively amplified even with a trace amount of template DNA.
- Stability: Included stabilizer in the real-time PCR reaction mixture provides increased stability compared to solution-type products.

Composition

Composition	50 µl reaction
Taq DNA Polymerase	1 U
dNTPs (dATP, dCTP, dGTP, dTTP)	Each 250 µM
Reaction buffer with 1.5 mM $MgCl_2$	1X
Pi Forward primer	0.4 µM
Pi Reverse primer	0.4 µM
Po4 Probe (FAM)	0.4 µM

*** Note:** For research use only. Not for use in diagnostic or therapeutic procedures.

Specifications

Taq DNA Polymerase	
5'→3' exonuclease activity	Yes
3'→5' exonuclease activity	No
3'–A overhang	Yes

Storage

Store at -20°C. If stored in the recommended temperature, this product will be stable until the expiration date printed out on the label.

Online Resources

English

Visit our **product page** for additional information and protocols

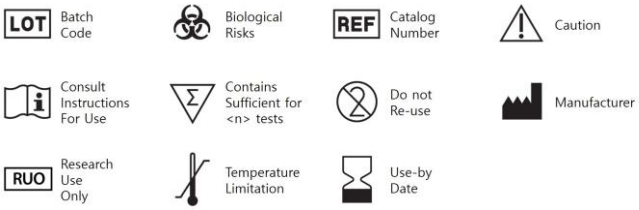
Ordering Information

Description	Cat. No.
AccuPower® Walnut blight Real-time PCR Kit, 0.2 ml thin-wall 8-tube strips with attached cap / 96 tubes	K-6900

Notice

BIONEER corporation reserves the right to make corrections, modifications, improvements and other changes to its products, services, specifications or product descriptions at any time without notice.

Explanation of Symbols



Experimental Procedures

<table>
<tr><th colspan="2">Steps</th><th>Procedure Details</th></tr>
<tr><td>1</td><td> 
Add template DNA</td><td>1. After preparing the template DNA and DEPC-D.W., add the template DNA to the AccuPower® Walnut blight Real-time PCR Kit.</td></tr>
<tr><td>2</td><td> 
Preparation of reaction mixture</td><td>2. Add DEPC-D.W. into PCR tubes to make a total volume of 50 µl.
(Do not include the volume of the dried premix in the PCR tubes.)

3. Completely dissolve the vacuum-dried pellet by vortexing, and briefly spin down.</td></tr>
<tr><td>3</td><td> 
Real-time PCR</td><td>4. Place PCR tubes on the Real-Time Quantitative thermal cycler.

5. Perform the reaction under the following conditions.
<table><tr><th>Step</th><th>Temperature</th><th>Time</th><th>Cycles</th></tr><tr><td>Pre-denaturation</td><td>95°C</td><td>10 min</td><td>1 cycle</td></tr><tr><td>Denaturation</td><td>95°C</td><td>5 sec</td><td rowspan="2">45 cycles</td></tr><tr><td>Annealing & Extension</td><td>57°C</td><td>40 sec</td></tr></table>* Note: Users can adjust the protocol according to their instrument and template sequences to get optimal results.

6. After the reaction is completed, analyze the results.</td></tr>
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