

Phomopsis viticola End-Point PCR Control (100)



Cat. No. CPD-579

Lot. No. (See product label)

Product Name

Phomopsis viticola End-Point PCR Control (100)

Product Overview

Phomopsis viticola End-Point PCR Control (100) is designed for the detection of Phomopsis viticola DNA based on the use of end-point PCR technology.

Description

Phomopsis viticola End-Point PCR Control (100) is designed for the detection of *P. viticola* specific DNA based on the use of end-point PCR technology. This kit is designed for research use only and not for use in diagnostic procedures. The kit includes Master Mix and primers for the specific amplification of a 300 nucleotide region of the *P. viticola* genome, as well as a positive control and a negative control to confirm the integrity of the kit reagents. In addition, the kit contains loading dye and a DNA ladder to facilitate analysis of the results.

Kit Components

Component Product
2X PCR Master Mix 350 µL
P. viticola Primer Mix 70 µL
P. viticola Positive Control 50 µL
Nuclease-Free Water 1.25 mL
Loading Dye 100 µL
DNA Ladder 100 µL
Product Insert 1

Materials Required but Not Supplied

Appropriate Real-Time PCR Instrument with FAM and HEX filter channel;
DNA Purification Kit: The kit is compatible with all DNA purification kits that yield high quality, inhibitor-free DNA;
Disposable powder-free gloves;
Benchtop microcentrifuge;
Micropipettors;
Sterile pipette tips with filters;
PCR tubes;
Vortex mixer;
Agarose gel electrophoresis apparatus;
UV transilluminator with suitable gel documentation system;
PCR reaction preparation station (Optional).

Scientific Background

Phomopsis cane and leaf spot, caused by *Phomopsis viticola*, occurs in most grape-growing regions and is an important disease of grapes worldwide. The fungus attacks all green parts of the vine, including canes, leaves, flowers, rachises, and berries. However, most economic damage is caused by rachis and berry infection. Infected leaves have small, yellowish spots with dark brown centers and may be puckered. With successive cool, wet springs, the inoculum will build up and infections will become more severe over time. Since symptoms appear 21 to 30 days after infection, early detection of the pathogen in the vineyard is therefore crucial for its control.

Detection method

End-Point PCR

Preparation

Before use, suitable amounts of all End-Point PCR components should be completely thawed at room temperature, mixed by gentle vortexing or by pipetting, and centrifuged briefly.

Assay Protocol

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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1. For each PCR set, prepare one no template control PCR as shown in Table 1 below:

Table 1. PCR Negative Control Preparation

PCR Components Quantity

Nuclease-Free Water 8 μ L

2X PCR Master Mix 10 μ L

P. viticola Primer Mix 2 μ L

Total Volume 20 μ L

2. Prepare the PCR reaction for sample detection as shown in Table 2 below.

Table 2. PCR Aspergillus niger Assay Preparation

PCR Components Quantity

Nuclease-Free Water 5 μ L

2X PCR Master Mix 10 μ L

P. viticola Primer Mix 2 μ L

Sample DNA 3 μ L

Total Volume 20 μ L

3. For each PCR set, prepare one positive control PCR as shown in Table 3 below:

Table 3. PCR Positive Control Preparation

PCR Components Quantity

2X PCR Master Mix 10 μ L

P. viticola Primer Mix 2 μ L

P. viticola Positive Control (PosC) 8 μ L

Total Volume 20 μ L

Sample Type

Plant tissues

Storage

All kit components should be stored at -20°C upon arrival;
Repeated thawing and freezing (> 2 x) of the Master Mix and Positive Control should be avoided, as this may affect the performance of the assay. If the reagents are to be used only intermittently, they should be frozen in aliquots;
All reagents can be stored for 1 year at -20°C without showing any reduction in performance.

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