Cladosporium cladosporioides End-Point PCR Control (100)

Cat. No. *CPD-575*

Lot. No. (See product label)

Product Name

Cladosporium cladosporioides End-Point PCR Control (100)

Product Overview

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

Description

Cladosporium cladosporioides End-Point PCR Control (100) is designed for the detection of C. cladosporioides 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 320 nucleotide region of the C. cladosporioides 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
C. cladosporioides Primer Mix 70 µL
C. cladosporioides 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

Cladosporium is one of the most widespread molds. It includes about 40 species naturally found in soil, on decaying plant material and as plant pathogens. Cladosporium rot (Cladosporium spp.) of grapevine (Vitis vinifera) is a common disease, particularly in Cabernet Sauvignon and other red wine grape cultivars. It is favored by delayed harvest to obtain the phenolic maturity necessary for high-quality red wine. Symptoms appear on mature grapes and are characterized by berry dehydration, a firm decay affecting a small portion of the berry and a superficial olivegreen mold. Rapid and accurate detection of Cladosporium infections is highly important to facilitate the monitoring of Cladosporium in plant samples.

Detection method

End-Point PCR

Preparation

Before use, suitable amounts of all End-Point PCR components should be completely thawed at room

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temperature, mixed by gentle vortexing or by pipetting, and centrifuged briefly.

Assay Protocol

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 µL
2X PCR Master Mix 10 µL
C. cladosporioides Primer Mix 2 µL
Total Volume 20 µL

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 µL
2X PCR Master Mix 10 µL
C. cladosporioides Primer Mix 2 µL
Sample DNA 3 µL
Total Volume 20 µL

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 µL
C. cladosporioides Primer Mix 2 µL
C. cladosporioides Positive Control (PosC) 8 µL
Total Volume 20 µL

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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