

Aspergillus niger Real-Time PCR Control (100)



Cat. No. CPD-572

Lot. No. (See product label)

Product Name

Aspergillus niger Real-Time PCR Control (100)

Product Overview

Aspergillus niger Real-Time PCR Control (100) is designed for the detection of Aspergillus niger DNA based on the use of real-time PCR technology.

Description

Aspergillus niger Real-Time PCR Control (100) is designed for the detection of Aspergillus niger specific DNA based on the use of real-time PCR technology. The detection of Aspergillus niger specific DNA is providing a simple, reliable and rapid result for the detection of Aspergillus niger. Aspergillus niger Real-Time PCR Control (100) includes a PCR control to monitor for PCR inhibition, and to validate the quality of the sample and the detection result. The Aspergillus niger Real-Time PCR Control (100) comprises Master Mix for the target and PCR control detection, Primer & Probe Mix, as well as a positive control and a negative control (nuclease-free water) to confirm the integrity of the kit reagents.

Kit Components

Component Product
2X PCR Master Mix 350 µL
Aspergillus niger Primer & Probe Mix 70 µL
Aspergillus niger Positive Control 50 µL
Nuclease-Free Water (Negative control) 1.25 mL
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;
PCR reaction preparation station (Optional).

Scientific Background

Aspergillus niger is a fungus and one of the most common species of the genus Aspergillus. It causes a disease called black mold on certain fruits and vegetables such as grapes, onions, and peanuts, and is a common contaminant of food. It causes stem rot of Dracaena, root stalk rot of Sansevieria and boll rot of cotton. It has also been implicated in the spoilage of cashew kernels, dates, figs, vanilla pods and dried prunes. It is ubiquitous in soil and is commonly reported from indoor environments, where it produces characteristic black colonies. Some strains of A. niger have also been reported to produce potent mycotoxins called ochratoxins. Methods for the rapid and sensitive detection of the pest would be valuable to ensure food quality and protection of individuals from the possibility of ingesting potentially hazardous myco- or ochratoxins.

Detection method

Real-Time PCR

Preparation

Before use, suitable amounts of all Real-Time 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 Real-Time 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

Aspergillus niger Primer & Probe 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

Aspergillus niger Primer & Probe 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

Aspergillus niger Primer & Probe Mix 2 μ L

Aspergillus niger 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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