

Aspergillus niger Detection Kits



Cat. No. PDF-115

Lot. No. (See product label)

Product Name

Aspergillus niger Detection Kits

Product Overview

Aspergillus niger PCR Kit is designed for the detection of Aspergillus niger specific DNA in a real-time PCR.

Description

Aspergillus niger PCR Kit is designed for the detection of Aspergillus niger specific DNA in a real-time PCR based on the use of technology. This kit is designed for research use only and not for use in diagnostic procedures. The detection of Aspergillus niger specific DNA is based on PCR providing a simple, reliable and rapid result for the detection of Aspergillus niger. Aspergillus niger PCR Kit includes a PCR control to monitor for PCR inhibition, and to validate the quality of the sample and the detection result. The Aspergillus niger PCR Kit 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.

Notes

1. Before use, suitable amounts of all components should be completely thawed at room temperature, mixed by gentle vortexing or by pipetting, and centrifuged briefly.
2. Work quickly on ice.
3. The recommended minimum number of DNA samples tested per PCR run is 6.

Sample Type

Fungi

Warning

1. Follow universal precautions. All specimens should be considered as potentially infectious and handled accordingly.
2. Ensure that a suitable lab coat, disposable gloves, and protective goggles are worn when handling specimens and kit reagents.
3. Use sterile pipette tips with filters. Use proper pipetting techniques and maintain the same pipetting pattern throughout the procedure to ensure optimal and reproducible values.
4. Ensure that appropriate specimen collection, transport, storage, and processing techniques are followed for optimal performance of this test.

Kit Components

1. MDx 2X PCR Master Mix 350 µL
2. Aspergillus niger Primer & Probe Mix 70 µL
3. Aspergillus niger Positive Control 50 µL
4. Nuclease-Free Water (Negative control) 1.25 mL
5. Product Insert 1

Materials Required but Not Supplied

1. Appropriate Real-Time PCR Instrument with FAM and HEX filter channel
2. DNA Purification Kit
3. Disposable powder-free gloves
4. Benchtop microcentrifuge
5. Micropipettors
6. Sterile pipette tips with filters
7. PCR tubes
8. Vortex mixer
9. 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

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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

PCR

Features & Benefits

The specificity of *Aspergillus niger* PCR Detection Kit is first and foremost ensured by the selection of the *Aspergillus niger*-specific primers, as well as the selection of stringent reaction conditions. The *Aspergillus niger* primers were checked for possible homologies to all microorganisms in GenBank published sequences by sequence comparison analysis.

Preparation

Purified DNA is the starting material for *Aspergillus niger* PCR Kit. The quality of the DNA template will have a major impact on the performance of the *Aspergillus niger* detection test. The user must ensure that the method used for DNA purification is compatible with PCR. If using a different spin column-based sample preparation procedure that includes ethanol-based wash buffers, a column drying step consisting of centrifugation for 3 minutes at 20,000 x g (~14,000 RPM), using a new collection tube, is highly recommended prior to the elution of the DNA. This will help to prevent the carry-over of any ethanol into the purified DNA, as ethanol is known to be a strong inhibitor of PCR. Ensure that any traces of ethanol from the sample preparation steps are eliminated prior to the elution of the DNA.

Assay Protocol

Detailed instructions, including assay protocol, are available in each corresponding product for operational reference.

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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