

Mycoreal Kit *Aspergillus*



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Order no.	Reactions	Pathogen	Internal positive control
DHUF00253	50	FAM + VIC channel	Cy5 channel

Kit contents:

- Detection Assay 1 for *A. flavus* (FAM), *A. fumigatus* (VIC) and IPC (Cy5)
- Detection Assay 2 for *A. nidulans*, *A. niger* (FAM), *A. terreus* (VIC) and IPC (Cy5)
- Target for internal DNA positive control (control of PCR amplification and DNA extraction)
- DNA reaction mix
- Nuclease-free water
- Positive control for *A. fumigatus* + *A. flavus* + *A. nidulans* + *A. terreus*



Background: *Aspergillus* is a fungal genus consisting of several hundred species. *Aspergillus* species are ubiquitously found and some species can cause opportunistic infections such as allergic bronchopulmonary aspergillosis, pulmonary aspergilloma and invasive aspergillosis. Invasive aspergillosis is increasingly recognized as a primary cause of morbidity and mortality especially in immunocompromised patients. *Aspergillus fumigatus* is the predominant disease-causing species. However, other species than *A. fumigatus*, in particular *A. terreus* and *A. flavus* but also *A. niger*, *A. nidulans* and *A. ustus* have gained greater clinical significance.

Not only the detection, but also the identification of the fungal species is important. The species might provide information on a potential contamination, colonisation or infection and moreover antifungal resistance.

Description: MycoReal Kit *Aspergillus* is an *in vitro* diagnostic test based on a real-time PCR for the detection of *Aspergillus fumigatus*, *Aspergillus flavus*, *Aspergillus terreus*, *Aspergillus niger* and *Aspergillus nidulans* from samples purified from bronchoalveolar lavages (BAL), blood, aspirates, cerebrospinal fluid and tissue. The kit detects the internal transcribed spacer 2 (ITS2-region, multicopy gene) of *Aspergillus*. Analysis is done with Assay Mix 1 and Assay Mix 2 in two parallel PCR-reactions. The internal DNA positive control (DNA IPC) is detected in Cy5 channel and is used as DNA extraction as well as PCR inhibition control. The DNA IPC target is extracted with the sample.

PCR-platforms: This kit has been validated with ABI® 7500 instrument (Thermo Fisher Scientific) and tested with cobas z 480 Analyzer (Roche). It is compatible with real-time PCR instruments detecting and differentiating fluorescence in FAM, VIC and Cy5 channel.

Specificity and sensitivity: This kit detects *A. fumigatus*, *A. flavus*, *A. terreus*, *A. niger* and *A. nidulans*. Furthermore, it detects some other closely related *Aspergillus*/*Emericella* species belonging to *Aspergillus* section *Fumigati*, *Flavi*, *Terrei*, *Nigri*, *Nidulantes*, *Usti* and *Versicolori*. It does not cross react with other fungi. MycoReal Kit *Aspergillus* has a LoD 95% (defined as the concentration, where 95% of 20 PCR repeats were positive) between 2-11 target copies/PCR, depending on the species.

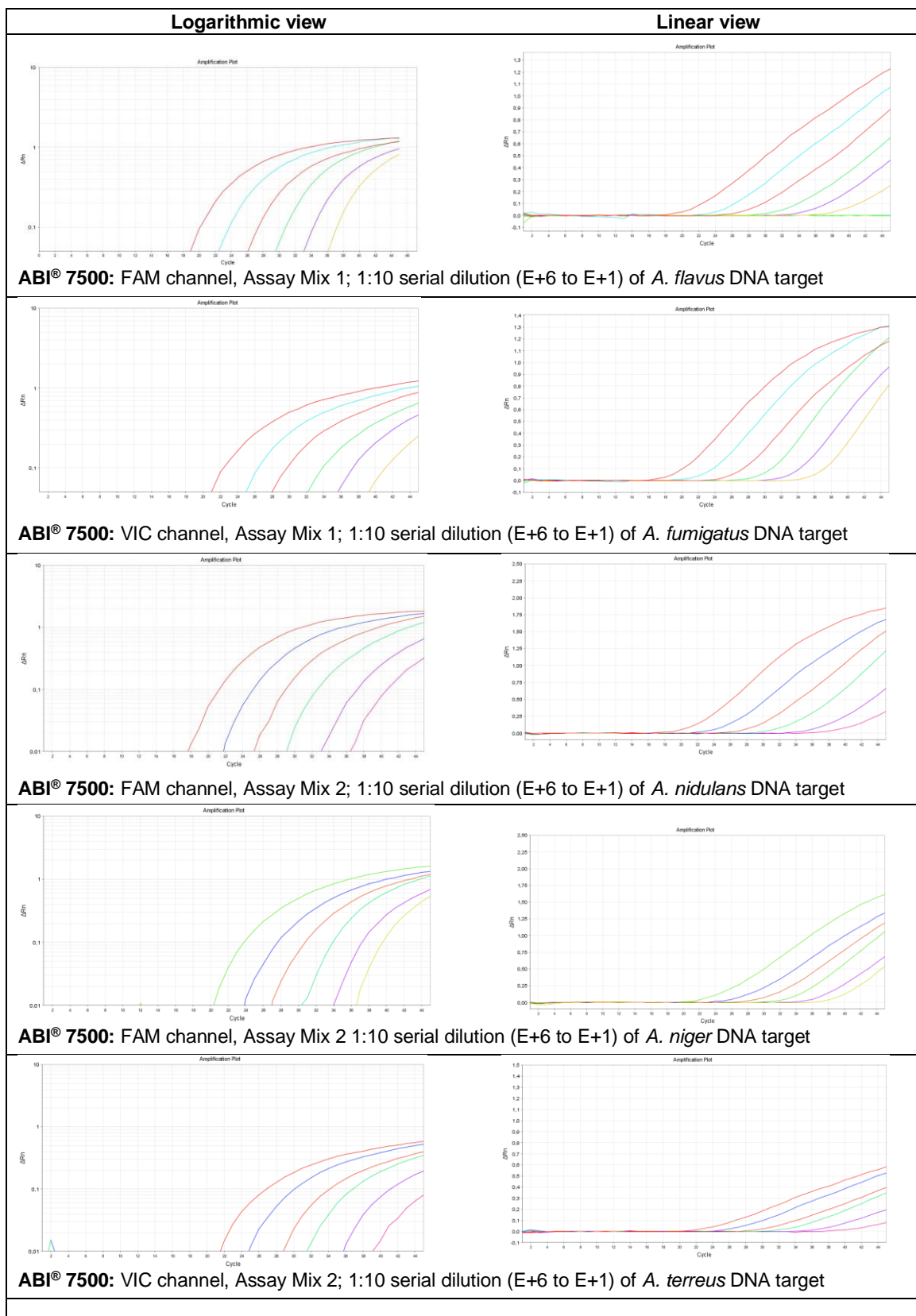


Figure 1 Performance of MycoReal Kit *Aspergillus*