

MycoReal Kit

Nosema apis & *ceranae*



For veterinary use only

MycoReal Kit *Nosema apis* & *ceranae*

Order no.	Reactions	Pathogen	Internal positive control
DVEF00113	100	FAM + VIC/HEX channel	Cy5 channel
DVEF00153	50	FAM + VIC/HEX channel	Cy5 channel

Kit contents:

- *Nosema apis* detection assay
- *Nosema ceranae* detection assay
- Detection assay for internal positive control (control of amplification)
- DNA reaction mix (contains uracil-N glycosylase, UNG)
- Positive controls for *Nosema apis* and *Nosema ceranae*
- Water

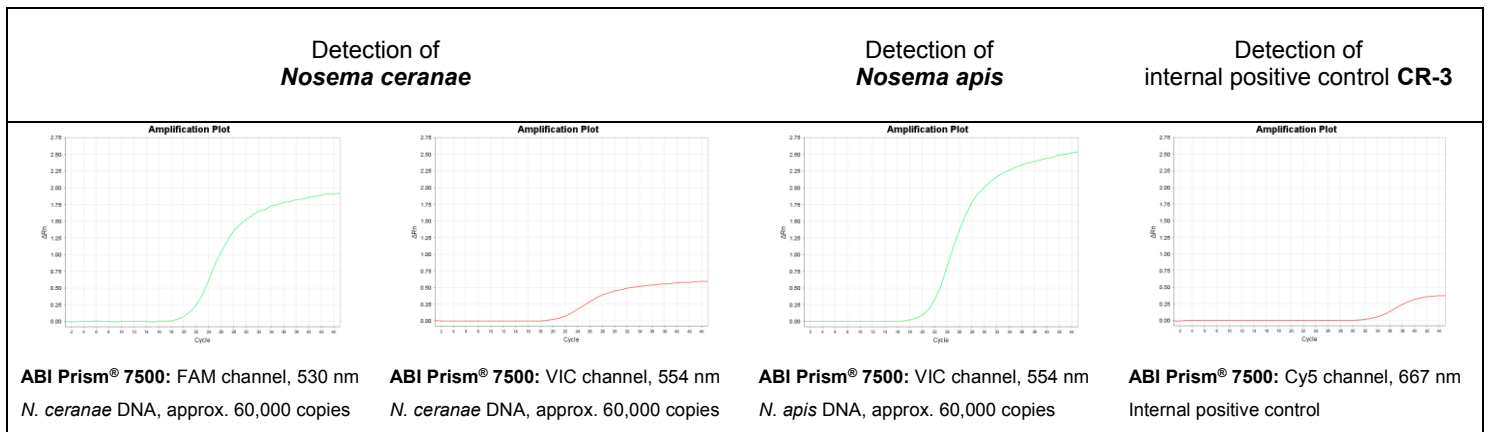
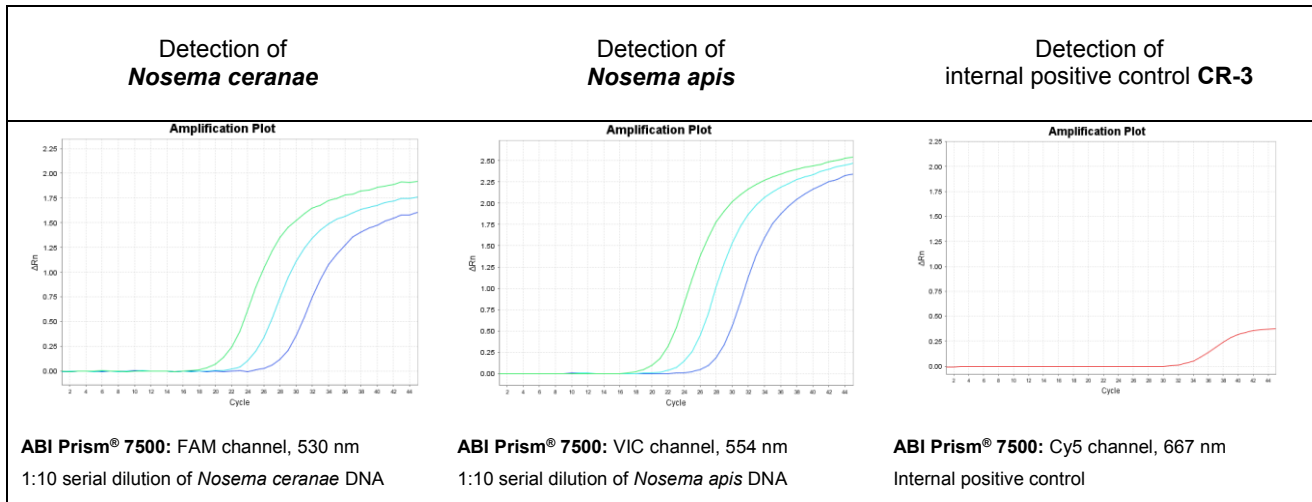


Background: *Nosema apis* and *Nosema ceranae* are microsporidian parasites recently reclassified as a fungus. Both species cause nosema disease in honey bees (*Apis mellifera*). The dormant stages are long-lived spores. The most notable symptom is dysentery. *Nosema ceranae* can be detected in all four seasons, while *Nosema apis* occurs mostly in the milder seasons of autumn and spring. There is a higher mortality of bees when they are infected by *Nosema ceranae* than when infected with *Nosema apis*. Double infection is also possible.

Description: MycoReal Kit *Nosema apis* & *ceranae* is based on the detection and differentiation of the 18S rRNA gene of *Nosema apis* (detection in VIC/HEX channel) as well as of the 18S rRNA gene of *Nosema ceranae* (detection in FAM and VIC/HEX channel) using multiplex real-time PCR. Thus, samples showing a positive signal in FAM as well as in VIC/HEX channel are positive for *N. ceranae*. Samples showing a positive signal in VIC/HEX channel are positive for *N. apis*. The kit facilitates the rapid and sensitive detection and differentiation of DNA of *Nosema apis* and *Nosema ceranae* from samples purified from bees (e.g. with the QIAamp DNA Mini Kit).

PCR-platforms: MycoReal Kit *Nosema apis* & *ceranae* is developed and validated for the ABI PRISM® 7500 instrument (Life Technologies), LightCycler® 480 (Roche) and Mx3005P® QPCR System (Agilent), but is also suitable for other real-time PCR instruments.

Sensitivity and specificity: MycoReal Kit *Nosema apis* & *ceranae* has an analytical sensitivity of approx. 3 target copies/PCR reaction. It is specific for *Nosema apis* and *Nosema ceranae*.



BactoReal®, MycoReal, ParoReal and ViroReal® Kits run with the same thermal cycling conditions. RNA and DNA material can be analysed in one PCR run.

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