

BactoReal® Kit *Nocardia* spp.



For research only, not for diagnostic use

BactoReal® Kit <i>Nocardia</i> spp.			
Order no.	Reactions	Pathogen	Internal positive control
DVEB03613	100	FAM channel	Cy5 channel
DVEB03653	50	FAM channel	Cy5 channel
DVEB03611	100	FAM channel	VIC/HEX channel
DVEB03651	50	FAM channel	VIC/HEX channel

Kit contents:

- Detection assay for *Nocardia* species
- Detection assay for internal positive control (control of amplification)
- DNA reaction mix (contains uracil-N glycosylase, UNG)
- Positive control for *Nocardia asteroides*
- Water



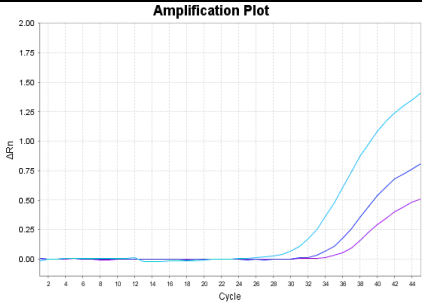
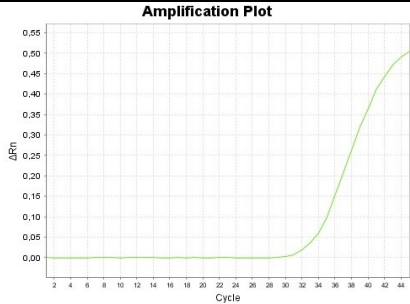
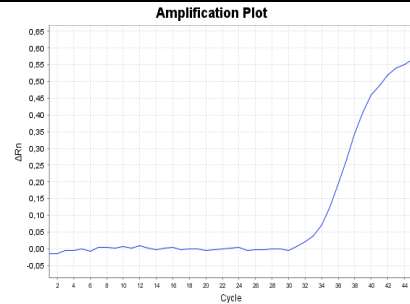
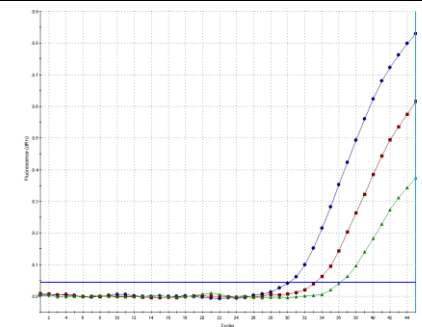
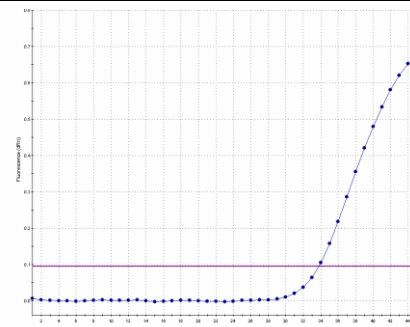
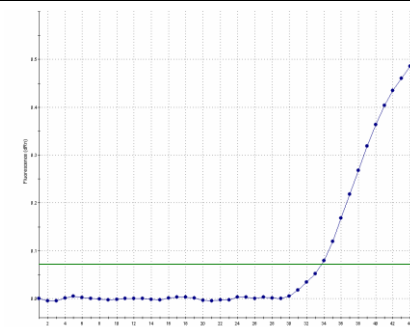
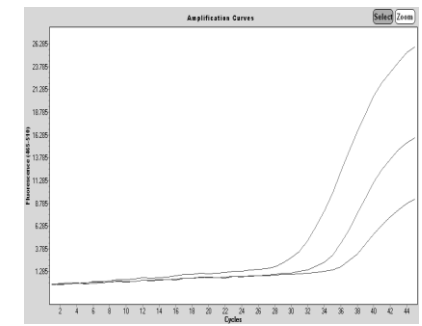
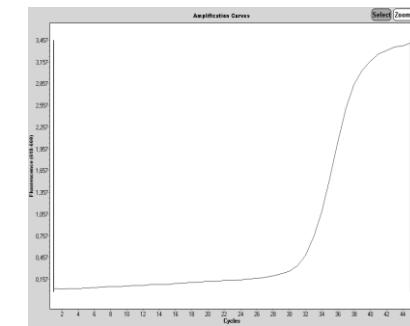
Background: *Nocardia* is a genus of Gram-positive, facultative intracellular bacteria belonging to the *Actinomycetes*. *Nocardia* species are found worldwide in soil, water and plants. This genus has a total of 85 species, of these > 25 have been recognized as causes of human infections, and > 30 are responsible for animal diseases. *Nocardia* spp. cause opportunistic disease in humans and animals. Nocardiosis is an infectious disease affecting either the lungs, but it may spread to other organ systems, most often the brain and the skin. It may also involve the kidneys, joints, heart, eyes, and bones. Bovine mastitis is the most common clinical manifestation of nocardiosis among domestic ruminants. Nocardial mastitis is observed in dairy herds submitted to inadequate milking management and/or poor hygienic conditions in pre- and post-milking. The most important pathogenic species for humans and animals are *N. asteroides* complex, *N. brasiliensis*, *N. pseudobrasiliensis*, *N. otitidiscaviarum*, and *N. transvalensis*.

Description: BactoReal® Kit *Nocardia* spp. is based on the amplification and detection of the 16S rDNA gene of *Nocardia* spp. using real-time PCR. It allows the rapid and sensitive detection of the 16S rDNA gene of *Nocardia* spp. from DNA samples purified from biopsies, blood, swabs, milk, etc. (e.g. with the QIAamp DNA Mini Kit).

PCR-platforms: BactoReal® Kit *Nocardia* spp. 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: BactoReal® Kit *Nocardia* spp. has an analytical sensitivity of 50 copies/reaction, as in negative samples the presence of contaminating DNA of *Actinomycetes* in the extraction or amplification reagents results in weak positive amplification. This kit may also detect other *Actinomycetes*.

References: Ribeiro M. G., Salerno T., De Mattos-Guaraldi A. L., Camello T. C. F., Langoni H., Siqueira A. K., Paes A. C., Fernandes M. C. and Lara G. H. B. 2008. Nocardiosis: An overview and additional report of 28 cases in cattle and dogs. Rev. Inst. Med. Trop. S. Paulo 50: 177 – 185.

Detection of <i>Nocardia</i> spp.	Detection of internal positive control CR-3	Detection of internal positive control CR-1
		
<p>ABI Prism® 7500: FAM channel, 530 nm 1:10 serial dilution of <i>N. asteroides</i> DNA</p>	<p>ABI Prism® 7500: Cy5 channel, 667 nm Internal positive control</p>	<p>ABI Prism® 7500: VIC channel, 554 nm Internal positive control</p>
		
<p>Mx3005P®: FAM channel 1:10 serial dilution of <i>N. asteroides</i> DNA</p>	<p>Mx3005P®: CY5 channel Internal positive control</p>	<p>Mx3005P®: HEX channel Internal positive control</p>
		
<p>LightCycler® 480: FAM channel 1:10 serial dilution of <i>N. asteroides</i> DNA</p>	<p>LightCycler® 480: Cy5 channel Internal positive control</p>	

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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