

BactoReal® Kit *Mycoplasma gallisepticum*



For veterinary use only

BactoReal® Kit *Mycoplasma gallisepticum*

| Order no. | Reactions | Pathogen | Internal positive control |
|-----------|-----------|-------------|---------------------------|
| DVEB00313 | 100 | FAM channel | Cy5 channel |
| DVEB00353 | 50 | FAM channel | Cy5 channel |
| DVEB00311 | 100 | FAM channel | VIC/HEX channel |
| DVEB00351 | 50 | FAM channel | VIC/HEX channel |

Kit contents:

- Detection assay for *Mycoplasma gallisepticum*
- Detection assay for internal positive control (control of amplification)
- DNA reaction mix (contains uracil-N glycosylase, UNG)
- Positive control for *M. gallisepticum*
- Water



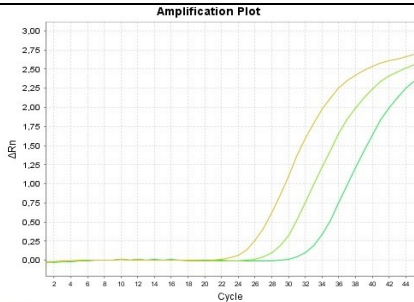
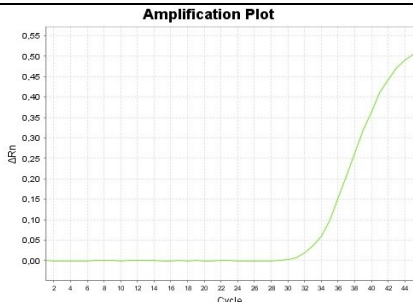
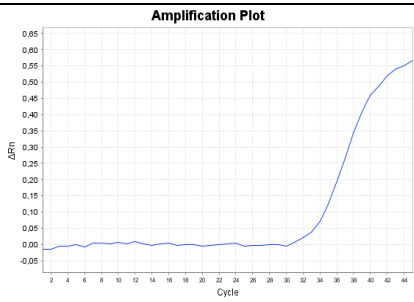
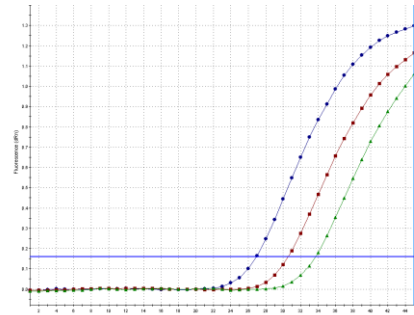
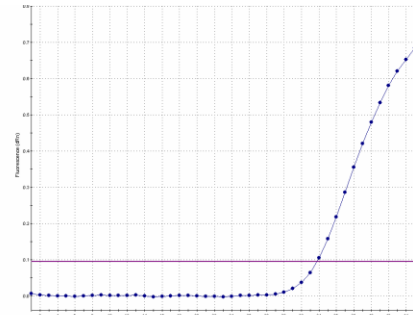
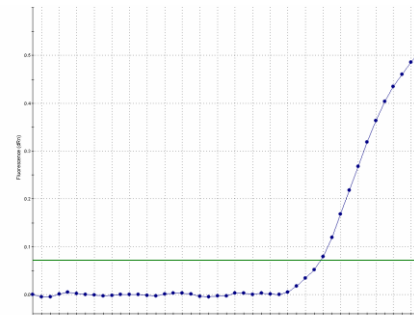
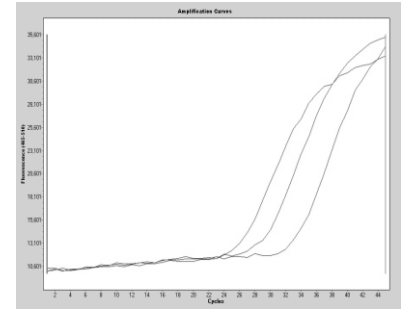
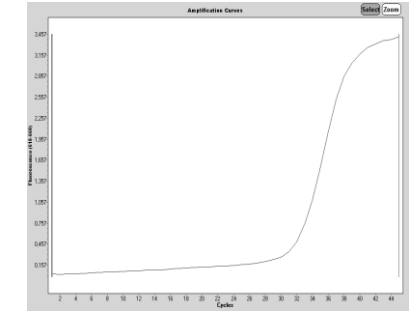
Background: Avian mycoplasmosis is caused by several pathogenic mycoplasmas. *Mycoplasma gallisepticum* and *Mycoplasma synoviae* are the most important avian pathogens. In addition, *Mycoplasma meleagridis* and *Mycoplasma iowae* can also cause disease in poultry, but *Mycoplasma gallisepticum* and *Mycoplasma synoviae* are considered to be the main species of pathogenic mycoplasmas. *Mycoplasma gallisepticum* and *Mycoplasma synoviae* cause chronic respiratory disease (CRD) and infectious synovitis of chickens and turkeys especially in the presence of stresses or other respiratory pathogens, causing economic losses due to decrease in growth rate, loss of weight and reduced egg production.

Description: BactoReal® Kit *Mycoplasma gallisepticum* is based on the amplification and detection of the *mgc2* gene (cytadhesin-like protein encoding gene) of *M. gallisepticum* using real-time PCR. It allows the rapid and sensitive detection of the *mgc2* gene of *M. gallisepticum* from DNA samples purified from faecal samples, or swabs of tissues, exudates, diluted tissue homogenates, aspirates from the infraorbital sinuses or joint cavities, as well as from material from egg yolk or embryos (e.g. with the QIAamp DNA Mini Kit extraction methods).

PCR-platforms: BactoReal® Kit *Mycoplasma gallisepticum* 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 *Mycoplasma gallisepticum* has an analytical sensitivity of 10 target copies/PCR reaction. The limit of detection (LoD95 = smallest number of copies of target DNA which can be detected in 95% of cases) is 27 target copies/reaction and was determined by several replicates around the detection limit. The kit is specific for *M. gallisepticum*. Specificity was tested on isolates of *M. meleagridis*, *M. synoviae* and *M. gallisepticum*. No cross reactions were observed. *Mycoplasma imitans*, a *Mycoplasma* species that is serologically related to *M. gallisepticum* and that presents the same biochemical properties, is not detected by this test. Eight field samples were tested and correctly analysed.

References: Raviv, Z. and S.H. Kleven, 2009. The development of diagnostic Real-Time TaqMan PCRs for the four pathogenic avian mycoplasmas. *Avian Dis.* 53:103-107.

| Detection of <i>Mycoplasma gallisepticum</i> | 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>M. gallisepticum</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>M. gallisepticum</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>M. gallisepticum</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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