

# BactoReal® Kit

## *Mycoplasma gallisepticum* & *synoviae*



For veterinary use only

### BactoReal® Kit *Mycoplasma gallisepticum* & *synoviae*

Order no.	Reactions	Pathogen	Internal positive control
DVEB05713	100	FAM + VIC/HEX channel	Cy5 channel
DVEB05753	50	FAM + VIC/HEX channel	Cy5 channel

#### Kit contents:

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

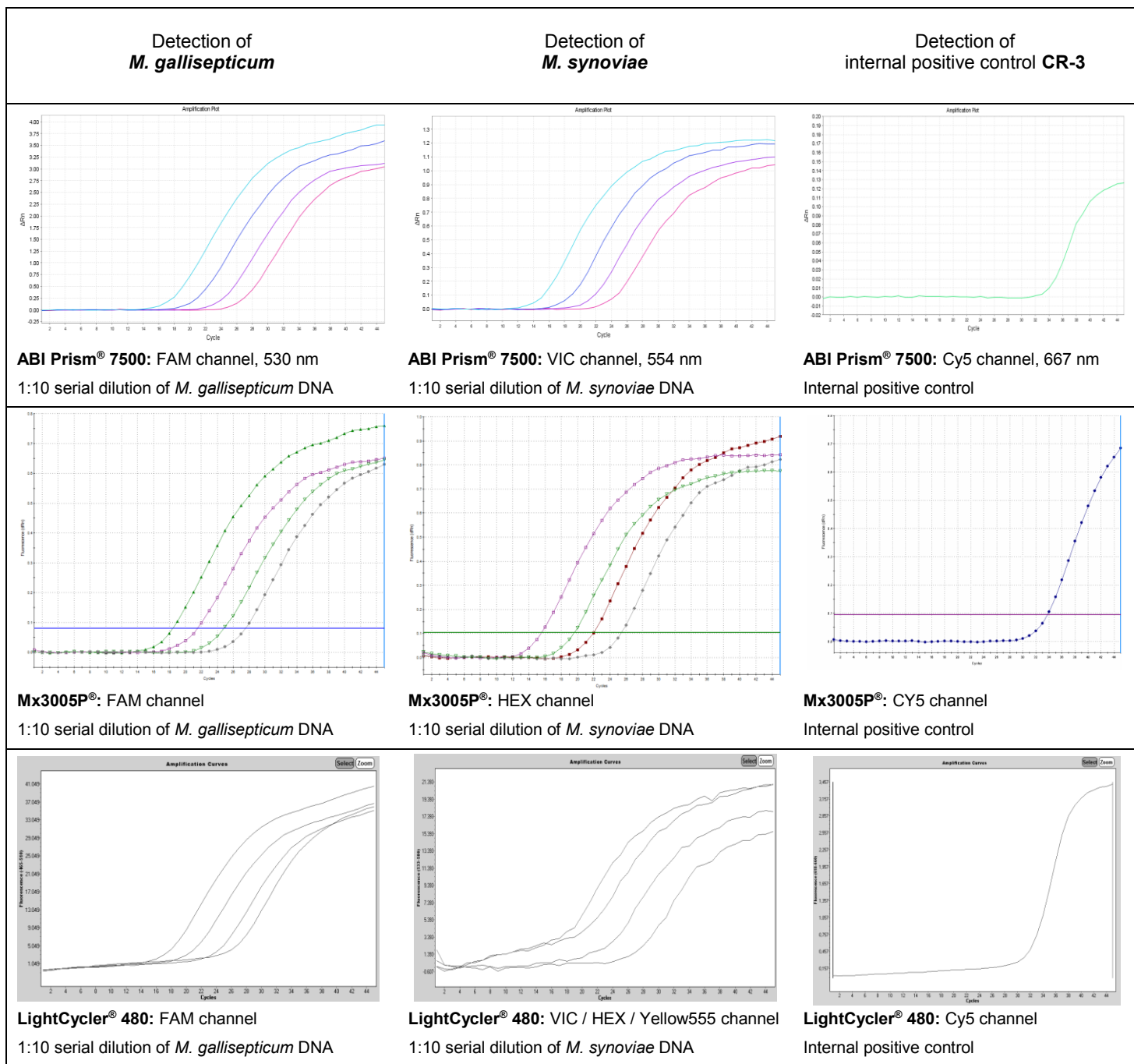
*Mycoplasma gallisepticum* and *Mycoplasma synoviae* cause chronic respiratory disease (CRD) and infectious synovitis of chickens and turkeys especially in the presence of stresses or other respiratory pathogens, causing economic losses due to decrease in growth rate, loss of weight and reduced egg production.

**Description:** BactoReal® Kit *Mycoplasma gallisepticum* & *synoviae* is based on the amplification and detection of the *mgc2* gene (cytadhesin-like protein encoding gene) of *M. gallisepticum* and the *vlhA* gene (haemagglutinin encoding gene) of *M. synoviae* using multiplex real-time PCR. *M. gallisepticum* is detected in FAM channel, *M. synoviae* is detected in VIC/HEX channel. This kit allows the rapid and sensitive detection of *M. gallisepticum* and *M. synoviae* 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* & *synoviae* 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* & *synoviae* has an analytical sensitivity of 10 target copies/PCR reaction for *M. gallisepticum* and 1 target copy/PCR reaction for *M. synoviae*. 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 for *M. gallisepticum* and 16 target copies/PCR reaction for *M. synoviae* and was determined by several replicates around the detection limit. The presence of high concentrations of *M. synoviae* or *M. gallisepticum* DNA has no influence on amplification of *M. gallisepticum* or *M. synoviae* DNA. Due to the high sensitivity of the test, sample pools with up to 20 samples per pool can be analyzed. The kit is specific for *M. gallisepticum* and *M. synoviae*. Specificity was tested on isolates of *M. gallisepticum*, *M. meleagridis* and *M. synoviae*. No cross reactions were observed. 26 field samples were tested using the *Mycoplasma synoviae* assay and correctly analysed. Eight field samples were tested using the *Mycoplasma gallisepticum* assay 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.



**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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