

BactoReal® Kit *Legionella pneumophila*



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Order no.	Reactions	Pathogen	Internal positive control
DHUB01153	50	FAM channel	Cy5 channel

Kit contents:

- Detection assay for *Legionella pneumophila*
- Detection assay + target for internal DNA positive control (control of PCR amplification and DNA extraction)
- DNA reaction mix
- Nuclease-free water
- Positive control for *Legionella pneumophila*



Background: *Legionella* are Gram-negative bacteria frequently found in aquatic systems and living within amoebae. The most common devices that have been found to transmit *Legionella* are domestic hot-water systems heated to less than 70°C, air conditioners and cooling towers. *Legionella* are transmitted to the lungs of human beings through aerosolized water. No person-to-person transmission has been yet observed. Many different species of *Legionella* (at least 40) have been discovered, and more than 66 serogroups of *Legionella* have been identified. Many thereof are considered to be potentially pathogenic for humans. Infection by *Legionella pneumophila* results mainly in Legionnaire's disease. However, some strains manifest a disorder called Pontiac Fever, which is a milder infection than the Legionnaire's disease.

Description: BactoReal® Kit *Legionella pneumophila* is an *in vitro* diagnostic test detecting DNA of the 23S-5S rDNA intergenic spacer region of all known serogroups and subspecies of *L. pneumophila* using real-time PCR. This test allows the rapid and sensitive detection of DNA of *Legionella pneumophila* from samples purified from the respiratory tract (e.g. with the QIAamp DNA Mini Kit, Qiagen).

Legionella pneumophila DNA is detected in FAM channel. 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 Applied Biosystems® 7500 Fast Real-time PCR System (Thermo Fisher Scientific) and tested with LightCycler® 480 Instrument II (Roche) and Mx3005P® QPCR System (Agilent). It is compatible with real-time PCR instruments detecting and differentiating fluorescence in FAM and Cy5 channel.

Specificity and sensitivity: BactoReal® Kit *Legionella pneumophila* detects at least 10 target copies/reaction. The limit of detection (LoD95 = smallest number of target DNA copies which can be detected in 95% of cases) is 15 copies/reaction. Diagnostic evaluation was performed with bacterial isolates and with clinical samples. This kit is specific for *Legionella pneumophila*.

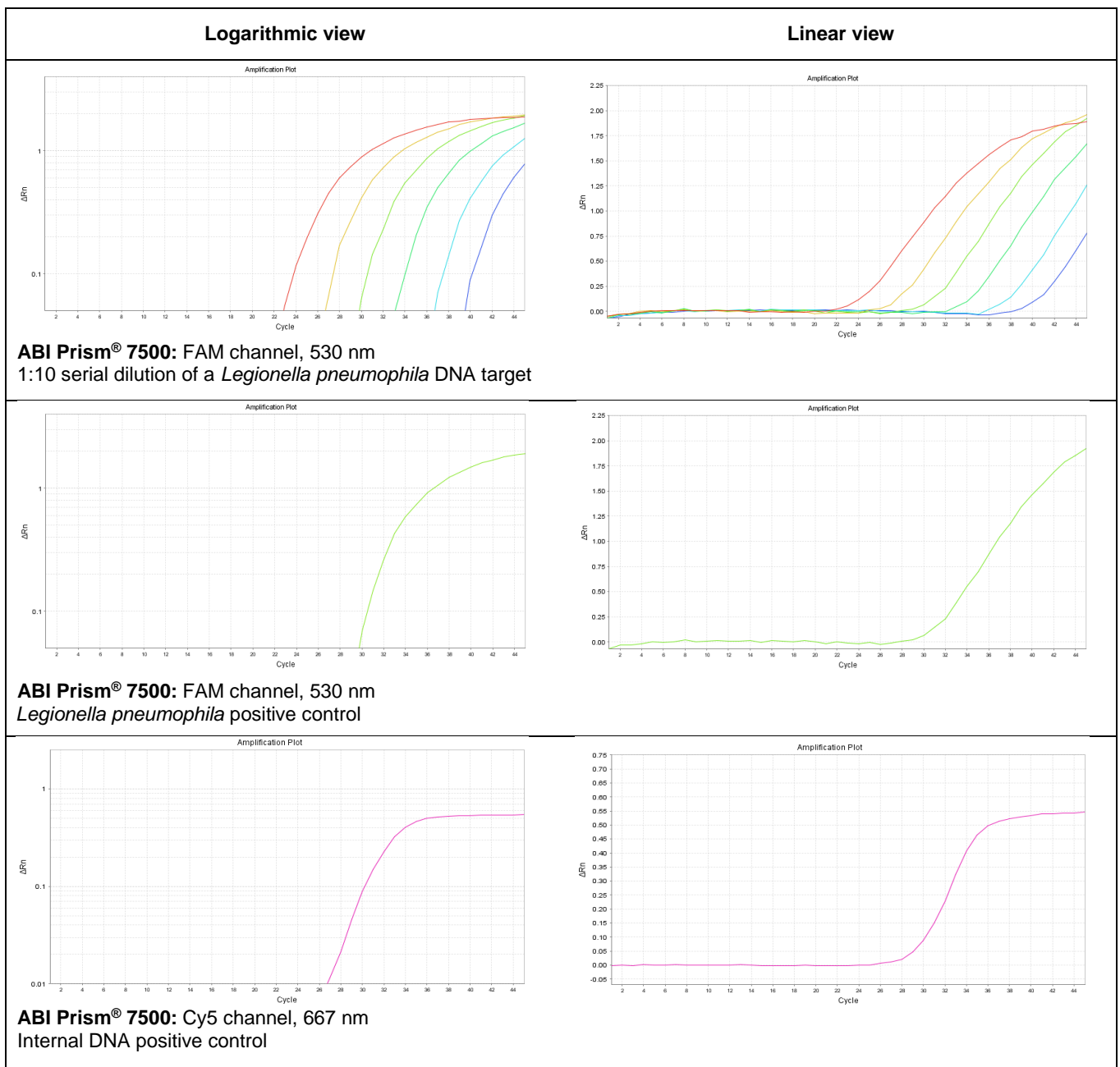


Figure 1 Performance of BactoReal® Kit *Legionella pneumophila*

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