

# BactoReal® Kit

## *Neisseria meningitidis*



### BactoReal® Kit *Neisseria meningitidis*

Order no.	Reactions	Pathogen	Internal positive control
DHUB00153	50	FAM channel	Cy5 channel

#### Kit contents:

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



**Background:** *Neisseria meningitidis* is a Gram-negative bacterium causing meningitis and septicemia. There are 13 clinically significant serogroups, which are classified according to the antigenic structure of their polysaccharide capsule. Five serogroups (A, B, C, Y and W135) are responsible for virtually all cases of the disease. Serogroup B is the predominant one. The capsular transport protein (ctrA) gene is unique to *N. meningitidis* and can be found in all meningococcal serogroups.

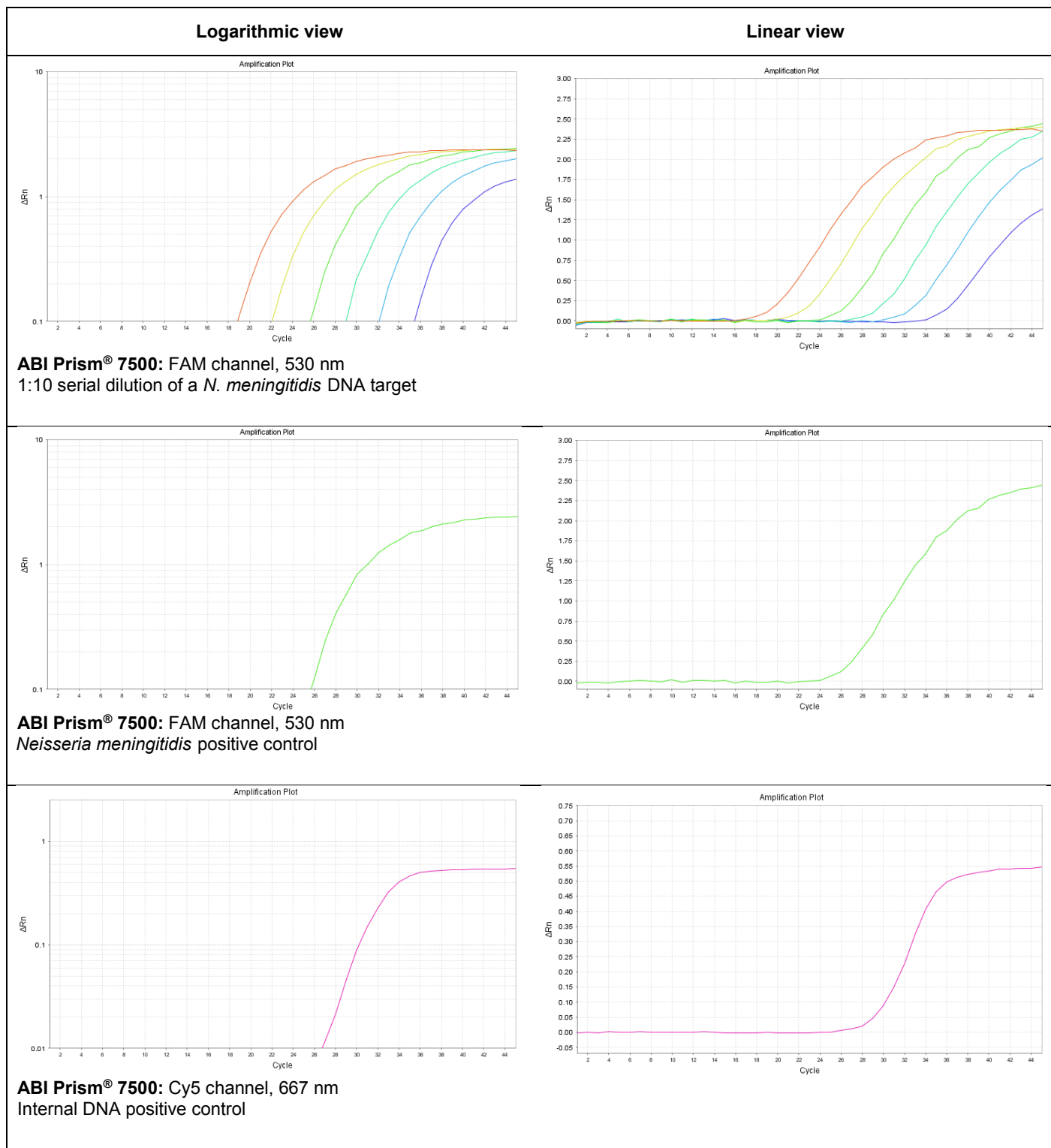
**Description:** BactoReal® Kit *Neisseria meningitidis* is an *in vitro* diagnostic test detecting the capsular transport protein (ctrA) gene of all known serogroups of *N. meningitidis* using real-time PCR.

This test allows the rapid and sensitive detection of DNA of *Neisseria meningitidis* from samples purified from EDTA-blood, blood culture or cerebrospinal fluid (e.g. with the QIAamp DNA Mini Kit, Qiagen).

*Neisseria meningitidis* 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:** The limit of detection (LoD95 = smallest number of target DNA copies which can be detected in 95% of cases) is 1.7 copies/reaction. Diagnostic evaluation was performed with bacterial isolates and with clinical samples. This kit is specific for *Neisseria meningitidis*. Two different regions of the ctrA gene are amplified in order to minimize false-negative results due to sequence heterogeneity within the target region. It guarantees also the detection of the three *N. meningitidis* strains described as ctrA mutants by Cavrini et al. (2010) and Jatou et al. (2010).



**Figure 1** Performance of BactoReal® Kit *Neisseria meningitidis*

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