

BactoReal® Kit

Staphylococcus aureus



For veterinary use only

BactoReal® Kit *Staphylococcus aureus*

Order no.	Reactions	Pathogen	Internal positive control
DVEB01013	100	FAM channel	Cy5 channel
DVEB01053	50	FAM channel	Cy5 channel
DVEB01011	100	FAM channel	VIC/HEX channel
DVEB01051	50	FAM channel	VIC/HEX channel

Kit contents:

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



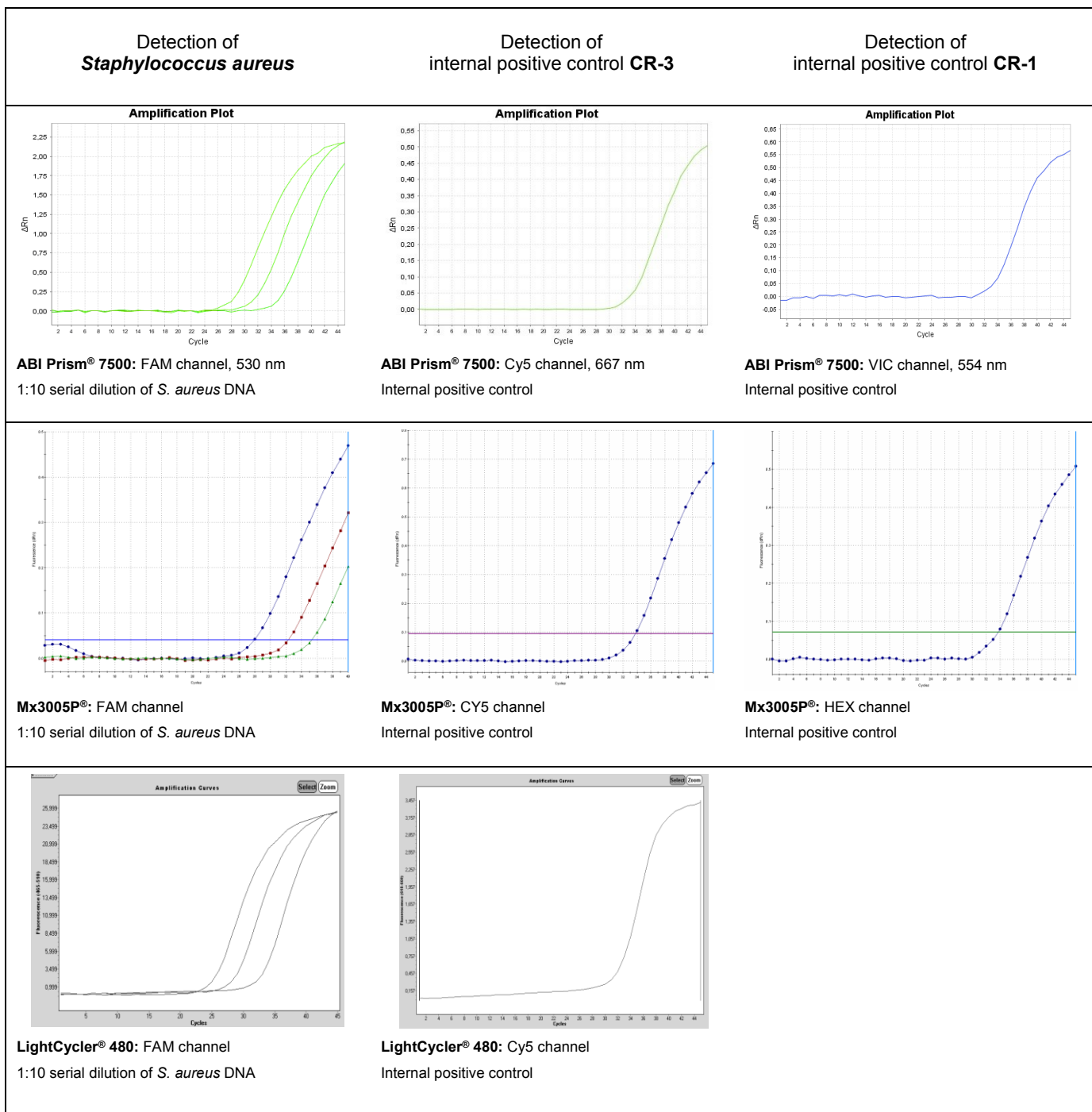
Background: *Staphylococcus aureus* is a Gram-positive bacterium. In healthy animals, *S. aureus* colonization of the skin, intestinal tract, or nasopharynx is generally asymptomatic. However, depending on the strain, *S. aureus* is capable of secreting several exotoxins. Many of these toxins are associated with specific diseases. By producing a toxin, *S. aureus* is also a common cause of foodborne illness. In cattle, *S. aureus* causes one of the most common types of chronic mastitis. In humans, *S. aureus* is a frequent commensal of the skin, but can cause a range of illnesses from minor skin infections to life-threatening diseases such as pneumonia, meningitis, osteomyelitis, endocarditis, toxic shock syndrome and sepsis.

Description: BactoReal® Kit *Staphylococcus aureus* is based on the amplification and detection of the thermonuclease (*nuc*) gene of *S. aureus* using real-time PCR. It allows the rapid and sensitive detection of *S. aureus* from DNA samples purified from various sample materials such as swabs, biopsies and milk (e.g. with the QIAamp DNA Mini Kit).

PCR-platforms: BactoReal® Kit *Staphylococcus aureus* 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 *Staphylococcus aureus* has an analytical sensitivity of 5 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 30 target copies/reaction and was determined by several replicates around the detection limit. The kit is specific for *S. aureus*. Specificity was tested on isolates of *E. coli*, *H. parasuis*, *L. monocytogenes*, *P. multocida*, *S. agalactiae*, *S. anginosus*, *S. constellatus*, *S. dysgalactiae*, *S. equinus*, *S. intermedius*, *S. mitis*, *S. mutans*, *S. parasanguinis*, *S. sanguis*, *S. pneumoniae*, *S. pyogenes* and *S. uberis*. No cross reactions were observed.

References: Taponen S, Salmikivi L, Simojoki H, Koskinen MT, Pyörälä S. 2009. Real-time polymerase chain reaction-based identification of bacteria in milk samples from bovine clinical mastitis with no growth in conventional culturing. J Dairy Sci. 92:2610-7.



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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