

# BactoReal® Kit *Salmonella enterica*



For veterinary use only

## BactoReal® Kit *Salmonella enterica*

Order no.	Reactions	Pathogen	Internal positive control
DVEB02313	100	FAM channel	Cy5 channel
DVEB02353	50	FAM channel	Cy5 channel
DVEB02311	100	FAM channel	VIC/HEX channel
DVEB02351	50	FAM channel	VIC/HEX channel

### Kit contents:

- Detection assay for *Salmonella enterica*
- Detection assay for internal positive control (control of amplification)
- DNA reaction mix (contains uracil-N glycosylase, UNG)
- Positive control for *Salmonella enterica*
- Water

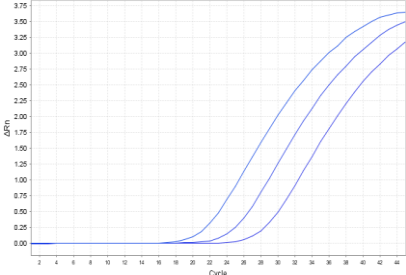
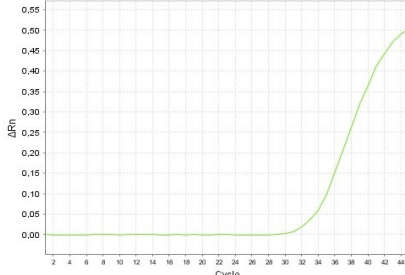
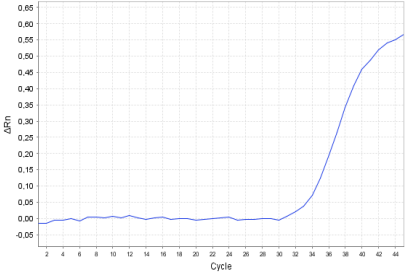
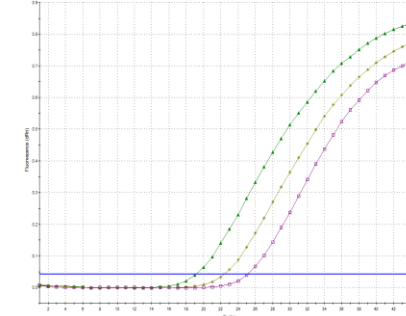
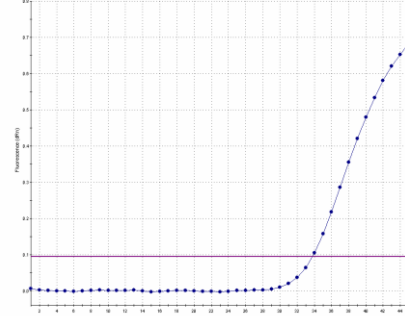
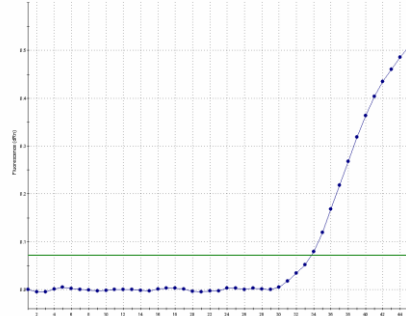
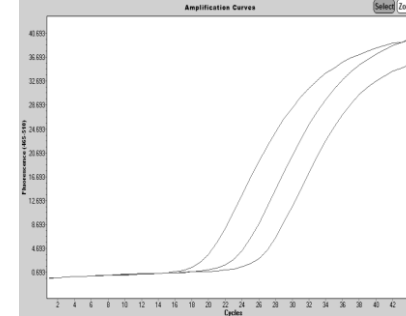
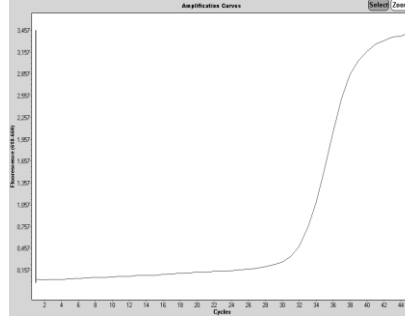


**Background:** *Salmonella* is a genus of Gram-negative bacteria of the *Enterobacteriaceae* family. This genus consists of only two species, *Salmonella enterica* and *Salmonella bongori*. *Salmonella bongori* mostly infects cold blooded animals. *Salmonella enterica* has six subspecies and more than 2500 serovars. Subspecies are *S. enterica* subsp. *arizonae*, *S. enterica* subsp. *diarizonae*, *S. enterica* subsp. *enterica*, *S. enterica* subsp. *houtenae*, *S. enterica* subsp. *indica* and *S. enterica* subsp. *salamae*. *Salmonella* infections in warm-blooded animals are generally caused by strains from *S. enterica* subspecies *enterica*. Typhoidal serovars include *Salmonella* Typhi and *Salmonella* Paratyphi, which only infect humans. Nontyphoidal serovars are more common, and usually cause self-limiting gastrointestinal disease. They can infect a range of animals, and are zoonotic. Although many other *Salmonella* serovars may cause enteric disease, the more common ones in cattle are *Salmonella* Typhimurium, *Salmonella* Dublin and *Salmonella* Newport. In sheep and goat the most common are *Salmonella* Typhimurium, *Salmonella* Dublin, *Salmonella* Abortusovis, *Salmonella* Anatum and *Salmonella* Montevideo. In pigs the most common are *Salmonella* Typhimurium and *Salmonella* Choleraesuis, and in poultry *Salmonella* Enteritidis, *Salmonella* Typhimurium, *Salmonella* Gallinarum and *Salmonella* Pullorum.

**Description:** BactoReal® Kit *Salmonella enterica* is based on the amplification and detection of the invasion protein A (inv A) gene of *Salmonella enterica* using real-time PCR. The inv A gene is essential for full virulence in *Salmonella* and is specific for members of the genus *Salmonella*. This kit allows the rapid and sensitive detection of *Salmonella enterica* from DNA samples purified from swabs, feces, etc. (e.g. with the QIAamp DNA Mini Kit or the QIAamp DNA Stool Mini Kit).

**PCR-platforms:** BactoReal® Kit *Salmonella enterica* 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 *Salmonella enterica* has a sensitivity of 7 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 19 target copies/reaction and was determined by several replicates around the detection limit. This kit is specific for *Salmonella enterica*. *Salmonella bongori* is detected with less sensitivity.

Detection of <i>Salmonella enterica</i>	Detection of internal positive control CR-3	Detection of internal positive control CR-1
<p><b>Amplification Plot</b></p>  <p><b>ABI Prism® 7500:</b> FAM channel, 530 nm 1:10 serial dilution of <i>S. Typhimurium</i> DNA</p>	<p><b>Amplification Plot</b></p>  <p><b>ABI Prism® 7500:</b> Cy5 channel, 667 nm Internal positive control</p>	<p><b>Amplification Plot</b></p>  <p><b>ABI Prism® 7500:</b> VIC channel, 554 nm Internal positive control</p>
 <p><b>Mx3005P®:</b> FAM channel 1:10 serial dilution of <i>S. Typhimurium</i> DNA</p>	 <p><b>Mx3005P®:</b> CY5 channel Internal positive control</p>	 <p><b>Mx3005P®:</b> HEX channel Internal positive control</p>
<p><b>Amplification Curves</b></p>  <p><b>LightCycler® 480:</b> FAM channel 1:10 serial dilution of <i>S. Typhimurium</i> DNA</p>	<p><b>Amplification Curves</b></p>  <p><b>LightCycler® 480:</b> 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.**

**For further information on our products please visit our homepage ([www.ingenetix.com](http://www.ingenetix.com))**