BactoReal® Kit
Brachyspira hyodysenteriae

For veterinary use only

BactoReal® Kit *Brachyspira hyodysenteriae*

Order no.	Reactions	Pathogen	Internal positive control
DVEB01113	100	FAM channel	Cy5 channel
DVEB01153	50	FAM channel	Cy5 channel
DVEB01111	100	FAM channel	VIC/HEX channel
DVEB01151	50	FAM channel	VIC/HEX channel

Kit contents:

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

Background: *Brachyspira hyodysenteriae* (previously called *Serpulina hyodysenteriae* or *Treponema hyodysenteriae*) is an anaerobic intestinal spirochaete and the causative agent of swine dysentery. Swine dysentery is a disease characterized by mucohaemorrhagic diarrhoea with lesions confined to the large intestine of pigs. Its incubation time is 10-14 days. The faecal excretion of *B. hyodysenteriae* starts 2 days after infection. *Brachyspira hyodysenteriae* is an anaerobic bacterium but is aerotolerant due, at least in part, to high NADH oxidase activity.

Description: BactoReal® Kit *Brachyspira hyodysenteriae* is based on the amplification and detection of the nox gene of *B. hyodysenteriae* using real-time PCR. It allows the rapid and sensitive detection of the nox gene of *B. hyodysenteriae* from DNA samples purified from faecal samples, or biopsies of the intestinal mucosa (e.g. with the QIAamp DNA Stool Mini Kit or the QIAamp DNA Mini Kit, respectively).

PCR-platforms: BactoReal® Kit *Brachyspira hyodysenteriae* 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 *Brachyspira hyodysenteriae* has an analytical sensitivity of 10 target copies/reaction. The limit of detection (LoD95 = smallest number of copies of target DNA which can be detected in 95% of cases) of 18 target copies/reaction was determined by several replicates around the detection limit. The kit is specific for *B. hyodysenteriae*. Specificity was tested on isolates of *B. pilosicoli, B. innocens, B. murdochii, E. coli, H. parasuis, L. intracellularis, L. innocua, L. monocytogenes, P. multocida, S. aureus, S. agalactiae* and *S. pyogenes*. No cross reactions were observed. A total of 31 field samples were tested and correctly analysed.

References: Atyeo, R. F., T. B. Stanton, N. S. Jensen, D. S. Suriyaarachichi, and D. J. Hampson. 1999. Differentiation of *Serpulina* species by NADH oxidase gene (*nox*) sequence comparisons and nox-based polymerase chain reaction tests. Vet. Microbiol. 67:47–60.

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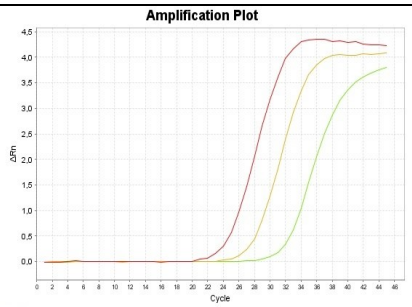
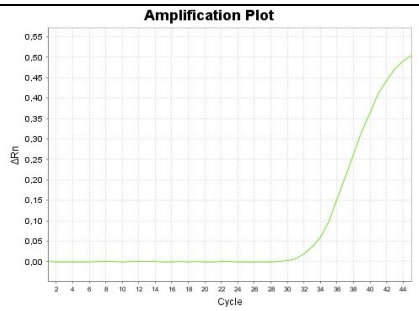
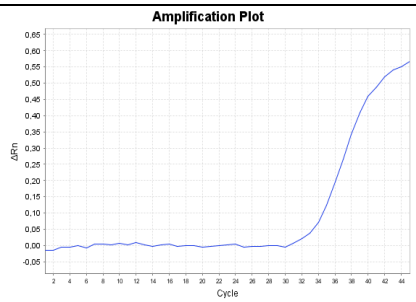
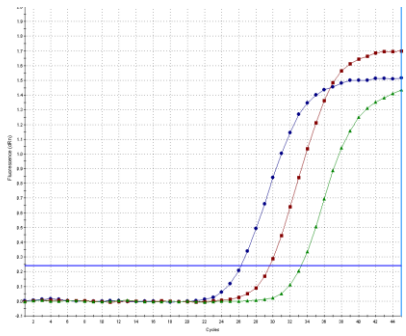
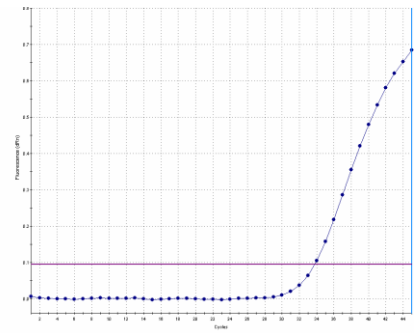
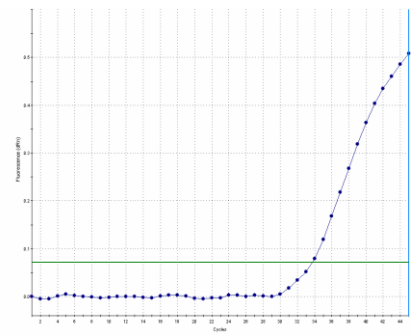
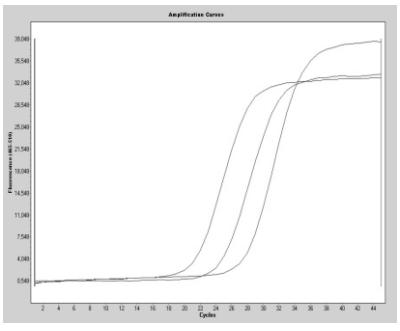
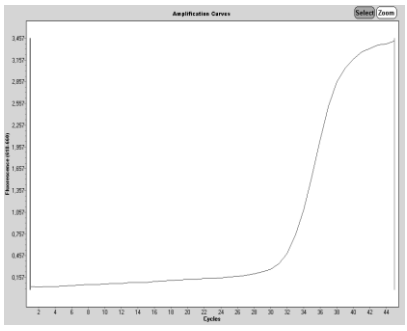
Detection of ***Brachyspira hyodysenteriae***	Detection of internal positive control **CR-3**	Detection of internal positive control **CR-1**
		
ABI Prism® 7500: FAM channel, 530 nm 1:10 serial dilution of *B. hyodysenteriae* DNA	**ABI Prism® 7500:** Cy5 channel, 667 nm Internal positive control	**ABI Prism® 7500:** VIC channel, 554 nm Internal positive control
		
Mx3005P®: FAM channel 1:10 serial dilution of *B. hyodysenteriae* DNA	**Mx3005P®:** CY5 channel Internal positive control	**Mx3005P®:** HEX channel Internal positive control
		
LightCycler® 480: FAM channel 1:10 serial dilution of *B. hyodysenteriae* DNA	**LightCycler® 480:** Cy5 channel Internal positive control	

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)

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