

BactoReal® Kit *Brachyspira hyo/pilo*



For veterinary use only

BactoReal® Kit *Brachyspira hyo/pilo*

Order no.	Reactions	Pathogen	Internal positive control
DVEB01813	100	FAM channel	Cy5 channel
DVEB01853	50	FAM channel	Cy5 channel
DVEB01811	100	FAM channel	VIC/HEX channel
DVEB01851	50	FAM channel	VIC/HEX channel

Kit contents:

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



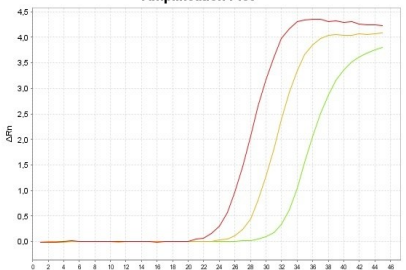
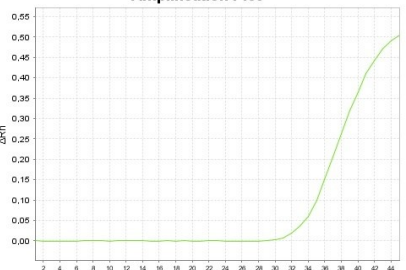
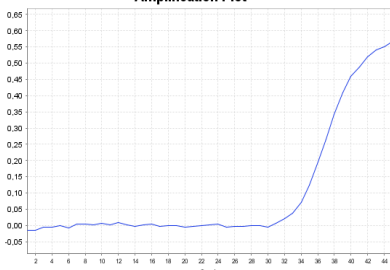
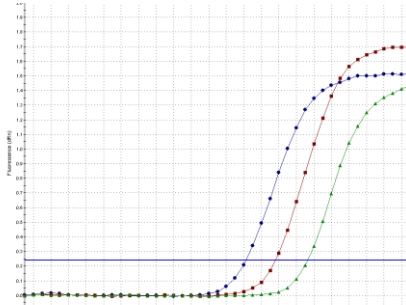
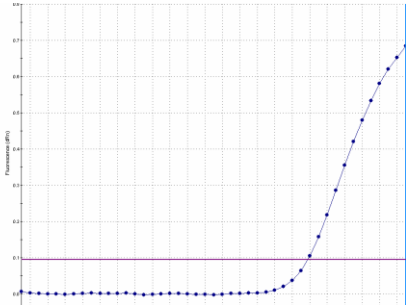
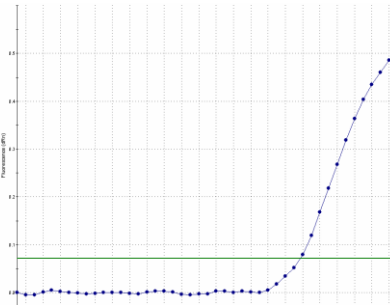
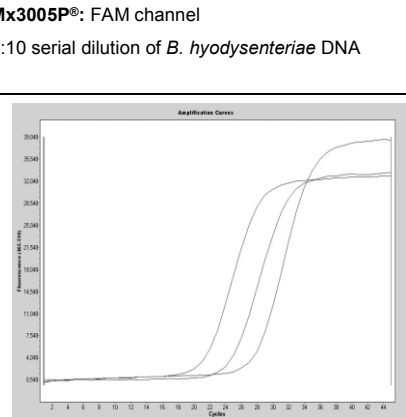
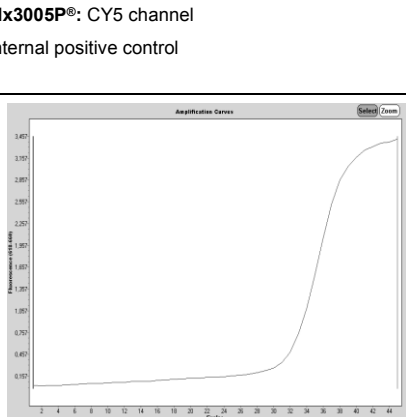
Background: *Brachyspira* are anaerobic intestinal spirochaetes. *Brachyspira hyodysenteriae* (previously called *Serpulina hyodysenteriae* or *Treponema hyodysenteriae*) is the causative agent of swine dysentery. Swine dysentery is a disease characterized by mucohaemorrhagic diarrhoea with lesions confined 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 pilosicoli* (previously called *Serpulina pilosicoli*) colonizes the large intestine of various species, including humans. It is the etiologic agent of human and animal intestinal spirochetosis and is rarely implicated as a cause of bacteremia. For example, it is the causative agent of porcine colonic spirochaetosis (PCS). *Brachyspira* are anaerobic bacteria but are aerotolerant due, at least in part, to high NADH oxidase activity.

Description: BactoReal® Kit *Brachyspira hyo/pilo* is based on the amplification and detection of the *nox* gene of *B. hyodysenteriae* and *B. pilosicoli* using real-time PCR. Other *Brachyspira* species are not detected by this test. It allows the rapid and sensitive screening for *B. hyodysenteriae* and *B. pilosicoli* from DNA samples purified from faecal samples, or biopsies of the intestinal mucosa. *Brachyspira* DNA can be recovered efficiently from faecal samples using the QIAamp DNA Stool Mini Kit, and from biopsies using the QIAamp DNA Mini Kit extraction methods, for example. For the separate detection of *Brachyspira pilosicoli* and *Brachyspira hyodysenteriae* we offer BactoReal® Kit *Brachyspira pilosicoli* and BactoReal® Kit *Brachyspira hyodysenteriae*.

PCR-platforms: BactoReal® Kit *Brachyspira hyo/pilo* 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 hyo/pilo* has an analytical sensitivity for *B. hyodysenteriae* and *B. pilosicoli* 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 25 target copies/reaction for *B. pilosicoli* and of 18 target copies/reaction for *B. hyodysenteriae* was determined by several replicates around the detection limit. Specificity was tested on isolates of *E. coli*, *H. parasuis*, *L. intracellularis*, *L. innocua*, *L. monocytogenes*, *P. multocida*, *S. aureus*, *S. agalactiae* and *S. pyogenes*. No cross reactions were observed. 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.

<p>Detection of <i>B. hyodysenteriae</i> or <i>B. pilosicoli</i></p>	<p>Detection of internal positive control CR-3</p>	<p>Detection of internal positive control CR-1</p>
<p>Amplification Plot</p> 	<p>Amplification Plot</p> 	<p>Amplification Plot</p> 
<p>ABI Prism® 7500: FAM channel, 530 nm 1:10 serial dilution of <i>B. hyodysenteriae</i> DNA</p>	<p>ABI Prism® 7500: Cy5 channel, 667 nm Internal positive control</p>	<p>ABI Prism® 7500: VIC channel, 554 nm Internal positive control</p>
<p>Mx3005P®: FAM channel 1:10 serial dilution of <i>B. hyodysenteriae</i> DNA</p> 	<p>Mx3005P®: CY5 channel Internal positive control</p> 	<p>Mx3005P®: HEX channel Internal positive control</p> 
<p>LightCycler® 480: FAM channel 1:10 serial dilution of <i>B. hyodysenteriae</i> DNA</p> 	<p>LightCycler® 480: Cy5 channel Internal positive control</p> 	

Ingenetix ViroReal®, BactoReal®, MycoReal and ParoReal 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)