

ParoReal Kit

Histomonas meleagridis



For veterinary use only

ParoReal Kit *Histomonas meleagridis*

Order no.	Reactions	Pathogen	Internal positive control
DVEP00313	100	FAM channel	Cy5 channel
DVEP00353	50	FAM channel	Cy5 channel
DVEP00311	100	FAM channel	VIC/HEX channel
DVEP00351	50	FAM channel	VIC/HEX channel

Kit contents:

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



Background: *Histomonas meleagridis* is a parasitic protozoan causing blackhead disease, infectious enterohepatitis, or histomoniasis. It can infect turkeys, chickens, and occasionally other galliform birds but it is most deadly in turkeys. Chickens are more resistant to the effects of the infection but may act as carriers. *Histomonas meleagridis* induces extensive and severe necrosis of the tissues of the mucosa and submucosa of cecum and parenchyma of the liver. It is transmitted by the nematode *Heterakis gallinarum* or directly from the droppings of infected birds. *Histomonas meleagridis* interacts with other gut organisms, such as bacteria and coccidia, and depends on these for full virulence.

Description: ParoReal Kit *Histomonas meleagridis* is based on the amplification and detection of the 18S rRNA gene of *H. meleagridis* using real-time PCR. It allows the rapid and sensitive detection of the 18S rRNA gene of *Histomonas meleagridis* from samples purified from biopsies of the cecum or liver (e.g. with the QIAamp DNA Mini Kit).

PCR-platforms: ParoReal Kit *Histomonas meleagridis* is developed and validated for the ABI PRISM® 7500 instrument (Thermo Fisher Scientific), LightCycler® 480 (Roche) and Mx3005P® QPCR System (Agilent), but is also suitable for other real-time PCR instruments.

Sensitivity and specificity: ParoReal Kit *Histomonas meleagridis* has a sensitivity of 10 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 12 target copies/reaction and was determined by several replicates around the detection limit. Since 2017, the kit has an improved and more specific design. Specificity was tested on six samples of *H. meleagridis* genotype I and II, and on isolates of *Dientamoebidae* sp., *Simplicimonas* sp. and *Tetratrichomonas gallinarum*. The *H. meleagridis* isolates were correctly identified. The kit shows no cross reaction with the other tested isolates.

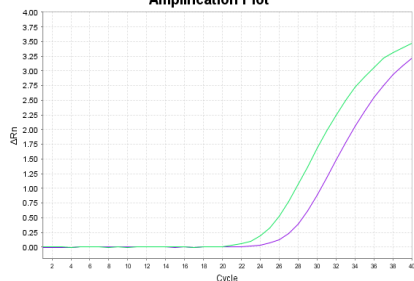
References: McDougald LR. 2005. Blackhead disease (histomoniasis) in poultry: a critical review. Avian Dis. 49:462-76.

Detection of *Histomonas meleagridis*

Detection of internal positive control CR-3

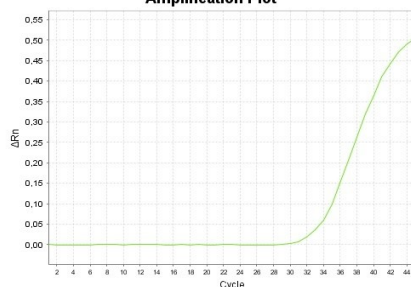
Detection of internal positive control CR-1

Amplification Plot



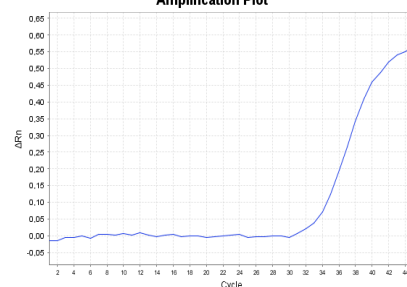
ABI Prism® 7500: FAM channel, 530 nm
1:10 serial dilution of *H. meleagridis* DNA

Amplification Plot

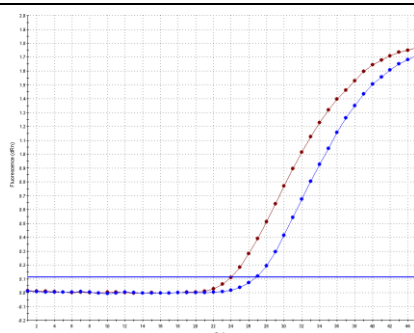


ABI Prism® 7500: Cy5 channel, 667 nm
Internal positive control

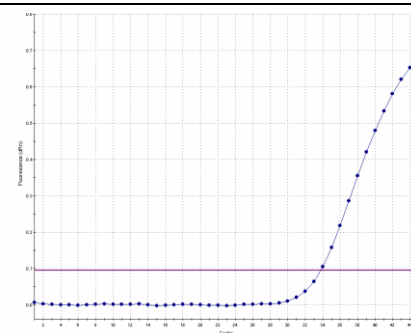
Amplification Plot



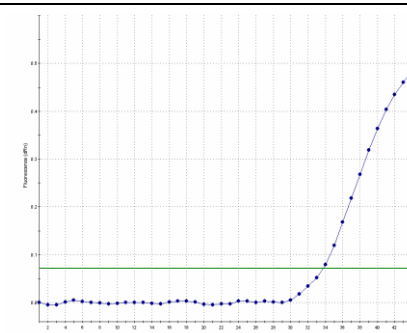
ABI Prism® 7500: VIC channel, 554 nm
Internal positive control



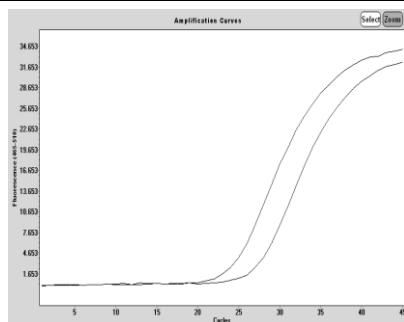
Mx3005P®: FAM channel
1:10 serial dilution of *H. meleagridis* DNA



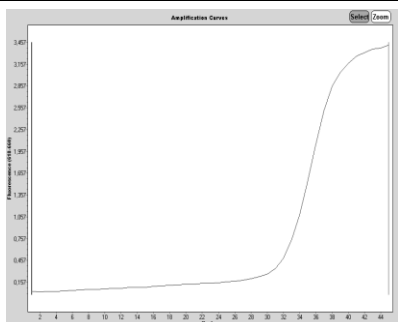
Mx3005P®: CY5 channel
Internal positive control



Mx3005P®: HEX channel
Internal positive control



LightCycler® 480: FAM channel
1:10 serial dilution of *H. meleagridis* DNA



LightCycler® 480: Cy5 channel
Internal positive control

ViroReal®, BactoReal® 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)