ViroReal® Kit Bovine Coronavirus

For veterinary use only

ViroReal® Kit Bovine Coronavirus			
Order no.	**Reactions**	**Pathogen**	**Internal positive control**
DVEV00913	100	FAM channel	Cy5 channel
DVEV00953	50	FAM channel	Cy5 channel
DVEV00911	100	FAM channel	VIC/HEX channel
DVEV00951	50	FAM channel	VIC/HEX channel

Kit contents:

- Detection assay for bovine coronavirus
- Detection assay + target for internal RNA positive control (control of RT-PCR amplification and/or RNA extraction)
- RNA reaction mix
- Nuclease-free water
- Positive control (RNA) for bovine coronavirus

Background: Bovine coronavirus (BCoV) is a member of the genus *Coronavirus (Betacoronavirus)*, family *Coronaviridae*. The BCoV virion is enveloped and spherical in shape. The genome is a single-stranded, positive-sense RNA molecule. BCoV causes diarrhea in adult cattle (Winter Dysentery) and wild ruminants, as well as enteric and respiratory diseases in calves. Winter Dysentery is characterized by high morbidity (50-100%) and low mortality (1-2%), the highest incidence is between November and April when cattle are kept in close confinement. In calves morbidity and mortality are high. BCoV has been found in cattle worldwide.

Description: ViroReal® Kit Bovine Coronavirus is based on the amplification and detection of the nucleocapsid protein gene (N gene) of the BCoV using one-step reverse transcription real-time PCR. It allows the rapid and sensitive detection of RNA of the BCoV from samples purified from nasal swabs or feces (e.g. with the QIAamp Viral RNA Mini Kit).

PCR-platforms: ViroReal® Kit Bovine Coronavirus 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.

Specificity and sensitivity: ViroReal® Kit Bovine Coronavirus has a sensitivity of 10 target copies/PCR reaction. The limit of detection (LoD95 = smallest number of copies of target RNA which can be detected in 95% of cases) is 26 target copies/reaction and was determined by several replicates around the detection limit. The kit was tested against RNA isolates of bovine coronavirus, PHEV, TGEV and PEDV. It cross-reacts with PHEV. ViroReal® Kit Bovine Coronavirus detects all BCoV strains published in the NCBI database.

References: Saif LJ. 2010. Bovine respiratory coronavirus. Vet Clin North Am Food Anim Pract. 26: 349-64.

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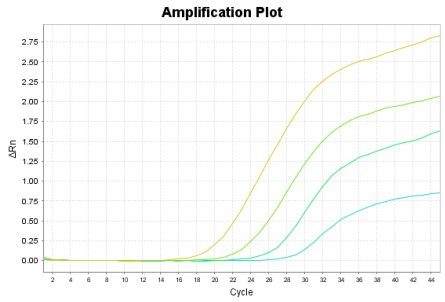
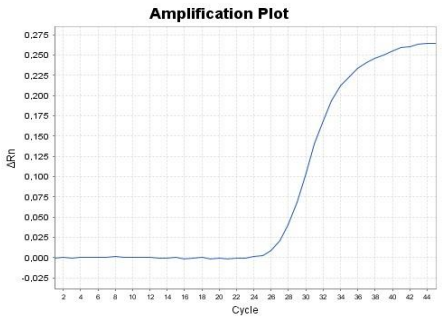
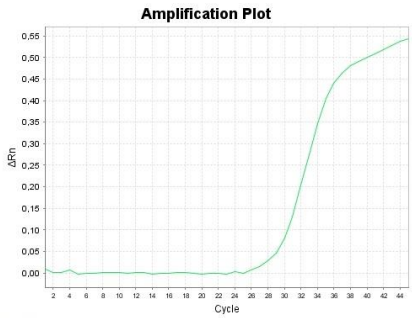
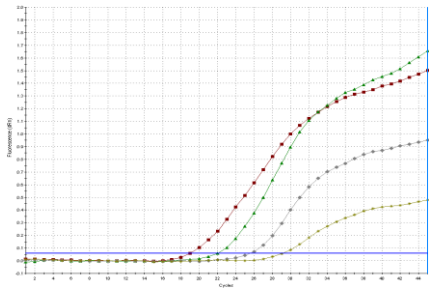
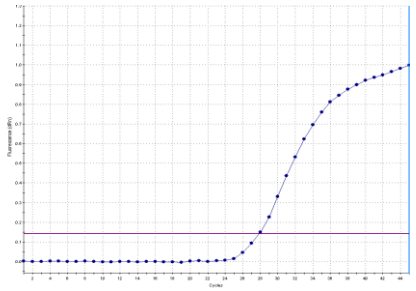
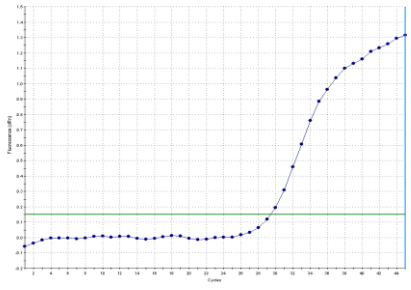
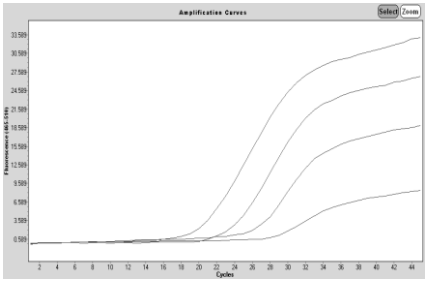
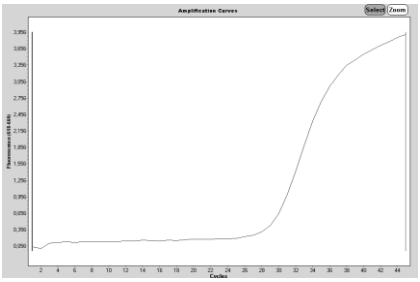
Detection of **bovine coronavirus**	Detection of internal RNA positive control **IPC-3**	Detection of internal RNA positive control **IPC-1**
		
ABI Prism® 7500: FAM channel, 530 nm 1:10 serial dilution of a BCoV RNA positive control	**ABI Prism® 7500:** Cy5 channel, 667 nm Detection of internal RNA positive control	**ABI Prism® 7500:** VIC channel, 554 nm Detection of internal RNA positive control
		
Mx3005P®: FAM channel 1:10 serial dilution of a BCoV RNA positive control	**Mx3005P®:** CY5 channel Detection of internal RNA positive control	**Mx3005P®:** HEX channel Detection of internal RNA positive control
		
LightCycler® 480: FAM channel 1:10 serial dilution of a BCoV RNA positive control	**LightCycler® 480:** Cy5 channel Detection of internal RNA 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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