

# ViroReal® Kit Swine Delta Coronavirus



For veterinary use only

## ViroReal® Kit Swine Delta Coronavirus

Order no.	Reactions	Pathogen	Internal positive control
DVEV01813	100	VIC / HEX channel	Cy5 channel
DVEV01853	50	VIC / HEX channel	Cy5 channel

### Kit contents:

- Detection assay for swine delta coronavirus (SDCV)
- 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 swine delta coronavirus (SDCV)



**Background:** Swine delta coronavirus (SDCV, also called porcine delta coronavirus PDCoV) is a member of the genus *Coronavirus* (Deltacoronavirus), family *Coronaviridae*, and a positive-sense, enveloped, single-stranded RNA virus. SDCV is a new virus first found in pigs in Hong Kong in 2012 and 2014 in the United States. Swine delta coronavirus causes acute watery diarrhea and vomiting in a large proportion at all ages of swine. Swine delta coronavirus infection is clinically similar to, but genetically distinct from porcine epidemic diarrhea virus (PEDV) and transmissible gastroenteritis virus (TGEV).

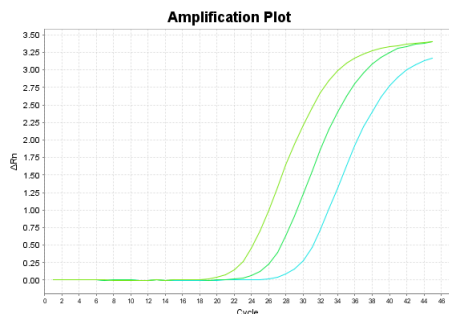
**Description:** ViroReal® Kit Swine Delta Coronavirus is based on the amplification and detection of the 3'UTR of swine delta coronavirus (PDCoV) using one-step reverse transcription real-time PCR. It allows the rapid and sensitive detection of swine delta coronavirus RNA isolated from feces of acutely affected pigs (e.g. with the QIAamp Viral RNA Mini Kit, Qiagen). The test does not detect porcine epidemic diarrhea virus (PEDV) or transmissible gastroenteritis virus (TGEV).

**PCR-platforms:** ViroReal® Kit Swine Delta Coronavirus 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.

**Specificity and sensitivity:** ViroReal® Kit Swine Delta Coronavirus has a sensitivity of 2 RNA copies/PCR. The limit of detection (LoD95 = smallest number of copies of target RNA which can be detected in 95% of cases) is 18 target copies/reaction and was determined by several replicates around the detection limit. The kit was tested with one TGEV, one HEV, three PEDV, eight PRRSV EU, four PPV and seven PCV2 strains. It showed no cross-reaction. It is specific for swine delta coronavirus and detects all swine delta coronavirus and porcine coronavirus HKU15 strains published in the NCBI database.

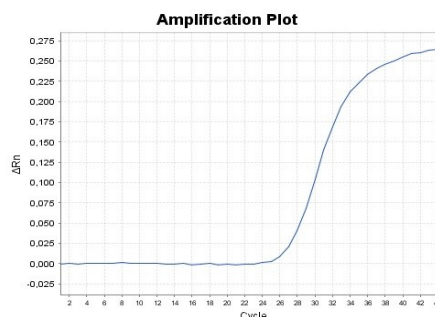
**References:** Patrick C. Y. Woo, Susanna K. P. Lau, Carol S. F. Lama, Kwok-Yung Yuena. 2012. Discovery of Seven Novel Mammalian and Avian Coronaviruses in the Genus Deltacoronavirus Supports Bat Coronaviruses as the Gene Source of Alphacoronavirus and Betacoronavirus and Avian Coronaviruses as the Gene Source of Gammacoronavirus and Deltacoronavirus. *J. Virology* 86:7.

## Detection of swine delta coronavirus

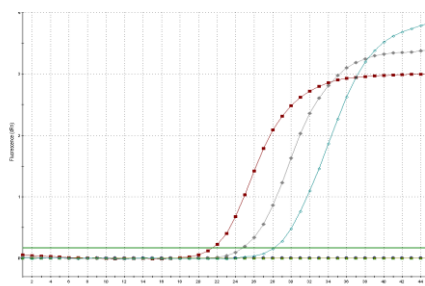


**ABI Prism® 7500:** VIC channel, 554 nm  
1:10 serial dilution of a swine delta coronavirus positive control

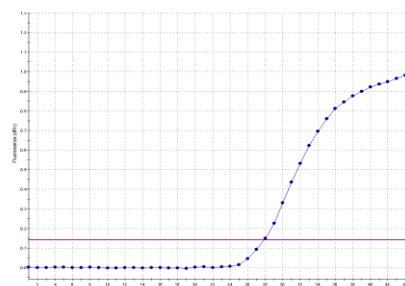
## Detection of internal RNA positive control



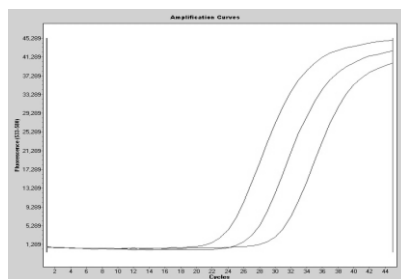
**ABI Prism® 7500:** Cy5 channel, 667 nm  
Detection of internal RNA positive control



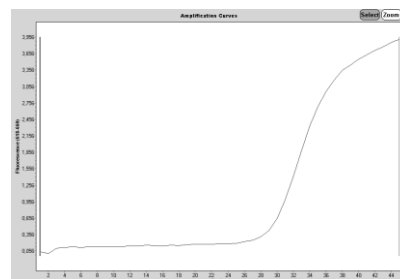
**Mx3005P®:** HEX channel  
1:10 serial dilution of a swine delta coronavirus positive control



**Mx3005P®:** CY5 channel  
Detection of internal RNA positive control



**LightCycler® 480:** HEX/VIC channel  
1:10 serial dilution of a swine delta coronavirus 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](http://www.ingenetix.com))