ViroReal® Kit PEDV & TGEV

For veterinary use only

ViroReal® Kit PEDV & TGEV			
Order no.	Reactions	Pathogen	Internal positive control
DVEV01413	100	FAM + VIC/HEX channel	Cy5 channel
DVEV01453	50	FAM + VIC/HEX channel	Cy5 channel

Kit contents:
- Two detection assays for porcine coronaviruses PEDV and TGEV
- Detection assay + target for internal RNA positive control (control of RT-PCR amplification and/or RNA extraction)
- RNA reaction mix
- Nuclease-free water
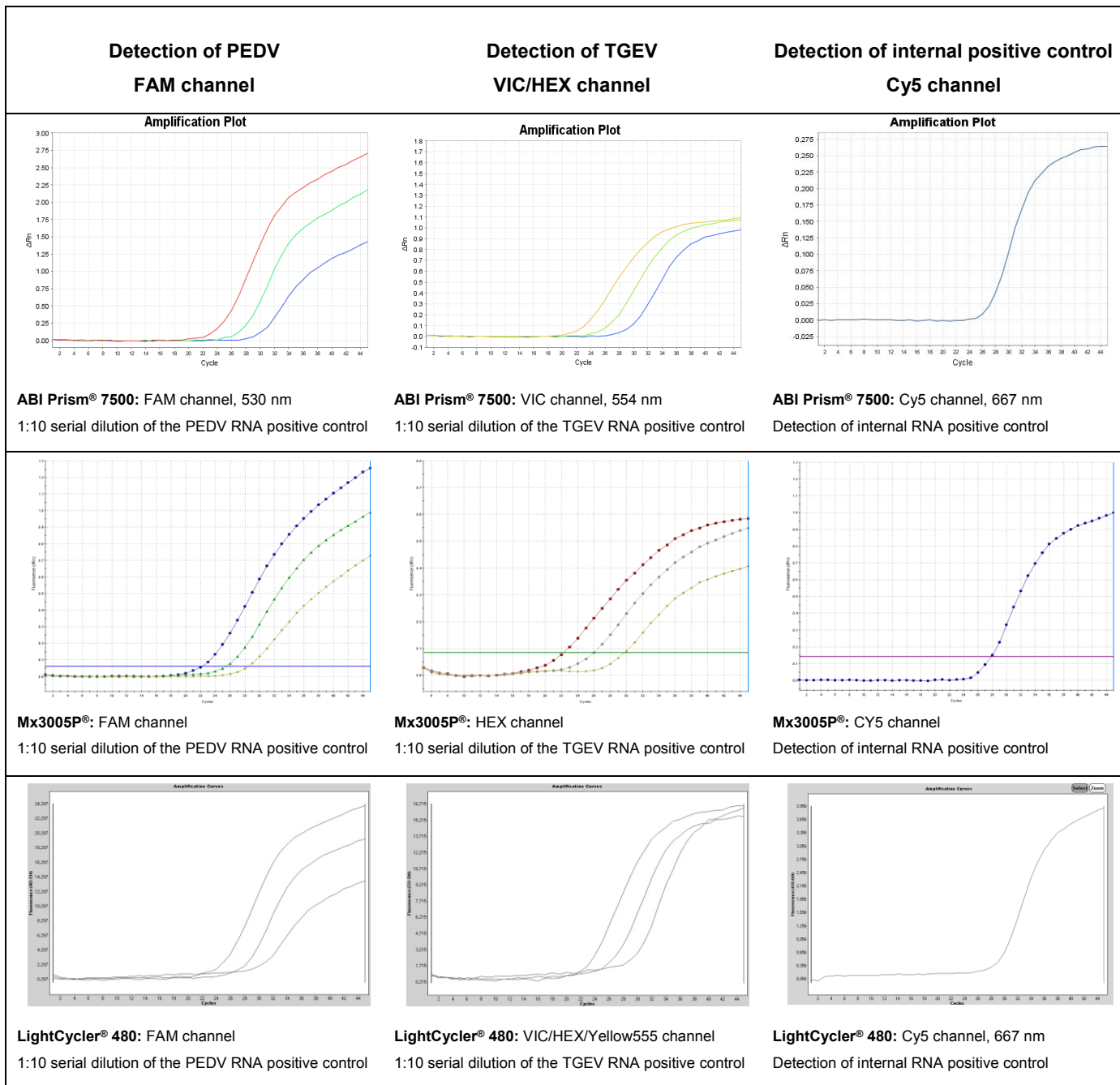- Positive controls (RNA) for PEDV and TGEV

Background: The family *Coronaviridae* includes pathogenic porcine coronaviruses such as the transmissible gastroenteritis virus (TGEV), the porcine respiratory coronavirus (PRCV), the porcine epidemic diarrhea virus (PEDV) and the porcine hemmaglutinating encephalomyelitis virus (PHEV). TGEV causes transmissible gastroenteritis (diarrhea and vomiting) in pigs, mortality is highest in neonates. PRCV is a mutant of TGEV and does not appear to be an important primary pathogen. PEDV is similar to, but antigenically distinct from TGEV. When epidemic, PEDV causes acute watery diarrhea and vomiting in a large proportion of all ages of swine. If PEDV is endemic, then diarrhea is observed with lower morbidity in suckling and recently weaned pigs.

Description: Viro**R**eal® Kit PEDV & TGEV is based on the amplification and detection of the nucleocapsid protein gene (N gene) of PEDV as well as a part of the S region of TGEV using one-step reverse transcription real-time PCR. PEDV is detected in FAM channel. TGEV is detected in VIC/HEX channel. This kit allows the rapid and sensitive detection of RNA of the porcine coronaviruses PEDV and TGEV from samples purified from nasal swabs and feces (e.g. with the QIAamp Viral RNA Mini Kit). The test clearly differentiates between these two viruses and does not detect PRCV that has a large in-frame deletion in the 5' end of the S gene.

PCR-platforms: Viro**R**eal® Kit PEDV & TGEV 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: Viro**R**eal® Kit PEDV & TGEV has a sensitivity of 10 RNA copies/PCR for PEDV and of 3 RNA copies/PCR for TGEV. The limit of detection (LoD95 = smallest number of copies of target RNA which can be detected in 95% of cases) was determined by several replicates around the detection limit. LoD95 is 37 target copies/reaction for PEDV and 17 target copies/reaction for TGEV. The kit was tested with one TGEV, one PHEV, three PEDV, eight PRRSV EU, four PPV and seven PCV2 strains. It was positive with PEDV and TGEV and showed no cross-reaction with the others. The kit is specific for PEDV and TGEV isolates.

References: Sestak K, Saif LJ. Porcine coronaviruses. In: Morilla A, Yoon K-J, Zimmerman JJ. Trends in Emerging Viral Infections of Swine. Ames, Iowa: Iowa State Press; 2002. p. 321-30.

Product Description

Detection of PEDV FAM channel	Detection of TGEV VIC/HEX channel	Detection of internal positive control Cy5 channel
ABI Prism® 7500: FAM channel, 530 nm 1:10 serial dilution of the PEDV RNA positive control	**ABI Prism® 7500:** VIC channel, 554 nm 1:10 serial dilution of the TGEV RNA positive control	**ABI Prism® 7500:** Cy5 channel, 667 nm Detection of internal RNA positive control
Mx3005P®: FAM channel 1:10 serial dilution of the PEDV RNA positive control	**Mx3005P®:** HEX channel 1:10 serial dilution of the TGEV RNA positive control	**Mx3005P®:** CY5 channel Detection of internal RNA positive control
LightCycler® 480: FAM channel 1:10 serial dilution of the PEDV RNA positive control	**LightCycler® 480:** VIC/HEX/Yellow555 channel 1:10 serial dilution of the TGEV RNA positive control	**LightCycler® 480:** Cy5 channel, 667 nm Detection of internal RNA 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)

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Product description v1.4e