

ViroReal® Kit Parainfluenzavirus



ViroReal® Kit Parainfluenzavirus

Order no.	Reactions	Pathogen	Internal positive control
DHUV01653	50	FAM & VIC/HEX channel	Cy5 channel

Kit contents:

- Detection assay for parainfluenzavirus types 1, 2, 3, 4
- Detection assay + target for internal RNA positive control (control of RT-PCR amplification and RNA extraction)
- RNA reaction mix
- Nuclease-free water
- Positive control (RNA) for parainfluenzavirus 1 and 2



Background: Human parainfluenzaviruses (HPIV) are enveloped, negative single-stranded RNA viruses (ss(-)RNA) of the family *Paramyxoviridae*. At present four serotypes are known (types 1, 2, 3, 4). Parainfluenzavirus type 1 and 3 belong to the genus *Respirovirus*, while parainfluenzavirus type 2 and 4 belong to the genus *Rubulavirus*. Human parainfluenzavirus type 1 (HPIV-1) is the major cause of acute croup, but can also cause respiratory tract infections at all ages. Human parainfluenzavirus type 2 (HPIV-2) can also cause croup as well as upper and lower respiratory tract illnesses. Human parainfluenzavirus type 3 (HPIV-3) causes bronchiolitis and pneumonia. Human parainfluenzavirus type 4 with the subtypes 4a and 4b is less likely to cause severe disease.

Description: ViroReal® Kit parainfluenzavirus is an *in vitro* diagnostic test detecting RNA of the hemagglutinin-neuraminidase glycoprotein gene (HN gene) of human parainfluenzavirus types 1, 2, 3 and 4 (HPIV-1, HPIV-2, HPIV-3, HPIV-4) using one-step reverse transcription real-time PCR (RT-PCR). This test allows the rapid detection of RNA of parainfluenzavirus from samples purified from the respiratory tract (e.g. with the QIAamp Viral RNA Mini Kit, Qiagen). Parainfluenzavirus type 1 and 3 (HPIV-1 and HPIV-3) are detected in FAM channel. Parainfluenzavirus type 2 and 4 (HPIV-2 and HPIV-4) are detected in VIC/HEX channel. The internal RNA positive control (RNA IPC) is detected in Cy5 channel and is used as RNA extraction as well as RT-PCR inhibition control. The RNA IPC target is extracted with the sample.

PCR-platforms: This test has been validated with the Applied Biosystems® 7500 Fast Real-time PCR System (Thermo Fisher Scientific) and tested with a LightCycler® 480 Instrument II (Roche), Mx3005P® QPCR System (Agilent), MIC instrument (bio molecular systems), QuantStudio™ 7 Pro (Thermo Fisher Scientific) and qTOWER³G (Analytik Jena). It is compatible with real-time PCR instruments which detect and differentiate fluorescence in FAM, VIC and Cy5 channel.

Specificity and sensitivity: ViroReal® Kit Parainfluenzavirus detects at least 10 target copies/reaction of HPIV-1 and at least 100 target copies/reaction of HPIV-2, HPIV-3 and HPIV-4. The limit of detection (LoD₉₅ = smallest number of copies of target RNA which can be detected in 95% of cases) is 47 target copies/reaction for HPIV-1, 335 target copies/reaction for HPIV-2, 294 target copies/reaction for HPIV-3 and 346 target copies/reaction for HPIV-4.

Diagnostic evaluation was performed with different viral isolates, with various parainfluenzavirus 1, 2, 3 and 4 isolates and with clinical samples. This kit is specific for so far known HPIV-1, HPIV-2, HPIV-3, HPIV-4 strains.

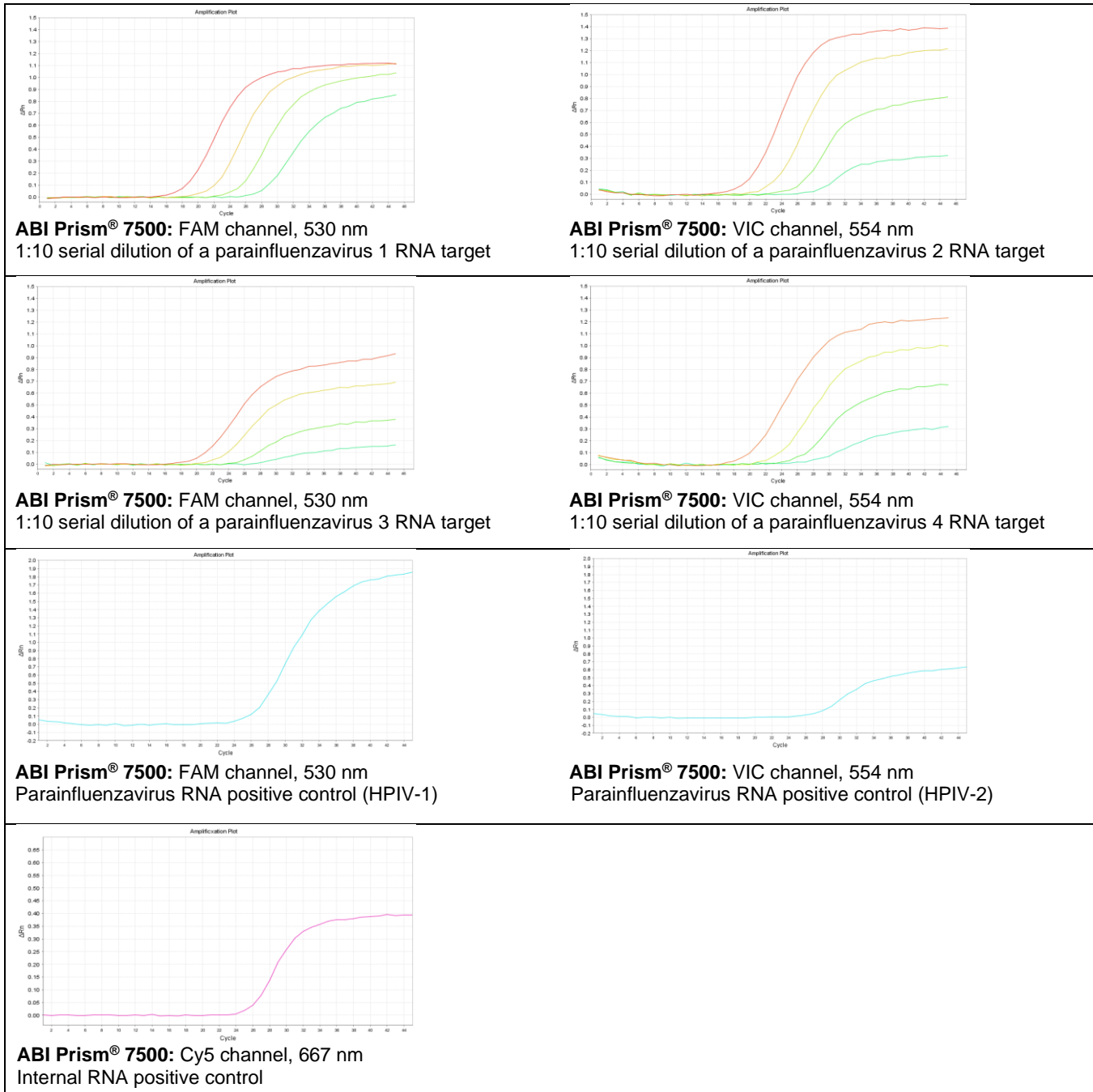


Figure 1 Performance of ViroReal® Kit Parainfluenzavirus

For further information on our products please visit our homepage (www.ingenetix.com)