

ViroReal® Kit Enterovirus



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Order no.	Reactions	Pathogen	Internal positive control
DHUV00353	50	FAM channel	Cy5 channel

Kit contents:

- Detection assay for enterovirus
- 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 enterovirus



Background: Enteroviruses are non-enveloped, positive single-stranded RNA viruses (ss(+)RNA) and are members of the family *Picornaviridae*. The genus *Enterovirus* has a worldwide distribution and includes numerous viral groups infecting humans, bovines, equines, simians, porcines and rodents. Enteroviruses infecting humans are poliovirus, coxsackievirus, echovirus, human enteroviruses and human rhinoviruses. Enteroviruses are the causative agents e.g. for infection of the respiratory tract (summer flu, pharyngitis, pneumonia) and infection of inner organs (myocarditis, encephalitis, pleurodynia), aseptic meningitis, herpangina, hand-foot-mouth disease, hemorrhagic conjunctivitis and poliomyelitis.

Description: ViroReal® Kit Enterovirus is an *in vitro* diagnostic test detecting RNA of the 5'UTR region of the genus *Enterovirus* using one-step reverse transcription real-time PCR (RT-PCR). This test allows the rapid and sensitive detection of RNA of enterovirus from samples purified from the respiratory tract and stool (e.g. with the QIAamp Viral RNA Mini Kit, Qiagen).

Enterovirus RNA is detected in FAM 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 kit has been validated with Applied Biosystems® 7500 Fast Real-time PCR System (Thermo Fisher Scientific) and tested with LightCycler® 480 Instrument II (Roche) and Mx3005P® QPCR System (Agilent). It is compatible with real-time PCR instruments detecting and differentiating fluorescence in FAM and Cy5 channel.

Specificity and sensitivity: ViroReal® Kit Enterovirus detects at least 10 target copies/reaction. The limit of detection (LoD95 = smallest number of target RNA copies which can be detected in 95% of cases) is 30.6 target copies/reaction. This kit is specific for so far known enterovirus strains.

Diagnostic evaluation was performed with viral isolates and clinical samples. The detection of following enterovirus serotypes has been confirmed: Coxsackie-Virus A1, coxsackie-virus A5, coxsackie-virus A6, coxsackie-virus A13, coxsackie-virus A21, coxsackie-virus B2, coxsackie-virus B3, coxsackie-virus B5, echovirus 1, echovirus 6, echovirus 11, echovirus 14, echovirus 30, enterovirus 71, enterovirus 90, enterovirus 99, enterovirus D68, poliovirus type 1, poliovirus type 2 and poliovirus type 3. Some rhinoviruses are detected as well, but with lower sensitivity.

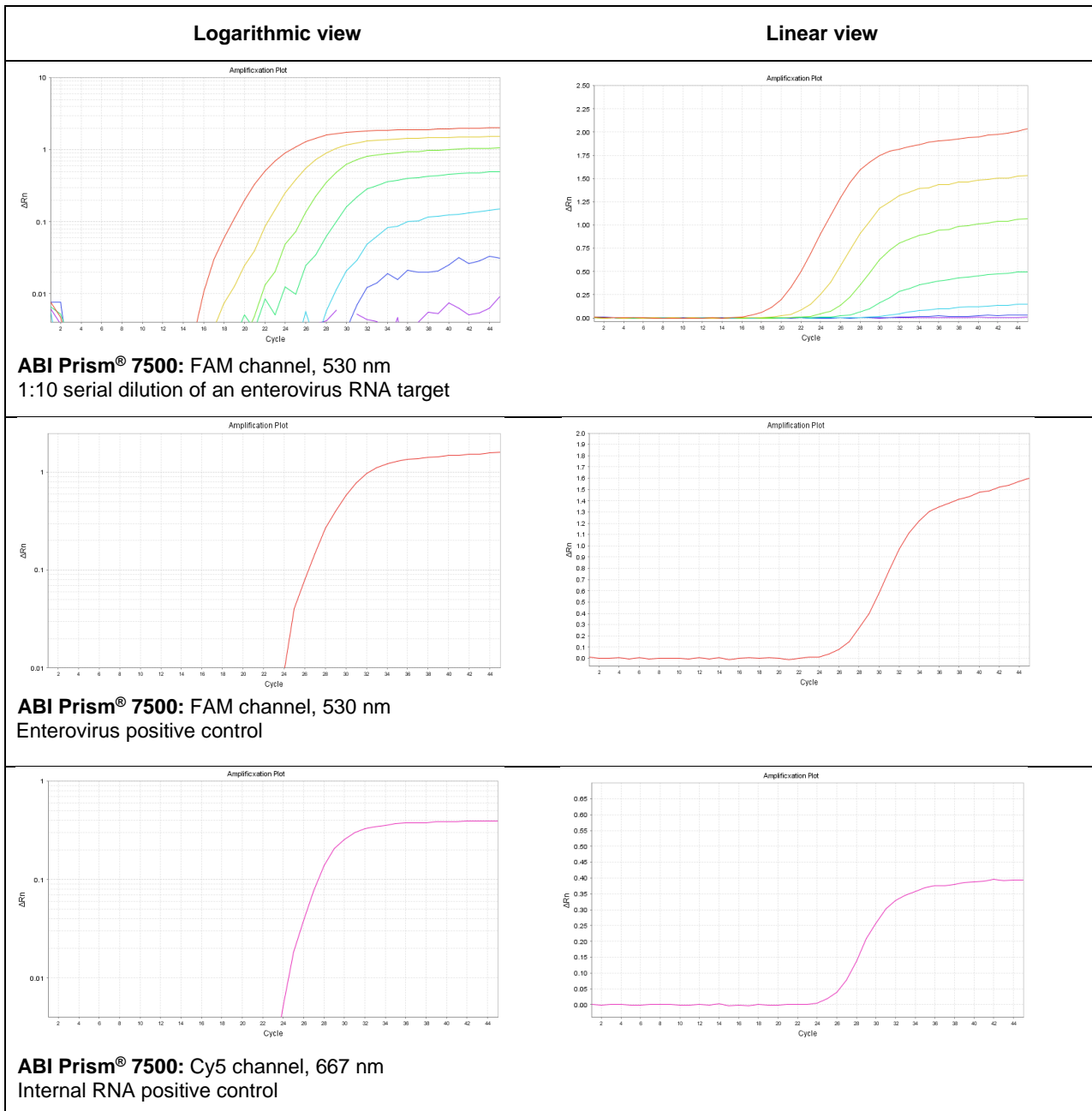


Figure 1 Performance of ViroReal® Kit Enterovirus

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