

Parainfluenza

Parainfluenza viruses (PIV or HPIV in humans) belong to the *Paramyxoviridae* family and are divided into 4 types. All of them cause respiratory infections in infants, children and adults; although the location of the infection and some symptoms depend on the type. HPIV-1 and HPIV-2 both cause upper and lower respiratory illness, such as cold and croup, with HPIV-1 most often identified in children. HPIV-3 is more often associated with lower illness (bronchiolitis, bronchitis and pneumonia) and HPIV-4 is recognized less often but may cause mild to severe respiratory illnesses.

Most often, they aren't severe enough to cause concern in healthy adults; however, they can be life-threatening in infants, immunocompromised patients, chronically ill and elderly.

HPIV usually spread from an infected person to others through the air by coughing and sneezing, close personal contact or touching objects or surfaces that have HPIV on them and then touching their mouth, nose or eyes. After you get infected, it takes about 2 to 7 days before you develop symptoms.

▶ Viral culture in combination with immunofluorescence is the traditional method for diagnosis but it is timeconsuming. Antigen detection test are widely used but they are less sensitive and specific than other diagnostics tools such as Real-time PCR assays, which currently are being considered one of the best method of choice.

VIASURE Parainfluenza Real Time PCR Detection Kit is designed for the diagnosis of Parainfluenza 1, Parainfluenza 2, Parainfluenza 3 and/or Parainfluenza 4 in clinical samples. The detection is done in one step real time RT format where the reverse transcription and the subsequent amplification of specific target sequence occur in the same reaction well. The isolated RNA target is transcribed generating complementary DNA by reverse transcriptase which is followed by the amplification of a conserved region of the hemagglutinin-neuraminidase gene, using specific primers and a fluorescent-labelled probe.



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VIASURE Parainfluenza Real Time PCR Detection Kit is designed for the specific identification and differentiation of Parainfluenza 1, Parainfluenza 2, Parainfluenza 3 and/or Parainfluenza 4 in clinical samples from patients with signs and symptoms of respiratory infection.

This test is intended for use as an aid in the diagnosis of Parainfluenzas viruses in combination with clinical and epidemiological risk factors.

RNA is extracted from clinical specimens, multiplied using Real Time amplification and detected using fluorescent reporter dye probes specific for Parainfluenza 1, Parainfluenza 2, Parainfluenza 3 and Parainfluenza 4.

Analytical sensitivity

VIASURE Parainfluenza Real Time PCR Detection Kit has a detection limit of ≥ 10 RNA copies per reaction (Figure 1, 2, 3 and 4).

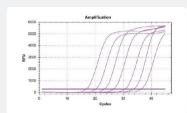


Figure 1.

Dilution series of Parainfluenza 1 (10^7 - 10^1 copies/rxn) template run on the Bio-Rad CFX96TM Real-Time PCR Detection System (Multiplex reaction mix Parainfluenza 1+3, channel Cy5).

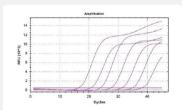


Figure 3.

Dilution series of Parainfluenza 2 (10^7 - 10^1 copies/rxn) template run on the Bio-Rad CFX96TM Real-Time PCR Detection System (Multiplex reaction mix Parainfluenza 2+4, channel Cy5)

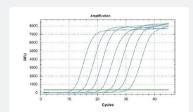


Figure 2.

Dilution series of Parainfluenza 3 (10^7 - 10^1 copies/rxn) template run on the Bio-Rad CFX96TM Real-Time PCR Detection System (Multiplex reaction mix Parainfluenza 1+3, channel FAM).

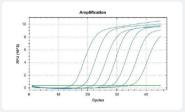


Figure 4.

Dilution series of Parainfluenza $4 (10^7-10^1 \text{ copies/rxn})$ template run on the Bio-Rad CFX96TM Real-Time PCR Detection System (Multiplex reaction mix Parainfluenza 2+4, channel FAM)

▶ References - VIASURE Parainfluenza Real Time PCR Detection Kit

6 x 8-well strips, low profileVS-PIZ106L
12 x 8-well strips, low profileVS-PIZ112L
18 x 4-well strips, Rotor-Gene® VS-PIZ136

6 x 8-well strips, high profile	VS-PIZ106H
12 x 8-well strips, high profile	VS-PIZ112H

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For more information and use procedure, read the instructions for use included in this product.

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