

VIASURE MULTIPLEX

Parainfluenza Real Time PCR Detection Kit

Pathogen and product description

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.

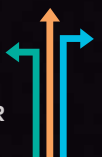
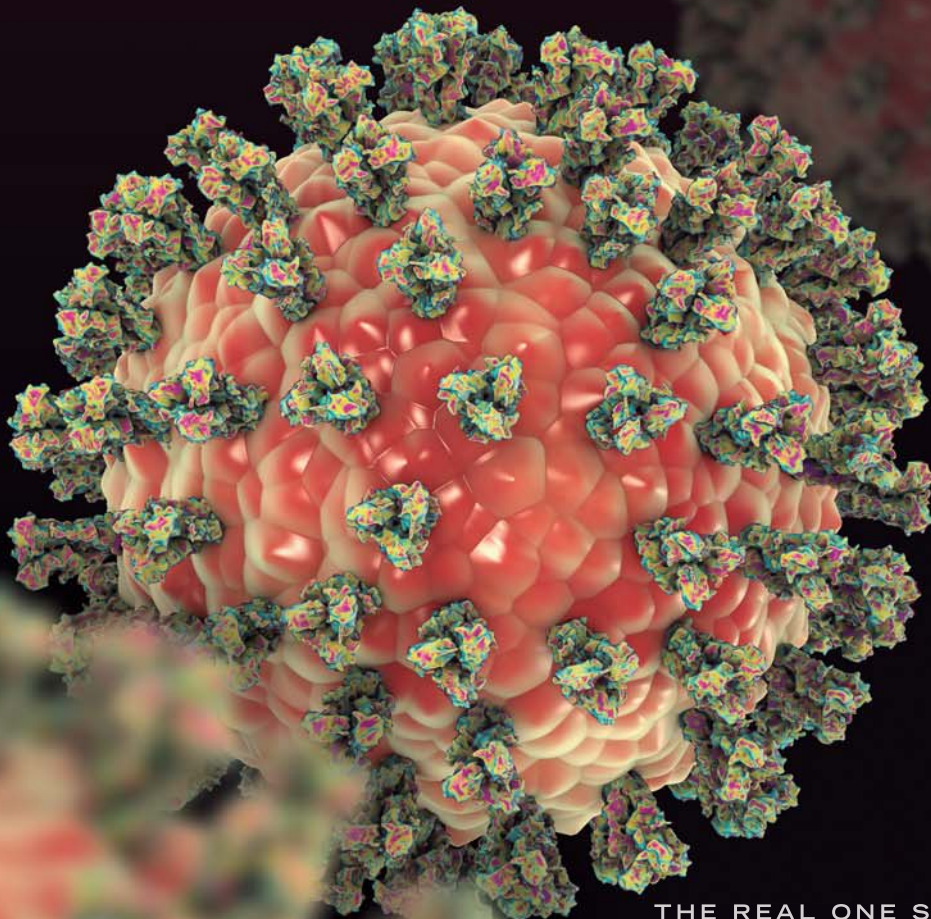
Most often, they aren't severe enough to cause concern in healthy adults; however, they can be life-threatening in infants, immunocompromised patients, chronically ill and elderly.

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.

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.

VIASURE *Parainfluenza* Real Time PCR Detection Kit contains in each well all the components necessary for real time PCR assay (specific primers/probes, dNTPs, buffer, polymerase and retrotranscriptase) in a stabilized format, as well an internal control to monitor PCR inhibition.



Analytical sensitivity

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

Figure 1. Dilution series of Parainfluenza 1 (10^7 – 10^1 copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System (Multiplex reaction mix Parainfluenza 1+3, channel Cy5).

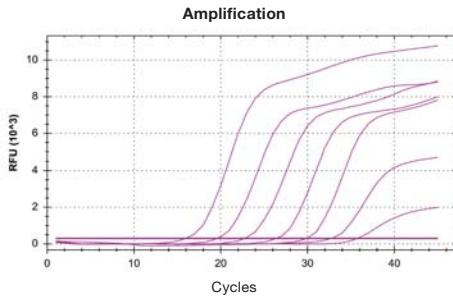


Figure 2. Dilution series of Parainfluenza 2 (10^7 – 10^1 copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System (Multiplex reaction mix Parainfluenza 2+4, Cy5 channel)

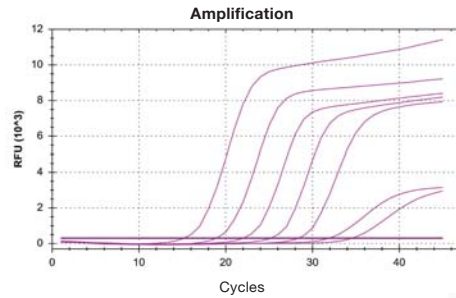


Figure 3. Dilution series of Parainfluenza 3 (10^7 – 10^1 copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System (Multiplex reaction mix Parainfluenza 1+3, FAM channel).

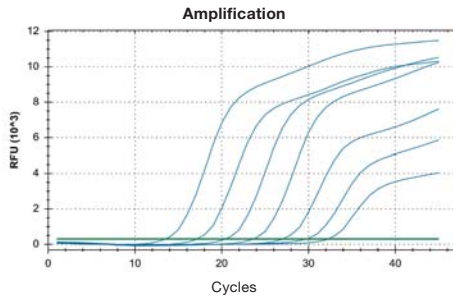
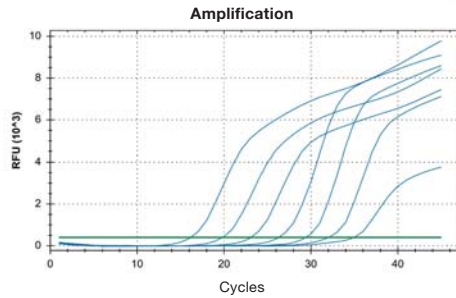


Figure 4. Dilution series of Parainfluenza 4 (10^7 – 10^1 copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System (Multiplex reaction mix Parainfluenza 2+4, FAM channel).



Components

Reagent/Material	Description	Colour	Quantity
Parainfluenza 1+3 8-well strips	A mix of enzymes, primers-probes, buffer, dNTPs, stabilizers and Internal control in stabilized format	White	3/6 x 8-well strip
Parainfluenza 2+4 8-well strips	A mix of enzymes, primers-probes, buffer, dNTPs, stabilizers and Internal control in stabilized format	White	3/6 x 8-well strip
Rehydration Buffer	Solution to reconstitute the stabilized product	Blue	1 vial x 1.8 mL
Parainfluenza Positive Control	Non-infectious synthetic lyophilized cDNA	Red	1 vial
Negative Control	Non template control	Violet	1 vial x 1 mL
Water RNase/DNase free	RNase/DNase free water	White	1 vial x 1 mL
Tear-off 8-cap strips	Optical caps for sealing wells during thermal cycling	Transparent	6/12 x 8-cap strip

Kit References

Reference	Description
VS-PIZ106L	VIASURE Parainfluenza Real Time PCR Detection Kit 6 x 8-well strips, low profile
VS-PIZ106H	VIASURE Parainfluenza Real Time PCR Detection Kit 6 x 8-well strips, high profile
VS-PIZ112L	VIASURE Parainfluenza Real Time PCR Detection Kit 12 x 8-well strips, low profile
VS-PIZ112H	VIASURE Parainfluenza Real Time PCR Detection Kit 12 x 8-well strips, high profile

Work Flow

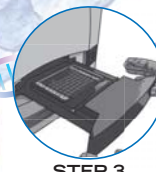
One-step rehydration of wells and add your extracted RNA



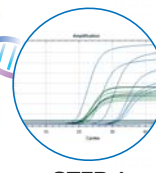
STEP 1
Add 15 μ l of rehydration buffer into each well



STEP 2
Add 5 μ l of RNA sample / positive control / negative control



STEP 3
Load the strips into the thermocycler and run the specified protocol



STEP 4
Interpretate results