

# VIASURE

## Human Metapneumovirus Real Time PCR Detection Kit

### Pathogen and product description

**H**uman Metapneumoviruses (hMPV) belong to the *Paramyxoviridae* family and have been identified as one of the most frequent causes of upper and lower respiratory tract infection.

The infection of human Metapneumovirus can cause severe bronchiolitis and pneumonia in children, and its clinical manifestations are indistinguishable from those caused by human respiratory syncytial virus. Initial infection usually occurs during early childhood, but reinfections are common throughout life. The frequent symptoms are fever, cough, hypoxia, upper and lower respiratory tract infections and wheezing.

The virus has been isolated on all continents and has a seasonal distribution. Outbreaks occur mainly in the spring and winter months. Human Metapneumoviruses are transmitted by infectious airborne droplets and by contact between infected people, as the natural reservoir

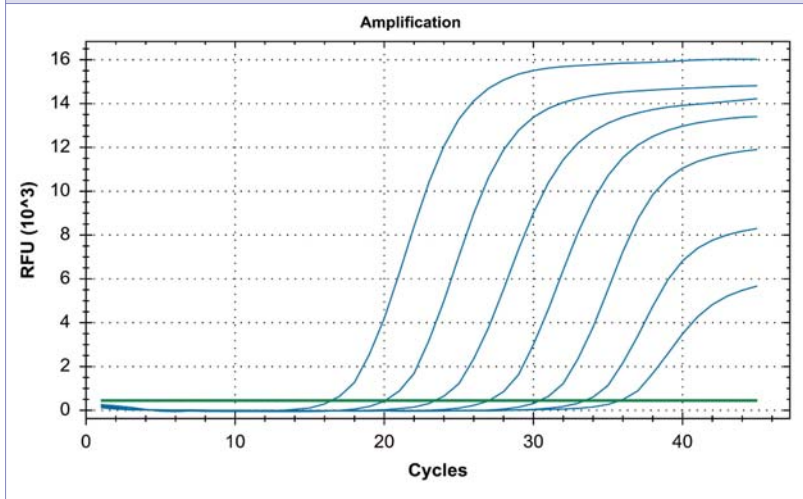
of these viruses in human. Detection of hMPV is non-optimal by conventional cell culture due to its slow growth, which was one of the reasons for the late discovery of the virus. Therefore, molecular methods like RT-PCR and/or real-time RT-PCR are preferred and more widely used diagnostic modality enveloped negative sense single stranded RNA virus.

VIASURE *Human Metapneumovirus* Real Time PCR Detection Kit is designed for the diagnosis of human Metapneumovirus in respiratory samples. The detection is done in one step real time PCR 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 amplification of a conserved region of *N* gene using specific primers and a fluorescent-labeled probe.



### Analytical sensitivity

**VIASURE** Human Metapneumovirus Real Time PCR Detection Kit has a detection limit of  $\geq 10$  RNA copies per reaction.



Dilution series of Human Metapneumovirus ( $10^7$ - $10^1$  copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System.

### Components

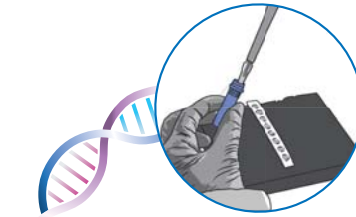
Reagent/Material	Description	Quantity
Human Metapneumovirus 8-well strips	A mix of enzymes, primers-probes, buffer, dNTPs, stabilizers and Internal control in stabilized format	6/12 x 8-well strip
Human Metapneumovirus 96-well plate	A mix of enzymes, primers-probes, buffer, dNTPs, stabilizers and Internal control in stabilized format	1 plate
Rehydration Buffer	Solution to reconstitute the stabilized product	1 vial x 1,8 mL
Human Metapneumovirus Positive Control	Non-infectious synthetic lyophilized cDNA	1 vial
Negative Control	Non template control	1 vial x 1 mL
Water RNase/DNase free	Water RNase/DNase free	1 vial x 1 mL
Tear-off 8-cap strips	Optical caps for sealing Wells during thermal cycling	6/12 x 8-cap strip
Shell Frame Grid	Shell Frame Grid	1 or 2

### Kit References

Reference	Description
VS-MPV106L	Viasure Human Metapneumovirus Real Time PCR Detection Kit 6 x 8-well strips, low profile
VS-MPV106H	Viasure Human Metapneumovirus Real Time PCR Detection Kit 6 x 8-well strips, high profile
VS-MPV112L	Viasure Human Metapneumovirus Real Time PCR Detection Kit 12 x 8-well strips, low profile
VS-MPV112H	Viasure Human Metapneumovirus Real Time PCR Detection Kit 12 x 8-well strips, high profile
VS-MPV113L	Viasure Human Metapneumovirus Real Time PCR Detection Kit 96-well plate, low profile
VS-MPV113H	Viasure Human Metapneumovirus Real Time PCR Detection Kit 96-well plate, high profile

### Work Flow

One-step rehydration of wells and add your extracted RNA



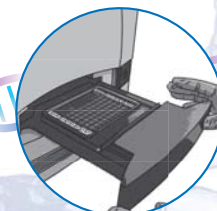
**STEP 1**

Add 15  $\mu$ l of rehydration buffer into each well



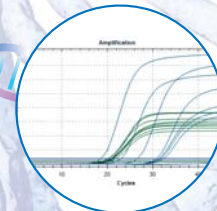
**STEP 2**

Add 5  $\mu$ 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