

VIASURE

Crimean-Congo hemorrhagic Fever Virus Real Time PCR Detection Kit

Pathogen and product description

Crimean-Congo hemorrhagic fever (CCHF) is caused by infection with a tick-borne virus (Nairovirus) in the family *Bunyaviridae*. The disease was first characterized in the Crimea in 1944 and given the name Crimean hemorrhagic fever. It was then later recognized in 1969 as the cause of illness in the Congo, thus resulting in the current name of the disease.

The Crimean-Congo haemorrhagic fever (CCHF) virus causes severe viral haemorrhagic fever outbreaks. The length of the incubation period depends on the mode of acquisition of the virus. Onset of symptoms is sudden, with fever, myalgia, dizziness, neck pain and stiffness, backache, headache, sore eyes and photophobia. There may be nausea, vomiting, diarrhoea, abdominal pain and sore throat early on, followed by sharp mood swings and confusion. After two to four days, the agitation may be replaced by sleepiness, depression and lassitude, and the abdominal pain may localize to the upper right quadrant, with detectable hepatomegaly. Other clinical signs include tachycardia, lymphadenopathy, and a petechial rash on internal mucosal surfaces, such as in the mouth and throat, and on the skin. The petechiae may give way to larger rashes called ecchymoses, and other haemorrhagic phenomena. There is usually evidence of hepatitis, and severely ill patients may experience rapid kidney deterioration, sudden liver failure or

pulmonary failure after the fifth day of illness.

The virus is primarily transmitted to people from ticks of the genus *Hyalomma* (are the principal vector) and livestock animals. Human-to-human transmission can occur resulting from close contact with the blood, secretions, organs or other bodily fluids of infected person.

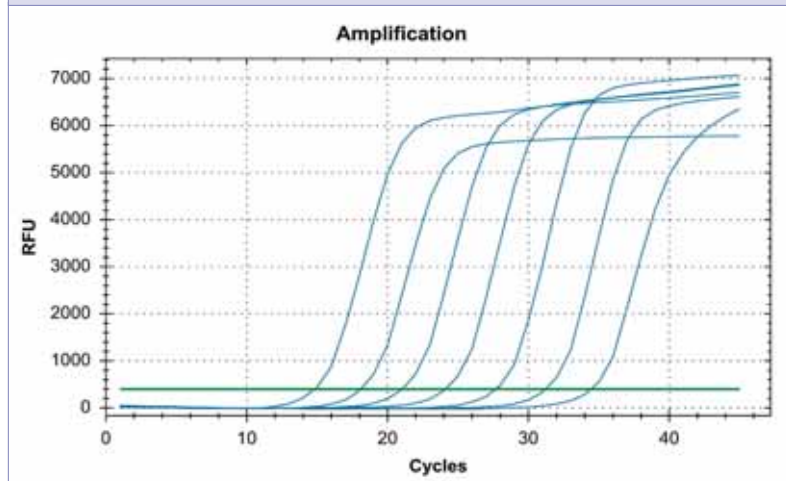
Laboratory tests that are used to diagnose CCHF include ELISA, real time PCR, virus isolation cell by culture, and detection of antibody by ELISA (IgG and IgM). The CCHFV genome can be detected with RT-PCR from serum, blood, and tissue autopsy. Real Time RT-PCR is a detection method commonly used during the acute phase of the infection.

VIASURE *Crimean-Congo hemorrhagic Fever Virus* Real Time PCR Detection Kit is designed for the diagnosis of the Crimean-Congo hemorrhagic Fever Virus in in serum, blood, and/or body fluids 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 segment S gene using specific primer and a fluorescent-labelled probe.



Analytical sensitivity

VIASURE Crimean-Congo hemorrhagic Fever Virus Real Time PCR Detection Kit has a detection limit of ≥ 10 RNA copies per reaction



Dilution series of Crimean-Congo hemorrhagic Fever Virus (10^7 - 10^1 copies/rxn) template run on the Bio-Rad CFX96™ Real-Time PCR Detection System (channel FAM).

Componentes

Reagent/Material	Description	Colour	Quantity
Crimean-Congo hemorrhagic Fever Virus 8-well strips	A mix of enzymes, primers-probes, buffer, dNTPs, stabilizers and Internal control in stabilized format	White	6/12 x 8-well strip
Rehydration Buffer	Solution to reconstitute the stabilized product	Blue	1 vial x 1,8 mL
Crimean-Congo hemorrhagic Fever Virus 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	Water RNase/DNAse free	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-CCV106L	Viasure Crimean-Congo hemorrhagic Fever Virus Real Time PCR Detection Kit 6 x 8-well strips, low profile
VS-CCV106H	Viasure Crimean-Congo hemorrhagic Fever Virus Real Time PCR Detection Kit 6 x 8-well strips, high profile
VS-CCV112L	Viasure Crimean-Congo hemorrhagic Fever Virus Real Time PCR Detection Kit 12 x 8-well strips, low profile
VS-CCV112H	Viasure Crimean-Congo hemorrhagic Fever Virus Real Time PCR Detection Kit 12 x 8-well strips, high profile
VS-CCV113L	Viasure Crimean-Congo hemorrhagic Fever Virus Real Time PCR Detection Kit 96-well plate, low profile
VS-CCV113H	Viasure Crimean-Congo hemorrhagic Fever Virus Real Time PCR Detection Kit 96-well plate, high profile

Work Flow

One-step rehydration of wells and add your extracted DNA

