VIASURE

Japanese encephalitis virus Real Time PCR Detection Kit

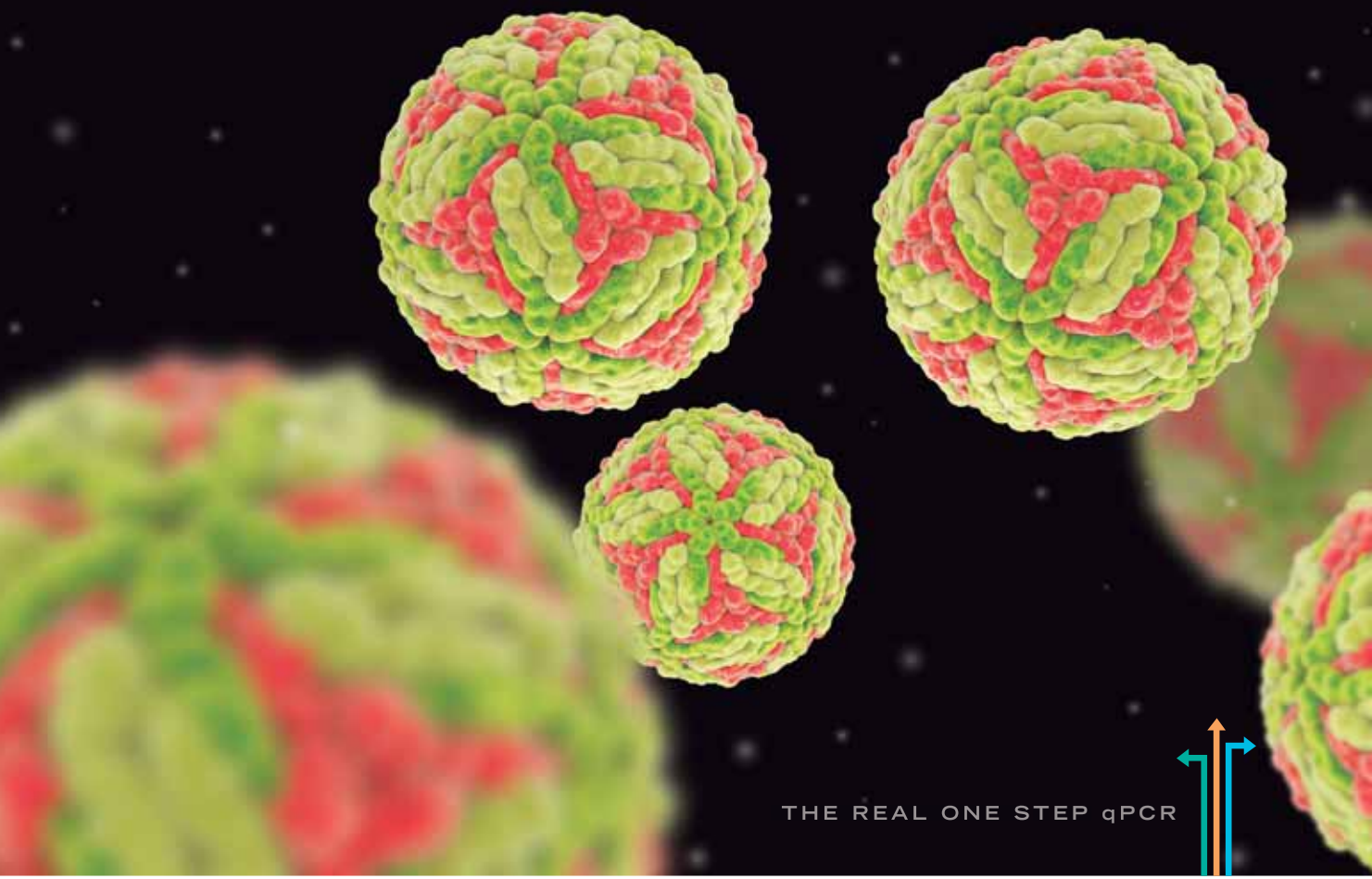
Pathogen and product description

Japanese encephalitis (JE) virus, a flavivirus, is closely related to West Nile and St. Louis encephalitis viruses. JE virus is transmitted to humans through the bite of infected *Culex* species mosquitoes, particularly *Culex tritaeniorhynchus*.

Humans can be infected when bitten by an infected mosquito. The virus is maintained in a cycle between mosquitoes and vertebrate hosts, primarily pigs and wading birds. Humans are incidental or dead-end hosts, because they usually do not develop high enough concentrations of JE virus in their bloodstreams to infect feeding mosquitoes. Most human infections are asymptomatic or result in only mild symptoms. However, a small percentage of infected persons develop inflammation of the brain (encephalitis), with symptoms including sudden onset of headache, high fever, disorientation, coma, tremors and convulsions. There is no specific treatment for JE.

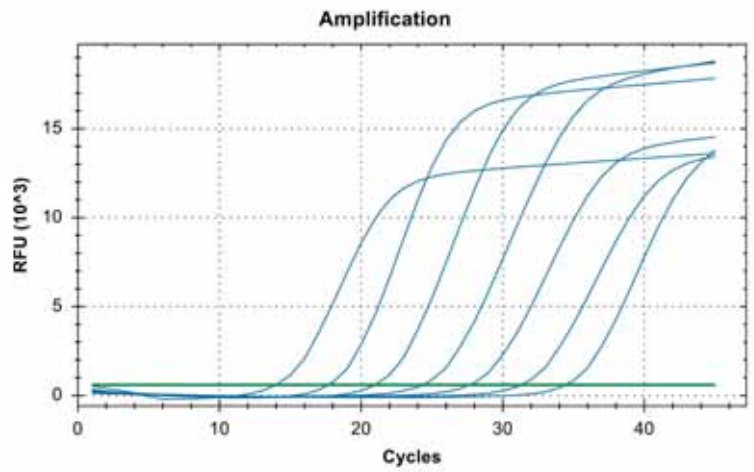
The diagnosis of Japanese encephalitis infection relies on the detection of specific IgM antibodies which are present in cerebrospinal fluid (CSF) and serum specimens from patients after 4-7 days post onset clinical symptoms. The viremia is very short and limited to the early phase of the disease. Viral direct detection by RT-PCR could be performed on blood or CSF in early stage of the disease and on cerebral biopsies from deceased patients.

VIASURE Japanese encephalitis virus Real Time PCR Detection Kit is designed for the diagnosis of the Japanese encephalitis virus in blood or CSF 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 *NS2A* gene using specific primer and a fluorescent–labelled probe.



Analytical sensitivity

VIASURE *Japanese encephalitis virus* Real Time PCR Detection Kit has a detection limit of ≥10 RNA copies per reaction



Dilution series of Japanese encephalitis virus (10^7-10^1 copies/rxn) template run on the Bio-Rad CFX96™ Real-Time PCR Detection System (channel FAM).

Components

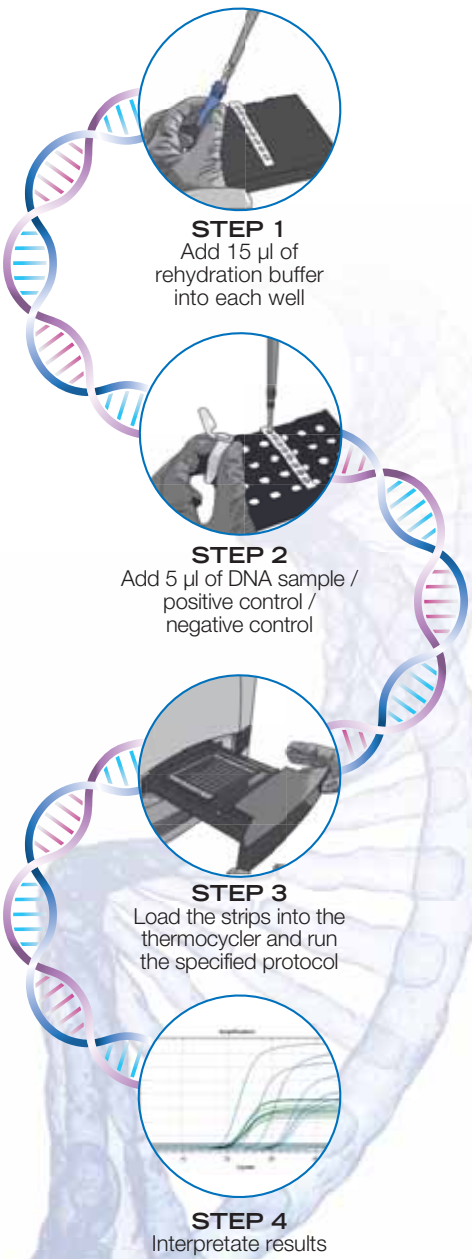
Reagent/Material	Description	Colour	Quantity
***Japanese encephalitis virus* 8-well strips**	A mix of enzymes, primers-probes, buffer, dNTPs, stabilizers and Internal control in stabilized format	White	6/12 x 8-well strip
Rehydration Buffer	Solution to reconstitute the stabilized product	Blue	1 vial x 1,8 mL
***Japanese encephalitis 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-JEV106L	Viasure *Crimean-Congo hemorrhagic Fever Virus* Real Time PCR Detection Kit 6 x 8-well strips, low profile
VS-JEV106H	Viasure *Crimean-Congo hemorrhagic Fever Virus* Real Time PCR Detection Kit 6 x 8-well strips, high profile
VS-JEV112L	Viasure *Crimean-Congo hemorrhagic Fever Virus* Real Time PCR Detection Kit 12 x 8-well strips, low profile
VS-JEV112H	Viasure *Crimean-Congo hemorrhagic Fever Virus* Real Time PCR Detection Kit 12 x 8-well strips, high profile
VS-JEV113L	Viasure *Crimean-Congo hemorrhagic Fever Virus* Real Time PCR Detection Kit 96-well plate, low profile
VS-JEV113H	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



STEP 1
Add 15 µl of rehydration buffer into each well

STEP 2
Add 5 µl of DNA sample / positive control / negative control

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

STEP 4
Interpretate results

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