



"Ready & Easy-to-use" kits.
Lyophilised product



Transport and storage at room temperature.
Shelf-life: 24 months



CE marked

TROPICAL & VECTOR-BORNE

TBD
MULTIPLEX

Tick Borne Diseases

- ▶ Tick Borne diseases comprise a group of infections transmitted to humans by the bite of ticks infected with bacteria, viruses, or parasites. The most common tick-borne diseases that affect humans include:

Tick-borne relapsing fever (TBRF), caused by bacteria of the genus *Borrelia*, such as *Borrelia miyamotoi* and *Borrelia hermsii*.

Anaplasmosis is caused by the bacterium *Anaplasma phagocytophilum* and is transmitted to humans through ticks of the genus *Ixodes*.

Q fever is a zoonosis caused by the bacteria *Coxiella burnetii*.

Babesiosis is produced by many species of protozoa of the genus *Babesia*, mainly *Babesia microti* and *Babesia divergens*.

Ehrlichiosis is due to different species of bacteria of the genus *Ehrlichia*.

Tick Borne encephalitis is produced by the Tick Borne encephalitis virus (TBEV) of the family *Flaviviridae*.

Spotted fever is caused by bacteria of the genus *Rickettsia* and is widely distributed by different geographical areas, being able to transmit depending on it by different ticks.

- ▶ Since most Tick Borne diseases show similar symptoms, diagnosis can be problematic. Real-time PCR assays have been shown to be a sensitive and specific diagnostic tool for the detection of the causative agent.

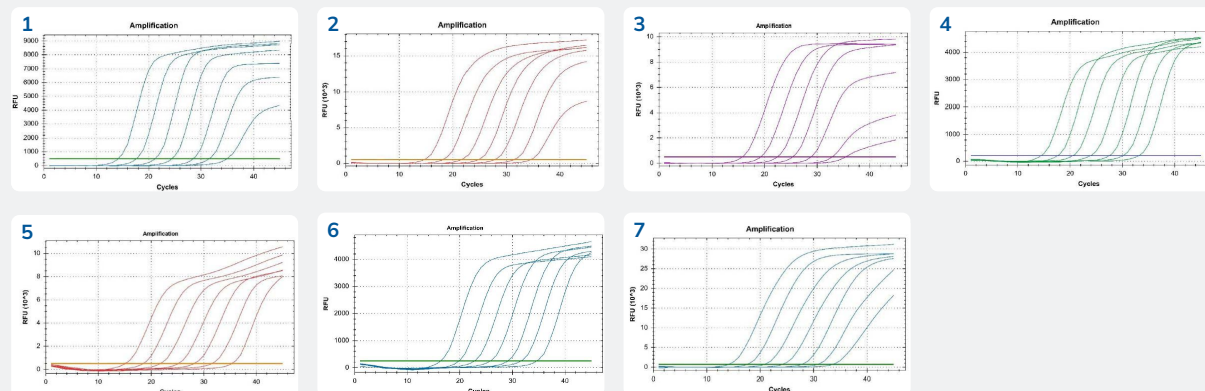
Tick Borne Diseases

VIASURE Tick Borne Diseases Real Time PCR Detection Kit is a real-time RT-PCR test designed for the qualitative detection of viral RNA or genomic DNA specific for Tick Borne Encephalitis Virus (TBEV), *Rickettsia spp.*, *Babesia microti/Babesia divergens*, *Ehrlichia chafeensis/Ehrlichia muris*, *Borrelia burgdorferi sensu lato (s.l.)/ Borrelia miyamotoi/Borrelia hermsii*, *Anaplasma phagocitophylum* and/or *Coxiella burnetii* in clinical samples from patients with signs and symptoms compatible with Tick Borne diseases such as biopsy skin, cerebrospinal fluid (CSF) and synovial fluid and clinical samples for epidemiological surveillance and control such as blood, serum, tissue samples and microbiological culture from ticks.

This test is intended for use as an aid in the diagnosis of Tick Borne diseases in combination with clinical and epidemiological risk factors. This test is not designed to diagnose Lyme disease, it detects but not differentiate *Borrelia burgdorferi sensu lato (s.l.)*, *Borrelia miyamotoi* and *Borrelia hermsii*. RNA/DNA is extracted from clinical specimens, multiplied using Real Time amplification and detected using fluorescent reporter dye probes specific TBEV, *Rickettsia spp.*, *Babesia microti*, *Babesia divergens*, *Ehrlichia chafeensis*, *Ehrlichia muris*, *Borrelia burgdorferi sensu lato s.l.*, *Borrelia miyamotoi* and *Borrelia hermsii*, *Anaplasma phagocitophylum* and *Coxiella burnetii*.

► Analytical sensitivity

VIASURE Tick Borne Diseases Real Time PCR Detection Kit has a detection limit of ≥ 10 RNA/DNA copies per reaction (Figure 1, 2, 3, 4, 5, 6 and 7). Template run on the Bio-Rad CFX96™ Real-Time PCR Detection System. Dilution series of:



1. *Borrelia burgdorferi/Borrelia miyamotoi/B. hermsii* (10^7 - 10^1 copies/rxn)
2. *Anaplasma phagocitophylum* (10^7 - 10^1 copies/rxn).
3. *Coxiella burnetii* (10^7 - 10^1 copies/rxn).
4. *Rickettsia spp* (10^7 - 10^1 copies/rxn).

5. *Babesia microti/Babesia divergens* (10^7 - 10^1 copies/rxn).
6. *Ehrlichia chafeensis/Ehrlichia muris* (10^7 - 10^1 copies/rxn).
7. TBEV (10^7 - 10^1 copies/rxn).

► References - VIASURE Tick Borne Diseases Real Time PCR Detection Kit

3 x 8-well strips, low profile	VS-TBD101L	3 x 8-well strips, high profile	VS-TBD101H
9 x 8-well strips, low profile	VS-TBD106L	9 x 8-well strips, high profile	VS-TBD106H
18 x 8-well strips, low profile	VS-TBD112L	18 x 8-well strips, high profile	VS-TBD112H
3 x 8-well strips, low profile	VS-TBD101LE	3 x 8-well strips, high profile	VS-TBD101HE
9 x 8-well strips, low profile	VS-TBD106LE	9 x 8-well strips, low profile	VS-TBD106HE
18 x 8-well strips, low profile	VS-TBD112LE	18 x 8-well strips, low profile	VS-TBD112HE
6 tubes x 24 reactions	VS-TBD148T	6 tubes x 24 reactions	VS-TBD148TE