

VIASURE

Clostridium difficile toxins A/B Real Time PCR Detection Kit

Pathogen and product description

C*lostridium difficile* is a gram-positive, sporegenic, anaerobic bacillus that belongs to the *Clostridiaceae* family. Initially, *C. difficile* was described as a member of the commensal microbiota of neonates. However, later it was identified as a causal agent of antibiotic-associated diarrhea (AAD) and its infection is associated with high morbidity and mortality in the elderly.

The major risk factors for *C. difficile* infection are broad spectrum antibiotics exposure, hospitalization, and advanced age. The severity of its infection ranges from mild diarrhea and pseudomembranous colitis to toxic megacolon, perforations of the colon and occasionally, sepsis and even death. The main routes of transmission are the fecal-oral or aerosols. In fact,

infected persons with acute diarrhea can lead to heavy contamination of the environment with spores, which can persist in dust or on surfaces for months and be transmitted to other hospitalized patients or to healthcare workers once again.

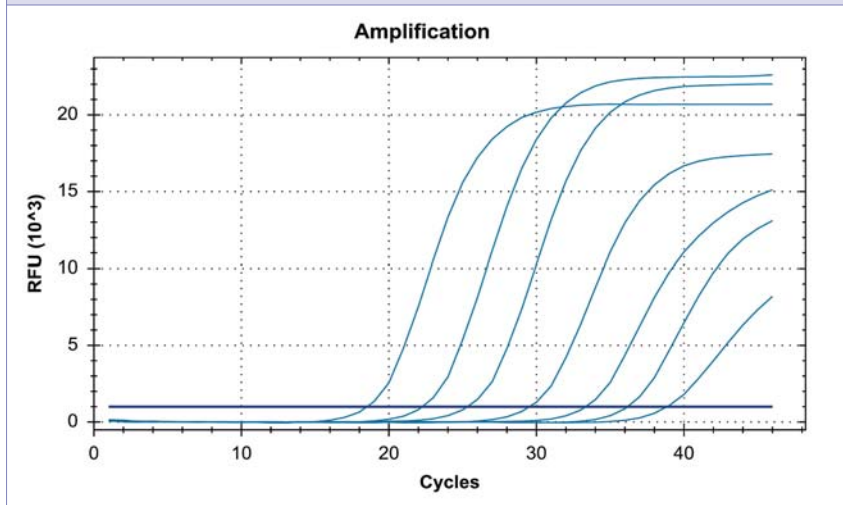
Toxigenic strains of *C. difficile* can colonize the gut, replicate and produce enterotoxin A and cytotoxin B, encoded by *tcdA* and *tcdB*.

VIASURE *Clostridium difficile* toxins A/B Real Time PCR Detection Kit is designed for the identification of *Clostridium difficile* toxins A and/or B. After DNA isolation, the identification of toxins A and/or B is performed by the amplification of a conserved region with the *tcdA* and/or *tcdB* genes using specific primers and a fluorescent-labeled probe.



Analytical sensitivity

VIASURE Clostridium difficile toxins A/B Real Time PCR Detection Kit has a detection limit of ≥ 10 DNA copies per reaction



Dilution series of Clostridium difficile toxin A and/or B (10^7 - 10^1 copies/rxn) template run on the Bio-Rad CFX96 Touch™ Real-Time PCR Detection System.

Components

Reagent/Material	Description	Quantity
Clostridium difficile toxins A/B 8-well strips	A mix of enzymes, primers-probes, buffer, dNTPs, stabilizers and Internal control in stabilized format	6/12 x 8-well strip
Clostridium difficile toxins A/B 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
Clostridium difficile toxins A/B Positive Control	Non-infectious synthetic lyophilized DNA	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

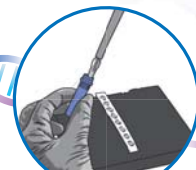
Reference	Description
VS-CIA106L	Viasure Clostridium difficile toxins A/B Real Time PCR Detection Kit 6 x 8-well strips, low profile
VS-CIA106H	Viasure Clostridium difficile toxins A/B Real Time PCR Detection Kit 6 x 8-well strips, high profile
VS-CIA112L	Viasure Clostridium difficile toxins A/B Real Time PCR Detection Kit 12 x 8-well strips, low profile
VS-CIA112H	Viasure Clostridium difficile toxins A/B Real Time PCR Detection Kit 12 x 8-well strips, high profile
VS-CIA113L	Viasure Clostridium difficile toxins A/B Real Time PCR Detection Kit 96-well plate, low profile
VS-CIA113H	Viasure Clostridium difficile toxins A/B Real Time PCR Detection Kit 96-well plate, high profile

Work Flow

One-step rehydration of wells and add your extracted DNA



STEP 1
Separate the number of required strips you need



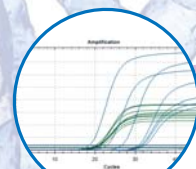
STEP 2
Add 15 µl of rehydration buffer into each well



STEP 3
Add 5 µl of DNA sample / positive control / negative control



STEP 4
Load the strips into the thermocycler and run the specified protocol



STEP 5
Interpretate results