

## TRUPCR® Gastrointestinal Panel I with *E. coli* O157 Kit

### NEED

Diarrhoeal disease is the second leading cause of death in children under five years old, and was responsible for the deaths of 3,70,000 children in 2019. For most people, severe dehydration and fluid loss were the main causes of diarrhoea deaths. **Other causes such as bacterial infections are likely to account for an increasing proportion of all diarrhea - associated deaths.** Not only young children, but the elderly, and immunocompromised patients are also at greatest risk for more severe disease and complications. Outbreak of gastrointestinal infections are a serious concern in the hospital environment as well.

*Escherichia coli* (*E. coli*) is a bacteria that normally is an important part of the healthy intestinal tracts of humans and animals. However, there are some kinds of *E. coli* that are harmful and can cause disease. The most common type of *E. coli* infection that causes illness in people is called *E. coli* O157. About 5–10% of people diagnosed with a type of *E. coli* called *Shiga* toxin-producing *E. coli* O157 develop hemolytic uremic syndrome (HUS), a type of kidney failure that can be life-threatening.

The range of pathogens that can cause bacterial GI infections requires classical detection methods for e.g., culture or antigen in order to target and identify the causative agent. These classical methods suffer from variable specificity and sensitivity, and are often poorly utilized due to a lack of physician understanding of the intended use for each method. Multiplex molecular tests allow for several of the most common GI pathogens to be tested at once, while providing improved analytical specificity and sensitivity versus most classical methodologies.



**Campylobacter**



**Shigella**



**Salmonella**



**VTEC *E. coli***



***E. coli* O157**

### SOLUTION BY TRUPCR®

TRUPCR® Gastrointestinal Panel I with *E. coli* O157 Kit is a Real-Time amplification test for the qualitative detection and differentiation of *Salmonella* spp., *Shigella* spp., *Campylobacter* spp., Verotoxin producing *E.coli* (VTEC) with specific differentiation of *E. coli* O157 in stool samples. An endogenous internal control has been integrated into the kit in order to check PCR inhibition. The different targets are detected with the help of different dyes. The kit is based on amplification of highly conserved regions of *Salmonella* spp., *Shigella* spp., *Campylobacter* spp., VTEC *E. coli* and *E. coli* O157 which provides detection of major diarrhea causing pathogens in clinical samples.

### TARGET PATHOGENS

#### TRUPCR® Gastrointestinal Panel I with *E. coli* O157 Kit

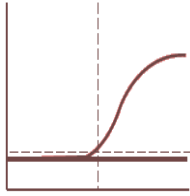
##### Primer Probe Mix-1

<b>FAM</b>	<b>VIC</b>	<b>Cy5</b>	<b>Cy5.5</b>	<b>Tex Red</b>
<i>Salmonella</i>	<i>Shigella</i>	<i>Campylobacter</i>	VTEC- <i>E. coli</i>	IC

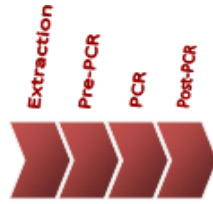
##### Primer Probe Mix-2

<b>FAM</b>	<b>Tex Red</b>
<i>E. Coli</i> O157	IC

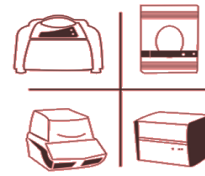
## KEY FEATURES



Endogenous Internal Control incorporated within the kit to ensure reliable results



Complete workflow solution available from Extraction of sample to Post-PCR analysis



Platform agnostic as compatible with various platforms



Rapid and reliable results within 90-100 minutes after PCR Start

## TECHNICAL SPECIFICATIONS

- Sample Type – Stool Specimen
- Clinical Validation – Validated on more than 300 clinical samples
- Target Regions – Conserved regions of the target pathogens
- Reaction Volume – 25 µl in each tube
- LOD Data: 1000 CFU/ml
- Compatible Instruments – Rotor-Gene Q, Bio-Rad CFX96

## CLINICAL DATA

		Reference Method		
		Positive	Negative	Total
TRUPCR Method	Positive	114	3	117
	Negative	3	93	96
Total		117	96	213

Parameters	Estimate
Sensitivity	97.44%
Specificity	96.88%
Positive Predictive Value	97.44%
Negative Predictive Value	96.87%



## ORDERING INFORMATION

Cat. No.	Description	Pack Size
3B403	TRUPCR® Gastrointestinal Panel I with <i>E. coli</i> O157 Kit	48 Reactions
3B404	TRUPCR® Gastrointestinal Panel I with <i>E. coli</i> O157 Kit	96 Reactions