

Quantiplus® Scrub Typhus Fast Detection Kit (Real-Time Qualitative PCR Kit)



QLF-SCT-25 : 25 rxns
 QLF-SCT-50 : 50 rxns



PI/QLFSCT-00

Introduction

The Quantiplus Scrub Typhus Fast Detection Kit is an in vitro nucleic acid amplification kit for the detection of Scrub typhus (*Orientia tsutsugamushi*) specific DNA.

Product Description

Quantiplus® Scrub Typhus Fast Detection Kit is a Real Time PCR based *in-vitro* diagnostic assay for detection of Scrub typhus in blood, plasma. The kit contains an advanced formulated qPCR mix with UDG/UNG which enables Performance of **Fast PCR in shorter run time**, UDG/UNG helps in controlling the PCR carryover contamination, Primer probe mix, standards, and internal control.

Kit components

Color Coding	Contents	Description	25 rxns (QLF-SCT-25)	50 rxns (QLF-SCT-50)
Blue	DNA Fast qPCR Mix with UDG/UNG (2X)	PCR Amplification Mix	1 x 325µL	1 x 650µL
Amber	SCT Fast PPM	Target specific Primer probe mix	1 x 50µL	1 x 100µL
Natural	IC-B Mix	Exogenous Internal Control-B mix	1 x 300 µL	1 x 600 µL
Red	SCT FPC	Positive Control	1 x 50 µL	1 x 100 µL
White	MBGPW	Purified water	1 x 500 µL	1 x 500 µL

Storage and Transportation Conditions

The kits could be transported at temperature below -20 °C. The kit will remain stable until the expiry date printed on the package, if the storage temperature is kept (-20 ± 5 °C). Kit is stable upto 4 repeated freezing/thawing cycles. The reagents should be frozen in aliquots, if they are to be used intermittently.

Technical Specification

Target Sequence : 16S ribosomal RNA of *Orientia tsutsugamushi*
 Validated Specimen : Blood-EDTA, Plasma
 Target Channel : FAM, HEX

Assay Procedure

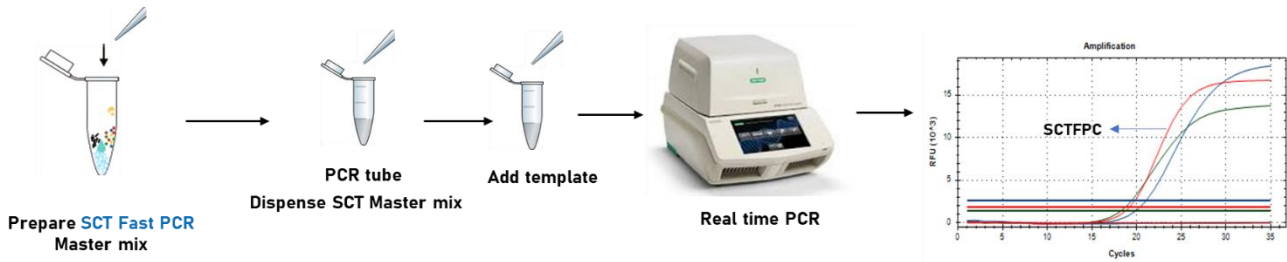
DNA Extraction

Quantiplus® Scrub Typhus Fast Detection Kit has been validated using the following Viral DNA extraction kits: Recommended sample volume for extraction and elution are as follows:

S. No.	Name of the Extraction Kit	Recommended Sample volume for Extraction	Recommended Final Elution volume
1.	QIAamp DNA Blood Mini Kit (Cat. No. 51104)	200 µL	100 µL

Note: Customer can also validate their own extraction process using other Viral DNA extraction Kits.

qPCR Protocol Flow



Preparation of Reaction Master mix

Components	Volume per reaction (For 26µL)
DNA Fast qPCR Mix with UDG/UNG (2X)	13.0
SCT Fast PPM	2.0
IC-B Mix (if not added at extraction step)	1.0
Extracted DNA/ SCTFPC / MBGPW	10.0

It is necessary to keep all components at +2 °C to +8 °C during the PCR preparation. Close the tubes, centrifuge shortly before processing in to thermal cycler.

Cycling Conditions

Steps	No. of cycles	Temperature (°C)	Time
1 (Initial denaturation)	1	95	1 min.
2 (PCR cycling)	40	95	10 sec.
		60*	10 sec.

*Plate Read/Data Acquisition in **FAM** and **HEX** Channel

Sample analysis and Interpretation

Interpret the values for unknown samples based on the observations as described in the following table and there should be no amplification in negative control.

S.No	FAM (SCT)	HEX (IC)	Fluorophore		Conclusion
			Interpretation		
1	√	√	Scrub typhus DNA Positive	←	Proceed for further Analysis
2	√	-			
3	-	√			
4	-	-	Invalid Result		Dilute the DNA sample (1:10) and repeat the Assay

Validated Instruments

- Thermo QS5 Real-Time PCR System
- Bio-Rad™ CFX 96



HLSS Manufacturing Pvt Ltd
 Plot No's M14, M15, M16, TSIC Medical device park
 Sultanpur villiage, Ameenpur Mandal,
 Sangareddy Dist, TS-502319