

Catalog Number	Kit Size
TBS42028-100	100 assays
TBS42028-200	200 assays

### DESCRIPTION

The Salmonella qPCR Kit has been designed to identify Salmonella strains in a single PCR reaction using real-time quantitative polymerase chain reaction (qPCR) and probe fluorescence labels. The detection of target DNA can confirm ingredient authenticity and prevents food fraud, ethical issues, or health concerns.

### PRINCIPLE

Authenticating ingredients utilizes real-time PCR which is based on the amplification of a specific region of the relevant target genome. The amplified product is detected using target-specific fluorescent probes that bind to the amplified product. As the PCR product accumulates, there is an increased fluorescent signal from the bound probes. Monitoring the fluorescence intensities during the PCR run allows the detection of the accumulating PCR product in real time.

The Salmonella qPCR Kit includes Salmonella target positive and negative controls, PCR internal controls labeled with Hex, a qPCR super mix, and the primer-probe mix in which the probe has been labeled with Texas Red for Salmonella species. These aid in a straightforward interpretation of the results.

### KEY FEATURES

- ❖ High sensitivity and specificity for Salmonella detection.
- ❖ High efficiency: the optimal systemic conditions for PCR amplifications.
- ❖ Streamlined protocol: Just add DNA Template and water.
- ❖ No cross reactivity with other species.

### APPLICATIONS

Detect Salmonella-derived DNA in plant, cannabis, cannabis ingredients, grain, food, herbals, and animal feed.

### KIT CONTENTS

Name	100x rxn	200x rxn
qPCR Super Mix	0.8mL	1.6mL
Primer-probe Mix	0.6mL	1.2mL
Positive Control DNA	60µL	100µL
Negative Control DNA	60µL	100µL

The Salmonella probe has been labeled with **Texas Red** while the PCR internal control has been labeled with **Hex**.

### STORAGE CONDITION

The kit is shipped on ice and stored at -20°C for long-term storage. Shelf life of 12 months after receipt.

### PCR PROTOCOL

1. Set up PCR reaction for each sample in 20µL

Reaction Component	Volume (µL)
qPCR Super Mix	7.0
Primer-probe Mix	5.0
Nuclease-free Water	3.0
DNA sample	5.0
<b>Final Volume</b>	<b>20µL</b>

Internal control should be included as below: Positive Control (5µL DNA/reaction) Negative Control (5µL DNA/reaction)

2. Suggested PCR conditions

Step	Amplification	PCR	
	HOLD	CYCLE (40x cycles)	
		Denature	Anneal/ Extend
<b>Temperature</b>	95°C	95°C	60°C
<b>Time</b>	2 min	15 sec	60 sec

### DATA ANALYSIS

Positive Reaction: Sample Ct ≤ 37 w/ Positive, Negative and Blank controls normal.

Negative Reaction: Sample Ct ≥ 38 w/ Positive, Negative and Blank controls normal.

PCR internal control is positive in all samples, positive and negative controls. The positive response indicates a normal PCR amplification. Otherwise, the PCR reaction may be inhibited.

Repeat Reaction: If one of the control reactions is not normal, PCR reaction is failed, and should be repeated.

### RELATIVE PRODUCTS

- TBS6025: Microbial DNA Magnetic Extraction
- TBS42020: Universal Aspergillus Species qPCR
- TBS42021: Aspergillus Flavus qPCR
- TBS42022: Aspergillus Fumigatus qPCR
- TBS42023: Aspergillus Niger qPCR
- TBS42024: Aspergillus Terreus qPCR
- TBS42025:4-In-1 Aspergillus qPCR
- TBS42026: O157H7 E. coli qPCR
- TBS42027: STEC qPCR
- TBS42029: STEC and Salmonella Multiple qPCR
- TBS42030: Mycoplasma Detection qPCR
- TBS42031: Listeria Monocytogen qPCR
- TBS42032: Listeria Genus qPCR
- TBS42033: Bacillus Cereus qPCR

**For research use only.**