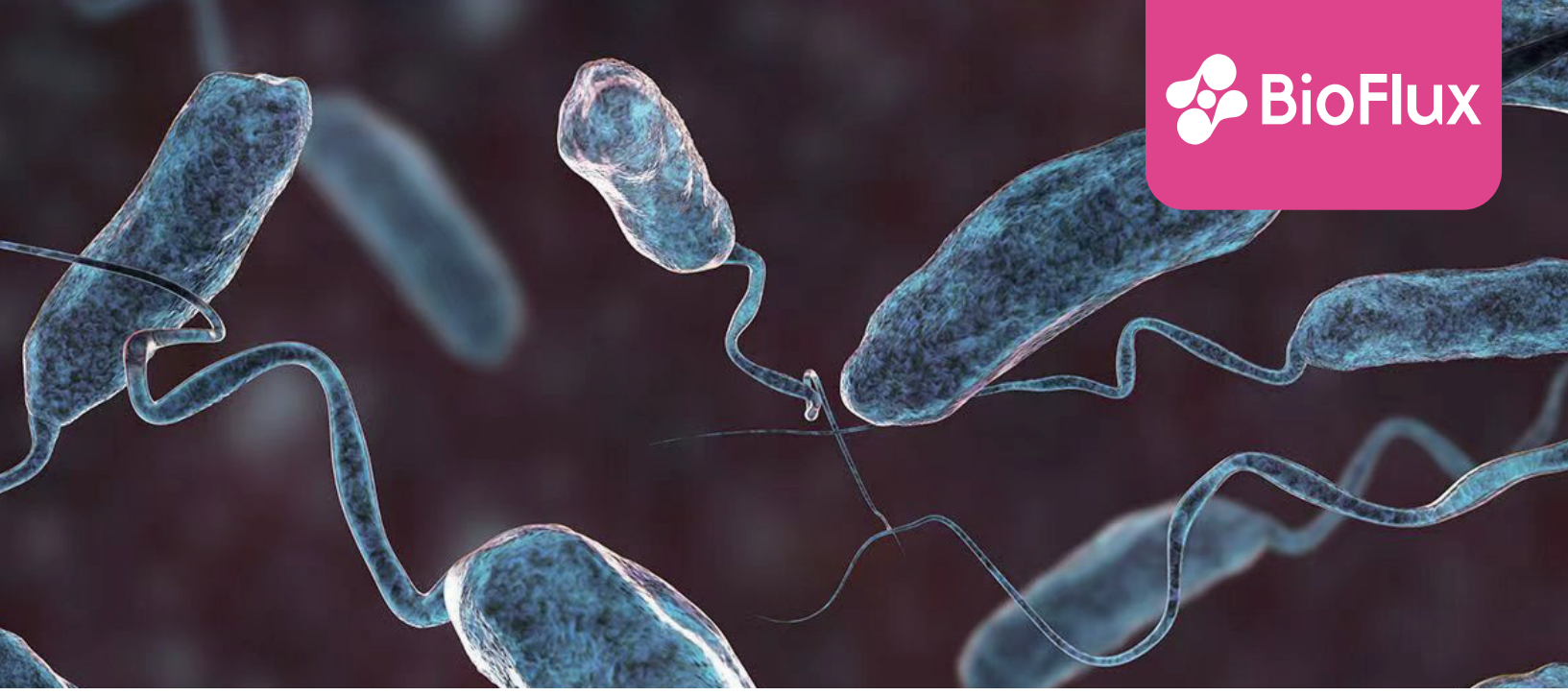

Vibrio Cholerae Nucleic Acid Detection Kit (Fluorescence PCR)

Product Introduction

Vibrio cholerae is a gram-negative bacterium that causes cholera, a severe diarrheal disease characterized by sudden onset of profuse, watery diarrhea, which can lead to dehydration and death if untreated. The primary mode of transmission is through contaminated water and food, making the disease particularly prevalent in areas with inadequate sanitation.

This Vibrio Cholerae Nucleic Acid Detection Kit (Fluorescence PCR) provides a highly sensitive and specific method for detecting the presence of V. cholerae in clinical samples. Unlike traditional culture methods, which can be time-consuming and less sensitive, fluorescence PCR allows for rapid, qualitative detection, offering results in a much shorter time frame. The fluorescent PCR approach not only improves accuracy by minimizing false positives and negatives but also enables the detection of low levels of bacterial nucleic acid, making it a superior tool for early diagnosis and effective outbreak management.

Product Specifications

Parameters	Description
Sample Type	Stool
Sensitivity	500 copies/mL
Precision	The coefficient of variation for intra-assay, inter-assay, inter-day, and intra-day precision is less than 5%.
Accuracy	The positive and negative concordance rates for the reference samples provided by the manufacturer are both 100%.
Specificity	This kit shows no cross-reactivity with Shigella spp., Vibrio parahaemolyticus, Escherichia coli, Staphylococcus aureus, Salmonella enteritidis, Salmonella typhimurium, norovirus, rotavirus, adenovirus, Klebsiella pneumoniae, human genomic DNA, and others.
Recommended Extraction Kit	BSC71 MagaBio Plus Virus DNA/RNA Purification Kit II
Compatible Instruments	LineGene 9600 and QuantGene 9600 Fluorescent Quantitative Detection System
Detection Time	50 minutes.
Storage Conditions	Store at -20 ± 5 °C, protected from light.

Product Features

- **High Throughput and Broad Range Detection:** The kit offers high detection throughput, capable of simultaneously testing up to 94 samples in a single 96-well experiment.
- **Rapid Detection:** The entire detection process can be completed within 50 minutes.
- **Contamination-Free Operation:** Fully enclosed tube operation eliminates the risk of contamination.
- **Sample Monitoring:** A non-competitive human internal control is included to evaluate sample quality, identify PCR inhibitors, and prevent false-negative results.

Application Cases

Case 1

Linear relationship: Dilute the positive reference sample from the company in a 10-fold gradient to 10^3 copies/mL and then perform the detection.

Results: The results indicate that there is a good linear relationship when detecting the company's reference samples with this reagent kit.

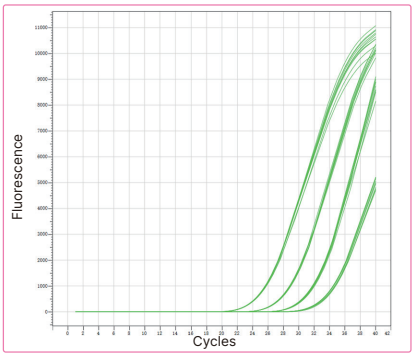

Figure 1: Amplification curves of the company's reference samples at different gradient concentrations

Case 2

Reproducibility: Dilute the positive reference sample from the company to 10^5 copies/mL and 500 copies/mL, and then perform the detection 20 times for each dilution. Calculate the coefficient of variation (CV) of the Ct values, with the requirement that the CV of the Ct values does not exceed 5%.

Results: The results indicate that the precision of the 20 repeated detections of the company's reference samples at 10^5 copies/mL and 500 copies/mL concentrations is good, with the coefficient of variation (CV) of the Ct values being less than 5%, demonstrating that the reagent kit has good reproducibility.

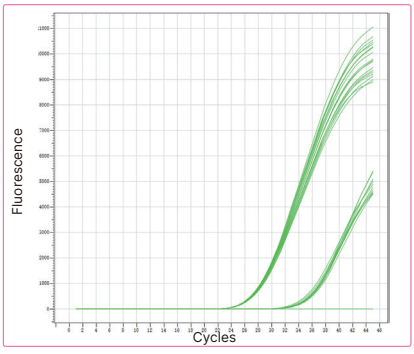

Figure 2: Amplification curves of the company's reference samples

Case 3

Specificity: Perform cross-reactivity validation by testing for Shigella, Vibrio parahaemolyticus, Escherichia coli, Staphylococcus aureus, Salmonella enterica, Salmonella pestis, Norovirus, Rotavirus, Adenovirus, Klebsiella pneumoniae, and human genomic DNA.

Results: The results indicate that the reagent kit shows no cross-reactivity with Shigella, Vibrio parahaemolyticus, Escherichia coli, Staphylococcus aureus, Salmonella enterica, Salmonella pestis, Norovirus, Rotavirus, Adenovirus, Klebsiella pneumoniae, or human genomic DNA. Therefore, the reagent kit exhibits good specificity.

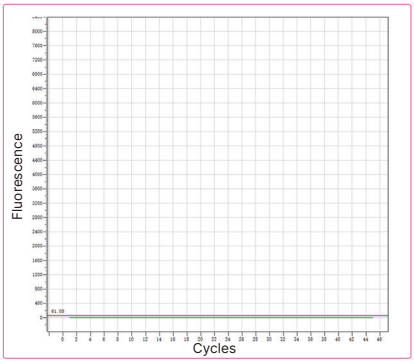

Figure 3: Specificity

Ordering Information

Product Name	Cat. No.	Package
Vibrio Cholerae Nucleic Acid Detection Kit (Fluorescence PCR)	BSJ39M1/BSJ39L1	48T/96T

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