

Data sheet

PRImeDETECT™ Salmonella Plus Detection Kit (Salmonella spp & Listeria monocytogenes)

Cat. No: FP0010 (48 reactions)

Cat. No: FP0011 (96 reactions)

Introduction

Waterborne and foodborne pathogens are ubiquitous in the environment. The threat to human health posed by foodborne pathogens has attracted public attention, and the incidence of illness or death caused by major known pathogens has increased worldwide. Infections or outbreaks caused by major foodborne pathogens can be the result of consuming contaminated foods, including beef, milk products, fresh vegetables, and contaminated water. In addition, food itself is a complex system, as well as a complicated environment, which can supply the enough nutrition for the bacteria.

Canvax Biotech SL offers molecular microbiology PCR-based detection systems intended for agri-food in a user-friendly, rapid, accurate and cost-effective format.

PRImeDETECT™ Salmonella Plus Detection Kit (Salmonella spp & Listeria monocytogenes) is based on amplification and detection of specific DNA fragments from *Salmonella spp* and/or *Listeria monocytogenes* by the real-time PCR method (multiplex PCR).

All reagents required for qPCR are provided ready to use as Multiplex PCR Master Mix (1 vial). The Multiplex PCR Master Mix contains the appropriate amounts of buffer, dNTPs, Hot-start DNA polymerase, DNA-free water and MgCl₂ to perform the number of reactions indicated in the kit. The Multiplex PCR Master Mix also includes an internal amplification control (IAC) whose detection indicates the absence of PCR inhibitors. Primers and probes for the amplification of IAC as well as for the amplification of the target gene are included in the Master Mix. The probe for the detection of target gene is labelled with the FAM (Listeria) and HEX fluorochrome (Salmonella), whereas the probe for the detection of IAC is labelled with the CY5 fluorochrome.

In addition, the kit includes positive control DNA and negative control. The positive control is supplied to demonstrate that the PCR amplification is working efficiently with the supplied components. To confirm absence of contamination, a negative control reaction should be included every time the kit is used.

Include DNAREady lysis buffer to extract the DNA from the sample prior to PCR detection.

Each kit contains:

- ✓ Multiplex PCR Master Mix (1 vial)
- ✓ DNAREady lysis buffer (1 bottle)
- ✓ PCR Positive Control (1 vial)
- ✓ PCR Negative Control (1 vial)

Shipping and Storage

The **PRImeDETECT™ Salmonella Plus Detection Kit** is shipped at ambient temperature. On arrival the kit should be stored at -20°C. Avoid prolonged exposure to light. If stored correctly the kit will retain full activity for 12 months. The kit can be stored at 4°C for 1 month.

Technical features

- ✓ **Amplification limit:** 10 UG per reaction (100%).
- ✓ **Quantification limit:** 20 UG per reaction (100%).
- ✓ **Quantification Dynamic range:** 6 logs
- ✓ **Simultaneously** detect and differentiate *Salmonella spp.* and *Listeria monocytogenes* in the same tube
- ✓ **Inclusivity:** *Salmonella:* Positive in 30 reference strains of food origin from the Spanish Type Culture Collection (CECT). *Listeria:* Positive in 48 reference strains of *L. monocytogenes* (serovars 1 to 7) from different collections.
- ✓ **Exclusivity:** *Salmonella:* Tested with 29 nontarget strains. *Listeria:* 100% Tested with 94 nontarget strains composed of 51 strains of *Listeria non-monocytogenes* and 43 strains of non-*Listeria*.
- ✓ **Detection:** probe labelled with fluorescent dyes—*Salmonella:* HEX-BHQ1; *Listeria:* FAM-BHQ1a; **IAC:** CY5-BHQ2.
- ✓ **Thermal cycler:** Agilent Mx3005P, Applied Biosystems 7300, 7500 and other cyclers.

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PCR cycling conditions

Step	Time	Temperature
Initial denaturation	10 min	95°C
45 Cycles:	15 sec	95°C
	1 min	60°C
Melt analysis	Refer to instrument instructions	

Analysis of results

Follow instrument software instructions to generate cycle threshold (Ct) values from the acquired data. The user may also, optionally, analyze the melt profile of each reaction.

The quantity of DNA target in each sample can be calculated by referring to the positive control template Ct value.

PRODUCT USE LIMITATION

Not For Medical Diagnostic Use.

Please refer to www.canvaxbiotech.com for the Material Safety Data Sheet of the product.

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