Data sheet

PRImeDETECT™ Listeria monocytogenes Detection Kit

Cat. No: FP0015 (48 reactions)
Cat. No: FP0016 (96 reactions)

Introduction

Listeria monocytogenes are Gram-positive, rod-shaped ubiquitous bacteria that cause human listeriosis, a rare disease associated with high hospitalization and mortality rates—causing septicemia, meningitis, miscarriage, and stillbirth—that affects the elderly, pregnant women, newborns, and immunocompromised adults. The ingestion of contaminated food (such as meat, poultry, dairy, vegetables, and ready to eat products) is the main route of transmission to humans.

PRImeDETECT™ Listeria monocytogenes Detection Kit is based on amplification and detection of specific DNA fragments from ***Listeria monocytogenes*** by the real-time PCR method.

All reagents required for qPCR are provided ready to use as PCR Master Mix. The PCR Master Mix contains the appropriate amounts of buffer, dNTPs, Hot-start DNA polymerase, DNA-free water and $MgCl_2$ to perform the number of reactions indicated in the kit. The 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, whereas the probe for the detection of IAC is labelled with the HEX 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:

- ✓ 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™ Listeria monocytogenes Detection Kits** are 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%), 2 UG per reaction (40%)
- ✓ **Quantification limit:** 20 UG per reaction (100%).
- ✓ **Quantification Dynamic range:** 6 logs
- ✓ **Target:** *Listeria monocytogenes*
- ✓ **Inclusivity:** Positive in 48 reference strains of *L. monocytogenes* (serovars 1 to 7) from different collections.
- ✓ **Exclusivity:** 100% Tested with 94 nontarget strains composed of 51 strains of Listeria no-monocytogenes and 43 strains of non-Listeria.
- ✓ **Detection:** probe labelled with fluorescent dyes ***Listeria monocytogenes*****:** FAM-BHQ1a; **IAC**: HEX-BHQ1.
- ✓ **Thermal cycler:** Agilent Mx3005P, Applied Biosystems 7300, 7500 and other cyclers.

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Canvax Biotech, S.L. C/Astrónoma Cecilia Payne. Edif. Canvax. 14014 Córdoba, Spain.
☎ : +34 957 348 066
🖷 : +34 957 346 217
✉ : info@canvaxbiotech.com

PCR cycling conditions

Step	Time	Temperature
Initial denaturation	10 min	95°C
45 Cycles:	15 sec 1 min	95°C 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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