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LEADGENE BIOMEDICAL, INC.

Product Information & Manual

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Leadgene® StablePlus™ 2X Fluorescent RT-LAMP Master Mix

Cat no. LDG0026RF

Product Overview

Package component

Item	Content
StablePlus™ 2X Fluorescent RT-LAMP Master Mix	1 vial (1 mL)
50X LAMP Fluorescent Dye	1 vial (40 µL)

Description

Leadgene® StablePlus™ 2X Fluorescent RT-LAMP Master Mix is an optimized master mix for reverse-transcription loop-mediated isothermal amplification (RT-LAMP) reactions. This product is a dual enzyme system, providing a rapid and sensitive detection in one pot. A fluorescent dye is also supplied with the kit. The LAMP reactions can be monitored through real-time fluorescence detection.

The StablePlus™ version contains nucleic acid stabilizing agent to protect the amplified products.

Storage and Stability

Stored at -20°C. Protect from light. Avoid repeated freeze/thaw cycles.

Procedure

The following procedure is a general guideline for RT-LAMP reaction. To maintain an RNase-free environment, always wear disposable gloves, and use laboratory consumables and water of nuclease-free grade during the whole experiment course.

RT-LAMP reaction set-up:

1. 10X LAMP primer mix

Component	10X concentration	Final concentration
FIP	16 µM	1.6 µM
BIP	16 µM	1.6 µM
F3	2 µM	0.2 µM
B3	2 µM	0.2 µM
LOOP F	8 µM	0.8 µM
LOOP B	8 µM	0.8 µM

2. An overview of the reaction set-up is listed in the table below. Place all required reagents **on ice**. Distribute appropriate volumes into each tube before adding template.

Component	Amount	Final concentration
StablePlus™ 2X Fluorescent RT-LAMP Master Mix	12.5 µL	1X
10X LAMP primer mix	2.5 µL	1X
50X LAMP Fluorescent Dye	0.5 µL	1X
Nuclease-Free H_2O	X µL	-
RNA template	1-2 µL	variable
Total reaction volume	25 µL	-

3. Add target RNA template to the detection tube. Gently mix the reaction thoroughly to achieve uniform distribution and avoid making bubbles.
4. Incubate at 65°C for 30-60 min.
5. After LAMP reaction complete, the enzyme can be inactivated by heating at 80°C for 10 min.
6. For real-time detection, collect fluorescent data using the SYBR® or FAM channels.

Important notes

Primer concentration

Primer concentration can be titrated between 0.25X – 1X if undesired background signal appeared.

Reaction mixture preparation

Fluorescent dye should be freshly added to the reaction mixture.

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Disclaimer

This product is for research use only and is not intended for diagnostic use.

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