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LEADGENE BIOMEDICAL, INC.

Product Information & Manual

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Leadgene® StablePlus™ 2X RT-LAMP Master Mix

Cat no. LDG0023RF

Product Overview

Package component

Item	Content
StablePlusTM 2X RT-LAMP Master Mix	1 vial (1 mL)

Description

Leadgene® StablePlusTM 2X 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. The amplified products can be detected by agarose gel electrophoresis.

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

Storage and Stability

Stored at -20°C. 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 RT-LAMP Master Mix	12.5 μL	1X
10X LAMP primer mix	2.5 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.

Important notes

Primer concentration

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

Detection method

Both detecting the amplified products by agarose gel electrophoresis and turbidity changes due to magnesium pyrophosphate precipitation can be employed to analyze test results, but the latter is somehow less sensitive.

Disclaimer

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

LEADGENE
www.leadgenebio.com
TEL: +886-6-253-6677 • Email: info@leadgene.com.tw • No.9, Ln. 147, Zhengbei 1st Rd., Yongkang Dist., Tainan City 710, Taiwan

LEADGENE BIOMEDICAL, INC.

No.9, Ln. 147, Zhengbei 1st Rd., Yongkang Dist., Tainan City 710, Taiwan R.O.C. TEL: +886-6-2536677 FAX: +886-6-2531536

www.leadgenebio.com