

HelixAmp™ FastLAMP Lyo-Cake (V3)

Kit Contents

HelixAmp™ FastLAMP Lyo-Cake (V3)		
Cat. No.	LFLP3-C96 (96rxns)	LFLP3-C480 (480rxns)
Rehydration Buffer	1.0ml x 2ea	1.0ml x 10ea
FastLAMP Lyo-Cake (V3)	8-strip x 12ea	8-strip x 60ea
8-Cap Strip	12ea	60ea
Instructions for Use	1ea	1ea

Description

HelixAmp™ FastLAMP Lyo-Cake (V3), a lyophilized LAMP reagent, provides a one-step solution for loop-mediated isothermal amplification (LAMP) of DNA targets. Especially this kit suppress non-specific product formation in isothermal amplification. Through the lyophilization method, moisture is removed from the product to facilitate the storing or transporting products at room temperature. The Lyophilized LAMP premix can be rehydrated simply by adding the Rehydration Buffer along with primers and templates.

HelixAmp™ FastLAMP Lyo-Cake (V3), contains engineered *Bst* DNA Polymerase, dNTPs, Mg²⁺, salts, and stabilizing agents. This kit allows the fast amplification of the target within 30 minutes with an appropriate LAMP primer set.

Application

Loop-mediated Isothermal Amplification (LAMP) of DNA

Storage

- Store at room temperature for a maximum of 6 months.
- For extended storage, maintain the product at or below 4°C for up to 12 months.
- Please protect it from direct light exposure.
- After opening the pouch, we suggest promptly resealing it and storing it in a freezer until the next use.

Quality control

Each lot of **HelixAmp™ FastLAMP Lyo-Cake (V3)** was tested against predetermined specifications to ensure consistent product quality.

Protocol

1. Reaction Mixture

- (1) Remove the seal of the lyophilized cake tube.
- (2) Add the reaction components to the lyophilized LAMP cake tube as in the following table for the selected analysis method (end-point or real-time assay) :

Components	For end-point	For real-time (Intercalating dye)
DNA Template	1 ~ 5 μ l	1 ~ 5 μ l
10x LAMP Primer Mix ¹⁾	2 μ l	2 μ l
Intercalating dye ²⁾	-	x μ l
Rehydration Buffer	Adjust to final 20 μ l. ※ Use at least 10 μ l of Rehydration Buffer.	

- ¹⁾ The following table lists the recommended concentrations for each primer in the 10x LAMP Primer Mix. If you encounter low efficiency or non-specific amplification, adjust the primer concentrations or design a new set of primers for the target sequence.

10x LAMP Primer Mix	
LAMP primers	Primer concentration.
FIP	16 μ M
BIP	16 μ M
F3	2 μ M
B3	2 μ M
LF	8 μ M
LB	8 μ M

- ²⁾ It is recommended to use SYBR Green I (final concentration of 0.1-0.2x), EvaGreen dye (0.1-0.3x), or SYTO 9 (0.1-0.5x). Please note that intercalating fluorescent dyes are not included in this kit.

- (3) Seal the tube with a cap strip. Gently tap the reaction mix and centrifuge briefly.
- (4) Perform the LAMP reaction according to the below Reaction Condition.

2. Reaction Condition.

For end-point assay: Incubate at 65°C for 30 minutes. Time can be extended as necessary for low-copy targets or challenging sample types.

For real-time assay (fluorescent dye): Use a real-time PCR machine or an isothermal amplification instrument to run the assay. Set the instrument to a constant incubation temperature of 65°C. Measure the fluorescence intensity every 1 min for 30 minutes. The reaction time can be increased as necessary for low copy targets or challenging sample types.

Products

	Products	Cat. No.	Size
Cake type	HelixAmp™ FastLAMP Lyo-Cake (V3)	LFLP3-C96	96rxns
		LFLP3-C480	480rxns
	HelixAmp™ Fast RT-LAMP Lyo-Cake (V3)	LFRLP3-C96	96rxns
		LFRLP3-C480	480rxns
Bead type	HelixAmp™ FastLAMP Lyo-Dot (V3)	LFLP3-B96	96rxns
	HelixAmp™ Fast RT-LAMP Lyo-Dot (V3)	LFRLP3-B96	96rxns