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WarmStart Bst 3.0 Enzyme Mix

Cat. No. : CW3337S (200 μL).
Storage Condition: -20°C.

Components

Component	CW3337S 200 μL
WarmStart Bst 3.0 Enzyme Mix	200 μL
10×Bst 3.0 Reaction Buffer	1.5 mL
100 mM $MgSO_4$ Solution	1.5 mL

Introduction

WarmStart Bst 3.0 Enzyme Mix is an enzyme mix containing WarmStart Bst DNA Polymerase and high temperature resistant reverse transcriptase. WarmStart Bst 3.0 improves the specificity of the reaction by adding modifications to Bst3.0, eliminating the non-specific amplification that occurs when setting up reactions at room temperature, and eliminating the need for a separate activation step. High-temperature resistant reverse transcriptase is a new enzyme that has been genetically engineered, which has a fast cDNA synthesis rate and greatly improved thermal stability. It can tolerate reaction temperatures up to 60°C, which is suitable for reverse transcription reactions of RNA templates with complex secondary structures. WarmStart Bst 3.0 Enzyme Mix can be used for isothermal amplification reactions (LAMP/RT-LAMP) using RNA or DNA as a template.

Applicable

This product is suitable for a variety of isothermal amplification reactions such as RT-LAMP, LAMP, RCA, CPA, etc

Heat inactivation

It can be inactivated after incubation at 80°C for 5min.

Protocol

Isothermal Amplification (LAMP/RT-LAMP) Operation Guide:

The following components were mixed proportionally and incubated at 60 °C for 30-60 min, and incubated at 80 °C for 5 min for inactivation.

Component	25 μL system	Final concentration
10×Bst 3.0 Reaction Buffer	2.5 μL	1 × (with 2 mM $MgSO_4$)
100 mM $MgSO_4$ Solution	1.5 μL	6 mM (8 mM total)
dNTP Mix (10mM)	3.5 μL	1.4 mM each
Primer Mix (25×)	1 μL	
WarmStart Bst 3.0 Enzyme Mix	0.5-1 μL	
DNA /RNA Sample	Variable	
Sterile water	To 25 μL	
Total volume	25 μL	

Note:1) Primers consist of 4 or 6 (including Loop) primers, 25 × primers include: 40 μM FIP, 40 μM BIP, 5 μM F3, 5 μM B3, 10 μM LoopF, 10 μM LoopB.

2) If the reaction needs to be optimized, the Mg^{2+} concentration (4-10 mM), the amount of enzyme (0.25-1.5 μL) or the primer concentration can be adjusted.

3) Do not shake vigorously. Vigorous shaking may inactivate the enzyme.

4) After mixing, ensure that there are no bubbles in the reaction system

This product is for scientific research only, which shall not be used for clinical diagnosis or other purposes.