Tinzyme Co., Limited

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WellStart Bst 3.0 Enzyme Mix

Product Number: BSM03W

Shipping and Storage

-20°C.

Components

Component	BSM03W 200μL
WellStart Bst 3.0 Enzyme Mix	200μL
10×Bst 3.0 Reaction Buffer	1.5mL
100mM $MgSO_4$ Solution	1.5mL

Description

WellStart Bst 3.0 Enzyme Mix is a mixed enzyme that contains WellStart Bst DNA polymerase and high-temperature resistant reverse transcriptase.WellStart Bst 3.0 Enzyme Mix adds modifications on top of Bst 3.0, eliminating non-specific amplification generated during reaction establishment at room temperature and eliminating the need for a separate activation step, which can improve the specificity of the reaction.High temperature resistant reverse transcriptase is a new enzyme modified by genetic engineering, with fast cDNA synthesis speed and significantly improved thermal stability. It can withstand reaction temperatures up to 60℃ and is suitable for reverse transcription reactions of RNA templates with complex secondary structures.WellStart Bst 3.0 Enzyme Mix can be applied to isothermal amplification reactions (LAMP/RT LAMP) using RNA or DNA as templates.

Application

This product is suitable for various isothermal amplification reactions such as RT LAMP, LAMP, RCA, CPA, etc.

Thermal inactivation

Incubate at 80℃ for 5 minutes before inactivation.

Protocol

Guidelines for Isothermal Amplification (LAMP/RT LAMP) Operation:

Mix the following components in proportion and incubate at 60℃ for 30-60 minutes. Incubate at 80℃ for 5 minutes to inactivate.

Component	25μL reaction system	Final Concentration
10×WellStart Bst 3.0 Enzyme Mix Buffer	2.5μL	1×(contain 2mM $MgSO_4$)
100 mM $MgSO_4$ Solution	1.5μL	6mM(8mM in total)
dNTP Mix (10mM)	3.5μL	1.4mM each
Primer Mix (25×)	1μL	
WellStart Bst 3.0 Enzyme Mix	0.5-1μL	
DNA /RNA Sample	variable	
Sterile water	Supplemented to 25μL	
Total Volume	25μL	

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

2)To optimize the reaction, the Mg^{2+} concentration (4-10mM), enzyme quantity (0.25-1.5μL), or primer concentration can be adjusted;

3)Do not shake vigorously. Mixing vigorously can cause enzyme inactivation;

4)Ensure that there are no bubbles in the reaction system after adding the system.