Tinzyme Co., Limited

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Bst 3.0 Enzyme Mix

Product Number: BSM03

Shipping and Storage

-20°C.

Components

Component	BSM03 200μL
Bst 3.0 Enzyme Mix	200μL
10×Bst 3.0 Reaction Buffer	1.5mL
100mM $MgSO_4$Solution	1.5mL

Description

Bst 3.0 Enzyme Mix is a mixed enzyme containing Bst DNA polymerase and high-temperature resistant reverse transcriptase. Bst DNA polymerase is a recombinant enzyme expressed and purified through E. coli, which undergoes partial point mutations on the basis of the original sequence. It has stronger 5'→3' DNA polymerase activity, strand displacement activity, reverse transcriptase activity, and no 5'→3' exonuclease activity.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.Bst 3.0 Enzyme Mix can be applied to isothermal amplification reactions (LAMP/RT-LAMP) using RNA or DNA as templates.Bst 3.0 Enzyme Mix can be applied to isothermal amplification reactions (LAMP/RT-LAMP) using RNA or DNA as templates.

Unit definition

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

Heat 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.

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

Note:1)LAMP primers consist 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 Mg2+concentration (4-10mM), enzyme quantity (0.25-1.5μL), or primer concentration can

be adjusted;

3)Do not shake vigorously. Mixing vigorously can inactivate the enzyme;

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