EZassay

Bst 2.0 DNA Polymerase Instructions

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BST2-8000

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Product Information	
Product name	Bst 2.0 DNA Polymerase
Expression system	Escherichia coli
Quality	Recombinant protein
Form	Liquid

Product Introduction

Bst 2.0 DNA Polymerase is proprietary mutant of Bst DNA polymerase, large fragment, with a fast reaction speed and increased sensitivity and tolerance to inhibitors. Bst 2.0 DNA Polymerase contains 5´→3´ DNA polymerase activity and strong strand displacement activity but lacks 5´→3´ exonuclease activity. Bst 2.0 DNA Polymerase enables highly efficient loop-mediated isothermal amplification (LAMP).

Storage

-20°C. Suggest to aliquot after receiving. Avoid repeated freeze-thaw.

Materials supplied

Cat:	BST2 -1600	BST2 -8000
Bst 2.0 DNA Polymerase (8 U/μl)	1600U	8000U
Isothermal Amplification Buffer (10X)	0.5mL	1mL*3
MgSO4 (100mM)	0.4mL	1mL*2

Unit definition

One unit is defined as the amount of enzyme that will incorporate 25 nmol of dNTP into acid insoluble material in 30 minutes at 65°C.

Inactivation

85°C for 10 minutes.

Enzyme storage solution

50 mM Tris-HCl，pH 8.0，50 mM KCl，0.1% Tween-20，0.1% Triton X-100，1 mM DTT，50% Glycerol

Other materials required

i. Template DNA or RNA
ii. LAMP primers
iii. SYBRTM or EvaGreenTM dye or Probes
iv. dNTP Mix
v. Nuclease-free water
vi. Q-PCR machine or heat block

Recommended reaction system

1、 Prepare reactions as following table. Reactions should be setup on ice.

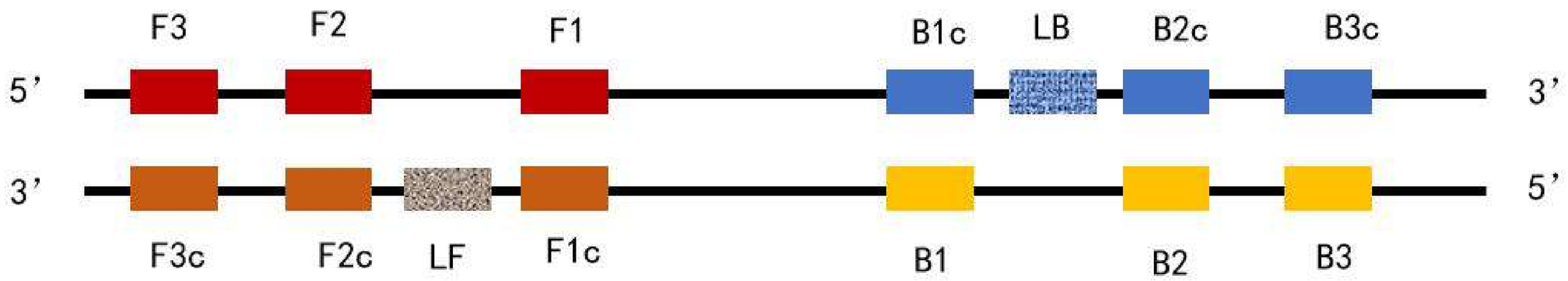
Component	Volume	Working concentration
Isothermal Amplification Buffer (10X)	2.5 µl	1X
MgSO4 (100mM)	1.5 µL	6mM+2mM in buffer=8mM final
dNTPs (10mM)	3.5ul	1.4mM

Primers(10X)	2.5 µl	1.6 µM FIP/BIP, 0.4 µM LF/LB, 0.2 µM F3/B3,
Bst 2.0 (8 U/µl)	1 µl	0.32 U/µL
模板 DNA	1 µl	>10 copies or more
ddH2O	Up to25 µl	-

2、 Incubate at 65°C for 30 to 60 minutes. Read fluorescence in real-time PCR machine or analyze final result by running DNA agarose gel.

Notes

・Running a no template control is strongly recommended to ensure amplification specificity.
・Designate and use distinct areas for sample preparation, reaction setup, and analysis.
・If optimization is desired, try titrating concentration of Mg (4–10 mM final) or Bst 2.0 (0.04-0.32 U/µL), or changing reaction temperature (50–72 °C).
・LAMP primer online design: http://primerexplorer.jp/e/



・F3 primer ・B3 primer ・FIP: Forward Inner Primer・BIP: Backward Inner Primer
・LF: Forward loop primer・BF: Backward loop primer