Tinzyme Co., Limited

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Bst DNA Polymerase

Product Number: BS01

Storage Conditions

-20°C.

Components

Component	BS01 800 U	BS01 4000 U
Bst DNA Polymerase, 8 U/μL	100 μL	2×250 μL
10×Bst Reaction Buffer	1.5 mL	2×1.5 mL
100mM $MgSO_4$ Solution	1.5 mL	2×1.5 mL

Description

Bst DNA Polymerase (Bst), a Large Fragment, is a purified recombinant enzyme expressed by Escherichia coli. Its gene was derived from Bacillus stearothermophilus and some point mutations were carried out on the basis of the original sequence.The protein has 5'→3' DNA polymerase activity, but no 5'→3' and 3'→5' exonuclease activity, and has strong chain replacement activity. It should be used for DNA isothermal amplification (LAMP), multiple displacement amplification (MDA), whole genome amplification (WGA), library sequencing, etc.

Unit definition

The amount of enzyme required to incorporate 10nmol of deoxynucleotides into an acid insoluble substance at 65°C for 30 min is defined as 1 activity unit (U).Thermal inactivation: inactivation after incubation at 80°C for 20min.

Quality Control

After several column purification, its purity was more than 98% detected by SDSPAGE. No exogenous nuclease activity and no host residual DNA were detected.

Protocol

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Component	25μL Reaction System	Final Concentration
10×Reaction Buffer	25μL	1× (include 2mM $MgSO_4$)
$MgSO_4$ (100 mM)	1.5μL	6mM (total 8mM)
dNTP Mix (10 mM)	3.5μL	each 1.4mM
FIP/BIP Primers (25×)	1μL	1.6μM
F3/B3 Primers (25×)	1μL	0.2μM
LoopF/B Primers (25×)	1μL	0.4μM
Bst DNA Polymerase, 8 U/μL	1μL	320 U/mL DNA
Sample	variable	> 10 copies or more
sterile water	Add to 25μL	
Total volume	25μL	

Note:1)LAMP primers are composed of 4 or 6 primers (including Loop), 25× primers include: 40μM FIP, 40μM BIP, 5μM F3, 5μMB3, 10μM LoopF, 10μM LoopB.

2)If the reaction condition needs to be optimized, the concentration of Mg2+ can be adjusted (4-10mM), enzyme amount (0.04-0.32 U/μL) or change the reaction temperature (50-68°C).

3)The reaction temperature should not exceed 70°C, which cannot be used in thermal cycle sequencing or PCR instrument.