Tinzyme Co., Limited

Email: sales@tinzyme.com Website: www.tinzyme.com
Tel: +86-755-86134126 WhatsApp/Facebook/Twitter: +86-189-22896756

WellStart II BST DNA polymerase

Product Number: BS02

Shipping and Storage

-20°C.

Components

Component	BS02 1600U
WellStart II BST DNA polymerase(8U/μL)	200μL
10×WellStart II BST Reaction Buffer	1.5mL
100mM $MgSO_4$Solution	1.5mL

Description

WellStart II BST DNA polymerase is a recombinant enzyme expressed and purified by Escherichia coli. Its gene is derived from Bacillus stearothermophilus and has undergone partial point mutations based on the original sequence.This protein has stronger 5'→ 3' DNA polymerase activity, chain displacement activity, reverse transcriptase activity, and no 5'→ 3' exonuclease activity.Applied to DNA/RNA isothermal amplification (LAMP), multiple displacement amplification (MDA), whole genome amplification (WGA), etc.

Unit definition

The amount of enzyme required to add 10nmol of deoxynucleotides to acidic insoluble substances within 30 minutes at 65°C is defined as 1 active unit (U).

Heat Inactivation

Incubate at 80°C for 5 minutes before inactivation.

Quality Control

After multiple column purification, the purity was detected by SDS-PAGE to be greater than 98%; No exogenous nuclease activity was detected.

Protocol

Isothermal Amplification (LAMP) Operation Guidelines:

Mix the following components in proportion and incubate at 65°C for 30-60 minutes. Incubate at 80°C for 5 minutes to inactivate.

Components	25μL reaction system	Final Concentration
10×WellStart II BST 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
FIP/BIP Primers (25×)	1 μL	1.6 μM
F3/B3 Primers (25×)	1 μL	0.2 μM
LoopF/B Primers (25×)	1 μL	0.4 μM
WellStart II BST DNA polymerase(8U/μL)	0.5-1 μL	160-320 U/mL
DNA Sample	variable	> 10 copies or more
Sterile water	Add to 25 μL	

Total Volume	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 Mg^{2+} concentration (4-10mM), enzyme quantity, or reaction temperature (60-72°C) can be adjusted. The optimal reaction temperature for this enzyme is 65-68°C;

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.