Tinzyme Co., Limited

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Bsu DNA Polymerase

Product Number: BS04

Shipping and Storage

-20°C.

Components

Component	BS04	BS04
Bsu DNA Polymerase	200U	1000U
10×Reaction Buffer	0.2ml	1.0ml

Description

Bsu DNA polymerase is a full-length protein of DNA polymerase A from Bacillus subtilis, which has a 5 '→ 3' exonuclease domain. However, this polymerase naturally lacks 3 '→ 5' exonuclease activity.

Our company's Bsu DNA polymerase is a recombinant protein expressed and purified through multiple steps.

Concentration

5U/μl

Features

1. Thermal deactivation: 75°C, 20min
2. Has certain incision translation activity

Application

1. RPA isothermal nucleic acid amplification reaction
2. Random primer labeling
3. Synthesis of the second strand of cDNA
4. Adding Tail to a Single dA

Unit definition

One unit is defined as the amount of enzyme that blends 10 nmol dNTP into an acid insoluble substance within 30 minutes at 37°C

Activity determination conditions

10×Reaction Buffer,37°C。

Storage buffer

50 mM Tris-HCl,50 mM KCl,1 mM DTT,0.1mM EDTA,50% Glycerol,pH 7.5,25°C。

Quality control

Relevant tests have shown that there is no contamination of exogenous endonuclease, exonuclease, or RNase. PCR method for detecting residual DNA without host.

Protocol

Second strand cDNA synthesis

1. Prepare the reaction system according to the following table

Component	Volume
10×Reaction Buffer	5μl
10mM dNTP	2μl
primer (100μM)	2μl
Template cDNA	100ng
H_2O	Variable
Total	50μl

2. Add 1μl Bsu DNA polymerase (5U/μl) and keep at 37℃ for 30 minutes;
3. Results of the extension effect of the second strand cDNA detected by gel electrophoresis

Note

1. Compared to large fragments of Bsu DNA polymerase, the effect of RPA isothermal DNA amplification reaction on the full length protein of Bsu DNA polymerase is poor. It is recommended to use our company's Bsu DNA polymerase large fragment for RPA isothermal DNA amplification reaction.
2. The full length protein of Bsu DNA polymerase has a certain 5'→3' exonuclease activity, therefore it has a certain incision translation activity.
3. The full length protein of Bsu DNA polymerase has a certain 5'→3' exonuclease activity, so its chain displacement synthesis ability is weaker than that of Bsu DNA polymerase Klenow large fragments.
4. Due to the lack of 3'→5' exonuclease activity, Bsu DNA polymerase cannot cleave the 3' unpaired protruding end, making it unsuitable for generating flat ends.