

Bst DNA Polymerase, Large Fragment

Technical Data

Product Name	No.	Specific Activity	Molecular Weight
Bst DNA Polymerase, Large Fragment	HH7001	8 U/ μ L	69 KD

Description

Bst DNA Polymerase, Large Fragment is the portion of the *Bacillus stearothermophilus* DNA Polymerase protein that contains the 5'→3' polymerase activity, but lacks 5'→3' exonuclease activity. This product uses *E. coli* expression and can be suitable for isothermal amplification.

Application

1. DNA sequencing through high GC regions.
2. Rapid Sequencing from nanogram amounts of DNA template.

Storage Conditions

Transport in ice packs, store at -20 °C. Avoid repeated freezing and thawing. The product is valid for 2 years.

Unit Definition

One unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid insoluble material in 30 minutes at 65°C.

Quality Control

Exonuclease residue detection: 80 U of this product was incubated with 50 pmol single-stranded DNA substrate and double-stranded DNA substrate at 37 °C for 16 hours. After denaturing PAGE electrophoresis, the DNA electrophoresis band did not change.

Endonuclease residue detection: 80 U of this product and 0.3 μ g of pBR322 DNA were incubated at 37 °C for 4 hours. After agarose gel electrophoresis, the electrophoresis band of the plasmid did not change.
***E. coli* DNA residue detection:** The remaining nucleic acid in 80 U of this enzyme was detected by TaqMan qPCR for *E. coli* gDNA, and the *E. coli* genome residue was less than 10 copies.

Experiment Process

1. Take out 10 × ThermoPol Buffer, thaw on ice, vortex for 10 seconds before use. Mix well and collect by centrifugation briefly.
2. In addition to the template DNA, the remaining components are configured in the order shown in the table below.

Substance	Volume	Concentration
10 × ThermoPol Buffer	2.5 μ l	1 ×
MgSO ₄ (100 mM)	1.5 μ l	6 mM (total 8 mM)
dNTP Mix (10 mM)	3.5 μ l	1.4 mM
FIP/BIP Primers	4 μ l	1.6 μ M
F3/B3 Primers	0.5 μ l	0.2 μ M
LoopF/LoopB Primers	2 μ l	0.8 μ M
Bst DNA Polymerase	1 μ l	320 U/ml
Template DNA	x μ l	>10 copies
Nuclease-free Water	up to 25 μ l	

3. Mix by pipetting, and centrifuge briefly to collect.
4. Constant temperature incubation at 60°C-65°C for 1 hour.

Precaution

1. The product can be dissolved at room temperature. After dissolution, it should be stored in an ice box or ice bath. After using, it should be stored at -20 °C immediately.
2. For your safety and health, please wear lab coat and disposable gloves.