

## Bst DNA Polymerase, Full Length



1-800-632-7799  
info@neb.com  
www.neb.com



M03285 005140316031

# M0328S



500 units 5,000 U/ml Lot: 0051403

RECOMBINANT Store at -20°C Exp: 3/16

**Description:** *Bst* DNA Polymerase, Full Length is the full length polymerase from *Bacillus stearothermophilus*. It has 5' → 3' polymerase and double-strand specific 5' → 3' exonuclease activity, but lacks 3' → 5' exonuclease activity (2).

**Source:** An *E. coli* strain that carries the DNA Polymerase gene from *Bacillus stearothermophilus*. (H. Kong)

Supplied in: 50 mM KCl, 10 mM Tris-HCl (pH 7.5), 0.1 mM EDTA, 1 mM dithiothreitol, 0.1% Triton X-100 and 50% glycerol.

**Reagents Supplied with Enzyme:**  
10X ThermoPol® Reaction Buffer

**Reaction Conditions:**  
1X ThermoPol Reaction Buffer.  
**Incubate at 65°C.**

**1X ThermoPol Reaction Buffer:**  
20 mM Tris-HCl  
10 mM (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>  
10 mM KCl  
2 mM MgSO<sub>4</sub>  
0.1% Triton® X-100  
pH 8.8 @ 25°C

**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.

**Unit Assay Conditions:** 50 mM KCl, 20 mM Tris-HCl (pH 8.8), 10 mM MgCl<sub>2</sub>, 30 nM M13mp18 SS DNA, 70 nM M13 sequencing primer (-47) 24-mer, 200 μM dATP, 200 μM dCTP, 200 μM dGTP, 100 μM dTTP including [3H]-dTTP, 100 μg/ml BSA and enzyme.

**Specific Activity:** 80,000 units/mg

**Heat Inactivation:** 80°C for 20 minutes.

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### Quality Control Assays

**Endonuclease Activity:** Incubation of a 50 μl reaction in ThermoPol Reaction Buffer containing a minimum of 50 units of *Bst* DNA Polymerase, Full Length with 1 μg of supercoiled φX174 DNA for 4 hours at either 37°C or 65°C results in < 10% conversion to the nicked form as determined by agarose gel electrophoresis.

**Physical Purity:** Purified to > 95% homogeneity as determined by SDS-PAGE analysis using Coomassie Blue detection.

**Notes On Use:** *Bst* DNA Polymerase, Full Length does not exhibit 3' → 5' exonuclease activity.

Reaction temperatures above 70°C are not recommended.

Cannot be used for thermal cycle sequencing or PCR.

### References:

1. Mead, D.A. et al. (1991) *BioTechniques*, 11, 76–87.
2. Aliotta, J.M. et al. (1996) *Genetic Analysis*, 12, 185–195.

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### Companion Products Sold Separately:

Magnesium Sulfate (MgSO<sub>4</sub>) Solution  
#B1003S 6.0 ml

ThermoPol Reaction Buffer Pack  
#B9004S 6.0 ml

ThermoPol II (Mg-free) Reaction Buffer Pack  
#B9005S 6.0 ml

ThermoPol DF (Detergent-free) Reaction Buffer Pack  
#B9013S 6.0 ml

Deoxynucleotide Solution Set  
#N0446S 25 μmol each

Deoxynucleotide Solution Mix  
#N0447S 8 μmol each  
#N0447L 40 μmol each



U.S. Patent No. 5,814,506.

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CERTIFICATE OF ANALYSIS

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Deoxynucleotide Solution Set  
#N0446S 25 μmol each

Deoxynucleotide Solution Mix  
#N0447S 8 μmol each  
#N0447L 40 μmol each



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