

**Bst DNA Polymerase, Exonuclease Minus**  
**8,000 U/ml**  
**Technical Specifications**



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Catalog No. 30027-0	200 Units Trial Size (1 x 25µl)
Catalog No. 30027-1	2,000 Units (1 x 250µl)
Catalog No. 30027-2	10,000 Units (5 x Cat. No. 30027-1)
Includes 10X DNA Polymerase Buffer B (1.2 ml per 2,000 Units)	
<b>Store at -20°C.</b>	
For Research Use Only.	
Not for use in Diagnostic Procedures.	

<b>Product Description</b>	Bst DNA Polymerase, Exonuclease Minus, 8,000 units/ml.
<b>Storage Buffer</b>	10 mM Tris-HCl, pH 7.5, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 0.1% Triton X-100, and 50% Glycerol.
<b>Stability</b>	Bst DNA Polymerase, Exonuclease Minus is stable for one year from the date received if stored at -20°C.
<b>Recommended Reaction Conditions</b>	8 U Bst DNA Polymerase, Exonuclease Minus; 1X DNA Polymerase Buffer B containing 20 mM Tris-HCl pH 8.8, 10 mM (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> , 10 mM KCl, 2 mM MgSO <sub>4</sub> , and 0.1 % Triton X-100.
<b>Activity Determination</b>	One unit catalyzes the incorporation of 10 nmol of dNTP into acid-insoluble material in 30 minutes at 65°C in 20 mM Tris-HCl pH 8.8, 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, 30 nM M13mp18 ssDNA, 70 nM M13 sequencing primer(-47) 24 mer, 200 µM dGTP, dATP, dTTP, dCTP (a mix of unlabeled and [ <sup>33</sup> P]dCTP), and 0.1 mg/ml BSA.
<b>Absence of Endonuclease or Nicking Activity</b>	Incubation of 8 U of Bst DNA Polymerase, Exonuclease Minus with 1 µg of supercoiled pBR322 DNA for 16 hours at 37° and 65°C resulted in no detectable conversion to relaxed or linear forms by agarose gel electrophoresis.
<b>Absence of Exonuclease Activity</b>	Incubation of 8 U of Bst DNA Polymerase, Exonuclease Minus with 1 µg of HindIII-cut lambda DNA for 16 hours at 37° and 65°C resulted in no smearing of bands on agarose gels. Single stranded and double stranded exonuclease activities were tested by incubating 10 µl of enzyme at 8 U/ µl with radiolabeled DNA substrate for one hour at 37° and 65°C, resulting in less than 0.1% release of TCA-soluble counts.
<b>Purity</b>	>99% pure by SDS PAGE. No detectable DNA contamination. 10 µl of enzyme at 8 U/ µl of the sample was tested for <i>E. coli</i> genomic DNA contamination by PCR amplifying with the <i>E. coli</i> 16S ribosomal primers.

**Applications**

1. DNA sequencing through high GC regions (1, 2)
2. Rapid Sequencing from nanogram amounts of DNA template (3)

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

**References**

- 1) Griffin, H. and Griffin, A. (1994) *PCR Technology*, 228-229.
- 2) McClary, J. et al. (1991) *J. DNA Sequencing and Mapping*, 1, 173-180.
- 3) Mead, D.A. et al. (1991) *Biotechniques*, 11, 76-87.

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