



Glycerol Free Bsu DNA Polymerase Large Fragment

Manual

Catalog #	3582GF	3585GF
Package Size	200 units	1000 units
Volume	40µl	200µl
Concentration	5 units/µl	



Important!

-20°C Storage Required

- * Immediately inspect packages
- * Freeze upon receipt



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Description:

Intact Genomics (ig®) Glycerol free Bsu DNA Polymerase I, Large Fragment is a product of the *Bacillus subtilis* DNA polymerase I which lacks the N-terminal exonuclease domain (1-296 amino acids). It retains the 5' → 3' polymerase activity of DNA polymerase I but lacks the 5' → 3' exonuclease activity. This large fragment also lacks 3' → 5' exonuclease activity (1).

Protein Purity:

The physical purity of this enzyme is ≥98% as assessed by SDS-PAGE with Coomassie® blue staining (Fig. 1).

Applications:

- Strand displacement DNA synthesis (2)
- Random primer labeling
- Second strand cDNA synthesis
- dA-tailing

Product Components:

- Glycerol Free Bsu DNA Polymerase I, Large fragment
- 10x Bsu DNA Polymerase I reaction buffer

Product Source:

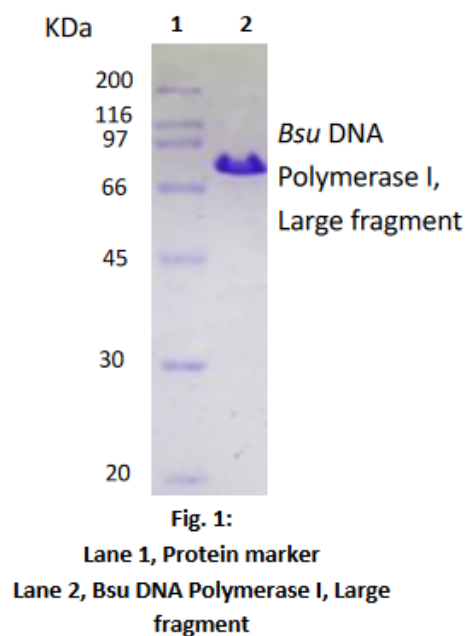
E. coli strain expressing Bsu DNA Polymerase I gene lacking the N-terminal 5' → 3' exonuclease domain.

Storage Buffer:

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

Heat Inactivation:

70°C for 20 min



Note:

Glycerol acts as a cryoprotectant and protein stabilizer when added to the storage buffer of proteins and enzymes. However, in certain circumstances, it is preferred to omit glycerol from the buffer. This includes instances where the presence of glycerol may interfere, such as lyophilization, high-throughput instruments with sensitive fluidics or primary cell cultures.

For our glycerol free products, it is **recommended to use immediately upon thaw** as without glycerol there will be significant activity loss with freeze/thaw cycles.

Quality Control:

Glycerol Free Bsu DNA Polymerase Large fragment is free from detectable nuclease activities.

Unit Definition:

One unit is defined as the amount of enzyme that incorporates 10 nmoles of dNTP into acid-insoluble form in 30 minutes at 37° C.

Related Products:

- T4 UvsX DNA Recombinase (Cat.# 3562)
- T4 UvsY Protein (Cat.# 3572)
- *Sau* DNA Polymerase (Cat.# 3595)
- T4 gp32 Protein (Cat.# 3515)
- Exonuclease III (Cat.# 3415)
- Exonuclease IV (Nfo) (Cat.# 3425)

Ordering Information:

- Order online within the USA. Place orders on **www.intactgenomics.com** using our secure Shopping Cart.
- Order by email, phone, or fax.
Email: **sales@intactgenomics.com**
Phone: (314) 942-3655 | Toll-free : 855-835-7172 | Fax: (314) 942-3656
- Order via our distributors.

References:

1. Okazaki, T. et al. (1964) J. Biol. Chem. 239, 259–268.
2. Piepenburg, O. et al. (2006) PLOS Biology, 4, 1115–1121.

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Our hours are Monday - Friday, 8AM to 5PM, U.S. Central Standard Time.

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