

# Bsu DNA Polymerase I, Large Fragment



|                      |             |
|----------------------|-------------|
| <b>Catalog #</b>     | 3585        |
| <b>Package Size</b>  | 1,000 Units |
| <b>Volume</b>        | 200 µl      |
| <b>Concentration</b> | 5 µg/µl     |

## Description

Intact Genomics (ig®) 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)

## Applications

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

## Protein Purity

The physical purity of this enzyme is ≥99% as assessed by SDS-PAGE with Coomassie® blue staining (see figure below).

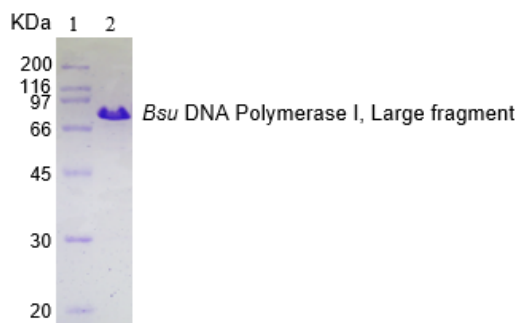


Fig: Lane 1. Protein marker and lane 2. Bsu DNA Polymerase I, Large fragment.

## Product Source

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

## Product Includes

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

## 1x Bsu DNA Polymerase I reaction buffer

10 mM Tris-HCl, 50 mM KCl, 10 mM MgCl<sub>2</sub>, 1 mM DTT  
pH 7.9 @ 25°C

## Storage Buffer

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

## Storage Temperature

-20°C

## Heat inactivation

70°C for 20 min

## 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.

## Quality Control assays

Bsu DNA Polymerase I, Large fragment is free from detectable nuclease activities.

## References

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

## 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)

## Technical Support

Intact Genomics is committed to supporting the worldwide scientific research community by supplying the highest quality reagents. Each new lot of our products is tested to ensure they meet the quality standards and specifications designated for the product. Please follow the instructions carefully and contact us if additional assistance is needed. We appreciate your business and your feedback regarding the performance of our products in your applications.