

## Sau DNA Polymerase I, Large Fragment

<b>Catalog #</b>	3592	3595
<b>Package Size</b>	250 units	1,000 units
<b>Concentration</b>	5 units/μl	

### Description

Sau DNA Polymerase I, Large Fragment is a product of the *Staphylococcus aureus* DNA polymerase I which lacks the N-terminal exonuclease domain (1-293 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.

### Applications

- Strand displacement DNA synthesis (1)
- 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).

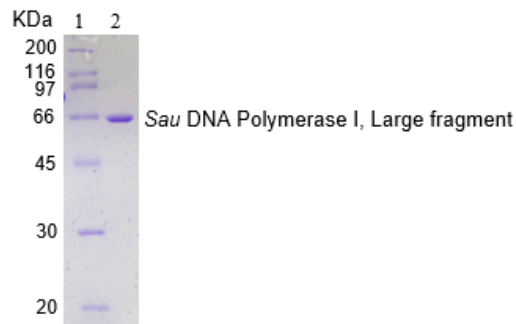


Fig: Lane 1. Protein marker and lane 2. *Sau* DNA Polymerase I, Large fragment.

### Product Source

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

### Product Includes

- *Sau* DNA Polymerase I, Large fragment
- 10x *Sau* DNA Polymerase I reaction buffer

### 1x *Sau* 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

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

### References

1. Piepenburg, O. et al. (2006) PLOS Biology, 4, 1115–1121.