Intact Genomics®

E. coli DNA Polymerase I (Pol I)

Catalog #	3266	3268
Package Size	500 units	2,500 units
Volume	50 µl	250 µl
Concentration	10 units/µl	

Description

E. coli DNA Polymerase I is a DNA-dependent DNA polymerase which has both 3′→ 5′ and 5′→ 3′ exonuclease activities (1). The 5′→ 3′ exonuclease removes nucleotides from the growing DNA chain and allows nick-translation.

Physical Purity

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

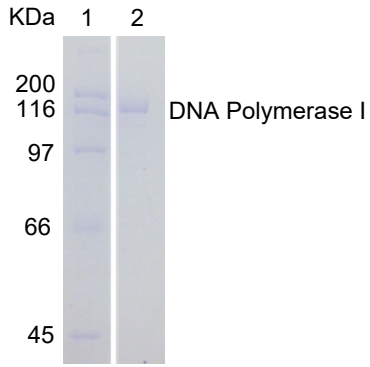

Figure: Lane 1. Protein Marker
Lane 2. DNA Polymerase I

Product Source

E. coli strain carrying recombinant E. coli polA gene.

Applications

- Nick translation of DNA to generate highly specific DNA probes (2).
- Second strand cDNA synthesis (3).

Product Includes

1) DNA Polymerase I
2) 10x DNA Polymerase I Reaction Buffer

Storage Temperature

–20 °C

Storage Buffer

50 mM Tris-HCl (pH 7.5),
0.1 mM EDTA,
1 mM β-mercaptoethanol,
1 mM DTT and 50% (v/v) glycerol.

10X Reaction Buffer

500 mM Tris-HCl
100 mM $MgCl_2$,
50 mM dithiothreitol (DTT)
pH 7.5 @ 25 °C.

Inactivation

Inactivated by heating at 75 °C for 20 min.

Quality Control Assays

DNA Polymerase I is free from detectable endonuclease and RNase activities.

References

1. Lehman, I. R (1981). In P.D. Boyer(Ed.), The Enzymes. 14A, 16-38. San Diego: Academic Press.
2. Meinkoth, J and Wahl, G. M (1987). S. L. Berger and A. R. Kimmel (Ed.), Methods Enzymol.152, 91-94. San Diego: Academic Press.
3. Gubler, U and Hoffmann, B. J (1983). Gene. 25, 263-269.