

# DNA Polymerase I (*E.coli*)



**Catalog:** RK20530

**Size:** 500 U / 2,500 U

**Concentration:** 10,000 U/ml

**Components:**

DNA Polymerase I ( <i>E. coli</i> ) (10,000 U/ml)	RM20518
10X ABuffer B	RM20126

**Molecular Weight:** Theoretical 103000 daltons

**5' - 3' Exonuclease:** Yes

**3' - 5' Exonuclease:** Yes

**Strand Displacement:** No

**Error Rate:** < 9x10<sup>-6</sup> bases

Notes:

- DNase I is not included with this enzyme and must be added for nick translation reactions.
- DNA Polymerase I (*E.coli*) is active in ABuffer A/B/C/S when supplemented with dNTPs (not included).

**QC Process:**

- Purity is above 95% detected by SDS-PAGE.
- No nuclease or RNase contamination.
- No residual host genomic DNA detected by PCR.

## Product Description

DNA Polymerase I (*E.coli*) is a DNA-dependent DNA polymerase with inherent 3' → 5' and 5' → 3' exonuclease activities. The 5' → 3' exonuclease activity removes nucleotides ahead of the growing DNA chain, allowing nick-translation.

It is applicable to nick translation of DNA to obtain probes with a high specific activity and second strand synthesis of cDNA.

**Product Source:**

An *E.coli* strain that carries an overexpressed copy of the polA gene.

**Unit Definition:**

One unit is defined as the amount of enzyme that will incorporate 10 nmol of dNTP into acid insoluble material in 30 minutes at 37°C.

**Storage Temperature:** -20°C

**Storage Conditions:**

25 mM Tris-HCl, 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, pH 7.4 @ 25°C

**Reaction Conditions:**

1X ABuffer B, Incubate at 37°C

**1X ABuffer B:**

10 mM Tris-HCl, 50 mM NaCl, 10 mM MgCl<sub>2</sub>, 1 mM DTT, pH7.9 @ 25°C

**Heat Inactivation:** 75°C for 20 min

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