DNA Polymerase I *(E.coli)*

Cat. No. : RK20530

Product components

Components	Component number	Concentration	500 U	2,500 U
DNA Polymerase I *(E. coli)*	RM20518	10,000 U/mL	50 μL	250 μL
10X ABuffer B	RM20126	10X	1.25 mL	1.25 mL

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 for obtaining probes with a high specific activity and for second strand synthesis of cDNA.

Product Source

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

Storage

-20℃

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℃.

Reaction Conditions

1X ABuffer B, Incubate at 37℃

1X ABuffer B

10 mM Tris-HCl, 50 mM NaCl, 10 mM $MgCl_2$, 1 mM DTT, pH7.9 @ 25℃

Storage Conditions

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

Heat Inactivation

75℃ for 20 min

Molecular Weight

Theoretical 103000 daltons

Strand Displacement

No

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Error Rate

< $9x10^{-6}$ bases

Notes

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

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