

E. coli DNA Polymerase I

CATALOG NO.: M1210-100
AMOUNT: 500 U (100 µl)
PRODUCT SOURCE: Recombinant *E. coli*
FORM: Liquid. Enzyme supplied with 10X Reaction Buffer

COMPONENTS:

Components Name	Volume	Part No.
<i>E. coli</i> DNA Polymerase I (5 U/µl)	100 µl	M1210-100-1
10X <i>E. coli</i> DNA Polymerase I Reaction Buffer	300 µl	M1210-100-2

DESCRIPTION: *E. coli* DNA Polymerase I is a DNA-dependent polymerase with intrinsic 3'→5' and 5'→3' exonuclease activities. Nick translation is facilitated by this enzyme due to the removal of nucleotides ahead of the growing chain via 5'→3' exonuclease activity.

APPLICATIONS:

1. Generation of labeled DNA probes by nick translation
2. Second-strand synthesis of cDNA

STORAGE CONDITIONS: Store all components at -20°C. Avoid repeated freeze-thaw cycles of all components to retain maximum performance. All components are stable for one year from the date of shipping when stored and handled properly.

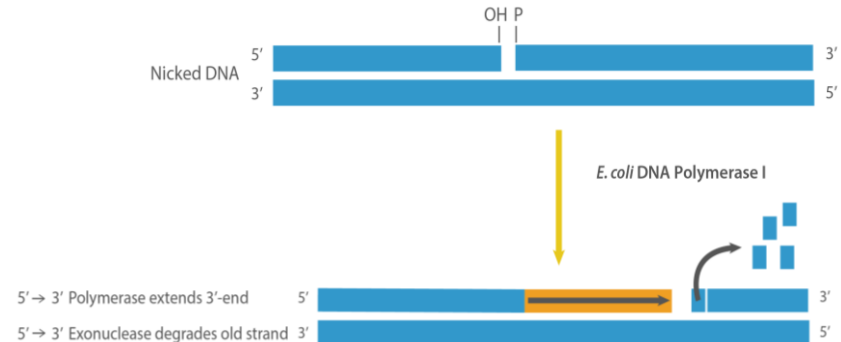
ENZYME STORAGE BUFFER: 25 mM Tris-HCl (pH 7.5), 0.1 mM EDTA, 1 mM DTT, and 50% (v/v) Glycerol

ENZYME UNIT DEFINITION: One unit is defined as the amount of *E. coli* DNA Polymerase I that catalyzes the incorporation of 10 nmol of dNTP into acid insoluble material in 30 minutes at 37°C using poly(dA-dT):poly(dA-dT) as a template:primer.

10X DNA POLYMERASE I REACTION BUFFER COMPONENTS: 100 mM Tris-HCl, 500 mM NaCl, 100 mM MgCl₂, 10 mM DTT, pH 7.9

REACTION CONDITIONS: Use 1X DNA Polymerase I Reaction Buffer and incubate at 37°C for 2 hours. *Note: DNase I is required for nick translation reactions and it is not supplied with this enzyme.*

HEAT INACTIVATION: 75°C for 20 minutes



RELATED PRODUCTS:

- Advance™ DNA Polymerase (Cat# M1151-250, -1000)
- Blood Advance™ DNA Polymerase (Cat# M1153-100, -400)
- Breeze™ DNA Polymerase (Cat# M1148-250, -1000)
- Distant™ DNA Polymerase (Cat# M1150-250, -1000)
- Fire Start™ DNA Polymerase (Cat# M1149-250, -1000)
- Outstretched™ DNA Polymerase (Cat# M1152-250, -1000)
- PFU DNA Polymerase (Cat# 9003-500, -2500)
- Ready™ DNA Polymerase (Cat# M1146-1000, -5000, -10000)
- Robust Ready™ DNA Polymerase (Cat# M1147-250, -1000)
- Taq DNA Polymerase (Cat# 9001-500, -2500)

FOR RESEARCH USE ONLY! Not to be used on humans.