



Just fine Molecular Biology

DATA SHEET

DNA Polymerase I, Large (Klenow) Fragment

Description: DNA Polymerase I, Large (Klenow) Fragment is a proteolytic product of *E. coli* DNA Polymerase I which retains polymerization and 3'→5' exonuclease activity, but has lost 5'→3' exonuclease activity. Klenow retains the polymerization fidelity of the holoenzyme without degrading 5' termini.

Source: *E. coli* strain harbouring the plasmid that direct the synthesis of Klenow fragment

Recommended Reaction Buffer: (1X) 10 mM Tris-HCl (pH 7.5), 5 mM MgCl₂, 5 mM dithiothreitol
Klenow Fragment is also active in any restriction enzyme reaction buffer and T4 DNA Ligase reaction buffer when supplemented with dNTPs.

Quality Assurance: Purified free of contaminating endonucleases and exonucleases.

Unit Definition: One unit is defined as the amount of enzyme required to convert 10 nmols of dNTPs to an acid-insoluble form in 30 minutes at 37 °C.

Concentration: 5,000 - 20,000 units/ml.

Storage Conditions: 100 mM KPO₄ (pH 6.5), 1 mM dithiothreitol and 50% glycerol. Store at -20 °C.

Applications

- DNA sequencing by the Sanger dideoxy method
- Fill-in of 5' overhangs to form blunt ends
- Removal of 3' overhangs to form blunt ends
- Second strand cDNA synthesis
- Second strand synthesis in mutagenesis protocols

Cat.-No:	Quantity
401002	200u
401010	1000u

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