

DNA Polymerase I Large (Klenow) Fragment, Exonuclease Minus Technical Specifications



Catalog No. 30095-1	200 Units (1 x 40µl) or
Catalog No. 30095-3	1,000 Units (5 x Cat.No. 30095-1)
Includes 10X DNA Polymerase Buffer A (1 ml per 200 Units)	
Store at -20°C.	
For <i>In Vitro</i> Research Use Only.	
Not for Drug or Diagnostic use. Not for use in humans or animals.	

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Product Description	DNA Polymerase I Large (Klenow) Fragment, Exonuclease Minus, 5,000 units/ml.
Storage Buffer	50% glycerol, 25 mM Tris-HCl (pH 7.9), 0.1 mM EDTA and 1 mM DTT.
Stability	DNA Polymerase I Large (Klenow) Fragment, Exonuclease Minus, is stable for one year from the date received if stored at -20°C.
Recommended Reaction Conditions	5 U DNA Polymerase I Large (Klenow) Fragment, Exonuclease Minus; 1X reaction Buffer containing 10 mM Tris-HCl (pH7.9), 10 mM MgCl ₂ , 50 mM NaCl and 1 mM DTT.
Activity Determination	One unit catalyzes the incorporation of 10nmol of dNTP into acid-insoluble material in 30 minutes at 37°C in 10 mM Tris-HCl (pH 7.9), 50 mM NaCl, 10 mM MgCl ₂ , 1 mM DTT, 200 µM dGTP, dATP, dTTP, dCTP (a mix of unlabeled and [³³ P]dCTP), 10 µg Activated Calf Thymus DNA, and 0.1 mg/ml BSA.
Absence of Endonuclease or Nicking Activity	Incubation of 5 U of DNA Polymerase I Large (Klenow) Fragment, Exonuclease Minus with 1 µg of supercoiled pBR322 DNA for 16 hours at 37°C resulted in no detectable conversion to relaxed or linear forms by agarose gel electrophoresis.
Absence of Exonuclease Activity	Incubation of 5 U of DNA Polymerase I Large (Klenow) Fragment, Exonuclease Minus with 1 µg of HindIII-cut lambda DNA for 16 hours at 37°C resulted in no smearing of bands on agarose gels.
Purity	>99% pure by SDS PAGE. No detectable DNA contamination.

Applications

- Random primed labeling (1)
- DNA sequencing by the Sanger dideoxy method (2).

Additional Reagents: Supplied with 10X DNA Polymerase Buffer A.

Heat Inactivation: 70°C for 15 min.

References

1. Tabor, S. and Struhl, K. (1989) In DNA-Dependent DNA Polymerases. F. M. Ausebel, R. Brent, R. E. Kingston, D. D. Moore, J. G. Seidman, J. A. Smith and K. Struhl (Eds.), *Current Protocols in Molecular Biology*, pp. 3.5.7-3.5.10.
2. Sanger, F. et al. (1977) Proc. Natl. Acad. Sci. USA, 74, 5463-5467

Warranty

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