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Exo-Minus Klenow DNA Polymerase (D355A, E357A)

Cat. No. KL11101K

1. Introduction

Exo-Minus Klenow DNA Polymerase is a DNA-dependent DNA polymerase that lacks both of the 5'→3' and 3'→5' exonuclease activities of *E. coli* DNA Polymerase I¹ from which it is derived. This N-terminal truncation of DNA Polymerase I has two mutations (D355A and E357A).

2. Product Designations and Kit Components

Product	Kit Size	Catalog Number	Reagent Description	Part Numbers	Volume
Exo-Minus Klenow DNA Polymerase (D355A, E357A)	1,000 Units	KL11101K	Exo-Minus Klenow DNA Polymerase (D355A, E357A) (10 U/μL)	E0141-10D1	100 μL
			Klenow exo- DNA Pol. 10X Buffer	SS000070-D1	5 mL

3. Product Specifications

Storage: Store only at -20°C in a freezer without a defrost cycle.

Storage Buffer: Exo-Minus Klenow DNA Polymerase (D355A and E357A) is supplied in a 50% glycerol solution containing 50 mM Tris-HCl (pH 7.5), 100 mM NaCl, 1.0 mM dithiothreitol (DTT), 0.1 mM EDTA, and 0.1% Triton® X-100.

Specific Activity: Exo-Minus Klenow DNA Polymerase has a specific activity of >1 x 10⁴ Units/mg.

Unit Definition: One unit converts 10 nmol of dNTPs into acid-insoluble material in 30 minutes at 37°C under standard assay conditions.

10X Reaction Buffer: 0.2 M Tris-HCl (pH 7.5), 50 mM MgCl₂, and 5.0 mM DTT.

Quality Control: Exo-Minus Klenow DNA Polymerase (D355A and E357A) is function-tested in a reaction containing 20 mM Tris-HCl (pH 7.5), 5 mM MgCl₂, 0.5 mM DTT, 10 μg of denatured activated calf thymus DNA, 2.5 μM each dNTP, and varying amounts of Exo-Minus Klenow DNA Polymerase.

Contaminating Activity Assays: Exo-Minus Klenow DNA Polymerase (D355A and E357A) is free of detectable endo- and exonuclease and RNase activities.

4. Reference

1. Lehman, I.R. (1981) *The Enzymes Academic Press* **14**, 16.

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