

Exo-Minus Klenow DNA Polymerase (D355A, E357A)

Cat. Nos. KL11250, KL111K, KL11101K, and KL115K



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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).

Exo-Minus Klenow DNA Polymerase is available in two concentrations, 5 U/μl and 10 U/μl, both at a specific activity of >1 x 10⁴ Units/mg. Each is supplied with a 10X Reaction Buffer.

2. Kit Contents

Cat. #	Concentration	Quantity
Exo-Minus Klenow DNA Polymerase		
KL11250	5 Units/μl	250 Units
KL111K	5 Units/μl	1,000 Units
KL11101K	10 Units/μl	1,000 Units
KL115K	5 Units/μl	5,000 Units

Each supplied with a 10X Reaction Buffer

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.

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.

3. Related Products

The following products are also available:

- Klenow Fragment DNA Polymerase
- DNA Polymerase I, *E. coli*
- dNTP Solution

4. References

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

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