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Exonuclease VII, *E. coli*

Cat. Nos. EN510100 and EN510250

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1. Introduction

Exonuclease VII, (Exo VII) derived from *E. coli,* has a high enzymatic specificity for single-stranded DNA (ssDNA) and exhibits both 5′→3′ and 3′→5′ exonuclease activities. It is especially useful for rapid removal of single stranded oligonucleotide primers from a completed PCR reaction when different primers are required for subsequent PCR reactions. Exo VII digestion of ssDNA works in the absence of magnesium.

Exo VII is available in 100 and 250 Unit sizes at a concentration of 10 Units/µl. The enzyme is supplied with a 5X Reaction Buffer.

Applications

- Removal of primers from completed PCR reactions.[1]
- Minimize the effect of primers left over from previous PCR reactions.

2. Product Specifications

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

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

Unit Definition: One unit of Exo VII results in the acid-solubilization of 1 nmol of nucleotides from activated single-stranded calf thymus DNA in 30 minutes at 37°C.

5X Reaction Buffer: 250 mM Tris-HCl (pH 7.9), 250 mM sodium phosphate (pH 7.8), 50 mM 2-mercaptoethanol, and 42 mM EDTA.

Quality Control: Exo VII is function-tested in a 100-µl reaction containing 50 mM Tris-HCl (pH 7.9), 50 mM sodium phosphate (pH 7.8), 10 mM 2-mercaptoethanol, 8.3 mM EDTA, 5 µg of heat-denatured activated calf thymus DNA, and varying amounts of Exo VII.

Contaminating Activity Assays: Exo VII is free of detectable RNase, DNA endo-, double-stranded DNA exo- and ssDNA Mg^{2+}-dependent exonuclease activities.

3. Related Products

The following products are also available:

- Exonuclease I, *E. coli*
- Exonuclease III, *E. coli*
- Lambda Exonuclease
- Rec BCD Nuclease
- Rec J Exonuclease, *E. coli*
- T5 Exonuclease
- Terminator™ 5′-Phosphate-Dependent Exonuclease
- Mung Bean Nuclease
- OmniCleave™ Endonuclease

4. Reference

1. Li, H. *et al.*, (1991) *Nucl. Acids Res.* **19**, 3139.

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