

# Manual

## Exonuclease VII

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For Research Use Only. Not for use in diagnostic procedures.

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## Exonuclease VII

### 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 Mg<sup>2+</sup>-free buffer containing EDTA.

### 2. Product designations and kit components

Product	Kit size	Catalogue number	Reagent description	Part number	Volume
Exonuclease VII	250 units	EN510250	Exonuclease VII (10 units/μL)	E0029-10D1	25 μL
			5X Exonuclease VII Buffer	SS000629-D1	500 μL

### 3. 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 (Rohm & Haas) and 0.1 mM EDTA.

**Unit definition:** One unit of Exo VII results in the acid-solubilisation 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<sup>2+</sup>-dependent exonuclease activities.

### 4. Applications

- Removal of primers from completed PCR reactions.<sup>1</sup>
- Minimise the effect of primers left over from previous PCR reactions.

### 5. Reference

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

### 6. Further support

If you require any further support, please do not hesitate to contact our Technical Support Team: [techsupport@lgcgroup.com](mailto:techsupport@lgcgroup.com).



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