



Applied Biological Materials Inc

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Exonuclease III, *E.coli*

Store at -20°C

Cat. No.	Description	Concentration	Quantity
E016	Exonuclease III, <i>E. coli</i>	100 U/μl	10,000 U (100 μl)

Product Description

Exonuclease III, *E. coli* digests duplex DNA in the 3'→5' direction from nicked DNA, blunt-end DNA, 3'-recessed ends, or 3'-overhangs of less than four bases, and yields nucleoside 5'-phosphates. The DNA degradation proceeds at a uniform rate and produces stretches of ssDNA on the opposite strand. Under defined reaction conditions, the reaction can yield predictable and reproducible digestion results. Conditions such as temperature, ionic strength, template DNA sequence and the Exonuclease III to DNA ratio need to be optimized to suit specific applications to achieve the desired excision rate. Exonuclease III, *E. coli* is also capable of degrading DNA from 3'-phosphate ends due to intrinsic 3'-phosphatase activity. The enzyme also has apurinic DNA endonuclease activity as well as RNase H activity.

Kit Components

Part No.	Product Components	10,000 U
E016-1	Exonuclease III, <i>E. coli</i> (100 U/μl)	100 μl
E016-2	10X Exonuclease III Reaction Buffer	500 μl

Product Applications

- Generation of intermediates for site-directed mutagenesis
- Preparation of strand-specific radio labelled probes
- Preparation of single-stranded DNA
- Preparation of single-stranded templates for dideoxy-sequencing of DNA
- Creation of unidirectional deletions in DNA fragments

Product Source

Recombinant *E. coli*.

Enzyme Storage Buffer

20 mM Tris-HCl (pH 7.5), 100 mM KCl, 1 mM DTT, and 50% (v/v) Glycerol.

Enzyme Unit Definition

One unit is defined as the amount of Exonuclease III, *E. coli* that is required to catalyze the release of 1 nmol of acid soluble nucleotides from double stranded DNA in 30 minutes at 37°C in 1X Exonuclease III Reaction Buffer.

Storage Conditions

Store all components at -20°C. Avoid repeated freeze-thaw cycles of all components to retain maximum performance. All components are stable for one year from the date of shipping when stored and handled properly.

10X Exonuclease III Reaction Buffer Components

100 mM Bis-Tris-Propane-HCl, 100 mM MgCl₂, 10 mM DTT, pH 7.0

Reaction Conditions

Use 1X Exonuclease III, *E. coli* Reaction Buffer and incubate at 37°C.

Heat Inactivation

70°C for 20 minutes.

For laboratory research only. Not for clinical applications.
For technical questions, please email us at technical@abmgood.com
or visit our website at www.abmGood.com