

TREVIGEN® Product Data

For Research Use Only. Not For Use In Diagnostic Procedures.

E. coli Exonuclease III (xth protein)

Catalog #: 4030-05K-EB

Contents: 4030-05K-01 Exonuclease III
3900-500-01 10X REC™ Buffer 1

Size: 5000 Units
1 ml

Description: Exonuclease III is a multifunctional repair enzyme with class II AP endonuclease activity (see reverse), incising immediately 5' to an abasic site leaving a 3'-OH terminus and a 5' abasic residue.

Source: Purified from *E. coli* containing a recombinant plasmid harboring the *E. coli xth A* gene.

Unit Definition: One Unit is the amount of enzyme required to produce 1 nmole of acid-soluble total nucleotide in 30 minutes at 37°C.

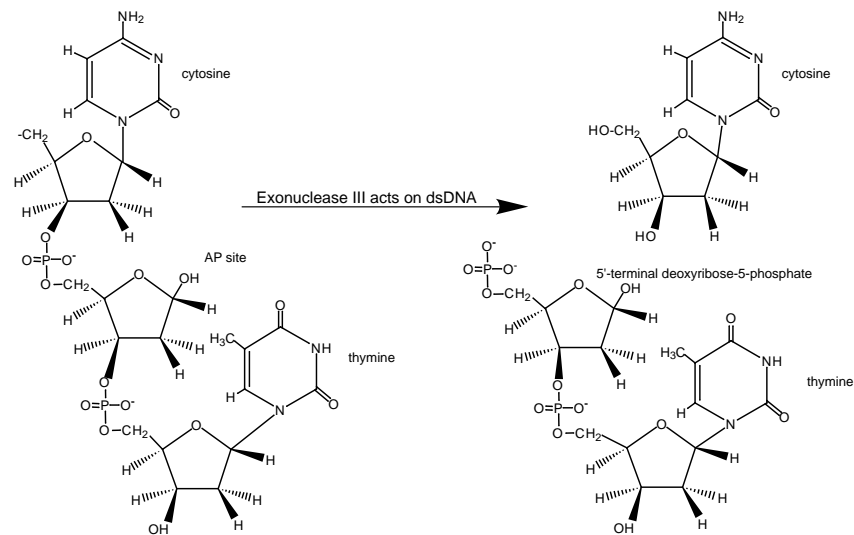
Specificity: Exonuclease III acts on 3'-OH, 3'-phosphate, and 3'-phosphoglycolate groups of double-stranded DNA only. It may also act upon 3' α , δ , β -unsaturated aldehydes generated following β elimination at AP sites.

Assay Conditions: 1 μ l of Exonuclease III was incubated in 50 mM Tris-HCl, pH 7.6, 10 mM MgCl₂, 1.0 mM DTT, 0.15 mM duplex [³H] lambda DNA at 37°C for 30 minutes in a reaction volume of 20 μ l.

Storage/Dilution Buffer: 25 mM Tris-HCl (pH 8.0), 50% (v/v) glycerol, and 0.05 mM DTT.

Storage Conditions: Store at -20°C in a manual defrost freezer. For long term storage, freeze in working aliquots at -80°C. Avoid repeated freeze-thawings.

References: 1. Lindahl, T. 1982. DNA Repair Enzymes. *Annual Review of Biochemistry*, 51:73.
2. Weiss, B. 1981. Exodeoxyribonucleases of *Escherichia coli*. *The Enzymes* (Boyer, P.D., ed). New York: Academic Press.
3. Friedberg, E.C., G.C. Walker, and W. Siede. 1995. *DNA Repair and Mutagenesis*, American Society of Microbiology, Washington, D.C.: ASM Press.



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