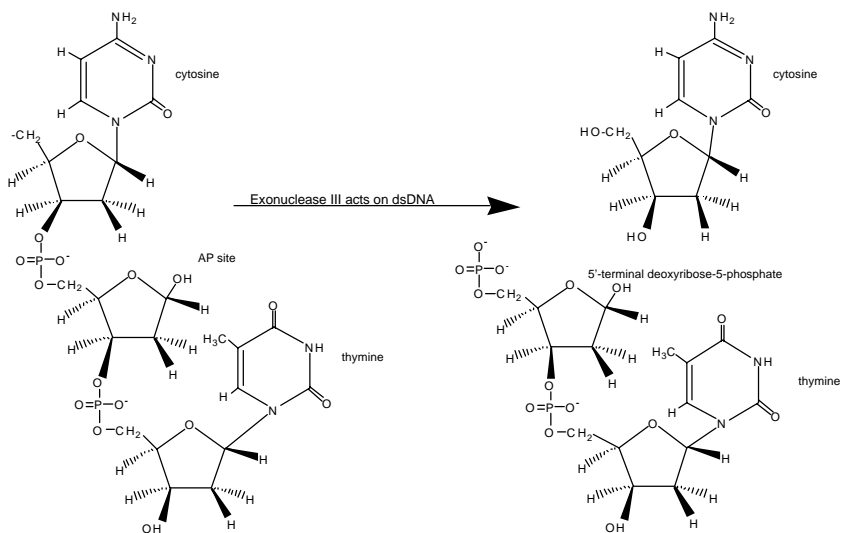


E. coli* Exonuclease III (xth protein)*Catalog #:** 4030-05K-EB**Contents:** Exonuclease III
10X REC™ Buffer 1**Size:** 5000 units
1 mL**Description:** Exonuclease III is a multifunctional repair enzyme with class II AP endonuclease activity (see reverse), immediately incising 5' to an abasic site leaving 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. 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 is 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), 0.05 mM DTT and 50% (v/v) glycerol.**Storage Conditions:** Store at -20° C in a manual defrost freezer. For long term storage, aliquot and store at -80° C. Avoid repeated freeze-thaw cycles.**References:**

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

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