**Exonuclease I (E. coli)**

**Storage Conditions:** 100 mM NaCl, 10 mM Tris-HCl (pH 7.5), 0.5 mM EDTA, 5 mM 2-mercaptoethanol, 100 µg/ml BSA and 50% glycerol.

**Reagents Supplied with Enzyme:** 10X Exonuclease I Reaction Buffer

**Reaction Conditions:** 1X Exonuclease I Reaction Buffer. Incubate at 37°C.

**M0293S**

3,000 units 20,000 U/ml Lot: 0241604 RECOMBINANT Store at –20°C Exp: 4/18

**Description:** Catalyzes the removal of nucleotides from single-stranded DNA in the 3' to 5' direction.

**Source:** An E. coli strain that carries the cloned Exo I gene from E. coli NMS54

**Applications:**
- Exonuclease I degrades excess single-stranded primer oligonucleotide from a reaction mixture containing double-stranded extension products.
- Exonuclease I degrades excess single-stranded primer oligonucleotide from a reaction mixture containing double-stranded extension products.

**Heat Inactivation:** 80°C for 20 minutes.

**Quality Control Assays**

**Double-stranded Endonuclease:** Incubation of 100 units of Exonuclease I with 1 µg φX174 RF I DNA for 16 hours at 37°C in 50 µl reaction buffer resulted in < 5% conversion to RF II.

**Single-stranded Endonuclease:** Incubation of 100 units of Exonuclease I with 1 µg of M13mp18 single-stranded DNA for 16 hours at 37°C in a 50 µl reaction resulted in no decrease in the amount of closed circular DNA as determined by agarose gel electrophoresis.

**Double-stranded Exonuclease:** Incubation of 50 units of enzyme with 0.2 µg 3H DNA (9.0 x 103 cpm/µg) for 4 hours at 37°C in 50 µl reaction buffer released < 0.5% radioactivity.

**Physical Purity:** Purified to > 95% homogeneity as determined by SDS-PAGE analysis using Coomasie Blue detection. BSA is added to the enzyme for stability.

**References:**
1. Lehman and Nussbaum (1964) J. Biol. Chem. 239, 2628.