

CERTIFICATE OF ANALYSIS

Exo- nuclease III

**S****E345**5,000 units
100,000 u/ml

Lot: 16

Exp: 07/20

Store at -20°C

Description: Exonuclease III (E. coli) catalyzes the stepwise removal of mononucleotides from 3'-hydroxyl termini of double stranded DNA. Exonuclease III activity depends partially on helical structure and displays sequence dependence (C>A=T>G). Temperature, salt concentration and the ratio of enzyme to DNA greatly affect enzyme activity, requiring reaction conditions to be tailored to specific applications.

Source: Isolated from an E.coli strain carrying the gene of the enzyme on a plasmid.

Applications:

- unidirectional nested deletions;
- site-directed mutagenesis;
- preparation of strand-specific probes;
- preparation of single-stranded substrates for dideoxy sequencing.

Storage Buffer:

10 mM Tris-HCl (pH 7,5);
50 mM KCl; 0.5 mM EDTA;
1 mM 2-mercaptoethanol; 50% glycerol.

Reaction Conditions:

1 x SEBuffer Exonuclease III. Incubate at 37°C.

1 x SEBuffer Exonuclease III (pH 8.0@25°C)
66 mM Tris-HCl; 6.6 mM MgCl₂.

Unit Definition: One unit is defined as the amount of enzyme required to produce 1 nmoles of acid-soluble nucleotides in 30 minutes at 37°C.

Assay Conditions: 50 mM Tris-HCl (pH 7.5 at 25°C);
1 mM MgCl₂; 1 mM DTT, 0.15 mM sonicated pancreatic DNA.

Reagents Supplied with Enzyme:

10 x SEBuffer Exonuclease III.

