

Product Insert

DNase I

Cat. No.
EA70000 ≥2000KU/mg

Size: 1g

All products contain :
1g DNase I, Lyophilized Powder

Store at 4°C

Features

- Recombinant enzyme.
- Purified from non-animal host with a lower level of intrinsic RNases.

Description

DNase I, (RNase-free) is an endonuclease that nonspecifically cleaves DNA to release di-, tri- and oligonucleotide products with 5'-phosphorylated and 3'-hydroxylated ends. DNase I acts on single- and double-stranded DNA, chromatin and RNA:DNA hybrids.

Applications

- Degradation of DNA template in transcription reactions
- Removal of contaminating genomic DNA from RNA samples
- DNase I footprinting
- Nick Translation

Quality Control

The absence of ribonucleases confirmed by appropriate quality test. Functionally tested for digestion of template DNA after *in vitro* transcription.

Molecular Weight

29 kDa monomer.

Source

A *E. Coli* strain that carries an MBP fusion clone of Bovine Pancreatic DNase I..

Definition of Activity Unit

One unit of the enzyme completely degrades 1 µg of plasmid DNA in 10 min at 37°C. Enzyme activity is assayed in the following mixture: 40 mM Tris-HCl (pH 8.0), 10 mM MgSO₄, 1 mM CaCl₂, 1 µg of pUC19 DNA.

Inhibition and Inactivation

Inhibitors: metal chelators, transition metals (e.g., Zn) in millimolar concentrations, SDS (even at concentrations less than 0.1%), reducing agents (DTT and beta-mercaptoethanol), ionic strength above 50-100mM.

Inactivated by heating at 65°C for 10 min in the presence of EGTA or EDTA (use at least 1 mol of EGTA/EDTA per 1 mol of Mn²⁺/Mg²⁺ (5)).

Note

- DNase I is sensitive to physical denaturation. Mix gently by inverting the tube. Do not vortex.

Technical Support

If the troubleshooting guide does not solve the difficulty you are experiencing, please contact Technical Support with details of reaction setup, cycling conditions and relevant date.

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