Hy-DNase I

Cat No. N9066

Size: 1 gm

Specific Activity: ≥ 2000 Kunitz units/mg

Form: Contains 1g Hy-DNase I, Lyophilized Powder

Store at 4°C

Description

Hy-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. Hy-DNase I acts on single- and double-stranded DNA, chromatin and RNA:DNA hybrids.

Features

• Recombinant enzyme.

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

Applications

• Degradation of DNA template in transcription reactions

• Removal of contaminating genomic DNA from RNA samples

• DNase I footprinting

• Nick Translation

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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 $MgSO_4$, 1 mM $CaCl_2$, 1 µg of pUC19 DNA.

Source

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

Molecular Weight

29 K Da monomer.

Quality Control

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

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 50-100 mM.
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 Mn^{2+}/Mg^{2+} (5).

Note

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

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