GENTAUR

DATA SHEET

DNase I

Store at -20°C

Cat. No.	Description	Quantity
G028	DNase I	2000U/ 1ml

Product Description

Deoxyribonuclease I (DNase I; EC3.1.21.1) is a non-specific endonuclease that catalyzes the cleavage of phosphodiester bonds in single/double-stranded DNA, chromatin, and RNA:DNA hybrids to generate di-and/or oligonucleotide (5'-phosphorylated and 3'-hydroxylated) end-products.[1,2] The catalytic activity of DNase I entails an obligate requirement for Ca^{2+} as its metal cofactor while Mg^{2+} ions offer a synergistic component to the reaction milieu.[3]

Alternative Name(s)

DNase I is synonymous with Pancreatic DNase, Endodeoxyribonuclease I and Thymonuclease.

Source

Recombinant clone of Bovine Pancreatic DNase I

Kit Components

Component Name	Volume
DNase I	1ml
10x DNase I Buffer	1ml

DNase I offers use in a myriad of applications:

- Degrade template DNA following *in vitro* transcription
- Remove contaminating genomic DNA from protein samples
- Mediate nick translation
- Reduce viscosity of cell lysates and prevent clumping when handling cultured cells
- Mediate DNase I foot-printing

Unit Definition

One unit is defined as the amount of enzyme which will completely degrade 1µg of pBR322 DNA in 10 mins at 37 °C. Complete degradation is defined as the reduction of the majority of DNA fragments to tetranucleotides or smaller.

Storage Conditions

2mM $CaCl_2$,10mM Tris-HCl (pH 7.6) and 50% glycerol. Store at -20 °C.

References

(1) Kunitz, M (1950). J. Gen. Physiol. 33, 349-362.
(2) Vanecko, S and Laskowski, M (1961). J Biol Chem 236: 3312-3316.
(3) Moores, S (1981). Pancreatic DNase, in: The Enzymes (P.D. Boyer, Ed.) Academic Press, New York, Chapter 15.

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