

## DNase I Solution (1mg/ml)

<u>Product Name</u>	<u>Product Code</u>	<u>Kit Packing</u>
DNase I Solution (1mg/ml)	ML068-1ML	1 ml

**Introduction:** Deoxyribonuclease I is an RNase-free glycoprotein which specifically degrades DNA. It is a recombinant double strand specific endonuclease that catalyzes the degradation of single and double-stranded DNAs which result into di-, tri-, and oligonucleotides with 5'-phosphate and 3'-hydroxyl termini.

**Description:** DNase I is a glycosylated polypeptide which is commonly used for the degradation of single- and double-stranded DNAs (which are not required) into 5' phosphodinucleotide and oligonucleotide fragments. The activity of DNase I is dependent on the presence of bivalent metal ions e.g. in the presence of Mg<sup>2+</sup>, Ca<sup>2+</sup> or Zn<sup>2+</sup> it degrades DNA by producing random single-strand nicks in the phosphate backbone and in the presence of Mn<sup>2+</sup>, both strands of double-stranded DNA are cleaved leaving blunt-end fragments. Monovalent metal ions like Na<sup>+</sup> and K<sup>+</sup> has a negative effect on DNase I.

**Application:** DNase I Solution is used for specific applications where integrity of RNA has to be maintained, e.g. for the removal of genomic DNA from RNA preparations prior to RT-PCR, during nick translations, for the isolation of DNA-free RNA after *in vitro* transcription reactions, DNase etc. Moreover, it is used to catalyze random degradation of single and double-stranded DNA. DNase I solution is also used for the prevention of clumping of concentrated or cryopreserved hematopoietic cell suspensions following thawing.

### Composition:

DNase I Solution (1mg/ml) consists of RNase free DNase I in a buffer which contains Sodium chloride, Magnesium chloride and Glycerol. This solution is supplied as ready to use.

### Properties:

Appearance	: Colorless solution
Clarity	: Clear and free of particles
Bioburden	: None detected
Suitability test	: This solution has been tested and is suitable for use in various molecular biology applications

**Storage conditions:** DNase I Solution (1mg/ml) has to be stored at - 20 °C. DNase I should not be stored in frost-free freezers as temperature fluctuations will reduce its activity. Always keep DNase I on ice until ready to use. DNase I is inactivated by heating to 65°C for 10 minutes.

### Technical Assistance

At HiMedia we pride ourselves on the quality and availability of our technical support. For any kind of technical assistance, mail at [mb@himedialabs.com](mailto:mb@himedialabs.com).

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