Tinzyme Co., Limited

Email: sales@tinzyme.com Website: www.tinzyme.com
Tel: +86-755-86134126 WhatsApp/Facebook/Twitter: +86-189-22896756

DNase I

Product Number: DI05

Shipping and Storage

-20℃, Valid for 12 months.

Components

Component	2KU	10KU	Storage
DNase I(RNase free)	1ml	5ml	-20℃
10×DNase Buffer	5ml	25ml	-20℃
RNase-Free ddH_2O	50ml	250ml	RT

Description

DNase I is a non-specific nuclease cleavage enzyme, mostly derived from recombinant E. coli strains, containing MBP fusion clones of bovine pancreatic DNase I. DNase I can be used to degrade single or double stranded DNA, based on the principle that DNase I hydrolyzes phosphate diester bonds to produce single or oligonucleotides with 5 '- phosphate groups and 3' - OH.

Both Mg^{2+} and Mn^{2+} can activate the activity of DNase I, and the concentration of Ca^{2+} directly affects the activity of the enzyme. When Mg^{2+} is present, it can randomly generate incisions on each single strand of double stranded DNA; In the presence of Mn^{2+}, double stranded DNA can be broken, resulting in DNA fragmentation.

DNase I solution (1mg/ml) is composed of DNase I, enzyme protection solution, preservatives, etc., with a concentration of 1mg/ml, used for single stranded DNA, double stranded DNA, chromatin, RNA: DNA hybrid strands. It is commonly used for the preparation of DNA free RNA, reverse transcription, and in vitro transcription experiments.

Unit definition

1 unit refers to the amount of enzyme required to completely degrade 1μg of pBR322 DNA in a 50μl reaction system at 37℃ for 10 minutes.

Protocol

1. Take DNase I solution (1mg/ml) and balance to room temperature. Centrifuge at low speed to allow the liquid to settle to the bottom of the tube for use. According to different experiments, an appropriate amount of enzyme should be added to fully digest DNA. Generally, 1U enzyme can digest less than 1μg of DNA.
2. Take 2-5μl (4-10U) of DNase I solution (1mg/ml), add the solution to be treated (generally less than 4-10μg), and finally replenish to 100μl with deionized water or RNase Free ddH_2O.
3. Incubate at 25-37℃ for 10 minutes.
4. Inactivation condition: Incubate at 75℃ for 10 minutes.

Note

1. Care should be taken to avoid contamination and repeated freeze-thaw cycles.
2. For your safety and health, please wear laboratory clothes and disposable gloves for operation.