MEBEP TECH(HK) Co., Limited
Email: sales@mebep.com Website: www.mebep.com
Tel: +86-755-86134126 WhatsApp/Facebook/Twitter: +86-189-22896756

DNase I (RNase free)

Product Number: RNK4501

Shipping and Storage

Store at -20 ℃ for 1 year.

Components

Component	RNK4501
RNase free DNase I	0.5 ml
10× DNase Buffer	0.5ml
Buffer ES	0.5 ml

Description

DNase I, also known as deoxyribonuclease I , is a nuclease that can digest single or double stranded DNA to produce single or double stranded oligodeoxynucleotides. The product of DNase I hydrolysis of single or double stranded DNA, with a phosphate group at the 5 'end and a hydroxyl group at the 3' end. DNase I activity depends on calcium ions and can be activated by magnesium ions or divalent manganese ions. Under the presence of magnesium ions, DNase I can randomly cleave any site of double stranded DNA; Under the presence of divalent manganese ions, DNase I can cleave DNA double strands at the same site, forming a flat end or 1-2 nucleotide protruding sticky end.

Source

31kd recombinant protein expressed in Escherichia coli.

Concentration

3U/μl

Features

This product uses our company's unique DNase and unique reaction solution for digestion without the need for tedious phenol/chloroform extraction and inactivation. It can be directly used for reverse transcription reactions, making it very fast and convenient to use.

Application

1. Preparation of RNA samples without DNA
2. Removing possible DNA contamination such as genomic DNA from RNA samples before RT-PCR reaction
3. Removal of DNA templates after RNA transcription catalyzed by RNA Polymerases such as T7, T3, and SP6 in vitro
4. DNase I footprinting studies on DNA protein interactions
5. Nick translation
6. Generate DNA random fragment library
7. Partial splicing of genomic DNA as positive control in TUNEL detection of cell apoptosis

Unit definition

The amount of enzyme required to completely degrade 1μg of pBR322 plasmid DNA within 10 minutes at 37 ℃ is defined as one active unit.

Storage buffer

50 mM Tris-HCl (pH7.5),10 mM CaCl2,50% (v/v)glycerol.

10×DNase Buffer:100 mM Tris-HCl (pH7.5 at 25℃),25 mM MgCl2,1 mM CaCl2.

Purity

No other DNA endonucleases and exonucleases, no RNA enzymes.

Protocol

1. Add the following components to the RNAse free tube

RNA	< 3μg (< 8μl)
10×DNase Buffer	1μl
DNase I	1μl
RNAse free water	Up to 10μl

2. Incubate at 37℃ for 30 minutes.
3. Add 1μl Buffer ES.
4. Incubate at 65℃ for 10 minutes to inactivate DNase I.
5. Take an appropriate amount or all 10μl of processed RNA directly for reverse transcription.

Note

Each μl of DNase I can process no more than 3μg RNA. If a large amount of RNA is needed, it is necessary to proportionally increase the usage of DNase I, 10×DNase Buffer, and reaction volume based on the amount of RNA processed. If pure RNA needs to be obtained after processing, RNAclean RNA Purification Kit (RNK1402) can be used to directly clean and purify after step 2 (incubation at 37 ℃ for 30 minutes) (without the need for buffer ES and incubation at 65 ℃ for 10 minutes).