

Recombinant DNase I (RNase-free)

Product description

DNase I is an endonuclease that can digest single- or double-stranded DNA. It can hydrolyze phosphodiester bonds to produce mono- and oligodeoxynucleotides containing a 5'-phosphate group and a 3'-OH group. The optimal working pH range of DNase I is 7-8. The activity of DNase I depends on Ca^{2+} and can be activated by divalent metal ions such as Co^{2+} , Mn^{2+} , Zn^{2+} , etc. In the presence of Mg^{2+} , DNase I can randomly cleave any site of double-stranded DNA; while in the presence of Mn^{2+} , DNase I can cleave DNA double-stranded at the same site, forming blunt ends or sticky ends with 1-2 nucleotides protruding. It can be used for the processing of various RNA samples.

Specifications

Cat.No.	10325ES80 / 10325ES90
Size	1,000 U / 5,000 U
Expression Host	Recombinant <i>E. coli</i> with Dnase I gene
Unit Definition	The amount of enzyme required to increase the absorbance at 260 nm of the reaction solution by 0.001 in 1 minute at 25°C and pH 5.0 using calf thymus DNA as the substrate is defined as one activity unit (Kunitz Unit)

Components

Components No.	Name	10325ES80	10325ES90
10325-A	Recombinant DNase I (RNase-free) -2 U/ μL	500 μL	5×500 μL
10325-B	DNase I Reaction Buffer (10×)	1 mL	5×1 mL

Storage

This product should be stored at -25~-15°C for 2 years. Please avoid repeated freeze-thaw.

Instructions

Applied to the removal of DNA from RNA samples for reference only.

1. Please use RNase-free centrifuge tubes and pipette tips to prepare the following reaction system:

Components	Volume (μL)
DNase I Reaction Buffer (10×)	1
Recombinant DNase I (RNase-free) -2 U/ μL	1
RNA	X
RNase-free ddH ₂ O	Up to 10

2. The reaction conditions are as follows: 37°C, after 15-30 mins, add a final concentration of 2.5 mM EDTA solution and mix well, then 65°C for 10 mins. The processed template can be used for subsequent RT-PCR or RT-qPCR experiments, etc.

Notes

1. DNase I is sensitive to physical denaturation; when mixing, gently reverse the test tube and shake well, do not shake vigorously.
2. The enzyme should be stored in an ice box or on an ice bath when used, and should be stored at -20°C immediately after use.
3. This product is for research use only.
4. Please operate with lab coats and disposable gloves, for your safety.