



# 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  $\text{Ca}^{2+}$  and can be activated by divalent metal ions such as  $\text{Co}^{2+}$ ,  $\text{Mn}^{2+}$ ,  $\text{Zn}^{2+}$ , etc. In the presence of  $\text{Mg}^{2+}$ , DNase I can randomly cleave any site of double-stranded DNA; while in the presence of  $\text{Mn}^{2+}$ , DNase I can cleave DNA double-stranded at the same site, forming blunt ends or sticky ends with 1-2 nucleotides protruding.

This enzyme is derived from recombinant *E. coli* strains, does not contain RNase, and can be used for the treatment of various RNA samples.

## Components

Components No.	Name	10325ES80 (1,000U)	10325ES90 (5,000 U)
10325-A	Recombinant DNase I (RNase-free) -2 U/ $\mu\text{L}$	500 $\mu\text{L}$	5 $\times$ 500 $\mu\text{L}$
10325-B	DNase I Reaction Buffer (10 $\times$ )	1 mL	5 $\times$ 1 mL

## Specifications

Expression Host	Recombinant <i>E. coli</i> with Dnase I gene
Purity	$\geq 99\%$ (SDS-PAGE)
Storage Buffer	10 mM Tris-HCl (pH 7.6), 2 mM $\text{CaCl}_2$ , 50% glycerol
Unit Definition	The amount of enzyme required to completely degrade 1 $\mu\text{g}$ of plasmid DNA at 37°C for 10 mins

## Storage

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

## Instructions

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

Components	Volume ( $\mu\text{L}$ )
DNase I Reaction Buffer (10 $\times$ )	1
Recombinant DNase I (RNase-free) -2 U/ $\mu\text{L}$	1
RNA	X
RNase-free ddH <sub>2</sub> 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. For your safety and health, please wear lab coats and disposable gloves for operation.
2. This product is for research use ONLY!