Version: M16H01V1.0

DNase I , RNase-free

Catalog: RK20549
Size: 1,000 U / 5,000 U
Concentration: 5,000 U/mL
Components:

DNase I, RNase-free (5,000 U/mL)	RM21312
10X DNase I Buffer	RM20266
1X DNase I Dilution Buffer	RM20195
10X Stop Solution	RM20196

Product Description

DNase I (deoxyribonuclease, RNase-free) is an endonuclease that nonspecifically cleaves DNA to release di-, tri-, and oligonucleotide products with 5'phosphorylated and 3´-hydroxylated ends. The activity of DNase I depends on Ca2+ and also be activated by divalent metal ions Mg2+, Mn2+, etc.DNase I act on various DNAs such as single and double-stranded DNA,RNA:DNA hybrids.

Product Source:

Bovine pancreas DNase I was expressed in yeast expression system.

Unit Definition:

One unit is defined as the amount of enzyme which will completely degrade 1 μg of pBR322 DNA in a total reaction volume of 50 μL in 10 minutes at 37℃.

Reagents supplied

The following reagents are supplied with this products

Component	1,000 U	5,000 U
DNase I, RNase-free (5,000 U/mL)	200 μL	1 mL
10X DNase I Buffer	1 mL	1 mL*5
1X DNase I Dilution Buffer	1 mL	1 mL*5
10X Stop Buffer	1 mL	1 mL*5

Storage Buffer:

2 mM $CaCl_2$, 10 mM Tris-HCl (pH 7.6) and 50% glycerol

Storage condition:

-20°C

Enzyme inactivation:

Stop Solution contains chelating agent to remove divalent cations. Before heat inactivation, Stop solution must be added and mixed to protect from RNA degradation.

Instructions

1. In the RNase-free reaction tube, the reaction solution is made up as followed table:

Component	Addition amount
RNA	X μg
10X DNase I Buffer	1 μL
DNase I, RNase-free（5U/μL）	1 U per μg RNA*
ddH2O	Up to 10 μL

**, note: The volume of DNase I needed to be calculated and added according to the amount of RNA.*

2. Incubate at 37℃ for 15 min.

3. 1 μ L 10X Stop Solution was added to terminated the reaction. And heated at 65℃ for 10 minutes to inactivate DNase I.The samples could be directly used for the next reverse transcription experiment.

Note:

1. 1 μg RNA or less than 1ug RNA can use 1 U DNase I.
2. EDTA should be added to a final concentration of 5 mM to protect RNA from being degraded during enzyme inactivation.