Tinzyme Co., Limited

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Heat Labile dsDNase

Product Number: DI06

Shipping and Storage

-20℃.

Components

Component	DI06	DI06
HL-dsDNase (2U/μl)	50μl	500μl
10×HL-dsDNase Buffer	1ml	1ml×2
20×Stop Solution	100μl	1ml

Description

Heat Laboratory dsDNase is an endonuclease that cleaves phosphodiester bonds in DNA, generating oligonucleotides with 5 '-phosphate and 3' - hydroxyl termini. HL-dsDNase has a high specific activity and is prone to thermal deactivation. In the presence of magnesium ions, the sample specifically recognizes and degrades dsDNA, with activity towards dsDNA at least 5000 times higher than that towards ssDNA, while ssDNA and RNA remain largely intact. Reacting at 55 ℃ for 5 minutes can cause irreversible inactivation of the enzyme while maintaining the stability of RNA and ssDNA. Meanwhile, the enzyme is compatible with both M-MLV and AMV reaction buffers, making it suitable for use in reverse transcription reactions to remove genomic DNA contamination and improve reverse transcription efficiency.

Features

1. Double stranded DNA specific endonuclease;
2. Has strong activity within the temperature range of 20-47 ℃;
3. Can be thermally inactivated;
4. Protect the low-temperature activity of RNA or proteins without affecting the quality of RNA or ssDNA.

Application

1. Prepare RNA or ssDNA samples without dsDNA;
2. Remove genomic DNA contamination from RNA samples;
3. Remove template DNA after in vitro transcription of RNA.

Unit definition

One unit refers to the amount of enzyme required to increase by 0.001 OD per minute at an absorbance of 260 nm using high molecular weight dsDNA as a substrate at 25℃ and pH 5.0.

Storage system

20mM Tris-HCl; 10mM NaCl; 50% glycerol; 2mM MgCl2; 0.01%Triton-X100(25℃, pH7.5)

Note

1. This enzyme has high reactivity and can be appropriately reduced according to the amount of substrate added; The reaction buffer is compatible with M-MLV and AMV reaction buffers;
2. Metal chelating agents, transition metals, SDS, or reducing agents can all inhibit the activity of the enzyme;
3. Recommend a dosage of 0.1-2U for this enzyme in a 20μl reverse transcription system

Protocol

1. Prepare the reaction system according to the following components (10μL)

Component	Volume
10×HL-dsDNase Buffer	2μl
Substrate	X
HL-dsDNase(2U/μl)	0.1~2U
Nuclease Free Water	to 20μl

2. Mix thoroughly and react at 37 ° C for 10-30 minutes;

Deactivation step

Add 1ul of 20×Stop Solution and incubate at 55℃ for 5 minutes to terminate the reaction.