A&A BIOTECHNOLOGY
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Manual

DNAse

DNAse I, RNAse-free. Concentration 10 U/µl.

catalog #	size
1009-10	1000 U
1009-100	10 000 U

For research use only.

Guarantee

A&A Biotechnology provides guarantee on this product.
The company does not guarantee correct performance of this kit in the event of:

- not adhering to the supplied protocol
- use of not recommended equipment or materials
- use of other reagents than recommended or which are not a component of the product
- use of expired or improperly stored product or its components

Description

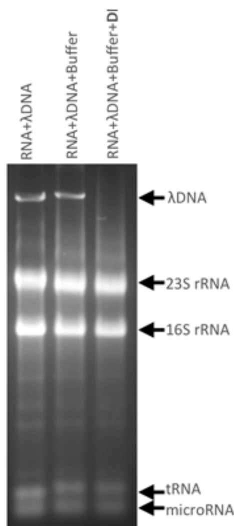
DNase (RNase-free) is an endonuclease that digests ssDNA, dsDNA and DNA in DNA-RNA complexes. The enzyme activity is strictly dependent on Ca^{2+} and is activated by Mg^{2+} and Mn^{2+} ions.
Enzyme is purified from *P.pastoris* (*K.phaffii*) expressing bovine pancreas DNAse I gene. DNAse I may be used to degrade DNA in applications that are sensitive to the presence of RNAses.

Application

- removal of contaminating genomic DNA from RNA samples.
- DNA labeling by nick-translation.
- studies of DNA-protein interactions by DNase I footprinting.

Contents

	1009-10	1009-100	storage
DNAse (10 U/µl)	1000 U	10 000 U	-20 °C
storage buffer: 10 mM Tris-HCl, pH 7.5, 2 mM $CaCl_2$, 50% glicerol (v/v)			
DNAse reaction buffer	2 x 1.5 ml	10 x 1.5 ml	-20 °C
10x reaction buffer: 500 mM Tris-HCl, pH 8.0, 50 mM $MgCl_2$			



2% agarose gel electrophoresis
All samples were incubated at 30°C for 60 min, before electrophoresis

Unit definition

One unit is the amount of enzyme required to completely degrade 1 µg of DNA Lambda/HinDIII in 10 min at 37°C.

Protocol

Removal of contaminating genomic DNA from RNA samples.

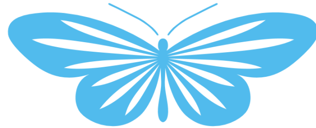
1. Prepare sterile, RNAse-free tube.
2. Add:

	reaction volume
component	**20 µl**
RNA	1 µg
DNAse reaction buffer	2 µl
DNAse	1-2 U
Sterile water	up to 20 µl

3. Incubate for 15-20 min at 25-37 °C.
4. Add 1 µl of 100 mM EDTA (final concentration: 5 mM).
5. Inactivation: Incubate for 10 min at 65 °C.

Important note

Thermal inactivation of **DNAse** may cause partial hydrolysis of RNA. We recommend in this situation cleaning the RNA with the Clean-Up RNA Concentrator kit, point 3. of the protocol (# 039-25C, 039-100C).



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