



## Ribonuclease A

*Enzymatic manipulation of DNA and RNA – Minipreps of plasmid DNA – In-situ hybridisation of cellular RNA – Removal of RNA from plasmid preparations*

### Product Description

<b>Name :</b>	<b>Ribonuclease A, solution 10mg/ml</b>
	from bovine pancreas, pH 8.0
<b>Catalog Number :</b>	734123, 5ml
<b>CAS-Number:</b>	[9001-99-4]

**Storage:** 2-8°C

#### Introduction

Ribonuclease A (RNase A) is an endoribonuclease, that specifically cleaves single-stranded RNA 3' to pyrimidine residues (cytosine, uracil). Thereby, it generates pyrimidine-3'-phosphate or oligonucleotides with terminal pyrimidine-3'-phosphates. The pH-optimum is in the range of 7.0 to 7.5. RNase is used for the purification of RNA-free DNA, for the removal of non-hybridised regions of RNA : DNA hybrids or as a molecular weight marker. The enzyme is inhibited by diethyl pyrocarbonate (DEPC), guanidinium salts (4M GuaSCN),  $\beta$ -mercaptoethanol, heavy metals, vanadyl-ribonucleoside-complexes, RNase-inhibitor from human placenta and competitively by DNA, respectively. Regarding the latter, the effect of denatured DNA is higher than by native nucleic acids. Nevertheless, RNase A is very active under very different conditions and difficult to inactivate. At low salt concentrations (up to 100mM NaCl), RNase A cleaves single - and double-stranded RNA and RNA in RNA : DNA hybrids. Under high salt concentrations (>300 mM NaCl) single-stranded RNA is cleaved only. To remove the enzyme from samples, it has to be digested by proteinase K (frequently, SDS at a final concentration of 0.6% is added) and several phenol extractions are required.

### Directions for use

#### Working concentrations

The recommended working concentration is from 0.1 to 10 $\mu$ g/mL.  
 10 $\mu$ g/mL (Removal of RNA from plasmid preparations: 1 hr, RT)  
 100ng/mL (Preparation of "blunt ends" of double-stranded cDNA).

#### Stability

RNase A aggregates during lyophilisation and storage. It has a high affinity to glass surfaces, which has to be taken into consideration. At neutral pH (e.g. PBS pH 7.4) and high concentrations (>10 mg/mL) the enzyme will precipitate. The solution is stable for several years (if stored at -20°C) or several weeks (if stored at +4°C)

## Related products

- Proteinase K, 858706

## Ordering information

Catalog size quantities and prices may be found at <http://www.interchim.com>.  
Please inquire for higher quantities (availability, shipment conditions).

For any information, please ask : Uptima / Interchim; Hotline : +33(0)4 70 03 73 06

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