



**DONGSHENG BIOTECH**

## Ribonucleasa (RNASE A) 1ml



### Description

The RNase A, DNase and protease-free is an endoribonuclease that specifically degrades single-stranded RNA at C and U residues. It cleaves the phosphodiester bond between the 5'-ribose of a nucleotide and the phosphate group attached to the 3'-ribose of an adjacent pyrimidine nucleotide. The resulting 2', 3'-cyclic phosphate is hydrolyzed to the corresponding 3'-nucleoside phosphate .

### Applications

- Plasmid and genomic DNA preparation
- Removal of RNA from recombinant protein preparations.
- Ribonuclease protection assays
- Mapping single-base mutations in DNA or RNA

### Source

Bovine pancreas.

### Molecular Weight

13.7 kDa monomer.



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### Definition of Activity Unit

One unit of the enzyme causes an increase in absorbance of 1.0 at 260 nm when yeast RNA is hydrolyzed at 37°C and pH 5.0.

Fifty units are approximately equivalent to 1 Kunitz unit.

### Storage Buffer

The enzyme is supplied in: 50 mM Tris-HCl (pH 7.4) and 50% (v/v) glycerol.

### Quality Control

The absence of endodeoxyribonucleases, exodeoxyribonucleases and proteases confirmed by appropriate quality tests. Functionally tested for RNA digestion in a plasmid DNA purification procedure.

### Inhibition and Inactivation

·Inhibitors: the most potent inhibitor is a ~50 kDa protein from cytosol of mammalian cells, e.g., RiboLock™ RNase Inhibitor.

·Other inhibitors: uridine 2',3'-cyclic vanadate, 5'-diphosphoadenosine 3'-phosphate and 5'-diphosphoadenosine 2'-phosphate (2), SDS, diethyl pyrocarbonate, 4M guanidinium thiocyanate plus 0.1M 2-mercaptoethanol and heavy metal ions. Inactivated by phenol/chloroform extraction.

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### Note

·The working concentration for RNase A is 1-100 µg/ml depending on the application.

·The enzyme is active under a wide range of reaction conditions. At low salt concentrations (0 to 100 mM NaCl), RNase A cleaves single-stranded and double-stranded RNA as well the RNA strand in RNA-DNA hybrids. However, at NaCl concentrations of 0.3 M or higher, RNase A specifically cleaves single-stranded RNA.

RNase A Catalog # N9041 Concentration 10 mg/ml Size 1 ml

Specific Activity: >2500 u/mg protein (>50 Kunitz units/mg protein).

Store at -20°C.

For research use only