Product Information

# Ribonuclease A from bovine pancreas

Sigma Type X-A, ≥90% (SDS-PAGE), ≥70 Kunitz units/mg protein, buffered aqueous solution

**R5250**

## Product Description

CAS Registry Number: 9001-99-4

Enzyme Commission (EC) Number: 3.1.27.5

Synonyms: RNase A, Pancreatic ribonuclease, Ribonuclease 3'-pyrimidinooligonucleotidohydrolase, Ribonuclease I, Endoribonuclease I

Molecular mass:[1] 13.7 kDa (based on amino acid sequence)

Extinction coefficient:[2] $E^{1\%}$ = 7.1 (280 nm)

Isoelectric point:[3] pI = 9.6

Optimal temperature: 60 °C (activity range of 15-70 °C)

Optimal pH:[4] 7.6 (activity range of 6-10)

Inhibitors: ribonuclease inhibitor

RNase A is an endoribonuclease that attacks at the 3'-phosphate of a pyrimidine nucleotide. For example, RNase A will cleave pG-pG-pC-pA-pG to give pG-pG-pCp and A-pG. The highest activity is exhibited with single-stranded RNA.[5]

RNase A is a single chain polypeptide with 4 disulfide bridges. In contrast to RNase B, RNase A is not a glycoprotein.[6] RNase A can be inhibited by alkylation of $His^{12}$ or $His^{119}$ (present in the active site of the enzyme).[7] Activators of RNase A include potassium and sodium salts.

Several dissertations[8-13] have cited use of product R5250 in their protocols.

## Product

This product is a solution in 0.2 M sodium phosphate buffer, pH 6.4. The acceptable protein concentration range is ≥ 10 mg/mL.

## Storage/Stability

Store this RNase A solution product at –20 °C.

## Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

## Usage

A major application for RNase A is the removal of RNA from preparations of plasmid DNA. For this application, DNase-free RNase A is used at a final concentration of 10 µg/mL.[14]

## References


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