

RNASE A, DNASE FREE HIGH PURITY GRADE

CAS# MC100-022

Storage : -20 °C

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

Product Description

A major application for Ribonuclease A (RNase A) is the removal of RNA from preparations of plasmid DNA. In this application, the presence of DNase activity as an impurity is a concern. The boiling-water bath method used to eliminate contaminating DNase activity has proven unreliable. For this reason, Bio Basic Inc. developed a proprietary chromatographic preparation method for elimination of DNase activity. RNase A is an endoribonuclease that attacks at the 3' phosphate of a pyrimidine nucleotide. The sequence of pG-pG-pC-pA-pG will be cleaved to give pG-pG-pCp and A-pG. The highest activity is exhibited with single stranded RNA. RNase A is a single chain polypeptide containing 4 disulfide bridges. In contrast to RNase B, it is not a glycoprotein. RNase A can be inhibited by alkylation of His12 or His119, which are present in the active site of the enzyme. Activators of RNase A include potassium and sodium salts.

Molecular weight: 113.7 kDa (amino acid sequence)

Extinction coefficient: 2 E1% = 7.0 (280 nm) Isoelectric point:3 pI = 9.6

Optimal temperature: 60 °C (activity range of 15-70 °C) Optimal pH: activity range of 6-10

Inhibitors: ribonuclease inhibitor

The chromatographically purified product is supplied as an essentially salt-free lyophilized powder.

Activity: 360 Kunitz units/mg protein

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Note: RNase A is stable to both heat and detergents. In addition, it adsorbs strongly to glass. Scrupulous precautions are necessary to insure that residues

of RNase A do not cause artifacts in processes requiring intact RNA.

Procedure

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 mg/ml.

Preparation Instructions

A stock solution of 10 mg/ml RNase A could be prepared by dissolving 100mg of RNase A in 9.925ml of 0.01M NaOAc (pH 5.2), plus 0.075ml of 1M Tris (not pH adjusted). Please verify final pH to be neutral.

BIONOVAS Biotechnology Co., Ltd.

647-808-8236

No. 194 kingsdale Ave, Toronto. Ontario. M2N3W9