Ribonuclease A (RNase A)

(DNase and Protease Free)

REF MO5411 **Concentration: 20mg/ml**

-20 RUO **Wet or Dry Ice**

Components (supplied)

Contents of the kit	Amounts
Ribonuclease A (RNase A)	1 ml

Description

Ribonuclease A (RNase A) is an endoribonuclease that is from bovine pancreas for molecular biology applications. The major application for RNase A is the removal of RNA from preparation of plasmid DNA as well as extraction of plasmid DNA. It is also used in removal of unspecifically bound RNA; RNase protection assays; analysis of RNA sequences as well as hydrolysis of RNA contained in protein samples.

RNase A 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.

Molecular Weight

Not applicable

Specific activity

≥50 Kunitz u/mg

Storage Buffer

The enzyme is supplied in 100 mM Tris-HCl (pH 8) and 50% (v/v) glycerol.

Note

The working concentration of RNase A is 1-100 µg/ml, depending on the application in extraction process (not for direct use).

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

Boiling stock solutions of the RNase A to inactivate residual DNase I is not necessary and may cause precipitation of RNase A and possible loss of enzymatic activity. If the RNase A solution is heated at a neutral pH, precipitation will occur. If the RNase A solution heated at a lower pH, some precipitation may occur due to the protein impurities that are present.

Inhibition

• the most potent inhibitor is a ~ 50 kDa protein from the cytosol of mammalian cells, e.g., Ribonuclease Inhibitor (from human placenta), Phosphate, SDS, diethyl pyrocarbonate, 4M guanidinium thyocyanate plus 0.1 M 2-mercaptoethanol and heavy metal ions.

Inactivation

• Inactivated by phenol/ chloroform extraction.

Quality Control

DNase

Non-detected

Functional Assay

Ribonuclease A was tested for RNA digestion in a plasmid DNA purification procedure.

SinaClon
شرکت سیناکلون BioScience

شکایات مشتری

SinaClon
شرکت سیناکلون BioScience

نظرسنجی از مشتری

Unit 9, Rouyesh building, Science and Technology Park, Tarbiat Modares University, Pajouhesh Blvd., Tehran, Iran

+982191082111
hi@sinaclon.com
www.sinaclon.com