PhileKorea

1st PhileKorea,Inc. (주)필코리아테크놀로지

Product Insert

RNase A

Cat. No.

EA51020	**20mg**
EA51200	**200mg**
EA52020	**20mg/mL**
EA52200	**200mg/10mL**

Shipping: On Dry/Blue Ice
Store at -20℃

Features

The RNase A is free of DNase activity. It is not necessary to heat it before use.

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 and 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

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.

Source

Bovine pancreas.

Molecular Weight

13.7 kDa monomer.

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℃ and pH 5.0. Fifty units are approximately equivalent to 1 Kunitz unit.

Specific Activity

>5000 u/mg protein (>100 Kunitz units/mg protein).

Storage Buffer

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

Inhibitor and Inactivation

- Inhibitors: the most potent inhibitor is 1 ~50 kDa protein from cytosol of mammalian cells, e.g., RobpLock™ RNase Inhibitor.
- Other inhibitors: uridine 2',3'-cyclic vanadate, 5'-diphosphoadenosine 3'-phophate and 5'-diphosphoadenosine 2'-phophate (2), SDS, diethyl pyrocarbonate, 4M guanidinium thyocyanate plus 0.1M 2-Mercaptoethanol and heavy metal ions. Inactivated by phenol/chloroform extraction.
- Inactivated by phenol/chloroform extraction.
- Inactivated by heating at 95℃ for 10 minutes.

Note

- The working concentration for RNase A is 1 – 100ug/ml depending on the application.
- The enzyme is active under a wide range of reaction conditions. At low salt concentrations (0 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.

Technical Support

If the troubleshooting guide does not solve the difficulty you are experiencing, please contact Technical Support with details of reaction setup, cycling conditions and relevant date.

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