Ver. HB230118

Ribonuclease A (RNase A), from bovine pancreas

Product description

Ribonuclease A (RNase A) is a single-stranded polypeptide containing 4 disulfide bonds with a molecular weight of about 13.7 kDa. RNase A is an endoribonuclease that specifically degrades single-stranded RNA at C and U residues. Specifically, the cleavage recognizes the phosphodiester bond formed by the 5'-ribose of a nucleotide and the phosphate group on the 3'-ribose of the adjacent pyrimidine nucleotide, so that the 2', 3' - Cyclic phosphates are hydrolyzed to the corresponding 3'-nucleoside phosphates (eg, pG-pG-pC-pA-pG is cleaved by RNase A to generate pG-pG-pCp and A-PG).RNase A is the most active in cleaving single-stranded RNA .Recommended working concentration is 1-100 μ G/mL, compatible with various reaction systems. Low salt concentration (0-100 mM NaCl) can be used to cut single-stranded RNA, double-stranded RNA, and RNA chains formed by RNA-DNA hybridization. However, at high salt concentration (≥ 0.3 M), RNase A only specifically cleaves single-stranded RNA.

RNase A is most commonly used to remove RNA during the preparation of plasmid DNA or genomic DNA. Whether or not DNase is active during the preparation process can easily affect the reaction. The traditional method of boiling in a water bath can be used to inactivate DNase activity. This product does not contain DNase and protease, and does not require heat treatment before use. In addition, this product can also be used in molecular biology experiments such as RNase protection analysis and RNA sequence analysis.

Components

Components No.	Name	10407ES60	10407ES80
10407	Ribonuclease A (RNase A), from bovine pancreas	500 mg	1 g

Specifications

Appearance	Powder
Quantity	100 mg/1 g
Product type	RNase A

Storage

The product should be stored at -25℃ ~ -15℃ for 2 years.

Instructions

[Notes]: This is one of the common methods for preparing RNase A storage solution. It can also be prepared by other methods according to the traditional methods in the laboratory or reference literature (such as directly dissolving in 10 mM Tris-HCl, pH 7.5 or Tris-NaCl solution)

1. Use 10 mM sodium acetate (pH 5.2) to prepare 10 mg/mL of RNase A storage solution
2. Heating at 100 ℃ for 15 min
3. Cool to room temperature, add 1/10 volume of 1 M Tris-HCl (pH 7.4), adjust its pH to 7.4 (for example, add 500 mL

of 10 mg/mL RNase storage solution 1 M Tris-HCl, pH7.4)

4. Sub-packaged at - 20 °C for frozen storage, which can be stable for up to 2 years.

[Notes]: When boiling RNase A solution under neutral conditions, RNase precipitation will form; Boil it at a lower pH, and if there is precipitation, it can be observed, which may be caused by the presence of protein impurities. If sediment is found after boiling, impurities can be removed by high-speed centrifugation (13000 rpm), and then sub-packed for freezing storage

Notes

Please wear the necessary PPE, such lab coat and gloves, to ensure your health and safety.