

Ribonuclease A (RNase A), 10 mg/mL Solution

Code	Description	Size
E866-1ML	Ribonuclease A (RNase A), 10 mg/ml Solution	1 mL
E866-5ML	Ribonuclease A (RNase A), 10 mg/ml Solution	5 mL

General Information

Ribonuclease A (RNase A), 10 mg/mL Solution is prepared from pancreatic RNase A of bovine origin. RNase A is an endoribonuclease that efficiently hydrolyzes RNA contaminants in DNA preparations by cleaving the phosphodiester bond between the 3'-phosphate group of a pyrimidine nucleotide (C and U) and the 5'-ribose of its adjacent nucleotide^{1,2,3}. The intermediate 2',3'-cyclic phosphodiester that is generated is then further hydrolyzed to a 3'-monophosphate group. Bovine pancreatic RNase A is a very stable protein of 124 amino acids, with its highest measured activity toward single-stranded RNA and a two-fold faster cleavage rate at cytidine residues compared to uridyl residues⁴.

- DNase and endonuclease tested
- Removes RNA contamination in DNA preparations

References

1. Markham, R.; Smith, J. D. *Biochem. J.* 1952, 52, 552-557.
2. Volkin, E.; Cohn, W. E. *J. Biol. Chem.* 1953, 205, 767-782.
3. Beers, R. F. *J. Biol. Chem.* 1960, 235, 2393-2398.
4. Richards, F. M.; Wyckoff, H. W. *Enzymes* 1971, IV, 647-806.

Storage/Stability

Store cold (2 – 8°C). Stable at least 2 years when stored as recommended.

Product Use Limitations

For research use only. Not for therapeutic or diagnostic use.

Protocol/Procedure

Note: Ribonuclease A (RNase A), 10 mg/mL Solution is ready-for-use and does not require boiling. The recommended working concentration of enzyme is 1 – 100 µg/mL.

Removal of DNA from plasmid DNA

- Ribonuclease A (RNase A), 10 mg/mL Solution may be added to the cell resuspension buffer after cell harvesting at a concentration up to 100 µg/mL.
- Ribonuclease A (RNase A), 10 mg/mL Solution may be added to the resuspended DNA (typically in TE pH 8.0) at 20 µg/mL. Incubate at 37°C for 15 – 30 minutes.
- If further purification is required to remove the RNase A, perform a phenol/chloroform extraction.

For Technical Support

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