



Product Information

Ribonuclease T₁ from *Aspergillus oryzae*

Product Number **R 1003**

Storage Temperature 2-8 °C

Product Description

Enzyme Commission (EC) Number: 3.1.27.3

CAS Number: 9026-12-4

Molecular Weight: 11,068 (amino acid sequence)¹

RNase T₁ from *Aspergillus oryzae* is an endoribonuclease that hydrolyzes after G residues.² In the reaction, cleavage occurs between the 3'-phosphate group of a guanine ribonucleotide and 5'-hydroxyl of the adjacent nucleotide. The initial product is a 2':3' cyclic phosphate nucleoside that is hydrolyzed to the corresponding 3'-nucleoside phosphate.³

A method for the enzymatic assay of Ribonuclease (RNase) T₁ has been published.⁴

1 Kunitz unit is equal to about 40-60 Calnatsky units.

A table of the amino acid composition of RNases T₁, T₂, N₁, U₁, and A has been published.³

Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

Storage/Stability

This product is an ammonium sulfate suspension and must not be frozen. The following information pertains to a solution and not an ammonium sulfate suspension of this enzyme.

Ribonuclease T₁ is a stable enzyme. In solution, it is fairly resistant to heat (100 °C for 10 minutes at pH 6) and acid, but unstable in alkaline solution (>pH 9). It should be noted that the reaction catalyzed by the enzyme cannot be stopped simply by heating the reaction mixture to 100 °C.³

Solutions of Ribonuclease T₁ at pH 7 can be stored refrigerated for several weeks or frozen at -20 °C for several months.⁵

References

1. Takahashi, K., The Structure and Function of Ribonuclease T1. XVII. Isolation and Amino Acid Sequences of Papain and Subtilisin Peptides from Ribonuclease T1 --the Complete Covalent Structure of Ribonuclease T1. J. Biochem. (Tokyo), **70(6)**, 945-960 (1971).
2. Current Protocols in Molecular Biology, Ausubel, F.G., et al., eds., Wiley (New York, NY: 1999), page 3.13.2.
3. Uchida, T., and Egami, F., in The Enzymes, **IV**, Boyer, P. D., ed., Academic Press (New York, NY: 1971), p. 205-250.
4. J. Biochem., **49**, 1 (1961).
5. Enzyme Handbook, Schomburg, D. and Salzmann, M., eds., Springer-Verlag (Berlin Heidelberg, Germany: 1991), EC 3.1.27.3.

HLD/RXR 10/02

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