

EZSolution™ RNase A, Recombinant

Rev 06/21

CATALOG #:	M1518-1 M1518-5	1 ml 5 ml
ALTERNATIVE NAMES:	Ribonuclease A, Pancreatic Ribonuclease, Ribonuclease I Ribonuclease 3'-pyrimidinooligonucleotidohydrolase	
MOL. WEIGHT:	13.7 kDa	
PURITY:	≥ 90% by SDS-PAGE	
SOURCE:	Genetically engineered bovine pancreatic ribonuclease expressed in eukaryotic yeast cells	
ENDOTOXIN LEVEL:	Endotoxin free as determined by the LAL method	
SPECIES:	Bovine pancreatic ribonuclease	
DNASE:	DNase-free	
FORM:	Liquid	
FORMULATION:	Recombinant RNase is dissolved in 10 mM Tris-HCl, 50% glycerol, pH 8.0 and is provided at a concentration of 10 mg/ml.	
SPECIFIC ACTIVITY:	≥ 60 Kunitz units/mg of protein. Maximum activity is observed at 60 °C, although the enzyme exhibits activity in the temperature range of 15-70 °C.	
UNIT DEFINITION:	A Kunitz unit of enzyme causes an increase in A ₃₀₀ equivalent to the complete hydrolysis of a 0.05% (w/v) yeast RNA to oligonucleotides in one minute at 25 °C and pH 5.0.	
pH RANGE	6-10. Optimal pH is 7.6	
STORAGE CONDITIONS:	Protein should be aliquoted and stored at -20 °C or -80 °C. Avoid repeated freeze-thaw cycles.	
DESCRIPTION:	<p>RNase A is an endoribonuclease that specifically cleaves RNA at the phosphodiester bond between the 3' phosphate group of a pyrimidine nucleotide and 5'-ribose of an adjacent nucleotide. The highest activity is demonstrated with single stranded RNA. The recombinant enzyme is identical to the native RNase A in amino acid sequence, structure and specifications. At low salt concentrations (0 to 100 mM NaCl), RNase A cleaves single-stranded and double-stranded RNA as well the RNA strand in RNA-DNA hybrids. However, at NaCl concentrations of 0.3 M or higher, RNase A specifically cleaves single-stranded RNA. Precipitation may occur at high concentrations (>10 mg/ml) of the enzyme. The enzyme is inhibited by diethyl pyrocarbonate (DEPC), guanidinium salts, β-mercaptoethanol, heavy metals and RNase-inhibitors. RNase A has a high affinity to glass surfaces. Special care and precautions should be taken in the lab with this enzyme to ensure cross contamination with RNA work does not occur.</p>	
APPLICATIONS:	<ul style="list-style-type: none"> • Analysis of RNA sequences • cDNA preparation and cloning • Removal of RNA from plasmid, genomic DNA preparation and protein samples • RNase protection assays 	
RELATED PRODUCTS:	RNase H, E.coli (Cat. No. M1513) RNase R (Cat. No. M1228) RNase A (Cat. No. M1227) EZSolution™ Benzo-Endonuclease (Cat. No. 9215) RNaseOFF ribonuclease Inhibitor (Cat. No. M1238)	

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