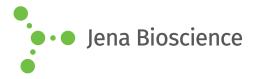
## **DATA SHEET**





### RNase A (DNase free)

Endoribonuclease Bovine pancreas

Cat. No.	Amount
EN-179S	2 x 50 mg
EN-179L	2 x 250 mg

For general laboratory use.

Shipping: shipped at ambient temperature

Storage Conditions: store at 2-8 °C

Additional Storage Conditions: stock solutions in TE buffer should be aliquoted and stored at -20 °C

Shelf Life: 12 months

Molecular Weight: 13.7 kDa (monomer)

CAS#: 9001-99-4

EC number: 232-646-6

**Purity:** ≥ 90 % (ion exchange chromatography), salt free, chromatographically homogeneous lyophilisate

Form: dry powder

#### Applications:

Plasmid and genomic DNA preparation

Removal of RNA from recombinant protein preparations

Ribonuclease protection assays

Mapping single-base mutations in DNA or RNA

#### **Description**:

RNase A is an endoribonuclease that attacks at the 3'-phosphate of a pyrimidine nucleotide. The sequence of pG-pG-pC-pA-pG will be cleaved to give pG-pG-pCp and A-pG. The highest activity is exhibited with ssRNA.

RNase A is free of detectable DNase and protease activity, a heat treatment of the enzyme is not necessary before use.

#### **Reaction conditions:**

Working concentration: 1 - 100  $\mu$ g/ml (depending on application) The enzyme is active under a wide range of reaction conditions. At low salt concentrations (0 to 100 mM NaCl), RNase cleaves ss and dsRNA as well as the RNA strand in RNA-DNA hybrids. At NaCl concentrations of 0.3 M or higher, RNase A specifically cleaves ssRNA.

#### Stability:

RNase A is an extremely stable enzyme, remarkable resistant to heating. It renatures easily after treatment with most denaturing agents.

#### Inactivation:

Ribonuclease inhibitor, Vanadyl-ribonucleoside complexes, arabinonucleosides, Zn<sup>2+</sup>, Cu<sup>2+</sup>, penicillin, Vitamin B12, SDS, DEPC, 4 M guanidinium thiocyanate plus 0.1 M 2-mercaptoethanol. Most polyanions show some inhibitory effect. Inactivated by phenol/chloroform extraction.

Isoelectric point (pI): 9.6

**Optimal pH:** 7.0 (activity range 6 - 10)

#### Activity:

≥ 80 Kunitz units/mg

**Unit definition:** 1 Kunitz unit is that amount of activity which is capable of causing within 1 minute a decrease in absorbance at 300 nm equivalent to the maximum possible change in a 0.05 % solution of yeast RNA at 25 °C, pH 5.0.

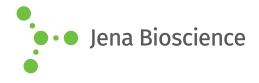
#### Selected References:

Burell *et al.* (1993) Enzymes of Molecular Biology, **Vol. 16**: 263. Asubel *et al.* (1994 - 2005) Current Protocols in Molecular Biology, vol. 1, *John* 



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Wiley & Sons, Inc., Brooklyn, NY 3.13.1

