

RNase R

Catalog Number	LDG0018RG
Package	500 U / Customized package

For full product information, images and publications, please visit [our website](#).



Overview

Description

Ribonuclease R (RNase R), derived from *E. coli*, is a magnesium-dependent exoribonuclease operating in a 3'→5' direction. Its primary function is to degrade linear RNAs while sparing lariat or circular RNA structures. Most cellular RNAs undergo complete digestion by RNase R, with exceptions such as tRNAs, 5S RNA, and intron lariats. RNase R effectively breaks down linear and Y-structured RNAs but does not affect lariats or circular RNAs. This property makes it useful for selectively enriching circular RNAs, which can be employed in protein production or intronic cDNA library construction.

Product Note

- RNase R activity is optimal in the presence of low magnesium concentrations ranging from 0.1 to 1.0 mM. However, the effectiveness of RNase R can be hindered by low EDTA levels in RNA substrate solutions. To mitigate this negative impact, additional MgCl₂ can be added, up to a final concentration of 1 mM, to counteract the presence of EDTA in the substrate.
- The enzyme exhibits its best performance at a temperature of 37°C.

Components

500 U	RNase R	1 vial (500 U)
500 U	10X Reaction buffer	1 vial (500 µL)

Specifications

Expression System	Concentration
Escherichia coli	20 U/ µL

Storage Buffer

RNase R is supplied in a 50% glycerol solution containing 50 mM Tris-HCl (pH 7.5), 100 mM NaCl, 0.1 mM EDTA, 1 mM DTT, and 0.1% Triton® X-100.

Unit Definition

One unit of RNase R converts 1 µg of poly(A) into acid-soluble nucleotides in 10 minutes at 37 °C under standard assay conditions.

Purity

>95% as determined by SDS-PAGE analysis.

Form

Liquid

Instruction**Shipping**

The product is shipped with polar packs. Upon receipt, store it immediately at -20°C or lower for long term storage.

Stability & Storage

This product is stable after storage at:

- -20°C for -80°C long-term storage under sterile conditions.

Avoid repeated free-thaw cycles.

Disclaimer : For Research Use or Further Manufacturing Only.