Active Recombinant RNase R

Cat. No. RNase R-08E **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant RNase R, expressed in E.coli, is derived from the rnr gene of E.coli. DNA Exonuclease Activity: Negative DNA Endonuclease Activity: Negative
Species	E.coli
Source	E.coli
Description	It is a magnesium ion-dependent 3'-5' exoribonuclease that can efficiently degrade the vast majority of linear RNA molecules. However, it cannot digest lariat or circular RNA, double-stranded RNA with a 3' overhang of less than 7 nucleotides, and some RNAs with complex structures. It can increase the abundance of circular RNA in the mixed RNA by degrading the linear RNA therein, achieving the purpose of enriching circular RNA. Moreover, its enzymatic activity can be inactivated by heating at 65 centigrade for 20 minutes.
Purity	≥ 95% by SDS-PAGE
Bio-activity	≥ 20 U/μL
Advantages	1. It can degrade linear RNA, but it is not easy to degrade circular RNA. 2. It has a high degradation efficiency. Generally, it can degrade the vast majority of linear RNA within 30 minutes. 3. When a performance comparison is made with products of well-known brands, the detection results are consistent.
Unit definition	1 U is defined as the amount of enzyme required to convert 1

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	μg of poly (A) into acid-soluble nucleotides within 10 minutes under the standard reaction system (20mM Tris-HCl, 100mM KCl, 0.1mM MgCl2, pH8.0, at 37 centigrade).
Usage	1. It is recommended to use the following reaction system: RNA: 1-5 μg 10× RNase R Reaction Buffer: 2 μL Recombinant RNase R: 2-5 U/μg RNA Nuclease-free Water: Up to 20 μL 2. Incubate at 37 centigrade for 10 to 30 minutes. After the reaction is completed, incubate at 65 centigrade for 20 minutes to inactivate RNase R. 3. To prevent RNA degradation, RNase Inhibitor can be added to the reaction system to a final concentration of 1-2 U/μL.
Applications	Enrichment and Identification of Circular RNAs
Note	1. Try to avoid freeze-thaw cycles of this product after receipt; 2. Please wear lab coat and disposable gloves when using; 3. This product should not be used directly for clinical diagnosis and treatment.
Stability	This product should be stored at -20 centigrade and can be stored for at least 12 months.
Storage	Store at -20 centigrade.
Storage Buffer	50mM Tris-HCl, 200mM NaCl, 1mM DTT, 0.1mM EDTA, 0.1% TritonX-100, 50% Glycerol, pH=7.5
Shipping	Dry Ice

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SDS-PAGE	 results of digesting total human RNA by Recombinant RNase R

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