HB240407

RNase R GMP-grade (20 U/μL)

Product Description

Ribonuclease R (RNase R) is a magnesium-dependent 3'→5' exoribonuclease that can digest essentially all linear RNAs, but does not digest lariat or circular RNA structures, or double-stranded RNA with 3' overhangs shorter than 7 nucleotides. As such, this enzyme is ideally suited to the study of lariat RNA produced by traditional splicing, as well as circRNAs which arise through back-splicing. By removing linear RNAs from cellular or RNA extracts, RNase R greatly facilitates the identification of circular species through RNA-sequencing. This enables researchers to probe the landscape of splicing events with greater depth.

This product is produced in accordance with GMP process requirements and provided in liquid form.

Specifications

Expression Host	Recombinant *E. coli* with RNase R gene
Storage Buffer	50 mM Tris-HCl, 100 mM NaCl, 0.1 mM EDTA, 1mM DTT, 0.1% TritonX-100, pH 7.5
Reaction Temperature	37°C
Unit Definition	One unit converts 1 μg of poly-r(A) into acid-soluble nucleotides in 10 minutes at 37 °C.
Application	1.Identification of intronic lariat sequences 2.Identification of exonic circRNAs 3.Studying alternative splicing 4.Production of artificial circular RNAs

Components

Components No.	Name	14615ES25 (500 U)	14615ES72 (5000 U)	14615ES80 (20 KU)	14615ES92 (200 KU)
14615	RNase R (20 U/μL)	25 μL	250 μL	1 mL	10 mL

Shipping and Storage

This product is shipped with dry ice and can be stored at -25 ~ -15°C for two years.

Instructions

Experimental methods

1. The following reaction system was formulated in a sterile micro-centrifuge tube:

Components	Volume
10 × RNase R Reaction Buffer*	2 μL
RNA Sample	1 μg
RNase R (20 U/μL)	2-4 U
DEPC H_2O	Up to 20 μL

*According to the specific purpose of experiments, it is necessary to prepare the corresponding reaction buffer. You can consider buying 14616ES(10×RNase R Reaction Buffer GMP-grade) to use together.

2. Reaction condition：37°C for 10 min to 30 min.
3. Inactivation condition: incubation at 70°C for 10 min can inactivate the enzyme.

Note

1. For your safety and health, please wear personal protective equipment (PPE), such as laboratory coats and disposable gloves, when operating with this product