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Certificate of Analysis

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Ribonuclease Inhibitor

Catalog No: 4210

Lot No: See Product Label

Package Size: See Product Label

Concentration: See Product Label

Storage Conditions: Store at -20°C

Description / Applications

- More potent than competing human placental RNase inhibitors
- RNase Free
- Effective over broad pH range from pH 5.5 to 8.5
- Active over temperature range from 37°C to 70°C
- Does not interfere with SP6, T7, or T3 RNA polymerase, AMV or M-MLV reverse transcriptase or Taq DNA polymerase
- Increases the time RNA can be safely stored

Unit Definition

One unit is the amount of enzyme required to inhibit by 50% the activity of 5 ng of Ribonuclease A at 25°C

Assay Conditions

0.1 M Tris-Acetate (pH 6.5)
1 mM EDTA
1 mM cyclic 2', 3'-cytidine monophosphate
Reaction volume 1 ml

Note: Inhibitor activity is determined by the inhibition of RNase A hydrolysis of cyclic 2', 3'-cytidine monophosphate in a spectrophotometric recording assay

Storage Buffer

20 mM Hepes-KOH (pH 7.5)
100 mM KCl
0.1 mM EDTA
50% glycerol

Quality Control

DNase, double-stranded: Incubation of 50, 100, 200 units of Ribonuclease Inhibitor with 0.03 µg of [³²P]lambda DNA at 37°C for 1 hour resulted in ≤0.3 slope of %-end label released per unit of enzyme. Reaction volume of 50 µl.

DNase, single-stranded: Incubation of 50, 100, 200 units of Ribonuclease Inhibitor with 0.03 µg of heat denatured [³²P]lambda DNA at 37°C for 1 hr resulted in ≤0.3 slope of %-end label released per unit of enzyme. Reaction volume of 50 µl.

3'-Exonuclease: 50, 100, 200 units of Ribonuclease Inhibitor and 5 pmole of 3'-ends of lambda/TaqI fragments (3'-labelled with Klenow exo- and [³H] dCTP), incubated for 1 hour at 37°C resulted in ≤0.3 slope of %-end label released per unit of enzyme. Reaction volume of 50 µl.

5'-Exonuclease/5'-Phosphatase: 50, 100, 200 units of Ribonuclease Inhibitor with 0.25 µg of 5'-ends of [5'-³²P]lambda/Hae III fragments for 1 hour at 37°C resulted in ≤0.3 slope of %-end label released per unit of enzyme. Reaction volume of 50 µl.

Nicking: 50, 100, 200 units of Ribonuclease Inhibitor with 1.0 µg of pBR322 DNA at 37°C for 1 hour resulted in ≤10% conversion of RFI to RFII DNA. Reaction volume of 50 µl.

For more information or to re-order, please visit www.chimerx.com