



## RNaseOUT™ Recombinant Ribonuclease Inhibitor

<b>Cat. no.</b> 10777-019	<b>Size</b> 5,000 Units	<b>Conc.</b> 40 U/μL <b>Store at</b> -30°C to -10°C
<b>Pub. Part no.</b> 10777019.pps	MAN0000896	<b>Rev. Date</b> 27 Sep 2011

### Description

RNaseOUT™ Ribonuclease (RNase) Inhibitor is purified by affinity chromatography from a recombinant strain of *E. coli* expressing a cloned porcine liver gene. This inhibitor has a very high binding affinity for pancreatic-type ribonucleases such as RNase A. Like other inhibitors of pancreatic ribonuclease, RNaseOUT™ Ribonuclease Inhibitor is an acidic protein. The recombinant RNase inhibitor has a molecular weight near 52,000 daltons. It forms a 1:1 complex with bovine pancreatic RNase A, and it is a noncompetitive inhibitor of these pancreatic enzymes. RNaseOUT™ Ribonuclease Inhibitor is active against RNase A, RNase B, and RNase C. It does not inhibit RNase 1, RNase T1, RNase T2, S1 nuclease, and RNase H.

### Storage Buffer

20 mM Tris-HCl (pH 8), 50 mM KCl, 0.5 mM EDTA, 8 mM DTT, and 50% (v/v) glycerol

### Storage Recommendations

Avoid exposing product to frequent changes in temperature. RNaseOUT™ Ribonuclease Inhibitor requires 1 mM DTT to maintain activity.

### Reference

Blackburn, P. (1979) *J. Biol. Chem.* 254, 12484–12487.

**Intended Use:** For research use only.

Not intended for any animal or human therapeutic or diagnostic use.

## Applications

### cDNA Synthesis

When added to the reaction mixture (40 units/20  $\mu$ L of reaction mixture), RNaseOUT™ Ribonuclease Inhibitor protects mRNA and improves total cDNA yields including percent total full length of cDNA.

### RT-PCR

RNaseOUT™ Ribonuclease Inhibitor is compatible with all enzymes used in RT-PCR. It has been used with the Elongase® Enzyme Mix in long RT-PCR mixture (40 units/20  $\mu$ L of reaction mixture).

### *In Vitro* Transcription

RNaseOUT™ Ribonuclease Inhibitor has been shown to be useful for the isolation of intact RNA transcripts using T3, T7, and SP6 RNA Polymerases (20–40 units/10  $\mu$ L of reaction mixture).

### Certificate of Analysis

The Certificate of Analysis (CofA) provides detailed quality control information for each product. The CofA is available on our website at [www.invitrogen.com/support](http://www.invitrogen.com/support), and it is searchable by product lot number, which is printed on each box.

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