

RNaseOUT™ Recombinant Ribonuclease Inhibitor

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WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from thermofisher.com/support.

Product description

The Invitrogen™ RNaseOUT™ Recombinant Ribonuclease 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, the RNaseOUT™ inhibitor is an acidic protein. The RNaseOUT™ inhibitor has a molecular weight near 52 kDa. It forms a 1:1 complex with bovine pancreatic RNase A, and it is a noncompetitive inhibitor of these pancreatic enzymes. The RNaseOUT™ inhibitor is active against RNase A, RNase B, and RNase C. It does not inhibit RNase 1, RNase T1, RNase T2, S1 nuclease, or RNase H.

Contents and storage

Contents	Amount	Storage
RNaseOUT™ Recombinant Ribonuclease Inhibitor (40 U/μL)	5,000 units	Store at -30 to -10°C. Avoid exposing product to frequent temperature changes. The RNaseOUT™ inhibitor requires 1 mM DTT to maintain activity.

Storage buffer

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

Procedural guidelines

- **cDNA synthesis**—Use 40 units of RNaseOUT™ inhibitor per 20 µL of reaction mixture to protect mRNA and improve total cDNA yield, including the overall percentage of full-length cDNA.
- **RT-PCR**—Use 40 units of RNaseOUT™ inhibitor per 20 µL of reaction mixture. The RNaseOUT™ inhibitor is compatible with all enzymes used in RT-PCR. It has been used with the Elongase™ Enzyme Mix in long RT-PCR mixture.
- **In Vitro Transcription**—Use 20–40 units of RNaseOUT™ inhibitor per 10 µL of reaction mixture to produce intact RNA transcripts using T3, T7, and SP6 RNA polymerases.

Limited product warranty

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Revision history: Pub. No. MAN0000896

Revision	Date	Description
A.0	15 June 2016	Format, style, and legal updates
—	27 September 2011	Baseline for this revision history

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