

## RNaseOFF Ribonuclease Inhibitor

**CATALOG NO.:** M1238-4000  
**AMOUNT:** 4000 U (100 µl)  
**CONCENTRATION:** 40 U/µl  
**PRODUCT SOURCE:** Recombinant *E.coli*  
**FORM:** Liquid

**DESCRIPTION:** RNaseOFF Ribonuclease Inhibitor specifically inhibits common ribonucleases (RNases), including RNase A, B and C, with high affinity and is a useful additive in PCR or RT-PCR as it does not inhibit polymerase activity. This robust version of RNase inhibitor has improved resistance to oxidation over the highly oxidation-sensitive human RNase inhibitor. RNaseOFF Ribonuclease Inhibitor is stable even under very low concentrations of DTT (< 1 mM), making it the best choice for ultimate RNA protection.

**APPLICATIONS:**

- RT-PCR.
- Quantitative, real-time RT-PCR.
- In vitro transcription.
- In vitro translation.
- Coupled transcription/translation.
- Protection of mRNA in cDNA synthesis reactions.
- RNA isolation procedures.
- Preparation of RNase-free antibodies.
- Eukaryotic RNase contamination-sensitive experiment.

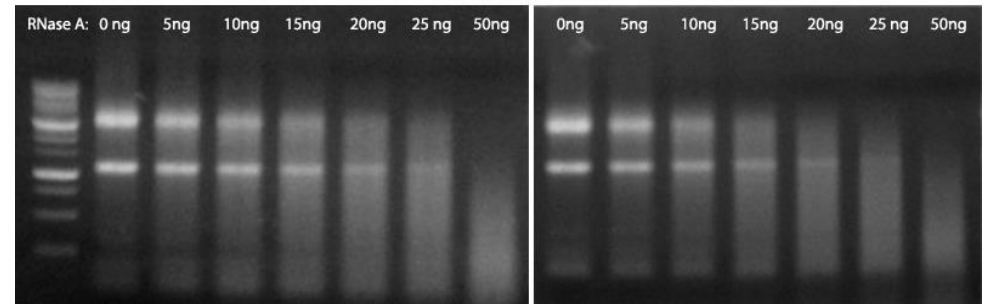
**EZYME UNIT DEFINITION:** One unit is defined as the amount of RNaseOFF Ribonuclease Inhibitor that is required to inhibit the activity of 5 ng of RNase A by 50%.

**ENZYME STORAGE BUFFER:** 20 mM HEPES-KOH pH 7.5, 50 mM KCl, 8 mM DTT, 50 % Glycerol

**STORAGE CONDITIONS:** Store at -20°C. Avoid repeated freeze-thaw cycles of all components to retain maximum performance. All components are stable for one year from the date of shipping when stored and handled properly.

**NOTES:**

- Always keep RNaseOFF on ice during reaction set-up.
- It is recommended to setup all RNA-related/RNase-sensitive work under conditions where RNase contamination has been eliminated. Pipette tips and tubes should be treated with 0.1% DEPC.
- Wearing gloves is highly recommended while working with RNA.



Rat RNA was pre-mixed with RNaseOFF Ribonuclease Inhibitor (left image) and the leading competitor's RNase inhibitor (right image) in a 20 µl reaction. Increasing amount of RNase enzyme ranging from 5 ng to 50 ng per reaction was added into each reaction mixture. The reaction was incubated at 37C for 15 minutes and loaded onto a 2% gel to visualize the degree of RNA degradation. At 15 ng/rxn of RNase, both 28S and 18s ribosomal RNA bands are clearly visible in #M1229 (left image). However, the 28S band is degraded in the competitor's reaction (right image).

**RELATED PRODUCTS:**

- RNase A (Cat# M1227-25)
- RNase R (Cat# M1228-500)
- DNase, *E.coli* DNA Ligase (Cat# M1217-100)
- Link-FAST™ 5 Minutes DNA Ligation Kit (Cat# K902-50)
- New T4 DNA Ligase (Cat# M1247-200)
- T4 DNA Ligase (5 u/µl) (Cat# 9101-250)
- T4 RNA Ligase 1 (ssRNA Ligase) (Cat# M1218-100)
- T4 RNA Ligase 2 (dsRNA Ligase) (Cat# M1219-100)
- T4 RNA Ligase 2 (Truncated) (Cat# M1220-100)

**FOR RESEARCH USE ONLY! Not to be used on humans.**