

QIAGEN[®] RNase Inhibitor

For potent inhibition of RNase A-type ribonucleases

Product Contents

QIAGEN RNase Inhibitor	
Catalog no.	129916
QIAGEN RNase Inhibitor	2000 units (for 500 reactions)
Product Sheet	1

Storage

QIAGEN RNase Inhibitor should be stored immediately upon receipt at -20°C in a constant-temperature freezer. QIAGEN RNase Inhibitor may also be stored at $2-8^{\circ}\text{C}$ for up to 12 months with no apparent decrease in activity. Do not store at -70°C or below.

Product Description

QIAGEN RNase Inhibitor is a protein of nonhuman origin that binds noncovalently to and inactivates a variety of ribonucleases (e.g., RNase A, B, and C). It does not interfere with RNase T1, T2, H, U1, U2, or CL3. QIAGEN RNase Inhibitor is a polyclonal antibody which is highly active and inhibits more than 90% of RNase activity, whereas HPRI (human placental RNase inhibitor) inhibits only 50%. For this reason, it can be used at lower concentrations compared to other RNase inhibitors. In addition, QIAGEN RNase Inhibitor is stable over a wide pH and temperature range and at varying dithiothreitol (DTT) concentrations. QIAGEN RNase Inhibitor is supplied at a concentration of 4 units per microliter in 2 mM KH_2PO_4 , 8.0 mM Na_2HPO_4 , 3.0 mM KCl, 150 mM NaCl, pH 7.4, and 50% glycerol.

Quality Control

In accordance with QIAGEN's ISO-certified Quality Management System, each lot of QIAGEN RNase Inhibitor is tested against predetermined specifications to ensure consistent product quality.

Product Use Limitations

QIAGEN RNase Inhibitor is intended for molecular biology applications. This product is neither intended for the diagnosis, prevention, or treatment of a disease, nor has it been validated for such use either alone or in combination with other products. Therefore, the performance characteristics of the product for clinical use (i.e., diagnostic, prognostic, therapeutic, or blood banking) are unknown.



Safety Information

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, please consult the appropriate material safety data sheets (MSDSs). These are available online in convenient and compact PDF format at www.qiagen.com/Support/MSDS.aspx where you can find, view, and print the MSDS for each QIAGEN kit and kit component.

24-hour emergency information

Emergency medical information in English, French, and German can be obtained 24 hours a day from: Poison Information Center Mainz, Germany, Tel: +49-6131-19240

Procedure

QIAGEN RNase Inhibitor is a ready-to-use solution with a concentration of 4 U/ μ l providing optimal activity and stability. Use of 1 μ l QIAGEN RNase Inhibitor per 20 μ l reaction volume is recommended to inhibit 20 ng RNase (1 unit of QIAGEN RNase Inhibitor inhibits over 90% of the activity of 5 ng pancreatic RNase A). A further dilution of QIAGEN RNase Inhibitor may not provide sufficient inhibition of ribonucleases. Where possible, QIAGEN RNase Inhibitor should be added to the reaction prior to addition or synthesis of RNA. For reverse transcription, 0.2 μ l QIAGEN RNase Inhibitor is sufficient for a 20 μ l RT-PCR reaction. If severe contamination with ribonucleases is suspected, it is recommended to preincubate QIAGEN RNase Inhibitor with all reaction components for 30 minutes at room temperature (15–25°C) prior to RNA addition.

QIAGEN RNase Inhibitor is most active in the absence of DTT. A slight inhibition of activity is observed in the presence of increasing concentrations of DTT (with 20 mM DTT, QIAGEN RNase Inhibitor exhibits 90% of its activity in the absence of DTT). The addition of DTT is not necessary or recommended for storage. QIAGEN RNase Inhibitor will be inactivated when exposed to denaturing conditions. For applications that require incubation at temperatures above 37°C, please consult Table 1.

Table 1. QIAGEN RNase Inhibitor stability at various temperatures

50°C	60°C	65°C	70°C
≤60 min	≤30 min	≤20 min	≤3 min

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