

## RNase Inhibitor (40 U/μL)

### Product Description

The Watchmaker RNase Inhibitor exhibits high-affinity, non-competitive binding of RNases A, B, and C, enabling high-quality cDNA synthesis from low-quality RNA samples<sup>1</sup> at temperatures up to 55°C. The absence of two cysteines present in human and porcine RNase inhibitors make this murine version much more suitable for low-DTT applications.

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### Kit Contents

Kit	Kit Code	Description	Component Volumes	
			100 μL (4 kU)	500 μL (20 kU)
RNase Inhibitor (40 U/μL)	<b>7K0088-100UL</b> <b>7K0088-500UL</b>	RNase Inhibitor (40 U/μL)	100 μL	500 μL

For larger volumes, higher concentrations, and custom formats, contact the **Sales Team** at [sales@watchmakergenomics.com](mailto:sales@watchmakergenomics.com).

## Product Applications\*

- First strand synthesis
- RT-PCR, RT-qPCR
- Nuclei isolation
- Single cell RNA-sequencing
- *In vitro* synthesis (IVT)
- cDNA synthesis
- Cell-free cloning
- Applications where maintaining RNA integrity is critical
- RNA labeling

\*These are applications where RNases may be present and thus the use of RNase Inhibitor may be advantageous. Watchmaker Genomics has not tested or validated RNase Inhibitor in all applications.

## Unit Definition

1 unit of RNase inhibitor is defined as the amount of RNase Inhibitor required to inhibit activity of 0.375 ng of RNase A by  $\geq 95\%$ .

## Storage and Handling

RNase Inhibitor is shipped on ice packs. Upon receipt, store all kit components at  $-25^{\circ}\text{C}$  to  $-15^{\circ}\text{C}$ . Keep on ice or a cooled reagent block during routine use. Take care to homogenize solutions thoroughly before use and during reaction setup. Do not vortex the inhibitor. When stored and handled as indicated, the product will retain full performance until the expiry date printed on the kit box.

## Heat Inactivation

$70^{\circ}\text{C}$  for 20 minutes

## Storage Buffer

20 mM HEPES-KOH, 0.1 mM EDTA, 50 mM KCl, 8 mM DTT, 50% glycerol, pH 7.6

## Recommended Reaction Setup

Use RNase Inhibitor at 1 U/ $\mu$ L final concentration in each reaction per assay. RNase Inhibitor is suitable for applications with reaction temperatures up to  $55^{\circ}\text{C}$ . The inhibitor should be added prior to the addition of any enzyme or input material that may be a source of RNase contamination.

## References

1. Kim, BM, et al. Variants of ribonuclease inhibitor that resist oxidation. *Protein Sci.* 1999; 8:430 – 434. doi: 10.1110/ps.8.2.430

## Revision History

Version	Description	Date
1.0	• First protocol release	09/2023



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