

SEQURNA®

Thermostable RNase Inhibitor

STORE AT

RT



FOR RESEARCH USE ONLY

Instructions for Use

SEQURNA® Thermostable RNase Inhibitor
150 µl (SQ-RIT-015)

SEQURNA® Thermostable RNase Inhibitor
3 × 150 µl (SQ-RIT-045)



DOWNLOAD INSTRUCTIONS FOR USE
www.genovis.com/ifu-SQ-RIT

Synthetic Thermostable RNase Inhibitor Ideal for Single-cell and *In Situ* RNA Sequencing

SEQURNA Thermostable RNase Inhibitor is a fully synthetic and heat-tolerant inhibitor that protects RNA integrity. It is active across a wide temperature range, provides sustainability through ambient storage and shipping, minimizes batch effects, and avoids activity loss from freeze-thaw cycles and long incubation times. This makes it ideal for applications such as single-cell and *in situ* RNA sequencing, where preserving high-quality RNA is essential. SEQURNA Thermostable RNase Inhibitor consists of a proprietary mix of synthetic molecules that protects RNA by interfering with the active site of RNases.

The SEQURNA Thermostable RNase Inhibitor, enduring 55°C for 24 hours or 70°C for 2 hours, and can tolerate even harsher experimental conditions. This ensures robust RNA protection throughout and after heat cycles, outperforming commonly used protein-based recombinant RNase inhibitors. The stability of the inhibitor enables the development of new workflows and enhances RNA integrity over longer experimental timelines, as well as during sample handling and storage.

SEQURNA Thermostable RNase Inhibitor tolerates freeze/thaw cycles and vigorous vortexing, requires no DTT, and remains active across a broad pH range of 4.0-10.0.

UNIT DEFINITION

One unit SEQURNA Thermostable RNase Inhibitor HighConc is defined as a mass unit*, corresponding to the mass per volume of its active components.

CONTENT AND STORAGE

SEQURNA Thermostable RNase Inhibitor is supplied as an aqueous solution with a concentration of 50 mass units/ul. The product is shipped at ambient temperature, and should be stored at room temperature upon arrival. It also tolerates deep freezing.

SEQURNA Thermostable RNase Inhibitor is for R&D use only.

QUALITY CONTROL

SEQURNA Thermostable RNase Inhibitor is tested to meet the specifications and lot-to-lot consistency.

YOU MIGHT ALSO BE INTERESTED IN

SEQblock™

Thermoconductive Module

* For this product, activity is expressed as “mass units/μl.” Please note that “mass units” are defined on an internal, arbitrary scale and may not correspond directly to the “units” used for recombinant RNase inhibitors from other suppliers. When applying SEQURNA® in new protocols or applications, we recommend testing a range of inhibitor concentrations to determine the optimal amount for your specific reaction. Both insufficient and excessive amounts may negatively affect performance.

Preparations

Important Information

- 'Mass units' for the synthetic SEQURNA Thermostable RNase Inhibitor does not necessarily correspond 1:1 to 'units' of recombinant RNase inhibitors from other suppliers in all applications.
- When using SEQURNA Thermostable RNase Inhibitor in new applications or protocols, it is important to identify the optimal span of inhibitor concentration by testing different amounts. Similarly, as for most reagents, using too low or too high concentrations may be detrimental to your specific reactions.

Recommended Concentrations for Different Applications

A. Single-cell RNA Sequencing

A.1 Smart-Seq2: 1.2 mass units/ μ l in lysis buffer (optimal range 1-2), resulting in \sim 0.5 mass units/ μ l in the reverse transcription (RT) reaction.



A.2 Smart-Seq3: 0.2 mass units/ μ l in lysis buffer (optimal range 0.15-0.3), resulting in \sim 0.15 mass units/ μ l in the RT reaction.



A.3 Smart-Seq3xpress: 0.2 mass units/ μ l in lysis buffer (optimal range 0.15-0.3), resulting in \sim 0.15 mass units/ μ l in the RT reaction.



A.4 FLASH-Seq: 5 mass units/ μ l in lysis buffer (optimal range 3.75–5), resulting in \sim 1 mass units/ μ l in the RT reaction.



Note: Add SEQRNA Thermostable RNase Inhibitor to the lysis buffer only; **do not add additional inhibitor** during the RT reaction. When added to the lysis buffer, SEQRNA Thermostable RNase Inhibitor remains active throughout the entire protocol.

B. cDNA Synthesis

B.1 cDNA synthesis: 0.1-2 mass units/ μ l in the RT reaction.

C. *In Vitro* Transcription with SP6 or T7 RNA Polymerase

C.1 *In vitro* transcription: 5-10 mass units/ μ l in the *in vitro* transcription reaction.

D. *In-situ* RNA Sequencing

D.1 *In-situ* RNA sequencing: 0.1-0.4 mass units/ μ l in the RT reaction.

USA & Canada

Genovis Inc.

10919 Technology Place Suite C, San Diego, CA 92127, USA

Phone: 1-855-782-0084 (toll free)

Fax: 1-858-524-3006

EMEA & Asia

Genovis AB

Box 4, SE-24421 Kävlinge, Sweden

Phone: +46 46 10 12 30

Fax: +46 46 12 80 20

support@genovis.com

www.genovis.com



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