GENOVIS

High Conc

SEQURNA®

Thermostable RNase Inhibitor HighConc

STORE AT
RT

FOR RESEARCH USE ONLY

Instructions for Use

SEQURNA® Thermostable RNase Inhibitor HighConc 150 µl (SQ-RIT-515)
500 mass units/µl

DOWNLOAD INSTRUCTIONS FOR USE
www.genovis.com/ifu-SQ-RIT-515

Synthetic Thermostable RNase Inhibitor Supplied at High Concentration, for Single-cell and *In Situ* RNA Sequencing

SEQURNA Thermostable RNase Inhibitor HighConc 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 HighConc consists of a proprietary mix of synthetic molecules that protects RNA by interfering with the active site of RNases.

This concentrated formulation of SEQURNA Thermostable RNase Inhibitor allows for processing of high-density cellular or nuclear suspensions and high volume workflows where RNA preservation is critical.

The SEQURNA Thermostable RNase Inhibitor HighConc, enduring 55°C for 24 hours or 70°C for 2 hours, and can tolerate even harsher experimental conditions, such as 95°C for shorter periods. 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 HighConc 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 HighConc is supplied as an aqueous solution with a concentration of 500 mass units/µl. 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 HighConc is for R&D use only.

QUALITY CONTROL

SEQURNA Thermostable RNase Inhibitor HighConc 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 HighConc does not necessarily correspond 1:1 to ‘units’ of recombinant RNase inhibitors from other suppliers in all applications.
- When using SEQURNA Thermostable RNase Inhibitor HighConc 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.
- The active components in the SEQURNA Thermostable RNase Inhibitor HighConc formulation are identical to those in the standard SEQURNA Thermostable RNase Inhibitor (SQ-RIT-015/SQ-RIT-045), but are supplied at 10× concentration.

Recommended Concentrations for Different Applications

A. Single-cell RNA Sequencing

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

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

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

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

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

B. cDNA Synthesis

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

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

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

D. *In-situ* RNA Sequencing

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

USA & Canada
Genovis Inc.
245 First Street, Suite 1800, Cambridge, MA 02142, USA
Phone: 1-855-782-0084 (toll free)
Fax: 1-858-524-3006

EMEA & Asia
Genovis AB
Box 4, SE-244 21 Kävlinge, Sweden
Phone: +46 46 10 12 30
Fax: +46 46 12 80 20

support@genovis.com
www.genovis.com

GENOVIS