

INTRODUCTION

ScriptGuard™ RNase Inhibitor prevents the degradation of RNA by eukaryotic RNase A, RNase B and RNase C, but it does not inhibit RNase 1, RNase H, RNase T1, RNase T2 or S1 Nuclease. A potent affinity for RNases ($K_i \sim 10^{-14}$ M) and a 1:1 binding ratio ensures rapid inhibition even when trace amounts of RNase are present. ScriptGuard RNase Inhibitor is free of detectable RNase and DNase activities and mammalian DNA. Because it does not interfere with most commonly used enzymes. It can be used in a wide variety of applications, including cDNA synthesis, and *in vitro* transcription and translation reactions.

MATERIALS

Materials Supplied



Store at -20°C in a freezer without a defrost cycle. Do not store at -70°C .

ScriptGuard™ RNase Inhibitor		
Catalog Number	Concentration	Units
C-SRI6325	40 U/ μl	2,500
C-SRI6310K	40 U/ μl	10,000

Inquire about custom kit sizes at 608-442-6484 or sales@cellscript.com.

SPECIFICATIONS

Storage Buffer

ScriptGuard RNase Inhibitor is supplied in a 50% glycerol solution containing 50 mM Tris-HCl, pH 7.5, 100 mM NaCl, 10 mM DTT and 0.1 mM EDTA.

Unit Definition

One unit of ScriptGuard RNase Inhibitor results in 50% inhibition of 5 ng of RNase A.

Functional Testing

ScriptGuard RNase Inhibitor is functionally tested to inhibit hydrolysis of cyclic 2',3'-CMP by RNase A.

Contaminating Activity Assays

ScriptGuard RNase Inhibitor is free of detectable mammalian DNA, and RNase and DNase activities.

BEFORE YOU START: IMPORTANT TIPS FOR OPTIMAL RESULTS**◆ Recommended Working Concentration:**

We recommend that ScriptGuard RNase Inhibitor be used at a final reaction concentration of 1 U/μl in any reaction where RNA integrity is a concern. Examples include: *in vitro* transcription, RNA 5'-end capping, RNA 3'-end poly(A)-tailing, *in vitro* translation reactions, etc...

◆ Maintaining an RNase-Free Environment:

RNases are ubiquitous, highly stable, can contaminate any lab environment and are present on human skin. Creating an RNase-free work environment and maintaining RNase-free solutions is critical for successful RNA reactions. Therefore, we strongly recommend that the user:

- Use RNase-free tubes and pipette tips.
- Always wear gloves when handling samples containing RNA. Change gloves frequently, especially after touching potential sources of RNase contamination such as door knobs, pens, pencils and human skin.
- Always wear gloves when handling kit components. Do not touch any kit component with an ungloved hand.
- Keep all kit components tightly sealed when not in use. Keep all tubes containing RNA tightly sealed during the incubation steps.

RELATED PRODUCTS

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|---|--|
| – A-Plus™ Poly(A) Polymerase Tailing Kit | – MessageMAX™ T7 ARCA-Capped Message Transcription Kit |
| – AmpliCap™ T7 & SP6 High Yield Message Maker Kits | – ScriptCap™ 2'-O-Methyltransferase Kit |
| – AmpliCap-Max™ T7 & T3 High Yield Message Maker Kits | – SP6 mScript™ Standard mRNA Production System Transcription Kit |
| – INCOGNITO™ SP6 Ψ-RNA Transcription Kit | – SP6-Scribe™ Standard RNA IVT Kit |
| – INCOGNITO™ T7 5mC- & Ψ-RNA Transcription Kit | – T7 mScript™ Standard mRNA Production System |
| – INCOGNITO™ T7 ARCA 5mC- & Ψ-RNA | – T7-FlashScribe™ Transcription Kit |
| – ScriptCap™ m ⁷ G Capping System | – T7-Scribe™ Standard RNA IVT Kit |
| – INCOGNITO™ T7 Ψ-RNA Transcription Kit | |

The performance of this product is guaranteed for one year from the date of purchase.

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