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SOLIS BIODYNE
INNOVATION POWERED BY NATURE

RiboGrip® RNase Inhibitor The Guardian of RNA

A unique chimeric RNase inhibitor protein with increased temperature tolerance

solisbiodyne.com

Exceptional stability
functional up to 60 °C

Lyo-compatible
formulation available

Versatile protection
against RNases

RiboGrip® RNase inhibitor (220 U/µl) is a unique chimeric protein of mammalian origin, expressed in *E. coli* and purified according to state-of-the-art protein purification methods. RiboGrip® inhibits the activity of ribonucleases, by forming a strong noncovalent bond in a non-competitive mode at a 1:1 ratio. It is primarily used to prevent RNA degradation by contaminating RNases in various assays that use RNA sample materials, such as first-strand cDNA synthesis, RT-(q)PCR, RT-LAMP, etc.
RiboGrip® also includes a genetic modification - **Stability TAG** - Solis BioDyne's proprietary and patented polypeptide stabilization technology[1]. Stability TAG makes RiboGrip® **extremely tolerant to higher temperatures**, and enables room temperature shipping as well as effective use in assays requiring high incubation temperatures.

[1] Kahre, O. et al., Compositions for increasing polypeptide stability and activity, and related methods, EP2501716B1 (2015) and US9321999B2 (2016)

Features

- **Exceptional stability** due to our patented Stability TAG technology – tolerates up to 60 minutes at 60 °C or 1 month at room temperature (25 °C)
- **Unique high concentration formulation (220 U/µl)** allows flexible assay design
- **Efficient protection of RNA** at low DTT concentrations
- **Strong inhibition** of eukaryotic RNases, including **RNase A, B, and C**
- **Compatibility** with reverse transcriptases, *Taq and Bsm* Polymerase.
- **Glycerol free** formulations available

Environment friendly dry ice-free shipping!

Applications

- First-strand cDNA synthesis
- RT-PCR, RT-qPCR and RT-LAMP
- In vitro transcription and translation
- RNA isolation and purification
- RNA sequencing

Stress tests with RiboGrip® show great tolerance to high temperatures

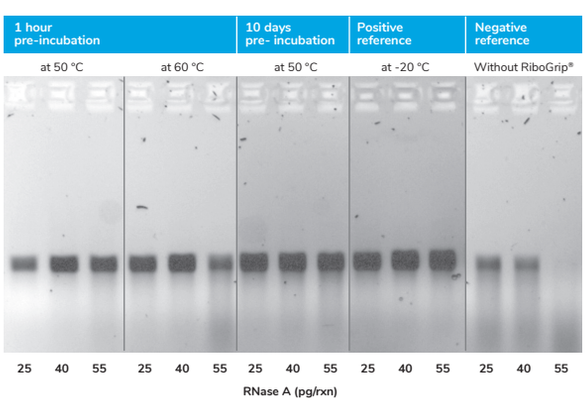

Figure 1. Illustrates the impact of RiboGrip® on the inhibition of RNase A-mediated cleavage of synthetic RNA. To assess its efficacy under different conditions, RiboGrip® was subjected to incubation at 50 °C or 60 °C for 1 hour, as well as at 50 °C for an extended period of 10 days (with a control sample stored at -20 °C). Subsequently, RiboGrip® stored under each respective stress condition was employed in an assay involving RNase A (at concentrations of 25, 40, and 55 pg/rxn, with a total reaction volume of 12 µl) and transcribed RNA (RNA 2 II, GAPDH, approximately 3000 bp). The reaction mixture was incubated in the reaction buffer at 32 °C for 60 minutes. The resulting cleavage of RNA was effectively inhibited by RiboGrip®, and the outcomes were visualized through electrophoresis on a 0.9% TBE gel.

Remarkable RNase inhibition range in real assays!

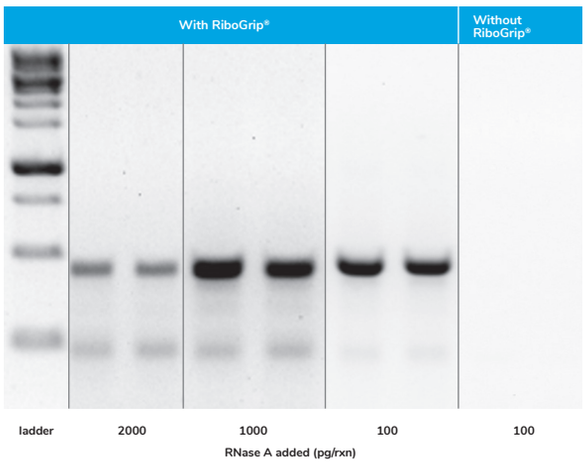

Figure 2. Demonstrates the broad inhibition range of RNase A by RiboGrip®. In this experiment, 1 ng of Human Total RNA (Agilent) served as the template in a 20 µl 1-step RT-PCR reaction. Various amounts of RNase A (100, 1000 and 2000 pg) were introduced into the reaction mixture.

The addition of 1.37 U/µl of RiboGrip® exhibited efficient inhibition of RNase A across the entire range of 100–2000 pg. Notably, this inhibitory effect did not compromise the amplification of the RNA target in the 1-step RT-PCR reaction. In stark contrast, in the absence of RiboGrip®, the reaction with 100 pg of RNase A resulted in the complete degradation of the RNA template, highlighting the critical protective role of RiboGrip® in preserving the integrity of the RNA target.

Find the best fit for your application:

Choose our glycerol-free RiboGrip® - for assays incorporating lyophilisation, air-drying or other applications requiring no glycerol!

RiboGrip® Glycerol-Free RNase Inhibitor (220 U/µl)

Choose our standard RiboGrip® - for any liquid mastermix or assay development where RNA degradation can be a problem!

RiboGrip® RNase Inhibitor (220 U/µl)

Clients report

- Great performance after air-drying and lyophilization!
- Remarkable stability in lysis buffer!

RiboGrip® is **a great fit with highly thermostable reverse transcriptases**, such as FIREScript® and SOLIScript®, allowing effective use with complex RNA templates and in one-step RT-(q)PCR assays, both of which may require higher RNA denaturation and/or RT reaction temperatures up to 60 °C.

Ordering information

Bulk solutions available!

Product	CAT. NO.	Size (U)	20 µL Reactions
RiboGrip® RNase Inhibitor (220 U/µl)	06-26-0000S (free sample) 06-26-4000U 06-26-010kU	2000 U 4000 U 10 000 U	100 200 500
RiboGrip® Glycerol-Free RNase Inhibitor (220 U/µl)	06-29-0000S (free sample) 06-29-4000U 06-29-010KU	2000 U 4000 U 10 000 U	100 200 500

FL-06-26/29-V1

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For further details and ordering please contact
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Request for a FREE SAMPLE!