

Protect your RNA



RiboSafe RNase Inhibitor

- Complete inhibition of RNase A, B and C
- No inhibition of polymerase/transcriptase activity
- Stable over a wide range of pH, temperatures and DTT concentrations
- Free from contaminants
- Increased RT-PCR sensitivity

Complete inhibition of eukaryotic RNases

RiboSafe RNase Inhibitor, manufactured by Bioline, is a recombinant protein which completely inhibits a broad spectrum of eukaryotic RNases, including RNase A, B and C. RiboSafe is effective even at high concentrations of eukaryotic RNases (Fig. 1). RiboSafe shows no inhibition of polymerase or transcriptase activity. Besides, it is not effective against RNase H, T1, S1-nuclease or RNase from *Aspergillus*.

RiboSafe is active over a broad range of reaction conditions - a wide range of pH, DTT concentrations and temperatures - allowing greater flexibility in experimental design (Fig. 2).

Increase in RT-PCR sensitivity

RiboSafe can significantly increase the detection limits of RT-PCR by protecting the RNA from degradation, leading to excellent results (Fig. 3).

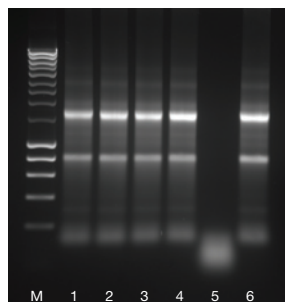


Fig. 1 RiboSafe inhibits increasing amounts of RNase A with high efficiency

2µg of total human HeLa cell RNA was incubated with 20 Units of RiboSafe RNase Inhibitor and 2ng, 750pg, 250pg and 125pg of RNase A (lanes 1-4) at 37°C for 30 min. Controls were total HeLa cell RNA (lane 5) and 2µg of total human HeLa cell RNA incubated with 125pg RNase A and no RiboSafe RNase Inhibitor (lane 6). Marker is HyperLadder I.

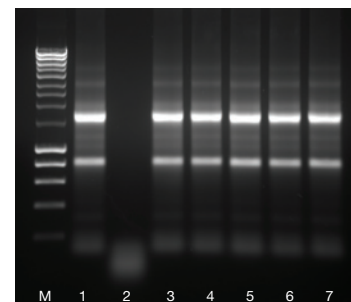


Fig. 2 Thermostability of RiboSafe RNase Inhibitor

2µg of total human HeLa cell RNA was incubated with 20 Units of RiboSafe RNase Inhibitor and 125pg of RNase A for 30 minutes at increasing temperatures (lanes 3-7). Control reaction was total human HeLa cell RNA incubated at 37°C without RNase Inhibitor (lane 1) and non-template control (lane 2). Marker is HyperLadder I.

Ribosafe RNase Inhibitor

Free from contamination

RiboSafe is tested for SDS-PAGE purity and the absence of endonucleases, exonucleases, nickases and phosphatases (Fig. 4). RiboSafe is guaranteed to be free from any degrading contaminants which could affect the quality of your results.

Superior performance

When compared with other commercially available inhibitors, RiboSafe is more efficient at inhibition of RNase activity. Fig. 5 shows the results of two assays performed with RiboSafe and an inhibitor from another supplier, demonstrating the superior protection offered by RiboSafe.

Applications

RiboSafe RNase Inhibitor is highly recommended in any application sensitive to RNase contamination, including:

- RNA purification
- RNA sequencing
- cDNA synthesis by reverse transcription
- *in vitro* RNA transcription
- *in vitro* protein synthesis

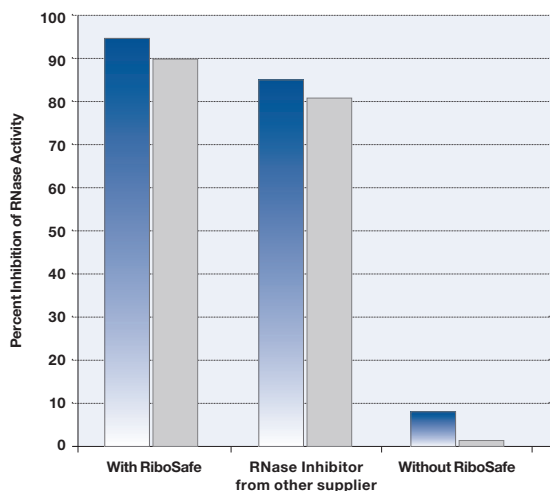


Fig. 5 RiboSafe RNase Inhibitor provides superior RNA protection

Inhibition of RNase A by RiboSafe RNase Inhibitor and RNase Inhibitor from another supplier was assessed with the Yeast RNA in-assay (blue columns) and the pre-incubation-assay (green columns). RiboSafe RNase Inhibitor blocks RNase A with higher efficiency than other commercially available RNase inhibitors.

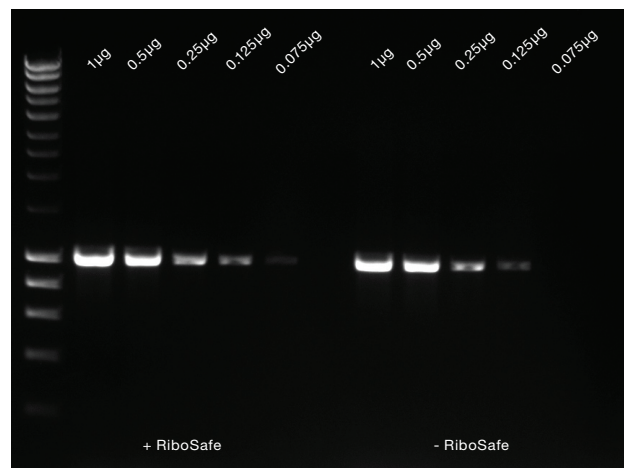


Fig. 3 RiboSafe increases the detection limits of RT-PCR

Total HeLa cell RNA (1µg - 0.075µg) was reverse transcribed in the presence and in the absence of RiboSafe RNase Inhibitor, followed by the amplification of a 1Kb fragment of the Angiotensin receptor II gene using SAHARA PCR Mix (lanes 1-10). Marker is HyperLadder I.

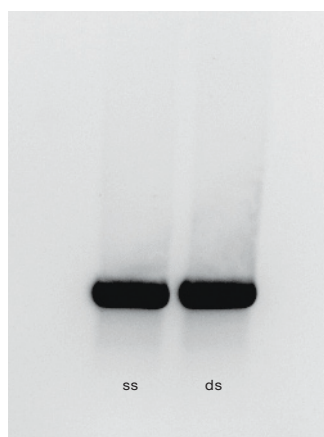


Fig. 4 Contamination tests for RiboSafe Ribonuclease Inhibitor

Radioactive-labeled short fragments of single (ss) and double (ds) stranded DNA were incubated for 3 hours at 37°C with 40 Units of RiboSafe Ribonuclease Inhibitor followed by separation on a 5% polyacrylamide gel. The gel was dried and exposed to X-Ray films.

Ordering Information

PRODUCT	PACK SIZE	CAT NO.
RiboSafe RNase Inhibitor	2500 Units	BIO-65027
RiboSafe RNase Inhibitor	10,000 Units	BIO-65028

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