Check the product label for actual catalog number, lot and expiry date.

SecurRIN™ RNase Inhibitor

CAT.#	SIZE	COMPONENTS	COMPONENT COMPOSITION
RNI0201	3000 u	75 µl - SecurRIN™ RNase Inhibitor, 40 u/µl	Storage buffer contains 50% glycerol and other components.
RNI0202	20000 u	500 µl - SecurRIN™ RNase Inhibitor, 40 u/µl	
Storage	*In the dark at -20°C.*		

APPLICATIONS

- Prevention of RNA degradation during:
  cDNA synthesis
  RNA purification
  in vitro transcription

BENEFITS

- Efficient RNA protection from RNases during cDNA synthesis or other procedures
- Economical robust high quality enzyme
- Active under different reaction conditions in different buffers

PRODUCT DETAILS

The SecurRIN™ RNase Inhibitor is a premium tool for protection of the RNA from degradation during enzymatic reactions, storage or RNA purification.
It is a recombinant protein derived from *E. coli* strain carrying the porcine RNase Inhibitor gene.
SecurRIN™ is a 52 kDa non-competitive inhibitor of pancreatic-type ribonucleases such as RNase A, RNase B, and RNase C.

PRODUCT DETAILS

- Active in all common buffers used for RNA work
- 1 unit of the RNase Inhibitor is typically used for 1 microliter of RNA reaction

UNIT DEFINITION

One unit is defined as the amount of enzyme required to inhibit by 50% the hydrolysis of cytidine 2', 3'-cyclic monophosphate by 5 ng of RNAse A.

PROTOCOL example (please follow recommendations for Reverse Transcriptase you use)

- RNA is extremely sensitive to degradation by RNases present everywhere. Take care to protect RNA from degradation keep your bench clean, wear gloves, use sterile tubes and filter pipet tips.
- Add SecurRIN™ RNase Inhibitor in to the cDNA synthesis reaction (~20 units for 20 µl reaction).
- Check the integrity of RNA prior to cDNA synthesis in denaturing agarose gel.
- Include positive control in parallel.
- Thaw and keep reagents on ice. Mix well before use.
- For best results, optimize the template and primer amount.
- Do not exceed the recommended amount of the enzyme.
- Choose optimal reaction temperature in a range recommended for your Reverse Transcriptase

Perform reaction as recommended for your Reverse Transcriptase. Given temperatures and times are just approximate suggestions.

✓ Prepare a 20 µl reaction:

SecurRIN™ RNase Inhibitor, 40 u/µl	0. 5 µl (20 u)
10 mM dNTP Mix (NUM0201)	2 µl (1 mM final)
Total RNA *or* Poly-A mRNA	1 pg to 5 µg *or* 1 pg to 0.5 µg
Oligo dT primer *or* Random primer *or* Specific primer	0.5 µg *or* 0.2 µg *or* 15-20 pmol
Water (PCR Water, WAT0110)	to 15 µl

✓ Mix gently, avoid bubbles.
✓ Heat 5 min at 65°C, spin, place on ice for 1 min.
✓ Add the 4 µl of 5X RT Reaction Buffer
✓ Add 1 µl Reverse Transcriptase, 200 u/µl and mix well.
✓ Incubate 2 min at 42°C for Oligo dT and for Specific primer
or
10 min at 25°C for Random primer to anneal.
✓ Incubate 30-50 min at 50°C to synthesize cDNA.
✓ Inactivate at 85°C for 10 min.
✓ Store reactions at -20°C or on ice for an immediate use.
✓ Use 2-5 µl of this reaction mix per 50 µl PCR reaction.
✓ Use 1-2 µl of this reaction mix per 20 µl qPCR reaction.

IN VITRO RESEARCH USE ONLY

ORDERING
T: +49 7250 33 13 401
F: +49 7250 33 11 413
order@highQu.com
www.highQu.com

SALES
T: +49 7250 33 13 401
F: +49 7250 33 11 413
sales@highQu.com

TECHNICAL SUPPORT
T: +49 7250 33 13 401
F: +49 7250 33 11 413
tech-support@highQu.com