RECEIVE FREE SAMPLE!

made in EU

*RIBO*PROTECT RNase Inhibitor

Maximum RNA protection

Full stability at 37°C for at least 4 weeks

2 YEARS SHELFLIFE — Full tests & documentation

LYO READY — Also glycerol-free

RIBO*PROTECT* **Hu RNase Inhibitor** is the right choice to overcome the challenges coming with the presence of ubiquitous RNases, commonly found in skin, dust, reagents, and biological samples.

RIBO*PROTECT* is a 50 kDa recombinant human placental protein expressed in *Escherichia coli*, which inhibits the activity of common A, B, and C RNases, but not towards RNase 1, RNase T1, RNase T2, S1 nuclease, and RNase H.

RIBO*PROTECT* inhibits RNases by non-covalent binding in a 1:1 ratio with high-affinity protein-protein interaction, forming one of the tightest known biomolecular complexes. Such inhibition effectively helps to maintain the RNA integrity and allows to obtain the appropriate quantity and quality of RNA.

Features and advantages

- **Full stability at 37°C for at least 4 weeks**
- **Inhibits RNase A, B and C activity**
- **Free of DNase and RNase activity**
- **Stable up to 58°C and at 0.5 – 1 mM DTT**
- **Active in diverse reaction conditions and in various buffers**
- **Active over a broad pH range (pH 5.5 – 9.0)**
- **High compatibility with co-reagents, including polymerase and reverse transcriptase**

Perfect choice for Life Science

Customized products

Technical support

Global distribution

Contact us at enzymes@blirt.eu to discuss your needs

Bulk quantities

Made in Poland

Partnership CMO/OEM

*RIBO*PROTECT RNase Inhibitor

Technical information

Molecular biology applications

- **RNA-related molecular diagnostics**
- **RNA isolation and purification**
- **cDNA synthesis, RT-PCR, RT-qPCR**
- ***in vitro* transcription and translation**

Stability during shipment

RIBO*PROTECT* displays unaffected activity for 4 weeks when incubated at 37˚C. Such a high unchanged activity in challenged temperature conditions is a guarantee of stability during uncontrolled shipment incidents.

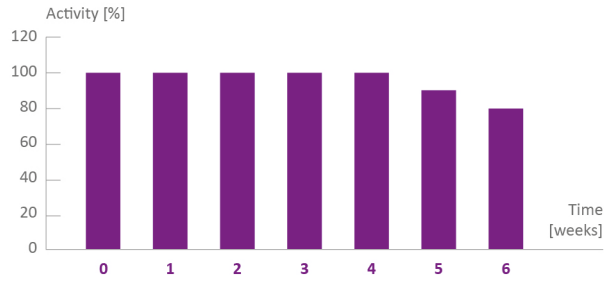

Figure 1:
*Stability of **RIBO**PROTECT Hu RNase Inhibitor at 37˚C.*

RIBO*PROTECT* samples were incubated at 37˚C for 6 weeks. After the given incubation time 40U of ***RIBO****PROTECT* was incubated with 5 ng of RNase A and 1 µg of RNA for 15 minutes at 37˚C.

Batch-to-batch consistency

Our customers' positive feedback is our best proof of reliability. The closeness in activity in the following three ***RIBO****PROTECT* batches (purple columns), coming from three different product purifications, shows very high batch-to-batch consistency. The grey column represents activity from a competitive RNase Inhibitor.

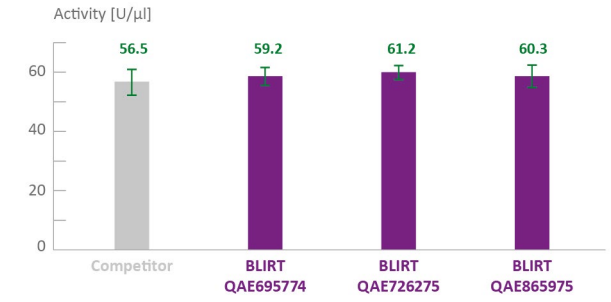

Figure 2:
RIBO*PROTECT Hu RNase Inhibitor stands out by high batch-to-batch consistency.*

The activity (U/µl) of ***RIBO****PROTECT* from three separate batches (purple columns) and a competitive RNase Inhibitor (grey column) tested by BLIRT's customer.

The efficiency comparison of *RIBO*PROTECT and competitive RNase Inhibitors

We compared the inhibition efficiency of the RNA degradation by ***RIBO****PROTECT* and two broadly used RNase Inhibitors from the top market leaders (marked here as RNase Inhibitor T and RNase Inhibitor P). We incubated 1 µg RNA (kidney cancer cell lines, 786-O) with 5 ng RNase A (BLIRT) at 37°C for 15 min with various RNase Inhibitor concentrations: 20, and 40U in a 20 µl reaction.

RIBO*PROTECT* displays very high RNA protection (RIN: 9.667 ± 0.240). For the recommended concentration of 40U, no differences were found between ***RIBO****PROTECT* and RNase Inhibitor P, while RNase Inhibitor T showed lower protection (RIN: 9.678 vs. 8.733, $p < 0.05$). Our results display that both RNase Inhibitor T and P are less efficient than ***RIBO****PROTECT* at 20U per 20 µl reaction ($p < 0.0001$).

*RIBO*PROTECT efficiency

RIBO*PROTECT* is the most efficient among all three tested RNase Inhibitors. Its equally high efficiency at 20-40U/20 µl reaction, which BLIRT recommends for most applications proves its high competitiveness among other RNase Inhibitors.

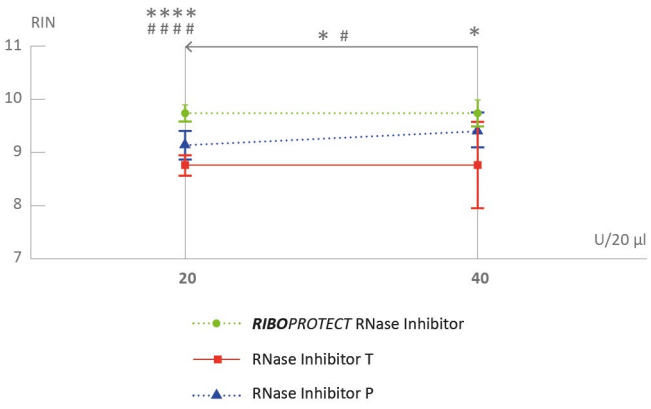

Figure 3:
Summary of RIN results for the three RNase Inhibitors.

Points: mean, whiskers — SD. *, # — determination for statistically significant differences between ***RIBO****PROTECT* and RNase Inhibitor T and P, respectively. *, #: $p < 0.05$; ****, ####: $p < 0.0001$: Student's t-test.

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