RiboLock RNase Inhibitor

Catalog Number EO0381, EO0382, EO0384

Pub. No. MAN0012010 Rev. C.00

WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from thermofisher.com/support.

Product description
Thermo Scientific RiboLock RNase Inhibitor inhibits the activity of RNases A, B and C by binding them in a noncompetitive mode at a 1:1 ratio. It does not inhibit eukaryotic RNases: T1, T2, U1, U2, CL3 as well as prokaryotic RNases I and H.

Contents and storage

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Contents</th>
<th>Source</th>
<th>Molecular Weight</th>
<th>Amount</th>
<th>Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>EO0381</td>
<td>RiboLock RNase Inhibitor</td>
<td><em>E.coli</em> cells with a cloned gene encoding a mammalian ribonuclease inhibitor.</td>
<td>49.6 kDa monomer</td>
<td>2500 U, 40 U/µL</td>
<td>-25 °C to -15 °C</td>
</tr>
<tr>
<td>EO0382</td>
<td></td>
<td></td>
<td></td>
<td>4 x 2500 U, 40 U/µL</td>
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<tr>
<td>EO0384</td>
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<td></td>
<td></td>
<td>24 x 2500 U, 40 U/µL</td>
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</tbody>
</table>

Applications
- Inhibition of RNA degradation in the following:
  - *in vitro* transcription (1);
  - cDNA synthesis (2);
  - *in vitro* translation (3);
  - isolation of mammalian cell fractions that contain mRNA-protein complex (3);
  - RNA amplification (4).
- RNA purification and storage.
- Separation and identification of specific ribonuclease activities (5).
- Studies of tumor suppression (6).

Definition of Activity Unit
One unit of the RiboLock™ RNase Inhibitor inhibits the activity of 5 ng of RNase A by 50 %.

Inhibitor activity is assayed in the following mixture:
100 mM Tris-HCl (pH 7.5), 1.2 mM EDTA, 0.1 mg/mL BSA, 100 ng/mL RNase A, 0.1 mg/mL [³H]-RNA, 50 mg/mL yeast RNA, 8 mM DTT.

Storage Buffer
The protein is supplied in: 20 mM HEPES-NaOH (pH 7.5), 50 mM NaCl, 8 mM DTT, 0.03 % (v/v) ELUGENT Detergent and 50% (v/v) glycerol.

Inhibition and Inactivation
- Inhibitors: common denaturants (SDS, urea and all oxidizing reagents (p-chloromercuribenzoate, dissolved oxygen, ions in their higher oxidation states) strongly inhibit RiboLock RNase Inhibitor and release the RNase bound.
- Inactivated by heating at 75 °C for 10 min. Residual activity detectable after 10 min heating at 70 °C.

Note
- DTT provided in the Storage Buffer ensures stability during long term storage, but is not necessary for inhibitor activity.
- Recommended concentration – 1 U/µL of a reaction mixture.

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References


Limited product warranty

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For descriptions of symbols on product labels or product documents, go to thermofisher.com/symbols-definition.

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