Ribonuclease, (RNase) H source: recombinant *E. coli* strain

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Ribonuclease H is used in removal of the RNA strand prior to second-strand cDNA synthesis and analysis of in vitro polyadenylation reaction products

NEW 32

Ribonuclease H (RNase H) from *E. coli* is an endoribonuclease that specifically hydrolyses the phosphodiester bonds of RNA hybridised to DNA to produce 3'-OH and 5'-P terminated products. It will not degrade single-stranded nucleic acids, duplex DNA or double-stranded RNA.

Catalogue No	Quantity
BPE3215-1	50 units

Concentration: 0.5 to 2units/µL
Storage buffer components: 20mM HEPES-KOH (pH7.8), 1mM DTT, 50mM KCl and 50% (v/v) glycerol and 0.2mg/mL BSA.
One unit is defined as the amount of enzyme required to produce 1nmol acid-soluble ribonucleotides from radiolabelled poly(rA):poly(dT) in 20 minutes at 37°C in 20mM HEPES-KOH (pH7.8), 50mM KCl, 10mM $MgCl_2$, 1mM DTT, 20µM radiolabelled poly(rA):poly(dT).

Product specification
Tested for: Activity, ssDnase, dsDnase, RNase, endonuclease/nickase, and specific performance tests

(Ribonuclease) RNase inhibitor

First aid	Std.
Spillage	G, H
Storage	Cool, dry

Ribonuclease inhibitor, recombinant, Optizyme

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Recombinant Ribonuclease inhibitor displays a broad spectrum of inhibitory activity against RNases, and does not have activity against other polymerases and reverse transcriptases

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Suitable for use in common molecular biology applications such as isolation and purification of RNA, cDNA synthesis, RT-PCR*, in vitro RNA transcription/translation, ribonuclease protection assay, and preparation of RNase-free antibodies.

Supplied as a recombinant product from *E. coli* (originally isolated from rat lung) and provides superior protection of RNA from degradation by RNases. This RNase inhibitor is commonly added to all solutions used during the isolation of RNA, and will not interfere with the performance of most enzymes in downstream applications. Active over a broad temperature range, and even provides some RNase inhibition at 60°C which is useful when performing reverse transcription reactions at elevated temperatures to overcome secondary structure in RNA.

Please note: Inactivates RNase A, RNase B, and RNase T2. No activity against SP6, T7, or T3 RNA polymerases, AMV or MMLV reverse transcriptases, and *Taq* DNA polymerase.
Unit activity: Defined as the amount of inhibitor required to inhibit 50% of the activity of 5ng of RNase A.

Catalogue No	Quantity
BPE3222-1	2,500 units
BPE3222-5	10,000 units

Storage buffer components: 20mM HEPES-KOH (pH7.6 at 4°C), 50mM KCl, 8mM DTT, and 50% glycerol (v/v)

Product specification
Tested for: DNase and Nickase contamination, absence of RNase activity, and specific performance tests

Ribonuclease inhibitor, human, placental, Optizyme

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Used in many molecular biology procedures to maintain the integrity of RNA

NEW 32

Human placental ribonuclease inhibitor is the most commonly used RNase inhibitor. Displays a broad spectrum of inhibitory activity against RNases, and does not have activity against other nucleases, reverse transcriptases, or polymerases. Suitable for use in common molecular biology applications such as RT-PCR*, cDNA synthesis, in vitro RNA transcription, in vitro translation, and ribonuclease protection assay.
Human placental ribonuclease inhibitor is isolated by affinity chromatography from human placentas and it will inactivate type A ribonucleases by non-covalently binding to the nuclease in a 1:1 ratio. This RNase inhibitor will function in most enzymatic reaction buffers with pH5 to pH9. Optimal activity is observed at pH7 to pH8.
Note: Inactivates RNase A, RNase B, and RNase C. Does not inhibit RNase T1, RNase H, S1 Nuclease, and RNase from *Aspergillus*. No activity against SP6, T7, or T3 RNA polymerases, AMV or MMLV reverse transcriptases, and *Taq* DNA polymerase.
Unit activity: Defined as the amount of inhibitor required to inhibit 5ng of RNase A by 50% at a concentration of RNase A of 1mg/mL.

Catalogue No	Quantity
BPE3224-1	2500 units
BPE3224-5	10,000 units

Concentration: 20 to 40units/µL (lot specific)
Storage buffer components: 20mM HEPES-KOH (pH7.6), 50mM KCl, 5mM DTT, and 50% glycerol

Product specification
Tested for: DNase and Nickase contamination, absence of RNase activity, and specific performance tests

Ribonuclease inhibitor, porcine, Optizyme

Fisher BioReagents®

Used in many molecular biology procedures to maintain the integrity of RNA

NEW 32

From a non-human source, porcine ribonuclease inhibitor may be especially useful where contamination with human DNA is a concern. It is the most economical choice for equivalent inactivation of RNase activity. Displays a broad spectrum of inhibitory activity against RNases, and is ideal for use in RT-PCR*, cDNA synthesis, and in vitro RNA trancription.
Porcine ribonuclease inhibitor is isolated by affinity chromatography from porcine livers and it will inactivate type A ribonucleases by non-covalently binding to the nuclease in a 1:1 ratio. This RNase inhibitor will function in most enzymatic reaction buffers with pH5 to pH9. Optimal activity is observed at pH7 to pH8. Does not have activity against other nucleases, reverse transcriptases, or polymerases.
Note: Inactivates RNase A, RNase B, and RNase C. Does not inhibit RNase T1, RNase H, RNase V1, RNase Phy M, and RNase U2. No activity against SP6, T7 or T3 RNA polymerases, AMV or MMLV reverse transcriptases, and *Taq* DNA polymerase.
Unit activity: Defined as the amount of inhibitor required to inhibit 5ng of RNase A by 50% at a concentration of RNase A of 1mg/mL.

Catalogue No	Quantity
BPE3225-1	2,500 units
BPE3225-5	10,000 units

Concentration: 20 to 40units/µL (lot specific)
Storage buffer components: 20mM HEPES-KOH (pH7.6), 50mM KCl, 5mM DTT, and 50% glycerol

Product specification
Tested for: DNase and Nickase contamination, absence of RNase activity, and specific performance tests

*Polymerase Chain Reaction (PCR) is a process covered by patents owned by Hoffman-La Roche