

DATA QUALITY SHEET



RNase-Inhibitor

FOR RESEARCH USE ONLY

Cat. GC-042-0100, GC-042-0250, GC-042-0500, GC-042-1000, GC-042-5000

DESCRIPTION	<p>Native RNase-Inhibitor from human placenta exerts its inhibitory effect by binding non-covalently to RNases in a 1:1 ratio with an association constant of 1014. It is a protein with a molecular weight of 51 kDa and inhibits common eukaryotic RNases including RNase A, RNase B, RNase C.</p> <p>It does not inhibit RNase H, S1 Nuclease, SP6, T7 or T3 RNA polymerase, AMV or M-MLV Reverse Transcriptase, Taq DNA polymerase and RNase T1.</p> <p>The enzyme is active over a broad pH range between 5 and 8, with a maximum activity at pH 7-8.</p>
CONCENTRATION	5 units/ μ l
APPLICATION	<p>Any application where eukaryotic RNase contamination is a potential problem:</p> <ul style="list-style-type: none">- Inhibition of RNA degradation in the following:<ul style="list-style-type: none">- in vitro transcription- cDNA synthesis- in vitro translation- isolation of mammalian cell fractions that contain mRNA-protein complex- RNA amplification- RNA purification and storage- Separation and identification of specific ribonuclease activities- Studies of tumor suppression
UNIT DEFINITION	One unit inhibits 5 ng of RNase A by 50% using cytidine 2',3'-cyclic monophosphate (cCMP) as a substrate.
STORAGE BUFFER	20 mM Hepes-KOH, 50 mM KCl, 8 mM DTT, 50% glycerol
STORAGE TEMPERATURE	RNase-Inhibitor below 0°C preferably at -20°C, in a constant temperature freezer.
QUALITY CONTROL	Activity, SDS-PAGE purity, absence of endonucleases/nucleases and exonucleases.
SHELF LIFE	2 years from date of receipt under proper storage conditions.
FUNCTIONAL ANALYSIS	Tested functionally in a unit activity test.