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Hybridase™ Thermostable RNase H

Cat. Nos. H39100 and H39500

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1. Introduction

Hybridase™ Thermostable RNase H is an enzyme that specifically degrades only the RNA strand of an RNA:DNA hybrid, leaving the DNA strand and any unhybridized RNA intact. Unlike *E. coli* RNase H, Hybridase RNase H is highly active and stable at high temperatures. The enzyme's half life is several hours at 70°C and approximately 30 minutes at 95°C. These characteristics allow researchers to increase the stringency of many applications that use RNase H activity, including RNA mapping studies and diagnostic probe research.

Hybridase Thermostable RNase H is available in 100- and 500-Unit sizes at a concentration of 5 Units/µl.

2. Product Specifications

Storage: Store only at –20°C in a freezer without a defrost cycle.

Unit Definition: One unit results in the acid-solubilization of 1 nmole of [^{3}H]-polyadenylic acid in the presence of an equimolar concentration of polythymidylic acid in 20 minutes at 45°C.

Note: *The unit assay is performed at 45°C due to the T_m of poly(dT)/poly(A). The optimal temperature for many applications may be considerably higher.*

Storage Buffer: Hybridase RNase H is supplied in a 50% glycerol solution containing 50 mM Tris-HCl (pH 7.5), 0.1 M NaCl, 0.1 mM EDTA, 1 mM dithiothreitol, and 0.1% Triton® X-100.

Quality Control: Hybridase RNase H is function-tested in a reaction containing 50 mM Tris-HCl (pH 7.5), 100 mM NaCl, 10 mM $MgCl_2$, 500 µM polythymidylic acid, and 500 µM polyadenylic acid.

Recommended Reaction Buffer: The recommended reaction buffer for Hybridase RNase H is 50 mM Tris-HCl (pH 7.5), 100 mM NaCl, and 10 mM $MgCl_2$.

Contaminating Activity Assays: Hybridase RNase H is free of detectable DNA exo- or endonuclease, and non-RNase H RNase activities.

3. Related Products

The following products are also available:

- RNase H, *E. coli*
- RNase 1, *E. coli*
- RNase T1, *Aspergillus oryzae*
- MMLV High Performance Reverse Transcriptase
- MMLV Reverse Transcriptase
- MonsterScript™ Reverse Transcriptase
- T7 Phage RNA Polymerase
- T7 R&DNA™ Polymerases
- dNTP Solutions
- NTP Solutions

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