



# Hybridase™ Thermostable RNase H

Cat. Nos. H39100 and H39500

Connect with Epicentre on our blog ([epicentral.blogspot.com](http://epicentral.blogspot.com)),  
Facebook ([facebook.com/EpicentreBio](https://facebook.com/EpicentreBio)), and Twitter ([@EpicentreBio](https://twitter.com/EpicentreBio)).

## 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 [<sup>3</sup>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<sub>2</sub>, 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<sub>2</sub>.

**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

Hybridase™ Thermostable RNase H is covered by U.S. Patent Nos. 5,268,289; 5,459,055 and 5,500,370 assigned to Epicentre. This product is accompanied by a limited non-exclusive license for the purchaser to use the purchased product solely for life science research. Contact Epicentre for information on licenses to other uses.

Hybridase, MonsterScript, and R&DNA are trademarks of Epicentre, Madison, Wisconsin.

Triton is a registered trademark of Rohm & Haas, Philadelphia, Pennsylvania.

Visit our technical blog: [epicentral.blogspot.com](http://epicentral.blogspot.com)