



## RNase H

*(Escherichia coli)*

Cat. No.	size
E1330-01	250 units
E1330-02	1 250 units

### Unit Definition:

One unit is the amount of enzyme required to produce 1 nmol of acid-soluble ribonucleotides from [<sup>3</sup>H]poly(A)-poly(dT) in 20 min at 37°C.

### Storage Conditions:

Store at -20°C.

### References:

1. Donis-Keller, H. (1979) *Nucleic Acids Res.* 7, 179-182.
2. Okayama, H. and Berg, P. (1982) *Mol. Cell Biol.* 2, 161-170.
3. Gubler, U. and Hoffman, B.J. (1983) *Gene* 25, 263-269.
4. Keller, W. and Crouch, R. (1972) *Proc. Natl. Acad. Sci. USA* 69, 3360-3364.
5. Goodwin, E.C. and Rottman, F.M. (1922) *Nucl. Acids Res.* 20, 916.
6. Hillenbrand, G. and Staudenbauer, W.L. (1982) *Nucl. Acids Res.* 10, 833-852.

Endonuclease that selectively cleaves the RNA of RNA-DNA hybrids.

### Description:

- Hybridization of a synthetic DNA oligomer to a complementary single-stranded region of a RNA molecule can be used to create a site that can be cleaved by RNase H (1).
- Used to remove RNA strand before second strand cDNA synthesis (2, 3).
- Detects RNA-DNA regions in naturally occurring double-stranded DNA (4).
- Used to analyze *in vitro* polyadenylation reaction products (5).

### Assay Conditions:

20 mM HEPES-KOH (pH 8.0), 50 mM KCl, 10 mM MgCl<sub>2</sub>, 1 mM dithiothreitol and 0.6 nmol [<sup>3</sup>H]poly(A)-poly(dT) in a reaction volume of 25 µl (6).

### Storage Buffer:

20 mM Tris-HCl (pH 7.5 at 22°C), 300 mM KCl, 0.1 mM dithiothreitol, 7 mM EDTA, 20 mM magnesium acetate, 200 µg/ml bovine serum albumin and 50% (v/v) glycerol.

### Quality Control:

All preparations are assayed for contaminating single- and double-stranded DNase, endonuclease, RNase III and nonspecific RNase activities. Typical preparations are greater than 90% pure, as judged by SDS polyacrylamide gel electrophoresis.