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roboklon

RNase H

Ribonuclease H
(*Escherichia coli*)

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(Escherichia coli)

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

Cat. No.	Size
E1330-01	50 units
E1330-02	250 units

Unit Definition:
One unit is the amount of enzyme required to produce 1 nmol of acid-soluble ribonucleotides from [^{3}H]poly(A)-poly(dT) in 20 min at 37°C.

Storage Conditions:
Store at -20°C

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).

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.

Assay Conditions:

20 mM HEPES-KOH (pH 8.0), 50 mM KCl, 10 mM $MgCl_2$, 1 mM dithiothreitol and 0.6 nmol [^{3}H]poly(A)-poly(dT) in a reaction volume of 25 µl (6).

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.

References:

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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.*