



Mung Bean Nuclease

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Single-stranded specific DNA and RNA endonuclease.

Cat. No.	Size
E1190-01	2 000 units
E1190-02	10 000 units

Unit Definition:

One unit is the amount of enzyme required to produce 1 µg of acid-soluble material per minute at 37°C using denatured calf thymus DNA.

Storage Conditions:

Store at -20°C

Description:

- Removes protruding ends in duplex DNA resulting in ligatable blunt ends (1).
- Suitable for trimming single-stranded protruding ends of DNA or RNA without degrading the duplex structure (2).
- Used for mapping of transcripts by analyzing the Mung Bean Nuclease-resistant RNA-DNA hybrids (3).
- Digests hairpin structures during cDNA synthesis (4).
- Will not cleave the strand opposite a nick in duplex DNA.
- Requires Zn²⁺ ions for activity.

Storage Buffer:

10 mM Tris-HCl (pH 7.5 at 22°C), 0.1 mM zinc acetate, and 50% [v/v] glycerol.

Assay Conditions:

30 mM sodium acetate (pH 5.0), 50 mM NaCl, 1 mM ZnCl₂, 0.5 mg/ml denatured calf thymus DNA and 5 [v/v] glycerol. Incubation is at 37°C for 10 min in a reaction volume of 1 ml.

Quality Control:

All preparations are assayed for contaminating double-stranded DNase activity.

References:

1. Ardelt, W., and Laskowski, M., Sr. (1971) *Biochem. Biophys. Res. Commun.* 44, No. 5, 1205-1211.
2. Berk, A.J., and Sharp, P.A. (1977) *Cell* 12, 721-732.
3. Berk, A.J., and Sharp, P.A. (1978) *Proc. Natl. Acad. Sci. U.S.A.* 75, 1274-1278.
4. Goodman, H.M. and McDonald, R.J. (1979) *Methods Enzymol.* 68, 75-90.