MnlI





R0163S





info@neb.com

www.neb.com

500 units

5.000 U/ml

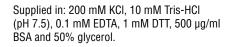
Lot: 0611208 RECOMBINANT Store at -20°C Exp: 8/14

Recognition Site:

5′... C C T C (N), ▼... 3′ 3'...5'

Source: An E. coli strain that carries the cloned MnII gene from Moraxella nonliquefaciens (ATCC 17953)

New Reaction Buffer



Reagents Supplied with Enzyme: 10X NEBuffer 4, 100X BSA.

Reaction Conditions: 1X NEBuffer 4. supplemented with 100 μg/ml BSA. Incubate at 37°C.

1X NEBuffer 4:

50 mM potassium acetate 20 mM Tris-acetate 10 mM magnesium acetate 1 mM dithiothreitol pH 7.9 @ 25°CC

Unit Definition: One unit is defined as the amount of enzyme required to digest 1 μ g of λ DNA in 1 hour at 37°C in a total reaction volume of 50 ul.

Diluent Compatibility: Diluent Buffer B 300 mM NaCl. 10 mM Tris-HCl. 0.1 mM EDTA. 1 mM DTT, 500 µg/ml BSA and 50% glycerol (pH 7.4 @ 25°C).

Quality Control Assays

Ligation: After 2-fold overdigestion with MnII. approximately 50% of the DNA fragments can be ligated with T4 DNA Ligase (at a 5' termini concentration of 1–2 µM) at 16°C. Of these ligated fragments. > 95% can be recut.

16-Hour Incubation: A 50 ul reaction containing 1 µg of DNA and 25 units of enzyme incubated for 16 hours resulted in the same pattern of DNA bands as a reaction incubated for 1 hour with 1 unit of enzyme.

Exonuclease Activity: Incubation of 100 units of enzyme with 1 µg sonicated 3H DNA (105 cpm/μg) for 4 hours at 37°C in 50 μl reaction buffer released < 0.1% radioactivity.

Enzyme Properties

Activity in NEBuffers:

NEBuffer 1 75% NFBuffer 2 100% NEBuffer 3 50% NEBuffer 4 100% When using a buffer other than the optimal (supplied) NEBuffer, it may be necessary to add more enzyme to achieve complete digestion.

Survival in a Reaction: A minimum of 0.25 unit is required to digest 1 µg of substrate DNA in 16 hours.

Heat Inactivation: 5 units of enzyme were inactivated by incubation at 65°C for 20 minutes.

Notes: MnII produces DNA fragments that have a single-base 3' extension which are more difficult to ligate than blunt-ended fragments.

The cleavage sequence of MnII has been revised. Brinkley, P., Bautista, D. S., and Graham, F. L. (1991) Gene 100, 267-268.

Not sensitive to dam, dcm or mammalian CpG methylation.

= Time-Saver™ Qualified (See www.neb.com for details).

CERTIFICATE OF ANALYSIS

MnlI



1-800-632-7799 info@neb.com www.neb.com



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5′... C C T C (N), ▼... 3′ 3′... G G A G (N)₆,... 5′

Source: An *E. coli* strain that carries the cloned MnII gene from *Moraxella nonliquefaciens* (ATCC 17953)

New Reaction Buffer

Supplied in: 200 mM KCl, 10 mM Tris-HCl (pH 7.5), 0.1 mM EDTA, 1 mM DTT, 500 μg/ml BSA and 50% glycerol.

Reagents Supplied with Enzyme: 10X NEBuffer 4, 100X BSA.

Reaction Conditions: 1X NEBuffer 4. supplemented with 100 μg/ml BSA. Incubate at 37°C.

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