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Certificate of Analysis

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Mnl I

Catalog No: 2289

Lot No: See Product Label

Package Size: See Product Label

Concentration: See Product Label

Source: *Moraxella nonliquefaciens*

Storage Conditions: Store at -20°C

Recognition/Cut Site

5'-CCTC(N)₇-3'

3'-GGAG(N)₆-5'

Unit Definition

One unit is the amount of enzyme required to completely digest 1 µg of Lambda DNA in 1 hour in a total reaction volume of 50 µl.

Reaction Temperature

37°C

Heat Inactivation

10 minutes at 65°C

Assay Conditions

10 mM Tris-HCl (pH 7.5 @ 37°C)

10 mM MgCl₂

50 mM NaCl

1 mM Dithiothreitol

100 µg/ml bovine serum albumin

1 µg of Lambda DNA

Incubation is at 37°C for 1 hour in a reaction volume of 50 µl

Storage Buffer

10 mM Tris-HCl (pH 7.5 @ 4°C)

50 mM KCl

0.1 mM EDTA

1 mM Dithiothreitol

200 µg/ml bovine serum albumin

50% (v/v) Glycerol

Quality Control

Non-specific Endonuclease: Incubation of 10 units of Mnl I with 1 µg of Lambda DNA at 37°C for 16 hours (a 160-fold over-digestion) resulted in the same sharp characteristic banding pattern as 10 U/µg in the standard 1 hour assay reaction, as determined by agarose gel electrophoresis.

3'-Exonuclease: Incubation of 1, 2, and 4 units of Mnl I and 5 pmole of lambda/TaqI fragments (3'-labeled with Klenow exo- and [³H]dCTP), incubated for 1 hour at 37°C resulted in ≤0.2 slope of %-end label released per unit of enzyme. Reaction volume of 50 µl.

5'-Exonuclease/5'-Phosphatase:

Incubation of 1, 2, and 4 units of Mlu I with 0.25 µg of [5'-³²P]lambda/HaeIII fragments for 1 hour at 37°C resulted in ≤0.2 slope of %-end label released per unit of enzyme. Reaction volume of 50 µl.