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Certificate of Analysis

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Msp I

Catalog No: 2290

Lot No: See Product Label

Package Size: See Product Label

Concentration: See Product Label

Source: Moraxella species

Storage Conditions: Store at -20°C

Recognition/Cut Site

5'-C↓CGG-3'

3'-GGC↑C-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 0.05 ml.

Reaction Temperature

37°C

Heat Inactivation

10 minutes at 65°C

Assay Conditions

50 mM Tris-HCl (pH 8.0)

50 mM NaCl

10 mM MgCl₂

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)

50 mM KCl

0.1 mM EDTA

1 mM dithiothreitol

100 µg/ml bovine serum albumin

50% (v/v) Glycerol

Quality Control

Nonspecific Endonuclease: Incubation of 20, 35, and 50 units of Msp I with 1 µg of ΦX-174 DNA at 37°C for 5 hours (a 250-fold over-digestion) resulted in the same sharp characteristic banding pattern as 4 U/µg in the standard 1 hour assay reaction, as determined by agarose gel electrophoresis.

Nonspecific Endonuclease: Incubation of 20, 35, and 50 units of Msp I with 1 µg of SV40 DNA at 37°C for 5 hours (a 250-fold over-digestion) resulted in the same sharp characteristic banding pattern as 4 U/µg in the standard 1 hour assay reaction, as determined by agarose gel electrophoresis.

3'-Exonuclease: Incubation of 5, 10, 15, 20, and 30 units of Msp I and 5 pmoles of lambda/Taq I fragments (3'-labeled with Klenow exo⁻ and [³H]dCTP), incubated for 1 hour at 37°C resulted in a ≤0.3 slope of %-end label released per unit of enzyme. Reaction volume of 50 µl.

5'-Exonuclease/5'-Phosphatase:

Incubation of 5, 10, 15, 20, and 30 units of Msp I with 0.25 µg of [5'-³²P]lambda/Hae III fragments for 1 hour at 37°C resulted in a ≤0.3 slope of %-end label released per unit of enzyme. Reaction volume of 50 µl.

Ligation/Recut: Incubation of 4 units of Msp I with 1 µg of Lambda DNA at 37°C produces fragementations that ligate with ≥95% efficiency. The recut efficiency of these ligated fragments is 100%.

For more information or to re-order, please visit www.chimerx.com