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Certificate of Analysis

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Mbo I

Catalog No: 2283

Lot No: See Product Label

Package Size: See Product Label

Concentration: See Product Label

Source: *Moraxella bovis*

Storage Conditions: Store at -20°C

Recognition/Cut Site

5'-GATC-3'

3'-CTAG-5'

Unit Definition

One unit is the amount of enzyme required to completely digest 1 µg of SV40 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

50 mM Tris-HCl (pH 8.0)

50 mM NaCl

10 mM MgCl₂

1 µg of SV40 DNA

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

Storage Buffer

10 mM Tris-HCl (pH 7.4)

0.1 mM EDTA

50 mM KCl

1 mM DTT

0.1% Triton X-100

500 µg/ml bovine serum albumin

50% (v/v) Glycerol

Quality Control

Endonuclease: Incubation of 10, 20, and 30 units of Mbo I with 1 µg of SV-40 DNA at 37°C for 5 hours (a 150-fold over-digestion) resulted in the same sharp characteristic banding pattern as 4 U/µg in the standard 1hr assay reaction, as determined by agarose gel electrophoresis.

Nicking: Incubation of 10, 20, and 30 units of Mbo I with 1 µg of φX-174 DNA at 37°C for 5 hours (a 150-fold over-digestion) resulted in $\leq 90\%$ conversion of RF I to RF II and $\leq 5\%$ conversion to RF III, as determined by agarose gel electrophoresis. Reaction volume of 50 µl.

3'-Exonuclease: Incubation of 2, 5, 10, 15, and 20 units of Mbo I and 5 pmoles of 3'-ends of lambda/Taq I fragments (3'-labelled with Klenow exo- and [³H]dCTP), incubated for 1 hr at 37°C resulted in ≤ 0.3 slope of %-end label released per unit of enzyme. Reaction volume 50 µl.

5'-Exonuclease/5'-Phosphatase:

Incubation of 2, 5, 10, 15, and 20 units of Mbo I with 0.25 µg 5'-ends of [5'-³²P]lambda/Hae III fragments for 1 hour at 37°C resulted in ≤ 0.3 slope of %-end label released per unit of enzyme. Reaction volume of 50 µl.

Ligation/Recut: Incubation of 2 units of Mbo I with 1 µg of SV-40 DNA at 37°C produces fragments that ligate with > 85% efficiency. The recut efficiency of these ligated fragments is 100%.

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