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Certificate of Analysis

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Mlu I

Catalog No: 2287

Lot No: See Product Label

Package Size: See Product Label

Concentration: See Product Label

Source: *Micrococcus luteus*

Storage Conditions: Store at -20°C

Recognition/Cut Site

5'-A↓CGCGT-3'
3'-TGCGC↑A-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

50 mM Tris-HCl (pH 8.0)

10 mM MgCl₂

100 mM NaCl

1 µg of Lambda DNA

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

Storage Buffer

50 mM Tris-HCl (pH 7.4)

50 mM NaCl

0.1 mM EDTA

1 mM dithiothreitol

500 µg/ml bovine serum albumin

0.1 % Triton X-100

50% (v/v) Glycerol

Quality Control

Non-specific Endonuclease: Incubation of 20, 35, and 50 units of Mlu I with 1 µg of Lambda DNA at 37°C for 5 hour (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.

Nicking: Incubation of 20, 35, and 50 units of Mlu I with 1 µg of pBR322 DNA at 37°C for 5 hours (a 250-fold over-digestion) resulted in ≤50% conversion of RF I to RF II and ≤5% conversion to RF III, as determined by agarose gel electrophoresis. Reaction volume of 50 µl.

3'-Exonuclease: Incubation of 5, 10, 15, 20, and 30 units of Mlu 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 5, 10, 15, 20, and 30 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.

Ligation/Recut: Incubation of 4 units of Mlu I with 1 µg of Lambda DNA at 37°C produces fragments 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