6143 North 60th Street
Milwaukee, WI 53218
www.chimerx.com

Certificate of Analysis

Telephone: (414) 535-9506
Toll Free: (800) 626-7833
Fax: (414) 535-9508
Web Support: chimerx.com/support
Email: info@chimerx.com

PinA I

Catalog No: 2299

Lot No: See Product Label
Package Size: See Product Label
Concentration: See Product Label
Source: Pseudomonas inqualis
Storage Conditions: Store at -20°C

Recognition/Cut Site

5'-A↓CCGGT-3'
3'-TGGCC↑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

37ºC

Heat Inactivation

10 minutes at 65ºC

Assay Conditions

20 mM Tris-HCl (pH 7.4)
5 mM $MgCl_2$
50 mM KCl
1 µg of λ DNA
Incubation is at 37°C for 1 hour in a reaction volume of 50 µl

Storage Buffer

20 mM Tris-HCl (pH 7.5)
0.1mM EDTA
100mM NaCl
10mM β-mercaptoethanol
0.05% (v/v) Triton X-100
50% (v/v) Glycerol

Quality Control

Endonuclease: Incubation of 10, 20, and 30 units of PinA I with 1 µg of λ 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 1 hour assay reaction, as determined by agarose gel electrophoresis. Reaction volume of 50 µl.

Nicking: Incubation of 10, 20, and 30 units of PinA I with 1 µg of ϕX-174 DNA at 37°C for 5 hours (a 150-fold over-digestion) resulted in ≤40% conversion of RF I to RF II and no conversion to RF III, as determined by agarose gel electrophoresis. Reaction volume of 50 µl.

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

5'-Exonuclease/5'-Phosphatase: Incubation of 2, 5, 10, and 20 units of PinA I with 0.25 µg 5'-ends of [5'-^{32}P]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 PinA I with 1 µg of λ DNA at 37°C produces fragments that ligate with > 95% efficiency. The recut efficiency of these ligated fragments is 100%.