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

Hpa I

Catalog No: 2250

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

Recognition/Cut Site

5'-GTT↓AAC-3'
3'-CAA↑TTG-5'

Unit Definition

One unit is the amount of enzyme required to completely digest 1 μg of Lambda DNA in 1 hour at 37°C in a total reaction volume of 50 μl.

Reaction Temperature

37ºC

Heat Inactivation

No

Assay Conditions

20 mM Tris-HCl (pH 7.4)
5 mM $MgCl_2$
50 mM KCl
1 μg of Lambda DNA
Reaction volume of 50 μl

Storage Buffer

20 mM Tris-HCl (pH 7.4)
0.5 mM EDTA
50 mM KCl
1 mM DTT
0.1% (w/v) Triton X-100
500 μg/ml Bovine serum albumin
50% (v/v) Glycerol

Quality Control

Endonuclease: Incubation of 20, 35, and 50 units of Hpa I with 1 μg of Lambda 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. A second incubation using SV40 DNA as the DNA substrate 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 Hpa I with 1 μg of pBR322 DNA at 37°C for 5 hours resulted in ≤60% conversion of RF I to RF II and ≤10% conversion to RFIII, as determined by agarose gel electrophoresis.

3'-Exonuclease: Incubation of 5, 10, 15, 20, and 30 units of Hpa I with 5 pmoles of Lambda/Taq I fragments (3'-labeled with Klenow exo^- and [^{3}H]dCTP), incubated for 1 hour at 37°C resulted in a ≤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 Hpa I with 0.25 μg of [5'-^{32}P]Lambda/Hae III fragments for 1 hour at 37°C resulted in a ≤0.2 slope of %-end label released per unit of enzyme. Reaction volume of 50 μl.

Ligation/Recut: Incubation of 4 units of Hpa I with 1 μg of SV40 DNA at 37°C produces fragments that ligate with ≥ 33% efficiency. The recut efficiency of these ligated fragments is 100%.