



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

Nhe I

Catalog No: 2293

Lot No: See Product Label
Package Size: See Product Label
Concentration: See Product Label
Source: *Arthrobacter luteus*
Storage Conditions: Store at -20°C

Recognition/Cut Site

5'G↓CTAGC-3'
3'-CGATC↑G-5'

Unit Definition

One unit is the amount of enzyme required to completely digest 1 µg of Ad-2 DNA in 1 hour at 37°C in a total reaction volume of 50 µl.

Reaction Temperature

37°C

Heat Inactivation

10 minutes at 65°C

Assay Conditions

20 mM Tris-HCl (pH 7.4)
5 mM MgCl₂
50 mM KCl
1 µg of Ad-2 DNA
Reaction volume 50 µl

Storage Buffer

10 mM Tris-HCl (pH 7.4)
50 mM KCl
0.1 mM EDTA
0.1 DTT
0.1% Triton X-100
500 µg/ml BSA
50% (v/v) Glycerol

Quality Control

Endonuclease: Incubation of 20, 35, and 50 units of Nhe I with 1 µg of Ad-2 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. Reaction volume of 50 µl.

Nicking: Incubation of 20, 35, and 50 units of Nhe I with 1 µg ΦX174 RF DNA for 5 hours (a 250-fold over-digestion) results in ≤70% conversion from RF I to RF II and ≤5% conversion to RF III.

3'-Exonuclease: Incubation of 5, 10, 15, 20, and 30 units of Nhe I with 5 pmol of Ad-2/Taq I fragments (3'-labeled with Klenow exo⁻ and [³H]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: Incubation of 5, 10, 15, 20, and 30 units of Nhe I with 0.25 µg of [5'-³²P]Ad-2/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.

Functional Assay: Incubation of 4 units of Nhe I with 1 µg of Ad-2 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