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## Certificate of Analysis

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### Nco I

Catalog No: 2292

**Lot No:** See Product Label

**Package Size:** See Product Label

**Concentration:** See Product Label

**Source:** Nocardia corallina

**Storage Conditions:** Store at -20°C

#### Recognition/Cut Site

5'C↓CATGG-3'

3'-GGTAC↑C-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 MgCl<sub>2</sub>

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 7.5)

100 mM KCl

1.0 mM EDTA

10 mM β-mercaptoethanol

0.1%(v/v) Triton X-100

0.1 mM PMSF

500 µg/ml bovine serum albumin

50% (v/v) Glycerol

#### Quality Control

**Endonuclease:** Incubation of 10, 20, and 30 units of Nco I with 1.0 µg of Lambda DNA at 37°C for 5 hours (a 150-fold over-digestion) resulted in the same sharp characteristic banding pattern as 4 U/µg the standard assay reaction, as determined by agarose gel electrophoresis. Reaction volume of 50 µl. 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 10, 20, and 30 units of Nco I with 1.0 µg of φX-174 DNA at 37°C for 1 hour resulted in ≤15% conversion of RFI to RFII and ≤5% conversion to RFIII. Reaction volume of 50 µl.

**3'-Exonuclease:** Incubation of 5, 10, and 20 units of Nco I and 5 pmoles of 3'-ends of lambda/Taq I fragments (3'-labeled with Klenow exo- and [<sup>3</sup>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 5, 10, and 20 units of Nco I with 0.25 µg of 5'-ends of [5'-<sup>32</sup>P]lambda/HaeIII 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:** Incubation of 2 units of Nco 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](http://www.chimerx.com)*