

Product Information

RESTRICTION ENDONUCLEASE Nde II

Product No. **R 5757**

Store at 0 °C to –20 °C

Product Summary

Recognition Sequence: 5'/GATC'3

Activity: Minimum 5,000 units/ml

Cutting: 100%

Ligation: >95%

Recutting: >95%

No degradation detected with >20 units for 16 hrs.

Fold over digestion: 320 (20 units x 16 hrs.)

Package Size: 200 units, 1,000 units

Unit Definition

One unit is the enzyme activity that completely cleaves 1 µg λ *dam*DNA in 1 hr. at 37 °C in a total volume of 25 µl of Buffer SP for restriction endonucleases.

Specificity

Nde II recognizes the sequence /GATC and generates fragments with 5'-cohesive ends.¹

Comments

Digestion Buffer SP is supplied as a 2x concentrate.

Heat inactivation information is not available for Nde II.

Nde II Storage and Dilution Buffer Composition

20 mM Tris-HCl

50 mM NaCl

0.1 mM EDTA

1 mM dithioerythritol

0.02% Thesit (v/v)

50% (v/v) glycerol

pH 7.5

Quality Control Testing

2x Digestion Buffer SP (B 6048) Composition for Nde II: 100% Digestion at 37 °C.

100 mM Tris-HCl

150 mM NaCl

10 mM MgCl₂

1 mM dithiothreitol

pH 7.6

Absence of unspecific endonuclease activities:

1 µg λ *dam*DNA or pBR322 DNA is incubated for 16 hrs. in 50 µl buffer SP with excess of Nde II.

Ligation and Recutting Assay

Nde II fragments, obtained by complete digestion of 1 µg λ DNA, are adjusted to pH 7.5 at 20 °C. The Nde II fragments are then ligated with 1.0 unit T4-DNA ligase at pH 7.5 at 4 °C. A 10 µl reaction mixture, incubated for 16 hrs. at 4 °C, contained: 1.0 unit T4-DNA ligase, 66 mM Tris-HCl, 5 mM MgCl₂, 1 mM dithioerythritol and 1 mM ATP.

The degree of ligation and subsequent recutting with Nde II to yield the typical pattern of λ *dam* x Nde II fragments is determined.

References

1. Watson, R., et. al., FEBS Lett., **150**, 114 (1982).

2/00

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications.

Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply.

Please see reverse side of the invoice or packing slip.