



Restriction Enzyme

Nde I



| | | |
|--------------|-------------|-------------------|
| Cat.# | Size | Conc. |
| FG-Ndel | 4,000 units | 20 units/ μ l |

Store at -20°C

Supplied with: 10X FastGene® Buffer IV (FG-REB4)
10X FastGene® FastCut Buffer (FG-REBHF)
6X DNA Loading Buffer
Sterile water

Recognition site



For Research Use Only. Not for use in diagnostic procedures.

ISO9001

Source: *Neisseria denitrificans*

Reaction conditions

1X FastGene® Buffer IV, 37°C
1X FastGene® FastCut Buffer, 37°C

FastGene® FastCut Buffer

FastGene® restriction enzyme can cut substrate DNA in 5-15 min with FastGene® FastCut Buffer.

1X FastGene® Buffer IV

20 mM Tris-acetate (pH 7.9 at 25°C)
50 mM potassium acetate
10 mM magnesium acetate
100 μ g/ml BSA

Unit definition

One unit is defined as the amount of enzyme required for complete digestion of 1 μ g bacteriophage λ at 37°C for 1 hr in 50 μ l reaction mixtures.

Quality control

- Unit definition assay
- Overdigestion assay
- Endonuclease assay
- Extreme pure assay

Dilution buffer

FastGene® Diluent A

Heat Inactivation

Nde I can be inactivated at 65°C for 20 min.

Methylation sensitivity

dam methylation: Not sensitive
dcm methylation: Not sensitive
CpG methylation: Not sensitive

Prolonged incubation

A minimum amount of enzyme required to digest 1 μ g substrate DNA for 16 hr; 0.13 U.

Relative activity in FastGene® Buffers

| | |
|---------------------------|------|
| FastGene® Buffer I: | 75% |
| FastGene® Buffer II: | 100% |
| FastGene® Buffer III: | 100% |
| FastGene® Buffer IV: | 100% |
| FastGene® FastCut Buffer: | 100% |

Note

It is not affected by *dam*, *dcm*, or mammalian CpG methylation, but is sensitive to impurities in DNA. Its half-life is 15 min at 37°C. Long term incubation is not effective. Its recognition sequence includes ATG, and therefore it is possible to express a target protein without additional amino acids after cloning a Nde I-cleaved fragment to the initiation site of an expression vector.

Standard reaction condition

- Normal protocol

| Component | Final Conc. | Volume |
|-------------------------|-------------|------------------|
| Substrate DNA | 1 μ g | X μ l |
| 10X FastGene® Buffer IV | 1 X | 5 μ l |
| Nde I | 20 unit | 1 μ l |
| Sterile water | | up to 50 μ l |

→ Incubate at 37°C for 1 hr

- Fast protocol

| Component | Final Conc. | Volume |
|------------------------------|-------------|------------------|
| Substrate DNA | 1 μ g | X μ l |
| 10X FastGene® FastCut Buffer | 1 X | 5 μ l |
| Nde I | 20 unit | 1 μ l |
| Sterile water | | up to 50 μ l |

→ Incubate at 37°C for 15 min

※We recommend 5-10 units of enzyme per μ g DNA and 10-20 units for genomic DNA in a 1 h digest.