FastGene®

Restriction Enzyme Nhe I

II 37℃ 65℃ CpG

Cat.#	Size	Conc.
FG-NheI	1,000 units	10 units/μl

Store at -20℃

Supplied with:
10X FastGene® Buffer II (FG-REB2)
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 mucosa heidelbergensis*

Reaction conditions
1X FastGene® Buffer II, 37℃
1X FastGene® FastCut Buffer, 37℃

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

1X FastGene® Buffer II
10 mM Tris-HCl (pH 7.9 at 25℃)
50 mM NaCl
10 mM $MgCl_2$
100 μg/ml BSA

Unit definition
One unit is defined as the amount of enzyme required for complete digestion of 1 μg bacteriophage λ (Hind III digestion) at 37℃ for 1 hr in 50-μl reaction mixtures.

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

Dilution buffer
FastGene® Diluent C

Heat Inactivation
Nhe I can be inactivated at 65℃ for 20 min.

Methylation sensitivity
dam methylation: Not sensitive
dcm methylation: Not sensitive
CpG methylation: Conditionally sensitive

Prolonged incubation
A minimum amount of enzyme required to digest 1 μg substrate DNA for 16 hr; 0.25 U.

Relative activity in FastGene® Buffers

FastGene® Buffer I:	100%
FastGene® Buffer II:	100%
FastGene® Buffer III:	10%
FastGene® Buffer IV:	100%
FastGene® FastCut Buffer:	100%

Note
It cleaves DNA and leaves a 5' CTAG extension, which can be efficiently ligated to DNA fragments cleaved by Avr II, Spe I, or Xba I. Cleavage of mammalian genomic DNA is blocked by CpG methylation partially overlapping the recognition sequence. Salt over 100 mM inhibits its activity.

Standard reaction condition
- Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 μg	X μl
10X FastGene® Buffer II	1 X	5 μl
Nhe I	10 unit	1 μl
Sterile water		up to 50 μl

→ Incubate at 37℃ for 1 hr

- Fast protocol

Component	Final Conc.	Volume
Substrate DNA	1 μg	X μl
10X FastGene® FastCut Buffer	1 X	5 μl
Nhe I	10 unit	1 μl
Sterile water		up to 50 μl

→ Incubate at 37℃ for 15 min

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

NIPPON Genetics EUROPE GmbH
www.nippongenetics.eu
www.n-genetics.com

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5' ··· G C T A G C ··· 3'
3' ··· C G A T C G ··· 5'

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