FastGene®

Restriction Enzyme Mbo I

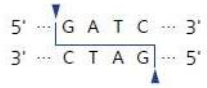
III 37 65 Dam CpG

Cat.#	Size	Conc.
FG-MboI	500 units	4 units/µl

Store at -20℃

Supplied with:
10X FastGene® Buffer III (FG-REB3)
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: *Moraxella bovis*

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

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

1X FastGene® Buffer III
50 mM Tris-HCl (pH 7.9 at 25℃)
100 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 (*dam* -) 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 A

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

Methylation sensitivity
dam methylation: 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; 0.5 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 an isoschizomer of Dpn II and Sau3A I. It leaves a 5' GATC extension, which can be efficiently ligated into DNA cleaved by BamH I, Bcl I, Bgl II, BstY I, Dpn II, or Sau3A I. Cleavage is blocked by *dam* methylation. Cleavage of mammalian genomic DNA is impaired by CpG methylation partially overlapping its recognition sequence.

Standard reaction condition
- Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 µg	X µl
10X FastGene® Buffer III	1 X	5 µl
Mbo I	4 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
Mbo I	4 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.

DOMINIQUE DUTSCHER SAS

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

FastGene®

Restriction Enzyme Mbo I

Cat.# FG-MboI | Size 500 units | Conc. 4 units/µl

Store at -20℃

Supplied with: 10X FastGene® Buffer III (FG-REB3); 10X FastGene® FastCut Buffer (FG-REBHF); 6X DNA Loading Buffer; Sterile water

Recognition site

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

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

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FastGene® Diluent A

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

Methylation sensitivity
dam methylation: 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; 0.5 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%

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