

# G Fast Gene **Restriction Enzyme** Msp I

Cat.# Size 20 units/µl FG-Mspl 5.000 units

Store at -20°C

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

Conc.

₩ (37°) NO

Conc.

20 units/µl

#### Recognition site



For Research Use Only. Not for use in diagnostic procedures. **ISO**9001

## Source: Moraxella species

Reaction conditions 1X FastGene® Buffer IV 37℃ 1X FastGene® FastCut Buffer, 37°C

### FastGene® FastCut Buffer

FastGene® restriction enzyme can cut substrate DNA in 5-15 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 µg/ml BSA

### Unit definition

One unit is defined as the amount of enzyme required for complete digestion of 1  $\mu$ g bacteriophage  $\lambda$  at 37°C for 1 hr in 50 µl reaction mixtures.

## Quality control

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

Dilution buffer: FastGene® Diluent A

Heat Inactivation No.

## 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 µg substrate DNA for 16 hr; 0.5 U.

### Relative activity in FastGene<sup>®</sup> Buffers

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

## Note

It is an isoschizomer of Hpa II. It is not affected by dam, dcm, or mammalian CpG methylation. However MspI can not digestion, when the external C in the sequence CCGG is methylated.

### Standard reaction condition

Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 µg	Xμl
10X FastGene <sup>®</sup> Buffer IV	1 X	5 µl
Msp I	20 unit	1 µl
Sterile water		up to 50 µl
$\rightarrow$ Incubate at 37°C for 1 hr		

#### - Fast protocol

Component	Final Conc.	Volume
Substrate DNA	1 µg	X µl
10X FastGene <sup>®</sup> FastCut Buffer	1 X	5 µl
Msp I	20 unit	1 µl
Sterile water		up to 50 µl
$\rightarrow$ Incubate at 37°C for 15 min	n	

→ Incubate at 37°C for 15 min

X'Standard conditions' is only a general recommendation. The experimental conditions should be adjusted according to the purpose and sample.

# Genetics NIPPON Genetics EUROPE GmbH

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# G Fast Gene

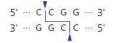
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### Quality control

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

#### Dilution buffer: FastGene® Diluent A

Heat Inactivation No.

### 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 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: 75% FastGene® Buffer IV: 100% FastGene® FastCut Buffer: 100%

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<ul> <li>Fast protocol</li> </ul>	
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