



## Restriction Enzyme

### Mlu I

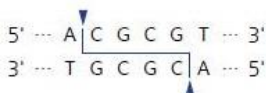


<b>Cat.#</b> FG-MluI	<b>Size</b> 1,000 units	<b>Conc.</b> 10 units/ $\mu$ l
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Store at -20°C

**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

#### Dilution buffer

FastGene® Diluent A

#### Heat Inactivation

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

#### Methylation sensitivity

*dam* methylation: Not sensitive  
*dcm* methylation: Not sensitive  
CpG methylation: Sensitive

#### Prolonged incubation

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

#### Relative activity in FastGene® Buffers

FastGene® Buffer I:	25%
FastGene® Buffer II:	75%
FastGene® Buffer III:	100%
FastGene® Buffer IV:	50%
FastGene® FastCut Buffer:	100%

#### Note

Cleavage of mammalian DNA is blocked by CpG methylation.

**Source:** *Micrococcus luteus*

#### Reaction conditions

1X FastGene® Buffer III 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 III

50 mM Tris-HCl (pH 7.9 at 25°C)  
100 mM NaCl  
10 mM MgCl<sub>2</sub>  
100  $\mu$ g/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  $\mu$ l reaction mixtures.

#### Quality control

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

#### Standard reaction condition

- Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 $\mu$ g	X $\mu$ l
10X FastGene® Buffer III	1 X	5 $\mu$ l
Mlu I	10 unit	1 $\mu$ l
Sterile water		up to 50 $\mu$ l

→ Incubate at 37°C for 1 hr

- Fast protocol

Component	Final Conc.	Volume
Substrate DNA	1 $\mu$ g	X $\mu$ l
10X FastGene® FastCut Buffer	1 X	5 $\mu$ l
Mlu I	10 unit	1 $\mu$ l
Sterile water		up to 50 $\mu$ l

→ Incubate at 37°C for 15 min

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