

## FastGene® Restriction Enzyme Alw I



Cat.#	Size	Conc.
FG-AlwI	500 units	10 units/μl

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

*Acinetobacter lwoffii*

### 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 μg/ml BSA

### Unit definition

One unit is defined as the amount of enzyme required to digest 1 μg of Lambda DNA (dam-) in 1 hour at 37°C in a total reaction volume of 50 μl.

### Quality control

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

### Dilution buffer

FastGene® Diluent A

### Heat Inactivation

No.

### Methylation sensitivity

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

### Relative activity in FastGene® Buffers

FastGene® Buffer I:	50%
FastGene® Buffer II:	50%
FastGene® Buffer III:	10%
FastGene® Buffer IV:	100%
FastGene® FastCut Buffer:	100%

### Note

DNA cleavage is blocked by dam methylation. It produces a 5' extension of one nucleotide, which is more difficult to be ligated than blunt-ends. Reaction condition with excess enzyme, excess glycerol (>5%) or extended digestion may result in star activity.

### Standard reaction condition

- Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 μg	X μl
10X FastGene® Buffer IV	1 X	5 μl
Alw I	Substrate dependent	
Sterile water		up to 50 μl
→ Incubate at 37°C for 1 hr		

- Fast protocol

Component	Final Conc.	Volume
Substrate DNA	1 μg	X μl
10X FastGene® FastCut Buffer	1 X	5 μl
Alw I	10 unit	1 μl
Sterile water		up to 50 μl
→ Incubate at 37°C 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.

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