FastGene®

Restriction Enzyme Alw I

IV 37 NO Dam

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

Store at -20℃

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℃
- 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 IV
20 mM Tris-acetate (pH 7.9 at 25℃)
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℃ 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℃ 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℃ 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.