



Restriction Enzyme

Aat II



Cat.#	Size	Conc.
FG_AatI	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

Dilution buffer

FastGene® Diluent A

Heat Inactivation

Aat II can be inactivated at 65°C for 20 min.

Methylation sensitivity

dam methylation: Not sensitive

dc methylation: Not sensitive

CpG methylation: Sensitive

Prolonged incubation

A minimum amount of enzyme required to digest 1 μg substrate DNA for 16 hr; 0.13 U.

Relative activity in FastGene® Buffers

FastGene® Buffer I:	0%
FastGene® Buffer II:	25%
FastGene® Buffer III:	25%
FastGene® Buffer IV:	100%
FastGene® FastCut Buffer:	100%

Note

More (3-5 fold) enzyme is required to cleave supercoiled DNA than lambda DNA. Activity decreases if buffer pH is not between 7.5 and 8.0 at 25°C. Cleavage of mammalian genomic DNA is blocked by CpG methylation.

Source: *Acetobacter acetii*

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 for complete digestion of 1 μg bacteriophage λ at 37°C for 1 hr in 50 μl 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 μg	X μl
10X FastGene® Buffer IV	1 X	5 μl
Aat II	10 unit	1 μl
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
Aat II	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.