

Grast Gene® Restriction Enzyme Aat II



Cat.# FG_Aatl

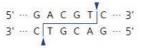
Size 500 units

Conc. 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.

Dilution buffer

FastGene® Diluent A

Heat Inactivation

Aat II can be inactivated at 65℃ 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 aceti

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 ug/ml BSA

Unit definition

One unit is defined as the amount of enzyme required for complete digestion of 1 μ g bacteriophage λ at 37°C for 1 hr in 50 μ l reaction mixtures.

Quality control

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

Standard reaction condition

- Norma	l protocol
---------	------------

Component	Final Conc.	Volume
Substrate DNA	1 µg	Xμl
10X FastGene [®] Buffer IV	1 X	5 µl
Aat II	10 unit	1 µl
Sterile water		up to 50 µl
\rightarrow Incubate at 37°C for 1 hr		

 \rightarrow Incubate at 3/°C for 1

- 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

 \rightarrow 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.