

Restriction Enzyme Apa I



-		
Cat.#	Size	Conc.
FG-Apal	5,000 units	50 units/μ

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

Dilution buffer

FastGene® Diluent A

Heat Inactivation

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

Methylation sensitivity

dam methylation: Not sensitive

dcm methylation: Conditionally sensitive CpG methylation: Conditionally 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:
 100%

 FastGene® Buffer II:
 25%

 FastGene® Buffer III:
 0%

 FastGene® Buffer IV:
 100%

 FastGene® FastCut Buffer:
 100%

Note

Incubation at 37°C results in 100% activity. However, it is unstable at 37°C with a half-life of only 30 min. Either *dcm* or CpG methylation overlapping its recognition sequence blocks cleavage of DNA. Salt over 50 mM is inhibitory.

Source: Acetobacter pasteurianus sub pasteurianus

Reaction conditions

1X FastGene® Buffer IV, 25℃ 1X FastGene® FastCut Buffer, 25℃

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 (Hind III digestion) at 25°C for 1 hr in 50- μ I 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	Χ μΙ
10X FastGene® Buffer IV	1 X	5 μΙ
Apa I	50 unit	1 μΙ
Sterile water		up to 50 μl
1 1 4 4 2505 5 4 1		

→ Incubate at 25°C for 1 hr

- Fast protocol

- rast protocol		
Component	Final Conc.	Volume
Substrate DNA	1 μg	Χ μΙ
10X FastGene® FastCut Buffer	1 X	5 μΙ
Apa I	50 unit	1 μΙ
Sterile water		up to 50 μl

→ Incubate at 25°C for 15 min