



Restriction Enzyme

Fok I



Cat.#	Size	Conc.
FG-FokI	1,000 units	5 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

Fok 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; 1 U.

Relative activity in FastGene® Buffers

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

Note

Cleavage is inhibited by *dcm* methylation and CpG methylation partially overlapping its cleavage site.

Overdigestions of >5 units of Fok I per µg of DNA and incubation times >2 hours are not recommended.

Source: *Flavobacterium okeanokoites*

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
Fok I	5 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
Fok I	5 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.