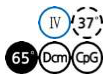




## Restriction Enzyme Fok I



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.



**Source:** *Flavobacterium okeanoikoites*

### 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 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

### 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.

### 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.



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- Normal protocol

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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.