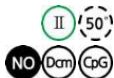




Restriction Enzyme

Sfi I



Cat.#	Size	Conc.
FG-SfiI	3,500 units	4 units/ μ l

Store at -20°C

Supplied with: 10X FastGene® Buffer II (FG-REB2)
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

Heat Inactivation

No.

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 μ g substrate DNA for 16 hr; 0.25 U.

Relative activity in FastGene® Buffers

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

Note

Cleavage is inhibited by *dcm* methylation and CpG methylation partially overlapping its cleavage site. Better cleavage occurs with long DNA such as chromosomal DNA. It requires two recognition sequences for efficient cleavage by homotetrameric Sfi I. Only 10% activity is obtained at 37°C. It is suitable to generate large DNA fragments from chromosome due to the rare occurrence of the recognition site.

Source: *Streptomyces fimbriatus*

Reaction conditions

1X FastGene® Buffer II 50°C

1X FastGene® FastCut Buffer, 50°C

FastGene® FastCut Buffer

FastGene® restriction enzyme can cut substrate DNA in 5-15 min with FastGene® FastCut Buffer.

1X FastGene® Buffer II

10 mM Tris-HCl (pH 7.9 at 25°C)

50 mM NaCl

10 mM MgCl₂

100 μ g/ml BSA

Unit definition

One unit is defined as the amount of enzyme required for complete digestion of 1 μ g pSK M3 at 50°C for 1 hr in 50 μ l reaction mixtures.

Quality control

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

Dilution buffer

FastGene® Diluent A

Standard reaction condition

- Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 μ g	X μ l
10X FastGene® Buffer II	1 X	5 μ l
Sfi I	4 unit	1 μ l
Sterile water		up to 50 μ l

→ Incubate at 50°C for 1 hr

- Fast protocol

Component	Final Conc.	Volume
Substrate DNA	1 μ g	X μ l
10X FastGene® FastCut Buffer	1 X	5 μ l
Sfi I	4 unit	1 μ l
Sterile water		up to 50 μ l

→ Incubate at 50°C for 15 min

※ We recommend 5-10 units of enzyme per μ g DNA and 10-20 units for genomic DNA in a 1 h digest.