



## Restriction Enzyme

### Swa I



Cat.#	Size	Conc.
FG-SwaI	2,000 units	4 units/μl

Store at -20°C

**Supplied with:** 10X FastGene® Buffer III (FG-REB3)  
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 B.

#### Heat Inactivation

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

#### Methylation sensitivity

*dam* methylation: Not sensitive  
*dcm* methylation: Not sensitive  
CpG methylation: Not sensitive

#### Prolonged incubation

A minimum amount of enzyme required to digest 1 μg substrate DNA for 16 hr; 0.25 U.

#### Relative activity in FastGene® Buffers

FastGene® Buffer I:	75%
FastGene® Buffer II:	75%
FastGene® Buffer III:	100%
FastGene® Buffer IV:	25%
FastGene® FastCut Buffer:	100%

#### Note

It is not affected by *dam*, *dcm*, or mammalian CpG methylation. Incubation at 37°C results in 50% activity.

**Source:** *Staphylococcus warneri*

#### Reaction conditions

1X FastGene® Buffer III 25°C  
1X FastGene® FastCut Buffer, 25°C

#### FastGene® FastCut Buffer

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

#### 1X FastGene® Buffer III

50 mM Tris-HCl (pH 7.9 at 25°C)  
100 mM NaCl  
10 mM MgCl<sub>2</sub>  
100 μg/ml BSA

#### Unit definition

One unit is defined as the amount of enzyme required for complete digestion of 1 μg pSK M3 at 25°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 III	1 X	5 μl
Swa I	4 unit	1 μl
Sterile water		up to 50 μl

→ Incubate at 25°C for 1 hr

- Fast protocol

Component	Final Conc.	Volume
Substrate DNA	1 μg	X μl
10X FastGene® FastCut Buffer	1 X	5 μl
Swa I	4 unit	1 μl
Sterile water		up to 50 μl

→ Incubate at 25°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.