FastGene®

Restriction Enzyme
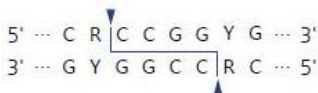# SgrA I

IV 37° 65° CpG

Cat.#	Size	Conc.
FG-SgrAI	**1,000 units**	**10 units/µl**

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

```
5' ··· C R│C C G G Y G ··· 3'
3' ··· G Y G G C C│R C ··· 5'
```

For Research Use Only. Not for use in diagnostic procedures.

ISO9001

Dilution buffer:
FastGene® Diluent A

Heat Inactivation
SgrA I can be inactivated at 65℃ for 20 min.

Methylation sensitivity
dam methylation: Not sensitive
dcm methylation: Not sensitive
CpG methylation: sensitive

Relative activity in FastGene® Buffers
FastGene® Buffer I: 100%
FastGene® Buffer II: 100%
FastGene® Buffer III: 0%
FastGene® Buffer IV: 100%
FastGene® FastCut Buffer: 100%

Note
Cleavage of mammalian genomic DNA is blocked by CpG methylation. Reaction condition with excess enzyme, excess glycerol (>5%) or high pH (>8.0) may result in star activity.

Source: *Streptomyces griseus*

Reaction conditions
1X FastGene® Buffer IV 37℃
1X FastGene® FastCut Buffer, 37℃

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℃)
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℃ 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
SgrA I	10 unit	1 µl
Sterile water		up to 50 µl

→ Incubate at 37℃ for 1 hr

- Fast protocol

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

→ Incubate at 37℃ 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..