FastGene®

Restriction Enzyme SgrA I

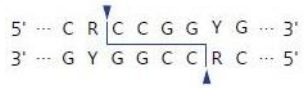
IV 37°C 65°C CpG

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



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

ISO9001

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

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.

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..

Genetics NIPPON Genetics EUROPE GmbH
www.nippongenetics.eu
www.n-genetics.com

FastGene®

Restriction Enzyme SgrA I

IV 37°C 65°C CpG

Cat.# FG-SgrAI | Size 1,000 units | Conc. 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

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 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

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.

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.