FastGene®

Restriction Enzyme Apo I

III 50° 80°

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

Store at -20℃

Supplied with:
- 10X FastGene® Buffer III (FG-REB3)
- 10X FastGene® FastCut Buffer (FG-REBHF)
- 6X DNA Loading Buffer
- Sterile water

Recognition site

5' ··· R | A A T T Y ··· 3'
3' ··· Y T T A A | R ··· 5'

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

ISO9001

Source
Arthrobacter protophormiae

Reaction conditions
- 1X FastGene® Buffer III 50℃
- 1X FastGene® FastCut Buffer, 50℃

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

1X FastGene® Buffer III
50 mM Tris-HCl (pH 7.9 at 25℃)
100 mM NaCl
10 mM $MgCl_2$
100 μg/ml BSA

Unit definition
One unit is defined as the amount of enzyme required to digest 1 μg of Lambda DNA in 1 hour at 50℃ in a total reaction volume of 50 μl.

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

Dilution buffer
FastGene® Diluent A

Heat Inactivation
80℃ for 20 min

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

Relative activity in FastGene® Buffers

FastGene® Buffer I:	10%
FastGene® Buffer II:	75%
FastGene® Buffer III:	100%
FastGene® Buffer IV:	75%
FastGene® FastCut Buffer:	100%

Note
Cleaves to leave 5′ AATT extension which can be ligated to DNA fragments generated by EcoR I digestion.

Standard reaction condition
- Normal protocol

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

→ Incubate at 50℃ for 1 hr

- Fast protocol

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

→ Incubate at 50℃ 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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www.n-genetics.com

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Standard reaction condition
- Normal protocol

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

→ Incubate at 50℃ for 1 hr

- Fast protocol

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

→ Incubate at 50℃ 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.