FastGene®

Restriction Enzyme Acc I

IV 37° 80° CpG

Cat.#	Size	Conc.
FG-AccI	1,000 units	4 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' … G T|M K A C … 3'
3' … C A K M|T G … 5'
```

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

ISO9001

Source: *Acinetobacter calcoaceticus*

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 min 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
Acc I can be inactivated at 80℃ for 20 min.

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

Prolonged incubation
A minimum amount of enzyme required to digest 1 μg substrate DNA for 16 hr; 0.13 U.

Relative activity in FastGene® Buffers

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

Note
It does not cleave DNA with 3 or fewer bases on each side of the recognition site. At least 13 bases are required beyond the ends of the recognition site for efficient cleavage. Cleavage of mammalian genomic DNA is blocked by CpG methylation overlapping its recognition sequence. Both M13 and pUC19 contain a single Acc I site.

Standard reaction condition
- Normal protocol

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

→ Incubate at 37℃ for 1 hr

- Fast protocol

Component	Final Conc.	Volume
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Acc I	4 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

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