FastGene®

Restriction Enzyme Cfr9 I

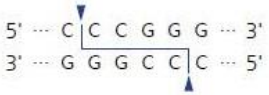
III 37 65 CpG

Cat.#	Size	Conc.
FG-Cfr9I	300 units	10 units/μl

Store at -20℃

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

Recognition site



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

ISO9001

Source: *Citrobacter freundii* RFL9

Reaction conditions
1X FastGene® Buffer III 37℃

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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 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
Cfr9 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:	NR
FastGene® Buffer II:	NR
FastGene® Buffer III:	100%
FastGene® Buffer IV:	NR
FastGene® FastCut Buffer:	Not recommended

FastGene® Buffer I, II and IV are not recommended (NR) due to star activity

Note
It is an isoschizomer of Xma Ⅰ. Cleavage of mammalian genomic DNA is blocked by CpG methylation. Reaction condition of low salt, excess enzyme, excess glycerol (>5%) or high pH (>8.0) may result in star activity. To avoid star activity, do not use Cfr9 I in FastGene® buffer I, II, or IV.

Standard reaction condition
- Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 μg	X μl
10X FastGene® Buffer III	1 X	5 μl
Cfr9 I	10 unit	1 μl
Sterile water		up to 50 μl

→ Incubate at 37℃ for 1 hr

※ We recommend 5-10 units of enzyme per μg DNA and 10-20 units for genomic DNA in a 1 h digest.