FastGene

# Restriction Enzyme Cfr9 I

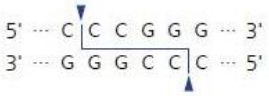
III 37 65 CpG

| 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℃

## 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 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.