FastGene®

Restriction Enzyme Bcl I

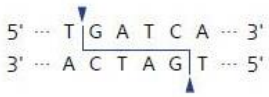
III 50 NO Dam

Cat.#	Size	Conc.
FG-BclI	3,000 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



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

ISO9001

Source: *Bacillus caldolyticus*

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 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 for complete digestion of 1 μg bacteriophage λ (*dam* -) 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
No.

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

Prolonged incubation
A minimum amount of enzyme required to digest 1 μg substrate DNA for 16 hr; 0.5 U.

Relative activity in FastGene® Buffers

FastGene® Buffer I:	50%
FastGene® Buffer II:	100%
FastGene® Buffer III:	100%
FastGene® Buffer IV:	75%
FastGene® FastCut Buffer:	100%

Note
DNA cleavage is blocked by *dam* methylation. Use *dam*- *E. coli* strains to amplify substrate DNA for cleavage. Incubation at 37℃ results in 50% activity. Optimal (100%) activity can be obtained at 50℃ in buffer with pH 7.7.

Standard reaction condition
- Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 μg	X μl
10X FastGene® Buffer III	1 X	5 μl
Bcl 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
Bcl 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.