FastGene®

Restriction Enzyme BspE I

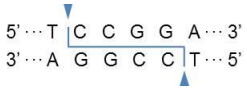
III 37° 80° Dam CpG

Cat.#	Size	Conc.
FG-BspEI	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



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

ISO9001

Source: *Bacillus* species

Reaction conditions
1X FastGene® Buffer III, 37℃
2X FastGene® FastCut Buffer, 37℃

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 to digest 1 µg of λ DNA(dam) in 1 hour at 37℃ in a total reaction volume of 50 µl.

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

Dilution buffer:
FastGene® Diluent B

Heat Inactivation
BspE I can be inactivated at 80℃ for 20 min.

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

Relative activity in FastGene® Buffers

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

Note
It is an isoschizomer of Kpn2 I and BspM II. Cleavage is blocked by *dam* methylation overlapping its recognition sequence. Cleavage is inhibited by CpG methylation partially overlapping its cleavage site.

Standard reaction condition
- Normal protocol

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

→ Incubate at 37℃ for 1 hr

- Fast protocol

Component	Final Conc.	Volume
Substrate DNA	1 µg	X µl
10X FastGene® FastCut Buffer	2 X	10 µl
BspE I	10 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.