



Restriction Enzyme BspE I

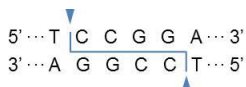


Cat.# FG-BspEI	Size 1,000 units	Conc. 10 units/μl
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Store at -20°C

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.



Source: *Bacillus* species

Reaction conditions

1X FastGene® Buffer III, 37°C
2X FastGene® FastCut Buffer, 37°C

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°C)
100 mM NaCl
10 mM MgCl₂
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°C 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°C 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°C 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°C 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.