



## Restriction Enzyme BtsC I



Cat.#	Size	Conc.
FG-BtsCI	2,000 units	20 units/µl

Store at -20°C

**Supplied with:** 10X FastGene® Buffer IV (FG-REB4)  
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 thermosphaericus*

### Reaction conditions

1X FastGene® Buffer IV 50°C  
1X FastGene® FastCut Buffer, 50°C

### FastGene® FastCut Buffer

FastGene® restriction enzyme can cut substrate DNA in 5-15 with FastGene® FastCut Buffer.

### 1X FastGene® Buffer IV

20 mM Tris-acetate (pH 7.9 at 25°C)  
50 mM potassium acetate  
10 mM magnesium acetate  
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 50°C for 1 hr in 50 µl reaction mixtures.

### Quality control

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

### Dilution buffer:

FastGene® Diluent B

### Heat Inactivation

BtsC I can be inactivated at 80°C for 20 min.

### Methylation sensitivity

*dam* methylation: Not 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:	75%
FastGene® Buffer II:	100%
FastGene® Buffer III:	100%
FastGene® Buffer IV:	100%
FastGene® FastCut Buffer:	100%

### Note

It is an isoschizomer of BstF5 I. It is not affected by *dam*, *dcm*, or mammalian CpG methylation.

### Standard reaction condition

- Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 µg	X µl
10X FastGene® Buffer IV	1 X	5 µl
BtsC I	20 unit	1 µl
Sterile water		up to 50 µl

→ Incubate at 50°C for 1 hr

- Fast protocol

Component	Final Conc.	Volume
Substrate DNA	1 µg	X µl
10X FastGene® FastCut Buffer	1 X	5 µl
BtsC I	20 unit	1 µl
Sterile water		up to 50 µl

→ Incubate at 50°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.



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### Quality control

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

### Dilution buffer:

FastGene® Diluent B

### Heat Inactivation

BtsC I can be inactivated at 80°C for 20 min.

### Methylation sensitivity

*dam* methylation: Not 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:	75%
FastGene® Buffer II:	100%
FastGene® Buffer III:	100%
FastGene® Buffer IV:	100%
FastGene® FastCut Buffer:	100%

### Note

It is an isoschizomer of BstF5 I. It is not affected by *dam*, *dcm*, or mammalian CpG methylation.

### Standard reaction condition

- Normal protocol

Component	Final Conc.	Volume
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10X FastGene® Buffer IV	1 X	5 µl
BtsC I	20 unit	1 µl
Sterile water		up to 50 µl

→ Incubate at 50°C for 1 hr

- Fast protocol

Component	Final Conc.	Volume
Substrate DNA	1 µg	X µl
10X FastGene® FastCut Buffer	1 X	5 µl
BtsC I	20 unit	1 µl
Sterile water		up to 50 µl

→ Incubate at 50°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.