



# Restriction Enzyme Taq I



Cat.# FG-TaqI	Size 4,000 units	Conc. 20 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:** *Thermus aquaticus* YT1

### Reaction conditions

1X FastGene® Buffer III 65°C  
1X FastGene® FastCut Buffer, 65°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 MgCl<sub>2</sub>  
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 65°C for 1 hr in 50 μl reaction mixtures.

### Quality control

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

### Standard reaction condition

- Normal protocol

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

→ Incubate at 65°C for 1 hr

- Fast protocol

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

→ Incubate at 65°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.

### Dilution buffer:

FastGene® Diluent B

### Heat Inactivation

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

### Methylation sensitivity

*dam* methylation: Conditionally 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:	100%
FastGene® FastCut Buffer:	100%

### Note

Activity is inhibited by *dam* methylation partially overlapping its recognition sequence. Incubation at 37°C results in 10% activity obtained at 65°C.