



Restriction Enzyme EcoT38 I



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|----------------------------|--------------------------|----------------------------|
| Cat.# FG-EcoT38I | Size 900 units | Conc. 5 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.



Source: *E. coli* TH38

Reaction conditions

1X FastGene® Buffer IV 37°C
1X 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 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 37°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 IV | 1 X | 5 μl |
| EcoT38 I | 5 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 | 1 X | 5 μl |
| EcoT38 I | 5 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.

Dilution buffer:

FastGene® Diluent A

Heat Inactivation

EcoT38 I can be inactivated at 65°C for 30 min.

Methylation sensitivity

dam methylation: Not sensitive

Prolonged incubation

A minimum amount of enzyme required to digest 1 μg substrate DNA for 16 hr; 0.13 U.

Relative activity in FastGene® Buffers

| | |
|---------------------------|------|
| FastGene® Buffer I: | 75% |
| FastGene® Buffer II: | 100% |
| FastGene® Buffer III: | 0% |
| FastGene® Buffer IV: | 100% |
| FastGene® FastCut Buffer: | 100% |

Note

It is an isoschizomer of Dra II. Activity is inhibited by *dam* methylation partially overlapping its recognition.