



# Restriction Enzyme

## Dde I



**Cat.#** FG-Ddel      **Size** 1,000 units      **Conc.** 5 units/μl

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.



### Dilution buffer:

FastGene® Diluent A

### Heat Inactivation

Dde I can be inactivated at 65°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; 0.13 U.

### Relative activity in FastGene® Buffers

FastGene® Buffer I: 25%  
FastGene® Buffer II: 50%  
FastGene® Buffer III: 100%  
FastGene® Buffer IV: 50%  
FastGene® FastCut Buffer: 100%

### Note

Cleavage of single stranded DNA is slow. It is not sensitive to *dam*, *dcm*, or mammalian CpG methylation. Activity can vary significantly with DNA substrates used.

**Source:** *Desulfovibrio desulfuricans*

### Reaction conditions

1X FastGene® Buffer III 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 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 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 III	1 X	5 μl
Dde 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
Dde 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.