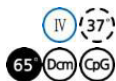




# Restriction Enzyme StyD4 I



Cat.# **FG-StyD4I**      Size **200 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.*

ISO9001

## Dilution buffer:

FastGene® Diluent B

## Heat Inactivation

StyD4 I can be inactivated at 65°C for 20 min.

## Methylation sensitivity

*dam* methylation: Not sensitive

*dcm* methylation: Conditionally sensitive

CpG methylation: Conditionally sensitive

## Relative activity in FastGene® Buffers

FastGene® Buffer I: 10%  
FastGene® Buffer II: 100%  
FastGene® Buffer III: 100%  
FastGene® Buffer IV: 100%  
FastGene® FastCut Buffer: 100%

## Note

Cleavage is blocked by *dcm* methylation overlapping its recognition sequence. Cleavage of mammalian genomic DNA can be blocked by CpG methylation that partially overlaps its recognition sequence.

**Source:** *Salmonella typhi* D4

## 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 to digest 1 μg of λ DNA 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

## Standard reaction condition

- Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 μg	X μl
10X FastGene® Buffer IV	1 X	5 μl
StyD4 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
StyD4 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.