



Restriction Enzyme Esp3 I



Cat.#	Size	Conc.
FG-Esp3I	200 units	10 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

Hafnia alvei RFL3

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 min 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 Lambda 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

Dilution buffer

FastGene® Diluent A

Heat Inactivation

Esp3 I can be inactivated at 65°C for 20 min.

Methylation sensitivity

dam methylation: Not sensitive
dcm methylation: Not sensitive
CpG methylation: Sensitive

Relative activity in FastGene® Buffers

FastGene® Buffer I:	25%
FastGene® Buffer II:	50%
FastGene® Buffer III:	10%
FastGene® Buffer IV:	100%
FastGene® FastCut Buffer:	100%

Note

Esp3 I is sensitive to DTT. It is an isoschizomer of BsmB I.

Standard reaction condition

- Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 μg	X μl
10X FastGene® Buffer IV	1 X	5 μl
Esp3 I	10 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
Esp3 I	10 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.



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