



Restriction Enzyme Hpa I



Cat.# FG-Hpal	Size 500 units	Conc. 4 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.



Heat Inactivation

No.

Methylation sensitivity

dam methylation: Not sensitive

dcm methylation: Not sensitive

CpG methylation: Conditionally sensitive

Prolonged incubation

A minimum amount of enzyme required to digest 1 μg substrate DNA for 16 hr; 0.25 U.

Relative activity in FastGene® Buffers

FastGene® Buffer I:	0%
FastGene® Buffer II:	50%
FastGene® Buffer III:	25%
FastGene® Buffer IV:	100%
FastGene® FastCut Buffer:	100%

Note

Cleavage of mammalian genomic DNA is blocked by CpG methylation that partially overlaps its recognition sequence. Reaction condition with excess enzyme, excess glycerol (>5%) or high pH (>8.0) may result in star activity. It is relatively unstable during incubation. Thus, use a higher level of enzyme in order to achieve complete cleavage in 1 hr. It is sensitive to impurities in DNA and its activity can be reduced by desiccation in a frost free freezer.

Source: *Haemophilus parainfluenzae*

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 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

Dilution buffer

FastGene® Diluent A

Standard reaction condition

- Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 μg	X μl
10X FastGene® Buffer IV	1 X	5 μl
Hpa I	4 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
Hpa I	4 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.