



# Restriction Enzyme Kpn I

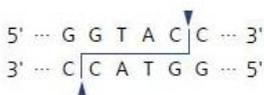


Cat.#	Size	Conc.
FG-Kpnl	4,500 units	10 units/μl

Store at -20°C

**Supplied with:** 10X FastGene® Buffer I (FG-REB1)  
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: Not 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:	100%
FastGene® Buffer II:	50%
FastGene® Buffer III:	0%
FastGene® Buffer IV:	100%
FastGene® FastCut Buffer:	100%

### Note

It is an isochizomer of Acc65 I. It produces a 3' extension of 4 bases, whereas Acc65 I produces a 5' extension of 4 bases. It is not sensitive to *dam*, *dcm*, or mammalian CpG methylation. Its activity varies with DNA substrates. Apart from lambda DNA, other DNA substrates require more enzymes (5-10 units per μg of DNA). Addition of 50 mM MgCl<sub>2</sub> to the reaction greatly increases the efficiency of cleaving impure DNA.

**Source:** *Klebsiella pneumoniae* OK8

### Reaction conditions

1X FastGene® Buffer I, 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 I

10 mM Bis Tris propane-HCl (pH 7.0 at 25°C)

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 pSK M2 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 I	1 X	5 μl
Kpn 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
Kpn 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.