



# Restriction Enzyme Xba I



<b>Cat.#</b> FG-XbaI	<b>Size</b> 3,000 units	<b>Conc.</b> 20 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:** *Xanthomonas badrii*

## 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 (Hind III digestion) 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 IV	1 X	5 μl
Xba I	20 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
Xba I	20 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.

## Dilution buffer

FastGene® Diluent A

## Heat Inactivation

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

## Methylation sensitivity

*dam* methylation: Conditionally 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:	0%
FastGene® Buffer II:	100%
FastGene® Buffer III:	100%
FastGene® Buffer IV:	100%
FastGene® FastCut Buffer:	100%

## Note

It is inhibited by dam methylation partially overlapping its recognition sequence. Its activity varies with substrates. It needs at least 2 bases on each side of the recognition site for >90% digestion in 2 hr digestion.