FastGene®

Restriction Enzyme Xba I

IV 37℃ 65℃ Dam

Cat.#	Size	Conc.
FG-XbaI	3,000 units	20 units/μl

Store at -20℃

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℃
1X FastGene® FastCut Buffer, 37℃

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℃)
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℃ 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

Heat Inactivation
Xba I can be inactivated at 65℃ 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.

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℃ for 1 hr

- Fast protocol

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Xba I	20 unit	1 μl
Sterile water		up to 50 μl

→ Incubate at 37℃ 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.

NIPPON Genetics EUROPE GmbH
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5' ··· T C T A G A ··· 3'
3' ··· A G A T C T ··· 5'

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