



Restriction Enzyme Sac II

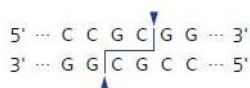


Cat.#	Size	Conc.
FG-SacII	2,000 units	20 units/µl

Store at -20°C

Supplied with: 10X FastGene® 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.



Source: *Streptomyces achromogenes*

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

Dilution buffer

FastGene® Diluent A

Heat Inactivation

Sac II can be inactivated at 65°C for 20 min.

Methylation sensitivity

dam methylation: Not sensitive
dcm methylation: Not sensitive
CpG methylation: 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:	50%
FastGene® Buffer II:	100%
FastGene® Buffer III:	50%
FastGene® Buffer IV:	100%
FastGene® FastCut Buffer:	100%

Note

Cleavage of mammalian genomic DNA is blocked by CpG methylation. It shows site preference. It is sensitive to impure DNA. It needs at least 3 bases on each side of the recognition site for >90% digestion after 20 hr incubation.

Standard reaction condition

- Normal protocol

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



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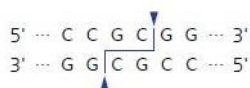


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