FastGene

Restriction Enzyme Spe I

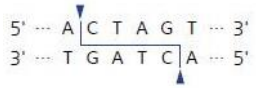
IV 37° 80°

Cat.#	Size	Conc.
FG-SpeI	500 units	10 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: *Sphaerotilus* species

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 pSK M2 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 C

Heat Inactivation
Spe I can be inactivated at 80℃ for 20 min.

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:	50%
FastGene® Buffer II:	100%
FastGene® Buffer III:	75%
FastGene® Buffer IV:	100%
FastGene® FastCut Buffer:	100%

Note
It generates a 5' CTAG extension, which can be efficiently ligated to DNA cleaved by Avr II, Nhe I, or Xba I. It is not affected by *dam*, *dcm*, or mammalian CpG methylation.

Standard reaction condition
- Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 µg	X µl
10X FastGene® Buffer IV	1 X	5 µl
Spe I	10 unit	1 µl
Sterile water		up to 50 µl

→ Incubate at 37℃ for 1 hr

- Fast protocol

Component	Final Conc.	Volume
Substrate DNA	1 µg	X µl
10X FastGene® FastCut Buffer	1 X	5 µl
Spe I	10 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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www.n-genetics.com

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6X DNA Loading Buffer
Sterile water

Recognition site

5' ··· A C T A G T ··· 3'
3' ··· T G A T C A ··· 5'

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Standard reaction condition
- Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 µg	X µl
10X FastGene® Buffer III	1 X	5 µl
Spe I	10 unit	1 µl
Sterile water		up to 50 µl

→ Incubate at 37℃ for 1 hr

- Fast protocol

Component	Final Conc.	Volume
Substrate DNA	1 µg	X µl
10X FastGene® FastCut Buffer	1 X	5 µl
Spe I	10 unit	1 µl
Sterile water		up to 50 µl

→ Incubate at 37℃ for 15 min

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