

FastGene® Restriction Enzyme Ssp I



| Cat.# | Size | Conc. |
|---------|-------------|-------------|
| FG-Sspl | 1,000 units | 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: *Sphaerotilus species*

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 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 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 B

Heat Inactivation

Ssp I can be inactivated at 65°C 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: 25%
FastGene® Buffer IV: 100%
FastGene® FastCut Buffer: 100%

Note

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 |
| Ssp 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 |
| Ssp 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.

FastGene® Restriction Enzyme Ssp I



| Cat.# | Size | Conc. |
|---------|-------------|-------------|
| FG-Sspl | 1,000 units | 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: *Sphaerotilus species*

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 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 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 B

Heat Inactivation

Ssp I can be inactivated at 65°C 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: 25%
FastGene® Buffer IV: 100%
FastGene® FastCut Buffer: 100%

Note

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 |
| Ssp 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 |
| Ssp 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.