FastGene

Restriction Enzyme Lsp1109 I

III 37° 65°

Cat.#	Size	Conc.
FG-Lsp1109I	200 units	5 units/µl

Store at -20℃

Supplied with:
10X FastGene® Buffer III (FG-REB3)
10X FastGene® FastCut Buffer (FG-REBHF)
6X DNA Loading Buffer
Sterile water

Recognition site

5' ··· G C A G C $(N)_8$ ··· 3'
3' ··· C G T C G $(N)_{12}$ ··· 5'

For Research Use Only. Not for use in diagnostic procedures.

ISO9001

Source
Listeria species RFL1109

Reaction conditions
1X FastGene® Buffer III, 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 III
50 mM Tris-HCl (pH 7.9 at 25℃)
100 mM NaCl
10 mM $MgCl_2$
100 µg/ml BSA

Unit definition
One unit is defined as the amount of enzyme required to digest 1 µg of pBR322 DNA in 1 hour at 37°C in a total reaction volume of 50 µl.

Quality control
- Unit definition assay
- Overdigestion assay
- Endonuclease assay
- Extreme pure assay

Dilution buffer
FastGene® Diluent A

Heat Inactivation
Lsp1109 I can be inactivated at 65℃ for 20 min.

Methylation sensitivity
dam methylation: Not sensitive
dcm methylation: Not sensitive
CpG methylation: Not sensitive

Relative activity in FastGene® Buffers
FastGene® Buffer I: 25%
FastGene® Buffer II: 75%
FastGene® Buffer III: 100%
FastGene® Buffer IV: 100%
FastGene® FastCut Buffer: 100%

Note
Lsp1109 I may remain associated with the cleaved DNA. This may cause DNA band shifting during electrophoresis. To avoid atypical DNA band patterns, use the 6X DNA Loading Dye & SDS Solution for sample preparation or heat the digested DNA in the presence of SDS prior to electrophoresis. Reaction condition of excess enzyme may result in star activity.

Standard reaction condition
- Normal protocol

Component	Final Conc.	Volume
Substrate DNA	1 µg	X µl
10X FastGene® Buffer III	1 X	5 µl
Lsp1109 I	5 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
Lsp1109 I	5 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.