



# Restriction Enzyme Lsp1109 I

III 37 65

**Cat.#**  
FG-Lsp1109I

**Size**  
200 units

**Conc.**  
5 units/μl

Store at -20°C

**Supplied with:** 10X FastGene® Buffer III (FG-REB3)  
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

*Listeria* species RFL1109

## Reaction conditions

1X FastGene® Buffer III, 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 III

50 mM Tris-HCl (pH 7.9 at 25°C)  
100 mM NaCl  
10 mM MgCl<sub>2</sub>  
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

## 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°C 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°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.

## Dilution buffer

FastGene® Diluent A

## Heat Inactivation

Lsp1109 I can be inactivated at 65°C 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.