

## Certificate of Analysis

### Bacterial Strain JM109

Part No.                      Size  
P975A                        500µl

**Description:** *E. coli* JM109 supplied in LB containing 10% glycerol. The cells are not competent cells.

**Genotype:** *endA1, recA1, gyrA96, thi, hsdR17 (r<sub>K</sub><sup>-</sup>, m<sub>K</sub><sup>+</sup>), relA1, supE44, Δ, Δ(lac-proAB), [F<sup>+</sup>, traD36, proAB, lacZΔM15].*

**Intended Uses:** JM109 can be used as a host for most plasmid vectors including the pGEM® series and allows production of single-stranded DNA from M13 and phagemid vectors. This strain is suitable for blue/white screening of vectors carrying the *lacZ* gene.

**Maintenance:** Maintain on minimal plates (M-9) containing 1mM thiamine-HCl to maintain the F<sup>+</sup> episome.

**Storage Conditions:** Store at -70°C. Avoid multiple freeze-thaw cycles or exposure to frequent temperature changes. These fluctuations can greatly alter product stability. See the expiration date on the Product Information Label.

## Quality Control Assays

**Antibiotic Sensitivity:** JM109 cells are plated on LB agar plates containing one of the following antibiotics: ampicillin, tetracycline, kanamycin or chloramphenicol. No growth is observed on plates containing any of these antibiotics.

**F Episome:** The presence of the F<sup>+</sup> episome is confirmed by growth on minimal medium (M9) containing 1mM thiamine-HCl.

**Genetic Markers:** The presence of the *gyrA96* mutation is confirmed by growth on nalidixic acid.

**M13 Infection:** The cells are tested as hosts for M13 phage by infecting with M13 helper phage, R408, and looking for the appearance of plaques.

**Microscopic Examination:** The purity of this strain is verified visually by examination using Gram stain.

## Reference

1. Yanisch-Perron, C., Vieira, J. and Messing, J. (1985) Improved M13 phage cloning vectors and host strains: Nucleotide sequences of the M13mp18 and pUC19 vectors. *Gene* 33, 103-19.

Signed by:

R. Wheeler, Quality Assurance

Bacterial Strain JM109, Glycerol  
Stock

REF P9751

-65°C

LOT 0000257314

2023-04-25

Dispensed Lot#: 000008033

500µl

For Research Use

Country of Origin: USA

Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711-5399 USA



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### Promega Corporation

2800 Woods Hollow Road  
Madison, WI 53711-5399 USA  
Telephone 608-274-4330  
Toll Free 800-356-9526  
Fax 608-277-2516  
Internet [www.promega.com](http://www.promega.com)

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