

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_K⁻, m_K⁺), relA1, supE44, Δ, Δ(lac-proAB), [F⁺, 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⁺ 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⁺ 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, 103-119.

Signed by:

R. Wheeler, Quality Assurance

Bacterial Strain JM109, Glycerol Stock

REF P9751 LOT 0000244209
-85°C 2023-01-30
500µl Dispensed Lot#: 000008033

For Research Use

Country of Origin: USA

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Promega

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