

Leishmania mexicana, Strain Δ lmgf

Catalog No. NR-21979

Product Description:

Leishmania mexicana (*L. mexicana*), strain Δ lmgf was constructed by targeted gene replacement of the three *Leishmania* glucose transporter (LmGT) alleles of strain MNYC/BZ/62/M379 with puromycin acetyltransferase and streptothricin acetyltransferase genes (encoding resistance markers for the antibiotics puromycin and nourseothricin, respectively). Strain MNYC/BZ/62/M379 was originally isolated from *Nyctomys sumichrasti* (rat) in Cayo District, Belize, 1962. NR-21979 was produced by inoculation of BEI Resources seed lot 60704414 into M199 supplemented with 10% HIFBS and 10 μ g/mL hemin and grown for 3 days at 25°C in an aerobic atmosphere to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 70082271

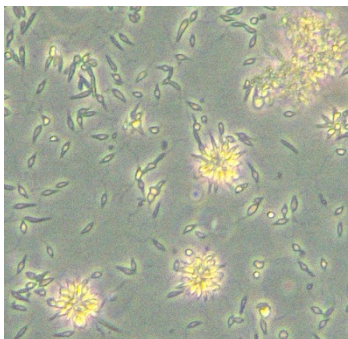
Manufacturing Date: 23APR2026

TEST	SPECIFICATIONS	RESULTS
Cell Morphology¹ 3 days at 25°C in an aerobic atmosphere in M199 supplemented with 10% HIFBS and 10 μ g/mL hemin	Report results	Refractile and motile with rosettes visible (Figure 1)
Genotypic Analysis² Sequencing of internal transcribed spacer (ITS) 1, 5.8S ribosomal RNA gene, ITS 2 (~ 503 base pairs) Sequencing of N-acetylglucosamine-1-phosphate transferase gene (<i>nagt</i>) (~ 1320 base pairs)	$\geq$ 99% sequence identity to <i>L. mexicana</i> , strain MNYC/BZ/62/M379 (GenBank: AF466383.1) $\geq$ 99% sequence identity to <i>L. mexicana nagt</i> gene (GenBank: DQ836161)	99.4% sequence identity to <i>L. mexicana</i> , strain MNYC/BZ/62/M379 (GenBank: AF466383.1) 100% sequence identity to <i>L. mexicana</i> gene (GenBank: DQ836161) ³
Confirmation of Gene Deletion by PCR Amplification² <i>L. mexicana</i> , strain MNYC/BZ/62/M379 (+luc) (NR-51210) ³ <i>L. mexicana</i> , strain Δ lmgf (NR-21979)	~ 2500 base pair amplicon No amplicon	~ 2500 base pair amplicon No amplicon
Viable Cell Count by Hemacytometry²	> 10 ⁶ cells per mL	3.2 $\times$ 10 ⁸ cells/mL
Viability¹ 3 days at 25°C in an aerobic atmosphere in M199 supplemented with 10% HIFBS and 10 μ g/mL hemin	Growth	Growth
Sterility (14-day incubation)¹ Trypticase soy broth, 37°C and 26°C, aerobic Sabouraud broth, 37°C and 26°C, aerobic Sheep blood agar, 37°C, aerobic Sheep blood agar, 37°C, anaerobic Thioglycollate broth, 37°C, anaerobic	No growth No growth No growth No growth No growth	No growth No growth No growth No growth No growth

¹Testing completed on vial, post-freeze material

²Testing completed on bulk material prior to vialing and freezing

³*L. mexicana* is differentiated from *L. amazonensis* based on a 7-nucleotide difference in the *nagt* gene (Waki, K., et al. "Transmembrane Molecules for Phylogenetic Analyses of Pathogenic Protists: *Leishmania*-Specific Informative Sites in Hydrophilic Loops of Trans-Endoplasmic Reticulum N-Acetylglucosamine-1-Phosphate Transferase." Eukaryot. Cell 6 (2007): 198-210. PubMed: 17142569.).

Figure 1: Cell Morphology

/Sonia Bjorum Brower/
Sonia Bjorum Brower

Technical Manager or designee, ATCC Federal Solutions

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