

## **Certificate of Analysis for NR-4098**

## Listeria monocytogenes, Strain Gibson

## Catalog No. NR-4098

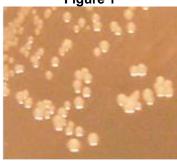
**Product Description**: Listeria monocytogenes (L. monocytogenes), strain Gibson was isolated in 1934 from meningeal pus collected post mortem from a fatal case of human meningitis in Edinburgh, Scotland, United Kingdom.

Lot<sup>1</sup>: 61834821 Manufacturing Date: 10JUL2013

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive rods	Gram-positive rods
Colony morphology <sup>2</sup>	Report results	Circular, low convex, entire, opaque, smooth and tan (Figure 1)
Hemolysis <sup>3,4</sup>	β-hemolytic	β-hemolytic
Motility (wet mount) <sup>5</sup>		
25°C	Motile	Motile
37°C	Non-motile	Non-motile
Biochemical tests:		
Analytical profile index (API® Listeria)	Consistent with L. monocytogenes	Consistent with L. monocytogenes
Catalase activity <sup>2</sup>	Positive	Positive
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~1500 base pairs)	Consistent with L. monocytogenes	Consistent with L. monocytogenes <sup>6</sup>
RiboPrinter Microbial Characterization System	Consistent with L. monocytogenes	Consistent with L. monocytogenes
Purity (post-freeze) <sup>7</sup>	Growth consistent with  L. monocytogenes	Growth consistent with L. monocytogenes
Viability (post-freeze) <sup>2</sup>	Growth	Growth

<sup>&</sup>lt;sup>1</sup>NR-4098 was produced by Brain Heart Infusion broth culture of ATCC<sup>®</sup> 7644™ (lot 3960854), which was incubated for 24 hours at 37°C in an aerobic atmosphere. Broth inoculum was added to kolles which were grown for 24 hours at 37°C in an aerobic atmosphere to produce this lot. <sup>2</sup>24 hours at 37°C in an aerobic atmosphere on Brain Heart Infusion agar

Figure 1



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<sup>&</sup>lt;sup>3</sup>Hemolytic activity on blood agar is generally used to distinguish *L. monocytogenes* from other *Listeria* species.

<sup>&</sup>lt;sup>4</sup>46 hours at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood

<sup>5</sup>L. monocytogenes strains are highly flagellated and motile at low temperatures (30°C and below), and are typically non-motile at temperatures of 37°C or above [see, Peel, M., W. Donachie and A. Shaw. "Temperature-Dependent Expression of Flagella of *Listeria monocytogenes* Studied by Electron Microscopy, SDS-PAGE and Western Blotting." J. Gen. Microbiol. 134 (1988): 2171-2178. PubMed: 3150978.].

<sup>&</sup>lt;sup>6</sup>Also consistent with other *Listeria* species

<sup>&</sup>lt;sup>7</sup>Purity of this lot was assessed for 7 days on Brain Heart Infusion agar at 37°C.



## **Certificate of Analysis for NR-4098**

Date: 24 OCT 2014 Signature:

Title: Technical Manager, BEI Authentication or designee

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