Certificate of Analysis for NR-305

Brucella suis, Strain 40

Catalog No. NR-305
(Derived from ATCC® 23447™)

Product Description:
Brucella suis (B. suis), strain 40 was isolated in 1960 from a reindeer in Russia (USSR). *B. suis*, strain 40 is a reference strain for biotype 4. NR-305 was produced by inoculation of ATCC® 23447™ into Tryptic Soy broth and grown for 3 days at 37°C in an aerobic atmosphere with 5% CO_2. Broth inoculum was added to Tryptic Soy agar kolles which were grown for 3 days at 37°C in an aerobic atmosphere with 5% CO_2 to produce this lot. Quality control testing was completed under propagation conditions unless otherwise noted.

Lot: 64364108 **Manufacturing Date: 23JUN2016**

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TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-negative rods	Gram-negative rods
Colony morphology	Report results	Circular, low convex, entire, smooth and cream (Figure 1)
Motility 7 days at 37°C in an aerobic atmosphere with 5% CO_2 on Remel™ Motility Test Medium w/TTC indicator	Non-motile	Non-motile
Biochemical tests		
Oxidase	Positive	Positive
Urease	Positive (> 5 minutes)	Positive (> 5 minutes)
Hydrogen sulfide production	Negative	Positive[1]
Arginine dihydrolase	Positive	Positive
Arabinose	Report results (variable)	Positive
Glucose	Positive	Positive
Xylose	Positive	Positive
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1,080 base pairs)	≥ 99% sequence identity to *B. suis*, strain 40 (GenBank: ACJK01000036.1)	100% sequence identity to *B. suis*, strain 40 (GenBank: ACJK01000036.1)
Purity (post-freeze) 10 days at 37°C in an aerobic atmosphere with 5% CO_2 on Tryptic Soy agar	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-freeze)	Growth	Growth

[1]Biotype 1 is the only biotype thought to produce hydrogen sulfide. NR-305 was tested in duplicate at BEI Resources after production of this lot and twice upon deposit at ATCC® and was found to be positive for hydrogen sulfide production. It was deposited as a reference strain for biotype 4 *Brucella suis*. For additional information regarding biotype and hydrogen sulfide production, see Meyer, M. E. and W. J. B. Morgan. "Designation of Neotype Strains and of Biotype Reference Strains for Species of the Genus *Brucella* Meyer and Shaw." Internat. J. System. Bacteriol. 23 (1972): 135-141.

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Figure 1: Colony Morphology

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Principal Investigator, ATCC

ATCC®, on behalf of BEI Resources, hereby represents and warrants that the material provided under this certificate has been subjected to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and accurate to the best of ATCC®'s knowledge.

Support Provided by NIAID

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