Certificate of Analysis for NR-51673

Borrelia recurrentis, Strain PAbn

Catalog No. NR-51673

Product Description:

Borrelia recurrentis (B. recurrentis), strain PAbn was isolated in 2015 from the blood of a human with louse-borne relapsing fever. NR-51673 lot 70027336 was produced by inoculation of the deposited material into Revised Barbour-Stoenner-Kelly broth and grown for 3 days at 33°C in an aerobic atmosphere with 5% CO_2. Broth inoculum was added to Revised Barbour-Stoenner-Kelly broth and grown for 3 days at 33°C in an aerobic atmosphere with 5% CO_2 to produce this lot.

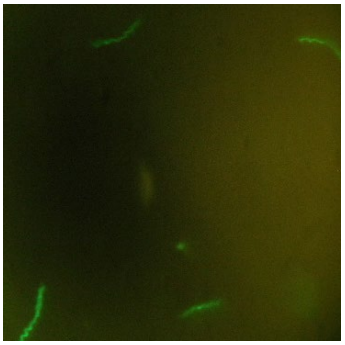
Lot: 70027336 **Manufacturing Date: 24OCT2019**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology 7 days at 33°C in an aerobic atmosphere with 5% CO_2 in Revised Barbour-Stoenner-Kelly broth	Spirochete	Spirochete
Motility (wet mount)	Report results	Motile
Genotypic Analysis		
Sequencing of 16S ribosomal RNA (rRNA) gene (~ 1330 base pairs)	≥ 99% sequence identity to *B. recurrentis*, strain A1 (GenBank: CP000993.1)	100% sequence identity to *B. recurrentis*, strain A1 (GenBank: CP000993.1)[1]
Purity		
7 days at 33°C in an aerobic atmosphere with 5% CO_2 in Tryptic Soy agar with 5% defibrinated sheep blood	Growth consistent with colony morphology or no growth	No growth
7 days at 37°C in an aerobic atmosphere with 5% CO_2 in Tryptic Soy agar with 5% defibrinated sheep blood	No growth	No growth
Viability (post-freeze)		
Visual observation 7 days at 33°C in an aerobic atmosphere with 5% CO_2 in Revised Barbour-Stoenner-Kelly broth	Growth	Growth
LIVE/DEAD® *Bac*Light™ Bacterial Viability	Green fluorescence visible	Green fluorescence visible (Figure 1)[2]

[1]Also consistent with other *Borrelia* species. *B. recurrentis* and *B. duttonii* cannot be differentiated by sequencing of the 16S rRNA gene (Marosevic, D., et al. "First Insights in the Variability of *Borrelia recurrentis* Genomes." PLoS Negl. Trop. Dis. 11 (2017): e0005865. PubMed: 28902847.).

[2]Determined after 3 days at 33°C in an aerobic atmosphere with 5% CO_2 in Revised Barbour-Stoenner-Kelly broth with LIVE/DEAD® *Bac*Light™ Bacterial Viability Kit, 1000× magnification (Invitrogen™ L34856). Cells with a compromised membrane that are dead or dying will stain red, while cells with an intact membrane will stain green.

Figure 1: LIVE/DEAD® *Bac*Light™ Bacterial Viability



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/Heather Couch/
Heather Couch 24 MAR 2020
Program Manager or designee, ATCC Federal Solutions

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.

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