Certificate of Analysis for NR-51674

Borrelia recurrentis, Strain PAbJ

Catalog No. NR-51674

Product Description:

Borrelia recurrentis (B. recurrentis), strain PAbJ was isolated in Germany in 2015 from the blood of a human with louse-borne relapsing fever who originated in Somalia and migrated to Germany. NR-51674 lot 70027339 was produced by inoculation of the deposited material into Revised Barbour-Stoenner-Kelly broth and grown for 7 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 8 days at 33°C in an aerobic atmosphere with 5% CO_2 to produce this lot.

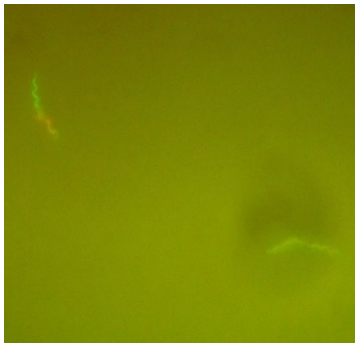
Lot: 70027339 **Manufacturing Date: 08NOV2019**

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 (~ 1340 base pairs)	≥ 99% sequence identity to *B. recurrentis*, strain A1 (GenBank: CP000993.1)	99.9% sequence identity to *B. recurrentis*, strain A1 (GenBank: CP000993.1)[1]
Purity (post-freeze)		
7 days at 33°C in an aerobic atmosphere with 5% CO_2 on 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 on 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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