

Brucella abortus, Strain 2308 Δ wbkA

Catalog No. NR-14816

Product Description: *Brucella abortus* (*B. abortus*), strain 2308 Δ wbkA was generated from strain 2308 by deletion of the *wbkA* gene and replacement with a marker gene encoding resistance to kanamycin. The *wbkA* protein is an N-formyl-glutamine transferase that is essential to the biosynthesis of the LPS O antigen [locus tag: BAB_RS18565 (previously, locus tag: BAB1_0553)]. The *wbkA* deletion in *B. abortus*, strain 2308, resulted in the attenuation of the strain for infection of murine macrophages. It has also been noted that strain 2308 Δ wbkA can provide similar protection efficacy against challenge as the S19 vaccine.

Lot¹: 63451488

Manufacturing Date: 24AUG2015

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology ² Motility ³ Biochemical tests Oxidase Urease Hydrogen sulfide production Arginine dihydrolase Arabinose Glucose Xylose	Gram-negative coccobacillus Report results Non-motile Positive Positive (> 5 minutes) Positive Negative Positive Positive Negative	Gram-negative coccobacillus Irregular, low convex, undulate, translucent and cream (Figure 1) Non-motile Positive Positive (> 5 minutes) Positive Negative Positive Positive Negative
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1360 base pairs)	≥ 99% sequence identity to <i>B. abortus</i> , strain 2308 (GenBank: NR_042460.1)	99.8% sequence identity to <i>B. abortus</i> , strain 2308 (GenBank: NR_042460.1) ⁴
Confirmation of ΔwbkA⁵	Resistant to kanamycin	Resistant to kanamycin
Purity (post-freeze)⁶	Growth consistent with expected colony morphology	Growth consistent with expected colony morphology
Viability (post-vialing)²	Growth	Growth

¹*B. abortus*, strain 2308 Δ wbkA was produced by inoculation of the deposited material onto Tryptic Soy agar with 25 µg/mL kanamycin and grown 1 day at 37°C in an aerobic atmosphere with 5% CO₂. The growth was harvested with Tryptic Soy broth supplemented with 10% glycerol and cryopreserved. A quantity of the preserved material was used to inoculate a tube of Tryptic Soy broth which was grown 3 days at 37°C in an aerobic atmosphere with 5% CO₂. Broth inoculum was added to Tryptic Soy agar kolles which were grown 3 days at 37°C in an aerobic atmosphere with 5% CO₂ to produce this lot.

²3 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar

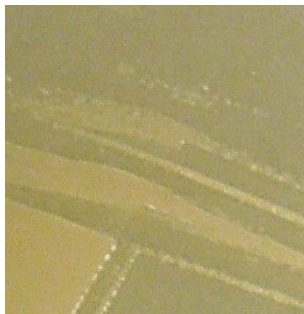
³Motility test performed on Remel™ Motility Test Medium w/TTC indicator for 7 days at 37°C in an aerobic atmosphere with 5% CO₂.

⁴Also consistent with other *Brucella* species

⁵3 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar supplemented with 25 µg/mL kanamycin; growth in the presence of kanamycin confirms the gene replacement of *wbkA*.

⁶Purity of this lot was assessed for 28 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar.

Figure 1: Colony Morphology



Date: 12 APR 2016

Signature:

Christina M. Fitzgibbon

Title: Senior Director, Compliance & QA/Chief Compliance Officer

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