b|e|i RESOURCES
SUPPORTING INFECTIOUS DISEASE RESEARCH

Certificate of Analysis for NR-46176

Staphylococcus aureus, Strain CA-263

Catalog No. NR-46176

Product Description: *Staphylococcus aureus* (*S. aureus*), strain CA-263 was isolated in August 2005 from the blood of a 56-year-old male in California, USA. *S. aureus*, strain CA-263 is a clinically-associated methicillin-resistant *S. aureus* (MRSA) strain.

Lot[1]: 63957096 **Manufacturing Date: 15JAN2016**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology[2]	Report results	Circular, low convex, entire, smooth and cream (Figure 1)
Motility (wet mount)	Report results	Non-motile
Hemolysis[3]	Report results	β-hemolytic
Biochemical characterization		
Catalase	Positive	Positive
Coagulase[4]	Report results	Positive
VITEK® 2 Compact (GP card)	≥ 90% probability of being *S. aureus*	*S. aureus* (98% probability)[5]
Antibiotic Susceptibility Profile		
VITEK® (AST-GP71 card)[6]		
Beta-lactamase[7]	Report results	Positive
Cefoxitin screen	Report results	Positive
Benzylpenicillin	Report results	Resistant (≥ 0.5 µg/mL)
Oxacillin	Resistant	Resistant (≥ 4 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Ciprofloxacin	Report results	Sensitive (≤ 0.5 µg/mL)
Levofloxacin	Sensitive	Sensitive (≤ 0.12 µg/mL)
Moxifloxacin	Report results	Sensitive (≤ 0.25 µg/mL)
Clindamycin (inducible resistance)	Report results	Negative
Erythromycin	Sensitive	Sensitive (≤ 0.25 /mL)
Clindamycin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Quinupristin/dalfopristin	Report results	Sensitive (≤ 0.25 µg/mL)
Linezolid	Sensitive	Sensitive (= 2 µg/mL)
Daptomycin	Sensitive	Sensitive (= 0.5 µg/mL)
Vancomycin	Sensitive	Sensitive (= 1 µg/mL)
Minocycline	Report results	Sensitive (≤ 0.5 µg/mL)
Tetracycline	Resistant	Resistant (≥ 16 µg/mL)
Tigecycline	Report results	Sensitive (≤ 0.12 µg/mL)[8]
Nitrofurantoin	Report results	Sensitive (≤ 16 µg/mL)
Rifampicin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 10 µg/mL)
Etest® antibiotic test strips[9]		
Chloramphenicol[10]	Sensitive	Sensitive (= 3 µg/mL)
Teicoplanin[10]	Report results	Sensitive (= 1.0 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1400 base pairs)	≥ 99% sequence identity to *S. aureus* type strain	99.6% sequence identity to L37597
Purity (post-freeze)[11]	Consistent with expected colony morphology	Consistent with expected colony morphology
Viability (post-freeze)[2]	Growth	Growth

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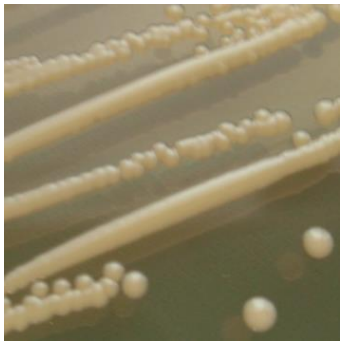
[1]*S. aureus*, strain CA-263 was deposited to BEI Resources as part of the NARSA collection. NR-46176 was produced by inoculation of the deposited material into Brain Heart Infusion broth and grown 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Brain Heart Infusion agar kolles which were grown 1 day at 37°C in an aerobic atmosphere to produce this lot.
[2]1 day at 37°C in an aerobic atmosphere on Brain Heart Infusion agar
[3]1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood
[4]4 hours at 37°C in rabbit serum with 0.15% EDTA (Coagulase Plasma BBL™ 240658)
[5]Percent probabilities above 90% indicate a close match to the typical biochemical pattern for the given organism, with a percent probability of 99% being a perfect match between the test reaction pattern and the unique biochemical pattern of a single organism or organism group. For additional information, please refer to O'Hara, C.M. and J. M. Miller. "Evaluation of the Vitek 2 ID-GNB Assay for Identification of Members of the Family *Enterobacteriaceae* and Other Nonenteric Gram-Negative Bacilli and Comparison with the Vitek GNI+ Card." J. Clin. Microbiol. 41 (2003): 2096-2101. PubMed: 12734254.
[6]Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)
[7]The production of beta-lactamase was detected using a DrySlide™ Nitrocefin (BBL™ 231749).
[8]MIC Interpretation Guideline: EUCAST Version 4.0 (2014)
[9]1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar
[10]For both chloramphenicol (bioMérieux Etest® 412308) and teicoplanin (bioMérieux Etest® 412459), a MIC ≤ 8 µg/mL is sensitive, a MIC = 16 µg/mL is intermediate and a MIC ≥ 32 µg/mL is resistant.
[11]Purity of this lot was assessed for 9 days at 37°C in an aerobic atmosphere on Brain Heart Infusion agar.

Figure 1: Colony Morphology



Date: 12 FEB 2016 **Signature:**

BEI Resources Authentication

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