Certificate of Analysis for NR-46422

Staphylococcus aureus, Strain AID 1001123

Catalog No. NR-46422

Product Description: *Staphylococcus aureus* (*S. aureus*), strain AID 1001123 was isolated in 2010 in Delaware, USA from wound drainage of a 63-year-old female with a prosthetic joint infection who had been unsuccessfully treated with continuous vancomycin therapy for 3 months. *S. aureus*, strain AID 1001123 is a vancomycin-resistant *S. aureus* (VRSA) strain. AID 1001123 is a co-isolate with AIS 1001095 from the same patient and they were isolated at the same time. Both are *mecA* positive but unlike AIS 1001095, AID 1001123 is phenotypically resistant to oxacillin by the cefoxitin disk diffusion test.

Lot[1]: 62401814 **Manufacturing Date: 28FEB2014**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology[2]	Report results	Circular, convex, entire, smooth and yellow (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)	Consistent with *S. aureus*	Consistent with *S. aureus*
Antibiotic Susceptibility Profile		
VITEK® (AST-GP71 card)[5]		
Beta-lactamase[6]	Report results	Positive
Cefoxitin screen	Report results	Positive
Benzylpenicillin	Report results	Resistant (≥ 0.5 µg/mL)
Oxacillin	Sensitive	Sensitive (= 1 µg/mL)
Gentamicin	Sensitive	Sensitive (= 1 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 8 µg/mL)
Levofloxacin	Report results	Resistant (≥ 8 µg/mL)
Moxifloxacin	Report results	Resistant (≥ 8 µg/mL)
Clindamycin (inducible resistance)	Report results	Negative
Erythromycin	Resistant	Resistant (≥ 8 µg/mL)
Clindamycin	Resistant	Resistant (≥ 8 µg/mL)
Quinupristin/dalfopristin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Linezolid	Sensitive	Sensitive (= 1 µg/mL)
Daptomycin	Sensitive	Sensitive (= 0.25 µg/mL)
Vancomycin	Resistant	Resistant (≥ 32 µg/mL)
Minocycline	Report results	Sensitive (≤ 0.5 µg/mL)
Tetracycline	Report results	Sensitive (≤ 1 µg/mL)
Tigecycline	Report results	Sensitive (≤ 0.12 µg/mL)
Nitrofurantoin	Report results	Sensitive (≤ 16 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (= 20 µg/mL)
Etest® antibiotic test strips[7]		
Chloramphenicol[8]	Report results	Sensitive (= 6 µg/mL)
Teicoplanin[8]	Intermediate	Resistant (= 256 µg/mL)[9]
Rifampicin[8]	Sensitive	Intermediate (= 2 µg/mL)[10]

BEI Resources
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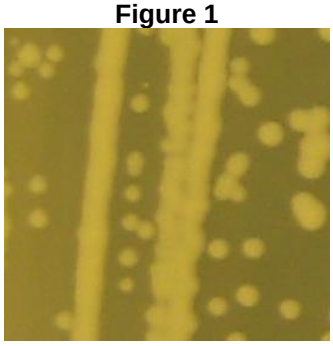
Certificate of Analysis for NR-46422

TEST	SPECIFICATIONS	RESULTS
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1500 base pairs)	Consistent with *S. aureus*	Consistent with *S. aureus*
Viability (post-freeze)[2]	Growth	Growth

[1]*S. aureus*, strain AID 1001123 was deposited to BEI Resources as part of the NARSA collection. NR-46422 was produced by inoculation of the deposited material into Brain Heart Infusion broth with 6 µg/mL vancomycin and grown 23 hours at 37°C in an aerobic atmosphere. Broth inoculum was added to Brain Heart Infusion agar with 6 µg/mL vancomycin kolles which were grown 23 hours at 37°C in an aerobic atmosphere to produce this lot. Purity of this lot was assessed for 7 days under propagation conditions.
[2]24 hours at 37°C and aerobic atmosphere on Brain Heart Infusion agar with 6 µg/mL vancomycin
[3]24 hours at 37°C and 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™ 240827)
[5]Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)
[6]The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).
[7]24 hours at 37°C and aerobic atmosphere on Mueller Hinton agar
[8]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. For rifampicin (bioMérieux Etest® 412449), a MIC ≤ 1 µg/mL is sensitive, a MIC = 2 µg/mL is intermediate and a MIC ≥ 4 µg/mL is resistant.
[9]*S. aureus*, strain AID 1001123 was deposited as having an intermediate susceptibility to teicoplanin. ATCC® quality control determined that *S. aureus*, strain AID 1001123 is resistant to teicoplanin. Repeat testing confirmed ATCC®'s initial results.
[10]*S. aureus*, strain AID 1001123 was deposited as being susceptible to rifampicin. ATCC® quality control determined that *S. aureus*, strain AID 1001123 has an intermediate susceptibility to rifampicin. Repeat testing confirmed ATCC®'s initial results.

Figure 1



Date: 03 JUN 2014 **Signature:**

Title: Technical Manager, BEI Authentication or designee

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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