Certificate of Analysis for NR-45867

Staphylococcus aureus, Strain SA MER-S20

Catalog No. NR-45867

Product Description: *Staphylococcus aureus* (*S. aureus*), strain SA MER-S20 is a derivative strain of strain SA MER (NRS11). Strain SA MER was isolated in December 1998 in France from the eye of a 35-year-old female with spontaneous conjunctivitis and who had no history of treatment with antimicrobial agents, including glycopeptides, in the preceding three months. *S. aureus*, strain SA MER-S20 is a vancomycin-intermediate *S. aureus* (VISA) strain and was deposited as resistant to benzylpenicillin but susceptible to methicillin.

Lot[1]: 62990876 **Manufacturing Date: 08OCT2014**

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[2]	Report results	β-hemolytic
Biochemical Characterization		
Catalase	Positive	Positive
Coagulase[3]	Report results	Positive
VITEK® 2 Compact (GP card)	Consistent with *S. aureus*	Consistent with *S. aureus*
Antibiotic Susceptibility Profile		
VITEK® (AST-GP71 card)[4]		
Beta-lactamase[5]	Report results	Positive
Cefoxitin screen	Report results	Negative
Benzylpenicillin	Report results	Resistant (≥ 0.5 µg/mL)
Oxacillin	Sensitive	Sensitive (= 0.5 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Levofloxacin	Report results	Sensitive (= 0.25 µg/mL)
Moxifloxacin	Report results	Sensitive (≤ 0.25 µg/mL)
Clindamycin (inducible resistance)	Report results	Negative
Erythromycin	Report results	Sensitive (≤ 0.25 µg/mL)
Clindamycin	Report results	Sensitive (≤ 0.25 µg/mL)
Quinupristin/dalfopristin	Sensitive	Sensitive (= 0.5 µg/mL)
Linezolid	Report results	Sensitive (= 4 µg/mL)
Daptomycin	Not susceptible	Not susceptible (= 4 µg/mL)
Vancomycin	Intermediate	Intermediate (= 4 µg/mL)
Minocycline	Report results	Sensitive (≤ 0.5 µg/mL)
Tetracycline	Sensitive	Sensitive (≤ 1 µg/mL)
Tigecycline	Report results	Sensitive (≤ 0.12 µg/mL)
Nitrofurantoin	Report results	Sensitive (≤ 16 µg/mL)
Rifampicin	Report results	Sensitive (≤ 0.5 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 10 µg/mL)
Etest® antibiotic test strips[6]		
Chloramphenicol[7]	Report results	Sensitive (= 4-6 µg/ml)
Teicoplanin[7]	Resistant	Resistant (= 32 µg/ml)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 890 base pairs)	Consistent with *S. aureus*	Consistent with *S. aureus*

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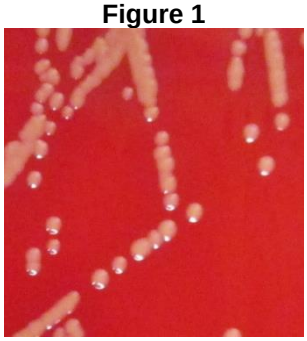
TEST	SPECIFICATIONS	RESULTS
Purity (post-freeze)[8]	Consistent with *S. aureus*	Consistent with *S. aureus*
Viability (post-freeze)[2]	Growth	Growth

[1]*S. aureus*, strain SA MER-S20 was deposited to BEI Resources as part of the NARSA collection. NR-45867 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 23 hours at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar with 5% defibrinated sheep blood kolles which were grown 24 hours at 37°C in an aerobic atmosphere to produce this lot.
[2]24 hours at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood
[3]4 hours at 37°C in rabbit serum with 0.15% EDTA (Coagulase Plasma BBL™ 240827)
[4]Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)
[5]The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).
[6]24 hours at 37°C in an aerobic atmosphere on Mueller Hinton agar
[7]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
[8]Purity of this lot was assessed for 7 days on Tryptic Soy agar with 5% defibrinated sheep blood at 37°C in an aerobic atmosphere.

Figure 1



Date: 20 NOV 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.

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