b|e|i RESOURCES
SUPPORTING INFECTIOUS DISEASE RESEARCH

Certificate of Analysis for NR-45902

Staphylococcus aureus, Strain HIP10267

Catalog No. NR-45902

Product Description: *Staphylococcus aureus (S. aureus)*, strain HIP10267 was isolated in 2000 from the bloodstream of a 30-year-old male patient in Maryland, USA.

Lot[1]: 70011116 **Manufacturing Date: 07DEC2017**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology[2]	Report results	Circular, 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)	*S. aureus* (≥ 89%)	*S. aureus* (99%)
Antibiotic Susceptibility Profile[5]		
VITEK® (AST-GP71 card)		
Beta-lactamase[6]	Report results	Positive
Cefoxitin screen	Report results	Positive
Benzylpenicillin	Report results	Resistant (≥ 0.5 µg/mL)
Oxacillin	Resistant	Resistant (≥ 4 µg/mL)
Gentamicin	Resistant	Resistant (≥ 16 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	Report results	Sensitive (= 1 µg/mL)[7]
Linezolid	Report results	Resistant (≥ 8 µg/mL)[8]
Daptomycin	Non-susceptible	Non-susceptible (= 2 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)[9]
Nitrofurantoin	Report results	Sensitive (≤ 16 µg/mL)
Rifampicin	Report results	Resistant (≥ 32 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 10 µg/mL)
Etest® antibiotic test strips[10]		
Chloramphenicol	Report results	Sensitive (= 4 to 6 µg/mL)
Teicoplanin	Sensitive	Sensitive (= 3 µg/mL)
Vancomycin	Intermediate	Intermediate (= 8 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (770 base pairs)	≥ 99% sequence identity to *S. aureus* type strain (GenBank: L37597)	100% sequence identity to *S. aureus* type strain (GenBank: L37597)[11]
Purity (post-freeze)[12]	Consistent with expected colony morphology	Consistent with expected colony morphology
Viability (post-freeze)[2]	Growth	Growth

[1]*S. aureus*, strain HIP10267 was deposited to BEI Resources as part of the NARSA collection. NR-45902 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar kolles, which were grown 1 day at 37°C in an aerobic atmosphere to produce this lot.

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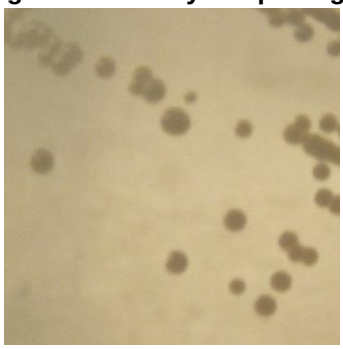
[2]1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar
[3]1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood
[4]1 day at 37°C in rabbit serum with 0.15% EDTA (Coagulase Plasma BBL™ 240827)
[5]Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)
[6]The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).
[7]*S. aureus*, strain HIP10267 was deposited as having an intermediate susceptibility to quinupristin/dalfopristin. Antibiotic susceptibility testing performed in duplicate determined that strain HIP10267 is sensitive to quinupristin/dalfopristin.
[8]*S. aureus*, strain HIP10267 was deposited as sensitive to linezolid. Antibiotic susceptibility testing performed in duplicate determined that strain HIP10267 is resistant to linezolid.
[9]MIC Interpretation Guideline: EUCAST Version 4.0 (2014)
[10]1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar
[11]Also consistent with *S. argenteus* and *S. simiae*
[12]Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere with 5% CO_2 on Tryptic Soy agar with 5% defibrinated sheep blood.

Figure 1: Colony Morphology



Heather Couch
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Date: 2018.04.20 09:05:24 -04'00'
20 APR 2018
Program Manager or designee, ATCC Federal Solutions

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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