

Certificate of Analysis for NR-45876

Staphylococcus aureus, Strain HIP09433

Catalog No. NR-45876

Product Description: *Staphylococcus aureus* (*S. aureus*), strain HIP09433 was isolated in 2000 from the cerebral spinal fluid of a 77-year-old female ICU patient in Michigan, USA. *S. aureus*, strain HIP09433 is a vancomycin-intermediate *S. aureus* (VISA) strain.

Lot¹: 62990882 Manufacturing Date: 09OCT2014

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology ²	Report results	Circular, low convex, entire, smooth
Colony melphology	report rooms	and gray (Figure 1)
Motility (wet mount)	Report results	Non-motile
Hemolysis ²	Report results	β-hemolytic
Biochemical Characterization	1 Report results	p nemorytic
Catalase	Positive	Positive
Coagulase ³	Report results	Positive
VITEK [®] 2 Compact (GP card)	Consistent with S. aureus	Consistent with S. aureus
	Gorisistent with G. aureus	Consistent with G. dureus
Antibiotic Susceptibility Profile		
VITEK [®] (AST-GP71 card)⁴		
Beta-lactamase ⁵	Report results	Positive
Cefoxitin screen	Report results	Positive
Benzylpenicillin	Report results	Resistant (≥ 0.5 µg/mL)
Oxacillin	Resistant	Resistant (≥ 4 µg/mL) Inconclusive ⁶
Gentamicin	Report results	
Ciprofloxacin	Resistant	Resistant (≥ 8 μg/mL)
Levofloxacin	Report results	Resistant (≥ 8 μg/mL)
Moxifloxacin	Report results	Resistant (= 4 µg/mL)
Clindamycin (inducible resistance)	Report results	Negative
Erythromycin	Report results	Resistant (≥ 8 µg/mL)
Clindamycin	Report results	Intermediate (= 2 µg/mL)
Quinupristin/dalfopristin	Sensitive	Sensitive (= 0.5 µg/mL)
Linezolid	Report results	Sensitive (= 2 µg/mL)
Daptomycin	Report results	Non-susceptible (= 4 µg/mL) ⁷
Minocycline	Report results	Sensitive (≤ 0.5 μg/mL)
Tetracycline	Sensitive	Sensitive (≤ 1 μg/mL)
Tigecycline	Report results	Sensitive (≤ 0.25 µg/mL)
Nitrofurantoin	Report results	Sensitive (≤ 16 µg/mL)
Rifampicin	Report results	Sensitive (≤ 0.5 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (≥ 320 µg/mL)
Etest [®] antibiotic test strips ⁸		
Chloramphenicol ⁹	Report results	Sensitive (= 4-6 µg/ml)
Teicoplanin ⁹	Sensitive	Sensitive (= 6 µg/ml)
Vancomycin ⁹	Intermediate	Intermediate (= 6 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	Consistent with S. aureus	Consistent with S. aureus
(~ 1440 base pairs)		
Purity (post-freeze) ¹⁰	Consistent with S. aureus	Consistent with S. aureus
Viability (post-freeze) ²	Growth	Growth

BEI Resources www.beiresources.org E-mail: contact@beiresources.org

Tel: 800-359-7370 Fax: 703-365-2898



SUPPORTING INFECTIOUS DISEASE RESEARCH

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¹S. aureus, strain HIP09433 was deposited to BEI Resources as part of the NARSA collection. NR-45876 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 24 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.

²23 hours at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood

³4 hours at 37°C in rabbit serum with 0.15% EDTA (Coagulase Plasma BBL™ 240827)

⁴Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

⁵The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).

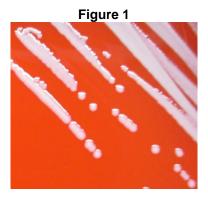
⁶S. *aureus*, strain HIP07920 was deposited as resistant to gentamicin. Antibiotic susceptibility testing performed in duplicate was inconclusive and could not confirm if this strain is resistant or susceptible to gentamicin.

7S. aureus, strain HIP09433 was deposited as being susceptible to daptomycin. Antibiotic susceptibility testing performed in duplicate identified S. aureus, strain HIP09433 as being non-susceptible to daptomycin.

⁸24 hours at 37°C in an aerobic atmosphere on Mueller Hinton agar

⁹For 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 vancomycin (bioMérieux Etest[®] 412486), a MIC ≤ 2 μg/mL is sensitive, a MIC = 4-8 μg/mL is intermediate, and a MIC ≥ 16 μg/mL is resistant.

 10 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.



Date: 16 DEC 2014

Signature:

Title: Technical Manager, BEI Authentication or designee

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BEI Resources www.beiresources.org E-mail: contact@beiresources.org
Tel: 800-359-7370

Fax: 703-365-2898