Certificate of Analysis for NR-46076

Staphylococcus aureus, Strain HIP13036

Catalog No. NR-46076

Product Description: *Staphylococcus aureus* (*S. aureus*), strain HIP13036 was isolated in 2004 from a male in Connecticut, USA. *S. aureus*, strain HIP13036 is a vancomycin-intermediate *S. aureus* (VISA) strain.

Lot[1]: 63007604 **Manufacturing Date: 24OCT2014**

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[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	Positive
Benzylpenicillin	Report results	Resistant (= 0.25 µg/mL)
Oxacillin	Resistant	Resistant (≥ 4 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Ciprofloxacin	Resistant	Resistant (= 4 µg/mL)
Levofloxacin	Report results	Resistant (= 4 µg/mL)
Moxifloxacin	Report results	Intermediate (= 1 µg/mL)
Clindamycin (inducible resistance)	Report results	Positive[6]
Erythromycin	Resistant	Resistant (≥ 8 µg/mL)
Quinupristin/dalfopristin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Linezolid	Sensitive	Sensitive (= 4 µg/mL)
Daptomycin	Not susceptible	Not susceptible (= 4 µg/mL)
Vancomycin	Intermediate	Intermediate (= 2-4 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)
Rifampicin	Report results	Sensitive (≤ 0.5 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 10 µg/mL)
Etest® antibiotic test strips:[7]		
Chloramphenicol[8]	Report results	Sensitive (= 3-5 µg/mL)
Teicoplanin[8]	Intermediate	Intermediate (= 16-24 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 900 base pairs)	Consistent with *S. aureus*	Consistent with *S. aureus*
Purity (post-freeze)[9]	Growth consistent with *S. aureus*	Growth consistent with *S. aureus*
Viability (post-freeze)[2]	Growth	Growth

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[1]*S. aureus*, strain HIP13036 was deposited to BEI Resources as part of the NARSA collection. NR-46076 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]The VITEK® AST-GP71 card tests for both clindamycin resistance and inducible clindamycin resistance (ICR). A positive ICR test is indicative of inducible MLS_b resistance, which confers resistance to macrolides, lincosamides, and type B streptogramin and the isolate should be considered resistant to clindamycin. *S. aureus*, strain HIP13036 was found to be sensitive to clindamycin but had a positive ICR test and therefore is considered resistant to clindamycin.
[7]24 hours at 37°C in an 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.
[9]Purity of this lot was assessed for 8 days on Tryptic Soy agar with 5% defibrinated sheep blood at 37°C in an aerobic atmosphere.

Figure 1

Date: 22 DEC 2014 **Signature:**

Title: Technical Manager, BEI Authentication or designee

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