Certificate of Analysis for NR-45872

Staphylococcus aureus, Strain HIP07930

Catalog No. NR-45872

Product Description: *Staphylococcus aureus* (*S. aureus*), strain HIP07930 was isolated in 1999 from the bloodstream of an adult female ICU patient in New York, USA. *S. aureus*, strain HIP07930 is a hospital-acquired methicillin-resistant *S. aureus* (HA-MRSA) strain and is reported to be resistant to erythromycin, clindamycin, trimethoprim/sulfamethoxazole, gentamicin and levofloxacin.

Lot[1]: 62280935 **Manufacturing Date: 09JAN2014**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology[2]	Report results	Circular, low convex, entire, smooth and white (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	Resistant	Resistant (≥ 0.5 µg/mL)
Oxacillin	Resistant	Resistant (≥ 4 µg/mL)
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	Resistant	Resistant (≥ 8 µg/mL)
Clindamycin	Resistant	Resistant (≥ 8 µg/mL)
Quinupristin/dalfopristin	Sensitive	Sensitive (= 0.5 µg/mL)
Linezolid	Sensitive	Sensitive (= 4 µg/mL)
Vancomycin	Intermediate	Intermediate (= 4 µg/mL)
Minocycline	Sensitive	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	Resistant	Resistant (≥ 320 µg/mL)
Etest® antibiotic test strips:[6]		
Chloramphenicol[7]	Report results	Sensitive (= 6 µg/mL)
Teicoplanin[7]	Sensitive	Sensitive (= 3 µg/mL)
Gentamicin[7]	Resistant	Resistant (≥ 32 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1500 base pairs)	Consistent with *S. aureus*	Consistent with *S. aureus*
Riboprinter® Microbial Characterization System	Consistent with *S. aureus*	Consistent with *S. aureus*
Viability (post-freeze)[2]	Growth	Growth

[1]*S. aureus*, strain HIP07930 was deposited to BEI Resources as part of the NARSA collection. NR-45872 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 20 hours at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar

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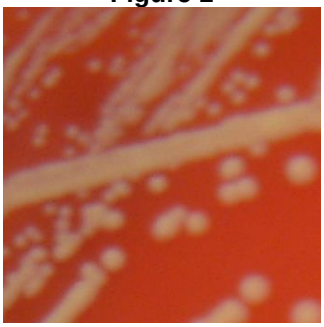
with 5% defibrinated sheep blood kolles which were grown 22 hours at 37°C in an aerobic atmosphere to produce this lot. Purity of this lot was assessed for 7 days under propagation conditions.
[2]23 hours at 37°C and aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood
[3]4 hours at 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 Nitrocefin dry slide (BBL™ 231749).
[6]24 hours at 37°C and 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. For gentamicin (bioMérieux Etest® 412367), a MIC ≤ 4 µg/mL is sensitive, a MIC = 8 µg/mL is intermediate and a MIC ≥ 16 µg/mL is resistant.

Figure 1



Date: 25 MAR 2014 **Signature:**

Title: Technical Manager, BEI Authentication or designee

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