b|e|i RESOURCES
SUPPORTING INFECTIOUS DISEASE RESEARCH

Certificate of Analysis for NR-46238

Staphylococcus aureus, Strain NY-208

Catalog No. NR-46238

Product Description: *Staphylococcus aureus* (*S. aureus*), strain NY-208 was isolated in 2005 from a joint of an 82-year-old male with osteomyelitis, arthritis and bursitis in New York, USA.

Lot[1]: 2109 **Manufacturing Date: 03NOV2016**

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)	≥ 90% probability of being *S. aureus*	*S. aureus* (99% probability)[5]
Antibiotic Susceptibility Profile		
VITEK® (AST-GP71 card)[6]		
Beta-lactamase[7]	Report results	Positive
Cefoxitin screen	Report results	Positive
Benzylpenicillin	Report results	Resistant (≥ 0.5 µg/mL)
Oxacillin	Resistant	Resistant (≥ 4 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Ciprofloxacin	Report results	Resistant (≥ 8 µg/mL)
Levofloxacin	Resistant	Resistant (= 4 µg/mL)
Moxifloxacin	Report results	Intermediate (= 1 µg/mL)
Clindamycin (inducible resistance)	Report results	Positive[8]
Erythromycin	Resistant	Resistant (≥ 8 µg/mL)
Quinupristin/dalfopristin	Report results	Sensitive (≤ 0.25 µg/mL)
Linezolid	Sensitive	Sensitive (= 2 µg/mL)
Daptomycin	Sensitive	Sensitive (= 0.25 µg/mL)
Vancomycin	Sensitive	Sensitive (= 1 µg/mL)
Minocycline	Report results	Sensitive (≤ 0.5 µg/mL)
Tetracycline	Sensitive	Sensitive (≤ 1 µg/mL)
Tigecycline	Report results	Sensitive (≤ 0.12 µg/mL)[9]
Nitrofurantoin	Report results	Sensitive (≤ 16 µg/mL)
Rifampicin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 10 µg/mL)
Etest® antibiotic test strips[10]		
Chloramphenicol[11]	Sensitive	Sensitive (= 6 µg/mL)
Teicoplanin[11]	Report results	Sensitive (= 0.75 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1480 base pairs)	≥ 99% sequence identity to *S. aureus* type strain (GenBank: L37597)	100% sequence identity to *S. aureus* type strain (GenBank: L37597)
Purity (post-freeze)[12]	Consistent with expected colony morphology	Consistent with expected colony morphology
Viability (post-freeze)[2]	Growth	Growth

[1] *S. aureus*, strain NY-208 was deposited to BEI Resources as part of the NARSA collection. NR-46238 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.
[2] 1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar

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[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]Percent probabilities above 90% indicate a close match to the typical biochemical pattern for the given organism, with a percent probability of 99% being a perfect match between the test reaction pattern and the unique biochemical pattern of the given organism or organism group. For additional information, please refer to O'Hara, C.M. and J. M. Miller. "Evaluation of the VITEK 2 ID-GNB Assay for Identification of Members of the Family Enterobacteriaceae and Other Nonenteric Gram-Negative Bacilli and Comparison with the VITEK GNI+ Card." J. Clin. Microbiol. 41 (2003): 2096-2101. PubMed: 12734254.
[6]Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)
[7]The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).
[8]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 NY-208 was found to be sensitive to clindamycin but had a positive ICR test and therefore is considered resistant to clindamycin.
[9]MIC Interpretation Guideline: EUCAST Version 4.0 (2014)
[10]1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar
[11]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.
[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

Date: 16 DEC 2016

Signature:

BEI Resources Authentication

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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