

Certificate of Analysis for NR-46268

Staphylococcus aureus, Strain TN-74

Catalog No. NR-46268

Product Description: Staphylococcus aureus (S. aureus), strain TN-74 was isolated in 2005 from pleural fluid of an 11-month-old male intensive care unit (ICU) patient with empyema and pneumonia in Tennessee, USA. S. aureus, strain TN-74 is a clinically-associated methicillin-resistant S. aureus (MRSA) strain.

Lot¹: 2139 Manufacturing Date: 15DEC2016

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology ²	Report results	Circular, convex, entire, smooth,
	·	opaque 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 <i>S. aureus</i>	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	Sensitive (≤ 0.5 µg/mL)
Levofloxacin	Sensitive	Sensitive (= 0.25 µg/mL)
Moxifloxacin	Report results	Sensitive (≤ 0.25 μg/mL)
Clindamycin (inducible resistance)	Report results	Negative
Erythromycin	Resistant	Resistant (≥ 8 µg/mL)
Clindamycin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Quinupristin/dalfopristin Linezolid	Report results Sensitive	Sensitive (≤ 0.25 μg/mL)
Daptomycin	Sensitive	Sensitive (= 2 µg/mL) Sensitive (= 0.25 µg/mL)
Vancomycin	Sensitive	Sensitive (= 0.23 μg/mL) Sensitive (≤ 1 μg/mL)
Minocycline	Report results	Sensitive (≤ 1.5 μg/mL)
Tetracycline	Resistant	Resistant (≥ 16 µg/mL)
Tigecycline	Report results	Sensitive (≤ 0.12 µg/mL) ⁸
Nitrofurantoin	Report results	Sensitive (≤ 16 µg/mL)
Rifampicin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 10 µg/mL)
Etest® antibiotic test strips9		
Chloramphenicol ¹⁰	Sensitive	Sensitive (= 3.0 µg/mL)
Teicoplanin ¹⁰	Report results	Sensitive (= 1 to 1.5 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	≥ 99% sequence identity to	99.9% sequence identity to
(1490 base pairs)	S. aureus type strain	S. aureus type strain
(1.100 0000 point)	(GenBank: L37597)	(GenBank: L37597)
-		,
Purity (post-freeze) ¹¹	Consistent with expected colony	Consistent with expected colony
, ,,	morphology	morphology
Viability (post-freeze) ²	Growth	Growth

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SUPPORTING INFECTIOUS DISEASE RESEARCH

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1S. aureus, strain TN-74 was deposited to BEI Resources as part of the NARSA collection. NR-46268 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.

²1 day at 37°C in an aerobic atmosphere on Tryptic Soy agar

31 day at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar with 5% defibrinated sheep blood

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

⁵Percent 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.

⁶Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

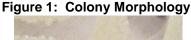
⁷The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).

⁸MIC Interpretation Guideline: EUCAST Version 4.0 (2014)

91 day at 37°C in an aerobic atmosphere on Mueller Hinton agar

10For 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 \geq 32 µg/mL is resistant.

¹¹Purity of this lot was assessed for 15 days at 37°C in an aerobic atmosphere with 5% CO₂ on Tryptic Soy agar with 5% defibrinated sheep blood.





Date: 10 APR 2017 Signature:

BEI Resources Authentication

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