

Certificate of Analysis for NR-46261

Staphylococcus aureus, Strain TN-112

Catalog No. NR-46261

Product Description: Staphylococcus aureus (S. aureus), strain TN-112 is a known clinically associated methicillin-resistant S. aureus (MRSA) strain that was isolated in Tennessee, USA.

Lot¹: 62436157 Manufacturing Date: 13MAR2014

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology ²	Report results	Circular, low convex, entire, smooth
3 - 3 - 7 - 1 - 3 J		and yellow (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 (≥ 0.5 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 ((≤ 0.12 µg/mL)
Moxifloxacin	Report results	Sensitive ((≤ 0.25 µg/mL)
Clindamycin (inducible resistance)	Report results	Negative
Erythromycin	Sensitive	Sensitive (≤ 0.25 μg/mL)
Clindamycin	Sensitive	Sensitive (≤ 0.25 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)
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 ⁶		
Chloramphenicol ⁷	Sensitive	Sensitive (= 3 µg/mL)
Teicoplanin ⁷	Report results	Sensitive (= 1 μg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene	Consistent with S. aureus	Consistent with S. aureus
(~ 1500 base pairs)		
Viability (post-freeze) ²	Growth	Growth

¹S. aureus, strain TN-112 was deposited to BEI Resources as part of the NARSA collection. NR-46261 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 30 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 19 hours at 37°C in an aerobic atmosphere to produce this lot. Purity of this lot was assessed for 7 days under propagation conditions.

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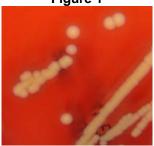
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²24 hours at 37°C and aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood

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

⁶24 hours at 37°C and aerobic atmosphere on Mueller Hinton agar

Figure 1



Date: 10 JUN 2014

Signature:

Title:

Technical Manager, BEI Authentication or designee

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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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).

⁷For 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.