

Certificate of Analysis for NR-46070

Staphylococcus aureus, Strain USA300-0114

Catalog No. NR-46070

Product Description *Staphylococcus aureus* (*S. aureus*), strain USA300-0114 was isolated from a wound in Mississippi, USA. *S. aureus*, strain USA300-0114 is a community-acquired methicillin-resistant *S. aureus* (CA-MRSA) strain and is also reported to be resistant to erythromycin and tetracycline.

Lot¹: 62265014 Manufacturing Date: 19DEC2013

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology ²	Report results	Circular, low 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	Resistant	Resistant (≥ 0.5 µg/mL)
Oxacillin	Resistant	Resistant (≥ 4 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Ciprofloxacin	Intermediate	Intermediate (= 2 µg/mL)
Levofloxacin	Report results	Sensitive (= 1 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	Sensitive	Sensitive (≤ 0.25 µg/mL)
Linezolid	Sensitive	Sensitive (= 2 µg/mL)
Daptomycin	Report results	Sensitive (= 1 µg/mL)
Vancomycin	Sensitive	Sensitive (≤ 0.5 μg/mL)
Minocycline	Report results	Sensitive (≤ 0.5 µg/mL)
Tetracycline	Report results	Resistant (≥ 16 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 (≤ 10µg/mL)
Etest [®] antibiotic test strips ⁶		
Chloramphenicol ⁷	Report results	Sensitive (= 3 µg/mL)
Teicoplanin ⁷	Sensitive	Sensitive (= 1.5 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1520 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

¹S. aureus, strain USA300-0114 was deposited to BEI Resources as part of the NARSA collection. NR-46070 was produced by inoculation of the

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deposited material into Tryptic Soy broth and grown 22 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 21 hours at 37°C in an aerobic atmosphere to produce this lot. Purity of this lot was assessed for 7 days under propagation conditions.

²22 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)

⁵The production of beta-lactamase was detected using a Nitrocefin dry slide (BBL™ 231749).

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

Figure 1

Date: 26 MAR 2014

Signature:

Title: Technical Manager, BEI Authentication or designee

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⁴Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

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.