Certificate of Analysis for NR-46207

Staphylococcus aureus, Strain CT-58

Catalog No. NR-46207

Product Description: *Staphylococcus aureus* (*S. aureus*), strain CT-58 was isolated in 2005 from the blood of a 68-year-old female in Connecticut, USA. *S. aureus*, strain CT-58 is a methicillin-resistant *S. aureus* (MRSA) strain.

Lot[1]: 62363118 **Manufacturing Date: 06FEB2014**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology[2]	Report results	Circular, low convex, entire, smooth 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
Oxacillin	Resistant	Resistant (≥ 4 µg/mL)
Gentamicin	Resistant	Resistant (≥16 µg/mL)
Ciprofloxacin	Report results	Resistant (≥ 8 µg/mL)
Levofloxacin	Resistant	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	Report results	Sensitive (= 0.5 µg/mL)
Linezolid	Sensitive	Sensitive (= 2 µg/mL)
Daptomycin	Sensitive	Sensitive (= 1 µg/mL)
Vancomycin	Sensitive	Sensitive (= 1 µg/mL)
Minocycline	Report results	Sensitive (= 4 µg/mL)
Tetracycline	Resistant	Resistant (≥ 16 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	Resistant	Resistant (≥ 320 µg/mL)
Etest® antibiotic test strips[6]		
Chloramphenicol[7]	Intermediate	Sensitive (= 4 µg/mL)[8]
Teicoplanin[7]	Report results	Sensitive (= 1 µg/mL)
Benzylpenicillin[7]	Report results	Resistant (≥ 32 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1490 base pairs)	Consistent with *S. aureus*	Consistent with *S. aureus*
Viability (post-freeze)[2]	Growth	Growth

[1] *S. aureus*, strain CT-58 was deposited to BEI Resources as part of the NARSA collection. NR-46207 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 24 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 22 hours at 37°C in an aerobic atmosphere to produce this lot. Purity of this lot was assessed

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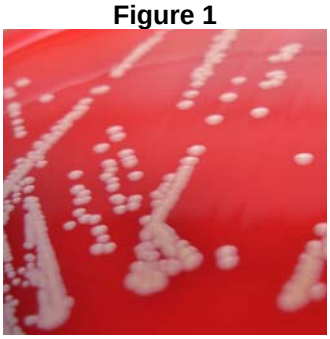
for 8 days under propagation conditions.
[2]21 hours at 37°C and aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood
[3]4 hours at 37°C in rabbit serum with 0.15% EDTA (Coagulase Plasma BBL™ 240827)
[4]Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)
[5]The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).
[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 benzylpenicillin (bioMérieux Etest® 412262), a MIC ≤ 0.12 µg/mL is sensitive and a MIC ≥ 0.25 µg/mL is resistant.
[8]*S. aureus*, strain CT-58 was deposited as having an intermediate susceptibility to chloramphenicol. ATCC® quality control determined that *S. aureus*, strain CT-58 is sensitive to chloramphenicol. Repeat testing confirmed ATCC®'s initial results.

Figure 1



Date: 17 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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