Certificate of Analysis for NR-45895

Staphylococcus aureus, Strain LY-1999 0620-03

Catalog No. NR-45895

Product Description: *Staphylococcus aureus* (*S. aureus*), strain LY-1999 0620-03 was isolated in Oman in 1998 from blood of a 50-year-old female patient with septicemia who had a history of diabetes mellitus, chronic renal failure, renal transplant with subsequent rejection, wound and catheter infections and extended treatment with glycopeptides. *S. aureus*, strain LY-1999 0620-03 is a glycopeptide-intermediate *S. aureus* (GISA) strain.

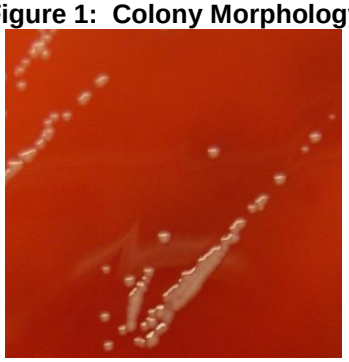
Lot[1]: 63622034 **Manufacturing Date: 29JUL2015**

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis		
Cellular morphology	Gram-positive cocci	Gram-positive cocci
Colony morphology[2]	Report results	Circular, convex, entire, smooth, opaque and white (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	Resistant	Resistant (≥ 16 µg/mL)
Ciprofloxacin	Resistant	Resistant (≥ 8 µg/mL)
Levofloxacin	Report results	Resistant (= 4 µg/mL)
Moxifloxacin	Report results	Resistant (= 2 µg/mL)
Clindamycin (inducible resistance)	Report results	Positive[6]
Quinupristin/dalfopristin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Linezolid	Sensitive	Sensitive (= 1 µg/mL)
Daptomycin	Non-susceptible	Susceptible (= 1 µg/mL)[7]
Minocycline	Report results	Intermediate (= 8 µg/mL)
Tetracycline	Report results	Resistant (≥ 16 µg/mL)
Tigecycline	Report results	Sensitive (≤ 0.12 µg/mL)[8]
Nitrofurantoin	Report results	Sensitive (≤ 16 µg/mL)
Rifampicin	Report results	Sensitive (≤ 0.5 µg/mL)
Trimethoprim/sulfamethoxazole	Resistant	Resistant (≥ 320 µg/mL)
Etest® antibiotic test strips[9]		
Chloramphenicol[10]	Report results	Resistant (> 256 µg/ml)
Teicoplanin[10]	Report results	Sensitive (= 4 µg/ml)
Vancomycin[10]	Intermediate	Intermediate (= 3 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1490 base pairs)	Consistent with *S. aureus*	Consistent with *S. aureus*
Purity (post-freeze)[11]	Growth consistent with *S. aureus*	Growth consistent with *S. aureus*
Viability (post-freeze)[2]	Growth	Growth

BEI Resources
www.beiresources.org
E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898

[1]*S. aureus*, strain LY-1999 0620-03 was deposited to BEI Resources as part of the NARSA collection. NR-45895 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 with 5% defibrinated sheep blood 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 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]*S. aureus*, strain LY-1999 0620-03 was deposited as being resistant to erythromycin and sensitive to clindamycin. Antibiotic susceptibility testing performed in duplicate determined the erythromycin and clindamycin MICs for *S. aureus*, strain LY-1999 0620-03 as 1 µg/ml and ≤ 0.25 µg/ml, respectively, which are considered susceptible; however, this strain tested positive for 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, suggesting that this strain is resistant to erythromycin and clindamycin. Confirmatory antibiotic susceptibility testing is recommended.
[7]*S. aureus*, strain LY-1999 0620-03 was deposited as being non-susceptible to daptomycin. Antibiotic susceptibility testing performed in duplicate determined that strain LY-1999 0620-03 is susceptible to daptomycin.
[8]MIC Interpretation Guideline: EUCAST Version 4.0 (2014)
[9]1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar
[10]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 vancomycin (bioMérieux Etest® 412486), a MIC ≤ 2 µg/mL is sensitive, a MIC = 4 to 8 µg/mL is intermediate, and a MIC ≥ 16 µg/mL is resistant.
[11]Purity of this lot was assessed for 7 days on Tryptic Soy agar with 5% defibrinated sheep blood at 37°C in an aerobic atmosphere.

Figure 1: Colony Morphology



Date: 20 OCT 2015 **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.

ATCC® is a trademark of the American Type Culture Collection.
You are authorized to use this product for research use only. It is not intended for human use.

Support Provided by NIAID

BEI Resources
www.beiresources.org

E-mail: contact@beiresources.org
Tel: 800-359-7370
Fax: 703-365-2898