b|e|i RESOURCES
SUPPORTING INFECTIOUS DISEASE RESEARCH

Certificate of Analysis for NR-45915

Staphylococcus aureus, Strain FRI361

Catalog No. NR-45915

Product Description: *Staphylococcus aureus* (*S. aureus*), strain FRI361 was isolated in 1962 from cooked chicken implicated in a food poisoning outbreak in England. *S. aureus*, strain FRI361 is a methicillin-sensitive *S. aureus* (MSSA) strain.

Lot[1]: 63622035 **Manufacturing Date: 16JUL2015**

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	Negative
Benzylpenicillin	Report results	Resistant (≥ 0.5 µg/mL)
Oxacillin	Sensitive	Sensitive (≤ 0.25 µg/mL)
Gentamicin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Ciprofloxacin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Levofloxacin	Report results	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	Sensitive	Sensitive (≤ 0.25 µg/mL)
Linezolid	Sensitive	Sensitive (= 2 µg/mL)
Daptomycin	Report results	Sensitive (= 0.25 µg/mL)
Vancomycin	Sensitive	Sensitive (≤ 0.5 µg/mL)
Minocycline	Report results	Sensitive (≤ 0.5 µg/mL)
Tetracycline	Report results	Sensitive (≤ 1 µg/mL)
Tigecycline	Report results	Sensitive (≤ 0.12 µg/mL)[6]
Nitrofurantoin	Report results	Sensitive (= 32 µg/mL)
Rifampicin	Report results	Sensitive (≤ 0.5 µg/mL)
Trimethoprim/sulfamethoxazole	Sensitive	Sensitive (≤ 10 µg/mL)
Etest® antibiotic test strips[7]		
Chloramphenicol[8]	Report results	Sensitive (= 4-6 µg/mL)
Teicoplanin[8]	Sensitive	Sensitive (≤ 0.25 µg/mL)
Genotypic Analysis		
Sequencing of 16S ribosomal RNA gene (~ 1430 base pairs)	Consistent with *S. aureus*	Consistent with *S. aureus*
Purity (post-freeze)[9,10]	Consistent with *S. aureus*	Consistent with *S. aureus*
Viability (post-freeze)[2]	Growth	Growth

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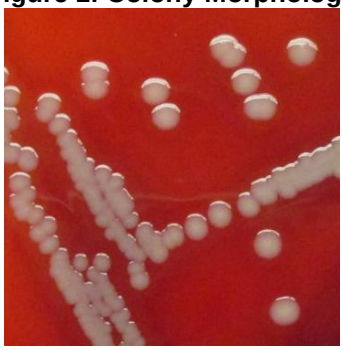
[1]*S. aureus*, strain FRI361 was deposited to BEI Resources as part of the NARSA collection. NR-45915 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 1 day at 37°C in an aerobic atmosphere. Broth inoculum was added to Tryptic Soy agar with 5% defibrinated sheep 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]MIC Interpretation Guideline: EUCAST Version 4.0 (2014)
[7]1 day at 37°C in an aerobic atmosphere on Mueller Hinton agar
[8]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.
[9]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.
[10]Two colony types were observed after 6 days of incubation under propagation conditions. Plating of the individual colony types showed that they did not revert to the mixed colony type. The 16S ribosomal RNA gene of each colony type was sequenced and found to be 100% identical with the other colony type and consistent with *S. aureus*.

Figure 1: Colony Morphology



Date: 02 NOV 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.

Support Provided by NIAID

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