

Staphylococcus aureus, Strain RN4220/pG0400

Catalog No. NR-45913

Product Description: *Staphylococcus aureus* (*S. aureus*), strain RN4220/pG0400 contains the plasmid pG0400 and is a transconjugant of mating between *S. aureus*, strain G03221 containing the plasmid pG0400 and *S. aureus*, strain RN4220NR. Strain G03221 was isolated in 1991 during an outbreak of mupirocin-resistant *S. aureus* on a dermatology ward of a university hospital in Connecticut, USA. Plasmid pG0400 is a 33.8 kilobase plasmid that encodes resistance to mupirocin. *S. aureus*, strain RN4220/pG0400 is a methicillin-sensitive *S. aureus* (MSSA) strain and reported to be resistant to mupirocin, rifampicin and novobiocin.

Lot¹: 62401816

Manufacturing Date: 27FEB2014

TEST	SPECIFICATIONS	RESULTS
Phenotypic Analysis Cellular morphology Colony morphology ² Motility (wet mount) Hemolysis ² Biochemical characterization Catalase Coagulase ³ VITEK [®] 2 Compact (GP card)	Gram-positive cocci Report results Report results Report results Positive Report results ≥ 90% probability of being <i>S. aureus</i>	Gram-positive cocci Circular, convex, entire, smooth and gray (Figure 1) Non-motile β-hemolytic Positive Positive <i>S. aureus</i> (99% probability) ⁴
Antibiotic Susceptibility Profile VITEK [®] (AST-GP71card) ⁵ Beta-lactamase ⁶ Cefoxitin screen Benzylpenicillin Oxacillin Gentamicin Ciprofloxacin Levofloxacin Moxifloxacin Clindamycin (inducible resistance) Erythromycin Clindamycin Quinupristin/dalfopristin Linezolid Daptomycin Vancomycin Minocycline Tetracycline Tigecycline Nitrofurantoin Rifampicin Trimethoprim/sulfamethoxazole Etest [®] antibiotic test strips ⁸ Chloramphenicol ⁹ Teicoplanin ⁹	Report results Report results Report results Sensitive Sensitive Sensitive Sensitive Report results Report results Report results Report results Sensitive Sensitive Sensitive Sensitive Report results Sensitive Report results Report results Report results Report results Report results Sensitive Report results Sensitive	Negative Negative Sensitive (≤ 0.03 µg/mL) Sensitive (= 0.5 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (= 0.25 µg/mL) Sensitive (≤ 0.25 µg/mL) Negative Sensitive (≤ 0.25 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (≤ 0.25 µg/mL) Sensitive (= 1 µg/mL) Sensitive (= 0.5 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 0.5 µg/mL) Sensitive (≤ 1 µg/mL) Sensitive (≤ 0.12 µg/mL) ⁷ Sensitive (≤ 16 µg/mL) Resistant (≥ 32 µg/mL) Sensitive (≤ 10 µg/mL) Sensitive (= 1 µg/mL) Sensitive (= 1.5 µg/mL)
Confirmation of Plasmid¹⁰	Resistant to Mupirocin	Resistant to Mupirocin

TEST	SPECIFICATIONS	RESULTS
Genotypic Analysis Sequencing of 16S ribosomal RNA gene (~ 1500 base pairs)	≥ 99% sequence identity to <i>S. aureus</i> type strain (GenBank: L37597)	99.9% sequence identity to <i>S. aureus</i> type strain (GenBank: L37597)
Purity (post-freeze)¹¹	Consistent with expected colony morphology	Consistent with expected colony morphology
Viability (post-freeze)²	Growth	Growth

¹*S. aureus*, strain RN4220/pG0400 was deposited to BEI Resources as part of the NARSA collection. NR-45913 was produced by inoculation of the deposited material into Tryptic Soy broth and grown 23 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 24 hours at 37°C in an aerobic atmosphere to produce this lot.

²21 hours at 37°C in an 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)

⁴Percent probabilities above 90% indicate a close match to the typical biochemical pattern for the given organism, with a percent probability of 99% being a perfect match between the test reaction pattern and the unique biochemical pattern of the given organism or organism group. For additional information, please refer to O'Hara, C.M. and J. M. Miller. "Evaluation of the Vitek 2 ID-GNB Assay for Identification of Members of the Family *Enterobacteriaceae* and Other Nonenteric Gram-Negative Bacilli and Comparison with the Vitek GNI+ Card." *J. Clin. Microbiol.* 41 (2003): 2096-2101. PubMed: 12734254.

⁵Minimum Inhibitory Concentration (MIC); MIC Interpretation Guideline: CLSI M100-S22 (2012)

⁶The production of beta-lactamase was detected using a Cefinase™ Paper Disc (BBL™ 231650).

⁷MIC Interpretation Guideline: EUCAST Version 4.0 (2014)

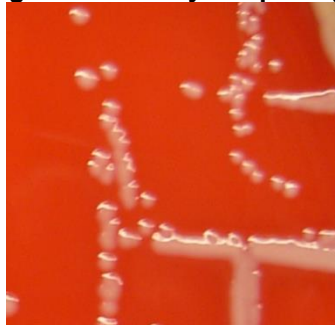
⁸24 hours at 37°C in an aerobic atmosphere on Mueller Hinton agar

⁹For 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.

¹⁰24 hours at 37°C in an aerobic atmosphere on Mueller Hinton agar with 20 µg/mL mupirocin

¹¹Purity of this lot was assessed for 7 days at 37°C in an aerobic atmosphere on Tryptic Soy agar with 5% defibrinated sheep blood.

Figure 1: Colony Morphology



Date: 02 SEP 2014

Signature:

BEI Resources Authentication

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