**Staphylococcus aureus**, Strain RN4220/pG01

**Catalog No. NR-45912**

For research use only. Not for human use.

**Contributor:**
Gordon L. Archer, M.D., Professor, Departments of Microbiology and Immunology and Medicine, School of Medicine, Virginia Commonwealth University, Richmond, Virginia, USA

**Manufacturer:**
BEI Resources

**Product Description:**

**Bacteria Classification:** *Staphylococcaceae, Staphylococcus*

**Species:** *Staphylococcus aureus*

**Strain:** RN4220/pG01

**NARSA Catalog Number:** NRS106

**Original Source:** *Staphylococcus aureus* (*S. aureus*), strain RN4220/pG01 contains the plasmid pG01 in *S. aureus*, research strain RN4220 (NRS144). Plasmid pG01 was isolated from a clinical methicillin-sensitive *S. aureus* (MSSA) strain in Virginia, USA.1,2

**Comments:** *S. aureus*, strain RN4220/pG01 is MSSA strain that was deposited as containing the plasmid pG01; negative for mec; MLST sequence type (ST) 8; eGenomic *spa* type 59, eGenomic *spa* repeats YHGGFMBQBLO; Ridom *spa* type t211. Plasmid pG01 is a 50 kilobase plasmid that encodes resistance to gentamicin, trimethoprim, and quaternary ammonium compounds.1,2 Note: Methicillin is no longer clinically used, however, the terms methicillin-resistant *Staphylococcus aureus* (MRSA) and methicillin-sensitive *Staphylococcus aureus* (MSSA) continue to be used to describe the susceptibility of *S. aureus* strains to the penicillins.

*S. aureus* is a Gram-positive, cluster-forming coccus that normally inhabits human nasal passages, skin and mucus membranes. It is also a human pathogen and causes a variety of pus-forming infections as well as food-poisoning and toxic shock syndrome. In 1961, two years after the introduction of methicillin, a penicillinase-resistant penicillin, *S. aureus* developed methicillin-resistance due to acquisition of the mecA gene. Subsequently, MRSA infections have become widespread in both hospital and community settings.4 As compared to MSSA infections, MRSA infections tend to have more complications such as a higher recurrence rate and higher mortality.5,7

**Material Provided:**
Each vial contains approximately 0.5 mL of bacterial culture in Tryptic Soy broth supplemented with 10% glycerol.

**Note:** If homogeneity is required for your intended use, please purify prior to initiating work.

**Packaging/Storage:**

NR-45912 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

**Growth Conditions:**

**Note:** For stability purposes, it is recommended that the strain is subcultured in the presence of 20 µg/mL trimethoprim and/or 5 µg/mL gentamicin.1,2

**Media:**
Brain Heart Infusion broth or Tryptic Soy broth or equivalent
Brain Heart Infusion agar or Tryptic Soy agar with 5% defibrinated sheep blood or equivalent

**Incubation:**
Temperature: 37°C
Atmosphere: Aerobic

**Propagation:**
1. Keep vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tube, slant and/or plate at 37°C for 18 to 24 hours.

**Citation:**

Acknowledgment for publications should read “The following reagent was provided by the Network on Antimicrobial Resistance in *Staphylococcus aureus* (NARSA) for distribution by BEI Resources, NIAID, NIH: *Staphylococcus aureus*, Strain RN4220/pG01, NR-45912.”

**Biosafety Level:** 2


**Disclaimers:**

You are authorized to use this product for research use only. It is not intended for human use.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at [www.beiresources.org](http://www.beiresources.org).

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any
warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:
This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

References:
3. NARSA, NRS106

ATCC® is a trademark of the American Type Culture Collection.