**Staphylococcus aureus**, Strain RN4220/pG0400

**Catalog No. NR-45913**

For research use only. Not for human use.

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**Manufacturer:**
BEI Resources

**Product Description:**

- **Bacteria Classification:** Staphylococcaceae, Staphylococcus
- **Species:** Staphylococcus aureus
- **Strain:** RN4220/pG0400 (also referred to as G0400)¹
- **NARSA Catalog Number:** NRS107

**Original Source:** 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.¹ 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.¹²

**Comments:** Plasmid pG0400 is a 33.8 kilobase plasmid that encodes resistance to mupirocin.¹² S. aureus, strain RN4220/pG0400 is a methicillin-sensitive S. aureus (MSSA) strain. It was deposited as containing the plasmid pG0400; resistant to mupirocin, rifampicin and novobiocin; negative for mec; MLST sequence type (ST) 8; eGenomic spa type 59, eGenomic spa repeats YHGGFMBQBLO; Ridom spa type t211.¹³ 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.⁵⁷

**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-45913 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 mupirocin.¹

**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/pG0400, NR-45913."

**Biosafety Level:** 2


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References:
3. NARSA, NRS107