**Staphylococcus aureus**, Strain RN1

**Catalog No.** NR-45904

For research use only. Not for human use.

**Contributor:**
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**Manufacturer:**
BEI Resources

**Product Description:**

Bacteria Classification: Staphylococaceae, Staphylococcus
Species: Staphylococcus aureus

Strain: RN1 (also referred to as NCTC 8325 and PS47)

NARSA Catalog Number: NRS77

Original Source: Staphylococcus aureus (S. aureus), strain RN1 was isolated in 1960 in the United Kingdom.2,3

Comments: S. aureus, strain RN1 was originally used for typing phage 47 and is considered to be the original strain for most S. aureus genetic research.2,3 S. aureus, strain RN1 was deposited as negative for mec, rsbU and sak; MLST sequence type (ST) 8; eGenomic spa type 59, eGenomic spa repeats YHGGFMOBLO; Ridom spa type t211; agr group 1.2,4 It also has a large variety of virulence factors.4 Due to the integration of Φ13 in hib, this strain does not produce beta-hemolysin, but does produce alpha, delta and gamma-hemolysins.5 The complete genome sequence of S. aureus, strain RN1 is available (GenBank: CP000253.1) and is the reference genome for S. aureus. 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.6 As compared to MSSA infections, MRSA infections tend to have more complications such as a higher recurrence rate and higher mortality.7,9

**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-45904 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:**

**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 RN1, NR-45904.”

**Biosafety Level:**

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References:
2. NARS, NRS77.

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