Staphylococcus aureus, Strain RN0451

Catalog No. NR-45938

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Contributor:
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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: Staphylococcaceae, Staphylococcus
Species: Staphylococcus aureus
Strain: RN0451
NARSA Catalog Number: NRS136

Original Source: Staphylococcus aureus (S. aureus), strain RN0451 is lysogenic for phage Φ11 and was derived from S. aureus, strain RN0450 (NRS135). In turn, strain RN0450 was derived from successive cycles of UV treatment of S. aureus, strain NCTC8325 (NRS77).

Comments: S. aureus, strain RN0451 is a methicillin-sensitive S. aureus (MSSA) strain developed for research purposes. It was deposited as lysogenized with phage Φ11; negative for mec, rsbU, and agr; MLST sequence type (ST) 8; eGenomic spa type 59, eGenomic spa repeats YHGGFMBOBLO; Ridom spa type t211. The presence of phage Φ11 is known to induce competence in 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. As compared to MSSA infections, MRSA infections tend to have more complications such as a higher recurrence rate and higher mortality.

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-45938 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 RN0451, NR-45938.”

Biosafety Level: 2


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References:
3. NARSA, NRS136

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