**Staphylococcus aureus, Strain C2000001227**

Catalog No. NR-45903

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Contributor:
Network on Antimicrobial Resistance in *Staphylococcus aureus* (NARSA), NIAID, NIH

Manufacturer:
BEI Resources

**Product Description:**

Bacteria Classification: *Staphylococcaceae, Staphylococcus*
Species: *Staphylococcus aureus*
Strain: C2000001227
NARSA Catalog Number: NRS76
Original Source: *Staphylococcus aureus* (S. aureus), strain C2000001227 was isolated in 2000 from a 59-year-old male in Minnesota, USA.¹

Comments: *S. aureus*, strain C2000001227 was reported as a vancomycin-intermediate *S. aureus* (VISA) strain. *S. aureus*, strain C2000001227 was deposited as positive for SCCmec (subtype II); negative for vanA, vanB, vanC1, vanC2, vanD and vanE; MLST sequencing type (ST) 5; eGenomic spa type 2, eGenomic spa repeats TJMBDMGMK; Ridom spa type t002.¹

*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.² Vancomycin has been the preferred antibiotic of choice for the treatment of MRSA infections.³ However, there have now been MRSA strains isolated that also have reduced susceptibility or resistance to vancomycin.⁴,⁵ It is believed that this decreased sensitivity primarily arises through mutations affecting the production of peptidoglycans, resulting in a thickened cell wall and a reduction of vancomycin at its site of action.⁶ While much rarer, resistance can also occur through the acquisition of the vancomycin resistance gene, vanA, from *Enterococcus faecalis*.⁴,⁶,⁷

**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-45903 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 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 1 day.

**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 C2000001227, NR-45903.”

**Biosafety Level: 2**


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References:
1. NARSA, NRS76

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