**Staphylococcus aureus**, Strain HIP07920

Catalog No. NR-45871

For research use only. Not for human use.

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

**Manufacturer:**
BEI Resources

**Product Description:**
- **Bacteria Classification:** Staphylococcaceae, *Staphylococcus*
- **Species:** *Staphylococcus aureus*
- **Strain:** HIP07920
- **NARSA Catalog Number:** NRS21
- **Original Source:** *Staphylococcus aureus* (S. aureus), strain HIP07920 was isolated in 1999 in Rhode Island, USA from the bloodstream of a 43-year-old male ICU patient with bacteremia with a history of a transjugular intrahepatic portosystemic shunt, recurrent catheter-associated methicillin-resistant *S. aureus* (MRSA) bacteremia and a prior 2-week course of vancomycin therapy.¹,²
- **Comments:** *S. aureus* is a vancomycin-intermediate *S. aureus* (VISA) strain.¹ *S. aureus*, strain HIP07920 was deposited as positive for mec (subtype IV); negative for vanA, vanB, vanC₁, vanC₂, vanD, and vanE; MLST sequencing type (ST) 8; eGenomic spa type 7, eGenomic spa repeats YHGCMBQBLO; Ridom spa type t064.²

*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 penicillilnase-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.³ Vancomycin has been the preferred antibiotic of choice for the treatment of MRSA infections.⁴ However, there have now been MRSA strains isolated that also have reduced susceptibility or resistance to vancomycin.⁵,⁶ 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.⁷ While much rarer, resistance can also occur through the acquisition of the vancomycin resistance gene, vanA, from *Enterococcus faecalis*.⁸

**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-45871 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 HIP07920, NR-45871.”

**Biosafety Level:** 2


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References:
2. NARSA, NRS21