Staphylococcus aureus, Strain HIP10267

Catalog No. NR-45902

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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: HIP10267
NARSA Catalog Number: NRS74
Original Source: Staphylococcus aureus (S. aureus), strain HIP10267 was isolated in 2000 from the bloodstream of a 30-year-old male patient in Maryland, USA.\(^1\)
Comments: S. aureus, strain HIP10267 is a vancomycin-intermediate S. aureus (VISA) strain. S. aureus, strain HIP10267 was deposited as positive for SCCmec (subtype II); negative for vanA, vanB, vanC1, vanC2, vanD, and vanE; MLST sequencing type (ST) 105; 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 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-45902 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, 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 HIP10267, NR-45902.”

Biosafety Level: 2

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References:
1. NARSA, NRS74

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