Staphylococcus aureus, Strain HIP13057

Catalog No. NR-46075

For research use only. Not for human use.

Contributor:
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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: Staphylococcaceae, Staphylococcus
Species: Staphylococcus aureus
Strain: HIP13057
NARSA Catalog Number: NRS403

Original Source: Staphylococcus aureus (S. aureus), strain HIP13057 was isolated in 2004 from the bloodstream of a 68-year-old female in Michigan, USA.1

Comments: S. aureus, strain HIP13057 is a vancomycin-intermediate S. aureus (VISA) strain. S. aureus, strain HIP13057 was deposited as positive for mec (subtype II) and vanC2; negative for vanA, vanB, vanC1, vanD and vanE; sequencing type (ST) 5; eGenomic spa type 2, eGenomic spa repeats TJMBMDMGMK; Ridom spa type t002.1 S. aureus, strain HIP13057 tested positive for the vancomycin resistance gene vanC2, which is responsible for intrinsic resistance to low levels of vancomycin in Enterococcus casseliflavus.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 penicillilinase-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.5,7,8

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-46075 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 plate 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 HIP13057, NR-46075.”

Biosafety Level: 2

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References:
1. NARSA, NRS403