Staphylococcus aureus, Strain
AIS 2006061

Catalog No. NR-46080

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Contributor:
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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: Staphylococcaceae, Staphylococcus
Species: Staphylococcus aureus
Strain: AIS 2006061
NARSA Catalog Number: NRS483

Original Source: Staphylococcus aureus (S. aureus), strain AIS 2006061 was isolated from a wound during a 1993-1994 methicillin-resistant S. aureus (MRSA) outbreak among high school wrestlers and the surrounding community in Vermont, USA.

Comments: S. aureus, strain AIS 2006061 is a methicillin-resistant S. aureus (MRSA) strain. S. aureus, strain AIS 2006061 was deposited as positive for mec (subtype IV), PVL, and enterotoxin B, and negative for tsst; pulsed-field type USA1000; MLST sequence type (ST) 59; spa repeats ZDGDGDEB; Ridom spa type t316; agr group I. It also has a large number of virulence factors. S. aureus, strain AIS 2006061 is an isolate of the USA1000 clone. All isolates of this clone have the same MLST profile (ST 59), SCCmec (subtype IV or V), agr group (I), and spa repeats (ZDGDGDEB) and most are resistant to ethromycin.

The USA1000 clone is associated with sporadic outbreaks of community-acquired infections, although there have been reports of localized pockets of higher carriage rates and risk of infection. Note: Methicillin is no longer clinically used, however, the term methicillin-resistant Staphylococcus aureus (MRSA) continues to be used to describe S. aureus strains resistant to all 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. For the last forty-five years hospital-acquired (HA) MRSA strains have disseminated worldwide. More recently, MRSA strains have been isolated that are not hospital acquired and are referred to as community-associated (CA) MRSA. These CA-MRSA strains differ phenotypically and genotypically from HA-MRSA strains and they are more frequently recovered from skin and soft tissue sources rather than post-operative wounds.

Material Provided:
Each vial contains approximately 0.5 mL of bacterial culture in 0.5X 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-46080 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.

Growing 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 AIS 2006061, NR-46080.”

Biosafety Level: 2


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References:
1. NARSA, NRS483.