Staphylococcus aureus, Strain F003/HI168

Catalog No. NR-30548

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Contributor:
Deepa Mukundan, M. D., Assistant Professor, Departments of Pediatrics and Microbiology and Immunology, The University of Toledo, Toledo, Ohio, USA

Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Staphylococcaceae, Staphylococcus*
Species: *Staphylococcus aureus*
Strain: F003/HI168
Original Source: *Staphylococcus aureus (S. aureus),* strain F003/HI168 was isolated from an abscess on the buttocks of a 1-year-old female.[1]
Comments: *S. aureus*, strain F003/HI168 was deposited as a methicillin-resistant *S. aureus* (MRSA) strain. This strain is also reported to be resistant to clindamycin, oxacillin, erythromycin, and penicillin and sensitive to tetracycline, vancomycin, ciprofloxacin, rifampin, linezolid, and ceftriaxone.[1] Strain F003/HI168 was also deposited as positive for mec (subtype IV); *pvl*$^{+}$; pulsed-field type USA 300; pulsed-field gel electrophoresis type 6; *cap5* positive; low virulence toward *Caenorhabditis elegans*, and contains the arginine catabolic mobile element (ACME).[1] The complete genome sequence of *S. aureus*, strain F003/HI168 is available (GenBank: AIVN00000000). Note: Methicillin is no longer clinically used, however, the term methicillin-resistant *Staphylococcus aureus* (MRSA) continues to be used to describe *Staphylococcus 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. 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.[2,3]

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-30548 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:
Tryptic Soy broth or Brain Heart Infusion broth or equivalent
Tryptic Soy agar with 5% sheep blood or Brain Heart Infusion agar 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 obtained through BEI Resources, NIAID, NIH: *Staphylococcus aureus*, Strain F003/HI168, NR-30548."

Biosafety Level: 2
Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm.

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References:

1. D. Mukundan, Personal Communication.
2. Deurenberg, R. H. and E. E. Stobberingh. "The Evolution of *Staphylococcus aureus*." Infect. Genet. Evol. 8 (2008): 747-763. PubMed: 18718557.
3. Davis, S. L., et al. "Epidemiology and Outcomes of Community-Associated Methicillin-Resistant *Staphylococcus aureus* Infection." J. Clin. Microbiol. 45 (2007): 1705-1711. PubMed: 17392441.

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