

***Staphylococcus aureus*, Strain SU-4**

Catalog No. NR-13549

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: SU-4

Original Source: *Staphylococcus aureus* (*S. aureus*), strain SU-4 was isolated in October 2005 from a Stanford Hospital patient in Palo Alto, California, U.S.A.¹

Comments: *S. aureus*, strain SU-4 is a community-associated (CA) methicillin-resistant *S. aureus* (MRSA) strain based on multilocus sequence typing and antibiogram results. Strain SU-4 is sensitive to vancomycin and clindamycin but resistant to oxacillin and ciprofloxacin.¹

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 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 Brain Heart Infusion Broth supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:

NR-13549 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -80°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 equivalent

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 tubes and plate at 37°C for 24 hours.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Staphylococcus aureus*, Strain SU-4, NR-13549."

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, 2007; see www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm.

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References:

1. Dr. Kristien Mortelmans, 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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