

***Staphylococcus aureus*, Strain MNHOCH**

Catalog No. NR-45920

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: MNHOCH

NARSA Catalog Number: NRS114

Original Source: *Staphylococcus aureus* (*S. aureus*), strain MNHOCH was isolated from a patient with non-menstrual toxic shock syndrome (TSS) in the United States.^{1,2}

Comments: *S. aureus*, strain MNHOCH is a methicillin-sensitive *S. aureus* (MSSA) strain. Strain MNHOCH was deposited as positive for *seb*; negative for *mec*; MLST sequence type (ST) 8; eGenomic *spa* type 363, eGenomic *spa* repeats YGFMBQBLO; Ridom *spa* type t024.¹⁻³ *S. aureus*, strain MNHOCH is a staphylococcal enterotoxin B (SEB) producing strain. SEB, like other staphylococcal enterotoxins, is a highly stable, heat and proteolytic resistant, secreted protein that is a cause of TSS and staphylococcal food poisoning.⁴⁻⁶ Note: Methicillin is no longer clinically used, however, the terms methicillin-resistant *Staphylococcus aureus* (MRSA) and methicillin-sensitive *Staphylococcus aureus* (MSSA) continue to be used to describe the susceptibility of *S.aureus* strains to the 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. Subsequently, MRSA infections have become widespread in both hospital and community settings.⁷ As compared to MSSA infections, MRSA infections tend to have more complications such as a higher recurrence rate and higher mortality.⁸⁻¹⁰

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-45920 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 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 MNHOCH, NR-45920."

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/biosafety/publications/bmb15/index.htm.

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References:

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