Product Information Sheet for HM-467

Staphylococcus aureus, Strain MRSA177

Catalog No. HM-467

For research use only. Not for use in humans.

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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Staphylococcaceae*, *Staphylococcus*
Species: *Staphylococcus aureus*
Strain: MRSA177 (also referred to as Col-177)
Original Source: *Staphylococcus aureus (S. aureus)*, strain MRSA177 was isolated from the skin of a patient with a soft tissue infection in Bogotá, Colombia.[1,2]
Comments: *S. aureus*, MRSA177 is a community-associated methicillin-resistant *S. aureus* (MRSA) strain based on multilocus sequence typing.[2] Strain MRSA177 is sensitive to vancomycin, teicoplanin, chloramphenicol, linezolid, ciprofloxacin, gentamicin and rifampicin.[1] *S. aureus*, strain MRSA177 (HMP ID 9529) is a reference genome for The Human Microbiome Project (HMP). HMP is an initiative to identify and characterize human microbial flora. The complete genome of *S. aureus*, strain MRSA177 was sequenced at the Washington University Genome Center (GenBank: AECP00000000).
Note: HMP material is taxonomically classified by the depositor. Quality control of these materials is only performed to demonstrate that the material distributed by BEI Resources is identical to the deposited material.

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.[3,4]

Material Provided:
Each vial contains approximately 0.5 mL of bacterial culture in 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:
HM-467 was packaged aseptically, in screw-capped plastic 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 equivalent
Brain Heart Infusion agar or equivalent
Incubation:
Temperature: 37°C
Atmosphere: Aerobic with or without 5% CO_2 or anaerobic
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 two days.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH as part of the Human Microbiome Project: *Staphylococcus aureus*, Strain MRSA177, HM-467."

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. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

Disclaimers:
You are authorized to use this product for research use only. It is not intended for human use.

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References:

1. HMP 9529 (*S. aureus*, strain MRSA177)
2. Arias, C. A., et al. "MRSA USA300 Clone and VREF-A U.S.-Colombian Connection?" N. Engl. J. Med. 359 (2008): 2177-2179. PubMed: 19005205.
3. Deurenberg, R. H. and E. E. Stobberingh. "The Evolution of *Staphylococcus aureus*." Infect. Genet. Evol. 8 (2008): 747-763. PubMed: 18718557.
4. 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.