Staphylococcus aureus, Strain 626

Catalog No. NR-46068

For research use only. Not for human use.

Contributor:
Linda McDougal, Centers for Disease Control and Prevention, Atlanta, Georgia, USA.

Manufacturer:
BEI Resources

Product Description:

Bacteria Classification: Staphylococcaceae, Staphylococcus
Species: Staphylococcus aureus
Strain: 626 (also referred to as USA100 and New York/Japan clone)
NARSA Catalog Number: NRS382

Original Source: Staphylococcus aureus (S. aureus), strain 626 was isolated from a bloodstream sample in Ohio, USA.1

Comments: S. aureus, strain 626 is a methicillin-resistant S. aureus (MRSA) strain. S. aureus, strain 626 was deposited as resistant to erythromycin, clindamycin and levofloxacin; positive for mec (subtype II); sed2; pulsed-field type USA100; MLST sequence type (ST) 5; eGenomic spa type 2, eGenomic spa repeats TJMBMDMGMK; Ridom spa type t002; agr grp II.1 S. aureus, strain 626 is a USA100 isolate. USA100 isolates have the same MLST profile (ST 5) and SCCmec (subtype II) and are usually resistant to β-lactams, erythromycin and spectinomycin as well as being multiresistant to other commonly used therapeutic agents. USA100 is the most prevalent U.S. health care-associated pulse-field type and is endemic in many U.S. hospitals.2

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.3,4

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-46068 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 626, NR-46068.”

Biosafety Level: 2

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

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet,
neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:
This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

References:
1. NARSA, NRS382.

ATCC® is a trademark of the American Type Culture Collection.