**Staphylococcus aureus, Strain CA-409**

**Catalog No. NR-46180**

For research use only. Not for human use.

**Contributor:**
Centers for Disease Control and Prevention, Atlanta, Georgia, USA

**Manufacturer:**
BEI Resources

**Product Description:**

**Bacteria Classification:** Staphylococcaceae, Staphylococcus

**Species:** Staphylococcus aureus

**Strain:** CA-409

**NARSA Catalog Number:** NR5651

**Original Source:**
Staphylococcus aureus (S. aureus), strain CA-409 was isolated in 2006 from the peritoneal fluid of a 61-year-old female in California, USA.¹

**Comments:**
S. aureus, strain CA-409 is a methicillin-resistant S. aureus (MRSA) strain.¹ Strain CA-409 was deposited as positive for mec (subtype II) and tsst; negative for PVL; pulsed-field type USA200.¹ S. aureus, strain CA-409 is a USA200 isolate. USA200 isolates have the same MLST profile (ST 36), SCCmec (subtype II), spa repeats (WGKAKOMQQQ) and are resistant to erythromycin, β-lactams and in some cases, spectinomycin. USA200 is the second most common health care-associated pulsed-field type in U.S.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-46180 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 CA-409, NR-46180.”

**Biosafety Level:** 2


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References:
1. NARSA, NRS651

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