**Staphylococcus aureus**, Strain USA300-0114

**Catalog No. NR-46070**

*For research use only. Not for human use.*

**Contributor:**
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**Manufacturer:**
BEI Resources

**Product Description:**

*Species:* Staphylococcus aureus

*Strain:* USA300-0114

*Species:* Staphylococcus aureus (S. aureus), strain USA300-0114 was isolated from a wound in Mississippi, USA.

**Comments:** S. aureus, strain USA300-0114 is a community-acquired methicillin-resistant S. aureus (CA-MRSA) strain. Outbreaks of this strain have been reported in correctional facilities (located in MS, GA, TN, TX, and CA); athletic teams (located in PA and CA); and male homosexual behavior (observed in CA).\(^1\)\(^2\) Strain USA300-0114 was deposited as resistant to erythromycin and tetracycline; positive for mec (subtype IV); pvl\(^\text{+}\); MLST sequence type (ST) 8; eGenomic spa type 1, eGenomic spa repeats YHGFMQBLO; Ridom spa type 1008; agr grp I.\(^3\) 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 *mec* A 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.\(^4\)\(^5\)

**Material Provided:**

Each vial contains approximately 0.5 mL of bacterial culture in 0.5X 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-46070 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 USA300-0114, NR-46070.”

**Biosafety Level:** 2


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References:
1. NARSA, NRS384.

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