**Staphylococcus aureus, Strain 1002434**

**Catalog No. NR-46423**

For research use only. Not for use in humans.

**Contributor:**
Network on Antimicrobial Resistance in *Staphylococcus aureus* (NARSA), NIAID, NIH, USA

**Manufacturer:**
BEI Resources

**Product Description:**
Bacteria Classification: *Staphylococcaceae, Staphylococcus*
Species: *Staphylococcus aureus*
Strain: 1002434
NARSA Catalog Number: VRS12

**Original Source:** *Staphylococcus aureus* (S. aureus), strain 1002434 was isolated in 2010 from a vaginal swab sample of an 83-year-old female in Delaware, USA.\(^1\)

**Comments:** *S. aureus*, strain 1002434 is a vancomycin-resistant *S. aureus* (VRSA) strain.\(^2,3\) *S. aureus*, strain 1002434 was deposited as negative for PVL and arginine catabolic mobile element (ACME); spa repeats TMDMGKM; Ridom spa type 1045.\(^4,5\) The pulsed-field type is a novel unnamed type that is related to USA100 and USA800 and is in the *S. aureus* Clonal Complex (CC) 5 lineage.\(^6\)

*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 septicemia and endocarditis. *S. aureus* infections are difficult to treat due to resistance to numerous antibiotics. The development and dissemination of MRSA strains has proven to be particularly difficult to contain and treat.\(^6\) Vancomycin has been the preferred antibiotic of choice for the treatment of MRSA infections; however, there have now been MRSA strains isolated that are also resistant to vancomycin.\(^6,7\) It is believed that this resistance results from either mutations that ultimately lead to a reduction of vancomycin at its site of action or from the acquisition of the vancomycin resistance gene, vanA, from *Enterococcus faecalis*.\(^6,7,8\)

**Material Provided:**
Each vial contains approximately 0.5 mL of bacterial culture in Brain Heart Infusion broth supplemented with 6 µg/mL vancomycin and 10% glycerol.

**Note:** If homogeneity is required for your intended use, please purify prior to initiating work.

**Packaging/Storage:**
NR-46423 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. Freezethaw cycles should be avoided.

**Growth Conditions:**
**Note:** For stability purposes, it is recommended that the strain is subcultured in the presence of vancomycin.

**Media:**
Brain Heart Infusion broth or Tryptic Soy broth or equivalent, with 6µg/mL vancomycin
Brain Heart Infusion agar or Tryptic Soy agar or Tryptic Soy agar with 5% defibrinated sheep blood or equivalent, with 6µg/mL vancomycin

**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 1 day.

**Citation:**
Acknowledgment for publications should read “The following reagent was provided by the Network on Antimicrobial Resistance in *Staphylococcus aureus* (NARSA) for distribution through BEI Resources, NIAID, NIH: *Staphylococcus aureus*, Strain 1002434, NR-46423.”

**Biosafety Level:** 2

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References:
1. NARSA, VRS12.

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