Product Information Sheet for NR-45927

Staphylococcus hominis subsp. *novobiosepticus*, Strain NRS122

Catalog No. NR-45927

For research use only. Not for human use.

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

Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Staphylococcaceae, Staphylococcus*
Species: *Staphylococcus hominis* subsp. *novobiosepticus* [NR-45927 was deposited to BEI Resources as *Staphylococcus epidermidis*, however, digital DNA-DNA hybridization (dDDH) testing performed at BEI Resources resulted in reclassification to *Staphylococcus hominis* (*S. hominis*) subsp. *novobiosepticus*]
Strain: NRS122
NARSA Catalog Number: NRS122
Original Source: *S. hominis* subsp. *novobiosepticus*, strain NRS122 was isolated in April 2002 from a 42-year-old male inpatient in Maryland, USA.[1]
Comments: *S. hominis* subsp. *novobiosepticus*, strain NRS122 is reported to be a glycopeptide-intermediate Staphylococcal strain. It was deposited as positive for *mecA* and negative for *vanA*, *vanB*, *vanC1*, *vanC2*, *vanD* and *vanE*.[1]

S. hominis is a Gram-positive, non-motile, coagulase-negative staphylococci (CoNS) that is a commensal resident of human skin covering the axillae, head, legs and arms. It is also an opportunistic pathogen in immunocompromised patients and neonates and has been associated as the causal agent of bacteremia, septicemia and endocarditis.[2-4] *S. hominis* is subspeciated into *S. hominis* subsp. *hominis* and *S. hominis* subsp. *novobiosepticus* based on the combined characteristics of novobiocin resistance and failure to produce acid aerobically from D-trehalose and N-acetyl-D-glucosamine in *S. hominis* subsp. *novobiosepticus*.[5] The two subspecies also differ in the presence and type of SCC*mec* cassette they carry. The majority of *S. hominis* subsp. *novobiosepticus* isolates have SCC*mec* cassette components similar to the ones found in *S. aureus,* whereas only a small subset of *S. hominis* subsp. *hominis* isolates carry a SCC*mec* cassette, and there is a larger diversity of SCC*mec* components.[6]

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-45927 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 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 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 by BEI Resources, NIAID, NIH: *Staphylococcus hominis* subsp. *novobiosepticus*, Strain NRS122, NR-45927."

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. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. NARSA, NRS122.
2. Kloos, W. E. and K. H. Schleifer. "Isolation and Characterization of Staphylococci from Human Skin. II. Descriptions of Four New Species: *Staphylococcus warneri*, *Staphylococcus capitis*, *Staphylococcus hominis*, and *Staphylococcus simulans*." Int. J. Syst. Bacteriol. 25 (1975): 62-79.
3. Chaves, F., et al. "Nosocomial Spread of a *Staphylococcus hominis* subsp. *novobiosepticus* Strain Causing Sepsis in a Neonatal Intensive Care Unit." J. Clin. Microbiol. 43 (2005): 4877-4879. PubMed: 16145165.
4. Mendoza-Olazarán, S., et al. "Microbiological and Molecular Characterization of *Staphylococcus hominis* Isolates from Blood." PLoS One 8 (2013): e61161. PubMed: 23585877.
5. Kloos, W. E., et al. "*Staphylococcus hominis* subsp. *novobiosepticus* subsp. nov., a Novel Trehalose- and N-Acetyl-D-Glucosamine-Negative, Novobiocin- and Multiple-Antibiotic-Resistant Subspecies Isolated from Human Blood Cultures." Int. J. Syst. Bacteriol. 48 (1998): 799-812. PubMed: 9734034.
6. Zhang, L., et al. "Multilocus Sequence Typing and Further Genetic Characterization of the Enigmatic Pathogen, *Staphylococcus hominis*." PLoS One 8 (2013): e66496. PubMed: 23776678.
7. Park, B., T. Iwase and G. Y. Liu. "Intranasal Application of *S. epidermidis* Prevents Colonization by Methicillin-Resistant *Staphylococcus aureus* in Mice." PLoS One 6 (2011): e25880. PubMed: 21998712.

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