Product Information Sheet for NR-51854

Streptococcus pneumoniae, Strain OREP7F

Catalog No. NR-51854

For research use only. Not for use in humans.

Contributor:
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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Streptococcaceae, Streptococcus*
Species: *Streptococcus pneumoniae*
Strain: OREP7F
Original Source: *Streptococcus pneumoniae (S. pneumoniae),* strain OREP7F was derived from human wild-type *S. pneumoniae*, strain DS2617-97 (serotype 7F) by natural selection using increasing concentrations of optochin.[1,2]
Comments: *S. pneumoniae*, strain OREP7F is reported to be resistant to optochin at a concentration of 2 µg/mL.[2]

S. pneumoniae is a Gram-positive, α-hemolytic diplococcal aerotolerant anaerobe that is a major cause of pneumonia, bacterial meningitis and otitis media. *S. pneumoniae* has a polysaccharide capsule that acts as a virulence factor for the organism. There are over ninety different capsular types of *S. pneumoniae* which differ in virulence, prevalence and extent of drug resistance.[3,4]

Material Provided:
Each vial contains bacterial culture in Todd-Hewitt broth containing 0.5% (w/v) yeast extract and 10% glycerol.

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

Packaging/Storage:
NR-51854 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -80°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:
Tryptic Soy broth or Todd-Hewitt broth containing 0.5% (w/v) yeast extract or equivalent
Tryptic Soy agar or Tryptic Soy agar with 5% defibrinated sheep blood or Todd-Hewitt agar containing 0.5% (w/v) yeast extract or equivalent
Incubation:
Temperature: 37°C
Atmosphere: Aerobic with 5% CO_2

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 obtained through BEI Resources, NIAID, NIH: *Streptococcus pneumoniae*, Strain OREP7F, NR-51854."

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. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

Disclaimers:
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References:

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3. Jedrzejas, M. J. "Pneumococcal Virulence Factors: Structure and Function." Microbiol. Mol. Biol. Rev. 65 (2001): 187-207. PubMed: 11381099.
4. Habib, M., B. D. Porter and C. Satzke. "Capsular Serotyping of *Streptococcus pneumoniae* Using the Quellung Reaction." J. Vis. Exp. (2014): e51208. PubMed: 24637727.
5. Cywes-Bentley, C., et al. "Antibody to a Conserved Antigenic Target is Protective Against Diverse Prokaryotic and Eukaryotic Pathogens." Proc. Natl. Acad. Sci. USA 110 (2013): E2209-E2218. PubMed: 23716675.
6. Balloch, A., et al. "Interlaboratory Comparison of the Pneumococcal Multiplex Opsonophagocytic Assays and their Level of Agreement for Determination of Antibody Function in Pediatric Sera." mSphere 3 (2018): e00070-18. PubMed: 29695620.
7. Burton, R. L. and M. H. Nahm. "Development of a Fourfold Multiplexed Opsonophagocytosis Assay for Pneumococcal Antibodies against Additional Serotypes and Discovery of Serological Subtypes in *Streptococcus pneumoniae* Serotype 20." Clin. Vaccine Immunol. 19 (2012): 835-841. PubMed: 22518015.

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