

Streptococcus mitis*, Strain SPAR10*Catalog No. NR-34818****For research use only. Not for human use.****Contributor:**

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Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Streptococcaceae*, *Streptococcus*

Species: *Streptococcus mitis*

Strain: SPAR10

Original Source: *Streptococcus mitis* (*S. mitis*), strain SPAR10 was isolated in June 1996 from human blood obtained in Atlanta, Georgia, USA.¹

Comment: The complete genome of *S. mitis*, strain SPAR10 has been sequenced (GenBank: [ALCH00000000](https://www.ncbi.nlm.nih.gov/nuclseq/ALCH00000000)).

S. mitis is a non-motile, alpha-hemolytic, Gram-positive commensal resident of the upper respiratory tract and intestines. It is part of the Mitis group of Gram-positive bacteria that includes the major human pathogen *Streptococcus pneumoniae*. Unlike *S. pneumoniae*, *S. mitis* rarely shows severe disease in humans, but can cause a variety of infectious complications including endocarditis, bacteremia and septicemia.^{2,3} Some *S. mitis* strains display an unusually high-level beta-lactam and multiple-antibiotic resistance.³ However, most of the capsular genes essential for virulence in *S. pneumoniae* appear to be largely absent in *S. mitis*.

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-34818 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 or equivalent
Tryptic Soy agar or Tryptic Soy agar with 5% sheep blood or Todd-Hewitt agar or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Aerobic with 5% CO₂

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 24 hours.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Streptococcus mitis*, Strain SPAR10, NR-34818."

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/bmb15/index.htm.

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References:

1. S. T. Chancey, Personal Communication.
2. Coykendall, A. L. "Classification and Identification of the Viridans Streptococci." Clin. Microbiol. Rev. 2 (1989): 315-328. PubMed: 2670193.
3. Mitchell, J. "*Streptococcus mitis*: Walking the Line between Commensalism and Pathogenesis." Mol. Oral Microbiol. 26 (2011): 89-98. PubMed: 21375700.

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