

***Streptococcus agalactiae*, Strain MNZ933**

**Catalog No. NR-43896**

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

**Contributor and Manufacturer:**

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**Product Description:**

Bacteria Classification: *Streptococcaceae*, *Streptococcus*

Species: *Streptococcus agalactiae*

Serogroup: Group B

Serotype: II

Strain: MNZ933

Original Source: *Streptococcus agalactiae* (*S. agalactiae*), strain MNZ933 was isolated from human blood.<sup>1</sup>

Comments: A protocol to detect opsonic antibodies to Group B *Streptococcus* (GBS) capsular polysaccharide in rabbit antisera using a singleplex assay format has been developed and is available. An opsonophagocytic killing assay that was developed for GBS is also available in this document.<sup>2</sup>

*Streptococcus agalactiae* is a Gram-positive cocci characterized by the presence of Group B Lancefield antigen, and is known as Group B *Streptococcus* (GBS). GBS causes illness in people of all ages. In newborns, GBS most commonly causes sepsis (infection of the blood), pneumonia (infection in the lungs), and sometimes meningitis (infection of the fluid and lining around the brain). The most common problems caused by GBS in adults are bloodstream infections, pneumonia, skin and soft-tissue infections, and bone and joint infections. In addition to the presence of the Group B Lancefield antigen, GBS is also characterized by its ability to hydrolyze sodium hippurate and sensitivity to bile. *S. agalactiae*'s polysaccharide antiphagocytic capsule is its main virulence factor.<sup>3</sup> Genomes from multiple serotypes have been sequenced for comparative analyses.<sup>4</sup>

**Material Provided:**

Each vial contains approximately 1.8 mL of bacterial culture in Todd-Hewitt broth containing 0.5% (w/v) yeast extract and 15% glycerol.

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

**Growth Conditions:**

Media:

Todd-Hewitt broth containing 0.5% (w/v) yeast extract or equivalent

Tryptic Soy agar with 5% sheep blood or equivalent

Incubation:

Temperature: 37°C

Atmosphere: 5% CO<sub>2</sub>

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 (incubate the broth without shaking).

**Packaging/Storage:**

NR-43896 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.

**Citation:**

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Streptococcus agalactiae*, Strain MNZ933, NR-43896."

**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/bmbI5/index.htm](http://www.cdc.gov/biosafety/publications/bmbI5/index.htm).

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**References:**

1. Moon H. Nahm, personal communication
2. Burton, R. L. and M. H. Nahm. "[Protocol for Opsonophagocytic Killing Assay for Antibodies against Group B Streptococcus \(UAB GBS OPA\)](http://www.vaccine.uab.edu/UAB-GBS-OPA.pdf)." <http://www.vaccine.uab.edu/UAB-GBS-OPA.pdf>.
3. Smith, J. P., K. K. Durfee and J. H. Marymount Jr. "A Review of Laboratory Methods for Identification of Group B Streptococci (*Streptococcus agalactiae*)." *Am. J. Med. Technol.* 45 (1979): 199-204. PubMed: 371403.
4. Tettelin, H., et al. "Genome Analysis of Multiple Pathogenic Isolates of *Streptococcus agalactiae*: Implications for Microbial "Pan-Genome"." *Proc. Natl. Acad. Sci. USA.* 102 (2005): 13950-13955. PubMed: 16172379.

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