SUPPORTING INFECTIOUS DISEASE RESEARCH

# Streptococcus sobrinus, Strain W1703

# Catalog No. HM-1063

# For research use only. Not for use in humans.

# **Contributor:**

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# Manufacturer:

**BEI Resources** 

# **Product Description:**

<u>Bacteria Classification</u>: Streptococcaceae, Streptococcus <u>Species</u>: Streptococcus sobrinus

Strain: W1703

- <u>Original Source</u>: *Streptococcus sobrinus (S. sobrinus)*, strain W1703 was isolated in 1989 from the dental plaque biofilm of the third molar tooth of an individual diagnosed with pericoronitis in the United Kingdom.<sup>1</sup>
- <u>Comments</u>: *S. sobrinus*, strain W1703 (<u>HMP ID 1557</u>) is a reference genome for <u>The Human Microbiome Project</u> (HMP). HMP is an initiative to identify and characterize human microbial flora. The complete genome of *S. sobrinus*, strain W1703 was sequenced at <u>Washington University</u> (GenBank: <u>AWVA00000000</u>).
- <u>Note</u>: HMP material is taxonomically classified by the depositor. Quality control of these materials is only performed to demonstrate that the material distributed by BEI Resources is identical to the deposited material.

*S. sobrinus* is a non-sporulating, Gram-positive coccus normally only present as a small proportion of the total human oral microflora. Among oral bacteria, *S. sobrinus* has been identified as an etiologic agent associated with the initiation of dental caries in humans.<sup>2,3,4,5</sup>

# **Material Provided:**

Each vial contains approximately 0.5 mL of bacterial culture in Brain Heart Infusion broth supplemented with 10% glycerol.

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

### Packaging/Storage:

HM-1063 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 equivalent

Tryptic Soy agar with 5% defibrinated sheep blood or equivalent

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# 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 obtained through BEI Resources, NIAID, NIH as part of the Human Microbiome Project: *Streptococcus sobrinus*, Strain W1703, HM-1063."

### **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. <u>Biosafety in Microbiological and Biomedical Laboratories (BMBL)</u>. 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

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### **References:**

- 1. Izard, J., Personal Communication.
- Nacimiento, M. M., et al. "Adaptive Acid Tolerance Response of *Streptococcus sobrinus*." <u>J. Bacteriol.</u> 186 (2004): 6383-6390. PubMed: 15375118.
- Cheon, K., et al. "Characteristics of *Streptococcus mutants* Genotypes and Dental Caries in Children." <u>Eur.</u> J. Oral Sci. 121 (2013): 148-155. PubMed: 23659236.
- Velazquez-Enrique, U., et al. "Quantitative Analysis of S. mutans and S. sobrinus Cultivated Independently and Adhered to Polished Orthodontic Composite Resins." J. <u>Appl. Oral Sci.</u> 45 (2012): 544-549. PubMed: 23138741.
- Dewhirst, F. E., et al. "The Human Oral Microbiome." <u>J.</u> <u>Bacteriol.</u> 192 (2010): 5002-5017. PubMed: 20656903.

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