

***Enterococcus faecalis*, Strain S613**

**Catalog No. HM-334**

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

**Contributor:**

Cesar A. Arias, M.D., Ph.D., Assistant Professor of Medicine, Department of Internal Medicine, The University of Texas Health Science Center at Houston, Houston, Texas, USA and John Quinn, M.D., Pfizer Global Research, New London, Connecticut, USA

**Manufacturer:**

BEI Resources

**Product Description:**

Bacteria Classification: *Enterococcaceae*, *Enterococcus*

Species: *Enterococcus faecalis*

Strain: S613

Original Source: *Enterococcus faecalis* (*E. faecalis*), strain S613 was isolated in 2004 from the blood of a 64-year-old female hemodialysis patient with fatal bacteremia. The S613 isolate was from blood drawn before treatment with daptomycin.<sup>1</sup>

Comments: *E. faecalis*, strain S613 ([HMP ID 9376](#)) is reported to be susceptible to daptomycin.<sup>1-3</sup> This strain is a reference genome for [The Human Microbiome Project](#) (HMP). HMP is an initiative to identify and characterize human microbial flora. The complete genome of *E. faecalis*, strain S613 was sequenced at the Genome Institute at [Washington University](#) (GenBank: [ADDP00000000](#)).

Note: 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.

*E. faecalis* is a Gram-positive, facultatively anaerobic coccus that inhabits the gastrointestinal and female genital tract. It is also the most frequently isolated species, often as a monoinfection, from root canals of endodontically treated teeth with persistent apical periodontitis.<sup>4</sup> *E. faecalis* is an opportunistic pathogen and has become a serious concern in hospitals because of its inherent hardiness and antibiotic resistance. The bacterium produces a cytolyisin toxin that is encoded on various mobile genetic elements, pathogenicity islands, and conjugative plasmids.<sup>5</sup>

**Material Provided:**

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

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

**Packaging/Storage:**

HM-334 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

Incubation:

Temperature: 37°C

Atmosphere: Aerobic with 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 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: *Enterococcus faecalis*, Strain S613, HM-334.”

**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](http://www.cdc.gov/biosafety/publications/bmbl5/index.htm).

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**References:**

1. Munoz-Price, L. S., K. Lolans and J. P. Quinn. "Emergence of Resistance to Daptomycin during Treatment of Vancomycin-Resistant *Enterococcus faecalis* Infection." Clin. Infect. Dis. 41 (2005): 565-566. PubMed: 16028170.
2. Arias, C. A., et al. "Genetic Basis for *In Vivo* Daptomycin Resistance in Enterococci." N. Engl. J. Med. 365 (2011): 892-900. PubMed: 21899450.
3. [HMP ID 9376](#) (*Enterococcus faecalis*, strain S613)
4. Stevens, R. H., O. D. Porras and A. L. Delisle. "Bacteriophages Induced from Lysogenic Root Canal Isolates of *Enterococcus faecalis*." Oral Microbiol. Immunol. 24 (2009): 278-284. PubMed: 19572888.
5. McBride, S. M., et al. "Genetic Variation and Evolution of the Pathogenicity Island of *Enterococcus faecalis*." J. Bacteriol. 191 (2009): 3392-3402. PubMed: 19270086.
6. Solheim, M., et al. "Comparative Genomic Analysis Reveals Significant Enrichment of Mobile Genetic Elements and Genes Encoding Surface Structure-Proteins in Hospital-Associated Clonal Complex 2 *Enterococcus faecalis*." BMC Microbiol. 11: (2011) 3. PubMed: 21205308.

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