

***Enterococcus faecalis*, Strain TX0104**

Catalog No. HM-201

For research use only. Not for human use.

Contributor:

Professor Barbara E. Murray, M.D., Director, Division of Infectious Diseases, Department of Internal Medicine, The University of Texas Health Science Center at Houston, Houston, Texas, USA

Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Enterococcaceae*, *Enterococcus*

Species: *Enterococcus faecalis*

Strain: TX0104

Original Source: *Enterococcus faecalis* (*E. faecalis*), strain TX0104 was isolated in January 2002 from the blood of a patient with endocarditis at Stamford Hospital in Connecticut, USA.^{1,2}

Comments: *E. faecalis*, strain TX0104 ([HMP ID 348](#)) is reported to be vancomycin resistant.¹ This strain is a reference genome for [The Human Microbiome Project](#) (HMP). HMP is an initiative to identify and characterize human microbial flora. *E. faecalis*, strain TX0104 was sequenced at the Human Genome Sequencing Center at [Baylor College of Medicine](#) (GenBank: [ACGL00000000](#)).

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 is a commensal inhabitant of the gastrointestinal and female genital tract.^{3,4} It is also the most frequently isolated species, often as a mono-infection, from root canals of endodontically treated teeth with persistent apical periodontitis.⁵ *E. faecalis* is an opportunistic pathogen and has become a serious concern in hospitals because of its inherent hardiness and high levels of antibiotic resistance.⁶ Virulent strains often express a cytolysin toxin that is encoded on various mobile genetic elements, pathogenicity islands, and conjugative plasmids.⁷

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-201 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 Tryptic Soy broth or equivalent Brain Heart Infusion agar or Tryptic Soy agar with 5% defibrinated sheep blood or equivalent

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: *Enterococcus faecalis*, Strain TX0104, HM-201."

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.

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References:

1. Murray, B. E., Personal Communication.
2. [HMP 348](#) (*Enterococcus faecalis*, strain TX0104)
3. Schleifer, K. H. and R. Kilpper-Bälz. "Transfer of *Streptococcus faecalis* and *Streptococcus faecium* to the Genus *Enterococcus* nom. rev. as *Enterococcus faecalis* comb. nov. and *Enterococcus faecium* comb. nov." Int. J. Syst. Bacteriol. 34 (1984): 31-34.
4. Chowdhury, S. A., et al. "A Trilocus Sequence Typing Scheme for Hospital Epidemiology and Subspecies Differentiation of an Important Nosocomial Pathogen, *Enterococcus faecalis*." J. Clin. Microbiol. 47 (2009): 2713-2719. PubMed: 19571023.
5. 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.
6. Arias, C. A. and B. E. Murray. "The Rise of the *Enterococcus*: Beyond Vancomycin Resistance." Nat. Rev. Microbiol. 10 (2012): 266-278. PubMed: 22421879.
7. McBride, S. M., et al. "Genetic Variation and Evolution of the Pathogenicity Island of *Enterococcus faecalis*." J. Bacteriol. 191 (2009): 3392-3402. PubMed: 19270086.
8. 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.
9. La Rosa, S. L., et al. "A Genomic Virulence Reference Map of *Enterococcus faecalis* Reveals an Important Contribution of Phage03-like Elements in Nosocomial Genetic Lineages to Pathogenicity in a *Caenorhabditis elegans* Infection Model." Infect Immun. 83 (2015): 2156-67. PubMed: 25776747.

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