

***Enterococcus faecium*, Strain E1578****Catalog No. NR-31933****For research use only. Not for human use.****Contributor:**

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**Manufacturer:**

BEI Resources

**Product Description:**

**Bacteria Classification:** *Enterococcaceae*, *Enterococcus*

**Species:** *Enterococcus faecium*

**Strain:** E1578 (also referred to as EnGen0007<sup>2</sup>)

**Original Source:** *Enterococcus faecium* (*E. faecium*), strain E1578 was isolated in 2001 from the feces of a miniature pig in Germany.<sup>1,2</sup>

**Comments:** *E. faecium*, strain E1578 is part of a genome sequencing project at the [Broad Institute](#).<sup>3</sup> The complete genome of *E. faecium*, strain E1578 has been sequenced (GenBank: [AHXB00000000](#)).

*E. faecium* is a Gram-positive, facultative, anaerobic coccus that is a commensal inhabitant of the gastrointestinal tract of both humans and animals.<sup>4,6</sup> *E. faecium* is an emerging and challenging nosocomial pathogen due to its inherent hardiness and ability to develop antibiotic resistance.<sup>4,6</sup> Its large open pan-genome allows for horizontal gene transfer between *E. faecium* and other pathogenic and non-pathogenic bacteria to adapt to changing environments.<sup>4,7</sup> The large majority of strains isolated from nosocomial infections have been classified as CC17, with a distinct genetic lineage characterized by ampicillin resistance and a pathogenicity island carrying the *esp* gene, which is known to contribute virulence in an animal model.<sup>4,7,8</sup> Two other virulence genes, *hyl* and *acm*, have been identified.<sup>4</sup>

**Material Provided:**

Each vial contains approximately 0.5 mL of bacterial culture in 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-31933 was packaged aseptically, in screw-capped plastic 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:**

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

**Incubation:**

Temperature: 35 to 37°C

Atmosphere: Aerobic (with or without 5% CO<sub>2</sub>) or anaerobic

**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 tube, slant and/or plate for 24 hours.

**Citation:**

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Enterococcus faecium*, Strain E1578, NR-31933."

**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:**

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3. Gilmore, M. S. "Scope of the Diversity of Emerging Hospital Pathogens, *Enterococcus faecalis* and *Enterococcus faecium*." [Broad Institute.](https://www.broadinstitute.org/files/shared/genomebio/Enterococcal%20genomes%20whitepaper.doc) <<https://www.broadinstitute.org/files/shared/genomebio/Enterococcal%20genomes%20whitepaper.doc>>
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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.
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