

***Enterococcus faecium*, Strain E0164**

Catalog No. NR-31915

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Contributor:

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Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Enterococcaceae*, *Enterococcus*

Species: *Enterococcus faecium*

Strain: E0164 (also referred to as EnGen0010)

Original Source: *Enterococcus faecium* (*E. faecium*), strain E0164 was isolated in 1996 from turkey feces in the Netherlands.¹

Comment: *E. faecium*, strain E0164 is reported to be resistant to gentamicin and vancomycin.¹ The complete genome of *E. faecium*, strain E0164 has been sequenced (GenBank: [AHWJ00000000](https://www.ncbi.nlm.nih.gov/nuccore/AHWJ00000000)).

E. faecium is a Gram-positive, facultative, anaerobic coccus that is a commensal inhabitant of the gastrointestinal tract of both humans and animals.^{2,4} *E. faecium* is an emerging and challenging nosocomial pathogen due to its inherent hardiness and ability to develop antibiotic resistance.^{2,4} 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.^{2,5} 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.^{2,5,6} Two other virulence genes, *hyl* and *acm*, have been identified.²

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-31915 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: 37°C

Atmosphere: Aerobic (with or without 5% CO₂) 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 1 day.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Enterococcus faecium*, Strain E0164, NR-31915."

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:

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4. 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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8. AbdelKhalek A., et al. "Repurposing Ebselen for Decolonization of Vancomycin-Resistant Enterococci (VRE)." PLoS One 13 (2018): e0199710. PubMed: 29953486.
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