Product Information Sheet for HM-460

Enterococcus faecium, Strain TX0082

Catalog No. HM-460

For research use only. Not for use in humans.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Enterococcaceae*, *Enterococcus*
Species: *Enterococcus faecium*
Strain: TX0082
Original Source: *Enterococcus faecium (E. faecium)*, strain TX0082 was isolated in 1999 from the blood of a human patient with endocarditis in Houston, Texas, USA.[1,2,3,4]
Comments: *E. faecium*, strain TX0082 (HMP ID 9522) is reported to be resistant to ampicillin, erythromycin, kanamycin and vancomycin.[1,2] This strain is a reference genome for The Human Microbiome Project (HMP). HMP is an initiative to identify and characterize human microbial flora. *E. faecium*, strain TX0082 was sequenced at Washington University (GenBank: AEBU00000000).
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. faecium is a Gram-positive, facultative, anaerobic coccus that is a commensal inhabitant of the gastrointestinal tract of both humans and animals.[5,6] *E. faecium* is an emerging and challenging nosocomial pathogen due to its inherent hardiness and ability to develop antibiotic resistance.[5,6,7] 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.[5]

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-460 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 (with or without 5% CO_2) 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 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 faecium*, Strain TX0082, HM-460."

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. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

Disclaimers:

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license is required. U.S. Government contractors may need a license before first commercial sale.

References:

1. Arias, C. A., Personal Communication.
2. HMP ID 9522 (*Enterococcus faecium*, strain TX0082)
3. Nallapareddy, S. R., K. V. Singh and B. E. Murray. "Construction of Improved Temperature-Sensitive and Mobilizable Vectors and Their Use for Constructing Mutations in the Adhesin-Encoding *acm* Gene of Poorly Transformable Clinical *Enterococcus faecium* Strains." Appl. Environ. Microbiol. 72 (2006): 334-345. PubMed: 16391062.
4. Nallapareddy, S. R., K. V. Singh and B. E. Murray. "Contribution of the Collagen Adhesin Acm to Pathogenesis of *Enterococcus faecium* in Experimental Endocarditis." Infect. Immun. 76 (2008): 4120-4128. PubMed: 18591236.
5. van Schaik, W., et al. "Pyrosequencing-Based Comparative Genome Analysis of the Nosocomial Pathogen *Enterococcus faecium* and Identification of a Large Transferable Pathogenicity Island." BMC Genomics 11 (2010): 239. PubMed: 20398277.
6. 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.
7. 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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