Product Information Sheet for NR-32002

Enterococcus faecalis, Strain YI6-1

Catalog No. NR-32002

For research use only. Not for human use.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Enterococcaceae, Enterococcus*
Species: *Enterococcus faecalis*
Strain: YI6-1 (also referred to as EnGen0287)
Original Source: *Enterococcus faecalis* (*E. faecalis*), strain YI6-1 is a derivative of the original YI6 strain, a clinical isolate from Japan around 1992.[1]
Comments: *E. faecalis*, strain YI6-1 is reported to be resistant to gentamicin and tetracycline[2] and susceptible to erythromycin and streptomycin.[1] It is the first isolate characterized with a chromosomal-encoded cytolysin.[1-3] The 10-kb plasmid of the parent YI6 strain was not detected in this YI6-1 derivative.[1] The complete genome of *E. faecalis*, strain YI6-1 has been sequenced (GenBank: AJEO00000000).

E. faecalis is a Gram-positive, facultatively anaerobic coccus that is a commensal inhabitant of the gastrointestinal and female genital tract.[4] It is also the most frequently isolated species, often as a monoinfection, 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 0.5X 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-32002 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:

Note: Specific growth conditions are reported on the Certificate of Analysis for each lot.
Media:
Tryptic Soy broth, Brain Heart Infusion broth or equivalent
Tryptic Soy agar, Tryptic Soy agar with 5% defibrinated sheep blood, Brain Heart Infusion agar or equivalent
Incubation:
Temperature: 35 to 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 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 faecalis*, Strain YI6-1, NR-32002."

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. Ike, Y. and D. B. Clewell. "Evidence that the Hemolysin/Bacteriocin Phenotype of *Enterococcus faecalis* subsp. *zymogenes* Can Be Determined by Plasmids in Different Incompatibility Groups as Well as by the Chromosome." J. Bacteriol. 174 (1992): 8172-8177. PubMed: 1459967.
2. McBride, S. M., et al. "Genetic Diversity among *Enterococcus faecalis*." PLoS One 2 (2007): e582. PubMed: 17611618.
3. Gilmore, M. S. Personal Communication.
4. 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.
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.

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