# Product Information Sheet for NR-31973

## *Enterococcus faecalis,* Strain HH22

## Catalog No. NR-31973

**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 faecalis*
Strain: HH22 (also referred to as TX0921 or EnGen0297)
Original Source: *Enterococcus faecalis (E. faecalis),* strain HH22 was isolated in 1981 from a clinical urine specimen submitted to the microbiology laboratory of Hermann Hospital in Houston, Texas, USA.[1,2,3]
Comments: *E. faecalis,* strain HH22 is reported to be the first identified β-lactamase-producing isolate and shows resistance to penicillin, erythromycin, tetracycline and high levels of aminoglycosides.[1,2,3] The complete genome of *E. faecalis*, strain HH22 has been sequenced (GenBank: ACIX00000000 and AJDY00000000).

*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] *E. faecalis*, strain HH22 was found to contain three conjugated plasmids and a conjugated transposon; it excretes a gelatinase, but neither hemolysin nor bacteriocin production has been detected.[8]

### 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:

NR-31973 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:
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% $CO_2$) 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: *Enterococcus faecalis,* Strain HH22, NR-31973."

### 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 (BMBL). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

### Disclaimers:

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## References:

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2. Mederski-Samoraj, B. D. and B. E. Murray. "High-Level Resistance to Gentamicin in Clinical Isolates of Enterococci." J. Infect. Dis. 147 (1983): 751-757. PubMed: 6404994.
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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.
8. Murray, B. E., F. Y. An, and D. B. Clewell. "Plasmids and Pheromone Response of the β-Lactamase Producer *Streptococcus (Enterococcus) faecalis* HH22." Antimicrob. Agents Chemother. 32 (1988): 547-551. PubMed: 3132094.
9. McBride, S. M., et al. "Genetic Diversity among *Enterococcus faecalis*." PLoS One 2 (2007): e582. PubMed: 17611618.



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