

Actinomyces israelii*, Strain F0345*Catalog No. HM-98****For research use only. Not for human use.****Contributor:**

Jacques Izard, Assistant Member of the Staff, Department of Molecular Genetics, The Forsyth Institute, Boston, Massachusetts

Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Actinomycetaceae*, *Actinomyces*

Species: *Actinomyces israelii*

Strain: F0345

Original Source: *Actinomyces israelii* (*A. israelii*), strain F0345 was isolated from a human oral cavity.¹

Comments: *A. israelii*, strain F0345 ([HMP ID 1037](#)) is a reference genome for [The Human Microbiome Project](#) (HMP). HMP is an initiative to identify and characterize human microbial flora. The complete genome of *A. israelii*, strain F0345 is currently being sequenced at the [J. Craig Venter Institute](#).

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.

A. israelii is a Gram-positive, facultatively anaerobic, rod-shaped bacterium commonly found in the normal human mouth, gastrointestinal tract, and female genital tract.^{2,3} Although it appears to be of low virulence, there are rare cases which demonstrate the potential for *A. israelii* to cause infection; it is the main cause of the chronic disease known as actinomycosis.² Infection typically results from a breach in the mucosal barrier, enabling *A. israelii* to enter deep tissue.

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in 0.5X *Actinomyces* Broth supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:

HM-98 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:

Actinomyces Broth ([ATCC medium 7](#)) or equivalent

Tryptic Soy Agar with 5% defibrinated sheep blood or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Anaerobic (80% N₂:10% CO₂:10% H₂)

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 72 to 96 hours.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH as part of the Human Microbiome Project: *Actinomyces israelii*, Strain F0345, HM-98."

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. [HMP ID 1037](#) (*Actinomyces israelii*, strain F0345)
2. Smego, R. A. Jr. and G. Foglia. "Actinomycosis." Clin. Infect. Dis. 26 (1988): 1255-1261. PubMed: 9636842.
3. Evans, D. T. "*Actinomyces israelii* in the Female Genital Tract: a Review." Genitourin. Med. 69 (1993): 54-59. PubMed: 8444484.
4. Smith, A. J., V. Hall, B. Thakker and C. G. Gemmell. "Antimicrobial Susceptibility Testing of *Actinomyces* Species with 12 Antimicrobial Agents." J. Antimicrob. Chemother. 56 (2005): 407-409. PubMed: 15972310.
5. Dewhirst, F. E., et al. "The Human Oral Microbiome." J. Bacteriol. 192 (2010): 5002-5017. PubMed: 20656903.

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