

**Acetobacteraceae sp., Strain AT-5844**

**Catalog No. HM-648**

**For research use only. Not for human use.**

**Contributor:**

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**Manufacturer:**

BEI Resources

**Product Description:**

Bacteria Classification: *Rhodospirillales, Acetobacteraceae*

Species: *Acetobacteraceae* sp.

Strain: AT-5844

Original Source: *Acetobacteraceae* sp., strain AT-5844 was isolated at the St. Louis Children's Hospital in Missouri, USA, on May 28, 2010, from a leg wound infection of a human patient that was stepped on by a bull.<sup>1</sup>

Comments: *Acetobacteraceae* sp., strain AT-5844 ([HMP ID 9946](#)) 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 *Acetobacteraceae* sp., strain AT-5844 was sequenced at the Genome Institute at [Washington University](#) (GenBank: [AGEZ00000000](#)).

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.

*Acetobacteraceae* bacteria are strictly aerobic, Gram-negative or Gram-variable, non-sporulating, ellipsoidal to rod-shaped bacteria.<sup>2</sup> Acetic acid bacteria (AAB) of the family *Acetobacteraceae* are commonly found in sugary, acidic, and alcoholic foodstuffs and beverages, in plants, and as endosymbionts with insects and microorganisms. Their oxidative capacity is commercially exploited not only for vinegar production but also food and chemical manufacturing.<sup>3</sup> Most AAB are non-pathogenic to humans and animals; however, a few species have been described as human pathogens.<sup>4-6</sup>

**Material Provided:**

Each vial contains approximately 0.5 mL of bacterial culture in Tryptic Soy broth supplemented with 15% glycerol.

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

**Packaging/Storage:**

HM-648 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 equivalent

Tryptic Soy agar with 5% sheep blood or Chocolate agar or equivalent

Incubation:

Temperature: 35°C

Atmosphere: Aerobic with 5% CO<sub>2</sub>

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 35°C for 18-24 hours.

**Citation:**

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH as part of the Human Microbiome Project: *Acetobacteraceae* sp., Strain AT-5844, HM-648."

**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](http://www.cdc.gov/biosafety/publications/bmbL5/index.htm).

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**References:**

1. Burnham, C.-A., Personal Communication.
2. Gillis, M. and J. De Ley. "Intra- and Intergeneric Similarities of the Ribosomal Ribonucleic Acid Cistrons of *Acetobacter* and *Gluconobacter*." Int. J. Syst. Bacteriol. (1980) 30:7-27.
3. Crotti, E., et al. "Acetic Acid Bacteria, Newly Emerging Symbionts of Insects." Appl. Environ. Microbiol. 76 (2010): 6963-6970. PubMed: 20851977.
4. Greenberg, D. E., et al. "A Novel Bacterium Associated with Lymphadenitis in a Patient with Chronic Granulomatous Disease." PLoS Pathog. 2 (2006): e28. PubMed: 16617373.
5. Greenberg, D. E., et al. "*Granulibacter bethesdensis* gen. nov., sp. nov., a Distinctive Pathogenic Acetic Acid Bacterium in the Family *Acetobacteraceae*." Int. J. Syst. Evol. Microbiol. 56 (2006): 2609-2616. PubMed: 17082400.
6. Tuuminen, T., T. Heinäsmäki and T. Kerttula. "First Report of Bacteremia by *Asaia bogorensis*, in a Patient with a History of Intravenous-Drug Abuse." J. Clin. Microbiol. 44 (2006): 3048-3050. PubMed: 16891542.
7. [HMP ID 9946](#) (*Acetobacteraceae* sp., strain AT-5844)
8. Cleenwerck, I., et al. "Differentiation of Species of the Family *Acetobacteraceae* by AFLP DNA Fingerprinting: *Gluconacetobacter kombuchae* Is a Later Heterotypic Synonym of *Gluconacetobacter hansenii*." Int. J. Syst. Evol. Microbiol. 59 (2009): 1771-1786. PubMed: 19542117.

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