

Cutibacterium acnes, Strain HL045PA1

Catalog No. HM-516

For research use only. Not for use in humans.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Propionibacteriaceae*, *Cutibacterium*
Species: *Cutibacterium acnes* (Previously referred to as *Propionibacterium acnes*, this genus has been reclassified and the genus designation on the vial label refers to the old nomenclature.)¹

Strain: HL045PA1

Original Source: *Cutibacterium acnes* (*C. acnes*), strain HL045PA1 was isolated from human skin.²

Comments: *C. acnes*, strain HL045PA1 ([HMP ID 9566](#)) 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 *C. acnes*, strain HL045PA1 was sequenced at the Genome Institute at [Washington University](#) (GenBank: [ADZA00000000](#)).

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.

C. acnes is a non-motile, Gram-positive, anaerobic rod that resides in hair follicles of the human skin.³ Some strains are aerotolerant, but typically grow better under anaerobic conditions. The causative agent of acne *C. acnes* usually has a low level of virulence.^{4,5} However, it may cause severe infections at various body sites, particularly in the presence of a foreign body.⁶

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in Modified Reinforced Clostridial broth supplemented with 10% glycerol.

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

Packaging/Storage:

HM-516 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:

Modified Reinforced Clostridial broth or equivalent

Tryptic Soy agar with 5% defibrinated sheep blood or equivalent

Incubation:

Temperature: 37°C

Atmosphere: 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 2 to 3 days.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH as part of the Human Microbiome Project: *Cutibacterium acnes*, Strain HL045PA1, HM-516."

Biosafety Level: 1

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.

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References:

1. Scholz, C. and Mogens K. "The Natural History of *Cutaneous Propionibacteria*, and Reclassification of Selected Species within the Genus *Propionibacterium* to the Proposed Novel Genera *Acidipropionibacterium* gen. nov., *Cutibacterium* gen. nov. and *Pseudopropionibacterium* gen. nov." *Int. J. Syst. Evol. Microbiol.* 66 (2016): 4422-4432. PubMed: 27488827.
2. [HMP ID 9566](#) (*C. acnes*, strain HL045PA1)
3. Perry, A. L. and P. A. Lambert. "*Propionibacterium acnes*." *Lett. Appl. Microbiol.* 42 (2006): 185-188. PubMed: 16478502.
4. Bojar, R. A. and K. T. Holland. "Acne and *Propionibacterium acnes*." *Clin. Dermatol.* 22 (2004): 375-379. PubMed: 15556721.
5. Dessinioti, C. and A. D. Katsambas. "The Role of *Propionibacterium acnes* in Acne Pathogenesis: Facts and Controversies." *Clin. Dermatol.* 28 (2010): 2-7. PubMed: 20082942.
6. Jakab, E., et al. "Severe Infections Caused by *Propionibacterium acnes*: an Underestimated Pathogen in Late Postoperative Infections." *Yale J. Biol. Med.* 69 (1996): 477-482. PubMed: 9436290.
7. Eady, E. A., M. Gloor and J. J. Leyden. "*Propionibacterium acnes* Resistance: a Worldwide Problem." *Dermatology* 206 (2003): 54-56. PubMed: 12566805.
8. Nord, C. E. and C. Oprica. "Antibiotic Resistance in *Propionibacterium acnes*. Microbiological and Clinical Aspects." *Anaerobe* 12 (2006): 207-210. PubMed: 17000123.

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