

## ***Fusobacterium nucleatum*, Strain CTI-05**

### **Catalog No. HM-995**

**For research use only. Not for use in humans.**

#### **Contributor:**

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#### **Manufacturer:**

BEI Resources

#### **Product Description:**

Bacteria Classification: *Fusobacteriaceae*, *Fusobacterium*

Species: *Fusobacterium nucleatum*

Strain: CTI-05

Original Source: *Fusobacterium nucleatum* (*F. nucleatum*), strain CTI-05 was isolated in 2012 from colonic tumor tissue from a human patient with colorectal carcinoma in Massachusetts, USA.<sup>1,2</sup>

Comments: *F. nucleatum*, strain CTI-05 ([HMP ID 1766](#)) 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 *F. nucleatum*, strain CTI-05 was sequenced at the [Broad Institute](#) (GenBank: [AXNW000000000](#)).

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.

*F. nucleatum* is an anaerobic, non-motile, non-sporulating, Gram-negative rod commonly found in the microflora of the human oral and gastrointestinal tracts.<sup>3,4</sup> It has been associated with periodontal disease but is commonly found in high numbers in healthy and successfully treated sites.<sup>3</sup> In general, *Fusobacteria* are ubiquitous in the normal flora of the oropharyngeal, gastrointestinal, and genitourinary tracts of healthy humans. If the host mucosal barrier weakens to allow these commensal organisms to reach the bloodstream, significant pathology may result including dental abscess formation, endocarditis, or other systemic infections.<sup>5</sup>

#### **Material Provided:**

Each vial contains approximately 0.5 mL of bacterial culture in Modified Chopped Meat medium supplemented with 10% glycerol.

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

#### **Packaging/Storage:**

HM-995 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 Chopped Meat medium 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 1 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: *Fusobacterium nucleatum*, Strain CTI-05, HM-995."

#### **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:

1. Garrett, W. S. and A. D. Kostic, Personal Communication.
2. [HMP ID 1766](#) (*F. nucleatum*, strain CTI-05)
3. Dzink, J. L., M. T. Sheenan and S. S. Socransky. "Proposal of Three Subspecies of *Fusobacterium nucleatum* Knorr 1922: *Fusobacterium nucleatum* subsp. *nucleatum* subsp. nov., comb. nov.; *Fusobacterium nucleatum* subsp. *polymorphum* subsp. nov., nom. rev., comb. nov.; and *Fusobacterium nucleatum* subsp. *vincentii* subsp. nov., nom. rev., comb. nov." *Int. J. Syst. Bacteriol.* 40 (1990): 74-78. PubMed: 2223601.
4. Gharbia, S. E. and H. N. Shah. "*Fusobacterium nucleatum* subsp. *fusiforme* subsp. nov. and *Fusobacterium nucleatum* subsp. *animalis* subsp. nov. as Additional Subspecies within *Fusobacterium nucleatum*." *Int. J. Syst. Bacteriol.* 42 (1992): 296-298. PubMed: 1581188.
5. Bennett, K. W. and A. Eley. "Fusobacteria: New Taxonomy and Related Diseases." *J. Med. Microbiol.* 39 (1993): 246-254. PubMed: 8411084.

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