

***Klebsiella oxytoca*, Strain MIT 10-5243**

Catalog No. HM-624

For research use only. Not for use in humans.

Contributor:

James G. Fox, DVM, DACLAM, Professor, Division of Comparative Medicine, Massachusetts Institute of Technology (MIT), Cambridge, Massachusetts, USA

Manufacturer:

BEI Resources

Product Description:

Bacteria Classification: *Enterobacteriaceae*, *Klebsiella*

Species: *Klebsiella oxytoca*

Strain: MIT 10-5243 (also referred to as 10-5243)

Original Source: *Klebsiella oxytoca* (*K. oxytoca*), strain MIT 10-5243 was isolated from human blood in Kansas, USA.^{1,2}

Comments: *K. oxytoca*, strain MIT 10-5243 ([HMP ID 9687](#)) 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 *K. oxytoca*, strain MIT 10-5243 was sequenced at the [Broad Institute](#) (GenBank: [AGDJ00000000](#)).

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.

K. oxytoca is a non-motile, Gram-negative, rod-shaped bacterium that causes frequent nosocomial infections of the urinary and respiratory tracts. It is ubiquitous in the environment and is often isolated from the skin, mucous membranes and intestines of humans and animals.³ Due to the extensive spread of antibiotic-resistant strains, especially of extended-spectrum β -lactamase (ESBL)-producing strains, there has been renewed interest in *K. oxytoca* infections.^{4,5}

K. oxytoca, strain MIT 10-5243 was deposited as an ampicillin-resistant strain that is positive for a cytotoxin that has been associated with hemorrhagic colitis.¹

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in Tryptic Soy broth supplemented with 10% glycerol.

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

Packaging/Storage:

HM-624 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 or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Aerobic

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 as part of the Human Microbiome Project: *Klebsiella oxytoca*, Strain MIT 10-5243, HM-624."

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](#). 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. Fox, J., Personal Communication.
2. [HMP 9687](#) (*Klebsiella oxytoca*, strain MIT 10-5243)
3. Podschun, R. and U. Ullmann. "*Klebsiella* spp. as Nosocomial Pathogens: Epidemiology, Taxonomy, Typing Methods, and Pathogenicity Factors." Clin. Microbiol. Rev. 11 (1998): 589-603. PubMed: 9767057.
4. Decré, D., et al. "Outbreak of Multi-resistant *Klebsiella oxytoca* Involving Strains with Extended-Spectrum β -lactamases and Strains with Extended-Spectrum Activity of the Chromosomal β -lactamase." J. Antimicrob. Chemother. 54 (2004): 881-888. PubMed: 15472005.
5. Granier, S. A., et al. "Recognition of Two Genetic Groups in the *Klebsiella oxytoca* Taxon on the Basis of Chromosomal β -lactamase and Housekeeping Gene Sequences as Well as ERIC-1R PCR Typing." Int. J. Syst. Evol. Microbiol. 53 (2003): 661-668. PubMed: 12807183.

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