

***Oxalobacter formigenes*, Strain OxCC13**

Catalog No. HM-1

For research use only. Not for human use.

Contributor:

Milton J. Allison, Affiliate Professor, Department of Animal Sciences, Iowa State University, Ames, Iowa

Product Description:

Bacteria Classification: *Oxalobacteraceae*, *Oxalobacter*

Species: *Oxalobacter formigenes*

Strain: OxCC13

Original Source: *Oxalobacter formigenes* (*O. formigenes*), strain OxCC13 was isolated in 1995 from a fecal sample from a healthy adult male in Ulm, Germany.¹

Comments: *O. formigenes*, strain OxCC13 is a reference genome for [The Human Microbiome Project](#) (HMP). HMP is an initiative to identify and characterize human microbial flora. The whole genome shotgun sequence of *O. formigenes*, strain OxCC13 is available (GenBank: [ACDQ00000000](#)). Strain OxCC13 is a representative of group I of the species, based on an evaluation of the 16S sequence.¹

O. formigenes is a Gram-negative, obligate anaerobic, rod-shaped bacterium which uses, and requires, oxalic acid for growth. Its activity in the large intestine reduces the amount of dietary oxalate that is absorbed and excreted in urine, helping to prevent the development of kidney stones. *O. formigenes* has been separated into groups I and II based on differences in patterns of cellular fatty acids and comparisons of 16S rRNA sequences.²

Material Provided:

Each vial contains approximately 0.5 mL of bacterial culture in 0.5X Oxalate maintenance medium supplemented with 10% glycerol.

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

Packaging/Storage:

HM-1 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:

Oxalate maintenance medium ([ATCC medium 1352](#))

Note: *O. formigenes* is slow growing on agar plates.³

Incubation:

Temperature: 37°C

Atmosphere: Anaerobic gas mixture
(97% CO₂:3% H₂)

Propagation:

1. Keep vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into Oxalate maintenance medium under anaerobic atmosphere.
3. Inoculate additional broth tubes with 0.5 mL each from the suspension.
4. Incubate cultures at 37°C under anaerobic atmosphere for 48 to 72 hours.

Citation:

Acknowledgment for publications should read “The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH as part of the Human Microbiome Project: *Oxalobacter formigenes*, Strain OxCC13, HM-1.”

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. 5th ed. Washington, DC: U.S. Government Printing Office, 2007; see [www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm](#).

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References:

1. Professor M. J. Allison, personal communication.
2. Allison, M. J., B. MacGregor, R. Sharp, and D. Stahl. (2005) "Genus *Oxalobacter*, Allison, Dawson, Mayberry and Foss, 1985." In: Bergey's Manual of Systematic Bacteriology. Garrity, G. (Ed.), Springer-Verlag: New York, Berlin, Heidelberg; pp 624-627.
3. Duncan, S. H., et al. "*Oxalobacter formigenes* and Its Potential Role in Human Health." Appl. Environ. Microbiol. 68 (2002): 3841-3847. PubMed: 12147479.

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