

Species *Methanomethylophilus alvi*[†]

Etymology

[al'vi] L. gen. n. *alvi*, of the bowel, referring to the isolation source (human gut).

Nomenclatural type

Strain: CIP 112449 = JCM 31474 = Mx-05 = Mx1201

Reference Strain

[CIP 112449](#) = [JCM 31474](#) = Mx-05 = Mx1201

Description

The strain Mx-05 was isolated from the human gut. The cells of Mx-05T are non-motile cocci 0.4–0.7 µm in diameter. They grow anaerobically and reduced methanol, mono-, di-, and trimethylamine into methane, using H₂ as an electron donor. Mx-05 grows at temperature range between 30 °C and 40 °C (optimum 37 °C), over a pH range of 6.9–8.3 (optimum pH 7.5). The genome is 1.67 Mbp with a G+C content of 55.5 mol%.

Classification

Archaea » *Methanobacteriota* » *Thermoplasmata* » *Methanomassiliicoccales* » *Methanomethylophilaceae* » *Methanomethylophilus* » *Methanomethylophilus alvi*[†]

References

Effective publication: Borrel et al., 2023 [1]
Assigned taxonomically: Borrel et al., 2012 [2]

Registry URL

<https://seqco.de/i:125>

References

1. Borrel et al. (2023). *Methanomethylophilus alvi* gen. nov., sp. nov., a Novel Hydrogenotrophic Methyl-Reducing Methanogenic Archaea of the Order Methanomassiliicoccales Isolated from the Human Gut and Proposal of the Novel Family Methanomethylophilaceae fam. nov. *Microorganisms*. DOI:10.3390/microorganisms11112794
2. Borrel et al. (2012). Genome Sequence of “Candidatus *Methanomethylophilus alvus*” Mx1201, a Methanogenic Archaeon from the Human Gut Belonging to a Seventh Order of Methanogens. *Journal of Bacteriology*. DOI:10.1128/jb.01867-12