Methanoplasma gen. nov.

Submitted by Protasov, Evgenii

Genus *Methanoplasma*

Etymology

[Me.tha.no.plas'ma] **N.L. neut. n.** *methanum*, methane; **Gr. neut. n.** *plasma*, something formed or molded, figure, image; **N.L. neut. n.** *Methanoplasma*, a methane-producing form.

Nomenclatural type

Species *Methanoplasma termitum*[Ts]

Description

The genus is defined by relative evolutionary divergence (RED) and phylogenomic analysis as a monophyletic group. Strictly anaerobic and chemoheterotrophic. Cells are cocci occurring singly. Cells does not have cell wall. No characteristic fluorescence of methanogens under UV light due to lack of F420. Utilize methanol or methylamines only in combination with H2 as substrates for methanogenesis.

Classification

Archaea » *Methanobacteriota* » *Thermoplasmata* » *Methanomassiliicoccales* » *Methanomethylophilaceae* » *Methanoplasma*

References

Effective publication: Lang et al., 2015 [1]

Registry URL

https://seqco.de/i:32483

Species *Methanoplasma termitum*[Ts]

Etymology

[ter'mi.tum] **L. gen. pl. n.** *termitum*, a woodworm, a termite

Nomenclatural type

NCBI Assembly: GCF_000800805.1 [Ts]

Description

The species identified by metagenomic analyses. Cells are cocci with a diameter of 0.5–0.8 µm. No cell wall. No autofluorescence under UV light due to lack of cofactor F420. Utilize only H2 + methanol or H2 + monomethylamine as substrates for methanogenesis. Require yeast extract, coenzyme M, and vitamins for growth. Species identified by physiological and genomic analyses of a highly enriched culture. The G+C content of the type genome is 49.2 mol%, and the genome size is 1.48 Mbp.

Classification

Archaea » *Methanobacteriota* » *Thermoplasmata* » *Methanomassiliicoccales* » *Methanomethylophilaceae* » *Methanoplasma* » *Methanoplasma termitum*[Ts]

References

Effective publication: Lang et al., 2015 [1]

Registry URL

https://seqco.de/i:46

References

1. Lang et al. (2015). New Mode of Energy Metabolism in the Seventh Order of Methanogens as Revealed by Comparative Genome Analysis of “Candidatus Methanoplasma termitum”. *Applied and Environmental Microbiology*. DOI:10.1128/aem.03389-14

Register List Certificate of Validation

On behalf of the *Committee on the Systematics of Prokaryotes Described from Sequence Data* (SeqCode Committee), we hereby certify that the Register List **seqco.de/r:bmcmeuab** submitted by **Protasov, Evgenii** and including 2 new names has been successfully validated.

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