

Methylomirabilis oxygeniifera sp. nov. and Methylomirabilis gen. nov.

Submitted by Chuvochina, Maria

Genus *Methylomirabilis*

Etymology

[Me.thy.lo.mi.ra.bi'lis] N.L. neut. n. *methyl*, the methyl group (modern Latin); L. fem. adj. *mirabilis*, astonishing, strange; N.L. fem. n. *Methylomirabilis*, a wonderful methyl (group oxidizing) organism

Nomenclatural type

Species *Methylomirabilis oxygeniifera*^{Ts}

Description

The description is the same as the type species *Methylomirabilis oxygeniifera* given by Ettwig et al., 2010.

Classification

Bacteria » “Methylomirabilota” » “Methylomirabilia” » “Methylomirabiales” » “Methylomirabilaceae” »
Methylomirabilis

References

Proposed: Ettwig et al., 2010

Registry URL

<https://seqco.de/i:323>

Species *Methylomirabilis oxygeniifera*^{Ts}

Etymology

[o.xy.ge.ni.i.fe'ra] N.L. fem. adj. *oxygeniifera*, carrying oxygen

Nomenclatural type

[NCBI Assembly: GCA_000091165.1](https://ncbi.nlm.nih.gov/assembly/GCA_000091165.1)^{Ts}

Description

The description is the same as given by Ettwig et al., 2010: Methane-oxidizing and nitrite-reducing bacterium of the candidate division NC10. Grows anaerobically, but produces oxygen for the aerobic oxidation of methane. Reduces nitrite to dinitrogen gas without a nitrous oxide reductase. Gram-negative rod with a diameter of 0.25–0.5 µm and a length of 0.8–1.1 µm. Mesophilic with regard to temperature and pH (enriched at 25–30 °C and pH 7–8). Slow growth (doubling time 1–2 weeks).

Classification

Bacteria » “Methylomirabilota” » “Methylomirabilia” » “Methylomirabiales” » “Methylomirabilaceae” »
Methylomirabilis » *Methylomirabilis oxygeniifera*^{Ts}

References

Proposed: Ettwig et al., 2010

Corrigendum: Oren, 2017 (from “Methylomirabilis oxyfera”)

Registry URL

<https://seqco.de/i:45>

References

1. Ettwig et al. (2010). Nitrite-driven anaerobic methane oxidation by oxygenic bacteria. *Nature*.
[DOI:10.1038/nature08883](https://doi.org/10.1038/nature08883)
2. Oren (2017). A plea for linguistic accuracy – also for Candidatus taxa. *International Journal of Systematic and Evolutionary Microbiology*. [DOI:10.1099/ijsem.0.001715](https://doi.org/10.1099/ijsem.0.001715)

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/loeyelk6 submitted by **Chuvochina, Maria** and including 2 new names has been successfully validated.

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