

Species *Methanocrinis natronophilus*

Etymology

[na.tro.no.phi'lus.] N.L. pref. *natrono-*, pertaining to soda; N.L. masc. *philus*, friend, loving; N.L. masc. adj. *natronophilus*, soda-loving

Nomenclatural type

[NCBI Assembly: GCA_029167045.1](#)^{Ts}

Reference Strain

Mx

Description

Cells are non-motile, rod-shaped, 1.9–4.8 × 0.6–1.0 μm. Forms multicellular filaments in a common sheath. Forms methane exclusively from acetate by the acetoclastic pathway. Obligately alkaliphilic with the pH range for growth from 7.5–7.8 to 10.2 (optimum at 9.3–9.5). NaCl is not required for growth, but up to 1 M total Na⁺ in the form of sodium carbonates is tolerated. The nongrowing cells still actively produce methane at pH up to 10.5 and 1.5 M total Na⁺. Ammonium serves as the nitrogen source. Optimal growth temperature is 35°C. Yeast extract is not essential for growth but slightly stimulatory. The complete genome of strain MxTs, available under the GenBank assembly accession number (GCA_029167045) is the designated nomenclatural type for the species and was recovered from an enrichment culture, cultivated on acetate and established from a saline soda lake, in southwestern Siberia, Russia. The genome of the type strain is 2.41 Mb with the G+C content of 58.18 mol%. Completeness is estimated by CheckM at 97.04% with 0.00% contamination. The GenBank accession number for the 16S rRNA gene sequence of MxTs is KP205578.

Classification

Archaea » "Euryarchaeota" » *Methanomicrobia* » *Methanosarcinales* » *Methanotrichaceae* » *Methanocrinis* » *Methanocrinis natronophilus*

References

Effective publication: Khomyakova et al., 2023 [1]

Registry URL

<https://seqco.de/i:32311>

References

1. Khomyakova et al. (2023). Phenotypic and genomic characterization of *Bathyarchaeum tardum* gen. nov., sp. nov., a cultivated representative of the archaeal class Bathyarchaeia. *Frontiers in Microbiology*. [DOI:10.3389/fmicb.2023.1214631](https://doi.org/10.3389/fmicb.2023.1214631)