

Species *Costitxia debesea*^{Ts}

Etymology

[de.be.se'a] N.L. fem. adj. *debesea*, arbitrary name formed from the DBSE (Deep Blue Sea Enterprise)

Nomenclatural type

[NCBI Assembly: GCA_963583855.1](#)^{Ts}

Description

This species *Costitxia debesea* sp. nov. is the type to the new genus *Costitxia* gen. nov. This genus is also the type for the new family *Costitxiaceae* fam. nov., order *Costitxiales* ord. nov. and class *Costitxiaia* class. nov. Metabolic inference indicated that this organism is mainly aerobic since the complete electron transport chain could be detected, including cytochrome bd complex with high affinity to oxygen. The genetic repertoire also suggests that could be facultative anaerobe due to a putative capability to respire nitrate/nitrite or iron, and heterotrophic bacteria according to the central carbon metabolism. The MAG presents Cas-systems and lack the flagellar machinery required for motility. Genes could not be detected for oxidase, catalase and lysine decarboxylase. The MAG originates from groundwater on the island of Mallorca. The type material is strain T4.018, with a genome sequence available under ENA accession GCA_963583855.

Classification

Bacteria » *Bacteroidota* » *Costitxiia* » *Costitxiales* » *Costitxiaceae* » *Costitxia* » *Costitxia debesea*^{Ts}

References

Effective publication: Gago et al., 2024 [1]

Registry URL

<https://seqco.de/i:43911>

References

1. Gago et al. (2024). Metagenomics of two aquifers with thermal anomalies in Mallorca Island, and proposal of new uncultivated taxa named following the rules of SeqCode. *Systematic and Applied Microbiology*. [DOI:10.1016/j.syapm.2024.126506](https://doi.org/10.1016/j.syapm.2024.126506)