

Species *Thermodiscus eudorianus*

Etymology

[eu.dor.i.a'nus] N.L. masc. adj. *eudorianus*, pertaining to Eudora, referencing to the Nereid water spirit in Greek mythology

Nomenclatural type

[NCBI Assembly: GCA_015521085.1](#)^{TS}

Description

The MAG representing this species was obtained from the Northwest Caldera Wall at the deep-sea Brothers volcano along the Kermadec arc. The MAG is composed of 10 contigs, totaling 1,522,352 bp in length, with a GC content of 54.2%. Based on CheckM2 analysis, the genome is about 95.13% complete and 0.11% contaminated, and it includes a complete 16S rRNA gene, a partial 23S rRNA gene and tRNA genes for all 20 standard amino acids. Inclusion of this MAG in *Thermodiscus* is supported by 16S rRNA gene sequence identity, and its distinction as a unique species is based on geographical location at a deep-sea volcano, and ANI-based divergence between *Thermodiscus* MAGs. Based on functional genomic analysis, this species is likely a non-motile, pilated anaerobic heterotroph that degrades protein-rich carbon sources and may reduce sulfur, thiosulfate, polysulfides or selenite. It is predicted to grow best at approximately 90°C. The name proposed for this species refers to an ocean-associated Nereid spirit who is the sister of Calypso, referencing the phylogenetic relationship between the *Calypsonella* and *Thermodiscus*.

Classification

Archaea » Thermoproteota » Thermoprotei » Desulfurococcales » Desulfurococcaceae » *Thermodiscus* » *Thermodiscus eudorianus*

References

Effective publication: St. John, Reysenbach, 2024 [1]

Registry URL

<https://seqco.de/i:33329>

References

1. St. John, Reysenbach (2024). Genomic comparison of deep-sea hydrothermal genera related to Aeropyrum, Thermodiscus and Caldisphaera, and proposed emended description of the family Acidilobaceae. *Systematic and Applied Microbiology*. DOI:10.1016/j.syapm.2024.126507