Species *Planktophila calida*

Etymology

[ca.li'da] **L. fem. adj.** *calida*, warm, hot, referring to the genome of this organism being recovered from a hot spring

Nomenclatural type

Genome sc|0004093 Ts

Description

Etymology. It is named after the Latin word ‘calidus’ or ‘calida’, meaning warm or hot; it refers to the preference of this species for warm waters and its maximum abundance during summer months.
Brief description. *Planktophila calida* RoE-11 (ENA accession number GCA_965267875) was isolated from the epilimnion (5m depth) of eutrophic Lake Roś, Poland (date: 2020-08-31) and it is the only isolated representative of the species. It has a complete circular genome with a size of 1,415,600 bp, a GC content of 48.9%, and a coding density of 95.9%. It encodes one rRNA operon and 38 tRNA genes. It distributed worldwide and in relatively high abundance, including the Delaware River and Bay (USA), Lake Breiter Luzin, Stechlin and Tiefwaren (Germany), Lake Micmac (Canada), Lake Loclat and Zurich (Switzerland) and well as in the Římov, Klíčava and Žlutice Reservoirs (Czech Republic). The closest isolated relative is *Planktophila thermolimna* MRE-226 with which it shared an average nucleotide identity of 89.53%. *Planktophila calida* RoE-11 encodes for a complete pentose phosphate pathway, both an actinorhodopsin and heliorhodopsin, and for the retinal biosynthesis pathway. It can synthesize all amino acids except asparagine. The Current GTDB classification (r220) is d__Bacteria;p__Actinomycetota; c__Actinomycetia;o__Nanopelagicales; f__Nanopelagicaceae; g__Planktophila; s__.

Classification

Bacteria » *Actinomycetota* » *Actinomycetes* » *Nanopelagicales* » *Nanopelagicaceae* » *Planktophila* » *Planktophila calida*

References

Effective publication: Chiriac et al., 2025 [1]

Registry URL

https://seqco.de/i:51477

References

1. Chiriac et al. (2025). Ecological success in freshwater lakes: insights from novel cultivated lineages of the abundant Nanopelagicales order. *Microbiome*. DOI: 10.1186/s40168-025-02272-x