

Species *Planktophila ortensis*

Etymology

[or.ten'sis] **N.L. fem. adj.** *ortensis*, It is named after Lake Orta, Italy, the place from which the representative strain was isolated.

Nomenclatural type

[Genome sc|0004099](#) ^{Is}

Description

Etymology. It is named after Lake Orta, Italy, the place from which the representative strain was isolated.

Brief description. *Planktophila ortaensis* OrE-3 (ENA accession number GCA_965268165) was isolated from the epilimnion (5m depth) of the oligotrophic Lake Orta, Italy (date: 2021-07-12) and it is the only isolated representative of the species. It has a complete circular genome of 1,475,422 bp, a GC content of 47.6% and a coding density of 95.7%. The closest isolated species is *Planktophila lacus* MMS-21-148, with whom it shares an average nucleotide identity of 93.5%. It encodes one rRNA operon and 41 tRNA genes; additionally, it has both actinorhodopsin and heliorhodopsin, and the capacity for retinal biosynthesis. It lacks the oxidative part of the pentose phosphate pathway, as well as the capacity to synthesize asparagine. Recruitment analysis shows that this species is relatively abundant in freshwater environments and widespread, including Torrens River (Australia), Římov and Klíčava Reservoirs (Czech Republic), the German lakes Breiter Luzin, Stechlin, Tiefwaren, Lake Zurich and Loclat (Switzerland), Lake Michigan (USA), and Lake Micmac (Canada). 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 ortensis*

References

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

Registry URL

<https://seqco.de/i:51483>

References

1. Chiriatic 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](https://doi.org/10.1186/s40168-025-02272-x)