Species *Rhodoluna miladensis*

Etymology
[mi.la.den'sis] **N.L. fem. adj.** *miladensis*, pertaining to Lake Milada (Czechia), the isolation source of the type strain.

Nomenclatural type
NCBI Assembly: GCA_965234705.1 [Ts]

Reference Strain
Strain sc|0038944: MiE-23b

Description
Type strain is *Rhodoluna miladensis* MiE-23b (GCA_965234705.1), isolated from 5 m depth from Lake Milada, Czechia (date: 2019-10-15), *via* high-throughput dilution to extinction cultivation. MiE-23b has a genome size of 1.28 Mbp with a genomic GC content of 50.2%, contains 3 rRNA genes and 40 tRNAs. The genome is complete, consisting of a circular chromosome. The genome contains genes encoding rhodopsins but lacks the biosynthetic pathway for retinal biosynthesis. No genes for flagella or pilus assembly and chemotaxis were annotated. Pathways for the biosynthesis of all amino acids except for methionine and histidine were predicted. Further, pathways for riboflavin, pyridoxal, coenzyme A, and menaquinone were identified. The closest cultivated relative is *Rhodoluna lacicola* MWH-Ta8 (GCF_000699505), with an average amino acid identity of 65.06% and average nucleotide identity of 67.72%. Current GTDB classification (R220): d__Bacteria; p__Actinomycetota; c__Actinomycetia; o__Actinomycetales; f__Microbacteriaceae; g__Rhodoluna; s__.

Classification
Bacteria » *Actinomycetota* » *Actinomycetes* » *Micrococcales* » *Microbacteriaceae* » *Rhodoluna* » *Rhodoluna miladensis*

References
Effective publication: Salcher et al., 2025 [1]

Registry URL
https://seqco.de/i:48729

References

1. Salcher et al. (2025). Bringing the uncultivated microbial majority of freshwater ecosystems into culture. *Nature Communications*. DOI:10.1038/s41467-025-63266-9