

Benthobacter isfjordensis sp. nov.

Submitted by Silva, Sebastian

Order *Benthobacterales*

Etymology

[Ben.tho.bac.ter.a'les] **N.L. masc. n.** *Benthobacter*, referring to the type genus Benthobacter; -ales, ending to denote an order; **N.L. fem. pl. n.** *Benthobacterales*, the Benthobacter order

Nomenclatural type

Genus *Benthobacter*

Description

Order with genus type Benthomarina

Classification

Bacteria » *Actinomycetota* » *Acidimicrobiia* » *Benthobacterales*

References

Effective publication: Silva-Solar et al., 2024 [1]

Registry URL

<https://seqco.de/i:33358>

Family *Benthobacteraceae*

Etymology

[Ben.tho.bac.ter.a'ce.ae] **N.L. masc. n.** *Benthobacter*, referring to the type genus Benthobacter; -aceae, ending to denote a family; **N.L. fem. pl. n.** *Benthobacteraceae*, the Benthobacter family

Nomenclatural type

Genus *Benthobacter*

Description

Family with genus type Benthomarina

Classification

Bacteria » *Actinomycetota* » *Acidimicrobiia* » *Benthobacterales* » *Benthobacteraceae*

References

Effective publication: Silva-Solar et al., 2024 [1]

Registry URL

<https://seqco.de/i:33359>

Genus *Benthobacter*

Etymology

[Ben.tho.bac'ter] **Gr. masc. adj.** *benthos*, the deep sea, sea floor; **N. L. masc. n.** *bacter*, rod; **N.L. masc. n.** *Benthobacter*, a rod-shaped bacterium belonging to marine sediment

Nomenclatural type

Species *Benthobacter isfjordensis*^{Ts}

Description

A bacterium found in marine benthic samples

Classification

Bacteria » *Actinomycetota* » *Acidimicrobiia* » *Benthobacterales* » *Benthobacteraceae* » *Benthobacter*

References

Effective publication: Silva-Solar et al., 2024 [1]

Registry URL

<https://seqco.de/i:33360>

Species *Benthobacter isfjordensis*^{Ts}

Etymology

[is.fjor.den'sis] **N.L. masc. adj.** *isfjordensis*, from or belonging to Isfjorden, Svalbard

Nomenclatural type

[NCBI Assembly: GCA_964014115.1](#)^{Ts}

Description

Based on KEGG metabolic annotation, *Benthobacter isfjordensis* shows basic carbon metabolism almost complete, no carbon fixation pathways, no flagella or pili, denitrification is incomplete (only import of extracellular nitrate, reduction of nitrate to nitrite, and reduction of nitrite to nitric oxide), and nitrilase present. The pathway for F420 biosynthesis is almost complete. Regarding functional annotation based on CAZy and DBCAN, the glycoside hydrolases present in this MAG are: GH3, GH1, GH13 (sub-families 9, 11, 16, 23, and 20), GH77, GH57, GH149, GH32, and GH133.

Classification

Bacteria » *Actinomycetota* » *Acidimicrobiia* » *Benthobacterales* » *Benthobacteraceae* » *Benthobacter* » *Benthobacter isfjordensis*^{Ts}

References

Effective publication: Silva-Solar et al., 2024 [1]

Registry URL

<https://seqco.de/i:33357>

References

1. Silva-Solar et al. (2024). Acidimicrobiia, the actinomycetota of coastal marine sediments: Abundance, taxonomy and genomic potential. *Systematic and Applied Microbiology*. [DOI:10.1016/j.syapm.2024.126555](https://doi.org/10.1016/j.syapm.2024.126555)

Register List Certificate of Validation

On behalf of the *Committee on the Systematics of Prokaryotes Described from Sequence Data* (SeqCode Committee), we hereby certify that the Register List **seqco.de/r:af2x99s7** submitted by **Silva, Sebastian** and including 4 new names has been successfully validated.

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