

Species *Obscuribacter phosphatis*^{Ts}

Etymology

[phos.pha'tis] N.L. **gen. n.** *phosphatis*, of phosphate, accumulating phosphate

Nomenclatural type

[NCBI Assembly: GCA_001899315.1](#)^{Ts}

Description

The description is the same as provided by Soo et al. (2014):

EBPR_351 representing the order Obscuribacterales is conspicuous among the Melainabacteria genomes because of its larger size (5 Mb) and associated metabolic versatility. *Obscuribacter phosphatis* contains the genes necessary for polyphosphate metabolism, including a low-affinity inorganic phosphate transporter (PiT), polyphosphate kinase 1 (used to synthesize or degrade polyP while consuming or generating, respectively, ATP directly), polyphosphate kinase 2 (degrades polyP producing GTP from GDP), exopolyphosphatase (degrades polyP in a nonreversible reaction that does not generate ATP directly), polyphosphate:AMP phosphotransferase and adenylate kinase (Seviour and Nielsen 2010). *Obscuribacter phosphatis* has the capacity for aerobic and anaerobic respiration, and fermentation, allowing it to function during both the oxic and anoxic phases of EBPR (Blackall et al. 2002). It contains genes encoding a complete respiratory chain including Complexes I, II, III, and IV and an F-Type ATPase.

Classification

Bacteria » *Cyanobacteriota* » *Vampirovibrionia* » *Obscuribacterales* » *Obscuribacteraceae* » *Obscuribacter* » *Obscuribacter phosphatis*^{Ts}

References

Effective publication: Soo et al., 2014 [1]

Registry URL

<https://seqco.de/i:23547>

References

1. Soo et al. (2014). An Expanded Genomic Representation of the Phylum Cyanobacteria. *Genome Biology and Evolution*. [DOI:10.1093/gbe/evu073](https://doi.org/10.1093/gbe/evu073)