

Phylum *Candidatus* Desulfobacterota

Etymology

[De.sul.fo.bac.te.ro'ta] N.L. masc. n. *Desulfobacter*, type genus of the type class of the phylum; L. suff. *-ota*, ending to denote a phylum; N.L. neut. pl. n. *Desulfobacterota*, the phylum of the class Desulfobacteria

Nomenclatural type

Unknown

Description

The description of the phylum is drawn from the shared characteristics of the members of its constituent classes with validly published descriptions. Morphological properties are highly variable (vibrio, rods, cocci, filaments). Gram-stain-negative, no spore formation. Strictly anaerobic chemoorganotrophic, chemolithoheterotrophic or chemolithoautotrophic growth by respiratory or fermentative metabolism. Some members can grow by disproportionation or oxidation of reduced sulphur compounds. Some members can grow only in the presence of H₂/formate-utilizing partners in syntrophic associations. When organic compounds are used, these are oxidized to acetate or completely to carbon dioxide. Members can be mesophilic, thermophilic or psychrophilic. Occurs in various aquatic environments. The phylum represents a distinct monophyletic lineage as supported by concatenated protein and 16S rRNA gene trees.

The type class of the phylum is *Desulfobacteria*.

Classification

Unknown

References

Effective publication: Waite et al., 2020 [1]

Registry URL

<https://seqco.de/i:688>

References

1. Waite et al. (2020). Proposal to reclassify the proteobacterial classes Deltaproteobacteria and Oligoflexia, and the phylum Thermodesulfobacteria into four phyla reflecting major functional capabilities. *International Journal of Systematic and Evolutionary Microbiology*. [DOI:10.1099/ijsem.0.004213](https://doi.org/10.1099/ijsem.0.004213)