

Phylum *Actinomycetota*

Etymology

[Ac.ti.no.my.ce.to'ta] **N.L. masc. n.** *Actinomyces*, type genus of the phylum; *-ota*, ending to denote a phylum; **N.L. pl. neut. n.** *Actinomycetota*, the *Actinomyces* phylum

Nomenclatural type

Genus *Actinomyces*

Description

Goodfellow 2012: This taxon is one of the major phyla in the domain *Bacteria*, as inferred from its branching pattern in the 16S rRNA gene tree (Garrity and Holt, 2001; Ludwig and Klenk, 2005) and taxon-specific 16S rRNA signatures (Zhi et al., 2009). The separation of the phylum from other bacterial taxa is supported by conserved indels in some proteins (e.g., cytochrome-*c* oxidase subunit 1, CTP synthase and glutamyl-tRNA synthase), by the presence of a large insert in 23S rRNA (Gao and Gupta, 2005; Gao et al., 2006) and by distinctive gene arrangements (Kunisawa, 2007). The nearest phylogenetic neighbor to the phylum is not clear (Ventura et al., 2007) though the *Firmicutes* are usually considered in this context. In this volume of the *Manual*, the phylum *Actinobacteria* encompasses five classes, 19 orders, 50 families, and 221 genera. However, many new taxa continue to be discovered so this listing is inevitably incomplete. The constituent classes are *Acidimicrobiia* class. nov., *Actinobacteria* (Stackebrandt et al., 1997), *Coriobacteriia* class. nov., *Rubrobacteria* class. nov., and *Thermoleophilia* class. nov.

Oren and Garrity, 2021: The properties of the taxon are as described by Goodfellow 2012. Correction of the effectively published synonym: *Actinobacteria* (sic) Goodfellow 2012.

Classification

Bacteria » *Actinomycetota*

References

Proposed: Goodfellow, 2012
Corrigendum: Oren, Garrity, 2021 (from “*Actinobacteria*”)

Registry URL

<https://seqco.de/i:812>

References

1. Goodfellow (2012). Phylum XXVI. Actinobacteria phyl. nov. *Bergey's Manual® of Systematic Bacteriology*. [DOI:10.1007/978-0-387-68233-4_3](https://doi.org/10.1007/978-0-387-68233-4_3)
2. Oren, Garrity (2021). Valid publication of the names of forty-two phyla of prokaryotes. *International Journal of Systematic and Evolutionary Microbiology*. [DOI:10.1099/ijsem.0.005056](https://doi.org/10.1099/ijsem.0.005056)