

Genus *Asgardarchaeum*

Etymology

[As.gar.dar.chae'um] **N.L. neut. n.** *Asgard*, from the Old Norse Asgard, named after the Realm of Æsir goddesses and gods in Norse mythology; **N.L. neut. n.** *archaeum*, [from Gr. adj. archaios, -e, -on] ancient, archaeon; **N.L. neut. n.** *Asgardarchaeum*, an archaeal genus named for Asgard

Nomenclatural type

Species *Asgardarchaeum abyssi*^{T5}

Description

Based on protein content and compositional features, we infer that Asgardarchaeia is an acetogenic chemoheterotroph, possibly a facultative lithoautotroph, and is adapted to a thermophilic lifestyle. Utilizing genomes from Asgard archaea, TACK, and Euryarchaea, we perform phylogenomic reconstructions using the GTDB archaeal marker genes, the current reference set for taxonomic classification. Calibrating relative evolutionary divergence (RED) values for Asgardarchaeota using established Thermoproteota lineages in the GTDB r207 reference tree, we establish a robust classification and propose Asgardarchaeum as the type genus for the family Asgardarchaeaceae, the order Asgardarchaeales, the class Asgardarchaeia and the phylum Asgardarchaeota.

Classification

Archaea » *Asgardarchaeota* » *Asgardarchaeia* » *Asgardarchaeales* » *Asgardarchaeaceae* » *Asgardarchaeum*

References

Effective publication: Tamarit et al., 2024 [1]

Registry URL

<https://seqco.de/i:41248>

References

1. Tamarit et al. (2024). Description of *Asgardarchaeum abyssi* gen. nov. spec. nov., a novel species within the class Asgardarchaeia and phylum Asgardarchaeota in accordance with the SeqCode. *Systematic and Applied Microbiology*. DOI:10.1016/j.syapm.2024.126525