

Family *Asgardarchaeaceae*

Etymology

[As.gar.dar.chae.a'ce.ae] N.L. neut. n. *Asgardarchaeum*, referring to the type genus *Asgardarchaeum*; *-aceae*, ending to denote a family; N.L. fem. pl. n. *Asgardarchaeaceae*, the *Asgardarchaeum* family

Nomenclatural type

Genus *Asgardarchaeum*

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*

References

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

Registry URL

<https://seqco.de/i:44142>

References

1. Tamarit et al. (2024). Description of *Asgardarchaeum abyssii* 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