

# Magnimaribacter mokuloeensis gen. nov. sp. nov.

Submitted by Freel, Kelle

## Order *Magnimaribacterales*

### Etymology

[Mag.ni.ma.ri.bac.ter.a'les] **N.L. masc. n.** *Magnimaribacter*, referring to the type genus *Magnimaribacter*; *-ales*, ending to denote an order; **N.L. fem. pl. n.** *Magnimaribacterales*, the *Magnimaribacter* order

### Nomenclatural type

Genus *Magnimaribacter*

### Description

This order was named following the isolation of a SAR86 bacterium from surface seawater of the tropical Pacific Ocean collected from Kāneʻohe Bay, Oʻahu, Hawaiʻi. It is the first isolated member of the SAR86 clade of gammaproteobacteria, which we have named the *Magnimaribacterales*. The *Magnimaribacterales* are frequently one of the most abundant groups of marine bacteria found across the global ocean.

### Classification

*Bacteria* » *Pseudomonadota* » *Gammaproteobacteria* » *Magnimaribacterales*

### References

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

### Registry URL

<https://seqco.de/i:44153>

## Family *Magnimaribacteraceae*

### Etymology

[Mag.ni.ma.ri.bac.ter.a'ce.ae] **N.L. masc. n.** *Magnimaribacter*, referring to the type genus *Magnimaribacter*; *-aceae*, ending to denote a family; **N.L. fem. pl. n.** *Magnimaribacteraceae*, the *Magnimaribacter* family

### Nomenclatural type

Genus *Magnimaribacter*

### Description

This family was established following the isolation of a SAR86 bacterium from surface seawater of the tropical Pacific Ocean collected from Kāneʻohe Bay, Oʻahu, Hawaiʻi. It is the first isolated member of the SAR86 clade of gammaproteobacteria, which we have named the *Magnimaribacterales*. The *Magnimaribacterales* are frequently one of the most abundant groups of marine bacteria found across the global ocean.

### Classification

*Bacteria* » *Pseudomonadota* » *Gammaproteobacteria* » *Magnimaribacterales* » *Magnimaribacteraceae*

### References

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

### Registry URL

<https://seqco.de/i:44054>

## Genus *Magnimaribacter*

### Etymology

[Mag.ni.ma.ri.bac'ter] **L. masc. adj.** *magnus*, great in importance or number; **L. fem. n.** *mare*, sea; **N.L. masc. n.** *bacter*, a rod; **N.L. masc. n.** *Magnimaribacter*, an abundant microbe in the global oceans

### Nomenclatural type

Species *Magnimaribacter mokuoloeensis*<sup>Ts</sup>

### Description

This type isolate of this genus was isolated from surface seawater of the tropical Pacific Ocean collected from Kāneʻohe Bay, Oʻahu, Hawaiʻi. It is the first isolated member of the SAR86 clade of gammaproteobacteria, the order of which we have named the Magnimaribacterales. The Magnimaribacterales are frequently one of the most abundant groups of marine bacteria found across the global ocean. This isolate opens an unprecedented window toward understanding the genomic and metabolic traits that contribute to the success of this lineage.

### Classification

*Bacteria* » *Pseudomonadota* » *Gammaproteobacteria* » *Magnimaribacterales* » *Magnimaribacteraceae* » *Magnimaribacter*

### References

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

### Registry URL

<https://seqco.de/i:44052>

## Species *Magnimaribacter mokuoloeensis*<sup>Ts</sup>

### Etymology

[mo.ku.o.lo.e.en'sis] **N.L. masc. adj.** *mokuoloeensis*, Named after Moku o Loʻe, an island in Kāneʻohe Bay, Oʻahu, where the organism was discovered from

### Nomenclatural type

[NCBI Assembly: GCA\\_041860225.1](#)<sup>Ts</sup>

### Reference Strain

[Strain sc|0038783](#): Strain HIMB1674

### Description

This bacterium was isolated from surface seawater of the tropical Pacific Ocean collected from Kāneʻohe Bay, Oʻahu, Hawaiʻi. It is the first isolated member of the SAR86 clade of gammaproteobacteria, which we have named the Magnimaribacterales. The Magnimaribacterales are frequently one of the most abundant groups of marine bacteria found across the global ocean. This isolate opens an unprecedented window toward understanding the genomic and metabolic traits that contribute to the success of this lineage.

### Classification

*Bacteria* » *Pseudomonadota* » *Gammaproteobacteria* » *Magnimaribacterales* » *Magnimaribacteraceae* » *Magnimaribacter* » *Magnimaribacter mokuoloeensis*<sup>Ts</sup>

### References

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

### Registry URL

<https://seqco.de/i:44051>

## References

1. Ramfelt et al. (2024). Isolate-anchored comparisons reveal evolutionary and functional differentiation across SAR86 marine bacteria. *The ISME Journal*. [DOI:10.1093/ismejo/wrae227](https://doi.org/10.1093/ismejo/wrae227)

## Register List Certificate of Validation

On behalf of the *Committee on the Systematics of Prokaryotes Described from Sequence Data* (SeqCode Committee), we hereby certify that the Register List **seqco.de/r:pj-wgdq1** submitted by **Freel, Kelle** and including 4 new names has been successfully validated.

**Date of Priority:** 2025-09-22 06:23 UTC

**DOI:** 10.57973/seqcode.r:pj-wgdq1

