Leucobacter sulfonamidivorax sp. nov.

Submitted by Nguyen, Huong

Species *Leucobacter sulfonamidivorax*

Etymology

[sul.fon.a.mi.di.vo'rax] **N.L. neut. n.** *sulfonamidum*, sulfonamide; **L. masc. adj.** *vorax*, devouring; **N.L. masc. adj.** *sulfonamidivorax*, sulfonamide degrading

Nomenclatural type

Genome sc|0006305 Ts

Description

Reis et al. (2019): '*Candidatus* Leucobacter sulfamidivorax' [sul.fa.mi.di.vo'rax N.L. n. *sulfamidum*, sulfonamide; L. adj. *Vorax* devouring, ravenous, voracious; N.L. masc. Adj. *sulfamidivorax*, sulfonamide-degrading]. Forms a bacterial consortium with *A. denitrificans* strain PR1 and can only be cultured in association with this *Proteobacteria*. Cells stain Gram-positive, present a rod-shaped morphology (1.3 ± 0.03 µm long and 0.5 ± 0.03 µm wide), and are probably non-motile. It produces light yellow-colored colonies with less than 1 mm in diameter on top of the colonies of *A. denitrificans* strain PR1 after 10 d of incubation on 25% (w/v) BHI plates at 30 °C. In liquid medium, it constitutes between 1 and 4% of the total cells. In medium MMSY, the aerobic growth is significantly impaired at 37 °C when compared to that at 22 and 30 °C. Growths well at neutral (pH 7.2) and basic (pH 9.5) pH values when compared to that at pH 5.5. Grows better in oligotrophic media (e.g., MMSY), in comparison to complex and rich medium (e.g., BHI and TSA). Tolerates up to 8% (w/v) NaCl. The DNA G + C content is 69.68 mol%. The representative strain, GP, which degrades sulfonamides, was obtained from a sulfamethoxazole enrichment culture produced from activated sludge from an urban WWTP, in North Portugal, in 2011.

Classification

Bacteria » *Actinomycetota* » *Actinomycetes* » *Micrococcales* » *Microbacteriaceae* » *Leucobacter* » *Leucobacter sulfonamidivorax*

References

Effective publication: Reis et al., 2019 [1]
Corrigendum: Oren, Garrity, 2021 [2] (from "Leucobacter sulfamidivorax")

Registry URL

https://seqco.de/i:477

References

1. Reis et al. (2019). Comparative genomics reveals a novel genetic organization of the sad cluster in the sulfonamide-degrader 'Candidatus Leucobacter sulfamidivorax' strain GP. *BMC Genomics*. DOI: 10.1186/s12864-019-6206-z
2. Oren, Garrity (2021). Candidatus List No. 2. Lists of names of prokaryotic Candidatus taxa. *International Journal of Systematic and Evolutionary Microbiology*. DOI: 10.1099/ijsem.0.004671

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:3kgxshuf** submitted by **Nguyen, Huong** and including 1 new name has been successfully validated.

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