

Roseiconus nitratreducens gen. nov. sp. nov and Roseiconus lacunae sp. nov.

Submitted by Van Lill, Melandre

Genus *Roseiconus*

Etymology

[Ro.se.i.co'nus] L. masc. adj. *roseus*, pink, rosy; L. masc. n. *conus*, cone; N.L. masc. n. *Roseiconus*, a pink cone

Nomenclatural type

Species *Roseiconus nitratreducens*^{Ts}

Description

Cells are spherical or cone to pear-shaped and Gram stain-negative. Crateriform structures with fimbriae are common. Daughter cells may be motile with lophotrichous flagella. Cell division is by budding. Mesophilic, heterotrophic and facultatively anaerobic. Major fatty acids are C18:1 ω 9c and C16:0. Phosphatidylethanolamine and phosphatidylcholine are the major polar lipids. Cadaverine and putrescine are the major polyamines. In addition, some strains can also have 1,2-diaminopropane and spermidine. MK6 is the only respiratory quinone. The genomic DNA G + C content is 55.1–60.0 mol%. The type species is *Roseiconus nitratreducens*. This genus is a member of the family *Pirellulaceae*.

Classification

Bacteria » *Planctomycetota* » *Planctomycetia* » *Pirellulales* » *Pirellulaceae* » *Roseiconus*

References

Proposed: Kumar et al., 2021
Assigned taxonomically: Kumar et al., 2021

Registry URL

<https://seqco.de/i:32093>

Species *Roseiconus lacunae*

Etymology

[la.cu'nae] L. gen. n. *lacunae*, of a lagoon

Nomenclatural type

[NCBI Assembly: GCA_008312935.1](#)^{Ts}

Reference Strain

JC635 = [KCTC 72164](#) = [NBRC 113875](#)

Description

Colour of chemotrophically grown culture is light pink. Cells are motile with lophotrichous flagella. NaCl is obligate for growth and tolerates up to 5% (w/v) with optimum growth at 3%. Optimum pH and temperature for growth are 8.0 (range 6.0–9.0) and 30 °C (range 10–35 °C), respectively. Growth factors are not required for growth. D-glucose, fructose, mannose, maltose, sucrose, starch, D-xylose, lactose, D-galactose and rhamnose are good carbon sources/electron donors for supporting its growth. Ammonium sulphate, peptone, L-serine, DL-threonine, L-leucine and DL-alanine, L-isoleucine, L-phenylalanine, L-glutamic acid and L-aspartic acid are utilized as nitrogen sources for its growth. Major fatty acids are C18:1 ω 9c, C16:0 and anteiso-C13:0. Minor fatty acids include C10:0 3-OH, C12:0, C11:0 3-OH, C14:0, anteiso-C15:0, C16:1 ω 7c/C16:1 ω 6c, C17:0, C17:1 ω 8c, anteiso-C17:0, C18:0, C18:1 ω 7c/C18:1 ω 6c, anteiso-C12:0, C16:0 3-OH, anteiso-C16:0, anteiso-C17:1 A and C18:3 ω 6,9,12c. Polyamines are 1,2-diaminopropane, cadaverine, spermidine, putrescine, and two unidentified polyamines. Polar lipids are phosphatidylethanolamine (PE), phosphatidylcholine (PC), unidentified amino lipids (AL 1), and one unidentified lipid (L1). Genomic DNA G + C content is 55.1 mol%. The reference strain JC635 (= KCTC 72164 = NBRC 113875) was isolated from Chilika lagoon, India (19° 51' 15N, 85° 21' 19E).

Classification

Bacteria » *Planctomycetota* » *Planctomycetia* » *Pirellulales* » *Pirellulaceae* » *Roseiconus* » *Roseiconus lacunae*

References

Proposed: Kumar et al., 2021

Assigned taxonomically: Kumar et al., 2021

Registry URL

<https://seqco.de/i:32094>

Species *Roseiconus nitratireducens*^{Ts}

Etymology

[ni.tra.ti.re.du'cens] N.L. masc. n. *nitras*, nitrate; L. pres. part. *reducens*, reducing; N.L. part. adj. *nitratireducens*, nitrate-reducing

Nomenclatural type

[NCBI Assembly: GCA_008629675.1](#)^{Ts}

Reference Strain

JC645 = [KCTC 72174](#) = [NBRC 113879](#)

Description

Colour of chemotrophically grown culture is pink. Motility could not be demonstrated. NaCl is obligate for growth and can tolerate up to 7% (w/v) NaCl. Optimum pH and temperature for growth are 8.0 (range 7.0–9.0) and 30°C (range 10–35 °C), respectively. D-Glucose, fructose, mannose, maltose, sucrose, starch, D-xylose, rhamnose, pyruvate and inulin are good carbon sources for supporting growth. Ammonium sulphate, peptone, L-serine, DL-threonine, L-leucine, DL-alanine, cysteine, L-glutamine, L-proline and urea can be used as nitrogen sources for growth. Major fatty acids are C18:1 ω 9c and C16:0. Minor fatty acids include C10:0 3-OH, C12:0, C11:0 3-OH, C14:0, anteiso-C15:0, C16:1 ω 7c/C16:1 ω 6c, C17:0, C17:1 ω 8c, anteiso-C17:0, C18:0, C18:1 ω 7c/C18:1 ω 6c, C15:0 2-OH, C19:0 and C20:1 ω 9c and C18:3 ω 6,9,12c. Cadaverine, putrescine and an unidentified polyamine (UN1) are the polyamines. Genomic DNA G + C content is 60 mol%. The reference strain JC645 (= KCTC 72174 = NBRC 113879) was isolated from Chilika lagoon, India (19° 51' 15N, 85° 21' 19E).

Classification

Bacteria » *Planctomycetota* » *Planctomycetia* » *Pirellulales* » *Pirellulaceae* » *Roseiconus* » *Roseiconus nitratireducens*^{Ts}

References

Proposed: Kumar et al., 2021

Assigned taxonomically: Kumar et al., 2021

Registry URL

<https://seqco.de/i:32092>

References

1. Kumar et al. (2021). Descriptions of *Roseiconus nitratireducens* gen. nov. sp. nov. and *Roseiconus lacunae* sp. nov. *Archives of Microbiology*. [DOI:10.1007/s00203-020-02078-5](https://doi.org/10.1007/s00203-020-02078-5)

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:v04mpu86](https://seqcode.de/r:v04mpu86) submitted by **Van Lill, Melandre** and including 3 new names has been successfully validated.

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