Species *Bradyrhizobium spitzkopense*

Etymology

[spitz.ko.pen'se] **N.L. neut. adj.** *spitzkopense*, pertaining to Spitzkop, the location where the reference strain was isolated

Nomenclatural type

Genome sc|0003198 [Ts]

Reference Strain

Strain sc|0038862: Arg816

Description

Cells are gram-negative motile rods ranging from 0.577 to 0.603 µm (in length) to 0.166 to 0.177 µm (in width). Colonies were medium in size, ranging between 1mm and 2mm at 7 days, are circular, opaque, pulvinate, smooth, opaque, and slimy. Colonies also produced an alkaline reaction in YMA with bromothymol blue as an indicator. The reference strain grows at a pH range of 5 to 10, temperature range of 25 to 30 °C, with optimum growth at 25 and 28 °C and tolerates up to 0.5% (wv) NaCl. It is resistant to ampicillin (10 µg), chloramphenicol (50 µg), penicillin (10 µg), and tetracycline (30 µg), and sensitive to kanamycin (30 µg), streptomycin (10 µg), erythromycin (30 µg), gentamicin (10 µg), and neomycin (10 µg). It assimilates L-arginine, Urease, esculin ferric citrate, β-galactosidase, L-arabinose, D-maltose, potassium gluconate, Capric acid, adipic acid, Malic acid, Trisodium citrate, and Phenylacetic acid, but does not assimilate indole, D-glucose, gelatin, D-mannose, D-mannitol, and N-acetyl-glucosamine. It can reduce nitrates to nitrite and nitrogen. In terms of the biology tests, Arg816 was reported negative for Dextrin, D-Maltose, D-Trehalose, D-Cellobiose, Gentiobiose, Sucrose, D-Turanose, Stachyose, D-Raffinose, α-D-Lactose, D-Melibiose, β-Methyl-D-Glucoside, D-Salicin, N-Acetyl-D-Glucosamine, N-Acetyl-β-D-Mannosamine, N-Acetyl-D-Galactosamine, N-Acetyl Neuraminic Acid, D-Fructose, D-Galactose, 3-Methyl Glucose, L-Rhamnose, Inosine, 1% Sodium Lactate, D-Sorbitol, D-Mannitol, D-Arabitol, myo-Inositol, Glycerol, D-Glucose6-PO4, D-Aspartic Acid, D-Serine, Gelatin, Glycyl-L-Proline, L-Alanine, L-Arginine, L-Aspartic Acid, L-Glutamic Acid, L-Pyroglutamic Acid, L-Serine, Niaproof 4, Pectin, D-Gluconic Acid, Quinic Acid, Methyl Pyruvate, D-Lactic Acid Methyl Ester, Citric Acid, Bromo-Succinic Acid, Tween 40, γ-Amino-Butryric Acid, α-Hydroxy-Butyric Acid, α-Keto-Butyric Acid, Propionic Acid, and Sodium Bromate, weakly positive for α-D-Glucose, D-Mannose, D-Fucose, L-Fucose, Fusidic Acid, D-Serine, D-Fructose6-PO4, Troleandomycin, L-Histidine, Lincomycin, Guanidine HCl, D-Galacturonic Acid, L-Galactonic Acid Lactone, D-Glucuronic Acid, Glucuronamide, Mucic Acid, D-Saccharic Acid, Vancomycin, L-Lactic Acid, α-Keto-Glutaric Acid, L-Malic Acid, Nalidixic Acid, Lithium Chloride, Potassium Tellurite, β-Hydroxy-D, L-Butyric Acid, Acetic Acid, Aztreonam, and Sodium Butyrate, and Positive for Rifamycin SV, Minocycline, Tetrazolium Violet, Tetrazolium Blue, p-Hydroxy-Phenylacetic Acid, D-Malic Acid, Acetoacetic Acid, and Formic Acid. The GC content for Arg816T was 63.2 mol%. The reference strain possesses nodulation *nodABCD1, D2, D3, D4IUSZ, noei, nopAX, nolAUWY, NfeD*.

Classification

Bacteria » *Pseudomonadota* » *Alphaproteobacteria* » *Hyphomicrobiales* » *Nitrobacteraceae* » *Bradyrhizobium* » *Bradyrhizobium spitzkopense*

References

Effective publication: Maake et al., 2026 [1]

Registry URL

https://seqco.de/i:46768

References

1. Maake et al. (2026). Argyrolobium legumes from an African centre of endemism associate with novel Bradyrhizobium species harbouring unique sets of symbiosis genes. *Molecular Phylogenetics and Evolution*. DOI: 10.1016/j.ympev.2025.108471