

Species *Bifidobacterium hominis*

Etymology

[ho'mi.nis] **L. gen. n.** *hominis*, of a human being, pertaining to the human gut habitat, from where the type strain was isolated

Nomenclatural type

Strain: CLA AA-H311 = DSM 118068 = LMG 33596

Description

The genome size is 2.03 Mbp, G+C percentage is 55.98%, with 99.77% completeness and 0.45% contamination. The closest relative to strain CLA-AA-H311 was *Bifidobacterium pseudocatenulatum* (99.07%) based on 16S rRNA gene analysis. However, ANI comparison identified strain CLA-AA-H311 as a novel species within the genus *Bifidobacterium*, with an ANI value of 93.18% against the closest relative *B. pseudocatenulatum*. GTDB-Tk classification as 'Bifidobacterium sp002742445' confirmed the proposition of a novel species. Placement within the genus *Bifidobacterium* was confirmed by the presence of fructose-6-phosphate phosphoketolase (KO1621). Functional analysis showed the strain has 90 transporters, 20 secretion genes, and predicted utilization of starch and production of propionate, acetate, and folate. In total, 137 CAZymes were identified, with 28 different glycoside hydrolase families and 11 glycoside transferase families represented. The strain CLA-AA-H311 (phylum *Actinomycetota*, family *Bifidobacteriaceae*) was isolated from human faeces.

Classification

Bacteria » *Actinomycetota* » *Actinomycetes* » *Bifidobacteriales* » *Bifidobacteriaceae* » *Bifidobacterium* » *Bifidobacterium hominis*

References

Effective publication: Hitch et al., 2025 [1]

Registry URL

<https://seqco.de/i:48042>

References

1. Hitch et al. (2025). HiBC: a publicly available collection of bacterial strains isolated from the human gut. *Nature Communications*. DOI:10.1038/s41467-025-59229-9