

Species *Enterobacter intestinhominis*

Etymology

[in.tes.ti.ni.ho.mi'nis] **L. neut. n.** *intestinum*, the intestine; **L. masc. n.** *homo*, a human being; **N.L. gen. n.** *intestinhominis*, of the human gut

Nomenclatural type

Strain: CLA AC-H004 = DSM 118557 = LMG 33610

Description

The genome size is 4.86 Mbp, G+C percentage is 54.88%, with 99.89% completeness and 0.12% contamination. It contains two plasmids (4,416 bp; 2,494 bp). Strain CLA-AC-H004 was determined to be a strain of *Enterobacter quasihormaechei* (99.8%) based on 16S rRNA gene analysis. Separation from existing *Enterobacter* species was confirmed by ANI comparison, which gave a value of 93.69% to *E. quasihormaechei*. GTDB-Tk classification of strain CLA-AC-H004 as '*Enterobacter hormaechei_A*' supports the proposal of a novel species. An ANI value of 99.01% was obtained when compared to *Enterobacter hormaechei* subsp. *hoffmannii*. However, given the separation from *E. hormaechei* we propose it these strains represent a separate species and not only a sub-species. ANI comparison also highlighted similarity with *Pedobacter himalayensis* (95.89%), which has been classified as '*Enterobacter hormaechei_B*' within GTDB. However, this suggests reclassification of *Pedobacter* may be required in future. Functional analysis showed the strain has 497 transporters, 98 secretion genes, and predicted utilization of arbutin, salicin, cellobiose, sucrose, and starch along with production of L-glutamate, biotin, riboflavin, acetate, propionate, and folate. In total, 316 CAZymes were identified, with 37 different glycoside hydrolase families and 19 glycoside transferase families represented. The strain CLA-AC-H004 (phylum Pseudomonadota, family Enterobacteriaceae) was isolated from human faeces.

Classification

Bacteria » *Pseudomonadota* » *Gammaproteobacteria* » *Enterobacterales* » *Enterobacteriaceae* » *Enterobacter* » *Enterobacter intestinhominis*

References

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

Registry URL

<https://seqco.de/i:48047>

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