

CULTURE PROFILE

Lacticaseibacillus chiayiensis

First described 2018 · NCBI TaxID 2100821 · 72 evidence sentences · 27 sources

cellular organisms; Bacteria; Bacillati; Bacillota; Bacilli; Lactobacillales; Lactobacillaceae; Lacticaseibacillus

UNREVIEWED — not verified by a microbiologist

At a glance

1	Media used	MRS agar/broth; Brain heart infusion (BHI); Luria-Bertani (LB)	low
2	Optimum temperature for growth	28 °C	low
3	Time required to grow	0-48 h	moderate
4	Colony morphology	No evidence retrieved	none
5	Gram character	Gram-positive	moderate
6	Biochemical tests for identification	16S rRNA gene sequencing; Whole-genome sequencing / ANI; Starch hydrolysis; Lipase; +8 more	high

1 Media used

low confidence

- MRS agar/broth
Low · score 7.35 · 1 source
- Brain heart infusion (BHI)
Low · score 4.04 · 1 source
- Luria-Bertani (LB)
Low · score 1.86 · 2 sources

2 Optimum temperature for growth

low confidence

28 °C

Low · score 1.4 · 1 source

37 °C

Low · score 1.38 · 1 source

Sources disagree: "28 °C" (score 1.4) versus "37 °C" (score 1.38). Both are shown; a reviewer should decide.

3 Time required to grow

moderate confidence

0-48 h

Moderate · score 6.88 · 2 sources

14 d

Low · score 1.4 · 1 source

21 d

Low · score 0.78 · 1 source

3 d

Low · score 0.78 · 1 source

4 Colony morphology

no evidence

No sentence in the retrieved literature supported this field. Nothing is asserted here.

5 Gram character

moderate confidence

Gram-positive

Moderate · score 7.98 · 2 sources

Gram-negative

Low · score 4.59 · 1 source

6 Biochemical tests for identification

high confidence

- 16S rRNA gene sequencing
High · score 15.48 · 3 sources
- Whole-genome sequencing / ANI
High · score 11.03 · 3 sources
- Starch hydrolysis
Moderate · score 8.28 · 4 sources
- Lipase
Moderate · score 8.28 · 4 sources
- Haemolysis pattern
Moderate · score 4.66 · 2 sources
- Antibiotic susceptibility profile
Low · score 4.27 · 4 sources
- Gelatin hydrolysis — reported negative
Low · score 2.79 · 1 source
- Motility — reported negative
Low · score 0.93 · 1 source
- Spore formation / stain — reported negative
Low · score 0.93 · 1 source
- Aerotolerance test — reported positive
Low · score 0.93 · 1 source
- Short-chain fatty acid profile (GLC)
Low · score 0.93 · 1 source
- Carbohydrate fermentation panel
Low · score 0.93 · 1 source

7 References

1. In vitro evaluation of *Zymomonas mobilis* UFPEDA 363 as a probiotic: safety profile, antagonism, and simulated gastrointestinal resistance 2026
<https://openalex.org/W7169801540> · via OpenAlex · supported: Time required to grow, Biochemical tests for identification
2. Multifunctional biotherapeutic probiotic bacteria with antioxidant capacity for cholesterol reduction, and inflammation alleviation. 2026
PMID:42008077 · via PubMed (NCBI E-utilities) · supported: Biochemical tests for identification
3. Microbial diversity of bacterial cellulose starter culture revealed by 16S rRNA gene amplicon sequencing 2026
<https://openalex.org/W7201951902> · via OpenAlex · supported: Biochemical tests for identification, Time required to grow
4. Multifunctional biotherapeutic probiotic bacteria with antioxidant capacity for cholesterol reduction, and inflammation alleviation. 2026
MED:42008077 doi:10.1007/s12223-026-01477-3 · via Europe PMC · supported: Biochemical tests for identification
5. Mechanisms of probiotic action in poultry gut: Colonization resistance, bioactive metabolites, quorum sensing activity, and immunomodulation. 2026
MED:42736181 doi:10.1016/j.psj.2026.107616 · via Europe PMC · supported: Biochemical tests for identification
6. Unveiling the probiotic potential of *L. rhamnosus* strain 044AE by genomic and phenotypic characterization 2026
<https://openalex.org/W7151940960> · via OpenAlex · supported: Biochemical tests for identification
7. Whole-Genome Sequence Analysis, Probiotic Potential, and Safety Assessment of the Marine Bacterium *Paraliobacillus zengyii* CGMCC1.16464 2025
PMC12112907 · via PubMed Central (open access) · supported: Media used, Optimum temperature for growth, Time required to grow

8. Evaluating the safety and efficacy of *Lactacaseibacillus paracasei* TISTR 2593 as a therapeutic probiotic for obesity prevention 2025
https://openalex.org/W4409074428 · via OpenAlex · supported: Biochemical tests for identification
9. Probiotic *Lactacaseibacillus casei* NK1 Enhances Growth and Gut Microbiota in Avian Pathogenic *Escherichia coli* Challenged Broilers 2025
https://openalex.org/W4409456493 · via OpenAlex · supported: Biochemical tests for identification
10. Effect of Spices on the Microbial Diversity, Physicochemical Properties and Nutritional Properties of Fermented Millet (*Pennisetum glaucum*) Slurry 2025
https://openalex.org/W4409160863 · via OpenAlex · supported: Biochemical tests for identification
11. Whole-Genome Analysis and Tolerance Assessment on Bifidobacteria-like Bacteria Isolated from Breast Milk and Infar Fecal Samples in Indonesia 2025
https://openalex.org/W4412096136 · via OpenAlex · supported: Biochemical tests for identification
12. Complete Genome Sequence Analysis and Probiotic Characterisation of *Lactiplantibacillus plantarum* Y300 Isolated from Traditional Free-Range Chickens 2025
https://openalex.org/W4416916710 · via OpenAlex · supported: Biochemical tests for identification
13. Genomic insights into *Lactacaseibacillus chiayiensis* PD2 isolated from Southern Thai fermented fish and its potential for probiotic and antibacterial activity against foodborne pathogens 2025
2b6af0542f284517b45798f975d4edc9 · via DOAJ · supported: Biochemical tests for identification
14. Clinical Potential of Novel Microbial Therapeutic LP51 Based on Xerosis-Microbiome Index 2024
PMC11639849 · via PubMed Central (open access) · supported: Media used, Time required to grow, Biochemical tests for identification
15. <i>Lactacaseibacillus parahuelsenbergensis</i> sp. nov., <i>Lactacaseibacillus styriensis</i> sp. nov. and <i>Lactacaseibacillus zeae</i> subsp. <i>silagei</i> subsp. nov., isolated from different grass and corn silage. 2024
MED:38954457 doi:10.1099/ijsem.0.006441 · via Europe PMC · supported: Gram character, Biochemical tests for identification
16. Associations between intestinal lactic acid bacteria species and feeding habits of zoo animals. 2024
MED:39421257 doi:10.20517/mrr.2024.08 · via Europe PMC · supported: Biochemical tests for identification
17. Cultivable microbial diversity, peptide profiles, and bio-functional properties in Parmigiano Reggiano cheese. 2024
MED:38567075 doi:10.3389/fmicb.2024.1342180 · via Europe PMC · supported: Time required to grow
18. Anti-Persisters Activity of *Lactacaseibacillus rhamnosus* Culture Filtrates against *Pseudomonas aeruginosa* in Artificial Sputum Medium 2024
doi:10.3390/ijms25137113 · via Crossref · supported: Media used
19. Genomic and in-vitro characteristics of a novel strain *Lactacaseibacillus chiayiensis* AACE3 isolated from fermented blueberry 2023
PMC10235500 · via PubMed Central (open access) · supported: Media used, Time required to grow, Gram character, Optimum temperature for growth
20. Effects of Dietary Supplementation of <i>Lactacaseibacillus Chiayiensis</i> AACE3 on Hepatic Antioxidant Capacity, Immune Factors and Gut Microbiology in Nandan Yao Chicks. 2023
MED:37760653 doi:10.3390/antibiotics12091356 · via Europe PMC · supported: Biochemical tests for identification
21. Probiotic Potential and Safety Assessment of *Lactiplantibacillus plantarum* cqf-43 and Whole-Genome Sequence Analysis 2023
https://openalex.org/W4389894774 · via OpenAlex · supported: Biochemical tests for identification
22. Effects of Dietary Supplementation of *Lactacaseibacillus Chiayiensis* AACE3 on Hepatic Antioxidant Capacity, Immune Factors and Gut Microbiology in Nandan Yao Chicks 2023
PMC10525887 · via PubMed Central (open access) · supported: Time required to grow, Media used
23. Effects of Dietary Supplementation of *Lactacaseibacillus Chiayiensis* AACE3 on Hepatic Antioxidant Capacity, Immune Factors and Gut Microbiology in Nandan Yao Chicks 2023
ae1254e5b1bd4b52b70914ab3f055dc8 · via DOAJ · supported: Biochemical tests for identification
24. Complete Genome Sequencing and Comparative Genomics of Three Potential Probiotic Strains, *Lactacaseibacillus casei* FBL6, *Lactacaseibacillus chiayiensis* FBL7, and *Lactacaseibacillus zeae* FBL8 2022
PMC8777060 · via PubMed Central (open access) · supported: Media used, Time required to grow, Biochemical tests for identification
25. Characterization of Two Highly Arsenic-Resistant Caulobacteraceae Strains of *Brevundimonas nasdae*: Discovery of a New Arsenic Resistance Determinant 2022
https://openalex.org/W4280514026 · via OpenAlex · supported: Biochemical tests for identification
26. The accurate identification and quantification of six *Enterococcus* species using quantitative polymerase chain reaction based novel DNA markers 2022
https://openalex.org/W4285600293 · via OpenAlex · supported: Biochemical tests for identification
27. Fig. 2. Growth curve of a bacterial culture K2-2 in a liquid VD medium with sodium acetate and without an organic substrate for 2.5 days. OD - optical density culture 2022
doi:10.17816/ecogen50901-37212 · via Crossref · supported: Time required to grow

How these values were derived

Each candidate value was scored as the sum, over every supporting sentence, of the source tier weight multiplied by how squarely the sentence asserts the value and by a recency factor. Culture collections and nomenclatural authorities carry weight 5.0, peer-reviewed literature 3.0, preprints 1.5, and encyclopedic sources 1.0. Confidence is reported as high only where a curated source and at least two independent sources agree. Where a runner-up scored above 60 per cent of the leader, both are shown and the field is flagged as a conflict rather than resolved automatically.

This report aggregates published evidence; it does not replace Bergey's Manual, the Manual of Clinical Microbiology, or the product sheet supplied with the strain. Every field is unreviewed until a microbiologist signs it off.