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16SrRNA gene from *Lactobacillus plantarum* ADP67

Arunava Das*, B. K. Ramya Krishnan

Molecular Diagnostics and Bacterial Pathogenomics Research Laboratory, Department of Biotechnology,
Bannari Amman Institute Technology, Sathyamangalam-638401, Erode District, Tamil Nadu, India,

Phone: +91-4295-226258 (O), +91-9751882590 (M)

*Corresponding Author: arunavadas@bitsathy.ac.in

Abstract

The phylogenetic study using 16SrRNA gene sequences is nowadays very useful in bacterial species homology identification. Present study is focused on sequencing and homology study of 16SrRNA gene isolated from *Lactobacillus* isolate used for bacteriocin production. The genomic DNA from the bacteria was extracted and purified. PCR assay was carried out for 16SrRNA gene. The PCR product of 1467bp DNA was purified and was commercially sequenced using primers 27F and 1492R. Sequence homology was performed using the NCBI BLAST program and the phylogenetic analysis was performed using the online available CLUSTAL W2 tool. DNA BLAST showed 98% similarity between ADP67 isolate and the reference sequence of *L. plantarum* from NCBI GenBank. The phylogenetic tree diagram showed that ADP67 isolate has close resemblance with various reference strains of *Lactobacillus* spp. and *Pediococcus* spp. available in GenBank. This study helped to establish the resemblance between the Indian field isolate ADP67 and the reference *Lactobacillus* isolates from other countries.

Key words: *Lactobacillus plantarum* ; 16S rRNA ; PCR ; Phylogenetic study.

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