

Abstract

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Ecological signi cance

is pathway is considered ancient and is believed to have been used by some of the earliest autotrophic organisms. It allows for CO2 xation in environments where oxygen is limited or absent, demonstrating the metabolic exibility of early life forms.

e reductive acetyl-coa pathway

e reductive acetyl-CoA pathway, also known as the Wood-Ljungdahl pathway, is utilized by a variety of anaerobic bacteria and archaea, including methanogens and acetogens.

Mechanism