Title (en)

REGULATION OF CARBON ASSIMILATION

Title (de)

REGULIERUNG VON KOHLENSTOFFASSIMILATION

Title (fr)

REGULATION DE L'ASSIMILATION DU CARBONE

Publication

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Application

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Abstract (en)

[origin: WO0100852A1] The present invention provides a method of increasing the productivity of a microorganism by improving the assimilation of carbon dioxide. Specifically, the invention provides a polypeptide having phosphoenolpyruvate carboxylase activity which does not require acetyl coenzyme A for activation and is desensitized to feedback inhibition by aspartic acid, and to genes coding for this polypeptide. A gene encoding a PEP carboxylase that is not regulated by acetyl-CoA or aspartic acid can improve carbon flow from the three carbon intermediate PEP to the four carbon intermediate OAA, contribute to compounds derived from OAA, and increase amino acid biosynthesis. The invention further provides recombinant DNA molecules containing these genes, bacteria transformed with these genes, and a method of producing amino acids using the transformed bacteria.

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