

Gluconeogenesis

I. Background

- A. Definition
- B. Why
- C. Where
- D. Precursors

II. Overview

- A. E requirements
- B. Reactions

III. The 3 Crucial steps

- A. Pyruvate \rightarrow PEP
 - 1. Pyruvate carboxylase
 - a. Structure
 - 1) biotin
 - 2) active sites
 - b. Rxn
 - c. Control
 - d. Compartmentalization
 - 2. PEPCK
 - a. Structure
 - b. Rxn
 - c. Control
 - 3. Notes
- B. FBPase-1
 - 1. Cofactors
 - 2. Rxn
 - 3. Control
- C. Glucose 6-phosphatase
 - 1. Rxn
 - 2. Species & Cell type
 - 3. Location

IV. Precursors

- A. Lactic acid
- B. aas
- C. glycerol
- D. Others

V. Cost