

Lecture 20

The TCA cycle: Eight Reactions

Purpose:

- Acquisition of Energy from Fuels
- Production of Building blocks (Anabolic precursors)
- Oxidation, Oxidative Decarboxylations

Formation of:

- NADH (2)
- FADH₂ (1)
- GTP (1)

Key Reactions

Key Regulated Steps (3 major points of regulation)

These Notes are Color Coded:

- Enzymes
- Inhibitors
- Positive effectors
- Important Anabolic Products

Key thoughts regarding regulation:

There are primarily 3 modes of regulation:

1. Availability of substrate
2. Product inhibition
3. Competitive feedback by downstream intermediates














