

TCA Cycle/ Krebs Cycle

Located in the **Mitochondrion matrix**

Krebs Cycle Happens **Twice** For Every Glucose Molecule

Produces **Reduced CoEnzymes and ATP**

Steps 1

Acetyl CoA combines with 4C molecule

Forms 6C Citrate

CoA goes back to Link Reaction

Step 2

6C Citrate converted to a 5C molecule

Decarboxylated 1C= CO₂

Dehydrogenation= hydrogen removed

Reduced NAD= NAD.2H

Step 3

5C molecule is converted into a 4C molecule

FAD coenzyme goes to FAD.2H

NAD goes to NAD.2H

Some ATP is made

CoEnzymes

CoEnzymes work in cooperation with enzymes

Can be used many times over

Enzymes are biological Catalyst

Lower activation Energy

Important Points

Remaining Carbon Atoms released as CO₂

Large quantities of Reduced Co Enzymes

ATP produced

Summary

Metabolic Pathway	Located in	Starts With	Ends with
TCA/Krebs cycle	Mitochondrion Matrix	2 x Acetyl CoA	4 CO ₂

Also Produced in Krebs Cycle

2 ATP

6 NAD.2H (CoEnzymes)

2 FAD.2H (CoEnzymes)

Image Krebs Cycle

