SANTA CRUZ BIOTECHNOLOGY, INC.

CPTII (51-350): sc-4499 WB

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The mitochondrial beta-oxidation of long-chain fatty acids is initiated by the sequential action of carnitine palmitoyltransferase (CPT) I (outer membrane and detergent labile) and II (inner membrane and detergent stable), together with carnitine carrier. CPTI catalyzes the first reaction in the transport of long-chain fatty acids from the cytoplasm to the mitochondrion, a rate-limiting step in beta-oxidation. Two types of CPTI are known, the muscle and liver isoforms. The human liver CPTI gene is located to chromosome 11q and the muscle type protein is specifically expressed in heart and skeletal muscle. Membrane-bound CPTI, but not CPTII, is inhibited reversibly by malonyl-coenzyme A (CoA). CPI is about 86 kDa in non-hepatic tissues and approximately 90–94 kDa in liver, depending upon species. For CPTII, it is about 70 kDa in rat tissues and about 68 kDa in all mouse tissues and human liver. Unlike CPTII, CPTI requires membrane integrity for catalytic function. In addition, glutamic acid 3 and histidine 5 are necessary for malonyl CoA inhibition and binding to liver CPTI, but not catalytic activity.

REFERENCES

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SOURCE

CPTII (51-350) is expressed in E. coli as a 60 kDa tagged fusion protein corresponding to amino acids 51-350 of CPTII of human origin.

PRODUCT

CPTII (51-350) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

CPTII (51-350) is suitable as a Western blotting control for sc-20526 and sc-20671.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

RESEARCH USE

For research use only, not for use in diagnostic procedures.