Trimetazidine is a compound that exhibits anti-anginal, anti-ischemic, and cardioprotective activities; it inhibits long-chain 3-ketoacyl-CoA thiolase. Trimetazidine reverses pro-inflammatory effects of TNF-α in animal models, including preventing decreases in myosin heavy chain production and myotube size. Trimetazidine prevents muscle wasting and atrophy; its mechanism may involve activation of Akt/mTOR2 signaling. In animal models of ischemia/reperfusion, trimetazidine decreases superoxide generation and caspase-3 activity, decreasing infarct size. In clinical settings, this compound decreases free fatty acid oxidation, improving cardiac function, insulin sensitivity, and glucose control. Trimetazidine also treats vertigo and may act as an antagonist at kainate and AMPA receptors.

References


