

UCP3 Human

Uncoupling protein 3 Human Recombinant

RCP2503

Product Overview

Name	UCP3 Human
Accession(Primary)	P55916
Description	Uncoupling protein 3 Human Recombinant

Target information (P55916)

Gene Name

About Gene Symbol

Background

Uncoupling protein 3 (UCP3) is a mitochondrial protein which takes part in energy metabolism and thermoregulation. UCP3 Function Proton Uncoupling - UCP3 helps dissipate the proton gradient across the inner mitochondrial membrane. This uncoupling leads to the production of heat instead of ATP, a necessary process for thermogenesis. Energy Regulation - UCP3 takes part in the regulation of energy expenditure and can influence metabolic efficiency. UCP3 Location UCP3 is predominantly expressed in skeletal muscle and brown adipose tissue, where its activity is critical for energy metabolism. UCP3 Role in Metabolism according to some studies, UCP3 may improve insulin sensitivity and help manage body weight. In addition, UCP3 participates in the metabolism of fatty acids and may help reduce the accumulation of reactive oxygen species (ROS) by decreasing oxidative stress. UCP3 Regulation UCP3 expression can raise in response to physical activity, emphasising its role in adapting to various energy demands during exercise. Changes in UCP3 levels have been associated with diabetes, obesity and other metabolic disorders. Clinical Relevance UCP3 is being investigated as a potential target for obesity and metabolic disease treatments because of its role in energy balance UCP3 is a central player in energy metabolism and thermogenesis, with implications for metabolic health and the body's

response to exercise and diet.