9051 Mira Mesa Blvd, #910094
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# UCP3 Human

*Uncoupling protein 3 Human Recombinant*
*RCP2503*

## Product Overview

| | |
|---|---|
| Name | UCP3 Human |
| **Description** | |
| Uncoupling protein 3 Human Recombinant | |
| Accession (Primary) | P55916 |
| **Source** | |
| Escherichia Coli. | |
| **Physical Appearance** | |
| Sterile Filtered White lyophilized (freeze-dried) powder. | |
| **Formulation** | |
| Each mg was lyophilized with 1xPBS, 0.4% SDS and 4mM DTT. | |
| **Stability** | |
| Store lyophilized UCP3 at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C. | |
| **Purity** | |
| Greater than 90% as determined by SDS-PAGE. | |
| **Solubility** | |
| It is recommended to add deionized water to prepare a working stock solution of approximately 0.5mg/ml and let the lyophilized pellet dissolve completely. Product is not sterile! Please filter the product by an appropriate sterile filter before using it on cell culture. | |
| **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 | |

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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 varius 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.

**Precautions**

UCP3 Human is for research use only and not for use in diagnostic or therapeutic procedures.

## Target Information: ( P55916 )

## Background

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