

# Product Information

## MemDX™ Membrane Protein Human UCP2 (Uncoupling protein 2) Full Length

Cat. No.: **MPC2358K**

This product is for research use only and is not intended for diagnostic use.

This product is a made-to-order Human UCP2 membrane protein expressed in HEK293. The protein is for research use only and is not approved for use in humans or in clinical diagnosis.

### Product Specifications

#### Host Species

Human

#### Target Protein

UCP2

#### Protein Length

Full length

#### Protein Class

Transporter

#### TMD

6

#### Sequence

MVGFKATDVPPTATVKFLGAGTAACIADLITFPLDTAKVRLQIQGESQGP  
VRATASAQYRGVMGTILTMVRTEGPRSLYNGLVAGLQRQMSFASVRIGLY  
DSVKQFYTKGSEHASIGSRLLAGSTTGALAVAVAQPTDVVKVRFQAQARA  
GGRRYQSTVNAYKTIAREEGFRGLWKGTSNPVARNAINCAELVTYDLI  
KDALLKANLMTDDLPCFTSAFGAGFCTTVIASPVDVVKTRYMNSALGQY  
SSAGHCALTMLQKEGPRAFYKGFMPSTFLRLGSWNVVMFVTYEQLKRALMA  
ACTSREAPF

### Product Description

#### Expression Systems

HEK293

#### Tag

Based on specific requirements

#### Protein Format

Detergent or based on specific requirements (Detergent, Liposome, Nanodisc, Polymer, VLP)

#### Form

Liquid

### Storage

Aliquot and store at -20°C or lower. For long term storage, we recommend to store at -72°C or lower. Avoid freeze/thaw cycles.

### Target

#### Target Protein

UCP2

#### Full Name

Uncoupling protein 2

#### Introduction

Mitochondrial uncoupling proteins (UCP) are members of the larger family of mitochondrial anion carrier proteins (MACP). UCPs separate oxidative phosphorylation from ATP synthesis with energy dissipated as heat, also referred to as the mitochondrial proton leak. UCPs facilitate the transfer of anions from the inner to the outer mitochondrial membrane and the return transfer of protons from the outer to the inner mitochondrial membrane. They also reduce the mitochondrial membrane potential in mammalian cells. Tissue specificity occurs for the different UCPs and the exact methods of how UCPs transfer H<sup>+</sup>/OH<sup>-</sup> are not known. UCPs contain the three homologous protein domains of MACPs. This gene is expressed in many tissues, with the greatest expression in skeletal muscle. It is thought to play a role in nonshivering thermogenesis, obesity and diabetes. Chromosomal order is 5'-UCP3-UCP2-3'.

#### Alternative Names

UCP2; UCPH; BMIQ4; SLC25A8; mitochondrial uncoupling protein 2; solute carrier family 25 member 8; uncoupling protein 2 (mitochondrial, proton carrier); Uncoupling protein 2

#### Gene ID

[7351](#)

#### UniProt ID

[P55851](#)