# UCP1 Blocking Peptide

## PRODUCT OVERVIEW

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| **Product Name** | UCP1, Blocking Peptide |
| **Full Product Name** | UCP1 Peptide |
| **Product Gene Name** | UCP1 blocking peptide |
| **Product Synonym Names** | UCP; SLC25A7; UCP; Mitochondrial brown fat uncoupling protein 1; Solute carrier family 25 member 7; UCP 1; uncoupling protein 1 (mitochondrial, proton carrier) |
| **Form/Format** | Liquid |
| **Concentration** | 200 ug/mL (lot specific) |
| **Preparation and Storage** | Store UCP1 peptide at -20 degree C, stable for one year. |
| **Antibody/Peptide Pairs** | UCP1 peptide (MBS154026) is used for blocking the activity of UCP1 antibody (MBS153446) |
| **Molecular Weight** | 33,005 Da |
| **OMIM** | 113730 |
| **Species** | Human |
| **Buffer** | PBS pH 7.2 (10 mM NaH2PO4, 10 mM Na2HPO4, 130 mM NaCl) containing 0.1% bovine serum albumin and 0.02% sodium azide |
| **Location** | 17 amino acids near the carboxy terminus of human UCP1. |
| **Applications Tested/Suitable for UCP1 blocking peptide** | Blocking (BL) |
| **Application Notes for UCP1 blocking peptide** | The peptide is used for blocking the activity of UCP1 antibody. It usually blocks the antibody activity completely by incubating the peptide with equal volume of antibody for 30 min at 37 degree C. |
| **Related Product Information for UCP1 blocking peptide** | MBS154026 is a blocking peptide targeting UCP1. Also known as UCP1 Peptide. |
| **Other Notes** | Small volumes of UCP1 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for UCP1. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 11225256 |
| **NCBI GeneID** | 7350 |
| **NCBI Accession #** | NP_068605 |
| **UniProt Primary Accession #** | P25874 |
| **UniProt Secondary Accession #** | Q13218; Q4KMZ3; Q68G66 |
| **UniProt Related Accession #** | P25874 |
| **GenBank Nucleotide #** | NM_021833.4 |
| **NCBI Official Full Name** | mitochondrial brown fat uncoupling protein 1 |

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| **NCBI Official Synonym Full Names** | uncoupling protein 1 (mitochondrial, proton carrier) |
| **NCBI Official Symbol** | UCP1 |
| **NCBI Official Synonym Symbols** | UCP; SLC25A7 |
| **UniProt Protein Name** | Mitochondrial brown fat uncoupling protein 1 |
| **UniProt Synonym Protein Names** | Solute carrier family 25 member 7; Thermogenin |
| **Protein Family** | Mitochondrial brown fat uncoupling protein |
| **UniProt Gene Name** | UCP1 |
| **UniProt Synonym Gene Names** | SLC25A7; UCP; UCP 1 |
| **UniProt Entry Name** | UCP1_HUMAN |
| **NCBI Protein Information** | mitochondrial brown fat uncoupling protein 1; thermogenin; solute carrier family 25 member 7 |
| **NCBI Summary for UCP1** | Mitochondrial uncoupling proteins (UCP) are members of the 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+/OH- are not known. UCPs contain the three homologous protein domains of MACPs. This gene is expressed only in brown adipose tissue, a specialized tissue which functions to produce heat. [provided by RefSeq, Jul 2008] |
| **UniProt Comments for UCP1** | UCP1: UCP are mitochondrial transporter proteins that create proton leaks across the inner mitochondrial membrane, thus uncoupling oxidative phosphorylation from ATP synthesis. As a result, energy is dissipated in the form of heat. Belongs to the mitochondrial carrier family.<br><br>Protein type: Mitochondrial; Membrane protein, integral; Membrane protein, multi-pass<br><br>Chromosomal Location of Human Ortholog: 4q28-q31<br><br>Cellular Component: mitochondrion; mitochondrial inner membrane; integral to membrane<br><br>Molecular Function: oxidative phosphorylation uncoupler activity<br><br>Biological Process: regulation of transcription from RNA polymerase II promoter; cellular metabolic process; proton transport; brown fat cell differentiation; mitochondrial transport<br><br>Disease: Obesity |
| **Research Articles on UCP1** | **1.** In obesity, in vitro differentiated beige/brite adipocytes derived from preadipocytes of human subcutaneous white adipose tissues express less UCP1. |
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