

**UCP3 Antibody (Center) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP18132c****Specification**

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**UCP3 Antibody (Center) Blocking Peptide - Product Information**Primary Accession [P55916](#)**UCP3 Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 7352**Other Names**

Mitochondrial uncoupling protein 3, UCP 3, Solute carrier family 25 member 9, UCP3, SLC25A9

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**UCP3 Antibody (Center) Blocking Peptide - Protein Information****Name** UCP3 {ECO:0000303|PubMed:9180264, ECO:0000312|HGNC:HGNC:12519}**Function**

Putative transmembrane transporter that plays a role in mitochondrial metabolism via an as yet unclear mechanism (PubMed: [21775425](http://www.uniprot.org/citations/21775425), PubMed: [36114012](http://www.uniprot.org/citations/36114012)). Originally, this mitochondrial protein was thought to act as a proton transmembrane transporter from the mitochondrial intermembrane space into the matrix, causing proton leaks through the inner mitochondrial membrane, thereby uncoupling mitochondrial membrane potential generation from ATP synthesis (PubMed: [9305858](http://www.uniprot.org/citations/9305858), PubMed: [11171965](http://www.uniprot.org/citations/11171965), PubMed: [12670931](http://www.uniprot.org/citations/12670931), PubMed: [12734183](http://www.uniprot.org/citations/12734183)). However, this function is controversial and uncoupling may not be the function, or at least not the main function, but rather a consequence of more conventional metabolite transporter activity (PubMed: [11707458](http://www.uniprot.org/citations/11707458)).

**Cellular Location**

Mitochondrion inner membrane {ECO:0000250|UniProtKB:P56501}; Multi-pass membrane protein

**Tissue Location**

Only in skeletal muscle and heart (PubMed:9305858). Also expressed in white and brown adipose tissues (PubMed:9305858). Is more expressed in glycolytic than in oxidative skeletal muscles

**UCP3 Antibody (Center) Blocking Peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

**UCP3 Antibody (Center) Blocking Peptide - Images****UCP3 Antibody (Center) Blocking Peptide - Background**

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. The different UCPs have tissue-specific expression; this gene is primarily expressed in skeletal muscle. This gene's protein product is postulated to protect mitochondria against lipid-induced oxidative stress. Expression levels of this gene increase when fatty acid supplies to mitochondria exceed their oxidation capacity and the protein enables the export of fatty acids from mitochondria. UCPs contain the three solcar protein domain typically found in MACPs. Two splice variants have been found for this gene.

**UCP3 Antibody (Center) Blocking Peptide - References**

Hu, M., et al. Pharmacogenet. Genomics 20(10):634-637(2010) Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010) Hancock, A.M., et al. Mol. Biol. Evol. (2010) In press : Aller, R., et al. Nutr Hosp 25(4):572-576(2010) Pinheiro, A.P., et al. Am. J. Med. Genet. B Neuropsychiatr. Genet. 153B (5), 1070-1080 (2010) :