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UCP3 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP18132c

Specification

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, PubMed: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, PubMed:11171965, PubMed:12670931, PubMed: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).

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 thelarger family of mitochondrial anion carrier proteins (MACP). UCPsseparate oxidative phosphorylation from ATP synthesis with energydissipated as heat, also referred to as the mitochondrial protonleak. UCPs facilitate the transfer of anions from the inner to theouter mitochondrial membrane and the return transfer of protonsfrom the outer to the inner mitochondrial membrane. They alsoreduce the mitochondrial membrane potential in mammalian cells. Thedifferent UCPs have tissue-specific expression; this gene isprimarily expressed in skeletal muscle. This gene's protein productis postulated to protect mitochondria against lipid-inducedoxidative stress. Expression levels of this gene increase whenfatty acid supplies to mitochondria exceed their oxidation capacityand the protein enables the export of fatty acids frommitochondria. UCPs contain the three solcar protein domainstypically found in MACPs. Two splice variants have been found forthis 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) :