

ARG42001 anti-UCP1 + UCP3 antibody

Package: 100 μl Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes UCP1 + UCP3
Tested Reactivity	Ms, Rat
Tested Application	IP, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	lgG
Target Name	UCP1 + UCP3
Species	Human
Immunogen	Synthetic peptide of Human UCP1 + UCP3.
Conjugation	Un-conjugated
Alternate Names	UCP1: UCP; SLC25A7; Thermogenin; Mitochondrial brown fat uncoupling protein 1; Solute carrier family 25 member 7; UCP 1 UCP3: Solute carrier family 25 member 9; SLC25A9; UCP 3; Mitochondrial uncoupling protein 3

Application Instructions

Application table	Application	Dilution
	IP	1:50
	WB	1:500 - 1:1000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	Mouse skeletal muscle	
Observed Size	~ 33 kDa	

Properties

Form	Liquid
Purification	Affinity purified.
Buffer	PBS (pH 7.4), 150 mM NaCl, 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Bioinformation

Gene Symbol	UCP1; UCP3
Gene Full Name	uncoupling protein 1 (mitochondrial, proton carrier) uncoupling protein 3 (mitochondrial, proton carrier)
Background	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. UCP1: This gene is expressed only in brown adipose tissue, a specialized tissue which functions to produce heat. [provided by RefSeq, Jul 2008]
	UCP3: 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 domains typically found in MACPs. Two splice variants have been found for this gene.[provided by RefSeq, Nov 2008]
Function	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. [UniProt]
Calculated Mw	UCP1: 33 kDa UCP3: 34 kDa
PTM	UCP1: May undergo sulfenylation upon cold exposure. May increase the sensitivity of UCP1 thermogenic function to the activation by noradrenaline probably through structural effects.
	May undergo ubiquitin-mediated proteasomal degradation. [UniProt]
Cellular Localization	UCP1 and UCP3: Mitochondrion inner membrane; Multi-pass membrane protein. [UniProt]

Images



ARG42001 anti-UCP1 + UCP3 antibody WB image

Western blot: Mouse skeletal muscle lysate stained with ARG42001 anti-UCP1 + UCP3 antibody.