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UCP1 (8C9) Rabbit Monoclonal Antibody

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Catalog # AP93774

Product Information

Application	WB, IHC, IP
Primary Accession	P12242, P04633
Reactivity	Rat, Mouse
Clonality	Monoclonal
Calculated MW	33248

Additional Information

Gene ID	22227
Dilution	WB~~1:1000 IHC~~1:100~500 IP~~N/A
Storage Conditions	-20℃

Protein Information

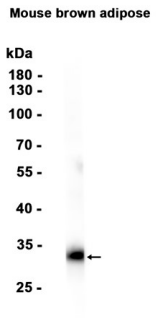
Name	Ucp1 {ECO:0000312|MGI:MGI:98894}
Function	Mitochondrial transporter that functions as a long-chain fatty acid/LCFA and proton symporter, simultaneously transporting one LCFA and one proton through the inner mitochondrial membrane. However, LCFAs remaining associated with the transporter via their hydrophobic tails, it results in an apparent transport of protons activated by LCFAs. Thereby, dissipates the mitochondrial proton gradient and converts the energy of substrate oxydation into heat instead of ATP (PubMed:23063128). Responsible for thermogenic respiration, a specialized capacity of brown adipose tissue and beige fat that participates in non-shivering adaptive thermogenesis to temperature and diet variations and more generally to the regulation of energy balance (PubMed:19187776, PubMed:23063128, PubMed:27027295, PubMed:9139827). Regulates the production of reactive oxygen species/ROS by mitochondria (PubMed:20416274, PubMed:20466728).
Cellular Location	Mitochondrion inner membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:P04633}
Tissue Location	Expressed in brown adipose tissue.

Background

Enables long-chain fatty acid binding activity; oxidative phosphorylation uncoupler activity; and purine

ribonucleotide binding activity. Involved in several processes, including cellular response to cold; diet induced thermogenesis; and positive regulation of cold-induced thermogenesis. Acts upstream of or within brown fat cell differentiation and regulation of transcription by RNA polymerase II. Located in mitochondrial inner membrane. Is expressed in several structures, including adipose tissue; adrenal gland; submandibular gland; testis; and thymus. Human ortholog(s) of this gene implicated in hypertension and type 2 diabetes mellitus. Orthologous to human UCP1 (uncoupling protein 1). [provided by Alliance of Genome Resources, Apr 2022]

Images



Western blot analysis of extracts from Mouse brain adipose tissue using AP93774 at 1:5000.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.