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UCP1 Recombinant Rabbit mAb

Catalog # AP97029

Product Information

Application	WB, IP
Primary Accession	P12242
Other Accession	P12242
Reactivity	Rat, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	33248
Physical State	Liquid
Immunogen	A synthesized peptide derived from mouse UCP1
Epitope Specificity	full-length
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	10mM phosphate buffered saline(pH 7.4) with 150mM sodium chloride, 0.05% BSA, 0.02% Proclin300 and 50% glycerol.
SIMILARITY	Belongs to the mitochondrial carrier family. Contains 3 Solcar repeats.
SUBUNIT	Acts as a dimer forming a proton channel.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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.

Additional Information

Gene ID	22227
Other Names	SLC25A7; UCP; Ucpa; Uncp; UCP1_HUMAN; UCP1; UCP 1; Solute carrier family 25 member 7; Thermogenin; UCP1_MOUSE; UCP1_RAT; uncoupling protein 1; uncoupling protein 1 (mitochondrial, proton carrier)
Dilution	WB=1:500-2000,IP=1:20-50
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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.

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