

UCP-1 Rabbit pAb

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Catalog # AP52120

Product Information

Application	WB
Primary Accession	P25874
Reactivity	Human
Predicted	Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	33005
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human UCP-1
Epitope Specificity	101-200/307
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Mitochondrion inner membrane; Multi-pass membrane protein.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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. This gene is expressed only in brown adipose tissue, a specialized tissue which functions to produce heat. [provided by RefSeq].

Additional Information

Gene ID	7350
Other Names	Mitochondrial brown fat uncoupling protein 1, UCP 1, Solute carrier family 25 member 7, Thermogenin, UCP1 (HGNC:12517)
Dilution	WB=1:500-2000
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 (HGNC:12517)
Function	Mitochondrial protein 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 (By similarity). Functions as a long-chain fatty acid/LCFA and proton symporter, simultaneously transporting one LCFA and one proton through the inner mitochondrial membrane (PubMed: 24196960 , PubMed: 28781081). 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. Regulates the production of reactive oxygen species/ROS by mitochondria (By similarity).
Cellular Location	Mitochondrion inner membrane {ECO:0000250 UniProtKB:P12242}; Multi-pass membrane protein
Tissue Location	Brown adipose tissue..

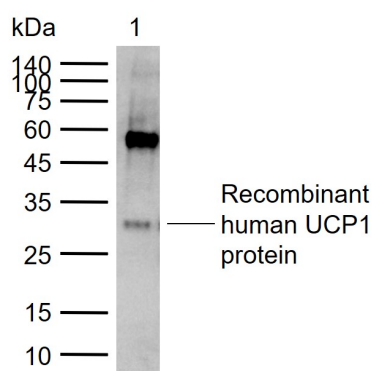
Background

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References

Kozak L.P.,et al.J. Biol. Chem. 263:12274-12277(1988).
Kozak U.C.,et al.Mol. Cell. Biol. 14:59-67(1994).

Images



Sample:
Lane 1: Recombinant human UCP1 protein, His(AP52120)
Primary: Anti-UCP-1 (AP52120) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 33 kDa
Observed band size: 32 kDa

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