


Product datasheet

Anti-UCP1 antibody ab10983

★★★★☆ 23 Abreviews 604 References 3 Images

Overview

Product name	Anti-UCP1 antibody
Description	Rabbit polyclonal to UCP1
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Mouse, Rat Predicted to work with: Sheep, Rabbit, Cow, Dog, Human, Macaque monkey 
Immunogen	Synthetic peptide corresponding to Human UCP1 aa 145-159 conjugated to keyhole limpet haemocyanin (Cysteine residue).
Positive control	IHC-P: Murine inguinal white adipose tissue. WB: Rat brown fat lysate.
General notes	<p>Storage in frost-free freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	Preservative: 0.097% Sodium azide Constituents: PBS, 0.1% BSA
Purity	Immunogen affinity purified
Purification notes	ab10983 is affinity purified using the immunogenic peptide immobilized on agarose.
Clonality	Polyclonal

Isotype

IgG

Applications

The Abpromise guarantee

Our [Abpromise guarantee](#) covers the use of ab10983 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (11)	1/1000. Detects a band of approximately 32 kDa. Use at a minimum dilution of 1/1000 in extract of rat brown adipose tissue (BAT) mitochondria or an extract of E.coli expressing recombinant mouse UCP1. Additional weak bands may be detected in some preparations of BAT extracts. Staining of the UCP1 band is specifically inhibited with the immunizing peptide. This antibody may not be suitable for Western blot in Human
IHC-P	★★★★★ (8)	1/500. This concentration is determined by indirect immunoperoxidase staining of protease digested, formalin-fixed, paraffin-embedded sections of mouse brown adipose tissue.

Target

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.

Tissue specificity

Brown adipose tissue.

Sequence similarities

Belongs to the mitochondrial carrier family.
Contains 3 Solcar repeats.

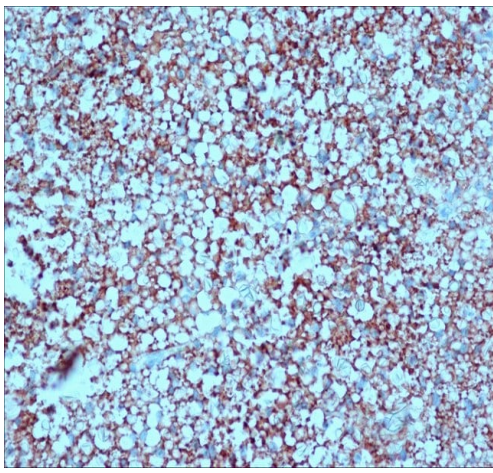
Cellular localization

Mitochondrion inner membrane.

Form

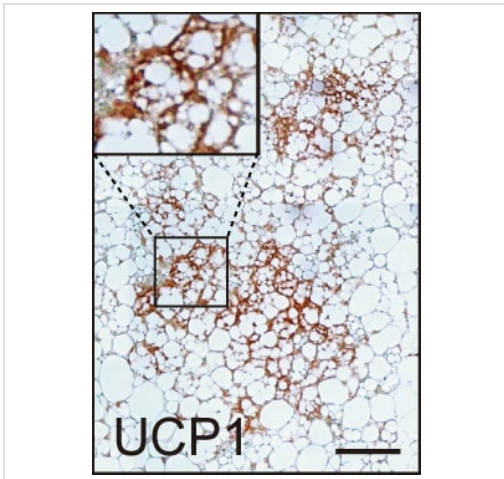
UCP1 is preferentially expressed in brown adipose tissue

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UCP1 antibody (ab10983)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded mouse brown adipose tissue staining UCP1 using ab10983 at 1/500 dilution. Detected using an Anti-Rabbit IgG-biotin conjugate and an Avidin-Peroxidase conjugate.

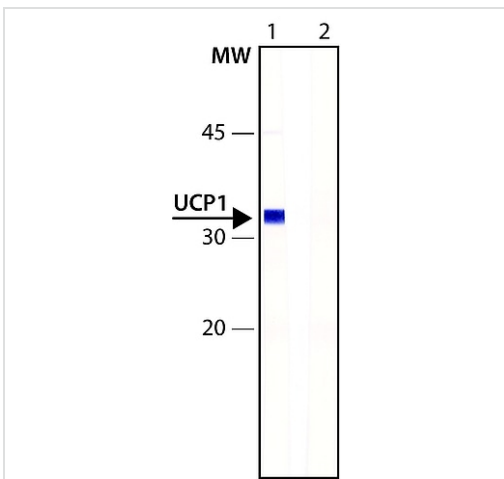


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-UCP1 antibody (ab10983)

ab10983, staining UCP1, in murine inguinal white adipose tissue, by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).

Tissue was incubated with primary antibody at 1/1000 dilution and staining was detected using an HRP/DAB detection kit. Sections were counterstained using hematoxylin.

Image from Mbrj Met et al., PLoS Biol. 2012;10(4):e1001314. Epub 2012 Apr 24. Fig 5.; doi:10.1371/journal.pbio.1001314; April 24, 2012, PLoS Biol 10(4): e1001314.



Western blot - Anti-UCP1 antibody (ab10983)

All lanes : Anti-UCP1 antibody (ab10983) at 1 µg/ml

Lane 1 : Rat brown fat

Lane 2 : Rat brown fat with UCP1 immunizing peptide (human, 145-159)

Secondary

All lanes : Goat Anti-Rabbit IgG-Alkaline Phosphatase and a colorimetric substrate

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