

For Research Use Only

# UCP1 Recombinant antibody

Catalog Number:83870-1-RR



## Basic Information

<b>Catalog Number:</b> 83870-1-RR	<b>GenBank Accession Number:</b> BC098168	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 100ul , Concentration: 1000 ug/ml by Nanodrop;	<b>GeneID (NCBI):</b> 7350	<b>CloneNo.:</b> 240782F3
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> P25874	<b>Recommended Dilutions:</b> WB 1:5000-1:50000 IHC 1:200-1:800 IF-P 1:200-1:800
<b>Isotype:</b> IgG	<b>Full Name:</b> uncoupling protein 1 (mitochondrial, proton carrier)	
<b>Immunogen Catalog Number:</b> AG20388	<b>Calculated MW:</b> 307 aa, 33 kDa	
	<b>Observed MW:</b> 33 kDa	

## Applications

### Tested Applications:

WB, IHC, IF-P, ELISA

### Species Specificity:

human, mouse

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

### Positive Controls:

WB : mouse brown adipose tissue,

IHC : rat brain tissue,

IF-P : mouse brown adipose tissue,

## Background Information

UCP-1 (Mitochondrial uncoupling protein 1), is a mitochondrial transporter protein that creates proton leaks across the inner mitochondrial membrane, thus uncoupling oxidative phosphorylation from ATP synthesis. It has been identified a key molecule for metabolic thermogenesis to avoid an excess of fat accumulation. UCP-1 expression is usually restricted to brown adipose when induced by cold exposure and thyroid hormone.

## Storage

### Storage:

Store at -20°C. Stable for one year after shipment.

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

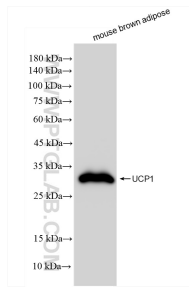
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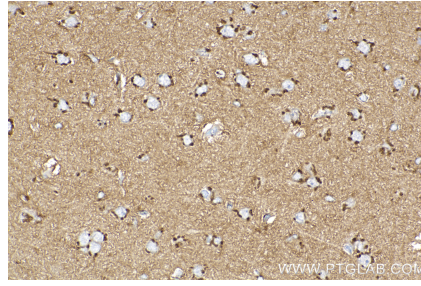
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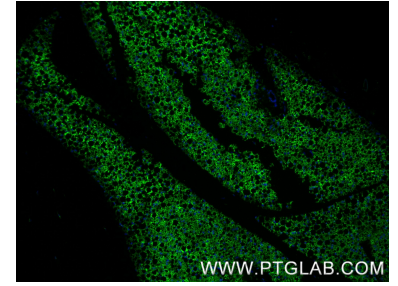
## Selected Validation Data



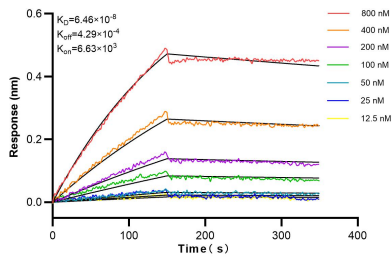
mouse brown adipose tissue were subjected to SDS PAGE followed by western blot with 83870-1-RR (UCP1 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded rat brain tissue slide using 83870-1-RR (UCP1 antibody) at dilution of 1:400 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed paraffin-embedded mouse brown adipose tissue using UCP1 antibody (83870-1-RR, Clone: 240782F3) at dilution of 1:400 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Biolayer interferometry (BLI) kinetic assays of 83870-1-RR against Human UCP1 were performed. The affinity constant is 64.6 nM.