

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse UCP2 in Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) UCP1 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human UCP2 Met1-Phe309 Accession # P55851
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

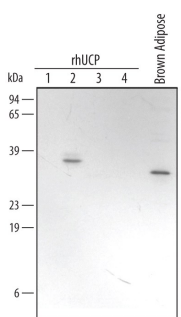
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Simple Western	10 µg/mL	See Below

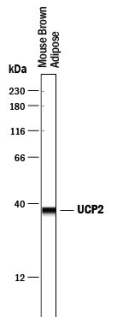
DATA

Western Blot




Detection of Human/Mouse UCP2 by Western Blot. Western blot shows lysates of mouse brown adipose tissue. PVDF membrane was probed with 1 µg/mL Goat Anti-Human/Mouse UCP2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4739) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). For additional reference, recombinant human UCP1, UCP2, UCP3, and UCP4 (5 ng/lane) were included. A specific band for UCP2 was detected at approximately 33 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 4.

Simple Western



Detection of Mouse UCP2 by Simple Western™. Simple Western lane view shows lysates of mouse brown adipose tissue, loaded at 0.2 mg/mL. A specific band was detected for UCP2 at approximately 38 kDa (as indicated) using 10 µg/mL of Goat Anti-Human/Mouse UCP2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4739) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Mitochondrial Uncoupling Protein 2 (UCP2) is a 33 kDa member of the mitochondrial carrier protein family. UCP2 uncouples respiration from oxidative phosphorylation, principally in fat and skeletal muscle. Unlike UCP1, which generates heat in response to cold, UCP2 generates heat in response to dietary fluctuations. Human UCP2 is 309 amino acid (aa) in length. It contains six transmembrane domains (aa's 11-291) and is embedded in the inner mitochondrial membrane. Here, it dimerizes, forming a proton channel. There is one nucleotide binding site (aa 276-298). Full-length UCP2 shares 94%, 97% and 96% aa identity with porcine, canine and mouse UCP2, respectively.