

BMCP1/KMCP1 (H-85): sc-99222

BACKGROUND

Members of the mitochondrial carrier family transport a variety of metabolites across the inner mitochondrial membrane. Brain mitochondrial carrier protein 1 (BMCP1), also designated uncoupling protein 5 (UCP5) or solute carrier family 25 member 14 (SLC25A14), is a 325 amino acid proton channel carrier protein that is not coupled to oxidative phosphorylation. BMCP1 is located in the inner membrane of mitochondria and is linked to the generation of heat. Like other UCPs, BMCP1 facilitates the transfer of anions from the inner to the outer mitochondrial membrane, as well as the return transfer of protons from the outer to the inner mitochondrial membrane. Kidney mitochondrial carrier protein-1 (KMCP1), also designated solute carrier family 25 member 30 (SLC25A30), is a 291 amino acid multi-pass membrane protein that localizes to mitochondria and is highly expressed in kidney cortex. KMCP1 is important during increased mitochondrial metabolism and is up-regulated in response to cellular oxidative damage. KMCP1 is highly homologous to BMCP1.

REFERENCES

1. Kuan, J. and Saier, M.H. 1993. The mitochondrial carrier family of transport proteins: structural, functional, and evolutionary relationships. *Crit. Rev. Biochem. Mol. Biol.* 28: 209-233.
2. Nelson, D.R., et al. 1998. Highly conserved charge-pair networks in the mitochondrial carrier family. *J. Mol. Biol.* 277: 285-308.
3. Sanchis, D., et al. 1998. BMCP1, a novel mitochondrial carrier with high expression in the central nervous system of humans and rodents, and respiration uncoupling activity in recombinant yeast. *J. Biol. Chem.* 273: 34611-34615.

CHROMOSOMAL LOCATION

Genetic locus: SLC25A14 (human) mapping to Xq26.1, SLC25A30 (human) mapping to 13q14.13; Slc25a14 (mouse) mapping to X A4, Slc25a30 (mouse) mapping to 14 D3.

SOURCE

BMCP1/KMCP1 (H-85) is a rabbit polyclonal antibody raised against amino acids 211-295 mapping near the C-terminus of BMCP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

BMCP1/KMCP1 (H-85) is recommended for detection of all isoforms of BMCP1 (UCP5) and KMCP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BMCP1/KMCP1 (H-85) is also recommended for detection of all isoforms of BMCP1 (UCP5) and KMCP1 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of BMCP1: 36 kDa.

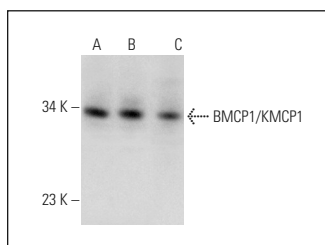
Molecular Weight of KMCP1: 30 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Hep G2 cell lysate: sc-2227 or A549 cell lysate: sc-2413.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



BMCP1/KMCP1 (H-85): sc-99222. Western blot analysis of BMCP1/KMCP1 expression in Jurkat (A), Hep G2 (B) and A549 (C) whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **BMCP1/KMCP1 (F-3): sc-376172** or **KMCP1 (C-7): sc-398835**, our highly recommended monoclonal alternatives to BMCP1/KMCP1 (H-85).