SANTA CRUZ BIOTECHNOLOGY, INC.

SCaMC-1 (A-22): sc-133987

BACKGROUND

SCaMC-1 (short calcium-binding mitochondrial carrier 1), also known as APC1 or SLC25A24 (solute carrier family 25, member 24), is a 477 amino acid multi-pass membrane protein belonging to the SLC25 family of mitochondrial carriers, which are responsible for transporting metabolites across the inner mitochondrial membrane. Expressed in a wide variety of tissues and localizing to the mitochondrial inner membrane, SCaMC-1 contains three Solcar repeats and four EF-hand domains and functions as a calcium-dependent mitochondrial solute carrier. SCaMC-1 may act as an ATP-Mg/Pi co-transporter, facilitating the transport of Mg-ATP in exchange for phosphate. Existing as two isoforms, SCaMC-1 is encoded by a gene located on human chromosome 1, which is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome.

REFERENCES

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2. del Arco, A. and Satrústegui, J. 2004. Identification of a novel human subfamily of mitochondrial carriers with calcium-binding domains. J. Biol. Chem. 279: 24701-24713.
3. Fiermonte, G., et al. 2004. Identification of the mitochondrial ATP-Mg/Pi transporter. Bacterial expression, reconstitution, functional characterization, and tissue distribution. J. Biol. Chem. 279: 30722-30730.
4. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608744. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Del Arco, A. 2005. Novel variants of human SCaMC-3, an isoform of the ATP-Mg/P(i) mitochondrial carrier, generated by alternative splicing from 3'-flanking transposable elements. Biochem. J. 389: 647-655.
6. Bassi, M.T., et al. 2005. Cellular expression and alternative splicing of SLC25A23, a member of the mitochondrial Ca^{2+}-dependent solute carrier gene family. Gene 345: 173-182.
7. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
8. Kucejova, B., et al. 2008. Pleiotropic effects of the yeast Sal1 and Aac2 carriers on mitochondrial function via an activity distinct from adenine nucleotide transport. Mol. Genet. Genomics 280: 25-39.

CHROMOSOMAL LOCATION

Genetic locus: SLC25A24 (human) mapping to 1p13.3; Slc25a24 (mouse) mapping to 3 F3.

SOURCE

SCaMC-1 (A-22) is a Protein A purified rabbit polyclonal antibody raised against synthetic SCaMC-1 peptide of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

SCaMC-1 (A-22) is recommended for detection of SCaMC-1 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SCaMC-1 siRNA (h): sc-88209, SCaMC-1 siRNA (m): sc-153242, SCaMC-1 shRNA Plasmid (h): sc-88209-SH, SCaMC-1 shRNA Plasmid (m): sc-153242-SH, SCaMC-1 shRNA (h) Lentiviral Particles: sc-88209-V and SCaMC-1 shRNA (m) Lentiviral Particles: sc-153242-V.

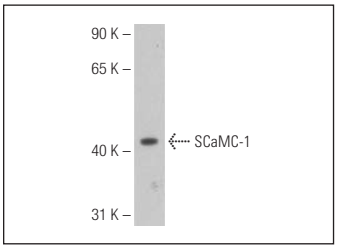
Molecular Weight of SCaMC-1: 48-50 kDa.

Positive Controls: human fetal thymus tissue extract.

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).

DATA



SCaMC-1 (A-22): sc-133987. Western blot analysis of SCaMC-1 expression in human fetal thymus tissue extract.

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.