SLC25A23 (S-14): sc-162206

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BIOTECHNOLOGY

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BACKGROUND

SLC25A23 (solute carrier family 25 (mitochondrial carrier; phosphate carrier), member 23), also known as APC2, MCSC2, MGC2615 or SCaMC-3, is a 467 amino acid mitochondrial inner membrane protein expressed at highest levels in brain, skeletal muscle and pancreas with low expression in other tissues. Existing as four alternatively spliced isoforms, SLC25A23 contains three EF-hand domains and three Solcar repeats. Belonging to the mitochondrial carrier superfamily of proteins, SLC25A23 is calcium-dependent mitochondrial solute carrier that shuttles metabolites, nucleotides and cofactors through the mito-chondrial inner membrane. SLC25A23 is thought to act as an ATP-Mg/P(i) exchanger that regulates the transport of Mg-ATP in exchange for phosphate, catalyzing the net uptake or efflux of adenine nucleotides into or from the mitochondria. SLC25A23 is encoded by a gene located on human chromo-some 19p13.3.

REFERENCES

1. del Arco, A. and Satrústegui, J. 2004. Identification of a novel human sub-family of mitochondrial carriers with calcium-binding domains. J. Biol. Chem. 279: 24701-24713.

2. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608746. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

3. 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.

4. Arco, A.D. and Satrústegui, J. 2005. New mitochondrial carriers: an overview. Cell. Mol. Life Sci. 62: 2204-2227.

5. 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.

6. Satrústegui, J., et al. 2007. Mitochondrial transporters as novel targets for intracellular calcium signaling. Physiol. Rev. 87: 29-67.

7. Traba, J., et al. 2009. Characterization of SCaMC-3-like/SLC25A41, a novel calcium-independent mitochondrial ATP-Mg/Pi carrier. Biochem. J. 418: 125-133.

CHROMOSOMAL LOCATION

Genetic locus: SLC25A23 (human) mapping to 19p13.3; Slc25a23 (mouse) mapping to 17 D.

SOURCE

SLC25A23 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SLC25A23 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.

Blocking peptide available for competition studies, sc-162206 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SLC25A23 (S-14) is recommended for detection of SLC25A23 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); non cross-reactive with other SLC25A family members.

SLC25A23 (S-14) is also recommended for detection of SLC25A23 in addi-tional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SLC25A23 siRNA (h): sc-97088, SLC25A23 siRNA (m): sc-153507, SLC25A23 shRNA Plasmid (h): sc-97088-SH, SLC25A23 shRNA Plasmid (m): sc-153507-SH, SLC25A23 shRNA (h) Lentiviral Particles: sc-97088-V and SLC25A23 shRNA (m) Lentiviral Particles: sc-153507-V.

Molecular Weight of SLC25A23: 48-54 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409.

DATA
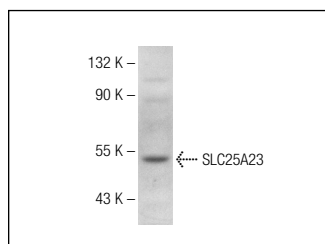
SLC25A23 (S-14): sc-162206. Western blot analysis of SLC25A23 expression in IMR-32 whole cell lysate.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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