

SLC25A25 (S-12): sc-132453

BACKGROUND

SLC25A25 (solute carrier family 25 member 25), also known as MCSC (mitochondrial calcium-dependent solute carrier protein), PCSCL or SCaMC-2 (small calcium-binding mitochondrial carrier protein 2), is a 469 amino acid multi-pass membrane protein that belongs to the the SLC25 family of mitochondrial carriers that are responsible for transporting metabolites across the inner mitochondrial membrane. Expressed in a wide variety of tissues and localized to the mitochondrion inner membrane, SLC25A25 contains three solcar repeats and three EF-hand domains and functions as a calcium-dependent mitochondrial solute carrier. More specifically, SLC25A25 acts as an ATP-Mg/P_i co-transporter, facilitating the transport of Mg-ATP in exchange for phosphate. Due to alternative splicing events, six isoforms exist for SLC25A25, namely SCaMC-2a, SCaMC-2b, isoform 3, SCaMC-2c, isoform 5 and SCaMC-2d. SCaMC-2a is ubiquitously expressed while SCaMC-2b expression is limited to lung and kidney.

REFERENCES

1. Nagase, T., et al. 2001. Prediction of the coding sequences of unidentified human genes. XXI. The complete sequences of 60 new cDNA clones from brain which code for large proteins. *DNA Res.* 8: 179-187.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608745. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Mashima, H., et al. 2003. A novel mitochondrial Ca²⁺-dependent solute carrier in the liver identified by mRNA differential display. *J. Biol. Chem.* 278: 9520-9527.
4. del Arco, A. and Satrustegui, J. 2004. Identification of a novel human subfamily of mitochondrial carriers with calcium-binding domains. *J. Biol. Chem.* 279: 24701-24713.
5. Fiermonte, G., et al. 2004. Identification of the mitochondrial ATP-Mg/P_i transporter. Bacterial expression, reconstitution, functional characterization, and tissue distribution. *J. Biol. Chem.* 279: 30722-30730.

CHROMOSOMAL LOCATION

Genetic locus: SLC25A25 (human) mapping to 9q34.11; Slc25a25 (mouse) mapping to 2 B.

SOURCE

SLC25A25 (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SLC25A25 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-132453 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

SLC25A25 (S-12) is recommended for detection of SLC25A25 isoforms 1, 2, 3, 4, 5 and 6 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.

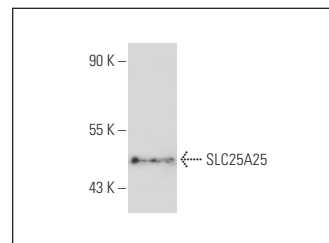
SLC25A25 (S-12) is also recommended for detection of SLC25A25 isoforms 1, 2, 3, 4, 5 and 6 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for SLC25A25 siRNA (h): sc-92973, SLC25A25 siRNA (m): sc-153508, SLC25A25 shRNA Plasmid (h): sc-92973-SH, SLC25A25 shRNA Plasmid (m): sc-153508-SH, SLC25A25 shRNA (h) Lentiviral Particles: sc-92973-V and SLC25A25 shRNA (m) Lentiviral Particles: sc-153508-V.

Molecular Weight of SLC25A25: 53 kDa.

Positive Controls: rat skeletal muscle extract: sc-364810.

DATA



SLC25A25 (S-12): sc-132453. Western blot analysis of SLC25A25 expression in rat skeletal muscle 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.