

SLC25A11 (K-12): sc-160802

BACKGROUND

Inner membrane mitochondrial proteins are responsible for the transport of metabolites across the mitochondrial membrane. SLC25A11 (solute carrier family 25 member 11), also known as Mitochondrial 2-oxoglutarate/malate carrier protein, is a 314 amino acid multi-pass transmembrane protein belonging to the mitochondrial carrier protein family. As an oxoglutarate/malate carrier, SLC25A11 transports 2-oxoglutarate across the inner mitochondrial membrane in an electroneutral exchange for dicarboxylic acids and malate. SLC25A11 also participates in other important metabolic processes, such as the oxoglutarate/isocitrate shuttle and the malate-aspartate shuttle, as well as in nitrogen metabolism and in gluconeogenesis from lactate. SLC25A11 contains 3 solcar repeats, which is typical of substrate carrier proteins involved in energy transfer.

REFERENCES

1. Aquila, H., et al. 1987. Solute carriers involved in energy transfer of mitochondria form a homologous protein family. *FEBS Lett.* 212: 1-9.
2. Iacobazzi, V., et al. 1992. Sequences of the human and bovine genes for the mitochondrial 2-oxoglutarate carrier. *DNA Seq.* 3: 79-88.
3. Kuan, J., et al. 1993. The mitochondrial carrier family of transport proteins: structural, functional, and evolutionary relationships. *Crit. Rev. Biochem. Mol. Biol.* 28: 209-233.
4. Piccininni, S., et al. 1998. Assignment of the oxoglutarate carrier gene (SLC20A4) to human chromosome 17p13.3. *Cytogenet. Cell Genet.* 83: 256-257.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604165. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Palmieri, F. 2004. The mitochondrial transporter family (SLC25): physiological and pathological implications. *Pflugers Arch.* 447: 689-709.

CHROMOSOMAL LOCATION

Genetic locus: SLC25A11 (human) mapping to 17p13.2; Slc25a11 (mouse) mapping to 11 B3.

SOURCE

SLC25A11 (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SLC25A11 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-160802 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SLC25A11 (K-12) is recommended for detection of SLC25A11 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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.

SLC25A11 (K-12) is also recommended for detection of SLC25A11 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SLC25A11 siRNA (h): sc-94049, SLC25A11 siRNA (m): sc-153500, SLC25A11 shRNA Plasmid (h): sc-94049-SH, SLC25A11 shRNA Plasmid (m): sc-153500-SH, SLC25A11 shRNA (h) Lentiviral Particles: sc-94049-V and SLC25A11 shRNA (m) Lentiviral Particles: sc-153500-V.

Molecular Weight (predicted) of SLC25A11: 34 kDa.

Molecular Weight (observed) of SLC25A11: 20 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or Sol8 cell lysate: sc-2249.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.