

SLC25A3 (S-13): sc-161226

BACKGROUND

Inner membrane mitochondrial proteins are responsible for the transport of metabolites across the mitochondrial membrane. SLC25A3 (solute carrier family 25 (mitochondrial carrier; phosphate carrier), member 3), also known as PHC or PTP (phosphate transport protein), is a 362 amino acid multi-pass inner mitochondrial membrane protein that belongs to the mitochondrial carrier family. SLC25A3 transports phosphate groups (and cotransports H⁺) to the mitochondrial matrix from cytosol, and exists as two alternatively spliced isoforms designated SLC25A3 isoform A and B. Highly expressed in pancreas, skeletal muscle and heart, SLC25A3 contains three solcar repeats and is encoded by a gene that maps to human chromosome 12q23.1. Defects in the gene encoding SLC25A3 are linked to mitochondrial phosphate carrier deficiency (MPCD), a disorder of oxidative phosphorylation that leads to death within the first year of life.

REFERENCES

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- Dolce, V., et al. 1994. The sequences of human and bovine genes of the phosphate carrier from mitochondria contain evidence of alternatively spliced forms. *J. Biol. Chem.* 269: 10451-10460.
- Marsh, S., et al. 1995. Chromosomal localization of the mitochondrial phosphate carrier gene PHC to 12q23. *Genomics* 29: 814-815.
- Huizing, M., et al. 1998. Human mitochondrial transmembrane metabolite carriers: tissue distribution and its implication for mitochondrial disorders. *J. Bioenerg. Biomembr.* 30: 277-284.
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CHROMOSOMAL LOCATION

Genetic locus: SLC25A3 (human) mapping to 12q23.1; Slc25a3 (mouse) mapping to 10 C2.

SOURCE

SLC25A3 (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SLC25A3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-161226 P, (100 μ g 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

SLC25A3 (S-13) is recommended for detection of SLC25A3 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), immunohistochemistry (including paraffin-embedded sections) (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.

SLC25A3 (S-13) is also recommended for detection of SLC25A3 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for SLC25A3 siRNA (h): sc-95930, SLC25A3 siRNA (m): sc-153510, SLC25A3 shRNA Plasmid (h): sc-95930-SH, SLC25A3 shRNA Plasmid (m): sc-153510-SH, SLC25A3 shRNA (h) Lentiviral Particles: sc-95930-V and SLC25A3 shRNA (m) Lentiviral Particles: sc-153510-V.

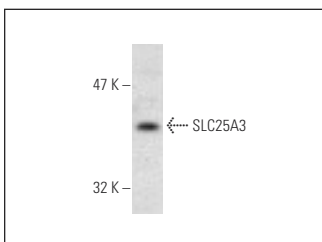
Molecular Weight of SLC25A3: 40 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

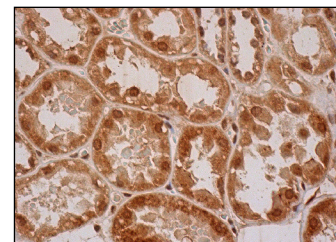
RECOMMENDED SECONDARY REAGENTS

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. 3) Immunohistochemistry: use ImmunoCruz[™]: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



SLC25A3 (S-13): sc-161226. Western blot analysis of SLC25A3 expression in K-562 whole cell lysate.



SLC25A3 (S-13): sc-161226. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic and nuclear staining of cells in glomeruli.

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.