

SLC25A3 (h5): 293T Lysate: sc-113441

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

1. Jabs, E.W., et al. 1994. Chromosomal localization of genes required for the terminal steps of oxidative metabolism: α and γ subunits of ATP synthase and the phosphate carrier. *Hum. Genet.* 93: 600-602.
2. 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.
3. Marsh, S., et al. 1995. Chromosomal localization of the mitochondrial phosphate carrier gene PHC to 12q23. *Genomics* 29: 814-815.
4. Huizing, M., et al. 1998. Human mitochondrial transmembrane metabolite carriers: tissue distribution and its implication for mitochondrial disorders. *J. Bioenerg. Biomembr.* 30: 277-284.
5. Mayr, J.A., et al. 2007. Mitochondrial phosphate-carrier deficiency: a novel disorder of oxidative phosphorylation. *Am. J. Hum. Genet.* 80: 478-484.
6. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 600370. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: SLC25A3 (human) mapping to 12q23.1.

PRODUCT

SLC25A3 (h5): 293T Lysate represents a lysate of human SLC25A3 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

SLC25A3 (h5): 293T Lysate is suitable as a Western Blotting positive control for human reactive SLC25A3 antibodies. Recommended use: 10-20 μ l per lane.

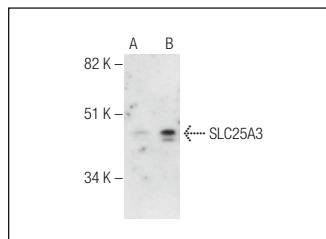
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

SLC25A3 (F-1): sc-376742 is recommended as a positive control antibody for Western Blot analysis of enhanced human SLC25A3 expression in SLC25A3 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



SLC25A3 (F-1): sc-376742. Western blot analysis of SLC25A3 expression in non-transfected: sc-117752 (A) and human SLC25A3 transfected: sc-175591 (B) 293T whole cell lysates.

RESEARCH USE

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