

SLC25A18 (T-16): sc-86870

BACKGROUND

SLC25A18 (solute carrier family 25 (mitochondrial carrier), member 18), also known as GC2, is a 315 amino acid multi-pass membrane protein that belongs to the mitochondrial carrier family. Human SLC25A18 is 87% identical to its mouse homolog and 63% identical to the protein sequence of SLC25A22. SLC25A18 is one of two mitochondrial glutamate/H⁺ symporters, the other being SLC25A22. SLC25A18 is also involved in the transport of glutamate across the inner mitochondrial membrane as glutamate is cotransported with H⁺. Containing three Solcar repeats, SLC25A18 is found to have strongest expression in adult human brain, with less expression in testis and weak expression in other tissues. The SLC25A18 gene comprises 11 exons, is conserved in chimpanzee, canine, mouse, rat and zebrafish, and maps to human chromosome 22q11.21, which is within the distal half of the cat eye syndrome critical region.

REFERENCES

1. Palmieri, L., et al. 2001. Citrin and aralar1 are Ca²⁺-stimulated aspartate/glutamate transporters in mitochondria. *EMBO J.* 20: 5060-5069.
2. Footz, T.K., et al. 2001. Analysis of the cat eye syndrome critical region in humans and the region of conserved synteny in mice: a search for candidate genes at or near the human chromosome 22 pericentromere. *Genome Res.* 11: 1053-1070.
3. Fiermonte, G., et al. 2002. Identification of the mitochondrial glutamate transporter. Bacterial expression, reconstitution, functional characterization, and tissue distribution of two human isoforms. *J. Biol. Chem.* 277: 19289-19294.
4. Palmieri, F. 2004. The mitochondrial transporter family (SLC25): physiological and pathological implications. *Pflugers Arch.* 447: 689-709.
5. Online Mendelian Inheritance in Man, OMIM™. 2005 Johns Hopkins University, Baltimore, MD. MIM Number: 609303. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Hendrickson, S.L., et al. 2010. Genetic variants in nuclear-encoded mitochondrial genes influence AIDS progression. *PLoS ONE* 5: e12862.

CHROMOSOMAL LOCATION

Genetic locus: SLC25A18 (human) mapping to 22q11.21; Slc25a18 (mouse) mapping to 6 F1.

SOURCE

SLC25A18 (T-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of SLC25A18 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86870 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SLC25A18 (T-16) is recommended for detection of SLC25A18 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).

SLC25A18 (T-16) is also recommended for detection of SLC25A18 in additional species, including canine.

Suitable for use as control antibody for SLC25A18 siRNA (h): sc-76505, SLC25A18 siRNA (m): sc-153502, SLC25A18 shRNA Plasmid (h): sc-76505-SH, SLC25A18 shRNA Plasmid (m): sc-153502-SH, SLC25A18 shRNA (h) Lentiviral Particles: sc-76505-V and SLC25A18 shRNA (m) Lentiviral Particles: sc-153502-V.

Molecular Weight of SLC25A18: 34 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.