

SLC7A10 (H-41): sc-292032

BACKGROUND

SLC7A10 (solute carrier family 7, (neutral amino acid transporter, γ^+ system member 10), also known as ASC1 (asc-type amino acid transporter 1), is a 523 amino acid multi-pass membrane protein that belongs to the amino acid-polyamine-organocation (APC) superfamily. SLC7A10 forms a disulfide-linked heterodimer with CD98 to regulate high-affinity transport of several neutral amino acids, including D-serine. Expressed in pancreas, skeletal muscle, placenta, heart, brain, kidney, lung and liver, SLC7A10 is encoded by a gene that maps to human chromosome 19q13.11 and is considered a candidate gene for cystinuria. Chromosome 19 consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes.

REFERENCES

1. Fukasawa, Y., et al. 2000. Identification and characterization of a Na⁺-independent neutral amino acid transporter that associates with the 4F2 heavy chain and exhibits substrate selectivity for small neutral D- and L-amino acids. *J. Biol. Chem.* 275: 9690-9698.
2. Nakauchi, J., et al. 2000. Cloning and characterization of a human brain Na⁺-independent transporter for small neutral amino acids that transports D-serine with high affinity. *Neurosci. Lett.* 287: 231-235.
3. Leclerc, D., et al. 2001. Is the SLC7A10 gene on chromosome 19 a candidate locus for cystinuria? *Mol. Genet. Metab.* 73: 333-339.
4. Dehal, P., et al. 2001. Human chromosome 19 and related regions in mouse: conservative and lineage-specific evolution. *Science* 293: 104-111.
5. Pineda, M., et al. 2004. The amino acid transporter asc-1 is not involved in cystinuria. *Kidney Int.* 66: 1453-1464.
6. Xu, D. and Hemler, M.E. 2005. Metabolic activation-related CD147-CD98 complex. *Mol. Cell. Proteomics* 4: 1061-1071.

CHROMOSOMAL LOCATION

Genetic locus: SLC7A10 (human) mapping to 19q13.11; Slc7a10 (mouse) mapping to 7 B1.

SOURCE

SLC7A10 (H-41) is a rabbit polyclonal antibody raised against amino acids 197-237 mapping within an internal region of SLC7A10 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.

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.

APPLICATIONS

SLC7A10 (H-41) is recommended for detection of SLC7A10 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

SLC7A10 (H-41) is also recommended for detection of SLC7A10 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SLC7A10 siRNA (h): sc-97607, SLC7A10 siRNA (m): sc-153578, SLC7A10 shRNA Plasmid (h): sc-97607-SH, SLC7A10 shRNA Plasmid (m): sc-153578-SH, SLC7A10 shRNA (h) Lentiviral Particles: sc-97607-V and SLC7A10 shRNA (m) Lentiviral Particles: sc-153578-V.

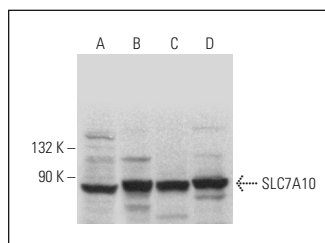
Molecular Weight of SLC7A10: 57 kDa.

Positive Controls: JAR cell lysate: sc-2276, SK-N-MC cell lysate: sc-2237 or KNRK whole cell lysate: sc-2214.

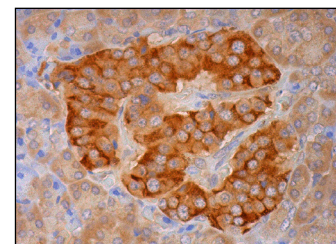
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



SLC7A10 (H-41): sc-292032. Western blot analysis of SLC7A10 expression in SK-N-MC (A), AMJ2-C8 (B), JAR (C) and KNRK (D) whole cell lysates.



SLC7A10 (H-41): sc-292032. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells and Islets of Langerhans.

RESEARCH USE

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