

SVCT2 (T-19): sc-31991

BACKGROUND

The sodium-dependent vitamin C transporters SVCT1 and SCVT2 are membrane transporters for L-ascorbic acid (Vitamin C). Both SVCT proteins mediate high affinity Na⁺-dependent L-ascorbic acid transport and are necessary for the uptake of vitamin C in many tissues. SVCT1 is a 604 amino acid protein that is expressed mainly in epithelial tissues, including intestine, kidney and liver. SVCT2 is a 592 amino acid protein that shares 65% homology to SVCT1, has been detected in various metabolically active cells as well as in specialized tissues such as eye and brain. A non-functional splice variant of SVCT1 has been identified in normal human intestine.

REFERENCES

1. Faaland, C.A., et al. 1998. Molecular characterization of two novel transporters from human and mouse kidney and from LLC-PK1 cells reveals a novel conserved family that is homologous to bacterial and *Aspergillus* nucleobase transporters. *Biochim. Biophys. Acta* 1442: 353-360.
2. Tsukaguchi, H., et al. 1999. A family of mammalian Na⁺-dependent L-ascorbic acid transporters. *Nature* 399: 70-75.
3. Daruwala, R., et al. 1999. Cloning and functional characterization of the human sodium-dependent vitamin C transporters hSVCT1 and hSVCT2. *FEBS Lett.* 460: 480-484.
4. Rajan, D.P., et al. 1999. Human placental sodium-dependent vitamin C transporter (SVCT2): molecular cloning and transport function. *Biochem. Biophys. Res. Commun.* 262: 762-768.
5. Wang, H., et al. 1999. Human Na⁺-dependent vitamin C transporter 1 (hSVCT1): primary structure, functional characteristics and evidence for a non-functional splice variant. *Biochim. Biophys. Acta* 1461: 1-9.

CHROMOSOMAL LOCATION

Genetic locus: SLC23A2 (human) mapping to 20p13; Slc23a2 (mouse) mapping to 2 F2.

SOURCE

SVCT2 (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SVCT2 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-31991 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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.

APPLICATIONS

SVCT2 (T-19) is recommended for detection of SVCT2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

SVCT2 (T-19) is also recommended for detection of SVCT2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SVCT2 siRNA (h): sc-41008, SVCT2 siRNA (m): sc-41009, SVCT2 shRNA Plasmid (h): sc-41008-SH, SVCT2 shRNA Plasmid (m): sc-41009-SH, SVCT2 shRNA (h) Lentiviral Particles: sc-41008-V and SVCT2 shRNA (m) Lentiviral Particles: sc-41009-V.

Molecular Weight of human SVCT2: 50 kDa.

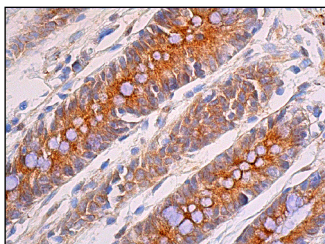
Molecular Weight of mouse/rat SVCT2: 65-75 kDa.

Positive Controls:

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



SVCT2 (T-19): sc-31991. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells.

PROTOCOLS

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