

## SVCT2 (G-19): sc-9927

### 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<sup>+</sup>-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, 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<sup>+</sup>-dependent L-ascorbic acid transporters. *Nature* 399: 70-75.

### CHROMOSOMAL LOCATION

Genetic locus: Slc23a2 (mouse) mapping to 2 F2.

### SOURCE

SVCT2 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of SVCT2 of rat 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-9927 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### APPLICATIONS

SVCT2 (G-19) is recommended for detection of SVCT2 of mouse and rat 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).

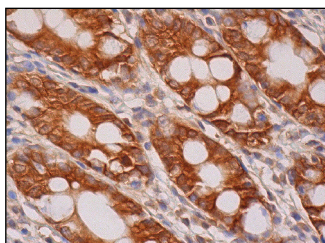
Suitable for use as control antibody for SVCT2 siRNA (m): sc-41009, SVCT2 shRNA Plasmid (m): sc-41009-SH and SVCT2 shRNA (m) Lentiviral Particles: sc-41009-V.

Molecular Weight of SVCT2: 65-75 kDa.

### 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



SVCT2 (G-19): sc-9927. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic and membrane staining of glandular cells.

### SELECT PRODUCT CITATIONS

1. Jin, S.N., et al. 2005. Immunohistochemical study on the distribution of sodium-dependent vitamin C transporters in the respiratory system of adult rat. *Microsc. Res. Tech.* 68: 360-367.
2. Perez, M.J., et al. 2008. Role of vitamin C transporters and biliverdin reductase in the dual pro-oxidant and anti-oxidant effect of biliary compounds on the placental-fetal unit in cholestasis during pregnancy. *Toxicol. Appl. Pharmacol.* 232: 327-336.
3. Low, M., et al. 2009. The ascorbic acid transporter SVCT2 is expressed in slow-twitch skeletal muscle fibres. *Histochem. Cell Biol.* 131: 565-574.
4. Salmaso, S., et al. 2009. Targeting glioma cells *in vitro* with ascorbate-conjugated pharmaceutical nanocarriers. *Bioconjug. Chem.* 20: 2348-2355.
5. Low, M., et al. 2011. Up-regulation of the vitamin C transporter SVCT2 upon differentiation and depolarization of myotubes. *FEBS Lett.* 585: 390-396.
6. Portugal, C.C., et al. 2012. Nitric oxide modulates sodium vitamin C transporter 2 (SVCT-2) protein expression via protein kinase G (PKG) and nuclear factor-κB (NF-κB). *J. Biol. Chem.* 287: 3860-3872.

### RESEARCH USE

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