

# SMVT (C-13): sc-48089



The Power to Question

## BACKGROUND

The sodium-dependent multivitamin transporter (SMVT) is a 68.6 kDa, 635 amino acid protein that belongs to the sodium-coupled glucose transporter family. SMVT contains 12 putative transmembrane domains with the N and C termini both facing towards the cytoplasm. Its function is to transport the essential vitamins pantothenate, biotin and the metabolite lipoate into cells of various human tissues. Biotin, also known as vitamin B6, is important in synthesizing fatty acids gluconeogenesis, and metabolizing leucine, while pantothenate, or vitamin B5, is critical in the metabolism and synthesis of carbohydrates, proteins and fats. Lipoate is involved in oxidative metabolism. SMVT uses a specialized carrier-mediated system to take up these vitamins and metabolites into the cells. This process is active and uses energy from the transmembrane sodium ion gradient as well as the membrane potential.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: SLC5A6 (human) mapping to 2p23; Slc5a6 (mouse) mapping to 5 B1.

## SOURCE

SMVT (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SMVT of mouse 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-48089 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SMVT (C-13) is recommended for detection of SMVT of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for SMVT siRNA (m): sc-61574.

Molecular Weight of SMVT: 69 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.