



# Glut9 (C-16): sc-21631

## BACKGROUND

Glucose serves as the major energy substrate of mammalian cells and is fundamental to metabolism. Glucose passage across cell membranes is mediated by a family of transporters termed glucose transporters or Gluts which are characterized by the presence of 12 membrane-spanning helices. Facilitated glucose transport is the rate-limiting step in glucose metabolism. The Glut family is divided into three subfamilies: class I (previously known as glucose transporters), which includes Glut1, Glut2, Glut3 and Glut4; class II (previously known as fructose transporters), which includes Glut5, Glut7, Glut9 and Glut11; class III, which includes Glut6, Glut8, Glut10, Glut12 and the myo-inositol transporter HMIT1). Glut9, also known as SLCA9 is expressed in liver and kidney and at lower levels in placenta, lung, peripheral blood leukocytes, heart and skeletal muscle. Glut9 is associated with medullary thyroid carcinomas and pheochromocytomas. The gene encoding human Glut9 maps to chromosome 4p16-p15.3.

## REFERENCES

- Phay, J., et al. 2000. Strategy for identification of novel glucose transporter family members by using internet-based genomic databases. *Surgery* 128: 946-951.
- Phay, J., et al. 2000. Cloning and expression analysis of a novel member of the facilitative glucose transporter family, SLCA9 (Glut9). *Genomics* 66: 217-220.
- Shikhman, A., et al. 2001. Cytokine regulation of facilitated glucose transport in human articular chondrocytes. *J. Immunology* 167: 7001-7008.
- Joost, H. and Thorens, B. 2001. The extended GLUT-family of sugar/polyol transport facilitators: nomenclature, sequence characteristics, and function of its novel members (review). *Mol. Membr. Biol.* 18: 247-256.
- Online Mendelian Inheritance in Man, OMIM (™). Johns Hopkins University, Baltimore, MD. MIM Number: 606142: 7/24/01: World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## SOURCE

Glut9 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of Glut9 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-21631 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.

## RESEARCH USE

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

## APPLICATIONS

Glut9 (C-16) is recommended for detection of Glut9 of 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).

Positive Controls: human liver, human lung or human kidney tissues.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.