

Glut5 (P-18): sc-14844

BACKGROUND

Glucose is the major source of our energy and there are numerous isoforms of the glucose transporter in mammals, including GLUT1, GLUT2, GLUT3, GLUT4, GLUT5, GLUT6, GLUT7, GLUT8 and GLUT9. The GLUT5 gene located on the short arm of human chromosome 1 encodes a 501-amino acid facilitative glucose transporter. GLUT5 mRNA is highly expressed in small intestine and to a lesser extent in kidney, skeletal muscle and adipose tissue. Glut5 plays a critical role in fructose absorption in the small intestine and its expression is highly induced when exposed to a fructose-enriched diet. Glut5 transporter expressed in human skeletal muscle is specifically localized to the plasma membrane, where it participates in regulating hexose transfer across the sarcolemma. Glut8, a novel glucose transporter-like protein, exhibits significant sequence similarity with the other members of sugar transporter family. Glut8 comprises 12 putative membrane-spanning helices and several conserved motifs, which are important for transport activity. In human tissues, GLUT8 is predominantly expressed in testis and, to a lesser extent, in most other tissues including skeletal muscle, heart, small intestine and brain. In addition, the Glut8 glucose transport facilitator has a hormonally regulated testicular function.

CHROMOSOMAL LOCATION

Genetic locus: Slc2a5 (mouse) mapping to 4 E2.

SOURCE

Glut5 (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Glut5 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-14844 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Glut5 (P-18) is recommended for detection of Glut5 of mouse and rat 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).

Suitable for use as control antibody for Glut5 siRNA (m): sc-41223, Glut5 shRNA Plasmid (m): sc-41223-SH and Glut5 shRNA (m) Lentiviral Particles: sc-41223-V.

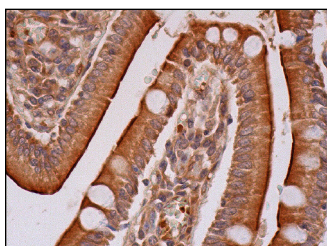
Molecular Weight of Glut5: 49-60 kDa.

Positive Controls: mouse kidney extract: sc-2255.

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



Glut5 (P-18): sc-14844. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing apical membrane and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Funari, V.A., et al. 2005. Genes required for fructose metabolism are expressed in Purkinje cells in the cerebellum. *Brain Res. Mol. Brain Res.* 142: 115-122.

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.



Try **Glut5 (E-2): sc-271055**, our highly recommended monoclonal alternative to Glut5 (P-18).