

Glut5 (S-12): sc-31846

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 (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal extracellular domain of Glut5 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-31846 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Glut5 (S-12) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Glut5 (S-12) is also recommended for detection of Glut5 in additional species, including bovine.

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.

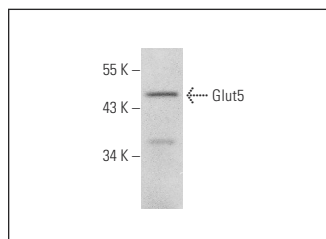
Molecular Weight of Glut5: 49-60 kDa.

Positive Controls: mouse brain extract: sc-2253, mouse kidney extract: sc-2255 or PC-12 cell lysate: sc-2250.

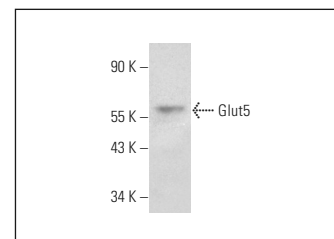
RECOMMENDED SECONDARY REAGENTS

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.

DATA



Glut5 (S-12): sc-31846. Western blot analysis of Glut5 expression in mouse brain tissue extract.



Glut5 (S-12): sc-31846. Western blot analysis of Glut5 expression in PC-12 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Sakakura, Y., et al. 2008. Metabolic mode peculiar to Meckel's cartilage: immunohistochemical comparisons of hypoxia-inducible factor-1 α and glucose transporters in developing endochondral bones in mice. *Eur. J. Oral Sci.* 116: 341-352.

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 or our catalog for detailed protocols and support products.


 MONOS
Satisfaction
Guaranteed

Try **Glut5 (E-2): sc-271055**, our highly recommended monoclonal alternative to Glut5 (S-12).