

Glut2 (Y-18): sc-31825

BACKGROUND

Glucose is fundamental to the metabolism of mammalian cells. Its passage across cell membranes is mediated by a family of transporters termed glucose transporters or Gluts. Glut1, Glut3 and Glut4 are high-affinity transporters, whereas Glut2 is a low-affinity transporter. In adipose and muscle tissue, Insulin stimulates a rapid and dramatic increase in glucose uptake, which is largely due to the redistribution of the Insulin-inducible glucose transporter Glut4. In response to Insulin, Glut4 is quickly shuttled from an intracellular storage site to the plasma membrane, where it binds glucose. In contrast, the ubiquitously expressed glucose transporter Glut1 is constitutively targeted to the plasma membrane and shows a much less dramatic translocation in response to Insulin. Glut2 expression is seen in pancreatic beta cells, hepatocytes and basolateral membranes of intestinal and epithelial cells, while the highest expression of Glut3 has been found in neuronal tissue.

REFERENCES

1. Mueckler, M. 1994. Facilitative glucose transporters. *Eur. J. Biochem.* 219: 713-725.
2. McCall, A.L., et al. 1995. Pro-gressive hippocampal loss of immunoreactive Glut3, the neuron-specific glucose transporter, after global forebrain ischemia in the rat. *Brain Res.* 670: 29-38.
3. Livingstone, C., et al. 1995. Hypothalamic Glut 4 expression: a glucose- and Insulin-sensing mechanism? *Mol. Cell. Endocrinol.* 107: 67-70.
4. Kandror, K.V., et al. 1995. Expression and compartmentalization of caveolin in adipose cells: coordinate regulation with and structural segregation from Glut4. *J. Cell. Biol.* 129: 999-1006.

CHROMOSOMAL LOCATION

Genetic locus: SLC2A2 (human) mapping to 3q26.2; Slc2a2 (mouse) mapping to 3 A3.

SOURCE

Glut2 (Y-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of Glut2 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-31825 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

Glut2 (Y-18) is recommended for detection of Glut2 of mouse, rat and human 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).

Glut2 (Y-18) is also recommended for detection of Glut2 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Glut2 siRNA (h): sc-35495, Glut2 siRNA (m): sc-35496, Glut2 siRNA (r): sc-270173, Glut2 shRNA Plasmid (h): sc-35495-SH, Glut2 shRNA Plasmid (m): sc-35496-SH, Glut2 shRNA Plasmid (r): sc-270173-SH, Glut2 shRNA (h) Lentiviral Particles: sc-35495-V, Glut2 shRNA (m) Lentiviral Particles: sc-35496-V and Glut2 shRNA (r) Lentiviral Particles: sc-270173-V.

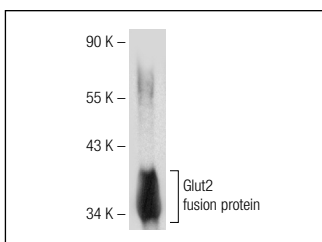
Molecular Weight of Glut2: 60-62 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411, T98G cell lysate: sc-2294 or Caki-1 cell lysate: sc-2224.

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



Glut2 (Y-18): sc-31825. Western blot analysis of human recombinant Glut2 fusion protein.



Glut2 (Y-18): sc-31825. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane and cytoplasmic staining of cells in tubules.

RESEARCH USE

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