

Glut10 (P-20): sc-50942

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. 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; and class III, which includes Glut6, Glut8, Glut10, Glut12 and the myo-inositol transporter HMIT1. Glut10 is a 541 amino acid facilitative glucose transporter expressed in high amounts in liver and pancreas. It contains 12 transmembrane domains, with a hydrophilic intracellular loop between helices 6 and 7, and a potential N-linked glycosylation site, with a large extracellular loop between helices 9 and 10. The gene for Glut 10, SLC2A10, maps to chromosome 20q13.1, a region that is linked to type 2 diabetes.

REFERENCES

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- Joost, H. and Thorens, B. 2001. The extended Glut-family of sugar/polyol transport facilitators: nomenclature, sequence characteristics and function of its novel members. *Mol. Membr. Biol.* 18: 247-256.
- McVie-Wylie, A.J., Lamson, D.R. and Chen Y.T. 2001. Molecular cloning of a novel member of the Glut family of transporters, SLC2A10 (Glut10), localized on chromosome 20q13.1: a candidate gene for NIDDM susceptibility. *Genomics* 72: 113-117.
- Dawson, P.A., Mychaleckyj, J.C., Fossey, S.C., Mihic, S.J., Craddock, A.L. and Bowden, D.W. 2001. Sequence and functional analysis of Glut10: a glucose transporter in the type 2 diabetes-linked region of chromosome 20q12-13.1. *Mol. Genet. Metab.* 74: 186-199.

CHROMOSOMAL LOCATION

Genetic locus: SLC2A10 (human) mapping to 20q13.12.

SOURCE

Glut10 (P-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of Glut10 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-50942 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.

APPLICATIONS

Glut10 (P-20) is recommended for detection of Glut10 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Glut10 siRNA (h): sc-60697, Glut10 shRNA Plasmid (h): sc-60697-SH and Glut10 shRNA (h) Lentiviral Particles: sc-60697-V.

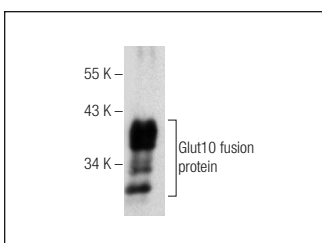
Molecular Weight of Glut10: 57 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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



Glut10 (P-20): sc-50942. Western blot analysis of human recombinant Glut10 fusion protein.

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
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Try **Glut10 (H-10): sc-398495**, our highly recommended monoclonal alternative to Glut10 (P-20).