

# Glut10 (H-10): sc-398495

## 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 myoinositol 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 20q13.12, a region that is linked to type 2 diabetes.

## REFERENCES

- Shikman, A., et al. 2001. Cytokine regulation of facilitated glucose transport in human articular chondrocytes. *J. Immunol.* 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. *Mol. Membr. Biol.* 18: 247-256.
- McVie-Wylie, A.J., et al. 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.

## CHROMOSOMAL LOCATION

Genetic locus: SLC2A10 (human) mapping to 20q13.12; Slc2a10 (mouse) mapping to 2 H3.

## SOURCE

Glut10 (H-10) is a mouse monoclonal antibody raised against amino acids 321-416 mapping within an extracellular domain of Glut10 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Glut10 (H-10) is available conjugated to agarose (sc-398495 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398495 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398495 PE), fluorescein (sc-398495 FITC), Alexa Fluor® 488 (sc-398495 AF488), Alexa Fluor® 546 (sc-398495 AF546), Alexa Fluor® 594 (sc-398495 AF594) or Alexa Fluor® 647 (sc-398495 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398495 AF680) or Alexa Fluor® 790 (sc-398495 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

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

## APPLICATIONS

Glut10 (H-10) is recommended for detection of Glut10 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 siRNA (m): sc-60698, Glut10 shRNA Plasmid (h): sc-60697-SH, Glut10 shRNA Plasmid (m): sc-60698-SH, Glut10 shRNA (h) Lentiviral Particles: sc-60697-V and Glut10 shRNA (m) Lentiviral Particles: sc-60698-V.

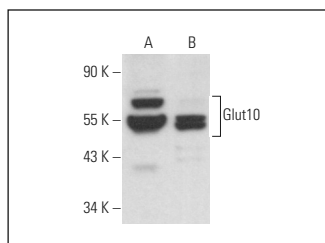
Molecular Weight of Glut10: 57 kDa.

Positive Controls: MDA-MB-435S whole cell lysate: sc-364184, NCI-H1299 whole cell lysate: sc-364234 or PANC-1 whole cell lysate: sc-364380.

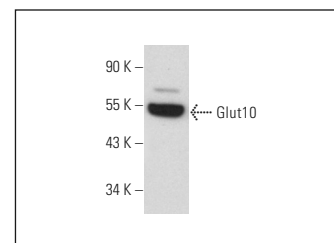
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Glut10 (H-10): sc-398495. Western blot analysis of Glut10 expression in MDA-MB-435S (A) and NCI-H1299 (B) whole cell lysates.



Glut10 (H-10): sc-398495. Western blot analysis of Glut10 expression in PANC-1 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Jian, L., et al. 2023. GLUT10 is a novel immune regulator involved in lung cancer immune cell infiltration and predicts worse survival when transcriptionally downregulated. *Heliyon* 9: e13836.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA