SANTA CRUZ BIOTECHNOLOGY, INC.

Glut10 (H-10): sc-398495

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Shikhman, A., et al. 2001. Cytokine regulation of facilitated glucose transport in human articular chondrocytes. J. Immunol. 167: 7001-7008.
2. 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_1 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.

STORAGE

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

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.

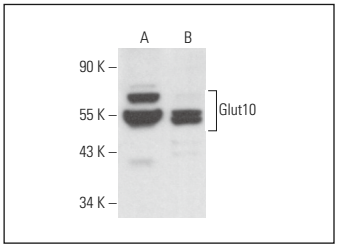
Molecular Weight of Glut10: 57 kDa.

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.

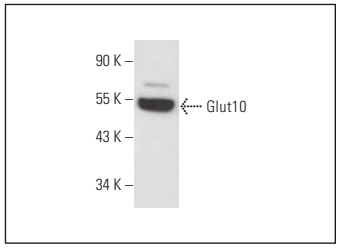
RECOMMENDED SUPPORT REAGENTS

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

1. 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.
2. Wu, Q., et al. 2023. Glut10 restrains neointima formation by promoting SMCs mtDNA demethylation and improving mitochondrial function. Transl. Res. 260: 1-16.

RESEARCH USE

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