SANTA CRUZ BIOTECHNOLOGY, INC.

Glut6 (B-3): sc-373973

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The oxidation of glucose functions as the dominant source of metabolic energy for mammals. The plasma membrane is impermeable to glucose, so the cellular uptake of this important nutrient is achieved by facultative hexose transproters (Gluts). Gluts are integral membrane proteins that transport glucose and related hexoses. Glucose binds to a Glut on one side of the membrane which provokes a conformational change causing it to release glucose to the other side. Members of the Glut family may enhance the metabolic activity of tumor cells. Glut6 is part of the third out of three classes of Gluts. Glut6 is mainly expressed in the brain, spleen and peripheral leukocytes. It appears to be regulated by subcellular redistribution, because it is targeted to intracellular compartments by di-leucine motifs, recycling itself in a Dynamin-dependent manner.

REFERENCES

1. Bell, G.I., et al. 1990. Molecular biology of mammalian glucose transporters. Diabetes Care 13: 198-208.
2. Kayano, T., et al. 1990. Human facilitative glucose transporters. Isolation, functional characterization, and gene localization of cDNAs encoding an isoform (Glut5) expressed in small intestine, kidney, muscle, and adipose tissue and an unusual glucose transporter pseudogene-like sequence (Glut6). J. Biol. Chem. 265: 13276-13282.
3. Lisinski, I., et al. 2001. Targeting of Glut6 (formerly Glut9) and Glut8 in rat adipose cells. Biochem. J. 358: 517-522.
4. Joost, H.G. and Thorens, B. 2001. The extended Glut-family of sugar/polyol transport facilitators: nomenclature, sequence characteristics, and potential function of its novel members. Mol. Membr. Biol. 18: 247-256.

CHROMOSOMAL LOCATION

Genetic locus: SLC2A6 (human) mapping to 9q34.2; Slc2a6 (mouse) mapping to 2 A3.

SOURCE

Glut6 (B-3) is a mouse monoclonal antibody raised against amino acids 226-267 mapping within an internal region of Glut6 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.

Glut6 (B-3) is available conjugated to agarose (sc-373973 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373973 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373973 PE), fluorescein (sc-373973 FITC), Alexa Fluor® 488 (sc-373973 AF488), Alexa Fluor® 546 (sc-373973 AF546), Alexa Fluor® 594 (sc-373973 AF594) or Alexa Fluor® 647 (sc-373973 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373973 AF680) or Alexa Fluor® 790 (sc-373973 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

Glut6 (B-3) is recommended for detection of Glut6 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 Glut6 siRNA (h): sc-60699, Glut6 siRNA (m): sc-60700, Glut6 shRNA Plasmid (h): sc-60699-SH, Glut6 shRNA Plasmid (m): sc-60700-SH, Glut6 shRNA (h) Lentiviral Particles: sc-60699-V and Glut6 shRNA (m) Lentiviral Particles: sc-60700-V.

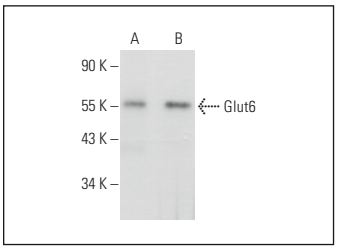
Molecular Weight of Glut6: 55 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, T24 cell lysate: sc-2292 or M1 whole cell lysate: sc-364782.

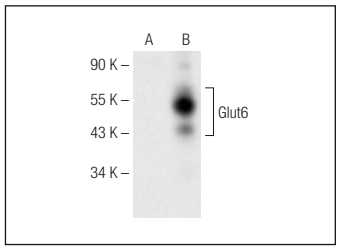
RECOMMENDED SUPPORT REAGENTS

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



Glut6 (B-3): sc-373973. Western blot analysis of Glut6 expression in MIA PaCa-2 (**A**) and M1 (**B**) whole cell lysates.



Glut6 (B-3): sc-373973. Western blot analysis of Glut6 expression in non-transfected (**A**) and human Glut6 transfected (**B**) HEK293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Kavanagh Williamson, M., et al. 2018. Upregulation of glucose uptake and hexokinase activity of primary human $CD4^+$ T cells in response to infection with HIV-1. Viruses 10: 114.

STORAGE

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