

Glut2 (C-10): sc-518022

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 β 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. Progressive 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 (C-10) is a mouse monoclonal antibody raised against amino acids 32-98 of Glut2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Glut2 (C-10) is available conjugated to agarose (sc-518022 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518022 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518022 PE), fluorescein (sc-518022 FITC), Alexa Fluor[®] 488 (sc-518022 AF488), Alexa Fluor[®] 546 (sc-518022 AF546), Alexa Fluor[®] 594 (sc-518022 AF594) or Alexa Fluor[®] 647 (sc-518022 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-518022 AF680) or Alexa Fluor[®] 790 (sc-518022 AF790), 200 μ g/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

Glut2 (C-10) is recommended for detection of Glut2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 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.

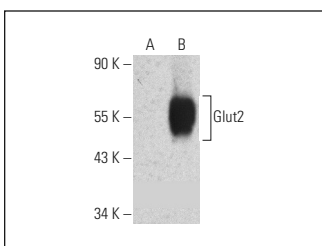
Molecular Weight of Glut2: 60-62 kDa.

Positive Controls: Glut2 (m): 293T Lysate: sc-120518.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



Glut2 (C-10): sc-518022. Western blot analysis of Glut2 expression in non-transfected: sc-117752 (A) and mouse Glut2 transfected: sc-120518 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Xu, H., et al. 2018. A long-term maternal diet intervention is necessary to avoid the obesogenic effect of maternal high-fat diet in the offspring. *J. Nutr. Biochem.* 62: 210-220.

RESEARCH USE

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

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