

Glut3 (M-20): sc-7582

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.

CHROMOSOMAL LOCATION

Genetic locus: SLC2A3 (human) mapping to 12p13.31; Slc2a3 (mouse) mapping to 6 F2.

SOURCE

Glut3 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of Glut3 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-7582 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Glut3 (M-20) is recommended for detection of Glut3 of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, 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 Glut3 siRNA (h): sc-41218, Glut3 siRNA (m): sc-41219, Glut3 shRNA Plasmid (h): sc-41218-SH, Glut3 shRNA Plasmid (m): sc-41219-SH, Glut3 shRNA (h) Lentiviral Particles: sc-41218-V and Glut3 shRNA (m) Lentiviral Particles: sc-41219-V.

Molecular Weight of Glut3: 48-70 kDa.

Positive Controls: EOC 20 whole cell lysate: sc-364187, mouse testis extract: sc-2405 or mouse heart extract: sc-2254.

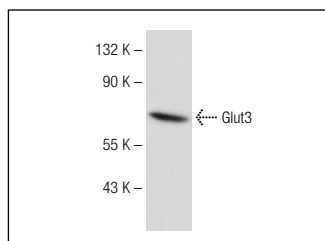
STORAGE

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

RESEARCH USE

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

DATA



Glut3 (M-20): sc-7582. Western blot analysis of Glut3 expression in EOC 20 whole cell lysate.

SELECT PRODUCT CITATIONS

- Zhou, R., et al. 2002. Genotoxic exposure is associated with alterations in glucose uptake and metabolism. *Cancer Res.* 62: 3515-3520.
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- Alonso, A., et al. 2007. Chronic estradiol treatment improves brain homeostasis during aging in female rats. *Endocrinology* 149: 57-72.
- Schmidt, S., et al. 2008. Neuronal functions, feeding behavior, and energy balance in Slc2a3^{-/-} mice. *Am. J. Physiol. Endocrinol. Metab.* 295: E1084-E1094.
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- Morán, J., et al. 2013. 17 β -Estradiol and genistein acute treatments improve some cerebral cortex homeostasis aspects deteriorated by aging in female rats. *Exp. Gerontol.* 48: 414-421.

PROTOCOLS

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