SANTA CRUZ BIOTECHNOLOGY, INC.

Glut3 (I-14): sc-31838

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (mouse) mapping to 6 F2.

SOURCE

Glut3 (I-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of Glut3 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-31838 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Glut3 (I-14) is recommended for detection of Glut3 of mouse and rat origin by Western Blotting (starting dilution 1:200, 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).

Glut3 (I-14) is also recommended for detection of Glut3 in additional species, including canine and bovine.

Suitable for use as control antibody for Glut3 siRNA (m): sc-41219, Glut3 shRNA Plasmid (m): sc-41219-SH and Glut3 shRNA (m) Lentiviral Particles: sc-41219-V.

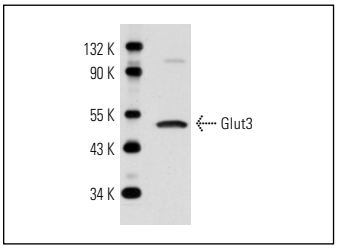
Molecular Weight of Glut3: 48-70 kDa.

Positive Controls: mouse testis extract: sc-2405 mouse brain extract: sc-2253 or mouse heart extract: sc-2254.

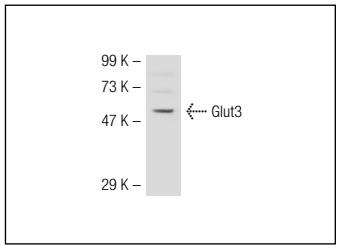
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Glut3 (I-14): sc-31838. Western blot analysis of Glut3 expression in mouse heart tissue extract.



Glut3 (I-14): sc-31838. Western blot analysis of Glut3 expression in mouse brain tissue extract.

SELECT PRODUCT CITATIONS

1. Sakakura, Y., et al. 2008. Metabolic mode peculiar to Meckel's cartilage: immunohistochemical comparisons of hypoxia-inducible factor-1α and glucose transporters in developing endochondral bones in mice. Eur. J. Oral Sci. 116: 341-352.
2. Ma, Y., et al. 2011. Upregulation of growth signaling and nutrient transporters in cotyledons of early to mid-gestational nutrient restricted ewes. Placenta 32: 255-263.
3. Ferreira, J.M., et al. 2011. Activity-dependent regulation of surface glucose transporter-3. J. Neurosci. 31: 1991-1999.
4. Laird, R.M., et al. 2013. γδ T cells acquire effector fates in the thymus and differentiate into cytokine-producing effectors in a listeria model of infection independently of CD28 costimulation. PLoS ONE 8: e63178.

RESEARCH USE

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