

# Glut7 (D-18): sc-161661

## 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 myo-inositol transporter HMIT1. Glut7, also known as SLC2A7 (solute carrier family 2 (facilitated glucose transporter), member 7), is a 513 amino acid multi-pass membrane protein belonging to the sugar transporter family, glucose transporter subfamily and major facilitator superfamily.

## REFERENCES

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3. 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.
4. Li, Q., et al. 2004. Cloning and functional characterization of the human Glut7 isoform SLC2A7 from the small intestine. *Am. J. Physiol. Gastrointest. Liver Physiol.* 287: G236-G242.
5. Manolescu, A., et al. 2005. Identification of a hydrophobic residue as a key determinant of fructose transport by the facilitative hexose transporter SLC2A7 (Glut7). *J. Biol. Chem.* 280: 42978-42983.
6. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610371. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Manolescu, A.R., et al. 2007. Facilitated hexose transporters: new perspectives on form and function. *Physiology* 22: 234-240.

## CHROMOSOMAL LOCATION

Genetic locus: Slc2a7 (mouse) mapping to 4 E2.

## SOURCE

Glut7 (D-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of Glut7 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-161661 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Glut7 (D-18) is recommended for detection of Glut7 of mouse 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); non cross-reactive with other Glut family members.

Suitable for use as control antibody for Glut7 siRNA (m): sc-145450, Glut7 shRNA Plasmid (m): sc-145450-SH and Glut7 shRNA (m) Lentiviral Particles: sc-145450-V.

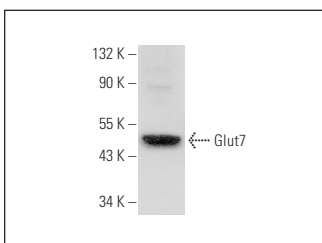
Molecular Weight of Glut7: 53 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

## 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



Glut7 (D-18): sc-161661. Western blot analysis of Glut7 expression in NIH/3T3 whole cell lysate.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.