

SGLT-2 (H-45): sc-98975

BACKGROUND

Glucose is the main source of energy for mammalian cells and its entry is mediated by various transporters. This process involves seven facilitative (GLUT-1 to -7) and 2 concentrative glucose transporters (SGLT-1, SGLT-2) and a sensor (SGLT-3). The SGLT family members use the electrochemical gradient of two sodium ions to transport one glucose molecule. The mRNA of SGLTs increase steadily from the fetal period to maturity along with an increase in their functional activity. SGLT-1 is responsible for the uptake of the dietary sugars glucose and galactose from the intestinal lumen, while SGLT-3 is involved in the detection of luminal glucose only. Both the sodium glucose co-transporters SGLT-1 and SGLT-2 are expressed in kidneys. Mutations in the gene encoding SGLT-2 result in familial renal glucosuria (FRG), an isolated disorder of proximal tubular glucose transport, characterized by abnormal urinary glucose excretion in the presence of normal blood glucose levels.

REFERENCES

1. Turk, E., et al. 1993. Assignment of the human Na⁺/glucose cotransporter gene SGLT1 to chromosome 22q13.1. *Genomics* 17: 752-754.
2. Yang, Q., et al. 2000. Expression characteristics and relevance of sodium glucose cotransporter-1 in mammalian renal tubulogenesis. *Am. J. Physiol. Renal Physiol.* 279: 765-777.

CHROMOSOMAL LOCATION

Genetic locus: SLC5A2 (human) mapping to 16p11.2; Slc5a2 (mouse) mapping to 7 F3.

SOURCE

SGLT-2 (H-45) is a rabbit polyclonal antibody raised against amino acids 226-268 mapping within an internal region of SGLT-2 of human origin.

PRODUCT

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

APPLICATIONS

SGLT-2 (H-45) is recommended for detection of SGLT-2 of mouse, rat and human 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). SGLT-2 (H-45) is also recommended for detection of SGLT-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SGLT-2 siRNA (h): sc-106547, SGLT-2 siRNA (m): sc-61540, SGLT-2 shRNA Plasmid (h): sc-106547-SH, SGLT-2 shRNA Plasmid (m): sc-61540-SH, SGLT-2 shRNA (h) Lentiviral Particles: sc-106547-V and SGLT-2 shRNA (m) Lentiviral Particles: sc-61540-V.

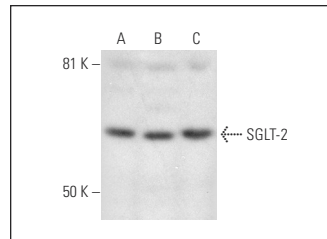
Molecular Weight of SGLT-2: 70-77 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, Jurkat whole cell lysate: sc-2204 or MDA-MB-435S whole cell lysate: sc-364184.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SGLT-2 (H-45): sc-98975. Western blot analysis of SGLT-2 expression in Caki-1 (A), Jurkat (B) and MDA-MB-435S (C) whole cell lysates.

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 or our catalog for detailed protocols and support products.

MONOS
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Try **SGLT-2 (D-6): sc-393350**, our highly recommended monoclonal alternative to SGLT-2 (H-45).