

SGLT-6 (H-40): sc-135408

BACKGROUND

SGLT-6, also known as SLC5A11 (solute carrier family 5 (sodium/glucose co-transporter), member 11) KST1, SLGTX or SMIT2, is a 675 amino acid multi-pass membrane protein that belongs to the sodium/solute symporter family of transport proteins. Expressed at high levels in kidney, heart, placenta, liver and skeletal muscle, SGLT-6 is involved in the co-transport of Myo-inositol with sodium, specifically facilitating the transport of two Myo-inositols per sodium ion. In addition to its role in sodium transport, SGLT-6 also participates in the transport of glucose and xylose and may function to induce Pcd-1-dependent cell apoptosis. The gene encoding SGLT-6 is an autoimmune modifier in systemic lupus erythematosus (SLE), suggesting an involvement for SGLT-6 in the pathogenesis of SLE. Multiple isoforms of SGLT-6 exist due to alternative splicing events.

REFERENCES

1. Roll, P., et al. 2002. New human sodium/glucose co-transporter gene (KST1): identification, characterization, and mutation analysis in ICCA (infantile convulsions and choreoathetosis) and BFIC (benign familial infantile convulsions) families. *Gene* 285: 141-148.
2. Coady, M.J., et al. 2002. Identification of a novel Na⁺/Myo-inositol co-transporter. *J. Biol. Chem.* 277: 35219-35224.
3. Groenen, P.M., et al. 2004. Spina bifida and genetic factors related to Myo-inositol, glucose, and zinc. *Mol. Genet. Metab.* 82: 154-161.
4. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610238. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Yang, Y., et al. 2007. Gene copy-number variation and associated polymorphisms of complement component C4 in human systemic lupus erythematosus (SLE): low copy number is a risk factor for and high copy number is a protective factor against SLE susceptibility in European Americans. *Am. J. Hum. Genet.* 80: 1037-1054.
6. Tsai, L.J., et al. 2008. The sodium-dependent glucose co-transporter SLC5A11 as an autoimmune modifier gene in SLE. *Tissue Antigens* 71: 114-126.
7. Gao, H., et al. 2009. Select nutrients in the ovine uterine lumen. ii. glucose transporters in the uterus and peri-implantation conceptuses. *Biol. Reprod.* 80: 94-104.

CHROMOSOMAL LOCATION

Genetic locus: SLC5A11 (human) mapping to 16p12.1; Slc5a11 (mouse) mapping to 7 F3.

SOURCE

SGLT-6 (H-40) is a rabbit polyclonal antibody raised against amino acids 218-257 mapping within an internal region of SGLT-6 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-6 (H-40) is recommended for detection of SGLT-6 of human origin and Slc5a11 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).

SGLT-6 (H-40) is also recommended for detection of SGLT-6 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SGLT-6 siRNA (h): sc-93032, Slc5a11 siRNA (m): sc-153571, SGLT-6 shRNA Plasmid (h): sc-93032-SH, Slc5a11 shRNA Plasmid (m): sc-153571-SH, SGLT-6 shRNA (h) Lentiviral Particles: sc-93032-V and Slc5a11 shRNA (m) Lentiviral Particles: sc-153571-V.

Molecular Weight of SGLT-6: 74 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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.

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.