SANTA CRUZ BIOTECHNOLOGY, INC.

SLC17A3 (N-19): sc-55772

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The Power to Question

BACKGROUND

SLC17A3 (solute carrier family 17 member 3), also known as NPT4 (Na^+/PI cotransporter 4), is a 401 amino acid multi-pass membrane protein that belongs to the sodium/anion cotransporter family. Expressed in the liver and kidney, SLC17A3 is involved in active transport of phosphate into cells through a sodium/phosphate co-transport system. SLC17A3 contains four transmembrane domains and is localized to the membrane of the endoplasmic reticulum (ER). Defects in the gene encoding SLC17A3 are thought to decrease phosphate transport efficiency and contribute to the development of glycogen storage disease type Ic (GSD Ic). GSD Ic is an autosomal recessive disorder caused by a deficiency in the phosphate transport system. It is characterized by pyogenic infections, neutrophil dysfunction and neutropenia.

REFERENCES

1. Cheret, C., Doyen, A., Yaniv, M. and Pontoglio, M. 2002. Hepatocyte nuclear factor 1 α controls renal expression of the NPT1-NPT4 anionic transporter locus. J. Mol. Biol. 322: 929-941.
2. Ishibashi, K., Matsuzaki, T., Takata, K. and Imai, M. 2003. Identification of a new member of type I Na/phosphate co-transporter in the rat kidney. Nephron Physiol 94: 10-18.
3. Melis, D., Havelaar, A.C., Verbeek, E., Smit, G.P., Benedetti, A., Mancini, G.M. and Verheijen, F. 2004. NPT4, a new microsomal phosphate transporter: mutation analysis in glycogen storage disease type Ic. J. Inherit. Metab. Dis. 27: 725-733.
4. Reimer, R.J. and Edwards, R.H. 2004. Organic anion transport is the primary function of the SLC17/type I phosphate transporter family. Pflugers Arch. 447: 629-635.
5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611034. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: SLC17A3 (human) mapping to 6p21.3.

SOURCE

SLC17A3 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of SLC17A3 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.

Blocking peptide available for competition studies, sc-55772 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

SLC17A3 (N-19) is recommended for detection of SLC17A3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 SLC17A3 siRNA (h): sc-63040.

Molecular Weight of SLC17A3: 44 kDa.

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) 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.

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.