SANTA CRUZ BIOTECHNOLOGY, INC.

SLC13A5 (L-13): sc-169320

BACKGROUND

SLC13A5 (solute carrier family 13 (sodium-dependent citrate transporter), member 5), also known as NaCT, is a 568 amino acid multi-pass membrane protein that belongs to the SLC13A transporter family and is expressed in liver, brain and testicular tissue. Functioning as a high-affinity sodium/citrate co-transporter, SLC13A5 mediates the electrogenic import of citrate into cells and is thought to facilitate the circulation of citrate for the generation of metabolic energy, as well as the synthesis of cholesterol and fatty acids. The gene encoding SLC13A5 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

1. Pajor, A.M. 1999. Citrate transport by the kidney and intestine. Semin. Nephrol. 19: 195-200.
2. Inoue, K., et al. 2002. Human Na^+-coupled citrate transporter: primary structure, genomic organization, and transport function. Biochem. Biophys. Res. Commun. 299: 465-471.
3. Inoue, K., et al. 2002. Structure, function, and expression pattern of a novel sodium-coupled citrate transporter (NaCT) cloned from mammalian brain. J. Biol. Chem. 277: 39469-39476.
4. Inoue, K., et al. 2003. Human sodium-coupled citrate transporter, the orthologue of *Drosophila* Indy, as a novel target for lithium action. Biochem. J. 374: 21-26.
5. Markovich, D. and Murer, H. 2004. The SLC13 gene family of sodium sulphate/carboxylate cotransporters. Pflugers Arch. 447: 594-602.

CHROMOSOMAL LOCATION

Genetic locus: SLC13A5 (human) mapping to 17p13.1.

SOURCE

SLC13A5 (L-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SLC13A5 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-169320 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

SLC13A5 (L-13) is recommended for detection of SLC13A5 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); non cross-reactive with other SLC13A family members.

Suitable for use as control antibody for SLC13A5 siRNA (h): sc-94127, SLC13A5 shRNA Plasmid (h): sc-94127-SH and SLC13A5 shRNA (h) Lentiviral Particles: sc-94127-V.

Molecular Weight of SLC13A5: 63 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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.