SANTA CRUZ BIOTECHNOLOGY, INC.

CTL4 (D-14): sc-68049

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Choline is an essential nutrient that is required for the synthesis of both acetylcholine, a neurotransmitter found in cholinergic nerve terminals, and phosphatidylcholine, a key component of cell membranes. Choline deficien cies are associated with defects in cell growth and have been implicated in disorders such as Alzheimer's and Parkinson's disease. The choline transporter-like protein family (CTL) are solute carriers that transport choline, a compound which is not able to permeate cells, across the cell membrane. CTL4, also known as SLC44A4 (solute carrier family 44, member 4), is a multi-pass membrane protein which can fuse with Neu1, generating a CTL4-Neu1 transcript. This fusion is implicated in sialidosis, a disease characterized by improper lysosomal storage.

REFERENCES

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2. Traiffort, E., Ruat, M., O'Regan, S. and Meunier, F.M. 2005. Molecular characterization of the family of choline transporter-like proteins and their splice variants. J. Neurochem. 92: 1116-1125.
3. Michel, V., Yuan, Z., Ramsubir, S. and Bakovic, M. 2006. Choline transport for phospholipid synthesis. Exp. Biol. Med. 231: 490-504.
4. Sjöblom, T., Jones, S., Wood, L.D., Parsons, D.W., Lin, J., Barber, T.D., Mandelker, D., Leary, R.J., Ptak, J., Silliman, N., Szabo, S., Buckhaults, P., Farrell, C., Meeh, P., Markowitz, S.D., Willis, J., Dawson, D., Willson, J.K., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. Science 314: 268-274.
5. Wang, T., Li, J., Chen, F., Zhao, Y., He, X., Wan, D. and Gu, J. 2007. Choline transporters in human lung adenocarcinoma: expression and functional implications. Acta Biochim. Biophys. Sin. 39: 668-674.
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CHROMOSOMAL LOCATION

Genetic locus: SLC44A4 (human) mapping to 6p21.33; Slc44a4 (mouse) mapping to 17 B1.

SOURCE

CTL4 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of CTL4 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-68049 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CTL4 (D-14) is recommended for detection of CTL4 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).

CTL4 (D-14) is also recommended for detection of CTL4 in additional species, including porcine.

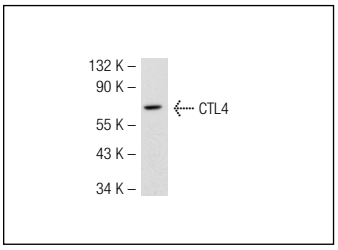
Suitable for use as control antibody for CTL4 siRNA (h): sc-62167, CTL4 siRNA (m): sc-62168, CTL4 shRNA Plasmid (h): sc-62167-SH, CTL4 shRNA Plasmid (m): sc-62168-SH, CTL4 shRNA (h) Lentiviral Particles: sc-62167-V and CTL4 shRNA (m) Lentiviral Particles: sc-62168-V.

Molecular Weight of CTL4: 79 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) 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



CTL4 (D-14): sc-68049. Western blot analysis of CTL4 expression in 293T 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 or our catalog for detailed protocols and support products.