

ZnT-2 (C-17): sc-27506

BACKGROUND

Zinc, an essential element required for cell proliferation and differentiation, plays a role in a diverse array of cellular functions, including acting as a cofactor for numerous enzymes and transcription factors and as a neuroregulator. The zinc transporter (ZnT) family regulates the supply of zinc within cells, and its members are characterized by containing six membrane-spanning domains, a large histidine-rich intracellular loop and a C-terminal tail. ZnT-2 mediates the uptake of zinc into vesicles in small intestine, kidney, placenta and, in some cases, liver.

REFERENCES

1. Palmiter, R.D. and Findley, S.D. 1995. Cloning and functional characterization of a mammalian zinc transporter that confers resistance to zinc. *EMBO J.* 14: 639-649.
2. McMahon, R.J. and Cousins, R.J. 1998. Mammalian zinc transporters. *J. Nutr.* 128: 667-670.
3. Beyersmann, D. and Haase, H. 2001. Functions of zinc in signaling, proliferation and differentiation of mammalian cells. *Biometals* 14: 331-341.
4. Liuzzi, J.P., Blanchard, R.K. and Cousins, R.J. 2001. Differential regulation of zinc transporter 1, 2, and 4 mRNA expression by dietary zinc in rats. *J. Nutr.* 131: 46-52.
5. Sekler, I., Moran, A., Hershinkel, M., Dori, A., Margulis, A., Birenzweig, N., Nitzan, Y. and Silverman, W.F. 2002. Distribution of the zinc transporter ZnT-1 in comparison with chelatable zinc in the mouse brain. *J. Comp. Neurol.* 447: 201-209.

CHROMOSOMAL LOCATION

Genetic locus: SLC30A2 (human) mapping to 1p36.11; Slc30a2 (mouse) mapping to 4 D3.

SOURCE

ZnT-2 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ZnT-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.

Blocking peptide available for competition studies, sc-27506 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.

PROTOCOLS

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

APPLICATIONS

ZnT-2 (C-17) is recommended for detection of ZnT-2 of human and, to a lesser extent, mouse and rat 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).

ZnT-2 (C-17) is also recommended for detection of ZnT-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ZnT-2 siRNA (h): sc-106718, ZnT-2 siRNA (m): sc-155819, ZnT-2 shRNA Plasmid (h): sc-106718-SH, ZnT-2 shRNA Plasmid (m): sc-155819-SH, ZnT-2 shRNA (h) Lentiviral Particles: sc-106718-V and ZnT-2 shRNA (m) Lentiviral Particles: sc-155819-V.

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.

SELECT PRODUCT CITATIONS

1. Leung, K.W., Liu, M., Xu, X., Seiler, M.J., Barnstable, C.J. and Tombran-Tink, J. 2008. Expression of ZnT and ZIP zinc transporters in the human RPE and their regulation by neurotrophic factors. *Invest. Ophthalmol. Vis. Sci.* 49: 1221-1231.

RESEARCH USE

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