SANTA CRUZ BIOTECHNOLOGY, INC.

ZnT-5 (E-14): sc-161273

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Zinc, an essential element required for cell proliferation and differentiation, plays a role in a diverse array of cellular functions (such as neuroregulation) and acts as a cofactor for numerous enzymes and transcription factors. The zinc transporter (ZnT) family regulates the supply of zinc within cells, and its members commonly contain six membrane-spanning domains, a large histidine-rich intracellular loop and a C-terminal tail. ZnT-5 (zinc transporter 5), also known as SLC30A5 (solute carrier family 30 member 5), ZNTL1 or ZTL1, is a 765 amino acid protein that localizes to the membrane of the *trans*-Golgi network. Expressed throughout the body with highest expression in liver, pancreas and kidney, ZnT-5 functions as zinc transporter that regulates zinc homeostasis within vesicular compartments and the Golgi apparatus and may help to form Insulin crystals within pancreatic β cells. ZnT-5 is expressed as two isoforms due to alternative splicing events and its expression is upregulated in response to zinc depletion.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SLC30A5 (human) mapping to 5q13.1; Slc30a5 (mouse) mapping to 13 D1.

SOURCE

ZnT-5 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of ZnT-5 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-161273 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ZnT-5 (E-14) is recommended for detection of ZnT-5 of mouse, rat and 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 ZnT family members.

ZnT-5 (E-14) is also recommended for detection of ZnT-5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ZnT-5 siRNA (h): sc-91622, ZnT-5 siRNA (m): sc-155978, ZnT-5 shRNA Plasmid (h): sc-91622-SH, ZnT-5 shRNA Plasmid (m): sc-155978-SH, ZnT-5 shRNA (h) Lentiviral Particles: sc-91622-V and ZnT-5 shRNA (m) Lentiviral Particles: sc-155978-V.

Molecular Weight (predicted) of ZnT-5 isoforms 1/2: 84/57 kDa.

Molecular Weight (observed) of ZnT-5: 68 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.

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.