SANTA CRUZ BIOTECHNOLOGY, INC.

ZnT-9 (C-3): sc-271956

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, including acting as a cofactor for numerous enzymes and transcription factors and as a neuroregulator. The zinc transporter (ZnT) or solute carrier 30 (SLC30) 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 proteins also belong to the cation diffusion facilitator (CDF) transporter family of metal ion transporters. ZnT-9, also known as HUEL (human embryonic lung protein), GAC63 (GRIP1-associated coactivator 1) or SLC30 member 9, displays ubiquitous expression in fetal and adult tissues as well as cancer cell lines. ZnT-9 localizes to the cytoplasm and is translocated to the nucleus during S phase. ZnT-9 has the lowest homology with the other zinc transporters and may function as a DNA-binding protein.

REFERENCES

1. Palmiter, R.D., et al. 2004. Efflux and compartmentalization of zinc by members of the SLC30 family of solute carriers. Pflugers Arch. 447: 744-751.
2. Seve, M., et al. 2004. In silico identification and expression of SLC30 family genes: an expressed sequence tag data mining strategy for the characterization of zinc transporters' tissue expression. BMC Genomics 5: 32-32.
3. González-Guerrero, M., et al. 2005. Characterization of a *Glomus intraradices* gene encoding a putative Zn transporter of the cation diffusion facilitator family. Fungal Genet. Biol. 42: 130-140.

CHROMOSOMAL LOCATION

Genetic locus: SLC30A9 (human) mapping to 4p13; Slc30a9 (mouse) mapping to 5 C3.1.

SOURCE

ZnT-9 (C-3) is a mouse monoclonal antibody raised against amino acids 260-553 mapping near the C-terminus of ZnT-9 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ZnT-9 (C-3) is available conjugated to agarose (sc-271956 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271956 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271956 PE), fluorescein (sc-271956 FITC), Alexa Fluor® 488 (sc-271956 AF488), Alexa Fluor® 546 (sc-271956 AF546), Alexa Fluor® 594 (sc-271956 AF594) or Alexa Fluor® 647 (sc-271956 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271956 AF680) or Alexa Fluor® 790 (sc-271956 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

ZnT-9 (C-3) is recommended for detection of ZnT-9 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for ZnT-9 siRNA (h): sc-77015, ZnT-9 siRNA (m): sc-77016, ZnT-9 shRNA Plasmid (h): sc-77015-SH, ZnT-9 shRNA Plasmid (m): sc-77016-SH, ZnT-9 shRNA (h) Lentiviral Particles: sc-77015-V and ZnT-9 shRNA (m) Lentiviral Particles: sc-77016-V.

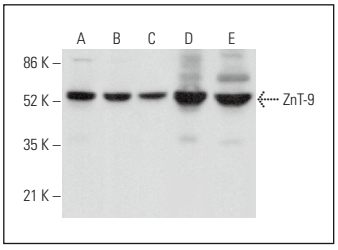
Molecular Weight of ZnT-9: 64 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, C6 whole cell lysate: sc-364373 or EOC 20 whole cell lysate: sc-364187.

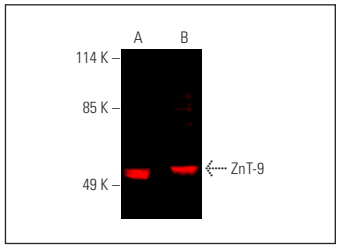
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ZnT-9 (C-3): sc-271956. Western blot analysis of ZnT-9 expression in SH-SY5Y (**A**), C6 (**B**) and EOC 20 (**C**) whole cell lysates and rat cerebellum (**D**) and mouse cerebellum (**E**) tissue extracts.



ZnT-9 (C-3): sc-271956. Near-Infrared western blot analysis of ZnT-9 expression in mouse cerebellum (**A**) and rat cerebellum (**B**) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

SELECT PRODUCT CITATIONS

1. Yao, H., et al. 2022. KCTD9 inhibits the Wnt/β-catenin pathway by decreasing the level of β-catenin in colorectal cancer. Cell Death Dis. 13: 761.

STORAGE

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