SANTA CRUZ BIOTECHNOLOGY, INC.

ZIP3 (D-14): sc-161267

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Zinc is an essential cofactor that is involved in cell growth and development, as well as in protein, nucleic acid and lipid metabolism. The transport of zinc across the cell membrane is crucial for correct enzyme and overall cell function. ZIP3 (Zrt- and Irt-like protein 3), also known as SLC39A3 (solute carrier family 39, member 2), is a 314 amino acid acid multi-pass membrane protein that localizes to the cell membrane and belongs to the ZIP family of zinc transporters. Two isoforms of ZIP3 exist as a result of alternative splicing events. ZIP3 is involved in translocation of extracellular zinc into a variety of cell types. Tumorigenic prostate epithelial cells contain less intracellular zinc than non-tumorigenic prostate epithelial cells. Loss of the ability to maintain zinc accumulation may be caused by the decrease in the ZIP1 protein expression and the intracellular redistribution of ZIP3.

REFERENCES

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4. Ota, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36: 40-45.
5. Gerhard, et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). Genome Res. 14: 2121-2127.
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7. Dephoure, N., et al. 2008. A quantitative atlas of mitotic phosphorylation. Proc. Natl. Acad. Sci. USA 105: 10762-10767.
8. Oppermann, F.S., et al. 2009. Large-scale proteomics analysis of the human kinome. Mol. Cell. Proteomics 8: 1751-1764.

CHROMOSOMAL LOCATION

Genetic locus: SLC39A3 (human) mapping to 19p13.3.

SOURCE

ZIP3 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of ZIP3 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-161267 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ZIP3 (D-14) is recommended for detection of ZIP3 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 ZIP family members.

ZIP3 (D-14) is also recommended for detection of ZIP3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ZIP3 siRNA (h): sc-97640, ZIP3 shRNA Plasmid (h): sc-97640-SH and ZIP3 shRNA (h) Lentiviral Particles: sc-97640-V.

Molecular Weight of ZIP3 isoforms 1/2: 34/11 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.