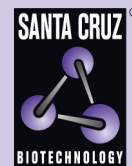


ZIP1 (K-13): sc-103945



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. ZIP1, also known as SLC39A1 (solute carrier family 39 (zinc transporter), member 1), IRT1 or ZIRTL, is a 324 amino acid multi-pass membrane protein that localizes to both the cell membrane and the endoplasmic reticulum and belongs to the ZIP transporter family. Expressed ubiquitously in adult and fetal tissue, ZIP1 functions as a major endogenous zinc uptake transporter, effectively mediating the transport of zinc across the cell membrane. ZIP1, whose activity is inhibited by Ni²⁺, may play an important role in zinc uptake within prostate cells, possibly effecting the development of prostate cancer.

REFERENCES

- Lioumi, M., et al. 1999. Isolation and characterization of human and mouse ZIRTL, a member of the IRT1 family of transporters, mapping within the epidermal differentiation complex. *Genomics* 62: 272-280.
- Franklin, R.B., et al. 2003. Human ZIP1 is a major zinc uptake transporter for the accumulation of zinc in prostate cells. *J. Inorg. Biochem.* 96: 435-442.
- Franklin, R.B., et al. 2005. hZIP1 zinc uptake transporter down regulation and zinc depletion in prostate cancer. *Mol. Cancer* 4: 32.

CHROMOSOMAL LOCATION

Genetic locus: SLC39A1 (human) mapping to 1q21.3.

SOURCE

ZIP1 (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of ZIP1 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-103945 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ZIP1 (K-13) is recommended for detection of ZIP1 of 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), immunohistochemistry (including paraffin-embedded sections) (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 ZIP1 siRNA (h): sc-88210, ZIP1 shRNA Plasmid (h): sc-88210-SH and ZIP1 shRNA (h) Lentiviral Particles: sc-88210-V.

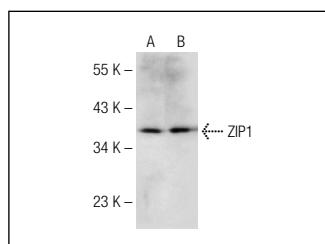
Molecular Weight of ZIP1: 34 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HCT-116 whole cell lysate: sc-364175 or WI-38 whole cell lysate: sc-364260.

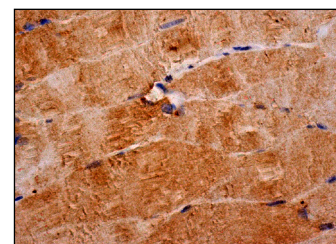
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



ZIP1 (K-13): sc-103945. Western blot analysis of ZIP1 expression in HCT 116 (A) and WI-38 (B) whole cell lysates.



ZIP1 (K-13): sc-103945. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes.

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.

MONOS
Satisfaction
Guaranteed

Try **ZIP1 (F-2): sc-393345**, our highly recommended monoclonal alternative to ZIP1 (K-13).