

SLC39A11 (P-12): sc-132834

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. SLC39A11 (solute carrier family 39 (metal ion transporter), member 11), also known as ZIP11 (zrt- and Irt-like protein 11), is a 342 amino acid multi-pass membrane protein belonging to the ZIP transporter family. Expressed as multiple alternatively spliced isoforms, SLC39A11 acts as a zinc-influx transporter and is encoded by a gene located on human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes, some of which are involved in tumor suppression and in the pathogenesis of Li-Fraumeni syndrome, early onset breast cancer and a predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

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3. Shen, H., et al. 2008. Cooperation of metallothionein and zinc transporters for regulating zinc homeostasis in human intestinal Caco-2 cells. *Nutr. Res.* 28: 406-413.
4. Nishida, S., et al. 2008. Involvement of histidine-rich domain of ZIP family transporter TjZNT1 in metal ion specificity. *Plant Physiol. Biochem.* 46: 601-606.
5. Himeno, S., et al. 2009. The role of zinc transporters in cadmium and manganese transport in mammalian cells. *Biochimie* 91: 1218-1222.
6. Gonzalez, K.D., et al. 2009. High frequency of *de novo* mutations in Li-Fraumeni syndrome. *J. Med. Genet.* 46: 689-693.
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CHROMOSOMAL LOCATION

Genetic locus: SLC39A11 (human) mapping to 17q24.3; Slc39a11 (mouse) mapping to 11 E2.

SOURCE

SLC39A11 (P-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SLC39A11 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-132834 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

SLC39A11 (P-12) is recommended for detection of SLC39A11 isoforms 1 and 2 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 SLC39A12 or SLC39A13.

SLC39A11 (P-12) is also recommended for detection of SLC39A11 isoforms 1 and 2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SLC39A11 siRNA (h): sc-93785, SLC39A11 siRNA (m): sc-153555, SLC39A11 shRNA Plasmid (h): sc-93785-SH, SLC39A11 shRNA Plasmid (m): sc-153555-SH, SLC39A11 shRNA (h) Lentiviral Particles: sc-93785-V and SLC39A11 shRNA (m) Lentiviral Particles: sc-153555-V.

Molecular Weight of SLC39A11: 35 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.

PROTOCOLS

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