

# SLC39A12 (K-14): sc-132102

## BACKGROUND

SLC39A12 (solute carrier family 39 (zinc transporter), member 12), also known as ZIP12 (Zrt- and Irt-like protein 12) or LZT-Hs8 (LIV-1 subfamily of ZIP zinc transporter 8), is a 691 amino acid multi-pass membrane protein that belongs to the LIV-1 subfamily of the ZIP family (or SLC39 family) of metal transporters. In humans, there are at least fifteen members of the ZIP family, all of which exhibit unique tissue-specific expression and are involved in zinc transport and metabolism. Members of the LIV-1 subfamily share similarity with the estrogen-regulated protein LIV-1 and contain a distinct motif with conserved glutamic acid and proline residues. Expressed in brain and eye tissues, SLC39A12 is believed to function as a zinc transporter, facilitating zinc influx into the cytosol. In addition, SLC39A12 may play a role in the onset of schizophrenia. Due to alternative splicing events, four SLC39A12 isoforms are produced.

## REFERENCES

1. Gaither, L.A. and Eide, D.J. 2001. Eukaryotic zinc transporters and their regulation. *Biometals* 14: 251-270.
2. Taylor, K.M. and Nicholson, R.I. 2003. The LZT proteins; the LIV-1 subfamily of zinc transporters. *Biochim. Biophys. Acta* 1611: 16-30.
3. Dufner-Beattie, J., et al. 2003. Structure, function, and regulation of a subfamily of mouse zinc transporter genes. *J. Biol. Chem.* 278: 50142-50150.
4. Liuzzi, J.P. and Cousins, R.J. 2004. Mammalian zinc transporters. *Annu. Rev. Nutr.* 24: 151-172.
5. Kambe, T., et al. 2004. Overview of mammalian zinc transporters. *Cell. Mol. Life Sci.* 61: 49-68.
6. Ford, D. 2004. Intestinal and placental zinc transport pathways. *Proc. Nutr. Soc.* 63: 21-29.
7. Bly, M. 2006. Examination of the zinc transporter gene, SLC39A12. *Schizophr. Res.* 81: 321-322.

## CHROMOSOMAL LOCATION

Genetic locus: SLC39A12 (human) mapping to 10p12.33; Slc39a12 (mouse) mapping to 2 A2.

## SOURCE

SLC39A12 (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of SLC39A12 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-132102 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

SLC39A12 (K-14) is recommended for detection of SLC39A12 isoforms 1-4 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with family members SLC39A11 or SLC39A13.

SLC39A12 (K-14) is also recommended for detection of SLC39A12 isoforms 1-4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SLC39A12 siRNA (h): sc-90521, SLC39A12 siRNA (m): sc-153556, SLC39A12 shRNA Plasmid (h): sc-90521-SH, SLC39A12 shRNA Plasmid (m): sc-153556-SH, SLC39A12 shRNA (h) Lentiviral Particles: sc-90521-V and SLC39A12 shRNA (m) Lentiviral Particles: sc-153556-V.

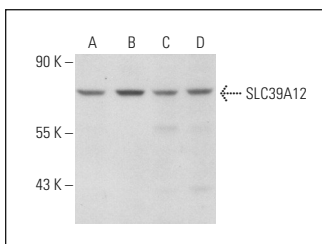
Molecular Weight of SLC39A12: 77 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, Y79 cell lysate: sc-2240 or IMR-32 cell lysate: sc-2409.

## 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.

## DATA



SLC39A12 (K-14): sc-132102. Western blot analysis of SLC39A12 expression in Jurkat (A), SK-N-MC (B) IMR-32 (C) and Y79 (D) whole cell lysates.

## STORAGE

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