

# SLC43A2 (S-14): sc-162213

## BACKGROUND

SLC43A2 (solute carrier family 43, member 2), also known as LAT4 or PP7664, is a 569 amino acid multi-pass membrane protein that belongs to the SLC43A solute transporter family. Expressed in a variety of tissues with highest expression in kidney and placenta, SLC43A2 functions as a sodium- and chloride-independent transport channel protein that facilitates the transport of large, neutral amino acids across membranes. Overexpression of SLC43A2 is associated with head and neck carcinomas, implicating SLC43A2 as a tumor-associated protein. SLC43A2 may be glycosylated and shares 91% sequence similarity with its mouse counterpart, suggesting a conserved function between species. The gene encoding SLC43A2 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

## REFERENCES

1. Boday, S., Martin, L., Zorzano, A., Palacín, M., Estévez, R. and Bertran, J. 2005. Identification of LAT4, a novel amino acid transporter with system L activity. *J. Biol. Chem.* 280: 12002-12011.
2. Zhdanova, N.S. 2007. Comparative mapping of mink (*Mustela vison*) chromosome 8p: localization of three human BAC clones. *Genetika* 43: 1074-1078.
3. Haase, C., Bergmann, R., Fuechtner, F., Hoeppling, A. and Pietzsch, J. 2007. L-type amino acid transporters LAT1 and LAT4 in cancer: uptake of 3-O-methyl-6-18F-fluoro-L-dopa in human adenocarcinoma and squamous cell carcinoma *in vitro* and *in vivo*. *J. Nucl. Med.* 48: 2063-2071.
4. Hoffert, J.D., Wang, G., Pisitkun, T., Shen, R.F. and Knepper, M.A. 2007. An automated platform for analysis of phosphoproteomic datasets: application to kidney collecting duct phosphoproteins. *J. Proteome Res.* 6: 3501-3508.
5. Ramadan, T., Camargo, S.M., Herzog, B., Bordin, M., Pos, K.M. and Verrey, F. 2007. Recycling of aromatic amino acids via TAT1 allows efflux of neutral amino acids via LAT2-4F2hc exchanger. *Pflugers Arch.* 454: 507-516.
6. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610791. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Vumma, R., Wiesel, F.A., Flyckt, L., Bjerkenstedt, L. and Venizelos, N. 2008. Functional characterization of tyrosine transport in fibroblast cells from healthy controls. *Neurosci. Lett.* 434: 56-60.

## CHROMOSOMAL LOCATION

Genetic locus: SLC43A2 (human) mapping to 17p13.3; Slc43a2 (mouse) mapping to 11 B5.

## SOURCE

SLC43A2 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SLC43A2 of human origin.

## STORAGE

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

## 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-162213 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SLC43A2 (S-14) is recommended for detection of SLC43A2 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 SLC43A1 or SLC43A3.

SLC43A2 (S-14) is also recommended for detection of SLC43A2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SLC43A2 siRNA (h): sc-94194, SLC43A2 siRNA (m): sc-153563, SLC43A2 shRNA Plasmid (h): sc-94194-SH, SLC43A2 shRNA Plasmid (m): sc-153563-SH, SLC43A2 shRNA (h) Lentiviral Particles: sc-94194-V and SLC43A2 shRNA (m) Lentiviral Particles: sc-153563-V.

Molecular Weight of SLC43A2 isoforms: 63/53 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.