SANTA CRUZ BIOTECHNOLOGY, INC.

SLC7A14 (S-18): sc-103230

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SLC7A14, also known as solute carrier family 7 member 14 or probable cationic amino acid transporter, is a 771 amino acid multi-pass membrane protein that belongs to the amino acid-polyamine-organocation (APC) superfamily and the cationic amino acid transporter (CAT) family. The gene that encodes SLC7A14 maps to human chromosome 3q26.2. Chromosome 3 is made up of about 214 million bases encoding over 1,100 genes. Notably, there is a chemokine receptor gene cluster and a variety of human cancer related loci on chromosome 3. Particular regions of the chromosome 3 short arm are deleted in many types of cancer cells.

REFERENCES

1. Müller, S., et al. 2000. Molecular cytogenetic dissection of human chromosomes 3 and 21 evolution. Proc. Natl. Acad. Sci. USA 97: 206-211.
2. Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. Mol. Biol. 37: 194-211.
3. Tsend-Ayush, E., et al. 2004. Plasticity of human chromosome 3 during primate evolution. Genomics 83: 193-202.
4. Yue, Y., et al. 2005. Comparative cytogenetics of human chromosome 3q21.3 reveals a hot spot for ectopic recombination in hominoid evolution. Genomics 85: 36-47.
5. Darai, E., et al. 2005. Evolutionarily plastic regions at human 3p21.3 coincide with tumor breakpoints identified by the "elimination test." Genomics 86: 1-12.
6. Yue, Y., et al. 2005. Genomic structure and paralogous regions of the inversion breakpoint occurring between human chromosome 3p12.3 and orangutan chromosome 2. Cytogenet. Genome Res. 108: 98-105.
7. Muzny, D.M., et al. 2006. The DNA sequence, annotation and analysis of human chromosome 3. Nature 440: 1194-1198.
8. Nareyeck, G., et al. 2006. Establishment and characterization of two uveal melanoma cell lines derived from tumors with loss of one chromosome 3. Exp. Eye Res. 83: 858-864.

CHROMOSOMAL LOCATION

Genetic locus: SLC7A14 (human) mapping to 3q26.2; Slc7a14 (mouse) mapping to 3 A3.

SOURCE

SLC7A14 (S-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of SLC7A14 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-103230 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SLC7A14 (S-18) is recommended for detection of SLC7A14 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 other SLC7A family members.

SLC7A14 (S-18) is also recommended for detection of SLC7A14 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SLC7A14 siRNA (h): sc-77973, SLC7A14 siRNA (m): sc-153580, SLC7A14 shRNA Plasmid (h): sc-77973-SH, SLC7A14 shRNA Plasmid (m): sc-153580-SH, SLC7A14 shRNA (h) Lentiviral Particles: sc-77973-V and SLC7A14 shRNA (m) Lentiviral Particles: sc-153580-V.

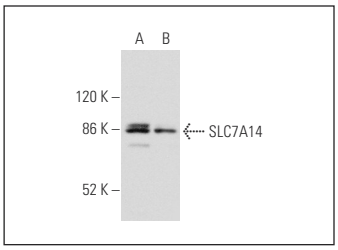
Molecular Weight of SLC7A14: 84 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SLC7A14 (S-18): sc-103230. Western blot analysis of SLC7A14 expression in HeLa (**A**) and Hep G2 (**B**) 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.

RESEARCH USE

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