

LAT1 (H-75): sc-134994

BACKGROUND

L-type amino acid transporter 1 (LAT1) is a multipass-membrane protein responsible for sodium-independent, high-affinity transport of large neutral amino acids. LAT1 functions as a disulfide-linked heterodimer with the amino acid transport protein CD98. LAT1 is expressed predominantly in adult lung and liver but is also expressed in brain, thymus, retina, testis, placenta, bone marrow and fetal liver. In the retina, LAT1 localizes to the blood-retinal-barrier (BRB) and mediates L-leucine transport from the blood to the retina. The devastating effects on the brain caused by phenylketonuria are due to the increased levels of LAT1 on the blood-brain-barrier in response to high concentrations of phenylalanine in the blood. LAT1 accepts the amino-acid related anticancer agent melphalan and plays a significant role in cell proliferation, differentiation, and invasion in esophageal squamous cell carcinoma.

CHROMOSOMAL LOCATION

Genetic locus: SLC7A5 (human) mapping to 16q24.2; Slc7a5 (mouse) mapping to 8 E1.

SOURCE

LAT1 (H-75) is a rabbit polyclonal antibody raised against amino acids 365-439 mapping within an internal region of LAT1 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.

STORAGE

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

APPLICATIONS

LAT1 (H-75) is recommended for detection of L-type amino acid transporter 1 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).

LAT1 (H-75) is also recommended for detection of L-type amino acid transporter 1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for LAT1 siRNA (h): sc-62555, LAT1 siRNA (m): sc-62556, LAT1 shRNA Plasmid (h): sc-62555-SH, LAT1 shRNA Plasmid (m): sc-62556-SH, LAT1 shRNA (h) Lentiviral Particles: sc-62555-V and LAT1 shRNA (m) Lentiviral Particles: sc-62556-V.

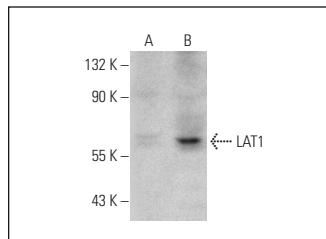
Molecular Weight of LAT1: 40 kDa.

Molecular Weight of glycosylated LAT1: 45-55 kDa.

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



LAT1 (H-75): sc-134994. Western blot analysis of LAT1 expression in non-transfected CHO (A) and mouse LAT1 transfected CHO (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Way, J.D., et al. 2014. Synthesis and evaluation of 2-amino-5-(4-[(18)F]fluorophenyl)pent-4-ynoic acid ([18)F]FPhPA): A novel (18)F-labeled amino acid for oncologic PET imaging. Nucl. Med. Biol. 41: 660-669.

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
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Try **LAT1 (D-10): sc-374232**, our highly recommended monoclonal alternative to LAT1 (H-75).