SANTA CRUZ BIOTECHNOLOGY, INC.

LAPTM4A (I-17): sc-132321



BACKGROUND

Lysosomal-associated transmembrane protein 4A (LAPTM4A), also known as Golgi 4-transmembrane spanning transporter MTP, is a 233 amino acid protein belonging to the LAPTM5/LAPTM5 transporter family. LAPTM4A is subcellularly localized to the intracytoplasmic membrane and has the potential to reside in intracellular membrane-bound compartments. LAPTM4A is thought to function as a transporter of nucleosides and/or nucleoside derivatives between the cytosol and the lumen of intracellular compartments. LAPTM4A is predicted to have four transmembrane domains, with the C-terminal domain being required for retention of the protein within intracellular membranes.

REFERENCES

- Nagase, T., Miyajima, N., Tanaka, A., Sazuka, T., Seki, N., Sato, S., Tabata, S., Ishikawa, K., Kawarabayasi, Y. and Kotani, H. 1995. Prediction of the coding sequences of unidentified human genes. III. The coding sequences of 40 new genes (KIAA0081-KIAA0120) deduced by analysis of cDNA clones from human cell line KG-1. DNA Res. 2: 37-43.
- Hogue, D.L., Ellison, M.J., Young, J.D. and Cass, C.E. 1996. Identification of a novel membrane transporter associated with intracellular membranes by phenotypic complementation in the yeast *Saccharomyces cerevisiae*. J. Biol. Chem. 271: 9801-9808.
- Cabrita, M.A., Hobman, T.C., Hogue, D.L., King, K.M. and Cass, C.E. 1999. Mouse transporter protein, a membrane protein that regulates cellular multidrug resistance, is localized to lysosomes. Cancer Res. 59: 4890-4897.
- Hogue, D.L., Nash, C., Ling, V. and Hobman, T.C. 2002. Lysosome-associated protein transmembrane 4 α (LAPTM4 α) requires two tandemly arranged tyrosine-based signals for sorting to lysosomes. Biochem. J. 365: 721-730.
- 5. Liu, X.R., Zhou, R.L., Zhang, Q.Y., Zhang, Y., Jin, Y.Y., Lin, M., Rui, J.A. and Ye, D.X. 2004. Structure analysis and expressions of a novel tetratransmembrane protein, lysosoma-associated protein transmembrane 4 β associated with hepatocellular carcinoma. World J. Gastroenterol. 10: 1555-1559.
- Maeda, K., Horikoshi, T., Nakashima, E., Miyamoto, Y., Mabuchi, A. and Ikegawa, S. 2005. MATN and LAPTM are parts of larger transcription units produced by intergenic splicing: intergenic splicing may be a common phenomenon. DNA Res. 12: 365-372.
- Pak, Y., Glowacka, W.K., Bruce, M.C., Pham, N. and Rotin, D. 2006. Transport of LAPTM5 to lysosomes requires association with the ubiquitin ligase Nedd4, but not LAPTM5 ubiquitination. J. Cell Biol. 175: 631-645.

CHROMOSOMAL LOCATION

Genetic locus: LAPTM4A (human) mapping to 2p24.1; Laptm4a (mouse) mapping to 12 A1.1.

SOURCE

LAPTM4A (I-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LAPTM4A of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-132321 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LAPTM4A (I-17) is recommended for detection of LAPTM4A 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 LAPTM4B.

LAPTM4A (I-17) is also recommended for detection of LAPTM4A in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for LAPTM4A siRNA (h): sc-94824, LAPTM4A siRNA (m): sc-146645, LAPTM4A shRNA Plasmid (h): sc-94824-SH, LAPTM4A shRNA Plasmid (m): sc-146645-SH, LAPTM4A shRNA (h) Lentiviral Particles: sc-94824-V and LAPTM4A shRNA (m) Lentiviral Particles: sc-146645-V.

Molecular Weight of LAPTM4A: 27 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) Immunofluo-rescence: 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.

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.