SANTA CRUZ BIOTECHNOLOGY, INC.

LAPTM5 (Y-12): sc-163004

BACKGROUND

Lysosomal-associated transmembrane protein 5 (LAPTM5) is a 262 amino acid protein belonging to the LAPTM4/LAPTM5 transporter family. The LAPTM5 protein is highly expressed in immune cells and contains three PY motifs (L/PPxY) and a ubiquitin-interacting motif, both of which facilitate the interaction of LAPTM5 with other proteins. LAPTM5 modulates surface T cell antigen receptor (TCR) expression and activation by specifically binding to CD3ζ and promoting its degradation without affecting other CD3 proteins. The gene encoding LAPTM5 resides within the chromosomal band 1p34-36, a commonly rearranged locus in several types of cancers. Subsequently, loss of LAPTM5 expression may play an important role in the progression of human multiple myeloma (MM).

REFERENCES

1. Scott, L.M., et al. 1996. E3, a hematopoietic-specific transcript directly regulated by the retinoic acid receptor α. Blood 88: 2517-2530.
2. Adra, C.N., et al. 1996. LAPTM5: a novel lysosomal-associated multi-spanning membrane protein preferentially expressed in hematopoietic cells. Genomics 35: 328-337.
3. Seimiya, M., et al. 2003. Stage-specific expression of Clast6/E3/LAPTM5 during B cell differentiation: elevated expression in human B lymphomas. Int. J. Oncol. 22: 301-304.
4. Hayami, Y., et al. 2003. Inactivation of the E3/LAPTM5 gene by chromosomal rearrangement and DNA methylation in human multiple myeloma. Leukemia 17: 1650-1657.
5. Pak, Y., et al. 2006. Transport of LAPTM5 to lysosomes requires association with the ubiquitin ligase Nedd4, but not LAPTM5 ubiquitination. J. Cell Biol. 175: 631-645.
6. Ouchida, R., et al. 2008. A lysosomal protein negatively regulates surface T cell antigen receptor expression by promoting CD3ζ-chain degradation. Immunity 29: 33-43.

CHROMOSOMAL LOCATION

Genetic locus: Laptm5 (mouse) mapping to 4 D2.3.

SOURCE

LAPTM5 (Y-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LAPTM5 of mouse 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-163004 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

LAPTM5 (Y-12) is recommended for detection of LAPTM5 of mouse and rat 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).

Suitable for use as control antibody for LAPTM5 siRNA (m): sc-146647, LAPTM5 shRNA Plasmid (m): sc-146647-SH and LAPTM5 shRNA (m) Lentiviral Particles: sc-146647-V.

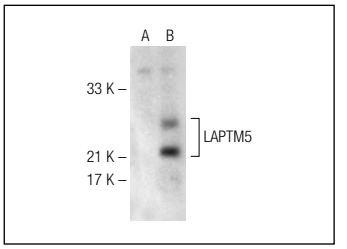
Molecular Weight of LAPTM5: 30 kDa.

Positive Controls: LAPTM5 (m): 293T Lysate: sc-125534.

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



LAPTM5 (Y-12): sc-163004. Western blot analysis of LAPTM5 expression in non-transfected: sc-117752 (**A**) and mouse LAPTM5 transfected: sc-125534 (**B**) 293T whole cell lysates.

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.