

# LCMT1 (C-8): sc-365064

## BACKGROUND

Protein phosphatase 2A (PP2A) is a serine/threonine (Ser/Thr) phosphatase that is thought to be involved in cell growth and proliferation events and may be associated with tumor progression. The activity of PP2A is regulated by a variety of mechanisms, one of which is the reversible methylation by select methyltransferases. LCMT1 (leucine carboxyl methyltransferase 1), also known as LCMT, PPMT1 or CGI-68, is a 334 amino acid member of the methyltransferase superfamily that is involved in the regulation of PP2A. Specifically, LCMT1 catalyzes the methylation of the carboxy group on the C-terminal leucine of the PP2A catalytic subunit (designated PP2A $\alpha$ ). Via its ability to regulate PP2A function, LCMT1 may be critical for normal mitotic progression and overall cell survival. Two isoforms of LCMT1 are expressed due to alternative splicing events.

## REFERENCES

- De Baere, I., et al. 1999. Purification of porcine brain protein phosphatase 2A leucine carboxyl methyltransferase and cloning of the human homologue. *Biochemistry* 38: 16539-16547.
- Lai, C.H., et al. 2000. Identification of novel human genes evolutionarily conserved in *Caenorhabditis elegans* by comparative proteomics. *Genome Res.* 10: 703-713.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610286. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Longin, S., et al. 2007. Selection of protein phosphatase 2A regulatory subunits is mediated by the C terminus of the catalytic subunit. *J. Biol. Chem.* 282: 26971-26980.
- Lee, J.A. and Pallas, D.C. 2007. Leucine carboxyl methyltransferase-1 is necessary for normal progression through mitosis in mammalian cells. *J. Biol. Chem.* 282: 30974-30984.
- Longin, S., et al. 2008. Spatial control of protein phosphatase 2A (de)methylation. *Exp. Cell Res.* 314: 68-81.

## CHROMOSOMAL LOCATION

Genetic locus: LCMT1 (human) mapping to 16p12.1.

## SOURCE

LCMT1 (C-8) is a mouse monoclonal antibody raised against amino acids 179-334 mapping at the C-terminus of LCMT1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain 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

LCMT1 (C-8) is recommended for detection of LCMT1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 LCMT1 siRNA (h): sc-93344, LCMT1 shRNA Plasmid (h): sc-93344-SH and LCMT1 shRNA (h) Lentiviral Particles: sc-93344-V.

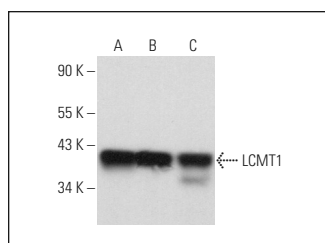
Molecular Weight of LCMT1: 38 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136, HeLa whole cell lysate: sc-2200 or MCF7 whole cell lysate: sc-2206.

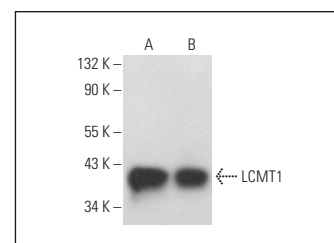
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



LCMT1 (C-8): sc-365064. Western blot analysis of LCMT1 expression in HEK293 (A), Hep G2 (B) and U-87 MG (C) whole cell lysates.



LCMT1 (C-8): sc-365064. Western blot analysis of LCMT1 expression in HeLa (A) and MCF7 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Elgenaidi, I.S. and Spiers, J.P. 2019. Hypoxia modulates the PP2A system in human cardiovascular cell lines: HIF-1 $\alpha$  dependent and independent regulation of PP2A in aortic smooth muscle cells and ventricular cardiomyocytes. *Br. J. Pharmacol.* 176: 1745-1763.

## 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) for detailed protocols and support products.