

#5691 Store at -20C

LCMT1 (4A4) Mouse mAb**Cell Signaling**
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	M R	Endogenous	39	Mouse IgG1	#A2RTH5	30949

Product Usage Information**Application**

Western Blotting

Immunoprecipitation

Dilution

1:1000

1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

LCMT1 (4A4) Mouse mAb recognizes endogenous levels of total LCMT1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a recombinant protein specific to mouse LCMT1 protein.

Background

Leucine carboxyl methyltransferase-1 (LCMT1) is an important mammalian methyltransferase that methylates the catalytic C subunit of protein phosphatase 2A (PP2A) at Leu309 (1,2). X-ray crystallography analysis reveals that the structural integrity of human LCMT1 and cofactor S-adenosylmethionine complex enables proper interaction with PP2A (3). Evidence suggests that functional LCMT1 is crucial for the ability of PP2A to form heterotrimers with the B/B55 and Bα family of regulatory subunits (4,5). Impaired LCMT1 activity is shown to disrupt mitosis and cell survival (5). In neurodegenerative models, increases in endogenous levels of LCMT1, methylated PP2A (C), and Bα induce the development and differentiation of neuroblastoma cells (5-7).

Background References

1. Xie, H. and Clarke, S. (1994) *Biochem Biophys Res Commun* 203, 1710-5.
2. Lee, J. and Stock, J. (1993) *J Biol Chem* 268, 19192-5.
3. Tsai, M.L. et al. (2011) *Acta Crystallogr D Biol Crystallogr* 67, 14-24.
4. Schild, A. et al. (2006) *Int J Dev Neurosci* 24, 437-43.
5. Lee, J.A. and Pallas, D.C. (2007) *J Biol Chem* 282, 30974-84.
6. Sontag, E. et al. (2004) *J Neuropathol Exp Neurol* 63, 1080-91.
7. Sontag, J.M. et al. (2010) *J Neurochem* 115, 1455-65.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key**WB:** Western Blotting **IP:** Immunoprecipitation**Cross-Reactivity Key**

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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