

# Liprin $\alpha$ 1 (A-6): sc-398030

## BACKGROUND

Liprins interact with members of the leukocyte common antigen-related (LAR) family of transmembrane protein tyrosine phosphatases, which are implicated in axon guidance and mammary gland development. Liprins are multivalent proteins that form complex structures and act as scaffolds for the recruitment and anchoring of LAR phosphatases. Based on sequence similarities and binding characteristics, Liprins are subdivided into  $\alpha$  and  $\beta$  Liprins. Both  $\alpha$  and  $\beta$  Liprins homodimerize via their N-terminal, coiled coil regions. Liprin  $\alpha$ 1 is a ubiquitously expressed protein that interacts with the tumor suppressor ING4 to regulate cell migration and possibly prevent metastasis. The interaction between LAR and Liprin  $\alpha$ 1 can be weakened by treatment of Liprin  $\alpha$ 1 with calf intestinal phosphatase.

## REFERENCES

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2. Kaufmann, N., et al. 2002. *Drosophila* Liprin  $\alpha$  and the receptor phosphatase Dlar control synapse morphogenesis. *Neuron* 34: 27-38.
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4. Patel, M.R., et al. 2006. Hierarchical assembly of presynaptic components in defined *C. elegans* synapses. *Nat. Neurosci.* 9: 1488-1498.
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6. Hofmeyer, K., et al. 2006. Liprin- $\alpha$  has LAR-independent functions in R7 photoreceptor axon targeting. *Proc. Natl. Acad. Sci. USA* 103: 11595-11600.
7. Choe, K.M., et al. 2006. Liprin- $\alpha$  is required for photoreceptor target selection in *Drosophila*. *Proc. Natl. Acad. Sci. USA* 103: 11601-11606.
8. Olsen, O., et al. 2006. Synaptic transmission regulated by a presynaptic MALS/Liprin- $\alpha$  protein complex. *Curr. Opin. Cell Biol.* 18: 223-227.

## CHROMOSOMAL LOCATION

Genetic locus: PPF1A1 (human) mapping to 11q13.3; Ppfia1 (mouse) mapping to 7 F5.

## SOURCE

Liprin  $\alpha$ 1 (A-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 522-541 within an internal region of Liprin  $\alpha$ 1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398030 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

Liprin  $\alpha$ 1 (A-6) is recommended for detection of Liprin  $\alpha$ 1 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (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 Liprin  $\alpha$ 1 siRNA (h): sc-72330, Liprin  $\alpha$ 1 siRNA (m): sc-72331, Liprin  $\alpha$ 1 shRNA Plasmid (h): sc-72330-SH, Liprin  $\alpha$ 1 shRNA Plasmid (m): sc-72331-SH, Liprin  $\alpha$ 1 shRNA (h) Lentiviral Particles: sc-72330-V and Liprin  $\alpha$ 1 shRNA (m) Lentiviral Particles: sc-72331-V.

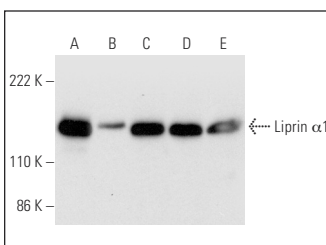
Molecular Weight of Liprin  $\alpha$ 1: 134-136 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or MDA-MB-231 cell lysate: sc-2232.

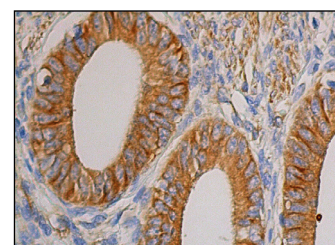
## RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Liprin  $\alpha$ 1 (A-6): sc-398030. Western blot analysis of Liprin  $\alpha$ 1 expression in BT-20 (A), MDA-MB-468 (B), Jurkat (C), HeLa (D) and MDA-MB-231 (E) whole cell lysates.



Liprin  $\alpha$ 1 (A-6): sc-398030. Immunoperoxidase staining of formalin fixed, paraffin-embedded human premenopausal uterus tissue showing cytoplasmic staining of glandular cells and cells in endometrial stroma.

## 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