

# Liprin $\beta$ 1 (F-2): sc-514575

## 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  $\alpha$ -type and  $\beta$ -type liprins. Both  $\alpha$ - and  $\beta$ -liprins homodimerize via their N-terminal, coiled coil regions. Liprin  $\beta$ 1 interacts with S100A4, a calcium-binding protein related to tumor invasiveness and metastasis. The two proteins colocalize in the cytoplasm and at protrusion sites in the plasma membrane. The interaction of Liprin  $\beta$ 1 and S100A4 inhibits the phosphorylation of Liprin  $\beta$ 1 by PKC and protein kinase CK2 *in vitro*.

## REFERENCES

1. Serra-Pages, C., et al. 1998. Liprins, a family of LAR transmembrane protein-tyrosine phosphatase-interacting proteins. *J. Biol. Chem.* 273: 15611-15620.
2. Krijavetska, M., et al. 2002. Liprin  $\beta$ 1, a member of the family of LAR transmembrane tyrosine phosphatase-interacting proteins, is a new target for the metastasis-associated protein S100A4 (Mts1). *J. Biol. Chem.* 277: 5229-5235.
3. Katoh, M. and Katoh, M. 2003. Identification and characterization of human PPFIA4 gene in silico. *Int. J. Mol. Med.* 12: 1009-1014.

## CHROMOSOMAL LOCATION

Genetic locus: PPFIBP1 (human) mapping to 12p11.23; Ppfibp1 (mouse) mapping to 6 G3.

## SOURCE

Liprin  $\beta$ 1 (F-2) is a mouse monoclonal antibody raised against amino acids 19-105 mapping near the N-terminus of Liprin  $\beta$ 1 of human origin.

## PRODUCT

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

Liprin  $\beta$ 1 (F-2) is available conjugated to agarose (sc-514575 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514575 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514575 PE), fluorescein (sc-514575 FITC), Alexa Fluor<sup>®</sup> 488 (sc-514575 AF488), Alexa Fluor<sup>®</sup> 546 (sc-514575 AF546), Alexa Fluor<sup>®</sup> 594 (sc-514575 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-514575 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-514575 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-514575 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## STORAGE

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

## APPLICATIONS

Liprin  $\beta$ 1 (F-2) is recommended for detection of Liprin  $\beta$ 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Liprin  $\beta$ 1 siRNA (h): sc-38031, Liprin  $\beta$ 1 siRNA (m): sc-38032, Liprin  $\beta$ 1 shRNA Plasmid (h): sc-38031-SH, Liprin  $\beta$ 1 shRNA Plasmid (m): sc-38032-SH, Liprin  $\beta$ 1 shRNA (h) Lentiviral Particles: sc-38031-V and Liprin  $\beta$ 1 shRNA (m) Lentiviral Particles: sc-38032-V.

Molecular Weight of Liprin  $\beta$ 1 isoforms 1/2/3/4/5: 114/113/97/110/19 kDa.

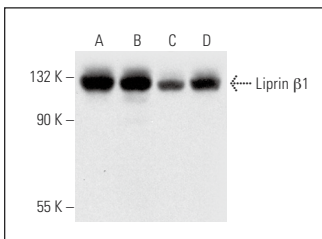
Positive Controls: T98G cell lysate: sc-2294, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

## RECOMMENDED SUPPORT REAGENTS

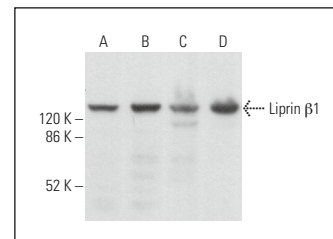
To ensure optimal results, the following support reagents are recommended:

- 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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Liprin  $\beta$ 1 (F-2): sc-514575. Western blot analysis of Liprin  $\beta$ 1 expression in T98G (A), HeLa (B), Jurkat (C) and COLO 205 (D) whole cell lysates.



Liprin  $\beta$ 1 (F-2): sc-514575. Western blot analysis of Liprin  $\beta$ 1 expression in U-87 MG (A), NIH/3T3 (C) and 3T3-L1 (D) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Paradžik, M., et al. 2020. KANK2 links  $\alpha$ V $\beta$ 5 focal adhesions to microtubules and regulates sensitivity to microtubule poisons and cell migration. *Front. Cell Dev. Biol.* 8: 125.
2. Lončarić, M., et al. 2023. Talin2 and KANK2 functionally interact to regulate microtubule dynamics, paclitaxel sensitivity and cell migration in the MDA-MB-435S melanoma cell line. *Cell. Mol. Biol. Lett.* 28: 56.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.