

Liprin α 2 (H-2): sc-393299

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 α and β liprins. Both α and β liprins homodimerize via their N-terminal, coiled coil regions. Liprin α 2, also known as PTPRF-interacting protein α 2, regulates the disassembly of focal adhesions and is expressed in brain and prostate. Liprin α 2 is downregulated by dihydrotestosterone (DHT) in prostate cancer cells in an androgen-dependent manner. The loss of Liprin α 2 expression may be associated with the androgen-independent characteristics of prostate cancer.

REFERENCES

1. Serra-Pagès, C., et al. 1998. Liprins, a family of LAR transmembrane protein-tyrosine phosphatase-interacting proteins. *J. Biol. Chem.* 273: 15611-15620.
2. Zhen, M. and Jin, Y. 1999. The Liprin protein SYD-2 regulates the differentiation of presynaptic termini in *C. elegans*. *Nature* 401: 371-375.
3. Kaufmann, N., et al. 2002. *Drosophila* Liprin- α and the receptor phosphatase Dlar control synapse morphogenesis. *Neuron* 34: 27-38.
4. Fujinami, K., et al. 2002. Liprin- α 2 gene, protein tyrosine phosphatase LAR interacting protein related gene, is downregulated by androgens in the human prostate cancer cell line LNCaP. *Int. J. Mol. Med.* 10: 173-176.

CHROMOSOMAL LOCATION

Genetic locus: PPFIA2 (human) mapping to 12q21.31; Ppfia2 (mouse) mapping to 10 D1.

SOURCE

Liprin α 2 (H-2) is a mouse monoclonal antibody raised against amino acids 489-590 mapping within an internal region of Liprin α 2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Liprin α 2 (H-2) is available conjugated to agarose (sc-393299 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393299 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393299 PE), fluorescein (sc-393299 FITC), Alexa Fluor[®] 488 (sc-393299 AF488), Alexa Fluor[®] 546 (sc-393299 AF546), Alexa Fluor[®] 594 (sc-393299 AF594) or Alexa Fluor[®] 647 (sc-393299 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393299 AF680) or Alexa Fluor[®] 790 (sc-393299 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

Liprin α 2 (H-2) is recommended for detection of Liprin α 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

Liprin α 2 (H-2) is also recommended for detection of Liprin α 2 in additional species, including equine and bovine.

Suitable for use as control antibody for Liprin α 2 siRNA (h): sc-72332, Liprin α 2 siRNA (m): sc-72333, Liprin α 2 shRNA Plasmid (h): sc-72332-SH, Liprin α 2 shRNA Plasmid (m): sc-72333-SH, Liprin α 2 shRNA (h) Lentiviral Particles: sc-72332-V and Liprin α 2 shRNA (m) Lentiviral Particles: sc-72333-V.

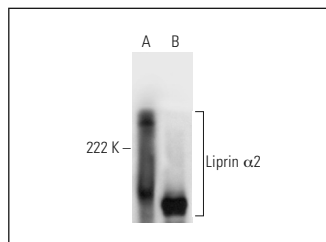
Molecular Weight of Liprin α 2: 143 kDa.

Positive Controls: human hippocampus tissue extract, Neuro-2A whole cell lysate: sc-364185 or mouse brain extract: sc-2253.

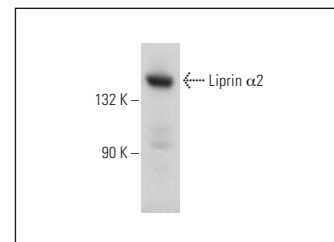
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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



Liprin α 2 (H-2): sc-393299. Western blot analysis of Liprin α 2 expression in human hippocampus (A) and mouse brain (B) tissue extracts.



Liprin α 2 (H-2): sc-393299. Western blot analysis of Liprin α 2 expression in Neuro-2A whole cell lysate.

SELECT PRODUCT CITATIONS

1. Liang, M., et al. 2021. Oligomerized Liprin- α promotes phase separation of ELKS for compartmentalization of presynaptic active zone proteins. *Cell Rep.* 34: 108901.

STORAGE

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