

# Liprin $\alpha$ 3 (E-18): sc-54046

## 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  $\alpha$ 3, also designated PTPRF-interacting protein  $\alpha$ 3, is a cytoplasmic protein expressed exclusively in brain. Due to alternative splicing, a second isoform exists for Liprin  $\alpha$ 3. Isoform 2 lacks the amino acid sequence 937-945.

## REFERENCES

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4. Ko, J., et al. 2003. Interaction between Liprin  $\alpha$  and GIT1 is required for AMPA receptor targeting. *J. Neurosci.* 23: 1667-1677.
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7. Miller, K.E., et al. 2005. Direct observation demonstrates that Liprin  $\alpha$  is required for trafficking of synaptic vesicles. *Curr. Biol.* 15: 684-689.
8. Hofmeyer, K., et al. 2006. Liprin  $\alpha$  has LAR-independent functions in R7 photoreceptor axon targeting. *Proc. Natl. Acad. Sci. USA* 103: 11595-11600.
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## CHROMOSOMAL LOCATION

Genetic locus: PPFIA3 (human) mapping to 19q13.33; Ppfia3 (mouse) mapping to 7 B4.

## SOURCE

Liprin  $\alpha$ 3 (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Liprin  $\alpha$ 3 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-54046 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Liprin  $\alpha$ 3 (E-18) is recommended for detection of Liprin  $\alpha$ 3 isoform 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Liprin  $\alpha$ 3 (E-18) is also recommended for detection of Liprin  $\alpha$ 3 isoform 1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Liprin  $\alpha$ 3 siRNA (h): sc-72334, Liprin  $\alpha$ 3 siRNA (m): sc-146754, Liprin  $\alpha$ 3 shRNA Plasmid (h): sc-72334-SH, Liprin  $\alpha$ 3 shRNA Plasmid (m): sc-146754-SH, Liprin  $\alpha$ 3 shRNA (h) Lentiviral Particles: sc-72334-V and Liprin  $\alpha$ 3 shRNA (m) Lentiviral Particles: sc-146754-V.

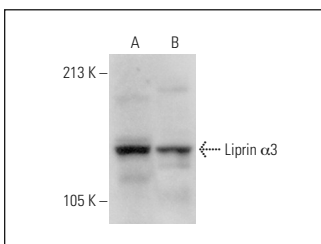
Molecular Weight of Liprin  $\alpha$ 3: 133 kDa.

Positive Controls: mouse cerebellum extract: sc-2403 or Hep G2 cell lysate: sc-2227.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Liprin  $\alpha$ 3 (E-18): sc-54046. Western blot analysis of Liprin  $\alpha$ 3 expression in mouse cerebellum tissue extract (A) and Hep G2 whole cell lysate (B).

## 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.