

# Liprin $\alpha$ 1 (G-19): sc-54037

## 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

- Serra-Pagès, C., Medley, Q.G., Tang, M., Hart, A. and Streuli, M. 1998. Liprins, a family of LAR transmembrane protein-tyrosine phosphatase-interacting proteins. *J. Biol. Chem.* 273: 15611-15620.
- Kaufmann, N., DeProto, J., Ranjan, R., Wan, H. and Van Vactor, D. 2002. *Drosophila* Liprin  $\alpha$  and the receptor phosphatase Dlar control synapse morphogenesis. *Neuron* 34: 27-38.
- Ko, J., Kim, S., Valtschanoff, J.G., Shin, H., Lee, J.R., Sheng, M., Premont, R.T., Weinberg, R.J. and Kim, E. 2003. Interaction between Liprin  $\alpha$  and GIT1 is required for AMPA receptor targeting. *J. Neurosci.* 23: 1667-1677.
- Patel, M.R., Lehrman, E.K., Poon, V.Y., Crump, J.G., Zhen, M., Bargmann, C.I. and Shen, K. 2006. Hierarchical assembly of presynaptic components in defined *C. elegans* synapses. *Nat. Neurosci.* 9: 1488-1498.
- Unoki, M., Shen, J.C., Zheng, Z.M. and Harris, C.C. 2006. Novel splice variants of ING4 and their possible roles in the regulation of cell growth and motility. *J. Biol. Chem.* 281: 34677-34686.

## CHROMOSOMAL LOCATION

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

## SOURCE

Liprin  $\alpha$ 1 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Liprin  $\alpha$ 1 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-54037 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Liprin  $\alpha$ 1 (G-19) is recommended for detection of Liprin  $\alpha$ 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  $\alpha$ 1 (G-19) is also recommended for detection of Liprin  $\alpha$ 1 in additional species, including equine, canine and bovine.

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.

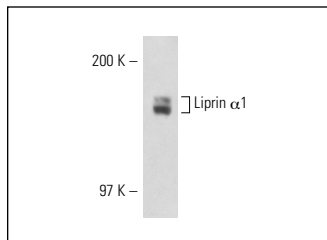
Molecular Weight of Liprin  $\alpha$ 1: 134-136 kDa.

Positive Controls: BT-20 cell lysate: sc-2223 or MDA-MB-468 cell lysate: sc-2282.

## 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  $\alpha$ 1 (G-19): sc-54037. Western blot analysis of Liprin  $\alpha$ 1 expression in BT-20 whole cell lysate.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.