

Liprin-α3

Cat.No. 169 102; Polyclonal rabbit antibody, 200 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	200 µl antiserum, lyophilized. For reconstitution add 200 µl H ₂ O, then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 (AP staining) IP: not tested yet ICC: 1 : 500 IHC: not tested yet IHC-P/FFPE: not tested yet
Immunogen	Recombinant protein corresponding to AA 463 to 604 from mouse Liprin-α3 (UniProt Id: P60469)
Reactivity	Reacts with: human (O75145), rat (Q91Z79), mouse (P60469). No signal: zebrafish. Other species not tested yet.
Specificity	Specific for liprin-α 3, no cross reaction to isoforms 1, 2, 4.
matching control	169-1P

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

The **liprin-α/Syd 2** protein family was initially identified as binding partners of the LAR family of receptor protein-tyrosine phosphatases.

Liprin-α proteins are multidomain proteins which are involved in the development of presynaptic active zones. Four isoforms of liprin-α have been described, so far and all of them interact with the RIM binding partners ERC 1b and ERC 2.

All four isoforms of liprin-α have also been identified as members of the MALS complex composed of CASK, Mint1 and Velis. This complex has been reported to be crucial for synaptic vesicle exocytosis.

Selected References SYSY Antibodies

RIM1α SUMOylation is required for fast synaptic vesicle exocytosis.

Girach F, Craig TJ, Rocca DL, Henley JM

Cell reports (2013) 5(5): 1294-301. **WB; tested species: rat**

Liprin-α controls stress fiber formation by binding to mDia and regulating its membrane localization.

Sakamoto S, Ishizaki T, Okawa K, Watanabe S, Arakawa T, Watanabe N, Narumiya S

Journal of cell science (2012) 125(Pt 1): 108-20. **WB**

Extensive remodeling of the presynaptic cytomatrix upon homeostatic adaptation to network activity silencing.

Lazarevic V, Schöne C, Heine M, Gundelfinger ED, Fejtova A

The Journal of neuroscience : the official journal of the Society for Neuroscience (2011) 31(28): 10189-200. **WB**

Selected General References

Liprin-alpha has LAR-independent functions in R7 photoreceptor axon targeting.

Hofmeyer K, Maurel-Zaffran C, Sink H, Treisman JE

Proceedings of the National Academy of Sciences of the United States of America (2006) 103(31): 11595-600.

Interaction of the ERC family of RIM-binding proteins with the liprin-alpha family of multidomain proteins.

Ko J, Na M, Kim S, Lee JR, Kim E

The Journal of biological chemistry (2003) 278(43): 42377-85.

Interaction between liprin-alpha and GIT1 is required for AMPA receptor targeting.

Ko J, Kim S, Valtchanoff JG, Shin H, Lee JR, Sheng M, Premont RT, Weinberg RJ, Kim E

The Journal of neuroscience : the official journal of the Society for Neuroscience (2003) 23(5): 1667-77.

The GIT family of proteins forms multimers and associates with the presynaptic cytomatrix protein Piccolo.

Kim S, Ko J, Shin H, Lee JR, Lim C, Han JH, Altmann WD, Garner CC, Gundelfinger ED, Premont RT, Kaang BK, et al.

The Journal of biological chemistry (2003) 278(8): 6291-300.

Liprins, a family of LAR transmembrane protein-tyrosine phosphatase-interacting proteins.

Serra-Pagès C, Medley QG, Tang M, Hart A, Streuli M

The Journal of biological chemistry (1998) 273(25): 15611-20.