SANTA CRUZ BIOTECHNOLOGY, INC.

Latrophilin-3 (B-6): sc-393576

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Latrophilin family of G protein-coupled receptors consists of three members, Latrophilin-1, 2 and 3, each of which displays distinct tissue distribution and function. Latrophilin-1, the most characterized member of this family, acts as a receptor for α-latrotoxin, a component of venom from the black widow spider. Binding of α-latrotoxin to Latrophilin-1 triggers synaptic vesicle exocytosis via both Ca^{2+}-dependent and -independent mechanisms, resulting in vesicle depletion. Latrophilin-1 is abundant in brain and present in endocrine cells. Latrophilin-3 is also brain-specific, whereas Latrophilin-2 expression is ubiquitous.

REFERENCES

1. Matsushita, H., et al. 1999. The latrophilin family: multiply spliced G protein-coupled receptors with differential tissue distribution. FEBS Lett. 443: 348-352.
2. Bittner, M.A., et al. 2000. α-latrotoxin and its receptors CIRL (latrophilin) and neurexin 1α mediate effects on secretion through multiple mechanisms. Biochimie 82: 447-452.
3. Van Renterghem, C., et al. 2000. α-latrotoxin forms calcium-permeable membrane pores via interactions with latrophilin or neurexin. Eur. J. Neurosci. 12: 3953-3962.
4. Sudhof, T.C., et al. 2001. α-latrotoxin and its receptors: neurexins and CIRL/latrophilins. Annu. Rev. Neurosci. 24: 933-962.

CHROMOSOMAL LOCATION

Genetic locus: ADGRL3 (human) mapping to 4q13.1; Adgrl3 (mouse) mapping to 5 D.

SOURCE

Latrophilin-3 (B-6) is a mouse monoclonal antibody raised against amino acids 547-623 mapping within an internal region of Latrophilin-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Latrophilin-3 (B-6) is available conjugated to agarose (sc-393576 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393576 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393576 PE), fluorescein (sc-393576 FITC), Alexa Fluor® 488 (sc-393576 AF488), Alexa Fluor® 546 (sc-393576 AF546), Alexa Fluor® 594 (sc-393576 AF594) or Alexa Fluor® 647 (sc-393576 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393576 AF680) or Alexa Fluor® 790 (sc-393576 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

Latrophilin-3 (B-6) is recommended for detection of all Latrophilin-3 isoforms of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

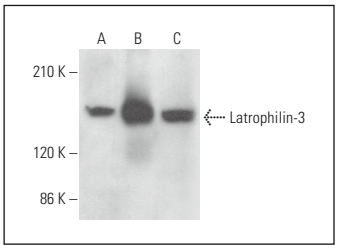
Latrophilin-3 (B-6) is also recommended for detection of all Latrophilin-3 isoforms in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Latrophilin-3 siRNA (h): sc-60921, Latrophilin-3 siRNA (m): sc-60922, Latrophilin-3 shRNA Plasmid (h): sc-60921-SH, Latrophilin-3 shRNA Plasmid (m): sc-60922-SH, Latrophilin-3 shRNA (h) Lentiviral Particles: sc-60921-V and Latrophilin-3 shRNA (m) Lentiviral Particles: sc-60922-V.

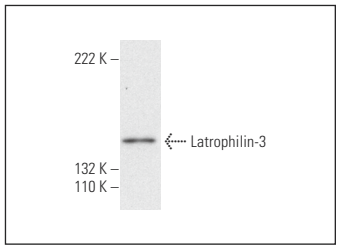
Molecular Weight of Latrophilin-3: 162 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, 3T3-L1 cell lysate: sc-2243 or Hep G2 cell lysate: sc-2227.

DATA



Latrophilin-3 (B-6): sc-393576. Western blot analysis of Latrophilin-3 expression in Hep G2 (**A**), THP-1 (**B**) and 3T3-L1 (**C**) whole cell lysates.



Latrophilin-3 (B-6): sc-393576. Western blot analysis of Latrophilin-3 expression in COLO 320DM whole cell lysate.

SELECT PRODUCT CITATIONS

1. Regan, S.L., et al. 2019. Knockout of Latrophilin-3 in Sprague-Dawley rats causes hyperactivity, hyper-reactivity, under-response to amphetamine, and disrupted dopamine markers. Neurobiol. Dis. 130: 104494.
2. Regan, S.L., et al. 2022. Latrophilin-3 heterozygous versus homozygous mutations in Sprague Dawley rats: effects on egocentric and allocentric memory and locomotor activity. Genes Brain Behav. 21: e12817.
3. Prigge, C.L., et al. 2023. Rejection of inappropriate synaptic partners in mouse retina mediated by transcellular FLRT2-UNC5 signaling. Dev. Cell 58: 2080-2096.e7.
4. Wang, S., et al. 2024. Alternative splicing of Latrophilin-3 controls synapse formation. Nature 626: 128-135.

RESEARCH USE

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