

Latrophilin-1 (D-20): sc-34484

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

- Matsushita, H., et al. 1999. The latrophilin family: multiply spliced G protein-coupled receptors with differential tissue distribution. *FEBS Lett.* 443: 348-352.
- Bittner, M.A., et al. 2000. α -latrotoxin and its receptors C1RL (latrophilin) and Neurexin-1 α mediate effects on secretion through multiple mechanisms. *Biochimie* 82: 447-452.
- 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.
- Sudhof, T.C., et al. 2001. α -latrotoxin and its receptors: neurexins and C1RL/latrophilins. *Annu. Rev. Neurosci.* 24: 933-962.
- Nicholson, G.M., et al. 2002. Spiders of medical importance in the Asia-Pacific: atracotoxin, latrotoxin and related spider neurotoxins. *Clin. Exp. Pharmacol. Physiol.* 29: 785-794.
- Ushkaryov, Y.A., et al. 2004. The multiple actions of black widow spider toxins and their selective use in neurosecretion studies. *Toxicon* 43: 527-542.

CHROMOSOMAL LOCATION

Genetic locus: LPHN1 (human) mapping to 19p13.12; Lphn1 (mouse) mapping to 8 C3.

SOURCE

Latrophilin-1 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of Latrophilin-1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-34484 P, (100 μ 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

Latrophilin-1 (D-20) is recommended for detection of Latrophilin-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Latrophilin-1 (D-20) is also recommended for detection of Latrophilin-1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Latrophilin-1 siRNA (h): sc-45408, Latrophilin-1 siRNA (m): sc-45409, Latrophilin-1 shRNA Plasmid (h): sc-45408-SH, Latrophilin-1 shRNA Plasmid (m): sc-45409-SH, Latrophilin-1 shRNA (h) Lentiviral Particles: sc-45408-V and Latrophilin-1 shRNA (m) Lentiviral Particles: sc-45409-V.

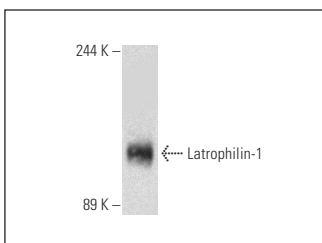
Molecular Weight of Latrophilin-1: 130 kDa.

Positive Control: rat brain extract: sc-2392 or mouse brain extract: sc-2253.

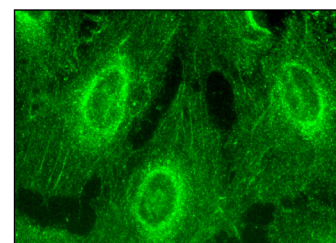
RECOMMENDED SECONDARY REAGENTS

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



Latrophilin-1 (D-20): sc-34484. Western blot analysis of Latrophilin-1 expression in mouse brain tissue extract.



Latrophilin-1 (D-20): sc-34484. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

RESEARCH USE

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

MONOS
Satisfaction
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Try **Latrophilin-1 (A-4): sc-514562**, our highly recommended monoclonal alternative to Latrophilin-1 (D-20).