

L-type Ca⁺⁺ CP γ 2 (H-80): sc-28620

BACKGROUND

Excitable cells in response to membrane depolarization are involved in a variety of Ca²⁺-dependent processes, including muscle contraction, hormone or neurotransmitter release and gene expression. Calcium channels are highly diverse, multimeric complexes composed of an α 1 subunit, an intracellular β subunit, a disulfide linked α 2/ δ subunit and a transmembrane γ subunit. L-type Ca²⁺ currents initiate muscle contraction, endocrine secretion and gene transcription, and are regulated through second-messenger activated protein phosphorylation pathways. L-type calcium channels may form macromolecular signaling complexes with G protein-coupled receptors, thereby enhancing the selectivity of regulating specific targets. L-type calcium channels in the brain specifically express the γ 2 subunit along with γ 3 and 4 subunits. The γ 2 subunit (also known as stargazin) is abundant in synaptic plasma membranes where it regulates synaptic targeting of AMP receptors in granule cells.

REFERENCES

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- Randall, A.D. 1998. The molecular basis of voltage-gated Ca²⁺ channel diversity: is it time for T? *J. Membr. Biol.* 161: 207-213.
- Catterall, W.A. 2000. Structure and regulation of voltage-gated Ca²⁺ channels. *Annu. Rev. Cell Dev. Biol.* 16: 521-555.
- Chen, L., et al. 2000. Stargazing regulates synaptic targeting of AMPA receptors by two distinct mechanisms. *Nature* 408: 936-943.
- Davare, M.A., et al. 2001. A β 2-Adrenergic receptor signaling complex assembled with the Ca²⁺ channel Cav1.2. *Science* 293: 98-101.
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SOURCE

L-type Ca⁺⁺ CP γ 2 (H-80) is a rabbit polyclonal antibody raised against amino acids 244-323 mapping at the C-terminus of L-type Ca⁺⁺ CP γ 2 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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

L-type Ca⁺⁺ CP γ 2 (H-80) is recommended for detection of L-type Ca⁺⁺ CP γ 2, and to a lesser extent L-type Ca⁺⁺ CP γ 3, γ 4 and γ 8 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).

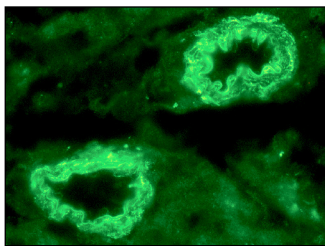
L-type Ca⁺⁺ CP γ 2 (H-80) is also recommended for detection of L-type Ca⁺⁺ CP γ 2, and to a lesser extent L-type Ca⁺⁺ CP γ 3, γ 4 and γ 8 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of L-type Ca⁺⁺ CP γ 2: 36 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz MarkerTM compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz MarkerTM 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruzTM Mounting Medium: sc-24941.

DATA



p15/p16 (H-43): sc-28260. Immunofluorescence staining of normal mouse kidney frozen section showing cytoplasmic staining.

RESEARCH USE

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