

L-type Ca⁺⁺ CP β1 (Y-2D68): sc-134377

BACKGROUND

Voltage-dependent Ca²⁺ channels mediate Ca²⁺ entry into excitable cells in response to membrane depolarization, and they 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. Ca²⁺ currents are characterized on the basis of their biophysical and pharmacologic properties and include L-, N-, T-, P-, Q-, and R- types. L-type Ca²⁺ currents initiate muscle contraction, endocrine secretion and gene transcription, and can be 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.

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.
- Davare, M.A., et al. 2001. A β₂ adrenergic receptor signaling complex assembled with the Ca²⁺ channel Ca_v1.2. *Science* 293: 98-101.
- Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 601011. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: CACNB1 (human) mapping to 17q12.

SOURCE

L-type Ca⁺⁺ CP β1 (Y-2D68) is a mouse monoclonal antibody raised against recombinant L-type Ca⁺⁺ CP β1 protein of human origin.

PRODUCT

Each vial contains 100 μg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

L-type Ca⁺⁺ CP β1 (Y-2D68) is recommended for detection of L-type Ca⁺⁺ CP β1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

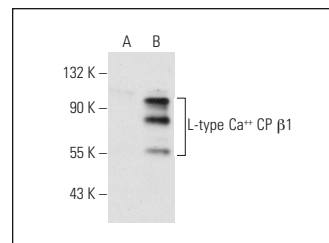
Suitable for use as control antibody for L-type Ca⁺⁺ CP β1 siRNA (h): sc-42694, L-type Ca⁺⁺ CP β1 shRNA Plasmid (h): sc-42694-SH and L-type Ca⁺⁺ CP β1 shRNA (h) Lentiviral Particles: sc-42694-V.

Positive Controls: L-type Ca⁺⁺ CP β1 (h): 293T Lysate: sc-176607.

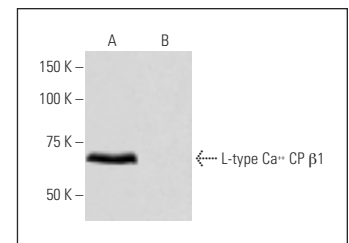
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



L-type Ca⁺⁺ CP β1 (Y-2D68): sc-134377. Western blot analysis of L-type Ca⁺⁺ CP β1 expression in non-transfected: sc-117752 (A) and human L-type Ca⁺⁺ CP β1 transfected: sc-176607 (B) 293T whole cell lysates.



L-type Ca⁺⁺ CP β1 (Y-2D68): sc-134377. Western blot analysis of L-type Ca⁺⁺ CP β1 expression in human L-type Ca⁺⁺ CP β1 transfected (A) and non-transfected (B) 293T whole cell lysates.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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