

L-type Ca⁺⁺ CP α1F (H-160): sc-25688

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

1. Perez-Reyes, E., et al. 1995. Molecular biology of calcium channels. *Kidney Int.* 48: 1111-1124.
2. Randall, A.D. 1998. The molecular basis of voltage-gated Ca²⁺ channel diversity: is it time for T? *J. Membr. Biol.* 161: 207-213.
3. Catterall, W.A. 2000. Structure and regulation of voltage-gated Ca²⁺ channels. *Annu. Rev. Cell Dev. Biol.* 16: 521-555.
4. Online Mendelian Inheritance in Man, OMIM™. Johns Hopkins University, Baltimore, MD. MIM Number: 601011: 4/5/2001: URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Davare, M.A., et al. 2001. A β2 adrenergic receptor signaling complex assembled with the Ca²⁺ channel Cav1.2. *Science* 293: 98-101.

CHROMOSOMAL LOCATION

Genetic locus: CACNA1F (human) mapping to Xp11.22; *Cacna1f* (mouse) mapping to X A1.1.

SOURCE

L-type Ca⁺⁺ CP α1F (H-160) is a rabbit polyclonal antibody raised against amino acids 1611-1770 mapping within an internal region of L-type Ca⁺⁺ CP α1F of human origin.

PRODUCT

Each vial contains 200 µg 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 α1F (H-160) is recommended for detection of L-type Ca⁺⁺ CP α1F of mouse, rat and 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)], 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).

Suitable for use as control antibody for L-type Ca⁺⁺ CP α1F siRNA (h): sc-42692, L-type Ca⁺⁺ CP α1F siRNA (m): sc-42693, L-type Ca⁺⁺ CP α1F shRNA Plasmid (h): sc-42692-SH, L-type Ca⁺⁺ CP α1F shRNA Plasmid (m): sc-42693-SH, L-type Ca⁺⁺ CP α1F shRNA (h) Lentiviral Particles: sc-42692-V and L-type Ca⁺⁺ CP α1F shRNA (m) Lentiviral Particles: sc-42693-V.

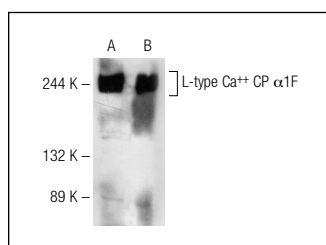
Molecular Weight of L-type Ca⁺⁺ CP α1F: 239 kDa.

Positive Controls: Y79 cell lysate: sc-2240, CCD-1064Sk cell lysate: sc-2263 or Hs 732.Sk/Mu whole cell lysate.

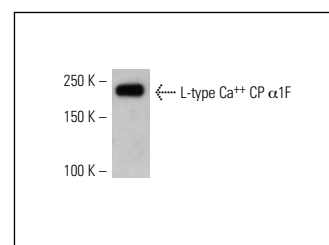
RECOMMENDED SECONDARY REAGENTS

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 Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 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 UltraCruz™ Mounting Medium: sc-24941.

DATA



L-type Ca⁺⁺ CP α1F (H-160): sc-25688. Western blot analysis of L-type Ca⁺⁺ CP α1F expression in Hs 732.Sk/Mu (A) and CCD-1064Sk (B) whole cell lysates.



L-type Ca⁺⁺ CP α1F (H-160): sc-25688. Western blot analysis of L-type Ca⁺⁺ CP α1F expression in Y79 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Katsura, M., et al. 2006. Increase in expression of α1 and α2/δ1 subunits of L-type high voltage-gated calcium channels after sustained ethanol exposure in cerebral cortical neurons. *J. Pharmacol. Sci.* 102: 221-230.

RESEARCH USE

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