

L-type Ca⁺⁺ CP α 1S (H-263): sc-20814

BACKGROUND

Voltage-dependent Ca⁺ channels mediate Ca⁺ entry into excitable cells in response to membrane depolarization, and they are involved in a variety of Ca⁺-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. Ca⁺ currents are characterized on the basis of their biophysical and pharmacologic properties and include L-, N-, T-, P-, Q-, and R-types. L-type Ca⁺ currents initiate muscle contraction, endocrine secretion and gene transcription, and can be regulated through second-messenger activated protein phosphorylation pathways. L-type Ca⁺ may form macromolecular signaling complexes with G protein-coupled receptors, thereby enhancing the selectivity of regulating specific targets. Calcium channels containing the α 1S subunit play an important role in excitation-contraction coupling in skeletal muscle.

CHROMOSOMAL LOCATION

Genetic locus: CACNA1S (human) mapping to 1q32.1; Cacna1s (mouse) mapping to 1 E4.

SOURCE

L-type Ca⁺⁺ CP α 1S (H-263) is a rabbit polyclonal antibody raised against amino acids 1611-1873 of L-type Ca⁺⁺ CP α 1S 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.

APPLICATIONS

L-type Ca⁺⁺ CP α 1S (H-263) is recommended for detection of L-type calcium channel α 1S of human and, to a lesser extent, mouse and rat 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), immunohistochemistry (including paraffin-embedded sections) (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 α 1S siRNA (h): sc-35772, L-type Ca⁺⁺ CP α 1S siRNA (m): sc-35773, L-type Ca⁺⁺ CP α 1S shRNA Plasmid (h): sc-35772-SH, L-type Ca⁺⁺ CP α 1S shRNA Plasmid (m): sc-35773-SH, L-type Ca⁺⁺ CP α 1S shRNA (h) Lentiviral Particles: sc-35772-V and L-type Ca⁺⁺ CP α 1S shRNA (m) Lentiviral Particles: sc-35773-V.

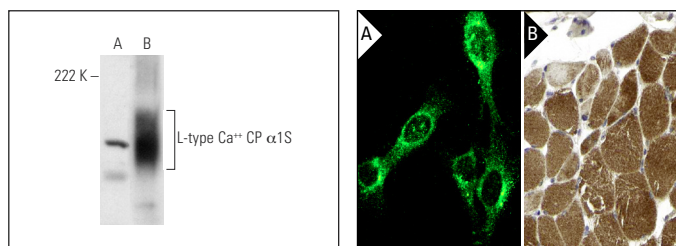
Molecular Weight of L-type Ca⁺⁺ CP α 1S: 170 kDa.

Positive Controls: human skeletal muscle extract: sc-363776 or HeLa whole cell lysate: sc-2200.

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



L-type Ca⁺⁺ CP α 1S (H-263): sc-20814. Western blot analysis of L-type Ca⁺⁺ CP α 1S expression in HeLa whole cell lysate (A) and human skeletal muscle tissue extract (B).

L-type Ca⁺⁺ CP α 1S (H-263): sc-20814. Immunofluorescence staining of methanol-fixed Sol8 cells showing membrane localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

RESEARCH USE

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

PROTOCOLS

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



Try **L-type Ca⁺⁺ CP α 1S (G-1): sc-514685** or **L-type Ca⁺⁺ CP α 1S (IIC12D4): sc-21781**, our highly recommended monoclonal alternatives to L-type Ca⁺⁺ CP α 1S (H-263).