SANTA CRUZ BIOTECHNOLOGY, INC.

L-type Ca^{++} CP α1D (C-20): sc-16251

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

VVoltage-dependent Ca^{2+} channels mediate Ca^{2+} entry into excitable cells in response to membrane depolarization, and they are involved in a variety of Ca^{2+}-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^{2+} 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 calcium channels may form macromolecular signaling complexes with G protein-coupled receptors, thereby enhancing the selectivity of regulating specific targets.

CHROMOSOMAL LOCATION

Genetic locus: CACNA1D (human) mapping to 3p21.1; Cacna1d (mouse) mapping to 14 B.

SOURCE

L-type Ca^{++} CP α1D (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of L-type Ca^{++} CP α1D 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.

Blocking peptide available for competition studies, sc-16251 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

L-type Ca^{++} CP α1D (C-20) is recommended for detection of L-type calcium channel α1D of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

L-type Ca^{++} CP α1D (C-20) is also recommended for detection of L-type calcium channel α1D in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for L-type Ca^{++} CP α1D siRNA (h): sc-42690, L-type Ca^{++} CP α1D siRNA (m): sc-42691, L-type Ca^{++} CP α1D shRNA Plasmid (h): sc-42690-SH, L-type Ca^{++} CP α1D shRNA Plasmid (m): sc-42691-SH, L-type Ca^{++} CP α1D shRNA (h) Lentiviral Particles: sc-42690-V and L-type Ca^{++} CP α1D shRNA (m) Lentiviral Particles: sc-42691-V.

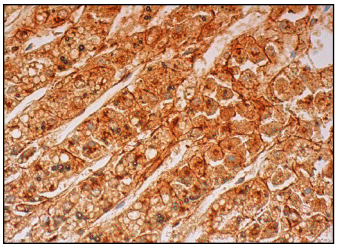
Molecular Weight of L-type Ca^{++} CP α1D: 199 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, SK-N-SH cell lysate: sc-2410 or U-87 MG cell lysate: sc-2411.

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



L-type Ca^{++} CP α1D (C-20): sc-16251. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing membrane and cytoplasmic staining of glandular cells.

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 or our catalog for detailed protocols and support products.

MONOS Satisfaction Guaranteed

Try **L-type Ca^{++} CP α1D (G-9): sc-515643**, our highly recommended monoclonal alternative to L-type Ca^{++} CP α1D (C-20).