SANTA CRUZ BIOTECHNOLOGY, INC.

# L-type Ca$^{++}$ CP α1S/1C/1D/1F (H-300): sc-98753

## BACKGROUND

L-type (long lasting current) voltage-dependent calcium channels are composed of four subunits, designated α1, β, γ and α2/δ, all of which work together to mediate neurotransmitter release. The α subunit contains a tetrameric association of four domains each containing a series of six transmembrane α-helical segments, numbered S1-S6, which are connected by both intracellular and extracellular loops. The α subunit is comprised of an ion-conducting pore, which determines the main characteristics of the cation channel complex, including ion selectivity, voltage sensitivity and pharmacology, and binding characteristics for endogenous and exogenous ligands. There are ten genes in the human genome that encode pore-forming α1 subunits of voltage-gated calcium channels. In combination with accessory subunits, these ten α1 subunits, which include L-type Ca$^{++}$ CP α1S, 1C, 1D and 1F, must mediate diverse functions such as intracellular calcium homeostasis, regulation of gene expression and coupling of membrane potential changes to various downstream processes like neurotransmitter release or muscle contraction.

## SOURCE

L-type Ca$^{++}$ CP α1S/1C/1D/1F (H-300) is a rabbit polyclonal antibody raised against amino acids 406-540 mapping within an internal region 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.

## 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 α1S/1C/1D/1F (H-300) is recommended for detection of L-type Ca$^{++}$ CP α1S/1C/1D/1F 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).

L-type Ca$^{++}$ CP α1S/1C/1D/1F (H-300) is also recommended for detection of L-type Ca$^{++}$ CP α1S/1C/1D/1F in additional species, including equine, bovine and porcine.

Molecular Weight of short form L-type Ca$^{++}$ CP α1C: 199 kDa.

Molecular Weight of long form L-type Ca$^{++}$ CP α1C: 240 kDa.

Molecular Weight of L-type Ca$^{++}$ CP α1D: 245 kDa.

Molecular Weight of L-type Ca$^{++}$ CP α1F: 221 kDa.

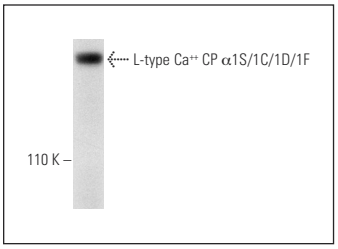
Molecular Weight of L-type Ca$^{++}$ CP α1S: 212 kDa.

Positive Controls: mouse heart extract: sc-2254.

## 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 α1S/1C/1D/1F (H-300): sc-98753. Western blot analysis of L-type Ca$^{++}$ CP α1S/1C/1D/1F expression in mouse heart tissue extract.

## 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.