

# L-type Ca<sup>++</sup> CP $\beta$ 1A (H-50): sc-25689

## BACKGROUND

Voltage-dependent Ca<sup>2+</sup> channels mediate Ca<sup>2+</sup> entry into excitable cells in response to membrane depolarization, and they are involved in a variety of Ca<sup>2+</sup>-dependent processes, including muscle contraction, hormone or neurotransmitter release and gene expression. Calcium channels are highly diverse, multimeric complexes composed of an  $\alpha$ -1 subunit, an intracellular  $\beta$  subunit, a disulfide linked  $\alpha$ -2/ $\delta$  subunit and a transmembrane  $\gamma$  subunit. Ca<sup>2+</sup> 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<sup>2+</sup> 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: CACNB1 (human) mapping to 17q12; Cacnb1 (mouse) mapping to 11 D.

## SOURCE

L-type Ca<sup>++</sup> CP  $\beta$ 1A (H-50) is a rabbit polyclonal antibody raised against amino acids 211-260 mapping within an internal region of L-type Ca<sup>++</sup> CP  $\beta$ 1A of human origin.

## PRODUCT

Each vial contains 200  $\mu$ 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<sup>++</sup> CP  $\beta$ 1A (H-50) is recommended for detection of L-type calcium channel  $\beta$ 1 isoform A (also designated isoform 2) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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); non cross-reactive with isoform 1B (also designated isoform 1 or  $\beta$ A) or isoform 1C (also designated isoform 3 or  $\beta$ B).

L-type Ca<sup>++</sup> CP  $\beta$ 1A (H-50) is also recommended for detection of L-type calcium channel  $\beta$ 1 isoform A (also designated isoform 2) in additional species, including equine, bovine and porcine.

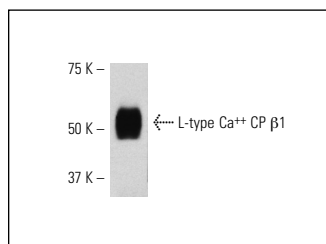
Molecular Weight of L-type Ca<sup>++</sup> CP  $\beta$ 1A: 66 kDa.

Positive Controls: rat skeletal muscle extract: sc-364810, Sol8 cell lysate: sc-2249 SK-N-SH cell lysate: sc-2410.

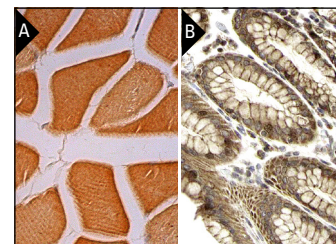
## RECOMMENDED SECONDARY REAGENTS

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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



L-type Ca<sup>++</sup> CP  $\beta$ 1 (H-50): sc-25689. Western blot analysis of L-type Ca<sup>++</sup> CP  $\beta$ 1 expression in rat skeletal muscle tissue extract.



L-type Ca<sup>++</sup> CP  $\beta$ 1A (H-50): sc-25689. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic and membrane staining of glandular cells at high 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Guaranteed

Try **L-type Ca<sup>++</sup> CP  $\beta$ 1 (Y-2D68): sc-134377**, our highly recommended monoclonal alternative to L-type Ca<sup>++</sup> CP  $\beta$ 1A (H-50).