

N-type Ca⁺⁺ CP α1B (S-18): sc-32084

BACKGROUND

N-type calcium channels are localized in high density presynaptic nerve terminals and are crucial elements in neuronal excitation-secretion coupling. Peripherally distributed N-type Ca²⁺ channel plays a key role in cardiovascular regulation through autonomic nervous system. The high-voltage activated Ca²⁺ channels that have been characterized biochemically are complexes of a pore-forming α-1 subunit; a transmembrane, disulfide-linked complex of α-2 and δ subunits; an intracellular β subunit; and in some cases, a transmembrane γ subunit. The α-1 subunit conducts N-type Ca²⁺ currents, which initiate rapid synaptic transmission. In addition to mediating Ca²⁺ entry to initiate transmitter release, N-type Ca²⁺ channels are thought to interact directly with proteins of the synaptic vesicle docking and fusion machinery. The synaptic protein interaction sites in the intracellular loop II-III of subunit α-1B of N-type Ca²⁺ channels bind to syntaxin, SNAP-25 and synaptotagmin.

CHROMOSOMAL LOCATION

Genetic locus: CACNA1B (human) mapping to 9q34.3; Cacna1b (mouse) mapping to 2 A3.

SOURCE

N-type Ca⁺⁺ CP α1B (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of N-type Ca⁺⁺ CP α1B 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-32084 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

N-type Ca⁺⁺ CP α1B (S-18) is recommended for detection of N-type calcium channel α1B 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).

N-type Ca⁺⁺ CP α1B (S-18) is also recommended for detection of N-type calcium channel α1B in additional species, including equine and bovine.

Suitable for use as control antibody for N-type Ca⁺⁺ CP α1B siRNA (h): sc-42698, N-type Ca⁺⁺ CP α1B siRNA (m): sc-42699, N-type Ca⁺⁺ CP α1B shRNA Plasmid (h): sc-42698-SH, N-type Ca⁺⁺ CP α1B shRNA Plasmid (m): sc-42699-SH, N-type Ca⁺⁺ CP α1B shRNA (h) Lentiviral Particles: sc-42698-V and N-type Ca⁺⁺ CP α1B shRNA (m) Lentiviral Particles: sc-42699-V.

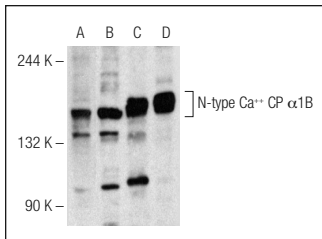
Molecular Weight of N-type Ca⁺⁺ CP α1B: 250 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, IMR-32 cell lysate: sc-2409 or mouse brain extract: sc-2253.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



N-type Ca⁺⁺ CP α1B (S-18): sc-32084. Western blot analysis of N-type Ca⁺⁺ CP α1B expression in SH-SY5Y (A) and IMR-32 (B) whole cell lysates and mouse brain (C) and rat brain (D) tissue extracts.

SELECT PRODUCT CITATIONS

1. Fernández-Morales, J.C., et al. 2014. Hypoxia-elicited catecholamine release is controlled by L-type as well as N/PQ types of calcium channels in rat embryo chromaffin cells. *Am. J. Physiol., Cell Physiol.* 307: C455-C465.

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 **N-type Ca⁺⁺ CP α1B (A-2): sc-377489** or **N-type Ca⁺⁺ CP α1B (A-11): sc-271010**, our highly recommended monoclonal alternatives to N-type Ca⁺⁺ CP α1B (S-18).