

P/Q-type Ca⁺⁺ CP α1A (H-90): sc-28619

BACKGROUND

Voltage-dependent Ca²⁺ channels mediate Ca²⁺ entry into excitable cells in response to membrane depolarization, and they are involved in a variety of Ca²⁺-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. Ca²⁺ currents are characterized on the basis of their biophysical and pharmacologic properties and include L-, N-, T-, P-, Q-, and R- types. P/Q-type Ca²⁺ channels are localized to presynaptic nerve terminals and are crucial elements in the coupling of neuronal excitation to secretion. P/Q-type Ca²⁺ currents initiate a rapid synaptic transmission that is regulated through G proteins, SNARE proteins and protein phosphorylation.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CACNA1A (human) mapping to 19p13.2; Cacna1a (mouse) mapping to 8 C3.

SOURCE

P/Q-type Ca⁺⁺ CP α1A (H-90) is a rabbit polyclonal antibody raised against amino acids 2225-2314 mapping within a cytoplasmic domain of P/Q-type Ca⁺⁺ CP α1A of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

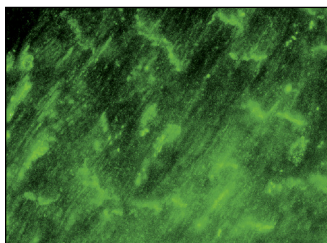
P/Q-type Ca⁺⁺ CP α1A (H-90) is recommended for detection of P/Q-type Ca⁺⁺ CP α1A, and to a lesser extent R-type Ca⁺⁺ CP α1E and N-type Ca⁺⁺ CP α1B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total 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).

Positive Controls: mouse heart tissue.

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



P/Q-type Ca⁺⁺ CP α1A (H-90): sc-28619. Immunofluorescence staining of normal mouse heart frozen section showing membrane staining.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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Try **P/Q-type Ca⁺⁺ CP α1A (C-2): sc-390004**, our highly recommended monoclonal alternative to P/Q-type Ca⁺⁺ CP α1A (H-90).