

T-type Ca⁺⁺ CP α1I (3H5): sc-293486

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. T-type Ca²⁺ currents are activated and inactivated more rapidly and at more negative membrane potentials than other Ca²⁺ current types. T-type Ca²⁺ channels enhance odor sensitivity by lowering the threshold of spike generation in olfactory receptor cells (ORCs).

REFERENCES

1. Perez-Reyes, E. and Schneider, T. 1995. Molecular biology of calcium channels. *Kidney Int.* 48: 1111-1124.
2. Randall, A.D. 1998. The molecular basis of voltage-gated Ca²⁺ channel diversity: is it time for T? *J. Membr. Biol.* 161: 207-213.
3. Catterall, W.A. 2000. Structure and regulation of voltage-gated Ca²⁺ channels. *Annu. Rev. Cell. Dev. Biol.* 16: 521-555.
4. Kawai, F. and Miyachi, E. 2001. Enhancement by T-type Ca²⁺ currents of odor sensitivity in olfactory receptor cells. *J. Neurosci.* 21: RC144.
5. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 601011. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: CACNA1I (human) mapping to 22q13.1; Cacna1i (mouse) mapping to 15 E1.

SOURCE

T-type Ca⁺⁺ CP α1I (3H5) is a mouse monoclonal antibody raised against amino acids 233-331 representing partial length T-type Ca⁺⁺ CP α1I of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

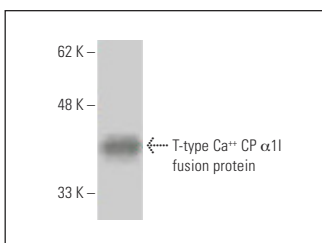
T-type Ca⁺⁺ CP α1I (3H5) is recommended for detection of T-type Ca⁺⁺ CP α1I of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for T-type Ca⁺⁺ CP α1I siRNA (h): sc-42708, T-type Ca⁺⁺ CP α1I siRNA (m): sc-42709, T-type Ca⁺⁺ CP α1I siRNA (r): sc-61871, T-type Ca⁺⁺ CP α1I shRNA Plasmid (h): sc-42708-SH, T-type Ca⁺⁺ CP α1I shRNA Plasmid (m): sc-42709-SH, T-type Ca⁺⁺ CP α1I shRNA Plasmid (r): sc-61871-SH, T-type Ca⁺⁺ CP α1I shRNA (h) Lentiviral Particles: sc-42708-V, T-type Ca⁺⁺ CP α1I shRNA (m) Lentiviral Particles: sc-42709-V and T-type Ca⁺⁺ CP α1I shRNA (r) Lentiviral Particles: sc-61871-V.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



T-type Ca⁺⁺ CP α1I (3H5): sc-293486. Western blot analysis of human recombinant T-type Ca⁺⁺ CP α1I fusion protein.

RESEARCH USE

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