

T-type Ca⁺⁺ CP α 1H (N-18): sc-16261

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 Ca⁺⁺ 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., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: CACNA1H (human) mapping to 16p13.3; Cacna1h (mouse) mapping to 17 A3.3.

SOURCE

T-type Ca⁺⁺ CP α 1H (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of T-type Ca⁺⁺ CP α 1H of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-16261 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

T-type Ca⁺⁺ CP α 1H (N-18) is recommended for detection of T-type calcium channel α 1H of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for T-type Ca⁺⁺ CP α 1H siRNA (h): sc-42706, T-type Ca⁺⁺ CP α 1H siRNA (m): sc-42707, T-type Ca⁺⁺ CP α 1H shRNA Plasmid (h): sc-42706-SH, T-type Ca⁺⁺ CP α 1H shRNA Plasmid (m): sc-42707-SH, T-type Ca⁺⁺ CP α 1H shRNA (h) Lentiviral Particles: sc-42706-V and T-type Ca⁺⁺ CP α 1H shRNA (m) Lentiviral Particles: sc-42707-V.

Molecular Weight (predicted) of T-type Ca⁺⁺ CP α 1H: 259 kDa.

Molecular Weight (observed) of T-type Ca⁺⁺ CP α 1H: 247-257 kDa.

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) 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.

SELECT PRODUCT CITATIONS

1. Trevino, C.L., et al. 2004. Expression and differential cell distribution of low-threshold Ca²⁺ channels in mammalian male germ cells and sperm. *FEBS Lett.* 563: 87-92.
2. De Proost, I., et al. 2007. Pulmonary expression of voltage-gated calcium channels: special reference to sensory airway receptors. *Histochem. Cell Biol.* 128: 301-316.
3. Escoffier, J., et al. 2007. Expression, localization and functions in acrosome reaction and sperm motility of CaV3.1 and CaV3.2 channels in sperm cells: an evaluation from CaV3.1 and CaV3.2 deficient mice. *J. Cell. Physiol.* 112: 753-763.
4. Morikawa, K., et al. 2010. Identification, isolation and characterization of HCN4-positive pacemaking cells derived from murine embryonic stem cells during cardiac differentiation. *Pacing Clin. Electrophysiol.* 33: 290-303.
5. Zhang, Y., et al. 2014. Peripheral pain is enhanced by Insulin-like growth factor 1 through a G protein-mediated stimulation of T-type calcium channels. *Sci. Signal.* 7: ra94.

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 **T-type Ca⁺⁺ CP α 1H (G-10): sc-377510**, our highly recommended monoclonal alternative to T-type Ca⁺⁺ CP α 1H (N-18).