

R-type Ca⁺⁺ CP α 1E (H-60): sc-28618

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. R-type Ca⁺⁺ currents initiate a rapid synaptic transmission that is regulated through G proteins, SNARE proteins, and protein phosphorylation. R-type Ca⁺⁺ channels may partially regulate the secretory process in chromaffin cells by mediating rapid secretory responses evoked by short depolarizing pulses.

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.
3. Catterall, W.A. 2000. Structure and regulation of voltage-gated Ca²⁺ channels. *Annu. Rev. Cell. Dev. Biol.* 16: 521-555.
4. Albillos, A., et al. 2000. R-Type Ca²⁺ channels are coupled to the rapid component of secretion in mouse adrenal slice chromaffin cells. *J. Neurosci.* 20: 8323-8330.
5. Online Mendelian Inheritance in Man, OMIM™ 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 601011. URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: CACNA1E (human) mapping to 1q25.3; Cacna1e (mouse) mapping to 1 G3.

SOURCE

R-type Ca⁺⁺ CP α 1E (H-60) is a rabbit polyclonal antibody raised against amino acids 2253-2312 mapping within a C-terminal cytoplasmic domain of R-type Ca⁺⁺ CP α 1E 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.

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 or our catalog for detailed protocols and support products.

APPLICATIONS

R-type Ca⁺⁺ CP α 1E (H-60) is recommended for detection of R-type Ca⁺⁺ CP α 1E of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

R-type Ca⁺⁺ CP α 1E (H-60) is also recommended for detection of R-type Ca⁺⁺ CP α 1E in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for R-type Ca⁺⁺ CP α 1E siRNA (h): sc-42702, R-type Ca⁺⁺ CP α 1E siRNA (m): sc-42703, R-type Ca⁺⁺ CP α 1E shRNA Plasmid (h): sc-42702-SH, R-type Ca⁺⁺ CP α 1E shRNA Plasmid (m): sc-42703-SH, R-type Ca⁺⁺ CP α 1E shRNA (h) Lentiviral Particles: sc-42702-V and R-type Ca⁺⁺ CP α 1E shRNA (m) Lentiviral Particles: sc-42703-V.

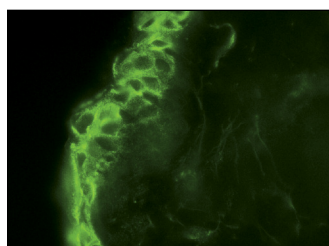
Molecular Weight of R-type Ca⁺⁺ CP α 1E: 220 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224 or SK-N-MC cell lysate: sc-2237.

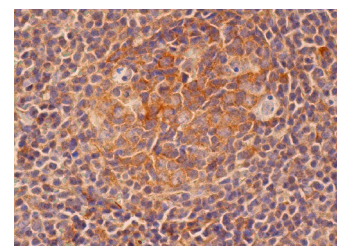
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



R-type Ca⁺⁺ CP α 1E (H-60): sc-28618. Immunofluorescence staining of normal mouse skin frozen section showing membrane staining.



R-type Ca⁺⁺ CP α 1E (H-60): sc-28618. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic and membrane staining of cells in germinal centers and cytoplasmic staining of cells in non-germinal centers.

RESEARCH USE

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