

L-type Ca⁺⁺ CP γ 2 (T-12): sc-18284

BACKGROUND

Excitable cells in response to membrane depolarization 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. L-type Ca⁺⁺ currents initiate muscle contraction, endocrine secretion and gene transcription, and are regulated through second-messenger activated protein phosphorylation pathways. L-type calcium channels may form macromolecular signaling complexes with G protein-coupled receptors, thereby enhancing the selectivity of regulating specific targets. L-type calcium channels in the brain specifically express the γ 2 subunit along with γ 3 and 4 subunits. The γ 2 subunit (also known as stargazin) is abundant in synaptic plasma membranes where it regulates synaptic targeting of AMP receptors in granule cells.

CHROMOSOMAL LOCATION

Genetic locus: CACNG2 (human) mapping to 22q12.3; Cacng2 (mouse) mapping to 15 E1.

SOURCE

L-type Ca⁺⁺ CP γ 2 (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of L-type Ca⁺⁺ CP γ 2 of mouse 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-18284 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

L-type Ca⁺⁺ CP γ 2 (T-12) is recommended for detection of L-type Ca⁺⁺ CP γ 2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

L-type Ca⁺⁺ CP γ 2 (T-12) is also recommended for detection of L-type Ca⁺⁺ CP γ 2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for L-type Ca⁺⁺ CP γ 2 siRNA (h): sc-42696, L-type Ca⁺⁺ CP γ 2 siRNA (m): sc-42697, L-type Ca⁺⁺ CP γ 2 shRNA Plasmid (h): sc-42696-SH, L-type Ca⁺⁺ CP γ 2 shRNA Plasmid (m): sc-42697-SH, L-type Ca⁺⁺ CP γ 2 shRNA (h) Lentiviral Particles: sc-42696-V and L-type Ca⁺⁺ CP γ 2 shRNA (m) Lentiviral Particles: sc-42697-V.

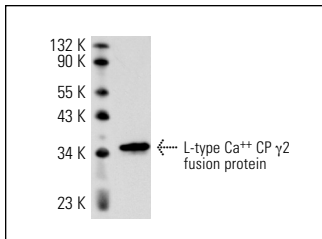
Molecular Weight of L-type Ca⁺⁺ CP γ 2: 36 kDa.

Positive Controls: L-type Ca⁺⁺ CP γ 2 (h2): 293T Lysate: sc-128975.

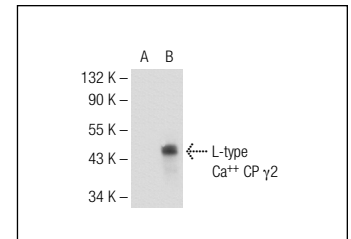
RECOMMENDED SECONDARY REAGENTS

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



L-type Ca⁺⁺ CP γ 2 (T-12): sc-18284. Western blot analysis of human recombinant L-type Ca⁺⁺ CP γ 2 fusion protein.



L-type Ca⁺⁺ CP γ 2 (T-12): sc-18284. Western blot analysis of L-type Ca⁺⁺ CP γ 2 expression in non-transfected: sc-117752 (A) and human L-type Ca⁺⁺ CP γ 2 transfected: sc-128975 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Powell, K.L., et al. 2008. Genetic absence epilepsy rats from Strasbourg have increased corticothalamic expression of stargazin. *Neurobiol. Dis.* 31: 261-265.
- Kennard, J.T., et al. 2011. Stargazin and AMPA receptor membrane expression is increased in the somatosensory cortex of genetic absence epilepsy rats from Strasbourg. *Neurobiol. Dis.* 42: 48-54.

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.