

TRPC5 (N-20): sc-18735

BACKGROUND

Transient receptor potential (TRP) ion channels are a superfamily of six transmembrane segment-spanning, gated cation channels. TRP subtypes mediate store-operated Ca^{2+} entry, a process involving Ca^{2+} influx and replenishment of Ca^{2+} stores formerly emptied through the action of inositol 1,4,5-trisphosphate production and other Ca^{2+} mobilizing agents. TRP ion channels influence calcium-depletion-induced calcium influx processes in response to chemo-, mechano- and osmoregulatory events. Human TRP1 protein is a 793 amino acid cation channel that is expressed in fetal and adult brain and in adult heart, testis and ovary, where it may influence store-operated Ca^{2+} entry as a component of capacitative calcium entry (CCE) complexes. The brain-specific subunit TRP5 forms a nonselective cation channel with TRP1 in the hippocampus that is activated by Gq-coupled receptors, but not by depletion of intracellular Ca^{2+} stores. The gene encoding human TRP5 maps to chromosome Xp23, which also contains loci for nonsyndromic mental retardation and X-linked disorders.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: TRPC4 (human) mapping to 13q13.3, TRPC5 (human) mapping to Xq23; Trpc4 (mouse) mapping to 3 D, Trpc5 (mouse) mapping to X F2.

SOURCE

TRPC5 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of TRPC5 of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-18735 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TRPC5 (N-20) is recommended for detection of TRPC5 and TRPC4 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).

TRPC5 (N-20) is also recommended for detection of TRPC5 and TRPC4 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of TRPC5: 112 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201.

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.

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.



Try **TRPC5 (1C8): sc-293259**, our highly recommended monoclonal alternative to TRPC5 (N-20).