

TRPC6 (E-7): sc-515927

BACKGROUND

Transient receptor potential cation (TRPC) channels are a superfamily of six transmembrane segment-spanning, gated cation channels. TRPC 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. TRPC ion channels influence calcium-depletion induced calcium influx processes in response to chemo-, mechano- and osmoregulatory events. Human TRPC6 protein is a 931 amino acid cation channel that is predominantly expressed in placenta, spleen, lung, small intestine and ovary. Activated by diacylglycerol (DAG), TRPC6 comprises the $\alpha 1$ -adrenoceptor-activated Ca^{2+} -permeable cation channel. The gene encoding human TRPC6 maps to chromosome 11q22.1.

REFERENCES

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2. Wes, P.D., et al. 1995. TRPC1, a human homolog of a *Drosophila* store-operated channel. *Proc. Natl. Acad. Sci. USA* 92: 9652-9666.
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4. D'Esposito, M., et al. 1998. Identification and assignment of the human transient receptor potential channel 6 gene TRPC6 to chromosome 11q21→q22. *Cytogenet. Cell Genet.* 83: 46-47.
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6. Hofmann, T., et al. 1999. Direct activation of human TRPC6 and TRPC3 by diacylglycerol. *Nature* 397: 259-263.
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8. Harteneck, C., et al. 2000. From worm to man: three subfamilies of TRP channels. *Trends Neurosci.* 23: 159-166.
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CHROMOSOMAL LOCATION

Genetic locus: TRPC6 (human) mapping to 11q22.1.

SOURCE

TRPC6 (E-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 834-860 within a C-terminal cytoplasmic domain of TRPC6 of human origin.

PRODUCT

Each vial contains 200 μg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TRPC6 (E-7) is recommended for detection of TRPC6 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg 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).

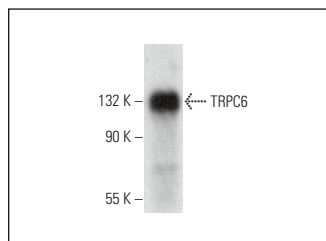
Suitable for use as control antibody for TRPC6 siRNA (h): sc-42672, TRPC6 shRNA Plasmid (h): sc-42672-SH and TRPC6 shRNA (h) Lentiviral Particles: sc-42672-V.

Positive Controls: human kidney extract: sc-363764.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TRPC6 (E-7): sc-515927. Western blot analysis of TRPC6 expression in human kidney tissue extract.

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 for detailed protocols and support products.