

TRPC3/6/7 (A-15): sc-15058

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 TRPC3 protein, also known as TRP3, is a cation channel that is predominantly expressed in brain. The activation of store-mediated Ca^{2+} entry in human cells likely occurs through the association between IP3R (inositol 1,4,5-trisphosphate receptors) and TRPC3. TRPC3 activity is also activated by DAG (diacylglycerol) independently of PKC (protein kinase C). Human TRPC6 is predominantly expressed in placenta, spleen, lung, small intestine and ovary. Also activated by diacylglycerol (DAG), TRPC6 comprises the $\alpha 1$ -adrenoceptor-activated Ca^{2+} -permeable cation channel.

REFERENCES

1. Wes, P.D., et al. 1995. TRPC1, a human homolog of a *Drosophila* store-operated channel. Proc. Natl. Acad. Sci. USA 92: 9652-9666.
2. Zhu, X., et al. 1995. Molecular cloning of a widely expressed human homologue for the *Drosophila* TRP gene. FEBS Lett. 373: 193-218.

SOURCE

TRPC3/6/7 (A-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TRPC3 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-15058 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TRPC3/6/7 (A-15) is recommended for detection of TRPC3, TRPC6 and TRPC7 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).

TRPC3/6/7 (A-15) is also recommended for detection of TRPC3, TRPC6 and TRPC7 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of TRPC3: 97 kDa.

Molecular Weight of TRPC6: 106 kDa.

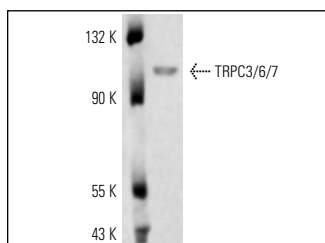
Molecular Weight of TRPC7: 100 kDa.

Positive Controls: MEG-01 cell lysate: sc-2283.

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



TRPC3/6/7 (A-15): sc-15058. Western blot analysis of TRPC3/6/7 expression in MEG-01 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Kwan, H.Y., et al. 2004. Regulation of canonical transient receptor potential isoform 3 (TRPC3) channel by protein kinase G. Proc. Natl. Acad. Sci. USA 101: 2625-2630.
2. Santillán, G., et al. 2004. TRPC3-like protein and vitamin D receptor mediate $1\alpha,25(OH)2D3$ -induced SOC influx in muscle cells. Int. J. Biochem. Cell Biol. 36: 1910-1918.

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.



Try **TRPC3 (C-5): sc-514670**, our highly recommended monoclonal alternative to TRPC3/6/7 (A-15).