

# TRPM5 (S-13): sc-27367

## BACKGROUND

Transient receptor potential ion channels (TRPCs) 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. TRP ion channels influence calcium-depletion induced calcium influx processes in response to chemo-, mechano- and osmoregulatory events. TRPM5 forms a cation channel that is directly activated by micromolar concentrations of intracellular  $Ca^{2+}$ . Sustained exposure to  $Ca^{2+}$  desensitizes TRPM5 channels, but phosphatidylinositol-4,5-bisphosphate reverses desensitization, partially restoring channel activity. TRPM5 channels are nonselective among monovalent cations and not detectably permeable to divalent cations.

## REFERENCES

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- Hofmann, T., Chubanov, V., Gudermann, T. and Montell, C. 2003. TRPM5 is a voltage-modulated and  $Ca^{2+}$ -activated monovalent selective cation channel. Curr. Biol. 13: 1153-1158.
- Pérez, C.A., Margolskee, R.F., Kinnamon, S.C. and Ogura, T. 2003. Making sense with TRP channels: store-operated calcium entry and the ion channel Trpm5 in taste receptor cells. Cell Calcium 33: 541-549.
- Perraud, A.L., Knowles, H.M. and Schmitz, C. 2004. Novel aspects of signaling and ion-homeostasis regulation in immunocytes. The TRPM ion channels and their potential role in modulating the immune response. Mol. Immunol. 41: 657-673.

## CHROMOSOMAL LOCATION

Genetic locus: TRPM5 (human) mapping to 11p15.5; Trpm5 (mouse) mapping to 7 F5.

## SOURCE

TRPM5 (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TRPM5 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27367 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

TRPM5 (S-13) is recommended for detection of TRPM5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

TRPM5 (S-13) is also recommended for detection of TRPM5 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for TRPM5 siRNA (h): sc-44169, TRPM5 siRNA (m): sc-154695, TRPM5 shRNA Plasmid (h): sc-44169-SH, TRPM5 shRNA Plasmid (m): sc-154695-SH, TRPM5 shRNA (h) Lentiviral Particles: sc-44169-V and TRPM5 shRNA (m) Lentiviral Particles: sc-154695-V.

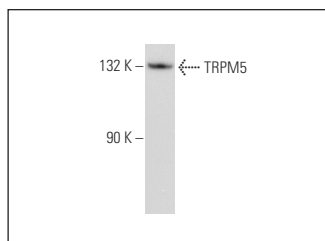
Molecular Weight of TRPM5: 131 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## 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



TRPM5 (S-13): sc-27367. Western blot analysis of TRPM5 expression in Hep G2 whole cell lysate.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.