

TRPM6 (H-300): sc-98695

BACKGROUND

Transient receptor potential ion channels (TRPC) 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 osmo-regulatory events. TRPM6 (transient receptor potential cation channel, subfamily M, member 6), also known as HSH, HMGX, HOMG, CHAK2 or HOMG1, is a 222 amino acid multi-pass membrane protein that is highly expressed in kidney and colon. An essential ion channel and a serine/threonine-protein kinase, TRPM6 is crucial for magnesium homeostasis and has an important role in epithelial magnesium transport and in the active magnesium absorption in the gut and kidney.

REFERENCES

- Walder, R.Y., et al. 2002. Mutation of TRPM6 causes familial hypomagnesemia with secondary hypocalcemia. *Nat. Genet.* 31: 171-174.
- Cao, G., et al. 2008. Insight into the molecular regulation of the epithelial magnesium channel TRPM6. *Curr. Opin. Nephrol. Hypertens.* 17: 373-378.
- Apa, H., et al. 2008. A case of hypomagnesemia with secondary hypocalcemia caused by TRPM6 gene mutation. *Indian J. Pediatr.* 75: 632-634.
- Rondón, L.J., et al. 2008. Dietary inulin in mice stimulates Mg^{2+} absorption and modulates TRPM6 and TRPM7 expression in large intestine and kidney. *Magnes. Res.* 21: 224-231.
- Song, Y., et al. 2009. Common genetic variants of the ion channel transient receptor potential membrane melastatin 6 and 7 (TRPM6 and TRPM7), magnesium intake, and risk of type 2 diabetes in women. *BMC Med. Genet.* 10: 4.
- Thebault, S., et al. 2009. EGF increases TRPM6 activity and surface expression. *J. Am. Soc. Nephrol.* 20: 78-85.

CHROMOSOMAL LOCATION

Genetic locus: TRPM6 (human) mapping to 9q21.13; Trpm6 (mouse) mapping to 19 B.

SOURCE

TRPM6 (H-300) is a rabbit polyclonal antibody raised against amino acids 1225-1524 mapping within an internal region of TRPM6 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.

STORAGE

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

APPLICATIONS

TRPM6 (H-300) is recommended for detection of TRPM6 of human and, to a lesser extent, mouse and rat 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

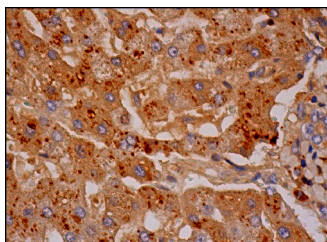
Suitable for use as control antibody for TRPM6 siRNA (h): sc-76754, TRPM6 siRNA (m): sc-76755, TRPM6 shRNA Plasmid (h): sc-76754-SH, TRPM6 shRNA Plasmid (m): sc-76755-SH, TRPM6 shRNA (h) Lentiviral Particles: sc-76754-V and TRPM6 shRNA (m) Lentiviral Particles: sc-76755-V.

Molecular Weight of TRPM6: 234 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



TRPM6 (H-300): sc-98695. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes and bile duct cells.

RESEARCH USE

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



Try **TRPM6 (D-6): sc-365536**, our highly recommended monoclonal alternative to TRPM6 (H-300).