SANTA CRUZ BIOTECHNOLOGY, INC.

TRPM6 (D-6): sc-365536

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 2,022 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.

CHROMOSOMAL LOCATION

Genetic locus: TRPM6 (human) mapping to 9q21.13.

SOURCE

TRPM6 (D-6) is a mouse monoclonal antibody raised against amino acids 1225-1524 mapping within an internal region of TRPM6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TRPM6 (D-6) is available conjugated to agarose (sc-365536 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365536 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365536 PE), fluorescein (sc-365536 FITC), Alexa Fluor® 488 (sc-365536 AF488), Alexa Fluor® 546 (sc-365536 AF546), Alexa Fluor® 594 (sc-365536 AF594) or Alexa Fluor® 647 (sc-365536 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365536 AF680) or Alexa Fluor® 790 (sc-365536 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

TRPM6 (D-6) is recommended for detection of TRPM6 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), 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 shRNA Plasmid (h): sc-76754-SH and TRPM6 shRNA (h) Lentiviral Particles: sc-76754-V.

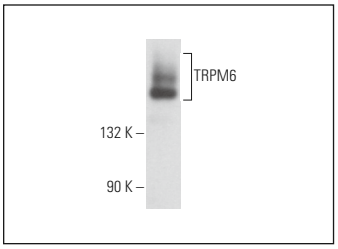
Molecular Weight of TRPM6: 234 kDa.

Positive Controls: human kidney extract: sc-363764.

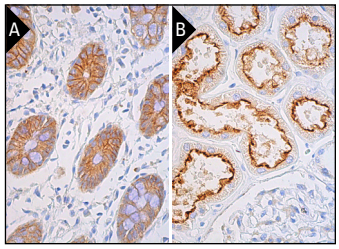
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



TRPM6 (D-6): sc-365536. Western blot analysis of TRPM6 expression in human kidney tissue extract.



TRPM6 (D-6): sc-365536. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing membrane and cytoplasmic staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing apical membrane staining of cells in tubules (**B**).

SELECT PRODUCT CITATIONS

1. Krapivinsky, G., et al. 2017. Histone phosphorylation by TRPM6's cleaved kinase attenuates adjacent arginine methylation to regulate gene expression. Proc. Natl. Acad. Sci. USA 114: E7092-E7100.
2. Uzawa, K., et al. 2019. Growth suppression of human oral cancer cells by candidate agents for cetuximab-side effects. Exp. Cell Res. 376: 210-220.
3. Andriule, I., et al. 2021. Evidence for the expression of TRPM6 and TRPM7 in cardiomyocytes from all four chamber walls of the human heart. Sci. Rep. 11: 15445.
4. Kriuchkova, N., et al. 2023. Furosemide rescues hypercalciuria in familial hypomagnesaemia with hypercalciuria and nephrocalcinosis model. Acta Physiol. 237: e13927.

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 for detailed protocols and support products.