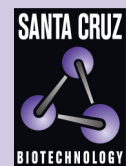


# TRPM3 (K-17): sc-79165



The Power to Question

## BACKGROUND

The transient receptor potential (TRP) protein family consists of a diverse group of cation channels functioning in a variety of homeostatic and regulatory pathways. Four subfamilies exist, based on channel domain homology, not activating stimuli: C type (canonical or classical), V type (vanilloid receptor related), M type (melastatin related) and P type (PKD). TRPM3 (transient receptor potential cation channel subfamily M member 3), also known as long transient receptor potential channel 3v and melastatin 2, is a 1,732 amino acid multi-pass membrane protein that is a member of the M-type subfamily and is closely related to MLSN1 (melastatin 1), also known as TRPM1. TRPM3 functions as a calcium channel that mediates entry of calcium ion into the cell. A decrease in extracellular osmolarity, depletion of stored calcium and muscarinic receptor activation result in an increase of TRPM3 channel activity. Nine isoforms of TRPM3 are produced as a result of alternative splicing events.

## REFERENCES

1. Nagase, T., et al. 2000. Prediction of the coding sequences of unidentified human genes. XVIII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 7: 273-281.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608961. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Lee, N., et al. 2003. Expression and characterization of human transient receptor potential melastatin 3 (hTRPM3). J. Biol. Chem. 278: 20890-20897.
4. Grimm, C., et al. 2003. Molecular and functional characterization of the melastatin-related cation channel TRPM3. J. Biol. Chem. 278: 21493-21501.
5. Kraft, R., et al. 2005. The mammalian melastatin-related transient receptor potential cation channels: an overview. Pflugers Arch. 451: 204-211.
6. Oberwinkler, J. 2007. TRPM3, a biophysical enigma? Biochem. Soc. Trans. 35: 89-90.
7. Harteneck, C., et al. 2007. TRP channels activated by extracellular hypo-osmoticity in epithelia. Biochem. Soc. Trans. 35: 91-95.

## CHROMOSOMAL LOCATION

Genetic locus: TRPM3 (human) mapping to 9q21.12; Trpm3 (mouse) mapping to 19 B.

## SOURCE

TRPM3 (K-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of TRPM3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-79165 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TRPM3 (K-17) is recommended for detection of TRPM3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

TRPM3 (K-17) is also recommended for detection of TRPM3 in additional species, including equine, canine and avian.

Suitable for use as control antibody for TRPM3 siRNA (h): sc-76759, TRPM3 siRNA (m): sc-76760, TRPM3 shRNA Plasmid (h): sc-76759-SH, TRPM3 shRNA Plasmid (m): sc-76760-SH, TRPM3 shRNA (h) Lentiviral Particles: sc-76759-V and TRPM3 shRNA (m) Lentiviral Particles: sc-76760-V.

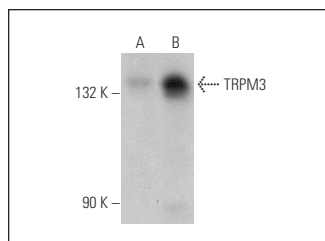
Molecular Weight of TRPM3: 198 kDa.

Positive Controls: TRPM3 transfected CHO whole cell lysates.

## 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



TRPM3 (K-17): sc-79165. Western blot analysis of TRPM3 expression in non-transfected CHO (A) and human TRPM3 transfected CHO (B) whole cell lysates.

## 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. Not for resale.