

TRPM8 (N-15): sc-169689



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. TRPM8 (transient receptor potential cation channel, subfamily M, member 8), also known as TRPP8 or LTRPC6, is a 1,104 amino acid multi-pass membrane protein that belongs to the TRP family of regulatory channel proteins. Expressed at high levels in prostate, TRPM8 functions as a receptor-activated cation channel that is permeable to monovalent cations (such as sodium and potassium) and divalent Ca^{2+} and is involved in the detection of temperature sensations (such as the feeling of coolness) throughout the body. TRPM8 is overexpressed in prostate tumors, as well as in colon, breast and lung cancers, suggesting an important role for TRPM8 in tumorigenesis.

REFERENCES

1. Tsavaler, L., et al. 2001. TRP-p8, a novel prostate-specific gene, is upregulated in prostate cancer and other malignancies and shares high homology with transient receptor potential calcium channel proteins. *Cancer Res.* 61: 3760-3769.
2. de la Peña, E., et al. 2005. The contribution of TRPM8 channels to cold sensing in mammalian neurones. *J. Physiol.* 567: 415-426.
3. Erler, I., et al. 2006. Trafficking and assembly of the cold-sensitive TRPM8 channel. *J. Biol. Chem.* 281: 38396-38404.
4. Facer, P., et al. 2007. Differential expression of the capsaicin receptor TRPV1 and related novel receptors TRPV3, TRPV4 and TRPM8 in normal human tissues and changes in traumatic and diabetic neuropathy. *BMC Neurol.* 7: 11.
5. Bödding, M., Wissenbach, U. and Flockerzi, V. 2007. Characterisation of TRPM8 as a pharmacophore receptor. *Cell. Calcium* 42: 618-628.

CHROMOSOMAL LOCATION

Genetic locus: TRPM8 (human) mapping to 2q37.1; Trpm8 (mouse) mapping to 1 D.

SOURCE

TRPM8 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of TRPM8 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-169689 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TRPM8 (N-15) is recommended for detection of TRPM8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other TRPM family members.

TRPM8 (N-15) is also recommended for detection of TRPM8 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TRPM8 siRNA (h): sc-95009, TRPM8 siRNA (m): sc-154696, TRPM8 shRNA Plasmid (h): sc-95009-SH, TRPM8 shRNA Plasmid (m): sc-154696-SH, TRPM8 shRNA (h) Lentiviral Particles: sc-95009-V and TRPM8 shRNA (m) Lentiviral Particles: sc-154696-V.

Molecular Weight of TRPM8: 130 kDa.

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) 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.

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.