TRPM8 (Extracellular region)

Mouse Monoclonal

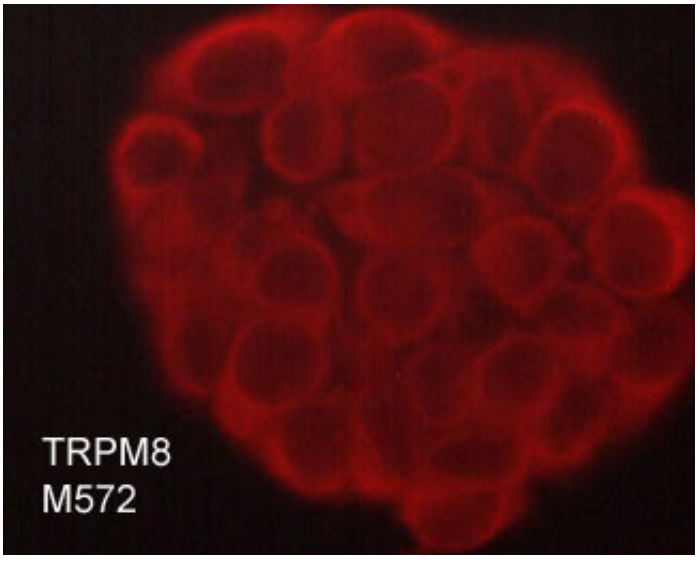
Cat. # TM5721
Size 100 µl

Background

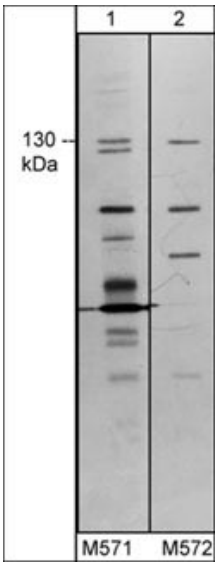
The Transient Receptor Potential Melastatin (TRPM) subfamily of cation-permeable channels is ubiquitous in mammalian tissues. This family includes TRPM1-8. In addition to acting as a calcium-permeant channel, some TRPM family members, TRPM6 and TRPM7, possess serine/threonine kinase activity and autophosphorylation. TRPM8 is thermoactivated at mildly cold temperatures (>25^{o}C), and can also be activated by compounds that cause a cooling sensation, such as menthol and icilin. TRPM8 is expressed in trigeminal and dorsal root ganglia neurons where it confers sensitivity to cold in the somatosensory system. In vascular smooth muscle, TRPM8 may alter blood flow by constricting or enlarging blood vessels. TRPM8 is also expressed in normal prostate epithelial cells, as well as overexpressed in several primary tumors including colon, lung, skin, breast, and prostate cancers.

Background References

Asuthkar, S. et al. (2014) J Biol Chem. 290(5):2659
Potapova, T.A. et al. (2014) Bull Exp Biol Med. 157(6):757
Bibaux, G. et al. (2015) Proc Natl Acad Sci. 112(26):E3345
Shah, A.A. et al. (2015) Clin Exp Rheuma. 33(4S91):S123



Immunocytochemical labeling of TRPM8 in paraformaldehyde fixed and NP-40 permeabilized MCF-7 cells. The cells were labeled with mouse monoclonal anti-TRPM8 (M572). The antibody was detected using goat anti-mouse DyLight® 594.



Western blot image of human TRPM8 in human MDA-MB-231 cells. The blot was probed with mouse monoclonal anti-TRPM8 (extracellular region) clone M571 (lane 1) or clone M572 (lane 2).

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Rev10/14/2019

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Immunogen

Uniprot ID: Q7Z2W7

Clone M572 was generated from TRPM8 synthetic peptide (coupled to carrier) corresponding to amino acids in the extracellular region of human TRPM8. This site is well conserved in rat and mouse TRPM8, but has low homology to other TRPM family members.

Buffer and Storage

Mouse monoclonal, affinity-purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Stable for 1 year.

Applications

WB	1:1000
ELISA	1:2000
ICC	1:200

Species Reactivity

Hu, Rt, Ms

Isotype: IgG1

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, Tris buffer, 0.04% Tween20 for 1 hour at room temperature.
Abbreviations: E = ELISA, ICC = immunocytochemistry, IHC = immunohistochemistry, IP = immunoprecipitation, MS = mass spectrometry, WB = western blot
Hu = Human, Ms = Mouse, Rt = Rat, Ck = Chicken, F = Frog, B = Bovine

Specificity

The antibody was affinity purified using TRPM8 (Extracellular region) peptide. This antibody antibody detects a 130 kDa* protein on SDS-PAGE immunoblots of human MDA-MB-231 and MCF-7 cells. The antibody is also recommended for immunocytochemical labeling of cells.

*All molecular weights (MW) are confirmed by comparison to MW standards and to western blot mobilities of known proteins with similar MW.
"Native" western blot utilizes non-reducing sample buffer (no mercaptoethanol or SDS), normal SDS-PAGE gel electrophoresis, and no methanol in transfer buffers.

Related Products

TP5701	TRPM8 (Extracellular region) Rabbit Polyclonal
TM5711	TRPM8 (Extracellular region) Mouse Monoclonal
TP5691	TRPM7 (a.a. 1484-1497) Rabbit Polyclonal
TP5661	TRPM7 (Ser-1493), phospho-specific Rabbit Polyclonal
TP5671	TRPM7 (Ser-1513), phospho-specific Rabbit Polyclonal
TP5681	TRPM7 (Ser-1569), phospho-specific Rabbit Polyclonal

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