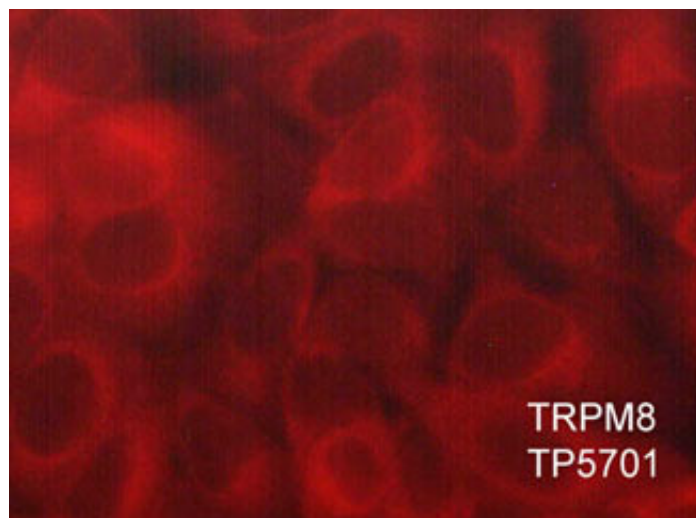


Background

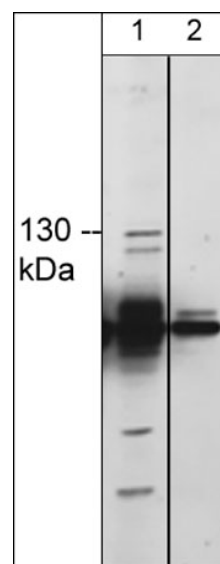
The Transient Receptor Potential Melastatin (TRPM) subfamily of cation-permeable channels is ubiquitous in mammalian tissues. This family includes TRPM1-8. In addition to acting as a calcium-permeant channel, some TRPM family members, TRPM6 and TRPM7, possess serine/threonine kinase activity and autophosphorylation. TRPM8 is thermoactivated at mildly cold temperatures (>25°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 rabbit polyclonal anti-TRPM8 (TP5701). The antibody was detected using goat anti-rabbit DyLight® 594.



Western blot image of human TRPM8 in human MDA-MB-231 cells. The blot was probed with rabbit polyclonal anti-TRPM8 (extracellular region) without peptide blocking (lane 1) or with peptide blocking (lane 2).

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Immunogen**Uniprot ID: Q7Z2W7**

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

Rabbit polyclonal, 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	1:500
ELISA	1:1000
ICC	1:200

Species Reactivity

Hu, Rt, Ms

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 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

TM5721 TRPM8 (Extracellular region) Mouse Monoclonal

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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