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Thermosensitive TRP Channel Anti TRPM8 (CMR1) Polyclonal Antibody

All mammals including human being can detect the temperature by their own skin. Recently, several molecular mechanism has been proposed to explain physiological stimuli. For example capsaicin receptors, TRPV1 (VR-1) and TRPV2 (VRL-1), which are related with noxious stimuli were cloned and found that these molecules were activated by temperatures exceeding 43°C and exceeding 50°C.

Jullus et al. and Patapoutian et al. found novel receptor, TRPM8 (cold and menthol-sensitive receptor 1 : CMR1), and reported to *Nature* and *Cell* in which they described that these molecules were activated in temperature range 8~28°C. These findings might become driving force to investigate the mammalian peripheral nervous system. So that, in near future, the advantage of molecular physiology could account for thermal stimuli such as 1) Why human can distinguish between cold and warm ?
2) Why the nervous activity accompanied by cold sensation does not always induce an unpleasant feeling or pain?

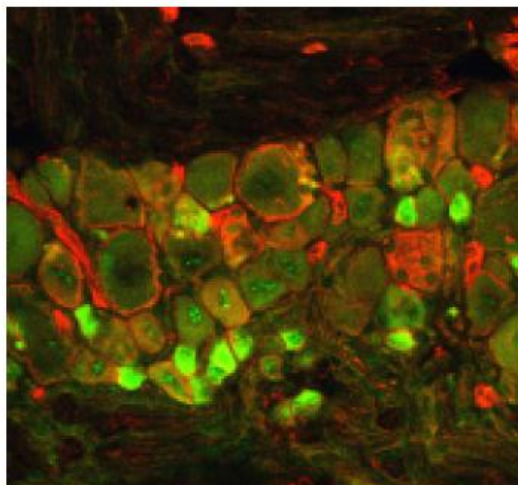
This antibody is very useful for investigating TRPM8 (CMR1) expression pattern and analyzing the function.

Package Size	25µg (100µL/vial)
Format	Rabbit polyclonal antibody 0.25mg/mL
Buffer	Block Ace as a stabilizer, containing 0.1%Proclin as bacteriostat
Storage	Store below -20°C. Once thawed, store at 4°C. Repeated freeze-thaw cycles should be avoided.
Purification method	This antibody was purified from rabbit serum by affinity chromatography.
Working dilution	Immunohistochemistry : 2 ~ 5µg/mL

Immunohistochemistry

Sample : Rat dorsal root neuron
(Positive: Green)

Preparation of antibodies and instruction
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【Reference】

- 1: Obata K, Katsura H, Mizushima T, Yamanaka H, Kobayashi K, Dai Y, Fukuoka T, Tokunaga A, Tominaga M, Noguchi K. TRPA1 induced in sensory neurons contributes to cold hyperalgesia after inflammation and nerve injury. *J Clin Invest.* 2005 Sep;115(9):2393-401.*
- 2: Bautista DM, Siemens J, Glazer JM, Tsuruda PR, Basbaum AI, Stucky CL, Jordt SE, Julius D. The menthol receptor TRPM8 is the principal detector of environmental cold. *Nature.* 2007 Jul 12;448(7150):204-8. Epub 2007 May 30.*
- 3: Xing H, Ling JX, Chen M, Johnson RD, Tominaga M, Wang CY, Gu J. TRPM8 mechanism of autonomic nerve response to cold in respiratory airway. *Mol Pain.* 2008 Jun 5;4:22. *

* Application Reference

Additional: Anti Thermosensitive TRP Channel antibodies available from TRANSGENIC INC.

TRPV1	KM018	Anti Rat TRPV1 (VR-1) Polyclonal Antibody
TRPV2	KM019	Anti Rat TRPV2 (VRL-1) Polyclonal Antibody
TRPM8	KM060	Anti Rat TRPM8 (CMR1) Polyclonal Antibody
phospho-TRPV1	KM112	Anti Rat phospho TRPV1 (VR-1) Polyclonal Antibody
TRPV4	KM119	Anti Mouse TRPV4 Polyclonal Antibody
TRPA1	KM120	Anti Mouse TRPA1 Polyclonal Antibody

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