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TRPM4 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16061b

Product Information

Application	WB, E
Primary Accession	Q8TD43
Other Accession	NP_001182156.1, NP_060106.2
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB35306
Calculated MW	134301
Antigen Region	1121-1149

Additional Information

Gene ID	54795
Other Names	Transient receptor potential cation channel subfamily M member 4, hTRPM4, Calcium-activated non-selective cation channel 1, Long transient receptor potential channel 4, LTrpC-4, LTrpC4, Melastatin-4, TRPM4, LTRPC4
Target/Specificity	This TRPM4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1121-1149 amino acids from the C-terminal region of human TRPM4.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TRPM4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TRPM4 (HGNC:17993)
Synonyms	LTRPC4

Function	Calcium-activated selective cation channel that mediates membrane depolarization (PubMed:12015988, PubMed:12842017, PubMed:29211723, PubMed:30528822). While it is activated by increase in intracellular Ca(2+), it is impermeable to it (PubMed:12015988). Mediates transport of monovalent cations (Na(+) > K(+) > Cs(+) > Li(+)), leading to depolarize the membrane (PubMed:12015988). It thereby plays a central role in cadiomyocytes, neurons from entorhinal cortex, dorsal root and vomeronasal neurons, endocrine pancreas cells, kidney epithelial cells, cochlea hair cells etc. Participates in T-cell activation by modulating Ca(2+) oscillations after T lymphocyte activation, which is required for NFAT-dependent IL2 production. Involved in myogenic constriction of cerebral arteries. Controls insulin secretion in pancreatic beta-cells. May also be involved in pacemaking or could cause irregular electrical activity under conditions of Ca(2+) overload. Affects T-helper 1 (Th1) and T-helper 2 (Th2) cell motility and cytokine production through differential regulation of calcium signaling and NFATC1 localization. Enhances cell proliferation through up-regulation of the beta-catenin signaling pathway. Plays a role in keratinocyte differentiation (PubMed:30528822).
Cellular Location	[Isoform 1]: Cell membrane; Multi-pass membrane protein. Endoplasmic reticulum. Golgi apparatus
Tissue Location	Widely expressed with a high expression in intestine and prostate. In brain, it is both expressed in whole cerebral arteries and isolated vascular smooth muscle cells Prominently expressed in Purkinje fibers. Expressed at higher levels in T-helper 2 (Th2) cells as compared to T-helper 1 (Th1) cells. Expressed in keratocytes (PubMed:30528822).

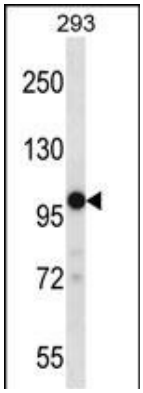
Background

The protein encoded by this gene is a calcium-activated nonselective ion channel that mediates transport of monovalent cations across membranes, thereby depolarizing the membrane. The activity of the encoded protein increases with increasing intracellular calcium concentration, but this channel does not transport calcium. Two transcript variants encoding different isoforms have been found for this gene.

References

Liu, H., et al. Circ Cardiovasc Genet 3(4):374-385(2010)
Yoo, J.C., et al. Biochem. Biophys. Res. Commun. 391(1):806-811(2010)
Kruse, M., et al. J. Clin. Invest. 119(9):2737-2744(2009)
Marigo, V., et al. Mol. Cell. Endocrinol. 299(2):194-203(2009)
Park, J.Y., et al. Biochem. Biophys. Res. Commun. 368(3):677-683(2008)

Images



TRPM4 Antibody (C-term) (Cat. #AP16061b) western blot analysis in 293 cell line lysates (35ug/lane).This demonstrates the TRPM4 antibody detected the TRPM4 protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.