

## Product datasheet

# Anti-TRPM4 antibody [OT110H5] ab123936

[1 References](#) [7 Images](#)

### Overview

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<b>Product name</b>	Anti-TRPM4 antibody [OT110H5]
<b>Description</b>	Mouse monoclonal [OT110H5] to TRPM4
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Dog, Human, African green monkey
<b>Immunogen</b>	Recombinant full length protein corresponding to Human TRPM4 aa 1-1214. Produced in HEK-293T cells (NP_060106). Sequence:  MVVPEKEQSWIPKIFKKKTC TTFVVDSTDPGGTLCQCGRP RTAHPAVAME DAFGAAVVTWSDAHTTEKPTDAYGELDFTGAGRKHS NFLRLSDRTDPA AVYSLVTRTWGFRAPNLVSVLGGSGGPVLQTWLQDLLR RGLVRAAQSTG AWVITGGLHTGIGRHVGVAVRDHQMASTGGTKVVAMGVA PWGVVRNRDTL INPKGSFPARYRWRGDPEDGVQFPLDYNYSAFFLVDDGT HGCLGGENRFR LRLESYSQQKTGVGGTGIDIPVLLLLIDGDEKMLTRIENATQ AQLPCLL VAGSGGAADCLAETLEDTLAPGSGGARQGEARDRIRRRF PKGDLEVLQAQ VERIMTRKELLTVYSSEDGSEEFETVLKALVKACGSSEAS AYLDELRLA VAWNRVDIAQSELFRGDIQWRSFHLEASLMDALLNDRPE FVRLISHGLS LGHFLTPMRLAQLYSAAPSNLIRNLLDQASHSAGTKAPA LKGAAELRP PDVGHVLRMLLGMKCAPRYPSGGAWDPHPGQGFESM YLLSDKATSPLSL DAGLGQAPWSDLLLWALLLNRAQMAMYFWEMGSNAVS SALGACLLLRVMA RLEPDAEEAARRKDLAFKFEGMGVDLFGECYRSSEVRA ARLLLRRCPLWG DATCLQLAMQADARAFFAQDGVQSLLTQKWWGDMASTT

PWALVLAFFCP  
PLIYTRLITFRKSEEEPTREELEFDMDSVINGEGPVGADP  
AEKTP LGVP  
RQSGRPGCCGGRRCGRRCLRRWFHFWGAPVTIFMGNV  
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NCSSEPGFW  
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FSYTFGKV  
QGNSDLWKAQRYRLIREFH SRPALAPPFVISHLRLLLRLQL  
CRRPRSPQ  
PSSPALEHFRVYLSKEAERKLLTWESVHKENFLARARD  
KRES DSERLKR  
TSQKVDLALKQLGHIREYEQRLKVLEREVQQCSRVLGWV  
AEALSR SALLP PGGPPPPDLPGSKD

Database link: [Q8TD43](#)

 [Run BLAST with](#)

 [Run BLAST with](#)

**Positive control**

WB: HEK-293T cells transfected with pCMV6-ENTRY TRPM4 cDNA; HepG2, HeLa, HT-29, COS-7, Jurkat, MDCK and MCF7 cell extracts. IHC-P: Human kidney, liver, liver carcinoma, ovary and pancreas tissues.

**General notes**

Clone OT110H5 (formerly 10H5).

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

**Properties**

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.30 Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA, 50% Glycerol
<b>Purity</b>	Affinity purified
<b>Purification notes</b>	Purified from cell culture supernatant by affinity chromatography.
<b>Clonality</b>	Monoclonal

**Clone number** OT110H5  
**Isotype** IgG1

## Applications

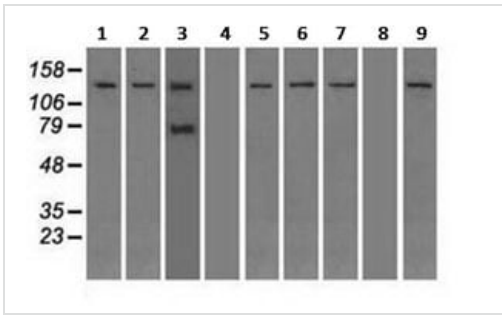
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab123936 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/5000 - 1/10000. Predicted molecular weight: 134 kDa.
IHC-P		1/50. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

## Target

<b>Function</b>	Calcium-activated non selective (CAN) cation channel that mediates membrane depolarization. While it is activated by increase in intracellular $Ca^{2+}$ , it is impermeable to it. Mediates transport of monovalent cations ( $Na^{+} > K^{+} > Cs^{+} > Li^{+}$ ), leading to depolarize the membrane. It thereby plays a central role in cardiomyocytes, 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.
<b>Tissue specificity</b>	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.
<b>Involvement in disease</b>	Defects in TRPM4 are the cause of progressive familial heart block type 1B (PFHB1B) [MIM:604559]. It is a cardiac bundle branch disorder characterized by progressive alteration of cardiac conduction through the His-Purkinje system, with a pattern of a right bundle-branch block and/or left anterior hemiblock occurring individually or together. It leads to complete atrio-ventricular block causing syncope and sudden death.
<b>Sequence similarities</b>	Belongs to the transient receptor (TC 1.A.4) family. LTrpC subfamily. TRPM4 sub-subfamily.
<b>Post-translational modifications</b>	Phosphorylation by PKC leads to increase the sensitivity to $Ca^{2+}$ . Sumoylated. Desumoylated by SENP1.
<b>Cellular localization</b>	Endoplasmic reticulum. Golgi apparatus and Cell membrane. Endoplasmic reticulum. Golgi apparatus.

## Images



Western blot - Anti-TRPM4 antibody [OTI10H5] (ab123936)

**All lanes :** Anti-TRPM4 antibody [OTI10H5] (ab123936) at 1/5000 dilution

**Lane 1 :** HepG2 (Human liver hepatocellular carcinoma cell line) cell extract

**Lane 2 :** HeLa (Human epithelial cell line from cervix adenocarcinoma) cell extract

**Lane 3 :** HT-29 (Human colorectal adenocarcinoma cell line) cell extract

**Lane 4 :** A549 (Human lung carcinoma cell line) cell extract

**Lane 5 :** COS-7 (African green monkey kidney fibroblast-like cell line) cell extract

**Lane 6 :** Jurkat (Human T cell leukemia cell line from peripheral blood) cell extract

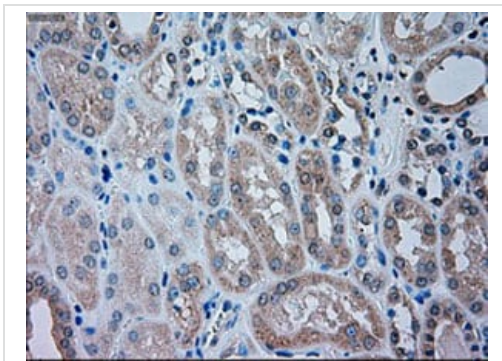
**Lane 7 :** MDCK (Canine kidney cell line) cell extract

**Lane 8 :** PC-12 (Rat adrenal gland pheochromocytoma cell line) cell extract

**Lane 9 :** MCF7 (Human breast adenocarcinoma cell line) cell extract

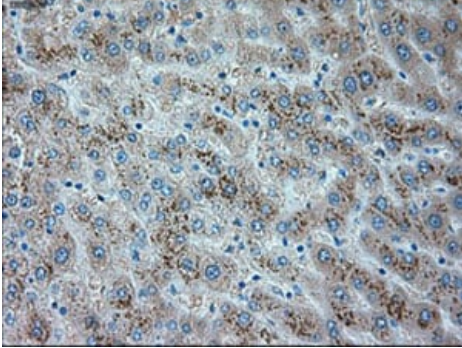
Lysates/proteins at 35 µg per lane.

**Predicted band size:** 134 kDa



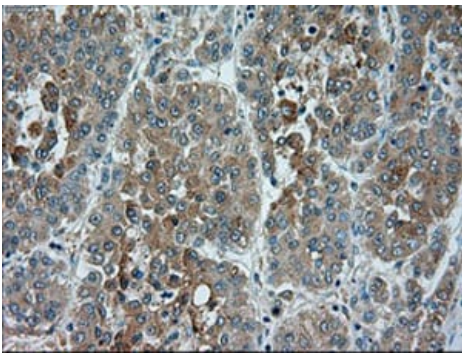
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRPM4 antibody [OTI10H5] (ab123936)

Paraffin-embedded human kidney tissue stained for TRPM4 with ab123936 at a 1/50 dilution in immunohistochemical analysis. Heat-induced epitope retrieval by 10 mM citric buffer, pH 6.0, 100°C for 10 minutes.



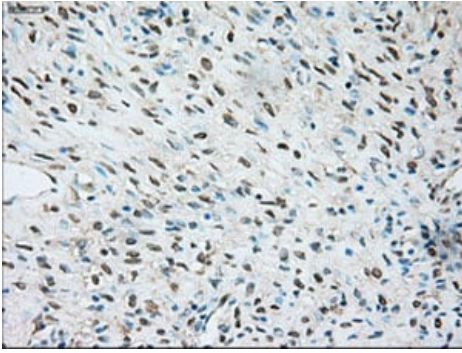
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRPM4 antibody  
[OT110H5] (ab123936)

Paraffin-embedded human liver tissue stained for TRPM4 with ab123936 at a 1/50 dilution in immunohistochemical analysis. Heat-induced epitope retrieval by 10 mM citric buffer, pH 6.0, 100°C for 10 minutes.



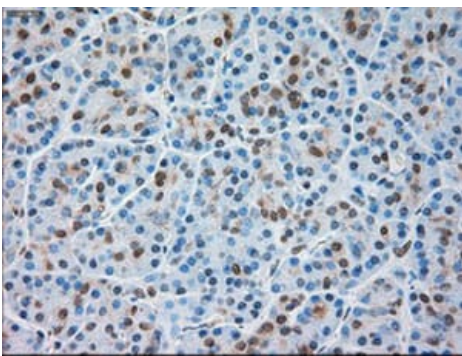
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRPM4 antibody  
[OT110H5] (ab123936)

Paraffin-embedded human liver carcinoma tissue stained for TRPM4 with ab123936 at a 1/50 dilution in immunohistochemical analysis. Heat-induced epitope retrieval by 10 mM citric buffer, pH 6.0, 100°C for 10 minutes.



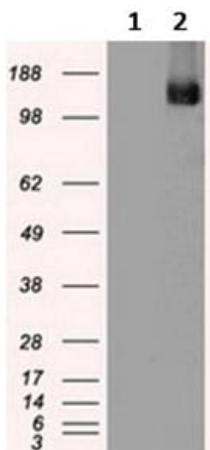
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRPM4 antibody [OTI10H5] (ab123936)

Paraffin-embedded human ovary tissue stained for TRPM4 with ab123936 at a 1/50 dilution in immunohistochemical analysis. Heat-induced epitope retrieval by 10 mM citric buffer, pH 6.0, 100°C for 10 minutes.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-TRPM4 antibody [OTI10H5] (ab123936)

Paraffin-embedded human pancreas tissue stained for TRPM4 with ab123936 at a 1/50 dilution in immunohistochemical analysis. Heat-induced epitope retrieval by 10 mM citric buffer, pH 6.0, 100°C for 10 minutes.



Western blot - Anti-TRPM4 antibody [OTI10H5] (ab123936)

**All lanes** : Anti-TRPM4 antibody [OTI10H5] (ab123936) at 1/5000 dilution

**Lane 1** : HEK-293T (Human epithelial cell line from embryonic kidney transformed with large T antigen) cells transfected with pCMV6-ENTRY control cDNA

**Lane 2** : HEK-293T cells transfected with pCMV6-ENTRY TRPM4 cDNA

Lysates/proteins at 5 µg per lane.

**Predicted band size:** 134 kDa

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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