

MTMR4 Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6804a

Specification

MTMR4 Antibody (C-term) - Product Information

Application	WB, IHC-P,E
Primary Accession	O9NYA4
Other Accession	NM_004687
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	1155-1187

MTMR4 Antibody (C-term) - Additional Information

Gene ID 9110

Other Names

Myotubularin-related protein 4, FYVE domain-containing dual specificity protein phosphatase 2, FYVE-DSP2, Zinc finger FYVE domain-containing protein 11, MTMR4, KIAA0647, ZFYVE11

Target/Specificity

This MTMR4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1155-1187 amino acids from the C-terminal region of human MTMR4.

Dilution

WB~~1:1000
IHC-P~~1:10~50

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

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

MTMR4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

MTMR4 Antibody (C-term) - Protein Information

Name MTMR4 ([HGNC:7452](#))

Function Lipid phosphatase that specifically dephosphorylates the D-3 position of

phosphatidylinositol 3-phosphate and phosphatidylinositol 3,5-bisphosphate, generating phosphatidylinositol and phosphatidylinositol 5-phosphate (PubMed:[11302699](#), PubMed:[16787938](#), PubMed:[20736309](#), PubMed:[27625994](#), PubMed:[29962048](#), PubMed:[30944173](#)). Decreases the levels of phosphatidylinositol 3-phosphate, a phospholipid found in cell membranes where it acts as key regulator of both cell signaling and intracellular membrane traffic, in a subset of endosomal membranes to negatively regulate both endocytic recycling and trafficking and/or maturation of endosomes toward lysosomes (PubMed:[16787938](#), PubMed:[20736309](#), PubMed:[29962048](#)). Through phosphatidylinositol 3-phosphate turnover in phagosome membranes regulates phagocytosis and phagosome maturation (PubMed:[31543504](#)). By decreasing phosphatidylinositol 3-monophosphate (PI3P) levels in immune cells it can also regulate the innate immune response (PubMed:[30944173](#)). Beside its lipid phosphatase activity, can also function as a molecular adapter to regulate midbody abscission during mitotic cytokinesis (PubMed:[25659891](#)). Can also negatively regulate TGF-beta and BMP signaling through Smad proteins dephosphorylation and retention in endosomes (PubMed:[20061380](#), PubMed:[23150675](#)).

Cellular Location

Early endosome membrane; Peripheral membrane protein. Recycling endosome membrane; Peripheral membrane protein. Late endosome membrane; Peripheral membrane protein. Cytoplasmic vesicle, phagosome membrane; Peripheral membrane protein

Tissue Location

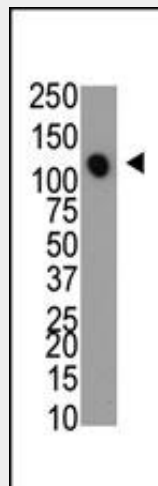
Expressed in brain, heart, kidney, spleen, liver, colon, testis, muscle, placenta, thyroid gland, pancreas, ovary, prostate, skin, peripheral blood, and bone marrow

MTMR4 Antibody (C-term) - Protocols

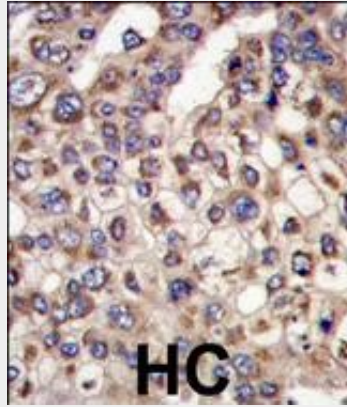
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

MTMR4 Antibody (C-term) - Images



The anti-MTMR4 Pab (Cat. #AP6804a) is used in Western blot to detect MTMR4 in mouse heart cell lysate.



Formalin-fixed and paraffin-embedded human hepatocarcinoma tissue reacted with MTMR4 antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

MTMR4 Antibody (C-term) - Background

MTMR, a member of the myotubularin family, encodes an intracellular protein of 1,195 amino acids, and shares approximately 47% sequence identity with MTMR3, spiking to over 70% identity in the catalytic domain and the double zinc finger (FYVE) motif. PCR analysis detects expression of MTMR4 in all human tissues examined except lung, small intestine, stomach, salivary gland, adrenal gland, and uterus. Subcellular localization of MTMR4 in transfected HeLa cells showed a perinuclear distribution, similar to that seen with MTMR3. MTMR4 dephosphorylates para-nitrophenylphosphate and phosphatidylinositol 3-phosphate.

MTMR4 Antibody (C-term) - Citations

- [PtdIns3P phosphatases MTMR3 and MTMR4 negatively regulate innate immune responses to DNA through modulating STING trafficking.](#)
- [Myotubularin-related protein 4 \(MTMR4\) attenuates BMP/Dpp signaling by dephosphorylation of Smad proteins.](#)
- [MTMR4 attenuates transforming growth factor beta \(TGFbeta\) signaling by dephosphorylating R-Smads in endosomes.](#)
- [The inositol phosphatase MTMR4 is a novel target of the ubiquitin ligase Nedd4.](#)