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MTM1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6809b

Specification

MTM1 Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	Q13496
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**69932**
Antigen Region	**566-594**

MTM1 Antibody (C-term) - Additional Information

Gene ID 4534

Other Names
Myotubularin, Phosphatidylinositol-3, 5-bisphosphate 3-phosphatase, Phosphatidylinositol-3-phosphate phosphatase, MTM1, CG2

Target/Specificity
This MTM1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 566-594 amino acids from the C-terminal region of human MTM1.

Dilution
WB~~1:2000
E~~Use at an assay dependent concentration.

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
MTM1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

MTM1 Antibody (C-term) - Protein Information

Name MTM1 (HGNC:7448)

Synonyms CG2

Function Lipid phosphatase which dephosphorylates phosphatidylinositol 3-monophosphate (PI3P) and phosphatidylinositol 3,5-bisphosphate (PI(3,5)P2) (PubMed:10900271, PubMed:11001925, PubMed:12646134, PubMed:14722070). Has also been shown to dephosphorylate phosphotyrosine- and phosphoserine-containing peptides (PubMed:9537414). Negatively regulates EGFR degradation through regulation of EGFR trafficking from the late endosome to the lysosome (PubMed:14722070). Plays a role in vacuolar formation and morphology. Regulates desmin intermediate filament assembly and architecture (PubMed:21135508). Plays a role in mitochondrial morphology and positioning (PubMed:21135508). Required for skeletal muscle maintenance but not for myogenesis (PubMed:21135508). In skeletal muscles, stabilizes MTMR12 protein levels (PubMed:23818870).

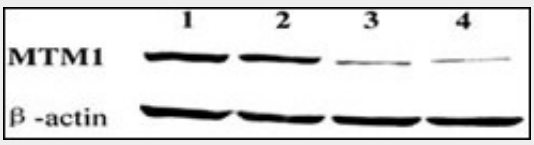
Cellular Location
Cytoplasm. Cell membrane; Peripheral membrane protein. Cell projection, filopodium. Cell projection, ruffle. Late endosome. Cytoplasm, myofibril, sarcomere {ECO:0000250|UniProtKB:Q9Z2C5}. Note=Localizes as a dense cytoplasmic network (PubMed:11001925). Also localizes to the plasma membrane, including plasma membrane extensions such as filopodia and ruffles (PubMed:12118066). Predominantly located in the cytoplasm following interaction with MTMR12 (PubMed:12847286). Recruited to the late endosome following EGF stimulation (PubMed:14722070). In skeletal muscles, co-localizes with MTMR12 in the sarcomere (By similarity) {ECO:0000250|UniProtKB:Q9Z2C5, ECO:0000269|PubMed:11001925, ECO:0000269|PubMed:12118066, ECO:0000269|PubMed:12847286, ECO:0000269|PubMed:14722070}

MTM1 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 Cytomety
- Cell Culture

MTM1 Antibody (C-term) - Images



Western blot showing knockdown of endogenous MTM1 expression by MTM1-targeting vectors pDM134 and pDM170. Embryonic stem (ES) cells were untreated (lane 1) or transfected with control plasmid pDCont (lane 2), MTM1-targeting plasmid pDM134 (lane 3), or pDM170 (lane 4). The blot was probed with anti-MTM1 rabbit polyclonal antibodies. -Actin was used as a loading control.

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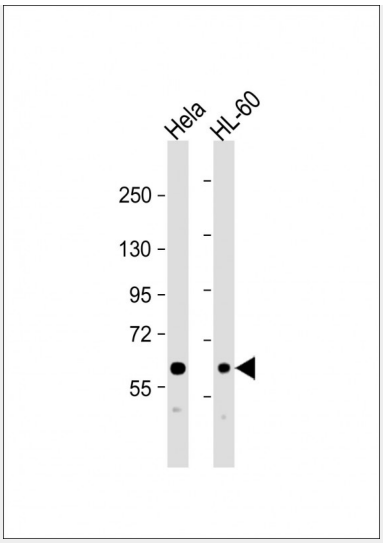

All lanes : Anti-hMTM1-K581 at 1:2000 dilution Lane 1: Hela whole cell lysate Lane 2: HL-60 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 70 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

MTM1 Antibody (C-term) - Background

MTM1 is a member of a protein family that encodes tyrosine phosphatases. Myotubularin is required for muscle cell differentiation and mutations in MTM1 have been identified as being responsible for X-linked myotubular myopathy. MTM1 is a potent phosphatidylinositol 3-phosphate phosphatase (PI(3)P). Mutations in the MTM1 gene that cause human myotubular myopathy dramatically reduce the ability of the phosphatase to dephosphorylate PI(3)P. The findings provided evidence that myotubularin exerts its effects during myogenesis by regulating the cellular levels of the inositol lipid PI(3)P.

MTM1 Antibody (C-term) - References

Nandurkar, H.H., et al., Proc. Natl. Acad. Sci. U.S.A. 100(15):8660-8665 (2003).
Biancalana, V., et al., Hum. Genet. 112(2):135-142 (2003).
Wishart, M.J., et al., Trends Cell Biol. 12(12):579-585 (2002).
Herman, G.E., et al., Hum. Mutat. 19(2):114-121 (2002).
Sutton, I.J., et al., Neurology 57(5):900-902 (2001).

MTM1 Antibody (C-term) - Citations

- A cDNA-based random RNA interference library for functional genetic screens in embryonic stem cells.