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EPM2A Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1453b

Specification

EPM2A Antibody (C-term) - Product Information

Application	**IHC-P, WB,E**
Primary Accession	O95278
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**37158**
Antigen Region	**288-317**

EPM2A Antibody (C-term) - Additional Information

Gene ID 7957

Other Names
Laforin, 313-, Glucan phosphatase, Lafora PTPase, LAFPTPase, EPM2A

Target/Specificity
This EPM2A antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 288-317 amino acids from the C-terminal region of human EPM2A.

Dilution
IHC-P~~1:10~50
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 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
EPM2A Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

EPM2A Antibody (C-term) - Protein Information

Name EPM2A

Function Plays an important role in preventing glycogen hyperphosphorylation and the formation

of insoluble aggregates, via its activity as glycogen phosphatase, and by promoting the ubiquitination of proteins involved in glycogen metabolism via its interaction with the E3 ubiquitin ligase NHLRC1/malin. Shows strong phosphatase activity towards complex carbohydrates in vitro, avoiding glycogen hyperphosphorylation which is associated with reduced branching and formation of insoluble aggregates (PubMed:16901901, PubMed:23922729, PubMed:25538239, PubMed:25544560, PubMed:26231210). Dephosphorylates phosphotyrosine and synthetic substrates, such as para- nitrophenylphosphate (pNPP), and has low activity with phosphoserine and phosphothreonine substrates (in vitro) (PubMed:11001928, PubMed:11220751, PubMed:11739371, PubMed:14532330, PubMed:14722920, PubMed:16971387, PubMed:18617530, PubMed:22036712, PubMed:23922729). Has been shown to dephosphorylate MAPT (By similarity). Forms a complex with NHLRC1/malin and HSP70, which suppresses the cellular toxicity of misfolded proteins by promoting their degradation through the ubiquitin-proteasome system (UPS). Acts as a scaffold protein to facilitate PPP1R3C/PTG ubiquitination by NHLRC1/malin (PubMed:23922729). Also promotes proteasome-independent protein degradation through the macroautophagy pathway (PubMed:20453062).

Cellular Location
Cytoplasm. Note=Under glycogenolytic conditions localizes to the nucleus [Isoform 2]: Cytoplasm. Endoplasmic reticulum membrane; Peripheral membrane protein; Cytoplasmic side. Cell membrane. Nucleus. Note=Also found in the nucleus. [Isoform 5]: Cytoplasm. Nucleus

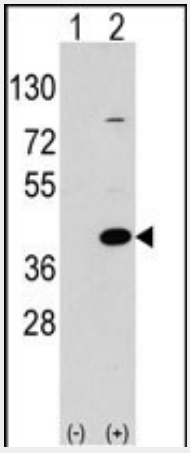
Tissue Location
Expressed in heart, skeletal muscle, kidney, pancreas and brain. Isoform 4 is also expressed in the placenta

EPM2A 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

EPM2A Antibody (C-term) - Images



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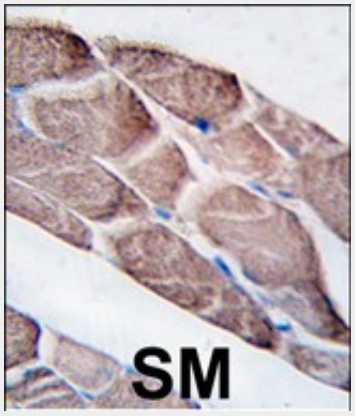
Western blot analysis of EPM2A (arrow) using rabbit polyclonal EPM2A Antibody (C-term) (Cat# AP1453b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the EPM2A gene (Lane 2) (Origene Technologies).



Formalin-fixed and paraffin-embedded human skeletal muscle tissue reacted with EPM2A antibody (C-term) (Cat.#AP1453b), 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.

EPM2A Antibody (C-term) - Background

EPM2A is a dual-specificity phosphatase that associates with polyribosomes. The encoded protein may be involved in the regulation of glycogen metabolism. Mutations have been associated with myoclonic epilepsy of Lafora.

EPM2A Antibody (C-term) - References

Minassian B.A., Nat. Genet. 20:171-174(1998).
Ganesh S., Hum. Mol. Genet. 9:2251-2261(2000).