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Goat anti-Laforin (isoform a), Biotinylated Antibody

Peptide-affinity purified goat antibody
Catalog # AF4381a

Product Information

Application	WB, IHC, Pep-ELISA
Primary Accession	O95278
Other Accession	NP_005661.1
Reactivity	Human, Mouse, Rat, Dog, Bovine
Host	Goat
Clonality	Polyclonal
Clone Names	EPM2A
Calculated MW	37158

Additional Information

Gene ID	7957
Other Names	EPM2A; epilepsy, progressive myoclonus type 2A, Lafora disease (laforin); EPM2; MELF; LAFPTPase; epilepsy, progressive myoclonus type 2, Lafora disease (laforin); glucan phosphatase; lafora PTPase
Dilution	WB~~1:1000 IHC~~1:100~500 Pep-ELISA~~N/A
Format	Supplied at 0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin. Aliquot and store at -20°C. Minimize freezing and thawing.
Immunogen	This antibody is expected to recognize isoform a (NP_005661.1) only.
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Goat anti-Laforin (isoform a), Biotinylated Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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