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ARG42011
anti-Laforin antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes Laforin
Tested Reactivity	Hu, Ms, Rat
Tested Application	WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	Laforin
Species	Human
Immunogen	Recombinant fusion protein corresponding to aa. 244-331 of Human Laforin (NP_005661.1).
Conjugation	Un-conjugated
Alternate Names	Laforin; EPM2; Glucan phosphatase; EC 3.1.3.16; EC 3.1.3.-; Lafora PTPase; LAFPTPase; EC 3.1.3.48; MELF

Application Instructions

Application table

Application	Dilution
WB	1:500 - 1:2000

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Positive Control	HeLa
Observed Size	~ 35 kDa

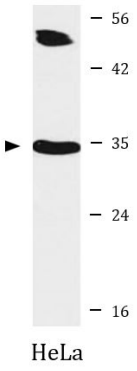
Properties

Form	Liquid
Purification	Affinity purified.
Buffer	PBS (pH 7.3), 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	EPM2A
Gene Full Name	epilepsy, progressive myoclonus type 2A, Lafora disease (laforin)
Background	This gene encodes a dual-specificity phosphatase that associates with polyribosomes. The encoded protein may be involved in the regulation of glycogen metabolism. Mutations in this gene have been associated with myoclonic epilepsy of Lafora. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2008]
Function	Has both dual-specificity protein phosphatase and glucan phosphatase activities. Together with the E3 ubiquitin ligase NHLRC1/malin, appears to be involved in the clearance of toxic polyglucosan and protein aggregates via multiple pathways. Dephosphorylates phosphotyrosine, phosphoserine and phosphothreonine substrates in vitro. Has also been shown to dephosphorylate MAPT. Shows strong phosphatase activity towards complex carbohydrates in vitro, avoiding glycogen hyperphosphorylation which is associated with reduced branching and formation of insoluble aggregates. 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. Also promotes proteasome-independent protein degradation through the macroautophagy pathway. Isoform 2, an inactive phosphatase, could function as a dominant-negative regulator for the phosphatase activity of isoform 1. [UniProt]
Calculated Mw	37 kDa
PTM	Polyubiquitinated by NHLRC1/malin. Phosphorylation on Ser-25 by AMPK affects the phosphatase activity of the enzyme and its ability to homodimerize and interact with NHLRC1, PPP1R3C or PRKAA2. [UniProt]
Cellular Localization	Cytoplasm. Note=Under glycogenolytic conditions localizes to the nucleus. [UniProt]

Images



ARG42011 anti-Laforin antibody WB image

Western blot: 25 µg of HeLa cell lysate stained with ARG42011 anti-Laforin antibody at 1:1000 dilution.