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Calmodulin (18Y1) Rabbit Monoclonal Antibody

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Catalog # AP93783

Product Information

Application	WB, IHC-P, FC, IP, IF
Primary Accession	P0DP23
Reactivity	Human, Mouse, Rat
Clonality	Monoclonal
Calculated MW	16838

Additional Information

Gene ID	801;805;808
Other Names	Calmodulin-1 {ECO:0000312|HGNC:HGNC:1442}, CALM1 {ECO:0000303|PubMed:7925473, ECO:0000312|HGNC:HGNC:1442}
Dilution	WB~~1:1000 IHC-P~~N/A FC~~1:10~50 IP~~N/A IF~~1:50~200
Storage Conditions	-20℃

Protein Information

Name	CALM1 {ECO:0000303|PubMed:7925473, ECO:0000312|HGNC:HGNC:1442}
Function	Calmodulin acts as part of a calcium signal transduction pathway by mediating the control of a large number of enzymes, ion channels, aquaporins and other proteins through calcium-binding (PubMed:16760425, PubMed:23893133, PubMed:26969752, PubMed:27165696, PubMed:28890335, PubMed:31454269, PubMed:35568036). Calcium-binding is required for the activation of calmodulin (PubMed:16760425, PubMed:23893133, PubMed:26969752, PubMed:27165696, PubMed:28890335, PubMed:31454269, PubMed:35568036). Among the enzymes to be stimulated by the calmodulin-calcium complex are a number of protein kinases, such as myosin light-chain kinases and calmodulin-dependent protein kinase type II (CaMK2), and phosphatases (PubMed:16760425, PubMed:23893133, PubMed:26969752, PubMed:27165696, PubMed:28890335, PubMed:31454269, PubMed:35568036). Together with CCP110 and centrin, is involved in a genetic pathway that regulates the centrosome cycle and progression through cytokinesis (PubMed:16760425). Is a regulator of voltage- dependent L-type calcium channels (PubMed:31454269). Mediates calcium- dependent inactivation of CACNA1C (PubMed:26969752). Positively regulates calcium-activated potassium channel activity of KCNN2 (PubMed:27165696). Forms a potassium channel complex with KCNQ1 and regulates electrophysiological activity of the channel via calcium- binding

(PubMed:25441029). Acts as a sensor to modulate the endoplasmic reticulum contacts with other organelles mediated by VMP1:ATP2A2 (PubMed:28890335). Component of the silencing factor of the integrated stress response (SIFI) complex, a multiprotein complex required to turn off the mitochondrial stress response after a specific stress event has been resolved (PubMed:38297121, PubMed:40328314, PubMed:40875847).

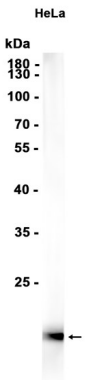
Cellular Location

Cytoplasm, cytoskeleton, spindle. Cytoplasm, cytoskeleton, spindle pole. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cell projection, cilium, flagellum {ECO:0000250|UniProtKB:P0DP26} Note=Distributed throughout the cell during interphase, but during mitosis becomes dramatically localized to the spindle poles and the spindle microtubules

Background

This gene encodes a member of the EF-hand calcium-binding protein family. It is one of three genes which encode an identical calcium binding protein which is one of the four subunits of phosphorylase kinase. Two pseudogenes have been identified on chromosome 7 and X. Multiple transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Oct 2009]

Images



Western blot analysis of extracts from HeLa cells using AP93783 at 1:1000.

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