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Calmodulin 1 Recombinant Rabbit mAb

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Catalog # AP94823

Product Information

Application	WB, IHC-P, IHC-F, IF, IP
Primary Accession	P0DP23
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Recombinant
Calculated MW	16838
Physical State	Liquid
Immunogen	A synthesized peptide derived from human Calmodulin 1
Epitope Specificity	100-149
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	10mM phosphate buffered saline(pH 7.4) with 150mM sodium chloride, 0.05% BSA, 0.02% Proclin300 and 50% glycerol.
SUBCELLULAR LOCATION	Cytoplasm, cytoskeleton, spindle. Cytoplasm, cytoskeleton, spindle pole. Note=Distributed throughout the cell during interphase, but during mitosis becomes dramatically localized to the spindle poles and the spindle microtubules.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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. Calcium-binding is required for the activation of calmodulin.

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=1:500-2000,IHC-P=1:50-200,IHC-F=1:50-200,ICC/IF=1:50-200,IF=1:50-200,IP=1:20-50,Flow-Cyt=1:50-100
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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

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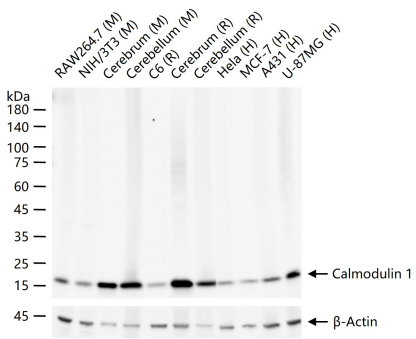
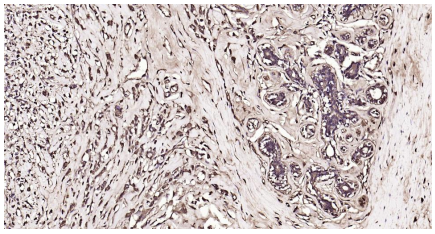
Images



25 ug total protein per lane of various lysates (see on figure) probed with Calmodulin 1 monoclonal antibody, unconjugated (AP94823) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.

Paraformaldehyde-fixed, paraffin embedded Human Breast Cancer; Antigen retrieval by boiling in sodium



citrate buffer (pH6.0) for 15 min; Antibody incubation with Calmodulin 1 Monoclonal Antibody, Unconjugated(AP94823) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023)and DAB (C-0010) staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.