

# Calmodulin 1 Recombinant Rabbit mAb

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Catalog # AP94823

## Product Information

<b>Application</b>	WB, IHC-P, IHC-F, IF, ICC, IP
<b>Primary Accession</b>	<a href="#">P0DP23</a>
<b>Reactivity</b>	Human
<b>Host</b>	Rabbit
<b>Clonality</b>	Recombinant
<b>Calculated MW</b>	16838
<b>Physical State</b>	Liquid
<b>Immunogen</b>	A synthesized peptide derived from human Calmodulin 1
<b>Epitope Specificity</b>	100-149
<b>Isotype</b>	IgG
<b>Purity</b>	affinity purified by Protein A
<b>Buffer</b>	10mM phosphate buffered saline(pH 7.4) with 150mM sodium chloride, 0.05% BSA, 0.02% Proclin300 and 50% glycerol.
<b>SUBCELLULAR LOCATION</b>	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.
<b>SIMILARITY</b>	Belongs to the calmodulin family. Contains 4 EF-hand domains.
<b>SUBUNIT</b>	Interacts with MYO1C and RRAD. Interacts with MYO10 (By similarity). Interacts with CEP97, CEP110, TTN/titin and SRY. Interacts with USP6; the interaction is calcium dependent. Interacts with CDK5RAP2. Interacts with SCN5A. Interacts with RYR1 and RYR2.
<b>Post-translational modifications</b>	Ubiquitination results in a strongly decreased activity. Phosphorylation results in a decreased activity.
<b>Important Note</b>	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
<b>Background Descriptions</b>	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

<b>Gene ID</b>	801;805;808
<b>Other Names</b>	Calmodulin-1 {ECO:0000312 HGNC:HGNC:1442}, CALM1 {ECO:0000303 PubMed:7925473, ECO:0000312 HGNC:HGNC:1442}
<b>Dilution</b>	WB=1:1000-1:2000,IHC-P=1:100-1:500,IHC-F=1:100-1:500,ICC/IF=1:50-1:200,IF=1:100-1:500,IP=1:20-1:50,Flow-Cyt=1:20-1:100

<b>Format</b>	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
<b>Storage</b>	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.

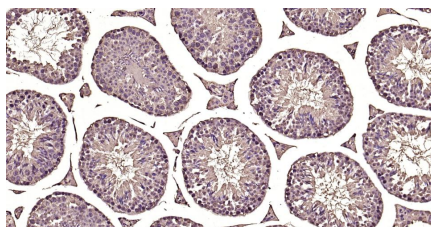
## Protein Information

<b>Name</b>	CALM1 {ECO:0000303   PubMed:7925473, ECO:0000312   HGNC:HGNC:1442}
<b>Function</b>	<p>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:<a href="#">16760425</a>, PubMed:<a href="#">23893133</a>, PubMed:<a href="#">26969752</a>, PubMed:<a href="#">27165696</a>, PubMed:<a href="#">28890335</a>, PubMed:<a href="#">31454269</a>, PubMed:<a href="#">35568036</a>). Calcium-binding is required for the activation of calmodulin (PubMed:<a href="#">16760425</a>, PubMed:<a href="#">23893133</a>, PubMed:<a href="#">26969752</a>, PubMed:<a href="#">27165696</a>, PubMed:<a href="#">28890335</a>, PubMed:<a href="#">31454269</a>, PubMed:<a href="#">35568036</a>). 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:<a href="#">16760425</a>, PubMed:<a href="#">23893133</a>, PubMed:<a href="#">26969752</a>, PubMed:<a href="#">27165696</a>, PubMed:<a href="#">28890335</a>, PubMed:<a href="#">31454269</a>, PubMed:<a href="#">35568036</a>). Together with CCP110 and centrin, is involved in a genetic pathway that regulates the centrosome cycle and progression through cytokinesis (PubMed:<a href="#">16760425</a>). Is a regulator of voltage- dependent L-type calcium channels (PubMed:<a href="#">31454269</a>). Mediates calcium- dependent inactivation of CACNA1C (PubMed:<a href="#">26969752</a>). Positively regulates calcium-activated potassium channel activity of KCNN2 (PubMed:<a href="#">27165696</a>). Forms a potassium channel complex with KCNQ1 and regulates electrophysiological activity of the channel via calcium- binding (PubMed:<a href="#">25441029</a>). Acts as a sensor to modulate the endoplasmic reticulum contacts with other organelles mediated by VMP1:ATP2A2 (PubMed:<a href="#">28890335</a>).</p>
<b>Cellular Location</b>	<p>Cytoplasm, cytoskeleton, spindle. Cytoplasm, cytoskeleton, spindle pole. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cell projection, cilium, flagellum {ECO:0000250   UniProtKB:P0DP26}</p> <p>Note=Distributed throughout the cell during interphase, but during mitosis becomes dramatically localized to the spindle poles and the spindle microtubules</p>

## Background

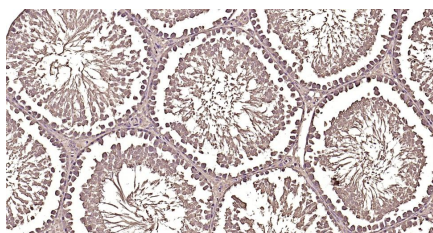
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## Images

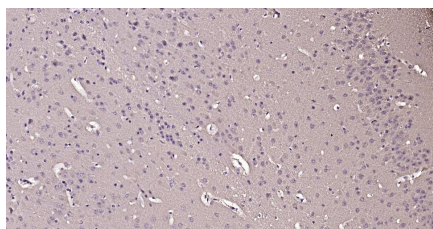


Paraformaldehyde-fixed, paraffin embedded Mouse Testicles; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Calmodulin 1 Monoclonal Antibody, Unconjugated(AP94823) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit,

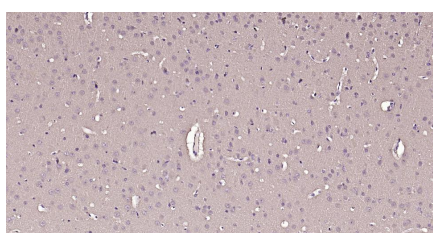
SP-0023)and DAB (C-0010) staining.



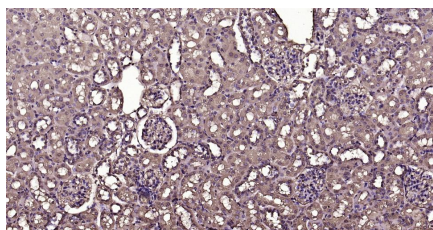
Paraformaldehyde-fixed, paraffin embedded Rat Testicles; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Calmodulin 1 Monoclonal Antibody, Unconjugated(AP94823) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023)and DAB (C-0010) staining.



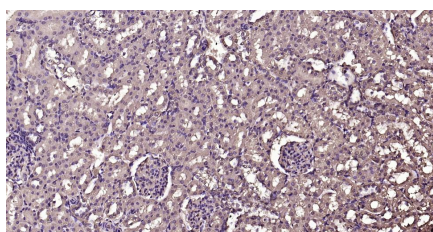
Paraformaldehyde-fixed, paraffin embedded Mouse Cerebrum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Calmodulin 1 Monoclonal Antibody, Unconjugated(AP94823) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023)and DAB (C-0010) staining.



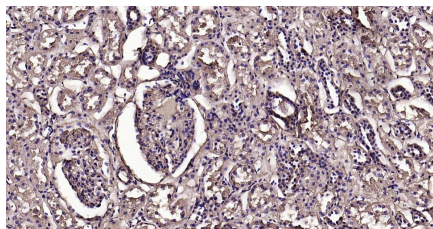
Paraformaldehyde-fixed, paraffin embedded Rat Cerebrum; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Calmodulin 1 Monoclonal Antibody, Unconjugated(AP94823) at 1:200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit, SP-0023)and DAB (C-0010) staining.



Paraformaldehyde-fixed, paraffin embedded Mouse Kidney; 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.



Paraformaldehyde-fixed, paraffin embedded Rat Kidney; 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.



Paraformaldehyde-fixed, paraffin embedded Human Kidney; 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'.