

**Calcineurin A Antibody**  
**Rabbit mAb**  
**Catalog # AP91249****Specification**

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**Calcineurin A Antibody - Product Information**

Application	WB, FC, ICC
Primary Accession	<a href="#">Q08209</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	
Calcineurin A1; CalcineurinA; CALN; CALNA 1; CALNA; CALNA1; CAM PRP; CNA alpha; CCN1;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	58688 Da

**Calcineurin A Antibody - Additional Information**

Dilution	WB~~1:1000 FC~~1:10~50 ICC~~N/A
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Calcineurin A
Description	Calcineurin, also known as protein phosphatase 2B (PP2B), is a calmodulin-dependent, calcium-activated, serine/threonine protein phosphatase composed of a catalytic subunit (calcineurin A) and a tightly bound regulatory subunit (calcineurin B). Calcium-dependent, calmodulin-stimulated protein phosphatase. This subunit may have a role in the calmodulin activation of calcineurin. Dephosphorylates DNM1L, HSPB1 and SSH1.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

**Calcineurin A Antibody - Protein Information****Name** PPP3CA ([HGNC:9314](#))**Synonyms** CALNA, CNA

## Function

Calcium-dependent, calmodulin-stimulated protein phosphatase which plays an essential role in the transduction of intracellular  $\text{Ca}^{2+}$ -mediated signals (PubMed:<a href="http://www.uniprot.org/citations/15671020" target="\_blank">15671020</a>, PubMed:<a href="http://www.uniprot.org/citations/18838687" target="\_blank">18838687</a>, PubMed:<a href="http://www.uniprot.org/citations/19154138" target="\_blank">19154138</a>, PubMed:<a href="http://www.uniprot.org/citations/23468591" target="\_blank">23468591</a>, PubMed:<a href="http://www.uniprot.org/citations/30254215" target="\_blank">30254215</a>). Many of the substrates contain a PxIXIT motif and/or a LxVP motif (PubMed:<a href="http://www.uniprot.org/citations/17498738" target="\_blank">17498738</a>, PubMed:<a href="http://www.uniprot.org/citations/17502104" target="\_blank">17502104</a>, PubMed:<a href="http://www.uniprot.org/citations/22343722" target="\_blank">22343722</a>, PubMed:<a href="http://www.uniprot.org/citations/23468591" target="\_blank">23468591</a>, PubMed:<a href="http://www.uniprot.org/citations/27974827" target="\_blank">27974827</a>). In response to increased  $\text{Ca}^{2+}$  levels, dephosphorylates and activates phosphatase SSH1 which results in cofilin dephosphorylation (PubMed:<a href="http://www.uniprot.org/citations/15671020" target="\_blank">15671020</a>). In response to increased  $\text{Ca}^{2+}$  levels following mitochondrial depolarization, dephosphorylates DNM1L inducing DNM1L translocation to the mitochondrion (PubMed:<a href="http://www.uniprot.org/citations/18838687" target="\_blank">18838687</a>). Positively regulates the CACNA1B/CAV2.2-mediated  $\text{Ca}^{2+}$  release probability at hippocampal neuronal soma and synaptic terminals (By similarity). Dephosphorylates heat shock protein HSPB1 (By similarity). Dephosphorylates and activates transcription factor NFATC1 (PubMed:<a href="http://www.uniprot.org/citations/19154138" target="\_blank">19154138</a>). In response to increased  $\text{Ca}^{2+}$  levels, regulates NFAT-mediated transcription probably by dephosphorylating NFAT and promoting its nuclear translocation (PubMed:<a href="http://www.uniprot.org/citations/26248042" target="\_blank">26248042</a>). Dephosphorylates and inactivates transcription factor ELK1 (PubMed:<a href="http://www.uniprot.org/citations/19154138" target="\_blank">19154138</a>). Dephosphorylates DARPP32 (PubMed:<a href="http://www.uniprot.org/citations/19154138" target="\_blank">19154138</a>). May dephosphorylate CRTC2 at 'Ser-171' resulting in CRTC2 dissociation from 14-3-3 proteins (PubMed:<a href="http://www.uniprot.org/citations/30611118" target="\_blank">30611118</a>). Dephosphorylates transcription factor TFEB at 'Ser-211' following Coxsackievirus B3 infection, promoting nuclear translocation (PubMed:<a href="http://www.uniprot.org/citations/33691586" target="\_blank">33691586</a>). Required for postnatal development of the nephrogenic zone and superficial glomeruli in the kidneys, cell cycle homeostasis in the nephrogenic zone, and ultimately normal kidney function (By similarity). Plays a role in intracellular AQP2 processing and localization to the apical membrane in the kidney, may thereby be required for efficient kidney filtration (By similarity). Required for secretion of salivary enzymes amylase, peroxidase, lysozyme and sialic acid via formation of secretory vesicles in the submandibular glands (By similarity). Required for calcineurin activity and homosynaptic depotentiation in the hippocampus (By similarity). Required for normal differentiation and survival of keratinocytes and therefore required for epidermis superstructure formation (By similarity). Positively regulates osteoblastic bone formation, via promotion of osteoblast differentiation (By similarity). Positively regulates osteoclast differentiation, potentially via NFATC1 signaling (By similarity). May play a role in skeletal muscle fiber type specification, potentially via NFATC1 signaling (By similarity). Negatively regulates MAP3K14/NIK signaling via inhibition of nuclear translocation of the transcription factors RELA and RELB (By similarity). Required for antigen-specific T- cell proliferation response (By similarity). Dephosphorylates KLHL3, promoting the interaction between KLHL3 and WNK4 and subsequent degradation of WNK4 (PubMed:<a href="http://www.uniprot.org/citations/30718414" target="\_blank">30718414</a>). Negatively regulates SLC9A1 activity (PubMed:<a href="http://www.uniprot.org/citations/31375679" target="\_blank">31375679</a>).

## Cellular Location

Cytoplasm. Cell membrane; Peripheral membrane protein. Cell membrane, sarcolemma {ECO:0000250|UniProtKB:P63329}. Cytoplasm, myofibril, sarcomere, Z line {ECO:0000250|UniProtKB:P63329}. Cell projection, dendritic spine. Note=Colocalizes with ACTN1

and MYOZ2 at the Z line in heart and skeletal muscle (By similarity). Recruited to the cell membrane by scaffold protein AKAP5 following L-type  $\text{Ca}^{2+}$ -channel activation (PubMed:22343722) {ECO:0000250|UniProtKB:P63329, ECO:0000269|PubMed:22343722}

#### Tissue Location

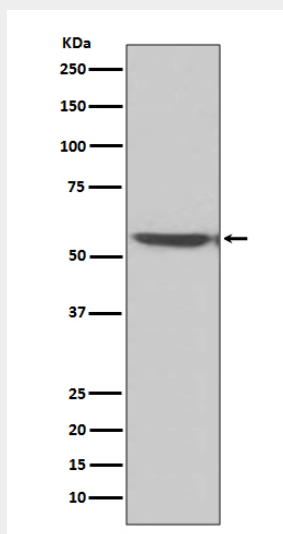
Expressed in keratinocytes (at protein level) (PubMed:29043977). Expressed in lymphoblasts (at protein level) (PubMed:30254215).

#### Calcineurin A Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### Calcineurin A Antibody - Images



Western blot analysis of Calcineurin A expression in A431 cell lysate.