

PPP3CA antibody - N-terminal region

Rabbit Polyclonal Antibody

Catalog # AI13300

Product Information

Application	WB
Primary Accession	P63329
Other Accession	NM_000944 , NP_000935
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Horse, Bovine
Predicted	Human, Mouse, Rat, Pig, Chicken, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	58644

Additional Information

Gene ID	24674
Alias Symbol	CALN, CALNA, CALNA1, CCN1, CNA1, PPP2B
Other Names	Serine/threonine-protein phosphatase 2B catalytic subunit alpha isoform, 3.1.3.16, CAM-PRP catalytic subunit, Calmodulin-dependent calcineurin A subunit alpha isoform, Ppp3ca, Calna
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-PPP3CA antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	PPP3CA antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Ppp3ca {ECO:0000312 RGD:3382}
Synonyms	Calna
Function	Calcium-dependent, calmodulin-stimulated protein phosphatase which plays an essential role in the transduction of intracellular Ca(2+)-mediated signals (PubMed: 1322410 , PubMed: 24018048). Many of the substrates contain a PxIxIT motif and/or a LxVP motif (By similarity). In response to increased Ca(2+) levels, dephosphorylates and activates phosphatase SSH1 which results in cofilin dephosphorylation (By similarity). In response to increased Ca(2+) levels following mitochondrial depolarization, dephosphorylates

DNM1L inducing DNM1L translocation to the mitochondrion (By similarity). Positively regulates the CACNA1B/CAV2.2-mediated Ca(2+) release probability at hippocampal neuronal soma and synaptic terminals (PubMed:23699505). Dephosphorylates heat shock protein HSPB1 (By similarity). Dephosphorylates and activates transcription factor NFATC1 (By similarity). Dephosphorylates and inactivates transcription factor ELK1 (By similarity). Dephosphorylates DARPP32 (By similarity). May dephosphorylate CRTC2 at 'Ser-171' resulting in CRTC2 dissociation from 14-3-3 proteins (By similarity). 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 (By similarity). Negatively regulates SLC9A1 activity (By similarity).

Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:Q08209}. Cell membrane {ECO:0000250|UniProtKB:Q08209}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q08209}. Cell membrane, sarcolemma. Cytoplasm, myofibril, sarcomere, Z line. Cell projection, dendritic spine {ECO:0000250|UniProtKB:Q08209}. Note=Colocalizes with ACTN1 and MYO22 at the Z line in heart and skeletal muscle (PubMed:11114196). Recruited to the cell membrane by scaffold protein AKAP5 following L-type Ca(2+)- channel activation (By similarity). {ECO:0000250|UniProtKB:Q08209, ECO:0000269|PubMed:11114196}

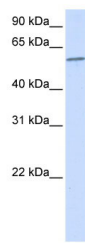
Tissue Location

Expressed in neonatal cardiomyocytes (at protein level) (PubMed:11114196). Expressed in hippocampal presynaptic termini (at protein level) (PubMed:23699505).

References

Ito A.,et al.Biochem. Biophys. Res. Commun. 163:1492-1497(1989).
 Perrino B.A.,et al.J. Biol. Chem. 267:15965-15969(1992).
 Chang C.,et al.Biochem. J. 288:801-805(1992).
 Lubec G.,et al.Submitted (JUL-2007) to UniProtKB.
 Wadzinski B.E.,et al.J. Biol. Chem. 265:21504-21508(1990).

Images



µg/ml
ELISA Titer: 1:1562500
Positive Control: 293T cell lysate

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