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Calcineurin (PPP3CA) Antibody (N-term) Blocking peptide

Synthetic peptide
Catalog # BP8463a

Specification

Calcineurin (PPP3CA) Antibody (N-term) Blocking peptide - Product Information

Primary Accession Q08209

Calcineurin (PPP3CA) Antibody (N-term) Blocking peptide - Additional Information

Gene ID 5530

Other Names
Serine/threonine-protein phosphatase 2B catalytic subunit alpha isoform, CAM-PRP catalytic subunit, Calmodulin-dependent calcineurin A subunit alpha isoform, PPP3CA, CALNA, CNA

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8463a was selected from the N-term region of human PPP3CA. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Calcineurin (PPP3CA) Antibody (N-term) Blocking peptide - Protein Information

Calcineurin (PPP3CA) Antibody (N-term) Blocking peptide - Background

PPP3CA is a calcium-dependent, calmodulin-stimulated protein phosphatase. This subunit may have a role in the calmodulin activation of calcineurin. PPP3CA dephosphorylates HSPB1 and SSH1.

Calcineurin (PPP3CA) Antibody (N-term) Blocking peptide - References

Rodriguez, A., et al., J. Biol. Chem. 280(11):9980-9984 (2005).Shirane, M., et al., Nat. Cell Biol. 5(1):28-37 (2003).Bengoechea-Alonso, M.T., et al., Nitric Oxide 8(1):65-74 (2003).Huai, Q., et al., Proc. Natl. Acad. Sci. U.S.A. 99(19):12037-12042 (2002).Bennasser, Y., et al., Virology 303(1):174-180 (2002).

Name PPP3CA (HGNC:9314)

Synonyms CALNA, CNA

Function
Calcium-dependent, calmodulin-stimulated protein phosphatase which plays an essential role in the transduction of intracellular Ca(2+)-mediated signals (PubMed:15671020, PubMed:18838687, PubMed:19154138, PubMed:23468591). Many of the substrates contain a PxIxIT motif and/or a LxVP motif (PubMed:17498738, PubMed:17502104, PubMed:23468591, PubMed:27974827, PubMed:22343722). In response to increased Ca(2+) levels, dephosphorylates and activates phosphatase SSH1 which results in cofilin dephosphorylation (PubMed:15671020). In response to increased Ca(2+) levels following mitochondrial depolarization, dephosphorylates DNM1L inducing DNM1L translocation to the mitochondrion (PubMed:18838687). Dephosphorylates heat shock protein HSPB1 (By similarity). Dephosphorylates and activates transcription factor NFATC1 (PubMed:19154138). In response to increased Ca(2+) levels,

regulates NFAT-mediated transcription probably by dephosphorylating NFAT and promoting its nuclear translocation (PubMed:26248042). Dephosphorylates and inactivates transcription factor ELK1 (PubMed:19154138). Dephosphorylates DARPP32 (PubMed:19154138). May dephosphorylate CRTC2 at 'Ser-171' resulting in CRTC2 dissociation from 14-3-3 proteins (PubMed:30611118). Dephosphorylates transcription factor TFEB at 'Ser-211' following Coxsackievirus B3 infection, promoting nuclear translocation (PubMed:33691586).

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 Ca(2+)- channel activation (PubMed:22343722). {ECO:0000250|UniProtKB:P63329, ECO:0000269|PubMed:22343722}

Tissue Location
Expressed in keratinocytes (at protein level).

Calcineurin (PPP3CA) Antibody (N-term) Blocking peptide - Protocols

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

- Blocking Peptides