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Goat Anti-PPP2CA / PPP2CB Antibody

Peptide-affinity purified goat antibody
Catalog # AF1854a

Specification

Goat Anti-PPP2CA / PPP2CB Antibody - Product Information

Application	**WB**
Primary Accession	P67775
Other Accession	NP_004147, 5515, 5516, 19052 (mouse), 24672 (rat)
Reactivity	**Human**
Predicted	**Mouse, Rat, Rabbit, Pig, Dog, Cow**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**35594**

Goat Anti-PPP2CA / PPP2CB Antibody - Additional Information

Gene ID 5515

Other Names
Serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform, PP2A-alpha, 3.1.3.16, Replication protein C, RP-C, PPP2CA

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-PPP2CA / PPP2CB Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-PPP2CA / PPP2CB Antibody - Protein Information

Name PPP2CA

Function
PP2A is the major phosphatase for microtubule-associated proteins (MAPs) (PubMed:22613722). PP2A can modulate the activity of phosphorylase B kinase casein kinase 2, mitogen-stimulated S6 kinase, and MAP-2 kinase (PubMed:<a href="http://www.uniprot.org/citations/22613722"

target="_blank">22613722). Cooperates with SGO2 to protect centromeric cohesin from separase-mediated cleavage in oocytes specifically during meiosis I (By similarity). Can dephosphorylate SV40 large T antigen and p53/TP53 (PubMed:17245430). Activates RAF1 by dephosphorylating it at 'Ser-259' (PubMed:10801873). Mediates dephosphorylation of WEE1, preventing its ubiquitin-mediated proteolysis, increasing WEE1 protein levels, and promoting the G2/M checkpoint (PubMed:33108758). Mediates dephosphorylation of MYC; promoting its ubiquitin-mediated proteolysis: interaction with AMBRA1 enhances interaction between PPP2CA and MYC (PubMed:25438055). Mediates dephosphorylation of FOXO3; promoting its stabilization: interaction with AMBRA1 enhances interaction between PPP2CA and FOXO3 (PubMed:30513302). Catalyzes dephosphorylation of the pyrin domain of NLRP3, promoting assembly of the NLRP3 inflammasome (By similarity).

Cellular Location
Cytoplasm. Nucleus. Chromosome, centromere. Cytoplasm, cytoskeleton, spindle pole. Note=In prometaphase cells, but not in anaphase cells, localizes at centromeres (PubMed:16541025). During mitosis, also found at spindle poles (PubMed:16541025). Centromeric localization requires the presence of SGO2 (By similarity) {ECO:0000250|UniProtKB:P63330, ECO:0000269|PubMed:16541025}

Goat Anti-PPP2CA / PPP2CB 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 Cytomety
- Cell Culture

Goat Anti-PPP2CA / PPP2CB Antibody - Images



AF1854a (0.05 µg/ml) staining of Human Cerebellum lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

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Goat Anti-PPP2CA / PPP2CB Antibody - Background

This gene encodes the phosphatase 2A catalytic subunit. Protein phosphatase 2A is one of the four major Ser/Thr phosphatases, and it is implicated in the negative control of cell growth and division. It consists of a common heteromeric core enzyme, which is composed of a catalytic subunit and a constant regulatory subunit, that associates with a variety of regulatory subunits. This gene encodes an alpha isoform of the catalytic subunit.

Goat Anti-PPP2CA / PPP2CB Antibody - References

An approach based on a genome-wide association study reveals candidate loci for narcolepsy. Shimada M, et al. Hum Genet, 2010 Oct. PMID 20677014.
Neuroprotectin D1 induces dephosphorylation of Bcl-xL in a PP2A-dependent manner during oxidative stress and promotes retinal pigment epithelial cell survival. Antony R, et al. J Biol Chem, 2010 Jun 11. PMID 20363734.
HUNK suppresses metastasis of basal type breast cancers by disrupting the interaction between PP2A and cofilin-1. Quintela-Fandino M, et al. Proc Natl Acad Sci U S A, 2010 Feb 9. PMID 20133759.
cAMP-stimulated protein phosphatase 2A activity associated with muscle A kinase-anchoring protein (mAKAP) signaling complexes inhibits the phosphorylation and activity of the cAMP-specific phosphodiesterase PDE4D3. Dodge-Kafka KL, et al. J Biol Chem, 2010 Apr 9. PMID 20106966.
Endotoxin conditioning induces VCP/p97-mediated and inducible nitric-oxide synthase-dependent Tyr284 nitration in protein phosphatase 2A. Ohama T, et al. J Biol Chem, 2010 Mar 19. PMID 20100830.