

**PP2A alpha/beta Rabbit mAb**  
Catalog # AP75936**Specification****PP2A alpha/beta Rabbit mAb - Product Information**

Application	WB, IHC-P, IHC-F, IP, ICC
Primary Accession	<a href="#">P67775</a>
Reactivity	Human, Mouse, Rat, Hamster
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	35594

**PP2A alpha/beta Rabbit mAb - Additional Information**

Gene ID 5515

**Other Names**

PPP2CA

**Dilution**

WB~~1/500-1/1000

IHC-P~~N/A

IHC-F~~N/A

IP~~1/20

ICC~~N/A

**Format**

Liquid

**PP2A alpha/beta Rabbit mAb - Protein Information**

Name PPP2CA

**Function**

Catalytic subunit of protein phosphatase 2A (PP2A), a serine/threonine phosphatase involved in the regulation of a wide variety of enzymes, signal transduction pathways, and cellular events (PubMed: [10801873](http://www.uniprot.org/citations/10801873), PubMed: [12473674](http://www.uniprot.org/citations/12473674), PubMed: [17245430](http://www.uniprot.org/citations/17245430), PubMed: [22613722](http://www.uniprot.org/citations/22613722), PubMed: [33243860](http://www.uniprot.org/citations/33243860), PubMed: [34004147](http://www.uniprot.org/citations/34004147), PubMed: [9920888](http://www.uniprot.org/citations/9920888)). PP2A is the major phosphatase for microtubule-associated proteins (MAPs) (PubMed: [22613722](http://www.uniprot.org/citations/22613722)). PP2A can modulate the activity of phosphorylase B kinase casein kinase 2, mitogen-stimulated S6 kinase, and MAP-2 kinase (PubMed: [22613722](http://www.uniprot.org/citations/22613722)). Cooperates with SGO2 to protect centromeric cohesin from

separate-mediated cleavage in oocytes specifically during meiosis I (By similarity). Can dephosphorylate various proteins, such as SV40 large T antigen, AXIN1, p53/TP53, PIM3, WEE1 (PubMed:<a href="http://www.uniprot.org/citations/10801873" target="\_blank">10801873</a>, PubMed:<a href="http://www.uniprot.org/citations/12473674" target="\_blank">12473674</a>, PubMed:<a href="http://www.uniprot.org/citations/17245430" target="\_blank">17245430</a>, PubMed:<a href="http://www.uniprot.org/citations/9920888" target="\_blank">9920888</a>). Activates RAF1 by dephosphorylating it at 'Ser-259' (PubMed:<a href="http://www.uniprot.org/citations/10801873" target="\_blank">10801873</a>). Mediates dephosphorylation of WEE1, preventing its ubiquitin-mediated proteolysis, increasing WEE1 protein levels, and promoting the G2/M checkpoint (PubMed:<a href="http://www.uniprot.org/citations/33108758" target="\_blank">33108758</a>). Mediates dephosphorylation of MYC; promoting its ubiquitin-mediated proteolysis: interaction with AMBRA1 enhances interaction between PPP2CA and MYC (PubMed:<a href="http://www.uniprot.org/citations/25438055" target="\_blank">25438055</a>). Mediates dephosphorylation of FOXO3; promoting its stabilization: interaction with AMBRA1 enhances interaction between PPP2CA and FOXO3 (PubMed:<a href="http://www.uniprot.org/citations/30513302" target="\_blank">30513302</a>). Catalyzes dephosphorylation of the pyrin domain of NLRP3, promoting assembly of the NLRP3 inflammasome (By similarity). Together with RACK1 adapter, mediates dephosphorylation of AKT1 at 'Ser-473', preventing AKT1 activation and AKT-mTOR signaling pathway (By similarity). Dephosphorylation of AKT1 is essential for regulatory T-cells (Treg) homeostasis and stability (By similarity). Catalyzes dephosphorylation of PIM3, promoting PIM3 ubiquitination and proteasomal degradation (PubMed:<a href="http://www.uniprot.org/citations/12473674" target="\_blank">12473674</a>). Part of the striatin- interacting phosphatase and kinase (STRIPAK) complexes (PubMed:<a href="http://www.uniprot.org/citations/33633399" target="\_blank">33633399</a>). STRIPAK complexes have critical roles in protein (de)phosphorylation and are regulators of multiple signaling pathways including Hippo, MAPK, nuclear receptor and cytoskeleton remodeling (PubMed:<a href="http://www.uniprot.org/citations/33633399" target="\_blank">33633399</a>). Different types of STRIPAK complexes are involved in a variety of biological processes such as cell growth, differentiation, apoptosis, metabolism and immune regulation (PubMed:<a href="http://www.uniprot.org/citations/33633399" target="\_blank">33633399</a>). Key mediator of a quality checkpoint during transcription elongation as part of the Integrator-PP2A (INTAC) complex (PubMed:<a href="http://www.uniprot.org/citations/33243860" target="\_blank">33243860</a>, PubMed:<a href="http://www.uniprot.org/citations/34004147" target="\_blank">34004147</a>, PubMed:<a href="http://www.uniprot.org/citations/37080207" target="\_blank">37080207</a>). The INTAC complex drives premature transcription termination of transcripts that are unfavorably configured for transcriptional elongation: within the INTAC complex, PPP2CA catalyzes dephosphorylation of the C-terminal domain (CTD) of Pol II subunit POLR2A/RPB1 and SUPT5H/SPT5, thereby preventing transcriptional elongation (PubMed:<a href="http://www.uniprot.org/citations/33243860" target="\_blank">33243860</a>, PubMed:<a href="http://www.uniprot.org/citations/34004147" target="\_blank">34004147</a>, PubMed:<a href="http://www.uniprot.org/citations/37080207" target="\_blank">37080207</a>).

### Cellular Location

Cytoplasm. Nucleus. Chromosome. 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). Recruited to chromatin and transcription pause-release checkpoint via its association with the Integrator complex (PubMed:33243860, PubMed:34004147). {ECO:0000250|UniProtKB:P63330, ECO:0000269|PubMed:16541025, ECO:0000269|PubMed:33243860, ECO:0000269|PubMed:34004147}

### PP2A alpha/beta Rabbit mAb - 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](#)

### PP2A alpha/beta Rabbit mAb - Images



