

## PP2A-Cα (phospho Tyr307) Polyclonal Antibody

**Catalog # AP67821** 

### **Specification**

## PP2A-Cα (phospho Tyr307) Polyclonal Antibody - Product Information

Application Primary Accession Reactivity Host Clonality WB, IHC-P, IF
P67775
Human, Mouse, Rat
Rabbit
Polyclonal

# PP2A-Cα (phospho Tyr307) Polyclonal Antibody - Additional Information

#### **Gene ID 5515**

### **Other Names**

PPP2CA; Serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform; PP2A-alpha; Replication protein C; RP-C

#### **Dilution**

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/5000. Not yet tested in other applications. IHC-P~~N/A IF~~1:50~200

#### **Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

# **Storage Conditions**

-20°C

### PP2A-Cα (phospho Tyr307) Polyclonal Antibody - 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:<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/22613722" target="\_blank">22613722</a>, 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/9920888" target="\_blank">9920888</a>, PubMed:<a href="http://www.uniprot.org/citations/9920888" target="\_blank">9920888</a>, PubMed:<a href="http://www.uniprot.org/citations/22613722" target="\_blank">22613722</a>, PubMed:<a href="http://www.uniprot.org/citations/22613722" target="\_blank">2261



and MAP-2 kinase (PubMed:<a href="http://www.uniprot.org/citations/22613722" target=" blank">22613722</a>). Cooperates with SGO2 to protect centromeric cohesin from separase-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, promotinh 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

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>).

href="http://www.uniprot.org/citations/33633399" target=" blank">33633399</a>). Key mediator

### **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:33243860, ECO:0000269|PubMed:34004147}

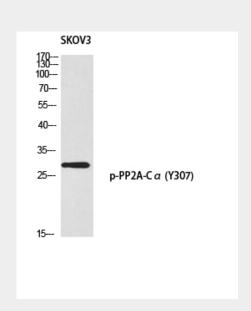
PP2A-Cα (phospho Tyr307) Polyclonal Antibody - Protocols



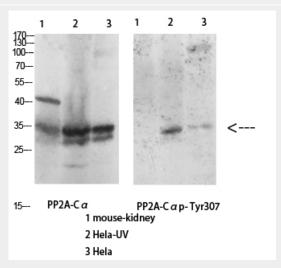
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## PP2A-Cα (phospho Tyr307) Polyclonal Antibody - Images



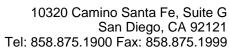
Western blot analysis of SKOV3 using p-PP2A-Cα (Y307) antibody. Antibody was diluted at 1:1000



Western Blot analysis of various cells using Antibody diluted at 1:1000. Secondary antibody was diluted at 1:20000

# PP2A-Cα (phospho Tyr307) Polyclonal Antibody - Background

PP2A is the major phosphatase for microtubule-associated proteins (MAPs). PP2A can modulate the activity of phosphorylase B kinase casein kinase 2, mitogen-stimulated S6 kinase, and MAP-2 kinase. 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. Activates RAF1 by dephosphorylating it at 'Ser-259'.