

## Phospho-PPP1CA (Thr320) Antibody

### Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP3912a

### Specification

#### Phospho-PPP1CA (Thr320) Antibody - Product Information

|                      |                                                                                                                                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Application          | WB,E                                                                                                                             |
| Primary Accession    | <a href="#">P62136</a>                                                                                                           |
| Other Accession      | <a href="#">Q3T0E7</a> , <a href="#">Q8WMS6</a> ,<br><a href="#">P62137</a> , <a href="#">P62139</a> ,<br><a href="#">P62138</a> |
| Reactivity Predicted | Human<br>Bovine, Mouse,<br>Rabbit, Rat                                                                                           |
| Host                 | Rabbit                                                                                                                           |
| Clonality            | polyclonal                                                                                                                       |
| Isotype              | Rabbit Ig                                                                                                                        |
| Calculated MW        | 37512                                                                                                                            |

#### Phospho-PPP1CA (Thr320) Antibody - Additional Information

**Gene ID** 5499

#### Other Names

Serine/threonine-protein phosphatase  
PP1-alpha catalytic subunit, PP-1A, 3.1.3.16,  
PPP1CA, PPP1A

#### Target/Specificity

This Phospho-PPP1CA (Thr320) antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 291-324 amino acids from the human region of human PPP1CA.

#### Dilution

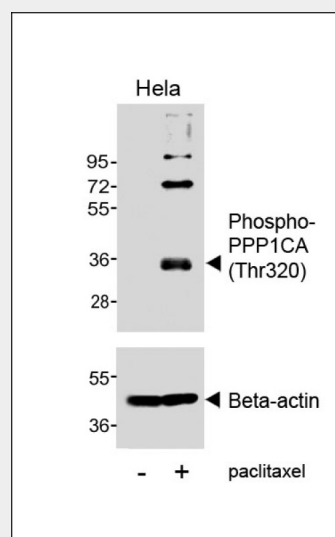
WB~~1:1000

#### Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

#### Storage

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



Western blot analysis of lysates from HeLa cell line, untreated or treated with paclitaxel, 100nM, 20hrs, using Phospho-PPP1CA (Thr320) Antibody (upper) or Beta-actin (lower).

#### Phospho-PPP1CA (Thr320) Antibody - Background

Protein phosphatase that associates with over 200 regulatory proteins to form highly specific holoenzymes which dephosphorylate hundreds of biological targets. Protein phosphatase 1 (PP1) is essential for cell division, and participates in the regulation of glycogen metabolism, muscle contractility and protein synthesis. Involved in regulation of ionic conductances and long-term synaptic plasticity. May play an important role in dephosphorylating substrates such as the postsynaptic density-associated Ca(2+)/calmodulin dependent protein kinase II. Component of the PTW/PP1 phosphatase complex, which plays a role in the control of chromatin structure and cell cycle progression during the transition from mitosis into interphase. Regulates NEK2 function in terms of kinase activity and centrosome number and

cycles.

### Precautions

Phospho-PPP1CA (Thr320) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### Phospho-PPP1CA (Thr320) Antibody - Protein Information

**Name** PPP1CA

**Synonyms** PPP1A

### Function

Protein phosphatase that associates with over 200 regulatory proteins to form highly specific holoenzymes which dephosphorylate hundreds of biological targets. Protein phosphatase 1 (PP1) is essential for cell division, and participates in the regulation of glycogen metabolism, muscle contractility and protein synthesis. Involved in regulation of ionic conductances and long-term synaptic plasticity. May play an important role in dephosphorylating substrates such as the postsynaptic density-associated Ca(2+)/calmodulin dependent protein kinase II. Component of the PTW/PP1 phosphatase complex, which plays a role in the control of chromatin structure and cell cycle progression during the transition from mitosis into interphase. Regulates NEK2 function in terms of kinase activity and centrosome number and splitting, both in the presence and absence of radiation- induced DNA damage. Regulator of neural tube and optic fissure closure, and enteric neural crest cell (ENCCs) migration during development. In balance with CSNK1D and CSNK1E, determines the circadian period length, through the regulation of the speed and rhythmicity of PER1 and PER2 phosphorylation. May dephosphorylate CSNK1D and CSNK1E. Dephosphorylates the 'Ser-418' residue of FOXP3 in regulatory T-cells (Treg) from patients with rheumatoid arthritis, thereby inactivating FOXP3 and rendering Treg cells functionally defective (PubMed:<a href="http://www.uniprot.org/citations/23396208" target="\_blank">23396208</a>). Dephosphorylates CENPA (PubMed:<a href="http://www.uniprot.org/citations/25556658" target="\_blank">25556658</a>).

splitting, both in the presence and absence of radiation-induced DNA damage. Regulator of neural tube and optic fissure closure, and enteric neural crest cell (ENCCs) migration during development. In balance with CSNK1D and CSNK1E, determines the circadian period length, through the regulation of the speed and rhythmicity of PER1 and PER2 phosphorylation. May dephosphorylate CSNK1D and CSNK1E.

### Phospho-PPP1CA (Thr320) Antibody - References

Song Q.,et al.Gene 129:291-295(1993).  
Durfee T.,et al.Genes Dev. 7:555-569(1993).  
Tung L.,et al.Submitted (APR-1991) to the EMBL/GenBank/DDBJ databases.  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
Kalnine N.,et al.Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.

Dephosphorylates the 'Ser-139' residue of ATG16L1 causing dissociation of ATG12-ATG5-ATG16L1 complex, thereby inhibiting autophagy (PubMed:<a href="http://www.uniprot.org/citations/26083323" target="\_blank">26083323</a>).

**Cellular Location**

Cytoplasm. Nucleus. Nucleus, nucleoplasm. Nucleus, nucleolus Note=Primarily nuclear and largely excluded from the nucleolus. Highly mobile in cells and can be relocalized through interaction with targeting subunits. NOM1 plays a role in targeting this protein to the nucleolus. In the presence of PPP1R8 relocalizes from the nucleus to nuclear speckles. Shuttles toward the cytosol during infection with VEEV (PubMed:29769351).

**Phospho-PPP1CA (Thr320) 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 Cytometry](#)
- [Cell Culture](#)