

**Product Name: PP1C alpha (1C11) Mouse Monoclonal Antibody**  
**Catalog #: AMM03424**

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## Summary

|                        |                                             |
|------------------------|---------------------------------------------|
| <b>Production Name</b> | PP1C alpha (1C11) Mouse Monoclonal Antibody |
| <b>Description</b>     | Mouse Monoclonal Antibody                   |
| <b>Host</b>            | Mouse                                       |
| <b>Application</b>     | WB,IHC-F,IHC-P,ICC/IF                       |
| <b>Reactivity</b>      | Human                                       |

## Performance

|                     |                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------|
| <b>Conjugation</b>  | Unconjugated                                                                                   |
| <b>Modification</b> | Unmodified                                                                                     |
| <b>Isotype</b>      | IgG1                                                                                           |
| <b>Clonality</b>    | Monoclonal                                                                                     |
| <b>Form</b>         | Liquid                                                                                         |
| <b>Storage</b>      | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.       |
| <b>Buffer</b>       | Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% sodium azide, pH 7.3. |
| <b>Purification</b> | Affinity Purification                                                                          |

## Immunogen

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>         | PPP1CA<br>Alpha isoform serine threonine protein phosphatase PP1alpha 1 catalytic subunit; Catalytic subunit; PP1A; PP1A_HUMAN; PP1alpha; PP2C ALPHA; PP2CA; Ppp1ca; Protein Phosphatase 2C Alpha Isoform; Serine threonine protein phosphatase PP1 alpha catalytic subunit; Serine threonine protein phosphatase PP1 alpha catalytic subunit protein phosphatase 1; Serine/threonine-protein phosphatase PP1-alpha catalytic subunit. |
| <b>Alternative Names</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Gene ID</b>           | 5499                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>SwissProt ID</b>      | P62136.                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Application

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**Dilution Ratio** WB: 1:500-1:1000 IHC: 1:50-1:100 IF: 1:50-1:200

**Molecular Weight** Calculated MW: 38 kDa; Observed MW: 38 kDa

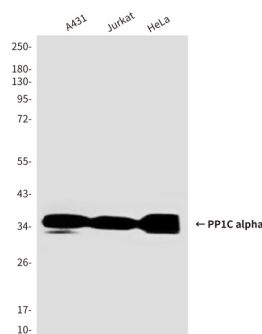
## Background

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<sup>2+</sup>/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:23396208). Dephosphorylates CENPA (PubMed:25556658). Dephosphorylates the 'Ser-139' residue of ATG16L1 causing dissociation of ATG12-ATG5-ATG16L1 complex, thereby inhibiting autophagy (PubMed:26083323).

## Research Area

Signal Transduction

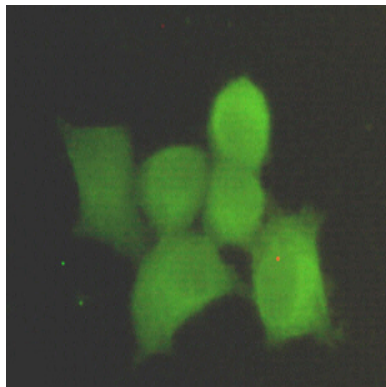
## Image Data



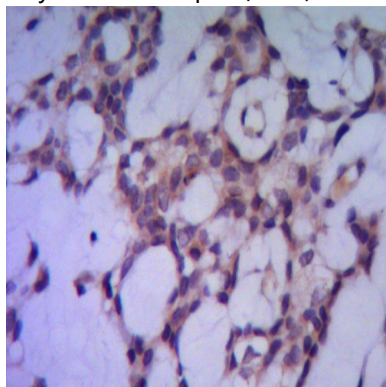
Western blot analysis of PPP1A in A431, Jurkat and HeLa whole lysates using PPP1A antibody.

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Immunocytochemistry analysis of PP1C alpha (1C11) in Hela using PPP1A antibody.



Immunohistochemistry analysis of paraffin-embedded Human breast cancer using PPP1A antibody. High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.

## **Note**

For research use only.