

## **PP2A-Cα Mouse mAb**

CatalogNo: YM1079

## Key Features

Host Species

Mouse

Reactivity

Human,Mouse,Bovine,Chicken,Dog,Pig,Rabbit,Zebrafish

Applications
• WB,IF

MW • 36kD (Calculated)

#### **Recommended Dilution Ratios**

WB 1:1000-1:2000 IF 1:100-1:500 Not yet tested in other applications.

#### **Storage**

Storage\*-15°C to -25°C/1 year(Do not lower than -25°C)FormulationLiquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

### **Basic Information**

Clonality Monoclonal

#### Immunogen Information

Immunogen	Purified recombinant human PP2A-C $\alpha$ (N-terminus) protein fragments expressed in E.coli.
Specificity	PP2A-Ca Monoclonal Antibody detects endogenous levels of PP2A-Ca protein.

#### **Target Information**

#### Gene name PPP2CA

#### Protein Name

Serine/threonine-protein phosphatase 2A catalytic subunit alpha isoform

Organism	Gene ID	UniProt ID
Human	<u>5515;</u>	<u>P67775;</u>
Mouse	<u>19052;</u>	<u>P63330;</u>
Rat		<u>P63331;</u>

# CellularCytoplasm . Nucleus . Chromosome, centromere . Cytoplasm, cytoskeleton, spindle pole . In<br/>prometaphase cells, but not in anaphase cells, localizes at centromeres<br/>(PubMed:16541025). During mitosis, also found at spindle poles (PubMed:16541025).<br/>Centromeric localization requires the presence of SGO2 (By similarity). .

Tissue specificity Fibroblast, Liver, Lung, Placenta, Testis, Uterus,

**Function** Catalytic activity: A phosphoprotein + H(2)O = a protein + phosphate., cofactor: Binds 1 ironion per subunit.,cofactor:Binds 1 manganese ion per subunit.,Function:PP2A can modulate the activity of phosphorylase B kinase casein kinase 2, mitogen-stimulated S6 kinase, and MAP-2 kinase. Can dephosphorylate SV40 large T antigen and p53. Dephosphorylates SV40 large T antigen, preferentially on serine residues 120, 123, 677, and perhaps 679. The C subunit was most active, followed by the AC form, which was more active than the ABC form, and activity of all three forms was strongly stimulated by manganese, and to a lesser extent by magnesium. Dephosphorylation by the AC form, but not C or ABC form is inhibited by small T antigen., PTM: Phosphorylation of either threonine (by autophosphorylationactivated protein kinase) or tyrosine results in inactivation of the phosphatase. Autodephosphorylation has been suggested as a mechanism for reactivation., PTM: Reversibly methyl esterified on Leu-309. Carboxyl methylation may play a role in holoenzyme assembly. It varies during the cell cycle., similarity: Belongs to the PPP phosphatase family., similarity: Belongs to the PPP phosphatase family. PP-1 subfamily., subcellular location: In prometaphase cells, but not in anaphase cells, localizes at centromeres. During mitosis, also found at spindle poles., subunit: PP2A consists of a common heterodimeric core enzyme, composed of a 36 kDa catalytic subunit (subunit C) and a 65 kDa constant regulatory subunit (PR65 or subunit A), that associates with a variety of regulatory subunits. Proteins that associate with the core dimer include three families of regulatory subunits B (the R2/B/PR55/B55, R3/B''/PR72/PR130/PR59 and R5/B'/B56 families), the 48 kDa variable regulatory subunit, viral proteins, and cell signaling molecules. Interacts with NXN; the interaction is direct (By similarity). May indirectly interact with SGOL1, most probably through regulatory B56 subunits.,

#### Validation Data



Western Blot analysis using PP2A-C $\alpha$  Monoclonal Antibody against MCF7 cell lysate.



Immunofluorescence analysis of HeLa cells using PP2A-C $\alpha$  Monoclonal Antibody.

#### **Contact information**

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Please scan the QR code to access additional product information: **PP2A-Cα Mouse mAb** 

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