

## PPP1A mouse mAb

<b>Catalog No :</b>	YM1226
<b>Reactivity :</b>	Human
<b>Applications :</b>	WB;IHC;ICC
<b>Target :</b>	PP1 $\alpha$
<b>Fields :</b>	>>mRNA surveillance pathway;>>cGMP-PKG signaling pathway;>>cAMP signaling pathway;>>Oocyte meiosis;>>Cellular senescence;>>Adrenergic signaling in cardiomyocytes;>>Vascular smooth muscle contraction;>>Hippo signaling pathway;>>Focal adhesion;>>Platelet activation;>>Long-term potentiation;>>Dopaminergic synapse;>>Inflammatory mediator regulation of TRP channels;>>Regulation of actin cytoskeleton;>>Insulin signaling pathway;>>Oxytocin signaling pathway;>>Insulin resistance;>>Amphetamine addiction;>>Alcoholism;>>Herpes simplex virus 1 infection;>>Proteoglycans in cancer;>>Diabetic cardiomyopathy
<b>Gene Name :</b>	ppp1ca
<b>Human Gene Id :</b>	5499
<b>Human Swiss Prot No :</b>	P62136
<b>Mouse Swiss Prot No :</b>	P62137
<b>Immunogen :</b>	Purified recombinant human PPP1A protein fragments expressed in E.coli.
<b>Specificity :</b>	This antibody detects endogenous levels of PPP1A and does not cross-react with related proteins.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Monoclonal, Mouse
<b>Dilution :</b>	wb 1:1000 icc 1:300
<b>Purification :</b>	The antibody was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen.

**Concentration :** 1 mg/ml**Storage Stability :** -15°C to -25°C/1 year(Do not lower than -25°C)**Observed Band :** 38kD**Cell Pathway :** Oocyte meiosis;Vascular smooth muscle contraction;Focal adhesion;Long-term potentiation;Regulates Actin and Cytoskeleton;Insulin\_Receptor;**Background :**

The protein encoded by this gene is one of the three catalytic subunits of protein phosphatase 1 (PP1). PP1 is a serine/threonine specific protein phosphatase known to be involved in the regulation of a variety of cellular processes, such as cell division, glycogen metabolism, muscle contractility, protein synthesis, and HIV-1 viral transcription. Increased PP1 activity has been observed in the end stage of heart failure. Studies in both human and mice suggest that PP1 is an important regulator of cardiac function. Mouse studies also suggest that PP1 functions as a suppressor of learning and memory. Three alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008],

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**Function :**

catalytic activity:A phosphoprotein + H(2)O = a protein + phosphate.,caution:The sequence shown here is derived from an Ensembl automatic analysis pipeline and should be considered as preliminary data.,cofactor:Binds 1 iron ion per subunit.,cofactor:Binds 1 manganese ion per subunit.,enzyme regulation:The phosphatase activity of the PPP1R15A-PP1 complex toward EIF2S1 is specifically inhibited by Salubrinal, a drug that protects cells from endoplasmic reticulum stress.,function: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.,online information:The th

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**Subcellular Location :**

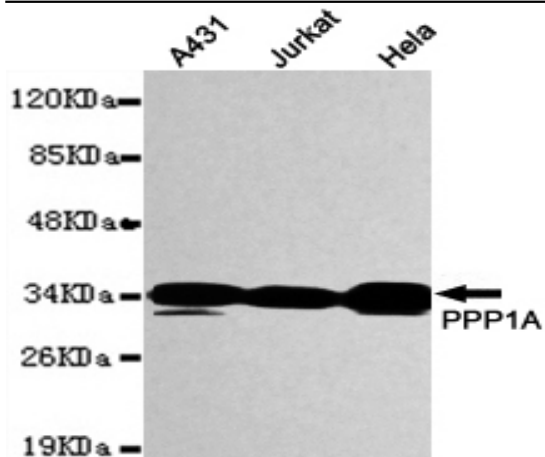
Cytoplasm . Nucleus . Nucleus, nucleoplasm . Nucleus, nucleolus . Primarily nuclear and largely excluded from the nucleolus. Highly mobile in cells and can be relocalized through interaction with targeting subunits. NOM1 plays a role in targeting this protein to the nucleolus. In the presence of PPP1R8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

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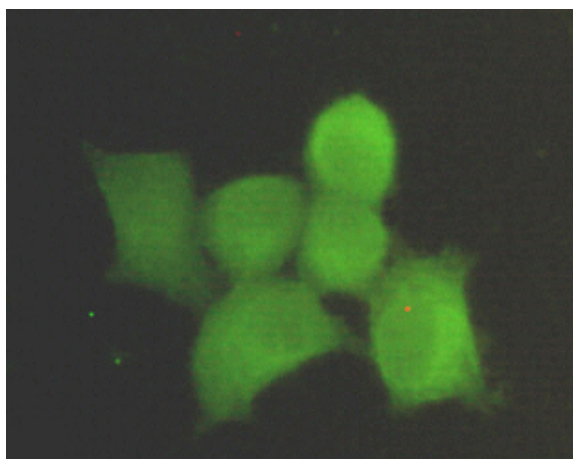
**Expression :** Colon carcinoma,Liver,Lung,Muscle,Pancreas,Placenta,Platele

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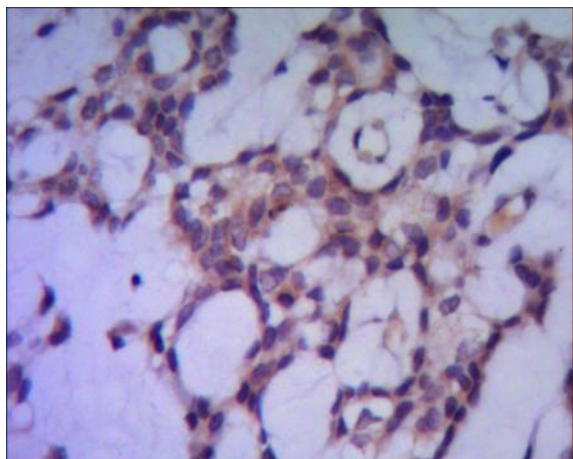
## Products Images



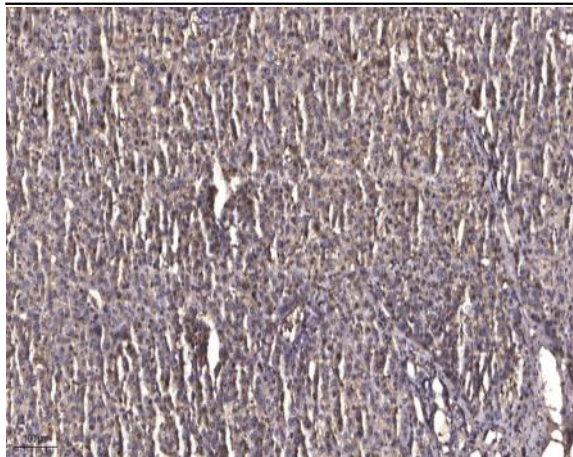
Western blot detection of PPP1A in MCF7, K562, HeLa, HEPG2 and Jurkat whole cell lysates using PPP1A mouse mAb (1:1000 diluted). Predicted band size: 38KDa. Observed band size: 38KDa.



Immunocytochemistry stain of HeLa using PPP1A mouse mAb (1:300).



IHC of paraffin-embedded human breast cancer using anti-PPP1A mouse mAb diluted 1/500-1/1000.



Immunohistochemical analysis of paraffin-embedded human liver cancer. 1, Antibody was diluted at 1:200(4° overnight). 2, Tris-EDTA,pH9.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 45min).